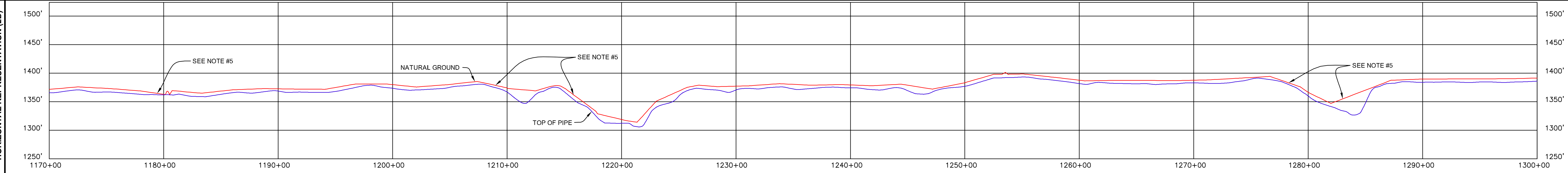
RIGHT-OF-WAY HORIZONTAL REPRESENTATION (2D)

TRACT NUMBER
OWNERSHIP/AGENCY
LENGTH
APPLICABLE DWG. NO.
LAND USE

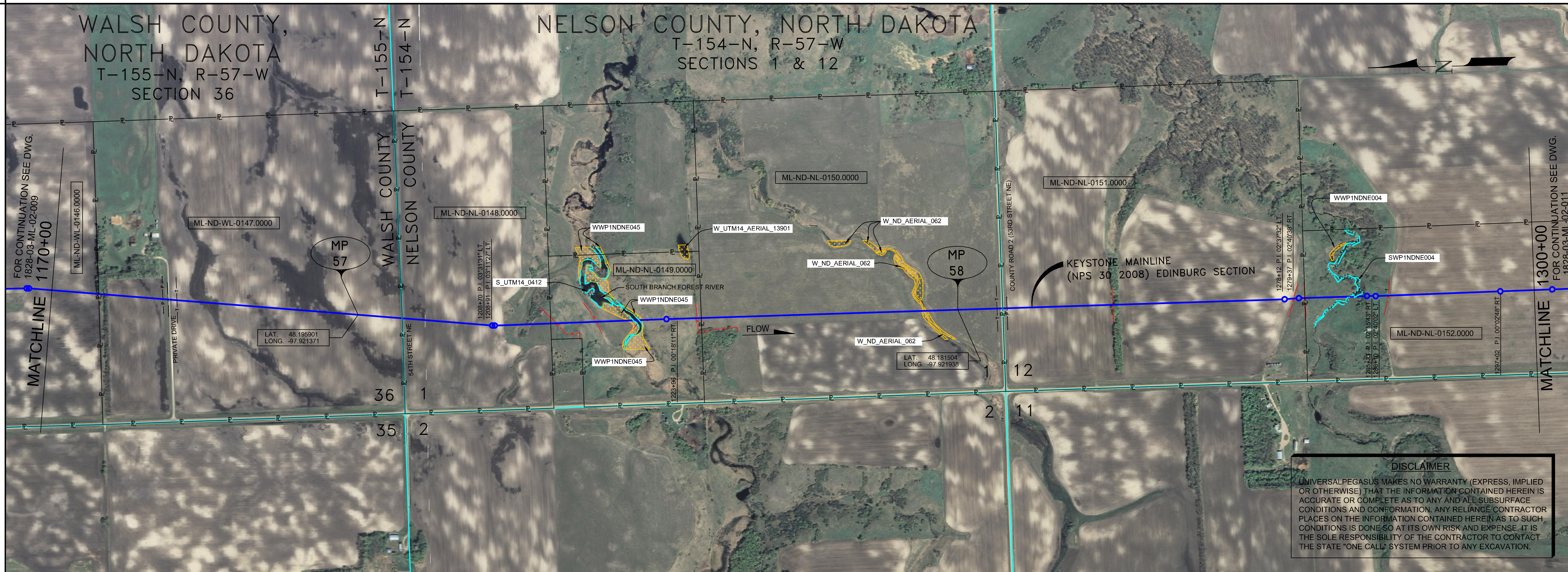
1170+00	ML-ND-WL-0146.0000	1174+09	ML-ND-WL-0147.0000	RD-ND-NL-0147.0000 54TH STREET NE (1200+77)	ML-ND-NL-0148.0000	1213+81	ML-ND-NL-0149.0000	1226+97	ML-ND-NL-0150.0000	RD-ND-NL-0150.0000 COUNTY ROAD 2 (53RD STREET NE) (1253+41)	ML-ND-NL-0151.0000	1280+03	ML-ND-NL-0152.0000	1300+00

PIPELINE PROFILE

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



PIPELINE PLAN (SCALE 1" = 500') 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 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

STATION/DESCRIPTION

- 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 1170+00 ... MATCHLINE 1300+00

SLOPE STATIONS (3D): MATCHLINE 1171+97 ... MATCHLINE 1302+37

PIPE SLOPE REPRESENTATION (3D): 1171+97; 1175+89; 1182+05; BR.; 1182+34; ② 3,047' FBE; 1202+44; ③ 79' FBE & ARO O.C.; 1203+23; 1216+29; 1219+86; 1222+81; ② 5,203' FBE; 1228+86; 1248+16; 1249+31; 1255+26; ③ 80' FBE & ARO BR.; 1256+06; 1265+66; ② 4,631' FBE; 1281+15; 1285+69; 1286+26; 1289+57; 1302+37

CPS (3D)

TEST SECTIONS (3D): TEST SECTION 1A-3 ILTO-019-2010; 1237+66; TEST SECTION 1A-3 ILTO-020-2010

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 12, 2009 FOR M.P. 31.03 TO M.P. 66.93 AND AUGUST 16, 2009 FOR M.P. 66.90 TO M.P. 88.54.
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 1810+69 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	12,881'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	159'
	PIPELINE MARKERS	3 EA
	PIPELINE WARNING SIGNS	12 EA
	CATHODIC TEST STATION	2 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	10/11/22	UEI				ISSUED FOR AS-BUILT 1828-03-ML-02-010 REPLACES COVERAGE OF IFC DRAWINGS 1828-03-ML-02-015, 1828-03-ML-02-016, 1828-03-ML-02-017

ENGINEERING RECORDS

	INITIAL	DATE		INITIAL	DATE
DRAWN BY	UEI	10/01/04	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 ENSCO, INC.

KEYSTONE MAINLINE (NPS 30 2008) EDINBURG SECTION

FIA# 1828 | SPREAD 1A | DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 56.49 TO M.P. 58.96

SHEET 10 OF 18 SHEETS

STA. 1171+97 TO STA. 1302+37 (3D)

DRAWING NO. 1828-03-ML-02-010 REV. 2

Z:\00_KEYSTONE_AS_BUILT\4-alignment sheets for North Dakota\ND1828_ASBUILT\ND1828-010.dwg, 3/9/2011 9:12:39 AM, pdfFactory.pc3