RIGHT-OF-WAY
HORIZONTAL REPRESENTATION (2D)
TRACT NUMBER
OWNERSHIP/AGENCY

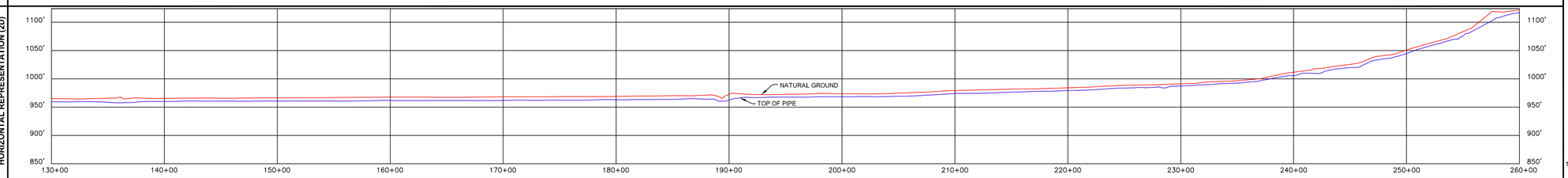
LENGTH
APPLICABLE DWG. NO.

130+00	ML-ND-CV-0005.0000	RD-ND-CV-0006.0000 COUNTY ROAD 107 (107TH STREET NE)	ML-ND-CV-0006.0000	163+65	ML-ND-CV-0007.0000	RD-ND-CV-0007.0000 166TH STREET	ML-ND-CV-0007.0001	190+03	ML-ND-CV-0008.0000	215+14	ML-ND-CV-0009.0000	RD-ND-CV-0009.0000 COUNTY ROAD 105 (105TH STREET)	ML-ND-CV-0010.0000	260+00
		136+10				188+83						241+76		

LAND USE

PIPELINE PROFILE

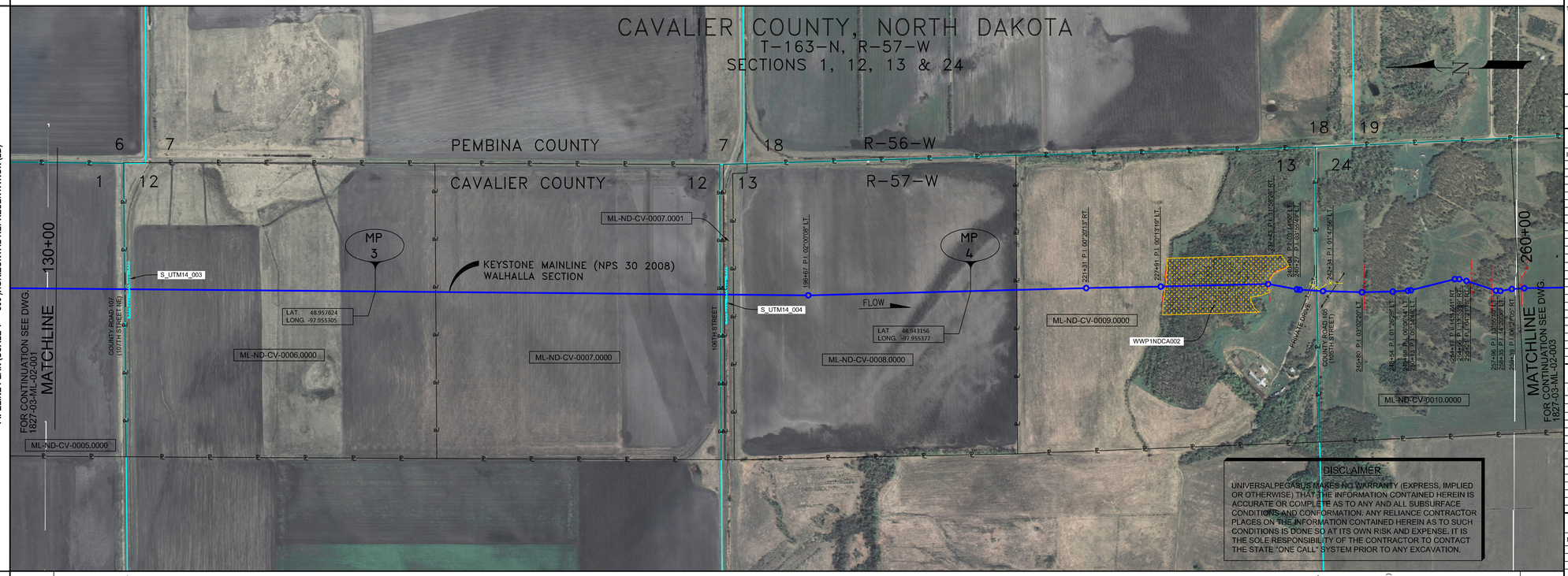
HORIZ. 1"=500' VER. 1"=100'
HORIZONTAL REPRESENTATION (2D)



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)



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

HORIZONTAL STATIONS (2D)

MATCHLINE 130+00
135+78 ROAD BAR DITCH
136+04 EDGE OF ROAD
136+10 EDGE OF ROAD
COUNTY ROAD 107 (107TH STREET NE)
136+14 EDGE OF ROAD
136+15 ROAD BAR DITCH
CVR. LINK
188+77 EDGE OF ROAD
188+92 EDGE OF ROAD
166TH STREET
188+92 EDGE OF ROAD
189+40 ROAD BAR DITCH
190+67 P.I. 02°00'09" LT.
221+31 P.I. 00°20'13" RT.
227+91 P.I. 00°13'19" LT.
228+24 FENCE (ELECTRIC)
228+65 BEGIN SLOUGH
233+06 CL SLOUGH
237+10 END SLOUGH
237+43 P.I. 11°38'26" RT.
FENCE (ELECTRIC)
240+04 P.I. 03°14'50" LT.
240+27 P.I. 03°35'08" LT.
241+17 FENCE (ELECTRIC)
241+23 EDGE OF DRIVE
241+44 EDGE OF ROAD
241+50 EDGE OF ROAD
241+76 CL COUNTY ROAD 105 (105TH STREET)
241+83 EDGE OF ROAD
242+34 P.I. 01°47'56" LT.
243+11 OVERHEAD POWERLINE
245+80 P.I. 03°02'20" LT.
246+01 FENCE (BARBED WIRE)
246+44 P.I. 06°06'14" LT.
249+68 P.I. 06°06'14" LT.
254+13 P.I. 05°14'49" LT.
254+17 P.I. 14°17'41" RT.
254+46 P.I. 13°53'39" RT.
255+21 P.I. 04°21'18" RT.
255+71 FENCE (ELECTRIC)
257+47 FENCE (ELECTRIC)
258+35 P.I. 14°20'39" LT.
259+39 P.I. 06°27'05" RT.
MATCHLINE 260+00

SLOPE STATIONS (3D)

MATCHLINE 130+07
132+67 4.8' CVR.
135+89 8.4' CVR.
ROAD BAR DITCH
135+97 ROAD BAR DITCH
COUNTY ROAD 107 (107TH STREET NE)
136+14 EDGE OF ROAD
136+20 EDGE OF ROAD
136+25 ROAD BAR DITCH
CVR. LINK
142+46 5.2' CVR.
155+12 6.5' CVR.
158+40 M.P. 3
178+67 5.4' CVR.
188+89 EDGE OF ROAD
188+97 TOP OF CURB
189+04 EDGE OF ROAD
189+52 ROAD BAR DITCH
CVR. LINK
190+39 10.8' CVR.
193+63 4.4' CVR.
196+80 P.I. 02°00'09" LT.
198+33 6.0' CVR.
203+08 4.7' CVR.
211+20 M.P. 4
212+62 6.0' CVR.
221+45 P.I. 00°20'13" RT.
228+05 P.I. 00°13'19" LT.
228+38 FENCE (ELECTRIC)
228+79 BEGIN SLOUGH
229+61 4.0' CVR.
233+20 CL SLOUGH
237+25 END SLOUGH
237+58 P.I. 11°38'26" RT.
FENCE (ELECTRIC)
240+19 P.I. 03°14'50" LT.
240+42 P.I. 03°35'08" LT.
241+29 FENCE (ELECTRIC)
15' CVR (ABOVE)
241+32 FENCE (ELECTRIC)
241+38 EDGE OF DRIVE
241+59 EDGE OF ROAD
241+65 EDGE OF ROAD
241+90 CL COUNTY ROAD 105 (105TH STREET)
241+99 EDGE OF ROAD
242+49 P.I. 01°47'56" LT.
243+27 OVERHEAD POWERLINE HT = 30'
245+96 P.I. 03°02'20" LT.
246+17 FENCE (BARBED WIRE)
246+60 P.I. 06°06'14" LT.
250+05 P.I. 06°06'14" LT.
254+30 P.I. 05°14'49" LT.
253+75 4.1' CVR.
254+24 P.I. 14°17'41" RT.
254+46 P.I. 13°53'39" RT.
255+40 P.I. 04°21'18" RT.
255+90 FENCE (ELECTRIC)
257+78 FENCE (ELECTRIC)
258+26 P.I. 14°20'39" LT.
258+56 P.I. 14°20'39" LT.
259+60 P.I. 06°27'05" RT.
MATCHLINE 260+20

PIPE SLOPE REPRESENTATION (2D)

130+07
① 535' FBE
135+42
③ 159' FBE & ARO O.C.
137+01
① 5,158' FBE
188+59
③ 80' FBE & ARO O.C.
189+39
① 5,192' FBE
④229+76
④233+32
241+31
③ 99' FBE & ARO BR.
242+30
① 1,790' FBE
255+76
BR.
257+92
260+20

CPS (3D)

TEST SECTIONS (3D)

TEST SECTION 1A-1
ILTO-019-2010

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 AUGUST 11, 2009 FOR M.P. 0.30 TO M.P. 31.03 AND AUGUST 12, 2009 FOR M.P. 31.03 TO M.P. 66.93.

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 0+00 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
1	30" O.D. X 0.438" W.T., API -5LX-70 W/FBE COATING	12,675'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	338'
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	5 EA
	CATHODIC TEST STATION	1 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	10/11/17	UEI				ISSUED FOR AS-BUILT
						1827-03-ML-02-002
						REPLACES COVERAGE OF IFC DRAWINGS
						1827-03-ML-02-002,
						1827-03-ML-02-003,
						1827-03-ML-02-004

ENGINEERING RECORDS

	INITIAL	DATE		INITIAL	DATE
DRAWN BY	UEI	09/12/21	ENV. APPRD.		
CHECKED BY			APPRD. BY		
			COMPANY APPROVED		

PROFESSIONAL ENGINEER

NAME	STATE	LIC#	REV#	DATE
LOYS A. GRAY, III	ND	PE5714		

SCALE: 0 125 250 500 Feet

TransCanada
In business to deliver

UNIVERSAL ENERGY SERVICES, INC.

KEYSTONE MAINLINE (NPS 30 2008) WALHALLA SECTION

P/A# 1827 | SPREAD 1A | DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 2.46 TO M.P. 4.93

SHEET 2 OF 14 SHEETS

STA. 130+07 TO STA. 260+20 (3D)

DRAWING NO. 1827-03-ML-02-002 REV. 2

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