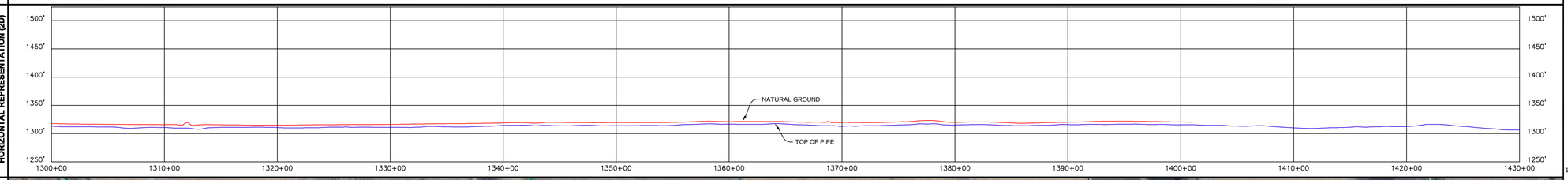
RIGHT-OF-WAY HORIZONTAL REPRESENTATION (2D)
TRACT NUMBER
OWNERSHIP/AGENCY
LENGTH
APPLICABLE DWG. NO.

LAND USE

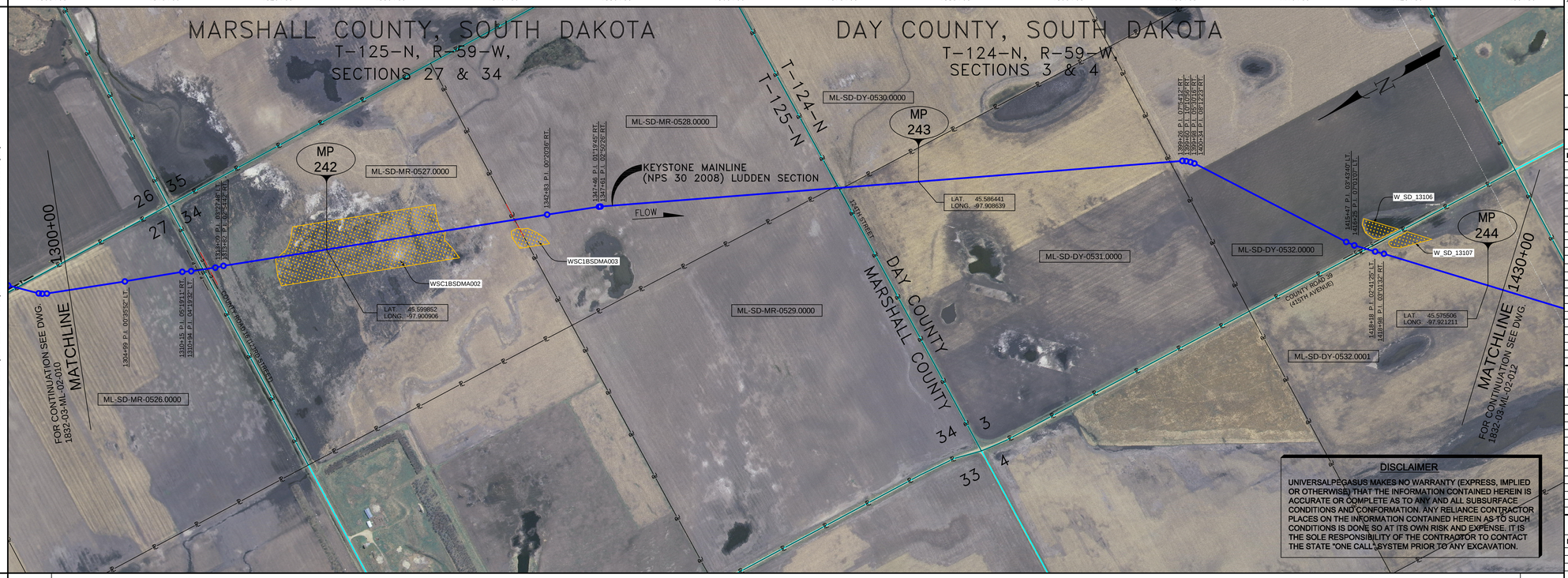
1300+00 | ML-SD-MR-0526.0000 | RD-SD-MR-0526.0000 / COUNTY ROAD 39 (123RD STREET) | 1311+99 | ML-SD-MR-0527.0000 | 1339+90 | ML-SD-MR-0528.0000 | 1368+05 | ML-SD-MR-0529.0000 | RD-SD-MR-0529.0000 / 124TH STREET | 1368+77 | ML-SD-DY-0530.0000 | 1369+08 | ML-SD-DY-0531.0000 | 1397+86 | ML-SD-DY-0532.0000 | RD-SD-DY-0532.0000 / COUNTY ROAD 39 (415TH AVENUE) | 1417+43 | ML-SD-DY-0532.0001 | 1430+00

PIPELINE PROFILE

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



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



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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
- TRACT NUMBER (ML-XX-XX-0000.0000)

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

HORIZONTAL STATIONS (2D)

MATCHLINE 1300+00

1304+99 P.I. 00°35'52" LT.
1310+15 P.I. 05°19'11" RT.
1310+94 P.I. 04°19'22" LT.
1311+51 OVERHEAD POWERLINE, HT.=16.9' EDGE OF ROAD (123RD STREET)
1311+98 EDGE OF ROAD
1312+11 CL COUNTY ROAD 39 (123RD STREET)
1312+34 FIBER OPTIC CABLE
1312+53 FENCE (BARBED WIRE)
1312+69 P.I. 09°27'46" LT.
1312+82 P.I. 02°54'42" RT.
1319+76 BEGIN SLOUGH
1326+32 CL SLOUGH
1334+06 END SLOUGH
1339+90 FENCE (BARBED WIRE)
1342+63 P.I. 00°29'36" RT.
1347+48 P.I. 01°19'45" RT.
1347+61 P.I. 02°50'26" RT.
1368+71 EDGE OF ROAD
1369+08 CL COUNTY ROAD 39
1369+48 EDGE OF ROAD
1389+26 P.I. 07°54'12" RT.
1400+00 P.I. 05°30'16" RT.
1399+98 P.I. 05°30'16" RT.
1400+34 P.I. 08°12'23" RT.
1415+47 P.I. 09°43'49" LT.
1416+25 P.I. 07°01'07" LT.
1417+08 FIBER OPTIC CABLE
1417+43 CL COUNTY ROAD 39 (415TH AVENUE)
1417+59 EDGE OF ROAD
1418+09 P.I. 07°01'07" LT.
MATCHLINE 1430+00

SLOPE STATIONS (3D)

MATCHLINE 1300+78

1305+77 P.I. 00°35'52" LT.
1310+99 P.I. 05°19'11" RT.
1311+79 P.I. 04°19'22" LT.
1312+29 OVERHEAD POWERLINE, HT.=16.9' EDGE OF ROAD (123RD STREET)
1312+79 CL COUNTY ROAD 39 (123RD STREET)
1312+98 FIBER OPTIC CABLE
1313+12 EDGE OF ROAD
1313+32 3 CVR. (ABOVE)
1313+46 P.I. 09°27'46" LT.
1314+66 P.I. 02°54'42" RT.
8.1 CVR.
5.6' CVR.
1319+54 BEGIN SLOUGH
1323+67 M.P. 242
1327+11 CL SLOUGH
1334+86 END SLOUGH
1340+69 FENCE (BARBED WIRE)
1342+67 4.5' CVR.
1343+04 4.4' CVR.
1342+63 P.I. 00°29'36" RT.
1344+82 5.8' CVR.
1348+26 P.I. 01°19'45" RT.
1348+41 P.I. 02°50'26" RT.
1359+16 4.6' CVR.
1368+30 5.6' CVR.
1369+51 EDGE OF ROAD
1369+67 CL COUNTY ROAD 39
1369+84 EDGE OF ROAD
1371+18 6.9' CVR.
1376+67 M.P. 243
1379+07 6.6' CVR.
1386+76 4.1' CVR.
1398+96 5.7' CVR.
1400+00 P.I. 07°54'12" RT.
1400+18 P.I. 05°30'16" RT.
1401+18 P.I. 08°12'23" RT.
5.6' CVR.
1406+40 4.5' CVR.
1415+61 5.0' CVR.
1416+30 P.I. 09°43'49" LT.
1417+08 P.I. 07°01'07" LT.
1417+91 FIBER OPTIC CABLE
5.1' CVR. (ABOVE)
1418+09 CL COUNTY ROAD 39 (415TH AVENUE)
1418+42 EDGE OF ROAD
1418+44 8.9' CVR.
1418+59 P.I. 09°43'49" LT.
1419+08 P.I. 07°01'07" LT.
5.1' CVR.
1428+99 6.3' CVR.
1429+47 M.P. 244
MATCHLINE 1430+84

PIPE SLOPE REPRESENTATION (3D)

1300+78 | ② 1,152' FBE | 1312+30 | ③ 98' FBE & ARO BR. | 1313+28 | ② 5,572' FBE | 1369+00 | ③ 118' FBE & ARO O.C. | 1370+18 | ② 4,749' FBE | 1417+67 | ③ 114' FBE & ARO BR. | 1418+81 | ② 1,203' FBE | 1430+84

CPS (3D)

TEST SECTIONS (3D): TEST SECTION 2A-4 ILTO-024-2010

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 SEPTEMBER 01, 2009 FOR M.P. 195.68 TO M.P. 218.50, SEPTEMBER 02, 2009 FOR M.P. 218.50 TO M.P. 259.00 AND OCTOBER 08, 2009 FOR M.P. 259.21 TO M.P. 301.75.
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 11453+73 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	12,676'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	330'
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	6 EA
	CATHODIC TEST STATION	3 EA
	AERIAL MARKER	0 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	6/11/08	UEI	RDG	LAG	SEC	ADDED CROSSING DETAILS
3	10/17/08	UEI				ISSUED FOR AS-BUILT
						1832-03-ML-02-011
						REPLACES COVERAGE OF
						IFC DRAWINGS
						1832-03-ML-02-017,
						1832-03-ML-02-018

ENGINEERING RECORDS

	INITIAL	DATE		INITIAL	DATE
DRAWN BY	UEI	10/02/01	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 2008) LUDDEN SECTION

F/A#	SPREAD	DISCIPLINE
1832	2A	03

AS-BUILT ALIGNMENT

M.P. 241.56 TO M.P. 244.03

SHEET 11 OF 19 SHEETS

STA. 1300+78 TO STA. 1430+84 (3D)

DRAWING NO. 1832-03-ML-02-011 REV. 3