



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA

= = = = =

IN THE MATTER OF THE APPLICATION HP14-002  
OF DAKOTA ACCESS, LLC FOR AN  
ENERGY FACILITY PERMIT TO CONSTRUCT  
THE DAKOTA ACCESS PIPELINE

= = = = =

Transcript of Hearing  
September 29, 2015 through October 9, 2015  
October 8, 2015  
Volume VII  
Pages 1703-1989

= = = = =

BEFORE THE PUBLIC UTILITIES COMMISSION

CHRIS NELSON, CHAIRMAN  
GARY HANSON, COMMISSIONER  
RICHARD SATTGAST, ACTING COMMISSIONER

COMMISSION STAFF

Rolayne Ailts Wiest  
Kristen Edwards  
Karen Cremer  
Brian Rounds  
Greg Rislov  
Darren Kearney  
Tina Douglas  
Katlyn Gustafson

Reported By Cheri McComsey Wittler, RPR, CRR

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

APPEARANCES

Brett Koenecke and Kara Semmler, Dakota Access  
Glenn Boomsma, Intervenors  
Kimberly Craven, Indigenous Environmental Network and  
Dakota Rural Action  
Thomasina Real Bird and Jennifer Baker, Yankton Sioux  
Tribe  
Matt Rappold, Rosebud Sioux Tribe  
Diane Best, City of Sioux Falls  
Margo Northrup, SD Association of Rural Water Systems  
Kristen Edwards and Karen Cremer, PUC Staff

= = = = =

TRANSCRIPT OF PROCEEDINGS, held in the  
above-entitled matter, at the South Dakota State Capitol  
Building, Room 414, 500 East Capitol Avenue, Pierre,  
South Dakota, on the 8th day of October, 2015.

I N D E X

1	DAPL EXHIBITS	PAGE
2		
3	1 - Application	61
	2 - Exhibits A of Application	62
4	3 - Exhibit B of Application	62
	4 - Exhibit C of Application	63
5	5 - Exhibit D of Application	64
	6 - Sunoco Pipeline L.P. Facility Response	525
6	Plan, DAPL North Response Zone	
	7 - Energy Transfer Co., DAPL SD Spill	525
7	Model Discussion (Confidential)	
	9 - Unanticipated Discoveries Plan	2170
8	12 - 9/8/15 Correspondence from SD State	747
	Historical Society	
9	16 - SD SHPO Trenching Approval 6/5/15	748
	30 - Mahmoud Direct	59
10	31 - Frey Direct	263
	32 - Edwards Direct and Exhibits	300
11	33 - Howard Direct	404
	34 - Stamm Direct	524
12	35 - Rorie Direct	1903
	36 - Mahmoud Rebuttal and Exhibits	1928
13	37 - Frey Rebuttal (Attached Exhibits A and	2133
	B denied)	
14	38 - Howard Rebuttal	2149
	39 - DeJoia Rebuttal	1872
15	41 - Jack Edwards Resume	299
	42 - Centerline from Residence	364
16	45 - Level III Intensive Cultural Resources	812
	Survey - Volume I (Confidential)	
17	46 - Level III Intensive Cultural Resources	812
	Survey - Volume II (Confidential)	
18	47 - Level III Intensive Cultural Resources	812
	Survey - Volume III (Confidential)	
19	48 - Level III Intensive Cultural Resources	812
	Survey - Volume IV (Confidential)	
20	49 - Level III Intensive Cultural Resources	812
	Survey - Volume V (Confidential)	
21	50 - DAPL Centerline from Structure and Maps	1907
	51 - Pipeline Infrastructure Map	1942
22	52 - Sioux Falls Area Pipeline	1944
	Infrastructure Map	
23	53 - James River HDD Maps (Confidential)	2159
	54 - Sioux Falls, Tea, Harrisburg, Hartford	1966
24	Routing Meetings	
	55 - Meetings with Public Officials	1971
25		

<u>I N D E X (Continued)</u>		
1		
2	IEN AND DRA EXHIBITS	PAGE
3	1 - Deville Rebuttal	1863
	2 - Win Young Rebuttal	1529
4	3 - 4/8/15 Standing Rock Letter to Army Corps	1530
5	4 - 2/18/15 Standing Rock Letter to Army Corps	1530
6	5 - 2/25/15 Standing Rock Emails and Letter to Army Corps	1530
7	6 - 2/17/15 Army Corps Letter	1531
	7 - Capossela Expert Rebuttal	627
8	8 - Capossela Resume	627
	9 - Lake Oahe Pool Duration Relationship	627
9	10 - Missouri River Mainstem Reservoirs Surplus Water Reports Summary	627
10	11 - U.S. Army Corps Missouri River Basin Mainstem and Tributary Reservoirs Bulletin	627
11	12 - Goldtooth Rebuttal	1834
12	13 - (Denied)	--
13	PUC STAFF EXHIBITS	PAGE
14	1 - Kearney Testimony and Exhibits	674
	2 - Walsh Testimony and Exhibit	698
15	3 - McIntosh Testimony and Exhibits	707
	4 - Kirschenmann Testimony and Exhibit	884
16	5 - Iles Testimony and Exhibit	1801
	6 - Olson Testimony and Exhibit	743
17	7 - Houdyshell Testimony and Exhibit	1599
	8 - Bailey Testimony and Exhibit	1670
18	9 - McFadden Testimony and Exhibit	1561
	10 - Shelly Testimony and Exhibit	957
19	11 - Nickel Testimony and Exhibit	1737
	13 - Thornton Testimony and Exhibit	1641
20	15 - Young Testimony and Exhibit	1727
	16 - Ledin Testimony and Exhibit	1731
21	17 - Timpson Rebuttal Testimony and Exhibit	1642
22	18 - Applicant's 8/24/15 Response to Staff Discovery Request 3 (Confidential)	674
23		
24		
25		

I N D E X (Continued)

2	INTERVENORS EXHIBITS	PAGE
3	I1 - Anderson Testimony	1342
4	I2 - R. Arends, A. Arends, Bacon, and Fines-Tracy Testimony	1428
5	I3 - Assid Testimony	1408
6	I4 - Geide Testimony	1221
7	I5 - Goulet Testimony	1177
8	I7 - Rod and Joy Hohn Testimony	1236
9	I8 - Hoogestraat Rebuttal and Exhibits	1309
10	I9 - Hoogestraat Testimony and Exhibits	1309
11	I10 - Kunzelman Testimony	1273
12	I11 - Moeckly Testimony	1386
13	I12 - Murray Testimony	1412
14	I13 - Oltmanns Testimony	1371
15	I16 - Petterson Testimony	1169
16	I17 - Schoffelman Testimony	1086
17	I18 - Sibson Rebuttal	1200
18	I20 - Nancy Stofferahn Testimony	1286
19	I21 - Ronald Stofferahn Testimony	1441
20	I22 - Thomas Stofferahn Testimony	1136
21	I23 - Top Testimony	1102
22	I24 - Wiebers Testimony	1375
23	I25 - Dakota Access Pipeline's Final Offer Letters (only page 1 accepted)	1327
24	I26 - Civ.15-138 - Order Granting Motion to Dismiss and Denying Motion for Preliminary Injunction	1086
25	I27 - Civ.15-138 - Proposed Findings of Fact and Conclusions of Law	1086
	I30 - Civ.15-341 - Summons	1086
	I31 - Civ.15-341 - Verified Petition for Condemnation	1086
	I32 - Sibson Testimony	1200
	I43 - Photos	1323
	I44 - Photos taken by Joy Hohn	1251
	I45 & I45L - Photos taken by Kunzelman	1276
	I46J- Photos taken by Joy Hohn	1243
	I47P- Photos of Schoffelman Farm	1167
	I50 - County Meetings (Denied)	--

1	<u>I N D E X (Continued)</u>	
2	ROSEBUD SIOUX TRIBE EXHIBITS	PAGE
3	12 - Sprague's pipit Conservation Plan	924
	16 - Topeka shiner Management Plan	916
4	17 - U.S. Fish & Wildlife Services Revised Recovery Plan of the pallid sturgeon	926
5	18 - U.S. Fish & Wildlife Services Pallid Sturgeon Five-Year Review Summary and	927
6	Evaluation	
	22 - Chapter 2 - The Districts	928
7	26 - Western Prairie Fringed Orchid Five-Year Review Summary and Evaluation	926
8		
	CITY OF SIOUX FALLS EXHIBITS	PAGE
9		
	A - Municipal Growth Areas Map	82
10	D - Lewis & Clark Regional Water System	1479
11	E - Lewis & Clark Regional Water System Invoice	1488
12	SDARWS EXHIBITS	PAGE
13	1 - Easement Agreement	1463
	2 - Map and Drawing	1462
14	3 - Zulkosky Testimony	1461
15	YANKTON SIOUX TRIBE EXHIBITS	PAGE
16	6 - Cooke Rebuttal	1064
	7 - Spotted Eagle Rebuttal	1050
17	8 - Spotted Eagle BIO	1031
	9 - Appendix A, 24 Ind. Cl. Comm. 208 Map of Yankton Aboriginal Title Lands	1050
18	10 - DAPL South Dakota Vicinity Map	1050
19	11 - Saunsoci Rebuttal	1921
20		
21		
22		
23		
24		
25		

	I N D E X (Continued)	
1		
2	DAPL WITNESSES	PAGE
3	JOEY MAHMOUD	
	Direct Examination by Mr. Koenecke	55
4	Cross-Examination by Ms. Baker	65
	Cross-Examination by Mr. Rappold	84
5	Cross-Examination by Ms. Craven	116
	Cross-Examination by Mr. Boomsma	140
6	Cross-Examination by Ms. Best	154
	Cross-Examination by Ms. Northrup	158
7	Cross-Examination by Ms. Edwards	181
	Examination by Chairman Nelson	188
8	Examination by Commissioner Hanson	194
	Examination by Commissioner Sattgast	202
9	Recross-Examination by Ms. Craven	210
	Recross-Examination by Mr. Rappold	220
10	Recross-Examination by Ms. Baker	231
	Recross-Examination by Ms. Northrup	237
11	Recross-Examination by Ms. Best	239
	Redirect Examination by Mr. Koenecke	243
12	Recross-Examination by Mr. Rappold	250
	Examination by Chairman Nelson	253
13	Examination by Commissioner Hanson	255
	Recross-Examination by Mr. Rappold	258
14	Recross-Examination by Ms. Craven	259
15		
	CHUCK FREY	
16	Direct Examination by Ms. Semmler	260
	Cross-Examination by Ms. Baker	263
17	Cross-Examination by Mr. Rappold	271
	Cross-Examination by Ms. Craven	280
18	Examination by Commissioner Hanson	289
	Redirect Examination by Ms. Semmler	292
19	Recross-Examination by Mr. Rappold	294
20		
21		
22		
23		
24		
25		



I N D E X (Continued)

	DAPL WITNESSES	PAGE
1		
2		
3	JACK EDWARDS	
	Direct Examination by Mr. Koenecke	296
4	Cross-Examination by Ms. Baker	301
	Cross-Examination by Ms. Northrup	320
5	Cross-Examination by Mr. Rappold	324
	Cross-Examination by Ms. Craven	339
6	Cross-Examination by Ms. Edwards	357
	Examination by Chairman Nelson	358
7	Examination by Commissioner Hanson	365
	Examination by Commissioner Sattgast	372
8	Recross-Examination by Mr. Rappold	374
	Recross-Examination by Ms. Craven	376
9	Recross-Examination by Ms. Baker	378
	Recross-Examination by Ms. Edwards	379
10	Redirect Examination by Mr. Koenecke	379
11	MONICA HOWARD	
	Direct Examination by Ms. Semmler	393
12	Cross-Examination by Ms. Baker	404
	Cross-Examination by Mr. Rappold	419
13	Cross-Examination by Ms. Craven	463
	Cross-Examination by Ms. Edwards	481
14	Examination by Chairman Nelson	482
	Examination by Commissioner Hanson	483
15	Examination by Commissioner Sattgast	487
	Recross-Examination by Ms. Baker	790
16	Redirect Examination by Ms. Semmler	491
17	Recross-Examination by Ms. Craven	495
18	TODD STAMM	
	Direct Examination by Mr. Koenecke	523
19	Cross-Examination by Ms. Real Bird	528
	Cross-Examination by Mr. Rappold	546
20	Cross-Examination by Ms. Craven	566
	Cross-Examination by Ms. Northrup	568
21	Cross-Examination by Ms. Edwards	572
	Examination by Chairman Nelson	575
22	Examination by Commissioner Hanson	578
	Examination by Commissioner Sattgast	584
23	Recross-Examination by Mr. Rappold	588
	Recross-Examination by Ms. Real Bird	594
24	Redirect Examination by Mr. Koenecke	596
25	Recross-Examination by Ms. Craven	607

<u>I N D E X (Continued)</u>		
1		
2	IEN AND DRA WITNESSES	PAGE
3	PETER CAPOSSELA	
	Direct Examination by Ms. Craven	621
4	Cross-Examination by Ms. Real Bird	648
	Cross-Examination by Mr. Rappold	651
5	Cross-Examination by Mr. Koenecke	662
6	WASTE WIN YOUNG	
	Direct Examination by Ms. Craven	1529
7	Cross-Examination by Mr. Rappold	1537
	Cross-Examination by Ms. Semmler	1540
8	Examination by Chairman Nelson	1551
	Examination by Commissioner Hanson	1552
9	Redirect Examination by Ms. Craven	1553
10	Recross-Examination by Ms. Semmler	1555
11	DALLAS GOLDTOOTH	
	Direct Examination by Ms. Craven	1828
12	Cross-Examination by Mr. Rappold	1849
	Cross-Examination by Mr. Koenecke	1850
13	Examination by Chairman Nelson	1856
14	Recross-Examination by Mr. Rappold	1857
15	STAFF WITNESSES	PAGE
16	DARREN KEARNEY	
	Direct Examination by Ms. Cremer	668
17	Cross-Examination by Ms. Real Bird	676
	Cross-Examination by Mr. Rappold	684
18	Examination by Chairman Nelson	687
	Examination by Commissioner Hanson	691
19	Redirect Examination by Ms. Cremer	693
20	BRIAN WALSH	
	Direct Examination by Ms. Cremer	695
21	Cross-Examination by Ms. Real Bird	699
	Cross-Examination by Mr. Rappold	701
22	Cross-Examination by Ms. Craven	702
23		
24		
25		

I N D E X (Continued)

2	STAFF WITNESSES	PAGE
3	KIMBERLY MCINTOSH	
	Direct Examination by Ms. Cremer	704
4	Cross-Examination by Ms. Real Bird	708
	Cross-Examination by Mr. Rappold	713
5	Cross-Examination by Ms. Craven	722
	Examination by Chairman Nelson	724
6	Examination by Commissioner Sattgast	727
	Examination by Commissioner Hanson	729
7		
	PAIGE OLSON	
8	Direct Examination by Ms. Cremer	739
	Cross-Examination by Ms. Semmler	745
9	Cross-Examination by Ms. Real Bird	749
	Cross-Examination by Mr. Rappold	757
10	Examination by Chairman Nelson	825
	Cross-Examination by Ms. Craven	843
11	Examination by Commissioner Hanson	863
	Recross-Examination by Mr. Rappold	871
12	Recross-Examination by Ms. Semmler	872
	Recross-Examination by Ms. Craven	872
13	Direct Examination by Ms. Cremer	872
	Recross-Examination by Ms. Semmler	874
14		
	TOM KIRSCHENMANN	
15	Direct Examination by Ms. Cremer	878
	Cross-Examination by Ms. Baker	886
16	Cross-Examination by Mr. Rappold	901
	Cross-Examination by Mr. Koenecke	931
17	Cross-Examination by Ms. Craven	941
	Examination by Chairman Nelson	945
18	Examination by Commissioner Sattgast	946
	Examination by Commissioner Hanson	949
19	Recross-Examination by Mr. Rappold	951
	Recross-Examination by Ms. Craven	951
20		
	MICHAEL SHELLY	
21	Direct Examination by Ms. Edwards	955
22	Cross-Examination by Ms. Real Bird	959
	Cross-Examination by Mr. Rappold	992
23	Cross-Examination by Ms. Craven	997
	Cross-Examination by Ms. Semmler	998
24	Examination by Commissioner Sattgast	1002
25		

I N D E X (Continued)

1	I N D E X (Continued)	
2	STAFF WITNESSES	PAGE
3	ROBERT MCFADDEN	
	Direct Examination by Ms. Edwards	1557
4	Cross-Examination by Ms. Real Bird	1562
	Cross-Examination by Mr. Rappold	1572
5	Cross-Examination by Ms. Craven	1578
	Cross-Examination by Ms. Northrup	1580
6	Cross-Examination by Ms. Semmler	1581
	Examination by Chairman Nelson	1582
7	Examination by Commissioner Sattgast	1583
	Examination by Commissioner Hanson	1585
8	Recross-Examination by Ms. Real Bird	1589
	Recross-Examination by Mr. Rappold	1591
9	Recross-Examination by Ms. Semmler	1593
	Redirect Examination by Ms. Edwards	1595
10	Recross-Examination by Ms. Craven	1596
11	MICHAEL HOUDYSHELL	
	Direct Examination by Ms. Cremer	1596
12	Cross-Examination by Ms. Baker	1602
	Cross-Examination by Mr. Rappold	1606
13	Cross-Examination by Mr. Craven	1607
	Cross-Examination by Mr. Koenecke	1615
14	Examination by Chairman Nelson	1616
	Examination by Commissioner Hanson	1628
15	Recross-Examination by Mr. Koenecke	1631
	Recross-Examination by Ms. Craven	1633
16		
17	MICHAEL TIMPSON	
	Direct Examination by Ms. Edwards	1634
18	Cross-Examination by Ms. Real Bird	1642
	Cross-Examination by Ms. Craven	1655
19	Cross-Examination by Ms. Semmler	1663
	Examination by Chairman Nelson	1666
20		
21		
22		
23		
24		
25		

I N D E X (Continued)

2	STAFF WITNESSES	PAGE
3	TODD BAILEY	
	Direct Examination by Ms. Cremer	1667
4	Cross-Examination by Ms. Real Bird	1670
	Cross-Examination by Mr. Rappold	1677
5	Cross-Examination by Mr. Koenecke	1678
	Examination by Chairman Nelson	1680
6	Examination by Commissioner Hanson	1686
	Reexamination by Chairman Nelson	1690
7	Recross-Examination by Mr. Koenecke	1690
	Recross-Examination by Mr. Rappold	1692
8	Recross-Examination by Ms. Craven	1692
	Recross-Examination by Ms. Real Bird	1695
9	Recross-Examination by Mr. Koenecke	1697
10	DAN FLO	
	Direct Examination by Ms. Edwards	1721
11	Cross-Examination by Ms. Baker	1737
	Cross-Examination by Mr. Rappold	1753
12	Cross-Examination by Ms. Craven	1773
	Cross-Examination by Ms. Semmler	1782
13	Examination by Chairman Nelson	1789
	Recross-Examination by Ms. Craven	1793
14	Recross-Examination by Mr. Rappold	1793
	Recross-Examination by Ms. Semmler	1794
15	Redirect Examination by Ms. Edwards	1796
16	DERRIC ILES	
	Direct Examination by Ms. Cremer	1797
17	Cross-Examination by Ms. Real Bird	1805
	Cross-Examination by Ms. Northrup	1820
18	Examination by Commissioner Hanson	1822
19	YANKTON SIOUX TRIBE WITNESSES	PAGE
20	FAITH SPOTTED EAGLE	
	Direct Examination by Ms. Baker	1028
21	Cross-Examination by Mr. Rappold	1050
	Examination by Chairman Nelson	1060
22		
23		
24		
25		

1	<u>I N D E X (Continued)</u>	
2	YANKTON SIOUX TRIBE WITNESSES	PAGE
3	JASON COOK	
	Direct Examination by Ms. Real Bird	1063
4	Cross-Examination by Mr. Koenecke	1064
	Examination by Commissioner Hanson	1066
5	Examination by Chairman Nelson	1067
6	INTERVENORS WITNESSES	PAGE
7	KEVIN SCHOFFELMAN	
	Direct Examination by Mr. Boomsma	1071
8	Cross-Examination by Mr. Koenecke	1088
	Examination by Chairman Nelson	1091
9	Examination by Commissioner Hanson	1091
	Redirect Examination by Mr. Boomsma	1094
10	Recross-Examination by Mr. Koenecke	1096
	Examination by Chairman Nelson	1096
11	Recross-Examination by Mr. Koenecke	1097
12		
	BRIAN TOP	
13	Direct Examination by Mr. Boomsma	1098
	Cross-Examination by Ms. Real Bird	1120
14	Cross-Examination by Mr. Rappold	1121
	Cross-Examination by Mr. Koenecke	1122
15	Examination by Chairman Nelson	1130
	Examination by Commissioner Sattgast	1131
16	Redirect Examination by Mr. Boomsma	1132
17		
	THOMAS STOFFERAHN	
18	Direct Examination by Mr. Boomsma	1134
	Cross-Examination by Mr. Rappold	1146
19	Cross-Examination by Ms. Craven	1147
	Cross-Examination by Mr. Koenecke	1148
20	Examination by Chairman Nelson	1152
	Redirect Examination by Mr. Boomsma	1158
21	Recross-Examination by Ms. Craven	1160
22	JANICE PETTERSON	
	Direct Examination by Mr. Boomsma	1163
23		
24		
25		

I N D E X (Continued)

	INTERVENORS WITNESSES	PAGE
1		
2		
3	LINDA GOULET	
	Direct Examination by Mr. Boomsma	1173
4	Cross-Examination by Ms. Craven	1177
	Cross-Examination by Mr. Koenecke	1178
5	Examination by Commissioner Hanson	1182
	Redirect Examination by Mr. Boomsma	1182
6		
7	SUE SIBSON	
	Direct Examination by Mr. Boomsma	1183
8	Cross-Examination by Ms. Baker	1192
	Cross-Examination by Ms. Craven	1192
9	Cross-Examination by Ms. Edwards	1200
	Cross-Examination by Mr. Koenecke	1201
10	Examination by Chairman Nelson	1208
	Examination by Commissioner Hanson	1209
11	Reexamination by Chairman Nelson	1215
	Redirect Examination by Mr. Boomsma	1216
12		
13	ORRIN GEIDE	
	Direct Examination by Mr. Boomsma	1218
14	Cross-Examination by Ms. Craven	1227
	Cross-Examination by Mr. Koenecke	1230
15	Examination by Chairman Nelson	1230
	Examination by Commissioner Hanson	1231
16		
17	JOY HOHN	
	Direct Examination by Mr. Boomsma	1234
	Cross-Examination by Ms. Baker	1252
18	Cross-Examination by Ms. Craven	1255
	Cross-Examination by Ms. Edwards	1257
19	Cross-Examination by Mr. Koenecke	1258
	Examination by Commissioner Hanson	1264
20	Redirect Examination by Mr. Boomsma	1266
	Recross-Examination by Mr. Koenecke	1268
21		
22	LAURIE KUNZELMAN	
	Direct Examination by Mr. Boomsma	1269
	Cross-Examination by Ms. Craven	1279
23	Cross-Examination by Mr. Koenecke	1281
24		
25		

I N D E X (Continued)

	INTERVENORS WITNESSES	PAGE
1		
2		
3	NANCY STOFFERAHN	
	Direct Examination by Mr. Boomsma	1284
4	Cross-Examination by Mr. Rappold	1299
	Cross-Examination by Ms. Northrup	1301
5	Cross-Examination by Mr. Koenecke	1303
	Examination by Commissioner Hanson	1305
6		
	PEGGY HOOGESTRAAT	
7	Direct Examination Mr. Boomsma	1307
	Cross-Examination by Ms. Real Bird	1330
8	Cross-Examination by Mr. Rappold	1331
	Cross-Examination by Ms. Craven	1331
9	Cross-Examination by Mr. Koenecke	1332
	Examination by Chairman Nelson	1335
10	Examination by Commissioner Sattgast	1336
11		
	MATTHEW ANDERSON	
	Direct Examination by Mr. Boomsma	1341
12	Cross-Examination by Mr. Koenecke	1343
13		
	SHIRLEY OLTMANNS	
	Direct Examination by Mr. Boomsma	1370
14		
	CORLISS WIEBERS	
15	Direct Examination by Mr. Boomsma	1373
16		
	KENT MOECKLY	
	Direct Examination by Mr. Boomsma	1376
17	Cross-Examination by Ms. Real Bird	1386
	Cross-Examination by Ms. Edwards	1387
18	Cross-Examination by Ms. Semmler	1389
	Examination by Chairman Nelson	1394
19	Recross-Examination by Ms. Semmler	1398
	Redirect Examination by Mr. Boomsma	1399
20	Recross-Examination by Ms. Craven	1401
	Recross-Examination by Ms. Semmler	1402
21		
22		
23		
24		
25		



<u>I N D E X (Continued)</u>		
	INTERVENORS WITNESSES	PAGE
1		
2		
3	DELORES ASSID	
4	Direct Examination by Mr. Boomsma	1404
5	MARILYN MURRAY	
6	Direct Examination by Mr. Boomsma	1411
7	Cross-Examination by Mr. Koenecke	1416
8	ROD HOHN	
9	Direct Examination by Mr. Boomsma	1418
10	Cross-Examination by Mr. Koenecke	1422
11	Examination by Commissioner Hanson	1424
12	Redirect Examination by Mr. Boomsma	1425
13	ALLAN ARENDS	
14	Direct Examination by Mr. Boomsma	1426
15	Cross-Examination by Ms. Craven	1432
16	Cross-Examination by Ms. Best	1434
17	Cross-Examination by Mr. Koenecke	1435
18	RON STOFFERAHN	
19	Direct Examination by Mr. Boomsma	1439
20	Cross-Examination by Mr. Koenecke	1450
21	Examination by Commissioner Hanson	1456
22	Redirect Examination by Mr. Boomsma	1457
23	SDARWS WITNESS	PAGE
24	TROY LARSON	
25	Direct Examination by Ms. Northrup	1460
	Cross-Examination by Ms. Real Bird	1467
	Cross-Examination by Mr. Rappold	1472
	Cross-Examination by Ms. Craven	1477
	Cross-Examination by Ms. Best	1484
	Cross-Examination by Ms. Edwards	1488
	Cross-Examination by Mr. Koenecke	1489
	Examination by Chairman Nelson	1494
	Examination by Commissioner Sattgast	1499
	Examination by Commissioner Hanson	1501
	Recross-Examination by Ms. Real Bird	1505
	Recross-Examination by Mr. Rappold	1509
	Recross-Examination by Ms. Craven	1510
	Recross-Examination by Mr. Koenecke	1513

I N D E X (Continued)

1		
2	DAPL RECALLED WITNESS	PAGE
3	CHUCK FREY	
	Direct Examination by Ms. Semmler	608
4	Cross-Examination by Ms. Real Bird	612
	Cross-Examination by Ms. Craven	620
5		
	DAPL REBUTTAL WITNESSES	PAGE
6	AARON DEJOIA	
7	Direct Examination by Ms. Semmler	1868
	Cross-Examination by Mr. Rappold	1882
8	Cross-Examination by Ms. Craven	1883
	Cross-Examination by Ms. Edwards	1892
9	Examination by Chairman Nelson	1894
	Examination by Commissioner Sattgast	1896
10	Redirect Examination by Ms. Semmler	1898
11	MICAH RORIE	
	Direct Examination by Mr. Koenecke	1901
12	Cross-Examination by Ms. Baker	1911
	Cross-Examination by Mr. Rappold	1913
13	Cross-Examination by Ms. Craven	1915
	Examination by Chairman Nelson	1916
14	Examination by Commissioner Hanson	1919
15	JOEY MAHMOUD	
	Direct Examination by Mr. Koenecke	1924
16	Cross-Examination by Ms. Real Bird	1975
	Cross-Examination by Mr. Rappold	1984
17	Cross-Examination by Ms. Craven	2035
	Cross-Examination by Mr. Boomsma	2046
18	Cross-Examination by Ms. Edwards	2084
	Examination by Chairman Nelson	2088
19	Examination by Commissioner Sattgast	2093
	Examination by Commissioner Hanson	2096
20	Recross-Examination by Ms. Real Bird	2123
	Recross-Examination by Mr. Rappold	2125
21	Recross-Examination by Mr. Boomsma	2129
22	CHUCK FREY	
	Direct Examination by Mr. Koenecke	2130
23	Cross-Examination by Ms. Baker	2142
	Cross-Examination by Mr. Rappold	2143
24	Cross-Examination by Ms. Craven	2145
	Cross-Examination by Ms. Edwards	2147
25		

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

I N D E X (Continued)

DAPL REBUTTAL WITNESSES	PAGE
MONICA HOWARD	
Direct Examination by Ms. Semmler	2148
Cross-Examination by Ms. Baker	2170
Cross-Examination by Mr. Rappold	2175
Cross-Examination by Ms. Craven	2182
Cross-Examination by Mr. Boomsma	2198
Cross-Examination by Ms. Edwards	2205
Examination by Chairman Nelson	2206
Examination by Commissioner Sattgast	2208
Recross-Examination by Ms. Craven	2211
Redirect Examination by Ms. Semmler	2212
Recross-Examination by Ms. Craven	2215

1 MS. WIEST: I believe where we left off, Staff  
2 was going to have their next witness.

3 MS. EDWARDS: Thank you. Staff calls Dan Flo.  
4 (The oath is administered by the court reporter.)

5 DIRECT EXAMINATION

6 BY MS. EDWARDS:

7 Q. Good morning, Dan. Could you please state your name  
8 and address for the record.

9 A. Yes. Daniel Flo, and my work address is in  
10 Portland, Oregon.

11 Q. What is your professional title?

12 A. Senior regulatory specialist.

13 Q. And what are your job responsibilities as senior  
14 regulatory specialist?

15 A. I have several roles at my company. As a regulatory  
16 specialist, I work on environmental permitting projects,  
17 primarily pipeline projects, either as a project manager  
18 or leading specific permit application development  
19 efforts and managing teams of tactical specialists.

20 Q. You said you work as a project manager, is one of  
21 the things you named.

22 Were you project manager on this project?

23 A. Yes.

24 Q. What is your educational background?

25 A. Which is to say I'm project manager as for NRG's

1 specialists in our role providing support to Staff.

2 Q. Sorry. Thank you.

3 A. That's okay.

4 I'm sorry. What was the last question?

5 Q. What is your educational background?

6 A. Oh, I have a B.S. in geography from Minnesota State  
7 University Mankato and a JD from Lewis & Clark Law School  
8 in Portland, Oregon.

9 Q. Are you a lawyer?

10 A. I am not.

11 Q. Have you ever sat for the Bar, I guess --

12 A. No.

13 Q. -- is what I should have asked?

14 Can you briefly describe your relevant work  
15 experience since college?

16 A. Yes. During and after college for a total of about  
17 10 years I worked in the printing industry and then I  
18 went to law school and since then I've been in this  
19 field, including three years as an analyst at the  
20 Minnesota Department of Commerce and in environmental  
21 reimbursement fund for petroleum tank spills. And then  
22 after that several -- five years at Natural Resource  
23 Group, two years at Barr Engineering in Minneapolis,  
24 almost a year at an environmental consulting firm  
25 called Cardno ENTRIX in Portland and then back to

1 Natural Resource Group in Portland. That's been about  
2 just over two years.

3 Q. How did you become involved in this docket?

4 A. Previously Natural Resource Group had provided  
5 environmental consulting services to PUC Staff. This was  
6 back in 2009 on the first Keystone XL Application  
7 process.

8 And then this year again we were asked to assist on  
9 that docket for the recertification of that Permit. And  
10 through that process we were asked to help now with the  
11 Dakota Access docket.

12 Q. How long have you been involved in this docket?

13 A. Since I think May or June. No. I'm sorry. I'm  
14 confusing that with Keystone XL. So with this one I  
15 think we started in July or August.

16 Q. Okay. Did you participate at all in the discovery  
17 process?

18 A. Yes. Yes, we did.

19 Q. Did you assist in prefiling testimony?

20 A. Yes.

21 Q. Did you oversee the prefiled testimony?

22 A. I did. So we received the request from Staff for  
23 the specific technical areas to prepare prefiled  
24 testimony, and as project manager I found the technical  
25 specialists with the ability and the availability in

1 their schedule to assist.

2 I provided them with direction on what our role was  
3 in supporting Staff. They prepared the testimony. I  
4 reviewed it for clarity and just to make sure that it  
5 was -- whether we had any questions, whether Staff might  
6 have any questions, and in some cases provided additional  
7 questions to the team so that they could clarify their  
8 testimony before it was filed.

9 Q. So would you feel comfortable answering questions  
10 about any of the testimony submitted by NRG?

11 A. Yes.

12 Q. What did you analyze or review in preparing that  
13 testimony and preparing to testify today?

14 A. Primarily the Application and all supporting  
15 Application materials filed by Dakota Access. And then  
16 any -- plus the State of South Dakota regulations.

17 Q. Drawing your attention to what's been marked for  
18 identification purposes is Staff's Exhibit 15.

19 Do you recognize this document?

20 A. Yes, I do.

21 Q. Can you tell us what it is?

22 A. Yes. It is the direct testimony of Cameron Young.

23 Q. Did you participate in the drafting of that  
24 testimony?

25 A. I did to the extent that I -- we received the

1 questions from Staff. I provided the format and the  
2 questions to Cameron with instructions on what we needed  
3 to do to assist Staff, and then he prepared the  
4 testimony.

5 I reviewed it for clarity and asked some questions,  
6 and he clarified. And then we submitted.

7 Q. Based on any information you've heard so far, do you  
8 have any additions, deletions, or corrections to make to  
9 that testimony?

10 A. I do have some clarifications that I'd like to make.

11 Q. Please, do.

12 A. Okay. Let me go through and make sure that I note  
13 the right locations.

14 On page 3 of the prefiled testimony where Cameron  
15 discusses the potential to impact the Topeka Shiner and  
16 he goes on to discuss other protected species, the  
17 clarification that I'd like to make is that all of these  
18 recommendations that we have made are couched in the  
19 assumption that Dakota Access has or will work with the  
20 Fish & Wildlife Service to determine what the Fish &  
21 Wildlife Service's recommendations are.

22 And so assuming that the Fish & Wildlife Service  
23 will be consulted through the Corps of Engineers'  
24 Nationwide Permit 12 process, the Fish & Wildlife Service  
25 and the Corps's recommendations would supersede our



1 recommendations.

2 Q. So would you have a recommendation as to whether  
3 that should be a requirement that they consult?

4 A. Yes. Absolutely.

5 Q. Any other additions, corrections, or deletions?

6 A. Yes. One correction, something that is not very  
7 clearly stated in the testimony -- oh, page 5. Sorry.

8 Towards the bottom of the page there's a reference  
9 to construction vehicles should be properly muffled to  
10 minimize noise. That reference is really to a standard  
11 bit of language that's included in -- I believe it's in  
12 their Application. In fact, it certainly is included in  
13 many permits as a condition, which is simply that  
14 construction equipment be properly maintained.

15 That's the clarification to that statement.

16 Q. Thank you. Anything else?

17 A. Several locations in this testimony we refer to  
18 cleaning stations with regard to noxious weeds.

19 The clarification there is that cleaning stations  
20 are really only used in cases where there are large  
21 identified infestations, they're often called, of noxious  
22 weeds.

23 And so the use of cleaning stations is really just a  
24 recommendation, if in working with the county officials  
25 and/or the NRCS, Natural Resources Conservation Service,

1 large areas, large infestations of particularly difficult  
2 or state identified problem areas for noxious weeds are  
3 along the project.

4 To the extent that there are no large infestations  
5 of noxious weeds, then we would not recommend cleaning  
6 stations in that case.

7 Q. Any other changes?

8 A. I believe that is all of my clarifications.

9 Q. If I asked you all of the questions in this  
10 testimony today with the exception of the edits and  
11 changes you made, would your answers be the same?

12 A. Yes.

13 Q. Are they true and correct to the best of your  
14 knowledge?

15 A. Yes.

16 MS. EDWARDS: I would move for admission of  
17 Staff's Exhibit 15.

18 MS. WIEST: Is there any objection?

19 If not, it's admitted.

20 Q. Turning your attention to what's been marked as  
21 Staff's Exhibit 16 for identification purposes, can you  
22 tell us what that is?

23 A. Yes. This is the direct testimony of Ryan Ledin.

24 Q. And what's your working relationship with Mr. Ledin?

25 A. One of my other roles at Natural Resource Group, in

1 addition to regulatory specialist and project manager I'm  
2 also the business development lead for our construction  
3 compliance group, and Ryan Ledin is a member of that  
4 construction compliance group.

5 Q. Did you assist in the preparation of this prefiled  
6 testimony?

7 A. Yes. In the same way that I assisted Cameron and  
8 all other NRG staff.

9 Q. Do you have any additions, corrections, or edits to  
10 make at this time?

11 A. I do also have some clarifications I'd like to make.

12 Q. Please do.

13 A. The first -- and let me know if you need me to give  
14 you an exact location in the testimony. This is really a  
15 reinforcement of something that Mike Timpson mentioned  
16 yesterday.

17 Mr. Ledin's testimony also mentions winter  
18 construction plans, our recommendation for a winter  
19 construction plan.

20 Like Mike said yesterday, we understand that  
21 Dakota Access does not have any plans to construct during  
22 the winter. And to the extent that they're able to keep  
23 their construction schedule, we would modify that  
24 recommendation to be a winterization plan, which is a  
25 plan for stabilizing the right of way after the

1 completion of pipeline construction defined as the  
2 pipeline being mechanically complete and in the ground.

3 But if there are areas of the right of way that are  
4 still not fully stabilized such as with vegetation growth  
5 and then winter sets in, then we advise that they have a  
6 winterization plan for stabilizing the right of way so  
7 that through the winter and especially in the spring  
8 there are plans and expectations for how final  
9 stabilization and restoration will occur.

10 Q. Did I hear you correctly that that's contingent upon  
11 them keeping their schedule?

12 A. That's right.

13 So Dakota Access has provided an anticipated  
14 construction schedule, which would start in the spring  
15 and end in the autumn. And so long as that schedule is  
16 maintained, then we don't see the need for a full winter  
17 construction plan.

18 Q. Thank you.

19 Any other additions or corrections? Clarifications?

20 A. Sure. The next clarification, Mr. Ledin recommended  
21 that in the SWPPP, the Storm Water Prevention Pollution  
22 Plan, erosion and sediment control, best management  
23 practices should be standardized. And I would just like  
24 to acknowledge that those practices are, in fact, in  
25 Dakota Access's typical drawings for the SWPPP.

1           So they have, in fact, standardized. We just didn't  
2 see that in our original testimony.

3 Q. Anything else?

4 A. Yes. One more clarification.

5           Mr. Ledin recommended that a master water body and  
6 wetland crossing table be included with the SWPPP that  
7 would include mileposts or stationing, essentially in and  
8 out table for wetlands and water bodies.

9           And through the course of the testimony, through the  
10 hearing, we have come to understand that that  
11 information, the wetlands and water bodies specifically,  
12 are shown on the company's alignment sheets, which are  
13 the engineered drawings for construction plans, and that  
14 is an equivalent to our recommendation and is an  
15 acceptable alternative.

16 Q. Any other clarifications?

17 A. One last clarification that I'd like to make.

18           There are some references to decisions regarding the  
19 application of mulch to the right of way or delegated to  
20 the environmental inspector. And Mr. Ledin's  
21 recommendation was to specify a certain slope, such as  
22 5 percent or greater, to apply mulch.

23           My clarification to that is really that mulch is --  
24 the application of mulch to the right of way is not the  
25 only way to stabilize the right of way, and so our

1 recommendation there is really that stabilization by  
2 appropriate means in consultation with the environmental  
3 inspector and the landowner is sufficient and that a -- a  
4 specified slope for the application of stabilization to  
5 the right of way is not -- not necessary so long as the  
6 environmental inspector is consulted and the right of way  
7 is stabilized appropriately.

8 Q. Thank you.

9 With those clarifications, if I asked you these  
10 questions today, would your answers be the same?

11 A. Yes.

12 Q. Is it true and correct to the best of your  
13 knowledge?

14 A. Yes.

15 MS. EDWARDS: I would move for the admission of  
16 Staff's Exhibit 16.

17 MS. WIEST: Is there any objection?

18 If not, it is admitted.

19 Q. Going to Staff's Exhibit 11, do you recognize what  
20 that is?

21 A. Yes. This is the direct testimony of David Nickel.

22 Q. And what is your association with Mr. Nickel?

23 A. Mr. Nickel is an employee of Natural Resource Group.  
24 He is the company's health and safety officer.

25 Q. Is he unavailable at this time?

1 A. That's right. In his duties as health and safety  
2 officer, if there is a safety incident in the company, he  
3 is required to investigate that.

4 And because a large part of our business is managing  
5 environmental field surveys, I understand that there was  
6 a safety incident recently and that he was called away to  
7 investigate that.

8 Q. Thank you.

9 Are you familiar with this testimony?

10 A. Yes.

11 Q. Did you assist in the preparation?

12 A. Yes. In the same way that I assisted Ryan and Cam  
13 on.

14 Q. Do you have any clarifications, additions, or  
15 corrections to make to this testimony?

16 A. One clarification. And it's actually not a change  
17 to this testimony, but it is just something that was also  
18 covered in testimony yesterday so I just want to make  
19 sure that Mr. Nickel's testimony is clear with regard to  
20 the question of high consequence areas and unusually  
21 sensitive areas.

22 Q. Okay. Anything else?

23 A. Nothing else.

24 Q. If I asked you the questions in this testimony with  
25 that clarification, would your answers be the same?

1 A. Yes.

2 Q. Is it true and correct to the best of your  
3 knowledge?

4 A. Yes.

5 MS. EDWARDS: I would move for the admission of  
6 Staff's Exhibit 11.

7 MS. WIEST: Is there any objection?

8 MS. CRAVEN: Dakota Rural Action and IEN, we  
9 object to the introduction of page 4, lines 1 through 46  
10 of Mr. Nickel's testimony, and we assert that this  
11 violates Rule 702.

12 This testimony gives opinions as an expert on  
13 the ultimate issues in this hearing. The question on  
14 line 1 asks if the pipeline will pose a serious threat to  
15 the environment. The other question asks if the pipeline  
16 will substantially impair the health, safety, and welfare  
17 of South Dakotans.

18 The South Dakota Supreme Court has ruled that  
19 it's improper even for an expert to render an opinion  
20 that the factfinder can infer for itself. That's  
21 State v. Guthrie.

22 The witness has a bachelor's degree and  
23 consulting experience. We're sure he's very  
24 knowledgeable, but the South Dakota Court requires that  
25 to qualify as an expert that the witness's knowledge be



1 superior. That's State v. Fischer.

2 The court also looks at many factors in  
3 determining whether a witness qualifies as an expert.  
4 Degrees is a factor. It's one factor. Here a witness  
5 with a bachelor's degree and some experience is rendering  
6 an opinion on the ultimate issue, and it is improper.

7 MS. WIEST: Do you have a response?

8 MS. EDWARDS: I would disagree that he has only  
9 some experience. That seems to be an understatement of  
10 his work in the field. And certainly the Commission can  
11 give it the weight it deserves.

12 If the Commission feels that a bachelor's degree  
13 is not sufficient, then the Commission is entitled to  
14 give it that amount of weight.

15 MR. RAPPOLD: And I think it's just an unusual  
16 situation where you have one witness, a live witness who  
17 has certain qualifications, testifying about somebody  
18 else's testimony that has different qualifications.

19 It's just a very unusual situation, I think, and  
20 we would join in the motion to -- or the objection to  
21 admitting this testimony, as Ms. Craven stated.

22 MS. BAKER: Yankton Sioux Tribe would like to  
23 join in the objection as well.

24 MS. WIEST: I'm going to overrule the objection.  
25 I believe that the Commission can certainly give any

1 weight that it wants to to these recommendations.

2 Anything further?

3 MS. BAKER: Yes. The Yankton Sioux Tribe  
4 objects and moves to strike the language on lines 28  
5 through 32 on page 3, lines 8 to 30 on page 4, and lines  
6 41 to 45 on page 4 on the grounds that they're clearly  
7 hearsay.

8 This language specifically says Dakota Access  
9 stated and so on.

10 MS. WIEST: Staff, did you have a response?

11 MS. EDWARDS: I believe it's an exception  
12 because the expert relied on it in coming to his  
13 recommendation.

14 MS. BAKER: And I believe it's been established  
15 it may not fully have been established but acknowledged  
16 that this is not an expert.

17 MS. SEMMLER: If I may comment as well, this is  
18 Kara Semmler.

19 How possibly could consultants not indicate what  
20 Dakota Access said? Its job, the consultants' job, is to  
21 review the Application. Dakota Access submits the  
22 Application. The consultants review it. It's a  
23 nonsensical objection.

24 MS. WIEST: I'm going to overrule the objection  
25 also with respect to hearsay. I believe statements of a

1 party opponent do not fall within the hearsay rule.

2 Any other objections?

3 MS. CRAVEN: Are they really a party opponent?

4 MS. WIEST: Well, Dakota Access is a party.

5 MS. CRAVEN: Are they an opponent of the Staff?

6 Because it seems like there's a lot of deal cutting going  
7 on with this --

8 MS. SEMMLER: Objection. I ask that be  
9 stricken. Counsel is testifying. This is not -- I think  
10 Brett referred to it as open mic. That's not what we're  
11 doing.

12 MS. CRAVEN: I'm just responding to Ms. Wiest's  
13 question.

14 We have testimony that says one thing and then  
15 they come in and they then state, well, this has been  
16 resolved and this has been resolved and that seems to be  
17 something going on that we're not quite privy to.

18 MS. SEMMLER: I object. First of all, there's  
19 no objection on the table. Second of all, counsel's  
20 testifying.

21 We, Dakota Access, would have been happy to sit  
22 down with any party to this proceeding, just like was  
23 evident yesterday, and talk about our differences. Just  
24 because Intervenors choose not to do that doesn't mean  
25 that there's anything inappropriate going on.

1 MS. CRAVEN: I have received no phone call about  
2 cultural resources that you've asked to discuss with me.

3 MS. SEMMLER: Neither did we.

4 MS. WIEST: Going back to the original  
5 objection, I believe that it would be very difficult to  
6 review any of these Permit -- an Application such as this  
7 without, you know, stating what the Applicant has stated  
8 over the -- within the Application. And so, again, that  
9 objection is overruled.

10 Is there anything further?

11 Staff?

12 MS. EDWARDS: I had just moved for the admission  
13 previously.

14 MS. WIEST: So this is S 11; right?

15 MS. EDWARDS: Yes.

16 MS. WIEST: After being offered, S 11 is  
17 admitted.

18 MS. EDWARDS: I have no further questions for  
19 this witness and would tender him for cross.

20 MS. WIEST: Yankton Sioux Tribe.

21 MS. BAKER: Thank you.

22 CROSS-EXAMINATION

23 BY MS. BAKER:

24 Q. Good morning, Mr. Flo.

25 A. Good morning.

1 Q. I think it does get a little bit complicated here  
2 with all of these prefiled testimonies, but I think I'd  
3 like to start with Mr. Young's.

4 Would you say that the impact analysis contained in  
5 the Revised Application is incomplete?

6 A. It is incomplete to the extent that the Fish &  
7 Wildlife Service has not issued a final concurrence with  
8 regard to federally protected species.

9 Q. Was that -- strike that.

10 If an EIS had been done, would you consider the  
11 impact analysis to be complete?

12 A. The same procedure still has to be followed even if  
13 there's an Environmental Impact Statement.

14 Q. Would that procedure have been followed if there was  
15 an Environmental Impact Statement?

16 MS. SEMMLER: Objection. Calls for speculation.

17 MS. BAKER: He's fully familiar with the process  
18 of an EIS and what's required and which agencies would be  
19 consulted.

20 MS. WIEST: Overruled.

21 A. It's my understanding that an application for --  
22 excuse me. A preconstruction notification to the Corps  
23 of Engineers under Nationwide Permit 12 is under  
24 consideration by the Corps of Engineers. And as part of  
25 the Corps's responsibility under the Endangered Species

1 Act, they must consult with the Fish & Wildlife Service.

2 So my understanding is that that process is  
3 ongoing.

4 Q. Thank you.

5 Can you tell me what is NatureServe?

6 A. NatureServe is a publicly available online database  
7 for identifying known occurrences of federally protected  
8 species. That's about all I know.

9 Q. Okay. You don't know who maintains that database?

10 A. I don't.

11 Q. Is your testimony that based on the information you  
12 were provided, the proposed pipeline could pose a threat  
13 to the Topeka shiner, the Northern long-eared bat,  
14 Sprague's pipit, whooping crane, the pallid sturgeon, the  
15 Dakota Skipper, and the Western prairie fringed orchid?

16 A. Our testimony is that it could and that the final  
17 determination on whether it may is the -- the  
18 responsibility for that final determination is in the  
19 Fish & Wildlife Service, which is under consideration.

20 Q. Can anyone, including the Fish & Wildlife Service,  
21 know for certain whether there will be any impact to each  
22 of these species?

23 MS. SEMMLER: Objection. Calls for speculation  
24 whether or not U.S. Fish & Wildlife Service can make a  
25 determination.

1 MS. BAKER: It's not about whether it can make a  
2 determination. It's whether this knowledge is  
3 ascertainable at all.

4 MS. WIEST: Can you rephrase that question?

5 Q. Is it possible for the Fish & Wildlife Service to  
6 ascertain with certainty whether there will be any impact  
7 to these species?

8 MS. SEMMLER: I object. This witness does not  
9 work for U.S. Fish & Wildlife Service.

10 MS. BAKER: It's a matter of available  
11 information and commonsense.

12 MS. SEMMLER: Same objection.

13 MS. WIEST: I think he can give his opinion if  
14 he has one.

15 A. My opinion is that the process is when there's a  
16 federal action, the Fish & Wildlife Service must be  
17 consulted with regard to the potential impacts to protect  
18 its species. And in so much as that is the process, then  
19 the Fish & Wildlife Services is required to render its  
20 opinion.

21 Q. Okay. So is your testimony that they can't say with  
22 any certainty that these species will or will not be  
23 impacted?

24 MS. SEMMLER: Objection. Asked and answered.

25 MS. BAKER: I don't believe he actually answered

1 the question.

2 MS. SEMMLER: Because he can't answer the  
3 question you asked.

4 MS. WIEST: Overruled.

5 CHAIRMAN NELSON: I'm going to move to sustain  
6 that objection.

7 COMMISSIONER HANSON: I would vote to overrule.  
8 It's all yours.

9 COMMISSIONER SATTGAST: I'll move to sustain.

10 MS. WIEST: Go ahead.

11 Q. What is a hibernaculum, if I say that correctly?

12 A. Sure. Hibernaculum is typically a cave. It can be  
13 a mine. It's an area where bats hibernate over the  
14 winter. It's an enclosed space.

15 Q. And are these types of spaces prevalent along the  
16 route at any point?

17 A. Not that I'm aware of.

18 Q. Can you tell us why you're concerned about the  
19 possibility of tree clearing at the Big Sioux River?

20 A. During the spring and -- I'm not a bat specialist,  
21 but I have supervised bat surveys on our projects. And  
22 my understanding is that some bat species, such as the  
23 Northern Long-Eared Bat, sleep at night in crevices and  
24 behind the bark of trees, dead trees or dying limbs.

25 And so the clearing of trees during a period where



1 bats are active can have the potential to kill them --  
2 any bats that might be roosting there.

3 Q. Is any of the area the proposed pipeline would cross  
4 suitable habitat for the pipit?

5 A. I'll review my testimony.

6 I think it's unclear to us whether a suitable pipit  
7 habitat is, in fact, crossed. And so that's an issue  
8 that will be determined through the company's  
9 consultation with the Corps of Engineers and the Fish &  
10 Wildlife Service.

11 Q. Thank you. You mentioned -- or Mr. Young's  
12 testimony mentioned that no analysis was conducted to  
13 protect potential stopover habitat for cranes.

14 Is there reason to believe that such stopover  
15 habitat exists along the pipeline route?

16 A. There's a general reason to believe that it exists  
17 because we're in the migration zone of the whooping  
18 crane. The project is.

19 Q. With respect to the Topeka shiner, even with block  
20 valves and SCADA leak detection systems, is it possible  
21 that a leak could affect the Topeka shiner and the pallid  
22 sturgeon, as well as other endangered species?

23 A. It's possible.

24 Q. To your knowledge, does the Dakota Skipper or its  
25 habitat occur in the project area?

1 A. I believe that it does.

2 Q. And, to your knowledge, does the Western Fringed  
3 Prairie Orchid or its habitat occur in the project area?

4 A. It could, but it's unknown for certain.

5 Q. Have you or has anyone from your group spoken with  
6 Dakota Access regarding your recommendations?

7 A. Not directly, no.

8 Q. Why do you recommend against using water from water  
9 bodies that may contain listed species for hydrostatic  
10 testing?

11 A. I'm sorry. Could you say that again?

12 Q. Sure. Why do you recommend against using water for  
13 hydrostatic testing that comes from water bodies that may  
14 contain listed species?

15 A. Oh. Because the process of appropriating water from  
16 a stream, essentially a pump and a hose, if not done  
17 properly, could essentially trap or -- yeah. Trap --  
18 trap a fish, trap an endangered species.

19 Q. Can you tell us what the impact would be to any of  
20 the listed species if it takes three years or longer to  
21 restore grasslands to their preconstruction condition?

22 A. It depends on the species. It depends on the  
23 habitat.

24 Q. Let's take the most likely to be heavily impacted  
25 species, if you understand what I'm saying. The most

1 sensitive to the change.

2 MS. SEMMLER: I do object to the extent this  
3 calls for speculation. Certainly if the witness can  
4 surmise based on his experience, that's one thing, but I  
5 think there's -- to a large extent this calls for  
6 speculation.

7 MS. BAKER: I can clarify that.

8 Q. Based on your experience, what would be the impact  
9 to these species if it takes three or more years to  
10 restore grasslands?

11 A. I'm afraid that does require some species specific  
12 knowledge that I don't have.

13 Q. That you don't have? Okay. Thank you.

14 MS. BAKER: And I have nothing further for this  
15 witness. Oh, I'm sorry. Strike that.

16 Q. I have nothing further regarding the testimony of  
17 Cameron Young. I would like to move to the testimony of  
18 David Nickel.

19 You mentioned wanting to clarify USAs. What is the  
20 significance of a USA?

21 A. Let me just get to the right page here. 49 CFR 195,  
22 and I think it's provision or Subsection 4, defines USAs  
23 or unusually sensitive areas. I don't think I have that  
24 full definition in front of me, but the upshot, as was  
25 discussed yesterday, is that if an area is crossed by a

1 pipeline that's subject to PHMSA regulation and that area  
2 is determined to be an unusually sensitive area,  
3 unusually sensitive areas are included in the definition  
4 of high consequence areas.

5 And only because I was listening to the testimony  
6 yesterday, my understanding is that that would change  
7 the -- have an effect on the requirements of the company  
8 while it's operating its pipeline. Not in the design or  
9 construction of it.

10 Q. Okay. So is it then correct that the proposed  
11 project would cross HCAs?

12 A. So the clarification that I would add, and this is,  
13 as I said, consistent with our testimony but perhaps a  
14 nuance to the testimony provided yesterday, is that we  
15 believe it is a determination of a regulatory authority,  
16 a governmental agency, whether an area that is crossed by  
17 the pipeline is, in fact, unusually sensitive.

18 So simply the act of a pipeline route crossing  
19 habitat, for instance, for a protected species does not  
20 automatically -- in our reading of the statute does not  
21 automatically qualify that area as a USA and, therefore,  
22 an HCA.

23 The determination is whether that habitat is  
24 unusually sensitive. You can have habitat that is  
25 suitable for a protected species that is not unusually

1 sensitive.

2 So that is our clarification in our reading of the  
3 rule is that, again, using the habitat example, the Fish  
4 & Wildlife Service would have to make the determination  
5 that a particular piece of habitat crossed by the route  
6 is somehow unusually sensitive for that area to then  
7 qualify as an HCA.

8 Q. Okay. And you may have just answered this, but  
9 which governmental body will make the determination about  
10 whether each area is unusually sensitive?

11 A. So it's a PHMSA regulation. So PHMSA enforces it.  
12 But PHMSA's not experts on protected species habitat so  
13 it would have to be a determination by Fish & Wildlife  
14 Service, I believe, that habitat is unusually sensitive,  
15 and then PHMSA would be required to enforce the  
16 regulations with regard to operation of the pipeline  
17 through that area.

18 Q. What triggers -- what would trigger the Fish &  
19 Wildlife Service to make a determination like that? How  
20 would they be alerted to the existence of it possibly?

21 A. Sure. That's outside of my specific knowledge. I'm  
22 not sure how that would work.

23 Q. Okay. And if a decision is made, if Fish & Wildlife  
24 Service does make a decision that an area is unusually  
25 sensitive, does the Applicant have any obligation to

1 notify the Commission it's crossing the USA?

2 MS. SEMMLER: Objection. This witness has  
3 testified he's not aware of some of those processes. If  
4 he's aware of the Commission to wildlife correspondence,  
5 that's one thing, but it sounds like it's outside of his  
6 area.

7 MS. BAKER: If the witness has this knowledge, I  
8 would like for him to answer. And if he does not have  
9 this knowledge, I would like for him to so say.

10 MS. WIEST: It's overruled.

11 A. Could you restate the question?

12 Q. Sure. If a determination is made by Fish & Wildlife  
13 Service that an area is unusually sensitive, would the  
14 Applicant have any obligation to alert the Commission as  
15 to that determination?

16 A. If it was during this hearing, during this  
17 proceeding, or up to the point where a Permit was  
18 approved or denied, I believe that is the case. Because  
19 it's at issue in this hearing.

20 After let's say the Permit is issued, I don't  
21 believe that there is a mechanism that would require  
22 that, at least not as part of the federal rule.

23 Q. Based on your experience and your knowledge, has oil  
24 from a spill or a leak ever traveled more than  
25 four-tenths of a mile or ever contaminated water more

1 than four-tenths of a mile away?

2 A. Not in my knowledge.

3 Q. Is it possible under worst-case scenarios for oil  
4 from a leak or spill to travel this distance or to  
5 contaminate water this distance from a spill site?

6 A. Are you talking about an overland?

7 Q. Under any condition that might be present --

8 A. Okay.

9 Q. -- along the pipeline route.

10 A. In my experience, if an oil spill enters a moving  
11 water body, a stream, then it can travel greater than  
12 that distance. I do not know of any specific instances  
13 where oil pipeline release on the land has traveled  
14 greater than that distance on the land.

15 Q. Now I don't know if you can answer this question  
16 because it may be specific to the drafter of the  
17 testimony, but if you are able to.

18 The testimony states that you have experience  
19 preparing reliability and safety sections of  
20 environmental impact statements. Based on your  
21 experience, would you say the studies conducted by Dakota  
22 Access with respect to reliability and safety are  
23 equivalent to that section of an actual EIS?

24 A. You're right. I'm afraid I can't answer that.

25 Q. Okay. Thank you. And then just a few questions

1 from the testimony of Mr. Ledin.

2 Why is a Permit required for temporary discharge of  
3 hydrostatic test water and trench dewatering water?

4 A. In terms of the policy behind it, I could speculate,  
5 but I don't know for sure what the reason. I just know  
6 that a permit is typically required under state rules if  
7 the State administers those provisions of the Clean Water  
8 Act.

9 Q. Okay. Well, I will not ask you to speculate.

10 Is water discharged through or after these processes  
11 identical in quality to the water -- strike that.

12 Is the water that becomes discharged from these  
13 processes of the same quality as the water that went into  
14 these processes? In other words, is the output water as  
15 good of quality as the water that was taken from the  
16 source?

17 A. Sure. It's very much a site-specific question. I  
18 have, for instance, appropriated water from a river in  
19 North Dakota that was listed as essentially polluted for  
20 turbidity. It had a lot of sediment. And it was used  
21 for hydrostatic testing, discharged through a bell  
22 structure and returned to the river cleaner than it came  
23 out.

24 So it depends on the original quality of the water,  
25 the discharge mechanisms, and whether there might be



1 anything in the pipe. But if it's new pipe that hasn't  
2 been used, then the quality shouldn't be affected greatly  
3 by its use as hydrostatic test water.

4 Q. And does the same go for water used for trench  
5 dewatering?

6 A. Yeah. Yes. The same goes for trench dewatering,  
7 which is not -- it doesn't go through the pipe or pipe  
8 sections. It's just pumped out of the trench into a  
9 dewatering structure.

10 So, again, through that process it's probably pretty  
11 dirty, muddy in the trench, and then through the process  
12 of discharging through whatever discharge structure is  
13 used there are lots of different BMPs that can be used.  
14 It is almost always cleaner coming out of the trench.

15 Q. But the water wasn't muddy and dirty before it was  
16 put into the trench, was it?

17 A. Well, it depends on how it got there. It might be  
18 groundwater that's coming up into the trench, or it might  
19 be rainwater flowing off the land into the trench. So it  
20 all depends.

21 Q. Okay. What is the concern you have regarding where  
22 hydrostatic test water is withdrawn and discharged if the  
23 output water is, you know, of this similar quality to the  
24 input water?

25 A. So under the example that I provided about the

1 appropriation discharge from a river in North Dakota, the  
2 company could have been subject to a fine because even  
3 though the water that was being discharged back to the  
4 river was cleaner than the source water -- it was the  
5 same source -- it still exceeded permit limits for  
6 suspended solids. And so we had to make the argument  
7 that it exceeded limits because the source water exceeded  
8 the limits.

9 So that's one of the reasons for the recommendation  
10 is to avoid permit violations.

11 Q. Okay. Now are any of the potential sources of water  
12 contaminated in that nature that might be used for the  
13 Dakota Access?

14 A. I don't know. And I don't know that the sources for  
15 hydrostatic test water have even been identified. I'm  
16 not sure.

17 Q. But where those sources are would be of concern?

18 A. It's just something that should, as a matter of best  
19 practices, be considered when identifying sources for  
20 hydrostatic test water. It is the quality of the water  
21 to make sure that the appropriate BMPs are used during  
22 the discharge process to make sure that the permit terms  
23 for the discharge are being complied with.

24 Q. This testimony states in your opinion the  
25 construction techniques and mitigation measured by Dakota

1 Access adequately minimized impacts to vegetation, and  
2 yet there are a number of recommendations made.

3 If impacts are adequately minimized, why are there  
4 so many recommendations?

5 A. I believe that recommendation is based on the  
6 spectrum of, if you will, minimum best practices and then  
7 higher measures that could be used to either assure best  
8 restoration or speed the rate of restoration.

9 So that's the purpose of recommendations is ways to  
10 either do it better or to monitor the restoration to make  
11 sure that it's -- that it lasts.

12 Q. And with respect to construction techniques and  
13 impacts to water bodies, the question on page 5, line 33  
14 states, In your opinion, do the construction techniques  
15 and mitigation measures identified by Dakota Access  
16 adequately minimize the impacts to water bodies?

17 And the response was not yes, but it was not no.  
18 Does that mean your answer is no to that question?

19 A. We believe that if the recommendations in the next  
20 answer are followed, that then the answer would be yes.

21 Q. So without those additional recommendations, your  
22 answer would be no?

23 A. Yes. That's correct.

24 Q. Thank you.

25 MS. BAKER: The Yankton Sioux Tribe has no

1 further questions for the witness.

2 Thank you.

3 MS. WIEST: Mr. Rappold.

4 MR. RAPPOLD: Yes.

5 CROSS-EXAMINATION

6 BY MR. RAPPOLD:

7 Q. Good morning, Mr. Flo.

8 A. Good morning.

9 Q. Matt Rappold. I represent the Rosebud Sioux Tribe.  
10 Nice to see you again.

11 A. Yes. You too.

12 Q. Thank you. Good to be seen. Most of the time.

13 I just have a couple of questions for you. There's  
14 been considerable discussion over the course of the last  
15 week and a half regarding high consequence areas and also  
16 unusually sensitive areas.

17 A. Yes.

18 Q. As I'm sure you're aware.

19 We have -- along the lines of that testimony and  
20 discussion there's been considerable inquiries regarding  
21 who makes the final determination as to whether or not a  
22 certain area qualifies under the rule.

23 A. Sure.

24 Q. Okay.

25 So your testimony was that fish and -- you believe

1 that Fish & Wildlife Service makes the final  
2 determination and then PHMSA would enforce the  
3 appropriate applicable rule if there's a determination.  
4 Is that accurate?

5 A. That is accurate. I don't know if there is any  
6 communication between those two agencies. That I can't  
7 answer.

8 But if the question posed to the Fish & Wildlife  
9 Service was is this habitat unusually sensitive, they're  
10 the ones that could answer that.

11 Q. Okay.

12 A. And then PHMSA through the audit process, I believe,  
13 enforces a pipeline company's adherence to its  
14 operational requirements.

15 Q. And that's assuming that the two -- that they  
16 actually communicate with each other. And you don't know  
17 if they do or not?

18 A. I don't know if they do.

19 Q. Okay.

20 A. But ultimately it's incumbent upon the company to  
21 operate the pipeline in accordance with PHMSA  
22 regulations.

23 Q. All other applicable laws?

24 A. Yes.

25 Q. So that's just on federal land; correct?

1 A. No.

2 Q. No?

3 Who would make the determination on nonfederal land  
4 where there's not a federal nexus? In other words, I'm  
5 sure you're aware that there's numerous Fish & Wildlife  
6 Service grasslands and wetland easements where the  
7 pipeline runs.

8 Are you aware of that?

9 A. Yes.

10 Q. Okay. So are you testifying then that Fish &  
11 Wildlife Service would have the jurisdiction to make  
12 those determinations along the entire route?

13 A. I think that it should be clear that when we're  
14 talking about PHMSA regulations we're talking about the  
15 operation of the pipeline.

16 Q. Right. Well, operation of -- the regulations also  
17 contemplate certain requirements, safety requirements,  
18 for certain areas that aren't required in other areas;  
19 correct?

20 A. Meaning?

21 Q. Meaning that --

22 A. HCAs are not HCAs, for instance?

23 Q. Sure. There's different regulations, safety  
24 regulations, for HCA areas?

25 A. Sure.

1 Q. As compared to non-HCA areas?

2 A. Correct. That's my understanding.

3 Q. Okay. So on this project we have land that has a  
4 federal connection; right?

5 A. Yes.

6 Q. And we have land that doesn't have a federal  
7 connection.

8 A. Yes.

9 Q. Correct?

10 Okay. So for the nonfederal land, all right, who  
11 makes that determination if this area is a high  
12 consequence area, subject to the applicable regulations  
13 for high consequence areas? Who makes that  
14 determination?

15 A. Sure. Well, since other definitions or categories  
16 within high consequence areas have nothing to do with  
17 federal or not federal lands such as populated areas, I'm  
18 not sure that I can adequately answer your question.

19 Q. Okay. That's fair enough if you don't know the  
20 answer.

21 Is there another witness whose testimony you've  
22 adopted might have been able to answer that question?

23 MS. SEMMLER: Objection. Calls for speculation.

24 MR. RAPPOLD: My response is this entire process  
25 calls for speculation. Really it does.

1 MS. WIEST: Can you just move on.

2 MR. RAPPOLD: That is my response. We're asking  
3 witnesses to apply information and data to a certain set  
4 of rules and speculate as to whether or not the proposed  
5 activity will have an effect on a particular species.  
6 This entire process calls for speculation.

7 That's my response.

8 MS. SEMMLER: May I respond?

9 MS. WIEST: Yes.

10 MS. SEMMLER: He asked what another witness  
11 could have or would have possibly said. That crosses the  
12 line of speculation.

13 MR. RAPPOLD: He's testifying for that witness.  
14 And additionally towards the end of Ms. Baker's  
15 questioning regarding I believe it was Mr. Young's  
16 testimony the witness's answer was that question requires  
17 species specific knowledge that I don't have and I can't  
18 answer that question.

19 MS. WIEST: The objection is sustained.

20 MR. RAPPOLD: This is just really difficult to  
21 deal with when we have a witness who's adopting other  
22 people's testimony and then can't testify about their  
23 testimony. I believe it really interferes --

24 MS. SEMMLER: Ms. Wiest, I think counsel's  
25 testifying again. We're in the midst of witness



1 examination here.

2 MS. WIEST: Can you just move on to your next  
3 question?

4 MR. RAPPOLD: I'm not testifying.

5 Yeah.

6 Q. What are the -- are you familiar with the categories  
7 of protection under the Endangered Species Act?

8 A. Yes. Threatened and endangered and candidate.

9 Q. Let's talk about candidate species. Well, actually  
10 what's threatened mean?

11 A. Threatened -- boy, I don't have it memorized.  
12 Threatened is the highest level of concern for the  
13 potential extinction of a species.

14 Q. Okay. What's threatened?

15 A. Threatened is -- has the potential to become  
16 endangered.

17 Q. And what's candidate?

18 A. Candidate is a species that is not listed as  
19 threatened or endangered and, therefore, has no direct  
20 protections under the Endangered Species Act but is being  
21 evaluated for listing.

22 Q. Are you aware of why candidate species are not  
23 actually listed as threatened or endangered?

24 A. Because the Fish & Wildlife Service studies,  
25 evaluates, monitors candidate species so that they can be

1 listed if they reach a certain threshold of risk, but my  
2 understanding is that it's not a foregone conclusion that  
3 that species is going to be endangered.

4 Q. Would you agree that another reason that a species  
5 is listed as a candidate is if there's not enough room on  
6 the endangered and threatened species list?

7 Would you agree with that statement?

8 A. If that's the case, I don't know that that's true.

9 Q. You don't know.

10 I'll ask, is there another witness whose testimony  
11 you've adopted may have been able to answer that  
12 question?

13 MS. SEMMLER: Same objection. He's asking what  
14 another witness could have said.

15 MR. RAPPOLD: Same response. Because he's  
16 adopted testimony of what other witnesses have said.

17 MS. WIEST: Sustained.

18 Q. I'd like to draw your attention -- I'll have this  
19 marked. It's Rosebud Sioux Tribe Exhibit 12. I'm going  
20 to have a paper copy.

21 MR. RAPPOLD: It should be electronically  
22 available on the website.

23 (Exhibit RST 12 is marked for identification)

24 Q. Can you turn to page 2, Mr. Flo?

25 A. Yes.

1 Q. RST Exhibit 2 is the U.S. Fish & Wildlife Service  
2 Sprague's pipit conservation plan.

3 Are you familiar with conservation plans?

4 A. I know what they are.

5 Q. You've heard of them?

6 A. Yes. I've never written one.

7 Q. You've never read one?

8 A. No.

9 Q. Not in your entire professional career have you ever  
10 read --

11 A. Written. I said written.

12 Q. No. I asked have you read one?

13 A. Yes.

14 Q. Okay. Good. Good. Sorry. I misheard you.

15 Now on page 2 the heading of page 2 is called  
16 Legal Status. Would you agree with that?

17 A. Yes.

18 Q. And then further down on page 2 we have several  
19 categories of legal statuses of the bird Sprague's pipit.

20 The first one is Global; correct?

21 A. Yes.

22 Q. And under the Global section it identifies all  
23 around the world the various levels of protection and  
24 different countries that have laws that protect this  
25 bird; correct?

1 A. Yes.

2 Q. Okay. And so the Sprague's pipit is protected by a  
3 number of different countries. Would you agree with  
4 that?

5 A. Yes, I would. I haven't read it to know whether  
6 it's actually protected.

7 Q. Okay. Well, the first line under Global, would you  
8 agree that it says "The Sprague's Pipits are federally  
9 protected in the United States, Canada, and Mexico under  
10 the Migratory Bird Treaty Act?

11 A. Yes. I see that.

12 Q. Okay. Would you agree that they're also listed on  
13 the International Union For The Conservation Of Nature  
14 Red List as vulnerable?

15 Would you agree with that?

16 A. Yes.

17 Q. Okay. I'm going to move over to under the category  
18 heading of United States.

19 A. Okay.

20 Q. And that's on the right-hand side of the page.

21 A. I see it.

22 Q. Do you see that?

23 A. Yes.

24 Q. Now this talks specifically about the question that  
25 I asked you relating to different categories of

1 protection under the Endangered Species Act; correct?

2 Take -- read that entire paragraph on the  
3 United States first. I'm sorry.

4 (Witness examines document)

5 A. Okay.

6 Q. Okay. Now in that section that you just read does  
7 it have any information relating to why a species would  
8 just be a candidate and not actually on the threatened  
9 and endangered list?

10 MS. SEMMLER: I object. This Commission doesn't  
11 have jurisdiction to determine what species are or are  
12 not placed on those lists.

13 The Applicant is obligated to abide by the  
14 agency who does make those findings, but, you know,  
15 having this discussion I just don't know what the  
16 Commission will do with it as this is out of the realm of  
17 this Commission's jurisdiction. Irrelevant.

18 MR. RAPPOLD: We're not asking the Commission to  
19 make any sort of determination as to whether or not any  
20 bird, species, animal, plant should or should not be on  
21 the endangered species list or protected.

22 I understand that you don't have that  
23 jurisdiction, and I'm certainly not asking you to do  
24 that.

25 The witness was asked a question related to his

1 knowledge of the Endangered Species Act, and what his  
2 testimony is getting to is whether or not the proposed  
3 project would have an effect on any listed species.

4 I asked him a question about reasons why a  
5 species would remain a candidate and not make it to the  
6 actual endangered or -- endangered or threatened  
7 categories. The witness didn't fully know why a species  
8 would remain a candidate.

9 And I'm getting to the point where he will  
10 testify as to why species remain candidates.

11 It is relevant. There are species along the  
12 pipeline route that are protected. There's candidate  
13 species. We've also heard testimony about who has the  
14 final determination of designated certain areas as  
15 requiring protection, triggering certain different rules  
16 regarding integrity management and safety operations of  
17 the pipelines.

18 Furthermore, the Commission in its permitting  
19 process regularly and routinely examines laws from other  
20 jurisdictions that they do not have the authority to  
21 enforce, and the Commission looks at applications and  
22 makes a determination as to whether or not it believes  
23 the applicant can comply with those laws. And that  
24 determination is made independently of the Commission's  
25 ability to actually enforce those laws.

1           A prime example is the requirements of the  
2 Pipeline Safety Act and its implementing regulations  
3 49 CFR 194 and 195. The Commission does that all the  
4 time in these proceedings, and I would reckon to say it  
5 does that in all of its proceedings.

6           MS. WIEST: Objection overruled.

7 Q.    So have you had an opportunity to review the entire  
8 paragraph under United States?

9 A.    Yes, I did.

10 Q.    About the middle of the road there -- is there  
11 anything in that paragraph that would change your answer  
12 as to why a species would remain a candidate?

13 A.    I can read what you're trying to get at, and I don't  
14 know that I agree with your original assessment.

15 Q.    That's okay. We don't have to agree with each  
16 other, but just go ahead and read what's there.

17 A.    "Fish & Wildlife Service determined that the  
18 petition presented substantial information indicating  
19 that listing the Sprague's pipit is warranted but  
20 precluded by higher listing priorities."

21 Q.    Okay. To me that kind of says there's not enough  
22 room on the list. There's other birds --

23           MS. SEMMLER: I object. Counsel's testifying  
24 right now as to what he thinks. I ask that that be  
25 stricken from the record.

1 MR. RAPPOLD: I'm not testifying. On  
2 cross-examination I'm permitted to engage in leading  
3 questions on cross-examination. The Rules of Evidence  
4 permit that. And I'm laying a little bit of  
5 foundation -- not foundation, but I'm prefacing what I'm  
6 going to say ultimately to get to that point.

7 MS. WIEST: Yes. I think he is prefacing coming  
8 up to a question.

9 Objection overruled.

10 MR. RAPPOLD: I would ask, Cheri, can you repeat  
11 what I was saying up until the point when I was  
12 interrupted.

13 (Reporter reads back the last question.)

14 Q. There's other birds and other species that are more  
15 threatened. Would you agree with that?

16 A. I would agree with that, yes.

17 Q. Okay. Thank you.

18 A. Yes.

19 Q. Would it surprise you to know there is what --  
20 strike that.

21 What's the habitat, to your knowledge, for the  
22 Sprague's pipit?

23 A. Large tracts of grasslands.

24 Q. Uh-huh.

25 A. Greater than about 71 acres. Void of trees and



1 shrubs for nesting.

2 Q. Okay. Are you aware of any of that habitat being  
3 along the route?

4 A. I am not aware.

5 Q. Have you reviewed any -- you're not aware.

6 Are you aware that the pipit is listed in Campbell  
7 and McPherson Counties?

8 A. Yes.

9 Q. Okay. And do you agree with Mr. Young's statement,  
10 Cameron Young on page 3, "Previous surveys or lack of  
11 documented occurrences do not necessarily warrant a no  
12 effect determination"?

13 Do you agree with that?

14 A. Yes.

15 Q. Okay. If you learned that there are large tracts of  
16 this type of habitat along the route, would that surprise  
17 you?

18 A. It might surprise me.

19 Q. Why would it surprise you?

20 A. Because my impression of the -- of the project area,  
21 the project route, is that it's largely agricultural.

22 Q. And does that mean that a lot of this habitat has  
23 been eliminated by human activity?

24 A. Yes.

25 Q. And isn't it also true that human activity is linked

1 to a lot of habitat elimination for species?

2 A. Yes.

3 Q. And if a particular animal doesn't have a place to  
4 live and habitat, that's going to cause that animal  
5 problems.

6 Would you agree with that?

7 A. Yes. I would agree with that.

8 Q. Okay. And one of the purposes of the Endangered  
9 Species Act is to keep species off the list; is that  
10 correct?

11 A. Yes. By -- through -- yes. That's right.

12 Q. Right. Okay. Because once a species gets on the  
13 list, we don't have a law that says you've got to stay on  
14 the list; right? Endangered species doesn't do that.

15 MS. SEMMLER: Objection. Calls for a legal  
16 conclusion. He asked about a law.

17 MR. RAPPOLD: He went to law school. He's got a  
18 law degree. I think the witness is perfectly capable of  
19 answering the question. This is what he does for a  
20 living.

21 MS. WIEST: I think -- I will overrule the  
22 objection.

23 A. My understanding of the Endangered Species Act is  
24 that once the species is listed the purpose is to get it  
25 off the list.

1 Q. Okay. Thanks.

2 Would it surprise you to learn there's at least one  
3 tract consisting of 111 acres of native grasslands that's  
4 consistent with Sprague's pipit habitat?

5 A. Yes.

6 Q. That would surprise you?

7 A. Yeah.

8 Q. Would it also surprise you to learn that that land  
9 is not located in any area that the Fish & Wildlife  
10 Service has jurisdiction over?

11 A. No.

12 Q. It wouldn't surprise you?

13 A. No.

14 Q. Okay. So that gets back to my -- the beginning of  
15 my question.

16 Who's going to make that determination?

17 A. Through the process that we've discussed previously,  
18 through the Nationwide Permit 12 process with the Corps  
19 of Engineers, the Corps consults with the Fish & Wildlife  
20 Service.

21 Q. Uh-huh.

22 A. And the Fish & Wildlife Service will -- should make  
23 a determination as to the effect of that permitting  
24 process with regard to protected species.

25 Your point is that if it's not federal land or the

1 Corps of Engineers does not have jurisdictional authority  
2 over it because it's an upland, it's not a wetland, it's  
3 not a water body, who makes the determination?

4 My understanding is that in this case under  
5 Section 10 of the Endangered Species Act it's incumbent  
6 upon the project proponent to not take a listed species.

7 Q. And you would agree that although this particular  
8 species is not on the Endangered Species Act, it is  
9 protected by other federal laws; correct?

10 A. Yes.

11 Q. I'd like you to turn to page 6 of Rosebud Sioux  
12 Tribe Exhibit 12, the same document that we've been  
13 working from.

14 On the right-hand side of the page towards the top  
15 there you'll see a heading that says United States.

16 A. I see it.

17 Q. Directly under that you'll see a subheading in  
18 italics titled Breeding.

19 Can you go ahead and read that paragraph, please, to  
20 yourself.

21 A. Okay.

22 Q. Thank you.

23 (Witness examines document)

24 A. Okay.

25 Q. Okay. Do you know where -- after you've read that,

1 do you know where the Sprague's pipit breeding grounds  
2 primarily occur?

3 A. Yes, I do.

4 Q. And where is that?

5 A. Excuse me. Northern Great Plains, primarily north  
6 central and eastern Montana to North Dakota, through to  
7 northwestern and north central South Dakota.

8 Q. Thank you. Directly under that -- well, do you know  
9 where the migration route of the Sprague's pipit is?

10 You can read the next paragraph if you want.

11 A. Yep.

12 Q. We'll cut to the chase here.

13 (Witness examines document)

14 A. Yes. Fall migration primarily occurs through the  
15 Great Plains from late September through early November.  
16 Spring migration, central Great Plains.

17 Q. Okay. And they have spring here identified as April  
18 and May. Would you agree with that?

19 A. Yes.

20 Q. Mr. Young's testimony regarding the pallid sturgeon.  
21 On page 4 he states that "No analysis was conducted to  
22 determine the potential impacts caused by a leak of HDD  
23 crossings."

24 Do you agree with that, that no analysis was  
25 performed?

1 A. Yes. Well, I agree that we did not have any  
2 analysis to review.

3 Q. So if it was performed, it wasn't provided to you?

4 A. Right. But I would expect that analysis to be part  
5 of the federal consultation process.

6 Q. Would that be something that you would normally  
7 expect to be provided to a group like yourself that  
8 reviews applications?

9 A. Not necessarily.

10 Q. No?

11 A. Not in reviewing applications through the state  
12 process when the analysis is likely to be part of the  
13 federal process.

14 Q. But we don't know if it's part of the federal  
15 process or not.

16 A. Not for sure.

17 Q. Okay. And you haven't seen anything --

18 A. That's correct.

19 Q. -- that would indicate that it was done.

20 The same -- Dakota Skipper, the testimony on page 4  
21 indicates that no surveys were conducted to determine if  
22 this species or its habitat occurs in the project area.

23 Would you agree with that statement?

24 A. Again, I agree that if surveys were conducted, we  
25 don't know about them.

1 Q. Well, this statement says no surveys were conducted.  
2 And earlier when Ms. Edwards was asking you to adopt this  
3 testimony she asked you if there was any changes,  
4 updates, or clarifications that you desired to make.

5 Do you remember doing that?

6 A. I do.

7 Q. And do you recall changing anything relating to this  
8 portion of the testimony?

9 A. I did not.

10 Q. Okay. So then is it true that this testimony states  
11 that no surveys were conducted?

12 A. That's what this testimony says. That's right.

13 Q. And then you haven't changed that so this is  
14 accurate; correct?

15 A. It is accurate, to the best of my knowledge. That's  
16 correct.

17 Q. Okay. Also regarding the Western Prairie Fringed  
18 Orchid -- I'm still on page 4 -- the last line of that  
19 little short paragraph says No surveys were conducted to  
20 determine if this species or its habitat occurs in the  
21 project area.

22 Do you agree with that statement?

23 A. I agree, to the best of my knowledge, no surveys  
24 were conducted.

25 Q. You would also agree that is not a portion of the

1 testimony that you clarified, updated, earlier this  
2 morning?

3 A. I agree.

4 MR. RAPPOLD: I'm trying to find an exact  
5 location on a page. Excuse me.

6 I have no further questions at this point.  
7 Thank you, Mr. Flo.

8 MS. WIEST: Go ahead, Ms. Craven.

9 CROSS-EXAMINATION

10 BY MS. CRAVEN:

11 Q. Good morning, Mr. Flo. Kimberly Craven, attorney  
12 for the Indigenous Environmental Network and Dakota Rural  
13 Action.

14 How are you this morning?

15 A. I'm doing well. Thank you.

16 Q. I want to start off getting some clarification of  
17 some testimony that I believe Mr. Ledin provided.

18 MS. CRAVEN: I had it right here, and now it's  
19 disappeared.

20 Q. It's Mr. Nickel's testimony. On page 2 of  
21 Mr. Nickel's testimony -- and this is getting back to  
22 discussing the HCAs and the USAs.

23 A. Okay.

24 Q. Are you there?

25 A. Yeah.



1 Q. The question was asked based on your review of the  
2 Revised Application, any related Interrogatories, do you  
3 believe the project will cross any unusually sensitive  
4 areas, USAs? If so, please explain.

5 And the answer is Based on NRG's review of Dakota  
6 Access's revised the Application and related  
7 Interrogatories, we believe that the project may cross  
8 USAs in South Dakota. A determination of whether an  
9 area is, in fact, unusually sensitive as defined by  
10 49 CFR 195.6 is ultimately to be made by the governmental  
11 body with regulatory authority over the drinking water  
12 or ecological resource that is being crossed.

13 And there's been some different various testimonies.  
14 Could you please provide an elaboration of that statement  
15 and a clarification of it.

16 A. Yes. So going back to the example of habitat, so  
17 ecological resource would include habitat for protected  
18 species. And if the agency that had regulatory authority  
19 over that listed species determined that a particular  
20 area of habitat was unusually sensitive, then we believe  
21 that that area would qualify under 49 CFR 195.6 as a USA  
22 and, therefore, as an HCA.

23 Q. And I guess I'd like to get a better understanding  
24 of the governmental authorities as that applies to  
25 drinking water.

1 A. Okay.

2 So, again, I apologize. I don't have the CFR in  
3 front of me. But the definition also referred to  
4 drinking water resources -- I'm paraphrasing -- and so I  
5 think later we refer to Minnehaha County Zone A wellhead  
6 protection and source water areas. Other examples,  
7 Lewis & Clark water system.

8 So if any of these areas that are defined as  
9 drinking water source areas are defined by those bodies  
10 that control them or regulate them as unusually  
11 sensitive, that's how we believe the CFR comes into play.

12 Q. Okay. So how would that apply to the Missouri  
13 River, which is a major source of drinking water for many  
14 people?

15 A. The Missouri River is not crossed by the project in  
16 South Dakota.

17 Q. It is a source of drinking water for many people so  
18 I would imagine that it would fit into the category of an  
19 unusually sensitive area as defined as drinking water  
20 under this HCA.

21 A. If it was crossed.

22 Q. Well, it's crossed in North Dakota twice.

23 MS. SEMMLER: Objection. Counsel's testifying.  
24 There wasn't a question there.

25 Q. Okay. Do you know --

1 MS. WIEST: Okay. The objection is sustained.  
2 If you can rephrase the question.

3 MS. CRAVEN: Okay.

4 Q. Do you know that the DAPL crosses the Missouri River  
5 twice in North Dakota?

6 A. Yes.

7 MS. EDWARDS: Objection. Outside the scope of  
8 this witness's testimony. He didn't testify about  
9 anything in North Dakota.

10 MS. CRAVEN: I'm trying to get to the drinking  
11 water question here.

12 MS. WIEST: I'll allow it to try to get to the  
13 drinking water question.

14 Q. If a spill were to occur in the Missouri River in  
15 North Dakota, would that impact the people who drink the  
16 water in South Dakota?

17 MS. SEMMLER: I'm going to make an objection  
18 there. He's not a hydrologist. He didn't study drinking  
19 water effects. So I'm going to echo the objection that  
20 Staff just made.

21 MS. EDWARDS: I'd also object that that's  
22 speculation on his part.

23 MS. CRAVEN: Mr. Flo has adopted the testimony  
24 of Mr. Nickel who has testified to hydrology, USAs,  
25 hydrostatic testing, all of this stuff.

1 MS. WIEST: Overruled. He does talk about  
2 drinking water in the testimony.

3 CHAIRMAN NELSON: I'm going to sustain.

4 COMMISSIONER HANSON: I'll overrule.

5 COMMISSIONER SATTGAST: I'll overrule.

6 A. So I don't think that there's any way to answer  
7 that question because there are too many variables at  
8 play.

9 Q. I'm asking about downstream users of water.

10 A. Right. And I don't know the answer to that question  
11 because I imagine that there are several dams or could be  
12 between the point of crossing or points of crossing in  
13 North Dakota and the downstream water users. And so  
14 that's one variable.

15 There are other variables such as the volume of the  
16 spill, the speed and effectiveness of the response.  
17 There's just no way to tell without a lot more  
18 information.

19 Q. Are you aware that there are three tribal water  
20 intakes for drinking water between the crossing and the  
21 Oahe Dam?

22 A. No. I was not aware.

23 Q. And are you aware that the Mni Sose Water Pipeline  
24 comes from the Missouri River and is a source of  
25 drinking water for many tribal and non-Indian

1 communities?

2 A. No, I don't. I'm not aware of that one.

3 Q. Would you consider the Missouri River to be an HCA  
4 if it is a source of drinking water?

5 MS. SEMMLER: I object. This has been asked and  
6 answered. The crossing is in North Dakota.

7 MS. CRAVEN: I'm not asking about the crossing.

8 MS. WIEST: I think this question has been asked  
9 and answered.

10 Sustained.

11 MS. CRAVEN: I don't recall his answer to it  
12 then, whether he would consider it an HCA.

13 A. My understanding from other testimony is that it has  
14 been defined as an HCA.

15 Q. Thank you. Do you agree that there should be no  
16 withdrawals of water for hydrostatic testing from waters  
17 which are habitats for protected species?

18 A. Unless allowed by the government agency that  
19 regulates withdrawals of water from the particular water  
20 body.

21 Q. And do you agree that natural grasslands should be  
22 identified prior to construction and avoided altogether?

23 A. That is our recommendation.

24 Q. Do you agree that the permanent easement size is too  
25 big?

1 A. Well, it depends on -- it depends on whether it's  
2 crossing a sensitive area or a habitat area. In general  
3 I don't think the permanent easement is too big.

4 Q. With respect to protected species, do you agree the  
5 Revised Application is inadequate?

6 A. I don't call it inadequate. I think it's incomplete  
7 until the Fish & Wildlife Service consultation is  
8 complete.

9 Q. DAPL planned six open cuts with water bodies with  
10 Topeka shiner habitat. Do you concur with that?

11 A. I think that's correct.

12 Q. Would that affect the Topeka shiner habitat?

13 A. It could. But that's for the Fish & Wildlife  
14 Service to determine.

15 MS. SEMMLER: You know, I'm going to object. I  
16 think that misstates the evidence. There is not that  
17 number of open cut crossings. So I'd ask that that be  
18 stricken as it misstates the record.

19 MS. CRAVEN: I believe that's in Cameron Young's  
20 testimony.

21 MS. WIEST: Can you point to it?

22 MS. CRAVEN: Page 4. The question that's at the  
23 bottom, In your opinion, does Dakota Access properly  
24 mitigate the potential impacts the project could have on  
25 the Topeka shiner?

1           Going down to the third line, it says According  
2 to the Revised Application, there are eight water bodies  
3 that may contain Topeka Shiners. Of these, six will be  
4 open cut, thereby directly impacting fish habitat and  
5 potentially altering water quality, all of which may  
6 directly and indirectly affect Topeka Shiners.

7           MS. SEMMLER: And if I may respond that was  
8 modified by Ms. Howard in her direct testimony. She made  
9 that correction on the witness stand.

10          MS. CRAVEN: It's in this testimony right in  
11 front of us. It was not corrected today here. It's his  
12 testimony he's adopted.

13          MS. WIEST: Yes. This is the testimony that  
14 we're dealing with right now.

15           I think that we can look at the record, and the  
16 record will reflect the correct answer. And at this  
17 point I will overrule the objection.

18 Q. So can you answer that, please.

19 A. I'm sorry. I wasn't sure what the question was.

20 Q. Would the six open cuts affect the Topeka shiner  
21 habitat?

22 A. They could, but that's up to the Fish & Wildlife  
23 Service to determine in consultation with the Corps of  
24 Engineers.

25 Q. Should the sources for hydrostatic test water or for

1 discharge of test water ever be permitted in waters that  
2 are impaired where the TSSSS, meaning total suspended  
3 solid standards, have already been exceeded?

4 A. Yes. I mean, I think that that's up to the State to  
5 determine, but if TSS levels are exceeded in the source  
6 water or the discharge body, it's not a concern for me as  
7 a source water for appropriation or a discharge water  
8 body, assuming that the correct discharge -- both  
9 appropriation and discharge best management practices are  
10 in place.

11 Q. And just for the record, have you published any  
12 authoritative, scientific, or technical articles or  
13 treatises?

14 A. No.

15 Q. Has Mr. Nickel ever published any authoritative,  
16 scientific, or technical articles or treatises?

17 A. Not to my knowledge.

18 MS. CRAVEN: Thank you. No more questions.

19 MS. NORTHRUP: I have no questions. Thank you.

20 MS. WIEST: Just for break purposes, do you have  
21 many questions, Dakota Access?

22 MS. SEMMLER: Yeah. I don't know.

23 MS. WIEST: Let's take a break. We will take --  
24 I have 9:45. We'll take a 15-minute break and come back  
25 at 10:00.



1 (A short recess is taken)

2 MS. WIEST: Dakota Access.

3 CROSS-EXAMINATION

4 BY MS. SEMMLER:

5 Q. Hi. This is Kara Semmler for Dakota Access.

6 So before we took the break you were asked a few  
7 questions about water withdrawal. I'm going to start  
8 there. Okay?

9 A. Okay.

10 Q. Is it your understanding that the South Dakota  
11 Department of Environment and Natural Resources has a  
12 permitting process for that?

13 A. Yes.

14 Q. And if the Applicant abides by that Permit and their  
15 recommendations, does that satisfy you?

16 A. Yes.

17 Q. The process for that withdrawal, you commented on it  
18 needs to be done correctly, obviously; right?

19 A. Correct.

20 Q. Would it satisfy you if you knew that there was a  
21 screened intake which prevents the -- which prevents the  
22 entrapment of the species, in addition that the water  
23 withdrawal is suspended within the water column?

24 A. If we're talking about protected species in that  
25 water body and as long as the Fish & Wildlife Service

1 agreed with that method, or the Corps in consultation  
2 with the Fish & Wildlife Service, then yes.

3 Q. So, again, you would leave those -- that analysis up  
4 to those other agencies?

5 A. That's correct.

6 Q. We got a bit bogged down in definitions; HCA, USA.  
7 Rather than rehash any of that, let's talk about  
8 practically pipelines.

9 Practically, what does it mean to the pipeline when  
10 there is such an area identified?

11 A. Since I am not an expert on the operation of the  
12 pipeline, I would have to refer to the gentleman's  
13 testimony yesterday. I think that it was a much more  
14 thorough explanation than what I could offer.

15 Q. But it is your understanding, right, that PHMSA is  
16 the pipeline safety enforcement agency?

17 A. That's correct.

18 Q. And it is your understanding that PHMSA generates a  
19 map to show these HCA areas; right?

20 A. I do understand that that is the case. I'm not -- I  
21 haven't used the map so I don't know how often it's  
22 updated, generated, et cetera. But I know that that is  
23 one way for a company to perform its due diligence in  
24 identifying HCAs.

25 Q. The Endangered Species Act applies regardless of

1 whether there is a federal nexus; correct?

2 A. That's correct.

3 Q. And it's the -- under the act it's the species  
4 that's protected, not the habitat; correct?

5 A. Unless there is a habitat conservation plan in place  
6 for a specific location.

7 Q. And you mean designated critical habitat?

8 A. Yes. I'm sorry. Yes. That's correct.

9 Q. There was some question about how human activity can  
10 eliminate habitat. Do you remember that?

11 A. Yes.

12 Q. And you testified that farming, for example, can  
13 eliminate habitat; right?

14 A. Yes.

15 Q. Is it your understanding that this Applicant will  
16 reclaim, rehabilitate the habitat it passes through?

17 A. That's my understanding from the Application, that  
18 areas affected by construction of the pipeline will be  
19 restored after construction.

20 Q. Do you know what the State EIS process is?

21 A. I briefly reviewed the regulations so I know  
22 generally what is required. But I do not know what  
23 triggers a State EIS.

24 Q. So based on that review then, you know it's quite  
25 different than the federal?

1 A. Yes.

2 Q. A long-eared bat. I'm going to go there. Okay?

3 A. Okay.

4 Q. Are you aware of the 4D rule exception?

5 A. I am aware of it, but I'm not an expert in it.

6 Q. So you're not aware that pursuant to that rule,  
7 north of central Iowa the species is excluded from  
8 protection?

9 A. That is not the reading of the rule of  
10 Cameron Young, but I assume that through the Fish &  
11 Wildlife Service consultation whatever interpretation  
12 will be resolved.

13 Q. So, again, if the Applicant gets that necessary  
14 clarification through U.S. Fish & Wildlife Service,  
15 you're satisfied?

16 A. That's right. The Service is the expert for that  
17 matter.

18 Q. And I'm just going to generally ask. There was a  
19 list of species in Cameron Young's testimony. I just  
20 want to be sure we've got a clear record.

21 If U.S. Fish & Wildlife Service is consulted and any  
22 recommendations are followed, you're satisfied?

23 A. That's right. And so to the extent that somehow the  
24 Fish & Wildlife Service would not make a recommendation  
25 for a given species, that's when our recommendations

1 would apply.

2 But if the Fish & Wildlife Service either provides  
3 recommendations or concurs in the company's findings,  
4 then we're satisfied.

5 Q. So if the Fish & Wildlife Service makes no comment,  
6 makes no recommendation, you're satisfied with that as  
7 well then; right? Because they're not taking an active  
8 role, they're not concerned?

9 A. Well, the absence of a comment or a recommendation  
10 on the part of Fish & Wildlife Service doesn't mean that  
11 a species is not protected and, therefore, shouldn't be  
12 avoided.

13 Q. If a formal consultation is performed, does your  
14 position stand?

15 MR. RAPPOLD: Objection. Calls for speculation.

16 MS. SEMMLER: Asking about his understanding of  
17 the process.

18 MR. RAPPOLD: She didn't ask about his  
19 understanding of the process. She asked him to  
20 speculate.

21 MS. WIEST: Can you rephrase that question?

22 MS. SEMMLER: I'll just add a couple words.

23 Q. Based on your experience, based on your  
24 understanding of the process, if formal consultation  
25 takes place, does it change your opinion?

1 I'll ask it a different way. Based on your  
2 experience and your opinion, if formal consultation takes  
3 place and as a result of that formal consultation U.S.  
4 Fish & Wildlife Service doesn't make any recommendations,  
5 do you believe they're satisfied?

6 MR. RAPPOLD: Objection. The question's been  
7 asked and answered. The witness testified previously if  
8 Fish & Wildlife Service doesn't make a recommendation,  
9 then that's when their recommendations come in, meaning  
10 theirs meaning NRG.

11 He's answered the question.

12 MS. SEMMLER: This question is different because  
13 I've asked about formal consultation. There's a  
14 difference.

15 MS. WIEST: Overruled.

16 A. If the Service does not make a recommendation with  
17 regard to a specific species but concurs in the finding  
18 of the company, then that satisfies me.

19 Q. Thank you.

20 I just want to be sure the record is clear. You  
21 were asked some questions about dewatering. You don't  
22 think that the company actually puts water in the trench;  
23 right?

24 A. No. No. The water -- no. That's right. As I  
25 said, the water is incidental to the process either

1 because of runoff from rain or because of groundwater out  
2 welling into the trench.

3 Q. And based on your review, it appears that the  
4 company's using best management practices for dewatering;  
5 right?

6 A. That's correct.

7 Q. Weeds, cleaning stations. If the Applicant's  
8 working with the NRCS regarding weed management and is  
9 going to follow their recommendations, does that satisfy  
10 you?

11 A. I would only add the counties because the counties  
12 often have weed control officers as well. So yes.

13 Q. You mentioned muffling sound, muffling noise from  
14 equipment. Do you remember that?

15 A. Yes.

16 Q. What do you mean by that or --

17 A. Sure. So the concern is that the noise from  
18 construction equipment like starting up the engines in  
19 the morning on the right of way could, for instance,  
20 startle and interrupt breeding birds or roosting  
21 protected species.

22 And my clarification was that as long as equipment  
23 is kept in good working order, that shouldn't be a  
24 concern. That's just a industry standard of best  
25 practice.

1 Q. You mentioned that it is a usual requirement of  
2 permits. What -- can you name that permit?

3 A. It's often stated in a state routing permit that the  
4 company shall require the construction contractor to keep  
5 equipment in good working order.

6 Q. And so long as the equipment is properly tuned and  
7 functioning, that meets that requirement you've seen  
8 before?

9 A. That's correct. That's also a requirement of other  
10 state and federal permits.

11 Q. You were asked some questions about Ryan Ledin's  
12 testimony, page 5, measures to mitigate impacts on water  
13 bodies.

14 These are all generally best management practices;  
15 right?

16 A. I'm just quick reviewing.

17 Q. Starting at line 40?

18 A. Yes. Yes.

19 Q. And you have and as you testified before, I guess,  
20 you understand the company's following all best  
21 management practices?

22 A. That is my understanding.

23 MS. SEMMLER: Nothing further.

24 MS. WIEST: Any Commissioner questions?

25 CHAIRMAN NELSON: Have you ever been involved in



1 a pipeline project where a third-party monitor or  
2 inspector was employed to monitor both the construction  
3 and the reclamation process with the goal of ensuring the  
4 best possible outcome in a reclamation area?

5 THE WITNESS: Yes. Many times.

6 CHAIRMAN NELSON: Can you explain to me how  
7 that works? Who actually employs the monitor? Who pays  
8 for the monitor? What the responsibilities would  
9 typically be.

10 Give us a picture of that.

11 THE WITNESS: Sure. It's most common in the  
12 arena of FERC regulated natural gas pipelines, but it has  
13 also been adopted for crude oil pipelines by other state  
14 regulating agencies, including other Public Utilities  
15 Commissions, departments of natural resources, et cetera,  
16 anyone with direct regulatory authority over the  
17 construction activities.

18 And so what typically happens is that the  
19 company employs a consultant who hires and manages the  
20 environmental inspectors who assist the company in  
21 assuring compliance with the permits and conditions and  
22 other regulations and construction plans.

23 The agency would also have the ability to hire a  
24 consultant who hires and manages these -- the folks,  
25 essentially the same people who might be an environmental

1 inspector on one project and on another project they're a  
2 third-party compliance monitor.

3 So the agency hires the consultant and  
4 supervises the construction monitor with the help of the  
5 consultant. The construction monitor is in the field  
6 10 hours a day, six days a week observing the  
7 construction activities, knows the permits, the permit  
8 conditions.

9 That monitor does not have directorial ability,  
10 and I believe that monitor does not even have stop work  
11 authority, except maybe in safety situations. That  
12 monitor, depending on the terms of the contract,  
13 typically reports to the agency either daily or weekly  
14 and provides just a list of the activities observed, if  
15 there were any problem areas, if there were any  
16 concerns. Similarly, when things are done well, when  
17 things are done correctly, or over and above.

18 And in those situations that I'm familiar with  
19 the cost of that process to employ and engage the monitor  
20 and the firm that hires and manages, that cost is passed  
21 through to the project proponent.

22 Even on FERC projects I don't believe that it's  
23 something that is mandatory, that the FERC can actually  
24 require, but they structure their permit so that it's --  
25 the option is there and the companies, the project

1     proponents, often opt into that program, the  
2     construction monitoring program, because through that  
3     process if the company wants to make a change in the  
4     field that is different than the construction plans or  
5     crossing, water body crossing method, that sort of thing  
6     that's maybe in the permit, that construction monitor can  
7     facilitate that change in the field, which often is far  
8     more expedient for the company than submitting a change  
9     request to the agency.

10             In the case of FERC, you know, wherever the  
11     project is, they have to submit it to Washington, D.C.  
12     Staff gets to it when they have time, et cetera.

13             If you have a construction monitor in the field  
14     and the contract -- and the permit is structured  
15     accordingly, that construction monitor can facilitate  
16     changes within a preconsidered range of reasonableness in  
17     the field and keep things moving along, which is good for  
18     everybody.

19             It's certainly good for the project proponent,  
20     but it's also good for restoration to move through not  
21     necessarily as quickly as possible but in a reasonable  
22     period of time so that the trench isn't left open too  
23     long, the right of way isn't left unrestored for too  
24     long, et cetera, et cetera.

25             CHAIRMAN NELSON:    Has NRG ever provided those

1 type of third-party monitoring services?

2 THE WITNESS: We have, and we do.

3 CHAIRMAN NELSON: Thank you for your  
4 explanation.

5 MS. WIEST: Any other Commission questions?

6 Anymore cross based on Commissioner?

7 RE CROSS-EXAMINATION

8 BY MS. CRAVEN:

9 Q. You testified that you looked at the regs for the  
10 state EIS?

11 MS. SEMMLER: I object. That's outside the  
12 scope of Commissioner Nelson's question.

13 MS. WIEST: Yes. That is outside the scope.

14 MR. RAPPOLD: One more question?

15 MS. WIEST: Go ahead.

16 RE CROSS-EXAMINATION

17 BY MR. RAPPOLD:

18 Q. Mr. Flo, are you familiar with any other consultant  
19 organizations besides NRG that provides similar services  
20 to what you provided in response to Mr. Commissioner  
21 Nelson's question?

22 A. Yes. There are several.

23 Q. Do you know any off the top of your head?

24 A. I believe Merjent does. I think Perennial does.

25 TRC, I think. Cardno. The ENTRIX part is no longer.

1 MR. RAPPOLD: Thank you.

2 MS. SEMMLER: I have one. This is Kara. One  
3 last question.

4 RECROSS-EXAMINATION

5 BY MS. SEMMLER:

6 Q. You indicated that this process has worked and been  
7 adopted by other states in state permitting processes?

8 A. Yes.

9 Q. Do you know off the top of your head what those  
10 states were and what those projects were?

11 A. Sure. In Minnesota for the Alberta Clipper Project,  
12 the Southern Lights Project, and the LSR Project. So  
13 those are three different projects. Those are all  
14 Enbridge projects.

15 Also in Minnesota the MinnCan Project. I believe  
16 the -- and for Enbridge. I'm most familiar with  
17 Enbridge. They're primarily a crude oil pipeline  
18 operating company. And it's become very routine for them  
19 to do that.

20 And so just about any Enbridge project in Michigan,  
21 Wisconsin. I can't think of any others off the top of my  
22 head.

23 Q. No. That's helpful. Thank you.

24 So do you know off the top of your head, was that  
25 condition put into that state agency's permit then? Is

1 that correct?

2 A. Yeah. Yes, that's right.

3 So in Wisconsin their wetlands and water bodies  
4 permit is the Chapter 30 Permit. That's what they call  
5 it. And so the Wisconsin DENR has the ability to require  
6 that specifically for monitoring wetland and water body  
7 crossings.

8 In Minnesota, the Minnesota DNR regulates that sort  
9 of thing for, again, water body crossings, wetlands that  
10 are state wetlands and state-owned land, trails, parks,  
11 but also just land that's not publicly owned -- or excuse  
12 me. Not privately owned.

13 In Wisconsin and Minnesota and I think Illinois and  
14 certainly other states the Departments of Agriculture  
15 have the ability to employ ag monitors on -- either  
16 employ or require ag monitors as part of the ag impact  
17 mitigation plans.

18 And another example -- although I don't know that  
19 it's regulated by a agency. If it is, it would be the  
20 State Department of Agriculture -- is organic farm  
21 monitors.

22 So, again, someone to -- who's familiar with farming  
23 practices and familiar with the specific organic  
24 certification requirements of a given farm to make sure  
25 that the landowner doesn't lose that certification.

1 Q. I didn't hear any Public Utilities Commission. Are  
2 you aware of any of that type of state agency that's  
3 imposed this as a condition?

4 A. I believe that -- in terms of third-party compliance  
5 monitoring, I'm not sure if, for instance, the Minnesota  
6 PUC has required it. The Minnesota PUC has included  
7 requirements for environmental inspection in route  
8 permits. I don't recall, I'm afraid, whether they did  
9 require third-party compliance monitors.

10 Q. Do you know if the South Dakota statutes, the  
11 parameters under which this Commission's working with, do  
12 you know if those statutes would permit this sort of a  
13 recommendation?

14 A. In South Dakota? I'm not certain. I'm not familiar  
15 enough to know.

16 MS. SEMMLER: Nothing further.

17 MS. WIEST: Is there any redirect?

18 MS. EDWARDS: Very briefly.

19 REDIRECT EXAMINATION

20 BY MS. EDWARDS:

21 Q. Mr. Flo, you testified about endangered species  
22 being removed from the list. How do they become removed  
23 from the list?

24 A. My understanding is that it's a similar process to  
25 the listing process. The Service itself proposes a

1 species for listing, and then the Service would then  
2 propose a species for what they call delisting.

3 But there would have to be studies that show that  
4 the species has recovered to a point where it no longer  
5 requires the protection of being listed on the Endangered  
6 Species Act.

7 MS. EDWARDS: Thank you. No further questions.

8 MS. WIEST: Any recross based on that redirect?  
9 Okay.

10 Any Commissioner questions?

11 Okay. Thank you.

12 You may call your next witness.

13 MS. CREMER: Thank you. Staff would call  
14 Derric Iles.

15 (The oath is administered by the court reporter.)

16 DIRECT EXAMINATION

17 BY MS. CREMER:

18 Q. Good morning, Mr. Iles. I bet you thought this day  
19 was never going to come, didn't you?

20 A. I was beginning to wonder.

21 Q. Would you state your name and address for the  
22 record.

23 A. Derric Iles, and the business address is  
24 Akeley-Lawrence Science Center, 414 East Clark Street,  
25 Vermillion, South Dakota 57069.



1 Q. What is your professional title?

2 A. I am the State Geologist and administrator of the  
3 Geological Survey Program within the South Dakota  
4 Department of Environment and Natural Resources.

5 Q. What are your job responsibilities?

6 A. As the State Geologist, my responsibilities are to  
7 plan, organize, and direct the activities of that  
8 particular State agency.

9 Q. Would you briefly describe your educational  
10 background.

11 A. I have a bachelor of arts degree from the University  
12 of Northern Iowa in geology, which was obtained in 1975.  
13 And I have a master's in geology obtained in 1977 from  
14 Iowa State University.

15 Q. And can you describe your work experience since  
16 college? Relevant work experience.

17 A. That still may not limit it very much.

18 From graduate school I came to the great State of  
19 South Dakota and began work at the Geological Survey in  
20 1977 and worked as a geologist and hydrologist for the  
21 Geological Survey until I believe it was November of  
22 1984.

23 During that time my primary responsibilities  
24 included management of subsurface drilling programs to  
25 characterize the geology and groundwater resources

1 dominantly in parts of eastern South Dakota, as well as  
2 investigating, on behalf of the State, petroleum leaks  
3 that occurred in various communities related to  
4 underground storage tanks.

5 That was in a time before the private consulting  
6 world was really geared up in South Dakota to do those  
7 sorts of things. And so at that time in our State's  
8 history the Geological Survey filled that role with its  
9 own drilling equipment and its own staff members.

10 In 1984, November of 1984, I began working as a  
11 consultant based out of St. Paul, and my primary  
12 responsibilities there were to investigate places which  
13 had petroleum contamination, again, dominantly related to  
14 leaking underground storage tanks and the advertences  
15 associated with those at gasoline stations.

16 And during that time my project sites ranged  
17 geographically from West Virginia to California. So I  
18 bounced around the country.

19 In early 1986 I returned to employment in the State  
20 of South Dakota with the Geological Survey, again,  
21 concentrating on geology and groundwater resources  
22 dominantly in eastern South Dakota and had the wonderful  
23 opportunity to be part of the team that designed and  
24 installed what I still think is the best ambient shallow  
25 groundwater monitoring network in the country and

1 continued to look at other water resource issues in  
2 eastern South Dakota.

3 In 1998 I began my tenure as the South Dakota State  
4 Geologist and have continued until present in that  
5 position.

6 Q. Can you explain to us how you became involved in  
7 this matter?

8 A. I was subpoenaed by the Public Utilities Commission.

9 Q. What generally did you review or analyze in order to  
10 file prefiled testimony?

11 A. I looked at the proposed route of the pipeline in  
12 relationship to the surface geology and very near surface  
13 geology along that route.

14 Q. And in front of you is what is -- has been marked  
15 for identification purposes as Staff Exhibit 5. Do you  
16 see that?

17 A. I do.

18 Q. Is that your prefiled testimony?

19 A. It is.

20 Q. Does it have any attachments?

21 A. It does not.

22 Q. Okay.

23 A. Well, it does too. It has my resume.

24 Q. All right. Thank you.

25 Do you have any additions, deletions, or edits to

1 make?

2 A. I do not.

3 Q. If I asked you the same questions today as those  
4 posed in your prefiled testimony, would your answers be  
5 the same?

6 A. They would.

7 Q. At the time your testimony and exhibit was filed,  
8 was it true and correct to the best of your information  
9 and knowledge?

10 A. Yes.

11 MS. CREMER: I would ask that Staff Exhibit 5 be  
12 admitted.

13 MS. WIEST: Is there any objection to Staff  
14 Exhibit 5?

15 If not, it has been admitted.

16 Q. Would you summarize the content of your testimony,  
17 please.

18 A. I will try and do that very succinctly without  
19 repeating what was in the prefiled testimony.

20 And basically what I did is I pointed out areas  
21 along the pipeline route where a shallow aquifer had been  
22 previously mapped by other various investigations.

23 Q. Thank you.

24 You've been here for the bulk of the week, I  
25 believe; is that correct?

1 A. I have.

2 Q. And you heard some testimony regarding the Wall Lake  
3 Aquifer; is that correct?

4 A. I did.

5 Q. Are you familiar with the Wall Lake Aquifer?

6 A. I, indeed, am. It was more than 30 years ago  
7 wherein I was the first one to define what was then named  
8 the Wall Lake Aquifer. So I have history from the  
9 inception of the -- the beginning of what we know as the  
10 Wall Lake Aquifer.

11 It has since undergone subsequent investigations.  
12 The aquifer extent and thicknesses have been revised as  
13 is commonplace as science marches on and we learn more,  
14 but I'm very familiar with it.

15 But the thing that is pertinent about the Wall Lake  
16 Aquifer to me and to these proceedings is that I heard  
17 testimony by others and questions provided by some of the  
18 attorneys involved here that implied that there was a  
19 great potential or a fear of the potential for  
20 contaminating the Wall Lake Aquifer due to perhaps a leak  
21 with the pipeline.

22 And my opinion, based on my in-depth understanding  
23 of the glacial geology and the Wall Lake Aquifer and  
24 those sediments that lie above the Wall Lake Aquifer is  
25 the potential -- just strictly speaking with the geology,

1 the potential for contamination of the Wall Lake Aquifer  
2 due to a leak along the pipeline would be minimal to  
3 nonexistent.

4 And I can go into great detail as to the  
5 underpinning of that opinion if you'd like, but that was  
6 the point that I would like to get out.

7 Q. I will leave that to others. I suspect you may hear  
8 more questions.

9 Did you hear the discussion regarding karst  
10 yesterday?

11 A. I did.

12 Q. And do you have knowledge of karst, and, if so,  
13 where it's found in South Dakota?

14 A. I do have knowledge of karst. And, in fact, my  
15 master's thesis in a former life was actually about karst  
16 in northeastern Iowa.

17 And we do have karst in South Dakota. We have some  
18 of the world's most spectacular examples of karst, and  
19 they would be Wind Cave and Jewel Cave in the Black Hills  
20 in South Dakota.

21 But the implication that I heard in yesterday's  
22 testimony is that karst may be a concern along the  
23 pipeline route in eastern South Dakota. I had not read  
24 any of the other prefiled testimony so -- or the  
25 concern -- I do not know the basis for the concerns that

1 were raised about karst yesterday. But I have been  
2 involved in similar hearings to this where the issue of  
3 karst has come up and the fear of karst being along  
4 whatever project is being proposed is -- might be there.

5 And in every one of those cases that presumption has  
6 been based on a U.S. Geological Survey National Karst  
7 Map. I do not know that to be the case here, but I would  
8 suspect that that may be a part of the thinking that went  
9 into it.

10 I am -- in my former life as a field geologist  
11 working for the Geological Survey I am the geologist of  
12 record on more than 800 test holes and observation wells  
13 drilled in eastern South Dakota in sediments just like  
14 where the pipeline would be -- is proposed.

15 I am not aware of any karst of the type that was  
16 being discussed yesterday. In other words, karst that  
17 may cause land subsidence that could impact a pipeline or  
18 any other structure. I am not aware of any karst in  
19 eastern South Dakota like that.

20 I did not see any in any of the geologic maps that I  
21 have reviewed or that my staff has prepared, and I did  
22 not find any evidence of it in any of the 800 plus test  
23 holes that I was on that were drilled in eastern  
24 South Dakota.

25 The national karst map prepared by the U.S.

1 Geological Survey in my opinion is flawed, and I have let  
2 them know that. And they came out recently with a newer  
3 digital version of the National Karst Map which contained  
4 all of the same old problems that the original map had  
5 and created some new issues.

6 We have provided comments in detail to the authors  
7 of that map, and I have been assured by the U.S.  
8 Geological Survey authors that they will be taking into  
9 account comments from South Dakota as well as other  
10 states that submitted comments on that map as they  
11 attempt to revise the map.

12 Q. I'm going to ask you what has been asked of a number  
13 of witnesses, and that is, so do you have anything else  
14 you want to share with us based on what you've heard?

15 A. I do not.

16 MS. CREMER: All right. Thank you. I'm done  
17 with direct, and he is available for cross.

18 MS. WIEST: Yankton Sioux Tribe.

19 MS. REAL BIRD: Yes.

20 CROSS-EXAMINATION

21 BY MS. REAL BIRD:

22 Q. Good morning. My name is Thomasina Real Bird,  
23 attorney for the Yankton Sioux Tribe.

24 A. Good morning.

25 Q. Thank you for your patience. I did notice you've



1 been in the room for much of the hearing.

2       Regarding your testimony on the shallow aquifers, do  
3 you have concerns with the proposed route crossing areas  
4 where shallow aquifers have been identified?

5 A. No, I don't. And so then that raises the question  
6 as why did I even bring this up. And the reason that I  
7 prepared the testimony that I did is that commonly in  
8 proceedings like this the locations of shallow aquifers  
9 are a subject of discussion.

10       And that is why I prepared the testimony that I did.  
11 Not because I had a concern of construction of a pipeline  
12 in those areas.

13 Q. And you mentioned the sediment above Wall aquifer.  
14 What are the sediments above the aquifer as listed in  
15 your testimony?

16 A. Sediments above the Wall Lake Aquifer are glacially  
17 derived clays, dominantly clays. The Wall Lake Aquifer  
18 is a glacially derived sand and gravel, glacial melt  
19 water deposited sand and gravel.

20       The clays above it that we have researched  
21 extensively are as low or lower in permeability than the  
22 liner requirement for a Subtitle D landfill. And we know  
23 that because we did extensive research at the Sioux Falls  
24 Landfill, which also directly lies above the Wall Lake  
25 Aquifer.

1           We did research a couple of miles south of Worthing,  
2 we did research in the Dolton area to the west of  
3 Sioux Falls, and we did the same kind of research  
4 northwest in the Miller and Highmore areas, which is west  
5 of the pipeline proposed route.

6           And the purpose of that research was to examine and  
7 to document groundwater conditions and potential  
8 groundwater movement through those glacial clays. The  
9 textbook teachings of how groundwater would move through  
10 those clays was that you have rainfall hitting the land  
11 surface, snow melt contributing water at the land  
12 surface. The water infiltrates to the water table and  
13 then continues downward until it reaches some aquifer or  
14 permeable zone and then migrates laterally with the  
15 groundwater flow in those aquifers.

16           The work that we have been doing as the Geological  
17 Survey over the years raised questions about the  
18 traditional thinking of how that water moved, and so we  
19 devised a research plan to look at that.

20           Our research shows that in any measurement in the  
21 human time scale that the groundwater does not move  
22 vertically downward in any significant quantity to those  
23 buried glacial sands and gravels. Rather, the water will  
24 infiltrate to the water table and then evaporate directly  
25 back up to the atmosphere with essentially no vertically

1 downward migration below that through those very, very  
2 low permeability, glacially derived clays.

3 And based on the proximity of three of our research  
4 areas to the Wall Lake Aquifer area, I firmly believe  
5 that my interpretation that the threat to contamination  
6 of the Wall Lake Aquifer by human activities at land  
7 surface is minimal to nonexistent.

8 Q. Thank you.

9 And so the studies you mentioned were to  
10 groundwater. Was there any additional substance present  
11 in those studies? For example, here we're looking at  
12 crude oil.

13 If crude oil were mixed with the groundwater, in  
14 your opinion would that change whether that material --  
15 that mixture would be able to travel through the  
16 glacially derived clay deposits?

17 A. No. In order for the -- first of all, the -- if  
18 there was a spill and crude oil mingled with the  
19 groundwater, the crude oil would tend to move -- or  
20 portions of the crude oil would tend to move where the  
21 groundwater goes.

22 So there has to be a gradient in the groundwater  
23 system. There has to be, rather, a push, a movement of  
24 the water to carry whatever contaminants might be with  
25 it. And we documented that there is no consistent

1 downward vertical gradient at any of the research sites  
2 that we looked at.

3 Therefore, there is no mechanism, no physical  
4 mechanism to carry shallow surface contaminants down to  
5 the Wall Lake Aquifer.

6 Q. Does that mean it will sit there and pool, or what  
7 does that mean?

8 A. In the glacial clays that is largely a decent  
9 characterization. There is very minimal lateral movement  
10 of groundwater or -- and, therefore, contaminants in  
11 those glacial clays.

12 Q. And back to the crude oil. If it were mixed with  
13 water and pooled there, would the presence of the crude  
14 oil in the mixture change the permeability, or would it  
15 be able to permeate the deposits over the aquifer?

16 A. I do not believe so.

17 Q. I'm just wondering the effect of the additional  
18 substance such as crude oil when all that's been studied  
19 has been water.

20 A. We studied the physical properties of the clay, and  
21 just the presence of a single contaminant is not going to  
22 change those physical properties of that rather thick  
23 clay layer.

24 Q. So if the single contaminant were made up of many  
25 different components, though, my understanding is there

1 is many components of crude oil so all those were studied  
2 as to their effect on the permeability of clay?

3 A. We did not look at contaminants in our study. We  
4 looked at the native physical properties of the glacially  
5 derived clays and the groundwater contained in it.

6 Q. Okay. Thank you.

7 As to the glacially derived clay, is the uniformity  
8 of the thickness -- is the thickness uniform above the  
9 aquifers or not?

10 A. No. The thickness would not be totally uniform.  
11 There would be variability in the thickness. But the  
12 depths of wells that I heard talked about in testimony I  
13 believe yesterday, maybe the day before, were in the  
14 180- to 220-foot depth range.

15 And wells at those depths, assuming that the well is  
16 properly constructed, properly maintained, would --  
17 should not be threatened by any contaminant at land  
18 surface.

19 Q. And what is the variation of the thickness of the  
20 clay --

21 A. I do not have that number.

22 Q. And moving to karst, that was my line of  
23 questioning, and I'm trying to reconcile the information  
24 provided publicly by the U.S. Geological Service as well  
25 as portions of the Application that cite the potential

1 karst at certain mileposts.

2 What is your take on why the Applicant -- or is  
3 there a potential for karst at those mileposts identified  
4 by the Applicant?

5 A. I would doubt it seriously. But typically what is  
6 done is you grab the -- the publication, or the map in  
7 this case, and, again, I'm assuming it's the National  
8 Karst Map prepared by the U.S. Geological Survey.

9 It's common to find a map or a publication that  
10 covers your entire area of concern, and in this case it's  
11 eastern South Dakota. And the only single source  
12 information -- of information on karst potential in that  
13 area is the National Karst Map, as far as I'm aware.

14 And, unfortunately, in my opinion that map is  
15 flawed. There are disclaimers and subtleties in the map  
16 that are often missed by users. And you have to be  
17 extremely careful in reading the fine print on the map as  
18 to what it's really telling you.

19 But I disagree that we have karst potential along  
20 the pipeline route of the type that would cause land  
21 subsidence that may impact, you know, surface or near  
22 surface structures.

23 Q. And you indicated that you've made your concerns  
24 known to the U.S. Geological Service?

25 A. I have indeed.

1 Q. Do you know why -- has the U.S. Geological Service  
2 responded to you?

3 A. Yes. I actually met with one of the authors of the  
4 map at a recent meeting. And he was painfully aware of  
5 concerns that were put to him by people in South Dakota.  
6 And I know of other written comments that came from  
7 Oklahoma.

8 And he was aware of concerns from the various states  
9 and had taken those to heart and said that he was -- he  
10 and the other author were going to be working with the  
11 states to address the issues that the various states have  
12 raised about the characterization that that map portrays  
13 of karst in their state.

14 Q. And when that service came out with the digital  
15 version of the map there were no changes?

16 A. It was this most recent digital version, which is  
17 presumably supposed to be better than the old one, and it  
18 was the newest version on which the various states  
19 commented.

20 So it's a difficult thing because the layperson or  
21 the consultant that's not privy to the actual review of  
22 these kinds of maps goes to look for something. That's  
23 an obvious source to go look at. And it's a citable,  
24 referenceable piece of information that people can use.  
25 Unfortunately, in this case and in my opinion, it's

1 flawed.

2 Q. Is karst visible from the surface?

3 A. It certainly can be.

4 Q. Is it always visible from the surface?

5 A. No, it's not.

6 Q. And you mentioned test holes. You bored down? Is  
7 that how you do those test holes?

8 A. Correct. The Geological Survey Program has two  
9 drilling rigs that we use routinely to investigate  
10 geology and help define the groundwater resources in our  
11 state. And it's those machines that we've used over the  
12 years.

13 We've had drilling equipment for more than 50 years,  
14 and we use those routinely to document, investigate,  
15 describe the State's subsurface geology and groundwater  
16 resources.

17 Q. And how deep were those test holes?

18 A. Anywhere from 10, 15 feet to over 800 feet.

19 Q. And how many did you do in the approximate area of  
20 the pipeline route?

21 A. I was afraid that question might come, and I do not  
22 have the number. However, every test hole, every well  
23 drilled by the Geological Survey Program is available  
24 online on an interactive map that anybody anywhere in the  
25 world and even on their smartphone can access.



1           So if you would go to the Department of Environment  
2 and Natural Resources' home page and access one of their  
3 GIS interactive maps, you have access to every single  
4 test hole and well that I do. And you can search through  
5 the Geological Survey Program's home page. You can  
6 search that database using my name as the geologist, and  
7 you can find out exactly where I was the rig-side  
8 geologist.

9           Q. And if one were to do that search, would there be  
10 other names that should be searched in addition to yours?

11           A. No. There have been a number of people responsible  
12 for the logging of the holes over the years. So there's  
13 no special name that needs to be looked for.

14           Q. My question is if I searched only for your name,  
15 would that be the comprehensive list of the holes?

16           A. Oh, heavens no. We have drilled as an agency I'm  
17 going to say roughly 24,000 test holes and wells for our  
18 specific projects that we've worked on.

19           In our online database I believe there's 34, 35,000  
20 records of drilling, which would be those logs in  
21 addition to our own that we used in some of our projects.

22           The Department of Environment and Natural Resources  
23 Water Rights Program, which is the agency that regulates  
24 water permitting in the state, they have roughly 65,  
25 67,000 records of well drilling that are available as

1 well. And in addition to that, every log of every oil  
2 test or gas test that has been drilled in this state is  
3 available through that same online mapping service.

4 So you as well as I have access to over 100,000 test  
5 holes and wells on this interactive map.

6 Q. And you mentioned, in your opinion, karst that is of  
7 the kind that would -- and I'm paraphrasing --  
8 potentially lead to land movement is not found in the  
9 route area.

10 Are there other types of karst?

11 A. Karst is -- to directly answer your question, I  
12 don't know.

13 But karst is the dissolution of carbonate rocks.  
14 And one of those types mentioned yesterday was limestone.  
15 And, in fact, Wind Cave and Jewel Cave are in what's  
16 either -- depending on your preference, it's either  
17 called the Madison Limestone or in South Dakota we call  
18 it the Paha Sapa Limestone. So it's in a carbonate rock.  
19 It's in a limestone.

20 The reason, I believe -- one of the reasons, I  
21 believe, that the National Karst Map shows karst  
22 potential in eastern South Dakota along some of the  
23 proposed pipeline route is that there's another carbonate  
24 unit that underlies a great deal of eastern South Dakota,  
25 and it's called the Niobrara formation.

1           And for those of you familiar with Lewis & Clark  
2 Lake down near Yankton the gorgeous cliffs that are on  
3 either side of the Lake are formed by a Niobrara  
4 formation, and it is a carbonated rock unit and soluble  
5 over time.

6           And because that rock unit is the first one  
7 encountered underneath some of the glacial deposits in  
8 areas of eastern South Dakota, I believe that is why  
9 there is karst potential shown on that National Karst  
10 Map.

11           However, in all of my greater than 37 years working  
12 in the State of South Dakota I have never seen any  
13 visible evidence of karst at land surface in eastern  
14 South Dakota.

15           Now that's not to say that at depth in the Niobrara  
16 formation or other deeper carbonate rock units there may  
17 not be some dissolution cavities that are present. They  
18 could be as wide as a piece of paper, the thickness of a  
19 piece of paper, or they could be larger.

20           But my opinion was and my assumption based on your  
21 questioning of other witnesses yesterday is that there  
22 was a concern that there may be these large fissures or  
23 depressions that would suddenly appear at land surface  
24 that could indeed impact a pipeline or other surface  
25 structure.

1           My personal opinion is that is not a threat along  
2 the pipeline route. If we were talking in Florida, I'd  
3 have a very different opinion.

4 Q.    So you covered land surface. What about during the  
5 construction project, during the excavation below the  
6 surface?

7           Is there the potential for karst discovery during  
8 that process?

9 A.    Anything is possible. You know, I don't have the  
10 world's best crystal ball and can say absolutely  
11 positively not.

12          It would be, in my opinion, the remotest of  
13 possibilities that you would see something. Because  
14 you're excavating glacially derived sediments, and any  
15 carbonate unit is commonly deeply buried below those  
16 glacial sediments.

17          So to see a manifestation of dissolution at depth  
18 all the way up through those glacial sediments either as  
19 to land surface or the base of the trench that may be  
20 excavated I would see as being the remotest of  
21 possibilities.

22 Q.    But yet the U.S. Geological Service still publishes  
23 currently to this date this map. And so you can see the  
24 cause for concern. It seems to be just a difference of  
25 opinion?

1 A. It's a difference of opinion and -- for instance,  
2 one of the problem areas in the most recent version of  
3 the National Karst Map was that all of a sudden there  
4 showed to be an area in southwestern South Dakota in  
5 Fall River County this area that they showed that there  
6 was karst potential when in the previous National Karst  
7 Map there was not.

8 And, of course, I looked at it, and I had staff look  
9 at it. And the only thing that we can figure out is that  
10 in the description of the surface geologic unit there was  
11 one little word that might contain some carbonate or  
12 something.

13 It could have been a fragment of carbonate in a  
14 larger geologic unit, and it appeared that they just  
15 looked for words that might lead to describing rock units  
16 that could be soluble. And that's how they may have, you  
17 know, shown that, oh, gee, there's karst potential here.

18 In no cases -- and I have talked to my colleagues in  
19 the other states, and in no cases with that National  
20 Karst Map was there serious interaction between somebody  
21 doing a desktop study at the U.S. Geological Survey in  
22 Reston, Virginia, and trying to figure out what it is in  
23 every single state where we do or don't have karst  
24 potential.

25 In my world I would expect they would come to the

1 experts, and those experts would be the Geological  
2 Surveys in all 50 states in our union and ask What do you  
3 think? What have you seen? What are your geologists in  
4 their expertise saying?

5 That did not happen. They did not consult with the  
6 states. And as a result, in my opinion, they came up  
7 with a map that cannot be defended.

8 And, in fact, when you go and try and use their map  
9 at the state level dealing with the state experts that  
10 have people on the ground that have done work, the map  
11 falls apart.

12 So, again, I have no qualms, no fears, no  
13 premonitions, that karst in any way, shape, or form is  
14 going to be a problem along the pipeline route.

15 Q. And in your experience does the average person know  
16 how to identify karst?

17 A. Probably not.

18 Q. In your opinion would it take somebody with a  
19 geotechnical engineer or a geology degree?

20 A. It probably would.

21 MS. REAL BIRD: No further questions. Thank  
22 you.

23 MS. WIEST: Rosebud Sioux Tribe, did you have  
24 any questions?

25 MR. RAPPOLD: Good morning, Mr. Iles.

1 Matt Rappold on behalf of the Rosebud Sioux Tribe.

2 I have no questions for you this morning.

3 Thank you.

4 MS. WIEST: Ms. Craven.

5 MS. CRAVEN: I have no questions either.

6 MS. WIEST: Ms. Northrup.

7 CROSS-EXAMINATION

8 BY MS. NORTHRUP:

9 Q. Good morning. My name is Margo Northrup. I'm an  
10 attorney from the South Dakota Association of Rural Water  
11 Systems. I just have a couple of questions.

12 It looks like from your prefiled testimony there are  
13 25 of the state's aquifers that are currently being  
14 monitored; is that correct?

15 A. Correct.

16 Q. And would that include the aquifers that you have  
17 identified on page 4 of your testimony?

18 A. Yes. I know for certain we have a monitoring site  
19 in the Selby, maybe two, and one or two monitoring sites  
20 in the Spring Creek, I believe. The Vermillion East Fork  
21 is where I am uncertain, but for sure the most heavily  
22 monitored aquifer that we have is the Big Sioux Aquifer,  
23 which basically coincides with the Big Sioux River Valley  
24 throughout eastern South Dakota.

25 Q. And if there was a contamination in one of these

1 aquifers, would that become readily apparent to DENR?

2 A. If it was an aquifer wide contamination event, then  
3 the answer to your question would be yes. But typically  
4 each one of these monitoring sites, which consists of one  
5 or two wells at different depths, monitors only a small  
6 area right around that site.

7 So, for instance, I will take the Big Sioux Aquifer.  
8 If there's a contamination event in Grant County in the  
9 Big Sioux Aquifer, the well site down in Minnehaha County  
10 is not going to pick it up. The contamination net would  
11 have to be very close to that monitoring location in  
12 order for us to pick it up.

13 Q. So if there was a breach of the oil pipeline, that  
14 wouldn't necessarily show up in your monitoring well  
15 unless it was in close proximity?

16 A. That's correct. And my recollection is the proposed  
17 pipeline route doesn't come very near any of our  
18 monitoring sites. But the value of the monitoring sites  
19 is that it does provide some baseline background water  
20 quality information in a few of the aquifers along the  
21 proposed pipeline route.

22 MS. NORTHRUP: Okay. I have no further  
23 questions. Thank you.

24 MS. WIEST: Dakota Access.

25 MR. KOENECKE: Good morning, Mr. Iles. Thank



1 you for being here today. We appreciate your testimony,  
2 and we have no questions.

3 MS. WIEST: Commissioners.

4 CHAIRMAN NELSON: I have no questions. I just  
5 want to say I appreciate the clarity and credibility of  
6 your testimony.

7 Thank you.

8 COMMISSIONER HANSON: Good morning, Mr. Iles.

9 THE WITNESS: Good morning.

10 COMMISSIONER HANSON: I like everyone else  
11 watched you sit in the back there and soak everything up  
12 and probably -- I don't know if it's more exciting than  
13 drilling a test hole or not.

14 THE WITNESS: At times.

15 COMMISSIONER HANSON: I only have one question,  
16 and that is how is the Wall Lake Aquifer recharged? Do  
17 you know?

18 THE WITNESS: You have been around too long and  
19 can ask questions that cut to the quick.

20 Recharge of our buried glacial aquifers is a  
21 question that we are still trying to address. I'm going  
22 to dance around the answer to your question.

23 The short answer is I don't know. However,  
24 it -- the Wall Lake Aquifer, I believe, if I can remember  
25 this far back, may be connected to the Skunk Creek

1 Aquifer on the southwest side of Sioux Falls. But once  
2 it moves away from -- once the aquifer is away from that  
3 possible connection area, it is encapsulated in glacial  
4 clays.

5 We actually are in the midst of looking at that  
6 very question. Because the answer to your question is  
7 extremely important in the understanding and management  
8 of South Dakota's groundwater resources, which is the  
9 charge of the Water Rights Program and DENR. And unless  
10 we are confident in our understanding of recharge to  
11 those buried aquifers, we can't do the best job possible  
12 for the people of South Dakota in managing those  
13 resources.

14 So we're in the midst of a project where we are  
15 sampling selected buried glacial sands and gravels for  
16 isotopes, certain isotopes, carbon 14, tritium,  
17 oxygen 18, and deuterium. And through the isotopic  
18 sampling we will gain a clearer picture of if and how  
19 much recharge is going to some of those buried glacial  
20 sands.

21 There is an aquifer in the Dolton area that is  
22 coincidentally named the Dolton aquifer that is a buried  
23 glacial sand and gravel aquifer.

24 We have age dates out of that aquifer that are  
25 greater than 30,000 years. So, in other words, the

1 majority of the water in that aquifer is probably the  
2 water that was in place during the time that it was  
3 created as an aquifer during glacial times. The  
4 significance of that is it's not getting a tremendous  
5 amount of contemporary recharge.

6 I suspect that the Wall Lake Aquifer may in  
7 large part be of the same type. But we won't know --  
8 we'll have a better idea at the conclusion of this study,  
9 which is over a year out before it concludes.

10 But the question you asked is very pertinent.  
11 It's very important. And we are continuing to look at  
12 that.

13 COMMISSIONER HANSON: Forgive me. Your answer  
14 gets another question.

15 Is there a concern then for mining of water in  
16 the Wall Lake Aquifer as a potential as growth takes  
17 place?

18 THE WITNESS: Potentially, yes. And that's  
19 exactly one of the reasons exactly why we are looking at  
20 that question.

21 Because, as you well know, South Dakota water  
22 law prohibits withdrawal of more water on an average  
23 annual basis than is recharged on an average annual  
24 basis. So it becomes very important to know that  
25 balance. And so the potential could be there. And

1 that's exactly why we're looking at this question.

2 COMMISSIONER HANSON: By your first answer you  
3 would not be surprised then. It was either slip up creek  
4 or split rock -- I think it was Split Rock Aquifer that  
5 we drilled a test hole and found water that was 18,000  
6 years old.

7 THE WITNESS: That's correct. Yeah. And I know  
8 exactly where that aquifer is.

9 COMMISSIONER HANSON: Okay. Thank you. Enjoyed  
10 your testimony.

11 MS. WIEST: Any further cross?

12 Any redirect?

13 MS. CREMER: Thank you. I have no redirect.

14 MS. WIEST: Thank you.

15 Staff, do you have another witness?

16 MS. CREMER: No, we do not. Staff would rest.

17 MS. WIEST: Let's go through what witnesses are  
18 remaining.

19 I believe that our next witness would probably  
20 be Mr. Goldtooth. Would that be correct, Ms. Craven?

21 MS. CRAVEN: Yes.

22 MS. WIEST: And do you have any update on  
23 Ms. Deville's ability?

24 MS. CRAVEN: She's only able to appear  
25 telephonically Friday.

1 MS. WIEST: Friday when?

2 MS. CRAVEN: We could do her first thing in the  
3 morning.

4 MS. WIEST: Because after Mr. Goldtooth's  
5 testimony, if I have this correct, I think we're at  
6 rebuttal.

7 MS. CRAVEN: Yes.

8 MS. WIEST: Would that be correct?

9 MR. KOENECKE: We object to this testimony.  
10 I'm sorry. You're asking me what?

11 MS. WIEST: No. I was just asking you --

12 MR. KOENECKE: The telephonic testimony of whom?

13 MS. WIEST: No. I was just asking after  
14 Mr. Goldtooth's testimony it would be my understanding  
15 that we would be at the spot where it would be Dakota  
16 Access rebuttal testimony?

17 MR. KOENECKE: Yeah. That's correct. And we  
18 object to calling any other witnesses prior to our  
19 rebuttal witnesses being called.

20 MS. WIEST: You mean after?

21 MR. KOENECKE: After. Right. Our witnesses  
22 should be last. Our opportunity for rebuttal closes. We  
23 want everybody else called prior to that time.

24 MS. WIEST: Can you respond to that?

25 MS. CRAVEN: Yes. I think we've all been trying

1 to be cooperative about Staff witnesses that haven't been  
2 able to appear and they've appeared telephonically and  
3 we're taking all sorts of testimony out of order.

4 We've heard rebuttal testimony from the State  
5 already. So it seems like our request to accommodate a  
6 witness should be honored just like that. Everyone  
7 else's requests so far have been honored. It's a  
8 professional courtesy.

9 MS. WIEST: Yeah. Is there any way that we  
10 couldn't get her on the phone today? I mean, you do  
11 understand the point that the rebuttal witnesses of the  
12 Applicant should be the last witnesses.

13 MS. CRAVEN: Yes. She's had some kind of dental  
14 emergency with her children, and she has to take them to  
15 the dentist today. And Friday's the only time that she  
16 can appear.

17 MR. KOENECKE: This witness is Lisa Deville?

18 MS. WIEST: Yes.

19 Well, at this point the parties can maybe think  
20 about it a little bit more, but why don't we take  
21 Mr. Goldtooth's testimony right now and then we could  
22 probably break for lunch.

23 MS. CRAVEN: Calling Dallas Goldtooth.

24 (The oath is administered by the court reporter.)

25

DIRECT EXAMINATION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

BY MS. CRAVEN:

Q. Good morning, Mr. Goldtooth.

A. Good morning.

Q. How are you today?

A. I'm good. I actually apologize. I'm not wearing my sport coat, actually ripped it this morning. I kind of hulked it. So I'm not as formal as I would like to be.

I'm also a little bit -- I'm caffeine sensitive. I had some caffeine so I'm more jittery than a long tailed cat in a room full of rocking chairs.

Q. Would you please state your name and occupation for the record.

A. My name is Dallas Goldtooth, and I am an organizer with the Indigenous Environmental Network.

Q. And would you please summarize your education and professional experience.

A. Yeah. I attended the University of California Berkeley. I'm also a cultural therapist for the Indigenous Child and Family Resource Center in the Bay area.

I am currently a language student and also a Dakota language teacher for communities in Minnesota. And, you know, currently -- the two hats, the Keystone XL campaign organizer for the Indigenous Environmental Network as

1 well as U.S. pipeline organizer for the same  
2 organization.

3 And, you know, the capacity of that job, my  
4 occupation, is just to assist communities throughout the  
5 country, North America, U.S., and whatever means possible  
6 on their different campaigns.

7 Q. I also understand that you recently received  
8 recognition from an advocacy group CREDO for your efforts  
9 as an environmental advocate.

10 What was your award?

11 A. Oh, it was the CREDO Climate Hero Award. And I just  
12 got announced a couple -- or they just told me a couple  
13 of days ago so -- and CREDO is a social change  
14 organization with over 3.5 million members, and so they  
15 wanted to -- it was a recognition of my work supporting  
16 grass roots communities, landowners, Tribes to protect  
17 their lands and water.

18 Q. Congratulations.

19 A. Thank you.

20 MS. CRAVEN: May I approach the witness?

21 MS. WIEST: Yes. Please, do.

22 THE WITNESS: It looks like a piece of paper.  
23 That is what it is.

24 Q. Could you please identify that document.

25 A. Yeah. This is Prefiled Rebuttal Testimony that I



1 submitted.

2 MS. CRAVEN: And I'd like the record to reflect  
3 that I showed Mr. Goldtooth DRA IEN Exhibit No. 12 of his  
4 prefiled testimony.

5 Q. Are your answers to the questions the same today as  
6 when you prefiled your testimony?

7 A. Yes.

8 MS. CRAVEN: I'd like to make a motion to  
9 introduce that into the record.

10 MS. WIEST: Is there any objection to  
11 Exhibit 12?

12 MR. KOENECKE: I'd like to voir dire the witness  
13 if I could.

14 MS. WIEST: Go ahead.

15 MR. KOENECKE: Good morning, Mr. Goldtooth. My  
16 name is Brett Koenecke. I'm a lawyer for the Dakota  
17 Access Pipeline.

18 THE WITNESS: Good morning, Brett.

19 MR. KOENECKE: Good morning. Do you have any  
20 particular education or expertise in fossil fuel  
21 development?

22 THE WITNESS: Just based off my experience in  
23 working with communities that are fighting against fossil  
24 fuel development.

25 MR. KOENECKE: And so have you undertaken any

1 education in fossil fuel development?

2 THE WITNESS: A number of workshops and  
3 trainings that are related to the fight against fossil  
4 fuel development.

5 MR. KOENECKE: And who were those offered by?

6 THE WITNESS: By U.S. Tar Sands Network. There  
7 was another training that was offered by Forest Ethics  
8 and another one by Oil Change International, I believe.

9 MR. KOENECKE: Is there more than just the  
10 three?

11 THE WITNESS: I think that there was a number of  
12 informal trainings, but that was the experience of those  
13 trainings.

14 MR. KOENECKE: Approximately how long were the  
15 three trainings?

16 THE WITNESS: A couple days, I think, each. Two  
17 days. One of them was a -- a part of a larger gathering,  
18 and it was a -- that gathering was about three days long.  
19 It was Extreme Energy Summit down in Biloxi, Mississippi.

20 MR. KOENECKE: Who were the presenters at any of  
21 those meetings?

22 THE WITNESS: I can't remember.

23 MS. CRAVEN: You know, we object it to this.  
24 This is our witness, and it seems like -- yeah.  
25 Mr. Koenecke has -- we've objected to a lot of their

1 witnesses. They've offered all of these witnesses that  
2 were not experts providing expert testimony, and we just  
3 object to this. This is beyond --

4 MS. WIEST: Well, this objection is overruled.  
5 I think he was still conducting his voir dire, and so I  
6 would let him finish.

7 MR. KOENECKE: Thank you.

8 Again, the question I think was who were some of  
9 the presenters?

10 THE WITNESS: I can't remember the names of some  
11 of the -- I know that for Oil Change International it was  
12 worked with a guy named David Turnbull who is an oil  
13 market analysis for Oil Change International is one of  
14 the leaders that did some of that.

15 MR. KOENECKE: So I'm trying to understand, are  
16 these meetings at which you've discussed how to oppose  
17 fossil fuel projects?

18 THE WITNESS: No. It was -- a lot of those  
19 meetings discuss how to analyze -- or how to use oil  
20 market analysis to assist communities that do whatever --  
21 you know, they decide what they want to do with that  
22 information as far as their campaigns, whatever direction  
23 they want to take.

24 So my job is basically to help with information  
25 for communities that may or may not be opposing pipelines

1 but are concerned about its impacts in their territory,  
2 their neighborhoods, or their lands.

3 MR. KOENECKE: So if I'm correct, the sum total  
4 of your education is six or seven days, three, two- to  
5 three-day meetings?

6 THE WITNESS: It's how you define education. I  
7 mean, working day in and day out with communities and  
8 also self-educated landowners about the process, the  
9 regulation process, the permitting process, the actual  
10 construction processes I think can add to one's education  
11 as well and deepen one's really knowledge about -- about  
12 how the industry operates and conducts construction.

13 MR. KOENECKE: I guess, Ms. Wiest, we'd object  
14 to this witness having any particular expertise to offer  
15 the testimony in writing.

16 MS. CRAVEN: We're not offering him as an expert  
17 witness. That is not our intention. Just like  
18 Ms. Howard read all of these documents that were in her  
19 testimony, Mr. Goldtooth has a lot of experience and  
20 knowledge from information working and documents that  
21 he's read, similarly to Ms. Howard. We objected to that  
22 testimony because they were offering her as an expert  
23 witness, and we were overruled.

24 MS. WIEST: I'll overrule the objection and  
25 allow it.

1 MS. CRAVEN: Thank you.

2 Q. I did make a motion to introduce his testimony.

3 MS. WIEST: And I will admit Exhibit 12.

4 MS. CRAVEN: Okay. Thank you.

5 Q. Would you please explain the role of the Indigenous  
6 Environmental Network?

7 A. Yeah. The Indigenous Environmental Network is a  
8 grassroots network that supports grassroots -- primarily  
9 indigenous communities throughout North America or what  
10 we call Turtle Island and their struggles to protect  
11 their land, natural resources, culturally significant  
12 sites against extractive industry, environmental  
13 degradation, and just a whole slough of different issues  
14 that might be affecting native lands, communities,  
15 frontline communities.

16 In that work we've also had to work and look forward  
17 to working with non-Native communities in that struggle  
18 as well because we see the potential of that  
19 collaboration. So it is national, local, and  
20 international work that IEN participates in.

21 Q. And are there priority issues for IEN?

22 A. Priority issues right now is extractive -- economics  
23 extractive industry. I mean, the focal point is  
24 protection of sacred sites. The recognition of  
25 indigenous rights in relationship to extractive

1 development in relation to energy development and  
2 indigenous people's role in like the consultation process  
3 that happens in that.

4 So that's, I guess, some of the focal point for us  
5 is indigenous rights, proper consultation between Tribes  
6 and federal governments or other governments as well or  
7 even industry, and a focus just on general fossil fuels.

8 Current campaign that we push forth is the Leave It  
9 In The Ground Campaign, which is to avoid complete  
10 climate disaster we have to keep the average global  
11 temperature below 2 percent.

12 And in order to do that it's been -- hundreds of  
13 scientists have all come together to state that in order  
14 to do that 80 percent of the world's fossil fuel reserves  
15 have to stay in the ground.

16 Q. Would you please discuss your concerns with the  
17 development of the Dakota Access Pipeline as it relates  
18 to the output of the Bakken deposit?

19 A. Yeah. And this is -- what's difficult is it's --  
20 there's different ways that you can quantify -- and I  
21 know that the directive of this Commission, from my  
22 perspective, is to look at the number of how this is --  
23 you know, really solid facts. That's what you want.  
24 That's what they're looking for.

25 And then we also have to take into account -- I

1 think we as all human beings have to acknowledge the  
2 social impacts and other cultural impacts that this  
3 pipeline and also in relation to the output from the  
4 Bakken have on communities not only at the source but  
5 along the route.

6 And, you know, my experience in just working with  
7 communities in the Bakken region, there are significant  
8 concerns about the negative impacts that oil development  
9 in the region has had on those communities. The health  
10 disparage, the health risk, the increased risk of  
11 violence in those communities which have all been  
12 quantified in a number of reports.

13 And so that me, as an advocate, in the position of  
14 work that I do has to reflect that, those concerns, and  
15 really share that as much as possible. So that's one of  
16 the things that I really want to identify is the voices  
17 from the people that I work with and community members  
18 that are -- that stand against this pipeline project for  
19 the fact that there is a sincere fear and concern that  
20 this could possibly encourage further development in the  
21 region, therefore, increasing the numbers that are  
22 already there of higher health risk and violence that's  
23 inflicted upon those communities.

24 And I think that's the -- the concerns is -- I guess  
25 I don't know that that answers the question, I guess,

1 I've been asked.

2 Q. Is there a concern that native communities are  
3 disproportionately impacted by oil and gas development?

4 A. There are concerns, yes. And that has been  
5 described in -- not only from perspectives and statements  
6 from community members themselves but also in reports and  
7 number of studies and even by the Federal Government who  
8 have acknowledged the immense disparities indigenous  
9 frontline communities face.

10 And it's not just native communities. I mean,  
11 there's landowners who have had, you know, guns pulled on  
12 them. These are non-Indian landowners because they've  
13 resisted more pipelines coming through their territory.

14 MR. KOENECKE: I object to that testimony.  
15 There's no foundation or basis for that. It's highly  
16 prejudicial and very, very unreliable.

17 THE WITNESS: Well, I can come up with the news  
18 clippings if you want.

19 MS. WIEST: Sustained.

20 MR. KOENECKE: Objection to that. News  
21 clippings are not evidence either.

22 MS. WIEST: Sustained.

23 MS. CRAVEN: May I approach the witness?

24 MS. WIEST: Yes.

25 Q. Mr. Goldtooth, can you identify the document I just



1 handed to you?

2 A. Yes. This is a report by the Post Carbon Institute  
3 written by J. David Hughes and his associates. It's  
4 titled Drilling Deeper: A Reality Check On U.S.  
5 Government Forecasts For A Lasting Tight Oil & Shale Gas  
6 Boom. And it's a report.

7 Q. Is this a document maintained by IEN in any database  
8 or file?

9 A. Yes, it is. We actually have it on file in our  
10 office and actually use digital -- we also have a digital  
11 format.

12 MS. CRAVEN: I would move to introduce this  
13 report into the record.

14 MR. KOENECKE: I object. I don't think it was  
15 provided in the prehearing filings.

16 MS. CRAVEN: Yes, it was. It was provided in  
17 the prehearing filings, and it's been over on this table  
18 all week long.

19 MR. KOENECKE: Can you point it out to me?

20 MS. CRAVEN: Would you hold it up, Dallas,  
21 please, Mr. Goldtooth.

22 MS. CREMER: What's the number on it?

23 MS. CRAVEN: Let's see. I don't know if we  
24 actually got a number on it but it was on our list and we  
25 brought it. So it may not have gotten a number on it

1 when we were doing that.

2 MR. KOENECKE: I maintain my objection. I don't  
3 see it on the list, and I didn't get a copy of it and  
4 there are a number of foundational difficulties with  
5 this.

6 MS. WIEST: Can you expand on the foundational  
7 difficulties, Mr. Koenecke?

8 MR. KOENECKE: I don't think he's an author of  
9 the study, and I don't think he can testify to anything  
10 that's in the document. He said he wasn't an expert in  
11 the voir dire.

12 MS. CRAVEN: It's a business record. We object  
13 to that.

14 And I do have our witness list that we've  
15 prefilled, and it's listed. It's the second document from  
16 the bottom.

17 MR. KOENECKE: It's not a business record. I  
18 don't believe that for a minute.

19 MS. WIEST: I believe it was listed on the  
20 website as the Post Carbon Institute Shale Market Report.  
21 Is that the title of it?

22 THE WITNESS: Yeah.

23 MS. WIEST: Can you read the title of it?

24 THE WITNESS: Drilling Deeper, Reality Check On  
25 U.S. Government Forecasts For Tight Oil & Shale Gas Boom,

1 Post Carbon Institute.

2 MR. KOENECKE: And no document was attached.

3 MS. CRAVEN: It's been on the table. It just  
4 didn't get a number, didn't get one of those little tags.  
5 It's been here all week long on the table. And it's on  
6 our list.

7 MR. KOENECKE: I don't find that to be helpful  
8 if it's on the table.

9 MS. CRAVEN: Well, that's where all the exhibits  
10 are.

11 MS. WIEST: We can stop the back and forth for a  
12 minute.

13 But I believe when we were having exhibits what  
14 is required is to the extent that the party actually  
15 files and serves the exhibit, then no extra copies are  
16 required, but -- and we just need one for the hearing.

17 But in this case I believe the only thing that  
18 was done was that the name was included on there. So the  
19 document was not -- there were no copies given to any of  
20 the parties.

21 I don't believe the name is the same as the name  
22 that is listed on the -- your list of your exhibits.

23 My other concern is that I do not believe that  
24 this is the type of document that comes under the  
25 business records exception, and lacking that foundation,

1 I would not admit the exhibit.

2 Q. From your experience --

3 MS. WIEST: Just one question, though.

4 For our records, what exhibit number would that  
5 have been?

6 MS. CRAVEN: It would have been Exhibit No. 13,  
7 DRA. It just didn't get a tag. It's on our list. I  
8 brought a copy.

9 MS. WIEST: Yep. I understand all of that, and  
10 I think I've explained my reasons. I just needed that  
11 for my record to show that it was offered and not  
12 admitted.

13 Thank you.

14 THE WITNESS: May I ask what is the definition  
15 of a business record?

16 COMMISSIONER HANSON: No, you may not.

17 MS. WIEST: You can proceed.

18 Q. From your experience working in the -- in your  
19 position, could you please elaborate on your  
20 understanding of demand, oil demand as it relates to  
21 DAPL?

22 A. So the -- and I admit that, you know, my  
23 understanding is from the documents I read and the  
24 capacity I assist these communities and the document that  
25 we've -- or the report here that we put forth is a

1 significant resource in that work that we utilized in  
2 order to give our communities that we work with as much  
3 information as we can, as it pertains to this specific  
4 project and also future projects and past projects.

5 You know, the concern that, you know, in our work  
6 and also as a result of looking at the data and looking  
7 at the research that was comprised in this report is that  
8 the predictions about oil production that are put out  
9 there by the Energy Information Administration not  
10 necessarily may be wrong but that the predictions are off  
11 and that there are a number of reports out there and  
12 information that, you know, the -- we're going to see  
13 peak oil occur much sooner than what has been predicted  
14 before.

15 And demand, obviously, on the global scale has a  
16 major part to play in the oil market. I mean, with OPEC  
17 taking a certain stance in its oil production has  
18 affected U.S. production itself.

19 So there's a close relationship, and the concern for  
20 demand is just that we question the ability in the long  
21 term about the need for this pipeline, for DAPL,  
22 considering the strong potential for production levels to  
23 continue to fall in the region, the Bakken region.

24 Q. There's been considerable testimony as to whether  
25 the Commission should require preparation of an

1 Environmental Impact Statement.

2 Are you familiar with Environment Impact Statements?

3 A. Yes, I am.

4 Q. What would be the benefit of a government agency  
5 preparing an Environmental Impact Statement prior to any  
6 approval of a major pipeline project?

7 A. I mean, I feel like it's pretty straightforward.  
8 It's commonsense that in order for any body or any  
9 decision-makers to have an adequate and -- the proper  
10 materials to base a good solid decision off, they have to  
11 have as much information about the impact that this  
12 project may have.

13 And I think the EIS from what I understand is very  
14 thorough and provides a great -- this is my  
15 interpretation -- nonpartisan almost approach to  
16 examining what this could -- potential effect have on  
17 lands, water, and resources and so on and so forth. It  
18 just makes commonsense any decision-maker would take that  
19 into account.

20 Q. So it would be an independent evaluation?

21 A. As far as opposed to opinions by the Applicant or  
22 Intervenors, I think that it provides another barrier.

23 That's my interpretation of it.

24 Q. Is DAPL the type of project for which state and  
25 federal agencies routinely prepare an EIS?

1 A. From my experience it seems like it does fall under  
2 like -- I've seen on other projects where an EIS has been  
3 conducted or has been encouraged to be conducted or --  
4 yeah. So yes.

5 Q. And earlier we heard testimony from Mr. Flo that he  
6 had reviewed regulations implementing an EIS.

7 Based on your understanding for an EIS in  
8 South Dakota, are there any regulations implementing the  
9 EIS statute?

10 A. To my knowledge, there are no regulations in the  
11 state -- to conduct EIS. There's statutes. There's  
12 statutes in the laws that the Legislature has passed down  
13 for agencies, but there's no regulation.

14 So when he said that, I don't know what regulations  
15 he's reading because there are none on the books for  
16 agencies.

17 They can take the statutes -- they can take the law  
18 and interpret it in-house amongst themselves how they  
19 want to conduct that as far as the environmental impact,  
20 but there are no regulations.

21 Q. Earlier you mentioned that IEN is also involved in  
22 the protection of sacred sites and cultural resource  
23 properties.

24 Is it common for Tribes to prohibit the release of  
25 information on sacred sites?

1 A. It is common. I think that there has to be -- and  
2 it's also -- and it makes sense because really it can be  
3 complicated.

4 But there's a difference between sites that have  
5 cultural items and sacred sites, which often have  
6 cultural items in them or culturally significant items or  
7 artifacts.

8 Sacred sites, because there's been a long history of  
9 exploitation and interference from outside communities,  
10 outside non-Native people, a lot of tribal nations,  
11 governments, even just common people are really hesitant  
12 about sharing and will refuse to share the location of  
13 sacred sites for that very reason of people coming in and  
14 overstepping where they shouldn't be.

15 So there's a difference between that and a site that  
16 might have cultural artifacts that a project might come  
17 upon or even just people, laymen walking the land might  
18 come upon.

19 Q. And what is your tribal affiliation?

20 A. I'm Mdewakantonwan Dakota. I'm an enrolled member  
21 of the Lower Sioux Indian Community in Minnesota. But I  
22 was raised on the hard gravel streets of South Dakota in  
23 southeast South Dakota on the Yankton Sioux Rez.

24 Q. What would your response be if someone sent you an  
25 e-mail asking for a list of your Tribe's sacred sites?



1 A. If somebody asked me for my Tribe's --

2 Q. Sent you an e-mail.

3 A. I'd be very uncomfortable and weirded out and  
4 actually upset. Because it's a question of what's the  
5 intention of that? What's the -- you know, first asking  
6 what's the intention of that?

7 But then also because of -- as I explained, the long  
8 history of trespassing on significant -- on sacred sites,  
9 I won't tell them. I wouldn't share that information  
10 whatsoever. Which just seems commonsense to me and many  
11 native people and leaders as well.

12 Q. Would you maybe even be insulted?

13 A. Yeah. For sure. Definitely insult would be  
14 something that would be a natural response.

15 Q. Is there anything else you would like to say to the  
16 Commission?

17 A. I think just to add upon that, I think that -- I  
18 know that in previous discussions -- there's been talks  
19 about the role that -- how does climate change play into  
20 all of this, and how do we take that into account? How  
21 do we actually process that?

22 And I feel like given the numerous expert testimony  
23 in the world and numerous reports that have been put out  
24 there, in order for us to avoid climate disaster we have  
25 to -- we have to keep 80 percent of the oil reserves in

1 the ground. How does that affect us and our people our  
2 relatives in South Dakota?

3 I mean, I think you have to see that it does have a  
4 direct impact. Whether you're a farmer and you're going  
5 to have considerably low yields or your product is going  
6 to be put into -- is going to be threatened, you have to  
7 look into the algae blooms in the eastern part of the  
8 state and the glacial lakes there in the northeast area  
9 or across the land.

10 You know, you could talk about the higher energy  
11 prices that as citizens I have to take on. So I think  
12 there is a correlation from a large level that we can as  
13 people here in South Dakota -- or whether it's North  
14 Dakota or Iowa, whatever it may be, must take into  
15 account that there are effects and there's a potential  
16 here to address that. That has to come into play here.

17 And I think that, you know, the other question that  
18 I -- that my thoughts about is also the length and what  
19 is the plan? Like I haven't seen, in reading the  
20 materials and presented by DAPL -- like there has been  
21 discussions about when oil production falls, which  
22 whether you're taking an EIA's assessment or other  
23 assessments, they all agree that oil production's going  
24 to fall.

25 So what happens when there's no longer a --

1 MR. KOENECKE: I object to this litany of  
2 personal question and answer here. I don't think there's  
3 any foundation for it or basis, and I don't think it  
4 falls to -- or reaches the level of testimony.

5 Instead, it seems to me to be argument disguised  
6 as testimony, and I object to going further.

7 MS. CRAVEN: We're looking at the Statute  
8 49-41B-22, and it's the Applicant's burden of proof to  
9 show that the pipeline will not pose a threat to the  
10 environment, nor the social and economic conditions of  
11 the inhabitants or to impair the health, safety, or  
12 welfare of the inhabitants.

13 Mr. Goldtooth is talking about how this pipeline  
14 has a potential to do that.

15 MS. WIEST: The objection is overruled. And  
16 what he is talking about now is similar to what he has in  
17 his prefiled testimony.

18 I would just remind you to the extent it's in  
19 the testimony, we don't necessarily need to listen -- I  
20 mean, have it stated exactly again.

21 THE WITNESS: Okay.

22 A. Can you remind me --

23 MS. CRAVEN: I have no further questions.

24 MS. WIEST: Yankton Sioux Tribe, did you have  
25 any questions?

1 MS. REAL BIRD: (Speaks Dakota). Dallas, no  
2 questions from Yankton.

3 MS. WIEST: Did you have any questions, Rosebud?

4 MR. RAPPOLD: Yes. Just probably one.

5 CROSS-EXAMINATION

6 BY MR. RAPPOLD:

7 Q. Still morning. Good morning, Mr. Goldtooth.

8 A. Good morning.

9 Q. I'll forego the introductions.

10 Have you seen any information in the documents that  
11 you've reviewed that shows how the project will provide  
12 for the future energy needs of the residents of the State  
13 of South Dakota?

14 A. I've overlooked the documents. I've seen them.  
15 I've heard the arguments. I've seen the arguments. But  
16 I call into question about the needs of South Dakota.

17 Like when it pertains to South Dakota I don't see  
18 how it fulfills the -- fully fulfills the needs of  
19 South Dakota, given the many other options that  
20 South Dakota is looking into for energy independence and  
21 especially renewable energies. But since this is a  
22 pipeline that oil's passing through South Dakota, I call  
23 into question the actual need.

24 MR. RAPPOLD: Thank you. No further questions.

25 MS. WIEST: Ms. Northrup, did you have any

1 questions?

2 MS. NORTHRUP: I have no questions. Thank you.

3 MS. WIEST: Commission Staff, do you have any  
4 questions?

5 MS. EDWARDS: No questions. Thank you.

6 MS. WIEST: Dakota Access.

7 MR. KOENECKE: I do have a few. Thank you,  
8 Ms. Wiest.

9 CROSS-EXAMINATION

10 BY MR. KOENECKE:

11 Q. Good morning again, Mr. Goldtooth.

12 A. Good morning.

13 Q. If I understood your most recent testimony  
14 correctly, you don't think South Dakota has a need for  
15 this pipeline?

16 A. Well, I think it's -- it can be -- I feel like the  
17 arguments that DAPL has put forth, that there is debate  
18 for -- that's, I guess, really why we're here is looking  
19 at the benefits. And I don't think that they -- the  
20 risks are not worth the supposed benefits. I feel like  
21 that's my -- my opinion.

22 Q. Well, let's talk about that some.

23 How did you get here from Morton, Minnesota?

24 A. Well, okay. So I see where you're going with it.  
25 Obviously, we are dependent on oil, as citizens, as

1 individuals.

2 Q. Just answer the question. How did you get here?

3 A. I drove.

4 Q. Right. And so where did the gasoline come from?

5 A. The gasoline --

6 Q. Where did you buy gas at last time you bought?

7 A. The gasoline came from an oil refinery. And  
8 actually the gasoline came from Tesoro, which most likely  
9 either came from the East Coast or West Coast refinery.

10 Q. And do you know whether Tesoro has interest in the  
11 Bakken?

12 A. Yeah.

13 Q. And do they? What are they? Do you know?

14 A. Well, I know they have investments, as far as I  
15 understand.

16 MS. CRAVEN: We object. This is beyond the  
17 scope of direct. We never brought up Tesoro. We never  
18 brought up driving.

19 MR. KOENECKE: He brought it up. He  
20 specifically said this doesn't contribute to  
21 South Dakota's benefit. And I want to go down that line.

22 MS. WIEST: Overruled.

23 Q. So if I recall correctly, you said you know, yes,  
24 that Tesoro has interest in the Bakken.

25 MS. REAL BIRD: I'll object. Mr. Goldtooth is

1 not a citizen of the state. He testified that he is from  
2 Minnesota, and so his gasoline consumption is not  
3 relevant.

4 MR. RAPPOLD: And I would like to add on that  
5 the statute does require a showing in the Application  
6 that the project will benefit the future energy needs of  
7 the residents of the state. And that statute is  
8 referring to the State of South Dakota.

9 MS. WIEST: Do you have a response?

10 MR. KOENECKE: We'll argue about what that  
11 statute says. I think there's plenty of case law on what  
12 legislative findings mean. If that was in the  
13 requirement of the burden of proof, the Legislature would  
14 have put it there.

15 But as far as that goes, it's South Dakotans --  
16 are we really going to get into semantics over where he  
17 bought gas last time? He brought it up. He said  
18 South Dakotans.

19 MS. REAL BIRD: You asked the question. So my  
20 objection is the same; he's not a citizen so his gasoline  
21 consumption is not relevant.

22 MS. WIEST: I'll sustain the objection. I think  
23 you can get your point, if you want to, in other  
24 questions.

25 Q. Do you know whether there's an oil refinery of any

1 kind in South Dakota?

2 A. You know, I don't know.

3 Q. Would it surprise you if there was not?

4 A. It would not surprise me.

5 Q. So our oil has to come from someplace, doesn't it?

6 A. Yes.

7 Q. What's your definition of community?

8 A. Oh. That's -- it depends. It can be -- it's a  
9 number of things. I can't really peg it down because it  
10 actually fluctuates. Whether I'm working with  
11 landowners, non-Native landowners who identify as  
12 landowners and as a community unto itself, farmers and  
13 ranchers, or if you're talking about a tribal nation or  
14 if you're talking about a district within a tribal  
15 nation.

16 For me it definitely fluctuates, but it's an open  
17 term that helps, in my work, work with the people I'm  
18 giving -- I think it's an easy term to identify  
19 communities with -- people with.

20 I think you can also identify South Dakotans as a  
21 community, I mean, in the sense of unified origin and  
22 space, and relationship to the land can also be used.

23 Q. So are you representing South Dakotans here today?

24 A. I'm representing --

25 MS. CRAVEN: That's argumentative. We object.



1 MS. WIEST: Overruled.

2 A. Oh. So who I represent is I'm a Dakota person, a  
3 Dakota man. And in my relationship to the land I  
4 basically -- I guess in a very personal sense I do this  
5 work for the land and the water I love. And I'm --

6 I belong to the Oceti Sakowin, which is a territory  
7 that is from the Mississippi all the way to the Rocky  
8 Mountains. So that's where I speak from is -- my  
9 relationship to this land and to the energy and spirit of  
10 this land.

11 I cannot say I speak on behalf of tribal nations.  
12 In very actual legal terms I can't say that. But in the  
13 communities I work with there is a definite past and just  
14 relationship that I support the people along the route of  
15 DAPL and just in the general area just support them in  
16 whatever voices they have or issues or opinions or  
17 concerns that they have.

18 Q. You mentioned in your testimony that there are  
19 communities against oil development; is that correct?

20 A. Yeah. And --

21 Q. How do you know that they're against oil  
22 development?

23 A. Because the folks have said it. They've told us.  
24 They've told me. They've stated numerous times outside  
25 of conversations with me.

1 Q. And if someone says they're for oil development, do  
2 they still get to be a part of your community?

3 A. Yeah.

4 MR. RAPPOLD: Objection. Argumentative.

5 MS. WIEST: Sustained.

6 Q. Why do you think an Environmental Impact Statement  
7 is preferable to this process?

8 A. Well, I mean, I would argue for both. Why not -- if  
9 you're a decision-maker and you're considering the  
10 impacts on land or resources or towns or whatever it may  
11 be, why not push it to the highest level of assessment  
12 and study.

13 So I think that both would be preferable, that you  
14 would have an EIS as well as the process that is going  
15 through here.

16 Q. Did I understand you to say that you believe that  
17 the Federal Energy Information Administration is  
18 incorrect?

19 A. Can you rephrase that?

20 Q. I heard you testify about the Federal Energy  
21 Information Administration.

22 A. Well, what I stated is that the research that we've  
23 done and some of the reports that we've read have stated  
24 that it's not incorrect but that the processes in which  
25 they are -- their evaluations and their predictions may

1 be called into question.

2 But I -- you know, that's based off of our  
3 experience and talking with and reading the reports.

4 Q. Couldn't the same thing be true if the government  
5 prepared an EIS?

6 MS. CRAVEN: We object. That calls for  
7 speculation.

8 MR. KOENECKE: I've got nothing further. Thank  
9 you.

10 MS. WIEST: Okay. Is there any questions from  
11 the Commissioners?

12 CHAIRMAN NELSON: Do you understand the  
13 importance of petroleum products to agriculture in  
14 South Dakota?

15 THE WITNESS: I do.

16 CHAIRMAN NELSON: Do you understand the  
17 importance of petroleum products to the tourism industry  
18 in South Dakota?

19 THE WITNESS: I do. I can see that. Yeah.

20 CHAIRMAN NELSON: Do you understand the  
21 importance of petroleum products to the economy of the  
22 United States of America?

23 THE WITNESS: I do.

24 CHAIRMAN NELSON: Would you prefer that this  
25 country obtain our oil from within this country or from

1 other countries?

2 THE WITNESS: That's a -- that's a trick  
3 question.

4 CHAIRMAN NELSON: That's a simple question.

5 THE WITNESS: I would prefer local sustainable  
6 energy development from a very localized energy  
7 production. So, obviously, I would prefer that energy  
8 that we consume is produced locally on a local level,  
9 preferable a renewable, sustainable solution.

10 CHAIRMAN NELSON: Thank you.

11 MS. WIEST: Any other Commission questions?

12 Any further cross?

13 RE-CROSS-EXAMINATION

14 BY MR. RAPPOLD:

15 Q. Are you aware of the ethanol industry in  
16 South Dakota?

17 A. Yes. Yes. I am aware. And, you know, I've been  
18 educated myself. Actually a lot of ranchers I work with  
19 and actually farmers have educated me and numerous people  
20 on it and the benefit to them that are producers, I  
21 guess.

22 Q. And, can you say, do you think ethanol is widely  
23 used in eastern South Dakota?

24 A. From what I've seen, yes, as well as outside the  
25 region as well.

1 MR. RAPPOLD: Okay. Thank you. No further  
2 questions.

3 MS. WIEST: Do you have any redirect?

4 MS. CRAVEN: No. No, thank you.

5 MS. WIEST: Thank you.

6 THE WITNESS: Thank you.

7 MS. WIEST: We will break for lunch. It's about  
8 noon so let's come back at 1:15.

9 MR. KOENECKE: Before we go, I'd like to make an  
10 offer.

11 MS. WIEST: Oh, yes.

12 MR. KOENECKE: In the interest of moving the  
13 hearings along, I believe that IEN wanted to call Lisa.  
14 I forget her last name.

15 MR. RAPPOLD: Deville.

16 MR. KOENECKE: We would stipulate to the  
17 introduction of her testimony as it's been put in the  
18 record without needing to call her to cross-examine, if  
19 that's acceptable to the rest of the parties.

20 MS. WIEST: Is that acceptable?

21 MS. CRAVEN: Can we get back to you? We'd like  
22 to talk about it.

23 Can we also get the list of the DAPL --

24 MS. WIEST: I'll ask. Do you know the order of  
25 the witnesses that you will be presenting to us after

1 lunch?

2 MR. KOENECKE: I don't know the order, but it's  
3 the six that filed rebuttal testimony.

4 MR. RAPPOLD: Regarding Ms. Deville's testimony,  
5 I'd also like to put on the record that the rebuttal  
6 testimony I've reviewed there's no DAPL witness that  
7 specifically identifies her testimony as being rebutted  
8 so I don't really see the point of going after -- of the  
9 problem that's been raised.

10 MR. KOENECKE: That's why we accept the  
11 stipulation of her testimony.

12 MR. RAPPOLD: It's my decision to make. I was  
13 just putting that in there.

14 MS. WIEST: Okay. We'll come to that decision  
15 after lunch. We'll see you at 1:15.

16 MR. RAPPOLD: So we have no idea which witness  
17 is going to be called after lunch? I mean, come on.  
18 There has to be some idea who they're going to call  
19 first.

20 MS. CRAVEN: Everyone's had to have an order.

21 MS. WIEST: Do you have a response,  
22 Mr. Koenecke?

23 MR. KOENECKE: I didn't hear what the question  
24 was.

25 MS. WIEST: They were, once again, asking who

1 would be your first witness after lunch.

2 MR. KOENECKE: We're going to call Aaron DeJoia  
3 first.

4 MR. RAPPOLD: And I really don't think it's  
5 unreasonable for the Commission to have DAPL tell us what  
6 order they're going to call their witnesses in because  
7 after that witness is done we have no idea who they're  
8 going to call next.

9 MR. KOENECKE: We're going to discuss it over  
10 lunch, just like they're going to discuss the offer of  
11 Lisa Deville's testimony.

12 MR. RAPPOLD: Two entirely different matters.

13 MS. WIEST: We will leave it at that, and we  
14 will see you at 1:15.

15 (A short recess is taken)

16 MS. WIEST: I believe Mrs. Hoogestraat -- I'm  
17 sorry.

18 MS. CRAVEN: Ms. Wiest, I have two issues I'd  
19 like to just bring to your attention.

20 One is this is my DRA exhibit marked 13 which  
21 was marked last Tuesday, and so it was over there  
22 properly marked. It was properly on the list, and I  
23 would ask you to reconsider not allowing it into the  
24 record.

25 MS. WIEST: Is there any response?

1 MS. SEMMLER: I think you've already stated the  
2 reason why that wasn't admitted.

3 The Commission rule, as we understood it, was  
4 that you had to provide a copy of the document itself to  
5 all of the parties, and it wasn't served on the parties.  
6 We received a list of documents but not the document  
7 itself so I don't know why the Commission would change  
8 its ruling. You were simply following your own order.

9 MS. WIEST: I want to make clear my ruling was  
10 not merely based on that procedural requirement; it was  
11 based on the foundational requirement. So I'm not  
12 reconsidering the ruling.

13 Ms. Hoogestraat, did you have an issue you  
14 wanted to bring before us?

15 MS. HOOGESTRAAT: Thank you.

16 Mr. Boomsma was advised to attend Friday to  
17 participate in the rebuttal testimony that will be  
18 presented.

19 And I'm just myself presenting a request that we  
20 continue rebuttal testimony tomorrow morning at 8 o'clock  
21 so that he can participate, and I would appreciate your  
22 consideration of this matter.

23 MS. WIEST: Is there any response?

24 MR. KOENECKE: We would object to that request.  
25 This hearing has been properly noticed, and for us to



1 take a whole afternoon off is -- is -- that's just not  
2 reasonable in my view at all.

3 Our witnesses are here. They've been patiently  
4 waiting and -- we talked about Mr. Iles this morning has  
5 been patiently waiting all week long for his chance. And  
6 to ask our witnesses to sit around for an afternoon and  
7 not testify, that's just not reasonable.

8 MS. WIEST: Is there any other response?

9 MS. CRAVEN: We would support Mr. Boomsma's  
10 request.

11 MS. REAL BIRD: Along those lines, perhaps it  
12 might help if the Applicant can provide a list of order  
13 they plan to go, and that might assist Mr. Boomsma.

14 MS. WIEST: Is there any other responses?

15 The Commission -- I will decline that request.  
16 I believe that the Commission does need to go forward.  
17 We only are scheduled through today and tomorrow  
18 afternoon hopefully so I just don't think that we can  
19 delay.

20 MS. HOOGESTRAAT: Thank you for considering.

21 MS. WIEST: Thank you.

22 MS. CRAVEN: Ms. Wiest, the other issue that I  
23 wanted to bring up was that I -- typically stipulations  
24 are attorneys confer and then they bring the matter to  
25 the Court or the Hearing Officer and there was no prior

1 stipulation, which is a professional courtesy as well  
2 too. But I would agree to accept the stipulation that  
3 Ms. Deville's testimony be entered into the record.

4 MS. WIEST: And that would be -- so then she  
5 would not be testifying live; is that correct?

6 MS. CRAVEN: That's correct, yes.

7 MS. WIEST: And is there any objection to that  
8 testimony coming in?

9 MR. KOENECKE: None whatsoever. Thank you. I  
10 appreciate the consideration.

11 MS. CRAVEN: You're welcome.

12 MS. WIEST: And can you identify the exhibit  
13 number for her testimony?

14 Would it be 1? Her prefiled testimony is your  
15 Exhibit 1?

16 MS. CRAVEN: Yes. Yes.

17 MS. WIEST: And I would ask, is there anybody  
18 else who has any objection to this coming in as  
19 stipulated?

20 If not, Exhibit 1 has been offered and admitted.

21 Is there anything else to come before the  
22 Commission before we start with rebuttal?

23 MR. KOENECKE: There is.

24 We intend to at this point call our witnesses in  
25 a particular order. I want to state we reserve the right

1 to change our minds, depending on what happens here this  
2 afternoon.

3 We've got six rebuttal witnesses. They've all  
4 filed prefiled testimony. It is my understanding, and  
5 I'm asking the Commission to consider this, that rebuttal  
6 testimony is to rebut something that's come up in the  
7 testimony this last two weeks. It's not to rehash  
8 anybody's direct testimony. We've got very targeted,  
9 bullet hole questions to ask and answers to get back.

10 And I want to make sure that that's everybody's  
11 understanding is rebuttal is not rehash what happened on  
12 direct testimony but instead just the rebuttal points.  
13 That's what we've striven to do. We spent a long time  
14 last night coming up with our rebuttal testimony, shaving  
15 it down, making it responsive to what's happened here  
16 this week. We've got a few Commissioner questions that  
17 we need to answer still. That's our intention.

18 We're going to call witnesses -- probably Aaron,  
19 then Micah, then Joey, then Chuck, then Monica, and then  
20 wrap up with Stacy.

21 I want to get through it in an expedient  
22 fashion. I think we can do that. We're looking forward  
23 to wrapping this case up. I think everybody else is too.

24 So that's our intention this afternoon is very  
25 direct, targeted testimony and not a rehashing.

1 MS. WIEST: Is there anything else?

2 MR. RAPPOLD: Regarding those statements, my  
3 understanding of Prefiled Rebuttal Testimony is that it's  
4 directly related to the direct testimony of a particular  
5 witness and that particular witness has to be identified  
6 in the rebuttal testimony and it's for that purpose, not  
7 so much the purpose of addressing issues that came up in  
8 the hearing. And that's my understanding.

9 MS. WIEST: Anyone else?

10 We'll just proceed with it. To the extent there  
11 are objections, we'll take care of those objections.

12 You may call your first witness.

13 MS. SEMMLER: Dakota Access calls Aaron DeJoia.

14 (The oath is administered by the court reporter.)

15 MR. RAPPOLD: Ms. Wiest, I've got a concern with  
16 the document that we've just been handed. The resume of  
17 the witness is what it appears to be. It would seem to  
18 me that a little bit more advanced notice and filing of  
19 this document would have been appropriate under the  
20 circumstances.

21 It's a little bit hard to review this document,  
22 which is six pages, as the witness is testifying, which  
23 seems to be what's contemplated, and I object to this  
24 being provided to us at this moment in time.

25 MS. WIEST: Is there a reason this was just

1 provided now?

2 MS. SEMMLER: You know, I was just trying to  
3 help with efficiency sake. There's, along the line, been  
4 some questions about qualification of various witnesses,  
5 and I think this document in and of itself will answer a  
6 lot of that so we don't need to go through that live here  
7 today.

8 MR. RAPPOLD: And a brief response.

9 Helping with efficiency would have been  
10 accomplished by filing this along the deadlines that the  
11 Commission established.

12 MS. SEMMLER: And all I can do is apologize for  
13 that. And if the Commission does not want this in,  
14 that's okay. We can have the witness testify to it.

15 MS. WIEST: Well, another option would be if the  
16 parties would want 10 minutes to -- or to review it. Or  
17 if they're going to --

18 MR. RAPPOLD: I'm going to ask the Commission to  
19 stick by its filing orders and deadlines in this case.

20 MS. WIEST: So you're withdrawing it?

21 MS. SEMMLER: No. I'm not going to withdraw it.  
22 But if the Commission chooses to make that decision,  
23 that's your prerogative.

24 MR. RAPPOLD: And I understand where  
25 Ms. Semmler's going, but it still gets at our ability to

1 adequately prepare for cross-examine of the witness and  
2 review his qualifications prior to the hearing and  
3 address other issues that could be associated with his  
4 qualifications, bias and other interests in the case.  
5 And it's a violation of our due process rights, as  
6 those are protected by the Constitution of the State of  
7 South Dakota, the laws of the State of South Dakota, and  
8 the Administrative Rules of the Public Utilities  
9 Commission.

10           Based on those grounds, I would object to -- I  
11 guess maybe I'm prematurely objecting, but in the  
12 interest of expediency, I'm objecting now.

13           MS. SEMMLER: Brief comment.

14           The parties all had an opportunity to conduct  
15 discovery, and I don't believe this was requested in  
16 discovery.

17           MS. EDWARDS: If I could just add, I guess  
18 where -- I'm having trouble seeing where the document is  
19 necessary.

20           If there's questions in his prefiled about his  
21 educational background and professional credentials, do  
22 we need this? I don't really see why they're giving it  
23 to us now.

24           MS. WIEST: Well, at this point nothing has been  
25 offered. Is this an exhibit that's going to be offered?

1 I don't know.

2 MS. SEMMLER: That was the plan.

3 MS. WIEST: Well, then I will rule on it when  
4 it's offered. If and when it's offered.

5 DIRECT EXAMINATION

6 BY MS. SEMMLER:

7 Q. Please state your name for the record.

8 A. Aaron DeJoia.

9 Q. And who do you work for?

10 A. I work for DuraRoot, LLC.

11 Q. What is your business address?

12 A. Business address is 4626 County Road 65, Keenesburg,  
13 Colorado 80643.

14 Q. And what do you do for DuraRoot?

15 A. I am a principal soil scientist, agronomist, and  
16 reclamation scientist for them.

17 Q. Could you tell us briefly about your educational  
18 background?

19 A. I have a bachelor's and a master's degree from  
20 Kansas State University. My bachelor's degree is in  
21 agriculture with an agronomy, soil and water science  
22 emphasis, and my master's degree is in agronomy, soil  
23 fertility emphasis.

24 Q. Do you have a secondary degree?

25 A. I have a secondary degree in natural resources and

1 environmental science from Kansas State University that  
2 was obtained at the same time as my bachelor's degree.

3 Q. Do you have experience -- well, let me back up.

4 What did you do as it pertains to this filing in  
5 front of the South Dakota PUC?

6 A. I am helping Dakota Access develop reclamation plans  
7 and soil plans for the entire line stretching from the  
8 boundary of South Dakota and North Dakota through the  
9 Illinois area properties.

10 Q. Have you done that before?

11 A. I have done that multiple times for multiple  
12 pipelines and private companies throughout the nation.

13 Q. How long?

14 A. I have been working in the environmental science  
15 field, soil science field, since 2000. I've been working  
16 in the oil and gas and pipeline industry since about  
17 2002. So that's about 15, 16 years.

18 Q. Do you see a document in front of you marked  
19 DAPL 39?

20 A. Yes, I do.

21 Q. What is that?

22 A. That is Aaron DeJoia's rebuttal testimony. Or my  
23 rebuttal testimony.

24 Q. Did you write this document?

25 A. Yes, I did.



1 Q. The document sitting in front of you, do you  
2 recognize that as the document you wrote?

3 A. Yes, I do.

4 MS. SEMMLER: Move to admit DAPL 39.

5 MS. WIEST: Any objection to Exhibit 39?

6 MS. REAL BIRD: May I voir dire the witness?

7 MS. WIEST: Go ahead.

8 MS. REAL BIRD: Mr. DeJoia, would you turn to  
9 line 215 of your testimony.

10 Excuse me. 216.

11 THE WITNESS: Yes.

12 MS. REAL BIRD: The study, the two studies that  
13 are referenced in 216, 217, and 218, did you author those  
14 studies?

15 THE WITNESS: No, I did not.

16 MS. REAL BIRD: Did you recreate the studies  
17 that are listed in those lines?

18 THE WITNESS: Did I do what?

19 MS. REAL BIRD: Recreate those studies.

20 THE WITNESS: No, I did not.

21 MS. SEMMLER: I'm going to object. I don't  
22 think that this goes towards his qualifications or  
23 capacity. Those can be addressed on cross-examination.

24 MS. REAL BIRD: I'm conducting the examination  
25 for the purposes of an objection.

1 MS. WIEST: Go ahead.

2 MS. REAL BIRD: I would like to object to lines  
3 216 through 218 on the basis of hearsay and lack of  
4 personal knowledge.

5 MS. WIEST: Do you have a response?

6 MS. SEMMLER: He's testifying as to a report  
7 that he read, and in his professional capacity with the  
8 many years of experience he has he can put that report  
9 into practice, so to speak, and can draw some conclusions  
10 from it.

11 He's an expert in this field, and these are the  
12 sorts of literatures that such an expert reviews.

13 MS. REAL BIRD: And they are still out-of-court  
14 statements offered for their truth, and they don't fall  
15 within any exception to that rule.

16 MS. WIEST: The objection is overruled.

17 MS. REAL BIRD: And I have additional voir dire  
18 to conduct.

19 MS. WIEST: Go ahead.

20 MS. REAL BIRD: Line 265 through 273.

21 THE WITNESS: Yes.

22 MS. REAL BIRD: There are additional studies  
23 listed in those lines.

24 Did you author those studies?

25 THE WITNESS: No, I did not. They're peer

1 reviewed studies.

2 MS. REAL BIRD: And did you recreate the studies  
3 that are listed in those lines?

4 THE WITNESS: No, I did not. They're peer  
5 reviewed studies.

6 MS. REAL BIRD: And the Yankton Sioux Tribe  
7 objects to the inclusion of those answers on hearsay  
8 grounds and lack of personal knowledge.

9 MS. SEMMLER: Same response.

10 MS. WIEST: And based on that response, I will  
11 again overrule the objection.

12 MS. REAL BIRD: That concludes my objection.

13 MS. WIEST: Any other objections?

14 If not, it has been admitted.

15 Q. Do you need to change or amend anything in this  
16 document?

17 A. No, I do not.

18 Q. So if I were to ask you these questions today, would  
19 you answer them the same?

20 A. Yes, I would.

21 Q. And are you adopting this written testimony as your  
22 sworn testimony today?

23 A. Yes, I am.

24 Q. I'm going to move on and ask a few questions about  
25 some testimony we heard earlier this week. Okay?

1 A. Okay.

2 Q. You told us what your job was for this project. As  
3 part of that job did you review the company's Ag  
4 Mitigation Plan?

5 A. Yes, I did.

6 Q. Do you agree that soil is a valuable resource for a  
7 landowner?

8 A. Yes. It's the most valuable resource a landowner  
9 has.

10 Q. And do you agree that landowners may have some  
11 unique circumstances on their land?

12 A. Of course. Every landowner has unique  
13 circumstances.

14 Q. Those two things in mind then, do you think the  
15 Agricultural Mitigation Plan covers that?

16 A. Yes, it does.

17 Q. Can you give a couple of examples of why you believe  
18 it covers that?

19 A. Every landowner in the route has different  
20 circumstances that their land is different, and we  
21 understand that as soil scientists and agronomists. And  
22 we try to take that into account.

23 In the Ag Mitigation Plan -- yeah. Agricultural  
24 Impact Mitigation Plan we're looking at doing topsoil  
25 separation and segregation. We're looking at doing deep

1 ripping and compaction. We're looking at how to return  
2 that property back to 100 percent productivity to  
3 whatever use it was before so that the landowner can get  
4 back whole and become able to farm or ranch or do  
5 whatever they want with that property as long as it  
6 abides by their easement agreement and that they do not  
7 have to deal with the impacts associated with --  
8 associated with pipeline construction.

9 This plan goes into great details about how it's  
10 going to be done. It does not specify that each  
11 individual tract will either have something done or not.  
12 That's working with the landowners as we go out there and  
13 figuring out what needs to be done and then working as  
14 construction's being done and implementing the right  
15 processes at the right time for those landowners.

16 Q. So are there typicals that are connected or attached  
17 to this plan?

18 A. Yes, there are.

19 Q. What are those -- what are those for then?

20 A. Typicals are the general way that construction  
21 practices will be conducted during the pipeline  
22 restoration -- in this case, the pipeline restoration  
23 process.

24 Q. So are they intended to cover all landowners and all  
25 circumstances?

1 A. No. They're intended to cover the general idea of  
2 how we're going to do the restoration, the ag impact  
3 mitigation part of this. So they do not cover every  
4 instance we're going to have. They cover this is  
5 typically how we would want to do this process.

6 Q. Given adequate resources, that being time and money,  
7 is there any land that can't be restored?

8 A. There is no land that can't be restored under those  
9 circumstances.

10 Q. And if the Ag Mitigation Plan is followed, what's  
11 your expectation regarding crop yields after the  
12 construction's over?

13 A. I believe the crop yields can be returned to  
14 100 percent based on past experiences on other projects  
15 within the three-year window we're estimating in that  
16 plan.

17 Q. I'm going to jump back. You spoke about topsoil  
18 segregation; right?

19 Can you help talk to the Commission about the  
20 12 inches that I think is in a typical --

21 A. In typical we are planning on taking -- taking up to  
22 a maximum of 12 inches. And we'll actually go to the  
23 depth of the topsoil if it's less than 12 inches.

24 The reason we chose 12 inches is because that's  
25 where your highest amount of organic matter, microbial

1 activity, and fertility in that land.

2 If we can salvage that -- and when I say "salvage"  
3 it means separate and put to the side so it doesn't get  
4 intermixed with subsoil and less high quality soils. If  
5 we can separate and segregate that soil and protect it  
6 from erosion, protect it from other -- you know,  
7 petroleum spills from vehicles, vehicle traffic, we're  
8 going to be able to put that back on and begin that  
9 process of restoration that much faster.

10 So we think that it's critically important to  
11 separate and protect that soil resource, topsoil, which  
12 is going to make restoration that much easier for the  
13 whole project out there.

14 Q. You said if you can separate it. What do you mean  
15 by -- aren't you going to do that in all circumstances?

16 A. We will do that in all circumstances if the  
17 landowner allows us to. You know, we have to work with  
18 the landowners. The landowners know the property the  
19 best.

20 Some landowners in my experience have not wanted  
21 topsoil segregation. So in those instances we work with  
22 them, tell them what the negative impacts of that might  
23 be, and try to get them to go along with the plan as we  
24 go out there.

25 Q. What if there's more than 12 inches of topsoil?

1 A. If there's more than 12 inches of topsoil, we will  
2 definitely take 12 inches all the time. If the  
3 landowner requests that we take to the depth of the  
4 topsoil or 18 inches, we will do that for the landowner.

5 We do not want to burden the landowner with, you  
6 know, taking less than what they want. We believe  
7 12 inches will adequately protect that topsoil resource  
8 and begin to start that restoration process and not have  
9 them lose fertility or crop productivity.

10 Q. As a consultant for Dakota Access, were you asked to  
11 develop a seed mix that's consistent with NRCS?

12 A. Yes.

13 Q. In addition to that, do you know, is Dakota Access  
14 willing to accommodate landowner preference regarding  
15 seed mix?

16 A. Yes. Dakota Access will accommodate all landowners  
17 with seed mixes that they request. We might work with  
18 them to help them design a seed mix that's special for  
19 them and might give them some inputs on the seed mixes.

20 But at the end of the day it's their property, and  
21 they know what they want back there. And Dakota Access  
22 is committed to working with them to get the seed mix  
23 that they need and want out there.

24 Q. We heard a lot of testimony about drain tiles  
25 earlier in this process. Did you hear some of that



1 testimony?

2 A. Yes, I did.

3 Q. So some of the testimony we heard landowners  
4 indicated that drain tiles can't be repaired.

5 Is that consistent with your experience?

6 A. That is not consistent with my experience.

7 Q. Tell us about your experience.

8 A. I have worked in multiple states in the Midwest, the  
9 Dakotas, Kansas, Illinois, Missouri, all having varying  
10 types of drain tiles from cement, clay, and the newer  
11 plastic style drain tiles.

12 In all of those instances we have been able to  
13 repair drain tiles, even sensitive clay and cement tiles  
14 that tend to break.

15 Sometimes we have to go back beyond the trench line  
16 a little bit further to find a good piece of tile to tie  
17 into, but in all of those instances we've been able to  
18 reconnect those tiles back together and have that drain  
19 system continue to operate and function properly.

20 Q. What if there's settling in the trench later on?

21 What does that do to the drain tile system?

22 A. That will cause a huge issue with the drain tile  
23 system because they're put on a grade that is very --  
24 .1 sometimes percent. And if any sagging occurs in that  
25 trench line, it will begin to remove the benefits of

1 having drain tile there.

2 Q. What if that would happen in this case? What does  
3 Dakota Access do about that?

4 MR. RAPPOLD: Objection. Calls for speculation.

5 MS. SEMMLER: It's in the Ag Mitigation Plan.

6 MS. WIEST: Overruled.

7 A. Dakota Access in their Ag Mitigation Plan has a  
8 typical, as we talked about earlier, one way to fix  
9 that -- or to ensure that that sagging doesn't happen.

10 And what they plan on doing is putting sandbags in  
11 that trench line to prop up the drain tile so settling  
12 does not occur through that trench line. And that is a  
13 typical way that has been done for years in the pipeline  
14 industry to prevent sagging of the drain tile as the  
15 pipeline -- as the settling occurs in that trench line.

16 And it's critically important that that's done.  
17 Because if it's not done, that drain tile has a decent  
18 likelihood of settling at some point during the life.

19 Q. But what if even that doesn't fix it? What's DAPL's  
20 promise?

21 A. DAPL's promise is to go back and fix those issues  
22 that are associated with pipeline construction.

23 Q. And based on your experience is it possible to fix  
24 those issues?

25 A. Yes, it is.

1 Q. So you just testified a bit about sandbags. We  
2 heard a recommendation regarding I think it's tiled  
3 bridge; is that right?

4 A. Yes.

5 Q. Can you explain the difference and compare and  
6 contrast those, please.

7 A. A tile bridge is a device that is usually  
8 prefabricated to go into the drain -- into the ditch  
9 line. And those systems have been out for a few years  
10 but not many.

11 I have only -- I don't know if I've been on a  
12 project that's actually used them yet because of the  
13 effectiveness of the sandbag system. And those systems  
14 have not proven longevity. They have not proven  
15 effectiveness. And they have not proven that they can be  
16 installed correctly in the trench line system.

17 So my feeling is they aren't bad, but they need some  
18 more proven issues, especially when we're going through  
19 farmland that is as important to these people's  
20 livelihood as that. We need a proven system that has  
21 worked before, rather than a system that might work.

22 Q. And you think sandbags are a proven system?

23 A. Yes. They've been used for as long as I've been in  
24 the industry, and we've had very few, if any, problems  
25 with using the sandbag system out there.

1 Q. We heard about -- or I think you mentioned  
2 decompaction. Is it important to restoration? Is that  
3 true?

4 A. Decompaction is probably the most critical aspect.  
5 And when I do see problems postconstruction it's because  
6 decompaction wasn't completed.

7 So decompaction is critical on that throughout all  
8 locations of the pipeline right of way. The method  
9 mostly used is a mechanical decompaction technique where  
10 we take the decompaction out by using normal agricultural  
11 equipment that's used every day in agriculture and use it  
12 to remove that decompaction.

13 Q. And have you seen that method done successfully?

14 A. Yes. We do that method all over the United States  
15 and have returned corn yields back to previous conditions  
16 very quickly using that method.

17 MS. SEMMLER: Nothing further. Thank you.

18 MS. WIEST: Yankton Sioux Tribe, do you have any  
19 questions?

20 MS. REAL BIRD: I have no questions for the  
21 witness.

22 MS. WIEST: Rosebud.

23 MR. RAPPOLD: Just a few.

24

25

CROSS-EXAMINATION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

BY MR. RAPPOLD:

Q. Good afternoon, Mr. DeJoia.

A. Good afternoon.

Q. You don't work for Dakota Access, do you?

A. No, I do not.

Q. I've noticed in your testimony you use the word "we" a lot when responding to questions about things that Dakota Access was going to do.

Would you agree with that?

A. Yes.

Q. Why would you use the word "we" if you don't work for Dakota Access?

A. The reason I use the word "we" is that it's a team effort. It's an effort between the landowner who is a very integral part of the restoration plan and techniques, Dakota Access which is installing the pipeline, the contractors which are putting the pipeline in the ground, and myself which is providing the science and technology to get this land back to full production as quickly as possible.

Q. And so you're -- your role and responsibility is to look at their plans; correct?

A. Correct.

Q. And form opinions based on their plans; right?

1 A. Correct.

2 Q. So you're not actually part of the "we" that's  
3 involved in doing anything here, are you?

4 MS. SEMMLER: I'm going to object. It was asked  
5 and answered. He provided an explanation as to why he  
6 used that particular two-letter word.

7 MR. RAPPOLD: I have no further questions.  
8 Thank you.

9 MS. WIEST: Do you have any questions,  
10 Ms. Craven?

11 MS. CRAVEN: Yes, I do.

12 CROSS-EXAMINATION

13 BY MS. CRAVEN:

14 Q. Kimberly Craven here for Dakota Rural Action and  
15 Indigenous Environmental Network.

16 How are you today?

17 A. I'm doing good.

18 Q. Good.

19 You testified there are limited studies regarding  
20 insects in the soil above the pipeline.

21 A. I did not testify to that.

22 Q. Your testimony -- I'll come back to that.

23 Your testimony discourages the use of FERC  
24 requirements for mitigation and winter planning. You  
25 also testified that growing up in rural Kansas you

1 appreciate the importance of the land to people who live  
2 off of it.

3 Why in the world would you discourage the use of  
4 stricter standards even if not legally required in order  
5 to protect the land?

6 MS. SEMMLER: I'm going to object. The  
7 witnesses who made those recommendations, who were Staff  
8 witnesses, did amend much of the testimony. So I think  
9 it's just a bit out of context to refer to that.

10 As a group, I think we need to take into  
11 consideration the revised recommendations, and if she  
12 wishes to ask questions on those specific revisions, I  
13 think that makes sense.

14 MS. CRAVEN: He didn't change his testimony.

15 MS. WIEST: Can you be more specific as to what  
16 you're referring to?

17 MS. CRAVEN: I'll ask another question.

18 Q. Is there anything that would prohibit the PUC from  
19 imposing the stricter FERC requirements?

20 MS. SEMMLER: Objection. Calls for a legal  
21 conclusion regarding this Commission's authority.

22 MS. CRAVEN: He's here as an expert witness, and  
23 he's talking about the FERC protection. I mean, we're --  
24 he's the closest we're going to get to an expert witness.

25 MS. WIEST: Overruled.

1 A. Can you restate that question?

2 Q. Yes. Is there anything that would prohibit the PUC  
3 from imposing the stricter FERC requirements that you've  
4 talked about?

5 A. I don't know if the FERC requirements are more  
6 strict or less strict, and I don't know what the PUC's  
7 ability to hand out tougher or less tough parameters.

8 Q. Okay. Thank you.

9 In your experience, is the best manner of mitigating  
10 impacts on the environment to establish strict uniform  
11 standards that may be waived on a case-by-case basis or  
12 to let industry regulate itself?

13 A. I believe that the best way to do this is work with  
14 all parties involved, including the landowners, and have  
15 us do what gets their land back to full productivity as  
16 quickly as possible.

17 Q. I have some more questions.

18 You testified that the most valuable resource a  
19 landowner has is its land -- is its soil; is that  
20 correct?

21 A. That's my opinion, yes.

22 Q. Yeah. And without water does that decrease the  
23 value of the land?

24 MS. SEMMLER: Objection. I think that's beyond  
25 the scope. This witness isn't talking about land value



1 and the --

2 MS. CRAVEN: He's an agronomist. He's an expert  
3 on soils and re-vegetation and all sorts of things of  
4 that nature, and I'm asking his opinion on the importance  
5 of water to these resources.

6 MS. WIEST: Overruled.

7 A. Yes. I believe rainfall is a very important aspect  
8 of this -- of a soil/landowner system.

9 Q. What about stream water for irrigation?

10 A. Irrigation in some parts is a very important aspect  
11 of an irrigation system.

12 Q. Especially to farmers; correct?

13 A. If they count on irrigation for their -- to grow  
14 their crops, yes.

15 Q. I have more questions. Just a moment.

16 How do you discount or explain away the test [sic]  
17 from Sibson and Moeckly regarding their topsoil problems?

18 MS. SEMMLER: I'm going to object. There's no  
19 foundation there.

20 MS. CRAVEN: He's rebutting all the landowners.  
21 That's what he says, he's rebutting the landowners.

22 MS. SEMMLER: I think we need maybe a more  
23 specific question, or maybe I didn't hear it right.

24 Did you say the test?

25 MS. CRAVEN: How does he discount or explain

1 away the testimony from Sibson and Moeckly regarding  
2 their topsoil problem.

3 MS. SEMMLER: I'm going to object as irrelevant.  
4 It's a different pipeline. It's a different company.  
5 Without exactly similar circumstances in all ways, I  
6 don't know how he can --

7 MS. CRAVEN: It's in the record. They've  
8 testified. It's part of this docket proceeding.

9 MS. WIEST: Overruled.

10 A. I have no knowledge or no understanding of the  
11 system that went on on the TransCanada 1 pipeline. And  
12 so I cannot make an educated reasoning for that -- those  
13 issues out there.

14 If I went out and did a soil study and figured out  
15 what went on there, I probably would be able to make a  
16 better response to your question.

17 Q. So as a consultant and expert for Dakota Access, you  
18 haven't yet tried to figure out what led to the failure  
19 of other re-vegetation efforts in the State of South  
20 Dakota?

21 A. I cannot speak to other pipelines that I've never  
22 been on before. I'm using the experience from peer  
23 reviewed journal articles, my personal experience with  
24 pipelines throughout the nation, and other reclamation  
25 practices that are in place for roadway right-of-way

1 restorations, mine soils restorations, and all those  
2 other restoration projects that I've worked on over the  
3 years.

4 Q. Have you been involved in crop monitoring protocols  
5 for TransCanada in South Dakota?

6 A. Yes, I have.

7 Q. And would you talk a little bit about that.

8 A. Yes. We put together a crop monitoring protocol for  
9 the Keystone XL Project through South Dakota. And that  
10 project -- or that was submitted to the -- I was a  
11 subconsultant to WESTECH. I do not know if that's been  
12 incorporated into their projects or not.

13 Q. And you also did problem tract consulting with  
14 TransCanada in North Dakota; is that correct?

15 A. Yes, I have.

16 Q. So how does the plan deal with compact -- compaction  
17 issues deeper down by the pipe?

18 A. Can you restate that?

19 Q. Yeah. How does the Agricultural Mitigation Plan  
20 deal with compaction issues that are deeper down by the  
21 pipeline?

22 A. We have a deep ripping protocol in the Agricultural  
23 Mitigation Plan, and that is how we're planning on  
24 handling deep -- or compaction relief on this pipeline  
25 right of way.

1 Q. Have you ever been involved with producing or  
2 contributing to an Environmental Impact Statement?

3 A. Yes, I have.

4 Q. What additional information would be available that  
5 we would be able to obtain or glean from an EIS in your  
6 professional opinion?

7 A. From my professional point of view and what I use  
8 EISs for, they're very invaluable to us because they have  
9 too broad of general base information in them. And  
10 they're of very little use to a soil scientist, in my  
11 professional opinion.

12 Other soil scientists like to use them. I'm not a  
13 fan of them because of the broadness and inaccuracy of  
14 some of the data in there.

15 Q. Did you just say they were invaluable, though?

16 A. I don't find much value at all in them.

17 Q. Invaluable?

18 A. Invaluable probably was too strong of a word, if I  
19 said invaluable. It's of very little use.

20 Q. Dakota Access has never installed a pipe before.  
21 How can we be certain that productivity will be returned?

22 A. They have developed an Agricultural Impact  
23 Mitigation Plan, which is the very first step of making  
24 sure that agricultural production will be maintained and  
25 put back to where it was before.

1 Q. And are you aware that the contractor in this  
2 pipeline is proposed to be the pipeline -- the same  
3 contractor in the first Keystone Pipeline, Michels?

4 A. I was made aware of that this week, yes.

5 Q. And so since we have the same contractor, what kind  
6 of assurances can you give us that a contractor will  
7 actually follow the instructions?

8 MS. SEMMLER: I'm going to object. He can't  
9 speak for Michels. I mean he's speculating on what that  
10 company might or might not do.

11 MS. WIEST: Can you rephrase that at all?

12 MS. CRAVEN: I'll just move on.

13 Q. If there's only 2 to 3 inches of topsoil, how can  
14 you be so certain that it won't get mixed up with any  
15 other subsoils?

16 A. We are going to work with the people involved in the  
17 topsoil, measure the topsoil depths, and then extract  
18 that topsoil as best we can to the depth that it is.

19 Q. Have you ever seen or worked with 100 year old clay  
20 tile in South Dakota?

21 A. In South Dakota, no.

22 Q. So are you simply saying that landowners like the  
23 Stofferahns who have had direct involvement with their  
24 clay tiles are incorrect in their analysis of them?

25 A. What I heard the other landowners say is that

1 they're very difficult to re -- you know, to reestablish,  
2 but they are not impossible. They've done it many times  
3 on their own farms, is what I remember them saying.

4 Maybe not many, but they have done it on their own farms.

5 Q. So you were here when they were testifying? Did you  
6 listen to their testimony?

7 A. Correct.

8 Q. Okay. And are you willing to replace the entire old  
9 clay or concrete tile system on the entire parcel of  
10 affected property?

11 Are you willing to make that recommendation to DAPL,  
12 that they replace the entire clay tiles?

13 Go ahead and answer.

14 A. Yes. I -- let me go back.

15 I believe that we can find quality tile as we --  
16 after we trench that we can hook up to and will not have  
17 to replace the entire system.

18 Q. And can you tell us, how much did the machineries  
19 weigh, the excavation and other type of machineries that  
20 are going to be used in the trench and things like that?

21 What's their weight?

22 A. I do not know.

23 Q. Are there studies demonstrating soil temperatures  
24 may increase up to 5 degrees Fahrenheit above the  
25 pipeline?

1 A. I believe that's what the studies say, yes.

2 Q. Okay.

3 MS. CRAVEN: No further questions. Thank you.

4 MS. WIEST: Ms. Northrup, did you have any  
5 questions?

6 MS. NORTHRUP: I have no questions. Thank you.

7 MS. WIEST: Commission Staff, do you have any  
8 questions?

9 MS. EDWARDS: I do. One second.

10 CROSS-EXAMINATION

11 BY MS. EDWARDS:

12 Q. Mr. DeJoia, turning to line 384 of your testimony,  
13 you testified that you don't believe a winter  
14 construction plan is necessary; correct?

15 A. Yes. That is correct. I do not believe a winter  
16 construction plan is necessary.

17 Q. Would you, nonetheless, agree that a winter  
18 stabilization plan is necessary?

19 A. I believe that if we go into winter before we get  
20 the right of way stabilized, that it would be a very good  
21 idea to have a winter stabilization plan in place.

22 Q. Thank you.

23 You also testified about an Agriculture Mitigation  
24 Plan.

25 Do you know if Dakota Access intends to use

1 subcontractors to handle the construction and reclamation  
2 process?

3 A. I cannot speak for Dakota Access whether or not  
4 they're planning on using subcontractors to do that part  
5 of the project.

6 Q. How could -- in your experience how could we be  
7 sure that Dakota Access or any contractors followed the  
8 Ag Mitigation Plan?

9 A. I believe that Dakota Access is planning on having  
10 environmental inspectors out in the field. I believe  
11 that a key part of that would be having them be there  
12 knowledgeable about agricultural and agronomy issues so  
13 that they can see these things go on in the field or have  
14 someone available to them that they can consult with when  
15 issues come up on, hey, does this look right or not? And  
16 that would help those EIs make sure we're doing what's  
17 best for the soils to get us back to full reclamation  
18 success as quickly as possible.

19 Q. But those EIs aren't independent third parties?

20 MS. SEMMLER: I'm sorry to interrupt, Kristen.  
21 Sorry to do that to you. But Joey is going to take the  
22 stand in a couple of witnesses, and I think he can speak  
23 more to the company's promises in regards to those sorts  
24 of contractors and such.

25 MS. EDWARDS: Okay. No further questions then.



1 Thank you.

2 MS. WIEST: Commissioners.

3 CHAIRMAN NELSON: The earlier discussion about  
4 using the sandbag method for propping up the drain tile,  
5 this is the first that I've heard about this.

6 So are those sandbags setting directly on top of  
7 the pipe then, the pipeline?

8 THE WITNESS: In the typicals that I have seen  
9 for Dakota Access they are sitting on top of the  
10 pipeline, and the pipeline has a pad over top of it.

11 In other typicals I've seen for other companies,  
12 if they cross not horizontal -- not perpendicular but at  
13 an angle, they will put multiple bags in different places  
14 across the line so that it doesn't -- it might not sag in  
15 the middle, but we don't want it sagging anywhere in  
16 between there.

17 So as we said before, the typicals are a  
18 typical. But when we get out to -- that's the minimum we  
19 do. But we don't want those drain tiles to sag anymore  
20 than anyone else because it causes issues across the  
21 whole right of way.

22 CHAIRMAN NELSON: In your testimony you talked a  
23 little bit about the organic issue, and we had some  
24 testimony earlier from a gentleman that was attempting to  
25 establish an organic buffalo herd.

1           Can you talk to us a little bit about, as you  
2 mentioned, using biological controls in organic areas?

3           THE WITNESS: Yes. There are multiple ways --  
4 are you talking about weed management?

5           CHAIRMAN NELSON: Well, you mentioned biological  
6 controls kind of broadly so that's why I'm asking if you  
7 can define exactly how you were intending to use  
8 biological controls.

9           THE WITNESS: Yeah. So the biological controls  
10 refer to an integrated weed management approach to taking  
11 care of weeds as they come up along the right of way.

12           Integrated weed management looks at all options  
13 to control those weeds, including herbicides, mechanical  
14 means, which includes pulling, cultural methods, and then  
15 also biological controls.

16           There are different biological controls for  
17 different weed species out there. Some of the weeds that  
18 we might have on the right of way might not have a  
19 biological control so that might not even be an option.  
20 But others might have a very effective biological  
21 control.

22           As part of the integrated weed management  
23 process we look at what's the most -- what's the best,  
24 most effective way to get rid of that weed with the  
25 resources we have.

1           In my opinion herbicides should always be used  
2 towards the end of that deal because of the negative  
3 effects it can have on other people off right of way or  
4 issues.

5           CHAIRMAN NELSON: Does the Ag Mitigation Plan  
6 speak at all to the organic issue?

7           THE WITNESS: I do not believe so.

8           CHAIRMAN NELSON: And not knowing whether or not  
9 you can or can't speak for the company, but do you  
10 believe the company is committed to working with  
11 landowners who are in an organic situation to maintain  
12 that?

13          THE WITNESS: I believe they are.

14          CHAIRMAN NELSON: As a scientist, would you ever  
15 design a test plot on top of a pipeline right of way?

16          THE WITNESS: No, I wouldn't.

17          CHAIRMAN NELSON: Why not?

18          THE WITNESS: Because of the -- you don't know  
19 what's the difference.

20          CHAIRMAN NELSON: You don't know what the  
21 variability --

22          THE WITNESS: It adds an error.

23          COMMISSIONER SATTGAST: Good afternoon. I just  
24 have a few questions here.

25                You've encountered landowners who have not

1 wanted segregation in their soil?

2 THE WITNESS: Very few. Maybe one.

3 COMMISSIONER SATTGAST: Okay. In that instance  
4 did they give a reasoning why?

5 THE WITNESS: They couldn't give a reasoning.  
6 They just thought it would be less impact if the trench  
7 line -- if they just drove on top of the surface and just  
8 dug everything up.

9 COMMISSIONER SATTGAST: Certainly.

10 THE WITNESS: I didn't agree with them on that,  
11 but it's their land. We have to listen to the  
12 landowners.

13 COMMISSIONER SATTGAST: Was there some type of  
14 documentation that showed that that was their wishes?

15 THE WITNESS: Yes. We made sure that was  
16 documented.

17 COMMISSIONER SATTGAST: And is that a  
18 recommendation you make in the future, that if the  
19 landowner wishes to deviate from the plan, to have  
20 documentation?

21 THE WITNESS: That's documented a lot of times  
22 on what I refer to as a line sheet. As we go through the  
23 landowners, as we're getting information about seed mixes  
24 and that stuff, all of that's documented on those.

25 COMMISSIONER SATTGAST: Thank you.

1 COMMISSIONER HANSON: No.

2 MS. WIEST: Any further cross based on those  
3 Commissioner questions?

4 Any redirect?

5 REDIRECT EXAMINATION

6 BY MS. SEMMLER:

7 Q. You were asked a question about 100 year old clay  
8 tile. And you've not worked on that age of clay tile in  
9 South Dakota particularly; right?

10 A. Correct.

11 Q. Have you worked on that sort of tile in other  
12 states?

13 A. Yes.

14 Q. Based on your experience and your education, do you  
15 have any reason to believe that South Dakota's tile would  
16 be any different than those other states' 100 year old  
17 clay tile?

18 A. No.

19 Q. You testified about a temperature increase along a  
20 pipeline. Do you remember that?

21 A. Correct.

22 Q. What kind of pipeline was that?

23 A. I believe one was a study to act like a pipeline  
24 which had heated tapes, and the other was a natural gas  
25 pipeline.

1 Q. You were just asked about test plots. To have a  
2 test plot is there a particular sort of soil that's  
3 required? Do you have to test the soil?

4 A. No. There is not a particular type of soil, but you  
5 want to make sure that test plot is on uniform soil. You  
6 do not want soils to change in that test plot.

7 So if you have multiple soils in there, your whole  
8 test plot gets thrown, is of relatively little use unless  
9 you know what you're measuring.

10 Q. Do you know if there's been any soil studies done on  
11 the Stofferahn property?

12 A. There is the NRCS soil survey that's been done on  
13 that property.

14 Q. Have you had occasion to look at that?

15 A. Yes, I have.

16 Q. Have you drawn any conclusions?

17 A. I noticed when I looked at it there are three  
18 separate soil types between his sheds and the pipeline  
19 right of way. Those three soil types are drastically  
20 different going from approximately 6 inches in depth to  
21 over, I believe, 18 inches in depth of the A soil  
22 material. That's a drastic difference in soil types for  
23 a research plot.

24 Q. So do you have any opinions on whether or not that's  
25 an appropriate location then for such a plot?

1 A. I don't know how they review the data and analyze  
2 the data. I personally probably would look for other  
3 places for a research plot in my opinion.

4 Q. I'm going to jump back a topic. The temperature  
5 question.

6 So do you know -- do you have an opinion on whether  
7 a crude oil pipeline temperature -- would it react the  
8 same? Is it the same as those other examples you looked  
9 at?

10 A. If the temperature in the pipeline and the pipeline  
11 is exactly the same, they'd act similarly. If the  
12 temperature is different and the pipe is different, there  
13 is no comparison that can be made between those two  
14 issues.

15 Q. So sitting here today, you just can't provide any  
16 certainties to the apples to apples to those?

17 A. No. There is no certainty in those two.

18 MS. SEMMLER: Nothing further. Thanks.

19 MS. WIEST: Is there any recross based on  
20 redirect from anyone?

21 Seeing none, thank you.

22 You may call your next witness.

23 (Exhibits DAPL 50 through 53 are marked  
24 for identification.)

25 MR. KOENECKE: We'll call Micah Rorie to the

1 stand.

2 (The oath is administered by the court reporter.)

3 DIRECT EXAMINATION

4 BY MR. KOENECKE:

5 Q. Good afternoon, Mr. Rorie.

6 Would you state your name and business address for  
7 the record, please.

8 A. My name is Micah Rorie. My business address is  
9 1300 Main Street, Houston, Texas 77002.

10 Q. Are you employed by the Dakota Access project?

11 A. I am.

12 Q. What's your position?

13 A. I'm the senior right-of-way manager handling land  
14 acquisitions in North and South Dakota portions of the  
15 project.

16 Q. Did you prepare prefiled testimony in this  
17 proceeding?

18 A. I did.

19 Q. Did you work with me to put your prefiled testimony  
20 together?

21 A. Yes.

22 Q. In fact, you did that just as if we were working on  
23 it here --

24 A. Yes.

25 Q. -- this afternoon live; correct?



1           You'll have to wait for me to finish my question  
2 before you answer. That will help the court reporter  
3 immensely. Thank you.

4           Do you have any additions or corrections to your  
5 testimony?

6 A. I do have one correction.

7 Q. What is it?

8 A. The last part of my testimony on the last page  
9 stated that we would provide contact information for  
10 environmental inspectors, agricultural inspectors to each  
11 landowner.

12           And it, in my experience, would be more efficient to  
13 simply provide the contact information for the respective  
14 land agent in that area. They are the most intimate with  
15 the properties that we're crossing and with the  
16 landowners in those areas, and they can direct specific  
17 concerns to the respective environmental inspectors that  
18 are in that area at the time the concern is voiced.

19 Q. Thank you.

20           Have you got anything further in the manner of  
21 corrections or additions?

22 A. No.

23 Q. I'm not sure what this exhibit number is. I  
24 apologize. Does yours have an exhibit number up there?

25 A. I do not see the exhibit number on this.

1 MS. WIEST: Is it 35?

2 MR. KOENECKE: I'm sorry. I apologize.

3 A. What I have in front of me says 35.

4 MR. KOENECKE: I'll move Dakota Access -- or  
5 DAPL Exhibit 35.

6 MS. WIEST: Is there any objection to  
7 Exhibit 35?

8 If not, it's been admitted.

9 Q. Mr. Rorie, how long have you been working on land  
10 acquisition for Dakota Access?

11 A. A little over a year.

12 Q. When did landowner contacts begin for the project,  
13 if you know?

14 A. Began in the summer of 2014.

15 Q. And what type of activities did you begin with at  
16 that time?

17 A. Locating landowners along the proposed route.

18 Q. Did you also inquire about survey access?

19 A. We did.

20 Q. Do you maintain a Staff of agents who work  
21 underneath you to do landowner contacts?

22 A. I do.

23 Q. And do they keep records of their contacts with  
24 landowners?

25 A. Yes.

1 Q. In fact, they keep records of every contact, don't  
2 they?

3 A. Yes.

4 Q. Do your agents abide by an ethical policy?

5 A. Yes.

6 Q. In fact, do they have to sign an ethical policy?

7 A. Yes.

8 Q. Each one individually?

9 A. Yes.

10 Q. What kind of things are in the policy?

11 A. The policy outlines Dakota Access's procedures in  
12 terms of code of conduct and ethics.

13 Q. Who enforces that policy?

14 A. Ultimately the person that enforces that is  
15 Mr. Mahmoud.

16 Q. Is there any landowner that the project has  
17 intentionally not communicated with?

18 A. No.

19 Q. Have you tried to reach every landowner personally?

20 A. Have I personally tried to do that?

21 Q. I'm sorry. That wasn't a very good question.

22 Has the project attempted to make personal contact  
23 with every landowner on the project route?

24 A. Yes.

25 Q. Mr. Rorie, do the land agents negotiate with

1 landowners as to such things as timing and access to  
2 their property?

3 A. Yes.

4 Q. And so if a landowner requested access to a  
5 particular portion of a field that would have to cross  
6 the right of way, is that something typically negotiated?

7 A. Yes.

8 Q. You wouldn't exclude anybody from their being able  
9 to access all of their property during construction; is  
10 that correct?

11 A. That's correct.

12 Q. There should be in front of you DAPL Exhibit 50 with  
13 the yellow lines on it and maps. Have you got that up  
14 there?

15 A. I do.

16 Q. Do you recognize that document?

17 A. I do.

18 Q. Can you tell the Commissioners what that is?

19 A. This document represents the pipeline's proximity to  
20 farmsteads along the route.

21 Q. Do you know what the yellow lines signify? Might it  
22 mean that there's a corresponding aerial photograph?

23 A. Yes. That's correct.

24 Q. Was that document prepared under your direction?

25 A. Yes.

1 Q. And can you testify to its contents today?

2 A. Yes, I can.

3 MR. KOENECKE: I would move DAPL 50.

4 MS. WIEST: Is there any objection to 50?

5 MS. REAL BIRD: Is that 5-0?

6 MS. WIEST: Yes. 5-0.

7 MS. REAL BIRD: I don't believe I have that on  
8 my list that was filed on September 23.

9 MS. WIEST: Right. Can you explain the  
10 existence of this?

11 MR. KOENECKE: I can do that.

12 Commissioner Nelson asked us during the pendency  
13 of these proceedings to prepare an exhibit like this.  
14 And we've had discussions on more than one occasion about  
15 the Applicant preparing this in order to meet with  
16 Commissioner Nelson's request so that questions could be  
17 asked about it.

18 I think we've done -- I think we've done exactly  
19 what was asked of us, and this witness can testify as to  
20 the contents. It was not requested prior to September 23  
21 and has developed during the course of the proceedings,  
22 and I think it's directly responsive to what was asked of  
23 us.

24 MS. WIEST: Are there any objections to the  
25 admission of Exhibit 50?

1           If not, it's admitted.

2       Q.   Mr. Rorie, are there indeed places where there  
3       are -- let's start over on that question.

4           Does the three-page table with the yellow lines  
5       indicate the approximate distance in feet from structures  
6       to the pipeline?

7       A.   Yes.

8       Q.   Do you know how we determined those distances?

9       A.   Normally determine those using GIS mapping  
10       resources.

11       Q.   Nothing further about that.

12           Mr. Rorie, are you familiar with the Stofferahn  
13       family?

14       A.   I am.

15       Q.   How many tracts of their -- owned by Stofferahns  
16       does the project seek to cross?

17       A.   To my knowledge, one.

18       Q.   Mr. Rorie, are you familiar with the tracts owned by  
19       the Hohn or Geide families?

20       A.   I am.

21       Q.   How many tracts of land does that cross?

22       A.   I'd have to get you that information. My  
23       understanding is one each.

24       Q.   Thank you. Are you familiar with the Schoffelman  
25       property?

1 A. Yes.

2 Q. Do you know how many tracts of land owned by that  
3 family we seek to cross?

4 A. I believe there's one.

5 Q. Are you familiar with the property of the Andreessen  
6 family?

7 A. Yes.

8 Q. Do you know how many tracts of land the project  
9 seeks to cross?

10 A. I believe there's one.

11 Q. Are you familiar with the Hoogestraat family? Do  
12 you know how many tracts we seek to cross?

13 A. I believe there's two involved with the Hoogestraat  
14 family.

15 Q. How did you arrive at two for them?

16 A. By looking at our lists, the information that I have  
17 for the project and the folks who are associated with the  
18 Hoogestraat family.

19 Q. Is one of the two owned by what's thought to be her  
20 son, Mr. Anderson?

21 A. That's correct.

22 Q. How many tracts of land does the project have  
23 identified in South Dakota?

24 A. 743.

25 Q. Have you spoken with landowners up and down the

1 right of way in South Dakota?

2 A. I have.

3 Q. Is it your opinion that the testimony from  
4 landowners here at the Commission is representative of  
5 the general sentiment of landowners on the route in  
6 South Dakota?

7 A. No, it's not.

8 Q. Mr. Rorie, has the project filed condemnation  
9 actions?

10 A. It has.

11 Q. How did the project arrive at the decision to  
12 make -- to file those actions?

13 A. After extensive efforts to try to reach an amicable  
14 agreement with those specific landowners --

15 MS. CRAVEN: We object. This is beyond the  
16 rebuttal, the scope of rebuttal.

17 We were lectured by the attorney about how we're  
18 supposed to stay within the limits of the rebuttal, and  
19 this is way beyond that scope.

20 MS. WIEST: Did you have a response?

21 MR. KOENECKE: I do have a response.

22 Condemnation has been brought up this week on  
23 several occasions, and it would be highly improper for  
24 the Commission not to take the testimony of the company  
25 as to the number perhaps, some of the sentiments behind



1 it, some of the things that led up to that decision.

2 Nobody on my side of the table likes eminent  
3 domain. There's nobody over here that's excited about  
4 it. But it got brought up and the Commission let it in  
5 and we think it would be highly prejudicial to not at  
6 least hear a little bit about how we got to those  
7 decisions.

8 MS. WIEST: The objection is overruled.

9 I believe what we have done is we have allowed  
10 the prefiled testimony in, and to the extent that there  
11 was more information that was at the hearing or through  
12 Interrogatories before the hearing, we have allowed that  
13 to be testified to by the witnesses.

14 MR. KOENECKE: Could you read the question back,  
15 please.

16 (Reporter reads back the last question.)

17 A. So after extensive efforts to negotiate with  
18 landowners and make an amicable agreement, if we arrive  
19 at what we determine to be an impasse, there's no further  
20 progress to be made in negotiations, then we move  
21 forward.

22 Q. Are there instances where the landowners have  
23 declared an impasse?

24 A. That's correct.

25 Q. How about for survey access?

1 A. Yes. That has happened as well.

2 Q. Can you explain a little bit about that for the  
3 Commission?

4 A. The initial part of the process of acquisition is to  
5 obtain permission from all of the landowners to survey  
6 their properties, conduct certain surveys that help us  
7 provide information about the route of the pipeline, the  
8 constructibility of the pipeline, et cetera.

9 And those surveys are essential in order for us to  
10 give proper information to the governing bodies over the  
11 project.

12 Q. And, in fact, a circuit judge told us to file  
13 condemnations if we needed surveys; isn't that correct?

14 A. That's correct.

15 MR. KOENECKE: I've got nothing further. Thank  
16 you.

17 MS. WIEST: Yankton Sioux Tribe, did you have  
18 any questions?

19 MS. BAKER: Thank you. Just one or two.

20 CROSS-EXAMINATION

21 BY MS. BAKER:

22 Q. Good afternoon.

23 A. Good afternoon.

24 Q. Jennifer Baker. I'm an attorney for the Yankton  
25 Sioux Tribe.

1 I was wondering, why does the amount Dakota Access  
2 will pay for crop damage diminish over a three-year  
3 period rather than paying for 100 percent damage over  
4 those three years, assuming crops are damaged for three  
5 years?

6 A. Initially we anticipate affecting one full growing  
7 season due to the pipeline's construction. After that  
8 full growing season it's been, in our experience  
9 accurate, really more than accurate, to compensate the  
10 landowner for that 80 percent on the second growing  
11 season. And then as the crops are replenished, the  
12 productivity increases, we feel it's fair to compensate  
13 60 percent on third year in lieu of compensating  
14 100 percent for the three years.

15 Q. Are you saying that 20 percent of the crop should be  
16 coming back in the second year and then 40 percent in the  
17 third year?

18 A. Initially is how we approached that topic, yes. But  
19 then again those were all handled individually on an  
20 individual basis contingent on that specific landowner's  
21 crop yields. It's a discussion between us and the  
22 landowner.

23 Q. Okay. So those 100, 80, 60 percent figures aren't  
24 set in stone?

25 A. They are not set in stone. That's correct.

1 Q. Okay. And then how can farmers be made whole if  
2 crop damage exceeds three years?

3 A. That would be something we would look at on an  
4 individual basis. If that crop damage that you're  
5 speaking to is attributable to the pipeline or the  
6 construction of the pipeline or operation or maintenance  
7 of the pipeline, then we would have that discussion with  
8 the landowner and reach an agreement with them.

9 Q. Okay. Why was that not included in your testimony?

10 A. That would be more of a question for our counsel as  
11 to why it was not included. Our standard payment  
12 structure for crop damage is what's reflected in my  
13 testimony.

14 MS. BAKER: Okay. Nothing further. Thank you.

15 MS. WIEST: Mr. Rappold.

16 CROSS-EXAMINATION

17 BY MR. RAPPOLD:

18 Q. Good afternoon, Mr. Rorie.

19 A. Good afternoon.

20 Q. You're familiar with the condemnation proceedings  
21 that are taking place in South Dakota; correct?

22 A. I am.

23 Q. You know there's new filed cases in Lincoln County;  
24 correct?

25 A. Uh-huh.

1 Q. And also the other county is Minnehaha County?

2 A. That's my understanding, yes.

3 Q. Is it also your understanding that you have  
4 different results of your lawsuits in both counties?

5 A. Depends on your definition of results. I'm not sure  
6 I understand that question.

7 Q. One county ruled in your favor, and one county ruled  
8 against you?

9 A. That's correct.

10 Q. Okay. And that's different results; right?

11 A. Yeah. That would be, yep, different.

12 Q. That's my definition for these purposes.

13 A. Okay.

14 Q. So you don't -- did you know when those cases are  
15 going to be resolved?

16 A. I do not know when they'll be resolved.

17 Q. Is it your understanding that the judge that ruled  
18 in your favor hasn't issued a written order yet?

19 A. It's my understanding he has not issued a written  
20 order. That's correct.

21 MR. RAPPOLD: Thank you. I have no further  
22 questions.

23 MS. WIEST: Ms. Craven.

24

25

CROSS-EXAMINATION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

BY MS. CRAVEN:

Q. I'll be brief. In response to one of Ms. Baker's questions you said we'll have to ask the attorneys why it's not in there.

Did you prepare your own testimony?

A. I prepared the testimony with our attorneys and other members of the project team, what we thought was pertinent to answer that question.

Ultimately, those types of negotiations and discussions about compensation vary based on those conversations with landowners and their particular farming operation.

Q. There's a map of the homes, Exhibit 50, which was just entered into the record that shows the homes are within 600 feet. Are there any maps of the wells attached to these homes that are within 600 feet of the centerlines?

A. I do not have any maps today to provide to you to show that, no.

Q. Have you done that kind of a study?

A. I have not personally done that kind of study.

Q. So you don't know where the water supplies are for the benefit of these homes that are going to be impacted by the pipeline?

1 A. I personally do not know that, know.

2 Q. Who would know that?

3 A. That would be a better question for Mrs. Howard.

4 Q. Okay. You also testified that DAPL tries to work  
5 with landowners.

6 Does that include digging up dirt on them for  
7 40 year old transgressions?

8 A. I'm not sure I understand the question. Digging up  
9 dirt?

10 MR. KOENECKE: I object. That's argumentative.

11 MS. CRAVEN: No further questions.

12 MS. WIEST: Sustained.

13 Ms. Northrup.

14 MS. NORTHRUP: I have no questions. Thank you.

15 MS. WIEST: Commission Staff.

16 MS. EDWARDS: I have no questions for this  
17 witness. Thank you.

18 MS. WIEST: Commissioners.

19 CHAIRMAN NELSON: First of all, thank you for  
20 the work that you and your staff did in putting together  
21 Exhibit 50. It's helpful to me. I want to ask just a  
22 few questions based on this.

23 THE WITNESS: Sure.

24 CHAIRMAN NELSON: If we could look at I think  
25 it's the second map of SD-MC-010.000, McPherson County.

1           Directly below the indicator of 195 feet it  
2 appears that the pipeline -- the permanent easement route  
3 goes through some trees that is maybe circled with a  
4 driveway of some type.

5           Can you help me understand exactly what that  
6 feature is?

7           THE WITNESS: I would have to provide that  
8 information for you, after further research, what that  
9 particular feature is. I can't really speak to it today.

10          CHAIRMAN NELSON: And here's the thing that  
11 puzzles me. Would you agree it looks like there's some  
12 kind of a driveway around that?

13          THE WITNESS: It does. In my experience  
14 sometimes those are former bins. Sometimes they're  
15 former owned sites. Not as often.

16          But we have several areas in North and  
17 South Dakota where that type of feature is prevalent, and  
18 it surrounds bins, some type of a shelter belt.

19          CHAIRMAN NELSON: But to your knowledge the  
20 landowner doesn't have a concern of that?

21          THE WITNESS: To my knowledge, I have no record  
22 of their concern of that feature.

23          CHAIRMAN NELSON: Thank you. Let's go to the  
24 last map, the last picture. And this is a Lincoln County  
25 SD-LI-065.100.



1           It appears that the easement area, the temporary  
2 easement area, specifically goes around their shelter  
3 belt. Is that correct?

4           THE WITNESS: Yes.

5           CHAIRMAN NELSON: And I'm assuming that was  
6 either asked for or you all agreed in order to preserve  
7 their shelter belt; is that correct?

8           THE WITNESS: One or the other, yes.

9           CHAIRMAN NELSON: And I think the last question  
10 that I want to ask, and this is a Miner County map,  
11 SD-MN-032.000.

12           So relating back to the question that I asked on  
13 the last map, on this one east of the house it appears  
14 that the temporary easement area is going right through  
15 the middle of some trees.

16           Is there some reason why these trees weren't  
17 excluded also just like we saw on the last map?

18           THE WITNESS: I can't speak to the particular  
19 reasons for that, other than it is closer proximity to a  
20 road bore so there's a certain space necessary to conduct  
21 that. But I would have to get back to you as to the  
22 exact answer why that wasn't done.

23           CHAIRMAN NELSON: So let me ask Ms. Wiest.

24           What would be the appropriate method for him to  
25 respond to my questions that were unanswered?

1 MR. KOENECKE: We can respond to those with  
2 other witnesses, if necessary.

3 MS. WIEST: Okay.

4 CHAIRMAN NELSON: Thank you.

5 I don't have any other questions, but, again,  
6 thanks for your work on this.

7 THE WITNESS: You're welcome.

8 COMMISSIONER HANSON: Good afternoon, Mr. Rorie.

9 THE WITNESS: Good afternoon.

10 COMMISSIONER HANSON: Who makes the decision or  
11 did you share that with us who makes the decision to sue  
12 for access to the properties?

13 THE WITNESS: The ultimate decision comes from  
14 Mr. Mahmoud.

15 COMMISSIONER HANSON: And that would be the same  
16 with condemnation? Is that what you refer to as  
17 condemnation then?

18 THE WITNESS: Yes, sir.

19 COMMISSIONER HANSON: What financial  
20 arrangements are made with the landowner if the pipeline  
21 route is changed after they've gone through the lawsuit?

22 THE WITNESS: What financial arrangements are  
23 made if the pipeline route changes after we go through a  
24 lawsuit?

25 COMMISSIONER HANSON: Sure. If the route is

1 changed.

2 THE WITNESS: That might be a better question  
3 for counsel. I'm not sure how South Dakota courts  
4 respond to that. In terms of variations of a route  
5 postdecision or a judgment, I don't know.

6 COMMISSIONER HANSON: So you don't have a  
7 standard operating procedure whereby if you have sued a  
8 landowner and the route changes and the landowner has  
9 incurred expenses for the lawsuit, you don't have a  
10 standard operating procedure for reimbursing them for the  
11 cost of the lawsuit?

12 THE WITNESS: I don't have a standard operating  
13 procedure for that, no.

14 COMMISSIONER HANSON: All right. Thank you.  
15 No further questions.

16 MS. WIEST: Any further cross based on those  
17 questions?

18 Any redirect?

19 MR. KOENECKE: No.

20 MS. WIEST: Okay. Thank you.

21 We will take a break now of 15 minutes. So we  
22 will be back at 5 to.

23 (A short recess is taken)

24 MS. WIEST: Mr. Koenecke, I believe you were  
25 going to call your next witness.

1 MR. KOENECKE: I will. But I think first  
2 Ms. Baker has a motion.

3 MS. BAKER: I do. Thank you.

4 The Yankton Sioux Tribe would move for the  
5 admission of the Prefiled Rebuttal Testimony of Chris  
6 Saunsoci, as he is still ill and will not be available to  
7 testify in person at the proceeding.

8 We have conferred with the opposing counsel, and  
9 they have agreed to stipulate to this. I am just looking  
10 for the exhibit number, and it is YST 11, I believe.

11 MS. WIEST: Okay. Just getting my list. So  
12 YST 11, prefiled of Mr. Saunsoci?

13 MS. BAKER: Yes. That's correct.

14 MS. WIEST: And that would come in without his  
15 presence; is that correct?

16 MS. BAKER: Yes.

17 MS. WIEST: And there is no objection to that?

18 MR. KOENECKE: No objection.

19 MS. WIEST: If not, Yankton Sioux Tribe  
20 Exhibit 11 will be admitted.

21 MS. BAKER: Thank you.

22 MS. CRAVEN: Ms. Wiest, I have a question about  
23 Exhibit 50. Would it be appropriate to ask it now?

24 MS. WIEST: Sure.

25 MS. CRAVEN: When we were discussing the

1 preparation of this exhibit and the list the other day I  
2 asked to have included adjoining farms where there is no  
3 eminent domain taking place.

4 And there is actually maps on here that I've  
5 seen. One is SD-LI-027519300. And there is an adjoining  
6 house, and it looks to be closer than the actual farm.  
7 It's about, let's see, one, two, three, four, fifth from  
8 the back. There's no number attached to that house.  
9 It's in the upper right-hand corner. It's in Lincoln  
10 County.

11 MS. WIEST: What are the numbers on it?

12 MS. CRAVEN: SD-LI-027519300.

13 MS. WIEST: Okay. Can you explain to me again  
14 the issue? I'm sorry.

15 MS. CRAVEN: Well, so the house is where the  
16 eminent domain appears to be taking place. They have  
17 numbers. But say the pipeline right of way comes right  
18 up to your property but they don't have to use eminent  
19 domain to come right up to your property but your house  
20 could, in fact, be closer to the right of way than the  
21 house where the eminent domain has taken place. So it's  
22 an adjoining property.

23 COMMISSIONER HANSON: Perhaps I can help there.  
24 If she looks at the very next page. Look at the very  
25 next page.

1           Does that include the one that you're referring  
2 to?

3           MS. CRAVEN: Oh, I think it does. Okay. Yes.  
4 Yes. It does. Thank you.

5           So let me see if that would be true then for the  
6 other one that I have a concern about. There was another  
7 one.

8           I'm not seeing it right now.

9           So all the adjoining properties then are  
10 identified? I want to make sure. It probably would have  
11 been helpful to have them both numbered on the same page  
12 so that it didn't create confusion.

13          MS. WIEST: I can't answer your question. I  
14 don't know.

15          Would Mr. Mahmoud be able to answer a question  
16 on this? Were you getting to your testimony?

17          MR. KOENECKE: I think the answer is yes.  
18 Sorry. I'm trolling around the room looking for a 50 I  
19 can use right now. Sorry. I just kind of grabbed the  
20 nearest microphone.

21          MR. MAHMOUD: I don't really understand what the  
22 question is, Ms. Wiest.

23          MR. KOENECKE: We'll do our best to answer  
24 everybody's questions about this exhibit. Mr. Mahmoud  
25 has knowledge of the question when it was first posed,

1 and we'll do what we can do here. It's going to take  
2 some more back and forth to figure out exactly what's  
3 being asked, I think.

4 MS. WIEST: Okay. Is it all right, Ms. Craven,  
5 if we go into the testimony and then we can try to figure  
6 it out?

7 MS. CRAVEN: Yes. Okay. Thank you.

8 MS. WIEST: Are we ready for the next witness  
9 then?

10 Go ahead, Mr. Koenecke.

11 MR. KOENECKE: Thank you, Ms. Wiest.

12 DIRECT EXAMINATION

13 BY MR. KOENECKE:

14 Q. Good afternoon, Mr. Mahmoud. Do you understand  
15 you're still under oath?

16 A. Yes, sir.

17 Q. Did you put forth written Prefiled Rebuttal  
18 Testimony in this matter?

19 A. Yes, I did.

20 Q. Is that in front of you, and is it marked with an  
21 exhibit number?

22 There's a lot of paper over there, isn't there?

23 A. Oh, here it is. I'm sorry.

24 Q. Sorry.

25 A. It is Exhibit 54.

1 Q. I think it might be 34. I'm sorry. We tried to  
2 locate yours over on the table previously and couldn't  
3 find it so --

4 A. 36. Sorry.

5 Q. 36?

6 A. Yes, sir.

7 Q. We've marked it as 36. That's your written Prefiled  
8 Rebuttal Testimony; correct?

9 A. Yes, it is.

10 Q. Do you have any additions or corrections for that  
11 this afternoon?

12 A. Well, I don't know if it's an addition or a  
13 correction. More so an agreement with the Staff to not  
14 contest the 24 million dollar road bond.

15 Q. And so that portion of your testimony related to  
16 that is not anything you're going to be testifying to  
17 this afternoon?

18 A. That's correct. It's no longer valid.

19 Q. Understood. Do you have any other additions or  
20 corrections?

21 A. No, I do not.

22 Q. If I asked you all those questions this afternoon  
23 orally, would you answer the same way?

24 A. I would.

25 MR. KOENECKE: I would move the admission of



1 DAPL 36.

2 MR. RAPPOLD: Rosebud objects. The grounds  
3 being the remainder of the testimony as identified, it  
4 isn't rebuttal testimony.

5 If you start on page 3, the question at line 67,  
6 Mr. -- I'm sorry. I can't pronounce your name. Have you  
7 studied the Keystone conditions imposed by the Commission  
8 in HP09-001?

9 That question is not designed to rebut anyone's  
10 testimony that I'm aware of. The answer then -- the  
11 answers from that point on just address various  
12 conditions that the Commission has placed on other  
13 pipelines, particularly the Keystone I.

14 It's clearly not rebuttal testimony. And it is  
15 more appropriate, I believe, for -- if Dakota Access  
16 wants these types of conditions placed on this Permit, it  
17 would have been more appropriate in one of two places.

18 One, direct testimony by Dakota Access. Or,  
19 two, it should be something that they would submit in our  
20 post briefings that I assume we're going to submit to the  
21 Commission.

22 And so I would object to admission of this  
23 testimony.

24 MS. REAL BIRD: The Yankton Sioux Tribe joins in  
25 that objection.

1 MS. WIEST: Okay.

2 MS. REAL BIRD: And also with regard to  
3 lines 227 and 273, those questions call for speculation  
4 and ask for legal conclusions, and we add to the  
5 objection of Rosebud and join in.

6 So we join in the objection and then add that  
7 additional grounds for the objection.

8 Thank you.

9 MS. WIEST: Okay.

10 MS. CRAVEN: And IEN and DRA joins as well.

11 MS. WIEST: Okay. Did you have a response,  
12 Mr. Koenecke?

13 MR. KOENECKE: We've heard over the last two  
14 weeks a number of questions related to conditions that  
15 might or might not be imposed on the project. We think  
16 this is responsive to those concerns which were outlined  
17 in writing previously to this time.

18 It's direct on rebuttal to those concerns that  
19 were espoused by Staff witnesses certainly and to a  
20 lesser extent some of the other witnesses.

21 I think it's completely relevant. It ought to  
22 be in front of the Commission. I don't know that it's a  
23 focal point of Mr. Mahmoud's testimony this afternoon,  
24 but I think it's very relevant. It's timely. It's  
25 instructive. And this is the time to take that up if

1 somebody wants to.

2 MS. WIEST: I will overrule the objections. I  
3 think it is relevant rebuttal testimony.

4 Anything further?

5 With that, I will admit Exhibit 36.

6 Q. Mr. Mahmoud, have you got a copy of Exhibit 50 in  
7 front of you, which is the farmstead exhibit?

8 A. Yes, I do.

9 Q. Have you had a -- were you in the room when  
10 Commissioner Nelson asked his questions of Mr. Rorie?

11 A. Yes, I was.

12 Q. Would you like to say anything about those questions  
13 at this -- let me back up.

14 Did you make an investigation of the matters  
15 contained in Exhibit 50 in response to Commissioner  
16 Nelson's questions?

17 A. I did to the two questions that I walked away with  
18 from tract number SD-MC-010.000 and SD-MN-032-000.

19 Q. What can you tell all of us about those two tracts?

20 A. The first one, track SD-MC-010.000 I believe,  
21 Commissioner Nelson, you were referring to the area  
22 southeast of the line that has the measurement measuring  
23 the 195 feet.

24 CHAIRMAN NELSON: It would be the feature  
25 directly south of the 190 foot numerals.

1 A. I know not everybody can see, but would you mind  
2 just pointing?

3 (Chairman Nelson points.)

4 A. Okay. We're talking about the same area, which what  
5 I referred to as southeast, Commissioner Nelson referred  
6 to it as south.

7 Based on our review, and we pulled up some Google  
8 Earth aerial photography, that appears to be an old  
9 filled in pond that is no longer -- is not farmed, from  
10 what we can tell, with a road going around it.

11 And then on the next one, the SD-MN-032-000, we  
12 looked at -- let me flip to it. The map I'm looking at,  
13 again, is SD-MN-032.000. This is Miner County,  
14 South Dakota in the title.

15 Where the route crosses over 229th Street, that road  
16 crossing is proposed to be a bore. We will set up bore  
17 pits on each side of the road so that the trees that are  
18 indicated that fall within the right of way -- we can't  
19 100 percent say that we're not going to have to cut the  
20 tree out, but our intent is to side trim that. Because  
21 theoretically the bore will extend beyond it.

22 The landowner has already given us consent to cut  
23 down the tree so we have an easement for this property.  
24 Without saying we will not cut, our intention is to not  
25 cut, but we may have to side trim. And unless the tree

1 causes a safety concern, then it will remain in place.

2 And I should add back on the first tract, we also  
3 have an easement for that property that we're traversing,  
4 the pond area.

5 THE WITNESS: Those are the two I had walked  
6 away with your questions.

7 CHAIRMAN NELSON: And I greatly appreciate that.  
8 And, frankly, on the first McPherson County -- and I  
9 hadn't noticed this earlier, but you've been very careful  
10 going through the two shelter belts to minimize the  
11 number of trees cut there.

12 And as a guy who spent much of his youth helping  
13 to build shelter belts, I appreciate that.

14 Q. Mr. Mahmoud, do you expect the project to replace  
15 rail car transportation for crude oil from the Bakken in  
16 North Dakota?

17 A. We do. As part of this project, it's going to move  
18 somewhere between 450 and 570,000 barrels of crude oil  
19 per day out of the Bakken.

20 When you look at that production today, the Bakken,  
21 which extends from North Dakota to Wyoming, it's about  
22 1.3 million barrels per day. If you look at where this  
23 pipe's going to service, it's about 1 million barrels per  
24 day.

25 What that means is the collection area or gathering

1 field in North Dakota that this pipeline will directly  
2 serve has a production quantity of about 1 million  
3 barrels per day. So this pipe will move about a third of  
4 that production coming out of the Bakken.

5 It will also, if you look at a bigger picture -- I'm  
6 sorry. That's a little bit more than 40 percent. About  
7 a third of the total Bakken.

8 Rail today is the largest transporter of crude out  
9 of the Bakken. So when you do the math and if you assume  
10 700 barrels per car, rail car, that's about five unit  
11 trains that will be displaced by this pipeline every  
12 single day going forward. Five trains, 120 cars,  
13 700 barrels per car off of the rails.

14 There's two important factors with that. One is  
15 safety. Hands down if you look at the data from DOT --  
16 this isn't my data. This is data you can go to their  
17 website and look at -- on a per barrel basis of product  
18 moved, pipelines are by far, no question, the safest mode  
19 of transportation.

20 So what this pipeline does, it increases the safety  
21 for the general public. It increases the safety here in  
22 South Dakota for the rail that moves crude out of the  
23 Bakken, across the United States, and directly for the  
24 North Dakota area.

25 The same thing with trucks. It's about 2,000 trucks

1 taken off the road every day by moving crude with this  
2 pipe as opposed to in -- trucks or semis moving that  
3 crude at 200 barrels per truckload.

4 So, in my mind, absolutely. It's going to remove  
5 crude that's being transported via rail that would  
6 otherwise -- be transported by rail will now be  
7 transported on this pipe. And that's about a third of  
8 that production or 40 percent coming out of the Bakken  
9 proper.

10 Q. Have you heard concerns here this week that  
11 South Dakota will get nothing from this pipeline?

12 A. I have.

13 Q. Do you have a response to that?

14 A. I do.

15 It's actually pretty baffling to me. And, you know,  
16 since this is my opinion it's actually pretty  
17 extraordinary that we would sit here and have a debate  
18 about crude oil in North America when, bottom line, the  
19 U.S. is a carbon-based society. No matter how you slice  
20 it, alternate energy, whatever's out there, we're crude  
21 based. Everything we do.

22 And that's not going to change. We know we all hope  
23 it's going to change one day just from being concerned  
24 citizens, but at this point it's just not there.

25 So when I hear that about the U.S. in particular --

1 and what I really started thinking about in South Dakota,  
2 the U.S. produces somewhere around 10 million barrels per  
3 day. We also import about 10 million barrels per day.

4 So our consumption, and these are round numbers, but  
5 it ranges between 17 and a half, 20 million barrels per  
6 day. Roughly half of that is produced right here in  
7 North America. Over the past five years that import has  
8 reduced by 26 percent. Again these aren't my numbers.  
9 These are facts you can find on the internet, EIA,  
10 wherever.

11 So of that 26 percent reduction, a million barrels  
12 of that's from the Bakken. That oil that's produced in  
13 the Bakken translates directly to refineries across the  
14 U.S., which produces the fuels that the farms here in  
15 South Dakota are dependent on. All of us that got here,  
16 unless you're driving the Chevy Volt sitting out there,  
17 put fuel inside that vehicle.

18 Even that Chevy Volt benefited from cruel oil  
19 because I don't know what the power plant was burning,  
20 could have been natural gas, could have been wind, but at  
21 some point the tires on that car are rubber product.  
22 That is simply a byproduct or a derivative of crude oil.

23 So in no uncertain point we as a society in  
24 South Dakota are dependent upon crude oil in every sense  
25 of the word.



1           And when I hear that we want to produce locally and  
2 we want to do all of those fun things, that sounds good  
3 in theory, but it's simply not reality.

4           South Dakota, a couple of fun facts, is the eighth  
5 largest consumer --

6           MR. RAPPOLD: I'm going to object. The answer  
7 is becoming a narrative.

8 Q.       Where does South Dakota rank in terms of per capita  
9 consumption of oil products, if you know.

10 A.       I do know. And it's eighth. You know, when we look  
11 at that, it's the eighth largest consumer. It's the 39th  
12 largest producer of energy in the United States out of  
13 50 states. It's the 25th out of 31 states producing  
14 crude oil in the U.S. 25 out of 31.

15           South Dakota consumes about 60,000 barrels per day  
16 of crude oil. 60,000 barrels. They produce five.  
17 That's a 12 times differential.

18           So when I hear things that South Dakota -- you know,  
19 economic development, Sioux Falls, wherever it may be,  
20 there's not a chance that Sioux Falls, that South Dakota  
21 can have economic development without crude oil. When a  
22 third of that -- well, 26 percent reduction. Half of the  
23 crude oil is domestically produced. That's coming from  
24 the Bakken. So the Bakken is spurring and generating  
25 economic growth in this state. It's developing it in

1 Sioux Falls.

2 When I look at pipes in the Sioux Falls area, if you  
3 look at the pipe map and the grid where there's refined  
4 products, there's natural gas pipes, when you look at the  
5 map and footprint of Sioux Falls there's pipes inside  
6 that city limit. It's that simple.

7 MS. CRAVEN: He's assuming facts that are not in  
8 evidence.

9 THE WITNESS: We actually -- well, I can't  
10 answer. Sorry.

11 MS. WIEST: Do you have a response,  
12 Mr. Koenecke?

13 Was that an objection?

14 MS. CRAVEN: That is an objection.

15 Q. Mr. Mahmoud, I'll rephrase the question.

16 Mr. Mahmoud, do you have in front of you DAPL 52?  
17 Or is it 51? 52? I'm sorry.

18 A. I do. I have two maps, DAPL 51 and 52.

19 Q. Speaking about 51, was that prepared under your  
20 direction?

21 A. It was.

22 Q. Can you tell us what that is?

23 A. 51 is a map that shows several pipelines on it that  
24 traverse through residential areas within the Sioux Falls  
25 area. There's a blue circle on it.

1 I can't remember the individual's name who testified  
2 that she would never live next to a pipeline. The blue  
3 dot is -- actually centers on her home. She lives  
4 immediately adjacent to a pipeline. It's actually a  
5 refined products pipeline. And I'm looking at  
6 Exhibit 51.

7 Q. Is 51 a picture of a little bit of Minnehaha and a  
8 lot of northern Lincoln County in Sioux Falls?

9 MS. WIEST: Have these been handed out?

10 MR. KOENECKE: They have been.

11 MS. WIEST: I don't have it.

12 MR. KOENECKE: I'm sorry.

13 THE WITNESS: I have 52.

14 CHAIRMAN NELSON: Could I ask that the last two  
15 or three questions be repeated? Because I was looking  
16 for a map and not listening.

17 MR. KOENECKE: I apologize, Commissioner. I  
18 looked up there and thought you had them.

19 Q. Mr. Mahmoud, back to 51, can you tell us what area  
20 51 encompasses?

21 A. It's a residential area, Sioux Falls general area,  
22 Minnehaha and Lincoln County residential. I don't know  
23 the name of the residential neighborhood.

24 Q. Do you see a blue dot in the middle of 51?

25 A. I do.

1 Q. Can you tell the Commissioners or everybody here  
2 what the blue dot signifies?

3 A. I can. And I can't remember the lady's name who  
4 testified that she would not live next to a pipeline.  
5 And so we have her address, and without disclosing what  
6 that is but we mapped that. We put it on this map and  
7 the center of the map, the circle, is her home and her  
8 home actually abuts a pipeline right of way. A refined  
9 products pipeline.

10 So I'm not trying to discredit that individual. I'm  
11 just pointing out a fact that although she doesn't  
12 believe that she could live next to a pipeline, she, in  
13 fact, does.

14 So it just goes to the point of once a pipeline is  
15 built -- and this pipeline predated this community, by  
16 the way. Once that pipeline is in the ground it's very  
17 hard to determine that it's there. And so the safety  
18 factor and the concern --

19 And, again, I take this for granted because I live  
20 in Houston, Texas, where oil and gas pipelines are second  
21 nature. I work in this business so I have a little bit  
22 different perspective.

23 But with a little bit of education, which we hope to  
24 do, to help continue to educate the public we hope to  
25 overcome those fears. And when we see examples like this

1 it's a clear indication that not only can the pipelines  
2 exist, but the pipelines and development and communities  
3 can exist together and coexist without having negative  
4 impacts to either one.

5 Q. Turning your attention to 52, can you tell the  
6 Commissioners what 52 is?

7 A. Same thing. Or similar.

8 MS. CRAVEN: Are these in the record?

9 Objection. These are not in the record.

10 MR. KOENECKE: I haven't offered them yet.

11 MS. CRAVEN: Well, you've moved on to the other  
12 one, and it seems like you should do one at a time.

13 MR. KOENECKE: I'll move them both at the same  
14 time or if it makes you feel better, I can move 51 now.

15 I'll move the admission of 51.

16 MS. WIEST: Any objection?

17 MS. REAL BIRD: The Yankton Sioux Tribe would  
18 like to inquire of the witness for the purposes of making  
19 an objection.

20 MS. WIEST: Go ahead.

21 MS. REAL BIRD: Mr. Mahmoud, my name is  
22 Thomasina Real Bird, attorney for the Yankton Sioux  
23 Tribe. Hi.

24 I would like to know the landowner that you  
25 speak of in reference to the blue dot.

1 THE WITNESS: I've already said I can't remember  
2 her name. She testified --

3 MS. REAL BIRD: I'm not asking for her name,  
4 sir. But you've indicated that you located her address,  
5 and you looked up where she lived.

6 When were you made aware of the address?

7 THE WITNESS: Our right of way group -- and I  
8 just forgot her name.

9 MS. REAL BIRD: I'm not asking for her name so  
10 that's fine.

11 THE WITNESS: I know you're not, but you're  
12 asking me how I know. I did know her name. I forgot.

13 So at that time we have -- we were able to  
14 locate where she lives with our right of way group who  
15 has the resources to figure that kind of stuff out.

16 MS. REAL BIRD: Has your group or company known  
17 of her address for some time now?

18 THE WITNESS: I think that's correct.

19 MS. REAL BIRD: Did you know of her address  
20 before September 23, 2015?

21 THE WITNESS: Oh, I can't answer that. I mean,  
22 maybe so.

23 MS. REAL BIRD: Have you had contact with this  
24 landowner through your interaction with landowners that  
25 you testified as to?

1           THE WITNESS: You know, I'd have to ask my right  
2 of way group. I don't have our contact notes in front of  
3 us. But I believe we did.

4           MR. KOENECKE: Ms. Wiest, the prefiled testimony  
5 of the individual has her address right on the front  
6 page. And she brought it up in her own testimony earlier  
7 this week when Mrs. Petterson said, no one would ever  
8 live next to a pipeline. Well, as it turns out, she  
9 does.

10           I think that's very directly brought up on  
11 rebuttal, and the map demonstrates clearly what her  
12 relationship is. That couldn't be a more clear cut use  
13 of rebuttal testimony.

14           MS. REAL BIRD: And I haven't yet made my  
15 objection.

16           MS. WIEST: Yes. Please go ahead, Ms. Real  
17 Bird.

18           MS. REAL BIRD: So is it your testimony that you  
19 have had her address prior to September 23?

20           THE WITNESS: And I said I don't know.

21           MS. REAL BIRD: Okay. But you believe you've  
22 had it for some time since you've had contact with  
23 landowners?

24           THE WITNESS: I just said I don't know when we  
25 had her address. I can't answer that.

1 MS. REAL BIRD: Okay. And have you reviewed her  
2 prefiled testimony that contains her address?

3 THE WITNESS: Me? No. I have not read it.

4 MS. REAL BIRD: Ms. Wiest, I'd like to object to  
5 the admission of this Exhibit No. 51.

6 It was not on the exhibit and witness list. The  
7 company had advanced notice of the landowner's address by  
8 virtue of her filing with the PUC, and they have also  
9 testified that they have made contact with each of the  
10 landowners.

11 And it's untimely to raise this exhibit at this  
12 point. They could have conducted discovery, prepared  
13 this map in advance of the September 23 deadline, and  
14 it's inappropriate to --

15 You know, we heard a diatribe earlier about not  
16 having trial by ambush. And so experiencing on the other  
17 side I think this objection is -- is meriful.

18 MS. WIEST: Anyone else have an objection before  
19 I go to Mr. Koenecke?

20 MS. CRAVEN: We join the objection.

21 MS. WIEST: Okay. Mr. Koenecke, can you  
22 respond, please.

23 MR. KOENECKE: Absolutely, Ms. Wiest.

24 My recollection is Ms. Petterson testified that  
25 she -- that no one would want to live next to a pipeline.



1 And she apparently does. I don't know whether she knows  
2 it or not. But she brought that up herself in live  
3 testimony here earlier this week, and I think that's, as  
4 I said previously, a clear reason to offer a map on  
5 rebuttal. Here's what it shows.

6 She said something, and it's -- we want to have  
7 our say on that. That's our rebuttal. I think it's  
8 completely within the bounds.

9 I find the objection to be illogical. We can't  
10 be asked to abide by a rule which says our rebuttal can  
11 only cover things that came up before the hearing  
12 started. That's not how rebuttal works.

13 To the best of our ability we rebutted what we  
14 knew ahead of time, but we did not know the statement  
15 Mrs. Petterson was going to make, and we offer the map in  
16 rebuttal.

17 MS. WIEST: I would note that, for example, with  
18 Mr. Boomsma's when he had his witnesses there were a  
19 number of exhibits that were admitted, I believe, after  
20 the fact with pictures of the land based on what had been  
21 brought up during the hearing.

22 And I think that this is properly rebuttal  
23 evidence, and I will admit Exhibit 51.

24 Q. Mr. Mahmoud, turning your attention to Exhibit 52,  
25 was 52 prepared at your direction?

1 A. Yes, it was.

2 Q. What does 52 purport to show?

3 A. 52 is a map that shows pipelines within the  
4 Sioux Falls area, and the names and the types of pipes  
5 that those are.

6 Q. Was it prepared using publicly available  
7 information?

8 A. It was. This is -- this is public information.

9 Q. Is it offered in response to testimony that's been  
10 offered since this hearing began?

11 A. It is. It's in response to testimony about the,  
12 lack of better words, compatibility of pipelines with  
13 economic development areas or developable areas within  
14 the Sioux Falls arena.

15 And various questions that I've either received or  
16 various staff have received, my staff, over the past two  
17 weeks.

18 Q. Do you know what the green star indicates?

19 A. That's the center of Sioux Falls, I believe.

20 MR. KOENECKE: I'd move 52 at this time.

21 MS. WIEST: Is there any objection?

22 MS. REAL BIRD: I'll make my same objection for  
23 the record.

24 MS. CRAVEN: And DRA and IEN, we also object.

25 We also note that it's not relevant. We don't know

1 anything about these pipelines. We don't know what they  
2 contain. We don't know how big they are.

3 Yes, they're on the map. But there's no other  
4 information about them. So they have no real value to  
5 add to this discussion.

6 MS. WIEST: I will admit Exhibit 52. I believe  
7 we can give it the weight that it deserves under those  
8 parameters.

9 Anything further?

10 Q. Mr. Mahmoud, did Dakota Access consult with local  
11 governments here in South Dakota?

12 A. We did. We actually consulted with quite a few  
13 people in the Sioux Falls, Tea, Harrisburg, Hartford  
14 area.

15 As a matter of fact, I just did a quick count -- I  
16 wrote it down so I wouldn't forget.

17 Over the duration of this project since we began --  
18 and just to give you a frame of reference with government  
19 officials, people that make policy decisions, people that  
20 make decisions on our ability to put this pipe into the  
21 ground or not or various conditions in the communities  
22 that they serve, we've had 171 meetings with government  
23 officials: 100 local government officials, 71 state,  
24 38 Minnehaha, 24 in Lincoln County.

25 Not only that, we've met with the City of

1 Sioux Falls, the City of -- and the Counties of Lincoln  
2 and Minnehaha in a joint session.

3 When we got some feedback in December of 2014 from  
4 some of those same people that we met with as well as  
5 some developers and some other interested parties we were  
6 asked to reevaluate our project coming through the  
7 Sioux Falls area.

8 And so we started down that path. And the very  
9 first thing we did after we received that feedback is we  
10 went back to the decision-makers of that area to ask them  
11 did we get it closer to what your expectations were this  
12 time? Yes or no?

13 It was a pretty simple presentation. I actually  
14 gave the presentation so this isn't stuff that I'm  
15 secondhand to. This is stuff that I personally did  
16 because it was such a big deal around the Sioux Falls  
17 area. And so I went, and I presented to a joint council  
18 meeting or a joint meeting of those two counties and the  
19 City of Sioux Falls.

20 Back in March of this year we filed some additional  
21 information into the docket, kind of spelling out what we  
22 had done to address those concerns.

23 So following the meeting, the joint meeting, we then  
24 had -- we hired a local engineer, McClory Engineering,  
25 and we took their data, our construction manager and

1 project manager, Jack Edwards, and I have a project  
2 director who's not here named Tom Siguaw. We evaluated  
3 it. We came up with multiple alternatives to cross the  
4 Sioux Falls area.

5 I had Monica Howard and her staff evaluate those  
6 various routes. Then we took it one step further. We  
7 went to each of the cities, the City of Sioux Falls  
8 again. Ms. Best who's not here anymore, but we met with  
9 her and her staff and the other departments. We met with  
10 the City of Harrisburg, and we met with the City of  
11 Hartford.

12 And we met with all of those individuals very  
13 specifically, and I personally met with these individuals  
14 to ensure that the route that we picked through the  
15 Sioux Falls area met their expectations to ensure that we  
16 were not infringing upon their proposed or future  
17 economic developable areas.

18 When we did that we walked away with each meeting  
19 with a very specific question that we asked them: Does  
20 this meet your expectations?

21 Not only did we ask that question, we gave them  
22 multiple routes. We said which route, if you're  
23 picking -- and we gave them the option to pick -- which  
24 one would you pick?

25 The route that we ended up with is the one that's

1 proposed today and is the one that they individually  
2 picked. Not only did they pick it because it makes the  
3 most sense --

4 MR. RAPPOLD: Objection. Hearsay.

5 MS. REAL BIRD: I'll join in that objection and  
6 move to strike.

7 Q. Mr. Mahmoud, were you personally at the meeting?

8 A. I was at the meeting.

9 Q. Are there objections that are unresolved from any of  
10 the cities you spoke about regarding the routing?

11 A. There are none.

12 Q. Do you know why there are no objections?

13 A. Because they picked the final route. And when they  
14 did such, they picked a route that follows a power line  
15 through -- when the route goes kind of east-west through  
16 that area. And they picked a route that parallels a  
17 power line that's existing today.

18 And so when we put forth the different alternatives  
19 we said, hey, which one makes more sense? To get  
20 100 percent out of whatever area you concerned about, to  
21 be a little bit in, to be a lot in, and we gave all sorts  
22 of routes.

23 And they picked one that was out. They picked one  
24 that followed the pathway of an existing transmission  
25 line that would not be developable anyway because of the

1 power line. So we were abutting that power line.  
2 Everybody believed that that was the right thing to do  
3 and gave us the green light.

4 Not only did we do that, in areas where they  
5 believed that they needed additional depth of cover at  
6 roadways or future development areas where they thought  
7 somebody had come in and said we may put a gas station  
8 there one day or we may do this, it doesn't really matter  
9 what it was, they gave us a list.

10 And Hartford in particular. But Sioux Falls, the  
11 engineering department, Tea and Harrisburg, they all did  
12 the same thing. They said, can you go deeper at these  
13 locations for future development?

14 MS. REAL BIRD: Objection. My objection is  
15 still pending from before, and it's happening again.  
16 He's offering multiple instances of hearsay, out-of-court  
17 statements that are offered for their truth and there's  
18 no exception and I would like that ruled on on the  
19 record.

20 MS. WIEST: Objection is sustained.

21 MS. REAL BIRD: And my motion to strike those  
22 hearsay statements is still pending.

23 MS. WIEST: The statements from before, yes,  
24 where he changed --

25 MS. REAL BIRD: The hearsay statements. And I

1 move to strike the most recent hearsay statements as  
2 well.

3 MS. WIEST: Yes. Granted.

4 MR. KOENECKE: Can you tell me exactly which  
5 hearsay statements you've just ordered stricken?

6 MS. WIEST: I would have to have the record read  
7 back.

8 MR. KOENECKE: Let's do that. I have to have  
9 that done, I'm afraid.

10 (A short recess is taken)

11 MS. WIEST: Cheri, have you looked through and  
12 found the place where we need to start from?

13 (Reporter reads back a portion of the Witness's answer.)

14 MS. WIEST: Can you explain to me, Mr. Koenecke,  
15 why the very last part would not be hearsay that they  
16 individually picked?

17 MR. KOENECKE: Because he didn't testify as to  
18 what somebody said. He testified as to what they did,  
19 and that was not hearsay. He was there. He has personal  
20 knowledge.

21 I've sat here and listened to people talk about  
22 the Keystone Pipeline when nobody knows anything about  
23 what happened with Keystone and construction and been  
24 overruled.

25 But Mr. Mahmoud was there at the meeting and



1 testified to what someone did. That's not hearsay and is  
2 properly before the Commission.

3 MS. WIEST: Any response?

4 MS. REAL BIRD: The statement defined in the  
5 codified law is an oral or written assertion or nonverbal  
6 conduct of a person if it's intended by him as an  
7 assertion. So it doesn't have to be a verbal statement.  
8 So that's my response.

9 MS. WIEST: Then I rule that that statement is  
10 hearsay. Should we go on to the other?

11 (Reporter reads back a portion of the Witness's answer.)

12 MS. WIEST: And I believe the statements about  
13 everybody believed it was the right thing and they said  
14 we can go deeper, I can't remember the rest of it, that's  
15 what I sustained as to hearsay.

16 Did you want to proceed?

17 MR. KOENECKE: We'll rephrase.

18 Q. Mr. Mahmoud, did you learn of specific concerns  
19 about the routing and installation of the pipeline around  
20 Sioux Falls as a part of your responsibilities?

21 A. Yes, I did.

22 Q. Did you respond to those concerns?

23 A. I did.

24 Q. What were your responses specifically as they relate  
25 to construction techniques or routing?

1 A. In locations where we were made aware of, whatever  
2 the constraint was, myself and my team, we evaluated  
3 those, we made the accommodations and either went  
4 deeper -- well, that was what we did.

5 We went deeper in each case to account for future  
6 growth for the constraint that was identified to us.

7 Q. And did you collocate your facility with existing  
8 linear facilities?

9 A. We did. We parallel a -- I'm sorry. An electric  
10 transmission line to -- we abut that transmission line to  
11 avoid impacts to green field or areas that are not  
12 encumbered by an existing utility.

13 Q. Do you remember the distance of that collocation?

14 A. No. I'd have to measure it from a map. I  
15 apologize.

16 Q. If I showed you the project maps which were attached  
17 to the Application, do you think you could find it?

18 A. I'm sure I could.

19 Q. It's right there in that binder open in front of  
20 you.

21 A. Do you want me to scale a map? Seriously?

22 Is that what you're asking, Brett?

23 Q. I don't know what scale a map means, Joey.

24 A. Do you want me to measure a distance from the map?

25 Q. I think we want to give the Commissioners an

1       indication of what kind of distance we're collocating in  
2       the areas of Tea, Harrisburg.

3             If you open to Exhibit A2 and flip to page 47 of 49,  
4       you'll find the I-29 crossing at milepost 471. Am I  
5       right?

6             Directing your attention to that page --

7             MS. CRAVEN: Objection. That's a leading  
8       question.

9             MS. WIEST: Overruled.

10       Q. Are you familiar with the scale of this map,  
11       Mr. Mahmoud?

12       A. Well, I can read the scale, but I do not have a  
13       scale which is an engineering device to measure from like  
14       a ruler. So if I had that, I could calculate distance  
15       real quick. But since I do not, I'm not going to  
16       estimate it.

17       Q. Okay. Very good.

18             Mr. Mahmoud, who actually picked the final route?

19       A. For the area south of the city of Tea through  
20       Harrisburg, that -- the city -- those two cities picked  
21       the route.

22             The City of Sioux Falls concurred with our route,  
23       and the City of Hartford concurred with our route.

24             MS. REAL BIRD: Objection to the answer. It's  
25       hearsay, and I move to strike. The same grounds stated

1 before. They're out of court statements, and statements  
2 has the definition stated earlier.

3 MS. WIEST: Any response?

4 MR. KOENECKE: We'll restate.

5 Q. Did the City of Tea concur with your route?

6 A. In my opinion, they did.

7 Q. Did the City of Harrisburg concur with your route?

8 MS. REAL BIRD: I have an objection still --

9 MS. WIEST: He is rephrasing so that portion of  
10 the statement we can strike, and then going to this next  
11 question.

12 MS. CRAVEN: I have a question. Whose testimony  
13 is being rebutted right now?

14 COMMISSIONER HANSON: I can answer that  
15 question.

16 I asked a number of questions pertaining to  
17 elected officials and discussion with persons in the --  
18 along the pipeline route from a standpoint of elected  
19 officials and people representing the citizens, and I  
20 believe he's answering those questions.

21 MR. RAPPOLD: I think the best witness to  
22 respond to those questions, Commissioner Hanson, would  
23 actually be the City officials, with all due respect.

24 MS. REAL BIRD: And I would still like to  
25 articulate my objection to hearsay. They're asking for

1 the City's out-of-court statements that they concur, and  
2 the answers are demonstrating hearsay.

3 They're out-of-court statements, and they're  
4 offered for their truth here. They're hearsay without an  
5 exception.

6 MS. CRAVEN: And with all due respect to  
7 Commissioner Hanson, his questions are not testimony.  
8 His questions are questions.

9 MS. WIEST: Did you have any response,  
10 Mr. Koenecke?

11 MR. KOENECKE: Mr. Mahmoud has personal  
12 knowledge of the actions taken by everybody we've talked  
13 about here. And that -- to my way of thinking the  
14 absolute best evidence and testimony there is, is the  
15 actions that were taken in response to something that was  
16 personally witnessed. I don't think that's hearsay at  
17 all.

18 MS. REAL BIRD: It's the definition of hearsay.  
19 They're not Mr. Mahmoud's statements that he's testifying  
20 to. They're the City's statements that they concur.

21 Hearsay and best evidence are different  
22 evidentiary principles. Best evidence does not apply to  
23 a hearsay consideration. This is the definition of  
24 hearsay, and I move to -- I object, and I move to strike.

25 MS. WIEST: Can you rephrase the question?

1 MR. KOENECKE: You were laying foundation for  
2 the Commissioner's questions that we think were terribly  
3 important. We're doing that to the best of our ability.  
4 I don't think we've done anything other than talk about  
5 what people's actions were, which is exactly what this  
6 matter is about.

7 MS. CRAVEN: We agree that the Commissioners'  
8 questions are important, but we need to follow the rules  
9 about rebuttal.

10 We just got a big lecture from Mr. Koenecke  
11 right before this started about rebuttal. And now he's  
12 just answering questions and putting all sorts of things  
13 in the record that is not related to the direct  
14 testimony.

15 MS. WIEST: We're on two different issues. I'm  
16 trying to stick to the hearsay question right now.

17 And I will sustain the objection for the last  
18 hearsay objection from Ms. Real Bird.

19 You may proceed.

20 Q. Mr. Mahmoud, do you have in front of you a document  
21 marked as Exhibit 54?

22 A. Yes, I do.

23 Q. Can you tell the Commissioners what that is?

24 A. This is a package of information that documents the  
25 steps that we took to accommodate the request from the

1 local government officials around Sioux Falls, Tea,  
2 Harrisburg, and Hartford, who we met with, when we met  
3 with them, the steps we took, and the correspondence that  
4 we had.

5 It just provides the documentation that was on the  
6 record either publicly that we presented and/or notes  
7 from our meetings and the actual individuals that we met  
8 with.

9 Q. Is the top sheet a letter from my office?

10 A. It is. It's May, Adams dated March 19, 2015, and on  
11 the front it's stamped Exhibit DAPL 54.

12 Q. And is that a filing letter purporting to file  
13 information in the docket?

14 A. I'm sorry, Brett.

15 Q. Is it a filing letter?

16 A. A filing letter?

17 Q. Yeah. Is it a letter that was sent to file  
18 information in the docket?

19 A. Yes. This was submitted to the PUC Staff as part of  
20 the record.

21 Q. Do you have personal knowledge of all of the  
22 information that's been filed -- or that's in Exhibit 54?

23 A. I actually prepared probably 95 percent of this  
24 letter.

25 Q. Does it represent business records that you have

1 kept in the performance of your duties?

2 A. Yes, it does.

3 MR. KOENECKE: I move 54.

4 MS. WIEST: Is there an objection to 54?

5 MS. REAL BIRD: The Yankton Sioux Tribe objects  
6 to the admission of Exhibit 54.

7 The grounds are the exhibit is not contained in  
8 the Applicant's witness and exhibit list filed  
9 September 23, 2015. The front of the document is marked  
10 with a date of March 19, 2015.

11 Other parties were chastised for dilatory  
12 filings for documents that existed prior to perceived  
13 deadlines, and here we have a concrete deadline that was  
14 not adhered to by the Applicant.

15 The fact that it was filed in the docket does  
16 not mean that it automatically comes in as an exhibit.  
17 The Applicant failed to place it on the exhibit and  
18 witness list. It did understand the rules of that as  
19 demonstrated by them listing their actual Application,  
20 which was also filed in the docket.

21 And so the response -- the probable response  
22 that, well, this has already been filed in the docket  
23 doesn't mean that it gets to become an exhibit at the  
24 evidentiary hearing it.

25 It does need to be designated. The rules need



1 to be followed and applied to everybody, and that's my  
2 objection.

3 Secondly, from a very cursory review, because we  
4 were handed it just a few minutes ago, it does not even  
5 appear to be identical to the document and exhibits filed  
6 on March 19, 2015. So we'd actually have to go through  
7 the numerous attachments and -- if the court were even  
8 inclined to accept it. But they're not even identical.

9 So that's my objection.

10 MS. WIEST: What is not identical? I just  
11 didn't understand that last part.

12 MS. REAL BIRD: Certainly. So it was the  
13 letter -- the cover letter was filed on March 19, 2015.

14 MS. WIEST: Uh-huh.

15 MS. REAL BIRD: And attached are Exhibits A1,  
16 A2, A3, Exhibit B, and Exhibit C. Those were filed in  
17 the docket. None of those were listed on the exhibit  
18 list that was due and filed September 23.

19 The physical document we were just handed from  
20 the Applicant is not even identical to what they filed in  
21 the docket.

22 So I have, I guess, two hurdles of objection.  
23 First, failure to abide by the rules that the Commission  
24 ordered. The document did exist. It appears to be a  
25 dilatory submission. And, two, they're not identical

1 from a cursory review. And, of course, I have to preface  
2 that because it just came in minutes ago, and I can't be  
3 expected to have reviewed every page yet.

4 MS. WIEST: And actually I think -- you know, I  
5 cannot review this in two minutes so I need time to  
6 review this. I don't know if people want to take a break  
7 or -- what would the Commission want to do?

8 MR. KOENECKE: Could I offer a quick response  
9 before that? I think it might be helpful.

10 MS. WIEST: Okay.

11 MR. KOENECKE: 54 was prepared in response to  
12 Commissioner Hanson's comments throughout the hearing.  
13 He wanted to know who we spoke with as far as government  
14 officials.

15 The front page, the front letter from Kara  
16 that's four pages, is a part of putting that together.  
17 The attachments -- the entirety of 54 is not meant to be  
18 the attachments to the letter of March 19.

19 What's contained in 54 is all of the detail of  
20 the meetings that we went through in order to be  
21 responsive to Commissioner Hanson's questions which have  
22 arisen because of the ex parte rules, I should say, since  
23 the hearing began.

24 So we're not saying that 54 is the March  
25 submission. We're just saying that the letter on top of

1 it is part of our package of response to his very  
2 important questions. That's all we're trying to do with  
3 54.

4 I feel bad about -- if somebody thought it was  
5 otherwise because it's not. And the letter on top makes  
6 it kind of look like this was the package that was  
7 submitted then, and it isn't. I should have said that  
8 previously, and I apologize for any confusion.

9 54 in its entirety is simply a package of  
10 everything we did in order to portray that we've gone out  
11 and done what we said we did.

12 MS. WIEST: Again, I will need time to look  
13 through this. It appears that at the end of it there are  
14 a number of e-mails with different people from Hartford  
15 and from other places. So we'll at least take a  
16 10-minute break.

17 MS. CRAVEN: Ms. Wiest, may I be recognized  
18 briefly, please?

19 MS. WIEST: Go ahead.

20 MS. CRAVEN: We support the answering of  
21 Commissioner Hanson's questions but we need to follow the  
22 rules and we join in the objection that Yankton has put  
23 before you.

24 We've all had deadlines we've had to do  
25 discovery. And now it's just like -- and we've been

1     chastised for ambushing -- ambushing and not having  
2     information presented beforehand, and now this feels like  
3     a total ambush.

4             There's been no communication with us about  
5     stipulating to these. We haven't seen them, and it just  
6     seems like we're being ambushed by the other counsel.

7             MR. RAPPOLD: And if I might chime in, I'm  
8     curious as to the ex parte rule that Mr. Koenecke  
9     referenced in his soliloquy a moment ago.

10            MR. KOENECKE: I have not, nor has anybody else  
11     involved in this docket, been able to communicate  
12     directly with Commissioners, nor they with us until this  
13     hearing started last Tuesday.

14            There was no way under the rules for  
15     Commissioner Hanson to communicate his concerns to us  
16     prior to the deadlines contained in the Scheduling Order.

17            Necessarily, and in order to be responsive to  
18     Commissioner Hanson's questions, we have had to develop  
19     both rebuttal testimony and these exhibits so we could  
20     show him and answer his very specific questions, which,  
21     as I said, are good questions. And so that's what we've  
22     done here.

23            Same thing we did with Commissioner Nelson's  
24     questions on the farmstead issue. There have been other  
25     questions that we've responded to in live testimony. And

1 so that's what we've done.

2 It's completely within the rules. It's an  
3 expectation that the Commissioners should have, that they  
4 can ask questions and that we go down at night and work  
5 on answers to them so that they can make a decision with  
6 a full understanding.

7 We've participated in the spirit of the  
8 proceedings here, and we should not only not be chastised  
9 for it, we expect to be asked hard questions and we're  
10 ready to do that. That's why we're here on rebuttal.

11 MR. RAPPOLD: And thank you for the  
12 clarification on the reference to the ex parte rule. I  
13 appreciate that.

14 MS. REAL BIRD: And I'll just respond briefly,  
15 if I may.

16 The objection is not meant to challenge or in  
17 other ways discount Commissioner Hanson's questions, but  
18 it's a matter of following the rules here. And the  
19 document on top at least existed on March 19, 2015. It  
20 was filed in the record.

21 And, you know, the Applicant's choice not to  
22 list it as an exhibit, I think, is fatal to their  
23 position here trying to insert it now as an exhibit.

24 It existed well prior to the deadline and, you  
25 know, all of the attachments, I guess we'll have to go

1 through them and see when those existed. But, you know,  
2 they had a chance to prepare their case and prepare their  
3 Application and their documents, and we all had to abide  
4 by the deadlines that were announced. And I just wanted  
5 to file that brief response.

6 MS. WIEST: As I stated, we will take a  
7 10-minute break.

8 (A short recess is taken)

9 MS. REAL BIRD: Ms. Wiest, may I add additional  
10 reasons for my objection based upon my review over the  
11 break of the document?

12 MS. WIEST: Go ahead?

13 MS. REAL BIRD: May I add additional reasons for  
14 my objection?

15 MS. WIEST: I'm sorry. I didn't hear you.

16 MS. REAL BIRD: Now that I've had a chance to  
17 review the document?

18 Each of the attachments or portions of  
19 Exhibit 54 appear to have existed before the exhibit and  
20 witness deadline. And I might add that they are trying  
21 to prove that they've considered the views of governing  
22 bodies of affected local units of government. And they  
23 took that in consideration for the selection of the  
24 proposed location.

25 Those are the Applicant's affirmative duties.

1 They have that burden of proof. They had that burden of  
2 proof when this case started, when they filed their  
3 Application. They chose not to include this information  
4 in their Application, chose not to include it in their  
5 exhibit list.

6 It does appear that all the portions of the  
7 exhibit existed well before the exhibit deadline. And I  
8 can't see a reason why they should be allowed to add it  
9 here just because there were important Commissioner  
10 questions about it.

11 This was their burden. That was their strategy  
12 by not including it, and they should be excluded.

13 MS. WIEST: My ruling is I will deny the  
14 admission of the exhibit. And I believe that this  
15 information could have been provided earlier as stated by  
16 Ms. Real Bird.

17 COMMISSIONER HANSON: Ms. Wiest, I'm going to  
18 make a motion to overrule that, but I'm only going to do  
19 it on a portion, if I understand the objection and the  
20 ruling correctly. Because I do agree that a large  
21 portion of this is not responsive to my question.

22 However, the portion that shows the officials  
23 that they met with and information pertaining to those  
24 meetings is responsive.

25 The remainder of it is -- well, I'll call it a

1 regurgitation, but it's duplicative of the information  
2 that was used for PowerPoints at the meetings and things  
3 of that nature.

4 So I do agree with Ms. Real Bird on a portion of  
5 that. But it is, in fact, responsive to -- there is a  
6 portion that is responsive to my question, and I think  
7 it's imperative that Commissioners are able to ask for  
8 and receive information. Otherwise, the foundation of  
9 the hearing just dissipates.

10 MS. WIEST: And can you just specifically state  
11 which documents those are so that we know?

12 COMMISSIONER HANSON: I knew you were going to  
13 ask me that.

14 Unfortunately, the cover letter covers a number  
15 of items including both. But the portion that has the  
16 matrix showing Sioux Falls, Tea, Harrisburg, and those  
17 meetings is responsive. And the information on the  
18 meetings that took place the next few pages. And then I  
19 believe there were some notes regarding those meetings.  
20 And I think that is responsive.

21 The remainder of it which shows the maps,  
22 PowerPoints, and such, which is a considerable amount, is  
23 not responsive.

24 MS. WIEST: So it would be the page you've  
25 already identified, and I believe it was the next three



1 pages after that. And then were there pages toward the  
2 end that you were --

3 I have this page, and then I have the next three  
4 pages. Were there any pages beyond these four pages?

5 COMMISSIONER HANSON: I would say that where it  
6 starts with Exhibit D on the handwritten page.

7 MS. WIEST: Okay.

8 COMMISSIONER HANSON: That page and everything  
9 after it is responsive.

10 And, you're correct, the page with the matrix  
11 and the following three pages.

12 MS. WIEST: Okay. I think I have it.

13 So the other two Commissioners can vote on that  
14 ruling.

15 COMMISSIONER SATTGAST: I'll concur with  
16 Commissioner Hanson.

17 CHAIRMAN NELSON: I concur with Commissioner  
18 Hanson.

19 MS. WIEST: So those portions of Exhibit 54 that  
20 have been identified by Commissioner Hanson have been  
21 admitted.

22 You may proceed.

23 MR. KOENECKE: Thank you.

24 Q. During the break, Mr. Mahmoud, did you have a chance  
25 to refresh your recollection as to the distance of

1 collocation?

2 A. I did. It was 4 miles.

3 Q. Thank you. Do you have Exhibit 55 in front of you?

4 A. I do.

5 Q. Is that a document that was prepared under your  
6 direction?

7 A. Yes, it was.

8 Q. Is it prepared in response to --

9 MR. KOENECKE: I think they've been handed out.  
10 We found them. Sorry.

11 Q. Directing your attention again to Exhibit 55, is  
12 that document in front of you?

13 A. Yes, it is.

14 Q. Was that exhibit prepared at your direction?

15 A. Yes, it was.

16 Q. Was it prepared because you think it's responsive to  
17 Commissioner Hanson's question?

18 A. That's exactly why I had it prepared.

19 Q. And what does the document contain?

20 A. This is a listing of the dates and the people and  
21 the various levels of government that we met with over  
22 the duration of the project to date. And where I spoke  
23 about the 171 meetings and the breakdown, that's where I  
24 got this information.

25 So it's just a simple listing for just -- to

1 demonstrate our commitment over the past -- well, during  
2 the development of this project to reach out to the  
3 community officials and to make sure that they were  
4 informed and educated regarding the project to ensure  
5 that we were accommodating any concerns or to provide  
6 information that they may request.

7 MR. KOENECKE: I'd move Exhibit 55.

8 MR. RAPPOLD: Objection.

9 MS. WIEST: Go ahead.

10 MR. RAPPOLD: Same grounds as before. Let me  
11 preface with what I'm going to say.

12 I agree wholeheartedly that the Commissioners'  
13 questions in this process are, without question, very  
14 important.

15 However, it seems what's happening is the  
16 Commissioners' questions are actually helping the  
17 Applicant satisfy its burden of proof. And when the  
18 situation appears to be that it's compromising the  
19 adversarial proceeding, which is contemplated under the  
20 PUC Administrative Rules and the Administrative  
21 Procedures Act for contested cases.

22 Most of this information on here was available  
23 prior to the deadline to submit evidence and exhibit  
24 lists, testimony. The Applicant has an affirmative duty,  
25 burden of proof 49-41B-22, Sub 4. "The facility will not

1 unduly interfere with the ordinarily development of the  
2 region, with due consideration having been given to the  
3 views of governing bodies of affected local units of  
4 government."

5 This information, although it is responsive to  
6 the Commissioner's questions, should have been properly  
7 filed and presented prior to the deadline established by  
8 the Commission for submitting exhibits and witness  
9 lists.

10 So I object on those grounds.

11 MS. WIEST: Any other objections?

12 MS. REAL BIRD: The Yankton Sioux Tribe joins in  
13 the motion for the reasons stated by Rosebud.

14 MS. CRAVEN: And Dakota Rural Action and the  
15 Indigenous Environmental Network would also join.

16 MS. WIEST: Any response, Mr. Koenecke?

17 MR. KOENECKE: Commissioner Hanson specifically  
18 asked us who we met with, policymakers. This is directly  
19 responsive to a Commissioner question.

20 It's not surprising to me that a Commissioner  
21 would ask a relevant question about something that was  
22 central to the burden of proof, and it really shouldn't  
23 be to anybody else in this room.

24 He asked for more specific information, and we  
25 have a duty to give it to him if he asks us for it. If

1 it's relevant and the -- the timing is not anything that  
2 I have any control over, and it's really not anything the  
3 Commissioner had any control over. He asked it at his  
4 early as possible opportunity.

5 And somehow to twist this around that the fact  
6 that it's relevant to this proceeding is something that  
7 should be used against us, that we somehow didn't provide  
8 it on a timely fashion, is a real distortion of this  
9 process, in my view and opinion.

10 We were asked at the earliest possible  
11 opportunity, and we responded when we put our witness on  
12 the stand. I don't think you can ask for any better of  
13 us than that.

14 I trust that it's responsive to the  
15 Commissioner's question. I think it's exactly what I  
16 heard him ask.

17 MR. RAPPOLD: Brief response?

18 MS. WIEST: Brief.

19 MR. RAPPOLD: Had the Applicant submitted in  
20 information in accordance with the deadlines established  
21 with the Commission under the rules, the burden of proof  
22 rule that I just cited for you, I submit that  
23 Commissioner Hanson would not have had that question  
24 because it would have been answered.

25 The information would have been submitted, and

1 we would have been able to look at a table just like  
2 this, and you would have had your answer.

3 MS. WIEST: Based on the Commission's prior  
4 ruling and that it is responding to a question that was  
5 asked during the hearing, I will admit this exhibit.

6 You may proceed.

7 Q. Mr. Mahmoud, do you have any information to share on  
8 cyber security measures used by the pipeline?

9 A. I do. Really it's more of a brief statement.

10 We are a multibillion dollar company. We're  
11 actually the largest in the U.S. from an administering  
12 perspective. Third largest energy company in the U.S.  
13 Fifth largest energy company in the world.

14 We have an incredibly robust cyber security program  
15 that's been developed in coordination with the Department  
16 of Homeland Security, the FBI, and the CIA. We move more  
17 energy commodities in this country than anyone.

18 So as a responsibility to our government, which we  
19 have that responsibility, we have an incredible burden to  
20 protect ourselves, as well as the ability to move those  
21 energy commodities for the benefit of the consumers in  
22 the United States.

23 So it's simple: Of course, we have a cyber security  
24 program. I can't even think about how I would ever share  
25 that with you because it would violate the very premise

1 of a cyber security program for security purposes. And  
2 we just simply can't. I mean, I don't even know how we  
3 would address that if somebody forced us to because we  
4 just simply cannot.

5 So with that said, we have -- I think where this  
6 came up was in regards to our SCADA system. The SCADA  
7 system is on its own server. It only has three access  
8 points, which I'm not going to disclose where those are  
9 at. But there's only three locations that people can get  
10 into it to operate our systems in this country, and they  
11 are incredibly secure, closed systems for highly trained  
12 operators to get in to control, operate, and move those  
13 commodities across this country.

14 Q. Is there any update on dialogue with Fish & Wildlife  
15 Service between the project and the FWS?

16 A. There is. There's been a lot of questions. I  
17 received some questions. Monica received some questions  
18 about the Special Use Permit and the easements that have  
19 been -- that we're crossing of the U.S. Fish & Wildlife.

20 Thursday of last week when I returned to Houston --  
21 I had to get back -- we had a phone call. Actually  
22 Monica had a phone call. And so her and I were briefed  
23 by the Fish & Wildlife from the archeology perspective  
24 that they did, in fact, review our information, provided  
25 comments, and requested that we incorporate those into

1 the documents for resubmittal.

2 MS. REAL BIRD: Objection. Hearsay. He's  
3 testifying as to what the Fish & Wildlife told him over  
4 the phone. That's the definition of hearsay without an  
5 exception.

6 MS. WIEST: Any response?

7 MR. KOENECKE: He's testifying related to  
8 foundation and updates to his original testimony. I  
9 don't know of another way to place a dialogue in evidence  
10 than to ask one of the people who was a party to it.

11 I mean, we're not asking what somebody else  
12 informed him of a conversation. We're asking him about a  
13 conversation he was a part of. I don't think that's  
14 hearsay at all. That's -- again, you know, telling what  
15 happened is -- I'm sorry. That's evidence.

16 MS. REAL BIRD: If I may respond, Mr. Mahmoud's  
17 statements are not hearsay. He can testify as to what he  
18 stated. But when a witness is testifying as to someone  
19 else's statements as defined in the codified law and  
20 they're made out of court, not within court, that's the  
21 definition of hearsay. And that's my objection.

22 MS. WIEST: Could you repeat the question.

23 (Reporter reads back the last question.)

24 MS. WIEST: Okay. I'm going to overrule the  
25 objection. I think it falls within the public records



1 and reports exception since we are talking about a public  
2 office and agency in the statements.

3 Go ahead.

4 A. I should clarify we got an e-mail, and we had a  
5 phone call. And when I testified earlier I testified  
6 that we had not had any communication.

7 And so since it happened during the relevancy of  
8 this trial, I wanted to make sure to fully disclose that  
9 after myself testified and after Monica testified that we  
10 did have that dialogue.

11 And we also had a conference call with their  
12 regional Fish & Wildlife person out of Denver, and we are  
13 actively working with them to address their comments.

14 That's really the update.

15 Q. Mr. Mahmoud, are you aware of whether the parent  
16 companies have issued guarantees to the project?

17 A. I am. And I am aware of that. You know, to  
18 eliminate any doubt about our financial responsibility,  
19 not only do I represent Dakota Access, I represent Energy  
20 Transfer Partners and a whole slough of our other  
21 affiliates, and I can tell you that our parent company  
22 has issued -- and not just ours but our partners have  
23 issued parent guarantees to backstop any liability that  
24 we may have in the event of a situation on this project.

25 MR. KOENECKE: I've got nothing further. Thank

1 you.

2 MS. WIEST: Yankton Sioux Tribe, did you have  
3 any questions?

4 MS. REAL BIRD: I do.

5 CROSS-EXAMINATION

6 BY MS. REAL BIRD:

7 Q. Good afternoon again.

8 Is it your opinion that an EIS is not necessary for  
9 the proposed project?

10 A. That's correct.

11 Q. Would you articulate why that is your opinion?

12 A. Sure. You know, during this hearing I actually went  
13 back -- although we're not filing it, I actually prepared  
14 a white paper on the differences for South Dakota's  
15 statutes required for an EIS at a state level versus an  
16 EIS -- or the process under the -- the process that we've  
17 been going through.

18 And when I did a side-by-side comparison, and I  
19 think we'll eventually file this, a side-by-side  
20 comparison, there literally is nothing that is not  
21 included in this record that would be disclosed in an  
22 EIS.

23 They're virtually the exact same information  
24 packaged in a different document. So, in my opinion, why  
25 should us, the Applicant -- it's a duplicative process.

1 It's burdensome. It's punitive in a regulatory sense to  
2 have an Applicant not only go through this process but  
3 then have to prepare an EIS or pay for one when all  
4 you're doing is regurgitating the same information. That  
5 doesn't seem very fair in a public process.

6 Do it one way or the other. If we would have been  
7 asked to do an EIS at the beginning of this process, we  
8 probably wouldn't object. But we're at this point at  
9 this stage of the project where we've submitted tons of  
10 information, mountains of information, a lot of paper,  
11 killed a lot of trees for this Application.

12 We've provided the data. We've done the surveys.  
13 We've done everything that we've been asked to do, and to  
14 repackage it just to appease a few people's very biased  
15 interest to me is a gross waste of money, time, the  
16 public's intent, as well as a lot of other people's  
17 intentions and, clearly, a misrepresentation of the  
18 South Dakota Statutes, in my opinion.

19 Q. Is your opinion based on your understanding of the  
20 National Environmental Policy Act?

21 A. Say that again, please.

22 Q. Sure.

23 Is your opinion based upon your understanding of the  
24 National Environmental Policy Act?

25 A. It is. Which is a federal statute and not a state

1 statute.

2 As we have articulated many times, this is not a  
3 federalized project, no matter how much anybody wants it  
4 to be. It's simply not.

5 Under NEPA, which I think you all know so I  
6 shouldn't have to tell you this -- there's not an EIS  
7 required under NEPA for this project because there is no  
8 lead federal agency.

9 Under a state agency if they so desired, they could  
10 develop a state level EIS. But that's not what's  
11 happened here.

12 Q. Is your opinion based on anything else?

13 A. I think I just gave you my opinion.

14 Q. Why doesn't Dakota Access offer to adhere to the  
15 first sentence of Condition 41 in the KXL Amended Permit  
16 Conditions attached to your prefiled testimony?

17 A. I would have to pull that out. If you can show me,  
18 I would be happy to. Or I can look at my testimony. But  
19 I need to actually get a copy of the KXL condition to  
20 read again real quick.

21 Q. It should be attached to your Exhibit 36.

22 A. It's not.

23 Q. Oh, is that not in the record? The attachment?

24 A. My copy up here does not. What we said earlier,  
25 somebody took the file copy off the table and has not

1 returned it.

2 Q. I will go over there and look again. That's where  
3 they are to be located. If you'll hold, please.

4 MS. REAL BIRD: Ms. Wiest, would you like -- I'm  
5 not sure how to proceed if it's not provided on the  
6 table.

7 MS. WIEST: I think she provided it to him  
8 electronically.

9 MS. REAL BIRD: Okay. Great.

10 A. I'm trying to find it in my written testimony where  
11 we said we would or would not, by the way.

12 Q. No problem. I'll pause. Take your time.

13 If it helps, it's line 83, 84 and the question and  
14 answer preceding that, page 4.

15 A. The problem is I just don't see item No. 41 in those  
16 list of numbers.

17 Q. And that's my question. Why doesn't Dakota Access  
18 offer to adhere to Condition 41 in the KXL Permit  
19 Condition and, in particular, the first sentence?

20 A. I'm going to read the first sentence. Okay?

21 "Keystone shall follow all protection and mitigation  
22 efforts as identified by the U.S. Fish & Wildlife Service  
23 in SD GFP." That's the first sentence.

24 And I'll answer it because there's nothing I will  
25 agree to in that first sentence because we're not

1 Keystone, in this particular case.

2 Q. And I understand that. And that was prefaced in  
3 your rebuttal testimony that, of course, those type of  
4 changes -- it's understood you're not Keystone.

5 But you do agree that you identify a number of  
6 conditions that you would adhere to listed on lines 83  
7 and 84. Those do, of course, reference Keystone, but you  
8 still agree to them with the understanding, of course,  
9 that Dakota Access, your company, would be the  
10 responsible party and not Keystone.

11 So I still have the remaining question as to 41,  
12 with that understanding.

13 A. Yeah. Okay. Thank you.

14 Then the rest of it goes on to say "Keystone shall  
15 identify all greater prairie chicken and greater sage and  
16 short-tailed grouse, leks within the buffer distances  
17 from the construction right of way set forth for the  
18 species in the FEIS and biological assessment prepared by  
19 DOS and U.S. Fish & Wildlife, in accordance with comments  
20 in the FEIS and BA, Keystone shall avoid or restrict  
21 construction activities as specified by U.S. Fish &  
22 Wildlife within such buffer zones between March 1 and  
23 June 15 and for other species as specified by U.S. Fish &  
24 Wildlife in South Dakota GFP."

25 And I appreciate you catching that. We would not

1 agree to this so thank you. And simply because there's  
2 not an FEIS or biological opinion to refer back to so  
3 this condition just simply does not apply to the current  
4 docket for Dakota Access.

5 Q. And I understand that. And so that's my question is  
6 more particular to the first sentence of the condition.

7 Would you tell me why Dakota Access does not offer  
8 to adhere to the first sentence of Condition 41 that's  
9 attached to your -- in the KXL Amended Permit Condition  
10 that is attached to your prefiled?

11 A. I'm sorry. I really don't understand your question.  
12 I read the sentence that Keystone shall follow all  
13 protection and mitigation efforts as identified by U.S.  
14 Fish & Wildlife in SD GFP.

15 Q. That's the condition. That's the portion of that  
16 condition that I'm --

17 A. And we would agree to a similar condition if one was  
18 issued that started with Dakota Access shall.

19 Q. Okay. I think that answers my question.

20 A. Okay. I'm sorry.

21 Q. We did get there eventually. Thank you.

22 A. You bet.

23 Q. Mr. Mahmoud, do you know what a frac-out is in the  
24 context of horizontal direction drilling?

25 A. I do.

1 Q. What is it?

2 MR. KOENECKE: I object. This isn't relevant or  
3 I don't think covered in rebuttal. I don't remember that  
4 term coming up in the whole hearing. Perhaps I missed  
5 it. That's possible but --

6 MS. REAL BIRD: May I respond?

7 MS. WIEST: Go ahead.

8 MS. REAL BIRD: On line 83 of the Prefiled  
9 Rebuttal Testimony, DAPL Exhibit 36, Mr. Mahmoud  
10 indicates that Dakota Access generally agrees to the  
11 conditions, and we would agree with the project specific  
12 adjustments.

13 And No. 21 is listed. If you do turn to  
14 Condition 21 and the attached -- the condition mentions  
15 frac-out. So I'm inquiring as to that.

16 MS. WIEST: Objection overruled.

17 A. I'm sorry. Do I answer that?

18 MS. WIEST: Yes.

19 A. Okay. Let me read it real quick.

20 (Witness examines document)

21 A. Well, in concept we have frac-out plans for our  
22 project. I generally just don't -- in my opinion, I  
23 don't care for some of the way that this thing is  
24 necessarily written.

25 We have frac-out plans. The value of submitting



1 some of the data seems to be irrelevant for the  
2 construction activity.

3 We've committed to clean up and remediate any  
4 impacts that we may have, and we do have those plans in  
5 place. So I think if the condition was worded a little  
6 bit different, we probably wouldn't have an issue with  
7 it.

8 Q. And, again, this is a condition that you offered to  
9 adhere to through the filing of your prefiled testimony,  
10 and there was no exception or changes.

11 A. Uh-huh.

12 Q. And so --

13 A. Hold on.

14 Q. I don't have a question yet.

15 A. Oh, you don't?

16 Q. I didn't ask a question --

17 A. Okay.

18 Q. -- sir. Thank you.

19 My question is why are you offering to include this  
20 condition in a Permit, if granted, if you don't entirely  
21 agree with the condition?

22 A. Well, in my prefiled testimony, which I was trying  
23 to answer so I apologize for stepping over you, Dakota  
24 Access generally agrees to the conditions, and  
25 specifically we would agree to the following with project

1 specific adjustments as listed.

2 So what I'm saying there is we do agree. I already  
3 just said we have a frac-out plan. So with this  
4 condition modified accordingly and to make it more  
5 appropriate to be site specific, we would agree.

6 Q. And where would you propose the Commission receive  
7 all of the site-specific information in the conditions,  
8 if it hasn't been testified to at the hearing?

9 A. Well, I believe -- and I shouldn't assume this, but  
10 I'm going to anyway -- that those plans, I believe, were  
11 already filed as part of our documentation as part of the  
12 Application.

13 Q. Just one more question.

14 Have you received a commitment from shippers who  
15 have provided you a guarantee that their product will  
16 certainly return to South Dakota?

17 A. No.

18 MS. REAL BIRD: No further questions.

19 MS. WIEST: Rosebud.

20 MR. RAPPOLD: Yeah. I need to move up there,  
21 though.

22 MS. WIEST: Okay.

23 MR. RAPPOLD: I might be able to get started  
24 while we wait for that to come up.

25

CROSS-EXAMINATION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

BY MR. RAPPOLD:

Q. Good afternoon, Mr. Mahmoud, again.

Were you involved with Dakota Access's Application for a Permit from the Federal Energy Regulatory -- FERC?

A. For this project?

Q. That's what we're talking about. Yeah. This project.

A. For what? The tariff?

Q. Yeah.

A. No.

Q. You weren't?

A. No.

Q. Did anyone -- do you know who did that?

A. I do.

Q. Would you disagree that FERC issued an opinion based on Dakota Access's Application for a Permit?

MR. KOENECKE: Objection. He testified he didn't prepare it.

MR. RAPPOLD: Well, I'm --

MR. KOENECKE: Inadequate foundation for this question.

MR. RAPPOLD: I just asked if he would disagree whether or not FERC issued a Permit.

MR. KOENECKE: You have to find out whether he

1 knows anything about it before you get to that question.

2 MS. WIEST: Can you lay some foundation?

3 Q. In your Application in several places you do make  
4 reference to needing a permit from the Federal Energy  
5 Regulatory Commission.

6 Do you agree with that?

7 A. No.

8 Q. You don't agree with that?

9 A. We don't need a permit from them.

10 Q. Not for anything?

11 A. We do not need a permit from the FERC for this  
12 project.

13 Q. Maybe I have my terms mixed up.

14 A. I'm sure.

15 Q. Yeah. I'm sure too. Thank you for pointing that  
16 out.

17 A. You're welcome.

18 MR. RAPPOLD: I'd ask the Commission to take  
19 judicial notice of 149 FERC paragraph 61, 275, and it's  
20 called a Declaratory Order, and it's on the screen above  
21 us. It's on Docket No. OR14-42-000. And I'd ask that  
22 the Commission take judicial notice of this Declaratory  
23 Order.

24 MS. WIEST: For what reason?

25 MR. RAPPOLD: I want to use this Order to

1 compare some information that's -- that's contained in  
2 the FERC Order with information that's contained in  
3 Dakota Access's Application for a Permit here and also  
4 with testimony of the witness that he elicited earlier on  
5 in his rebuttal testimony.

6 It will be for impeachment purposes.

7 MR. KOENECKE: I object. There's no adequate  
8 foundation. We don't know if this document is even  
9 accurate or correct. Somebody has to come here and put  
10 it into evidence.

11 MR. RAPPOLD: I'm asking for judicial notice.

12 MR. KOENECKE: And there are a host of reasons  
13 why that shouldn't be granted. Judicial notice I think  
14 applies to statutes and not this, even if it is what it  
15 purports to be. I don't know. I can't read it from here  
16 even.

17 MR. RAPPOLD: I could pull up the statute on  
18 judicial notice if it will help reach a conclusion on the  
19 applicability of judicial notice.

20 MS. WIEST: How long is this document?

21 MR. RAPPOLD: It's several pages. I mean, I can  
22 jump right to the chase here.

23 I think it's about 15 pages maybe.

24 The document is 13 pages.

25 MS. WIEST: And before ruling on this motion --

1 or request for judicial notice, I would like to read  
2 this. And what I would propose is that the Commission  
3 adjourn for the evening and we come back in the morning.

4 Is there any objection to that?

5 MR. RAPPOLD: None from me.

6 MS. WIEST: And what is the citation to this?

7 MR. RAPPOLD: I got to get back in it. It's  
8 right there.

9 MS. WIEST: Do you have a paper copy of this?

10 MR. RAPPOLD: I don't. I just came across it a  
11 little while ago and just for the purposes of rebuttal  
12 impeachment, and I think the rules would permit me not  
13 to -- the rules shouldn't require me to have a paper copy  
14 right now.

15 MS. WIEST: Okay. With this, we will adjourn  
16 for the evening --

17 Go ahead. Sorry.

18 CHAIRMAN NELSON: Just a word or two about  
19 tomorrow. First and most importantly, I do intend for us  
20 to finish tomorrow.

21 Secondly, I have got a previously scheduled  
22 conference call at 1 o'clock, and so however tomorrow  
23 morning works out, I am going to propose we take our  
24 lunch break, assuming we're not done by then, at 12:45  
25 until 2 o'clock.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

MS. WIEST: Okay. With that, we will adjourn.  
Thank you.  
(The hearing is in recess at 5:15 p.m.)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

STATE OF SOUTH DAKOTA)

:SS

CERTIFICATE

COUNTY OF SULLY )

I, CHERI MCCOMSEY WITTLER, a Registered Professional Reporter, Certified Realtime Reporter and Notary Public in and for the State of South Dakota:

DO HEREBY CERTIFY that as the duly-appointed shorthand reporter, I took in shorthand the proceedings had in the above-entitled matter on the 8th day of October, 2015, and that the attached is a true and correct transcription of the proceedings so taken.

Dated at Onida, South Dakota this 23rd day of October, 2015.

\_\_\_\_\_  
Cheri McComsey Wittler,  
Notary Public and  
Registered Professional Reporter  
Certified Realtime Reporter



<b>1</b>	<b>1120</b> [1] - 1715:13 <b>1121</b> [1] - 1715:14 <b>1122</b> [1] - 1715:14 <b>1130</b> [1] - 1715:15 <b>1131</b> [1] - 1715:15 <b>1132</b> [1] - 1715:16 <b>1134</b> [1] - 1715:18 <b>1136</b> [1] - 1707:12 <b>1146</b> [1] - 1715:18 <b>1147</b> [1] - 1715:19 <b>1148</b> [1] - 1715:19 <b>1152</b> [1] - 1715:20 <b>1158</b> [1] - 1715:20 <b>116</b> [1] - 1709:5 <b>1160</b> [1] - 1715:21 <b>1163</b> [1] - 1715:22 <b>1167</b> [1] - 1707:21 <b>1169</b> [1] - 1707:9 <b>1173</b> [1] - 1716:3 <b>1177</b> [2] - 1707:5, 1716:4 <b>1178</b> [1] - 1716:4 <b>1182</b> [2] - 1716:5, 1716:5 <b>1183</b> [1] - 1716:7 <b>1192</b> [2] - 1716:8, 1716:8 <b>12</b> [21] - 1705:8, 1706:11, 1708:3, 1725:24, 1738:23, 1759:19, 1759:23, 1768:18, 1769:12, 1830:3, 1830:11, 1834:3, 1875:20, 1875:22, 1875:23, 1875:24, 1876:25, 1877:1, 1877:2, 1877:7, 1934:17 <b>120</b> [1] - 1931:12 <b>1200</b> [3] - 1707:10, 1707:18, 1716:9 <b>1201</b> [1] - 1716:9 <b>1208</b> [1] - 1716:10 <b>1209</b> [1] - 1716:10 <b>1215</b> [1] - 1716:11 <b>1216</b> [1] - 1716:11 <b>1218</b> [1] - 1716:13 <b>1221</b> [1] - 1707:5 <b>1227</b> [1] - 1716:14 <b>1230</b> [2] - 1716:14, 1716:15 <b>1231</b> [1] - 1716:15 <b>1234</b> [1] - 1716:17 <b>1236</b> [1] - 1707:6 <b>1243</b> [1] - 1707:20 <b>1251</b> [1] - 1707:19 <b>1252</b> [1] - 1716:17 <b>1255</b> [1] - 1716:18 <b>1257</b> [1] - 1716:18	<b>1258</b> [1] - 1716:19 <b>1264</b> [1] - 1716:19 <b>1266</b> [1] - 1716:20 <b>1268</b> [1] - 1716:20 <b>1269</b> [1] - 1716:22 <b>1273</b> [1] - 1707:7 <b>1276</b> [1] - 1707:20 <b>1279</b> [1] - 1716:22 <b>1281</b> [1] - 1716:23 <b>1284</b> [1] - 1717:3 <b>1286</b> [1] - 1707:11 <b>1299</b> [1] - 1717:4 <b>12:45</b> [1] - 1987:24 <b>13</b> [5] - 1706:12, 1706:19, 1841:6, 1860:20, 1986:24 <b>1300</b> [1] - 1901:9 <b>1301</b> [1] - 1717:4 <b>1303</b> [1] - 1717:5 <b>1305</b> [1] - 1717:5 <b>1307</b> [1] - 1717:7 <b>1309</b> [2] - 1707:6, 1707:7 <b>1323</b> [1] - 1707:19 <b>1327</b> [1] - 1707:13 <b>1330</b> [1] - 1717:7 <b>1331</b> [2] - 1717:8, 1717:8 <b>1332</b> [1] - 1717:9 <b>1335</b> [1] - 1717:9 <b>1336</b> [1] - 1717:10 <b>1341</b> [1] - 1717:11 <b>1342</b> [1] - 1707:3 <b>1343</b> [1] - 1717:12 <b>1370</b> [1] - 1717:13 <b>1371</b> [1] - 1707:9 <b>1373</b> [1] - 1717:15 <b>1375</b> [1] - 1707:13 <b>1376</b> [1] - 1717:16 <b>1386</b> [2] - 1707:8, 1717:17 <b>1387</b> [1] - 1717:17 <b>1389</b> [1] - 1717:18 <b>1394</b> [1] - 1717:18 <b>1398</b> [1] - 1717:19 <b>1399</b> [1] - 1717:19 <b>14</b> [1] - 1823:16 <b>140</b> [1] - 1709:5 <b>1401</b> [1] - 1717:20 <b>1402</b> [1] - 1717:20 <b>1404</b> [1] - 1718:3 <b>1408</b> [1] - 1707:4 <b>1411</b> [1] - 1718:5 <b>1412</b> [1] - 1707:8 <b>1416</b> [1] - 1718:5 <b>1418</b> [1] - 1718:7 <b>1422</b> [1] - 1718:7 <b>1424</b> [1] - 1718:8 <b>1425</b> [1] - 1718:8	<b>1426</b> [1] - 1718:10 <b>1428</b> [1] - 1707:3 <b>1432</b> [1] - 1718:10 <b>1434</b> [1] - 1718:11 <b>1435</b> [1] - 1718:11 <b>1439</b> [1] - 1718:13 <b>1441</b> [1] - 1707:11 <b>1450</b> [1] - 1718:13 <b>1456</b> [1] - 1718:14 <b>1457</b> [1] - 1718:14 <b>1460</b> [1] - 1718:17 <b>1461</b> [1] - 1708:14 <b>1462</b> [1] - 1708:13 <b>1463</b> [1] - 1708:13 <b>1467</b> [1] - 1718:17 <b>1472</b> [1] - 1718:18 <b>1477</b> [1] - 1718:18 <b>1479</b> [1] - 1708:10 <b>1484</b> [1] - 1718:19 <b>1488</b> [2] - 1708:10, 1718:19 <b>1489</b> [1] - 1718:20 <b>149</b> [1] - 1985:19 <b>1494</b> [1] - 1718:20 <b>1499</b> [1] - 1718:21 <b>15</b> [8] - 1706:20, 1724:18, 1727:17, 1813:18, 1869:17, 1920:21, 1979:23, 1986:23 <b>15-minute</b> [1] - 1781:24 <b>1501</b> [1] - 1718:21 <b>1505</b> [1] - 1718:22 <b>1509</b> [1] - 1718:22 <b>1510</b> [1] - 1718:23 <b>1513</b> [1] - 1718:23 <b>1529</b> [2] - 1706:3, 1711:6 <b>1530</b> [3] - 1706:4, 1706:5, 1706:6 <b>1531</b> [1] - 1706:7 <b>1537</b> [1] - 1711:7 <b>154</b> [1] - 1709:6 <b>1540</b> [1] - 1711:7 <b>1551</b> [1] - 1711:8 <b>1552</b> [1] - 1711:8 <b>1553</b> [1] - 1711:9 <b>1555</b> [1] - 1711:9 <b>1557</b> [1] - 1713:3 <b>1561</b> [1] - 1706:18 <b>1562</b> [1] - 1713:4 <b>1572</b> [1] - 1713:4 <b>1578</b> [1] - 1713:5 <b>158</b> [1] - 1709:6 <b>1580</b> [1] - 1713:5 <b>1581</b> [1] - 1713:6 <b>1582</b> [1] - 1713:6 <b>1583</b> [1] - 1713:7	<b>1585</b> [1] - 1713:7 <b>1589</b> [1] - 1713:8 <b>1591</b> [1] - 1713:8 <b>1593</b> [1] - 1713:9 <b>1595</b> [1] - 1713:9 <b>1596</b> [2] - 1713:10, 1713:11 <b>1599</b> [1] - 1706:17 <b>16</b> [6] - 1705:9, 1706:20, 1708:3, 1727:21, 1731:16, 1869:17 <b>1602</b> [1] - 1713:12 <b>1606</b> [1] - 1713:12 <b>1607</b> [1] - 1713:13 <b>1615</b> [1] - 1713:13 <b>1616</b> [1] - 1713:14 <b>1628</b> [1] - 1713:14 <b>1631</b> [1] - 1713:15 <b>1633</b> [1] - 1713:15 <b>1634</b> [1] - 1713:17 <b>1641</b> [1] - 1706:19 <b>1642</b> [2] - 1706:21, 1713:18 <b>1655</b> [1] - 1713:18 <b>1663</b> [1] - 1713:19 <b>1666</b> [1] - 1713:19 <b>1667</b> [1] - 1714:3 <b>1670</b> [2] - 1706:17, 1714:4 <b>1677</b> [1] - 1714:4 <b>1678</b> [1] - 1714:5 <b>1680</b> [1] - 1714:5 <b>1686</b> [1] - 1714:6 <b>1690</b> [2] - 1714:6, 1714:7 <b>1692</b> [2] - 1714:7, 1714:8 <b>1695</b> [1] - 1714:8 <b>1697</b> [1] - 1714:9 <b>17</b> [3] - 1706:21, 1708:4, 1933:5 <b>1703-1989</b> [1] - 1703:10 <b>171</b> [2] - 1944:22, 1967:23 <b>1721</b> [1] - 1714:10 <b>1727</b> [1] - 1706:20 <b>1731</b> [1] - 1706:20 <b>1737</b> [2] - 1706:19, 1714:11 <b>1753</b> [1] - 1714:11 <b>1773</b> [1] - 1714:12 <b>1782</b> [1] - 1714:12 <b>1789</b> [1] - 1714:13 <b>1793</b> [2] - 1714:13, 1714:14 <b>1794</b> [1] - 1714:14 <b>1796</b> [1] - 1714:15	1
----------	---	--	---	--	---

<p>1797 [1] - 1714:16  18 [5] - 1706:21,  1708:5, 1823:17,  1877:4, 1899:21  18,000 [1] - 1825:5  180 [1] - 1810:14  1801 [1] - 1706:16  1805 [1] - 1714:17  181 [1] - 1709:7  1820 [1] - 1714:17  1822 [1] - 1714:18  1828 [1] - 1711:11  1834 [1] - 1706:11  1849 [1] - 1711:12  1850 [1] - 1711:12  1856 [1] - 1711:13  1857 [1] - 1711:13  1863 [1] - 1706:3  1868 [1] - 1719:7  1872 [1] - 1705:14  188 [1] - 1709:7  1882 [1] - 1719:7  1883 [1] - 1719:8  1892 [1] - 1719:8  1894 [1] - 1719:9  1896 [1] - 1719:9  1898 [1] - 1719:10  19 [6] - 1956:10,  1957:10, 1958:6,  1958:13, 1959:18,  1962:19  190 [1] - 1928:25  1901 [1] - 1719:11  1903 [1] - 1705:12  1907 [1] - 1705:21  1911 [1] - 1719:12  1913 [1] - 1719:12  1915 [1] - 1719:13  1916 [1] - 1719:13  1919 [1] - 1719:14  1921 [1] - 1708:19  1924 [1] - 1719:15  1928 [1] - 1705:12  194 [2] - 1709:8,  1764:3  1942 [1] - 1705:21  1944 [1] - 1705:22  195 [4] - 1744:21,  1764:3, 1917:1,  1928:23  195.6 [2] - 1774:10,  1774:21  1966 [1] - 1705:23  1971 [1] - 1705:24  1975 [2] - 1719:16,  1798:12  1977 [2] - 1798:13,  1798:20  1984 [4] - 1719:16,</p>	<p>1798:22, 1799:10  1986 [1] - 1799:19  1998 [1] - 1800:3  1:15 [3] - 1858:8,  1859:15, 1860:14</p> <p style="text-align: center;"><b>2</b></p> <p>2 [14] - 1705:3, 1706:3,  1706:14, 1708:6,  1708:13, 1759:24,  1760:1, 1760:15,  1760:18, 1773:20,  1835:11, 1890:13,  1987:25  2,000 [1] - 1931:25  2/17/15 [1] - 1706:7  2/18/15 [1] - 1706:5  2/25/15 [1] - 1706:6  20 [2] - 1912:15,  1933:5  200 [1] - 1932:3  2000 [1] - 1869:15  2002 [1] - 1869:17  2009 [1] - 1723:6  2014 [2] - 1903:14,  1945:3  2015 [13] - 1703:8,  1703:9, 1704:16,  1939:20, 1956:10,  1957:9, 1957:10,  1958:6, 1958:13,  1962:19, 1989:11,  1989:14  202 [1] - 1709:8  2035 [1] - 1719:17  2046 [1] - 1719:17  208 [1] - 1708:17  2084 [1] - 1719:18  2088 [1] - 1719:18  2093 [1] - 1719:19  2096 [1] - 1719:19  21 [2] - 1981:13,  1981:14  210 [1] - 1709:9  2123 [1] - 1719:20  2125 [1] - 1719:20  2129 [1] - 1719:21  2130 [1] - 1719:22  2133 [1] - 1705:13  2142 [1] - 1719:23  2143 [1] - 1719:23  2145 [1] - 1719:24  2147 [1] - 1719:24  2148 [1] - 1720:3  2149 [1] - 1705:14  215 [1] - 1870:9  2159 [1] - 1705:23  216 [3] - 1870:10,</p>	<p>1870:13, 1871:3  217 [1] - 1870:13  2170 [2] - 1705:7,  1720:4  2175 [1] - 1720:4  218 [2] - 1870:13,  1871:3  2182 [1] - 1720:5  2198 [1] - 1720:5  22 [1] - 1708:6  220 [1] - 1709:9  220-foot [1] - 1810:14  2205 [1] - 1720:6  2206 [1] - 1720:6  2208 [1] - 1720:7  2211 [1] - 1720:7  2212 [1] - 1720:8  2215 [1] - 1720:8  227 [1] - 1927:3  229th [1] - 1929:15  23 [7] - 1906:8,  1906:20, 1939:20,  1940:19, 1941:13,  1957:9, 1958:18  231 [1] - 1709:10  237 [1] - 1709:10  239 [1] - 1709:11  23rd [1] - 1989:13  24 [3] - 1708:17,  1925:14, 1944:24  24,000 [1] - 1814:17  243 [1] - 1709:11  25 [2] - 1820:13,  1934:14  250 [1] - 1709:12  253 [1] - 1709:12  255 [1] - 1709:13  258 [1] - 1709:13  259 [1] - 1709:14  25th [1] - 1934:13  26 [4] - 1708:7,  1933:8, 1933:11,  1934:22  260 [1] - 1709:16  263 [2] - 1705:10,  1709:16  265 [1] - 1871:20  271 [1] - 1709:17  273 [2] - 1871:20,  1927:3  275 [1] - 1985:19  28 [1] - 1735:4  280 [1] - 1709:17  289 [1] - 1709:18  29 [1] - 1703:8  292 [1] - 1709:18  294 [1] - 1709:19  296 [1] - 1710:3  299 [1] - 1705:15</p>	<p style="text-align: center;"><b>3</b></p> <p>3 [10] - 1705:4, 1706:4,  1706:15, 1706:22,  1708:14, 1725:14,  1735:5, 1766:10,  1890:13, 1926:5  3.5 [1] - 1829:14  30 [4] - 1705:9,  1735:5, 1795:4,  1802:6  30,000 [1] - 1823:25  300 [1] - 1705:10  301 [1] - 1710:4  31 [3] - 1705:10,  1934:13, 1934:14  32 [2] - 1705:10,  1735:5  320 [1] - 1710:4  324 [1] - 1710:5  33 [2] - 1705:11,  1752:13  339 [1] - 1710:5  34 [3] - 1705:11,  1814:19, 1925:1  35 [5] - 1705:12,  1903:1, 1903:3,  1903:5, 1903:7  35,000 [1] - 1814:19  357 [1] - 1710:6  358 [1] - 1710:6  36 [8] - 1705:12,  1925:4, 1925:5,  1925:7, 1926:1,  1928:5, 1977:21,  1981:9  364 [1] - 1705:15  365 [1] - 1710:7  37 [2] - 1705:13,  1816:11  372 [1] - 1710:7  374 [1] - 1710:8  376 [1] - 1710:8  378 [1] - 1710:9  379 [2] - 1710:9,  1710:10  38 [2] - 1705:14,  1944:24  384 [1] - 1892:12  39 [4] - 1705:14,  1869:19, 1870:4,  1870:5  393 [1] - 1710:11  39th [1] - 1934:11</p> <p style="text-align: center;"><b>4</b></p> <p>4 [15] - 1705:4, 1706:5,</p>	<p>1706:15, 1733:9, 2  1735:5, 1735:6,  1744:22, 1770:21,  1771:20, 1772:18,  1779:22, 1820:17,  1967:2, 1968:25,  1978:14  4/8/15 [1] - 1706:4  40 [5] - 1789:17,  1912:16, 1916:7,  1931:6, 1932:8  404 [2] - 1705:11,  1710:12  41 [7] - 1705:15,  1735:6, 1977:15,  1978:15, 1978:18,  1979:11, 1980:8  414 [2] - 1704:15,  1797:24  419 [1] - 1710:12  42 [1] - 1705:15  45 [2] - 1705:16,  1735:6  450 [1] - 1930:18  46 [2] - 1705:17,  1733:9  4626 [1] - 1868:12  463 [1] - 1710:13  47 [2] - 1705:18,  1952:3  471 [1] - 1952:4  48 [1] - 1705:19  481 [1] - 1710:13  482 [1] - 1710:14  483 [1] - 1710:14  487 [1] - 1710:15  49 [6] - 1705:20,  1744:21, 1764:3,  1774:10, 1774:21,  1952:3  49-41B-22 [2] -  1848:8, 1968:25  491 [1] - 1710:16  495 [1] - 1710:16  4D [1] - 1785:4</p> <p style="text-align: center;"><b>5</b></p> <p>5 [12] - 1705:5, 1706:6,  1706:16, 1726:7,  1730:22, 1752:13,  1789:12, 1800:15,  1801:11, 1801:14,  1891:24, 1920:22  5-0 [2] - 1906:5,  1906:6  50 [15] - 1705:21,  1813:13, 1819:2,  1900:23, 1905:12,</p>
---	--	--	--	---

1906:3, 1906:4, 1906:25, 1915:14, 1916:21, 1921:23, 1923:18, 1928:6, 1928:15, 1934:13 <b>500</b> [1] - 1704:15 <b>51</b> [14] - 1705:21, 1935:17, 1935:18, 1935:19, 1935:23, 1936:6, 1936:7, 1936:19, 1936:20, 1936:24, 1938:14, 1938:15, 1941:5, 1942:23 <b>52</b> [13] - 1705:22, 1935:16, 1935:17, 1935:18, 1936:13, 1938:5, 1938:6, 1942:24, 1942:25, 1943:2, 1943:3, 1943:20, 1944:6 <b>523</b> [1] - 1710:18 <b>524</b> [1] - 1705:11 <b>525</b> [2] - 1705:5, 1705:6 <b>528</b> [1] - 1710:19 <b>53</b> [2] - 1705:23, 1900:23 <b>54</b> [16] - 1705:23, 1924:25, 1955:21, 1956:11, 1956:22, 1957:3, 1957:4, 1957:6, 1959:11, 1959:17, 1959:19, 1959:24, 1960:3, 1960:9, 1963:19, 1966:19 <b>546</b> [1] - 1710:19 <b>55</b> [5] - 1705:24, 1709:3, 1967:3, 1967:11, 1968:7 <b>566</b> [1] - 1710:20 <b>568</b> [1] - 1710:20 <b>570,000</b> [1] - 1930:18 <b>57069</b> [1] - 1797:25 <b>572</b> [1] - 1710:21 <b>575</b> [1] - 1710:21 <b>578</b> [1] - 1710:22 <b>584</b> [1] - 1710:22 <b>588</b> [1] - 1710:23 <b>59</b> [1] - 1705:9 <b>594</b> [1] - 1710:23 <b>596</b> [1] - 1710:24 <b>5:15</b> [1] - 1988:3	1769:11, 1899:20 <b>6/5/15</b> [1] - 1705:9 <b>60</b> [2] - 1912:13, 1912:23 <b>60,000</b> [2] - 1934:15, 1934:16 <b>600</b> [2] - 1915:16, 1915:17 <b>607</b> [1] - 1710:24 <b>608</b> [1] - 1719:3 <b>61</b> [2] - 1705:3, 1985:19 <b>612</b> [1] - 1719:4 <b>62</b> [2] - 1705:3, 1705:4 <b>620</b> [1] - 1719:4 <b>621</b> [1] - 1711:3 <b>627</b> [5] - 1706:7, 1706:8, 1706:8, 1706:9, 1706:10 <b>63</b> [1] - 1705:4 <b>64</b> [1] - 1705:5 <b>648</b> [1] - 1711:4 <b>65</b> [3] - 1709:4, 1814:24, 1868:12 <b>651</b> [1] - 1711:4 <b>662</b> [1] - 1711:5 <b>668</b> [1] - 1711:16 <b>67</b> [1] - 1926:5 <b>67,000</b> [1] - 1814:25 <b>674</b> [2] - 1706:14, 1706:21 <b>676</b> [1] - 1711:16 <b>684</b> [1] - 1711:17 <b>687</b> [1] - 1711:17 <b>691</b> [1] - 1711:18 <b>693</b> [1] - 1711:18 <b>695</b> [1] - 1711:20 <b>698</b> [1] - 1706:14 <b>699</b> [1] - 1711:20	<b>739</b> [1] - 1712:8 <b>743</b> [2] - 1706:16, 1908:24 <b>745</b> [1] - 1712:8 <b>747</b> [1] - 1705:8 <b>748</b> [1] - 1705:9 <b>749</b> [1] - 1712:9 <b>757</b> [1] - 1712:9 <b>77002</b> [1] - 1901:9 <b>790</b> [1] - 1710:15	<b>8</b>	<b>8</b> [6] - 1703:9, 1706:8, 1706:17, 1708:17, 1735:5, 1861:20 <b>8/24/15</b> [1] - 1706:21 <b>80</b> [4] - 1835:14, 1846:25, 1912:10, 1912:23 <b>800</b> [3] - 1804:12, 1804:22, 1813:18 <b>80643</b> [1] - 1868:13 <b>812</b> [5] - 1705:16, 1705:17, 1705:18, 1705:19, 1705:20 <b>82</b> [1] - 1708:9 <b>825</b> [1] - 1712:10 <b>83</b> [3] - 1978:13, 1979:6, 1981:8 <b>84</b> [3] - 1709:4, 1978:13, 1979:7 <b>843</b> [1] - 1712:10 <b>863</b> [1] - 1712:11 <b>871</b> [1] - 1712:11 <b>872</b> [3] - 1712:12, 1712:12, 1712:13 <b>874</b> [1] - 1712:13 <b>878</b> [1] - 1712:15 <b>884</b> [1] - 1706:15 <b>886</b> [1] - 1712:15 <b>8th</b> [2] - 1704:16, 1989:10	<b>9</b>	<b>9</b> [5] - 1703:8, 1705:7, 1706:8, 1706:18, 1708:17 <b>9/8/15</b> [1] - 1705:8 <b>901</b> [1] - 1712:16 <b>916</b> [1] - 1708:3 <b>924</b> [1] - 1708:3 <b>926</b> [2] - 1708:4, 1708:7 <b>927</b> [1] - 1708:5 <b>928</b> [1] - 1708:6 <b>931</b> [1] - 1712:16	<b>941</b> [1] - 1712:17 <b>945</b> [1] - 1712:17 <b>946</b> [1] - 1712:18 <b>949</b> [1] - 1712:18 <b>95</b> [1] - 1956:23 <b>951</b> [2] - 1712:19, 1712:19 <b>955</b> [1] - 1712:21 <b>957</b> [1] - 1706:18 <b>959</b> [1] - 1712:22 <b>992</b> [1] - 1712:22 <b>997</b> [1] - 1712:23 <b>998</b> [1] - 1712:23 <b>9:45</b> [1] - 1781:24	<b>A</b>	<b>A1</b> [1] - 1958:15 <b>A2</b> [2] - 1952:3, 1958:16 <b>A3</b> [1] - 1958:16 <b>Aaron</b> [5] - 1860:2, 1864:18, 1865:13, 1868:8, 1869:22 <b>AARON</b> [1] - 1719:6 <b>abide</b> [5] - 1762:13, 1904:4, 1942:10, 1958:23, 1963:3 <b>abides</b> [2] - 1782:14, 1874:6 <b>ability</b> [14] - 1723:25, 1763:25, 1790:23, 1791:9, 1795:5, 1795:15, 1825:23, 1842:20, 1866:25, 1885:7, 1942:13, 1944:20, 1955:3, 1971:20 <b>able</b> [21] - 1728:22, 1748:17, 1756:22, 1759:11, 1808:15, 1809:15, 1825:24, 1827:2, 1874:4, 1876:8, 1878:12, 1878:17, 1887:15, 1889:5, 1905:8, 1923:15, 1939:13, 1961:11, 1965:7, 1971:1, 1983:23 <b>Aboriginal</b> [1] - 1708:18 <b>above-entitled</b> [2] - 1704:14, 1989:10 <b>absence</b> [1] - 1786:9 <b>absolute</b> [1] - 1954:14 <b>absolutely</b> [4] - 1726:4, 1817:10, 1932:4, 1941:23 <b>abut</b> [1] - 1951:10	<b>abuts</b> [1] - 1937:8 <b>abutting</b> [1] - 1948:1 <b>accept</b> [3] - 1859:10, 1863:2, 1958:8 <b>acceptable</b> [3] - 1730:15, 1858:19, 1858:20 <b>accepted</b> [1] - 1707:14 <b>Access</b> [61] - 1704:2, 1707:13, 1723:11, 1724:15, 1725:19, 1728:21, 1729:13, 1735:8, 1735:20, 1735:21, 1736:4, 1736:21, 1743:6, 1748:22, 1751:13, 1752:1, 1752:15, 1779:23, 1781:21, 1782:2, 1782:5, 1821:24, 1826:16, 1830:17, 1835:17, 1850:6, 1865:13, 1869:6, 1877:10, 1877:13, 1877:16, 1877:21, 1879:3, 1879:7, 1882:5, 1882:9, 1882:13, 1882:17, 1887:17, 1889:20, 1892:25, 1893:3, 1893:7, 1893:9, 1894:9, 1901:10, 1903:4, 1903:10, 1912:1, 1926:15, 1926:18, 1944:10, 1974:19, 1977:14, 1978:17, 1979:9, 1980:4, 1980:7, 1980:18, 1981:10, 1982:24 <b>ACCESS</b> [2] - 1703:4, 1703:5 <b>access</b> [11] - 1813:25, 1814:2, 1814:3, 1815:4, 1903:18, 1905:1, 1905:4, 1905:9, 1910:25, 1919:12, 1972:7 <b>Access's</b> [6] - 1729:25, 1774:6, 1904:11, 1984:4, 1984:17, 1986:3 <b>accommodate</b> [4] - 1827:5, 1877:14, 1877:16, 1955:25 <b>accommodating</b> [1] - 1968:5 <b>accommodations</b> [1] - 1951:3 <b>accomplished</b> [1] - 1866:10	3
<b>6</b>	<b>6</b> [6] - 1705:5, 1706:7, 1706:16, 1708:16,	<b>7</b>	<b>7</b> [4] - 1705:6, 1706:7, 1706:17, 1708:16 <b>700</b> [2] - 1931:10, 1931:13 <b>701</b> [1] - 1711:21 <b>702</b> [2] - 1711:21, 1733:11 <b>704</b> [1] - 1712:3 <b>707</b> [1] - 1706:15 <b>708</b> [1] - 1712:4 <b>71</b> [2] - 1765:25, 1944:23 <b>713</b> [1] - 1712:4 <b>722</b> [1] - 1712:5 <b>724</b> [1] - 1712:5 <b>727</b> [1] - 1712:6 <b>729</b> [1] - 1712:6	<b>8</b>	<b>8</b> [6] - 1703:9, 1706:8, 1706:17, 1708:17, 1735:5, 1861:20 <b>8/24/15</b> [1] - 1706:21 <b>80</b> [4] - 1835:14, 1846:25, 1912:10, 1912:23 <b>800</b> [3] - 1804:12, 1804:22, 1813:18 <b>80643</b> [1] - 1868:13 <b>812</b> [5] - 1705:16, 1705:17, 1705:18, 1705:19, 1705:20 <b>82</b> [1] - 1708:9 <b>825</b> [1] - 1712:10 <b>83</b> [3] - 1978:13, 1979:6, 1981:8 <b>84</b> [3] - 1709:4, 1978:13, 1979:7 <b>843</b> [1] - 1712:10 <b>863</b> [1] - 1712:11 <b>871</b> [1] - 1712:11 <b>872</b> [3] - 1712:12, 1712:12, 1712:13 <b>874</b> [1] - 1712:13 <b>878</b> [1] - 1712:15 <b>884</b> [1] - 1706:15 <b>886</b> [1] - 1712:15 <b>8th</b> [2] - 1704:16, 1989:10	<b>9</b>	<b>9</b> [5] - 1703:8, 1705:7, 1706:8, 1706:18, 1708:17 <b>9/8/15</b> [1] - 1705:8 <b>901</b> [1] - 1712:16 <b>916</b> [1] - 1708:3 <b>924</b> [1] - 1708:3 <b>926</b> [2] - 1708:4, 1708:7 <b>927</b> [1] - 1708:5 <b>928</b> [1] - 1708:6 <b>931</b> [1] - 1712:16	<b>A</b>	<b>A1</b> [1] - 1958:15 <b>A2</b> [2] - 1952:3, 1958:16 <b>A3</b> [1] - 1958:16 <b>Aaron</b> [5] - 1860:2, 1864:18, 1865:13, 1868:8, 1869:22 <b>AARON</b> [1] - 1719:6 <b>abide</b> [5] - 1762:13, 1904:4, 1942:10, 1958:23, 1963:3 <b>abides</b> [2] - 1782:14, 1874:6 <b>ability</b> [14] - 1723:25, 1763:25, 1790:23, 1791:9, 1795:5, 1795:15, 1825:23, 1842:20, 1866:25, 1885:7, 1942:13, 1944:20, 1955:3, 1971:20 <b>able</b> [21] - 1728:22, 1748:17, 1756:22, 1759:11, 1808:15, 1809:15, 1825:24, 1827:2, 1874:4, 1876:8, 1878:12, 1878:17, 1887:15, 1889:5, 1905:8, 1923:15, 1939:13, 1961:11, 1965:7, 1971:1, 1983:23 <b>Aboriginal</b> [1] - 1708:18 <b>above-entitled</b> [2] - 1704:14, 1989:10 <b>absence</b> [1] - 1786:9 <b>absolute</b> [1] - 1954:14 <b>absolutely</b> [4] - 1726:4, 1817:10, 1932:4, 1941:23 <b>abut</b> [1] - 1951:10	<b>abuts</b> [1] - 1937:8 <b>abutting</b> [1] - 1948:1 <b>accept</b> [3] - 1859:10, 1863:2, 1958:8 <b>acceptable</b> [3] - 1730:15, 1858:19, 1858:20 <b>accepted</b> [1] - 1707:14 <b>Access</b> [61] - 1704:2, 1707:13, 1723:11, 1724:15, 1725:19, 1728:21, 1729:13, 1735:8, 1735:20, 1735:21, 1736:4, 1736:21, 1743:6, 1748:22, 1751:13, 1752:1, 1752:15, 1779:23, 1781:21, 1782:2, 1782:5, 1821:24, 1826:16, 1830:17, 1835:17, 1850:6, 1865:13, 1869:6, 1877:10, 1877:13, 1877:16, 1877:21, 1879:3, 1879:7, 1882:5, 1882:9, 1882:13, 1882:17, 1887:17, 1889:20, 1892:25, 1893:3, 1893:7, 1893:9, 1894:9, 1901:10, 1903:4, 1903:10, 1912:1, 1926:15, 1926:18, 1944:10, 1974:19, 1977:14, 1978:17, 1979:9, 1980:4, 1980:7, 1980:18, 1981:10, 1982:24 <b>ACCESS</b> [2] - 1703:4, 1703:5 <b>access</b> [11] - 1813:25, 1814:2, 1814:3, 1815:4, 1903:18, 1905:1, 1905:4, 1905:9, 1910:25, 1919:12, 1972:7 <b>Access's</b> [6] - 1729:25, 1774:6, 1904:11, 1984:4, 1984:17, 1986:3 <b>accommodate</b> [4] - 1827:5, 1877:14, 1877:16, 1955:25 <b>accommodating</b> [1] - 1968:5 <b>accommodations</b> [1] - 1951:3 <b>accomplished</b> [1] - 1866:10	3

<p><b>accordance</b> [3] - 1754:21, 1970:20, 1979:19</p> <p><b>according</b> [1] - 1780:1</p> <p><b>accordingly</b> [2] - 1792:15, 1983:4</p> <p><b>account</b> [7] - 1805:9, 1835:25, 1843:19, 1846:20, 1847:15, 1873:22, 1951:5</p> <p><b>accurate</b> [7] - 1754:4, 1754:5, 1772:14, 1772:15, 1912:9, 1986:9</p> <p><b>acknowledge</b> [2] - 1729:24, 1836:1</p> <p><b>acknowledged</b> [2] - 1735:15, 1837:8</p> <p><b>acquisition</b> [2] - 1903:10, 1911:4</p> <p><b>acquisitions</b> [1] - 1901:14</p> <p><b>acres</b> [2] - 1765:25, 1768:3</p> <p><b>act</b> [4] - 1745:18, 1784:3, 1898:23, 1900:11</p> <p><b>Act</b> [17] - 1739:1, 1749:8, 1758:7, 1758:20, 1761:10, 1762:1, 1763:1, 1764:2, 1767:9, 1767:23, 1769:5, 1769:8, 1783:25, 1797:6, 1968:21, 1976:20, 1976:24</p> <p><b>ACTING</b> [1] - 1703:14</p> <p><b>Action</b> [5] - 1704:5, 1733:8, 1773:13, 1883:14, 1969:14</p> <p><b>action</b> [1] - 1740:16</p> <p><b>actions</b> [5] - 1909:9, 1909:12, 1954:12, 1954:15, 1955:5</p> <p><b>active</b> [2] - 1742:1, 1786:7</p> <p><b>actively</b> [1] - 1974:13</p> <p><b>activities</b> [7] - 1790:17, 1791:7, 1791:14, 1798:7, 1808:6, 1903:15, 1979:21</p> <p><b>activity</b> [6] - 1757:5, 1766:23, 1766:25, 1784:9, 1876:1, 1982:2</p> <p><b>actual</b> [9] - 1748:23, 1763:6, 1812:21, 1833:9, 1849:23, 1854:12, 1922:6,</p>	<p>1956:7, 1957:19</p> <p><b>Adams</b> [1] - 1956:10</p> <p><b>add</b> [15] - 1745:12, 1786:22, 1788:11, 1833:10, 1846:17, 1852:4, 1867:17, 1927:4, 1927:6, 1930:2, 1944:5, 1963:9, 1963:13, 1963:20, 1964:8</p> <p><b>addition</b> [7] - 1728:1, 1782:22, 1814:10, 1814:21, 1815:1, 1877:13, 1925:12</p> <p><b>additional</b> [12] - 1724:6, 1752:21, 1808:10, 1809:17, 1871:17, 1871:22, 1889:4, 1927:7, 1945:20, 1948:5, 1963:9, 1963:13</p> <p><b>additionally</b> [1] - 1757:14</p> <p><b>additions</b> [10] - 1725:8, 1726:5, 1728:9, 1729:19, 1732:14, 1800:25, 1902:4, 1902:21, 1925:10, 1925:19</p> <p><b>address</b> [26] - 1721:8, 1721:9, 1797:21, 1797:23, 1812:11, 1822:21, 1847:16, 1867:3, 1868:11, 1868:12, 1901:6, 1901:8, 1926:11, 1937:5, 1939:4, 1939:6, 1939:17, 1939:19, 1940:5, 1940:19, 1940:25, 1941:2, 1941:7, 1945:22, 1972:3, 1974:13</p> <p><b>addressed</b> [1] - 1870:23</p> <p><b>addressing</b> [1] - 1865:7</p> <p><b>adds</b> [1] - 1896:22</p> <p><b>adequate</b> [3] - 1843:9, 1875:6, 1986:7</p> <p><b>adequately</b> [6] - 1752:1, 1752:3, 1752:16, 1756:18, 1867:1, 1877:7</p> <p><b>adhere</b> [5] - 1977:14, 1978:18, 1979:6, 1980:8, 1982:9</p> <p><b>adhered</b> [1] - 1957:14</p> <p><b>adherence</b> [1] - 1754:13</p>	<p><b>adjacent</b> [1] - 1936:4</p> <p><b>adjoining</b> [4] - 1922:2, 1922:5, 1922:22, 1923:9</p> <p><b>adjourn</b> [3] - 1987:3, 1987:15, 1988:1</p> <p><b>adjustments</b> [2] - 1981:12, 1983:1</p> <p><b>administered</b> [5] - 1721:4, 1797:15, 1827:24, 1865:14, 1901:2</p> <p><b>administering</b> [1] - 1971:11</p> <p><b>administrators</b> [1] - 1749:7</p> <p><b>Administration</b> [1] - 1855:21</p> <p><b>administration</b> [2] - 1842:9, 1855:17</p> <p><b>Administrative</b> [3] - 1867:8, 1968:20</p> <p><b>administrator</b> [1] - 1798:2</p> <p><b>admission</b> [12] - 1727:16, 1731:15, 1733:5, 1737:12, 1906:25, 1921:5, 1925:25, 1926:22, 1938:15, 1941:5, 1957:6, 1964:14</p> <p><b>admit</b> [8] - 1834:3, 1841:1, 1841:22, 1870:4, 1928:5, 1942:23, 1944:6, 1971:5</p> <p><b>admitted</b> [14] - 1727:19, 1731:18, 1737:17, 1801:12, 1801:15, 1841:12, 1861:2, 1863:20, 1872:14, 1903:8, 1907:1, 1921:20, 1942:19, 1966:21</p> <p><b>admitting</b> [1] - 1734:21</p> <p><b>adopt</b> [1] - 1772:2</p> <p><b>adopted</b> [7] - 1756:22, 1759:11, 1759:16, 1776:23, 1780:12, 1790:13, 1794:7</p> <p><b>adopting</b> [2] - 1757:21, 1872:21</p> <p><b>advance</b> [1] - 1941:13</p> <p><b>advanced</b> [2] - 1865:18, 1941:7</p> <p><b>adversarial</b> [1] - 1968:19</p> <p><b>advertences</b> [1] - 1799:14</p>	<p><b>advise</b> [1] - 1729:5</p> <p><b>advised</b> [1] - 1861:16</p> <p><b>advocacy</b> [1] - 1829:8</p> <p><b>advocate</b> [2] - 1829:9, 1836:13</p> <p><b>aerial</b> [2] - 1905:22, 1929:8</p> <p><b>affect</b> [5] - 1742:21, 1779:12, 1780:6, 1780:20, 1847:1</p> <p><b>affected</b> [6] - 1750:2, 1784:18, 1842:18, 1891:10, 1963:22, 1969:3</p> <p><b>affecting</b> [2] - 1834:14, 1912:6</p> <p><b>affiliates</b> [1] - 1974:21</p> <p><b>affiliation</b> [1] - 1845:19</p> <p><b>afraid</b> [5] - 1744:11, 1748:24, 1796:8, 1813:21, 1949:9</p> <p><b>afternoon</b> [23] - 1862:1, 1862:6, 1862:18, 1864:2, 1864:24, 1882:3, 1882:4, 1896:23, 1901:5, 1901:25, 1911:22, 1911:23, 1913:18, 1913:19, 1919:8, 1919:9, 1924:14, 1925:11, 1925:17, 1925:22, 1927:23, 1975:7, 1984:3</p> <p><b>Ag</b> [7] - 1873:3, 1873:23, 1875:10, 1879:5, 1879:7, 1893:8, 1896:5</p> <p><b>ag</b> [4] - 1795:15, 1795:16, 1875:2</p> <p><b>age</b> [2] - 1823:24, 1898:8</p> <p><b>agencies</b> [7] - 1738:18, 1754:6, 1783:4, 1790:14, 1843:25, 1844:13, 1844:16</p> <p><b>agency</b> [18] - 1745:16, 1762:14, 1774:18, 1778:18, 1783:16, 1790:23, 1791:3, 1791:13, 1792:9, 1795:19, 1796:2, 1798:8, 1814:16, 1814:23, 1843:4, 1974:2, 1977:8, 1977:9</p> <p><b>agency's</b> [1] - 1794:25</p> <p><b>agent</b> [1] - 1902:14</p>	<p><b>agents</b> [3] - 1903:20, 1904:4, 1904:25</p> <p><b>ago</b> [6] - 1802:6, 1829:13, 1958:4, 1959:2, 1961:9, 1987:11</p> <p><b>agree</b> [53] - 1759:4, 1759:7, 1760:16, 1761:3, 1761:8, 1761:12, 1761:15, 1764:14, 1764:15, 1765:15, 1765:16, 1766:9, 1766:13, 1767:6, 1767:7, 1769:7, 1770:18, 1770:24, 1771:1, 1771:23, 1771:24, 1772:22, 1772:23, 1772:25, 1773:3, 1778:15, 1778:21, 1778:24, 1779:4, 1847:23, 1863:2, 1873:6, 1873:10, 1882:10, 1892:17, 1897:10, 1917:11, 1955:7, 1964:20, 1965:4, 1968:12, 1978:25, 1979:5, 1979:8, 1980:1, 1980:17, 1981:11, 1982:21, 1982:25, 1983:2, 1983:5, 1985:6, 1985:8</p> <p><b>agreed</b> [3] - 1783:1, 1918:6, 1921:9</p> <p><b>agreement</b> [5] - 1874:6, 1909:14, 1910:18, 1913:8, 1925:13</p> <p><b>Agreement</b> [1] - 1708:13</p> <p><b>agrees</b> [2] - 1981:10, 1982:24</p> <p><b>agricultural</b> [5] - 1766:21, 1881:10, 1889:24, 1893:12, 1902:10</p> <p><b>Agricultural</b> [5] - 1873:15, 1873:23, 1888:19, 1888:22, 1889:22</p> <p><b>agriculture</b> [5] - 1795:14, 1856:13, 1868:21, 1881:11, 1892:23</p> <p><b>Agriculture</b> [1] - 1795:20</p> <p><b>agronomist</b> [2] - 1868:15, 1886:2</p> <p><b>agronomists</b> [1] -</p>	4
---	---	--	--	--	---

<p>1873:21  <b>agronomy</b> [3] -  1868:21, 1868:22,  1893:12  <b>ahead</b> [20] - 1741:10,  1764:16, 1769:19,  1773:8, 1793:15,  1830:14, 1870:7,  1871:1, 1871:19,  1891:13, 1924:10,  1938:20, 1940:16,  1942:14, 1960:19,  1963:12, 1968:9,  1974:3, 1981:7,  1987:17  <b>Ailts</b> [1] - 1703:16  <b>Akeley</b> [1] - 1797:24  <b>Akeley-Lawrence</b> [1] -  1797:24  <b>Alberta</b> [1] - 1794:11  <b>alert</b> [1] - 1747:14  <b>alerted</b> [1] - 1746:20  <b>algae</b> [1] - 1847:7  <b>alignment</b> [1] -  1730:12  <b>ALLAN</b> [1] - 1718:9  <b>allow</b> [2] - 1776:12,  1833:25  <b>allowed</b> [4] - 1778:18,  1910:9, 1910:12,  1964:8  <b>allowing</b> [1] - 1860:23  <b>allows</b> [1] - 1876:17  <b>almost</b> [3] - 1722:24,  1750:14, 1843:15  <b>altering</b> [1] - 1780:5  <b>alternate</b> [1] - 1932:20  <b>alternative</b> [1] -  1730:15  <b>alternatives</b> [2] -  1946:3, 1947:18  <b>altogether</b> [1] -  1778:22  <b>ambient</b> [1] - 1799:24  <b>ambush</b> [2] - 1941:16,  1961:3  <b>ambushed</b> [1] -  1961:6  <b>ambushing</b> [2] -  1961:1  <b>amend</b> [2] - 1872:15,  1884:8  <b>Amended</b> [2] -  1977:15, 1980:9  <b>America</b> [5] - 1829:5,  1834:9, 1856:22,  1932:18, 1933:7  <b>amicable</b> [2] -  1909:13, 1910:18  <b>amount</b> [5] - 1734:14,</p>	<p>1824:5, 1875:25,  1912:1, 1965:22  <b>AN</b> [1] - 1703:4  <b>analysis</b> [12] - 1738:4,  1738:11, 1742:12,  1770:21, 1770:24,  1771:2, 1771:4,  1771:12, 1783:3,  1832:13, 1832:20,  1890:24  <b>analyst</b> [1] - 1722:19  <b>analyze</b> [4] - 1724:12,  1800:9, 1832:19,  1900:1  <b>AND</b> [2] - 1706:2,  1711:2  <b>ANDERSON</b> [1] -  1717:11  <b>Anderson</b> [2] -  1707:3, 1908:20  <b>Andreessen</b> [1] -  1908:5  <b>angle</b> [1] - 1894:13  <b>animal</b> [3] - 1762:20,  1767:3, 1767:4  <b>announced</b> [2] -  1829:12, 1963:4  <b>annual</b> [2] - 1824:23  <b>answer</b> [59] - 1741:2,  1747:8, 1748:15,  1748:24, 1752:18,  1752:20, 1752:22,  1754:7, 1754:10,  1756:18, 1756:20,  1756:22, 1757:16,  1757:18, 1759:11,  1764:11, 1774:5,  1777:6, 1777:10,  1778:11, 1780:16,  1780:18, 1815:11,  1821:3, 1822:22,  1822:23, 1823:6,  1824:13, 1825:2,  1848:2, 1851:2,  1864:17, 1866:5,  1872:19, 1891:13,  1902:2, 1915:9,  1918:22, 1923:13,  1923:15, 1923:17,  1923:23, 1925:23,  1926:10, 1934:6,  1935:10, 1939:21,  1940:25, 1949:13,  1950:11, 1952:24,  1953:14, 1961:20,  1971:2, 1978:14,  1978:24, 1981:17,  1982:23  <b>answered</b> [9] -  1740:24, 1740:25,</p>	<p>1746:8, 1778:6,  1778:9, 1787:7,  1787:11, 1883:5,  1970:24  <b>answering</b> [5] -  1724:9, 1767:19,  1953:20, 1955:12,  1960:20  <b>answers</b> [12] -  1727:11, 1731:10,  1732:25, 1801:4,  1830:5, 1836:25,  1864:9, 1872:7,  1926:11, 1954:2,  1962:5, 1980:19  <b>anticipate</b> [1] - 1912:6  <b>anticipated</b> [1] -  1729:13  <b>anyway</b> [2] - 1947:25,  1983:10  <b>apart</b> [1] - 1819:11  <b>apologize</b> [9] -  1775:2, 1828:6,  1866:12, 1902:24,  1903:2, 1936:17,  1951:15, 1960:8,  1982:23  <b>apparent</b> [1] - 1821:1  <b>appear</b> [7] - 1816:23,  1825:24, 1827:2,  1827:16, 1958:5,  1963:19, 1964:6  <b>APPEARANCES</b> [1] -  1704:1  <b>appeared</b> [2] -  1818:14, 1827:2  <b>appease</b> [1] - 1976:14  <b>Appendix</b> [1] -  1708:17  <b>apples</b> [2] - 1900:16  <b>applicability</b> [1] -  1986:19  <b>applicable</b> [3] -  1754:3, 1754:23,  1756:12  <b>applicant</b> [1] -  1763:23  <b>Applicant</b> [21] -  1737:7, 1746:25,  1747:14, 1762:13,  1782:14, 1784:15,  1785:13, 1811:2,  1811:4, 1827:12,  1843:21, 1862:12,  1906:15, 1957:14,  1957:17, 1958:20,  1968:17, 1968:24,  1970:19, 1975:25,  1976:2  <b>Applicant's</b> [6] -</p>	<p>1706:21, 1788:7,  1848:8, 1957:8,  1962:21, 1963:25  <b>application</b> [5] -  1721:18, 1730:19,  1730:24, 1731:4,  1738:21  <b>Application</b> [32] -  1705:3, 1705:3,  1705:4, 1705:4,  1705:5, 1723:6,  1724:14, 1724:15,  1726:12, 1735:21,  1735:22, 1737:6,  1737:8, 1738:5,  1774:2, 1774:6,  1779:5, 1780:2,  1784:17, 1810:25,  1852:5, 1951:17,  1957:19, 1963:3,  1964:3, 1964:4,  1976:11, 1983:12,  1984:4, 1984:17,  1985:3, 1986:3  <b>APPLICATION</b> [1] -  1703:4  <b>applications</b> [3] -  1763:21, 1771:8,  1771:11  <b>applied</b> [1] - 1958:1  <b>applies</b> [3] - 1774:24,  1783:25, 1986:14  <b>apply</b> [6] - 1730:22,  1757:3, 1775:12,  1786:1, 1954:22,  1980:3  <b>appointed</b> [1] - 1989:8  <b>appreciate</b> [9] -  1822:1, 1822:5,  1861:21, 1863:10,  1884:1, 1930:7,  1930:13, 1962:13,  1979:25  <b>approach</b> [4] -  1829:20, 1837:23,  1843:15, 1895:10  <b>approached</b> [1] -  1912:18  <b>appropriate</b> [10] -  1731:2, 1751:21,  1754:3, 1865:19,  1899:25, 1918:24,  1921:23, 1926:15,  1926:17, 1983:5  <b>appropriated</b> [1] -  1749:18  <b>appropriately</b> [1] -  1731:7  <b>appropriating</b> [1] -  1743:15</p>	<p><b>appropriation</b> [3] - 5  1751:1, 1781:7,  1781:9  <b>Approval</b> [1] - 1705:9  <b>approval</b> [1] - 1843:6  <b>approved</b> [1] -  1747:18  <b>approximate</b> [2] -  1813:19, 1907:5  <b>April</b> [1] - 1770:17  <b>aquifer</b> [17] - 1801:21,  1802:12, 1806:13,  1806:14, 1807:13,  1809:15, 1820:22,  1821:2, 1823:2,  1823:21, 1823:22,  1823:23, 1823:24,  1824:1, 1824:3,  1825:4, 1825:8  <b>Aquifer</b> [23] - 1802:3,  1802:5, 1802:8,  1802:10, 1802:16,  1802:20, 1802:23,  1802:24, 1802:31,  1806:16, 1806:17,  1806:25, 1808:4,  1808:6, 1809:5,  1820:22, 1821:7,  1821:9, 1822:16,  1822:24, 1823:1,  1824:6, 1824:16  <b>aquifers</b> [11] - 1806:2,  1806:4, 1806:8,  1807:15, 1810:9,  1820:13, 1820:16,  1821:1, 1821:20,  1822:20, 1823:11  <b>archeology</b> [1] -  1972:23  <b>area</b> [70] - 1741:13,  1742:3, 1742:25,  1743:3, 1744:25,  1745:1, 1745:2,  1745:16, 1745:21,  1746:6, 1746:10,  1746:17, 1746:24,  1747:6, 1747:13,  1753:22, 1756:11,  1756:12, 1766:20,  1768:9, 1771:22,  1772:21, 1774:9,  1774:20, 1774:21,  1775:19, 1779:2,  1783:10, 1790:4,  1807:2, 1808:4,  1811:10, 1811:13,  1813:19, 1815:9,  1818:4, 1818:5,  1821:6, 1823:3,  1823:21, 1828:21,</p>
---	--	---	---	--



<p>1847:8, 1854:15, 1869:9, 1902:14, 1902:18, 1918:1, 1918:2, 1918:14, 1928:21, 1929:4, 1930:4, 1930:25, 1931:24, 1935:2, 1935:25, 1936:19, 1936:21, 1943:4, 1944:14, 1945:7, 1945:10, 1945:17, 1946:4, 1946:15, 1947:16, 1947:20, 1952:19</p> <p><b>Area</b> [1] - 1705:22</p> <p><b>Areas</b> [1] - 1708:9</p> <p><b>areas</b> [44] - 1723:23, 1727:1, 1727:2, 1729:3, 1732:20, 1732:21, 1744:23, 1745:3, 1745:4, 1753:15, 1753:16, 1755:18, 1755:24, 1756:1, 1756:13, 1756:16, 1756:17, 1763:14, 1774:4, 1775:6, 1775:8, 1775:9, 1783:19, 1784:18, 1791:15, 1801:20, 1806:3, 1806:12, 1807:4, 1808:4, 1816:8, 1818:2, 1895:2, 1902:16, 1917:16, 1935:24, 1943:13, 1946:17, 1948:4, 1948:6, 1951:11, 1952:2</p> <p><b>arena</b> [2] - 1790:12, 1943:14</p> <p><b>Arends</b> [2] - 1707:3</p> <p><b>ARENDS</b> [1] - 1718:9</p> <p><b>argue</b> [2] - 1852:10, 1855:8</p> <p><b>argument</b> [2] - 1751:6, 1848:5</p> <p><b>argumentative</b> [3] - 1853:25, 1855:4, 1916:10</p> <p><b>arguments</b> [3] - 1849:15, 1850:17</p> <p><b>arisen</b> [1] - 1959:22</p> <p><b>Army</b> [5] - 1706:4, 1706:5, 1706:6, 1706:7, 1706:10</p> <p><b>arrangements</b> [2] - 1919:20, 1919:22</p> <p><b>arrive</b> [3] - 1908:15, 1909:11, 1910:18</p> <p><b>articles</b> [3] - 1781:12,</p>	<p>1781:16, 1887:23</p> <p><b>articulate</b> [2] - 1953:25, 1975:11</p> <p><b>articulated</b> [1] - 1977:2</p> <p><b>artifacts</b> [2] - 1845:7, 1845:16</p> <p><b>arts</b> [1] - 1798:11</p> <p><b>ascertain</b> [1] - 1740:6</p> <p><b>ascertainable</b> [1] - 1740:3</p> <p><b>aspect</b> [3] - 1881:4, 1886:7, 1886:10</p> <p><b>assert</b> [1] - 1733:10</p> <p><b>assertion</b> [2] - 1950:5, 1950:7</p> <p><b>assessment</b> [4] - 1764:14, 1847:22, 1855:11, 1979:18</p> <p><b>assessments</b> [1] - 1847:23</p> <p><b>Assid</b> [1] - 1707:4</p> <p><b>ASSID</b> [1] - 1718:3</p> <p><b>assist</b> [11] - 1723:8, 1723:19, 1724:1, 1725:3, 1728:5, 1732:11, 1790:20, 1829:4, 1832:20, 1841:24, 1862:13</p> <p><b>assisted</b> [2] - 1728:7, 1732:12</p> <p><b>associated</b> [6] - 1799:15, 1867:3, 1874:7, 1874:8, 1879:22, 1908:17</p> <p><b>associates</b> [1] - 1838:3</p> <p><b>association</b> [1] - 1731:22</p> <p><b>Association</b> [2] - 1704:9, 1820:10</p> <p><b>assume</b> [4] - 1785:10, 1926:20, 1931:9, 1983:9</p> <p><b>assuming</b> [9] - 1725:22, 1754:15, 1781:8, 1810:15, 1811:7, 1912:4, 1918:5, 1935:7, 1987:24</p> <p><b>assumption</b> [2] - 1725:19, 1816:20</p> <p><b>assurances</b> [1] - 1890:6</p> <p><b>assure</b> [1] - 1752:7</p> <p><b>assured</b> [1] - 1805:7</p> <p><b>assuring</b> [1] - 1790:21</p> <p><b>atmosphere</b> [1] - 1807:25</p> <p><b>attached</b> [12] - 1840:2,</p>	<p>1874:16, 1915:17, 1922:8, 1951:16, 1958:15, 1977:16, 1977:21, 1980:9, 1980:10, 1981:14, 1989:11</p> <p><b>Attached</b> [1] - 1705:13</p> <p><b>attachment</b> [1] - 1977:23</p> <p><b>attachments</b> [6] - 1800:20, 1958:7, 1959:17, 1959:18, 1962:25, 1963:18</p> <p><b>attempt</b> [1] - 1805:11</p> <p><b>attempted</b> [1] - 1904:22</p> <p><b>attempting</b> [1] - 1894:24</p> <p><b>attend</b> [1] - 1861:16</p> <p><b>attended</b> [1] - 1828:18</p> <p><b>attention</b> [8] - 1724:17, 1727:20, 1759:18, 1860:19, 1938:5, 1942:24, 1952:6, 1967:11</p> <p><b>attorney</b> [6] - 1773:11, 1805:23, 1820:10, 1909:17, 1911:24, 1938:22</p> <p><b>attorneys</b> [4] - 1802:18, 1862:24, 1915:4, 1915:7</p> <p><b>attributable</b> [1] - 1913:5</p> <p><b>audit</b> [1] - 1754:12</p> <p><b>August</b> [1] - 1723:15</p> <p><b>author</b> [4] - 1812:10, 1839:8, 1870:13, 1871:24</p> <p><b>authoritative</b> [2] - 1781:12, 1781:15</p> <p><b>authorities</b> [1] - 1774:24</p> <p><b>authority</b> [8] - 1745:15, 1763:20, 1769:1, 1774:11, 1774:18, 1790:16, 1791:11, 1884:21</p> <p><b>authors</b> [3] - 1805:6, 1805:8, 1812:3</p> <p><b>automatically</b> [3] - 1745:20, 1745:21, 1957:16</p> <p><b>autumn</b> [1] - 1729:15</p> <p><b>availability</b> [1] - 1723:25</p> <p><b>available</b> [12] - 1739:6, 1740:10, 1759:22, 1805:17, 1813:23, 1814:25,</p>	<p>1815:3, 1889:4, 1893:14, 1921:6, 1943:6, 1968:22</p> <p><b>Avenue</b> [1] - 1704:15</p> <p><b>average</b> [4] - 1819:15, 1824:22, 1824:23, 1835:10</p> <p><b>avoid</b> [5] - 1751:10, 1835:9, 1846:24, 1951:11, 1979:20</p> <p><b>avoided</b> [2] - 1778:22, 1786:12</p> <p><b>award</b> [2] - 1829:10, 1829:11</p> <p><b>aware</b> [33] - 1741:17, 1747:3, 1747:4, 1753:18, 1755:5, 1755:8, 1758:22, 1766:2, 1766:4, 1766:5, 1766:6, 1777:19, 1777:22, 1777:23, 1778:2, 1785:4, 1785:5, 1785:6, 1796:2, 1804:15, 1804:18, 1811:13, 1812:4, 1812:8, 1857:15, 1857:17, 1890:1, 1890:4, 1926:10, 1939:6, 1951:1, 1974:15, 1974:17</p> <p style="text-align: center;"><b>B</b></p> <p><b>B.S</b> [1] - 1722:6</p> <p><b>BA</b> [1] - 1979:20</p> <p><b>bachelor</b> [1] - 1798:11</p> <p><b>bachelor's</b> [6] - 1733:22, 1734:5, 1734:12, 1868:19, 1868:20, 1869:2</p> <p><b>background</b> [6] - 1721:24, 1722:5, 1798:10, 1821:19, 1867:21, 1868:18</p> <p><b>backstop</b> [1] - 1974:23</p> <p><b>Bacon</b> [1] - 1707:3</p> <p><b>bad</b> [2] - 1880:17, 1960:4</p> <p><b>baffling</b> [1] - 1932:15</p> <p><b>bags</b> [1] - 1894:13</p> <p><b>BAILEY</b> [1] - 1714:3</p> <p><b>Bailey</b> [1] - 1706:17</p> <p><b>BAKER</b> [20] - 1734:22, 1735:3, 1735:14, 1737:21, 1737:23, 1738:17, 1740:1, 1740:10, 1740:25,</p>	<p>1744:7, 1744:14, 1747:7, 1752:25, 1911:19, 1911:21, 1913:14, 1921:3, 1921:13, 1921:16, 1921:21</p> <p><b>Baker</b> [19] - 1704:6, 1709:4, 1709:10, 1709:16, 1710:4, 1710:9, 1710:12, 1710:15, 1712:15, 1713:12, 1714:11, 1714:20, 1716:8, 1716:17, 1719:12, 1719:23, 1720:4, 1911:24, 1921:2</p> <p><b>Baker's</b> [2] - 1757:14, 1915:3</p> <p><b>Bakken</b> [18] - 1835:18, 1836:4, 1836:7, 1842:23, 1851:11, 1851:24, 1930:15, 1930:19, 1930:20, 1931:4, 1931:7, 1931:9, 1931:23, 1932:8, 1933:12, 1933:13, 1934:24</p> <p><b>balance</b> [1] - 1824:25</p> <p><b>ball</b> [1] - 1817:10</p> <p><b>bar</b> [1] - 1722:11</p> <p><b>bark</b> [1] - 1741:24</p> <p><b>barr</b> [1] - 1722:23</p> <p><b>barrel</b> [1] - 1931:17</p> <p><b>barrels</b> [13] - 1930:18, 1930:22, 1930:23, 1931:3, 1931:10, 1931:13, 1932:3, 1933:2, 1933:3, 1933:5, 1933:11, 1934:15, 1934:16</p> <p><b>barrier</b> [1] - 1843:22</p> <p><b>base</b> [3] - 1817:19, 1843:10, 1889:9</p> <p><b>based</b> [48] - 1725:7, 1739:11, 1744:4, 1744:8, 1747:23, 1748:20, 1752:5, 1774:1, 1774:5, 1784:24, 1786:23, 1787:1, 1788:3, 1793:6, 1797:8, 1799:11, 1802:22, 1804:6, 1805:14, 1808:3, 1816:20, 1830:22, 1844:7, 1856:2, 1861:10, 1861:11, 1867:10, 1872:10, 1875:14, 1879:23, 1882:25, 1898:2, 1898:14,</p>
---	--	---	---	--

<p>1900:19, 1915:11, 1916:22, 1920:16, 1929:7, 1932:19, 1932:21, 1942:20, 1963:10, 1971:3, 1976:19, 1976:23, 1977:12, 1984:16</p> <p><b>baseline</b> [1] - 1821:19</p> <p><b>Basin</b> [1] - 1706:10</p> <p><b>basis</b> [10] - 1803:25, 1824:23, 1824:24, 1837:15, 1848:3, 1871:3, 1885:11, 1912:20, 1913:4, 1931:17</p> <p><b>bat</b> [5] - 1739:13, 1741:20, 1741:21, 1741:22, 1785:2</p> <p><b>Bat</b> [1] - 1741:23</p> <p><b>bats</b> [3] - 1741:13, 1742:1, 1742:2</p> <p><b>bay</b> [1] - 1828:20</p> <p><b>became</b> [1] - 1800:6</p> <p><b>become</b> [7] - 1723:3, 1758:15, 1794:18, 1796:22, 1821:1, 1874:4, 1957:23</p> <p><b>becomes</b> [2] - 1749:12, 1824:24</p> <p><b>becoming</b> [1] - 1934:7</p> <p><b>BEFORE</b> [1] - 1703:12</p> <p><b>beforehand</b> [1] - 1961:2</p> <p><b>began</b> [7] - 1798:19, 1799:10, 1800:3, 1903:14, 1943:10, 1944:17, 1959:23</p> <p><b>begin</b> [5] - 1876:8, 1877:8, 1878:25, 1903:12, 1903:15</p> <p><b>beginning</b> [4] - 1768:14, 1797:20, 1802:9, 1976:7</p> <p><b>behalf</b> [3] - 1799:2, 1820:1, 1854:11</p> <p><b>behind</b> [3] - 1741:24, 1749:4, 1909:25</p> <p><b>beings</b> [1] - 1836:1</p> <p><b>believes</b> [1] - 1763:22</p> <p><b>bell</b> [1] - 1749:21</p> <p><b>belong</b> [1] - 1854:6</p> <p><b>below</b> [5] - 1808:1, 1817:5, 1817:15, 1835:11, 1917:1</p> <p><b>belt</b> [3] - 1917:18, 1918:3, 1918:7</p> <p><b>belts</b> [2] - 1930:10, 1930:13</p> <p><b>benefit</b> [6] - 1843:4, 1851:21, 1852:6,</p>	<p>1857:20, 1915:24, 1971:21</p> <p><b>benefited</b> [1] - 1933:18</p> <p><b>benefits</b> [3] - 1850:19, 1850:20, 1878:25</p> <p><b>Berkeley</b> [1] - 1828:19</p> <p><b>best</b> [33] - 1727:13, 1729:22, 1731:12, 1733:2, 1751:18, 1752:6, 1752:7, 1772:15, 1772:23, 1781:9, 1788:4, 1788:24, 1789:14, 1789:20, 1790:4, 1799:24, 1801:8, 1817:10, 1823:11, 1876:19, 1885:9, 1885:13, 1890:18, 1893:17, 1895:23, 1923:23, 1942:13, 1946:8, 1953:21, 1954:14, 1954:21, 1954:22, 1955:3</p> <p><b>Best</b> [5] - 1704:8, 1709:6, 1709:11, 1718:11, 1718:19</p> <p><b>bet</b> [2] - 1797:18, 1980:22</p> <p><b>better</b> [10] - 1752:10, 1774:23, 1812:17, 1824:8, 1887:16, 1916:3, 1920:2, 1938:14, 1943:12, 1970:12</p> <p><b>between</b> [16] - 1754:6, 1777:12, 1777:20, 1818:20, 1835:5, 1845:4, 1845:15, 1882:15, 1894:16, 1899:18, 1900:13, 1912:21, 1930:18, 1933:5, 1972:15, 1979:22</p> <p><b>beyond</b> [8] - 1832:3, 1851:16, 1878:15, 1885:24, 1909:15, 1909:19, 1929:21, 1966:4</p> <p><b>bias</b> [1] - 1867:4</p> <p><b>biased</b> [1] - 1976:14</p> <p><b>Big</b> [5] - 1741:19, 1820:22, 1820:23, 1821:7, 1821:9</p> <p><b>big</b> [5] - 1778:25, 1779:3, 1944:2, 1945:16, 1955:10</p> <p><b>bigger</b> [1] - 1931:5</p> <p><b>Biloxi</b> [1] - 1831:19</p> <p><b>binder</b> [1] - 1951:19</p>	<p><b>bins</b> [2] - 1917:14, 1917:18</p> <p><b>BIO</b> [1] - 1708:17</p> <p><b>biological</b> [10] - 1895:2, 1895:5, 1895:8, 1895:9, 1895:15, 1895:16, 1895:19, 1895:20, 1979:18, 1980:2</p> <p><b>BIRD</b> [65] - 1805:19, 1805:21, 1819:21, 1849:1, 1851:25, 1852:19, 1862:11, 1870:6, 1870:8, 1870:12, 1870:16, 1870:19, 1870:24, 1871:2, 1871:13, 1871:17, 1871:20, 1871:22, 1872:2, 1872:6, 1872:12, 1881:20, 1906:5, 1906:7, 1926:24, 1927:2, 1938:17, 1938:21, 1939:3, 1939:9, 1939:16, 1939:19, 1939:23, 1940:14, 1940:18, 1940:21, 1941:1, 1941:4, 1943:22, 1947:5, 1948:14, 1948:21, 1948:25, 1950:4, 1952:24, 1953:8, 1953:24, 1954:18, 1957:5, 1958:12, 1958:15, 1962:14, 1963:9, 1963:13, 1963:16, 1969:12, 1973:2, 1973:16, 1975:4, 1975:6, 1978:4, 1978:9, 1981:6, 1981:8, 1983:18</p> <p><b>bird</b> [3] - 1760:19, 1760:25, 1762:20</p> <p><b>Bird</b> [31] - 1704:6, 1710:19, 1710:23, 1711:4, 1711:16, 1711:20, 1712:4, 1712:9, 1712:22, 1713:4, 1713:8, 1713:18, 1714:4, 1714:8, 1714:17, 1715:3, 1715:13, 1717:7, 1717:17, 1718:17, 1718:22, 1719:4, 1719:16, 1719:20, 1761:10, 1805:22, 1938:22, 1940:17, 1955:18, 1964:16, 1965:4</p>	<p><b>birds</b> [3] - 1764:22, 1765:14, 1788:20</p> <p><b>bit</b> [22] - 1726:11, 1738:1, 1765:4, 1783:6, 1827:20, 1828:9, 1865:18, 1865:21, 1878:16, 1880:1, 1884:9, 1888:7, 1894:23, 1895:1, 1910:6, 1911:2, 1931:6, 1936:7, 1937:21, 1937:23, 1947:21, 1982:6</p> <p><b>Black</b> [1] - 1803:19</p> <p><b>block</b> [1] - 1742:19</p> <p><b>blooms</b> [1] - 1847:7</p> <p><b>blue</b> [5] - 1935:25, 1936:2, 1936:24, 1937:2, 1938:25</p> <p><b>BMPs</b> [2] - 1750:13, 1751:21</p> <p><b>bodies</b> [14] - 1730:8, 1730:11, 1743:9, 1743:13, 1752:13, 1752:16, 1775:9, 1779:9, 1780:2, 1789:13, 1795:3, 1911:10, 1963:22, 1969:3</p> <p><b>body</b> [13] - 1730:5, 1746:9, 1748:11, 1769:3, 1774:11, 1778:20, 1781:6, 1781:8, 1782:25, 1792:5, 1795:6, 1795:9, 1843:8</p> <p><b>bogged</b> [1] - 1783:6</p> <p><b>bond</b> [1] - 1925:14</p> <p><b>books</b> [1] - 1844:15</p> <p><b>Boom</b> [1] - 1838:6</p> <p><b>boom</b> [1] - 1839:25</p> <p><b>boomsma</b> [1] - 1717:11</p> <p><b>Boomsma</b> [35] - 1704:3, 1709:5, 1715:7, 1715:9, 1715:13, 1715:16, 1715:18, 1715:20, 1715:22, 1716:3, 1716:5, 1716:7, 1716:11, 1716:13, 1716:17, 1716:20, 1716:22, 1717:3, 1717:7, 1717:13, 1717:15, 1717:16, 1717:19, 1718:3, 1718:5, 1718:7, 1718:8, 1718:10, 1718:13, 1718:14,</p>	<p>1719:17, 1719:21, 1720:5, 1861:16, 1862:13</p> <p><b>Boomsma's</b> [2] - 1862:9, 1942:18</p> <p><b>bore</b> [4] - 1918:20, 1929:16, 1929:21</p> <p><b>bored</b> [1] - 1813:6</p> <p><b>bottom</b> [4] - 1726:8, 1779:23, 1839:16, 1932:18</p> <p><b>bought</b> [2] - 1851:6, 1852:17</p> <p><b>bounced</b> [1] - 1799:18</p> <p><b>boundary</b> [1] - 1869:8</p> <p><b>bounds</b> [1] - 1942:8</p> <p><b>boy</b> [1] - 1758:11</p> <p><b>breach</b> [1] - 1821:13</p> <p><b>break</b> [14] - 1781:20, 1781:23, 1781:24, 1782:6, 1827:22, 1858:7, 1878:14, 1920:21, 1959:6, 1960:16, 1963:7, 1963:11, 1966:24, 1987:24</p> <p><b>breakdown</b> [1] - 1967:23</p> <p><b>breeding</b> [3] - 1769:18, 1770:1, 1788:20</p> <p><b>Brett</b> [6] - 1704:2, 1736:10, 1830:16, 1830:18, 1951:22, 1956:14</p> <p><b>BRIAN</b> [2] - 1711:19, 1715:12</p> <p><b>Brian</b> [1] - 1703:17</p> <p><b>bridge</b> [2] - 1880:3, 1880:7</p> <p><b>brief</b> [7] - 1866:8, 1867:13, 1915:3, 1963:5, 1970:17, 1970:18, 1971:9</p> <p><b>briefed</b> [1] - 1972:22</p> <p><b>briefings</b> [1] - 1926:20</p> <p><b>briefly</b> [7] - 1722:14, 1784:21, 1796:18, 1798:9, 1868:17, 1960:18, 1962:14</p> <p><b>bring</b> [5] - 1806:6, 1860:19, 1861:14, 1862:23, 1862:24</p> <p><b>broad</b> [1] - 1889:9</p> <p><b>broadly</b> [1] - 1895:6</p> <p><b>broadness</b> [1] - 1889:13</p> <p><b>brought</b> [12] - 1838:25, 1841:8, 1851:17, 1851:18,</p>	7
--	---	---	--	---	---

<p>1851:19, 1852:17, 1909:22, 1910:4, 1940:6, 1940:10, 1942:2, 1942:21  <b>buffalo</b> [1] - 1894:25  <b>buffer</b> [2] - 1979:16, 1979:22  <b>build</b> [1] - 1930:13  <b>Building</b> [1] - 1704:15  <b>built</b> [1] - 1937:15  <b>bulk</b> [1] - 1801:24  <b>bullet</b> [1] - 1864:9  <b>Bulletin</b> [1] - 1706:11  <b>burden</b> [11] - 1848:8, 1852:13, 1877:5, 1964:1, 1964:11, 1968:17, 1968:25, 1969:22, 1970:21, 1971:19  <b>burdensome</b> [1] - 1976:1  <b>buried</b> [7] - 1807:23, 1817:15, 1822:20, 1823:11, 1823:15, 1823:19, 1823:22  <b>burning</b> [1] - 1933:19  <b>business</b> [13] - 1728:2, 1732:4, 1797:23, 1839:12, 1839:17, 1840:25, 1841:15, 1868:11, 1868:12, 1901:6, 1901:8, 1937:21, 1956:25  <b>buy</b> [1] - 1851:6  <b>BY</b> [28] - 1721:6, 1737:23, 1753:6, 1773:10, 1782:4, 1793:8, 1793:17, 1794:5, 1796:20, 1797:17, 1805:21, 1820:8, 1828:2, 1849:6, 1850:10, 1857:14, 1868:6, 1882:2, 1883:13, 1892:11, 1898:6, 1901:4, 1911:21, 1913:17, 1915:2, 1924:13, 1975:6, 1984:2  <b>byproduct</b> [1] - 1933:22</p>	<p>1799:17, 1828:18  <b>Cam</b> [1] - 1732:12  <b>Cameron</b> [9] - 1724:22, 1725:2, 1725:14, 1728:7, 1744:17, 1766:10, 1779:19, 1785:10, 1785:19  <b>campaign</b> [3] - 1828:24, 1835:8, 1835:9  <b>campaigns</b> [2] - 1829:6, 1832:22  <b>Campbell</b> [1] - 1766:6  <b>Canada</b> [1] - 1761:9  <b>candidate</b> [12] - 1758:8, 1758:9, 1758:17, 1758:18, 1758:22, 1758:25, 1759:5, 1762:8, 1763:5, 1763:8, 1763:12, 1764:12  <b>candidates</b> [1] - 1763:10  <b>cannot</b> [7] - 1819:7, 1854:11, 1887:12, 1887:21, 1893:3, 1959:5, 1972:4  <b>capable</b> [1] - 1767:18  <b>capacity</b> [4] - 1829:3, 1841:24, 1870:23, 1871:7  <b>capita</b> [1] - 1934:8  <b>Capitol</b> [2] - 1704:14, 1704:15  <b>Capossela</b> [2] - 1706:7, 1706:8  <b>CAPOSSELA</b> [1] - 1711:3  <b>car</b> [5] - 1930:15, 1931:10, 1931:13, 1933:21  <b>carbon</b> [5] - 1823:16, 1838:2, 1839:20, 1840:1, 1932:19  <b>carbon-based</b> [1] - 1932:19  <b>carbonate</b> [7] - 1815:13, 1815:18, 1815:23, 1816:16, 1817:15, 1818:11, 1818:13  <b>carbonated</b> [1] - 1816:4  <b>Cardno</b> [2] - 1722:25, 1793:25  <b>care</b> [3] - 1865:11, 1895:11, 1981:23  <b>career</b> [1] - 1760:9  <b>careful</b> [2] - 1811:17,</p>	<p>1930:9  <b>carry</b> [2] - 1808:24, 1809:4  <b>cars</b> [1] - 1931:12  <b>case</b> [24] - 1727:6, 1747:18, 1748:3, 1759:8, 1769:4, 1783:20, 1792:10, 1804:7, 1811:7, 1811:10, 1812:25, 1840:17, 1852:11, 1864:23, 1866:19, 1867:4, 1874:22, 1879:2, 1885:11, 1951:5, 1963:2, 1964:2, 1979:1  <b>case-by-case</b> [1] - 1885:11  <b>cases</b> [8] - 1724:6, 1726:20, 1804:5, 1818:18, 1818:19, 1913:23, 1914:14, 1968:21  <b>cat</b> [1] - 1828:11  <b>catching</b> [1] - 1979:25  <b>categories</b> [5] - 1756:15, 1758:6, 1760:19, 1761:25, 1763:7  <b>category</b> [2] - 1761:17, 1775:18  <b>caused</b> [1] - 1770:22  <b>causes</b> [2] - 1894:20, 1930:1  <b>Cave</b> [4] - 1803:19, 1815:15  <b>cave</b> [1] - 1741:12  <b>cavities</b> [1] - 1816:17  <b>cement</b> [2] - 1878:10, 1878:13  <b>Center</b> [1] - 1797:24  <b>center</b> [3] - 1828:20, 1937:7, 1943:19  <b>Centerline</b> [2] - 1705:15, 1705:21  <b>centerlines</b> [1] - 1915:18  <b>centers</b> [1] - 1936:3  <b>central</b> [5] - 1770:6, 1770:7, 1770:16, 1785:7, 1969:22  <b>certain</b> [20] - 1730:21, 1734:17, 1739:21, 1743:4, 1753:22, 1755:17, 1755:18, 1757:3, 1759:1, 1763:14, 1763:15, 1796:14, 1811:1, 1820:18, 1823:16, 1842:17, 1889:21,</p>	<p>1890:14, 1911:6, 1918:20  <b>certainly</b> [12] - 1726:12, 1734:10, 1734:25, 1744:3, 1762:23, 1792:19, 1795:14, 1813:3, 1897:9, 1927:19, 1958:12, 1983:16  <b>certainties</b> [1] - 1900:16  <b>certainty</b> [3] - 1740:6, 1740:22, 1900:17  <b>CERTIFICATE</b> [1] - 1989:2  <b>certification</b> [2] - 1795:24, 1795:25  <b>Certified</b> [2] - 1989:6, 1989:19  <b>CERTIFY</b> [1] - 1989:8  <b>cetera</b> [6] - 1783:22, 1790:15, 1792:12, 1792:24, 1911:8  <b>CFR</b> [6] - 1744:21, 1764:3, 1774:10, 1774:21, 1775:2, 1775:11  <b>Chairman</b> [33] - 1709:7, 1709:12, 1710:6, 1710:14, 1710:21, 1711:8, 1711:13, 1711:17, 1712:5, 1712:10, 1712:17, 1713:6, 1713:14, 1713:19, 1714:5, 1714:6, 1714:13, 1714:21, 1715:5, 1715:8, 1715:10, 1715:15, 1715:20, 1716:10, 1716:11, 1716:15, 1717:9, 1717:18, 1718:20, 1719:9, 1719:13, 1719:18, 1720:6  <b>CHAIRMAN</b> [36] - 1703:13, 1741:5, 1777:3, 1789:25, 1790:6, 1792:25, 1793:3, 1822:4, 1856:12, 1856:16, 1856:20, 1856:24, 1857:4, 1857:10, 1894:3, 1894:22, 1895:5, 1896:5, 1896:8, 1896:14, 1896:17, 1896:20, 1916:19, 1916:24, 1917:10, 1917:19, 1917:23, 1918:5,</p>	<p>1918:9, 1918:23, 1919:4, 1928:24, 1930:7, 1936:14, 1966:17, 1987:18  <b>chairman</b> [1] - 1929:3  <b>chairs</b> [1] - 1828:11  <b>challenge</b> [1] - 1962:16  <b>chance</b> [5] - 1862:5, 1934:20, 1963:2, 1963:16, 1966:24  <b>change</b> [23] - 1732:16, 1744:1, 1745:6, 1764:11, 1786:25, 1792:3, 1792:7, 1792:8, 1808:14, 1809:14, 1809:22, 1829:13, 1831:8, 1832:11, 1832:13, 1846:19, 1861:7, 1864:1, 1872:15, 1884:14, 1899:6, 1932:22, 1932:23  <b>changed</b> [4] - 1772:13, 1919:21, 1920:1, 1948:24  <b>changes</b> [9] - 1727:7, 1727:11, 1772:3, 1792:16, 1812:15, 1919:23, 1920:8, 1979:4, 1982:10  <b>changing</b> [1] - 1772:7  <b>chapter</b> [1] - 1795:4  <b>Chapter</b> [1] - 1708:6  <b>characterization</b> [2] - 1809:9, 1812:12  <b>characterize</b> [1] - 1798:25  <b>charge</b> [1] - 1823:9  <b>chase</b> [2] - 1770:12, 1986:22  <b>chastised</b> [3] - 1957:11, 1961:1, 1962:8  <b>check</b> [2] - 1838:4, 1839:24  <b>Cheri</b> [4] - 1703:24, 1765:10, 1949:11, 1989:18  <b>CHERI</b> [1] - 1989:5  <b>Chevy</b> [2] - 1933:16, 1933:18  <b>chicken</b> [1] - 1979:15  <b>child</b> [1] - 1828:20  <b>children</b> [1] - 1827:14  <b>chime</b> [1] - 1961:7  <b>choice</b> [1] - 1962:21  <b>choose</b> [1] - 1736:24  <b>chooses</b> [1] - 1866:22  <b>chose</b> [3] - 1875:24,</p>
<b>C</b>				
<p><b>caffeine</b> [2] - 1828:9, 1828:10  <b>calculate</b> [1] - 1952:14  <b>California</b> [2] -</p>	<p><b>Cardno</b> [2] - 1722:25, 1793:25  <b>care</b> [3] - 1865:11, 1895:11, 1981:23  <b>career</b> [1] - 1760:9  <b>careful</b> [2] - 1811:17,</p>	<p>1930:9  <b>carry</b> [2] - 1808:24, 1809:4  <b>cars</b> [1] - 1931:12  <b>case</b> [24] - 1727:6, 1747:18, 1748:3, 1759:8, 1769:4, 1783:20, 1792:10, 1804:7, 1811:7, 1811:10, 1812:25, 1840:17, 1852:11, 1864:23, 1866:19, 1867:4, 1874:22, 1879:2, 1885:11, 1951:5, 1963:2, 1964:2, 1979:1  <b>case-by-case</b> [1] - 1885:11  <b>cases</b> [8] - 1724:6, 1726:20, 1804:5, 1818:18, 1818:19, 1913:23, 1914:14, 1968:21  <b>cat</b> [1] - 1828:11  <b>catching</b> [1] - 1979:25  <b>categories</b> [5] - 1756:15, 1758:6, 1760:19, 1761:25, 1763:7  <b>category</b> [2] - 1761:17, 1775:18  <b>caused</b> [1] - 1770:22  <b>causes</b> [2] - 1894:20, 1930:1  <b>Cave</b> [4] - 1803:19, 1815:15  <b>cave</b> [1] - 1741:12  <b>cavities</b> [1] - 1816:17  <b>cement</b> [2] - 1878:10, 1878:13  <b>Center</b> [1] - 1797:24  <b>center</b> [3] - 1828:20, 1937:7, 1943:19  <b>Centerline</b> [2] - 1705:15, 1705:21  <b>centerlines</b> [1] - 1915:18  <b>centers</b> [1] - 1936:3  <b>central</b> [5] - 1770:6, 1770:7, 1770:16, 1785:7, 1969:22  <b>certain</b> [20] - 1730:21, 1734:17, 1739:21, 1743:4, 1753:22, 1755:17, 1755:18, 1757:3, 1759:1, 1763:14, 1763:15, 1796:14, 1811:1, 1820:18, 1823:16, 1842:17, 1889:21,</p>	<p>1890:14, 1911:6, 1918:20  <b>certainly</b> [12] - 1726:12, 1734:10, 1734:25, 1744:3, 1762:23, 1792:19, 1795:14, 1813:3, 1897:9, 1927:19, 1958:12, 1983:16  <b>certainties</b> [1] - 1900:16  <b>certainty</b> [3] - 1740:6, 1740:22, 1900:17  <b>CERTIFICATE</b> [1] - 1989:2  <b>certification</b> [2] - 1795:24, 1795:25  <b>Certified</b> [2] - 1989:6, 1989:19  <b>CERTIFY</b> [1] - 1989:8  <b>cetera</b> [6] - 1783:22, 1790:15, 1792:12, 1792:24, 1911:8  <b>CFR</b> [6] - 1744:21, 1764:3, 1774:10, 1774:21, 1775:2, 1775:11  <b>Chairman</b> [33] - 1709:7, 1709:12, 1710:6, 1710:14, 1710:21, 1711:8, 1711:13, 1711:17, 1712:5, 1712:10, 1712:17, 1713:6, 1713:14, 1713:19, 1714:5, 1714:6, 1714:13, 1714:21, 1715:5, 1715:8, 1715:10, 1715:15, 1715:20, 1716:10, 1716:11, 1716:15, 1717:9, 1717:18, 1718:20, 1719:9, 1719:13, 1719:18, 1720:6  <b>CHAIRMAN</b> [36] - 1703:13, 1741:5, 1777:3, 1789:25, 1790:6, 1792:25, 1793:3, 1822:4, 1856:12, 1856:16, 1856:20, 1856:24, 1857:4, 1857:10, 1894:3, 1894:22, 1895:5, 1896:5, 1896:8, 1896:14, 1896:17, 1896:20, 1916:19, 1916:24, 1917:10, 1917:19, 1917:23, 1918:5,</p>	<p>1918:9, 1918:23, 1919:4, 1928:24, 1930:7, 1936:14, 1966:17, 1987:18  <b>chairman</b> [1] - 1929:3  <b>chairs</b> [1] - 1828:11  <b>challenge</b> [1] - 1962:16  <b>chance</b> [5] - 1862:5, 1934:20, 1963:2, 1963:16, 1966:24  <b>change</b> [23] - 1732:16, 1744:1, 1745:6, 1764:11, 1786:25, 1792:3, 1792:7, 1792:8, 1808:14, 1809:14, 1809:22, 1829:13, 1831:8, 1832:11, 1832:13, 1846:19, 1861:7, 1864:1, 1872:15, 1884:14, 1899:6, 1932:22, 1932:23  <b>changed</b> [4] - 1772:13, 1919:21, 1920:1, 1948:24  <b>changes</b> [9] - 1727:7, 1727:11, 1772:3, 1792:16, 1812:15, 1919:23, 1920:8, 1979:4, 1982:10  <b>changing</b> [1] - 1772:7  <b>chapter</b> [1] - 1795:4  <b>Chapter</b> [1] - 1708:6  <b>characterization</b> [2] - 1809:9, 1812:12  <b>characterize</b> [1] - 1798:25  <b>charge</b> [1] - 1823:9  <b>chase</b> [2] - 1770:12, 1986:22  <b>chastised</b> [3] - 1957:11, 1961:1, 1962:8  <b>check</b> [2] - 1838:4, 1839:24  <b>Cheri</b> [4] - 1703:24, 1765:10, 1949:11, 1989:18  <b>CHERI</b> [1] - 1989:5  <b>Chevy</b> [2] - 1933:16, 1933:18  <b>chicken</b> [1] - 1979:15  <b>child</b> [1] - 1828:20  <b>children</b> [1] - 1827:14  <b>chime</b> [1] - 1961:7  <b>choice</b> [1] - 1962:21  <b>choose</b> [1] - 1736:24  <b>chooses</b> [1] - 1866:22  <b>chose</b> [3] - 1875:24,</p>



<p>1964:3, 1964:4  <b>Chris</b> [1] - 1921:5  <b>CHRIS</b> [1] - 1703:13  <b>Chuck</b> [1] - 1864:19  <b>CHUCK</b> [3] - 1709:15, 1719:3, 1719:22  <b>CIA</b> [1] - 1971:16  <b>circle</b> [2] - 1935:25, 1937:7  <b>circled</b> [1] - 1917:3  <b>circuit</b> [1] - 1911:12  <b>circumstances</b> [9] - 1865:20, 1873:11, 1873:13, 1873:20, 1874:25, 1875:9, 1876:15, 1876:16, 1887:5  <b>citable</b> [1] - 1812:23  <b>citation</b> [1] - 1987:6  <b>cite</b> [1] - 1810:25  <b>cited</b> [1] - 1970:22  <b>cities</b> [3] - 1946:7, 1947:10, 1952:20  <b>citizen</b> [2] - 1852:1, 1852:20  <b>citizens</b> [4] - 1847:11, 1850:25, 1932:24, 1953:19  <b>City</b> [5] - 1704:8, 1944:25, 1945:19, 1946:7, 1952:22  <b>CITY</b> [1] - 1708:8  <b>city</b> [10] - 1935:6, 1945:1, 1946:10, 1952:19, 1952:20, 1952:23, 1953:5, 1953:7, 1953:23  <b>city's</b> [2] - 1954:1, 1954:20  <b>Civ.15-138</b> [2] - 1707:14, 1707:16  <b>Civ.15-341</b> [2] - 1707:17, 1707:17  <b>Cl</b> [1] - 1708:17  <b>clarification</b> [16] - 1725:17, 1726:15, 1726:19, 1729:20, 1730:4, 1730:17, 1730:23, 1732:16, 1732:25, 1745:12, 1746:2, 1773:16, 1774:15, 1785:14, 1788:22, 1962:12  <b>clarifications</b> [8] - 1725:10, 1727:8, 1728:11, 1729:19, 1730:16, 1731:9, 1732:14, 1772:4  <b>clarified</b> [2] - 1725:6, 1773:1</p>	<p><b>clarify</b> [4] - 1724:7, 1744:7, 1744:19, 1974:4  <b>clarity</b> [3] - 1724:4, 1725:5, 1822:5  <b>Clark</b> [6] - 1708:10, 1708:10, 1722:7, 1775:7, 1797:24, 1816:1  <b>clay</b> [15] - 1808:16, 1809:20, 1809:23, 1810:2, 1810:7, 1810:20, 1878:10, 1878:13, 1890:19, 1890:24, 1891:9, 1891:12, 1898:7, 1898:8, 1898:17  <b>clays</b> [10] - 1806:17, 1806:20, 1807:8, 1807:10, 1808:2, 1809:8, 1809:11, 1810:5, 1823:4  <b>clean</b> [1] - 1982:3  <b>Clean</b> [1] - 1749:7  <b>cleaner</b> [3] - 1749:22, 1750:14, 1751:4  <b>cleaning</b> [5] - 1726:18, 1726:19, 1726:23, 1727:5, 1788:7  <b>clear</b> [8] - 1732:19, 1755:13, 1785:20, 1787:20, 1861:9, 1938:1, 1940:12, 1942:4  <b>clearer</b> [1] - 1823:18  <b>clearing</b> [2] - 1741:19, 1741:25  <b>clearly</b> [5] - 1726:7, 1735:6, 1926:14, 1940:11, 1976:17  <b>cliffs</b> [1] - 1816:2  <b>climate</b> [4] - 1829:11, 1835:10, 1846:19, 1846:24  <b>clipper</b> [1] - 1794:11  <b>clippings</b> [2] - 1837:18, 1837:21  <b>close</b> [3] - 1821:11, 1821:15, 1842:19  <b>closed</b> [1] - 1972:11  <b>closer</b> [4] - 1918:19, 1922:6, 1922:20, 1945:11  <b>closes</b> [1] - 1826:22  <b>closest</b> [1] - 1884:24  <b>Co</b> [1] - 1705:6  <b>Coast</b> [2] - 1851:9  <b>coat</b> [1] - 1828:7  <b>code</b> [1] - 1904:12</p>	<p><b>codified</b> [2] - 1950:5, 1973:19  <b>coexist</b> [1] - 1938:3  <b>coincidentally</b> [1] - 1823:22  <b>coincides</b> [1] - 1820:23  <b>collaboration</b> [1] - 1834:19  <b>colleagues</b> [1] - 1818:18  <b>collection</b> [1] - 1930:25  <b>college</b> [3] - 1722:15, 1722:16, 1798:16  <b>collocate</b> [1] - 1951:7  <b>collocating</b> [1] - 1952:1  <b>collocation</b> [2] - 1951:13, 1967:1  <b>Colorado</b> [1] - 1868:13  <b>column</b> [1] - 1782:23  <b>comfortable</b> [1] - 1724:9  <b>coming</b> [15] - 1735:12, 1750:14, 1750:18, 1765:7, 1837:13, 1845:13, 1863:8, 1863:18, 1864:14, 1912:16, 1931:4, 1932:8, 1934:23, 1945:6, 1981:4  <b>Comm</b> [1] - 1708:17  <b>comment</b> [4] - 1735:17, 1786:5, 1786:9, 1867:13  <b>commented</b> [2] - 1782:17, 1812:19  <b>comments</b> [8] - 1805:6, 1805:9, 1805:10, 1812:6, 1959:12, 1972:25, 1974:13, 1979:19  <b>Commerce</b> [1] - 1722:20  <b>COMMISSION</b> [3] - 1703:1, 1703:12, 1703:15  <b>Commission</b> [54] - 1734:10, 1734:12, 1734:13, 1734:25, 1747:1, 1747:4, 1747:14, 1762:10, 1762:16, 1762:18, 1763:18, 1763:21, 1764:3, 1793:5, 1796:1, 1800:8, 1835:21, 1842:25, 1846:16, 1850:3,</p>	<p>1857:11, 1860:5, 1861:3, 1861:7, 1862:15, 1862:16, 1863:22, 1864:5, 1866:11, 1866:13, 1866:18, 1866:22, 1867:9, 1875:19, 1892:7, 1909:4, 1909:24, 1910:4, 1911:3, 1916:15, 1926:7, 1926:12, 1926:21, 1927:22, 1950:2, 1958:23, 1959:7, 1969:8, 1970:21, 1983:6, 1985:5, 1985:18, 1985:22, 1987:2  <b>Commission's</b> [5] - 1762:17, 1763:24, 1796:11, 1884:21, 1971:3  <b>Commissioner</b> [74] - 1709:8, 1709:8, 1709:13, 1709:18, 1710:7, 1710:7, 1710:14, 1710:15, 1710:22, 1710:22, 1711:8, 1711:18, 1712:6, 1712:6, 1712:11, 1712:18, 1712:18, 1712:24, 1713:7, 1713:7, 1713:14, 1714:6, 1714:18, 1715:4, 1715:9, 1715:15, 1716:5, 1716:10, 1716:15, 1716:19, 1717:5, 1717:10, 1718:8, 1718:14, 1718:21, 1718:21, 1719:9, 1719:14, 1719:19, 1719:19, 1720:7, 1789:24, 1793:6, 1793:12, 1793:20, 1797:10, 1864:16, 1898:3, 1906:12, 1906:16, 1928:10, 1928:15, 1928:21, 1929:5, 1936:17, 1953:22, 1954:7, 1959:12, 1959:21, 1960:21, 1961:15, 1961:18, 1961:23, 1962:17, 1964:9, 1966:16, 1966:17, 1966:20, 1967:17, 1969:17, 1969:19, 1969:20, 1970:3, 1970:23  <b>COMMISSIONER</b> [34] - 1703:13, 1703:14,</p>	<p>1741:7, 1741:9, 1777:4, 1777:5, 1822:8, 1822:10, 1822:15, 1824:13, 1825:2, 1825:9, 1841:16, 1896:23, 1897:3, 1897:9, 1897:13, 1897:17, 1897:25, 1898:1, 1919:8, 1919:10, 1919:15, 1919:19, 1919:25, 1920:6, 1920:14, 1922:23, 1953:14, 1964:17, 1965:12, 1966:5, 1966:8, 1966:15  <b>Commissioner's</b> [3] - 1955:2, 1969:6, 1970:15  <b>Commissioners</b> [13] - 1822:3, 1856:11, 1894:2, 1905:18, 1916:18, 1937:1, 1938:6, 1951:25, 1955:23, 1961:12, 1962:3, 1965:7, 1966:13  <b>Commissioners'</b> [3] - 1955:7, 1968:12, 1968:16  <b>Commissions</b> [1] - 1790:15  <b>commitment</b> [2] - 1968:1, 1983:14  <b>committed</b> [3] - 1877:22, 1896:10, 1982:3  <b>commodities</b> [3] - 1971:17, 1971:21, 1972:13  <b>common</b> [5] - 1790:11, 1811:9, 1844:24, 1845:1, 1845:11  <b>commonly</b> [2] - 1806:7, 1817:15  <b>commonplace</b> [1] - 1802:13  <b>commonsense</b> [4] - 1740:11, 1843:8, 1843:18, 1846:10  <b>communicate</b> [3] - 1754:16, 1961:11, 1961:15  <b>communicated</b> [1] - 1904:17  <b>communication</b> [3] - 1754:6, 1961:4, 1974:6  <b>communities</b> [29] -</p>	9
---	--	---	---	--	---

<p>1778:1, 1799:3, 1828:23, 1829:4, 1829:16, 1830:23, 1832:20, 1832:25, 1833:7, 1834:9, 1834:14, 1834:15, 1834:17, 1836:4, 1836:7, 1836:9, 1836:11, 1836:23, 1837:2, 1837:9, 1837:10, 1841:24, 1842:2, 1845:9, 1853:19, 1854:13, 1854:19, 1938:2, 1944:21</p> <p><b>community</b> [9] - 1836:17, 1837:6, 1845:21, 1853:7, 1853:12, 1853:21, 1855:2, 1937:15, 1968:3</p> <p><b>compact</b> [1] - 1888:16</p> <p><b>compaction</b> [4] - 1874:1, 1888:16, 1888:20, 1888:24</p> <p><b>companies</b> [4] - 1791:25, 1869:12, 1894:11, 1974:16</p> <p><b>company</b> [26] - 1721:15, 1732:2, 1745:7, 1751:2, 1754:20, 1783:23, 1787:18, 1787:22, 1789:4, 1790:19, 1790:20, 1792:3, 1792:8, 1794:18, 1887:4, 1890:10, 1896:9, 1896:10, 1909:24, 1939:16, 1941:7, 1971:10, 1971:12, 1971:13, 1974:21, 1979:9</p> <p><b>company's</b> [9] - 1730:12, 1731:24, 1742:8, 1754:13, 1786:3, 1788:4, 1789:20, 1873:3, 1893:23</p> <p><b>compare</b> [2] - 1880:5, 1986:1</p> <p><b>compared</b> [1] - 1756:1</p> <p><b>comparison</b> [3] - 1900:13, 1975:18, 1975:20</p> <p><b>compatibility</b> [1] - 1943:12</p> <p><b>compensate</b> [2] - 1912:9, 1912:12</p> <p><b>compensating</b> [1] - 1912:13</p>	<p><b>compensation</b> [1] - 1915:11</p> <p><b>complete</b> [4] - 1729:2, 1738:11, 1779:8, 1835:9</p> <p><b>completed</b> [1] - 1881:6</p> <p><b>completely</b> [3] - 1927:21, 1942:8, 1962:2</p> <p><b>completion</b> [1] - 1729:1</p> <p><b>compliance</b> [6] - 1728:3, 1728:4, 1790:21, 1791:2, 1796:4, 1796:9</p> <p><b>complicated</b> [2] - 1738:1, 1845:3</p> <p><b>complied</b> [1] - 1751:23</p> <p><b>comply</b> [1] - 1763:23</p> <p><b>components</b> [2] - 1809:25, 1810:1</p> <p><b>comprehensive</b> [1] - 1814:15</p> <p><b>comprised</b> [1] - 1842:7</p> <p><b>compromising</b> [1] - 1968:18</p> <p><b>concentrating</b> [1] - 1799:21</p> <p><b>concept</b> [1] - 1981:21</p> <p><b>concern</b> [25] - 1750:21, 1751:17, 1758:12, 1781:6, 1788:17, 1788:24, 1803:22, 1803:25, 1806:11, 1811:10, 1816:22, 1817:24, 1824:15, 1836:19, 1837:2, 1840:23, 1842:5, 1842:19, 1865:15, 1902:18, 1917:20, 1917:22, 1923:6, 1930:1, 1937:18</p> <p><b>concerned</b> [5] - 1741:18, 1786:8, 1833:1, 1932:23, 1947:20</p> <p><b>concerns</b> [21] - 1791:16, 1803:25, 1806:3, 1811:23, 1812:5, 1812:8, 1835:16, 1836:8, 1836:14, 1836:24, 1837:4, 1854:17, 1902:17, 1927:16, 1927:18, 1932:10, 1945:22, 1950:18,</p>	<p>1950:22, 1961:15, 1968:5</p> <p><b>concludes</b> [2] - 1824:9, 1872:12</p> <p><b>conclusion</b> [5] - 1759:2, 1767:16, 1824:8, 1884:21, 1986:18</p> <p><b>conclusions</b> [3] - 1871:9, 1899:16, 1927:4</p> <p><b>Conclusions</b> [1] - 1707:16</p> <p><b>concrete</b> [2] - 1891:9, 1957:13</p> <p><b>concur</b> [7] - 1779:10, 1953:5, 1953:7, 1954:1, 1954:20, 1966:15, 1966:17</p> <p><b>concurred</b> [2] - 1952:22, 1952:23</p> <p><b>concurrence</b> [1] - 1738:7</p> <p><b>concur</b> [2] - 1786:3, 1787:17</p> <p><b>condemnation</b> [5] - 1909:8, 1909:22, 1913:20, 1919:16, 1919:17</p> <p><b>Condemnation</b> [1] - 1707:18</p> <p><b>condemnations</b> [1] - 1911:13</p> <p><b>condition</b> [20] - 1726:13, 1743:21, 1748:7, 1794:25, 1796:3, 1977:15, 1977:19, 1978:18, 1980:3, 1980:6, 1980:9, 1980:15, 1980:16, 1980:17, 1981:14, 1982:5, 1982:8, 1982:20, 1982:21, 1983:4</p> <p><b>Condition</b> [3] - 1978:19, 1980:8, 1981:14</p> <p><b>conditions</b> [14] - 1790:21, 1791:8, 1807:7, 1848:10, 1881:15, 1926:7, 1926:12, 1926:16, 1927:14, 1944:21, 1979:6, 1981:11, 1982:24, 1983:7</p> <p><b>Conditions</b> [1] - 1977:16</p> <p><b>conduct</b> [8] - 1844:11, 1844:19, 1867:14, 1871:18, 1904:12,</p>	<p>1911:6, 1918:20, 1950:6</p> <p><b>conducted</b> [13] - 1742:12, 1748:21, 1770:21, 1771:21, 1771:24, 1772:1, 1772:11, 1772:19, 1772:24, 1844:3, 1874:21, 1941:12</p> <p><b>conducting</b> [2] - 1832:5, 1870:24</p> <p><b>conducts</b> [1] - 1833:12</p> <p><b>confer</b> [1] - 1862:24</p> <p><b>conference</b> [2] - 1974:11, 1987:22</p> <p><b>conferred</b> [1] - 1921:8</p> <p><b>confident</b> [1] - 1823:10</p> <p><b>Confidential</b> [8] - 1705:7, 1705:16, 1705:17, 1705:18, 1705:19, 1705:20, 1705:23, 1706:22</p> <p><b>confusing</b> [1] - 1723:14</p> <p><b>confusion</b> [2] - 1923:12, 1960:8</p> <p><b>congratulations</b> [1] - 1829:18</p> <p><b>connected</b> [2] - 1822:25, 1874:16</p> <p><b>connection</b> [3] - 1756:4, 1756:7, 1823:3</p> <p><b>consent</b> [1] - 1929:22</p> <p><b>consequence</b> [6] - 1732:20, 1745:4, 1753:15, 1756:12, 1756:13, 1756:16</p> <p><b>Conservation</b> [1] - 1708:3</p> <p><b>conservation</b> [5] - 1726:25, 1760:2, 1760:3, 1761:13, 1784:5</p> <p><b>consider</b> [4] - 1738:10, 1778:3, 1778:12, 1864:5</p> <p><b>considerable</b> [4] - 1753:14, 1753:20, 1842:24, 1965:22</p> <p><b>considerably</b> [1] - 1847:5</p> <p><b>consideration</b> [8] - 1738:24, 1739:19, 1861:22, 1863:10, 1884:11, 1954:23, 1963:23, 1969:2</p> <p><b>considered</b> [2] -</p>	<p>1751:19, 1963:21</p> <p><b>considering</b> [3] - 1842:22, 1855:9, 1862:20</p> <p><b>consistent</b> [6] - 1745:13, 1768:4, 1808:25, 1877:11, 1878:5, 1878:6</p> <p><b>consisting</b> [1] - 1768:3</p> <p><b>consists</b> [1] - 1821:4</p> <p><b>Constitution</b> [1] - 1867:6</p> <p><b>constraint</b> [2] - 1951:2, 1951:6</p> <p><b>CONSTRUCT</b> [1] - 1703:5</p> <p><b>construct</b> [1] - 1728:21</p> <p><b>constructed</b> [1] - 1810:16</p> <p><b>constructibility</b> [1] - 1911:8</p> <p><b>construction</b> [50] - 1726:9, 1726:14, 1728:2, 1728:4, 1728:18, 1728:19, 1728:23, 1729:1, 1729:14, 1729:17, 1730:13, 1745:9, 1751:25, 1752:12, 1752:14, 1778:22, 1784:18, 1784:19, 1788:18, 1789:4, 1790:2, 1790:17, 1790:22, 1791:4, 1791:5, 1791:7, 1792:2, 1792:4, 1792:6, 1792:13, 1792:15, 1806:11, 1817:5, 1833:10, 1833:12, 1874:8, 1874:20, 1879:22, 1892:14, 1892:16, 1893:1, 1905:9, 1912:7, 1913:6, 1945:25, 1949:23, 1950:25, 1979:17, 1979:21, 1982:2</p> <p><b>construction's</b> [2] - 1874:14, 1875:12</p> <p><b>consult</b> [5] - 1726:3, 1739:1, 1819:5, 1893:14, 1944:10</p> <p><b>consultant</b> [9] - 1790:19, 1790:24, 1791:3, 1791:5, 1793:18, 1799:11, 1812:21, 1877:10, 1887:17</p>	10
---	---	--	---	---	----

<p><b>consultants</b> [2] - 1735:19, 1735:22</p> <p><b>consultants'</b> [1] - 1735:20</p> <p><b>consultation</b> [14] - 1731:2, 1742:9, 1771:5, 1779:7, 1780:23, 1783:1, 1785:11, 1786:13, 1786:24, 1787:2, 1787:3, 1787:13, 1835:2, 1835:5</p> <p><b>consulted</b> [6] - 1725:23, 1731:6, 1738:19, 1740:17, 1785:21, 1944:12</p> <p><b>consulting</b> [5] - 1722:24, 1723:5, 1733:23, 1799:5, 1888:13</p> <p><b>consults</b> [1] - 1768:19</p> <p><b>consume</b> [1] - 1857:8</p> <p><b>consumer</b> [2] - 1934:5, 1934:11</p> <p><b>consumers</b> [1] - 1971:21</p> <p><b>consumes</b> [1] - 1934:15</p> <p><b>consumption</b> [4] - 1852:2, 1852:21, 1933:4, 1934:9</p> <p><b>contact</b> [8] - 1902:9, 1902:13, 1904:1, 1904:22, 1939:23, 1940:2, 1940:22, 1941:9</p> <p><b>contacts</b> [3] - 1903:12, 1903:21, 1903:23</p> <p><b>contain</b> [6] - 1743:9, 1743:14, 1780:3, 1818:11, 1944:2, 1967:19</p> <p><b>contained</b> [9] - 1738:4, 1805:3, 1810:5, 1928:15, 1957:7, 1959:19, 1961:16, 1986:1, 1986:2</p> <p><b>contains</b> [1] - 1941:2</p> <p><b>contaminant</b> [3] - 1809:21, 1809:24, 1810:17</p> <p><b>contaminants</b> [4] - 1808:24, 1809:4, 1809:10, 1810:3</p> <p><b>contaminate</b> [1] - 1748:5</p> <p><b>contaminated</b> [2] - 1747:25, 1751:12</p>	<p><b>contaminating</b> [1] - 1802:20</p> <p><b>contamination</b> [7] - 1799:13, 1803:1, 1808:5, 1820:25, 1821:2, 1821:8, 1821:10</p> <p><b>contemplate</b> [1] - 1755:17</p> <p><b>contemplated</b> [2] - 1865:23, 1968:19</p> <p><b>contemporary</b> [1] - 1824:5</p> <p><b>content</b> [1] - 1801:16</p> <p><b>contents</b> [2] - 1906:1, 1906:20</p> <p><b>contest</b> [1] - 1925:14</p> <p><b>contested</b> [1] - 1968:21</p> <p><b>context</b> [2] - 1884:9, 1980:24</p> <p><b>contingent</b> [2] - 1729:10, 1912:20</p> <p><b>continue</b> [4] - 1842:23, 1861:20, 1878:19, 1937:24</p> <p><b>continued</b> [2] - 1800:1, 1800:4</p> <p><b>Continued</b> [15] - 1706:1, 1707:1, 1708:1, 1709:1, 1710:1, 1711:1, 1712:1, 1713:1, 1714:1, 1715:1, 1716:1, 1717:1, 1718:1, 1719:1, 1720:1</p> <p><b>continues</b> [1] - 1807:13</p> <p><b>continuing</b> [1] - 1824:11</p> <p><b>contract</b> [2] - 1791:12, 1792:14</p> <p><b>contractor</b> [5] - 1789:4, 1890:1, 1890:3, 1890:5, 1890:6</p> <p><b>contractors</b> [3] - 1882:18, 1893:7, 1893:24</p> <p><b>contrast</b> [1] - 1880:6</p> <p><b>contribute</b> [1] - 1851:20</p> <p><b>contributing</b> [2] - 1807:11, 1889:2</p> <p><b>control</b> [9] - 1729:22, 1775:10, 1788:12, 1895:13, 1895:19, 1895:21, 1970:2, 1970:3, 1972:12</p>	<p><b>controls</b> [6] - 1895:2, 1895:6, 1895:8, 1895:9, 1895:15, 1895:16</p> <p><b>conversation</b> [2] - 1973:12, 1973:13</p> <p><b>conversations</b> [2] - 1854:25, 1915:12</p> <p><b>COOK</b> [1] - 1715:3</p> <p><b>Cooke</b> [1] - 1708:16</p> <p><b>cooperative</b> [1] - 1827:1</p> <p><b>coordination</b> [1] - 1971:15</p> <p><b>copies</b> [2] - 1840:15, 1840:19</p> <p><b>copy</b> [10] - 1759:20, 1839:3, 1841:8, 1861:4, 1928:6, 1977:19, 1977:24, 1977:25, 1987:9, 1987:13</p> <p><b>CORLISS</b> [1] - 1717:14</p> <p><b>corn</b> [1] - 1881:15</p> <p><b>corner</b> [1] - 1922:9</p> <p><b>Corps</b> [14] - 1706:4, 1706:5, 1706:6, 1706:7, 1706:10, 1725:23, 1738:22, 1738:24, 1742:9, 1768:18, 1768:19, 1769:1, 1780:23, 1783:1</p> <p><b>Corps's</b> [2] - 1725:25, 1738:25</p> <p><b>correct</b> [8] - 1727:13, 1731:12, 1733:2, 1745:10, 1752:23, 1754:25, 1755:19, 1756:2, 1756:9, 1760:20, 1760:25, 1762:1, 1767:10, 1769:9, 1771:18, 1772:14, 1772:16, 1779:11, 1780:16, 1781:8, 1782:19, 1783:5, 1783:17, 1784:1, 1784:2, 1784:4, 1784:8, 1788:6, 1789:9, 1795:1, 1801:8, 1801:25, 1802:3, 1813:8, 1820:14, 1820:15, 1821:16, 1825:7, 1825:20, 1826:5, 1826:8, 1826:17, 1833:3, 1854:19, 1863:5, 1863:6, 1882:23,</p>	<p>1882:24, 1883:1, 1885:20, 1886:12, 1888:14, 1891:7, 1892:14, 1892:15, 1898:10, 1898:21, 1901:25, 1905:10, 1905:11, 1905:23, 1908:21, 1910:24, 1911:13, 1911:14, 1912:25, 1913:21, 1913:24, 1914:9, 1914:20, 1918:3, 1918:7, 1921:13, 1921:15, 1925:8, 1925:18, 1939:18, 1966:10, 1975:10, 1986:9, 1989:12</p> <p><b>corrected</b> [1] - 1780:11</p> <p><b>correction</b> [4] - 1726:6, 1780:9, 1902:6, 1925:13</p> <p><b>corrections</b> [9] - 1725:8, 1726:5, 1728:9, 1729:19, 1732:15, 1902:4, 1902:21, 1925:10, 1925:20</p> <p><b>correctly</b> [8] - 1729:10, 1741:11, 1782:18, 1791:17, 1850:14, 1851:23, 1880:16, 1964:20</p> <p><b>correlation</b> [1] - 1847:12</p> <p><b>Correspondence</b> [1] - 1705:8</p> <p><b>correspondence</b> [2] - 1747:4, 1956:3</p> <p><b>corresponding</b> [1] - 1905:22</p> <p><b>cost</b> [3] - 1791:19, 1791:20, 1920:11</p> <p><b>couched</b> [1] - 1725:18</p> <p><b>council</b> [1] - 1945:17</p> <p><b>counsel</b> [5] - 1736:9, 1913:10, 1920:3, 1921:8, 1961:6</p> <p><b>counsel's</b> [4] - 1736:19, 1757:24, 1764:23, 1775:23</p> <p><b>count</b> [2] - 1886:13, 1944:15</p> <p><b>counties</b> [6] - 1766:7, 1788:11, 1914:4, 1945:1, 1945:18</p> <p><b>countries</b> [3] - 1760:24, 1761:3, 1857:1</p> <p><b>country</b> [8] - 1799:18,</p>	<p>1799:25, 1829:5, 1856:25, 1971:17, 1972:10, 1972:13</p> <p><b>COUNTY</b> [1] - 1989:3</p> <p><b>County</b> [16] - 1707:21, 1775:5, 1818:5, 1821:8, 1821:9, 1913:23, 1914:1, 1916:25, 1917:24, 1918:10, 1922:10, 1929:13, 1930:8, 1936:8, 1936:22, 1944:24</p> <p><b>county</b> [5] - 1726:24, 1868:12, 1914:1, 1914:7</p> <p><b>couple</b> [10] - 1753:13, 1786:22, 1807:1, 1820:11, 1829:12, 1831:16, 1873:17, 1893:22, 1934:4</p> <p><b>course</b> [10] - 1730:9, 1753:14, 1818:8, 1873:12, 1906:21, 1959:1, 1971:23, 1979:3, 1979:7, 1979:8</p> <p><b>court</b> [18] - 1721:4, 1733:18, 1733:24, 1734:2, 1797:15, 1827:24, 1862:25, 1865:14, 1871:13, 1901:2, 1902:2, 1948:16, 1953:1, 1954:1, 1954:3, 1958:7, 1973:20</p> <p><b>courtesy</b> [2] - 1827:8, 1863:1</p> <p><b>courts</b> [1] - 1920:3</p> <p><b>cover</b> [8] - 1874:24, 1875:1, 1875:3, 1875:4, 1942:11, 1948:5, 1958:13, 1965:14</p> <p><b>covered</b> [3] - 1732:18, 1817:4, 1981:3</p> <p><b>covers</b> [4] - 1811:10, 1873:15, 1873:18, 1965:14</p> <p><b>crane</b> [2] - 1739:14, 1742:18</p> <p><b>cranes</b> [1] - 1742:13</p> <p><b>Craven</b> [59] - 1704:4, 1709:5, 1709:9, 1709:14, 1709:17, 1710:5, 1710:8, 1710:13, 1710:16, 1710:20, 1710:24, 1711:3, 1711:6, 1711:9, 1711:11,</p>	11
---	---	---	--	--	----

<p>1711:21, 1712:5, 1712:10, 1712:12, 1712:17, 1712:19, 1712:23, 1713:5, 1713:10, 1713:13, 1713:15, 1713:18, 1714:8, 1714:12, 1714:13, 1715:19, 1715:21, 1716:4, 1716:8, 1716:14, 1716:18, 1716:22, 1717:8, 1717:20, 1718:10, 1718:18, 1718:23, 1719:4, 1719:8, 1719:13, 1719:17, 1719:24, 1720:5, 1720:7, 1720:8, 1734:21, 1773:8, 1773:11, 1820:4, 1825:20, 1883:10, 1883:14, 1924:4 <b>CRAVEN</b> [90] - 1733:8, 1736:3, 1736:5, 1736:12, 1737:1, 1773:10, 1773:18, 1776:3, 1776:10, 1776:23, 1778:7, 1778:11, 1779:19, 1779:22, 1780:10, 1781:18, 1793:8, 1820:5, 1825:21, 1825:24, 1826:2, 1826:7, 1826:25, 1827:13, 1827:23, 1828:2, 1829:20, 1830:2, 1830:8, 1831:23, 1833:16, 1834:1, 1834:4, 1837:23, 1838:12, 1838:16, 1838:20, 1838:23, 1839:12, 1840:3, 1840:9, 1841:6, 1848:7, 1848:23, 1851:16, 1853:25, 1856:6, 1858:4, 1858:21, 1859:20, 1860:18, 1862:9, 1862:22, 1863:6, 1863:11, 1863:16, 1883:11, 1883:13, 1884:14, 1884:17, 1884:22, 1886:2, 1886:20, 1886:25, 1887:7, 1890:12, 1892:3, 1909:15, 1915:2, 1916:11, 1921:22, 1921:25, 1922:12, 1922:15, 1923:3, 1924:7,</p>	<p>1927:10, 1935:7, 1935:14, 1938:8, 1938:11, 1941:20, 1943:24, 1952:7, 1953:12, 1954:6, 1955:7, 1960:17, 1960:20, 1969:14 <b>create</b> [1] - 1923:12 <b>created</b> [2] - 1805:5, 1824:3 <b>credentials</b> [1] - 1867:21 <b>credibility</b> [1] - 1822:5 <b>CREDO</b> [3] - 1829:8, 1829:11, 1829:13 <b>Creek</b> [2] - 1820:20, 1822:25 <b>creek</b> [1] - 1825:3 <b>Cremer</b> [12] - 1703:17, 1704:10, 1711:16, 1711:18, 1711:20, 1712:3, 1712:8, 1712:13, 1712:15, 1713:11, 1714:3, 1714:16 <b>CREMER</b> [7] - 1797:13, 1797:17, 1801:11, 1805:16, 1825:13, 1825:16, 1838:22 <b>crevices</b> [1] - 1741:23 <b>critical</b> [3] - 1784:7, 1881:4, 1881:7 <b>critically</b> [2] - 1876:10, 1879:16 <b>crop</b> [11] - 1875:11, 1875:13, 1877:9, 1888:4, 1888:8, 1912:2, 1912:15, 1912:21, 1913:2, 1913:4, 1913:12 <b>crops</b> [3] - 1886:14, 1912:4, 1912:11 <b>Cross</b> [140] - 1709:4, 1709:4, 1709:5, 1709:5, 1709:6, 1709:6, 1709:7, 1709:16, 1709:17, 1709:17, 1710:4, 1710:4, 1710:5, 1710:5, 1710:6, 1710:12, 1710:12, 1710:13, 1710:13, 1710:19, 1710:19, 1710:20, 1710:20, 1710:21, 1711:4, 1711:4, 1711:5, 1711:7, 1711:7, 1711:12, 1711:12, 1711:16, 1711:17, 1711:20, 1711:21, 1711:21, 1712:4, 1712:4, 1712:5, 1712:8, 1712:9, 1712:9, 1712:10, 1712:15, 1712:16, 1712:16, 1712:17, 1712:22, 1712:22, 1712:23, 1712:23, 1713:4, 1713:4, 1713:5, 1713:5, 1713:6, 1713:12, 1713:12, 1713:13, 1713:13, 1713:18, 1713:18, 1713:19, 1714:4, 1714:4, 1714:5, 1714:11, 1714:11, 1714:12, 1714:12, 1714:17, 1714:17, 1714:21, 1715:4, 1715:8, 1715:13, 1715:14, 1715:14, 1715:18, 1715:19, 1715:19, 1716:4, 1716:4, 1716:8, 1716:8, 1716:9, 1716:9, 1716:14, 1716:14, 1716:17, 1716:18, 1716:18, 1716:19, 1716:22, 1716:23, 1717:4, 1717:4, 1717:5, 1717:7, 1717:8, 1717:8, 1717:9, 1717:12, 1717:17, 1717:17, 1717:18, 1718:5, 1718:7, 1718:10, 1718:11, 1718:11, 1718:13, 1718:17, 1718:18, 1718:18, 1718:19, 1718:19, 1718:20, 1719:4, 1719:4, 1719:7, 1719:8, 1719:8, 1719:12, 1719:12, 1719:13, 1719:16, 1719:16, 1719:17, 1719:17, 1719:18, 1719:23, 1719:23, 1719:24, 1719:24, 1720:4, 1720:4, 1720:5, 1720:5, 1720:6 <b>cross</b> [24] - 1737:19, 1742:3, 1745:11, 1765:2, 1765:3, 1774:3, 1774:7, 1793:6, 1805:17, 1825:11, 1857:12, 1858:18, 1867:1,</p>	<p>1711:20, 1711:21, 1711:21, 1712:4, 1712:4, 1712:5, 1712:8, 1712:9, 1712:9, 1712:10, 1712:15, 1712:16, 1712:16, 1712:17, 1712:22, 1712:22, 1712:23, 1712:23, 1713:4, 1713:4, 1713:5, 1713:5, 1713:6, 1713:12, 1713:12, 1713:13, 1713:13, 1713:18, 1713:18, 1713:19, 1714:4, 1714:4, 1714:5, 1714:11, 1714:11, 1714:12, 1714:12, 1714:17, 1714:17, 1714:21, 1715:4, 1715:8, 1715:13, 1715:14, 1715:14, 1715:18, 1715:19, 1715:19, 1716:4, 1716:4, 1716:8, 1716:8, 1716:9, 1716:9, 1716:14, 1716:14, 1716:17, 1716:18, 1716:18, 1716:19, 1716:22, 1716:23, 1717:4, 1717:4, 1717:5, 1717:7, 1717:8, 1717:8, 1717:9, 1717:12, 1717:17, 1717:17, 1717:18, 1718:5, 1718:7, 1718:10, 1718:11, 1718:11, 1718:13, 1718:17, 1718:18, 1718:18, 1718:19, 1718:19, 1718:20, 1719:4, 1719:4, 1719:7, 1719:8, 1719:8, 1719:12, 1719:12, 1719:13, 1719:16, 1719:16, 1719:17, 1719:17, 1719:18, 1719:23, 1719:23, 1719:24, 1719:24, 1720:4, 1720:4, 1720:5, 1720:5, 1720:6 <b>cross</b> [24] - 1737:19, 1742:3, 1745:11, 1765:2, 1765:3, 1774:3, 1774:7, 1793:6, 1805:17, 1825:11, 1857:12, 1858:18, 1867:1,</p>	<p>1870:23, 1894:12, 1898:2, 1905:5, 1907:16, 1907:21, 1908:3, 1908:9, 1908:12, 1920:16, 1946:3 <b>CROSS</b> [16] - 1737:22, 1753:5, 1773:9, 1782:3, 1805:20, 1820:7, 1849:5, 1850:9, 1882:1, 1883:12, 1892:10, 1911:20, 1913:16, 1915:1, 1975:5, 1984:1 <b>cross-examination</b> [3] - 1765:2, 1765:3, 1870:23 <b>CROSS-</b> <b>EXAMINATION</b> [16] - 1737:22, 1753:5, 1773:9, 1782:3, 1805:20, 1820:7, 1849:5, 1850:9, 1882:1, 1883:12, 1892:10, 1911:20, 1913:16, 1915:1, 1975:5, 1984:1 <b>Cross-Examination</b> [140] - 1709:4, 1709:4, 1709:5, 1709:5, 1709:6, 1709:6, 1709:7, 1709:16, 1709:17, 1709:17, 1710:4, 1710:4, 1710:5, 1710:5, 1710:6, 1710:12, 1710:12, 1710:13, 1710:13, 1710:19, 1710:19, 1710:20, 1710:20, 1710:21, 1711:4, 1711:4, 1711:5, 1711:7, 1711:7, 1711:12, 1711:12, 1711:16, 1711:17, 1711:20, 1711:21, 1711:21, 1712:4, 1712:4, 1712:5, 1712:8, 1712:9, 1712:9, 1712:10, 1712:15, 1712:16, 1712:16, 1712:17, 1712:22, 1712:22, 1712:23, 1712:23, 1713:4, 1713:4, 1713:5, 1713:5, 1713:6, 1713:12, 1713:12, 1713:13, 1713:13, 1713:18,</p>	<p>1713:18, 1713:19, 12 1714:4, 1714:4, 1714:5, 1714:11, 1714:11, 1714:12, 1714:12, 1714:17, 1714:17, 1714:21, 1715:4, 1715:8, 1715:13, 1715:14, 1715:14, 1715:18, 1715:19, 1715:19, 1716:4, 1716:4, 1716:8, 1716:8, 1716:9, 1716:9, 1716:14, 1716:14, 1716:17, 1716:18, 1716:18, 1716:19, 1716:22, 1716:23, 1717:4, 1717:4, 1717:5, 1717:7, 1717:8, 1717:8, 1717:9, 1717:12, 1717:17, 1717:17, 1717:18, 1718:5, 1718:7, 1718:10, 1718:11, 1718:11, 1718:13, 1718:17, 1718:18, 1718:18, 1718:19, 1718:19, 1718:20, 1719:4, 1719:4, 1719:7, 1719:8, 1719:8, 1719:12, 1719:12, 1719:13, 1719:16, 1719:16, 1719:17, 1719:17, 1719:18, 1719:23, 1719:23, 1719:24, 1719:24, 1720:4, 1720:4, 1720:5, 1720:5, 1720:6 <b>cross-examine</b> [2] - 1858:18, 1867:1 <b>crossed</b> [8] - 1742:7, 1744:25, 1745:16, 1746:5, 1774:12, 1775:15, 1775:21, 1775:22 <b>crosses</b> [3] - 1757:11, 1776:4, 1929:15 <b>crossing</b> [16] - 1730:6, 1745:18, 1747:1, 1777:12, 1777:20, 1778:6, 1778:7, 1779:2, 1792:5, 1806:3, 1902:15, 1929:16, 1952:4, 1972:19 <b>crossings</b> [4] - 1770:23, 1779:17, 1795:7, 1795:9</p>
--	---	---	--	--

<p><b>CRR</b> <sup>[1]</sup> - 1703:24  <b>crude</b> <sup>[27]</sup> - 1790:13, 1794:17, 1808:12, 1808:13, 1808:18, 1808:19, 1808:20, 1809:12, 1809:13, 1809:18, 1810:1, 1900:7, 1930:15, 1930:18, 1931:8, 1931:22, 1932:1, 1932:3, 1932:5, 1932:18, 1932:20, 1933:22, 1933:24, 1934:14, 1934:16, 1934:21, 1934:23  <b>cruel</b> <sup>[1]</sup> - 1933:18  <b>crystal</b> <sup>[1]</sup> - 1817:10  <b>Cultural</b> <sup>[5]</sup> - 1705:16, 1705:17, 1705:18, 1705:19, 1705:20  <b>cultural</b> <sup>[8]</sup> - 1737:2, 1828:19, 1836:2, 1844:22, 1845:5, 1845:6, 1845:16, 1895:14  <b>culturally</b> <sup>[2]</sup> - 1834:11, 1845:6  <b>curious</b> <sup>[1]</sup> - 1961:8  <b>current</b> <sup>[2]</sup> - 1835:8, 1980:3  <b>cursor</b> <sup>[2]</sup> - 1958:3, 1959:1  <b>cut</b> <sup>[10]</sup> - 1770:12, 1779:17, 1780:4, 1822:19, 1929:19, 1929:22, 1929:24, 1929:25, 1930:11, 1940:12  <b>cuts</b> <sup>[2]</sup> - 1779:9, 1780:20  <b>cutting</b> <sup>[1]</sup> - 1736:6  <b>cyber</b> <sup>[4]</sup> - 1971:8, 1971:14, 1971:23, 1972:1</p>	<p>1736:4, 1736:21, 1739:15, 1742:24, 1743:6, 1748:21, 1749:19, 1751:1, 1751:13, 1751:25, 1752:15, 1770:6, 1770:7, 1771:20, 1773:12, 1774:5, 1774:8, 1775:16, 1775:22, 1776:5, 1776:9, 1776:15, 1776:16, 1777:13, 1778:6, 1779:23, 1781:21, 1782:2, 1782:5, 1782:10, 1796:10, 1796:14, 1797:25, 1798:3, 1798:19, 1799:1, 1799:6, 1799:20, 1799:22, 1800:2, 1800:3, 1803:13, 1803:17, 1803:20, 1803:23, 1804:13, 1804:19, 1804:24, 1805:9, 1811:11, 1812:5, 1815:17, 1815:22, 1815:24, 1816:8, 1816:12, 1816:14, 1818:4, 1820:10, 1820:24, 1821:24, 1823:12, 1824:21, 1826:15, 1828:22, 1830:16, 1835:17, 1844:8, 1845:20, 1845:22, 1845:23, 1847:2, 1847:13, 1847:14, 1849:13, 1849:16, 1849:17, 1849:19, 1849:20, 1849:22, 1850:6, 1850:14, 1852:8, 1853:1, 1854:2, 1854:3, 1856:14, 1856:18, 1857:16, 1857:23, 1865:13, 1867:7, 1869:5, 1869:6, 1869:8, 1877:10, 1877:13, 1877:16, 1877:21, 1879:3, 1879:7, 1882:5, 1882:9, 1882:13, 1882:17, 1883:14, 1887:17, 1887:20, 1888:5, 1888:9, 1888:14, 1889:20, 1890:20, 1890:21, 1892:25, 1893:3, 1893:7, 1893:9, 1894:9, 1898:9, 1901:10, 1901:14,</p>	<p>1903:4, 1903:10, 1904:11, 1908:23, 1909:1, 1909:6, 1912:1, 1913:21, 1917:17, 1920:3, 1926:15, 1926:18, 1929:14, 1930:16, 1930:21, 1931:1, 1931:22, 1931:24, 1932:11, 1933:1, 1933:15, 1933:24, 1934:4, 1934:8, 1934:15, 1934:18, 1934:20, 1944:10, 1944:11, 1969:14, 1974:19, 1976:18, 1977:14, 1978:17, 1979:9, 1979:24, 1980:4, 1980:7, 1980:18, 1981:10, 1982:23, 1983:16, 1984:4, 1984:17, 1986:3, 1989:7, 1989:13  <b>DAKOTA</b> <sup>[4]</sup> - 1703:2, 1703:4, 1703:5, 1989:1  <b>Dakota's</b> <sup>[4]</sup> - 1823:8, 1851:21, 1898:15, 1975:14  <b>Dakota</b> <sup>[1]</sup> - 1849:1  <b>Dakotas</b> <sup>[5]</sup> - 1733:17, 1852:15, 1852:18, 1853:20, 1853:23  <b>Dakotas</b> <sup>[1]</sup> - 1878:9  <b>DALLAS</b> <sup>[1]</sup> - 1711:11  <b>Dallas</b> <sup>[4]</sup> - 1827:23, 1828:14, 1838:20, 1849:1  <b>Dam</b> <sup>[1]</sup> - 1777:21  <b>damage</b> <sup>[5]</sup> - 1912:2, 1912:3, 1913:2, 1913:4, 1913:12  <b>damaged</b> <sup>[1]</sup> - 1912:4  <b>dams</b> <sup>[1]</sup> - 1777:11  <b>Dan</b> <sup>[2]</sup> - 1721:3, 1721:7  <b>DAN</b> <sup>[1]</sup> - 1714:10  <b>dance</b> <sup>[1]</sup> - 1822:22  <b>Daniel</b> <sup>[1]</sup> - 1721:9  <b>DAPL</b> <sup>[34]</sup> - 1705:2, 1705:6, 1705:6, 1705:21, 1708:18, 1709:2, 1710:2, 1719:2, 1719:5, 1720:2, 1776:4, 1779:9, 1841:21, 1842:21, 1843:24, 1847:20, 1850:17,</p>	<p>1854:15, 1858:23, 1859:6, 1860:5, 1869:19, 1870:4, 1891:11, 1900:23, 1903:5, 1905:12, 1906:3, 1916:4, 1926:1, 1935:16, 1935:18, 1956:11, 1981:9  <b>DAPL's</b> <sup>[2]</sup> - 1879:19, 1879:21  <b>DARREN</b> <sup>[1]</sup> - 1711:15  <b>Darren</b> <sup>[1]</sup> - 1703:18  <b>data</b> <sup>[11]</sup> - 1757:3, 1842:6, 1889:14, 1900:1, 1900:2, 1931:15, 1931:16, 1945:25, 1976:12, 1982:1  <b>database</b> <sup>[5]</sup> - 1739:6, 1739:9, 1814:6, 1814:19, 1838:7  <b>date</b> <sup>[3]</sup> - 1817:23, 1957:10, 1967:22  <b>Dated</b> <sup>[1]</sup> - 1989:13  <b>dated</b> <sup>[1]</sup> - 1956:10  <b>dates</b> <sup>[2]</sup> - 1823:24, 1967:20  <b>David</b> <sup>[4]</sup> - 1731:21, 1744:18, 1832:12, 1838:3  <b>days</b> <sup>[6]</sup> - 1791:6, 1829:13, 1831:16, 1831:17, 1831:18, 1833:4  <b>dead</b> <sup>[1]</sup> - 1741:24  <b>deadline</b> <sup>[7]</sup> - 1941:13, 1957:13, 1962:24, 1963:20, 1964:7, 1968:23, 1969:7  <b>deadlines</b> <sup>[7]</sup> - 1866:10, 1866:19, 1957:13, 1960:24, 1961:16, 1963:4, 1970:20  <b>deal</b> <sup>[8]</sup> - 1736:6, 1757:21, 1815:24, 1874:7, 1888:16, 1888:20, 1896:2, 1945:16  <b>dealing</b> <sup>[2]</sup> - 1780:14, 1819:9  <b>debate</b> <sup>[2]</sup> - 1850:17, 1932:17  <b>December</b> <sup>[1]</sup> - 1945:3  <b>decent</b> <sup>[2]</sup> - 1809:8, 1879:17  <b>decide</b> <sup>[1]</sup> - 1832:21  <b>decision</b> <sup>[16]</sup> -</p>	<p>1746:23, 1746:24, 1843:9, 1843:10, 1843:18, 1855:9, 1859:12, 1859:14, 1866:22, 1909:11, 1910:1, 1919:10, 1919:11, 1919:13, 1945:10, 1962:5  <b>decision-maker</b> <sup>[2]</sup> - 1843:18, 1855:9  <b>decision-makers</b> <sup>[2]</sup> - 1843:9, 1945:10  <b>decisions</b> <sup>[4]</sup> - 1730:18, 1910:7, 1944:19, 1944:20  <b>declaratory</b> <sup>[2]</sup> - 1985:20, 1985:22  <b>declared</b> <sup>[1]</sup> - 1910:23  <b>decline</b> <sup>[1]</sup> - 1862:15  <b>decompaction</b> <sup>[7]</sup> - 1881:2, 1881:4, 1881:6, 1881:7, 1881:9, 1881:10, 1881:12  <b>decrease</b> <sup>[1]</sup> - 1885:22  <b>deep</b> <sup>[4]</sup> - 1813:17, 1873:25, 1888:22, 1888:24  <b>deepen</b> <sup>[1]</sup> - 1833:11  <b>deeper</b> <sup>[9]</sup> - 1816:16, 1838:4, 1839:24, 1888:17, 1888:20, 1948:12, 1950:14, 1951:4, 1951:5  <b>deeply</b> <sup>[1]</sup> - 1817:15  <b>defended</b> <sup>[1]</sup> - 1819:7  <b>define</b> <sup>[4]</sup> - 1802:7, 1813:10, 1833:6, 1895:7  <b>defined</b> <sup>[8]</sup> - 1729:1, 1774:9, 1775:8, 1775:9, 1775:19, 1778:14, 1950:4, 1973:19  <b>defines</b> <sup>[1]</sup> - 1744:22  <b>definite</b> <sup>[1]</sup> - 1854:13  <b>definitely</b> <sup>[3]</sup> - 1846:13, 1853:16, 1877:2  <b>definition</b> <sup>[12]</sup> - 1744:24, 1745:3, 1775:3, 1841:14, 1853:7, 1914:5, 1914:12, 1953:2, 1954:18, 1954:23, 1973:4, 1973:21  <b>definitions</b> <sup>[2]</sup> - 1756:15, 1783:6  <b>degradation</b> <sup>[1]</sup> - 1834:13</p>
<b>D</b>				
<p><b>D.C</b> <sup>[1]</sup> - 1792:11  <b>daily</b> <sup>[1]</sup> - 1791:13  <b>Dakota</b> <sup>[190]</sup> - 1704:2, 1704:5, 1704:14, 1704:16, 1707:13, 1708:18, 1723:11, 1724:15, 1724:16, 1725:19, 1728:21, 1729:13, 1729:25, 1733:8, 1733:18, 1733:24, 1735:8, 1735:20, 1735:21,</p>				



<p><b>degree</b> [12] - 1733:22, 1734:5, 1734:12, 1767:18, 1798:11, 1819:19, 1868:19, 1868:20, 1868:22, 1868:24, 1868:25, 1869:2</p> <p><b>degrees</b> [2] - 1734:4, 1891:24</p> <p><b>DEJOIA</b> [1] - 1719:6</p> <p><b>DeJoia</b> [7] - 1705:14, 1860:2, 1865:13, 1868:8, 1870:8, 1882:3, 1892:12</p> <p><b>DeJoia's</b> [1] - 1869:22</p> <p><b>delay</b> [1] - 1862:19</p> <p><b>delegated</b> [1] - 1730:19</p> <p><b>deletions</b> [3] - 1725:8, 1726:5, 1800:25</p> <p><b>delisting</b> [1] - 1797:2</p> <p><b>DELORES</b> [1] - 1718:3</p> <p><b>demand</b> [4] - 1841:20, 1842:15, 1842:20</p> <p><b>demonstrate</b> [1] - 1968:1</p> <p><b>demonstrated</b> [1] - 1957:19</p> <p><b>demonstrates</b> [1] - 1940:11</p> <p><b>demonstrating</b> [2] - 1891:23, 1954:2</p> <p><b>Denied</b> [2] - 1706:12, 1707:21</p> <p><b>denied</b> [2] - 1705:13, 1747:18</p> <p><b>DENR</b> [3] - 1795:5, 1821:1, 1823:9</p> <p><b>dental</b> [1] - 1827:13</p> <p><b>dentist</b> [1] - 1827:15</p> <p><b>Denver</b> [1] - 1974:12</p> <p><b>deny</b> [1] - 1964:13</p> <p><b>Denying</b> [1] - 1707:15</p> <p><b>Department</b> [6] - 1722:20, 1795:20, 1798:4, 1814:1, 1814:22, 1971:15</p> <p><b>department</b> [2] - 1782:11, 1948:11</p> <p><b>departments</b> [2] - 1790:15, 1946:9</p> <p><b>Departments</b> [1] - 1795:14</p> <p><b>dependent</b> [3] - 1850:25, 1933:15, 1933:24</p> <p><b>deposit</b> [1] - 1835:18</p> <p><b>deposited</b> [1] - 1806:19</p> <p><b>deposits</b> [3] -</p>	<p>1808:16, 1809:15, 1816:7</p> <p><b>depressions</b> [1] - 1816:23</p> <p><b>depth</b> [10] - 1802:22, 1810:14, 1816:15, 1817:17, 1875:23, 1877:3, 1890:18, 1899:20, 1899:21, 1948:5</p> <p><b>depths</b> [4] - 1810:12, 1810:15, 1821:5, 1890:17</p> <p><b>derivative</b> [1] - 1933:22</p> <p><b>derived</b> [7] - 1806:17, 1806:18, 1808:2, 1808:16, 1810:5, 1810:7, 1817:14</p> <p><b>Derric</b> [2] - 1797:14, 1797:23</p> <p><b>DERRIC</b> [1] - 1714:16</p> <p><b>describe</b> [4] - 1722:14, 1798:9, 1798:15, 1813:15</p> <p><b>described</b> [1] - 1837:5</p> <p><b>describing</b> [1] - 1818:15</p> <p><b>description</b> [1] - 1818:10</p> <p><b>deserves</b> [2] - 1734:11, 1944:7</p> <p><b>design</b> [3] - 1745:8, 1877:18, 1896:15</p> <p><b>designated</b> [3] - 1763:14, 1784:7, 1957:25</p> <p><b>designed</b> [2] - 1799:23, 1926:9</p> <p><b>desired</b> [2] - 1772:4, 1977:9</p> <p><b>desktop</b> [1] - 1818:21</p> <p><b>detail</b> [3] - 1803:4, 1805:6, 1959:19</p> <p><b>details</b> [1] - 1874:9</p> <p><b>detection</b> [1] - 1742:20</p> <p><b>determination</b> [27] - 1739:17, 1739:18, 1739:25, 1740:2, 1745:15, 1745:23, 1746:4, 1746:9, 1746:13, 1746:19, 1747:12, 1747:15, 1753:21, 1754:2, 1754:3, 1755:3, 1756:11, 1756:14, 1762:19, 1763:14, 1763:22, 1763:24, 1766:12, 1768:16,</p>	<p>1768:23, 1769:3, 1774:8</p> <p><b>determinations</b> [1] - 1755:12</p> <p><b>determine</b> [11] - 1725:20, 1762:11, 1770:22, 1771:21, 1772:20, 1779:14, 1780:23, 1781:5, 1907:9, 1910:19, 1937:17</p> <p><b>determined</b> [5] - 1742:8, 1745:2, 1764:17, 1774:19, 1907:8</p> <p><b>determining</b> [1] - 1734:3</p> <p><b>deuterium</b> [1] - 1823:17</p> <p><b>develop</b> [4] - 1869:6, 1877:11, 1961:18, 1977:10</p> <p><b>developable</b> [3] - 1943:13, 1946:17, 1947:25</p> <p><b>developed</b> [3] - 1889:22, 1906:21, 1971:15</p> <p><b>developers</b> [1] - 1945:5</p> <p><b>developing</b> [1] - 1934:25</p> <p><b>development</b> [24] - 1721:18, 1728:2, 1830:21, 1830:24, 1831:1, 1831:4, 1835:1, 1835:17, 1836:8, 1836:20, 1837:3, 1854:19, 1854:22, 1855:1, 1857:6, 1934:19, 1934:21, 1938:2, 1943:13, 1948:6, 1948:13, 1968:2, 1969:1</p> <p><b>deviate</b> [1] - 1897:19</p> <p><b>device</b> [2] - 1880:7, 1952:13</p> <p><b>Deville</b> [3] - 1706:3, 1827:17, 1858:15</p> <p><b>Deville's</b> [4] - 1825:23, 1859:4, 1860:11, 1863:3</p> <p><b>devised</b> [1] - 1807:19</p> <p><b>dewatering</b> [6] - 1749:3, 1750:5, 1750:6, 1750:9, 1787:21, 1788:4</p> <p><b>dialogue</b> [3] - 1972:14, 1973:9,</p>	<p>1974:10</p> <p><b>Diane</b> [1] - 1704:8</p> <p><b>diatribe</b> [1] - 1941:15</p> <p><b>difference</b> [8] - 1787:14, 1817:24, 1818:1, 1845:4, 1845:15, 1880:5, 1896:19, 1899:22</p> <p><b>differences</b> [2] - 1736:23, 1975:14</p> <p><b>different</b> [41] - 1734:18, 1750:13, 1755:23, 1760:24, 1761:3, 1761:25, 1763:15, 1774:13, 1784:25, 1787:1, 1787:12, 1792:4, 1794:13, 1809:25, 1817:3, 1821:5, 1829:6, 1834:13, 1835:20, 1860:12, 1873:19, 1873:20, 1887:4, 1894:13, 1895:16, 1895:17, 1898:16, 1899:20, 1900:12, 1914:4, 1914:10, 1914:11, 1937:22, 1947:18, 1954:21, 1955:15, 1960:14, 1975:24, 1982:6</p> <p><b>differential</b> [1] - 1934:17</p> <p><b>difficult</b> [6] - 1727:1, 1737:5, 1757:20, 1812:20, 1835:19, 1891:1</p> <p><b>difficulties</b> [2] - 1839:4, 1839:7</p> <p><b>digging</b> [2] - 1916:6, 1916:8</p> <p><b>digital</b> [5] - 1805:3, 1812:14, 1812:16, 1838:10</p> <p><b>dilatory</b> [2] - 1957:11, 1958:25</p> <p><b>diligence</b> [1] - 1783:23</p> <p><b>diminish</b> [1] - 1912:2</p> <p><b>dire</b> [5] - 1830:12, 1832:5, 1839:11, 1870:6, 1871:17</p> <p><b>direct</b> [19] - 1724:22, 1727:23, 1731:21, 1758:19, 1780:8, 1790:16, 1798:7, 1805:17, 1847:4, 1851:17, 1864:8, 1864:12, 1864:25, 1865:4, 1890:23,</p>	<p>1902:16, 1926:18, 1927:18, 1955:13</p> <p><b>DIRECT</b> [6] - 1721:5, 1797:16, 1828:1, 1868:5, 1901:3, 1924:12</p> <p><b>Direct</b> [56] - 1705:9, 1705:10, 1705:10, 1705:11, 1705:11, 1705:12, 1709:3, 1709:16, 1710:3, 1710:11, 1710:18, 1711:3, 1711:6, 1711:11, 1711:16, 1711:20, 1712:3, 1712:8, 1712:13, 1712:15, 1712:21, 1713:3, 1713:11, 1713:17, 1714:3, 1714:10, 1714:16, 1714:20, 1715:3, 1715:7, 1715:13, 1715:18, 1715:22, 1716:3, 1716:7, 1716:13, 1716:17, 1716:22, 1717:3, 1717:7, 1717:11, 1717:13, 1717:15, 1717:16, 1718:3, 1718:5, 1718:7, 1718:10, 1718:13, 1718:17, 1719:3, 1719:7, 1719:11, 1719:15, 1719:22, 1720:3</p> <p><b>directing</b> [2] - 1952:6, 1967:11</p> <p><b>direction</b> [8] - 1724:2, 1832:22, 1905:24, 1935:20, 1942:25, 1967:6, 1967:14, 1980:24</p> <p><b>directive</b> [1] - 1835:21</p> <p><b>directly</b> [19] - 1743:7, 1769:17, 1770:8, 1780:4, 1780:6, 1806:24, 1807:24, 1815:11, 1865:4, 1894:6, 1906:22, 1917:1, 1928:25, 1931:1, 1931:23, 1933:13, 1940:10, 1961:12, 1969:18</p> <p><b>director</b> [1] - 1946:2</p> <p><b>directorial</b> [1] - 1791:9</p> <p><b>dirt</b> [2] - 1916:6, 1916:9</p> <p><b>dirty</b> [2] - 1750:11, 1750:15</p> <p><b>disagree</b> [4] - 1734:8,</p>
--	--	---	---	---

<p>1811:19, 1984:16, 1984:23</p> <p><b>disappeared</b> [1] - 1773:19</p> <p><b>disaster</b> [2] - 1835:10, 1846:24</p> <p><b>discharge</b> [11] - 1749:2, 1749:25, 1750:12, 1751:1, 1751:22, 1751:23, 1781:1, 1781:6, 1781:7, 1781:8, 1781:9</p> <p><b>discharged</b> [5] - 1749:10, 1749:12, 1749:21, 1750:22, 1751:3</p> <p><b>discharging</b> [1] - 1750:12</p> <p><b>disclaimers</b> [1] - 1811:15</p> <p><b>disclose</b> [2] - 1972:8, 1974:8</p> <p><b>disclosed</b> [1] - 1975:21</p> <p><b>disclosing</b> [1] - 1937:5</p> <p><b>discount</b> [3] - 1886:16, 1886:25, 1962:17</p> <p><b>discourage</b> [1] - 1884:3</p> <p><b>discourages</b> [1] - 1883:23</p> <p><b>Discoveries</b> [1] - 1705:7</p> <p><b>discovery</b> [6] - 1723:16, 1817:7, 1867:15, 1867:16, 1941:12, 1960:25</p> <p><b>Discovery</b> [1] - 1706:22</p> <p><b>discredit</b> [1] - 1937:10</p> <p><b>discuss</b> [6] - 1725:16, 1737:2, 1832:19, 1835:16, 1860:9, 1860:10</p> <p><b>discussed</b> [4] - 1744:25, 1768:17, 1804:16, 1832:16</p> <p><b>discusses</b> [1] - 1725:15</p> <p><b>discussing</b> [2] - 1773:22, 1921:25</p> <p><b>discussion</b> [10] - 1753:14, 1753:20, 1762:15, 1803:9, 1806:9, 1894:3, 1912:21, 1913:7, 1944:5, 1953:17</p>	<p><b>Discussion</b> [1] - 1705:7</p> <p><b>discussions</b> [4] - 1846:18, 1847:21, 1906:14, 1915:11</p> <p><b>disguised</b> [1] - 1848:5</p> <p><b>Dismiss</b> [1] - 1707:15</p> <p><b>disparage</b> [1] - 1836:10</p> <p><b>disparities</b> [1] - 1837:8</p> <p><b>displaced</b> [1] - 1931:11</p> <p><b>disproportionately</b> [1] - 1837:3</p> <p><b>dissipates</b> [1] - 1965:9</p> <p><b>dissolution</b> [3] - 1815:13, 1816:17, 1817:17</p> <p><b>distance</b> [10] - 1748:4, 1748:5, 1748:12, 1748:14, 1907:5, 1951:13, 1951:24, 1952:1, 1952:14, 1966:25</p> <p><b>distances</b> [2] - 1907:8, 1979:16</p> <p><b>distortion</b> [1] - 1970:8</p> <p><b>district</b> [1] - 1853:14</p> <p><b>Districts</b> [1] - 1708:6</p> <p><b>ditch</b> [1] - 1880:8</p> <p><b>DNR</b> [1] - 1795:8</p> <p><b>DO</b> [1] - 1989:8</p> <p><b>docket</b> [15] - 1723:3, 1723:9, 1723:11, 1723:12, 1887:8, 1945:21, 1956:13, 1956:18, 1957:15, 1957:20, 1957:22, 1958:17, 1958:21, 1961:11, 1980:4</p> <p><b>Docket</b> [1] - 1985:21</p> <p><b>document</b> [47] - 1724:19, 1762:4, 1769:12, 1769:23, 1770:13, 1807:7, 1813:14, 1829:24, 1837:25, 1838:7, 1839:10, 1839:15, 1840:2, 1840:19, 1840:24, 1841:24, 1861:4, 1861:6, 1865:16, 1865:19, 1865:21, 1866:5, 1867:18, 1869:18, 1869:24, 1870:1, 1870:2, 1872:16, 1905:16, 1905:19, 1905:24, 1955:20,</p>	<p>1957:9, 1958:5, 1958:19, 1958:24, 1962:19, 1963:11, 1963:17, 1967:5, 1967:12, 1967:19, 1975:24, 1981:20, 1986:8, 1986:20, 1986:24</p> <p><b>documentation</b> [4] - 1897:14, 1897:20, 1956:5, 1983:11</p> <p><b>documented</b> [5] - 1766:11, 1808:25, 1897:16, 1897:21, 1897:24</p> <p><b>documents</b> [11] - 1833:18, 1833:20, 1841:23, 1849:10, 1849:14, 1861:6, 1955:24, 1957:12, 1963:3, 1965:11, 1973:1</p> <p><b>dollar</b> [2] - 1925:14, 1971:10</p> <p><b>Dolton</b> [3] - 1807:2, 1823:21, 1823:22</p> <p><b>domain</b> [5] - 1910:3, 1922:3, 1922:16, 1922:19, 1922:21</p> <p><b>domestically</b> [1] - 1934:23</p> <p><b>dominantly</b> [4] - 1799:1, 1799:13, 1799:22, 1806:17</p> <p><b>done</b> [41] - 1738:10, 1743:16, 1771:19, 1782:18, 1791:16, 1791:17, 1805:16, 1811:6, 1819:10, 1840:18, 1855:23, 1860:7, 1869:10, 1869:11, 1874:10, 1874:11, 1874:13, 1874:14, 1879:13, 1879:16, 1879:17, 1881:13, 1891:2, 1891:4, 1899:10, 1899:12, 1906:18, 1910:9, 1915:21, 1915:22, 1918:22, 1945:22, 1949:9, 1955:4, 1960:11, 1961:22, 1962:1, 1976:12, 1976:13, 1987:24</p> <p><b>DOS</b> [1] - 1979:19</p> <p><b>DOT</b> [1] - 1931:15</p> <p><b>dot</b> [4] - 1936:3, 1936:24, 1937:2, 1938:25</p>	<p><b>doubt</b> [2] - 1811:5, 1974:18</p> <p><b>Douglas</b> [1] - 1703:19</p> <p><b>down</b> [21] - 1736:22, 1760:18, 1780:1, 1783:6, 1809:4, 1813:6, 1816:2, 1821:9, 1831:19, 1844:12, 1851:21, 1853:9, 1864:15, 1888:17, 1888:20, 1908:25, 1929:23, 1931:15, 1944:16, 1945:8, 1962:4</p> <p><b>downstream</b> [2] - 1777:9, 1777:13</p> <p><b>downward</b> [4] - 1807:13, 1807:22, 1808:1, 1809:1</p> <p><b>DRA</b> [7] - 1706:2, 1711:2, 1830:3, 1841:7, 1860:20, 1927:10, 1943:24</p> <p><b>drafter</b> [1] - 1748:16</p> <p><b>drafting</b> [1] - 1724:23</p> <p><b>drain</b> [15] - 1877:24, 1878:4, 1878:10, 1878:11, 1878:13, 1878:18, 1878:21, 1878:22, 1879:1, 1879:11, 1879:14, 1879:17, 1880:8, 1894:4, 1894:19</p> <p><b>drastic</b> [1] - 1899:22</p> <p><b>drastically</b> [1] - 1899:19</p> <p><b>draw</b> [2] - 1759:18, 1871:9</p> <p><b>drawing</b> [1] - 1724:17</p> <p><b>Drawing</b> [1] - 1708:13</p> <p><b>drawings</b> [2] - 1729:25, 1730:13</p> <p><b>drawn</b> [1] - 1899:16</p> <p><b>drilled</b> [6] - 1804:13, 1804:23, 1813:23, 1814:16, 1815:2, 1825:5</p> <p><b>drilling</b> [10] - 1798:24, 1799:9, 1813:9, 1813:13, 1814:20, 1814:25, 1822:13, 1838:4, 1839:24, 1980:24</p> <p><b>drink</b> [1] - 1776:15</p> <p><b>drinking</b> [14] - 1774:11, 1774:25, 1775:4, 1775:9, 1775:13, 1775:17, 1775:19, 1776:10, 1776:13, 1776:18,</p>	<p>1777:2, 1777:20, 1777:25, 1778:4</p> <p><b>driveway</b> [2] - 1917:4, 1917:12</p> <p><b>driving</b> [2] - 1851:18, 1933:16</p> <p><b>drove</b> [2] - 1851:3, 1897:7</p> <p><b>due</b> [9] - 1783:23, 1802:20, 1803:2, 1867:5, 1912:7, 1953:23, 1954:6, 1958:18, 1969:2</p> <p><b>dug</b> [1] - 1897:8</p> <p><b>duly</b> [1] - 1989:8</p> <p><b>duly-appointed</b> [1] - 1989:8</p> <p><b>duplicative</b> [2] - 1965:1, 1975:25</p> <p><b>DuraRoot</b> [2] - 1868:10, 1868:14</p> <p><b>duration</b> [2] - 1944:17, 1967:22</p> <p><b>Duration</b> [1] - 1706:8</p> <p><b>during</b> [25] - 1722:16, 1728:21, 1741:20, 1741:25, 1747:16, 1751:21, 1798:23, 1799:16, 1817:4, 1817:5, 1817:7, 1824:2, 1824:3, 1874:21, 1879:18, 1905:9, 1906:12, 1906:21, 1942:21, 1966:24, 1968:1, 1971:5, 1974:7, 1975:12</p> <p><b>duties</b> [3] - 1732:1, 1957:1, 1963:25</p> <p><b>duty</b> [2] - 1968:24, 1969:25</p> <p><b>dying</b> [1] - 1741:24</p>
<b>E</b>				
<p><b>e-mail</b> [3] - 1845:25, 1846:2, 1974:4</p> <p><b>e-mails</b> [1] - 1960:14</p> <p><b>EAGLE</b> [1] - 1714:20</p> <p><b>Eagle</b> [2] - 1708:16, 1708:17</p> <p><b>Eared</b> [1] - 1741:23</p> <p><b>eared</b> [2] - 1739:13, 1785:2</p> <p><b>earliest</b> [1] - 1970:10</p> <p><b>early</b> [3] - 1770:15, 1799:19, 1970:4</p> <p><b>earth</b> [1] - 1929:8</p> <p><b>easement</b> [9] -</p>				

<p>1778:24, 1779:3, 1874:6, 1917:2, 1918:1, 1918:2, 1918:14, 1929:23, 1930:3</p> <p><b>Easement</b> [1] - 1708:13</p> <p><b>easements</b> [2] - 1755:6, 1972:18</p> <p><b>easier</b> [1] - 1876:12</p> <p><b>East</b> [2] - 1704:15, 1851:9</p> <p><b>east</b> [4] - 1797:24, 1820:20, 1918:13, 1947:15</p> <p><b>east-west</b> [1] - 1947:15</p> <p><b>eastern</b> [16] - 1770:6, 1799:1, 1799:22, 1800:2, 1803:23, 1804:13, 1804:19, 1804:23, 1811:11, 1815:22, 1815:24, 1816:8, 1816:13, 1820:24, 1847:7, 1857:23</p> <p><b>easy</b> [1] - 1853:18</p> <p><b>echo</b> [1] - 1776:19</p> <p><b>ecological</b> [2] - 1774:12, 1774:17</p> <p><b>economic</b> [6] - 1848:10, 1934:19, 1934:21, 1934:25, 1943:13, 1946:17</p> <p><b>economics</b> [1] - 1834:22</p> <p><b>economy</b> [1] - 1856:21</p> <p><b>edits</b> [3] - 1727:10, 1728:9, 1800:25</p> <p><b>educate</b> [1] - 1937:24</p> <p><b>educated</b> [5] - 1833:8, 1857:18, 1857:19, 1887:12, 1968:4</p> <p><b>education</b> [8] - 1828:16, 1830:20, 1831:1, 1833:4, 1833:6, 1833:10, 1898:14, 1937:23</p> <p><b>educational</b> [5] - 1721:24, 1722:5, 1798:9, 1867:21, 1868:17</p> <p><b>edwards</b> [1] - 1713:3</p> <p><b>EDWARDS</b> [22] - 1710:3, 1721:3, 1721:6, 1727:16, 1731:15, 1733:5, 1734:8, 1735:11, 1737:12, 1737:15,</p>	<p>1737:18, 1776:7, 1776:21, 1796:18, 1796:20, 1797:7, 1850:5, 1867:17, 1892:9, 1892:11, 1893:25, 1916:16</p> <p><b>Edwards</b> [24] - 1703:16, 1704:10, 1705:10, 1705:15, 1709:7, 1710:6, 1710:9, 1710:13, 1710:21, 1712:21, 1713:9, 1713:17, 1714:10, 1714:15, 1716:9, 1716:18, 1717:17, 1718:19, 1719:8, 1719:18, 1719:24, 1720:6, 1772:2, 1946:1</p> <p><b>effect</b> [8] - 1745:7, 1757:5, 1763:3, 1766:12, 1768:23, 1809:17, 1810:2, 1843:16</p> <p><b>effective</b> [2] - 1895:20, 1895:24</p> <p><b>effectiveness</b> [3] - 1777:16, 1880:13, 1880:15</p> <p><b>effects</b> [3] - 1776:19, 1847:15, 1896:3</p> <p><b>efficiency</b> [2] - 1866:3, 1866:9</p> <p><b>efficient</b> [1] - 1902:12</p> <p><b>effort</b> [2] - 1882:15</p> <p><b>efforts</b> [7] - 1721:19, 1829:8, 1887:19, 1909:13, 1910:17, 1978:22, 1980:13</p> <p><b>EIA</b> [1] - 1933:9</p> <p><b>EIA's</b> [1] - 1847:22</p> <p><b>eight</b> [1] - 1780:2</p> <p><b>eighth</b> [3] - 1934:4, 1934:10, 1934:11</p> <p><b>EIS</b> [24] - 1738:10, 1738:18, 1748:23, 1784:20, 1784:23, 1793:10, 1843:13, 1843:25, 1844:2, 1844:6, 1844:7, 1844:9, 1844:11, 1855:14, 1856:5, 1889:5, 1975:8, 1975:15, 1975:16, 1975:22, 1976:3, 1976:7, 1977:6, 1977:10</p> <p><b>Eis</b> [2] - 1893:16, 1893:19</p> <p><b>EISs</b> [1] - 1889:8</p>	<p><b>either</b> [21] - 1721:17, 1752:7, 1752:10, 1786:2, 1787:25, 1791:13, 1795:15, 1815:16, 1816:3, 1817:18, 1820:5, 1825:3, 1837:21, 1851:9, 1874:11, 1918:6, 1938:4, 1943:15, 1951:3, 1956:6</p> <p><b>elaborate</b> [1] - 1841:19</p> <p><b>elaboration</b> [1] - 1774:14</p> <p><b>elected</b> [2] - 1953:17, 1953:18</p> <p><b>electric</b> [1] - 1951:9</p> <p><b>electronically</b> [2] - 1759:21, 1978:8</p> <p><b>elicited</b> [1] - 1986:4</p> <p><b>eliminate</b> [3] - 1784:10, 1784:13, 1974:18</p> <p><b>eliminated</b> [1] - 1766:23</p> <p><b>elimination</b> [1] - 1767:1</p> <p><b>Emails</b> [1] - 1706:6</p> <p><b>emergency</b> [1] - 1827:14</p> <p><b>eminent</b> [5] - 1910:2, 1922:3, 1922:16, 1922:18, 1922:21</p> <p><b>emphasis</b> [2] - 1868:22, 1868:23</p> <p><b>employ</b> [3] - 1791:19, 1795:15, 1795:16</p> <p><b>employed</b> [2] - 1790:2, 1901:10</p> <p><b>employee</b> [1] - 1731:23</p> <p><b>employment</b> [1] - 1799:19</p> <p><b>employs</b> [2] - 1790:7, 1790:19</p> <p><b>Enbridge</b> [4] - 1794:14, 1794:16, 1794:17, 1794:20</p> <p><b>encapsulated</b> [1] - 1823:3</p> <p><b>enclosed</b> [1] - 1741:14</p> <p><b>encompasses</b> [1] - 1936:20</p> <p><b>encountered</b> [2] - 1816:7, 1896:25</p> <p><b>encourage</b> [1] - 1836:20</p> <p><b>encouraged</b> [1] -</p>	<p>1844:3</p> <p><b>encumbered</b> [1] - 1951:12</p> <p><b>end</b> [6] - 1729:15, 1757:14, 1877:20, 1896:2, 1960:13, 1966:2</p> <p><b>Endangered</b> [11] - 1738:25, 1758:7, 1758:20, 1762:1, 1763:1, 1767:8, 1767:23, 1769:5, 1769:8, 1783:25, 1797:5</p> <p><b>endangered</b> [14] - 1742:22, 1743:18, 1758:8, 1758:16, 1758:19, 1758:23, 1759:3, 1759:6, 1762:9, 1762:21, 1763:6, 1767:14, 1796:21</p> <p><b>ended</b> [1] - 1946:25</p> <p><b>energies</b> [1] - 1849:21</p> <p><b>energy</b> [20] - 1831:19, 1835:1, 1842:9, 1847:10, 1849:12, 1849:20, 1852:6, 1854:9, 1855:17, 1857:6, 1857:7, 1932:20, 1934:12, 1971:12, 1971:13, 1971:17, 1971:21, 1984:5, 1985:4</p> <p><b>Energy</b> [3] - 1705:6, 1855:20, 1974:19</p> <p><b>ENERGY</b> [1] - 1703:5</p> <p><b>enforce</b> [4] - 1746:15, 1754:2, 1763:21, 1763:25</p> <p><b>enforcement</b> [1] - 1783:16</p> <p><b>enforces</b> [4] - 1746:11, 1754:13, 1904:13, 1904:14</p> <p><b>engage</b> [2] - 1765:2, 1791:19</p> <p><b>engineer</b> [2] - 1819:19, 1945:24</p> <p><b>engineered</b> [1] - 1730:13</p> <p><b>engineering</b> [4] - 1722:23, 1945:24, 1948:11, 1952:13</p> <p><b>Engineers</b> [6] - 1738:23, 1738:24, 1742:9, 1768:19, 1769:1, 1780:24</p> <p><b>Engineers'</b> [1] - 1725:23</p>	<p><b>engines</b> [1] - 1788:18 1 6</p> <p><b>enjoyed</b> [1] - 1825:9</p> <p><b>enrolled</b> [1] - 1845:20</p> <p><b>ensure</b> [4] - 1879:9, 1946:14, 1946:15, 1968:4</p> <p><b>ensuring</b> [1] - 1790:3</p> <p><b>entered</b> [2] - 1863:3, 1915:15</p> <p><b>enters</b> [1] - 1748:10</p> <p><b>entire</b> [12] - 1755:12, 1756:24, 1757:6, 1760:9, 1762:2, 1764:7, 1811:10, 1869:7, 1891:8, 1891:9, 1891:12, 1891:17</p> <p><b>entirely</b> [2] - 1860:12, 1982:20</p> <p><b>entirety</b> [2] - 1959:17, 1960:9</p> <p><b>entitled</b> [3] - 1704:14, 1734:13, 1989:10</p> <p><b>entrapment</b> [1] - 1782:22</p> <p><b>ENTRIX</b> [2] - 1722:25, 1793:25</p> <p><b>Environment</b> [2] - 1798:4, 1814:1</p> <p><b>environment</b> [6] - 1733:15, 1782:11, 1814:22, 1843:2, 1848:10, 1885:10</p> <p><b>environmental</b> [22] - 1721:16, 1722:20, 1722:24, 1723:5, 1730:20, 1731:2, 1731:6, 1732:5, 1738:15, 1748:20, 1773:12, 1790:20, 1790:25, 1796:7, 1829:9, 1834:12, 1844:19, 1869:1, 1869:14, 1893:10, 1902:10, 1902:17</p> <p><b>Environmental</b> [14] - 1704:4, 1738:13, 1828:15, 1828:25, 1834:6, 1834:7, 1843:1, 1843:5, 1855:6, 1883:15, 1889:2, 1969:15, 1976:20, 1976:24</p> <p><b>equipment</b> [9] - 1726:14, 1788:14, 1788:18, 1788:22, 1789:5, 1789:6, 1799:9, 1813:13, 1881:11</p> <p><b>equivalent</b> [2] -</p>
---	---	--	---	--



<p>1730:14, 1748:23  <b>erosion</b> [2] - 1729:22, 1876:6  <b>error</b> [1] - 1896:22  <b>especially</b> [4] - 1729:7, 1849:21, 1880:18, 1886:12  <b>espoused</b> [1] - 1927:19  <b>essential</b> [1] - 1911:9  <b>essentially</b> [6] - 1730:7, 1743:16, 1743:17, 1749:19, 1790:25, 1807:25  <b>establish</b> [2] - 1885:10, 1894:25  <b>established</b> [5] - 1735:14, 1735:15, 1866:11, 1969:7, 1970:20  <b>estimate</b> [1] - 1952:16  <b>estimating</b> [1] - 1875:15  <b>et</b> [6] - 1783:22, 1790:15, 1792:12, 1792:24, 1911:8  <b>ethanol</b> [2] - 1857:15, 1857:22  <b>ethical</b> [2] - 1904:4, 1904:6  <b>ethics</b> [2] - 1831:7, 1904:12  <b>evaluate</b> [1] - 1946:5  <b>evaluated</b> [3] - 1758:21, 1946:2, 1951:2  <b>evaluates</b> [1] - 1758:25  <b>Evaluation</b> [2] - 1708:6, 1708:7  <b>evaluation</b> [1] - 1843:20  <b>evaluations</b> [1] - 1855:25  <b>evaporate</b> [1] - 1807:24  <b>evening</b> [2] - 1987:3, 1987:16  <b>event</b> [3] - 1821:2, 1821:8, 1974:24  <b>eventually</b> [2] - 1975:19, 1980:21  <b>Evidence</b> [1] - 1765:3  <b>evidence</b> [13] - 1779:16, 1804:22, 1816:13, 1837:21, 1935:8, 1942:23, 1954:14, 1954:21, 1954:22, 1968:23, 1973:9, 1973:15,</p>	<p>1986:10  <b>evident</b> [1] - 1736:23  <b>evidentiary</b> [2] - 1954:22, 1957:24  <b>ex</b> [3] - 1959:22, 1961:8, 1962:12  <b>exact</b> [4] - 1728:14, 1773:4, 1918:22, 1975:23  <b>exactly</b> [16] - 1814:7, 1824:19, 1825:1, 1825:8, 1848:20, 1887:5, 1895:7, 1900:11, 1906:18, 1917:5, 1924:2, 1949:4, 1955:5, 1967:18, 1970:15  <b>examination</b> [5] - 1758:1, 1765:2, 1765:3, 1870:23, 1870:24  <b>Examination</b> [338] - 1709:3, 1709:4, 1709:4, 1709:5, 1709:5, 1709:6, 1709:6, 1709:7, 1709:7, 1709:8, 1709:8, 1709:9, 1709:9, 1709:10, 1709:10, 1709:11, 1709:11, 1709:12, 1709:12, 1709:13, 1709:13, 1709:14, 1709:14, 1709:16, 1709:16, 1709:17, 1709:17, 1709:18, 1709:18, 1709:19, 1710:3, 1710:4, 1710:4, 1710:5, 1710:5, 1710:6, 1710:6, 1710:7, 1710:7, 1710:8, 1710:8, 1710:9, 1710:9, 1710:10, 1710:11, 1710:12, 1710:12, 1710:13, 1710:13, 1710:14, 1710:14, 1710:15, 1710:15, 1710:16, 1710:16, 1710:18, 1710:19, 1710:19, 1710:20, 1710:20, 1710:21, 1710:21, 1710:22, 1710:22, 1710:23, 1710:23, 1710:24, 1710:24, 1711:3, 1711:4, 1711:4, 1711:5, 1711:6, 1711:7, 1711:7, 1711:8, 1711:8,</p>	<p>1711:9, 1711:9, 1711:11, 1711:12, 1711:12, 1711:13, 1711:13, 1711:16, 1711:16, 1711:17, 1711:17, 1711:18, 1711:18, 1711:20, 1711:20, 1711:21, 1712:3, 1712:4, 1712:4, 1712:5, 1712:5, 1712:6, 1712:6, 1712:8, 1712:8, 1712:9, 1712:9, 1712:10, 1712:10, 1712:11, 1712:11, 1712:12, 1712:12, 1712:13, 1712:13, 1712:15, 1712:15, 1712:16, 1712:16, 1712:17, 1712:17, 1712:18, 1712:18, 1712:19, 1712:19, 1712:21, 1712:22, 1712:22, 1712:23, 1712:23, 1712:24, 1713:3, 1713:4, 1713:4, 1713:5, 1713:5, 1713:6, 1713:6, 1713:7, 1713:7, 1713:8, 1713:9, 1713:9, 1713:10, 1713:11, 1713:12, 1713:12, 1713:13, 1713:13, 1713:14, 1713:14, 1713:15, 1713:15, 1713:17, 1713:17, 1713:18, 1713:18, 1713:19, 1713:19, 1714:3, 1714:4, 1714:4, 1714:5, 1714:5, 1714:6, 1714:7, 1714:7, 1714:8, 1714:8, 1714:9, 1714:10, 1714:11, 1714:11, 1714:12, 1714:12, 1714:13, 1714:13, 1714:14, 1714:14, 1714:15, 1714:16, 1714:17, 1714:17, 1714:18, 1714:20, 1714:21, 1714:21, 1715:3, 1715:4, 1715:4, 1715:5, 1715:7, 1715:8, 1715:8, 1715:9, 1715:9, 1715:10, 1715:10, 1715:11, 1715:13, 1715:13,</p>	<p>1715:14, 1715:14, 1715:15, 1715:15, 1715:16, 1715:18, 1715:18, 1715:19, 1715:19, 1715:20, 1715:20, 1715:21, 1715:22, 1716:3, 1716:4, 1716:4, 1716:5, 1716:5, 1716:7, 1716:8, 1716:8, 1716:9, 1716:9, 1716:10, 1716:10, 1716:11, 1716:13, 1716:14, 1716:14, 1716:15, 1716:17, 1716:18, 1716:18, 1716:19, 1716:20, 1716:20, 1716:22, 1716:22, 1716:23, 1717:3, 1717:4, 1717:4, 1717:5, 1717:5, 1717:7, 1717:7, 1717:8, 1717:8, 1717:9, 1717:9, 1717:10, 1717:11, 1717:12, 1717:13, 1717:15, 1717:16, 1717:17, 1717:17, 1717:18, 1717:18, 1717:19, 1717:19, 1717:20, 1718:3, 1718:5, 1718:5, 1718:7, 1718:7, 1718:8, 1718:8, 1718:10, 1718:10, 1718:11, 1718:11, 1718:13, 1718:13, 1718:14, 1718:14, 1718:17, 1718:17, 1718:18, 1718:18, 1718:19, 1718:19, 1718:20, 1718:20, 1718:21, 1718:21, 1718:22, 1718:22, 1718:23, 1718:23, 1719:3, 1719:4, 1719:4, 1719:7, 1719:7, 1719:8, 1719:8, 1719:9, 1719:9, 1719:10, 1719:11, 1719:12, 1719:12, 1719:13, 1719:13, 1719:14, 1719:15, 1719:16, 1719:16, 1719:17, 1719:17, 1719:18, 1719:18, 1719:19, 1719:19, 1719:20,</p>	<p>1719:20, 1719:21, 1719:22, 1719:23, 1719:23, 1719:24, 1719:24, 1720:3, 1720:4, 1720:4, 1720:5, 1720:5, 1720:6, 1720:6, 1720:7, 1720:7, 1720:8, 1720:8  <b>EXAMINATION</b> [28] - 1721:5, 1737:22, 1753:5, 1773:9, 1782:3, 1793:7, 1793:7, 1794:4, 1796:19, 1797:16, 1805:20, 1820:7, 1828:1, 1849:5, 1850:9, 1857:13, 1868:5, 1882:1, 1883:12, 1892:10, 1898:5, 1901:3, 1911:20, 1913:16, 1915:1, 1924:12, 1975:5, 1984:1  <b>examine</b> [3] - 1807:6, 1858:18, 1867:1  <b>examines</b> [5] - 1762:4, 1763:19, 1769:23, 1770:13, 1981:20  <b>examining</b> [1] - 1843:16  <b>example</b> [8] - 1746:3, 1750:25, 1764:1, 1774:16, 1784:12, 1795:18, 1808:11, 1942:17  <b>examples</b> [5] - 1775:6, 1803:18, 1873:17, 1900:8, 1937:25  <b>excavated</b> [1] - 1817:20  <b>excavating</b> [1] - 1817:14  <b>excavation</b> [2] - 1817:5, 1891:19  <b>exceeded</b> [5] - 1751:5, 1751:7, 1781:3, 1781:5  <b>exceeds</b> [1] - 1913:2  <b>except</b> [1] - 1791:11  <b>exception</b> [10] - 1727:10, 1735:11, 1785:4, 1840:25, 1871:15, 1948:18, 1954:5, 1973:5, 1974:1, 1982:10  <b>excited</b> [1] - 1910:3  <b>exciting</b> [1] - 1822:12  <b>exclude</b> [1] - 1905:8  <b>excluded</b> [3] - 1785:7,</p>
--	--	--	---	--

<p>1918:17, 1964:12  <b>excuse</b> [5] - 1738:22, 1770:5, 1773:5, 1795:11, 1870:10  <b>exhibit</b> [35] - 1801:7, 1840:15, 1841:1, 1841:4, 1860:20, 1863:12, 1867:25, 1902:23, 1902:24, 1902:25, 1906:13, 1921:10, 1922:1, 1923:24, 1924:21, 1928:7, 1941:6, 1941:11, 1956:11, 1957:7, 1957:8, 1957:16, 1957:17, 1957:23, 1958:17, 1962:22, 1962:23, 1963:19, 1964:5, 1964:7, 1964:14, 1967:14, 1968:23, 1971:5  <b>Exhibit</b> [67] - 1705:4, 1705:4, 1705:5, 1706:14, 1706:15, 1706:16, 1706:16, 1706:17, 1706:17, 1706:18, 1706:18, 1706:19, 1706:19, 1706:20, 1706:20, 1706:21, 1724:18, 1727:17, 1727:21, 1731:16, 1731:19, 1733:6, 1759:19, 1759:23, 1760:1, 1769:12, 1800:15, 1801:11, 1801:14, 1830:3, 1830:11, 1834:3, 1841:6, 1863:15, 1863:20, 1870:5, 1903:5, 1903:7, 1905:12, 1906:25, 1915:14, 1916:21, 1921:20, 1921:23, 1924:25, 1928:5, 1928:6, 1928:15, 1936:6, 1941:5, 1942:23, 1942:24, 1944:6, 1952:3, 1955:21, 1956:22, 1957:6, 1958:16, 1963:19, 1966:6, 1966:19, 1967:3, 1967:11, 1968:7, 1977:21, 1981:9  <b>EXHIBITS</b> [8] - 1705:2, 1706:2, 1706:13, 1707:2, 1708:2, 1708:8, 1708:12, 1708:15</p>	<p><b>exhibits</b> [7] - 1840:9, 1840:13, 1840:22, 1942:19, 1958:5, 1961:19, 1969:8  <b>Exhibits</b> [10] - 1705:3, 1705:10, 1705:12, 1705:13, 1706:14, 1706:15, 1707:6, 1707:7, 1900:23, 1958:15  <b>exist</b> [3] - 1938:2, 1938:3, 1958:24  <b>existed</b> [6] - 1957:12, 1962:19, 1962:24, 1963:1, 1963:19, 1964:7  <b>existence</b> [2] - 1746:20, 1906:10  <b>existing</b> [4] - 1947:17, 1947:24, 1951:7, 1951:12  <b>exists</b> [2] - 1742:15, 1742:16  <b>expand</b> [1] - 1839:6  <b>expect</b> [5] - 1771:4, 1771:7, 1818:25, 1930:14, 1962:9  <b>expectation</b> [2] - 1875:11, 1962:3  <b>expectations</b> [4] - 1729:8, 1945:11, 1946:15, 1946:20  <b>expected</b> [1] - 1959:3  <b>expediency</b> [1] - 1867:12  <b>expedient</b> [2] - 1792:8, 1864:21  <b>expenses</b> [1] - 1920:9  <b>experience</b> [39] - 1722:15, 1733:23, 1734:5, 1734:9, 1744:4, 1744:8, 1747:23, 1748:10, 1748:18, 1748:21, 1786:23, 1787:2, 1798:15, 1798:16, 1819:15, 1828:17, 1830:22, 1831:12, 1833:19, 1836:6, 1841:2, 1841:18, 1844:1, 1856:3, 1869:3, 1871:8, 1876:20, 1878:5, 1878:6, 1878:7, 1879:23, 1885:9, 1887:22, 1887:23, 1893:6, 1898:14, 1902:12, 1912:8, 1917:13  <b>experiences</b> [1] -</p>	<p>1875:14  <b>experiencing</b> [1] - 1941:16  <b>Expert</b> [1] - 1706:7  <b>expert</b> [20] - 1733:12, 1733:19, 1733:25, 1734:3, 1735:12, 1735:16, 1783:11, 1785:5, 1785:16, 1832:2, 1833:16, 1833:22, 1839:10, 1846:22, 1871:11, 1871:12, 1884:22, 1884:24, 1886:2, 1887:17  <b>expertise</b> [3] - 1819:4, 1830:20, 1833:14  <b>experts</b> [5] - 1746:12, 1819:1, 1819:9, 1832:2  <b>explain</b> [11] - 1774:4, 1790:6, 1800:6, 1834:5, 1880:5, 1886:16, 1886:25, 1906:9, 1911:2, 1922:13, 1949:14  <b>explained</b> [2] - 1841:10, 1846:7  <b>explanation</b> [3] - 1783:14, 1793:4, 1883:5  <b>exploitation</b> [1] - 1845:9  <b>extend</b> [1] - 1929:21  <b>extends</b> [1] - 1930:21  <b>extensive</b> [3] - 1806:23, 1909:13, 1910:17  <b>extensively</b> [1] - 1806:21  <b>extent</b> [13] - 1724:25, 1727:4, 1728:22, 1738:6, 1744:2, 1744:5, 1785:23, 1802:12, 1840:14, 1848:18, 1865:10, 1910:10, 1927:20  <b>extinction</b> [1] - 1758:13  <b>extra</b> [1] - 1840:15  <b>extract</b> [1] - 1890:17  <b>extractive</b> [4] - 1834:12, 1834:22, 1834:23, 1834:25  <b>extraordinary</b> [1] - 1932:17  <b>extreme</b> [1] - 1831:19  <b>extremely</b> [2] - 1811:17, 1823:7</p>	<p style="text-align: center;"><b>F</b></p> <p><b>face</b> [1] - 1837:9  <b>facilitate</b> [2] - 1792:7, 1792:15  <b>facilities</b> [1] - 1951:8  <b>Facility</b> [1] - 1705:5  <b>facility</b> [2] - 1951:7, 1968:25  <b>FACILITY</b> [1] - 1703:5  <b>Fact</b> [1] - 1707:16  <b>fact</b> [23] - 1726:12, 1729:24, 1730:1, 1742:7, 1745:17, 1774:9, 1803:14, 1815:15, 1819:8, 1836:19, 1901:22, 1904:1, 1904:6, 1911:12, 1922:20, 1937:11, 1937:13, 1942:20, 1944:15, 1957:15, 1965:5, 1970:5, 1972:24  <b>factfinder</b> [1] - 1733:20  <b>factor</b> [3] - 1734:4, 1937:18  <b>factors</b> [2] - 1734:2, 1931:14  <b>facts</b> [4] - 1835:23, 1933:9, 1934:4, 1935:7  <b>Fahrenheit</b> [1] - 1891:24  <b>failed</b> [1] - 1957:17  <b>failure</b> [2] - 1887:18, 1958:23  <b>fair</b> [3] - 1756:19, 1912:12, 1976:5  <b>FAITH</b> [1] - 1714:20  <b>fall</b> [7] - 1736:1, 1770:14, 1842:23, 1844:1, 1847:24, 1871:14, 1929:18  <b>Fall</b> [1] - 1818:5  <b>Falls</b> [30] - 1704:8, 1705:22, 1705:23, 1806:23, 1807:3, 1823:1, 1934:19, 1934:20, 1935:1, 1935:2, 1935:5, 1935:24, 1936:8, 1936:21, 1943:4, 1943:14, 1943:19, 1944:13, 1945:1, 1945:7, 1945:16, 1945:19, 1946:4, 1946:7, 1946:15, 1948:10, 1950:20,</p>	<p>1952:22, 1956:1, 1965:16  <b>FALLS</b> [1] - 1708:8  <b>falls</b> [4] - 1819:11, 1847:21, 1848:4, 1973:25  <b>familiar</b> [21] - 1732:9, 1738:17, 1758:6, 1760:3, 1791:18, 1793:18, 1794:16, 1795:22, 1795:23, 1796:14, 1802:5, 1802:14, 1816:1, 1843:2, 1907:12, 1907:18, 1907:24, 1908:5, 1908:11, 1913:20, 1952:10  <b>families</b> [1] - 1907:19  <b>family</b> [7] - 1828:20, 1907:13, 1908:3, 1908:6, 1908:11, 1908:14, 1908:18  <b>fan</b> [1] - 1889:13  <b>far</b> [12] - 1725:7, 1792:7, 1811:13, 1822:25, 1827:7, 1832:22, 1843:21, 1844:19, 1851:14, 1852:15, 1931:18, 1959:13  <b>farm</b> [4] - 1795:20, 1795:24, 1874:4, 1922:6  <b>Farm</b> [1] - 1707:21  <b>farmed</b> [1] - 1929:9  <b>farmer</b> [1] - 1847:4  <b>farmers</b> [4] - 1853:12, 1857:19, 1886:12, 1913:1  <b>farming</b> [3] - 1784:12, 1795:22, 1915:13  <b>farmland</b> [1] - 1880:19  <b>farms</b> [4] - 1891:3, 1891:4, 1922:2, 1933:14  <b>farmstead</b> [2] - 1928:7, 1961:24  <b>farmsteads</b> [1] - 1905:20  <b>fashion</b> [2] - 1864:22, 1970:8  <b>faster</b> [1] - 1876:9  <b>fatal</b> [1] - 1962:22  <b>favor</b> [2] - 1914:7, 1914:18  <b>FBI</b> [1] - 1971:16  <b>fear</b> [3] - 1802:19, 1804:3, 1836:19  <b>fears</b> [2] - 1819:12, 1937:25</p>
--	---	---	--	--

<p><b>feature</b> [5] - 1917:6, 1917:9, 1917:17, 1917:22, 1928:24</p> <p><b>federal</b> [23] - 1740:16, 1747:22, 1754:25, 1755:4, 1756:4, 1756:6, 1756:17, 1768:25, 1769:9, 1771:5, 1771:13, 1771:14, 1784:1, 1784:25, 1789:10, 1835:6, 1843:25, 1855:17, 1976:25, 1977:8, 1984:5, 1985:4</p> <p><b>Federal</b> [2] - 1837:7, 1855:20</p> <p><b>federalized</b> [1] - 1977:3</p> <p><b>federally</b> [3] - 1738:8, 1739:7, 1761:8</p> <p><b>feedback</b> [2] - 1945:3, 1945:9</p> <p><b>feet</b> [7] - 1813:18, 1907:5, 1915:16, 1915:17, 1917:1, 1928:23</p> <p><b>FEIS</b> [3] - 1979:18, 1979:20, 1980:2</p> <p><b>FERC</b> [15] - 1790:12, 1791:22, 1791:23, 1792:10, 1883:23, 1884:19, 1884:23, 1885:3, 1885:5, 1984:5, 1984:16, 1984:24, 1985:11, 1985:19, 1986:2</p> <p><b>fertility</b> [3] - 1868:23, 1876:1, 1877:9</p> <p><b>few</b> [16] - 1748:25, 1782:6, 1821:20, 1850:7, 1864:16, 1872:24, 1880:9, 1880:24, 1881:23, 1896:24, 1897:2, 1916:22, 1944:12, 1958:4, 1965:18, 1976:14</p> <p><b>field</b> [17] - 1722:19, 1732:5, 1734:10, 1791:5, 1792:4, 1792:7, 1792:13, 1792:17, 1804:10, 1869:15, 1871:11, 1893:10, 1893:13, 1905:5, 1931:1, 1951:11</p> <p><b>fifth</b> [2] - 1922:7, 1971:13</p> <p><b>fight</b> [1] - 1831:3</p>	<p><b>fighting</b> [1] - 1830:23</p> <p><b>figure</b> [6] - 1818:9, 1818:22, 1887:18, 1924:2, 1924:5, 1939:15</p> <p><b>figured</b> [1] - 1887:14</p> <p><b>figures</b> [1] - 1912:23</p> <p><b>figuring</b> [1] - 1874:13</p> <p><b>file</b> [10] - 1800:10, 1838:8, 1838:9, 1909:12, 1911:12, 1956:12, 1956:17, 1963:5, 1975:19, 1977:25</p> <p><b>filed</b> [23] - 1724:8, 1724:15, 1801:7, 1859:3, 1864:4, 1906:8, 1909:8, 1913:23, 1945:20, 1956:22, 1957:8, 1957:15, 1957:20, 1957:22, 1958:5, 1958:13, 1958:16, 1958:18, 1958:20, 1962:20, 1964:2, 1969:7, 1983:11</p> <p><b>files</b> [1] - 1840:15</p> <p><b>filing</b> [10] - 1865:18, 1866:10, 1866:19, 1869:4, 1941:8, 1956:12, 1956:15, 1956:16, 1975:13, 1982:9</p> <p><b>filings</b> [3] - 1838:15, 1838:17, 1957:12</p> <p><b>filled</b> [2] - 1799:8, 1929:9</p> <p><b>final</b> [9] - 1729:8, 1738:7, 1739:16, 1739:18, 1753:21, 1754:1, 1763:14, 1947:13, 1952:18</p> <p><b>Final</b> [1] - 1707:13</p> <p><b>financial</b> [3] - 1919:19, 1919:22, 1974:18</p> <p><b>Findings</b> [1] - 1707:16</p> <p><b>findings</b> [3] - 1762:14, 1786:3, 1852:12</p> <p><b>fine</b> [3] - 1751:2, 1811:17, 1939:10</p> <p><b>Fines</b> [1] - 1707:4</p> <p><b>Fines-Tracy</b> [1] - 1707:4</p> <p><b>finish</b> [3] - 1832:6, 1902:1, 1987:20</p> <p><b>firm</b> [2] - 1722:24, 1791:20</p> <p><b>firmly</b> [1] - 1808:4</p> <p><b>first</b> [35] - 1723:6,</p>	<p>1728:13, 1736:18, 1760:20, 1761:7, 1762:3, 1802:7, 1808:17, 1816:6, 1825:2, 1826:2, 1846:5, 1859:19, 1860:1, 1860:3, 1865:12, 1889:23, 1890:3, 1894:5, 1916:19, 1921:1, 1923:25, 1928:20, 1930:2, 1930:8, 1945:9, 1958:23, 1977:15, 1978:19, 1978:20, 1978:23, 1978:25, 1980:6, 1980:8, 1987:19</p> <p><b>Fischer</b> [1] - 1734:1</p> <p><b>fish</b> [5] - 1743:18, 1753:25, 1780:4, 1787:8, 1972:23</p> <p><b>Fish</b> [53] - 1708:4, 1708:5, 1725:20, 1725:22, 1725:24, 1738:6, 1739:1, 1739:19, 1739:20, 1739:24, 1740:5, 1740:9, 1740:16, 1740:19, 1742:9, 1746:3, 1746:13, 1746:18, 1746:23, 1747:12, 1754:1, 1754:8, 1755:5, 1755:10, 1758:24, 1760:1, 1764:17, 1768:9, 1768:19, 1768:22, 1779:7, 1779:13, 1780:22, 1782:25, 1783:2, 1785:10, 1785:14, 1785:21, 1785:24, 1786:2, 1786:5, 1786:10, 1787:4, 1972:14, 1972:19, 1973:3, 1974:12, 1978:22, 1979:19, 1979:21, 1979:23, 1980:14</p> <p><b>fissures</b> [1] - 1816:22</p> <p><b>fit</b> [1] - 1775:18</p> <p><b>five</b> [5] - 1722:22, 1931:10, 1931:12, 1933:7, 1934:16</p> <p><b>Five</b> [2] - 1708:5, 1708:7</p> <p><b>Five-Year</b> [2] - 1708:5, 1708:7</p> <p><b>fix</b> [4] - 1879:8, 1879:19, 1879:21, 1879:23</p>	<p><b>flawed</b> [3] - 1805:1, 1811:15, 1813:1</p> <p><b>flip</b> [2] - 1929:12, 1952:3</p> <p><b>Flo</b> [1] - 1721:3, 1721:9, 1737:24, 1753:7, 1759:24, 1773:7, 1773:11, 1776:23, 1793:18, 1796:21, 1844:5</p> <p><b>FLO</b> [1] - 1714:10</p> <p><b>Florida</b> [1] - 1817:2</p> <p><b>flow</b> [1] - 1807:15</p> <p><b>flowing</b> [1] - 1750:19</p> <p><b>fluctuates</b> [2] - 1853:10, 1853:16</p> <p><b>focal</b> [3] - 1834:23, 1835:4, 1927:23</p> <p><b>focus</b> [1] - 1835:7</p> <p><b>folks</b> [3] - 1790:24, 1854:23, 1908:17</p> <p><b>follow</b> [6] - 1788:9, 1890:7, 1955:8, 1960:21, 1978:21, 1980:12</p> <p><b>followed</b> [8] - 1738:12, 1738:14, 1752:20, 1785:22, 1875:10, 1893:7, 1947:24, 1958:1</p> <p><b>following</b> [6] - 1789:20, 1861:8, 1945:23, 1962:18, 1966:11, 1982:25</p> <p><b>follows</b> [1] - 1947:14</p> <p><b>foot</b> [1] - 1928:25</p> <p><b>footprint</b> [1] - 1935:5</p> <p><b>FOR</b> [1] - 1703:4</p> <p><b>forced</b> [1] - 1972:3</p> <p><b>forecasts</b> [2] - 1838:5, 1839:25</p> <p><b>forego</b> [1] - 1849:9</p> <p><b>foregone</b> [1] - 1759:2</p> <p><b>forest</b> [1] - 1831:7</p> <p><b>forget</b> [2] - 1858:14, 1944:16</p> <p><b>forgive</b> [1] - 1824:13</p> <p><b>forgot</b> [2] - 1939:8, 1939:12</p> <p><b>fork</b> [1] - 1820:20</p> <p><b>form</b> [2] - 1819:13, 1882:25</p> <p><b>formal</b> [6] - 1786:13, 1786:24, 1787:2, 1787:3, 1787:13, 1828:8</p> <p><b>format</b> [2] - 1725:1, 1838:11</p> <p><b>formation</b> [3] - 1815:25, 1816:4,</p>	<p>1816:16</p> <p><b>formed</b> [1] - 1816:3</p> <p><b>former</b> [4] - 1803:15, 1804:10, 1917:14, 1917:15</p> <p><b>forth</b> [9] - 1835:8, 1840:11, 1841:25, 1843:17, 1850:17, 1924:2, 1924:17, 1947:18, 1979:17</p> <p><b>forward</b> [5] - 1834:16, 1862:16, 1864:22, 1910:21, 1931:12</p> <p><b>fossil</b> [7] - 1830:20, 1830:23, 1831:1, 1831:3, 1832:17, 1835:7, 1835:14</p> <p><b>foundation</b> [12] - 1765:5, 1837:15, 1840:25, 1848:3, 1886:19, 1955:1, 1965:8, 1973:8, 1984:21, 1985:2, 1986:8</p> <p><b>foundational</b> [3] - 1839:4, 1839:6, 1861:11</p> <p><b>four</b> [5] - 1747:25, 1748:1, 1922:7, 1959:16, 1966:4</p> <p><b>four-tenths</b> [2] - 1747:25, 1748:1</p> <p><b>frac</b> [5] - 1980:23, 1981:15, 1981:21, 1981:25, 1983:3</p> <p><b>frac-out</b> [5] - 1980:23, 1981:15, 1981:21, 1981:25, 1983:3</p> <p><b>fragment</b> [1] - 1818:13</p> <p><b>frame</b> [1] - 1944:18</p> <p><b>frankly</b> [1] - 1930:8</p> <p><b>Frey</b> [2] - 1705:10, 1705:13</p> <p><b>FREY</b> [3] - 1709:15, 1719:3, 1719:22</p> <p><b>Friday</b> [3] - 1825:25, 1826:1, 1861:16</p> <p><b>Friday's</b> [1] - 1827:15</p> <p><b>fringed</b> [2] - 1739:15, 1743:2</p> <p><b>Fringed</b> [2] - 1708:7, 1772:17</p> <p><b>front</b> [23] - 1744:24, 1775:3, 1780:11, 1800:14, 1869:5, 1869:18, 1870:1, 1903:3, 1905:12, 1924:20, 1927:22, 1928:7, 1935:16, 1940:2, 1940:5,</p>
---	---	--	---	--

<p>1951:19, 1955:20, 1956:11, 1957:9, 1959:15, 1967:3, 1967:12</p> <p><b>frontline</b> [2] - 1834:15, 1837:9</p> <p><b>fuel</b> [7] - 1830:20, 1830:24, 1831:1, 1831:4, 1832:17, 1835:14, 1933:17</p> <p><b>fuels</b> [2] - 1835:7, 1933:14</p> <p><b>fulfills</b> [2] - 1849:18</p> <p><b>full</b> [9] - 1729:16, 1744:24, 1828:11, 1882:20, 1885:15, 1893:17, 1912:6, 1912:8, 1962:6</p> <p><b>fully</b> [6] - 1729:4, 1735:15, 1738:17, 1763:7, 1849:18, 1974:8</p> <p><b>fun</b> [2] - 1934:2, 1934:4</p> <p><b>function</b> [1] - 1878:19</p> <p><b>functioning</b> [1] - 1789:7</p> <p><b>fund</b> [1] - 1722:21</p> <p><b>furthermore</b> [1] - 1763:18</p> <p><b>future</b> [8] - 1842:4, 1849:12, 1852:6, 1897:18, 1946:16, 1948:6, 1948:13, 1951:5</p> <p><b>FWS</b> [1] - 1972:15</p>	<p><b>Geide</b> [2] - 1707:5, 1907:19</p> <p><b>GEIDE</b> [1] - 1716:13</p> <p><b>general</b> [10] - 1742:16, 1779:2, 1835:7, 1854:15, 1874:20, 1875:1, 1889:9, 1909:5, 1931:21, 1936:21</p> <p><b>generally</b> [7] - 1784:22, 1785:18, 1789:14, 1800:9, 1981:10, 1981:22, 1982:24</p> <p><b>generated</b> [1] - 1783:22</p> <p><b>generates</b> [1] - 1783:18</p> <p><b>generating</b> [1] - 1934:24</p> <p><b>gentleman</b> [1] - 1894:24</p> <p><b>gentleman's</b> [1] - 1783:12</p> <p><b>geographically</b> [1] - 1799:17</p> <p><b>geography</b> [1] - 1722:6</p> <p><b>geologic</b> [3] - 1804:20, 1818:10, 1818:14</p> <p><b>Geological</b> [9] - 1798:3, 1804:6, 1805:1, 1805:8, 1811:8, 1813:8, 1813:23, 1814:5, 1818:21</p> <p><b>geological</b> [11] - 1798:19, 1798:21, 1799:8, 1799:20, 1804:11, 1807:16, 1810:24, 1811:24, 1812:1, 1817:22, 1819:1</p> <p><b>geologist</b> [8] - 1798:2, 1798:6, 1798:20, 1800:4, 1804:10, 1804:11, 1814:6, 1814:8</p> <p><b>geologists</b> [1] - 1819:3</p> <p><b>geology</b> [11] - 1798:12, 1798:13, 1798:25, 1799:21, 1800:12, 1800:13, 1802:23, 1802:25, 1813:10, 1813:15, 1819:19</p> <p><b>geotechnical</b> [1] - 1819:19</p>	<p><b>GFP</b> [3] - 1978:23, 1979:24, 1980:14</p> <p><b>GIS</b> [2] - 1814:3, 1907:9</p> <p><b>given</b> [8] - 1785:25, 1795:24, 1840:19, 1846:22, 1849:19, 1875:6, 1929:22, 1969:2</p> <p><b>glacial</b> [16] - 1802:23, 1806:18, 1807:8, 1807:23, 1809:8, 1809:11, 1816:7, 1817:16, 1817:18, 1822:20, 1823:3, 1823:15, 1823:19, 1823:23, 1824:3, 1847:8</p> <p><b>glacially</b> [7] - 1806:16, 1806:18, 1808:2, 1808:16, 1810:4, 1810:7, 1817:14</p> <p><b>glean</b> [1] - 1889:5</p> <p><b>Glenn</b> [1] - 1704:3</p> <p><b>global</b> [5] - 1760:20, 1760:22, 1761:7, 1835:10, 1842:15</p> <p><b>goal</b> [1] - 1790:3</p> <p><b>goldtooth</b> [2] - 1833:19, 1837:25</p> <p><b>Goldtooth</b> [12] - 1706:11, 1825:20, 1827:23, 1828:3, 1828:14, 1830:3, 1830:15, 1838:21, 1848:13, 1849:7, 1850:11, 1851:25</p> <p><b>GOLDTOOTH</b> [1] - 1711:11</p> <p><b>Goldtooth's</b> [3] - 1826:4, 1826:14, 1827:21</p> <p><b>Google</b> [1] - 1929:7</p> <p><b>gorgeous</b> [1] - 1816:2</p> <p><b>GOULET</b> [1] - 1716:3</p> <p><b>Goulet</b> [1] - 1707:5</p> <p><b>governing</b> [3] - 1911:10, 1963:21, 1969:3</p> <p><b>government</b> [14] - 1778:18, 1838:5, 1839:25, 1843:4, 1856:4, 1944:18, 1944:22, 1944:23, 1956:1, 1959:13, 1963:22, 1967:21, 1969:4, 1971:18</p> <p><b>Government</b> [1] - 1837:7</p> <p><b>governmental</b> [4] -</p>	<p>1745:16, 1746:9, 1774:10, 1774:24</p> <p><b>governments</b> [4] - 1835:6, 1845:11, 1944:11</p> <p><b>grab</b> [1] - 1811:6</p> <p><b>grabbed</b> [1] - 1923:19</p> <p><b>grade</b> [1] - 1878:23</p> <p><b>gradient</b> [2] - 1808:22, 1809:1</p> <p><b>graduate</b> [1] - 1798:18</p> <p><b>Grant</b> [1] - 1821:8</p> <p><b>granted</b> [4] - 1937:19, 1949:3, 1982:20, 1986:13</p> <p><b>Granting</b> [1] - 1707:14</p> <p><b>grass</b> [1] - 1829:16</p> <p><b>grasslands</b> [6] - 1743:21, 1744:10, 1755:6, 1765:23, 1768:3, 1778:21</p> <p><b>grassroots</b> [2] - 1834:8</p> <p><b>gravel</b> [4] - 1806:18, 1806:19, 1823:23, 1845:22</p> <p><b>gravels</b> [2] - 1807:23, 1823:15</p> <p><b>Great</b> [3] - 1770:5, 1770:15, 1770:16</p> <p><b>great</b> [7] - 1798:18, 1802:19, 1803:4, 1815:24, 1843:14, 1874:9, 1978:9</p> <p><b>greater</b> [8] - 1730:22, 1748:11, 1748:14, 1765:25, 1816:11, 1823:25, 1979:15</p> <p><b>greatly</b> [2] - 1750:2, 1930:7</p> <p><b>green</b> [3] - 1943:18, 1948:3, 1951:11</p> <p><b>Greg</b> [1] - 1703:18</p> <p><b>grid</b> [1] - 1935:3</p> <p><b>gross</b> [1] - 1976:15</p> <p><b>ground</b> [8] - 1729:2, 1819:10, 1835:9, 1835:15, 1847:1, 1882:19, 1937:16, 1944:21</p> <p><b>grounds</b> [10] - 1735:6, 1770:1, 1867:10, 1872:8, 1926:2, 1927:7, 1952:25, 1957:7, 1968:10, 1969:10</p> <p><b>groundwater</b> [20] - 1750:18, 1788:1, 1798:25, 1799:21, 1799:25, 1807:7,</p>	<p>1807:8, 1807:9, 1807:15, 1807:21, 1808:10, 1808:13, 1808:19, 1808:21, 1808:22, 1809:10, 1810:5, 1813:10, 1813:15, 1823:8</p> <p><b>Group</b> [5] - 1722:23, 1723:1, 1723:4, 1727:25, 1731:23</p> <p><b>group</b> [10] - 1728:3, 1728:4, 1743:5, 1771:7, 1829:8, 1884:10, 1939:7, 1939:14, 1939:16, 1940:2</p> <p><b>grouse</b> [1] - 1979:16</p> <p><b>grow</b> [1] - 1886:13</p> <p><b>growing</b> [4] - 1883:25, 1912:6, 1912:8, 1912:10</p> <p><b>growth</b> [4] - 1729:4, 1824:16, 1934:25, 1951:6</p> <p><b>Growth</b> [1] - 1708:9</p> <p><b>guarantee</b> [1] - 1983:15</p> <p><b>guarantees</b> [2] - 1974:16, 1974:23</p> <p><b>guess</b> [14] - 1722:11, 1774:23, 1789:19, 1833:13, 1835:4, 1836:24, 1836:25, 1850:18, 1854:4, 1857:21, 1867:11, 1867:17, 1958:22, 1962:25</p> <p><b>guns</b> [1] - 1837:11</p> <p><b>Gustafson</b> [1] - 1703:19</p> <p><b>Guthrie</b> [1] - 1733:21</p> <p><b>guy</b> [2] - 1832:12, 1930:12</p>
<b>G</b>				
<p><b>gain</b> [1] - 1823:18</p> <p><b>GARY</b> [1] - 1703:13</p> <p><b>gas</b> [12] - 1790:12, 1815:2, 1837:3, 1839:25, 1851:6, 1852:17, 1869:16, 1898:24, 1933:20, 1935:4, 1937:20, 1948:7</p> <p><b>Gas</b> [1] - 1838:5</p> <p><b>gasoline</b> [7] - 1799:15, 1851:4, 1851:5, 1851:7, 1851:8, 1852:2, 1852:20</p> <p><b>gathering</b> [3] - 1831:17, 1831:18, 1930:25</p> <p><b>geared</b> [1] - 1799:6</p> <p><b>gee</b> [1] - 1818:17</p>	<p><b>geological</b> [11] - 1798:19, 1798:21, 1799:8, 1799:20, 1804:11, 1807:16, 1810:24, 1811:24, 1812:1, 1817:22, 1819:1</p> <p><b>geologist</b> [8] - 1798:2, 1798:6, 1798:20, 1800:4, 1804:10, 1804:11, 1814:6, 1814:8</p> <p><b>geologists</b> [1] - 1819:3</p> <p><b>geology</b> [11] - 1798:12, 1798:13, 1798:25, 1799:21, 1800:12, 1800:13, 1802:23, 1802:25, 1813:10, 1813:15, 1819:19</p> <p><b>geotechnical</b> [1] - 1819:19</p>	<p><b>goldtooth</b> [2] - 1833:19, 1837:25</p> <p><b>Goldtooth</b> [12] - 1706:11, 1825:20, 1827:23, 1828:3, 1828:14, 1830:3, 1830:15, 1838:21, 1848:13, 1849:7, 1850:11, 1851:25</p> <p><b>GOLDTOOTH</b> [1] - 1711:11</p> <p><b>Goldtooth's</b> [3] - 1826:4, 1826:14, 1827:21</p> <p><b>Google</b> [1] - 1929:7</p> <p><b>gorgeous</b> [1] - 1816:2</p> <p><b>GOULET</b> [1] - 1716:3</p> <p><b>Goulet</b> [1] - 1707:5</p> <p><b>governing</b> [3] - 1911:10, 1963:21, 1969:3</p> <p><b>government</b> [14] - 1778:18, 1838:5, 1839:25, 1843:4, 1856:4, 1944:18, 1944:22, 1944:23, 1956:1, 1959:13, 1963:22, 1967:21, 1969:4, 1971:18</p> <p><b>Government</b> [1] - 1837:7</p> <p><b>governmental</b> [4] -</p>	<p>1745:16, 1746:9, 1774:10, 1774:24</p> <p><b>governments</b> [4] - 1835:6, 1845:11, 1944:11</p> <p><b>grab</b> [1] - 1811:6</p> <p><b>grabbed</b> [1] - 1923:19</p> <p><b>grade</b> [1] - 1878:23</p> <p><b>gradient</b> [2] - 1808:22, 1809:1</p> <p><b>graduate</b> [1] - 1798:18</p> <p><b>Grant</b> [1] - 1821:8</p> <p><b>granted</b> [4] - 1937:19, 1949:3, 1982:20, 1986:13</p> <p><b>Granting</b> [1] - 1707:14</p> <p><b>grass</b> [1] - 1829:16</p> <p><b>grasslands</b> [6] - 1743:21, 1744:10, 1755:6, 1765:23, 1768:3, 1778:21</p> <p><b>grassroots</b> [2] - 1834:8</p> <p><b>gravel</b> [4] - 1806:18, 1806:19, 1823:23, 1845:22</p> <p><b>gravels</b> [2] - 1807:23, 1823:15</p> <p><b>Great</b> [3] - 1770:5, 1770:15, 1770:16</p> <p><b>great</b> [7] - 1798:18, 1802:19, 1803:4, 1815:24, 1843:14, 1874:9, 1978:9</p> <p><b>greater</b> [8] - 1730:22, 1748:11, 1748:14, 1765:25, 1816:11, 1823:25, 1979:15</p> <p><b>greatly</b> [2] - 1750:2, 1930:7</p> <p><b>green</b> [3] - 1943:18, 1948:3, 1951:11</p> <p><b>Greg</b> [1] - 1703:18</p> <p><b>grid</b> [1] - 1935:3</p> <p><b>gross</b> [1] - 1976:15</p> <p><b>ground</b> [8] - 1729:2, 1819:10, 1835:9, 1835:15, 1847:1, 1882:19, 1937:16, 1944:21</p> <p><b>grounds</b> [10] - 1735:6, 1770:1, 1867:10, 1872:8, 1926:2, 1927:7, 1952:25, 1957:7, 1968:10, 1969:10</p> <p><b>groundwater</b> [20] - 1750:18, 1788:1, 1798:25, 1799:21, 1799:25, 1807:7,</p>	<p>1807:8, 1807:9, 1807:15, 1807:21, 1808:10, 1808:13, 1808:19, 1808:21, 1808:22, 1809:10, 1810:5, 1813:10, 1813:15, 1823:8</p> <p><b>Group</b> [5] - 1722:23, 1723:1, 1723:4, 1727:25, 1731:23</p> <p><b>group</b> [10] - 1728:3, 1728:4, 1743:5, 1771:7, 1829:8, 1884:10, 1939:7, 1939:14, 1939:16, 1940:2</p> <p><b>grouse</b> [1] - 1979:16</p> <p><b>grow</b> [1] - 1886:13</p> <p><b>growing</b> [4] - 1883:25, 1912:6, 1912:8, 1912:10</p> <p><b>growth</b> [4] - 1729:4, 1824:16, 1934:25, 1951:6</p> <p><b>Growth</b> [1] - 1708:9</p> <p><b>guarantee</b> [1] - 1983:15</p> <p><b>guarantees</b> [2] - 1974:16, 1974:23</p> <p><b>guess</b> [14] - 1722:11, 1774:23, 1789:19, 1833:13, 1835:4, 1836:24, 1836:25, 1850:18, 1854:4, 1857:21, 1867:11, 1867:17, 1958:22, 1962:25</p> <p><b>guns</b> [1] - 1837:11</p> <p><b>Gustafson</b> [1] - 1703:19</p> <p><b>Guthrie</b> [1] - 1733:21</p> <p><b>guy</b> [2] - 1832:12, 1930:12</p>
<b>H</b>				
<p><b>habitat</b> [38] - 1742:4, 1742:7, 1742:13, 1742:15, 1742:25, 1743:3, 1743:23, 1745:19, 1745:23, 1745:24, 1746:3, 1746:5, 1746:12, 1746:14, 1754:9, 1765:21, 1766:2, 1766:16, 1766:22, 1767:1, 1767:4, 1768:4, 1771:22, 1772:20, 1774:16, 1774:17, 1774:20,</p>				

<p>1779:2, 1779:10, 1779:12, 1780:4, 1780:21, 1784:4, 1784:5, 1784:7, 1784:10, 1784:13, 1784:16</p> <p><b>habitats</b> [1] - 1778:17</p> <p><b>half</b> [4] - 1753:15, 1933:5, 1933:6, 1934:22</p> <p><b>hand</b> [4] - 1761:20, 1769:14, 1885:7, 1922:9</p> <p><b>handed</b> [6] - 1838:1, 1865:16, 1936:9, 1958:4, 1958:19, 1967:9</p> <p><b>handle</b> [1] - 1893:1</p> <p><b>handled</b> [1] - 1912:19</p> <p><b>handling</b> [2] - 1888:24, 1901:13</p> <p><b>hands</b> [1] - 1931:15</p> <p><b>handwritten</b> [1] - 1966:6</p> <p><b>Hanson</b> [35] - 1709:8, 1709:13, 1709:18, 1710:7, 1710:14, 1710:22, 1711:8, 1711:18, 1712:6, 1712:11, 1712:18, 1713:7, 1713:14, 1714:6, 1714:18, 1715:4, 1715:9, 1716:5, 1716:10, 1716:15, 1716:19, 1717:5, 1718:8, 1718:14, 1718:21, 1719:14, 1719:19, 1953:22, 1954:7, 1961:15, 1966:16, 1966:18, 1966:20, 1969:17, 1970:23</p> <p><b>HANSON</b> [24] - 1703:13, 1741:7, 1777:4, 1822:8, 1822:10, 1822:15, 1824:13, 1825:2, 1825:9, 1841:16, 1898:1, 1919:8, 1919:10, 1919:15, 1919:19, 1919:25, 1920:6, 1920:14, 1922:23, 1953:14, 1964:17, 1965:12, 1966:5, 1966:8</p> <p><b>Hanson's</b> [6] - 1959:12, 1959:21, 1960:21, 1961:18, 1962:17, 1967:17</p> <p><b>happy</b> [2] - 1736:21,</p>	<p>1977:18</p> <p><b>hard</b> [4] - 1845:22, 1865:21, 1937:17, 1962:9</p> <p><b>Harrisburg</b> [9] - 1705:23, 1944:13, 1946:10, 1948:11, 1952:2, 1952:20, 1953:7, 1956:2, 1965:16</p> <p><b>Hartford</b> [7] - 1705:23, 1944:13, 1946:11, 1948:10, 1952:23, 1956:2, 1960:14</p> <p><b>hats</b> [1] - 1828:24</p> <p><b>HCA</b> [11] - 1745:22, 1746:7, 1755:24, 1756:1, 1774:22, 1775:20, 1778:3, 1778:12, 1778:14, 1783:6, 1783:19</p> <p><b>HCAs</b> [5] - 1745:11, 1755:22, 1773:22, 1783:24</p> <p><b>HDD</b> [2] - 1705:23, 1770:22</p> <p><b>head</b> [4] - 1793:23, 1794:9, 1794:22, 1794:24</p> <p><b>heading</b> [3] - 1760:15, 1761:18, 1769:15</p> <p><b>health</b> [7] - 1731:24, 1732:1, 1733:16, 1836:9, 1836:10, 1836:22, 1848:11</p> <p><b>hear</b> [12] - 1729:10, 1796:1, 1803:7, 1803:9, 1859:23, 1877:25, 1886:23, 1910:6, 1932:25, 1934:1, 1934:18, 1963:15</p> <p><b>heard</b> [23] - 1725:7, 1760:5, 1763:13, 1802:2, 1802:16, 1803:21, 1805:14, 1810:12, 1827:4, 1844:5, 1849:15, 1855:20, 1872:25, 1877:24, 1878:3, 1880:2, 1881:1, 1890:25, 1894:5, 1927:13, 1932:10, 1941:15, 1970:16</p> <p><b>Hearing</b> [2] - 1703:7, 1862:25</p> <p><b>hearing</b> [24] - 1730:10, 1733:13, 1747:16, 1747:19, 1806:1, 1840:16, 1861:25,</p>	<p>1865:8, 1867:2, 1910:11, 1910:12, 1942:11, 1942:21, 1943:10, 1957:24, 1959:12, 1959:23, 1961:13, 1965:9, 1971:5, 1975:12, 1981:4, 1983:8, 1988:3</p> <p><b>hearings</b> [2] - 1804:2, 1858:13</p> <p><b>hearsay</b> [32] - 1735:7, 1735:25, 1736:1, 1871:3, 1872:7, 1947:4, 1948:16, 1948:22, 1948:25, 1949:1, 1949:5, 1949:15, 1949:19, 1950:1, 1950:10, 1950:15, 1952:25, 1953:25, 1954:2, 1954:4, 1954:16, 1954:18, 1954:21, 1954:23, 1954:24, 1955:16, 1955:18, 1973:2, 1973:4, 1973:14, 1973:17, 1973:21</p> <p><b>heart</b> [1] - 1812:9</p> <p><b>heated</b> [1] - 1898:24</p> <p><b>heavens</b> [1] - 1814:16</p> <p><b>heavily</b> [2] - 1743:24, 1820:21</p> <p><b>held</b> [1] - 1704:13</p> <p><b>help</b> [15] - 1723:10, 1791:4, 1813:10, 1832:24, 1862:12, 1866:3, 1875:19, 1877:18, 1893:16, 1902:2, 1911:6, 1917:5, 1922:23, 1937:24, 1986:18</p> <p><b>helpful</b> [5] - 1794:23, 1840:7, 1916:21, 1923:11, 1959:9</p> <p><b>helping</b> [4] - 1866:9, 1869:6, 1930:12, 1968:16</p> <p><b>helps</b> [2] - 1853:17, 1978:13</p> <p><b>herbicides</b> [2] - 1895:13, 1896:1</p> <p><b>herd</b> [1] - 1894:25</p> <p><b>HEREBY</b> [1] - 1989:8</p> <p><b>hero</b> [1] - 1829:11</p> <p><b>herself</b> [1] - 1942:2</p> <p><b>hesitant</b> [1] - 1845:11</p> <p><b>hi</b> [1] - 1782:5</p> <p><b>Hi</b> [1] - 1938:23</p> <p><b>hibernaculum</b> [2] -</p>	<p>1741:11, 1741:12</p> <p><b>hibernate</b> [1] - 1741:13</p> <p><b>high</b> [7] - 1732:20, 1745:4, 1753:15, 1756:11, 1756:13, 1756:16, 1876:4</p> <p><b>higher</b> [4] - 1752:7, 1764:20, 1836:22, 1847:10</p> <p><b>highest</b> [3] - 1758:12, 1855:11, 1875:25</p> <p><b>highly</b> [4] - 1837:15, 1909:23, 1910:5, 1972:11</p> <p><b>Highmore</b> [1] - 1807:4</p> <p><b>Hills</b> [1] - 1803:19</p> <p><b>hire</b> [1] - 1790:23</p> <p><b>hired</b> [1] - 1945:24</p> <p><b>hires</b> [4] - 1790:19, 1790:24, 1791:3, 1791:20</p> <p><b>Historical</b> [1] - 1705:8</p> <p><b>history</b> [4] - 1799:8, 1802:8, 1845:8, 1846:8</p> <p><b>hitting</b> [1] - 1807:10</p> <p><b>Hohn</b> [4] - 1707:6, 1707:19, 1707:20, 1907:19</p> <p><b>HOHN</b> [2] - 1716:16, 1718:6</p> <p><b>hold</b> [3] - 1838:20, 1978:3, 1982:13</p> <p><b>hole</b> [5] - 1813:22, 1814:4, 1822:13, 1825:5, 1864:9</p> <p><b>holes</b> [9] - 1804:12, 1804:23, 1813:6, 1813:7, 1813:17, 1814:12, 1814:15, 1814:17, 1815:5</p> <p><b>home</b> [5] - 1814:2, 1814:5, 1936:3, 1937:7, 1937:8</p> <p><b>Homeland</b> [1] - 1971:16</p> <p><b>homes</b> [4] - 1915:14, 1915:15, 1915:17, 1915:24</p> <p><b>honored</b> [2] - 1827:6, 1827:7</p> <p><b>Hoogestraat</b> [7] - 1707:6, 1707:7, 1860:16, 1861:13, 1908:11, 1908:13, 1908:18</p> <p><b>HOOGESTRAAT</b> [3] - 1717:6, 1861:15, 1862:20</p>	<p><b>hook</b> [1] - 1891:16</p> <p><b>hope</b> [3] - 1932:22, 1937:23, 1937:24</p> <p><b>hopefully</b> [1] - 1862:18</p> <p><b>horizontal</b> [2] - 1894:12, 1980:24</p> <p><b>hose</b> [1] - 1743:16</p> <p><b>host</b> [1] - 1986:12</p> <p><b>HOUDYSHELL</b> [1] - 1713:11</p> <p><b>Houdyshell</b> [1] - 1706:17</p> <p><b>hours</b> [1] - 1791:6</p> <p><b>house</b> [7] - 1844:18, 1918:13, 1922:6, 1922:8, 1922:15, 1922:19, 1922:21</p> <p><b>Houston</b> [3] - 1901:9, 1937:20, 1972:20</p> <p><b>Howard</b> [7] - 1705:11, 1705:14, 1780:8, 1833:18, 1833:21, 1916:3, 1946:5</p> <p><b>HOWARD</b> [2] - 1710:11, 1720:3</p> <p><b>HP09-001</b> [1] - 1926:8</p> <p><b>HP14-002</b> [1] - 1703:4</p> <p><b>huge</b> [1] - 1878:22</p> <p><b>Hughes</b> [1] - 1838:3</p> <p><b>hulked</b> [1] - 1828:8</p> <p><b>human</b> [6] - 1766:23, 1766:25, 1784:9, 1807:21, 1808:6, 1836:1</p> <p><b>hundreds</b> [1] - 1835:12</p> <p><b>hurdles</b> [1] - 1958:22</p> <p><b>hydrologist</b> [2] - 1776:18, 1798:20</p> <p><b>hydrology</b> [1] - 1776:24</p> <p><b>hydrostatic</b> [11] - 1743:9, 1743:13, 1749:3, 1749:21, 1750:3, 1750:22, 1751:15, 1751:20, 1776:25, 1778:16, 1780:25</p>	<p><b>I</b></p>	<p><b>I-29</b> [1] - 1952:4</p> <p><b>I1</b> [1] - 1707:3</p> <p><b>I10</b> [1] - 1707:7</p> <p><b>I11</b> [1] - 1707:8</p> <p><b>I12</b> [1] - 1707:8</p> <p><b>I13</b> [1] - 1707:9</p> <p><b>I16</b> [1] - 1707:9</p>
---	---	--	---	---	-----------------	--



<p><b>I17</b> [1] - 1707:10  <b>I18</b> [1] - 1707:10  <b>I2</b> [1] - 1707:3  <b>I20</b> [1] - 1707:11  <b>I21</b> [1] - 1707:11  <b>I22</b> [1] - 1707:12  <b>I23</b> [1] - 1707:12  <b>I24</b> [1] - 1707:13  <b>I25</b> [1] - 1707:13  <b>I26</b> [1] - 1707:14  <b>I27</b> [1] - 1707:16  <b>I3</b> [1] - 1707:4  <b>I30</b> [1] - 1707:17  <b>I31</b> [1] - 1707:17  <b>I32</b> [1] - 1707:18  <b>I4</b> [1] - 1707:5  <b>I43</b> [1] - 1707:19  <b>I44</b> [1] - 1707:19  <b>I45</b> [1] - 1707:20  <b>I45L</b> [1] - 1707:20  <b>I46J</b> [1] - 1707:20  <b>I47P</b> [1] - 1707:21  <b>I5</b> [1] - 1707:5  <b>I50</b> [1] - 1707:21  <b>I7</b> [1] - 1707:6  <b>I8</b> [1] - 1707:6  <b>I9</b> [1] - 1707:7  <b>idea</b> [6] - 1824:8,  1859:16, 1859:18,  1860:7, 1875:1,  1892:21  <b>identical</b> [6] -  1749:11, 1958:5,  1958:8, 1958:10,  1958:20, 1958:25  <b>identification</b> [5] -  1724:18, 1727:21,  1759:23, 1800:15,  1900:24  <b>identified</b> [19] -  1726:21, 1727:2,  1751:15, 1752:15,  1770:17, 1778:22,  1783:10, 1806:4,  1811:3, 1820:17,  1865:5, 1908:23,  1923:10, 1926:3,  1951:6, 1965:25,  1966:20, 1978:22,  1980:13  <b>identifies</b> [2] -  1760:22, 1859:7  <b>identify</b> [10] - 1819:16,  1829:24, 1836:16,  1837:25, 1853:11,  1853:18, 1853:20,  1863:12, 1979:5,  1979:15  <b>identifying</b> [3] -  1739:7, 1751:19,</p>	<p>1783:24  <b>IEN</b> [11] - 1706:2,  1711:2, 1733:8,  1830:3, 1834:20,  1834:21, 1838:7,  1844:21, 1858:13,  1927:10, 1943:24  <b>II</b> [1] - 1705:17  <b>III</b> [6] - 1705:16,  1705:17, 1705:18,  1705:18, 1705:19,  1705:20  <b>ILES</b> [1] - 1714:16  <b>iles</b> [8] - 1706:16,  1797:14, 1797:18,  1797:23, 1819:25,  1821:25, 1822:8,  1862:4  <b>ill</b> [1] - 1921:6  <b>Illinois</b> [3] - 1795:13,  1869:9, 1878:9  <b>illogical</b> [1] - 1942:9  <b>imagine</b> [2] - 1775:18,  1777:11  <b>immediately</b> [1] -  1936:4  <b>immense</b> [1] - 1837:8  <b>immensely</b> [1] -  1902:3  <b>impact</b> [18] - 1725:15,  1738:4, 1738:11,  1739:21, 1740:6,  1743:19, 1744:8,  1748:20, 1776:15,  1795:16, 1804:17,  1811:21, 1816:24,  1843:11, 1844:19,  1847:4, 1875:2,  1897:6  <b>Impact</b> [9] - 1738:13,  1738:15, 1843:1,  1843:2, 1843:5,  1855:6, 1873:24,  1889:2, 1889:22  <b>impacted</b> [4] -  1740:23, 1743:24,  1837:3, 1915:24  <b>impacting</b> [1] - 1780:4  <b>impacts</b> [19] -  1740:17, 1752:1,  1752:3, 1752:13,  1752:16, 1770:22,  1779:24, 1789:12,  1833:1, 1836:2,  1836:8, 1855:10,  1874:7, 1876:22,  1885:10, 1938:4,  1951:11, 1982:4  <b>impair</b> [2] - 1733:16,  1848:11</p>	<p><b>impaired</b> [1] - 1781:2  <b>impasse</b> [2] - 1910:19,  1910:23  <b>impeachment</b> [2] -  1986:6, 1987:12  <b>imperative</b> [1] -  1965:7  <b>implementing</b> [4] -  1764:2, 1844:6,  1844:8, 1874:14  <b>implication</b> [1] -  1803:21  <b>implied</b> [1] - 1802:18  <b>import</b> [2] - 1933:3,  1933:7  <b>importance</b> [5] -  1856:13, 1856:17,  1856:21, 1884:1,  1886:4  <b>important</b> [15] -  1823:7, 1824:11,  1824:24, 1876:10,  1879:16, 1880:19,  1881:2, 1886:7,  1886:10, 1931:14,  1955:3, 1955:8,  1960:2, 1964:9,  1968:14  <b>importantly</b> [1] -  1987:19  <b>imposed</b> [3] - 1796:3,  1926:7, 1927:15  <b>imposing</b> [2] -  1884:19, 1885:3  <b>impossible</b> [1] -  1891:2  <b>impression</b> [1] -  1766:20  <b>improper</b> [3] -  1733:19, 1734:6,  1909:23  <b>IN</b> [1] - 1703:4  <b>in-depth</b> [1] - 1802:22  <b>in-house</b> [1] - 1844:18  <b>inaccuracy</b> [1] -  1889:13  <b>inadequate</b> [3] -  1779:5, 1779:6,  1984:21  <b>inappropriate</b> [2] -  1736:25, 1941:14  <b>inception</b> [1] - 1802:9  <b>inches</b> [12] - 1875:20,  1875:22, 1875:23,  1875:24, 1876:25,  1877:1, 1877:2,  1877:4, 1877:7,  1890:13, 1899:20,  1899:21  <b>incident</b> [2] - 1732:2,</p>	<p>1732:6  <b>incidental</b> [1] -  1787:25  <b>inclined</b> [1] - 1958:8  <b>include</b> [8] - 1730:7,  1774:17, 1820:16,  1916:6, 1923:1,  1964:3, 1964:4,  1982:19  <b>included</b> [11] -  1726:11, 1726:12,  1730:6, 1745:3,  1796:6, 1798:24,  1840:18, 1913:9,  1913:11, 1922:2,  1975:21  <b>includes</b> [1] - 1895:14  <b>including</b> [7] -  1722:19, 1739:20,  1790:14, 1885:14,  1895:13, 1964:12,  1965:15  <b>inclusion</b> [1] - 1872:7  <b>incomplete</b> [3] -  1738:5, 1738:6,  1779:6  <b>incorporate</b> [1] -  1972:25  <b>incorporated</b> [1] -  1888:12  <b>incorrect</b> [3] -  1855:18, 1855:24,  1890:24  <b>increase</b> [2] - 1891:24,  1898:19  <b>increased</b> [1] -  1836:10  <b>increases</b> [3] -  1912:12, 1931:20,  1931:21  <b>increasing</b> [1] -  1836:21  <b>incredible</b> [1] -  1971:19  <b>incredibly</b> [2] -  1971:14, 1972:11  <b>incumbent</b> [2] -  1754:20, 1769:5  <b>incurred</b> [1] - 1920:9  <b>Ind</b> [1] - 1708:17  <b>indeed</b> [4] - 1802:6,  1811:25, 1816:24,  1907:2  <b>independence</b> [1] -  1849:20  <b>independent</b> [2] -  1843:20, 1893:19  <b>independently</b> [1] -  1763:24  <b>Indian</b> [3] - 1777:25,</p>	<p>1837:12, 1845:21 22  <b>indicate</b> [3] - 1735:19,  1771:19, 1907:5  <b>indicated</b> [5] - 1794:6,  1811:23, 1878:4,  1929:18, 1939:4  <b>indicates</b> [3] -  1771:21, 1943:18,  1981:10  <b>indicating</b> [1] -  1764:18  <b>indication</b> [2] -  1938:1, 1952:1  <b>indicator</b> [1] - 1917:1  <b>indigenous</b> [6] -  1828:20, 1834:9,  1834:25, 1835:2,  1835:5, 1837:8  <b>Indigenous</b> [8] -  1704:4, 1773:12,  1828:15, 1828:25,  1834:5, 1834:7,  1883:15, 1969:15  <b>indirectly</b> [1] - 1780:6  <b>individual</b> [5] -  1874:11, 1912:20,  1913:4, 1937:10,  1940:5  <b>individual's</b> [1] -  1936:1  <b>individually</b> [4] -  1904:8, 1912:19,  1947:1, 1949:16  <b>individuals</b> [4] -  1851:1, 1946:12,  1946:13, 1956:7  <b>industry</b> [12] -  1722:17, 1788:24,  1833:12, 1834:12,  1834:23, 1835:7,  1856:17, 1857:15,  1869:16, 1879:14,  1880:24, 1885:12  <b>infer</b> [1] - 1733:20  <b>infestations</b> [3] -  1726:21, 1727:1,  1727:4  <b>infiltrate</b> [1] - 1807:24  <b>infiltrates</b> [1] -  1807:12  <b>inflicted</b> [1] - 1836:23  <b>informal</b> [1] - 1831:12  <b>Information</b> [1] -  1855:21  <b>information</b> [67] -  1725:7, 1730:11,  1739:11, 1740:11,  1757:3, 1762:7,  1764:18, 1777:18,  1801:8, 1810:23,</p>
---	--	---	--	---

<p>1811:12, 1812:24, 1821:20, 1832:22, 1832:24, 1833:20, 1842:3, 1842:9, 1842:12, 1843:11, 1844:25, 1846:9, 1849:10, 1855:17, 1889:4, 1889:9, 1897:23, 1902:9, 1902:13, 1907:22, 1908:16, 1910:11, 1911:7, 1911:10, 1917:8, 1943:7, 1943:8, 1944:4, 1945:21, 1955:24, 1956:13, 1956:18, 1956:22, 1961:2, 1964:3, 1964:15, 1964:23, 1965:1, 1965:8, 1965:17, 1967:24, 1968:6, 1968:22, 1969:5, 1969:24, 1970:20, 1970:25, 1971:7, 1972:24, 1975:23, 1976:4, 1976:10, 1983:7, 1986:1, 1986:2</p> <p><b>informed</b> [2] - 1968:4, 1973:12</p> <p><b>Infrastructure</b> [2] - 1705:21, 1705:22</p> <p><b>infringing</b> [1] - 1946:16</p> <p><b>inhabitants</b> [2] - 1848:11, 1848:12</p> <p><b>initial</b> [1] - 1911:4</p> <p><b>Injunction</b> [1] - 1707:15</p> <p><b>input</b> [1] - 1750:24</p> <p><b>inputs</b> [1] - 1877:19</p> <p><b>inquire</b> [2] - 1903:18, 1938:18</p> <p><b>inquiries</b> [1] - 1753:20</p> <p><b>inquiring</b> [1] - 1981:15</p> <p><b>insects</b> [1] - 1883:20</p> <p><b>insert</b> [1] - 1962:23</p> <p><b>inside</b> [2] - 1933:17, 1935:5</p> <p><b>inspection</b> [1] - 1796:7</p> <p><b>inspector</b> [5] - 1730:20, 1731:3, 1731:6, 1790:2, 1791:1</p> <p><b>inspectors</b> [5] - 1790:20, 1893:10, 1902:10, 1902:17</p> <p><b>installation</b> [1] - 1950:19</p>	<p><b>installed</b> [3] - 1799:24, 1880:16, 1889:20</p> <p><b>installing</b> [1] - 1882:17</p> <p><b>instance</b> [9] - 1745:19, 1749:18, 1755:22, 1788:19, 1796:5, 1818:1, 1821:7, 1875:4, 1897:3</p> <p><b>instances</b> [6] - 1748:12, 1876:21, 1878:12, 1878:17, 1910:22, 1948:16</p> <p><b>instead</b> [2] - 1848:5, 1864:12</p> <p><b>institute</b> [3] - 1838:2, 1839:20, 1840:1</p> <p><b>instructions</b> [2] - 1725:2, 1890:7</p> <p><b>instructive</b> [1] - 1927:25</p> <p><b>insult</b> [1] - 1846:13</p> <p><b>insulted</b> [1] - 1846:12</p> <p><b>intake</b> [1] - 1782:21</p> <p><b>intakes</b> [1] - 1777:20</p> <p><b>integral</b> [1] - 1882:16</p> <p><b>integrated</b> [3] - 1895:10, 1895:12, 1895:22</p> <p><b>integrity</b> [1] - 1763:16</p> <p><b>intend</b> [2] - 1863:24, 1987:19</p> <p><b>intended</b> [3] - 1874:24, 1875:1, 1950:6</p> <p><b>intending</b> [1] - 1895:7</p> <p><b>intends</b> [1] - 1892:25</p> <p><b>Intensive</b> [5] - 1705:16, 1705:17, 1705:18, 1705:19, 1705:20</p> <p><b>intent</b> [2] - 1929:20, 1976:16</p> <p><b>intention</b> [6] - 1833:17, 1846:5, 1846:6, 1864:17, 1864:24, 1929:24</p> <p><b>intentionally</b> [1] - 1904:17</p> <p><b>intentions</b> [1] - 1976:17</p> <p><b>interaction</b> [2] - 1818:20, 1939:24</p> <p><b>interactive</b> [3] - 1813:24, 1814:3, 1815:5</p> <p><b>interest</b> [5] - 1851:10, 1851:24, 1858:12,</p>	<p>1867:12, 1976:15</p> <p><b>interested</b> [1] - 1945:5</p> <p><b>interests</b> [1] - 1867:4</p> <p><b>interfere</b> [1] - 1969:1</p> <p><b>interference</b> [1] - 1845:9</p> <p><b>interferes</b> [1] - 1757:23</p> <p><b>intermixed</b> [1] - 1876:4</p> <p><b>international</b> [5] - 1761:13, 1831:8, 1832:11, 1832:13, 1834:20</p> <p><b>internet</b> [1] - 1933:9</p> <p><b>interpret</b> [1] - 1844:18</p> <p><b>interpretation</b> [4] - 1785:11, 1808:5, 1843:15, 1843:23</p> <p><b>Interrogatories</b> [3] - 1774:2, 1774:7, 1910:12</p> <p><b>interrupt</b> [2] - 1788:20, 1893:20</p> <p><b>interrupted</b> [1] - 1765:12</p> <p><b>INTERVENORS</b> [5] - 1707:2, 1715:6, 1716:2, 1717:2, 1718:2</p> <p><b>Intervenor</b> [3] - 1704:3, 1736:24, 1843:22</p> <p><b>intimate</b> [1] - 1902:14</p> <p><b>introduce</b> [3] - 1830:9, 1834:2, 1838:12</p> <p><b>introduction</b> [2] - 1733:9, 1858:17</p> <p><b>introductions</b> [1] - 1849:9</p> <p><b>invaluable</b> [5] - 1889:8, 1889:15, 1889:17, 1889:18, 1889:19</p> <p><b>investigate</b> [5] - 1732:3, 1732:7, 1799:12, 1813:9, 1813:14</p> <p><b>investigating</b> [1] - 1799:2</p> <p><b>investigation</b> [1] - 1928:14</p> <p><b>investigations</b> [2] - 1801:22, 1802:11</p> <p><b>investments</b> [1] - 1851:14</p> <p><b>Invoice</b> [1] - 1708:11</p> <p><b>involved</b> [15] - 1723:3, 1723:12, 1789:25, 1800:6, 1802:18,</p>	<p>1804:2, 1844:21, 1883:3, 1885:14, 1888:4, 1889:1, 1890:16, 1908:13, 1961:11, 1984:4</p> <p><b>involvement</b> [1] - 1890:23</p> <p><b>Iowa</b> [5] - 1785:7, 1798:12, 1798:14, 1803:16, 1847:14</p> <p><b>irrelevant</b> [3] - 1762:17, 1887:3, 1982:1</p> <p><b>irrigation</b> [4] - 1886:9, 1886:10, 1886:11, 1886:13</p> <p><b>Island</b> [1] - 1834:10</p> <p><b>isotopes</b> [2] - 1823:16</p> <p><b>isotopic</b> [1] - 1823:17</p> <p><b>issue</b> [12] - 1734:6, 1742:7, 1747:19, 1804:2, 1861:13, 1862:22, 1878:22, 1894:23, 1896:6, 1922:14, 1961:24, 1982:6</p> <p><b>issued</b> [10] - 1738:7, 1747:20, 1914:18, 1914:19, 1974:16, 1974:22, 1974:23, 1980:18, 1984:16, 1984:24</p> <p><b>issues</b> [23] - 1733:13, 1800:1, 1805:5, 1812:11, 1834:13, 1834:21, 1834:22, 1854:16, 1860:18, 1865:7, 1867:3, 1879:21, 1879:24, 1880:18, 1887:13, 1888:17, 1888:20, 1893:12, 1893:15, 1894:20, 1896:4, 1900:14, 1955:15</p> <p><b>italics</b> [1] - 1769:18</p> <p><b>item</b> [1] - 1978:15</p> <p><b>items</b> [4] - 1845:5, 1845:6, 1965:15</p> <p><b>itself</b> [8] - 1733:20, 1796:25, 1842:18, 1853:12, 1861:4, 1861:7, 1866:5, 1885:12</p> <p><b>IV</b> [1] - 1705:19</p>	<p>1946:1</p> <p><b>James</b> [1] - 1705:23</p> <p><b>JANICE</b> [1] - 1715:22</p> <p><b>JASON</b> [1] - 1715:3</p> <p><b>JD</b> [1] - 1722:7</p> <p><b>Jennifer</b> [2] - 1704:6, 1911:24</p> <p><b>Jewel</b> [2] - 1803:19, 1815:15</p> <p><b>jittery</b> [1] - 1828:10</p> <p><b>job</b> [9] - 1721:13, 1735:20, 1798:5, 1823:11, 1829:3, 1832:24, 1873:2, 1873:3</p> <p><b>Joey</b> [3] - 1864:19, 1893:21, 1951:23</p> <p><b>JOEY</b> [2] - 1709:3, 1719:15</p> <p><b>join</b> [8] - 1734:20, 1734:23, 1927:5, 1927:6, 1941:20, 1947:5, 1960:22, 1969:15</p> <p><b>joins</b> [3] - 1926:24, 1927:10, 1969:12</p> <p><b>joint</b> [4] - 1945:2, 1945:17, 1945:18, 1945:23</p> <p><b>journal</b> [1] - 1887:23</p> <p><b>Joy</b> [3] - 1707:6, 1707:19, 1707:20</p> <p><b>JOY</b> [1] - 1716:16</p> <p><b>judge</b> [2] - 1911:12, 1914:17</p> <p><b>judgment</b> [1] - 1920:5</p> <p><b>judicial</b> [7] - 1985:19, 1985:22, 1986:11, 1986:13, 1986:18, 1986:19, 1987:1</p> <p><b>July</b> [1] - 1723:15</p> <p><b>jump</b> [3] - 1875:17, 1900:4, 1986:22</p> <p><b>June</b> [2] - 1723:13, 1979:23</p> <p><b>jurisdiction</b> [5] - 1755:11, 1762:11, 1762:17, 1762:23, 1768:10</p> <p><b>jurisdictional</b> [1] - 1769:1</p> <p><b>jurisdictions</b> [1] - 1763:20</p>
			<b>J</b>	<b>K</b>
			<p><b>JACK</b> [1] - 1710:3</p> <p><b>Jack</b> [2] - 1705:15,</p>	<p><b>Kansas</b> [4] - 1868:20, 1869:1, 1878:9, 1883:25</p>

<p><b>Kara</b> [5] - 1704:2, 1735:18, 1782:5, 1794:2, 1959:15</p> <p><b>Karen</b> [2] - 1703:17, 1704:10</p> <p><b>Karst</b> [6] - 1811:13, 1815:21, 1816:9, 1818:3, 1818:6, 1818:20</p> <p><b>karst</b> [37] - 1803:9, 1803:12, 1803:14, 1803:15, 1803:17, 1803:18, 1803:22, 1804:1, 1804:3, 1804:6, 1804:15, 1804:16, 1804:18, 1804:25, 1805:3, 1810:22, 1811:1, 1811:3, 1811:8, 1811:12, 1811:19, 1812:13, 1813:2, 1815:6, 1815:10, 1815:11, 1815:13, 1815:21, 1816:9, 1816:13, 1817:7, 1818:6, 1818:17, 1818:23, 1819:13, 1819:16</p> <p><b>Katlyn</b> [1] - 1703:19</p> <p><b>KEARNEY</b> [1] - 1711:15</p> <p><b>Kearney</b> [2] - 1703:18, 1706:14</p> <p><b>Keenesburg</b> [1] - 1868:12</p> <p><b>keep</b> [8] - 1728:22, 1767:9, 1789:4, 1792:17, 1835:10, 1846:25, 1903:23, 1904:1</p> <p><b>keeping</b> [1] - 1729:11</p> <p><b>KENT</b> [1] - 1717:16</p> <p><b>kept</b> [2] - 1788:23, 1957:1</p> <p><b>KEVIN</b> [1] - 1715:7</p> <p><b>key</b> [1] - 1893:11</p> <p><b>Keystone</b> [17] - 1723:6, 1723:14, 1828:24, 1888:9, 1890:3, 1926:7, 1926:13, 1949:22, 1949:23, 1978:21, 1979:1, 1979:4, 1979:7, 1979:10, 1979:14, 1979:20, 1980:12</p> <p><b>kill</b> [1] - 1742:1</p> <p><b>killed</b> [1] - 1976:11</p> <p><b>KIMBERLY</b> [1] - 1712:3</p>	<p><b>Kimberly</b> [3] - 1704:4, 1773:11, 1883:14</p> <p><b>kind</b> [19] - 1764:21, 1807:3, 1815:7, 1827:13, 1828:7, 1853:1, 1890:5, 1895:6, 1898:22, 1904:10, 1915:21, 1915:22, 1917:12, 1923:19, 1939:15, 1945:21, 1947:15, 1952:1, 1960:6</p> <p><b>kinds</b> [1] - 1812:22</p> <p><b>Kirschenmann</b> [1] - 1706:15</p> <p><b>KIRSCHENMANN</b> [1] - 1712:14</p> <p><b>knowing</b> [1] - 1896:8</p> <p><b>knowledge</b> [35] - 1727:14, 1731:13, 1733:3, 1733:25, 1740:2, 1742:24, 1743:2, 1744:12, 1746:21, 1747:7, 1747:9, 1747:23, 1748:2, 1757:17, 1763:1, 1765:21, 1772:15, 1772:23, 1781:17, 1801:9, 1803:12, 1803:14, 1833:11, 1833:20, 1844:10, 1871:4, 1872:8, 1887:10, 1907:17, 1917:19, 1917:21, 1923:25, 1949:20, 1954:12, 1956:21</p> <p><b>knowledgeable</b> [2] - 1733:24, 1893:12</p> <p><b>known</b> [3] - 1739:7, 1811:24, 1939:16</p> <p><b>knows</b> [4] - 1791:7, 1942:1, 1949:22, 1985:1</p> <p><b>Koenecke</b> [53] - 1704:2, 1709:3, 1709:11, 1710:3, 1710:10, 1710:18, 1710:24, 1711:5, 1711:12, 1712:16, 1713:13, 1714:5, 1714:7, 1714:9, 1715:4, 1715:8, 1715:10, 1715:11, 1715:14, 1715:19, 1716:4, 1716:9, 1716:14, 1716:19, 1716:20, 1716:23, 1717:5, 1717:9, 1717:12, 1718:5,</p>	<p>1718:7, 1718:11, 1718:13, 1718:20, 1718:23, 1719:11, 1719:15, 1719:22, 1830:16, 1831:25, 1839:7, 1859:22, 1920:24, 1924:10, 1927:12, 1935:12, 1941:19, 1941:21, 1949:14, 1954:10, 1955:10, 1961:8, 1969:16</p> <p><b>KOENECKE</b> [95] - 1821:25, 1826:9, 1826:12, 1826:17, 1826:21, 1827:17, 1830:12, 1830:15, 1830:19, 1830:25, 1831:5, 1831:9, 1831:14, 1831:20, 1832:7, 1832:15, 1833:3, 1833:13, 1837:14, 1837:20, 1838:14, 1838:19, 1839:2, 1839:8, 1839:17, 1840:2, 1840:7, 1848:1, 1850:7, 1850:10, 1851:19, 1852:10, 1856:8, 1858:9, 1858:12, 1858:16, 1859:2, 1859:10, 1859:23, 1860:2, 1860:9, 1861:24, 1863:9, 1863:23, 1900:25, 1901:4, 1903:2, 1903:4, 1906:3, 1906:11, 1909:21, 1910:14, 1911:15, 1916:10, 1919:1, 1920:19, 1921:1, 1921:18, 1923:17, 1923:23, 1924:11, 1924:13, 1925:25, 1927:13, 1936:10, 1936:12, 1936:17, 1938:10, 1938:13, 1940:4, 1941:23, 1943:20, 1949:4, 1949:8, 1949:17, 1950:17, 1953:4, 1954:11, 1955:1, 1957:3, 1959:8, 1959:11, 1961:10, 1966:23, 1967:9, 1968:7, 1969:17, 1973:7, 1974:25, 1981:2, 1984:18, 1984:21, 1984:25, 1986:7, 1986:12</p>	<p><b>koenecke</b> [1] - 1713:15</p> <p><b>Kristen</b> [3] - 1703:16, 1704:10, 1893:20</p> <p><b>Kunzelman</b> [2] - 1707:7, 1707:20</p> <p><b>KUNZELMAN</b> [1] - 1716:21</p> <p><b>KXL</b> [4] - 1977:15, 1977:19, 1978:18, 1980:9</p>	<p>1942:20</p> <p><b>landfill</b> [1] - 1806:22</p> <p><b>Landfill</b> [1] - 1806:24</p> <p><b>landowner</b> [32] - 1731:3, 1795:25, 1873:7, 1873:8, 1873:12, 1873:19, 1874:3, 1876:17, 1877:3, 1877:4, 1877:5, 1877:14, 1882:15, 1885:19, 1897:19, 1902:11, 1903:12, 1903:21, 1904:16, 1904:19, 1904:23, 1905:4, 1912:10, 1912:22, 1913:8, 1917:20, 1919:20, 1920:8, 1929:22, 1938:24, 1939:24</p> <p><b>landowner's</b> [2] - 1912:20, 1941:7</p> <p><b>landowners</b> [41] - 1829:16, 1833:8, 1837:11, 1837:12, 1853:11, 1853:12, 1873:10, 1874:12, 1874:15, 1874:24, 1876:18, 1876:20, 1877:16, 1878:3, 1885:14, 1886:20, 1886:21, 1890:22, 1890:25, 1896:11, 1896:25, 1897:12, 1897:23, 1902:16, 1903:17, 1903:24, 1905:1, 1908:25, 1909:4, 1909:5, 1909:14, 1910:18, 1910:22, 1911:5, 1915:12, 1916:5, 1939:24, 1940:23, 1941:10</p> <p><b>Lands</b> [1] - 1708:18</p> <p><b>lands</b> [5] - 1756:17, 1829:17, 1833:2, 1834:14, 1843:17</p> <p><b>language</b> [5] - 1726:11, 1735:4, 1735:8, 1828:22, 1828:23</p> <p><b>large</b> [12] - 1726:20, 1727:1, 1727:4, 1732:4, 1744:5, 1765:23, 1766:15, 1816:22, 1824:7, 1847:12, 1964:20</p> <p><b>largely</b> [2] - 1766:21, 1809:8</p> <p><b>larger</b> [3] - 1816:19,</p>	24
<b>L</b>					
			<p><b>L.P</b> [1] - 1705:5</p> <p><b>lack</b> [4] - 1766:10, 1871:3, 1872:8, 1943:12</p> <p><b>lacking</b> [1] - 1840:25</p> <p><b>lady's</b> [1] - 1937:3</p> <p><b>Lake</b> [22] - 1706:8, 1802:2, 1802:5, 1802:8, 1802:10, 1802:15, 1802:20, 1802:23, 1802:24, 1803:1, 1806:16, 1806:17, 1806:24, 1808:4, 1808:6, 1809:5, 1816:2, 1816:3, 1822:16, 1822:24, 1824:6, 1824:16</p> <p><b>lakes</b> [1] - 1847:8</p> <p><b>land</b> [54] - 1748:13, 1748:14, 1750:19, 1754:25, 1755:3, 1756:3, 1756:6, 1756:10, 1768:8, 1768:25, 1795:10, 1795:11, 1804:17, 1807:10, 1807:11, 1808:6, 1810:17, 1811:20, 1815:8, 1816:13, 1816:23, 1817:4, 1817:19, 1834:11, 1845:17, 1847:9, 1853:22, 1854:3, 1854:5, 1854:9, 1854:10, 1855:10, 1873:11, 1873:20, 1875:7, 1875:8, 1876:1, 1882:20, 1884:1, 1884:5, 1885:15, 1885:19, 1885:23, 1885:25, 1897:11, 1901:13, 1902:14, 1903:9, 1904:25, 1907:21, 1908:2, 1908:8, 1908:22,</p>		



<p>1818:14, 1831:17  <b>largest</b> [7] - 1931:8,  1934:5, 1934:11,  1934:12, 1971:11,  1971:12, 1971:13  <b>LARSON</b> [1] - 1718:16  <b>last</b> [30] - 1722:4,  1730:17, 1753:14,  1765:13, 1772:18,  1794:3, 1826:22,  1827:12, 1851:6,  1852:17, 1858:14,  1860:21, 1864:7,  1864:14, 1902:8,  1910:16, 1917:24,  1918:9, 1918:13,  1918:17, 1927:13,  1936:14, 1949:15,  1955:17, 1958:11,  1961:13, 1972:20,  1973:23  <b>lasting</b> [1] - 1838:5  <b>lasts</b> [1] - 1752:11  <b>late</b> [1] - 1770:15  <b>lateral</b> [1] - 1809:9  <b>laterally</b> [1] - 1807:14  <b>LAURIE</b> [1] - 1716:21  <b>Law</b> [1] - 1707:16  <b>law</b> [11] - 1722:7,  1722:18, 1767:13,  1767:16, 1767:17,  1767:18, 1824:22,  1844:17, 1852:11,  1950:5, 1973:19  <b>Lawrence</b> [1] -  1797:24  <b>laws</b> [8] - 1754:23,  1760:24, 1763:19,  1763:23, 1763:25,  1769:9, 1844:12,  1867:7  <b>lawsuit</b> [4] - 1919:21,  1919:24, 1920:9,  1920:11  <b>lawsuits</b> [1] - 1914:4  <b>lawyer</b> [2] - 1722:9,  1830:16  <b>lay</b> [1] - 1985:2  <b>layer</b> [1] - 1809:23  <b>laying</b> [2] - 1765:4,  1955:1  <b>laymen</b> [1] - 1845:17  <b>layperson</b> [1] -  1812:20  <b>lead</b> [4] - 1728:2,  1815:8, 1818:15,  1977:8  <b>leaders</b> [2] - 1832:14,  1846:11  <b>leading</b> [3] - 1721:18,</p>	<p>1765:2, 1952:7  <b>leak</b> [7] - 1742:20,  1742:21, 1747:24,  1748:4, 1770:22,  1802:20, 1803:2  <b>leaking</b> [1] - 1799:14  <b>leaks</b> [1] - 1799:2  <b>learn</b> [4] - 1768:2,  1768:8, 1802:13,  1950:18  <b>learned</b> [1] - 1766:15  <b>least</b> [5] - 1747:22,  1768:2, 1910:6,  1960:15, 1962:19  <b>leave</b> [4] - 1783:3,  1803:7, 1835:8,  1860:13  <b>lecture</b> [1] - 1955:10  <b>lectured</b> [1] - 1909:17  <b>led</b> [2] - 1887:18,  1910:1  <b>Ledin</b> [8] - 1706:20,  1727:23, 1727:24,  1728:3, 1729:20,  1730:5, 1749:1,  1773:17  <b>Ledin's</b> [3] - 1728:17,  1730:20, 1789:11  <b>left</b> [3] - 1721:1,  1792:22, 1792:23  <b>legal</b> [6] - 1760:16,  1760:19, 1767:15,  1854:12, 1884:20,  1927:4  <b>legally</b> [1] - 1884:4  <b>legislative</b> [1] -  1852:12  <b>Legislature</b> [2] -  1844:12, 1852:13  <b>leks</b> [1] - 1979:16  <b>length</b> [1] - 1847:18  <b>less</b> [6] - 1875:23,  1876:4, 1877:6,  1885:6, 1885:7,  1897:6  <b>lesser</b> [1] - 1927:20  <b>Letter</b> [4] - 1706:4,  1706:5, 1706:6,  1706:7  <b>letter</b> [14] - 1883:6,  1956:9, 1956:12,  1956:15, 1956:16,  1956:17, 1956:24,  1958:13, 1959:15,  1959:18, 1959:25,  1960:5, 1965:14  <b>Letters</b> [1] - 1707:14  <b>Level</b> [5] - 1705:16,  1705:17, 1705:18,  1705:19, 1705:20</p>	<p><b>level</b> [8] - 1758:12,  1819:9, 1847:12,  1848:4, 1855:11,  1857:8, 1975:15,  1977:10  <b>levels</b> [4] - 1760:23,  1781:5, 1842:22,  1967:21  <b>Lewis</b> [5] - 1708:10,  1708:10, 1722:7,  1775:7, 1816:1  <b>liability</b> [1] - 1974:23  <b>lie</b> [1] - 1802:24  <b>lies</b> [1] - 1806:24  <b>lieu</b> [1] - 1912:13  <b>life</b> [3] - 1803:15,  1804:10, 1879:18  <b>light</b> [1] - 1948:3  <b>lights</b> [1] - 1794:12  <b>likelihood</b> [1] -  1879:18  <b>likely</b> [3] - 1743:24,  1771:12, 1851:8  <b>limbs</b> [1] - 1741:24  <b>limestone</b> [4] -  1815:14, 1815:17,  1815:18, 1815:19  <b>limit</b> [2] - 1798:17,  1935:6  <b>limited</b> [1] - 1883:19  <b>limits</b> [4] - 1751:5,  1751:7, 1751:8,  1909:18  <b>Lincoln</b> [7] - 1913:23,  1917:24, 1922:9,  1936:8, 1936:22,  1944:24, 1945:1  <b>LINDA</b> [1] - 1716:3  <b>line</b> [36] - 1733:14,  1752:13, 1757:12,  1761:7, 1772:18,  1780:1, 1789:17,  1810:22, 1851:21,  1866:3, 1869:7,  1870:9, 1871:20,  1878:15, 1878:25,  1879:11, 1879:12,  1879:15, 1880:9,  1880:16, 1892:12,  1894:14, 1897:7,  1897:22, 1926:5,  1928:22, 1932:18,  1947:14, 1947:17,  1947:25, 1948:1,  1951:10, 1978:13,  1981:8  <b>linear</b> [1] - 1951:8  <b>liner</b> [1] - 1806:22  <b>lines</b> [15] - 1733:9,  1735:4, 1735:5,</p>	<p>1753:19, 1862:11,  1870:17, 1871:2,  1871:23, 1872:3,  1905:13, 1905:21,  1907:4, 1927:3,  1979:6  <b>linked</b> [1] - 1766:25  <b>Lisa</b> [3] - 1827:17,  1858:13, 1860:11  <b>list</b> [36] - 1759:6,  1761:14, 1762:9,  1762:21, 1764:22,  1767:9, 1767:13,  1767:14, 1767:25,  1785:19, 1791:14,  1796:22, 1796:23,  1814:15, 1838:24,  1839:3, 1839:14,  1840:6, 1840:22,  1841:7, 1845:25,  1858:23, 1860:22,  1861:6, 1862:12,  1906:8, 1921:11,  1922:1, 1941:6,  1948:9, 1957:8,  1957:18, 1958:18,  1962:22, 1964:5,  1978:16  <b>listed</b> [26] - 1743:9,  1743:14, 1743:20,  1749:19, 1758:18,  1758:23, 1759:1,  1759:5, 1761:12,  1763:3, 1766:6,  1767:24, 1769:6,  1774:19, 1797:5,  1806:14, 1839:15,  1839:19, 1840:22,  1870:17, 1871:23,  1872:3, 1958:17,  1979:6, 1981:13,  1983:1  <b>listen</b> [3] - 1848:19,  1891:6, 1897:11  <b>listened</b> [1] - 1949:21  <b>listening</b> [2] - 1745:5,  1936:16  <b>listing</b> [8] - 1758:21,  1764:19, 1764:20,  1796:25, 1797:1,  1957:19, 1967:20,  1967:25  <b>lists</b> [4] - 1762:12,  1908:16, 1968:24,  1969:9  <b>litany</b> [1] - 1848:1  <b>literally</b> [1] - 1975:20  <b>literatures</b> [1] -  1871:12  <b>live</b> [14] - 1734:16,</p>	<p>1767:4, 1863:5, 25  1866:6, 1884:1,  1901:25, 1936:2,  1937:4, 1937:12,  1937:19, 1940:8,  1941:25, 1942:2,  1961:25  <b>lived</b> [1] - 1939:5  <b>livelihood</b> [1] -  1880:20  <b>lives</b> [2] - 1936:3,  1939:14  <b>living</b> [1] - 1767:20  <b>LLC</b> [2] - 1703:4,  1868:10  <b>local</b> [9] - 1834:19,  1857:5, 1857:8,  1944:10, 1944:23,  1945:24, 1956:1,  1963:22, 1969:3  <b>localized</b> [1] - 1857:6  <b>locally</b> [2] - 1857:8,  1934:1  <b>locate</b> [2] - 1925:2,  1939:14  <b>located</b> [3] - 1768:9,  1939:4, 1978:3  <b>locating</b> [1] - 1903:17  <b>location</b> [7] - 1728:14,  1773:5, 1784:6,  1821:11, 1845:12,  1899:25, 1963:24  <b>locations</b> [7] -  1725:13, 1726:17,  1806:8, 1881:8,  1948:13, 1951:1,  1972:9  <b>log</b> [1] - 1815:1  <b>logging</b> [1] - 1814:12  <b>logs</b> [1] - 1814:20  <b>long-eared</b> [2] -  1739:13, 1785:2  <b>Long-Eared</b> [1] -  1741:23  <b>longevity</b> [1] -  1880:14  <b>look</b> [33] - 1780:15,  1800:1, 1807:19,  1810:3, 1812:22,  1812:23, 1818:8,  1824:11, 1834:16,  1835:22, 1847:7,  1882:23, 1893:15,  1895:23, 1899:14,  1900:2, 1913:3,  1916:24, 1922:24,  1930:20, 1930:22,  1931:5, 1931:15,  1931:17, 1934:10,  1935:2, 1935:3,</p>
--	--	--	--	---

<p>1935:4, 1960:6, 1960:12, 1971:1, 1977:18, 1978:2</p> <p><b>looked</b> [13] - 1793:9, 1800:11, 1809:2, 1810:4, 1814:13, 1818:8, 1818:15, 1899:17, 1900:8, 1929:12, 1936:18, 1939:5, 1949:11</p> <p><b>looking</b> [20] - 1808:11, 1823:5, 1824:19, 1825:1, 1835:24, 1842:6, 1848:7, 1849:20, 1850:18, 1864:22, 1873:24, 1873:25, 1874:1, 1908:16, 1921:9, 1923:18, 1929:12, 1936:5, 1936:15</p> <p><b>looks</b> [8] - 1734:2, 1763:21, 1820:12, 1829:22, 1895:12, 1917:11, 1922:6, 1922:24</p> <p><b>lose</b> [2] - 1795:25, 1877:9</p> <p><b>love</b> [1] - 1854:5</p> <p><b>low</b> [3] - 1806:21, 1808:2, 1847:5</p> <p><b>lower</b> [2] - 1806:21, 1845:21</p> <p><b>LSR</b> [1] - 1794:12</p> <p><b>lunch</b> [8] - 1827:22, 1858:7, 1859:1, 1859:15, 1859:17, 1860:1, 1860:10, 1987:24</p>	<p>1981:9, 1984:3</p> <p><b>MAHMOUD</b> [3] - 1709:3, 1719:15, 1923:21</p> <p><b>Mahmoud's</b> [3] - 1927:23, 1954:19, 1973:16</p> <p><b>mail</b> [3] - 1845:25, 1846:2, 1974:4</p> <p><b>mails</b> [1] - 1960:14</p> <p><b>Main</b> [1] - 1901:9</p> <p><b>Mainstem</b> [2] - 1706:9, 1706:10</p> <p><b>maintain</b> [3] - 1839:2, 1896:11, 1903:20</p> <p><b>maintained</b> [5] - 1726:14, 1729:16, 1810:16, 1838:7, 1889:24</p> <p><b>maintains</b> [1] - 1739:9</p> <p><b>maintenance</b> [1] - 1913:6</p> <p><b>major</b> [3] - 1775:13, 1842:16, 1843:6</p> <p><b>majority</b> [1] - 1824:1</p> <p><b>maker</b> [2] - 1843:18, 1855:9</p> <p><b>makers</b> [2] - 1843:9, 1945:10</p> <p><b>man</b> [1] - 1854:3</p> <p><b>management</b> [13] - 1729:22, 1763:16, 1781:9, 1788:4, 1788:8, 1789:14, 1789:21, 1798:24, 1823:7, 1895:4, 1895:10, 1895:12, 1895:22</p> <p><b>Management</b> [1] - 1708:3</p> <p><b>manager</b> [9] - 1721:17, 1721:20, 1721:22, 1721:25, 1723:24, 1728:1, 1901:13, 1945:25, 1946:1</p> <p><b>manages</b> [3] - 1790:19, 1790:24, 1791:20</p> <p><b>managing</b> [3] - 1721:19, 1732:4, 1823:12</p> <p><b>mandatory</b> [1] - 1791:23</p> <p><b>manifestation</b> [1] - 1817:17</p> <p><b>Mankato</b> [1] - 1722:7</p> <p><b>manner</b> [2] - 1885:9, 1902:20</p> <p><b>Map</b> [12] - 1705:21,</p>	<p>1705:22, 1708:9, 1708:13, 1708:18, 1708:18, 1811:13, 1815:21, 1816:10, 1818:3, 1818:7, 1818:20</p> <p><b>map</b> [48] - 1783:19, 1783:21, 1804:7, 1804:25, 1805:3, 1805:4, 1805:7, 1805:10, 1805:11, 1811:6, 1811:8, 1811:9, 1811:14, 1811:15, 1811:17, 1812:4, 1812:12, 1812:15, 1813:24, 1815:5, 1817:23, 1819:7, 1819:8, 1819:10, 1915:14, 1916:25, 1917:24, 1918:10, 1918:13, 1918:17, 1929:12, 1935:3, 1935:5, 1935:23, 1936:16, 1937:6, 1937:7, 1940:11, 1941:13, 1942:4, 1942:15, 1943:3, 1944:3, 1951:14, 1951:21, 1951:23, 1951:24, 1952:10</p> <p><b>mapped</b> [2] - 1801:22, 1937:6</p> <p><b>mapping</b> [2] - 1815:3, 1907:9</p> <p><b>maps</b> [10] - 1804:20, 1812:22, 1814:3, 1905:13, 1915:16, 1915:19, 1922:4, 1935:18, 1951:16, 1965:21</p> <p><b>Maps</b> [2] - 1705:21, 1705:23</p> <p><b>March</b> [9] - 1945:20, 1956:10, 1957:10, 1958:6, 1958:13, 1959:18, 1959:24, 1962:19, 1979:22</p> <p><b>marches</b> [1] - 1802:13</p> <p><b>Margo</b> [2] - 1704:9, 1820:9</p> <p><b>MARILYN</b> [1] - 1718:4</p> <p><b>marked</b> [14] - 1724:17, 1727:20, 1759:19, 1759:23, 1800:14, 1860:20, 1860:21, 1860:22, 1869:18, 1900:23, 1924:20, 1925:7, 1955:21, 1957:9</p>	<p><b>market</b> [4] - 1832:13, 1832:20, 1839:20, 1842:16</p> <p><b>master</b> [1] - 1730:5</p> <p><b>master's</b> [4] - 1798:13, 1803:15, 1868:19, 1868:22</p> <p><b>material</b> [2] - 1808:14, 1899:22</p> <p><b>materials</b> [3] - 1724:15, 1843:10, 1847:20</p> <p><b>math</b> [1] - 1931:9</p> <p><b>matrix</b> [2] - 1965:16, 1966:10</p> <p><b>Matt</b> [3] - 1704:7, 1753:9, 1820:1</p> <p><b>MATTER</b> [1] - 1703:4</p> <p><b>matter</b> [16] - 1704:14, 1740:10, 1751:18, 1785:17, 1800:7, 1861:22, 1862:24, 1875:25, 1924:18, 1932:19, 1944:15, 1948:8, 1955:6, 1962:18, 1977:3, 1989:10</p> <p><b>matters</b> [2] - 1860:12, 1928:14</p> <p><b>MATTHEW</b> [1] - 1717:11</p> <p><b>maximum</b> [1] - 1875:22</p> <p><b>McClory</b> [1] - 1945:24</p> <p><b>MCCOMSEY</b> [1] - 1989:5</p> <p><b>McComsey</b> [2] - 1703:24, 1989:18</p> <p><b>McFadden</b> [1] - 1706:18</p> <p><b>MCFADDEN</b> [1] - 1713:3</p> <p><b>McIntosh</b> [1] - 1706:15</p> <p><b>MCINTOSH</b> [1] - 1712:3</p> <p><b>McPherson</b> [3] - 1766:7, 1916:25, 1930:8</p> <p><b>Mdewakantonwan</b> [1] - 1845:20</p> <p><b>mean</b> [34] - 1736:24, 1752:18, 1758:10, 1766:22, 1781:4, 1783:9, 1784:7, 1786:10, 1788:16, 1809:6, 1809:7, 1826:20, 1827:10, 1833:7, 1834:23, 1837:10, 1842:16,</p>	<p>1843:7, 1847:3, 1848:20, 1852:12, 1853:21, 1855:8, 1859:17, 1876:14, 1884:23, 1890:9, 1905:22, 1939:21, 1957:16, 1957:23, 1972:2, 1973:11, 1986:21</p> <p><b>meaning</b> [5] - 1755:20, 1755:21, 1781:2, 1787:9, 1787:10</p> <p><b>means</b> [6] - 1731:2, 1829:5, 1876:3, 1895:14, 1930:25, 1951:23</p> <p><b>meant</b> [2] - 1959:17, 1962:16</p> <p><b>measure</b> [4] - 1890:17, 1951:14, 1951:24, 1952:13</p> <p><b>measured</b> [1] - 1751:25</p> <p><b>measurement</b> [2] - 1807:20, 1928:22</p> <p><b>measures</b> [4] - 1752:7, 1752:15, 1789:12, 1971:8</p> <p><b>measuring</b> [2] - 1899:9, 1928:22</p> <p><b>mechanical</b> [2] - 1881:9, 1895:13</p> <p><b>mechanically</b> [1] - 1729:2</p> <p><b>mechanism</b> [3] - 1747:21, 1809:3, 1809:4</p> <p><b>mechanisms</b> [1] - 1749:25</p> <p><b>meet</b> [2] - 1906:15, 1946:20</p> <p><b>meeting</b> [9] - 1812:4, 1945:18, 1945:23, 1946:18, 1947:7, 1947:8, 1949:25</p> <p><b>Meetings</b> [3] - 1705:24, 1705:24, 1707:21</p> <p><b>meetings</b> [13] - 1831:21, 1832:16, 1832:19, 1833:5, 1944:22, 1956:7, 1959:20, 1964:24, 1965:2, 1965:17, 1965:18, 1965:19, 1967:23</p> <p><b>meets</b> [1] - 1789:7</p> <p><b>melt</b> [2] - 1806:18, 1807:11</p>
<b>M</b>				
<p><b>machineries</b> [2] - 1891:18, 1891:19</p> <p><b>machines</b> [1] - 1813:11</p> <p><b>Madison</b> [1] - 1815:17</p> <p><b>Mahmoud</b> [28] - 1705:9, 1705:12, 1904:15, 1919:14, 1923:15, 1923:24, 1924:14, 1928:6, 1930:14, 1935:15, 1935:16, 1936:19, 1938:21, 1942:24, 1944:10, 1947:7, 1949:25, 1950:18, 1952:11, 1952:18, 1954:11, 1955:20, 1966:24, 1971:7, 1974:15, 1980:23,</p>	<p>1721:17, 1721:20, 1721:22, 1721:25, 1723:24, 1728:1, 1901:13, 1945:25, 1946:1</p> <p><b>manages</b> [3] - 1790:19, 1790:24, 1791:20</p> <p><b>managing</b> [3] - 1721:19, 1732:4, 1823:12</p> <p><b>mandatory</b> [1] - 1791:23</p> <p><b>manifestation</b> [1] - 1817:17</p> <p><b>Mankato</b> [1] - 1722:7</p> <p><b>manner</b> [2] - 1885:9, 1902:20</p> <p><b>Map</b> [12] - 1705:21,</p>	<p>1705:22, 1708:9, 1708:13, 1708:18, 1708:18, 1811:13, 1815:21, 1816:10, 1818:3, 1818:7, 1818:20</p> <p><b>map</b> [48] - 1783:19, 1783:21, 1804:7, 1804:25, 1805:3, 1805:4, 1805:7, 1805:10, 1805:11, 1811:6, 1811:8, 1811:9, 1811:14, 1811:15, 1811:17, 1812:4, 1812:12, 1812:15, 1813:24, 1815:5, 1817:23, 1819:7, 1819:8, 1819:10, 1915:14, 1916:25, 1917:24, 1918:10, 1918:13, 1918:17, 1929:12, 1935:3, 1935:5, 1935:23, 1936:16, 1937:6, 1937:7, 1940:11, 1941:13, 1942:4, 1942:15, 1943:3, 1944:3, 1951:14, 1951:21, 1951:23, 1951:24, 1952:10</p> <p><b>mapped</b> [2] - 1801:22, 1937:6</p> <p><b>mapping</b> [2] - 1815:3, 1907:9</p> <p><b>maps</b> [10] - 1804:20, 1812:22, 1814:3, 1905:13, 1915:16, 1915:19, 1922:4, 1935:18, 1951:16, 1965:21</p> <p><b>Maps</b> [2] - 1705:21, 1705:23</p> <p><b>March</b> [9] - 1945:20, 1956:10, 1957:10, 1958:6, 1958:13, 1959:18, 1959:24, 1962:19, 1979:22</p> <p><b>marches</b> [1] - 1802:13</p> <p><b>Margo</b> [2] - 1704:9, 1820:9</p> <p><b>MARILYN</b> [1] - 1718:4</p> <p><b>marked</b> [14] - 1724:17, 1727:20, 1759:19, 1759:23, 1800:14, 1860:20, 1860:21, 1860:22, 1869:18, 1900:23, 1924:20, 1925:7, 1955:21, 1957:9</p>	<p><b>market</b> [4] - 1832:13, 1832:20, 1839:20, 1842:16</p> <p><b>master</b> [1] - 1730:5</p> <p><b>master's</b> [4] - 1798:13, 1803:15, 1868:19, 1868:22</p> <p><b>material</b> [2] - 1808:14, 1899:22</p> <p><b>materials</b> [3] - 1724:15, 1843:10, 1847:20</p> <p><b>math</b> [1] - 1931:9</p> <p><b>matrix</b> [2] - 1965:16, 1966:10</p> <p><b>Matt</b> [3] - 1704:7, 1753:9, 1820:1</p> <p><b>MATTER</b> [1] - 1703:4</p> <p><b>matter</b> [16] - 1704:14, 1740:10, 1751:18, 1785:17, 1800:7, 1861:22, 1862:24, 1875:25, 1924:18, 1932:19, 1944:15, 1948:8, 1955:6, 1962:18, 1977:3, 1989:10</p> <p><b>matters</b> [2] - 1860:12, 1928:14</p> <p><b>MATTHEW</b> [1] - 1717:11</p> <p><b>maximum</b> [1] - 1875:22</p> <p><b>McClory</b> [1] - 1945:24</p> <p><b>MCCOMSEY</b> [1] - 1989:5</p> <p><b>McComsey</b> [2] - 1703:24, 1989:18</p> <p><b>McFadden</b> [1] - 1706:18</p> <p><b>MCFADDEN</b> [1] - 1713:3</p> <p><b>McIntosh</b> [1] - 1706:15</p> <p><b>MCINTOSH</b> [1] - 1712:3</p> <p><b>McPherson</b> [3] - 1766:7, 1916:25, 1930:8</p> <p><b>Mdewakantonwan</b> [1] - 1845:20</p> <p><b>mean</b> [34] - 1736:24, 1752:18, 1758:10, 1766:22, 1781:4, 1783:9, 1784:7, 1786:10, 1788:16, 1809:6, 1809:7, 1826:20, 1827:10, 1833:7, 1834:23, 1837:10, 1842:16,</p>	<p>1843:7, 1847:3, 1848:20, 1852:12, 1853:21, 1855:8, 1859:17, 1876:14, 1884:23, 1890:9, 1905:22, 1939:21, 1957:16, 1957:23, 1972:2, 1973:11, 1986:21</p> <p><b>meaning</b> [5] - 1755:20, 1755:21, 1781:2, 1787:9, 1787:10</p> <p><b>means</b> [6] - 1731:2, 1829:5, 1876:3, 1895:14, 1930:25, 1951:23</p> <p><b>meant</b> [2] - 1959:17, 1962:16</p> <p><b>measure</b> [4] - 1890:17, 1951:14, 1951:24, 1952:13</p> <p><b>measured</b> [1] - 1751:25</p> <p><b>measurement</b> [2] - 1807:20, 1928:22</p> <p><b>measures</b> [4] - 1752:7, 1752:15, 1789:12, 1971:8</p> <p><b>measuring</b> [2] - 1899:9, 1928:22</p> <p><b>mechanical</b> [2] - 1881:9, 1895:13</p> <p><b>mechanically</b> [1] - 1729:2</p> <p><b>mechanism</b> [3] - 1747:21, 1809:3, 1809:4</p> <p><b>mechanisms</b> [1] - 1749:25</p> <p><b>meet</b> [2] - 1906:15, 1946:20</p> <p><b>meeting</b> [9] - 1812:4, 1945:18, 1945:23, 1946:18, 1947:7, 1947:8, 1949:25</p> <p><b>Meetings</b> [3] - 1705:24, 1705:24, 1707:21</p> <p><b>meetings</b> [13] - 1831:21, 1832:16, 1832:19, 1833:5, 1944:22, 1956:7, 1959:20, 1964:24, 1965:2, 1965:17, 1965:18, 1965:19, 1967:23</p> <p><b>meets</b> [1] - 1789:7</p> <p><b>melt</b> [2] - 1806:18, 1807:11</p>

<p><b>member</b> [2] - 1728:3, 1845:20</p> <p><b>members</b> [5] - 1799:9, 1829:14, 1836:17, 1837:6, 1915:8</p> <p><b>memorized</b> [1] - 1758:11</p> <p><b>mentioned</b> [16] - 1728:15, 1742:11, 1742:12, 1744:19, 1788:13, 1789:1, 1806:13, 1808:9, 1813:6, 1815:6, 1815:14, 1844:21, 1854:18, 1881:1, 1895:2, 1895:5</p> <p><b>mentions</b> [2] - 1728:17, 1981:14</p> <p><b>merely</b> [1] - 1861:10</p> <p><b>meritful</b> [1] - 1941:17</p> <p><b>Merjent</b> [1] - 1793:24</p> <p><b>met</b> [15] - 1812:3, 1944:25, 1945:4, 1946:8, 1946:9, 1946:10, 1946:12, 1946:13, 1946:15, 1956:2, 1956:7, 1964:23, 1967:21, 1969:18</p> <p><b>method</b> [8] - 1783:1, 1792:5, 1881:8, 1881:13, 1881:14, 1881:16, 1894:4, 1918:24</p> <p><b>methods</b> [1] - 1895:14</p> <p><b>Mexico</b> [1] - 1761:9</p> <p><b>mic</b> [1] - 1736:10</p> <p><b>MICAH</b> [1] - 1719:11</p> <p><b>Micah</b> [3] - 1864:19, 1900:25, 1901:8</p> <p><b>MICHAEL</b> [3] - 1712:21, 1713:11, 1713:17</p> <p><b>Michels</b> [2] - 1890:3, 1890:9</p> <p><b>Michigan</b> [1] - 1794:20</p> <p><b>microbial</b> [1] - 1875:25</p> <p><b>microphone</b> [1] - 1923:20</p> <p><b>middle</b> [4] - 1764:10, 1894:15, 1918:15, 1936:24</p> <p><b>midst</b> [3] - 1757:25, 1823:5, 1823:14</p> <p><b>Midwest</b> [1] - 1878:8</p> <p><b>might</b> [41] - 1724:5, 1742:2, 1748:7, 1749:25, 1750:17,</p>	<p>1750:18, 1751:12, 1756:22, 1766:18, 1790:25, 1804:4, 1808:24, 1813:21, 1818:11, 1818:15, 1834:14, 1845:16, 1845:17, 1862:12, 1862:13, 1876:22, 1877:17, 1877:19, 1880:21, 1890:10, 1894:14, 1895:18, 1895:19, 1895:20, 1905:21, 1920:2, 1925:1, 1927:15, 1959:9, 1961:7, 1963:20, 1983:23</p> <p><b>migrates</b> [1] - 1807:14</p> <p><b>migration</b> [5] - 1742:17, 1770:9, 1770:14, 1770:16, 1808:1</p> <p><b>Migratory</b> [1] - 1761:10</p> <p><b>Mike</b> [2] - 1728:15, 1728:20</p> <p><b>mile</b> [2] - 1747:25, 1748:1</p> <p><b>milepost</b> [1] - 1952:4</p> <p><b>mileposts</b> [3] - 1730:7, 1811:1, 1811:3</p> <p><b>miles</b> [2] - 1807:1, 1967:2</p> <p><b>Miller</b> [1] - 1807:4</p> <p><b>million</b> [9] - 1829:14, 1925:14, 1930:22, 1930:23, 1931:2, 1933:2, 1933:3, 1933:5, 1933:11</p> <p><b>mind</b> [3] - 1873:14, 1929:1, 1932:4</p> <p><b>minds</b> [1] - 1864:1</p> <p><b>mine</b> [2] - 1741:13, 1888:1</p> <p><b>Miner</b> [2] - 1918:10, 1929:13</p> <p><b>mingled</b> [1] - 1808:18</p> <p><b>minimal</b> [3] - 1803:2, 1808:7, 1809:9</p> <p><b>minimize</b> [3] - 1726:10, 1752:16, 1930:10</p> <p><b>minimized</b> [2] - 1752:1, 1752:3</p> <p><b>minimum</b> [2] - 1752:6, 1894:18</p> <p><b>mining</b> [1] - 1824:15</p> <p><b>MinnCan</b> [1] - 1794:15</p> <p><b>Minneapolis</b> [1] - 1722:23</p>	<p><b>Minnehaha</b> [7] - 1775:5, 1821:9, 1914:1, 1936:7, 1936:22, 1944:24, 1945:2</p> <p><b>Minnesota</b> [13] - 1722:6, 1722:20, 1794:11, 1794:15, 1795:8, 1795:13, 1796:5, 1796:6, 1828:23, 1845:21, 1850:23, 1852:2</p> <p><b>minute</b> [2] - 1839:18, 1840:12</p> <p><b>minutes</b> [5] - 1866:16, 1920:21, 1958:4, 1959:2, 1959:5</p> <p><b>misheard</b> [1] - 1760:14</p> <p><b>misrepresentation</b> [1] - 1976:17</p> <p><b>missed</b> [2] - 1811:16, 1981:4</p> <p><b>Mississippi</b> [2] - 1831:19, 1854:7</p> <p><b>Missouri</b> [9] - 1706:9, 1706:10, 1775:12, 1775:15, 1776:4, 1776:14, 1777:24, 1778:3, 1878:9</p> <p><b>misstates</b> [2] - 1779:16, 1779:18</p> <p><b>mitigate</b> [2] - 1779:24, 1789:12</p> <p><b>mitigating</b> [1] - 1885:9</p> <p><b>Mitigation</b> [12] - 1873:4, 1873:15, 1873:23, 1873:24, 1875:10, 1879:5, 1879:7, 1888:19, 1888:23, 1889:23, 1893:8, 1896:5</p> <p><b>mitigation</b> [8] - 1751:25, 1752:15, 1795:17, 1875:3, 1883:24, 1892:23, 1978:21, 1980:13</p> <p><b>mix</b> [4] - 1877:11, 1877:15, 1877:18, 1877:22</p> <p><b>mixed</b> [4] - 1808:13, 1809:12, 1890:14, 1985:13</p> <p><b>mixes</b> [3] - 1877:17, 1877:19, 1897:23</p> <p><b>mixture</b> [2] - 1808:15, 1809:14</p> <p><b>Mni</b> [1] - 1777:23</p> <p><b>mode</b> [1] - 1931:18</p> <p><b>Model</b> [1] - 1705:7</p>	<p><b>modified</b> [2] - 1780:8, 1983:4</p> <p><b>modify</b> [1] - 1728:23</p> <p><b>Moeckly</b> [3] - 1707:8, 1886:17, 1887:1</p> <p><b>MOECKLY</b> [1] - 1717:16</p> <p><b>moment</b> [3] - 1865:24, 1886:15, 1961:9</p> <p><b>money</b> [2] - 1875:6, 1976:15</p> <p><b>Monica</b> [5] - 1864:19, 1946:5, 1972:17, 1972:22, 1974:9</p> <p><b>MONICA</b> [2] - 1710:11, 1720:3</p> <p><b>monitor</b> [15] - 1752:10, 1790:1, 1790:2, 1790:7, 1790:8, 1791:2, 1791:4, 1791:5, 1791:9, 1791:10, 1791:12, 1791:19, 1792:6, 1792:13, 1792:15</p> <p><b>monitored</b> [2] - 1820:14, 1820:22</p> <p><b>monitoring</b> [14] - 1792:2, 1793:1, 1795:6, 1796:5, 1799:25, 1820:18, 1820:19, 1821:4, 1821:11, 1821:14, 1821:18, 1888:4, 1888:8</p> <p><b>monitors</b> [6] - 1758:25, 1795:15, 1795:16, 1795:21, 1796:9, 1821:5</p> <p><b>Montana</b> [1] - 1770:6</p> <p><b>morning</b> [34] - 1721:7, 1737:24, 1737:25, 1753:7, 1753:8, 1773:2, 1773:11, 1773:14, 1788:19, 1797:18, 1805:22, 1805:24, 1819:25, 1820:2, 1820:9, 1821:25, 1822:8, 1822:9, 1826:3, 1828:3, 1828:4, 1828:7, 1830:15, 1830:18, 1830:19, 1849:7, 1849:8, 1850:11, 1850:12, 1861:20, 1862:4, 1987:3, 1987:23</p> <p><b>Morton</b> [1] - 1850:23</p> <p><b>most</b> [21] - 1743:24, 1743:25, 1753:12,</p>	<p>1790:11, 1794:16, 1803:18, 1812:16, 1818:2, 1820:21, 1850:13, 1851:8, 1873:8, 1881:4, 1885:18, 1895:23, 1895:24, 1902:14, 1947:3, 1949:1, 1968:22, 1987:19</p> <p><b>mostly</b> [1] - 1881:9</p> <p><b>Motion</b> [2] - 1707:14, 1707:15</p> <p><b>motion</b> [8] - 1734:20, 1830:8, 1834:2, 1921:2, 1948:21, 1964:18, 1969:13, 1986:25</p> <p><b>Mountains</b> [1] - 1854:8</p> <p><b>mountains</b> [1] - 1976:10</p> <p><b>move</b> [40] - 1727:16, 1731:15, 1733:5, 1741:5, 1741:9, 1744:17, 1757:1, 1758:2, 1761:17, 1792:20, 1807:9, 1807:21, 1808:19, 1808:20, 1838:12, 1870:4, 1872:24, 1890:12, 1903:4, 1906:3, 1910:20, 1921:4, 1925:25, 1930:17, 1931:3, 1938:13, 1938:14, 1938:15, 1943:20, 1947:6, 1949:1, 1952:25, 1954:24, 1957:3, 1968:7, 1971:16, 1971:20, 1972:12, 1983:20</p> <p><b>moved</b> [4] - 1737:12, 1807:18, 1931:18, 1938:11</p> <p><b>movement</b> [4] - 1807:8, 1808:23, 1809:9, 1815:8</p> <p><b>moves</b> [3] - 1735:4, 1823:2, 1931:22</p> <p><b>moving</b> [6] - 1748:10, 1792:17, 1810:22, 1858:12, 1932:1, 1932:2</p> <p><b>MR</b> [165] - 1734:15, 1753:4, 1753:6, 1756:24, 1757:2, 1757:13, 1757:20, 1758:4, 1759:15, 1759:21, 1762:18, 1765:1, 1765:10,</p>
---	--	--	--	---

<p>1767:17, 1773:4, 1786:15, 1786:18, 1787:6, 1793:14, 1793:17, 1794:1, 1819:25, 1821:25, 1826:9, 1826:12, 1826:17, 1826:21, 1827:17, 1830:12, 1830:15, 1830:19, 1830:25, 1831:5, 1831:9, 1831:14, 1831:20, 1832:7, 1832:15, 1833:3, 1833:13, 1837:14, 1837:20, 1838:14, 1838:19, 1839:2, 1839:8, 1839:17, 1840:2, 1840:7, 1848:1, 1849:4, 1849:6, 1849:24, 1850:7, 1850:10, 1851:19, 1852:4, 1852:10, 1855:4, 1856:8, 1857:14, 1858:1, 1858:9, 1858:12, 1858:15, 1858:16, 1859:2, 1859:4, 1859:10, 1859:12, 1859:16, 1859:23, 1860:2, 1860:4, 1860:9, 1860:12, 1861:24, 1863:9, 1863:23, 1865:2, 1865:15, 1866:8, 1866:18, 1866:24, 1879:4, 1881:23, 1882:2, 1883:7, 1900:25, 1901:4, 1903:2, 1903:4, 1906:3, 1906:11, 1909:21, 1910:14, 1911:15, 1913:17, 1914:21, 1916:10, 1919:1, 1920:19, 1921:1, 1921:18, 1923:17, 1923:21, 1923:23, 1924:11, 1924:13, 1925:25, 1926:2, 1927:13, 1934:6, 1936:10, 1936:12, 1936:17, 1938:10, 1938:13, 1940:4, 1941:23, 1943:20, 1947:4, 1949:4, 1949:8, 1949:17, 1950:17, 1953:4, 1953:21, 1954:11, 1955:1, 1957:3, 1959:8, 1959:11, 1961:7, 1961:10,</p>	<p>1962:11, 1966:23, 1967:9, 1968:7, 1968:8, 1968:10, 1969:17, 1970:17, 1970:19, 1973:7, 1974:25, 1981:2, 1983:20, 1983:23, 1984:2, 1984:18, 1984:20, 1984:21, 1984:23, 1984:25, 1985:18, 1985:25, 1986:7, 1986:11, 1986:12, 1986:17, 1986:21, 1987:5, 1987:7, 1987:10 <b>MS</b> [512] - 1721:1, 1721:3, 1721:6, 1727:16, 1727:18, 1731:15, 1731:17, 1733:5, 1733:7, 1733:8, 1734:7, 1734:8, 1734:22, 1734:24, 1735:3, 1735:10, 1735:11, 1735:14, 1735:17, 1735:24, 1736:3, 1736:4, 1736:5, 1736:8, 1736:12, 1736:18, 1737:1, 1737:3, 1737:4, 1737:12, 1737:14, 1737:15, 1737:16, 1737:18, 1737:20, 1737:21, 1737:23, 1738:16, 1738:17, 1738:20, 1739:23, 1740:1, 1740:4, 1740:8, 1740:10, 1740:12, 1740:13, 1740:24, 1740:25, 1741:2, 1741:4, 1741:10, 1744:2, 1744:7, 1744:14, 1747:2, 1747:7, 1747:10, 1752:25, 1753:3, 1756:23, 1757:1, 1757:8, 1757:9, 1757:10, 1757:19, 1757:24, 1758:2, 1759:13, 1759:17, 1762:10, 1764:6, 1764:23, 1765:7, 1767:15, 1767:21, 1773:8, 1773:10, 1773:18, 1775:23, 1776:1, 1776:3, 1776:7, 1776:10, 1776:12, 1776:17, 1776:21, 1776:23, 1777:1, 1778:5, 1778:7,</p>	<p>1778:8, 1778:11, 1779:15, 1779:19, 1779:21, 1779:22, 1780:7, 1780:10, 1780:13, 1781:18, 1781:19, 1781:20, 1781:22, 1781:23, 1782:2, 1782:4, 1786:16, 1786:21, 1786:22, 1787:12, 1787:15, 1789:23, 1789:24, 1793:5, 1793:8, 1793:11, 1793:13, 1793:15, 1794:2, 1794:5, 1796:16, 1796:17, 1796:18, 1796:20, 1797:7, 1797:8, 1797:13, 1797:17, 1801:11, 1801:13, 1805:16, 1805:18, 1805:19, 1805:21, 1819:21, 1819:23, 1820:4, 1820:5, 1820:6, 1820:8, 1821:22, 1821:24, 1822:3, 1825:11, 1825:13, 1825:14, 1825:16, 1825:17, 1825:21, 1825:22, 1825:24, 1826:1, 1826:2, 1826:4, 1826:7, 1826:8, 1826:11, 1826:13, 1826:20, 1826:24, 1826:25, 1827:9, 1827:13, 1827:18, 1827:23, 1828:2, 1829:20, 1829:21, 1830:8, 1830:10, 1830:14, 1831:23, 1832:4, 1833:16, 1833:24, 1834:1, 1834:3, 1834:4, 1837:19, 1837:22, 1837:23, 1837:24, 1838:12, 1838:16, 1838:20, 1838:22, 1838:23, 1839:6, 1839:12, 1839:19, 1839:23, 1840:3, 1840:9, 1840:11, 1841:3, 1841:6, 1841:9, 1841:17, 1848:7, 1848:15, 1848:23, 1848:24, 1849:1, 1849:3, 1849:25, 1850:2, 1850:3, 1850:5, 1850:6, 1851:16, 1851:22, 1851:25,</p>	<p>1852:9, 1852:19, 1852:22, 1853:25, 1854:1, 1855:5, 1856:6, 1856:10, 1857:11, 1858:3, 1858:4, 1858:5, 1858:7, 1858:11, 1858:20, 1858:21, 1858:24, 1859:14, 1859:20, 1859:21, 1859:25, 1860:13, 1860:16, 1860:18, 1860:25, 1861:1, 1861:9, 1861:15, 1861:23, 1862:8, 1862:9, 1862:11, 1862:14, 1862:20, 1862:21, 1862:22, 1863:4, 1863:6, 1863:7, 1863:11, 1863:12, 1863:16, 1863:17, 1865:1, 1865:9, 1865:13, 1865:25, 1866:2, 1866:12, 1866:15, 1866:20, 1866:21, 1867:13, 1867:17, 1867:24, 1868:2, 1868:3, 1868:6, 1870:4, 1870:5, 1870:6, 1870:7, 1870:8, 1870:12, 1870:16, 1870:19, 1870:21, 1870:24, 1871:1, 1871:2, 1871:5, 1871:6, 1871:13, 1871:16, 1871:17, 1871:19, 1871:20, 1871:22, 1872:2, 1872:6, 1872:9, 1872:10, 1872:12, 1872:13, 1879:5, 1879:6, 1881:17, 1881:18, 1881:20, 1881:22, 1883:4, 1883:9, 1883:11, 1883:13, 1884:6, 1884:14, 1884:15, 1884:17, 1884:20, 1884:22, 1884:25, 1885:24, 1886:2, 1886:6, 1886:18, 1886:20, 1886:22, 1886:25, 1887:3, 1887:7, 1887:9, 1890:8, 1890:11, 1890:12, 1892:3, 1892:4, 1892:6, 1892:7, 1892:9, 1892:11, 1893:20, 1893:25,</p>	<p>1894:2, 1898:2, 28 1898:6, 1900:18, 1900:19, 1903:1, 1903:6, 1906:4, 1906:5, 1906:6, 1906:7, 1906:9, 1906:24, 1909:15, 1909:20, 1910:8, 1911:17, 1911:19, 1911:21, 1913:14, 1913:15, 1914:23, 1915:2, 1916:11, 1916:12, 1916:14, 1916:15, 1916:16, 1916:18, 1919:3, 1920:16, 1920:20, 1920:24, 1921:3, 1921:11, 1921:13, 1921:14, 1921:16, 1921:17, 1921:19, 1921:21, 1921:22, 1921:24, 1921:25, 1922:11, 1922:12, 1922:13, 1922:15, 1923:3, 1923:13, 1924:4, 1924:7, 1924:8, 1926:24, 1927:1, 1927:2, 1927:9, 1927:10, 1927:11, 1928:2, 1935:7, 1935:11, 1935:14, 1936:9, 1936:11, 1938:8, 1938:11, 1938:16, 1938:17, 1938:20, 1938:21, 1939:3, 1939:9, 1939:16, 1939:19, 1939:23, 1940:14, 1940:16, 1940:18, 1940:21, 1941:1, 1941:4, 1941:18, 1941:20, 1941:21, 1942:17, 1943:21, 1943:22, 1943:24, 1944:6, 1947:5, 1948:14, 1948:20, 1948:21, 1948:23, 1948:25, 1949:3, 1949:6, 1949:11, 1949:14, 1950:3, 1950:4, 1950:9, 1950:12, 1952:7, 1952:9, 1952:24, 1953:3, 1953:8, 1953:9, 1953:12, 1953:24, 1954:6, 1954:9, 1954:18, 1954:25, 1955:7, 1955:15, 1957:4, 1957:5, 1958:10, 1958:12,</p>
---	--	--	---	---

<p>1958:14, 1958:15, 1959:4, 1959:10, 1960:12, 1960:17, 1960:19, 1960:20, 1962:14, 1963:6, 1963:9, 1963:12, 1963:13, 1963:15, 1963:16, 1964:13, 1965:10, 1965:24, 1966:7, 1966:12, 1966:19, 1968:9, 1969:11, 1969:12, 1969:14, 1969:16, 1970:18, 1971:3, 1973:2, 1973:6, 1973:16, 1973:22, 1973:24, 1975:2, 1975:4, 1975:6, 1978:4, 1978:7, 1978:9, 1981:6, 1981:7, 1981:8, 1981:16, 1981:18, 1983:18, 1983:19, 1983:22, 1985:2, 1985:24, 1986:20, 1986:25, 1987:6, 1987:9, 1987:15, 1988:1</p> <p><b>muddy</b> [2] - 1750:11, 1750:15</p> <p><b>muffled</b> [1] - 1726:9</p> <p><b>muffling</b> [2] - 1788:13</p> <p><b>mulch</b> [4] - 1730:19, 1730:22, 1730:23, 1730:24</p> <p><b>multibillion</b> [1] - 1971:10</p> <p><b>multiple</b> [9] - 1869:11, 1878:8, 1894:13, 1895:3, 1899:7, 1946:3, 1946:22, 1948:16</p> <p><b>Municipal</b> [1] - 1708:9</p> <p><b>MURRAY</b> [1] - 1718:4</p> <p><b>Murray</b> [1] - 1707:8</p> <p><b>must</b> [3] - 1739:1, 1740:16, 1847:14</p>	<p>1936:23, 1937:3, 1938:21, 1939:2, 1939:3, 1939:8, 1939:9, 1939:12</p> <p><b>named</b> [5] - 1721:21, 1802:7, 1823:22, 1832:12, 1946:2</p> <p><b>names</b> [3] - 1814:10, 1832:10, 1943:4</p> <p><b>Nancy</b> [1] - 1707:11</p> <p><b>NANCY</b> [1] - 1717:3</p> <p><b>narrative</b> [1] - 1934:7</p> <p><b>nation</b> [4] - 1853:13, 1853:15, 1869:12, 1887:24</p> <p><b>National</b> [8] - 1811:13, 1815:21, 1816:9, 1818:3, 1818:6, 1818:19, 1976:20, 1976:24</p> <p><b>national</b> [5] - 1804:6, 1804:25, 1805:3, 1811:7, 1834:19</p> <p><b>nations</b> [2] - 1845:10, 1854:11</p> <p><b>Nationwide</b> [3] - 1725:24, 1738:23, 1768:18</p> <p><b>native</b> [6] - 1768:3, 1810:4, 1834:14, 1837:2, 1837:10, 1846:11</p> <p><b>Native</b> [3] - 1834:17, 1845:10, 1853:11</p> <p><b>natural</b> [12] - 1726:25, 1778:21, 1782:11, 1790:12, 1790:15, 1814:22, 1834:11, 1846:14, 1868:25, 1898:24, 1933:20, 1935:4</p> <p><b>Natural</b> [7] - 1722:22, 1723:1, 1723:4, 1727:25, 1731:23, 1798:4, 1814:2</p> <p><b>nature</b> [5] - 1751:12, 1761:13, 1886:4, 1937:21, 1965:3</p> <p><b>NatureServe</b> [2] - 1739:5, 1739:6</p> <p><b>near</b> [4] - 1800:12, 1811:21, 1816:2, 1821:17</p> <p><b>nearest</b> [1] - 1923:20</p> <p><b>necessarily</b> [8] - 1766:11, 1771:9, 1792:21, 1821:14, 1842:10, 1848:19, 1961:17, 1981:24</p> <p><b>necessary</b> [9] -</p>	<p>1731:5, 1785:13, 1867:19, 1892:14, 1892:16, 1892:18, 1918:20, 1919:2, 1975:8</p> <p><b>need</b> [28] - 1728:13, 1729:16, 1840:16, 1842:21, 1848:19, 1849:23, 1850:14, 1862:16, 1864:17, 1866:6, 1867:22, 1872:15, 1877:23, 1880:17, 1880:20, 1884:10, 1886:22, 1949:12, 1955:8, 1957:25, 1959:5, 1960:12, 1960:21, 1977:19, 1983:20, 1985:9, 1985:11</p> <p><b>needed</b> [4] - 1725:2, 1841:10, 1911:13, 1948:5</p> <p><b>needing</b> [2] - 1858:18, 1985:4</p> <p><b>needs</b> [7] - 1782:18, 1814:13, 1849:12, 1849:16, 1849:18, 1852:6, 1874:13</p> <p><b>negative</b> [4] - 1836:8, 1876:22, 1896:2, 1938:3</p> <p><b>negotiate</b> [2] - 1904:25, 1910:17</p> <p><b>negotiated</b> [1] - 1905:6</p> <p><b>negotiations</b> [2] - 1910:20, 1915:10</p> <p><b>neighborhood</b> [1] - 1936:23</p> <p><b>neighborhoods</b> [1] - 1833:2</p> <p><b>NELSON</b> [36] - 1703:13, 1741:5, 1777:3, 1789:25, 1790:6, 1792:25, 1793:3, 1822:4, 1856:12, 1856:16, 1856:20, 1856:24, 1857:4, 1857:10, 1894:3, 1894:22, 1895:5, 1896:5, 1896:8, 1896:14, 1896:17, 1896:20, 1916:19, 1916:24, 1917:10, 1917:19, 1917:23, 1918:5, 1918:9, 1918:23, 1919:4, 1928:24, 1930:7, 1936:14, 1966:17, 1987:18</p>	<p><b>Nelson</b> [38] - 1709:7, 1709:12, 1710:6, 1710:14, 1710:21, 1711:8, 1711:13, 1711:17, 1712:5, 1712:10, 1712:17, 1713:6, 1713:14, 1713:19, 1714:5, 1714:6, 1714:13, 1714:21, 1715:5, 1715:8, 1715:10, 1715:15, 1715:20, 1716:10, 1716:11, 1716:15, 1717:9, 1717:18, 1718:20, 1719:9, 1719:13, 1719:18, 1720:6, 1906:12, 1928:10, 1928:21, 1929:3, 1929:5</p> <p><b>Nelson's</b> [5] - 1793:12, 1793:21, 1906:16, 1928:16, 1961:23</p> <p><b>NEPA</b> [2] - 1977:5, 1977:7</p> <p><b>nesting</b> [1] - 1766:1</p> <p><b>net</b> [1] - 1821:10</p> <p><b>network</b> [3] - 1799:25, 1831:6, 1834:8</p> <p><b>Network</b> [8] - 1704:4, 1773:12, 1828:15, 1828:25, 1834:6, 1834:7, 1883:15, 1969:15</p> <p><b>never</b> [9] - 1760:6, 1760:7, 1797:19, 1816:12, 1851:17, 1887:21, 1889:20, 1936:2</p> <p><b>new</b> [3] - 1750:1, 1805:5, 1913:23</p> <p><b>newer</b> [2] - 1805:2, 1878:10</p> <p><b>newest</b> [1] - 1812:18</p> <p><b>news</b> [2] - 1837:17, 1837:20</p> <p><b>next</b> [23] - 1721:2, 1729:20, 1752:19, 1758:2, 1770:10, 1797:12, 1825:19, 1860:8, 1900:22, 1920:25, 1922:24, 1922:25, 1924:8, 1929:11, 1936:2, 1937:4, 1937:12, 1940:8, 1941:25, 1953:10, 1965:18, 1965:25, 1966:3</p> <p><b>nexus</b> [2] - 1755:4,</p>	<p>1784:1</p> <p><b>nice</b> [1] - 1753:10</p> <p><b>Nickel</b> [7] - 1706:19, 1731:21, 1731:22, 1731:23, 1744:18, 1776:24, 1781:15</p> <p><b>Nickel's</b> [4] - 1732:19, 1733:10, 1773:20, 1773:21</p> <p><b>night</b> [3] - 1741:23, 1864:14, 1962:4</p> <p><b>Niobrara</b> [3] - 1815:25, 1816:3, 1816:15</p> <p><b>nobody</b> [3] - 1910:2, 1910:3, 1949:22</p> <p><b>noise</b> [3] - 1726:10, 1788:13, 1788:17</p> <p><b>non</b> [6] - 1756:1, 1777:25, 1834:17, 1837:12, 1845:10, 1853:11</p> <p><b>non-HCA</b> [1] - 1756:1</p> <p><b>non-Indian</b> [2] - 1777:25, 1837:12</p> <p><b>non-Native</b> [3] - 1834:17, 1845:10, 1853:11</p> <p><b>none</b> [6] - 1844:15, 1863:9, 1900:21, 1947:11, 1958:17, 1987:5</p> <p><b>nonetheless</b> [1] - 1892:17</p> <p><b>nonexistent</b> [2] - 1803:3, 1808:7</p> <p><b>nonfederal</b> [2] - 1755:3, 1756:10</p> <p><b>nonpartisan</b> [1] - 1843:15</p> <p><b>nonsensical</b> [1] - 1735:23</p> <p><b>nonverbal</b> [1] - 1950:5</p> <p><b>noon</b> [1] - 1858:8</p> <p><b>normal</b> [1] - 1881:10</p> <p><b>normally</b> [2] - 1771:6, 1907:9</p> <p><b>north</b> [3] - 1770:5, 1770:7, 1785:7</p> <p><b>North</b> [23] - 1705:6, 1749:19, 1751:1, 1770:6, 1775:22, 1776:5, 1776:9, 1776:15, 1777:13, 1778:6, 1829:5, 1834:9, 1847:13, 1869:8, 1888:14, 1901:14, 1917:16, 1930:16, 1930:21, 1931:1, 1931:24,</p>
<b>N</b>				
<p><b>name</b> [28] - 1721:7, 1789:2, 1797:21, 1805:22, 1814:6, 1814:13, 1814:14, 1820:9, 1828:12, 1828:14, 1830:16, 1840:18, 1840:21, 1858:14, 1868:7, 1901:6, 1901:8, 1926:6, 1936:1,</p>				



<p>1932:18, 1933:7  <b>northeast</b> [1] - 1847:8  <b>northeastern</b> [1] - 1803:16  <b>northern</b> [3] - 1739:13, 1770:5, 1936:8  <b>Northern</b> [2] - 1741:23, 1798:12  <b>northrup</b> [1] - 1849:25  <b>Northrup</b> [13] - 1704:9, 1709:6, 1709:10, 1710:4, 1710:20, 1713:5, 1714:17, 1717:4, 1718:17, 1820:6, 1820:9, 1892:4, 1916:13  <b>NORTHRUP</b> [6] - 1781:19, 1820:8, 1821:22, 1850:2, 1892:6, 1916:14  <b>northwest</b> [1] - 1807:4  <b>northwestern</b> [1] - 1770:7  <b>Notary</b> [2] - 1989:7, 1989:18  <b>note</b> [3] - 1725:12, 1942:17, 1943:25  <b>notes</b> [3] - 1940:2, 1956:6, 1965:19  <b>nothing</b> [17] - 1732:23, 1744:14, 1744:16, 1756:16, 1789:23, 1796:16, 1856:8, 1867:24, 1881:17, 1900:18, 1907:11, 1911:15, 1913:14, 1932:11, 1974:25, 1975:20, 1978:24  <b>notice</b> [10] - 1805:25, 1865:18, 1941:7, 1985:19, 1985:22, 1986:11, 1986:13, 1986:18, 1986:19, 1987:1  <b>noticed</b> [4] - 1861:25, 1882:7, 1899:17, 1930:9  <b>notification</b> [1] - 1738:22  <b>notify</b> [1] - 1747:1  <b>November</b> [3] - 1770:15, 1798:21, 1799:10  <b>noxious</b> [4] - 1726:18, 1726:21, 1727:2, 1727:5  <b>NRCS</b> [4] - 1726:25,</p>	<p>1788:8, 1877:11, 1899:12  <b>NRG</b> [5] - 1724:10, 1728:8, 1787:10, 1792:25, 1793:19  <b>NRG's</b> [2] - 1721:25, 1774:5  <b>nuance</b> [1] - 1745:14  <b>number</b> [36] - 1752:2, 1761:3, 1779:17, 1805:12, 1810:21, 1813:22, 1814:11, 1831:2, 1831:11, 1835:22, 1836:12, 1837:7, 1838:22, 1838:24, 1838:25, 1839:4, 1840:4, 1841:4, 1842:11, 1853:9, 1863:13, 1902:23, 1902:24, 1902:25, 1909:25, 1921:10, 1922:8, 1924:21, 1927:14, 1928:18, 1930:11, 1942:19, 1953:16, 1960:14, 1965:14, 1979:5  <b>numbered</b> [1] - 1923:11  <b>numbers</b> [6] - 1836:21, 1922:11, 1922:17, 1933:4, 1933:8, 1978:16  <b>numerals</b> [1] - 1928:25  <b>numerous</b> [6] - 1755:5, 1846:22, 1846:23, 1854:24, 1857:19, 1958:7</p>	<p>1848:6, 1851:16, 1851:25, 1853:25, 1856:6, 1861:24, 1865:23, 1867:10, 1870:21, 1871:2, 1883:4, 1884:6, 1886:18, 1887:3, 1890:8, 1909:15, 1916:10, 1926:22, 1934:6, 1941:4, 1943:24, 1954:24, 1969:10, 1976:8, 1981:2, 1986:7  <b>objected</b> [2] - 1831:25, 1833:21  <b>objecting</b> [2] - 1867:11, 1867:12  <b>objection</b> [101] - 1727:18, 1731:17, 1733:7, 1734:20, 1734:23, 1734:24, 1735:23, 1735:24, 1736:8, 1736:19, 1737:5, 1737:9, 1738:16, 1739:23, 1740:12, 1740:24, 1741:6, 1747:2, 1756:23, 1757:19, 1759:13, 1764:6, 1765:9, 1767:15, 1767:22, 1775:23, 1776:1, 1776:7, 1776:17, 1776:19, 1780:17, 1786:15, 1787:6, 1801:13, 1830:10, 1832:4, 1833:24, 1837:20, 1839:2, 1848:15, 1852:20, 1852:22, 1855:4, 1863:7, 1863:18, 1870:5, 1870:25, 1871:16, 1872:11, 1872:12, 1879:4, 1884:20, 1885:24, 1903:6, 1906:4, 1910:8, 1921:17, 1921:18, 1926:25, 1927:5, 1927:6, 1927:7, 1935:13, 1935:14, 1938:9, 1938:16, 1938:19, 1940:15, 1941:17, 1941:18, 1941:20, 1942:9, 1943:21, 1943:22, 1947:4, 1947:5, 1948:14, 1948:20, 1952:7, 1952:24, 1953:8, 1953:25, 1955:17, 1955:18, 1957:4, 1958:2,</p>	<p>1958:9, 1958:22, 1960:22, 1962:16, 1963:10, 1963:14, 1964:19, 1968:8, 1973:2, 1973:21, 1973:25, 1981:16, 1984:18, 1987:4  <b>objections</b> [9] - 1736:2, 1865:11, 1872:13, 1906:24, 1928:2, 1947:9, 1947:12, 1969:11  <b>objects</b> [4] - 1735:4, 1872:7, 1926:2, 1957:5  <b>obligated</b> [1] - 1762:13  <b>obligation</b> [2] - 1746:25, 1747:14  <b>observation</b> [1] - 1804:12  <b>observed</b> [1] - 1791:14  <b>observing</b> [1] - 1791:6  <b>obtain</b> [3] - 1856:25, 1889:5, 1911:5  <b>obtained</b> [3] - 1798:12, 1798:13, 1869:2  <b>obvious</b> [1] - 1812:23  <b>obviously</b> [4] - 1782:18, 1842:15, 1850:25, 1857:7  <b>occasion</b> [2] - 1899:14, 1906:14  <b>occasions</b> [1] - 1909:23  <b>occupation</b> [2] - 1828:12, 1829:4  <b>occur</b> [7] - 1729:9, 1742:25, 1743:3, 1770:2, 1776:14, 1842:13, 1879:12  <b>occurred</b> [1] - 1799:3  <b>occurrences</b> [2] - 1739:7, 1766:11  <b>occurs</b> [5] - 1770:14, 1771:22, 1772:20, 1878:24, 1879:15  <b>Oceti</b> [1] - 1854:6  <b>October</b> [5] - 1703:8, 1703:9, 1704:16, 1989:11, 1989:14  <b>OF</b> [8] - 1703:2, 1703:4, 1703:4, 1704:13, 1708:8, 1989:1, 1989:3  <b>offer</b> [10] - 1783:14, 1833:14, 1858:10, 1860:10, 1942:4,</p>	<p>1942:15, 1959:8, 1977:14, 1978:18, 1980:7  <b>Offer</b> [1] - 1707:13  <b>offered</b> [17] - 1737:16, 1831:5, 1831:7, 1832:1, 1841:11, 1863:20, 1867:25, 1868:4, 1871:14, 1938:10, 1943:9, 1943:10, 1948:17, 1954:4, 1982:8  <b>offering</b> [4] - 1833:16, 1833:22, 1948:16, 1982:19  <b>office</b> [3] - 1838:10, 1956:9, 1974:2  <b>Officer</b> [1] - 1862:25  <b>officer</b> [2] - 1731:24, 1732:2  <b>officers</b> [1] - 1788:12  <b>officials</b> [11] - 1726:24, 1944:19, 1944:23, 1953:17, 1953:19, 1953:23, 1956:1, 1959:14, 1964:22, 1968:3  <b>Officials</b> [1] - 1705:24  <b>often</b> [9] - 1726:21, 1783:21, 1788:12, 1789:3, 1792:1, 1792:7, 1811:16, 1845:5, 1917:15  <b>Oil</b> [1] - 1838:5  <b>oil</b> [56] - 1747:23, 1748:3, 1748:10, 1748:13, 1790:13, 1794:17, 1808:12, 1808:13, 1808:18, 1808:19, 1808:20, 1809:12, 1809:14, 1809:18, 1810:1, 1815:1, 1821:13, 1831:8, 1832:11, 1832:12, 1832:13, 1832:19, 1836:8, 1837:3, 1839:25, 1841:20, 1842:8, 1842:13, 1842:16, 1842:17, 1846:25, 1847:21, 1847:23, 1850:25, 1851:7, 1852:25, 1853:5, 1854:19, 1854:21, 1855:1, 1856:25, 1869:16, 1900:7, 1930:15, 1930:18, 1932:18, 1933:12, 1933:18, 1933:22, 1933:24, 1934:9,</p>	30
<b>O</b>					
	<p><b>o'clock</b> [3] - 1861:20, 1987:22, 1987:25  <b>Oahe</b> [2] - 1706:8, 1777:21  <b>oath</b> [6] - 1721:4, 1797:15, 1827:24, 1865:14, 1901:2, 1924:15  <b>object</b> [45] - 1733:9, 1736:18, 1740:8, 1744:2, 1762:10, 1764:23, 1776:21, 1778:5, 1779:15, 1793:11, 1826:9, 1826:18, 1831:23, 1832:3, 1833:13, 1837:14, 1838:14, 1839:12, 1848:1,</p>				

<p>1934:14, 1934:16, 1934:21, 1934:23, 1937:20</p> <p><b>oil's</b> [1] - 1849:22</p> <p><b>Oklahoma</b> [1] - 1812:7</p> <p><b>old</b> [9] - 1805:4, 1812:17, 1825:6, 1890:19, 1891:8, 1898:7, 1898:16, 1916:7, 1929:8</p> <p><b>Olson</b> [1] - 1706:16</p> <p><b>OLSON</b> [1] - 1712:7</p> <p><b>Oltmanns</b> [1] - 1707:9</p> <p><b>OLTMANNs</b> [1] - 1717:13</p> <p><b>once</b> [7] - 1767:12, 1767:24, 1823:1, 1823:2, 1859:25, 1937:14, 1937:16</p> <p><b>one</b> [101] - 1721:20, 1723:14, 1726:6, 1727:25, 1730:4, 1730:17, 1732:16, 1734:4, 1734:16, 1736:14, 1740:14, 1744:4, 1747:5, 1751:9, 1760:6, 1760:7, 1760:12, 1760:20, 1767:8, 1768:2, 1777:14, 1778:2, 1783:23, 1791:1, 1793:14, 1794:2, 1802:7, 1804:5, 1812:3, 1812:17, 1814:2, 1814:9, 1815:14, 1815:20, 1816:6, 1818:2, 1818:11, 1820:19, 1820:25, 1821:4, 1822:15, 1824:19, 1831:8, 1831:17, 1832:13, 1836:15, 1840:4, 1840:16, 1841:3, 1849:4, 1860:20, 1879:8, 1892:9, 1897:2, 1898:23, 1902:6, 1904:8, 1906:14, 1907:17, 1907:23, 1908:4, 1908:10, 1908:19, 1911:19, 1912:6, 1914:7, 1915:3, 1918:8, 1918:13, 1922:5, 1922:7, 1923:1, 1923:6, 1923:7, 1926:17, 1926:18, 1928:20, 1929:11, 1931:14, 1932:23, 1938:4,</p>	<p>1938:12, 1940:7, 1941:25, 1946:6, 1946:24, 1946:25, 1947:1, 1947:19, 1947:23, 1948:8, 1973:10, 1976:3, 1976:6, 1980:17, 1983:13</p> <p><b>one's</b> [2] - 1833:10, 1833:11</p> <p><b>ones</b> [1] - 1754:10</p> <p><b>ongoing</b> [1] - 1739:3</p> <p><b>Onida</b> [1] - 1989:13</p> <p><b>online</b> [4] - 1739:6, 1813:24, 1814:19, 1815:3</p> <p><b>OPEC</b> [1] - 1842:16</p> <p><b>open</b> [9] - 1736:10, 1779:9, 1779:17, 1780:4, 1780:20, 1792:22, 1853:16, 1951:19, 1952:3</p> <p><b>operate</b> [4] - 1754:21, 1878:19, 1972:10, 1972:12</p> <p><b>operates</b> [1] - 1833:12</p> <p><b>operating</b> [5] - 1745:8, 1794:18, 1920:7, 1920:10, 1920:12</p> <p><b>operation</b> [6] - 1746:16, 1755:15, 1755:16, 1783:11, 1913:6, 1915:13</p> <p><b>operational</b> [1] - 1754:14</p> <p><b>operations</b> [1] - 1763:16</p> <p><b>operators</b> [1] - 1972:12</p> <p><b>opinion</b> [48] - 1733:19, 1734:6, 1740:13, 1740:15, 1740:20, 1751:24, 1752:14, 1779:23, 1786:25, 1787:2, 1802:22, 1803:5, 1805:1, 1808:14, 1811:14, 1812:25, 1815:6, 1816:20, 1817:1, 1817:3, 1817:12, 1817:25, 1818:1, 1819:6, 1819:18, 1850:21, 1885:21, 1886:4, 1889:6, 1889:11, 1896:1, 1900:3, 1900:6, 1909:3, 1932:16, 1953:6, 1970:9, 1975:8, 1975:11, 1975:24,</p>	<p>1976:18, 1976:19, 1976:23, 1977:12, 1977:13, 1980:2, 1981:22, 1984:16</p> <p><b>opinions</b> [5] - 1733:12, 1843:21, 1854:16, 1882:25, 1899:24</p> <p><b>opponent</b> [3] - 1736:1, 1736:3, 1736:5</p> <p><b>opportunity</b> [6] - 1764:7, 1799:23, 1826:22, 1867:14, 1970:4, 1970:11</p> <p><b>oppose</b> [1] - 1832:16</p> <p><b>opposed</b> [2] - 1843:21, 1932:2</p> <p><b>opposing</b> [2] - 1832:25, 1921:8</p> <p><b>opt</b> [1] - 1792:1</p> <p><b>option</b> [4] - 1791:25, 1866:15, 1895:19, 1946:23</p> <p><b>options</b> [2] - 1849:19, 1895:12</p> <p><b>OR14-42-000</b> [1] - 1985:21</p> <p><b>oral</b> [1] - 1950:5</p> <p><b>orally</b> [1] - 1925:23</p> <p><b>Orchid</b> [2] - 1708:7, 1772:18</p> <p><b>orchid</b> [2] - 1739:15, 1743:3</p> <p><b>order</b> [31] - 1788:23, 1789:5, 1800:9, 1808:17, 1821:12, 1827:3, 1835:12, 1835:13, 1842:2, 1843:8, 1846:24, 1858:24, 1859:2, 1859:20, 1860:6, 1861:8, 1862:12, 1863:25, 1884:4, 1906:15, 1911:9, 1914:18, 1914:20, 1918:6, 1959:20, 1960:10, 1961:17, 1985:20, 1985:23, 1985:25, 1986:2</p> <p><b>Order</b> [2] - 1707:14, 1961:16</p> <p><b>ordered</b> [2] - 1949:5, 1958:24</p> <p><b>orders</b> [1] - 1866:19</p> <p><b>ordinarily</b> [1] - 1969:1</p> <p><b>Oregon</b> [2] - 1721:10, 1722:8</p> <p><b>organic</b> [8] - 1795:20, 1795:23, 1875:25, 1894:23, 1894:25,</p>	<p>1895:2, 1896:6, 1896:11</p> <p><b>organization</b> [2] - 1829:2, 1829:14</p> <p><b>organizations</b> [1] - 1793:19</p> <p><b>organize</b> [1] - 1798:7</p> <p><b>organizer</b> [3] - 1828:14, 1828:25, 1829:1</p> <p><b>origin</b> [1] - 1853:21</p> <p><b>original</b> [6] - 1730:2, 1737:4, 1749:24, 1764:14, 1805:4, 1973:8</p> <p><b>ORRIN</b> [1] - 1716:13</p> <p><b>otherwise</b> [3] - 1932:6, 1960:5, 1965:8</p> <p><b>ought</b> [1] - 1927:21</p> <p><b>ourselves</b> [1] - 1971:20</p> <p><b>out-of-court</b> [4] - 1871:13, 1948:16, 1954:1, 1954:3</p> <p><b>outcome</b> [1] - 1790:4</p> <p><b>outlined</b> [1] - 1927:16</p> <p><b>outlines</b> [1] - 1904:11</p> <p><b>output</b> [4] - 1749:14, 1750:23, 1835:18, 1836:3</p> <p><b>outside</b> [9] - 1746:21, 1747:5, 1776:7, 1793:11, 1793:13, 1845:9, 1845:10, 1854:24, 1857:24</p> <p><b>overcome</b> [1] - 1937:25</p> <p><b>overland</b> [1] - 1748:6</p> <p><b>overlooked</b> [1] - 1849:14</p> <p><b>overrule</b> [12] - 1734:24, 1735:24, 1741:7, 1767:21, 1777:4, 1777:5, 1780:17, 1833:24, 1872:11, 1928:2, 1964:18, 1973:24</p> <p><b>overruled</b> [22] - 1737:9, 1738:20, 1741:4, 1747:10, 1764:6, 1765:9, 1777:1, 1787:15, 1832:4, 1833:23, 1848:15, 1851:22, 1854:1, 1871:16, 1879:6, 1884:25, 1886:6, 1887:9, 1910:8, 1949:24, 1952:9, 1981:16</p>	<p><b>oversee</b> [1] - 1723:21 31</p> <p><b>overstepping</b> [1] - 1845:14</p> <p><b>own</b> [9] - 1799:9, 1814:21, 1861:8, 1891:3, 1891:4, 1915:6, 1940:6, 1972:7</p> <p><b>owned</b> [8] - 1795:10, 1795:11, 1795:12, 1907:15, 1907:18, 1908:2, 1908:19, 1917:15</p> <p><b>oxygen</b> [1] - 1823:17</p>
<b>P</b>				
<p><b>p.m</b> [1] - 1988:3</p> <p><b>package</b> [4] - 1955:24, 1960:1, 1960:6, 1960:9</p> <p><b>packaged</b> [1] - 1975:24</p> <p><b>pad</b> [1] - 1894:10</p> <p><b>PAGE</b> [25] - 1705:2, 1706:2, 1706:13, 1707:2, 1708:2, 1708:8, 1708:12, 1708:15, 1709:2, 1710:2, 1711:2, 1711:14, 1712:2, 1713:2, 1714:2, 1714:19, 1715:2, 1715:6, 1716:2, 1717:2, 1718:2, 1718:15, 1719:2, 1719:5, 1720:2</p> <p><b>page</b> [45] - 1707:14, 1725:14, 1726:7, 1726:8, 1733:9, 1735:5, 1735:6, 1744:21, 1752:13, 1759:24, 1760:15, 1760:18, 1761:20, 1766:10, 1769:11, 1769:14, 1770:21, 1771:20, 1772:18, 1773:5, 1773:20, 1779:22, 1789:12, 1814:2, 1814:5, 1820:17, 1902:8, 1907:4, 1922:24, 1922:25, 1923:11, 1926:5, 1940:6, 1952:3, 1952:6, 1959:3, 1959:15, 1965:24, 1966:3, 1966:6, 1966:8, 1966:10, 1978:14</p> <p><b>pages</b> [12] - 1865:22,</p>				

<p>1959:16, 1965:18, 1966:1, 1966:4, 1966:11, 1986:21, 1986:23, 1986:24</p> <p><b>Pages</b> [1] - 1703:10</p> <p><b>Paha</b> [1] - 1815:18</p> <p><b>PAIGE</b> [1] - 1712:7</p> <p><b>painfully</b> [1] - 1812:4</p> <p><b>pallid</b> [4] - 1708:4, 1739:14, 1742:21, 1770:20</p> <p><b>Pallid</b> [1] - 1708:5</p> <p><b>paper</b> [9] - 1759:20, 1816:18, 1816:19, 1829:22, 1924:22, 1975:14, 1976:10, 1987:9, 1987:13</p> <p><b>paragraph</b> [7] - 1762:2, 1764:8, 1764:11, 1769:19, 1770:10, 1772:19, 1985:19</p> <p><b>parallel</b> [1] - 1951:9</p> <p><b>parallels</b> [1] - 1947:16</p> <p><b>parameters</b> [3] - 1796:11, 1885:7, 1944:8</p> <p><b>paraphrasing</b> [2] - 1775:4, 1815:7</p> <p><b>parcel</b> [1] - 1891:9</p> <p><b>parent</b> [3] - 1974:15, 1974:21, 1974:23</p> <p><b>parks</b> [1] - 1795:10</p> <p><b>part</b> [37] - 1732:4, 1738:24, 1747:22, 1771:4, 1771:12, 1771:14, 1776:22, 1786:10, 1793:25, 1795:16, 1799:23, 1804:8, 1824:7, 1831:17, 1842:16, 1847:7, 1855:2, 1873:3, 1875:3, 1882:16, 1883:2, 1887:8, 1893:4, 1893:11, 1895:22, 1902:8, 1911:4, 1930:17, 1949:15, 1950:20, 1956:19, 1958:11, 1959:16, 1960:1, 1973:13, 1983:11</p> <p><b>parte</b> [3] - 1959:22, 1961:8, 1962:12</p> <p><b>participate</b> [4] - 1723:16, 1724:23, 1861:17, 1861:21</p> <p><b>participated</b> [1] - 1962:7</p> <p><b>participates</b> [1] -</p>	<p>1834:20</p> <p><b>particular</b> [24] - 1746:5, 1757:5, 1767:3, 1769:7, 1774:19, 1778:19, 1798:8, 1830:20, 1833:14, 1863:25, 1865:4, 1865:5, 1883:6, 1899:2, 1899:4, 1905:5, 1915:12, 1917:9, 1918:18, 1932:25, 1948:10, 1978:19, 1979:1, 1980:6</p> <p><b>particularly</b> [3] - 1727:1, 1898:9, 1926:13</p> <p><b>parties</b> [11] - 1827:19, 1840:20, 1858:19, 1861:5, 1866:16, 1867:14, 1885:14, 1893:19, 1945:5, 1957:11</p> <p><b>Partners</b> [1] - 1974:20</p> <p><b>partners</b> [1] - 1974:22</p> <p><b>parts</b> [2] - 1799:1, 1886:10</p> <p><b>party</b> [12] - 1736:1, 1736:3, 1736:4, 1736:22, 1790:1, 1791:2, 1793:1, 1796:4, 1796:9, 1840:14, 1973:10, 1979:10</p> <p><b>passed</b> [2] - 1791:20, 1844:12</p> <p><b>passes</b> [1] - 1784:16</p> <p><b>passing</b> [1] - 1849:22</p> <p><b>past</b> [6] - 1842:4, 1854:13, 1875:14, 1933:7, 1943:16, 1968:1</p> <p><b>path</b> [1] - 1945:8</p> <p><b>pathway</b> [1] - 1947:24</p> <p><b>patience</b> [1] - 1805:25</p> <p><b>patiently</b> [2] - 1862:3, 1862:5</p> <p><b>Paul</b> [1] - 1799:11</p> <p><b>pause</b> [1] - 1978:12</p> <p><b>pay</b> [2] - 1912:2, 1976:3</p> <p><b>paying</b> [1] - 1912:3</p> <p><b>payment</b> [1] - 1913:11</p> <p><b>pays</b> [1] - 1790:7</p> <p><b>peak</b> [1] - 1842:13</p> <p><b>peer</b> [3] - 1871:25, 1872:4, 1887:22</p> <p><b>peg</b> [1] - 1853:9</p> <p><b>PEGGY</b> [1] - 1717:6</p> <p><b>pendency</b> [1] -</p>	<p>1906:12</p> <p><b>pending</b> [2] - 1948:15, 1948:22</p> <p><b>people</b> [35] - 1775:14, 1775:17, 1776:15, 1790:25, 1812:5, 1812:24, 1814:11, 1819:10, 1823:12, 1836:17, 1845:10, 1845:11, 1845:13, 1845:17, 1846:11, 1847:1, 1847:13, 1853:17, 1853:19, 1854:14, 1857:19, 1884:1, 1890:16, 1896:3, 1944:13, 1944:19, 1945:4, 1949:21, 1953:19, 1959:6, 1960:14, 1967:20, 1972:9, 1973:10</p> <p><b>people's</b> [6] - 1757:22, 1835:2, 1880:19, 1955:5, 1976:14, 1976:16</p> <p><b>per</b> [13] - 1930:19, 1930:22, 1930:23, 1931:3, 1931:10, 1931:13, 1931:17, 1932:3, 1933:2, 1933:3, 1933:5, 1934:8, 1934:15</p> <p><b>perceived</b> [1] - 1957:12</p> <p><b>percent</b> [22] - 1730:22, 1835:11, 1835:14, 1846:25, 1874:2, 1875:14, 1878:24, 1912:3, 1912:10, 1912:13, 1912:14, 1912:15, 1912:16, 1912:23, 1929:19, 1931:6, 1932:8, 1933:8, 1933:11, 1934:22, 1947:20, 1956:23</p> <p><b>Perennial</b> [1] - 1793:24</p> <p><b>perfectly</b> [1] - 1767:18</p> <p><b>perform</b> [1] - 1783:23</p> <p><b>performance</b> [1] - 1957:1</p> <p><b>performed</b> [3] - 1770:25, 1771:3, 1786:13</p> <p><b>perhaps</b> [6] - 1745:13, 1802:20, 1862:11, 1909:25, 1922:23, 1981:4</p> <p><b>period</b> [3] - 1741:25,</p>	<p>1792:22, 1912:3</p> <p><b>permanent</b> [3] - 1778:24, 1779:3, 1917:2</p> <p><b>permeability</b> [4] - 1806:21, 1808:2, 1809:14, 1810:2</p> <p><b>permeable</b> [1] - 1807:14</p> <p><b>permeate</b> [1] - 1809:15</p> <p><b>permission</b> [1] - 1911:5</p> <p><b>PERMIT</b> [1] - 1703:5</p> <p><b>permit</b> [19] - 1721:18, 1749:6, 1751:5, 1751:10, 1751:22, 1765:4, 1789:2, 1789:3, 1791:7, 1791:24, 1792:6, 1792:14, 1794:25, 1795:4, 1796:12, 1985:4, 1985:9, 1985:11, 1987:12</p> <p><b>Permit</b> [20] - 1723:9, 1725:24, 1737:6, 1738:23, 1747:17, 1747:20, 1749:2, 1768:18, 1782:14, 1795:4, 1926:16, 1972:18, 1977:15, 1978:18, 1980:9, 1982:20, 1984:5, 1984:17, 1984:24, 1986:3</p> <p><b>permits</b> [6] - 1726:13, 1789:2, 1789:10, 1790:21, 1791:7, 1796:8</p> <p><b>permitted</b> [2] - 1765:2, 1781:1</p> <p><b>permitting</b> [7] - 1721:16, 1763:18, 1768:23, 1782:12, 1794:7, 1814:24, 1833:9</p> <p><b>perpendicular</b> [1] - 1894:12</p> <p><b>person</b> [6] - 1819:15, 1854:2, 1904:14, 1921:7, 1950:6, 1974:12</p> <p><b>personal</b> [10] - 1817:1, 1848:2, 1854:4, 1871:4, 1872:8, 1887:23, 1904:22, 1949:19, 1954:11, 1956:21</p> <p><b>personally</b> [9] - 1900:2, 1904:19,</p>	<p>1904:20, 1915:22, 32 1916:1, 1945:15, 1946:13, 1947:7, 1954:16</p> <p><b>persons</b> [1] - 1953:17</p> <p><b>perspective</b> [4] - 1835:22, 1937:22, 1971:12, 1972:23</p> <p><b>perspectives</b> [1] - 1837:5</p> <p><b>pertaining</b> [2] - 1953:16, 1964:23</p> <p><b>pertains</b> [3] - 1842:3, 1849:17, 1869:4</p> <p><b>pertinent</b> [3] - 1802:15, 1824:10, 1915:9</p> <p><b>PETER</b> [1] - 1711:3</p> <p><b>Petition</b> [1] - 1707:17</p> <p><b>petition</b> [1] - 1764:18</p> <p><b>petroleum</b> [7] - 1722:21, 1799:2, 1799:13, 1856:13, 1856:17, 1856:21, 1876:7</p> <p><b>PETTERSON</b> [1] - 1715:22</p> <p><b>Petterson</b> [4] - 1707:9, 1940:7, 1941:24, 1942:15</p> <p><b>PHMSA</b> [10] - 1745:1, 1746:11, 1746:15, 1754:2, 1754:12, 1754:21, 1755:14, 1783:15, 1783:18</p> <p><b>PHMSA's</b> [1] - 1746:12</p> <p><b>phone</b> [6] - 1737:1, 1827:10, 1972:21, 1972:22, 1973:4, 1974:5</p> <p><b>photograph</b> [1] - 1905:22</p> <p><b>photography</b> [1] - 1929:8</p> <p><b>Photos</b> [5] - 1707:19, 1707:19, 1707:20, 1707:20, 1707:21</p> <p><b>physical</b> [5] - 1809:3, 1809:20, 1809:22, 1810:4, 1958:19</p> <p><b>pick</b> [5] - 1821:10, 1821:12, 1946:23, 1946:24, 1947:2</p> <p><b>picked</b> [10] - 1946:14, 1947:2, 1947:13, 1947:14, 1947:16, 1947:23, 1949:16, 1952:18, 1952:20</p> <p><b>picking</b> [1] - 1946:23</p>
--	--	---	--	--



<p><b>picture</b> <sup>[5]</sup> - 1790:10, 1823:18, 1917:24, 1931:5, 1936:7</p> <p><b>pictures</b> <sup>[1]</sup> - 1942:20</p> <p><b>piece</b> <sup>[6]</sup> - 1746:5, 1812:24, 1816:18, 1816:19, 1829:22, 1878:16</p> <p><b>Pierre</b> <sup>[1]</sup> - 1704:15</p> <p><b>pipe</b> <sup>[13]</sup> - 1750:1, 1750:7, 1888:17, 1889:20, 1894:7, 1900:12, 1931:3, 1932:2, 1932:7, 1935:3, 1944:20</p> <p><b>pipe's</b> <sup>[1]</sup> - 1930:23</p> <p><b>Pipeline</b> <sup>[8]</sup> - 1705:5, 1705:21, 1705:22, 1764:2, 1830:17, 1835:17, 1890:3, 1949:22</p> <p><b>PIPELINE</b> <sup>[1]</sup> - 1703:5</p> <p><b>pipeline</b> <sup>[114]</sup> - 1721:17, 1729:1, 1729:2, 1733:14, 1733:15, 1739:12, 1742:3, 1742:15, 1745:1, 1745:8, 1745:17, 1745:18, 1746:16, 1748:9, 1748:13, 1754:13, 1754:21, 1755:7, 1755:15, 1763:12, 1777:23, 1783:9, 1783:12, 1783:16, 1784:18, 1790:1, 1794:17, 1800:11, 1801:21, 1802:21, 1803:2, 1803:23, 1804:14, 1804:17, 1806:11, 1807:5, 1811:20, 1813:20, 1815:23, 1816:24, 1817:2, 1819:14, 1821:13, 1821:17, 1821:21, 1829:1, 1836:3, 1836:18, 1842:21, 1843:6, 1848:9, 1848:13, 1849:22, 1850:15, 1869:16, 1874:8, 1874:21, 1874:22, 1879:13, 1879:15, 1879:22, 1881:8, 1882:18, 1883:20, 1887:4, 1887:11, 1888:21, 1888:24, 1890:2, 1891:25, 1894:7, 1894:10, 1896:15, 1898:20,</p>	<p>1898:22, 1898:23, 1898:25, 1899:18, 1900:7, 1900:10, 1907:6, 1911:7, 1911:8, 1913:5, 1913:6, 1913:7, 1915:25, 1917:2, 1919:20, 1919:23, 1922:17, 1931:1, 1931:11, 1931:20, 1932:11, 1936:2, 1936:4, 1936:5, 1937:4, 1937:8, 1937:9, 1937:12, 1937:14, 1937:15, 1937:16, 1940:8, 1941:25, 1950:19, 1953:18, 1971:8</p> <p><b>pipeline's</b> <sup>[2]</sup> - 1905:19, 1912:7</p> <p><b>Pipeline's</b> <sup>[1]</sup> - 1707:13</p> <p><b>pipelines</b> <sup>[18]</sup> - 1763:17, 1783:8, 1790:12, 1790:13, 1832:25, 1837:13, 1869:12, 1887:21, 1887:24, 1926:13, 1931:18, 1935:23, 1937:20, 1938:1, 1938:2, 1943:3, 1943:12, 1944:1</p> <p><b>pipes</b> <sup>[4]</sup> - 1935:2, 1935:4, 1935:5, 1943:4</p> <p><b>pipit</b> <sup>[13]</sup> - 1708:3, 1739:14, 1742:4, 1742:6, 1760:2, 1760:19, 1761:2, 1764:19, 1765:22, 1766:6, 1768:4, 1770:1, 1770:9</p> <p><b>pipits</b> <sup>[1]</sup> - 1761:8</p> <p><b>pits</b> <sup>[1]</sup> - 1929:17</p> <p><b>place</b> <sup>[19]</sup> - 1767:3, 1781:10, 1784:5, 1786:25, 1787:3, 1824:2, 1824:17, 1887:25, 1892:21, 1913:21, 1922:3, 1922:16, 1922:21, 1930:1, 1949:12, 1957:17, 1965:18, 1973:9, 1982:5</p> <p><b>placed</b> <sup>[3]</sup> - 1762:12, 1926:12, 1926:16</p> <p><b>places</b> <sup>[7]</sup> - 1799:12, 1894:13, 1900:3, 1907:2, 1926:17, 1960:15, 1985:3</p>	<p><b>Plains</b> <sup>[3]</sup> - 1770:5, 1770:15, 1770:16</p> <p><b>Plan</b> <sup>[17]</sup> - 1705:6, 1705:7, 1708:3, 1708:3, 1708:4, 1873:4, 1873:15, 1873:23, 1873:24, 1875:10, 1879:5, 1879:7, 1888:19, 1888:23, 1889:23, 1893:8, 1896:5</p> <p><b>plan</b> <sup>[27]</sup> - 1728:19, 1728:24, 1728:25, 1729:6, 1729:17, 1729:22, 1760:2, 1784:5, 1798:7, 1807:19, 1847:19, 1862:13, 1868:2, 1874:9, 1874:17, 1875:16, 1876:23, 1879:10, 1882:16, 1888:16, 1892:14, 1892:16, 1892:18, 1892:21, 1892:24, 1897:19, 1983:3</p> <p><b>planned</b> <sup>[1]</sup> - 1779:9</p> <p><b>planning</b> <sup>[5]</sup> - 1875:21, 1883:24, 1888:23, 1893:4, 1893:9</p> <p><b>plans</b> <sup>[16]</sup> - 1728:18, 1728:21, 1729:8, 1730:13, 1760:3, 1790:22, 1792:4, 1795:17, 1869:6, 1869:7, 1882:23, 1882:25, 1981:21, 1981:25, 1982:4, 1983:10</p> <p><b>plant</b> <sup>[2]</sup> - 1762:20, 1933:19</p> <p><b>plastic</b> <sup>[1]</sup> - 1878:11</p> <p><b>play</b> <sup>[5]</sup> - 1775:11, 1777:8, 1842:16, 1846:19, 1847:16</p> <p><b>plenty</b> <sup>[1]</sup> - 1852:11</p> <p><b>plot</b> <sup>[8]</sup> - 1896:15, 1899:2, 1899:5, 1899:6, 1899:8, 1899:23, 1899:25, 1900:3</p> <p><b>plots</b> <sup>[1]</sup> - 1899:1</p> <p><b>plus</b> <sup>[2]</sup> - 1724:16, 1804:22</p> <p><b>point</b> <sup>[31]</sup> - 1741:16, 1747:17, 1763:9, 1765:6, 1765:11, 1768:25, 1773:6, 1777:12, 1779:21, 1780:17, 1797:4,</p>	<p>1803:6, 1827:11, 1827:19, 1834:23, 1835:4, 1838:19, 1852:23, 1859:8, 1863:24, 1867:24, 1879:18, 1889:7, 1926:11, 1927:23, 1932:24, 1933:21, 1933:23, 1937:14, 1941:12, 1976:8</p> <p><b>pointed</b> <sup>[1]</sup> - 1801:20</p> <p><b>pointing</b> <sup>[3]</sup> - 1929:2, 1937:11, 1985:15</p> <p><b>points</b> <sup>[4]</sup> - 1777:12, 1864:12, 1929:3, 1972:8</p> <p><b>policy</b> <sup>[7]</sup> - 1749:4, 1904:4, 1904:6, 1904:10, 1904:11, 1904:13, 1944:19</p> <p><b>Policy</b> <sup>[2]</sup> - 1976:20, 1976:24</p> <p><b>policymakers</b> <sup>[1]</sup> - 1969:18</p> <p><b>polluted</b> <sup>[1]</sup> - 1749:19</p> <p><b>pollution</b> <sup>[1]</sup> - 1729:21</p> <p><b>pond</b> <sup>[2]</sup> - 1929:9, 1930:4</p> <p><b>pool</b> <sup>[1]</sup> - 1809:6</p> <p><b>Pool</b> <sup>[1]</sup> - 1706:8</p> <p><b>pooled</b> <sup>[1]</sup> - 1809:13</p> <p><b>populated</b> <sup>[1]</sup> - 1756:17</p> <p><b>portion</b> <sup>[14]</sup> - 1772:8, 1772:25, 1905:5, 1925:15, 1949:13, 1950:11, 1953:9, 1964:19, 1964:21, 1964:22, 1965:4, 1965:6, 1965:15, 1980:15</p> <p><b>portions</b> <sup>[6]</sup> - 1808:20, 1810:25, 1901:14, 1963:18, 1964:6, 1966:19</p> <p><b>Portland</b> <sup>[4]</sup> - 1721:10, 1722:8, 1722:25, 1723:1</p> <p><b>portray</b> <sup>[1]</sup> - 1960:10</p> <p><b>portrays</b> <sup>[1]</sup> - 1812:12</p> <p><b>pose</b> <sup>[3]</sup> - 1733:14, 1739:12, 1848:9</p> <p><b>posed</b> <sup>[3]</sup> - 1754:8, 1801:4, 1923:25</p> <p><b>position</b> <sup>[6]</sup> - 1786:14, 1800:5, 1836:13, 1841:19, 1901:12, 1962:23</p> <p><b>positively</b> <sup>[1]</sup> - 1817:11</p>	<p><b>possibilities</b> <sup>[2]</sup> - 33 1817:13, 1817:21</p> <p><b>possibility</b> <sup>[1]</sup> - 1741:19</p> <p><b>possible</b> <sup>[18]</sup> - 1740:5, 1742:20, 1742:23, 1748:3, 1790:4, 1792:21, 1817:9, 1823:3, 1823:11, 1829:5, 1836:15, 1879:23, 1882:21, 1885:16, 1893:18, 1970:4, 1970:10, 1981:5</p> <p><b>possibly</b> <sup>[4]</sup> - 1735:19, 1746:20, 1757:11, 1836:20</p> <p><b>post</b> <sup>[4]</sup> - 1838:2, 1839:20, 1840:1, 1926:20</p> <p><b>postconstruction</b> <sup>[1]</sup> - 1881:5</p> <p><b>postdecision</b> <sup>[1]</sup> - 1920:5</p> <p><b>potential</b> <sup>[31]</sup> - 1725:15, 1740:17, 1742:1, 1742:13, 1751:11, 1758:13, 1758:15, 1770:22, 1779:24, 1802:19, 1802:25, 1803:1, 1807:7, 1810:25, 1811:3, 1811:12, 1811:19, 1815:22, 1816:9, 1817:7, 1818:6, 1818:17, 1818:24, 1824:16, 1824:25, 1834:18, 1842:22, 1843:16, 1847:15, 1848:14</p> <p><b>potentially</b> <sup>[3]</sup> - 1780:5, 1815:8, 1824:18</p> <p><b>power</b> <sup>[5]</sup> - 1933:19, 1947:14, 1947:17, 1948:1</p> <p><b>PowerPoints</b> <sup>[2]</sup> - 1965:2, 1965:22</p> <p><b>practically</b> <sup>[2]</sup> - 1783:8, 1783:9</p> <p><b>practice</b> <sup>[2]</sup> - 1788:25, 1871:9</p> <p><b>practices</b> <sup>[11]</sup> - 1729:23, 1729:24, 1751:19, 1752:6, 1781:9, 1788:4, 1789:14, 1789:21, 1795:23, 1874:21, 1887:25</p> <p><b>prairie</b> <sup>[3]</sup> - 1739:15,</p>
---	---	--	--	---

<p>1743:3, 1979:15  <b>Prairie</b> [2] - 1708:7, 1772:17  <b>preceding</b> [1] - 1978:14  <b>precluded</b> [1] - 1764:20  <b>preconsidered</b> [1] - 1792:16  <b>preconstruction</b> [2] - 1738:22, 1743:21  <b>predated</b> [1] - 1937:15  <b>predicted</b> [1] - 1842:13  <b>predictions</b> [3] - 1842:8, 1842:10, 1855:25  <b>prefabricated</b> [1] - 1880:8  <b>preface</b> [2] - 1959:1, 1968:11  <b>prefaced</b> [1] - 1979:2  <b>prefacing</b> [2] - 1765:5, 1765:7  <b>prefer</b> [3] - 1856:24, 1857:5, 1857:7  <b>preferable</b> [3] - 1855:7, 1855:13, 1857:9  <b>preference</b> [2] - 1815:16, 1877:14  <b>Prefiled</b> [6] - 1829:25, 1865:3, 1921:5, 1924:17, 1925:7, 1981:8  <b>prefiled</b> [28] - 1723:21, 1723:23, 1725:14, 1728:5, 1738:2, 1800:10, 1800:18, 1801:4, 1801:19, 1803:24, 1820:12, 1830:4, 1830:6, 1839:15, 1848:17, 1863:14, 1864:4, 1867:20, 1901:16, 1901:19, 1910:10, 1921:12, 1940:4, 1941:2, 1977:16, 1980:10, 1982:9, 1982:22  <b>prefiling</b> [1] - 1723:19  <b>prehearing</b> [2] - 1838:15, 1838:17  <b>prejudicial</b> [2] - 1837:16, 1910:5  <b>Preliminary</b> [1] - 1707:15  <b>prematurely</b> [1] - 1867:11  <b>premise</b> [1] - 1971:25</p>	<p><b>premonitions</b> [1] - 1819:13  <b>preparation</b> [4] - 1728:5, 1732:11, 1842:25, 1922:1  <b>prepare</b> [10] - 1723:23, 1843:25, 1867:1, 1901:16, 1906:13, 1915:6, 1963:2, 1976:3, 1984:19  <b>prepared</b> [23] - 1724:3, 1725:3, 1804:21, 1804:25, 1806:7, 1806:10, 1811:8, 1856:5, 1905:24, 1915:7, 1935:19, 1941:12, 1942:25, 1943:6, 1956:23, 1959:11, 1967:5, 1967:8, 1967:14, 1967:16, 1967:18, 1975:13, 1979:18  <b>preparing</b> [5] - 1724:12, 1724:13, 1748:19, 1843:5, 1906:15  <b>prerogative</b> [1] - 1866:23  <b>presence</b> [3] - 1809:13, 1809:21, 1921:15  <b>present</b> [4] - 1748:7, 1800:4, 1808:10, 1816:17  <b>presentation</b> [2] - 1945:13, 1945:14  <b>presented</b> [7] - 1764:18, 1847:20, 1861:18, 1945:17, 1956:6, 1961:2, 1969:7  <b>presenters</b> [2] - 1831:20, 1832:9  <b>presenting</b> [2] - 1858:25, 1861:19  <b>preserve</b> [1] - 1918:6  <b>presumably</b> [1] - 1812:17  <b>presumption</b> [1] - 1804:5  <b>pretty</b> [5] - 1750:10, 1843:7, 1932:15, 1932:16, 1945:13  <b>prevalent</b> [2] - 1741:15, 1917:17  <b>prevent</b> [1] - 1879:14  <b>prevention</b> [1] - 1729:21</p>	<p><b>prevents</b> [2] - 1782:21  <b>previous</b> [4] - 1766:10, 1818:6, 1846:18, 1881:15  <b>previously</b> [10] - 1723:4, 1737:13, 1768:17, 1787:7, 1801:22, 1925:2, 1927:17, 1942:4, 1960:8, 1987:21  <b>prices</b> [1] - 1847:11  <b>primarily</b> [7] - 1721:17, 1724:14, 1770:2, 1770:5, 1770:14, 1794:17, 1834:8  <b>primary</b> [2] - 1798:23, 1799:11  <b>prime</b> [1] - 1764:1  <b>principal</b> [1] - 1868:15  <b>principles</b> [1] - 1954:22  <b>print</b> [1] - 1811:17  <b>printing</b> [1] - 1722:17  <b>priorities</b> [1] - 1764:20  <b>priority</b> [2] - 1834:21, 1834:22  <b>private</b> [2] - 1799:5, 1869:12  <b>privately</b> [1] - 1795:12  <b>privy</b> [2] - 1736:17, 1812:21  <b>probable</b> [1] - 1957:21  <b>problem</b> [9] - 1727:2, 1791:15, 1818:2, 1819:14, 1859:9, 1887:2, 1888:13, 1978:12, 1978:15  <b>problems</b> [5] - 1767:5, 1805:4, 1880:24, 1881:5, 1886:17  <b>procedural</b> [1] - 1861:10  <b>procedure</b> [5] - 1738:12, 1738:14, 1920:7, 1920:10, 1920:13  <b>procedures</b> [1] - 1904:11  <b>Procedures</b> [1] - 1968:21  <b>proceed</b> [7] - 1841:17, 1865:10, 1950:16, 1955:19, 1966:22, 1971:6, 1978:5  <b>proceeding</b> [7] - 1736:22, 1747:17, 1887:8, 1901:17, 1921:7, 1968:19, 1970:6</p>	<p><b>proceedings</b> [10] - 1764:4, 1764:5, 1802:16, 1806:8, 1906:13, 1906:21, 1913:20, 1962:8, 1989:9, 1989:12  <b>PROCEEDINGS</b> [1] - 1704:13  <b>process</b> [61] - 1723:7, 1723:10, 1723:17, 1725:24, 1738:17, 1739:2, 1740:15, 1740:18, 1743:15, 1750:10, 1750:11, 1751:22, 1754:12, 1756:24, 1757:6, 1763:19, 1768:17, 1768:18, 1768:24, 1771:5, 1771:12, 1771:13, 1771:15, 1782:12, 1782:17, 1784:20, 1786:17, 1786:19, 1786:24, 1787:25, 1790:3, 1791:19, 1792:3, 1794:6, 1796:24, 1796:25, 1817:8, 1833:8, 1833:9, 1835:2, 1846:21, 1855:7, 1855:14, 1867:5, 1874:23, 1875:5, 1876:9, 1877:8, 1877:25, 1893:2, 1895:23, 1911:4, 1968:13, 1970:9, 1975:16, 1975:25, 1976:2, 1976:5, 1976:7  <b>processes</b> [8] - 1747:3, 1749:10, 1749:13, 1749:14, 1794:7, 1833:10, 1855:24, 1874:15  <b>produce</b> [2] - 1934:1, 1934:16  <b>produced</b> [4] - 1857:8, 1933:6, 1933:12, 1934:23  <b>producer</b> [1] - 1934:12  <b>producers</b> [1] - 1857:20  <b>produces</b> [2] - 1933:2, 1933:14  <b>producing</b> [2] - 1889:1, 1934:13  <b>product</b> [4] - 1847:5, 1931:17, 1933:21, 1983:15  <b>production</b> [12] - 1842:8, 1842:17,</p>	<p>1842:18, 1842:22, 34  1847:21, 1857:7, 1882:20, 1889:24, 1930:20, 1931:2, 1931:4, 1932:8  <b>production's</b> [1] - 1847:23  <b>productivity</b> [5] - 1874:2, 1877:9, 1885:15, 1889:21, 1912:12  <b>products</b> [7] - 1856:13, 1856:17, 1856:21, 1934:9, 1935:4, 1936:5, 1937:9  <b>professional</b> [11] - 1721:11, 1760:9, 1798:1, 1827:8, 1828:17, 1863:1, 1867:21, 1871:7, 1889:6, 1889:7, 1889:11  <b>Professional</b> [2] - 1989:6, 1989:19  <b>Program</b> [5] - 1798:3, 1813:8, 1813:23, 1814:23, 1823:9  <b>program</b> [5] - 1792:1, 1792:2, 1971:14, 1971:24, 1972:1  <b>Program's</b> [1] - 1814:5  <b>programs</b> [1] - 1798:24  <b>progress</b> [1] - 1910:20  <b>prohibit</b> [3] - 1844:24, 1884:18, 1885:2  <b>prohibits</b> [1] - 1824:22  <b>Project</b> [1] - 1888:9  <b>project</b> [90] - 1721:17, 1721:20, 1721:22, 1721:25, 1723:24, 1727:3, 1728:1, 1742:18, 1742:25, 1743:3, 1745:11, 1756:3, 1763:3, 1766:20, 1766:21, 1769:6, 1771:22, 1772:21, 1774:3, 1774:7, 1775:15, 1779:24, 1790:1, 1791:1, 1791:21, 1791:25, 1792:11, 1792:19, 1794:11, 1794:12, 1794:15, 1794:20, 1799:16, 1804:4, 1817:5, 1823:14, 1836:18, 1842:4, 1843:6,</p>
---	--	--	---	--

				<b>Q</b>	35
<p>1843:12, 1843:24, 1845:16, 1849:11, 1852:6, 1873:2, 1876:13, 1880:12, 1888:10, 1893:5, 1901:10, 1901:15, 1903:12, 1904:16, 1904:22, 1904:23, 1907:16, 1908:8, 1908:17, 1908:22, 1909:8, 1909:11, 1911:11, 1915:8, 1927:15, 1930:14, 1930:17, 1944:17, 1945:6, 1946:1, 1951:16, 1967:22, 1968:2, 1968:4, 1972:15, 1974:16, 1974:24, 1975:9, 1976:9, 1977:3, 1977:7, 1981:11, 1981:22, 1982:25, 1984:6, 1984:8, 1985:12</p> <p><b>projects</b> [16] - 1721:16, 1721:17, 1741:21, 1791:22, 1794:10, 1794:13, 1794:14, 1814:18, 1814:21, 1832:17, 1842:4, 1844:2, 1875:14, 1888:2, 1888:12</p> <p><b>promise</b> [2] - 1879:20, 1879:21</p> <p><b>promises</b> [1] - 1893:23</p> <p><b>pronounce</b> [1] - 1926:6</p> <p><b>proof</b> [8] - 1848:8, 1852:13, 1964:1, 1964:2, 1968:17, 1968:25, 1969:22, 1970:21</p> <p><b>prop</b> [1] - 1879:11</p> <p><b>proper</b> [4] - 1835:5, 1843:9, 1911:10, 1932:9</p> <p><b>properly</b> [14] - 1726:9, 1726:14, 1743:17, 1779:23, 1789:6, 1810:16, 1860:22, 1861:25, 1878:19, 1942:22, 1950:2, 1969:6</p> <p><b>properties</b> [9] - 1809:20, 1809:22, 1810:4, 1844:23, 1869:9, 1902:15, 1911:6, 1919:12,</p>	<p>1923:9</p> <p><b>property</b> [16] - 1874:2, 1874:5, 1876:18, 1877:20, 1891:10, 1899:11, 1899:13, 1905:2, 1905:9, 1907:25, 1908:5, 1922:18, 1922:19, 1922:22, 1929:23, 1930:3</p> <p><b>proponent</b> [3] - 1769:6, 1791:21, 1792:19</p> <p><b>proponents</b> [1] - 1792:1</p> <p><b>propose</b> [4] - 1797:2, 1983:6, 1987:2, 1987:23</p> <p><b>Proposed</b> [1] - 1707:16</p> <p><b>proposed</b> [20] - 1739:12, 1742:3, 1745:10, 1757:4, 1763:2, 1800:11, 1804:4, 1804:14, 1806:3, 1807:5, 1815:23, 1821:16, 1821:21, 1890:2, 1903:17, 1929:16, 1946:16, 1947:1, 1963:24, 1975:9</p> <p><b>proposes</b> [1] - 1796:25</p> <p><b>propping</b> [1] - 1894:4</p> <p><b>protect</b> [11] - 1740:17, 1742:13, 1760:24, 1829:16, 1834:10, 1876:5, 1876:6, 1876:11, 1877:7, 1884:5, 1971:20</p> <p><b>protected</b> [21] - 1725:16, 1738:8, 1739:7, 1745:19, 1745:25, 1746:12, 1761:2, 1761:6, 1761:9, 1762:21, 1763:12, 1768:24, 1769:9, 1774:17, 1778:17, 1779:4, 1782:24, 1784:4, 1786:11, 1788:21, 1867:6</p> <p><b>protection</b> [12] - 1758:7, 1760:23, 1762:1, 1763:15, 1775:6, 1785:8, 1797:5, 1834:24, 1844:22, 1884:23, 1978:21, 1980:13</p> <p><b>protections</b> [1] -</p>	<p>1758:20</p> <p><b>protocol</b> [2] - 1888:8, 1888:22</p> <p><b>protocols</b> [1] - 1888:4</p> <p><b>prove</b> [1] - 1963:21</p> <p><b>proven</b> [6] - 1880:14, 1880:15, 1880:18, 1880:20, 1880:22</p> <p><b>provide</b> [13] - 1774:14, 1821:19, 1849:11, 1861:4, 1862:12, 1900:15, 1902:9, 1902:13, 1911:7, 1915:19, 1917:7, 1968:5, 1970:7</p> <p><b>provided</b> [27] - 1723:4, 1724:2, 1724:6, 1725:1, 1729:13, 1739:12, 1745:14, 1750:25, 1771:3, 1771:7, 1773:17, 1792:25, 1793:20, 1802:17, 1805:6, 1810:24, 1838:15, 1838:16, 1865:24, 1866:1, 1883:5, 1964:15, 1972:24, 1976:12, 1978:5, 1978:7, 1983:15</p> <p><b>provides</b> [6] - 1786:2, 1791:14, 1793:19, 1843:14, 1843:22, 1956:5</p> <p><b>providing</b> [3] - 1722:1, 1832:2, 1882:19</p> <p><b>provision</b> [1] - 1744:22</p> <p><b>provisions</b> [1] - 1749:7</p> <p><b>proximity</b> [4] - 1808:3, 1821:15, 1905:19, 1918:19</p> <p><b>PUBLIC</b> [2] - 1703:1, 1703:12</p> <p><b>Public</b> [7] - 1705:24, 1790:14, 1796:1, 1800:8, 1867:8, 1989:7, 1989:18</p> <p><b>public</b> [6] - 1931:21, 1937:24, 1943:8, 1973:25, 1974:1, 1976:5</p> <p><b>public's</b> [1] - 1976:16</p> <p><b>publication</b> [2] - 1811:6, 1811:9</p> <p><b>publicly</b> [5] - 1739:6, 1795:11, 1810:24, 1943:6, 1956:6</p> <p><b>published</b> [2] -</p>	<p>1781:11, 1781:15</p> <p><b>publishes</b> [1] - 1817:22</p> <p><b>PUC</b> [11] - 1704:10, 1706:13, 1723:5, 1796:6, 1869:5, 1884:18, 1885:2, 1941:8, 1956:19, 1968:20</p> <p><b>PUC's</b> [1] - 1885:6</p> <p><b>pull</b> [2] - 1977:17, 1986:17</p> <p><b>pulled</b> [2] - 1837:11, 1929:7</p> <p><b>pulling</b> [1] - 1895:14</p> <p><b>pump</b> [1] - 1743:16</p> <p><b>pumped</b> [1] - 1750:8</p> <p><b>punitive</b> [1] - 1976:1</p> <p><b>purport</b> [1] - 1943:2</p> <p><b>purporting</b> [1] - 1956:12</p> <p><b>purports</b> [1] - 1986:15</p> <p><b>purpose</b> [5] - 1752:9, 1767:24, 1807:6, 1865:6, 1865:7</p> <p><b>purposes</b> [1] - 1724:18, 1727:21, 1767:8, 1781:20, 1800:15, 1870:25, 1914:12, 1938:18, 1972:1, 1986:6, 1987:11</p> <p><b>pursuant</b> [1] - 1785:6</p> <p><b>push</b> [3] - 1808:23, 1835:8, 1855:11</p> <p><b>put</b> [28] - 1750:16, 1794:25, 1812:5, 1841:25, 1842:8, 1846:23, 1847:6, 1850:17, 1852:14, 1858:17, 1859:5, 1871:8, 1876:3, 1876:8, 1878:23, 1888:8, 1889:25, 1894:13, 1901:19, 1924:17, 1933:17, 1937:6, 1944:20, 1947:18, 1948:7, 1960:22, 1970:11, 1986:9</p> <p><b>puts</b> [1] - 1787:22</p> <p><b>putting</b> [6] - 1859:13, 1879:10, 1882:18, 1916:20, 1955:12, 1959:16</p> <p><b>puzzles</b> [1] - 1917:11</p>	<p><b>qualification</b> [1] - 1866:4</p> <p><b>qualifications</b> [5] - 1734:17, 1734:18, 1867:2, 1867:4, 1870:22</p> <p><b>qualifies</b> [2] - 1734:3, 1753:22</p> <p><b>quality</b> [4] - 1733:25, 1745:21, 1746:7, 1774:21</p> <p><b>quality</b> [11] - 1749:11, 1749:13, 1749:15, 1749:24, 1750:2, 1750:23, 1751:20, 1780:5, 1821:20, 1876:4, 1891:15</p> <p><b>qualms</b> [1] - 1819:12</p> <p><b>quantified</b> [1] - 1836:12</p> <p><b>quantify</b> [1] - 1835:20</p> <p><b>quantity</b> [2] - 1807:22, 1931:2</p> <p><b>question's</b> [1] - 1787:6</p> <p><b>questioning</b> [3] - 1757:15, 1810:23, 1816:21</p> <p><b>questions</b> [126] - 1724:5, 1724:6, 1724:7, 1724:9, 1725:1, 1725:2, 1725:5, 1727:9, 1731:10, 1732:24, 1737:18, 1748:25, 1753:1, 1753:13, 1765:3, 1773:6, 1781:18, 1781:19, 1781:21, 1782:7, 1787:21, 1789:11, 1789:24, 1793:5, 1797:7, 1797:10, 1801:3, 1802:17, 1803:8, 1807:17, 1819:21, 1819:24, 1820:2, 1820:5, 1820:11, 1821:23, 1822:2, 1822:4, 1822:19, 1830:5, 1848:23, 1848:25, 1849:2, 1849:3, 1849:24, 1850:1, 1850:2, 1850:4, 1850:5, 1852:24, 1856:10, 1857:11, 1858:2, 1864:9, 1864:16, 1866:4,</p>	

<p>1867:20, 1872:18, 1872:24, 1881:19, 1881:20, 1882:8, 1883:7, 1883:9, 1884:12, 1885:17, 1886:15, 1892:3, 1892:5, 1892:6, 1892:8, 1893:25, 1896:24, 1898:3, 1906:16, 1911:18, 1914:22, 1915:4, 1916:11, 1916:14, 1916:16, 1916:22, 1918:25, 1919:5, 1920:15, 1920:17, 1923:24, 1925:22, 1927:3, 1927:14, 1928:10, 1928:12, 1928:16, 1928:17, 1930:6, 1936:15, 1943:15, 1953:16, 1953:20, 1953:22, 1954:7, 1954:8, 1955:2, 1955:8, 1955:12, 1959:21, 1960:2, 1960:21, 1961:18, 1961:20, 1961:21, 1961:24, 1961:25, 1962:4, 1962:9, 1962:17, 1964:10, 1968:13, 1968:16, 1969:6, 1972:16, 1972:17, 1975:3, 1983:18</p> <p><b>quick</b> [7] - 1789:16, 1822:19, 1944:15, 1952:15, 1959:8, 1977:20, 1981:19</p> <p><b>quickly</b> [5] - 1792:21, 1881:16, 1882:21, 1885:16, 1893:18</p> <p><b>quite</b> [3] - 1736:17, 1784:24, 1944:12</p>	<p><b>raises</b> [1] - 1806:5</p> <p><b>ranch</b> [1] - 1874:4</p> <p><b>ranchers</b> [2] - 1853:13, 1857:18</p> <p><b>range</b> [2] - 1792:16, 1810:14</p> <p><b>ranged</b> [1] - 1799:16</p> <p><b>ranges</b> [1] - 1933:5</p> <p><b>rank</b> [1] - 1934:8</p> <p><b>rappold</b> [2] - 1709:13, 1719:7</p> <p><b>RAPPOLD</b> [69] - 1734:15, 1753:4, 1753:6, 1756:24, 1757:2, 1757:13, 1757:20, 1758:4, 1759:15, 1759:21, 1762:18, 1765:1, 1765:10, 1767:17, 1773:4, 1786:15, 1786:18, 1787:6, 1793:14, 1793:17, 1794:1, 1819:25, 1849:4, 1849:6, 1849:24, 1852:4, 1855:4, 1857:14, 1858:1, 1858:15, 1859:4, 1859:12, 1859:16, 1860:4, 1860:12, 1865:2, 1865:15, 1866:8, 1866:18, 1866:24, 1879:4, 1881:23, 1882:2, 1883:7, 1913:17, 1914:21, 1926:2, 1934:6, 1947:4, 1953:21, 1961:7, 1962:11, 1968:8, 1968:10, 1970:17, 1970:19, 1983:20, 1983:23, 1984:2, 1984:20, 1984:23, 1985:18, 1985:25, 1986:11, 1986:17, 1986:21, 1987:5, 1987:7, 1987:10</p> <p><b>Rappold</b> [46] - 1704:7, 1709:4, 1709:9, 1709:12, 1709:17, 1709:19, 1710:5, 1710:8, 1710:12, 1710:19, 1710:23, 1711:4, 1711:7, 1711:12, 1711:13, 1711:17, 1711:21, 1712:4, 1712:9, 1712:11, 1712:16, 1712:19, 1712:22, 1713:4, 1713:8,</p>	<p>1713:12, 1714:4, 1714:7, 1714:11, 1714:14, 1714:21, 1715:14, 1715:18, 1717:4, 1717:8, 1718:18, 1718:22, 1719:12, 1719:16, 1719:20, 1719:23, 1720:4, 1753:3, 1753:9, 1820:1, 1913:15</p> <p><b>rate</b> [1] - 1752:8</p> <p><b>rather</b> [6] - 1783:7, 1807:23, 1808:23, 1809:22, 1880:21, 1912:3</p> <p><b>re</b> [3] - 1886:3, 1887:19, 1891:1</p> <p><b>re-vegetation</b> [2] - 1886:3, 1887:19</p> <p><b>reach</b> [6] - 1759:1, 1904:19, 1909:13, 1913:8, 1968:2, 1986:18</p> <p><b>reaches</b> [2] - 1807:13, 1848:4</p> <p><b>react</b> [1] - 1900:7</p> <p><b>read</b> [28] - 1760:7, 1760:10, 1760:12, 1761:5, 1762:2, 1762:6, 1764:13, 1764:16, 1769:19, 1769:25, 1770:10, 1803:23, 1833:18, 1833:21, 1839:23, 1841:23, 1855:23, 1871:7, 1910:14, 1941:3, 1949:6, 1952:12, 1977:20, 1978:20, 1980:12, 1981:19, 1986:15, 1987:1</p> <p><b>readily</b> [1] - 1821:1</p> <p><b>reading</b> [7] - 1745:20, 1746:2, 1785:9, 1811:17, 1844:15, 1847:19, 1856:3</p> <p><b>reads</b> [5] - 1765:13, 1910:16, 1949:13, 1950:11, 1973:23</p> <p><b>ready</b> [2] - 1924:8, 1962:10</p> <p><b>Real</b> [30] - 1704:6, 1710:19, 1710:23, 1711:4, 1711:16, 1711:20, 1712:4, 1712:9, 1712:22, 1713:4, 1713:8, 1713:18, 1714:4, 1714:8, 1714:17,</p>	<p>1715:3, 1715:13, 1717:7, 1717:17, 1718:17, 1718:22, 1719:4, 1719:16, 1719:20, 1805:22, 1938:22, 1940:16, 1955:18, 1964:16, 1965:4</p> <p><b>REAL</b> [65] - 1805:19, 1805:21, 1819:21, 1849:1, 1851:25, 1852:19, 1862:11, 1870:6, 1870:8, 1870:12, 1870:16, 1870:19, 1870:24, 1871:2, 1871:13, 1871:17, 1871:20, 1871:22, 1872:2, 1872:6, 1872:12, 1881:20, 1906:5, 1906:7, 1926:24, 1927:2, 1938:17, 1938:21, 1939:3, 1939:9, 1939:16, 1939:19, 1939:23, 1940:14, 1940:18, 1940:21, 1941:1, 1941:4, 1943:22, 1947:5, 1948:14, 1948:21, 1948:25, 1950:4, 1952:24, 1953:8, 1953:24, 1954:18, 1957:5, 1958:12, 1958:15, 1962:14, 1963:9, 1963:13, 1963:16, 1969:12, 1973:2, 1973:16, 1975:4, 1975:6, 1978:4, 1978:9, 1981:6, 1981:8, 1983:18</p> <p><b>real</b> [5] - 1944:4, 1952:15, 1970:8, 1977:20, 1981:19</p> <p><b>reality</b> [3] - 1838:4, 1839:24, 1934:3</p> <p><b>really</b> [34] - 1726:10, 1726:20, 1726:23, 1728:14, 1730:23, 1731:1, 1736:3, 1756:25, 1757:20, 1757:23, 1799:6, 1811:18, 1833:11, 1835:23, 1836:15, 1836:16, 1845:2, 1845:11, 1850:18, 1852:16, 1853:9, 1859:8, 1860:4, 1867:22, 1912:9, 1917:9, 1923:21, 1933:1, 1948:8,</p>	<p>1969:22, 1970:2, 1971:9, 1974:14, 1980:11</p> <p><b>realm</b> [1] - 1762:16</p> <p><b>Realtime</b> [2] - 1989:6, 1989:19</p> <p><b>reason</b> [16] - 1742:14, 1742:16, 1749:5, 1759:4, 1806:6, 1815:20, 1845:13, 1861:2, 1865:25, 1875:24, 1882:14, 1898:15, 1918:16, 1942:4, 1964:8, 1985:24</p> <p><b>reasonable</b> [3] - 1792:21, 1862:2, 1862:7</p> <p><b>reasonableness</b> [1] - 1792:16</p> <p><b>reasoning</b> [3] - 1887:12, 1897:4, 1897:5</p> <p><b>reasons</b> [10] - 1751:9, 1763:4, 1815:20, 1824:19, 1841:10, 1918:19, 1963:10, 1963:13, 1969:13, 1986:12</p> <p><b>rebut</b> [2] - 1864:6, 1926:9</p> <p><b>REBUTTAL</b> [2] - 1719:5, 1720:2</p> <p><b>Rebuttal</b> [20] - 1705:12, 1705:13, 1705:14, 1705:14, 1706:3, 1706:3, 1706:7, 1706:11, 1706:21, 1707:6, 1707:10, 1708:16, 1708:16, 1708:19, 1829:25, 1865:3, 1921:5, 1924:17, 1925:8, 1981:9</p> <p><b>rebuttal</b> [42] - 1826:6, 1826:16, 1826:19, 1826:22, 1827:4, 1827:11, 1859:3, 1859:5, 1861:17, 1861:20, 1863:22, 1864:3, 1864:5, 1864:11, 1864:12, 1864:14, 1865:6, 1869:22, 1869:23, 1909:16, 1909:18, 1926:4, 1926:14, 1927:18, 1928:3, 1940:11, 1940:13, 1942:5, 1942:7, 1942:10, 1942:12,</p>
<b>R</b>				
<p><b>rail</b> [6] - 1930:15, 1931:8, 1931:10, 1931:22, 1932:5, 1932:6</p> <p><b>rails</b> [1] - 1931:13</p> <p><b>rain</b> [1] - 1788:1</p> <p><b>rainfall</b> [2] - 1807:10, 1886:7</p> <p><b>rainwater</b> [1] - 1750:19</p> <p><b>raise</b> [1] - 1941:11</p> <p><b>raised</b> [5] - 1804:1, 1807:17, 1812:12, 1845:22, 1859:9</p>				

<p>1942:16, 1942:22, 1955:9, 1955:11, 1961:19, 1962:10, 1979:3, 1981:3, 1986:5, 1987:11</p> <p><b>rebutted</b> [3] - 1859:7, 1942:13, 1953:13</p> <p><b>rebutting</b> [2] - 1886:20, 1886:21</p> <p><b>RECALLED</b> [1] - 1719:2</p> <p><b>receive</b> [2] - 1965:8, 1983:6</p> <p><b>received</b> [11] - 1723:22, 1724:25, 1737:1, 1829:7, 1861:6, 1943:15, 1943:16, 1945:9, 1972:17, 1983:14</p> <p><b>recent</b> [5] - 1812:4, 1812:16, 1818:2, 1850:13, 1949:1</p> <p><b>recently</b> [3] - 1732:6, 1805:2, 1829:7</p> <p><b>recertification</b> [1] - 1723:9</p> <p><b>recess</b> [6] - 1782:1, 1860:15, 1920:23, 1949:10, 1963:8, 1988:3</p> <p><b>recharge</b> [4] - 1822:20, 1823:10, 1823:19, 1824:5</p> <p><b>recharged</b> [2] - 1822:16, 1824:23</p> <p><b>reckon</b> [1] - 1764:4</p> <p><b>reclaim</b> [1] - 1784:16</p> <p><b>reclamation</b> [7] - 1790:3, 1790:4, 1868:16, 1869:6, 1887:24, 1893:1, 1893:17</p> <p><b>recognition</b> [3] - 1829:8, 1829:15, 1834:24</p> <p><b>recognize</b> [4] - 1724:19, 1731:19, 1870:2, 1905:16</p> <p><b>recognized</b> [1] - 1960:17</p> <p><b>recollection</b> [3] - 1821:16, 1941:24, 1966:25</p> <p><b>recommend</b> [3] - 1727:5, 1743:8, 1743:12</p> <p><b>recommendation</b> [20] - 1726:2, 1726:24, 1728:18, 1728:24, 1730:14, 1730:21,</p>	<p>1731:1, 1735:13, 1751:9, 1752:5, 1778:23, 1785:24, 1786:6, 1786:9, 1787:8, 1787:16, 1796:13, 1880:2, 1891:11, 1897:18</p> <p><b>recommendations</b> [20] - 1725:18, 1725:21, 1725:25, 1726:1, 1735:1, 1743:6, 1752:2, 1752:4, 1752:9, 1752:19, 1752:21, 1782:15, 1785:22, 1785:25, 1786:3, 1787:4, 1787:9, 1788:9, 1884:7, 1884:11</p> <p><b>recommended</b> [2] - 1729:20, 1730:5</p> <p><b>reconcile</b> [1] - 1810:23</p> <p><b>reconnect</b> [1] - 1878:18</p> <p><b>reconsider</b> [1] - 1860:23</p> <p><b>reconsidering</b> [1] - 1861:12</p> <p><b>record</b> [38] - 1721:8, 1764:25, 1779:18, 1780:15, 1780:16, 1781:11, 1785:20, 1787:20, 1797:22, 1804:12, 1828:13, 1830:2, 1830:9, 1838:13, 1839:12, 1839:17, 1841:11, 1841:15, 1858:18, 1859:5, 1860:24, 1863:3, 1868:7, 1887:7, 1901:7, 1915:15, 1917:21, 1938:8, 1938:9, 1943:23, 1948:19, 1949:6, 1955:13, 1956:6, 1956:20, 1962:20, 1975:21, 1977:23</p> <p><b>records</b> [8] - 1814:20, 1814:25, 1840:25, 1841:4, 1903:23, 1904:1, 1956:25, 1973:25</p> <p><b>recovered</b> [1] - 1797:4</p> <p><b>Recovery</b> [1] - 1708:4</p> <p><b>recreate</b> [3] - 1870:16, 1870:19, 1872:2</p> <p><b>Recross</b> [56] - 1709:9, 1709:10,</p>	<p>1709:10, 1709:11, 1709:12, 1709:13, 1709:14, 1709:19, 1710:8, 1710:8, 1710:9, 1710:9, 1710:15, 1710:16, 1710:23, 1710:23, 1710:24, 1711:9, 1711:13, 1712:11, 1712:12, 1712:12, 1712:13, 1712:19, 1712:19, 1713:8, 1713:8, 1713:9, 1713:10, 1713:15, 1713:15, 1714:7, 1714:7, 1714:8, 1714:8, 1714:9, 1714:13, 1714:14, 1714:14, 1715:10, 1715:11, 1715:21, 1716:20, 1717:19, 1717:20, 1717:20, 1718:22, 1718:22, 1718:23, 1718:23, 1719:20, 1719:20, 1719:21, 1720:7, 1720:8</p> <p><b>recross</b> [2] - 1797:8, 1900:19</p> <p><b>RECROSS</b> [4] - 1793:7, 1793:16, 1794:4, 1857:13</p> <p><b>Recross-Examination</b> [56] - 1709:9, 1709:9, 1709:10, 1709:10, 1709:11, 1709:12, 1709:13, 1709:14, 1709:19, 1710:8, 1710:8, 1710:9, 1710:15, 1710:16, 1710:23, 1710:23, 1710:24, 1711:9, 1711:13, 1712:11, 1712:12, 1712:12, 1712:13, 1712:13, 1712:19, 1712:19, 1713:8, 1713:8, 1713:9, 1713:9, 1713:10, 1713:15, 1713:15, 1714:7, 1714:7, 1714:8, 1714:8, 1714:9, 1714:13, 1714:14, 1714:14, 1715:10, 1715:11, 1715:21, 1716:20, 1717:19, 1717:20, 1717:20, 1718:22, 1718:23, 1718:23, 1719:20, 1719:20, 1719:21,</p>	<p>1720:7, 1720:8</p> <p><b>RECROSS-EXAMINATION</b> [4] - 1793:7, 1793:16, 1794:4, 1857:13</p> <p><b>red</b> [1] - 1761:14</p> <p><b>Redirect</b> [20] - 1709:11, 1709:18, 1710:10, 1710:16, 1710:24, 1711:9, 1711:18, 1713:9, 1714:15, 1715:9, 1715:16, 1715:20, 1716:5, 1716:11, 1716:20, 1717:19, 1718:8, 1718:14, 1719:10, 1720:8</p> <p><b>redirect</b> [8] - 1796:17, 1797:8, 1825:12, 1825:13, 1858:3, 1898:4, 1900:20, 1920:18</p> <p><b>REDIRECT</b> [2] - 1796:19, 1898:5</p> <p><b>reduced</b> [1] - 1933:8</p> <p><b>reduction</b> [2] - 1933:11, 1934:22</p> <p><b>reestablish</b> [1] - 1891:1</p> <p><b>reevaluate</b> [1] - 1945:6</p> <p><b>Reexamination</b> [2] - 1714:6, 1716:11</p> <p><b>refer</b> [8] - 1726:17, 1775:5, 1783:12, 1884:9, 1895:10, 1897:22, 1919:16, 1980:2</p> <p><b>reference</b> [7] - 1726:8, 1726:10, 1938:25, 1944:18, 1962:12, 1979:7, 1985:4</p> <p><b>referenceable</b> [1] - 1812:24</p> <p><b>referenced</b> [2] - 1870:13, 1961:9</p> <p><b>references</b> [1] - 1730:18</p> <p><b>referred</b> [4] - 1736:10, 1775:3, 1929:5</p> <p><b>referring</b> [4] - 1852:8, 1884:16, 1923:1, 1928:21</p> <p><b>refined</b> [3] - 1935:3, 1936:5, 1937:8</p> <p><b>refineries</b> [1] - 1933:13</p> <p><b>refinery</b> [3] - 1851:7, 1851:9, 1852:25</p> <p><b>reflect</b> [3] - 1780:16,</p>	<p>1830:2, 1836:14 37</p> <p><b>reflected</b> [1] - 1913:12</p> <p><b>refresh</b> [1] - 1966:25</p> <p><b>refuse</b> [1] - 1845:12</p> <p><b>regard</b> [8] - 1726:18, 1732:19, 1738:8, 1740:17, 1746:16, 1768:24, 1787:17, 1927:2</p> <p><b>regarding</b> [26] - 1730:18, 1743:6, 1744:16, 1750:21, 1753:15, 1753:20, 1757:15, 1763:16, 1770:20, 1772:17, 1788:8, 1802:2, 1803:9, 1806:2, 1859:4, 1865:2, 1875:11, 1877:14, 1880:2, 1883:19, 1884:21, 1886:17, 1887:1, 1947:10, 1965:19, 1968:4</p> <p><b>regardless</b> [1] - 1783:25</p> <p><b>regards</b> [2] - 1893:23, 1972:6</p> <p><b>region</b> [7] - 1836:7, 1836:9, 1836:21, 1842:23, 1857:25, 1969:2</p> <p><b>Regional</b> [2] - 1708:10, 1708:10</p> <p><b>register</b> [1] - 1974:12</p> <p><b>Registered</b> [2] - 1989:5, 1989:19</p> <p><b>regs</b> [1] - 1793:9</p> <p><b>regularly</b> [1] - 1763:19</p> <p><b>regulate</b> [2] - 1775:10, 1885:12</p> <p><b>regulated</b> [2] - 1790:12, 1795:19</p> <p><b>regulates</b> [3] - 1778:19, 1795:8, 1814:23</p> <p><b>regulating</b> [1] - 1790:14</p> <p><b>regulation</b> [4] - 1745:1, 1746:11, 1833:9, 1844:13</p> <p><b>regulations</b> [16] - 1724:16, 1746:16, 1754:22, 1755:14, 1755:16, 1755:23, 1755:24, 1756:12, 1764:2, 1784:21, 1790:22, 1844:6, 1844:8, 1844:10, 1844:14, 1844:20</p> <p><b>regulatory</b> [11] -</p>
--	---	--	---	--



<p>1721:12, 1721:14, 1721:15, 1728:1, 1745:15, 1774:11, 1774:18, 1790:16, 1976:1, 1984:5, 1985:5</p> <p><b>regurgitating</b> [1] - 1976:4</p> <p><b>regurgitation</b> [1] - 1965:1</p> <p><b>rehabilitate</b> [1] - 1784:16</p> <p><b>rehash</b> [3] - 1783:7, 1864:7, 1864:11</p> <p><b>rehashing</b> [1] - 1864:25</p> <p><b>reimbursement</b> [1] - 1722:21</p> <p><b>reimbursing</b> [1] - 1920:10</p> <p><b>reinforcement</b> [1] - 1728:15</p> <p><b>relate</b> [1] - 1950:24</p> <p><b>related</b> [11] - 1762:25, 1774:2, 1774:6, 1799:3, 1799:13, 1831:3, 1865:4, 1925:15, 1927:14, 1955:13, 1973:7</p> <p><b>relates</b> [2] - 1835:17, 1841:20</p> <p><b>relating</b> [4] - 1761:25, 1762:7, 1772:7, 1918:12</p> <p><b>relation</b> [2] - 1835:1, 1836:3</p> <p><b>relationship</b> [9] - 1727:24, 1800:12, 1834:25, 1842:19, 1853:22, 1854:3, 1854:9, 1854:14, 1940:12</p> <p><b>Relationship</b> [1] - 1706:8</p> <p><b>relatively</b> [1] - 1899:8</p> <p><b>relatives</b> [1] - 1847:2</p> <p><b>release</b> [2] - 1748:13, 1844:24</p> <p><b>relevancy</b> [1] - 1974:7</p> <p><b>relevant</b> [13] - 1722:14, 1763:11, 1798:16, 1852:3, 1852:21, 1927:21, 1927:24, 1928:3, 1943:25, 1969:21, 1970:1, 1970:6, 1981:2</p> <p><b>reliability</b> [2] - 1748:19, 1748:22</p> <p><b>relied</b> [1] - 1735:12</p>	<p><b>relief</b> [1] - 1888:24</p> <p><b>remain</b> [5] - 1763:5, 1763:8, 1763:10, 1764:12, 1930:1</p> <p><b>remainder</b> [3] - 1926:3, 1964:25, 1965:21</p> <p><b>remaining</b> [2] - 1825:18, 1979:11</p> <p><b>remediate</b> [1] - 1982:3</p> <p><b>remember</b> [14] - 1772:5, 1784:10, 1788:14, 1822:24, 1831:22, 1832:10, 1891:3, 1898:20, 1936:1, 1937:3, 1939:1, 1950:14, 1951:13, 1981:3</p> <p><b>remind</b> [2] - 1848:18, 1848:22</p> <p><b>remotest</b> [2] - 1817:12, 1817:20</p> <p><b>remove</b> [3] - 1878:25, 1881:12, 1932:4</p> <p><b>removed</b> [2] - 1796:22</p> <p><b>render</b> [2] - 1733:19, 1740:19</p> <p><b>rendering</b> [1] - 1734:5</p> <p><b>renewable</b> [2] - 1849:21, 1857:9</p> <p><b>repackage</b> [1] - 1976:14</p> <p><b>repair</b> [1] - 1878:13</p> <p><b>repaired</b> [1] - 1878:4</p> <p><b>repeat</b> [2] - 1765:10, 1973:22</p> <p><b>repeated</b> [1] - 1936:15</p> <p><b>repeating</b> [1] - 1801:19</p> <p><b>rephrase</b> [8] - 1740:4, 1776:2, 1786:21, 1855:19, 1890:11, 1935:15, 1950:17, 1954:25</p> <p><b>rephrasing</b> [1] - 1953:9</p> <p><b>replace</b> [4] - 1891:8, 1891:12, 1891:17, 1930:14</p> <p><b>replenished</b> [1] - 1912:11</p> <p><b>report</b> [8] - 1838:2, 1838:6, 1838:13, 1839:20, 1841:25, 1842:7, 1871:6, 1871:8</p> <p><b>Reported</b> [1] - 1703:24</p> <p><b>reporter</b> [7] - 1721:4, 1797:15, 1827:24,</p>	<p>1865:14, 1901:2, 1902:2, 1989:9</p> <p><b>Reporter</b> [9] - 1765:13, 1910:16, 1949:13, 1950:11, 1973:23, 1989:6, 1989:19, 1989:19</p> <p><b>reports</b> [8] - 1791:13, 1836:12, 1837:6, 1842:11, 1846:23, 1855:23, 1856:3, 1974:1</p> <p><b>Reports</b> [1] - 1706:9</p> <p><b>represent</b> [5] - 1753:9, 1854:2, 1956:25, 1974:19</p> <p><b>representative</b> [1] - 1909:4</p> <p><b>representing</b> [3] - 1853:23, 1853:24, 1953:19</p> <p><b>represents</b> [1] - 1905:19</p> <p><b>request</b> [12] - 1723:22, 1792:9, 1827:5, 1861:19, 1861:24, 1862:10, 1862:15, 1877:17, 1906:16, 1955:25, 1968:6, 1987:1</p> <p><b>Request</b> [1] - 1706:22</p> <p><b>requested</b> [4] - 1867:15, 1905:4, 1906:20, 1972:25</p> <p><b>requests</b> [2] - 1827:7, 1877:3</p> <p><b>require</b> [10] - 1744:11, 1747:21, 1789:4, 1791:24, 1795:5, 1795:16, 1796:9, 1842:25, 1852:5, 1987:13</p> <p><b>required</b> [15] - 1732:3, 1738:18, 1740:19, 1746:15, 1749:2, 1749:6, 1755:18, 1784:22, 1796:6, 1840:14, 1840:16, 1884:4, 1899:3, 1975:15, 1977:7</p> <p><b>requirement</b> [8] - 1726:3, 1789:1, 1789:7, 1789:9, 1806:22, 1852:13, 1861:10, 1861:11</p> <p><b>requirements</b> [11] - 1745:7, 1754:14, 1755:17, 1764:1, 1795:24, 1796:7, 1883:24, 1884:19,</p>	<p>1885:3, 1885:5</p> <p><b>requires</b> [3] - 1733:24, 1757:16, 1797:5</p> <p><b>requiring</b> [1] - 1763:15</p> <p><b>research</b> [14] - 1806:23, 1807:1, 1807:2, 1807:3, 1807:6, 1807:19, 1807:20, 1808:3, 1809:1, 1842:7, 1855:22, 1899:23, 1900:3, 1917:8</p> <p><b>researched</b> [1] - 1806:20</p> <p><b>reserve</b> [1] - 1863:25</p> <p><b>reserves</b> [2] - 1835:14, 1846:25</p> <p><b>Reservoirs</b> [2] - 1706:9, 1706:10</p> <p><b>Residence</b> [1] - 1705:15</p> <p><b>residential</b> [4] - 1935:24, 1936:21, 1936:22, 1936:23</p> <p><b>residents</b> [2] - 1849:12, 1852:7</p> <p><b>resisted</b> [1] - 1837:13</p> <p><b>resolved</b> [5] - 1736:16, 1785:12, 1914:15, 1914:16</p> <p><b>Resource</b> [5] - 1722:22, 1723:1, 1723:4, 1727:25, 1731:23</p> <p><b>resource</b> [11] - 1774:12, 1774:17, 1800:1, 1828:20, 1842:1, 1844:22, 1873:6, 1873:8, 1876:11, 1877:7, 1885:18</p> <p><b>Resources</b> [6] - 1705:16, 1705:17, 1705:18, 1705:19, 1705:20, 1798:4</p> <p><b>resources</b> [21] - 1726:25, 1737:2, 1775:4, 1782:11, 1790:15, 1798:25, 1799:21, 1813:10, 1813:16, 1814:22, 1823:8, 1823:13, 1834:11, 1843:17, 1855:10, 1868:25, 1875:6, 1886:5, 1895:25, 1907:10, 1939:15</p> <p><b>Resources'</b> [1] - 1814:2</p>	<p><b>respect</b> [7] - 1735:25, 38 1742:19, 1748:22, 1752:12, 1779:4, 1953:23, 1954:6</p> <p><b>respective</b> [2] - 1902:13, 1902:17</p> <p><b>respond</b> [12] - 1757:8, 1780:7, 1826:24, 1918:25, 1919:1, 1920:4, 1941:22, 1950:22, 1953:22, 1962:14, 1973:16, 1981:6</p> <p><b>responded</b> [3] - 1812:2, 1961:25, 1970:11</p> <p><b>responding</b> [3] - 1736:12, 1882:8, 1971:4</p> <p><b>response</b> [45] - 1734:7, 1735:10, 1752:17, 1756:24, 1757:2, 1757:7, 1759:15, 1777:16, 1793:20, 1845:24, 1846:14, 1852:9, 1859:21, 1860:25, 1861:23, 1862:8, 1866:8, 1871:5, 1872:9, 1872:10, 1887:16, 1909:20, 1909:21, 1915:3, 1927:11, 1928:15, 1932:13, 1935:11, 1943:9, 1943:11, 1950:3, 1950:8, 1953:3, 1954:9, 1954:15, 1957:21, 1959:8, 1959:11, 1960:1, 1963:5, 1967:8, 1969:16, 1970:17, 1973:6</p> <p><b>Response</b> [3] - 1705:5, 1705:6, 1706:21</p> <p><b>responses</b> [2] - 1862:14, 1950:24</p> <p><b>responsibilities</b> [7] - 1721:13, 1790:8, 1798:5, 1798:6, 1798:23, 1799:12, 1950:20</p> <p><b>responsibility</b> [6] - 1738:25, 1739:18, 1882:22, 1971:18, 1971:19, 1974:18</p> <p><b>responsible</b> [2] - 1814:11, 1979:10</p> <p><b>responsive</b> [17] - 1864:15, 1906:22,</p>
--	--	--	---	--

<p>1927:16, 1959:21, 1961:17, 1964:21, 1964:24, 1965:5, 1965:6, 1965:17, 1965:20, 1965:23, 1966:9, 1967:16, 1969:5, 1969:19, 1970:14</p> <p><b>rest</b> [4] - 1825:16, 1858:19, 1950:14, 1979:14</p> <p><b>restate</b> [4] - 1747:11, 1885:1, 1888:18, 1953:4</p> <p><b>Reston</b> [1] - 1818:22</p> <p><b>restoration</b> [14] - 1729:9, 1752:8, 1752:10, 1792:20, 1874:22, 1875:2, 1876:9, 1876:12, 1877:8, 1881:2, 1882:16, 1888:2</p> <p><b>restorations</b> [2] - 1888:1</p> <p><b>restore</b> [2] - 1743:21, 1744:10</p> <p><b>restored</b> [3] - 1784:19, 1875:7, 1875:8</p> <p><b>restrict</b> [1] - 1979:20</p> <p><b>resubmittal</b> [1] - 1973:1</p> <p><b>result</b> [3] - 1787:3, 1819:6, 1842:6</p> <p><b>results</b> [3] - 1914:4, 1914:5, 1914:10</p> <p><b>resume</b> [2] - 1800:23, 1865:16</p> <p><b>Resume</b> [2] - 1705:15, 1706:8</p> <p><b>return</b> [2] - 1874:1, 1983:16</p> <p><b>returned</b> [7] - 1749:22, 1799:19, 1875:13, 1881:15, 1889:21, 1972:20, 1978:1</p> <p><b>review</b> [26] - 1724:12, 1735:21, 1735:22, 1737:6, 1742:5, 1764:7, 1771:2, 1774:1, 1774:5, 1784:24, 1788:3, 1800:9, 1812:21, 1865:21, 1866:16, 1867:2, 1873:3, 1900:1, 1929:7, 1958:3, 1959:1, 1959:5, 1959:6, 1963:10, 1963:17, 1972:24</p> <p><b>Review</b> [2] - 1708:5,</p>	<p>1708:7</p> <p><b>reviewed</b> [13] - 1724:4, 1725:5, 1766:5, 1784:21, 1804:21, 1844:6, 1849:11, 1859:6, 1872:1, 1872:5, 1887:23, 1941:1, 1959:3</p> <p><b>reviewing</b> [2] - 1771:11, 1789:16</p> <p><b>reviews</b> [2] - 1771:8, 1871:12</p> <p><b>revise</b> [1] - 1805:11</p> <p><b>Revised</b> [5] - 1708:4, 1738:5, 1774:2, 1779:5, 1780:2</p> <p><b>revised</b> [3] - 1774:6, 1802:12, 1884:11</p> <p><b>revisions</b> [1] - 1884:12</p> <p><b>Rez</b> [1] - 1845:23</p> <p><b>RICHARD</b> [1] - 1703:14</p> <p><b>rid</b> [1] - 1895:24</p> <p><b>rig</b> [1] - 1814:7</p> <p><b>rig-side</b> [1] - 1814:7</p> <p><b>right-hand</b> [3] - 1761:20, 1769:14, 1922:9</p> <p><b>right-of-way</b> [2] - 1887:25, 1901:13</p> <p><b>Rights</b> [2] - 1814:23, 1823:9</p> <p><b>rights</b> [3] - 1834:25, 1835:5, 1867:5</p> <p><b>rigs</b> [1] - 1813:9</p> <p><b>ripped</b> [1] - 1828:7</p> <p><b>ripping</b> [2] - 1874:1, 1888:22</p> <p><b>risk</b> [4] - 1759:1, 1836:10, 1836:22</p> <p><b>risks</b> [1] - 1850:20</p> <p><b>Rislov</b> [1] - 1703:18</p> <p><b>River</b> [12] - 1705:23, 1706:9, 1706:10, 1741:19, 1775:13, 1775:15, 1776:4, 1776:14, 1777:24, 1778:3, 1818:5, 1820:23</p> <p><b>river</b> [4] - 1749:18, 1749:22, 1751:1, 1751:4</p> <p><b>road</b> [8] - 1764:10, 1868:12, 1918:20, 1925:14, 1929:10, 1929:15, 1929:17, 1932:1</p> <p><b>roadway</b> [1] - 1887:25</p>	<p><b>roadways</b> [1] - 1948:6</p> <p><b>ROBERT</b> [1] - 1713:3</p> <p><b>robust</b> [1] - 1971:14</p> <p><b>rock</b> [7] - 1815:18, 1816:4, 1816:6, 1816:16, 1818:15, 1825:4</p> <p><b>Rock</b> [3] - 1706:4, 1706:5, 1706:6</p> <p><b>rocking</b> [1] - 1828:11</p> <p><b>rocks</b> [1] - 1815:13</p> <p><b>Rocky</b> [1] - 1854:7</p> <p><b>ROD</b> [1] - 1718:6</p> <p><b>Rod</b> [1] - 1707:6</p> <p><b>Rolayne</b> [1] - 1703:16</p> <p><b>role</b> [8] - 1722:1, 1724:2, 1786:8, 1799:8, 1834:5, 1835:2, 1846:19, 1882:22</p> <p><b>roles</b> [2] - 1721:15, 1727:25</p> <p><b>RON</b> [1] - 1718:12</p> <p><b>Ronald</b> [1] - 1707:11</p> <p><b>Room</b> [1] - 1704:15</p> <p><b>room</b> [7] - 1759:5, 1764:22, 1806:1, 1828:11, 1923:18, 1928:9, 1969:23</p> <p><b>roosting</b> [2] - 1742:2, 1788:20</p> <p><b>roots</b> [1] - 1829:16</p> <p><b>Rorie</b> [13] - 1705:12, 1900:25, 1901:5, 1901:8, 1903:9, 1904:25, 1907:2, 1907:12, 1907:18, 1909:8, 1913:18, 1919:8, 1928:10</p> <p><b>RORIE</b> [1] - 1719:11</p> <p><b>ROSEBUD</b> [1] - 1708:2</p> <p><b>Rosebud</b> [12] - 1704:7, 1753:9, 1759:19, 1769:11, 1819:23, 1820:1, 1849:3, 1881:22, 1926:2, 1927:5, 1969:13, 1983:19</p> <p><b>roughly</b> [3] - 1814:17, 1814:24, 1933:6</p> <p><b>round</b> [1] - 1933:4</p> <p><b>Rounds</b> [1] - 1703:17</p> <p><b>route</b> [55] - 1741:16, 1742:15, 1745:18, 1746:5, 1748:9, 1755:12, 1763:12, 1766:3, 1766:16, 1766:21, 1770:9, 1796:7, 1800:11,</p>	<p>1800:13, 1801:21, 1803:23, 1806:3, 1807:5, 1811:20, 1813:20, 1815:9, 1815:23, 1817:2, 1819:14, 1821:17, 1821:21, 1836:5, 1854:14, 1873:19, 1903:17, 1904:23, 1905:20, 1909:5, 1911:7, 1917:2, 1919:21, 1919:23, 1919:25, 1920:4, 1920:8, 1929:15, 1946:14, 1946:22, 1946:25, 1947:13, 1947:14, 1947:15, 1947:16, 1952:18, 1952:21, 1952:22, 1952:23, 1953:5, 1953:7, 1953:18</p> <p><b>routes</b> [3] - 1946:6, 1946:22, 1947:22</p> <p><b>routine</b> [1] - 1794:18</p> <p><b>routinely</b> [4] - 1763:19, 1813:9, 1813:14, 1843:25</p> <p><b>Routing</b> [1] - 1705:24</p> <p><b>routing</b> [4] - 1789:3, 1947:10, 1950:19, 1950:25</p> <p><b>RPR</b> [1] - 1703:24</p> <p><b>RST</b> [2] - 1759:23, 1760:1</p> <p><b>rubber</b> [1] - 1933:21</p> <p><b>Rule</b> [1] - 1733:11</p> <p><b>rule</b> [16] - 1736:1, 1746:3, 1747:22, 1753:22, 1754:3, 1785:4, 1785:6, 1785:9, 1861:3, 1868:3, 1871:15, 1942:10, 1950:9, 1961:8, 1962:12, 1970:22</p> <p><b>ruled</b> [5] - 1733:18, 1914:7, 1914:17, 1948:18</p> <p><b>ruler</b> [1] - 1952:14</p> <p><b>Rules</b> [3] - 1765:3, 1867:8, 1968:20</p> <p><b>rules</b> [15] - 1749:6, 1757:4, 1763:15, 1955:8, 1957:18, 1957:25, 1958:23, 1959:22, 1960:22, 1961:14, 1962:2, 1962:18, 1970:21, 1987:12, 1987:13</p> <p><b>ruling</b> [8] - 1861:8,</p>	<p>1861:9, 1861:12, 1964:13, 1964:20, 1966:14, 1971:4, 1986:25</p> <p><b>runoff</b> [1] - 1788:1</p> <p><b>runs</b> [1] - 1755:7</p> <p><b>Rural</b> [7] - 1704:5, 1704:9, 1733:8, 1773:12, 1820:10, 1883:14, 1969:14</p> <p><b>rural</b> [1] - 1883:25</p> <p><b>Ryan</b> [4] - 1727:23, 1728:3, 1732:12, 1789:11</p>
<b>S</b>				
<p><b>sacred</b> [8] - 1834:24, 1844:22, 1844:25, 1845:5, 1845:8, 1845:13, 1845:25, 1846:8</p> <p><b>safest</b> [1] - 1931:18</p> <p><b>Safety</b> [1] - 1764:2</p> <p><b>safety</b> [18] - 1731:24, 1732:1, 1732:2, 1732:6, 1733:16, 1748:19, 1748:22, 1755:17, 1755:23, 1763:16, 1783:16, 1791:11, 1848:11, 1930:1, 1931:15, 1931:20, 1931:21, 1937:17</p> <p><b>sag</b> [2] - 1894:14, 1894:19</p> <p><b>sage</b> [1] - 1979:15</p> <p><b>sagging</b> [4] - 1878:24, 1879:9, 1879:14, 1894:15</p> <p><b>sake</b> [1] - 1866:3</p> <p><b>Sakowin</b> [1] - 1854:6</p> <p><b>salvage</b> [2] - 1876:2</p> <p><b>sampling</b> [2] - 1823:15, 1823:18</p> <p><b>sand</b> [3] - 1806:18, 1806:19, 1823:23</p> <p><b>sandbag</b> [3] - 1880:13, 1880:25, 1894:4</p> <p><b>sandbags</b> [4] - 1879:10, 1880:1, 1880:22, 1894:6</p> <p><b>sands</b> [4] - 1807:23, 1823:15, 1823:20, 1831:6</p> <p><b>Sapa</b> [1] - 1815:18</p> <p><b>sat</b> [2] - 1722:11, 1949:21</p>				

<p><b>satisfied</b> [5] - 1785:15, 1785:22, 1786:4, 1786:6, 1787:5</p> <p><b>satisfies</b> [1] - 1787:18</p> <p><b>satisfy</b> [4] - 1782:15, 1782:20, 1788:9, 1968:17</p> <p><b>Sattgast</b> [14] - 1709:8, 1710:7, 1710:15, 1710:22, 1712:6, 1712:18, 1712:24, 1713:7, 1715:15, 1717:10, 1718:21, 1719:9, 1719:19, 1720:7</p> <p><b>SATTGAST</b> [10] - 1703:14, 1741:9, 1777:5, 1896:23, 1897:3, 1897:9, 1897:13, 1897:17, 1897:25, 1966:15</p> <p><b>Saunsoci</b> [3] - 1708:19, 1921:6, 1921:12</p> <p><b>saw</b> [1] - 1918:17</p> <p><b>SCADA</b> [3] - 1742:20, 1972:6</p> <p><b>scale</b> [7] - 1807:21, 1842:15, 1951:21, 1951:23, 1952:10, 1952:12, 1952:13</p> <p><b>scenarios</b> [1] - 1748:3</p> <p><b>schedule</b> [5] - 1724:1, 1728:23, 1729:11, 1729:14, 1729:15</p> <p><b>scheduled</b> [2] - 1862:17, 1987:21</p> <p><b>Scheduling</b> [1] - 1961:16</p> <p><b>SCHOFFELMAN</b> [1] - 1715:7</p> <p><b>Schoffelman</b> [3] - 1707:10, 1707:21, 1907:24</p> <p><b>school</b> [4] - 1722:7, 1722:18, 1767:17, 1798:18</p> <p><b>Science</b> [1] - 1797:24</p> <p><b>science</b> [6] - 1802:13, 1868:21, 1869:1, 1869:14, 1869:15, 1882:19</p> <p><b>scientific</b> [2] - 1781:12, 1781:16</p> <p><b>scientist</b> [4] - 1868:15, 1868:16, 1889:10, 1896:14</p> <p><b>scientists</b> [3] - 1835:13, 1873:21,</p>	<p>1889:12</p> <p><b>scope</b> [7] - 1776:7, 1793:12, 1793:13, 1851:17, 1885:25, 1909:16, 1909:19</p> <p><b>screen</b> [1] - 1985:20</p> <p><b>screened</b> [1] - 1782:21</p> <p><b>SD</b> [6] - 1704:9, 1705:6, 1705:8, 1705:9, 1978:23, 1980:14</p> <p><b>SD-LI-027519300</b> [2] - 1922:5, 1922:12</p> <p><b>SD-LI-065.100</b> [1] - 1917:25</p> <p><b>SD-MC-010.000</b> [3] - 1916:25, 1928:18, 1928:20</p> <p><b>SD-MN-032-000</b> [2] - 1928:18, 1929:11</p> <p><b>SD-MN-032.000</b> [2] - 1918:11, 1929:13</p> <p><b>SDARWS</b> [2] - 1708:12, 1718:15</p> <p><b>search</b> [3] - 1814:4, 1814:6, 1814:9</p> <p><b>searched</b> [2] - 1814:10, 1814:14</p> <p><b>season</b> [3] - 1912:7, 1912:8, 1912:11</p> <p><b>second</b> [7] - 1736:19, 1839:15, 1892:9, 1912:10, 1912:16, 1916:25, 1937:20</p> <p><b>secondary</b> [2] - 1868:24, 1868:25</p> <p><b>secondhand</b> [1] - 1945:15</p> <p><b>secondly</b> [2] - 1958:3, 1987:21</p> <p><b>Section</b> [1] - 1769:5</p> <p><b>section</b> [3] - 1748:23, 1760:22, 1762:6</p> <p><b>sections</b> [2] - 1748:19, 1750:8</p> <p><b>secure</b> [1] - 1972:11</p> <p><b>security</b> [5] - 1971:8, 1971:14, 1971:23, 1972:1</p> <p><b>Security</b> [1] - 1971:16</p> <p><b>sediment</b> [3] - 1729:22, 1749:20, 1806:13</p> <p><b>sediments</b> [7] - 1802:24, 1804:13, 1806:14, 1806:16, 1817:14, 1817:16, 1817:18</p> <p><b>see</b> [39] - 1729:16,</p>	<p>1730:2, 1753:10, 1761:11, 1761:21, 1761:22, 1769:15, 1769:16, 1769:17, 1800:16, 1804:20, 1817:13, 1817:17, 1817:20, 1817:23, 1834:18, 1838:23, 1839:3, 1842:12, 1847:3, 1849:17, 1850:24, 1856:19, 1859:8, 1859:15, 1860:14, 1867:22, 1869:18, 1881:5, 1893:13, 1902:25, 1922:7, 1923:5, 1929:1, 1936:24, 1937:25, 1963:1, 1964:8, 1978:15</p> <p><b>seed</b> [7] - 1877:11, 1877:15, 1877:17, 1877:18, 1877:19, 1877:22, 1897:23</p> <p><b>seeing</b> [3] - 1867:18, 1900:21, 1923:8</p> <p><b>seek</b> [3] - 1907:16, 1908:3, 1908:12</p> <p><b>seeks</b> [1] - 1908:9</p> <p><b>seem</b> [2] - 1865:17, 1976:5</p> <p><b>segregate</b> [1] - 1876:5</p> <p><b>segregation</b> [4] - 1873:25, 1875:18, 1876:21, 1897:1</p> <p><b>Selby</b> [1] - 1820:19</p> <p><b>selected</b> [1] - 1823:15</p> <p><b>selection</b> [1] - 1963:23</p> <p><b>self</b> [1] - 1833:8</p> <p><b>self-educated</b> [1] - 1833:8</p> <p><b>semantics</b> [1] - 1852:16</p> <p><b>semis</b> [1] - 1932:2</p> <p><b>semmler</b> [1] - 1719:10</p> <p><b>SEMMLER</b> [60] - 1735:17, 1736:8, 1736:18, 1737:3, 1738:16, 1739:23, 1740:8, 1740:12, 1740:24, 1741:2, 1744:2, 1747:2, 1756:23, 1757:8, 1757:10, 1757:24, 1759:13, 1762:10, 1764:23, 1767:15, 1775:23, 1776:17, 1778:5, 1779:15, 1780:7, 1781:22, 1782:4, 1786:16,</p>	<p>1786:22, 1787:12, 1789:23, 1793:11, 1794:2, 1794:5, 1796:16, 1861:1, 1865:13, 1866:2, 1866:12, 1866:21, 1867:13, 1868:2, 1868:6, 1870:4, 1870:21, 1871:6, 1872:9, 1879:5, 1881:17, 1883:4, 1884:6, 1884:20, 1885:24, 1886:18, 1886:22, 1887:3, 1890:8, 1893:20, 1898:6, 1900:18</p> <p><b>Semmler</b> [25] - 1704:2, 1709:16, 1709:18, 1710:11, 1710:16, 1711:7, 1711:9, 1712:8, 1712:12, 1712:13, 1712:23, 1713:6, 1713:9, 1713:19, 1714:12, 1714:14, 1717:18, 1717:19, 1717:20, 1719:3, 1719:7, 1720:3, 1720:8, 1735:18, 1782:5</p> <p><b>Semmler's</b> [1] - 1866:25</p> <p><b>senior</b> [3] - 1721:12, 1721:13, 1901:13</p> <p><b>sense</b> [8] - 1845:2, 1853:21, 1854:4, 1884:13, 1933:24, 1947:3, 1947:19, 1976:1</p> <p><b>sensitive</b> [23] - 1732:21, 1744:1, 1744:23, 1745:2, 1745:3, 1745:17, 1745:24, 1746:1, 1746:6, 1746:10, 1746:14, 1746:25, 1747:13, 1753:16, 1754:9, 1774:3, 1774:9, 1774:20, 1775:11, 1775:19, 1779:2, 1828:9, 1878:13</p> <p><b>sent</b> [3] - 1845:24, 1846:2, 1956:17</p> <p><b>sentence</b> [8] - 1977:15, 1978:19, 1978:20, 1978:23, 1978:25, 1980:6, 1980:8, 1980:12</p> <p><b>sentiment</b> [1] - 1909:5</p>	<p><b>sentiments</b> [1] - 40 1909:25</p> <p><b>separate</b> [5] - 1876:3, 1876:5, 1876:11, 1876:14, 1899:18</p> <p><b>separation</b> [1] - 1873:25</p> <p><b>September</b> [9] - 1703:8, 1770:15, 1906:8, 1906:20, 1939:20, 1940:19, 1941:13, 1957:9, 1958:18</p> <p><b>serious</b> [2] - 1733:14, 1818:20</p> <p><b>seriously</b> [2] - 1811:5, 1951:21</p> <p><b>serve</b> [2] - 1931:2, 1944:22</p> <p><b>served</b> [1] - 1861:5</p> <p><b>server</b> [1] - 1972:7</p> <p><b>serves</b> [1] - 1840:15</p> <p><b>service</b> [12] - 1726:25, 1785:16, 1787:16, 1796:25, 1797:1, 1810:24, 1811:24, 1812:1, 1812:14, 1815:3, 1817:22, 1930:23</p> <p><b>Service</b> [43] - 1725:20, 1725:22, 1725:24, 1738:7, 1739:1, 1739:19, 1739:20, 1739:24, 1740:5, 1740:9, 1740:16, 1742:10, 1746:4, 1746:14, 1746:19, 1746:24, 1747:13, 1754:1, 1754:9, 1755:6, 1755:11, 1758:24, 1760:1, 1764:17, 1768:10, 1768:20, 1768:22, 1779:7, 1779:14, 1780:23, 1782:25, 1783:2, 1785:11, 1785:14, 1785:21, 1785:24, 1786:2, 1786:5, 1786:10, 1787:4, 1787:8, 1972:15, 1978:22</p> <p><b>Service's</b> [1] - 1725:21</p> <p><b>services</b> [3] - 1723:5, 1793:1, 1793:19</p> <p><b>Services</b> [3] - 1708:4, 1708:5, 1740:19</p> <p><b>session</b> [1] - 1945:2</p> <p><b>set</b> [5] - 1757:3, 1912:24, 1912:25, 1929:16, 1979:17</p>
---	---	---	--	---



<p><b>sets</b> [1] - 1729:5</p> <p><b>setting</b> [1] - 1894:6</p> <p><b>settling</b> [4] - 1878:20, 1879:11, 1879:15, 1879:18</p> <p><b>seven</b> [1] - 1833:4</p> <p><b>several</b> [11] - 1721:15, 1722:22, 1726:17, 1760:18, 1777:11, 1793:22, 1909:23, 1917:16, 1935:23, 1985:3, 1986:21</p> <p><b>Shale</b> [2] - 1838:5, 1839:20</p> <p><b>shale</b> [1] - 1839:25</p> <p><b>shall</b> [6] - 1789:4, 1978:21, 1979:14, 1979:20, 1980:12, 1980:18</p> <p><b>shallow</b> [6] - 1799:24, 1801:21, 1806:2, 1806:4, 1806:8, 1809:4</p> <p><b>shape</b> [1] - 1819:13</p> <p><b>share</b> [7] - 1805:14, 1836:15, 1845:12, 1846:9, 1919:11, 1971:7, 1971:24</p> <p><b>sharing</b> [1] - 1845:12</p> <p><b>shaving</b> [1] - 1864:14</p> <p><b>sheds</b> [1] - 1899:18</p> <p><b>sheet</b> [2] - 1897:22, 1956:9</p> <p><b>sheets</b> [1] - 1730:12</p> <p><b>Shelly</b> [1] - 1706:18</p> <p><b>SHELLY</b> [1] - 1712:21</p> <p><b>shelter</b> [5] - 1917:18, 1918:2, 1918:7, 1930:10, 1930:13</p> <p><b>Shiner</b> [1] - 1725:15</p> <p><b>shiner</b> [8] - 1708:3, 1739:13, 1742:19, 1742:21, 1779:10, 1779:12, 1779:25, 1780:20</p> <p><b>Shiners</b> [2] - 1780:3, 1780:6</p> <p><b>shippers</b> [1] - 1983:14</p> <p><b>SHIRLEY</b> [1] - 1717:13</p> <p><b>short</b> [8] - 1772:19, 1782:1, 1822:23, 1860:15, 1920:23, 1949:10, 1963:8, 1979:16</p> <p><b>short-tailed</b> [1] - 1979:16</p> <p><b>shorthand</b> [2] - 1989:9</p> <p><b>show</b> [9] - 1783:19, 1797:3, 1821:14,</p>	<p>1841:11, 1848:9, 1915:20, 1943:2, 1961:20, 1977:17</p> <p><b>showed</b> [5] - 1818:4, 1818:5, 1830:3, 1897:14, 1951:16</p> <p><b>showing</b> [2] - 1852:5, 1965:16</p> <p><b>shown</b> [3] - 1730:12, 1816:9, 1818:17</p> <p><b>shows</b> [9] - 1807:20, 1815:21, 1849:11, 1915:15, 1935:23, 1942:5, 1943:3, 1964:22, 1965:21</p> <p><b>SHPO</b> [1] - 1705:9</p> <p><b>shrubs</b> [1] - 1766:1</p> <p><b>Sibson</b> [4] - 1707:10, 1707:18, 1886:17, 1887:1</p> <p><b>SIBSON</b> [1] - 1716:7</p> <p><b>sic</b> [1] - 1886:16</p> <p><b>side</b> [15] - 1761:20, 1769:14, 1814:7, 1816:3, 1823:1, 1876:3, 1910:2, 1929:17, 1929:20, 1929:25, 1941:17, 1975:18, 1975:19</p> <p><b>side-by-side</b> [2] - 1975:18, 1975:19</p> <p><b>sign</b> [1] - 1904:6</p> <p><b>significance</b> [2] - 1744:20, 1824:4</p> <p><b>significant</b> [6] - 1807:22, 1834:11, 1836:7, 1842:1, 1845:6, 1846:8</p> <p><b>signifies</b> [1] - 1937:2</p> <p><b>signify</b> [1] - 1905:21</p> <p><b>Siguaw</b> [1] - 1946:2</p> <p><b>similar</b> [8] - 1750:23, 1793:19, 1796:24, 1804:2, 1848:16, 1887:5, 1938:7, 1980:17</p> <p><b>similarly</b> [3] - 1791:16, 1833:21, 1900:11</p> <p><b>simple</b> [5] - 1857:4, 1935:6, 1945:13, 1967:25, 1971:23</p> <p><b>simply</b> [13] - 1726:13, 1745:18, 1861:8, 1890:22, 1902:13, 1933:22, 1934:3, 1960:9, 1972:2, 1972:4, 1977:4, 1980:1, 1980:3</p> <p><b>sincere</b> [1] - 1836:19</p> <p><b>single</b> [6] - 1809:21,</p>	<p>1809:24, 1811:11, 1814:3, 1818:23, 1931:12</p> <p><b>Sioux</b> [63] - 1704:6, 1704:7, 1704:8, 1705:22, 1705:23, 1734:22, 1735:3, 1737:20, 1741:19, 1752:25, 1753:9, 1759:19, 1769:11, 1805:18, 1805:23, 1806:23, 1807:3, 1819:23, 1820:1, 1820:22, 1820:23, 1821:7, 1821:9, 1823:1, 1845:21, 1845:23, 1848:24, 1872:6, 1881:18, 1911:17, 1911:25, 1921:4, 1921:19, 1926:24, 1934:19, 1934:20, 1935:1, 1935:2, 1935:5, 1935:24, 1936:8, 1936:21, 1938:17, 1938:22, 1943:4, 1943:14, 1943:19, 1944:13, 1945:1, 1945:7, 1945:16, 1945:19, 1946:4, 1946:7, 1946:15, 1948:10, 1950:20, 1952:22, 1956:1, 1957:5, 1965:16, 1969:12, 1975:2</p> <p><b>SIoux</b> [5] - 1708:2, 1708:8, 1708:15, 1714:19, 1715:2</p> <p><b>sit</b> [5] - 1736:21, 1809:6, 1822:11, 1862:6, 1932:17</p> <p><b>site</b> [8] - 1748:5, 1749:17, 1820:18, 1821:6, 1821:9, 1845:15, 1983:5, 1983:7</p> <p><b>site-specific</b> [2] - 1749:17, 1983:7</p> <p><b>sites</b> [17] - 1799:16, 1809:1, 1820:19, 1821:4, 1821:18, 1834:12, 1834:24, 1844:22, 1844:25, 1845:4, 1845:5, 1845:8, 1845:13, 1845:25, 1846:8, 1917:15</p> <p><b>sitting</b> [4] - 1870:1, 1894:9, 1900:15, 1933:16</p>	<p><b>situation</b> [5] - 1734:16, 1734:19, 1896:11, 1968:18, 1974:24</p> <p><b>situations</b> [2] - 1791:11, 1791:18</p> <p><b>six</b> [8] - 1779:9, 1780:3, 1780:20, 1791:6, 1833:4, 1859:3, 1864:3, 1865:22</p> <p><b>size</b> [1] - 1778:24</p> <p><b>Skipper</b> [3] - 1739:15, 1742:24, 1771:20</p> <p><b>Skunk</b> [1] - 1822:25</p> <p><b>sleep</b> [1] - 1741:23</p> <p><b>slice</b> [1] - 1932:19</p> <p><b>slip</b> [1] - 1825:3</p> <p><b>slope</b> [2] - 1730:21, 1731:4</p> <p><b>slough</b> [2] - 1834:13, 1974:20</p> <p><b>small</b> [1] - 1821:5</p> <p><b>smartphone</b> [1] - 1813:25</p> <p><b>snow</b> [1] - 1807:11</p> <p><b>soak</b> [1] - 1822:11</p> <p><b>social</b> [3] - 1829:13, 1836:2, 1848:10</p> <p><b>Society</b> [1] - 1705:8</p> <p><b>society</b> [2] - 1932:19, 1933:23</p> <p><b>soil</b> [26] - 1868:15, 1868:21, 1868:22, 1869:7, 1869:15, 1873:6, 1873:21, 1876:5, 1876:11, 1883:20, 1885:19, 1887:14, 1889:10, 1889:12, 1891:23, 1897:1, 1899:2, 1899:3, 1899:4, 1899:5, 1899:10, 1899:12, 1899:18, 1899:19, 1899:21, 1899:22</p> <p><b>soil/landowner</b> [1] - 1886:8</p> <p><b>soils</b> [6] - 1876:4, 1886:3, 1888:1, 1893:17, 1899:6, 1899:7</p> <p><b>solid</b> [3] - 1781:3, 1835:23, 1843:10</p> <p><b>solids</b> [1] - 1751:6</p> <p><b>soliloquy</b> [1] - 1961:9</p> <p><b>soluble</b> [2] - 1816:4, 1818:16</p> <p><b>solution</b> [1] - 1857:9</p> <p><b>someone</b> [6] -</p>	<p>1795:22, 1845:24, 1855:1, 1893:14, 1950:1, 1973:18</p> <p><b>someplace</b> [1] - 1853:5</p> <p><b>sometimes</b> [4] - 1878:15, 1878:24, 1917:14</p> <p><b>somewhere</b> [2] - 1930:18, 1933:2</p> <p><b>son</b> [1] - 1908:20</p> <p><b>sooner</b> [1] - 1842:13</p> <p><b>sorry</b> [37] - 1722:2, 1722:4, 1723:13, 1726:7, 1743:11, 1744:15, 1760:14, 1762:3, 1780:19, 1784:8, 1826:10, 1860:17, 1893:20, 1893:21, 1903:2, 1904:21, 1922:14, 1923:18, 1923:19, 1924:23, 1924:24, 1925:1, 1925:4, 1926:6, 1931:6, 1935:10, 1935:17, 1936:12, 1951:9, 1956:14, 1963:15, 1967:10, 1973:15, 1980:11, 1980:20, 1981:17, 1987:17</p> <p><b>sort</b> [6] - 1762:19, 1792:5, 1795:8, 1796:12, 1898:11, 1899:2</p> <p><b>sorts</b> [7] - 1799:7, 1827:3, 1871:12, 1886:3, 1893:23, 1947:21, 1955:12</p> <p><b>Sose</b> [1] - 1777:23</p> <p><b>sound</b> [1] - 1788:13</p> <p><b>sounds</b> [2] - 1747:5, 1934:2</p> <p><b>source</b> [15] - 1749:16, 1751:4, 1751:5, 1751:7, 1775:6, 1775:9, 1775:13, 1775:17, 1777:24, 1778:4, 1781:5, 1781:7, 1811:11, 1812:23, 1836:4</p> <p><b>sources</b> [5] - 1751:11, 1751:14, 1751:17, 1751:19, 1780:25</p> <p><b>south</b> [4] - 1807:1, 1928:25, 1929:6, 1952:19</p> <p><b>SOUTH</b> [2] - 1703:2, 1989:1</p> <p><b>South</b> [104] - 1704:14,</p>	41
---	--	---	--	--	----

<p>1704:16, 1708:18, 1724:16, 1733:17, 1733:18, 1733:24, 1770:7, 1774:8, 1775:16, 1776:16, 1782:10, 1796:10, 1796:14, 1797:25, 1798:3, 1798:19, 1799:1, 1799:6, 1799:20, 1799:22, 1800:2, 1800:3, 1803:13, 1803:17, 1803:20, 1803:23, 1804:13, 1804:19, 1804:24, 1805:9, 1811:11, 1812:5, 1815:17, 1815:22, 1815:24, 1816:8, 1816:12, 1816:14, 1818:4, 1820:10, 1820:24, 1823:8, 1823:12, 1824:21, 1844:8, 1845:22, 1845:23, 1847:2, 1847:13, 1849:13, 1849:16, 1849:17, 1849:19, 1849:20, 1849:22, 1850:14, 1851:21, 1852:8, 1852:15, 1852:18, 1853:1, 1853:20, 1853:23, 1856:14, 1856:18, 1857:16, 1857:23, 1867:7, 1869:5, 1869:8, 1887:19, 1888:5, 1888:9, 1890:20, 1890:21, 1898:9, 1898:15, 1901:14, 1908:23, 1909:1, 1909:6, 1913:21, 1917:17, 1920:3, 1929:14, 1931:22, 1932:11, 1933:1, 1933:15, 1933:24, 1934:4, 1934:8, 1934:15, 1934:18, 1934:20, 1944:11, 1975:14, 1976:18, 1979:24, 1983:16, 1989:7, 1989:13</p> <p><b>southeast</b> [3] - 1845:23, 1928:22, 1929:5</p> <p><b>southern</b> [1] - 1794:12</p> <p><b>southwest</b> [1] - 1823:1</p> <p><b>southwestern</b> [1] - 1818:4</p> <p><b>space</b> [3] - 1741:14,</p>	<p>1853:22, 1918:20</p> <p><b>spaces</b> [1] - 1741:15</p> <p><b>speaking</b> [3] - 1802:25, 1913:5, 1935:19</p> <p><b>Speaks</b> [1] - 1849:1</p> <p><b>special</b> [3] - 1814:13, 1877:18, 1972:18</p> <p><b>specialist</b> [5] - 1721:12, 1721:14, 1721:16, 1728:1, 1741:20</p> <p><b>specialists</b> [3] - 1721:19, 1722:1, 1723:25</p> <p><b>species</b> [72] - 1725:16, 1738:8, 1739:8, 1739:22, 1740:7, 1740:18, 1740:22, 1741:22, 1742:22, 1743:9, 1743:14, 1743:18, 1743:20, 1743:22, 1744:11, 1745:19, 1745:25, 1746:12, 1757:5, 1757:17, 1758:9, 1758:13, 1758:18, 1758:22, 1758:25, 1759:3, 1759:4, 1759:6, 1762:7, 1762:11, 1762:20, 1762:21, 1763:3, 1763:5, 1763:7, 1763:10, 1763:11, 1763:13, 1764:12, 1765:14, 1767:1, 1767:9, 1767:12, 1767:14, 1767:24, 1768:24, 1769:6, 1769:8, 1771:22, 1772:20, 1774:18, 1774:19, 1778:17, 1779:4, 1782:22, 1782:24, 1784:3, 1785:7, 1785:19, 1785:25, 1786:11, 1787:17, 1788:21, 1796:21, 1797:1, 1797:2, 1797:4, 1895:17, 1979:18, 1979:23</p> <p><b>Species</b> [11] - 1738:25, 1758:7, 1758:20, 1762:1, 1763:1, 1767:9, 1767:23, 1769:5, 1769:8, 1783:25, 1797:6</p> <p><b>specific</b> [27] -</p>	<p>1721:18, 1723:23, 1744:11, 1746:21, 1748:12, 1748:16, 1749:17, 1757:17, 1784:6, 1787:17, 1795:23, 1814:18, 1842:3, 1884:12, 1884:15, 1886:23, 1902:16, 1909:14, 1912:20, 1946:19, 1950:18, 1961:20, 1969:24, 1981:11, 1983:1, 1983:5, 1983:7</p> <p><b>specifically</b> [12] - 1730:11, 1735:8, 1761:24, 1795:6, 1851:20, 1859:7, 1918:2, 1946:13, 1950:24, 1965:10, 1969:17, 1982:25</p> <p><b>specified</b> [3] - 1731:4, 1979:21, 1979:23</p> <p><b>specify</b> [2] - 1730:21, 1874:10</p> <p><b>spectacular</b> [1] - 1803:18</p> <p><b>spectrum</b> [1] - 1752:6</p> <p><b>speculate</b> [4] - 1749:4, 1749:9, 1757:4, 1786:20</p> <p><b>speculating</b> [1] - 1890:9</p> <p><b>speculation</b> [13] - 1738:16, 1739:23, 1744:3, 1744:6, 1756:23, 1756:25, 1757:6, 1757:12, 1776:22, 1786:15, 1856:7, 1879:4, 1927:3</p> <p><b>speed</b> [2] - 1752:8, 1777:16</p> <p><b>spelling</b> [1] - 1945:21</p> <p><b>spent</b> [2] - 1864:13, 1930:12</p> <p><b>spill</b> [7] - 1747:24, 1748:4, 1748:5, 1748:10, 1776:14, 1777:16, 1808:18</p> <p><b>Spill</b> [1] - 1705:6</p> <p><b>spills</b> [2] - 1722:21, 1876:7</p> <p><b>spirit</b> [2] - 1854:9, 1962:7</p> <p><b>split</b> [2] - 1825:4</p> <p><b>spoken</b> [2] - 1743:5, 1908:25</p> <p><b>sport</b> [1] - 1828:7</p> <p><b>spot</b> [1] - 1826:15</p>	<p><b>Spotted</b> [2] - 1708:16, 1708:17</p> <p><b>SPOTTED</b> [1] - 1714:20</p> <p><b>Sprague's</b> [11] - 1708:3, 1739:14, 1760:2, 1760:19, 1761:2, 1761:8, 1764:19, 1765:22, 1768:4, 1770:1, 1770:9</p> <p><b>Spring</b> [1] - 1820:20</p> <p><b>spring</b> [5] - 1729:7, 1729:14, 1741:20, 1770:16, 1770:17</p> <p><b>spurring</b> [1] - 1934:24</p> <p><b>SS</b> [1] - 1989:2</p> <p><b>St</b> [1] - 1799:11</p> <p><b>stabilization</b> [5] - 1729:9, 1731:1, 1731:4, 1892:18, 1892:21</p> <p><b>stabilize</b> [1] - 1730:25</p> <p><b>stabilized</b> [3] - 1729:4, 1731:7, 1892:20</p> <p><b>stabilizing</b> [2] - 1728:25, 1729:6</p> <p><b>Stacy</b> [1] - 1864:20</p> <p><b>Staff</b> [31] - 1704:10, 1706:21, 1721:1, 1721:3, 1722:1, 1723:5, 1723:22, 1724:3, 1724:5, 1725:1, 1725:3, 1735:10, 1736:5, 1737:11, 1776:20, 1792:12, 1797:13, 1800:15, 1801:11, 1801:13, 1825:15, 1825:16, 1827:1, 1850:3, 1884:7, 1892:7, 1903:20, 1916:15, 1925:13, 1927:19, 1956:19</p> <p><b>staff</b> [9] - 1728:8, 1799:9, 1804:21, 1818:8, 1916:20, 1943:16, 1946:5, 1946:9</p> <p><b>STAFF</b> [6] - 1703:15, 1706:13, 1711:14, 1712:2, 1713:2, 1714:2</p> <p><b>Staff's</b> [6] - 1724:18, 1727:17, 1727:21, 1731:16, 1731:19, 1733:6</p> <p><b>stage</b> [1] - 1976:9</p> <p><b>Stamm</b> [1] - 1705:11</p> <p><b>STAMM</b> [1] - 1710:18</p>	<p><b>stamped</b> [1] - 1956:1142</p> <p><b>stance</b> [1] - 1842:17</p> <p><b>stand</b> [6] - 1780:9, 1786:14, 1836:18, 1893:22, 1901:1, 1970:12</p> <p><b>standard</b> [6] - 1726:10, 1788:24, 1913:11, 1920:7, 1920:10, 1920:12</p> <p><b>standardized</b> [2] - 1729:23, 1730:1</p> <p><b>standards</b> [3] - 1781:3, 1884:4, 1885:11</p> <p><b>Standing</b> [3] - 1706:4, 1706:5, 1706:6</p> <p><b>standpoint</b> [1] - 1953:18</p> <p><b>star</b> [1] - 1943:18</p> <p><b>start</b> [9] - 1729:14, 1738:3, 1773:16, 1782:7, 1863:22, 1877:8, 1907:3, 1926:5, 1949:12</p> <p><b>started</b> [9] - 1723:15, 1933:1, 1942:12, 1945:8, 1955:11, 1961:13, 1964:2, 1980:18, 1983:23</p> <p><b>starting</b> [2] - 1788:18, 1789:17</p> <p><b>startle</b> [1] - 1788:20</p> <p><b>starts</b> [1] - 1966:6</p> <p><b>STATE</b> [2] - 1703:2, 1989:1</p> <p><b>state</b> [43] - 1721:7, 1727:2, 1733:21, 1734:1, 1736:15, 1749:6, 1771:11, 1789:3, 1789:10, 1790:13, 1793:10, 1794:7, 1794:25, 1795:10, 1796:2, 1797:21, 1798:8, 1799:2, 1812:13, 1813:11, 1814:24, 1815:2, 1818:23, 1819:9, 1828:12, 1835:13, 1843:24, 1844:11, 1847:8, 1852:1, 1852:7, 1863:25, 1868:7, 1901:6, 1934:25, 1944:23, 1965:10, 1975:15, 1976:25, 1977:9, 1977:10</p> <p><b>State</b> [25] - 1704:14, 1705:8, 1722:6, 1724:16, 1749:7,</p>
--	--	--	--	---

<p>1781:4, 1784:20, 1784:23, 1795:20, 1798:2, 1798:6, 1798:14, 1798:18, 1799:19, 1800:3, 1816:12, 1827:4, 1849:12, 1852:8, 1867:6, 1867:7, 1868:20, 1869:1, 1887:19, 1989:7</p> <p><b>state's</b> [1] - 1820:13</p> <p><b>State's</b> [2] - 1799:7, 1813:15</p> <p><b>state-owned</b> [1] - 1795:10</p> <p><b>statement</b> [14] - 1726:15, 1738:15, 1759:7, 1766:9, 1771:23, 1772:1, 1772:22, 1774:14, 1942:14, 1950:4, 1950:7, 1950:9, 1953:10, 1971:9</p> <p><b>Statement</b> [5] - 1738:13, 1843:1, 1843:5, 1855:6, 1889:2</p> <p><b>statements</b> [22] - 1735:25, 1748:20, 1837:5, 1843:2, 1865:2, 1871:14, 1948:17, 1948:22, 1948:23, 1948:25, 1949:1, 1949:5, 1950:12, 1953:1, 1954:1, 1954:3, 1954:19, 1954:20, 1973:17, 1973:19, 1974:2</p> <p><b>states</b> [20] - 1748:18, 1751:24, 1752:14, 1770:21, 1772:10, 1794:7, 1794:10, 1795:14, 1805:10, 1812:8, 1812:11, 1812:18, 1818:19, 1819:2, 1819:6, 1878:8, 1898:12, 1934:13</p> <p><b>States</b> [10] - 1761:9, 1761:18, 1762:3, 1764:8, 1769:15, 1856:22, 1881:14, 1931:23, 1934:12, 1971:22</p> <p><b>states'</b> [1] - 1898:16</p> <p><b>stating</b> [1] - 1737:7</p> <p><b>station</b> [1] - 1948:7</p> <p><b>stationing</b> [1] - 1730:7</p> <p><b>stations</b> [6] - 1726:18,</p>	<p>1726:19, 1726:23, 1727:6, 1788:7, 1799:15</p> <p><b>status</b> [1] - 1760:16</p> <p><b>statuses</b> [1] - 1760:19</p> <p><b>statute</b> [9] - 1745:20, 1844:9, 1848:7, 1852:5, 1852:7, 1852:11, 1976:25, 1977:1, 1986:17</p> <p><b>statutes</b> [8] - 1796:10, 1796:12, 1844:11, 1844:12, 1844:17, 1975:15, 1976:18, 1986:14</p> <p><b>stay</b> [3] - 1767:13, 1835:15, 1909:18</p> <p><b>step</b> [2] - 1889:23, 1946:6</p> <p><b>stepping</b> [1] - 1982:23</p> <p><b>steps</b> [2] - 1955:25, 1956:3</p> <p><b>stick</b> [2] - 1866:19, 1955:16</p> <p><b>still</b> [22] - 1729:4, 1738:12, 1751:5, 1772:18, 1798:17, 1799:24, 1817:22, 1822:21, 1832:5, 1849:7, 1855:2, 1864:17, 1866:25, 1871:13, 1921:6, 1924:15, 1948:15, 1948:22, 1953:8, 1953:24, 1979:8, 1979:11</p> <p><b>stipulate</b> [2] - 1858:16, 1921:9</p> <p><b>stipulated</b> [1] - 1863:19</p> <p><b>stipulating</b> [1] - 1961:5</p> <p><b>stipulation</b> [3] - 1859:11, 1863:1, 1863:2</p> <p><b>stipulations</b> [1] - 1862:23</p> <p><b>STOFFERAHN</b> [3] - 1715:17, 1717:3, 1718:12</p> <p><b>Stofferahn</b> [5] - 1707:11, 1707:11, 1707:12, 1899:11, 1907:12</p> <p><b>Stofferahns</b> [2] - 1890:23, 1907:15</p> <p><b>stone</b> [2] - 1912:24, 1912:25</p> <p><b>stop</b> [2] - 1791:10, 1840:11</p>	<p><b>stopover</b> [2] - 1742:13, 1742:14</p> <p><b>storage</b> [2] - 1799:4, 1799:14</p> <p><b>storm</b> [1] - 1729:21</p> <p><b>straightforward</b> [1] - 1843:7</p> <p><b>strategy</b> [1] - 1964:11</p> <p><b>stream</b> [3] - 1743:16, 1748:11, 1886:9</p> <p><b>Street</b> [1] - 1901:9</p> <p><b>street</b> [2] - 1797:24, 1929:15</p> <p><b>streets</b> [1] - 1845:22</p> <p><b>stretching</b> [1] - 1869:7</p> <p><b>stricken</b> [4] - 1736:9, 1764:25, 1779:18, 1949:5</p> <p><b>strict</b> [3] - 1885:6, 1885:10</p> <p><b>stricter</b> [3] - 1884:4, 1884:19, 1885:3</p> <p><b>strictly</b> [1] - 1802:25</p> <p><b>strike</b> [11] - 1735:4, 1738:9, 1744:15, 1749:11, 1765:20, 1947:6, 1948:21, 1949:1, 1952:25, 1953:10, 1954:24</p> <p><b>striven</b> [1] - 1864:13</p> <p><b>strong</b> [2] - 1842:22, 1889:18</p> <p><b>structure</b> [7] - 1749:22, 1750:9, 1750:12, 1791:24, 1804:18, 1816:25, 1913:12</p> <p><b>Structure</b> [1] - 1705:21</p> <p><b>structured</b> [1] - 1792:14</p> <p><b>structures</b> [2] - 1811:22, 1907:5</p> <p><b>struggle</b> [1] - 1834:17</p> <p><b>struggles</b> [1] - 1834:10</p> <p><b>student</b> [1] - 1828:22</p> <p><b>studied</b> [4] - 1809:18, 1809:20, 1810:1, 1926:7</p> <p><b>studies</b> [19] - 1748:21, 1758:24, 1797:3, 1808:9, 1808:11, 1837:7, 1870:12, 1870:14, 1870:16, 1870:19, 1871:22, 1871:24, 1872:1, 1872:2, 1872:5, 1883:19, 1891:23, 1892:1, 1899:10</p>	<p><b>study</b> [11] - 1776:18, 1810:3, 1818:21, 1824:8, 1839:9, 1855:12, 1870:12, 1887:14, 1898:23, 1915:21, 1915:22</p> <p><b>stuff</b> [5] - 1776:25, 1897:24, 1939:15, 1945:14, 1945:15</p> <p><b>sturgeon</b> [4] - 1708:4, 1739:14, 1742:22, 1770:20</p> <p><b>Sturgeon</b> [1] - 1708:5</p> <p><b>style</b> [1] - 1878:11</p> <p><b>Sub</b> [1] - 1968:25</p> <p><b>subconsultant</b> [1] - 1888:11</p> <p><b>subcontractors</b> [2] - 1893:1, 1893:4</p> <p><b>subheading</b> [1] - 1769:17</p> <p><b>subject</b> [4] - 1745:1, 1751:2, 1756:12, 1806:9</p> <p><b>submission</b> [2] - 1958:25, 1959:25</p> <p><b>submit</b> [5] - 1792:11, 1926:19, 1926:20, 1968:23, 1970:22</p> <p><b>submits</b> [1] - 1735:21</p> <p><b>submitted</b> [10] - 1724:10, 1725:6, 1805:10, 1830:1, 1888:10, 1956:19, 1960:7, 1970:19, 1970:25, 1976:9</p> <p><b>submitting</b> [3] - 1792:8, 1969:8, 1981:25</p> <p><b>subpoenaed</b> [1] - 1800:8</p> <p><b>subsection</b> [1] - 1744:22</p> <p><b>subsequent</b> [1] - 1802:11</p> <p><b>subsidence</b> [2] - 1804:17, 1811:21</p> <p><b>subsoil</b> [1] - 1876:4</p> <p><b>subsoils</b> [1] - 1890:15</p> <p><b>substance</b> [2] - 1808:10, 1809:18</p> <p><b>substantial</b> [1] - 1764:18</p> <p><b>substantially</b> [1] - 1733:16</p> <p><b>subsurface</b> [2] - 1798:24, 1813:15</p> <p><b>subtitle</b> [1] - 1806:22</p> <p><b>subtleties</b> [1] - 1811:15</p>	<p><b>success</b> [1] - 1893:18 4 3</p> <p><b>successfully</b> [1] - 1881:13</p> <p><b>succinctly</b> [1] - 1801:18</p> <p><b>sudden</b> [1] - 1818:3</p> <p><b>suddenly</b> [1] - 1816:23</p> <p><b>sue</b> [1] - 1919:11</p> <p><b>SUE</b> [1] - 1716:7</p> <p><b>sued</b> [1] - 1920:7</p> <p><b>sufficient</b> [2] - 1731:3, 1734:13</p> <p><b>suitable</b> [3] - 1742:4, 1742:6, 1745:25</p> <p><b>SULLY</b> [1] - 1989:3</p> <p><b>sum</b> [1] - 1833:3</p> <p><b>summarize</b> [2] - 1801:16, 1828:16</p> <p><b>Summary</b> [3] - 1706:9, 1708:5, 1708:7</p> <p><b>summer</b> [1] - 1903:14</p> <p><b>summit</b> [1] - 1831:19</p> <p><b>Summons</b> [1] - 1707:17</p> <p><b>Sunoco</b> [1] - 1705:5</p> <p><b>superior</b> [1] - 1734:1</p> <p><b>supersede</b> [1] - 1725:25</p> <p><b>supervised</b> [1] - 1741:21</p> <p><b>supervises</b> [1] - 1791:4</p> <p><b>supplies</b> [1] - 1915:23</p> <p><b>support</b> [5] - 1722:1, 1854:14, 1854:15, 1862:9, 1960:20</p> <p><b>supporting</b> [3] - 1724:3, 1724:14, 1829:15</p> <p><b>supports</b> [1] - 1834:8</p> <p><b>supposed</b> [3] - 1812:17, 1850:20, 1909:18</p> <p><b>Supreme</b> [1] - 1733:18</p> <p><b>surface</b> [19] - 1800:12, 1807:11, 1807:12, 1808:7, 1809:4, 1810:18, 1811:21, 1811:22, 1813:2, 1813:4, 1816:13, 1816:23, 1816:24, 1817:4, 1817:6, 1817:19, 1818:10, 1897:7</p> <p><b>surmise</b> [1] - 1744:4</p> <p><b>Surplus</b> [1] - 1706:9</p> <p><b>surprise</b> [10] - 1765:19, 1766:16, 1766:18, 1766:19,</p>
---	---	---	--	---

<p>1768:2, 1768:6, 1768:8, 1768:12, 1853:3, 1853:4 <b>surprised</b> [1] - 1825:3 <b>surprising</b> [1] - 1969:20 <b>surrounds</b> [1] - 1917:18 <b>Survey</b> [14] - 1705:16, 1705:17, 1705:18, 1705:19, 1705:20, 1798:3, 1804:6, 1805:1, 1805:8, 1811:8, 1813:8, 1813:23, 1814:5, 1818:21 <b>survey</b> [10] - 1798:19, 1798:21, 1799:8, 1799:20, 1804:11, 1807:17, 1899:12, 1903:18, 1910:25, 1911:5 <b>surveys</b> [14] - 1732:5, 1741:21, 1766:10, 1771:21, 1771:24, 1772:1, 1772:11, 1772:19, 1772:23, 1819:2, 1911:6, 1911:9, 1911:13, 1976:12 <b>suspect</b> [3] - 1803:7, 1804:8, 1824:6 <b>suspended</b> [3] - 1751:6, 1781:2, 1782:23 <b>sustain</b> [5] - 1741:5, 1741:9, 1777:3, 1852:22, 1955:17 <b>sustainable</b> [2] - 1857:5, 1857:9 <b>sustained</b> [10] - 1757:19, 1759:17, 1776:1, 1778:10, 1837:19, 1837:22, 1855:5, 1916:12, 1948:20, 1950:15 <b>sworn</b> [1] - 1872:22 <b>SWPPP</b> [3] - 1729:21, 1729:25, 1730:6 <b>system</b> [18] - 1775:7, 1808:23, 1878:19, 1878:21, 1878:23, 1880:13, 1880:16, 1880:20, 1880:21, 1880:22, 1880:25, 1886:8, 1886:11, 1887:11, 1891:9, 1891:17, 1972:6, 1972:7 <b>System</b> [2] - 1708:10,</p>	<p>1708:10 <b>Systems</b> [2] - 1704:9, 1820:11 <b>systems</b> [5] - 1742:20, 1880:9, 1880:13, 1972:10, 1972:11</p> <p style="text-align: center;"><b>T</b></p> <p><b>table</b> [15] - 1730:6, 1730:8, 1736:19, 1807:12, 1807:24, 1838:17, 1840:3, 1840:5, 1840:8, 1907:4, 1910:2, 1925:2, 1971:1, 1977:25, 1978:6 <b>tactical</b> [1] - 1721:19 <b>tag</b> [1] - 1841:7 <b>tags</b> [1] - 1840:4 <b>tailed</b> [2] - 1828:10, 1979:16 <b>talks</b> [2] - 1761:24, 1846:18 <b>tank</b> [1] - 1722:21 <b>tanks</b> [2] - 1799:4, 1799:14 <b>tapes</b> [1] - 1898:24 <b>tar</b> [1] - 1831:6 <b>targeted</b> [2] - 1864:8, 1864:25 <b>tariff</b> [1] - 1984:9 <b>Tea</b> [8] - 1705:23, 1944:13, 1948:11, 1952:2, 1952:19, 1953:5, 1956:1, 1965:16 <b>teacher</b> [1] - 1828:23 <b>teachings</b> [1] - 1807:9 <b>team</b> [5] - 1724:7, 1799:23, 1882:14, 1915:8, 1951:2 <b>teams</b> [1] - 1721:19 <b>technical</b> [4] - 1723:23, 1723:24, 1781:12, 1781:16 <b>technique</b> [1] - 1881:9 <b>techniques</b> [5] - 1751:25, 1752:12, 1752:14, 1882:17, 1950:25 <b>technology</b> [1] - 1882:20 <b>telephonic</b> [1] - 1826:12 <b>telephonically</b> [2] - 1825:25, 1827:2 <b>temperature</b> [6] - 1835:11, 1898:19,</p>	<p>1900:4, 1900:7, 1900:10, 1900:12 <b>temperatures</b> [1] - 1891:23 <b>temporary</b> [3] - 1749:2, 1918:1, 1918:14 <b>tend</b> [3] - 1808:19, 1808:20, 1878:14 <b>tender</b> [1] - 1737:19 <b>tenths</b> [2] - 1747:25, 1748:1 <b>tenure</b> [1] - 1800:3 <b>term</b> [4] - 1842:21, 1853:17, 1853:18, 1981:4 <b>terms</b> [9] - 1749:4, 1751:22, 1791:12, 1796:4, 1854:12, 1904:12, 1920:4, 1934:8, 1985:13 <b>terribly</b> [1] - 1955:2 <b>territory</b> [3] - 1833:1, 1837:13, 1854:6 <b>Tesoro</b> [4] - 1851:8, 1851:10, 1851:17, 1851:24 <b>test</b> [29] - 1749:3, 1750:3, 1750:22, 1751:15, 1751:20, 1780:25, 1781:1, 1804:12, 1804:22, 1813:6, 1813:7, 1813:17, 1813:22, 1814:4, 1814:17, 1815:2, 1815:4, 1822:13, 1825:5, 1886:16, 1886:24, 1896:15, 1899:1, 1899:2, 1899:3, 1899:5, 1899:6, 1899:8 <b>testified</b> [32] - 1747:3, 1776:24, 1784:12, 1787:7, 1789:19, 1793:9, 1796:21, 1852:1, 1880:1, 1883:19, 1883:25, 1885:18, 1887:8, 1892:13, 1892:23, 1898:19, 1910:13, 1916:4, 1936:1, 1937:4, 1939:2, 1939:25, 1941:9, 1941:24, 1949:18, 1950:1, 1974:5, 1974:9, 1983:8, 1984:18 <b>testify</b> [14] - 1724:13, 1757:22, 1763:10,</p>	<p>1776:8, 1839:9, 1855:20, 1862:7, 1866:14, 1883:21, 1906:1, 1906:19, 1921:7, 1949:17, 1973:17 <b>testifying</b> [19] - 1734:17, 1736:9, 1736:20, 1755:10, 1757:13, 1757:25, 1758:4, 1764:23, 1765:1, 1775:23, 1863:5, 1865:22, 1871:6, 1891:5, 1925:16, 1954:19, 1973:3, 1973:7, 1973:18 <b>testimonies</b> [2] - 1738:2, 1774:13 <b>testimony</b> [211] - 1723:19, 1723:21, 1723:24, 1724:3, 1724:8, 1724:10, 1724:13, 1724:22, 1724:24, 1725:4, 1725:9, 1725:14, 1726:7, 1726:17, 1727:10, 1727:23, 1728:6, 1728:14, 1728:17, 1730:2, 1730:9, 1731:21, 1732:9, 1732:15, 1732:17, 1732:18, 1732:19, 1732:24, 1733:10, 1733:12, 1734:18, 1734:21, 1736:14, 1739:11, 1739:16, 1740:21, 1742:5, 1742:12, 1744:16, 1744:17, 1745:5, 1745:13, 1745:14, 1748:17, 1748:18, 1749:1, 1751:24, 1753:19, 1753:25, 1756:21, 1757:16, 1757:22, 1757:23, 1759:10, 1759:16, 1763:2, 1763:13, 1770:20, 1771:20, 1772:3, 1772:8, 1772:10, 1772:12, 1773:1, 1773:17, 1773:20, 1773:21, 1776:8, 1776:23, 1777:2, 1778:13, 1779:20, 1780:8, 1780:10, 1780:12, 1780:13, 1783:13, 1785:19, 1789:12, 1800:10, 1800:18, 1801:4,</p>	<p>1801:7, 1801:16, 4 4 1801:19, 1802:2, 1802:17, 1803:22, 1803:24, 1806:2, 1806:7, 1806:10, 1806:15, 1810:12, 1820:12, 1820:17, 1822:1, 1822:6, 1825:10, 1826:5, 1826:9, 1826:12, 1826:14, 1826:16, 1827:3, 1827:4, 1827:21, 1830:4, 1830:6, 1832:2, 1833:15, 1833:19, 1833:22, 1834:2, 1837:14, 1842:24, 1844:5, 1846:22, 1848:4, 1848:6, 1848:17, 1848:19, 1850:13, 1854:18, 1858:17, 1859:3, 1859:4, 1859:6, 1859:7, 1859:11, 1860:11, 1861:17, 1861:20, 1863:3, 1863:8, 1863:13, 1863:14, 1864:4, 1864:6, 1864:7, 1864:8, 1864:12, 1864:14, 1864:25, 1865:4, 1865:6, 1869:22, 1869:23, 1870:9, 1872:21, 1872:22, 1872:25, 1877:24, 1878:1, 1878:3, 1882:7, 1883:22, 1883:23, 1884:8, 1884:14, 1887:1, 1891:6, 1892:12, 1894:22, 1894:24, 1901:16, 1901:19, 1902:5, 1902:8, 1909:3, 1909:24, 1910:10, 1913:9, 1913:13, 1915:6, 1915:7, 1923:16, 1924:5, 1925:15, 1926:3, 1926:4, 1926:10, 1926:14, 1926:18, 1926:23, 1927:23, 1928:3, 1940:4, 1940:6, 1940:13, 1940:18, 1941:2, 1942:3, 1943:9, 1943:11, 1953:12, 1954:7, 1954:14, 1955:14, 1961:19, 1961:25, 1968:24, 1973:8, 1977:16,</p>
---	--	--	--	---



<p>1977:18, 1978:10, 1979:3, 1982:9, 1982:22, 1986:4, 1986:5</p> <p><b>Testimony</b> [41] - 1706:14, 1706:14, 1706:15, 1706:15, 1706:16, 1706:16, 1706:17, 1706:17, 1706:18, 1706:18, 1706:19, 1706:19, 1706:20, 1706:20, 1706:21, 1707:3, 1707:4, 1707:4, 1707:5, 1707:5, 1707:6, 1707:7, 1707:7, 1707:8, 1707:8, 1707:9, 1707:9, 1707:10, 1707:11, 1707:11, 1707:12, 1707:12, 1707:13, 1707:18, 1708:14, 1829:25, 1865:3, 1921:5, 1924:18, 1925:8, 1981:9</p> <p><b>testing</b> [5] - 1743:10, 1743:13, 1749:21, 1776:25, 1778:16</p> <p><b>Texas</b> [1] - 1937:20</p> <p><b>texas</b> [1] - 1901:9</p> <p><b>textbook</b> [1] - 1807:29</p> <p><b>THE</b> [82] - 1703:1, 1703:2, 1703:4, 1703:5, 1703:12, 1790:5, 1790:11, 1793:2, 1822:9, 1822:14, 1822:18, 1824:18, 1825:7, 1829:22, 1830:18, 1830:22, 1831:2, 1831:6, 1831:11, 1831:16, 1831:22, 1832:10, 1832:18, 1833:6, 1837:17, 1839:22, 1839:24, 1841:14, 1848:21, 1856:15, 1856:19, 1856:23, 1857:2, 1857:5, 1858:6, 1870:11, 1870:15, 1870:18, 1870:20, 1871:21, 1871:25, 1872:4, 1894:8, 1895:3, 1895:9, 1896:7, 1896:13, 1896:16, 1896:18, 1896:22, 1897:2, 1897:5, 1897:10, 1897:15, 1897:21,</p>	<p>1916:23, 1917:7, 1917:13, 1917:21, 1918:4, 1918:8, 1918:18, 1919:7, 1919:9, 1919:13, 1919:18, 1919:22, 1920:2, 1920:12, 1930:5, 1935:9, 1936:13, 1939:1, 1939:7, 1939:11, 1939:18, 1939:21, 1940:1, 1940:20, 1940:24, 1941:3</p> <p><b>theirs</b> [1] - 1787:10</p> <p><b>themselves</b> [2] - 1837:6, 1844:18</p> <p><b>theoretically</b> [1] - 1929:21</p> <p><b>theory</b> [1] - 1934:3</p> <p><b>therapist</b> [1] - 1828:19</p> <p><b>thereby</b> [1] - 1780:4</p> <p><b>therefore</b> [7] - 1745:21, 1758:19, 1774:22, 1786:11, 1809:3, 1809:10, 1836:21</p> <p><b>thesis</b> [1] - 1803:15</p> <p><b>they've</b> [14] - 1827:2, 1832:1, 1837:12, 1854:23, 1854:24, 1862:3, 1864:3, 1880:23, 1887:7, 1891:2, 1919:21, 1963:21, 1967:9</p> <p><b>thick</b> [1] - 1809:22</p> <p><b>thickness</b> [6] - 1810:8, 1810:10, 1810:11, 1810:19, 1816:18</p> <p><b>thicknesses</b> [1] - 1802:12</p> <p><b>thinking</b> [4] - 1804:8, 1807:18, 1933:1, 1954:13</p> <p><b>thinks</b> [1] - 1764:24</p> <p><b>third</b> [14] - 1780:1, 1790:1, 1791:2, 1793:1, 1796:4, 1796:9, 1893:19, 1912:13, 1912:17, 1931:3, 1931:7, 1932:7, 1934:22, 1971:12</p> <p><b>third-party</b> [5] - 1790:1, 1791:2, 1793:1, 1796:4, 1796:9</p> <p><b>Thomas</b> [1] - 1707:12</p> <p><b>THOMAS</b> [1] - 1715:17</p> <p><b>Thomasina</b> [3] -</p>	<p>1704:6, 1805:22, 1938:22</p> <p><b>Thornton</b> [1] - 1706:19</p> <p><b>thorough</b> [2] - 1783:14, 1843:14</p> <p><b>thoughts</b> [1] - 1847:18</p> <p><b>threat</b> [5] - 1733:14, 1739:12, 1808:5, 1817:1, 1848:9</p> <p><b>threatened</b> [14] - 1758:8, 1758:10, 1758:11, 1758:12, 1758:14, 1758:15, 1758:19, 1758:23, 1759:6, 1762:8, 1763:6, 1765:15, 1810:17, 1847:6</p> <p><b>three</b> [27] - 1722:19, 1743:20, 1744:9, 1777:19, 1794:13, 1808:3, 1831:10, 1831:15, 1831:18, 1833:4, 1833:5, 1875:15, 1899:17, 1899:19, 1907:4, 1912:2, 1912:4, 1912:14, 1913:2, 1922:7, 1936:15, 1965:25, 1966:3, 1966:11, 1972:7, 1972:9</p> <p><b>three-day</b> [1] - 1833:5</p> <p><b>three-page</b> [1] - 1907:4</p> <p><b>three-year</b> [2] - 1875:15, 1912:2</p> <p><b>threshold</b> [1] - 1759:1</p> <p><b>throughout</b> [7] - 1820:24, 1829:4, 1834:9, 1869:12, 1881:7, 1887:24, 1959:12</p> <p><b>thrown</b> [1] - 1899:8</p> <p><b>Thursday</b> [1] - 1972:20</p> <p><b>tie</b> [1] - 1878:16</p> <p><b>tight</b> [1] - 1838:5</p> <p><b>Tight</b> [1] - 1839:25</p> <p><b>tile</b> [17] - 1878:16, 1878:21, 1878:22, 1879:1, 1879:11, 1879:14, 1879:17, 1880:7, 1890:20, 1891:9, 1891:15, 1894:4, 1898:8, 1898:11, 1898:15, 1898:17</p> <p><b>tiled</b> [1] - 1880:2</p> <p><b>tiles</b> [10] - 1877:24,</p>	<p>1878:4, 1878:10, 1878:11, 1878:13, 1878:18, 1890:24, 1891:12, 1894:19</p> <p><b>timely</b> [2] - 1927:24, 1970:8</p> <p><b>timing</b> [2] - 1905:1, 1970:1</p> <p><b>TIMPSON</b> [1] - 1713:17</p> <p><b>Timpson</b> [2] - 1706:21, 1728:15</p> <p><b>Tina</b> [1] - 1703:19</p> <p><b>tires</b> [1] - 1933:21</p> <p><b>title</b> [5] - 1721:11, 1798:1, 1839:21, 1839:23, 1929:14</p> <p><b>Title</b> [1] - 1708:18</p> <p><b>titled</b> [2] - 1769:18, 1838:4</p> <p><b>TO</b> [1] - 1703:5</p> <p><b>today</b> [24] - 1724:13, 1727:10, 1731:10, 1780:11, 1801:3, 1822:1, 1827:10, 1827:15, 1828:5, 1830:5, 1853:23, 1862:17, 1866:7, 1872:18, 1872:22, 1883:16, 1900:15, 1906:1, 1915:19, 1917:9, 1930:20, 1931:8, 1947:1, 1947:17</p> <p><b>TODD</b> [2] - 1710:18, 1714:3</p> <p><b>together</b> [7] - 1835:13, 1878:18, 1888:8, 1901:20, 1916:20, 1938:3, 1959:16</p> <p><b>Tom</b> [1] - 1946:2</p> <p><b>TOM</b> [1] - 1712:14</p> <p><b>tomorrow</b> [5] - 1861:20, 1862:17, 1987:19, 1987:20, 1987:22</p> <p><b>tons</b> [1] - 1976:9</p> <p><b>took</b> [9] - 1782:6, 1945:25, 1946:6, 1955:25, 1956:3, 1963:23, 1965:18, 1977:25, 1989:9</p> <p><b>top</b> [14] - 1769:14, 1793:23, 1794:9, 1794:21, 1794:24, 1894:6, 1894:9, 1894:10, 1896:15, 1897:7, 1956:9, 1959:25, 1960:5, 1962:19</p>	<p><b>TOP</b> [1] - 1715:12</p> <p><b>Top</b> [1] - 1707:12</p> <p><b>Topeka</b> [11] - 1708:3, 1725:15, 1739:13, 1742:19, 1742:21, 1779:10, 1779:12, 1779:25, 1780:3, 1780:6, 1780:20</p> <p><b>topic</b> [2] - 1900:4, 1912:18</p> <p><b>topsoil</b> [15] - 1873:24, 1875:17, 1875:23, 1876:11, 1876:21, 1876:25, 1877:1, 1877:4, 1877:7, 1886:17, 1887:2, 1890:13, 1890:17, 1890:18</p> <p><b>total</b> [5] - 1722:16, 1781:2, 1833:3, 1931:7, 1961:3</p> <p><b>totally</b> [1] - 1810:10</p> <p><b>tough</b> [1] - 1885:7</p> <p><b>tougher</b> [1] - 1885:7</p> <p><b>tourism</b> [1] - 1856:17</p> <p><b>toward</b> [1] - 1966:1</p> <p><b>towards</b> [5] - 1726:8, 1757:14, 1769:14, 1870:22, 1896:2</p> <p><b>towns</b> [1] - 1855:10</p> <p><b>track</b> [1] - 1928:20</p> <p><b>tract</b> [5] - 1768:3, 1874:11, 1888:13, 1928:18, 1930:2</p> <p><b>tracts</b> [10] - 1765:23, 1766:15, 1907:15, 1907:18, 1907:21, 1908:2, 1908:8, 1908:12, 1908:22, 1928:19</p> <p><b>Tracy</b> [1] - 1707:4</p> <p><b>traditional</b> [1] - 1807:18</p> <p><b>traffic</b> [1] - 1876:7</p> <p><b>trails</b> [1] - 1795:10</p> <p><b>trained</b> [1] - 1972:11</p> <p><b>training</b> [1] - 1831:7</p> <p><b>trainings</b> [4] - 1831:3, 1831:12, 1831:13, 1831:15</p> <p><b>trains</b> [2] - 1931:11, 1931:12</p> <p><b>TransCanada</b> [3] - 1887:11, 1888:5, 1888:14</p> <p><b>TRANSCRIPT</b> [1] - 1704:13</p> <p><b>Transcript</b> [1] - 1703:7</p> <p><b>transcription</b> [1] - 1989:12</p>	45
--	--	---	---	--	----

<p><b>Transfer</b> [2] - 1705:6, 1974:20</p> <p><b>transgressions</b> [1] - 1916:7</p> <p><b>translates</b> [1] - 1933:13</p> <p><b>transmission</b> [3] - 1947:24, 1951:10</p> <p><b>transportation</b> [2] - 1930:15, 1931:19</p> <p><b>transported</b> [3] - 1932:5, 1932:6, 1932:7</p> <p><b>transporter</b> [1] - 1931:8</p> <p><b>trap</b> [4] - 1743:17, 1743:18</p> <p><b>travel</b> [3] - 1748:4, 1748:11, 1808:15</p> <p><b>traveled</b> [2] - 1747:24, 1748:13</p> <p><b>traverse</b> [1] - 1935:24</p> <p><b>traversing</b> [1] - 1930:3</p> <p><b>TRC</b> [1] - 1793:25</p> <p><b>treatises</b> [2] - 1781:13, 1781:16</p> <p><b>Treaty</b> [1] - 1761:10</p> <p><b>tree</b> [4] - 1741:19, 1929:20, 1929:23, 1929:25</p> <p><b>trees</b> [10] - 1741:24, 1741:25, 1765:25, 1917:3, 1918:15, 1918:16, 1929:17, 1930:11, 1976:11</p> <p><b>tremendous</b> [1] - 1824:4</p> <p><b>trench</b> [23] - 1749:3, 1750:4, 1750:6, 1750:8, 1750:11, 1750:14, 1750:16, 1750:18, 1750:19, 1787:22, 1788:2, 1792:22, 1817:19, 1878:15, 1878:20, 1878:25, 1879:11, 1879:12, 1879:15, 1880:16, 1891:16, 1891:20, 1897:6</p> <p><b>Trenching</b> [1] - 1705:9</p> <p><b>trespassing</b> [1] - 1846:8</p> <p><b>trial</b> [2] - 1941:16, 1974:8</p> <p><b>tribal</b> [7] - 1777:19, 1777:25, 1845:10, 1845:19, 1853:13, 1853:14, 1854:11</p> <p><b>Tribe</b> [26] - 1704:6, 1704:7, 1734:22,</p>	<p>1735:3, 1737:20, 1752:25, 1753:9, 1759:19, 1769:12, 1805:18, 1805:23, 1819:23, 1820:1, 1848:24, 1872:6, 1881:18, 1911:17, 1911:25, 1921:4, 1921:19, 1926:24, 1938:17, 1938:23, 1957:5, 1969:12, 1975:2</p> <p><b>TRIBE</b> [4] - 1708:2, 1708:15, 1714:19, 1715:2</p> <p><b>Tribe's</b> [2] - 1845:25, 1846:1</p> <p><b>Tribes</b> [3] - 1829:16, 1835:5, 1844:24</p> <p><b>Tributary</b> [1] - 1706:10</p> <p><b>trick</b> [1] - 1857:2</p> <p><b>tried</b> [4] - 1887:18, 1904:19, 1904:20, 1925:1</p> <p><b>tries</b> [1] - 1916:4</p> <p><b>trigger</b> [1] - 1746:18</p> <p><b>triggering</b> [1] - 1763:15</p> <p><b>triggers</b> [2] - 1746:18, 1784:23</p> <p><b>trim</b> [2] - 1929:20, 1929:25</p> <p><b>tritium</b> [1] - 1823:16</p> <p><b>trolling</b> [1] - 1923:18</p> <p><b>trouble</b> [1] - 1867:18</p> <p><b>TROY</b> [1] - 1718:16</p> <p><b>truckload</b> [1] - 1932:3</p> <p><b>trucks</b> [3] - 1931:25, 1932:2</p> <p><b>true</b> [11] - 1727:13, 1731:12, 1733:2, 1759:8, 1766:25, 1772:10, 1801:8, 1856:4, 1881:3, 1923:5, 1989:11</p> <p><b>trust</b> [1] - 1970:14</p> <p><b>truth</b> [3] - 1871:14, 1948:17, 1954:4</p> <p><b>try</b> [7] - 1776:12, 1801:18, 1819:8, 1873:22, 1876:23, 1909:13, 1924:5</p> <p><b>trying</b> [16] - 1764:13, 1773:4, 1776:10, 1810:23, 1818:22, 1822:21, 1826:25, 1832:15, 1866:2, 1937:10, 1955:16, 1960:2, 1962:23, 1963:20, 1978:10,</p>	<p>1982:22</p> <p><b>TSS</b> [1] - 1781:5</p> <p><b>TSSS</b> [1] - 1781:2</p> <p><b>Tuesday</b> [2] - 1860:21, 1961:13</p> <p><b>tuned</b> [1] - 1789:6</p> <p><b>turbidity</b> [1] - 1749:20</p> <p><b>turn</b> [4] - 1759:24, 1769:11, 1870:8, 1981:13</p> <p><b>turnbull</b> [1] - 1832:12</p> <p><b>turning</b> [4] - 1727:20, 1892:12, 1938:5, 1942:24</p> <p><b>turns</b> [1] - 1940:8</p> <p><b>Turtle</b> [1] - 1834:10</p> <p><b>twice</b> [2] - 1775:22, 1776:5</p> <p><b>twist</b> [1] - 1970:5</p> <p><b>two</b> [43] - 1722:23, 1723:2, 1754:6, 1754:15, 1813:8, 1820:19, 1821:5, 1828:24, 1831:16, 1833:4, 1860:12, 1860:18, 1864:7, 1870:12, 1873:14, 1883:6, 1900:13, 1900:17, 1908:13, 1908:15, 1908:19, 1911:19, 1922:7, 1926:17, 1926:19, 1927:13, 1928:17, 1928:19, 1930:5, 1930:10, 1931:14, 1935:18, 1936:14, 1943:16, 1945:18, 1952:20, 1955:15, 1958:22, 1958:25, 1959:5, 1966:13, 1987:18</p> <p><b>two-letter</b> [1] - 1883:6</p> <p><b>type</b> [16] - 1766:16, 1793:1, 1796:2, 1804:15, 1811:20, 1824:7, 1840:24, 1843:24, 1891:19, 1897:13, 1899:4, 1903:15, 1917:4, 1917:17, 1917:18, 1979:3</p> <p><b>types</b> [10] - 1741:15, 1815:10, 1815:14, 1878:10, 1899:18, 1899:19, 1899:22, 1915:10, 1926:16, 1943:4</p> <p><b>typical</b> [6] - 1729:25, 1875:20, 1875:21, 1879:8, 1879:13,</p>	<p>1894:18</p> <p><b>typically</b> [10] - 1741:12, 1749:6, 1790:9, 1790:18, 1791:13, 1811:5, 1821:3, 1862:23, 1875:5, 1905:6</p> <p><b>typicals</b> [5] - 1874:16, 1874:20, 1894:8, 1894:11, 1894:17</p>	<p>1784:3, 1796:11, 1840:24, 1844:1, 1865:19, 1875:8, 1905:24, 1924:15, 1935:19, 1944:7, 1961:14, 1967:5, 1968:19, 1970:21, 1975:16, 1977:5, 1977:7, 1977:9</p> <p><b>undergone</b> [1] - 1802:11</p> <p><b>underground</b> [2] - 1799:4, 1799:14</p> <p><b>underlies</b> [1] - 1815:24</p> <p><b>underneath</b> [2] - 1816:7, 1903:21</p> <p><b>underpinning</b> [1] - 1803:5</p> <p><b>understatement</b> [1] - 1734:9</p> <p><b>understood</b> [4] - 1850:13, 1861:3, 1925:19, 1979:4</p> <p><b>undertaken</b> [1] - 1830:25</p> <p><b>unduly</b> [1] - 1969:1</p> <p><b>unfortunately</b> [3] - 1811:14, 1812:25, 1965:14</p> <p><b>unified</b> [1] - 1853:21</p> <p><b>uniform</b> [4] - 1810:8, 1810:10, 1885:10, 1899:5</p> <p><b>uniformity</b> [1] - 1810:7</p> <p><b>union</b> [2] - 1761:13, 1819:2</p> <p><b>unique</b> [2] - 1873:11, 1873:12</p> <p><b>unit</b> [7] - 1815:24, 1816:4, 1816:6, 1817:15, 1818:10, 1818:14, 1931:10</p> <p><b>United</b> [10] - 1761:9, 1761:18, 1762:3, 1764:8, 1769:15, 1856:22, 1881:14, 1931:23, 1934:12, 1971:22</p> <p><b>units</b> [4] - 1816:16, 1818:15, 1963:22, 1969:3</p> <p><b>University</b> [6] - 1722:7, 1798:11, 1798:14, 1828:18, 1868:20, 1869:1</p> <p><b>unknown</b> [1] - 1743:4</p> <p><b>unless</b> [7] - 1778:18, 1784:5, 1821:15, 1823:9, 1899:8,</p>	46
<b>U</b>					
<p><b>U.S</b> [37] - 1706:10, 1708:4, 1708:5, 1739:24, 1740:9, 1760:1, 1785:14, 1785:21, 1787:3, 1804:6, 1804:25, 1805:7, 1810:24, 1811:8, 1811:24, 1812:1, 1817:22, 1818:21, 1829:1, 1829:5, 1831:6, 1838:4, 1839:25, 1842:18, 1932:19, 1932:25, 1933:2, 1933:14, 1934:14, 1971:11, 1971:12, 1972:19, 1978:22, 1979:19, 1979:21, 1979:23, 1980:13</p> <p><b>ultimate</b> [3] - 1733:13, 1734:6, 1919:13</p> <p><b>ultimately</b> [5] - 1754:20, 1765:6, 1774:10, 1904:14, 1915:10</p> <p><b>unanswered</b> [1] - 1918:25</p> <p><b>Unanticipated</b> [1] - 1705:7</p> <p><b>unavailable</b> [1] - 1731:25</p> <p><b>uncertain</b> [2] - 1820:21, 1933:23</p> <p><b>unclear</b> [1] - 1742:6</p> <p><b>uncomfortable</b> [1] - 1846:3</p> <p><b>under</b> [40] - 1738:23, 1738:25, 1739:19, 1748:3, 1748:7, 1749:6, 1750:25, 1753:22, 1758:7, 1758:20, 1760:22, 1761:7, 1761:9, 1761:17, 1762:1, 1764:8, 1769:4, 1769:17, 1770:8, 1774:21, 1775:20,</p>					

<p>1929:25, 1933:16  <b>unreasonable</b> [1] - 1860:5  <b>unreliable</b> [1] - 1837:16  <b>unresolved</b> [1] - 1947:9  <b>unrestored</b> [1] - 1792:23  <b>untimely</b> [1] - 1941:11  <b>unto</b> [1] - 1853:12  <b>unusual</b> [2] - 1734:15, 1734:19  <b>unusually</b> [19] - 1732:20, 1744:23, 1745:2, 1745:3, 1745:17, 1745:24, 1745:25, 1746:6, 1746:10, 1746:14, 1746:24, 1747:13, 1753:16, 1754:9, 1774:3, 1774:9, 1774:20, 1775:10, 1775:19  <b>up</b> [74] - 1747:17, 1750:18, 1765:8, 1765:11, 1780:22, 1781:4, 1783:3, 1788:18, 1799:6, 1804:3, 1806:6, 1807:25, 1809:24, 1817:18, 1819:6, 1821:10, 1821:12, 1821:14, 1822:11, 1825:3, 1837:17, 1838:20, 1851:17, 1851:18, 1851:19, 1852:17, 1862:23, 1864:6, 1864:14, 1864:20, 1864:23, 1865:7, 1869:3, 1875:21, 1879:11, 1883:25, 1890:14, 1891:16, 1891:24, 1893:15, 1894:4, 1895:11, 1897:8, 1902:24, 1905:13, 1908:25, 1909:22, 1910:1, 1910:4, 1916:6, 1916:8, 1922:18, 1922:19, 1927:25, 1928:13, 1929:7, 1929:16, 1936:18, 1939:5, 1940:6, 1940:10, 1942:2, 1942:11, 1942:21, 1946:3, 1946:25, 1972:6, 1977:24, 1981:4, 1982:3, 1983:20,</p>	<p>1983:24, 1985:13, 1986:17  <b>update</b> [3] - 1825:22, 1972:14, 1974:14  <b>updated</b> [2] - 1773:1, 1783:22  <b>updates</b> [2] - 1772:4, 1973:8  <b>upland</b> [1] - 1769:2  <b>upper</b> [1] - 1922:9  <b>upset</b> [1] - 1846:4  <b>upshot</b> [1] - 1744:24  <b>USA</b> [5] - 1744:20, 1745:21, 1747:1, 1774:21, 1783:6  <b>USAs</b> [6] - 1744:19, 1744:22, 1773:22, 1774:4, 1774:8, 1776:24  <b>users</b> [3] - 1777:9, 1777:13, 1811:16  <b>usual</b> [1] - 1789:1  <b>UTILITIES</b> [2] - 1703:1, 1703:12  <b>Utilities</b> [4] - 1790:14, 1796:1, 1800:8, 1867:8  <b>utility</b> [1] - 1951:12  <b>utilized</b> [1] - 1842:1</p>	<p>1729:4, 1752:1, 1886:3, 1887:19  <b>vehicle</b> [2] - 1876:7, 1933:17  <b>vehicles</b> [2] - 1726:9, 1876:7  <b>verbal</b> [1] - 1950:7  <b>Verified</b> [1] - 1707:17  <b>Vermillion</b> [2] - 1797:25, 1820:20  <b>version</b> [5] - 1805:3, 1812:15, 1812:16, 1812:18, 1818:2  <b>versus</b> [1] - 1975:15  <b>vertical</b> [1] - 1809:1  <b>vertically</b> [2] - 1807:22, 1807:25  <b>via</b> [1] - 1932:5  <b>Vicinity</b> [1] - 1708:18  <b>view</b> [3] - 1862:2, 1889:7, 1970:9  <b>views</b> [2] - 1963:21, 1969:3  <b>VII</b> [1] - 1703:9  <b>violate</b> [1] - 1971:25  <b>violates</b> [1] - 1733:11  <b>violation</b> [1] - 1867:5  <b>violations</b> [1] - 1751:10  <b>violence</b> [2] - 1836:11, 1836:22  <b>Virginia</b> [2] - 1799:17, 1818:22  <b>virtually</b> [1] - 1975:23  <b>virtue</b> [1] - 1941:8  <b>visible</b> [3] - 1813:2, 1813:4, 1816:13  <b>voiced</b> [1] - 1902:18  <b>voices</b> [2] - 1836:16, 1854:16  <b>void</b> [1] - 1765:25  <b>voir</b> [5] - 1830:12, 1832:5, 1839:11, 1870:6, 1871:17  <b>Volt</b> [2] - 1933:16, 1933:18  <b>Volume</b> [6] - 1703:9, 1705:16, 1705:17, 1705:18, 1705:19, 1705:20  <b>volume</b> [1] - 1777:15  <b>vote</b> [2] - 1741:7, 1966:13  <b>vulnerable</b> [1] - 1761:14</p>	<p>1983:24  <b>waiting</b> [2] - 1862:4, 1862:5  <b>waived</b> [1] - 1885:11  <b>walked</b> [3] - 1928:17, 1930:5, 1946:18  <b>walking</b> [1] - 1845:17  <b>wall</b> [1] - 1806:13  <b>Wall</b> [19] - 1802:2, 1802:5, 1802:8, 1802:10, 1802:15, 1802:20, 1802:23, 1802:24, 1803:1, 1806:16, 1806:17, 1806:24, 1808:4, 1808:6, 1809:5, 1822:16, 1822:24, 1824:6, 1824:16  <b>WALSH</b> [1] - 1711:19  <b>Walsh</b> [1] - 1706:14  <b>wants</b> [5] - 1735:1, 1792:3, 1926:16, 1928:1, 1977:3  <b>warrant</b> [1] - 1766:11  <b>warranted</b> [1] - 1764:19  <b>Washington</b> [1] - 1792:11  <b>waste</b> [1] - 1976:15  <b>WASTE</b> [1] - 1711:6  <b>watched</b> [1] - 1822:11  <b>Water</b> [8] - 1704:9, 1706:9, 1708:10, 1708:10, 1749:7, 1814:23, 1820:10, 1823:9  <b>water</b> [109] - 1729:21, 1730:5, 1730:8, 1730:11, 1743:8, 1743:12, 1743:13, 1743:15, 1747:25, 1748:5, 1748:11, 1749:3, 1749:10, 1749:11, 1749:12, 1749:13, 1749:14, 1749:15, 1749:18, 1749:24, 1750:3, 1750:4, 1750:15, 1750:22, 1750:23, 1750:24, 1751:3, 1751:4, 1751:7, 1751:11, 1751:15, 1751:20, 1752:13, 1752:16, 1769:3, 1774:11, 1774:25, 1775:4, 1775:6, 1775:7, 1775:9, 1775:13, 1775:17, 1775:19, 1776:11, 1776:13, 1776:16,</p>	<p>1776:19, 1777:2, 1777:9, 1777:13, 1777:19, 1777:20, 1777:23, 1777:25, 1778:4, 1778:16, 1778:19, 1779:9, 1780:2, 1780:5, 1780:25, 1781:1, 1781:6, 1781:7, 1782:7, 1782:22, 1782:23, 1782:25, 1787:22, 1787:24, 1787:25, 1789:12, 1792:5, 1795:3, 1795:6, 1795:9, 1800:1, 1806:19, 1807:11, 1807:12, 1807:18, 1807:23, 1807:24, 1808:24, 1809:13, 1809:19, 1814:24, 1821:19, 1824:1, 1824:2, 1824:15, 1824:21, 1824:22, 1825:5, 1829:17, 1843:17, 1854:5, 1868:21, 1885:22, 1886:5, 1886:9, 1915:23  <b>waters</b> [2] - 1778:16, 1781:1  <b>ways</b> [5] - 1752:9, 1835:20, 1887:5, 1895:3, 1962:17  <b>wearing</b> [1] - 1828:6  <b>website</b> [3] - 1759:22, 1839:20, 1931:17  <b>weed</b> [8] - 1788:8, 1788:12, 1895:4, 1895:10, 1895:12, 1895:17, 1895:22, 1895:24  <b>weeds</b> [8] - 1726:18, 1726:22, 1727:2, 1727:5, 1788:7, 1895:11, 1895:13, 1895:17  <b>week</b> [14] - 1753:15, 1791:6, 1801:24, 1838:18, 1840:5, 1862:5, 1864:16, 1872:25, 1890:4, 1909:22, 1932:10, 1940:7, 1942:3, 1972:20  <b>weekly</b> [1] - 1791:13  <b>weeks</b> [3] - 1864:7, 1927:14, 1943:17  <b>weigh</b> [1] - 1891:19  <b>weight</b> [5] - 1734:11, 1734:14, 1735:1,</p>
<b>V</b>				
<p><b>valid</b> [1] - 1925:18  <b>Valley</b> [1] - 1820:23  <b>valuable</b> [3] - 1873:6, 1873:8, 1885:18  <b>value</b> [6] - 1821:18, 1885:23, 1885:25, 1889:16, 1944:4, 1981:25  <b>valves</b> [1] - 1742:20  <b>variability</b> [2] - 1810:11, 1896:21  <b>variable</b> [1] - 1777:14  <b>variables</b> [2] - 1777:7, 1777:15  <b>variation</b> [1] - 1810:19  <b>variations</b> [1] - 1920:4  <b>various</b> [14] - 1760:23, 1774:13, 1799:3, 1801:22, 1812:8, 1812:11, 1812:18, 1866:4, 1926:11, 1943:15, 1943:16, 1944:21, 1946:6, 1967:21  <b>vary</b> [1] - 1915:11  <b>varying</b> [1] - 1878:9  <b>vegetation</b> [4] -</p>		<p><b>wait</b> [2] - 1902:1,</p>		
<b>W</b>				

<p>1891:21, 1944:7  <b>weirded</b> [1] - 1846:3  <b>welcome</b> [3] -  1863:11, 1919:7,  1985:17  <b>welfare</b> [2] - 1733:16,  1848:12  <b>wellhead</b> [1] - 1775:5  <b>welling</b> [1] - 1788:2  <b>wells</b> [7] - 1804:12,  1810:12, 1810:15,  1814:17, 1815:5,  1821:5, 1915:16  <b>West</b> [2] - 1799:17,  1851:9  <b>west</b> [3] - 1807:2,  1807:4, 1947:15  <b>WESTECH</b> [1] -  1888:11  <b>Western</b> [2] - 1708:7,  1772:17  <b>western</b> [2] - 1739:15,  1743:2  <b>wetland</b> [4] - 1730:6,  1755:6, 1769:2,  1795:6  <b>wetlands</b> [5] - 1730:8,  1730:11, 1795:3,  1795:9, 1795:10  <b>whatever's</b> [1] -  1932:20  <b>whatsoever</b> [2] -  1846:10, 1863:9  <b>whereby</b> [1] - 1920:7  <b>wherein</b> [1] - 1802:7  <b>white</b> [1] - 1975:14  <b>whole</b> [9] - 1834:13,  1862:1, 1874:4,  1876:13, 1894:21,  1899:7, 1913:1,  1974:20, 1981:4  <b>wholeheartedly</b> [1] -  1968:12  <b>whooping</b> [2] -  1739:14, 1742:17  <b>wide</b> [2] - 1816:18,  1821:2  <b>widely</b> [1] - 1857:22  <b>WIEBERS</b> [1] -  1717:14  <b>Wiebers</b> [1] - 1707:13  <b>Wiest</b> [18] - 1703:16,  1757:24, 1833:13,  1850:8, 1860:18,  1862:22, 1865:15,  1918:23, 1921:22,  1923:22, 1924:11,  1940:4, 1941:4,  1941:23, 1960:17,  1963:9, 1964:17,</p>	<p>1978:4  <b>Wiest</b> [242] - 1721:1,  1727:18, 1731:17,  1733:7, 1734:7,  1734:24, 1735:10,  1735:24, 1736:4,  1737:4, 1737:14,  1737:16, 1737:20,  1738:20, 1740:4,  1740:13, 1741:4,  1741:10, 1747:10,  1753:3, 1757:1,  1757:9, 1757:19,  1758:2, 1759:17,  1764:6, 1765:7,  1767:21, 1773:8,  1776:1, 1776:12,  1777:1, 1778:8,  1779:21, 1780:13,  1781:20, 1781:23,  1782:2, 1786:21,  1787:15, 1789:24,  1793:5, 1793:13,  1793:15, 1796:17,  1797:8, 1801:13,  1805:18, 1819:23,  1820:4, 1820:6,  1821:24, 1822:3,  1825:11, 1825:14,  1825:17, 1825:22,  1826:1, 1826:4,  1826:8, 1826:11,  1826:13, 1826:20,  1826:24, 1827:9,  1827:18, 1829:21,  1830:10, 1830:14,  1832:4, 1833:24,  1834:3, 1837:19,  1837:22, 1837:24,  1839:6, 1839:19,  1839:23, 1840:11,  1841:3, 1841:9,  1841:17, 1848:15,  1848:24, 1849:3,  1849:25, 1850:3,  1850:6, 1851:22,  1852:9, 1852:22,  1854:1, 1855:5,  1856:10, 1857:11,  1858:3, 1858:5,  1858:7, 1858:11,  1858:20, 1858:24,  1859:14, 1859:21,  1859:25, 1860:13,  1860:16, 1860:25,  1861:9, 1861:23,  1862:8, 1862:14,  1862:21, 1863:4,  1863:7, 1863:12,  1863:17, 1865:1,  1865:9, 1865:25,</p>	<p>1866:15, 1866:20,  1867:24, 1868:3,  1870:5, 1870:7,  1871:1, 1871:5,  1871:16, 1871:19,  1872:10, 1872:13,  1879:6, 1881:18,  1881:22, 1883:9,  1884:15, 1884:25,  1886:6, 1887:9,  1890:11, 1892:4,  1892:7, 1894:2,  1898:2, 1900:19,  1903:1, 1903:6,  1906:4, 1906:6,  1906:9, 1906:24,  1909:20, 1910:8,  1911:17, 1913:15,  1914:23, 1916:12,  1916:15, 1916:18,  1919:3, 1920:16,  1920:20, 1920:24,  1921:11, 1921:14,  1921:17, 1921:19,  1921:24, 1922:11,  1922:13, 1923:13,  1924:4, 1924:8,  1927:1, 1927:9,  1927:11, 1928:2,  1935:11, 1936:9,  1936:11, 1938:16,  1938:20, 1940:16,  1941:18, 1941:21,  1942:17, 1943:21,  1944:6, 1948:20,  1948:23, 1949:3,  1949:6, 1949:11,  1949:14, 1950:3,  1950:9, 1950:12,  1952:9, 1953:3,  1953:9, 1954:9,  1954:25, 1955:15,  1957:4, 1958:10,  1958:14, 1959:4,  1959:10, 1960:12,  1960:19, 1963:6,  1963:12, 1963:15,  1964:13, 1965:10,  1965:24, 1966:7,  1966:12, 1966:19,  1968:9, 1969:11,  1969:16, 1970:18,  1971:3, 1973:6,  1973:22, 1973:24,  1975:2, 1978:7,  1981:7, 1981:16,  1981:18, 1983:19,  1983:22, 1985:2,  1985:24, 1986:20,  1986:25, 1987:6,  1987:9, 1987:15,</p>	<p>1988:1  <b>Wiest's</b> [1] - 1736:12  <b>wildlife</b> [3] - 1747:4,  1787:8, 1972:23  <b>Wildlife</b> [53] - 1708:4,  1708:5, 1725:20,  1725:21, 1725:22,  1725:24, 1738:7,  1739:1, 1739:19,  1739:20, 1739:24,  1740:5, 1740:9,  1740:16, 1740:19,  1742:10, 1746:4,  1746:13, 1746:19,  1746:23, 1747:12,  1754:1, 1754:8,  1755:5, 1755:11,  1758:24, 1760:1,  1764:17, 1768:9,  1768:19, 1768:22,  1779:7, 1779:13,  1780:22, 1782:25,  1783:2, 1785:11,  1785:14, 1785:21,  1785:24, 1786:2,  1786:5, 1786:10,  1787:4, 1972:14,  1972:19, 1973:3,  1974:12, 1978:22,  1979:19, 1979:22,  1979:24, 1980:14  <b>willing</b> [3] - 1877:14,  1891:8, 1891:11  <b>WIN</b> [1] - 1711:6  <b>Win</b> [1] - 1706:3  <b>Wind</b> [2] - 1803:19,  1815:15  <b>wind</b> [1] - 1933:20  <b>window</b> [1] - 1875:15  <b>winter</b> [13] - 1728:17,  1728:18, 1728:22,  1729:5, 1729:7,  1729:16, 1741:14,  1883:24, 1892:13,  1892:15, 1892:17,  1892:19, 1892:21  <b>winterization</b> [2] -  1728:24, 1729:6  <b>Wisconsin</b> [4] -  1794:21, 1795:3,  1795:5, 1795:13  <b>wishes</b> [3] - 1884:12,  1897:14, 1897:19  <b>withdraw</b> [1] -  1866:21  <b>withdrawal</b> [4] -  1782:7, 1782:17,  1782:23, 1824:22  <b>withdrawals</b> [2] -  1778:16, 1778:19</p>	<p><b>withdrawing</b> [1] - 48  1866:20  <b>withdrawn</b> [1] -  1750:22  <b>Witness</b> [4] - 1762:4,  1769:23, 1770:13,  1981:20  <b>WITNESS</b> [78] -  1718:15, 1719:2,  1790:5, 1790:11,  1793:2, 1822:9,  1822:14, 1822:18,  1824:18, 1825:7,  1829:22, 1830:18,  1830:22, 1831:2,  1831:6, 1831:11,  1831:16, 1831:22,  1832:10, 1832:18,  1833:6, 1837:17,  1839:22, 1839:24,  1841:14, 1848:21,  1856:15, 1856:19,  1856:23, 1857:2,  1857:5, 1858:6,  1870:11, 1870:15,  1870:18, 1870:20,  1871:21, 1871:25,  1872:4, 1894:8,  1895:3, 1895:9,  1896:7, 1896:13,  1896:16, 1896:18,  1896:22, 1897:2,  1897:5, 1897:10,  1897:15, 1897:21,  1916:23, 1917:7,  1917:13, 1917:21,  1918:4, 1918:8,  1918:18, 1919:7,  1919:9, 1919:13,  1919:18, 1919:22,  1920:2, 1920:12,  1930:5, 1935:9,  1936:13, 1939:1,  1939:7, 1939:11,  1939:18, 1939:21,  1940:1, 1940:20,  1940:24, 1941:3  <b>witness</b> [69] - 1721:2,  1733:22, 1734:3,  1734:4, 1734:16,  1737:19, 1740:8,  1744:3, 1744:15,  1747:2, 1747:7,  1753:1, 1756:21,  1757:10, 1757:13,  1757:21, 1757:25,  1759:10, 1759:14,  1762:25, 1763:7,  1767:18, 1780:9,  1787:7, 1797:12,</p>
--	--	--	---	--



<p>1825:15, 1825:19, 1827:6, 1827:17, 1829:20, 1830:12, 1831:24, 1833:14, 1833:17, 1833:23, 1837:23, 1839:14, 1859:6, 1859:16, 1860:1, 1860:7, 1865:5, 1865:12, 1865:17, 1865:22, 1866:14, 1867:1, 1870:6, 1881:21, 1884:22, 1884:24, 1885:25, 1900:22, 1906:19, 1916:17, 1920:25, 1924:8, 1938:18, 1941:6, 1953:21, 1957:8, 1957:18, 1963:20, 1969:8, 1970:11, 1973:18, 1986:4</p> <p><b>Witness's</b> [2] - 1949:13, 1950:11</p> <p><b>witness's</b> [3] - 1733:25, 1757:16, 1776:8</p> <p><b>witnessed</b> [1] - 1954:16</p> <p><b>witnesses</b> [29] - 1757:3, 1759:16, 1805:13, 1816:21, 1825:17, 1826:18, 1826:19, 1826:21, 1827:1, 1827:11, 1827:12, 1832:1, 1858:25, 1860:6, 1862:3, 1862:6, 1863:24, 1864:3, 1864:18, 1866:4, 1884:7, 1884:8, 1893:22, 1910:13, 1919:2, 1927:19, 1927:20, 1942:18</p> <p><b>WITNESSES</b> [15] - 1709:2, 1710:2, 1711:2, 1711:14, 1712:2, 1713:2, 1714:2, 1714:19, 1715:2, 1715:6, 1716:2, 1717:2, 1718:2, 1719:5, 1720:2</p> <p><b>Wittler</b> [2] - 1703:24, 1989:18</p> <p><b>WITTLER</b> [1] - 1989:5</p> <p><b>wonder</b> [1] - 1797:20</p> <p><b>wonderful</b> [1] - 1799:22</p> <p><b>wondering</b> [2] - 1809:17, 1912:1</p>	<p><b>word</b> [8] - 1818:11, 1882:7, 1882:12, 1882:14, 1883:6, 1889:18, 1933:25, 1987:18</p> <p><b>worded</b> [1] - 1982:5</p> <p><b>words</b> [7] - 1749:14, 1755:4, 1786:22, 1804:16, 1818:15, 1823:25, 1943:12</p> <p><b>works</b> [3] - 1790:7, 1942:12, 1987:23</p> <p><b>workshops</b> [1] - 1831:2</p> <p><b>world</b> [7] - 1760:23, 1799:6, 1813:25, 1818:25, 1846:23, 1884:3, 1971:13</p> <p><b>world's</b> [3] - 1803:18, 1817:10, 1835:14</p> <p><b>worst</b> [1] - 1748:3</p> <p><b>worst-case</b> [1] - 1748:3</p> <p><b>worth</b> [1] - 1850:20</p> <p><b>Worthing</b> [1] - 1807:1</p> <p><b>wrap</b> [1] - 1864:20</p> <p><b>wrapping</b> [1] - 1864:23</p> <p><b>write</b> [1] - 1869:24</p> <p><b>writing</b> [2] - 1833:15, 1927:17</p> <p><b>written</b> [13] - 1760:6, 1760:11, 1812:6, 1838:3, 1872:21, 1914:18, 1914:19, 1924:17, 1925:7, 1950:5, 1978:10, 1981:24</p> <p><b>wrote</b> [2] - 1870:2, 1944:16</p> <p><b>Wyoming</b> [1] - 1930:21</p>	<p>1911:24, 1921:4, 1921:19, 1926:24, 1938:17, 1938:22, 1957:5, 1960:22, 1969:12, 1975:2</p> <p><b>YANKTON</b> [3] - 1708:15, 1714:19, 1715:2</p> <p><b>year</b> [14] - 1722:24, 1723:8, 1824:9, 1875:15, 1890:19, 1898:7, 1898:16, 1903:11, 1912:2, 1912:13, 1912:16, 1912:17, 1916:7, 1945:20</p> <p><b>Year</b> [2] - 1708:5, 1708:7</p> <p><b>years</b> [25] - 1722:17, 1722:19, 1722:22, 1722:23, 1723:2, 1743:20, 1744:9, 1802:6, 1807:17, 1813:12, 1813:13, 1814:12, 1816:11, 1823:25, 1825:6, 1869:17, 1871:8, 1879:13, 1880:9, 1888:3, 1912:4, 1912:5, 1912:14, 1913:2, 1933:7</p> <p><b>yellow</b> [3] - 1905:13, 1905:21, 1907:4</p> <p><b>yesterday</b> [14] - 1728:16, 1728:20, 1732:18, 1736:23, 1744:25, 1745:6, 1745:14, 1783:13, 1803:10, 1804:1, 1804:16, 1810:13, 1815:14, 1816:21</p> <p><b>yesterday's</b> [1] - 1803:21</p> <p><b>yields</b> [5] - 1847:5, 1875:11, 1875:13, 1881:15, 1912:21</p> <p><b>YOUNG</b> [1] - 1711:6</p> <p><b>Young</b> [6] - 1706:3, 1706:20, 1724:22, 1744:17, 1766:10, 1785:10</p> <p><b>young's</b> [5] - 1738:3, 1742:11, 1757:15, 1766:9, 1770:20</p> <p><b>Young's</b> [2] - 1779:19, 1785:19</p> <p><b>yourself</b> [2] - 1769:20, 1771:7</p> <p><b>youth</b> [1] - 1930:12</p> <p><b>YST</b> [2] - 1921:10,</p>	<p>1921:12</p> <p style="text-align: center;"><b>Z</b></p> <p><b>zone</b> [2] - 1742:17, 1807:14</p> <p><b>Zone</b> [2] - 1705:6, 1775:5</p> <p><b>zones</b> [1] - 1979:22</p> <p><b>Zulkosky</b> [1] - 1708:14</p>
	<b>X</b>		
	<p><b>XL</b> [4] - 1723:6, 1723:14, 1828:24, 1888:9</p>		
	<b>Y</b>		
	<p><b>Yankton</b> [25] - 1704:6, 1708:18, 1734:22, 1735:3, 1737:20, 1752:25, 1805:18, 1805:23, 1816:2, 1845:23, 1848:24, 1849:2, 1872:6, 1881:18, 1911:17,</p>		