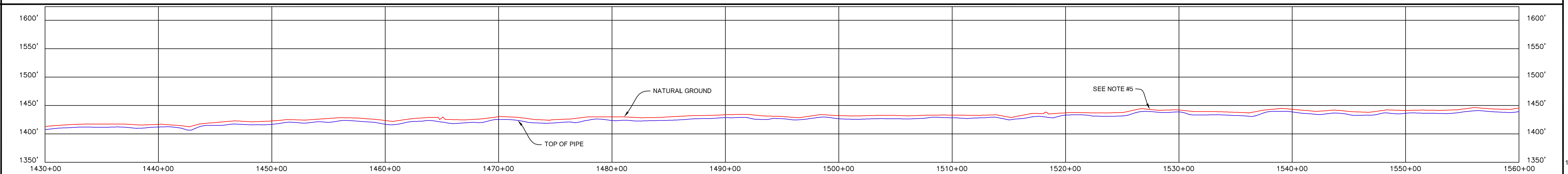
RIGHT-OF-WAY
HORIZONTAL REPRESENTATION (2D)
TRACT NUMBER
OWNERSHIP/AGENCY
LENGTH
APPLICABLE DWG. NO.

1430+00	1438+79	1464+97	1491+71	1518+14	1544+79	1560+00
ML-ND-NL-0159.0000	ML-ND-NL-0160.0000	RD-ND-NL-0160.0000 49TH STREET NE	ML-ND-NL-0161.0000	ML-ND-NL-0162.0000 / RD-ND-NL-0162.0000 48TH STREET NE	ML-ND-NL-0163.0000	ML-ND-NL-0164.0000

LAND USE

PIPELINE PROFILE

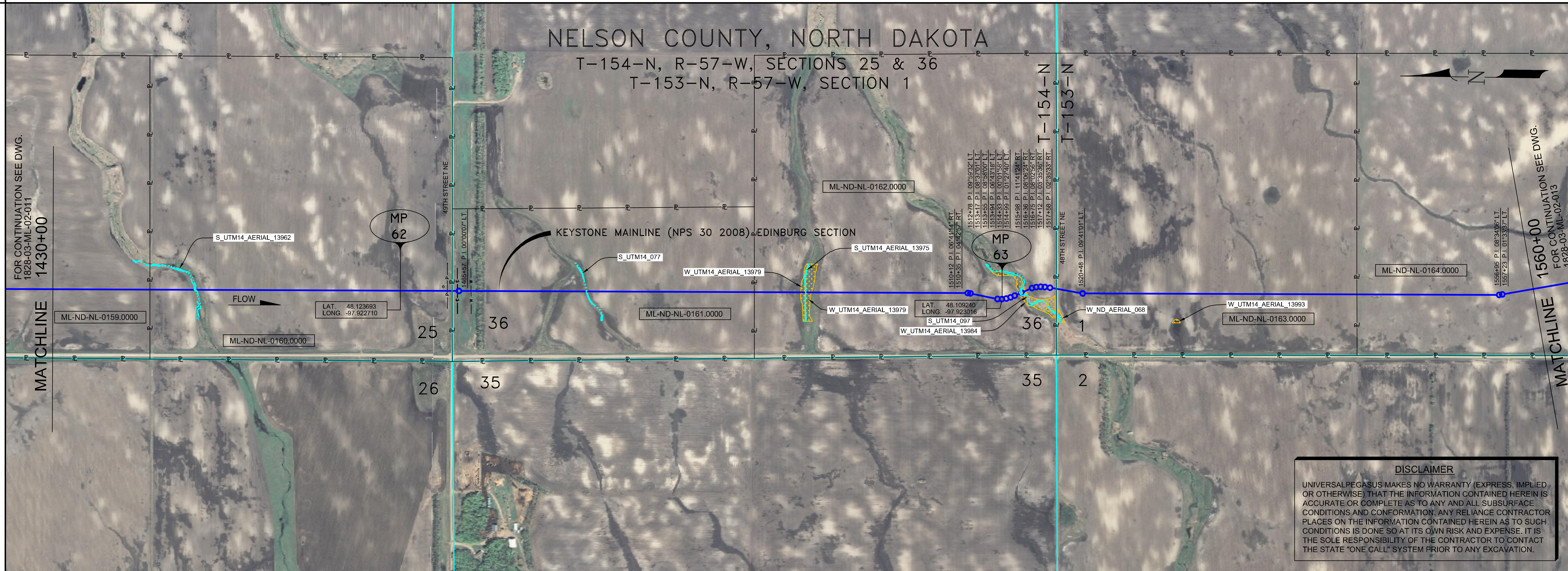
HORIZ: 1"=500' VER: 1"=100' HORIZONTAL REPRESENTATION (2D)



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 1430+00
1429+98 END SLOUGH
1442+19 WATER EDGE
1442+54 CL CREEK
1443+01 WATER EDGE
1464+55 OVERHEAD POWERLINE
1464+70 ROAD BAR DITCH
1464+90 EDGE OF ROAD
1464+97 CL 49TH STREET NE
1465+03 EDGE OF ROAD
1465+42 TELEPHONE LINE
1465+45 TELEPHONE LINE
1465+57 P.I. 00°00'07" LT.
1466+63 WATER SUPPLY LINE
1474+24 WATER EDGE
1474+33 CL RIVER
1474+48 WATER EDGE
1476+49 WATER EDGE
1476+64 CL CREEK
1476+77 WATER EDGE
1495+39 WATER EDGE
1496+30 CL RIVER
1497+14 WATER EDGE
1510+12 P.I. 06°41'14" RT.
1510+35 P.I. 04°42'57" RT.
1510+92 WATER EDGE
1511+13 CL RIVER
1511+34 WATER EDGE
1512+78 P.I. 09°59'32" LT.
1513+17 P.I. 08°37'01" LT.
1513+55 P.I. 08°58'00" LT.
1513+94 P.I. 06°43'18" LT.
1514+33 P.I. 00°01'58" LT.
1514+99 P.I. 01°27'40" LT.
1515+02 WATER EDGE
1515+21 CL CREEK
1515+33 WATER EDGE
1515+98 P.I. 11°41'24" RT.
1516+36 P.I. 08°06'24" RT.
1516+75 P.I. 08°02'56" RT.
1517+12 P.I. 03°35'36" RT.
1517+58 P.I. 02°35'33" RT.
1518+07 EDGE OF ROAD
1518+14 CL 48TH STREET NE
1518+22 EDGE OF ROAD
1520+48 P.I. 09°41'01" LT.
1536+03 WATER EDGE
1536+25 CL RIVER
1536+50 WATER EDGE
1556+95 P.I. 08°34'06" LT.
1557+23 P.I. 01°33'37" LT.
MATCHLINE 1560+00

SLOPE STATIONS (3D)

MATCHLINE 1432+45
1432+44 END SLOUGH
1444+39 4.5' CVR.
1444+65 WATER EDGE
1445+00 CL CREEK
1445+47 WATER EDGE
1462+91 M.P. 62
1467+03 OVERHEAD POWERLINE, HT. = 40'
1467+18 ROAD BAR DITCH, 4.42' CVR.
1467+38 EDGE OF ROAD
1467+45 CL 49TH STREET NE
1467+51 EDGE OF ROAD
1467+90 TELEPHONE LINE 6.5' CVR. 3.0' CLR. (ABOVE)
1467+93 TELEPHONE LINE 6.5' CVR. 3.0' CLR. (ABOVE)
1468+04 P.I. 00°00'07" LT.
1469+10 WATER SUPPLY LINE 5.0' CVR. CLR. UNK.
1469+39 5.2' CVR.
1470+94 6.3' CVR.
1476+72 WATER EDGE
1476+81 CL RIVER
1476+96 WATER EDGE
1478+97 WATER EDGE
1479+12 CL CREEK
1479+26 WATER EDGE
1481+84 5.0' CVR.
1495+79 6.1' CVR.
1497+89 WATER EDGE
1498+79 CL RIVER
1499+64 WATER EDGE
1500+77 4.6' CVR.
1506+96 6.0' CVR.
1512+63 P.I. 06°41'14" RT.
1512+86 P.I. 04°42'57" RT.
1513+14 4.2' CVR.
1513+43 WATER EDGE
1513+63 CL RIVER
1513+84 WATER EDGE
1515+29 P.I. 09°59'32" LT.
1515+68 P.I. 08°37'01" LT.
1515+71 M.P. 63
1516+06 P.I. 08°58'00" LT.
1516+46 P.I. 06°43'18" LT.
1516+84 P.I. 00°01'58" LT.
1517+51 P.I. 01°27'40" LT.
1517+54 WATER EDGE
1517+72 CL CREEK
1517+85 WATER EDGE
1518+51 P.I. 11°41'24" RT.
1518+89 P.I. 08°06'24" RT.
1519+28 P.I. 08°02'56" RT.
1519+65 P.I. 03°35'36" RT.
1520+11 P.I. 02°35'33" RT.
1520+60 EDGE OF ROAD
1520+67 CL 48TH STREET NE
1520+68 8.8' CVR.
1520+75 EDGE OF ROAD
1522+87 4.2' CVR.
1523+01 P.I. 09°41'01" LT.
1527+52 6.0' CVR.
1538+57 WATER EDGE
1538+80 CL RIVER
1539+03 WATER EDGE
1539+91 4.9' CVR.
1547+66 6.1' CVR.
1552+32 5.1' CVR.
1559+52 P.I. 08°34'06" LT.
1559+79 P.I. 01°33'37" LT.
MATCHLINE 1562+56

PIPE SLOPE REPRESENTATION (3D)

1432+45
1444+47
② 3,460' FBE
1467+05
③ 79' FBE & ARO BR.
1467+84
1469+87
② 5,244' FBE
1516+93
1520+28
③ 80' FBE & ARO BR.
1521+08
② 4,148' FBE
1562+56

CPS (3D)

TEST SECTIONS (3D): 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	12,852'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	159'
	PIPELINE MARKERS	2 EA
	PIPELINE WARNING SIGNS	5 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-02-012 REPLACES COVERAGE OF IFC DRAWINGS 1828-03-ML-02-018, 1828-03-ML-02-019, 1828-03-ML-02-020

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. 61.42 TO M.P. 63.89
SHEET 12 OF 18 SHEETS
STA. 1432+45 TO STA. 1562+56 (3D)

DRAWING NO. 1828-03-ML-02-012 REV. 2

Z:\00_KEYSTONE_AS_BUILT\4-alignment sheets for North Dakota\ND1828_ASBUILT\ND1828-012.dwg, 3/9/2011 9:32:56 AM, pdfFactory.pc3