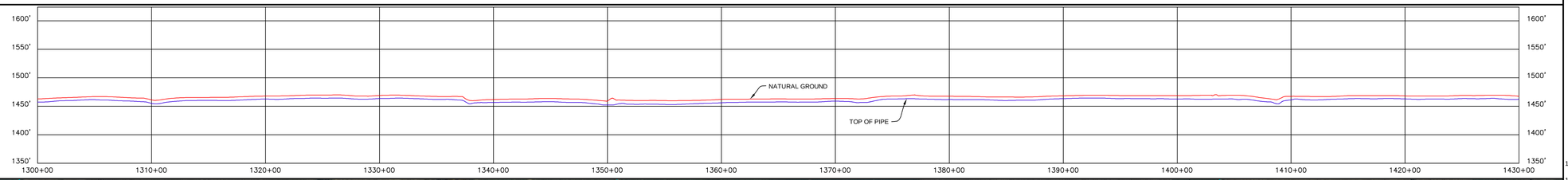
RIGHT-OF-WAY	
HORIZONTAL REPRESENTATION (2D)	
TRACT NUMBER	1300+00 ML-SD-CK-0647.0000 1337+23 ML-SD-CK-0648.0000 RD-SD-CK-0648.0000 COUNTY ROAD 27 (169TH STREET) 1350+38 ML-SD-CK-0649.0000 1376+90 ML-SD-CK-0650.0000 RD-SD-CK-0650.0000 170TH STREET 1403+32 ML-SD-CK-0651.0000 1429+77 ML-SD-CK-0652.0000 1430+00
OWNERSHIP/AGENCY	
LENGTH	
APPLICABLE DWG. NO.	
LAND USE	

PIPELINE PROFILE

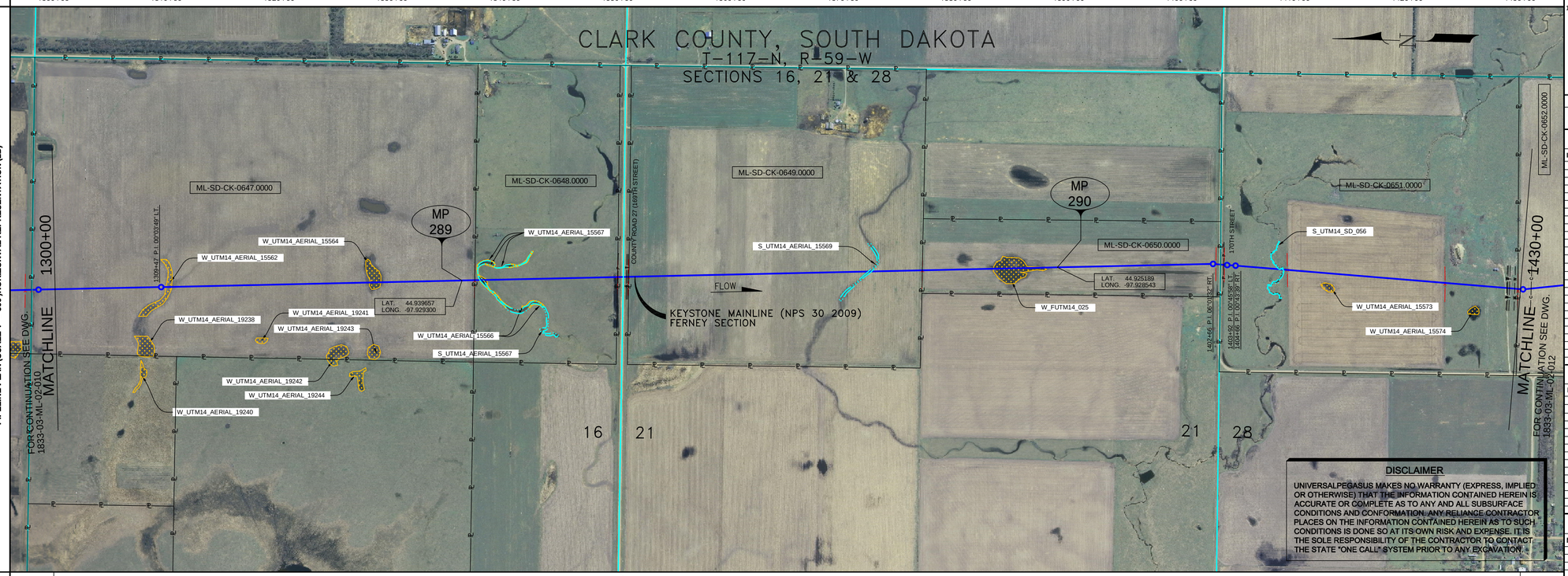
HORIZ: 1"=500' VER: 1"=100'
HORIZONTAL REPRESENTATION (2D)



LEGEND

- KEYSTONE PIPELINE
- STATE BOUNDARY
- COUNTY/TOWNSHIP
- SECTIONS
- NATIONAL OR STATE RESERVATION BOUNDARY
- PROPERTY LINE
- FENCE
- EXCLUSIONARY FENCE
- POWER LINE
- TELEPHONE LINE
- BURIED CABLE
- WATER LINE
- SANITARY SEWER LINE
- STORM SEWER / DRAIN
- FOREIGN PIPELINE
- RAILROAD
- HIGHWAY / ROAD
- STREAM / DITCH
- WETLAND
- INTERSTATE ROUTE
- U.S. ROUTE
- STATE ROUTE
- POINT OF INTERSECTION (PI)
- PIPELINE MILEPOST
- DIRECTION OF FLOW
- HOUSE
- BUILDING
- WATER WELL
- MAINLINE VALVE
- ML-XX-XX-0000.0000 TRACT NUMBER

PIPELINE PLAN (SCALE 1" = 500')HORIZONTAL REPRESENTATION (2D)



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PIPELINE SCHEMATIC

- HEAVYWALL PIPE
- WELD FITTING
- TRANSITION PIECE
- CASING PIPE
- CONCRETE COATING
- SET-ON WEIGHTS
- PIPELINE WARNING SIGN
- PIPELINE MARKER
- MATERIAL ITEM
- GROUNDING MAT
- ZINC RIBBON
- AERIAL MARKER
- CATHODIC TEST STATION
- MAINLINE VALVE
- CHECK VALVE
- O.C. OPEN CUT
- BR. BORE
- D DRINKING WATER USA
- E ECOLOGICAL USA
- H HIGHLY POPULATED AREA
- K OPERATOR (KEYSTONE) DEFINED
- O OTHER POPULATED AREA
- S SOURCE WATER PROTECTION AREA
- W WELLHEAD PROTECTION AREA

STATION/DESCRIPTION

PIPELINE DATA

HORIZONTAL STATIONS (2D)	MATCHLINE 1300+00 · 1300+41 P.I. 00°03'49" LT. · 1337+23 FENCE (BARBED WIRE) 1337+51 FENCE (BARBED WIRE) 1337+88 CL CREEK 1338+14 WATER EDGE · 1349+89 FENCE (BARBED WIRE) 1349+90 POWERLINE 1350+36 CL COUNTY ROAD 27 (169TH STREET) 1350+38 POWERLINE 1350+46 TELEPHONE LINE 1350+47 FENCE (HOG WIRE) 1350+84 FENCE (HOG WIRE) · 1371+71 WATER EDGE 1372+04 WATER EDGE 1372+14 WATER EDGE · 1376+90 FENCE (HOG WIRE) · 1402+43 TELEPHONE LINE 1402+46 P.I. 06°01'32" RT. 1402+48 FENCE (BARBED WIRE) · 1403+22 EDGE OF ROAD 1403+41 EDGE OF ROAD 1403+46 POWERLINE 1403+67 · 1403+96 P.I. 00°45'38" LT. 1404+02 P.I. 00°45'38" RT. · 1409+31 FENCE (BARBED WIRE) · 1423+58 FENCE (BARBED WIRE) · 1428+33 WATER SUPPLY LINE 1428+48 TELEPHONE LINE 1428+58 WATER SUPPLY LINE · 1429+78 FENCE (BARBED WIRE) MATCHLINE 1430+00
SLOPE STATIONS (3D)	MATCHLINE 1300+91 · 1310+33 P.I. 00°03'49" LT. · 1312+48 6.0 CVR. · 1337+04 M.P. 289 · 1338+16 FENCE (BARBED WIRE) 1338+45 EDGE OF ROAD 1338+93 CL CREEK 1339+12 WATER EDGE · 1350+84 FENCE (BARBED WIRE). POWERLINE, HT. = 20' 1351+21 FENCE (BARBED WIRE) 1351+25 11.4' CVR. 1351+42 CL COUNTY ROAD 27 (169TH STREET) 1351+46 TELEPHONE LINE 1351+47 6.7' CLR. (ABOVE) 3.7' CLR. (BURIED) 1351+72 5.0' CVR. 1351+79 FENCE (HOG WIRE) · 1371+95 5.4' CVR. 1372+66 WATER EDGE 1373+04 WATER EDGE 1373+09 WATER EDGE · 1377+86 FENCE (HOG WIRE). 1377+87 6.7' CVR. · 1388+84 M.P. 290 1396+96 5.4' CVR. · 1403+40 TELEPHONE LINE 5.0' CLR. (ABOVE) 1403+46 P.I. 06°01'32" RT. 1403+52 FENCE (BARBED WIRE). 1403+96 P.I. 00°45'38" LT. 1404+19 EDGE OF ROAD 1404+38 EDGE OF ROAD 1404+46 POWERLINE, HT. = 20' 1404+48 FENCE (BARBED WIRE) 1404+58 P.I. 00°45'38" RT. 1409+29 FENCE (BARBED WIRE) 1410+92 6.4' CVR. · 1418+43 5.5' CVR. · 1424+57 FENCE (BARBED WIRE) 1429+30 WATER SUPPLY LINE 5.5' CVR. 1429+40 TELEPHONE LINE 5.5' CVR. 1429+57 TELEPHONE LINE 6.5' CVR. (ABOVE) 9.0' CLR. (ABOVE) 1430+03 WATER SUPPLY LINE 5.5' CVR. 1430+77 FENCE (BARBED WIRE) MATCHLINE 1430+99
PIPE SLOPE REPRESENTATION (2D)	1300+91 · ② 4,980' FBE · 1338+16 · 1350+71 ③ 120' FBE & ARO BR. 1351+91 · 1377+87 ② 5,199' FBE · 1403+90 ③ 80' FBE & ARO BR. 1404+70 · 1410+30 2% · 1424+56 · 1429+25 ⑤ 75' FBE 1430+00 ③ 99' FBE 1430+77
CPS (3D)	

TEST SECTIONS (3D): TEST SECTION 3B-1 ILTO-025-2010

ENVIRONMENTAL MITIGATION/RECLAMATION STATIONS (2D)

- TOPSOIL SALVAGE METHOD
- STREAMS
- WETLANDS
- TIMING CONSTRAINTS
- **STATIONS**
- MONITORING
- RECLAMATION
- SPECIAL CONSIDERATIONS

GENERAL NOTES

1) ALL CHAINAGES ARE IN FEET UNLESS OTHERWISE SPECIFIED.

2) DATUM ELEVATION AND PROJECTION ARE BASED ON MEAN SEA LEVEL AND NAD 83.

3) FIELD PIPE LOCATING REQUIRED TO DETERMINE PLACEMENT OF PIPELINE WITHIN PERMANENT EASEMENT.

4) UNLESS OTHERWISE NOTED, 48 INCHES MINIMUM COVER EXCEPT 36 INCHES IN AREAS OF CONSOLIDATED ROCK.

5) NO ACTUAL AS-BUILT GROUND SHOTS WERE TAKEN AT THIS LOCATION. THE PROFILE REPRESENTS A PROJECTION FROM SHOTS TAKEN AT 150' TO 250' INTERVALS.

6) THE TYPE OF COATING APPLIED TO THE FIELD WELDS DURING THE ORIGINAL CONSTRUCTION WAS TWO COMPONENT LIQUID EPOXY. THE COATING PRODUCTS USED WERE DENSO 7200 OR SPC SP-2888.

7) THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIPER PIG RUN, WAS OCTOBER 08, 2009 FOR M.P. 259.21 TO M.P. 301.75 AND OCTOBER 10, 2009 FOR M.P. 301.75 TO M.P. 343.98.

8) ORIGINAL IN-SERVICE DATE OF THE KEYSTONE PIPELINE (PHASE 1): JUNE 30, 2010.

9) CPS CALCULATION DATE: MAY 2010.

10) ORION STATION SERIES NUMBER: 1182700.

11) TO DETERMINE THE MILE POST AT A GIVEN LOCATION, ADD THE 3D STATION NUMBER FROM THIS SEGMENT TO STATION NUMBER 13922+16 AND DIVIDE BY 5280.

OPERATING AND TEST PRESSURE

1. THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
2. THE MINIMUM TEST PRESSURE WAS 1801 PSIG.

BILL OF MATERIALS (3D)

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T., API -5LX-70 W/FBE COATING	12,733'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	200'
6	30" O.D. X 0.429" W.T., API -5LX-70 W/FBE COATING	75'
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	9 EA
	CATHODIC TEST STATION	2 EA
	AERIAL MARKER	1 EA

REFERENCE DRAWINGS

REF. NO.	DRAWING NO.	REV. NO.	DRAWING TITLE

REVISIONS

NO.	DATE	REV BY	CHCK BY	APPRD BY	ENV APPRD	DESCRIPTION
1	5/12/08	UEI	RDG	LAG	SEC	ISSUED FOR CONSTRUCTION
2	10/12/08	UEI				ISSUED FOR AS-BUILT
						1833-03-ML-02-011
						REPLACES COVERAGE OF
						IFC DRAWINGS
						1833-03-ML-02-017,
						1833-03-ML-02-018,
						1833-03-ML-02-019

ENGINEERING RECORDS

	INITIAL	DATE		INITIAL	DATE
DRAWN BY	UEI	10/02/08	ENV. APPRD.		
CHECKED BY			APPRD. BY		
			COMPANY APPROVED		

PROFESSIONAL ENGINEER

NAME	STATE	LIC#	REV#	DATE
LOYS ALVIN GRAY, III	SD	CE9004		

SCALE: 0 125 250 500 Feet

TransCanada — In business to deliver

UNIVERSAL PEGASUS INTERNATIONAL

KEYSTONE MAINLINE (NPS 30 2009) FERNEY SECTION

F1A#	SPREAD	DISCIPLINE
1833	SPREAD 3B	DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 288.32 TO M.P. 290.78

SHEET 11 OF 20 SHEETS

STA. 1300+91 TO STA. 1430+99 (3D)

DRAWING NO. 1833-03-ML-02-011 REV. 2