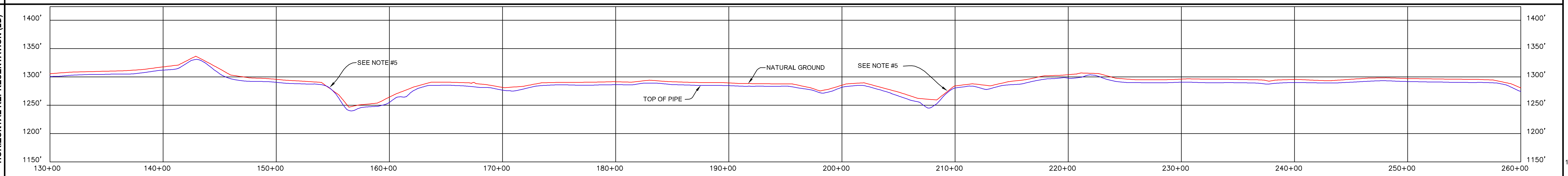
RIGHT-OF-WAY
HORIZONTAL REPRESENTATION (2D)
TRACT NUMBER
OWNERSHIP/AGENCY
LENGTH
APPLICABLE DWG. NO.

130+00	ML-ND-WL-0100.0003	141+19	ML-ND-WL-0102.0000	RD-ND-WL-0102.0000 73RD STREET NE 167+46	ML-ND-WL-0103.0000	193+94	ML-ND-WL-0104.0000	RD-ND-WL-0104.0000 72ND STREET NE 220+72	ML-ND-WL-0105.0000	246+63	ML-ND-WL-0106.0000	260+00

LAND USE

PIPELINE PROFILE

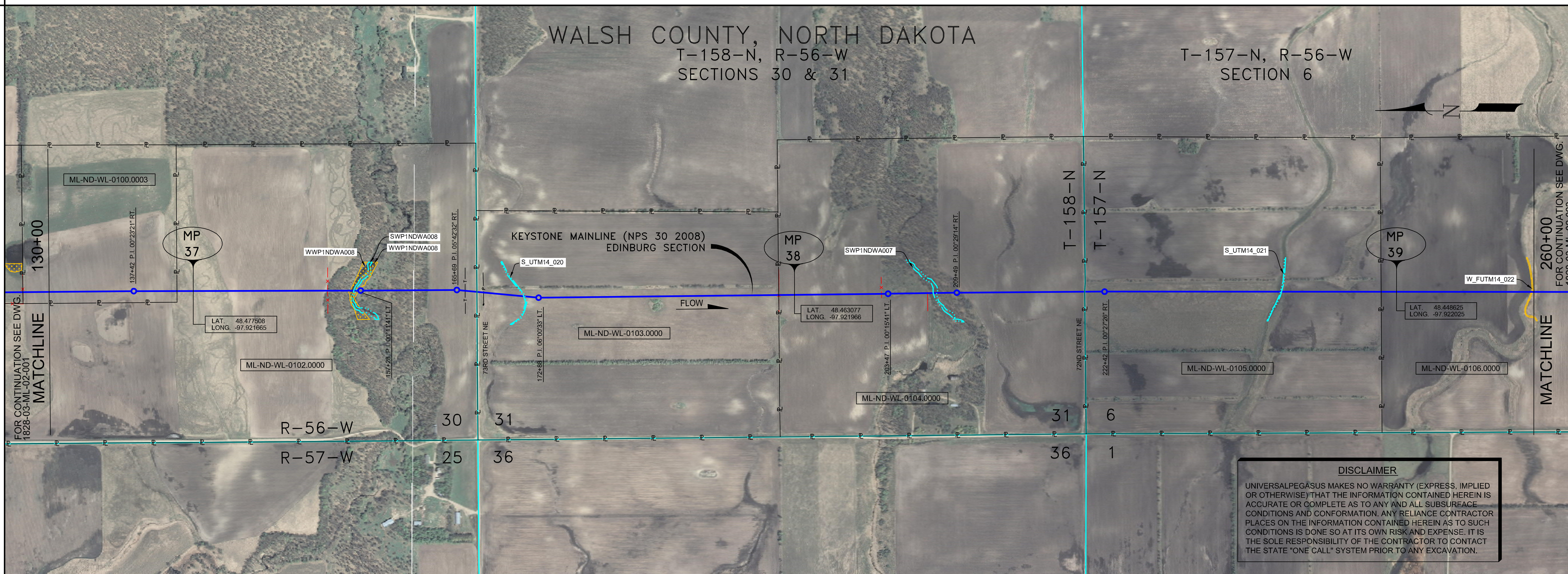
HORIZ: 1"=500' VER: 1"=100'
HORIZONTAL REPRESENTATION (2D)



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
- (3) SET-ON WEIGHTS
- PIPELINE WARNING SIGN
- PIPELINE MARKER
- (1) MATERIAL ITEM
- GM GROUNDING MAT
- ZINC RIBBON
- 200 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)

- 130+00 MATCHLINE
- 137+42 P.I. 00°23'21" RT.
- 154+40 FENCE (ELECTRIC)
- 155+52 BEGIN ROCK SHIELD
- 156+20 WATER EDGE
- 156+49 CL CREEK
- 156+65 WATER EDGE
- 157+28 P.I. 00°11'41" LT.
- 157+67 END ROCK SHIELD
- 165+69 P.I. 05°42'32" RT.
- 166+42 TELEPHONE LINE
- 167+35 EDGE OF ROAD
- 167+46 CL 73RD STREET NE
- 167+57 EDGE OF ROAD
- 168+02 OVERHEAD POWERLINE
- 172+88 P.I. 06°00'33" LT.
- 193+94 FENCE (BARBED WIRE)
- 197+46 BEGIN SLOUGH
- 198+05 CL SLOUGH
- 198+45 END SLOUGH
- 202+93 FENCE (BARBED WIRE)
- 203+47 P.I. 00°15'41" LT.
- 206+95 FENCE (BARBED WIRE)
- 206+98 BEGIN ROCK SHIELD
- 207+50 WATER EDGE
- 207+61 CL CREEK
- 207+70 WATER EDGE
- 208+55 END ROCK SHIELD
- 209+49 P.I. 00°29'14" RT.
- 220+64 EDGE OF ROAD
- 220+72 CL 72ND STREET NE
- 220+78 EDGE OF ROAD
- 222+42 P.I. 00°27'26" RT.
- 237+32 WATER EDGE
- 237+75 CL CREEK
- 238+24 WATER EDGE
- 242+67 BEGIN SLOUGH
- 243+33 CL SLOUGH
- 243+65 END SLOUGH
- 259+55 BEGIN ROCK SHIELD
- 259+89 BEGIN SLOUGH
- 260+00 CL SLOUGH
- 260+00 MATCHLINE

SLOPE STATIONS (3D)

- 130+28 MATCHLINE
- 130+49 5.2' CVR.
- 137+70 P.I. 00°23'21" RT.
- 142+91 M.P. 37
- 144+77 6.9' CVR.
- 154+30 4.0' CVR.
- 154+72 FENCE (ELECTRIC)
- 155+87 BEGIN ROCK SHIELD
- 156+57 WATER EDGE
- 156+87 CL CREEK
- 157+02 WATER EDGE
- 157+66 P.I. 00°11'41" LT.
- 158+06 END ROCK SHIELD
- 162+51 6.3' CVR.
- 166+10 P.I. 05°42'32" RT.
- 166+82 TELEPHONE LINE, 4.6' CVR., 1.5' CLR. (ABOVE)
- 167+76 EDGE OF ROAD
- 167+87 CL 73RD STREET NE
- 167+98 EDGE OF ROAD
- 168+43 OVERHEAD POWERLINE, HT. = 25'
- 173+30 P.I. 06°00'33" LT.
- 175+44 4.3' CVR.
- 194+36 FENCE (BARBED WIRE)
- 195+71 M.P. 38
- 197+88 BEGIN SLOUGH
- 198+48 CL SLOUGH
- 198+88 END SLOUGH
- 203+36 FENCE (BARBED WIRE)
- 203+91 P.I. 00°15'41" LT.
- 205+58 7.1' CVR.
- 207+40 FENCE (BARBED WIRE)
- 207+43 BEGIN ROCK SHIELD
- 207+96 WATER EDGE
- 208+07 CL CREEK
- 208+16 WATER EDGE
- 209+01 END ROCK SHIELD
- 209+97 P.I. 00°29'14" RT.
- 212+01 4.2' CVR.
- 221+14 EDGE OF ROAD
- 221+22 CL 72ND STREET NE
- 221+28 EDGE OF ROAD
- 221+60 7.7' CVR.
- 222+92 P.I. 00°27'26" RT.
- 226+35 5.2' CVR.
- 237+83 WATER EDGE, 6.5' CVR.
- 238+26 CL CREEK
- 238+76 WATER EDGE
- 243+18 BEGIN SLOUGH
- 243+80 4.1' CVR.
- 243+84 CL SLOUGH
- 244+17 END SLOUGH
- 248+51 M.P. 39
- 251+78 5.4' CVR.
- 259+65 5.9' CVR.
- 260+07 BEGIN ROCK SHIELD
- 260+42 BEGIN SLOUGH
- 260+53 CL SLOUGH
- 260+54 MATCHLINE

PIPE SLOPE REPRESENTATION (3D)

- 130+28
- (2) 3,716' FBE
- 154+74, 156+33, 157+18, 163+52 (pipeline markers)
- 167+44 — (3) 78' FBE & ARO BR. — 168+22
- (2) 5,258' FBE
- 207+86, 208+26
- 220+80 — (3) 80' FBE & ARO O.C. — 221+60
- 237+73, 238+81
- (2) 3,894' FBE
- 260+54

CPS (3D)

TEST SECTIONS (3D): TEST SECTION 1A-3 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 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	12,868'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	158'
	PIPELINE MARKERS	0 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	6/27/08	UEI	GTC	LAG	SEC	ADDED CROSSING DETAILS
3	10/11/22	UEI				ISSUED FOR AS-BUILT 1828-03-ML-02-002 REPLACES COVERAGE OF IFC DRAWINGS, 1828-03-ML-02-002, 1828-03-ML-02-003, 1828-03-ML-02-004

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. 36.76 TO M.P. 39.23

SHEET 2 OF 18 SHEETS

STA. 130+28 TO STA. 260+54 (3D)

DRAWING NO. 1828-03-ML-02-002 REV. 3

Z:\00_KEYSTONE_AS_BUILT\4-alignment sheets for North Dakota\ND1828_ASBUILT\ND1828-002.dwg, 3/9/2011 8:48:47 AM, pdfFactory.pc3