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

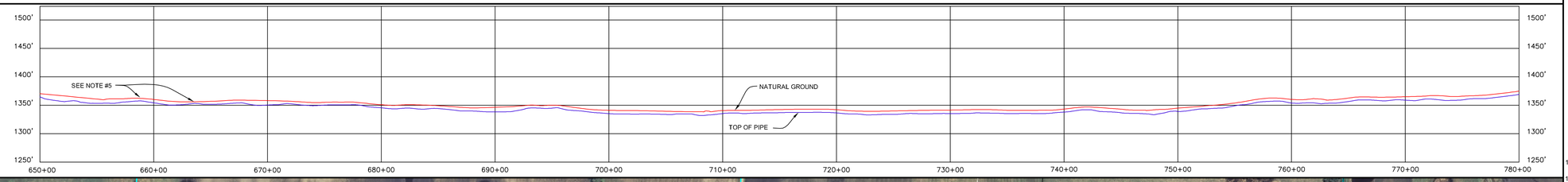
LENGTH
APPLICABLE DWG. NO.

650+00 | ML-ND-RS-0401.0000 | RD-ND-RS-0401.0000 69TH STREET SE | 655+78 | ML-ND-RS-0403.0000 | 662+18 | ML-ND-RS-0404.0000 | 695+37 | ML-ND-RS-0405.0000 | RD-ND-RS-0405.0000 70TH STREET SE | 708+61 | ML-ND-RS-0406.0000 | 736+00 | ML-ND-RS-0407.0000 | RD-ND-RS-0407.0000 117TH AVENUE | 746+71 | ML-ND-RS-0408.0000 | RD-ND-RS-0408.0000 75TH STREET SE | 763+21 | ML-ND-RS-0409.0000 | 780+00

LAND USE

PIPELINE PROFILE

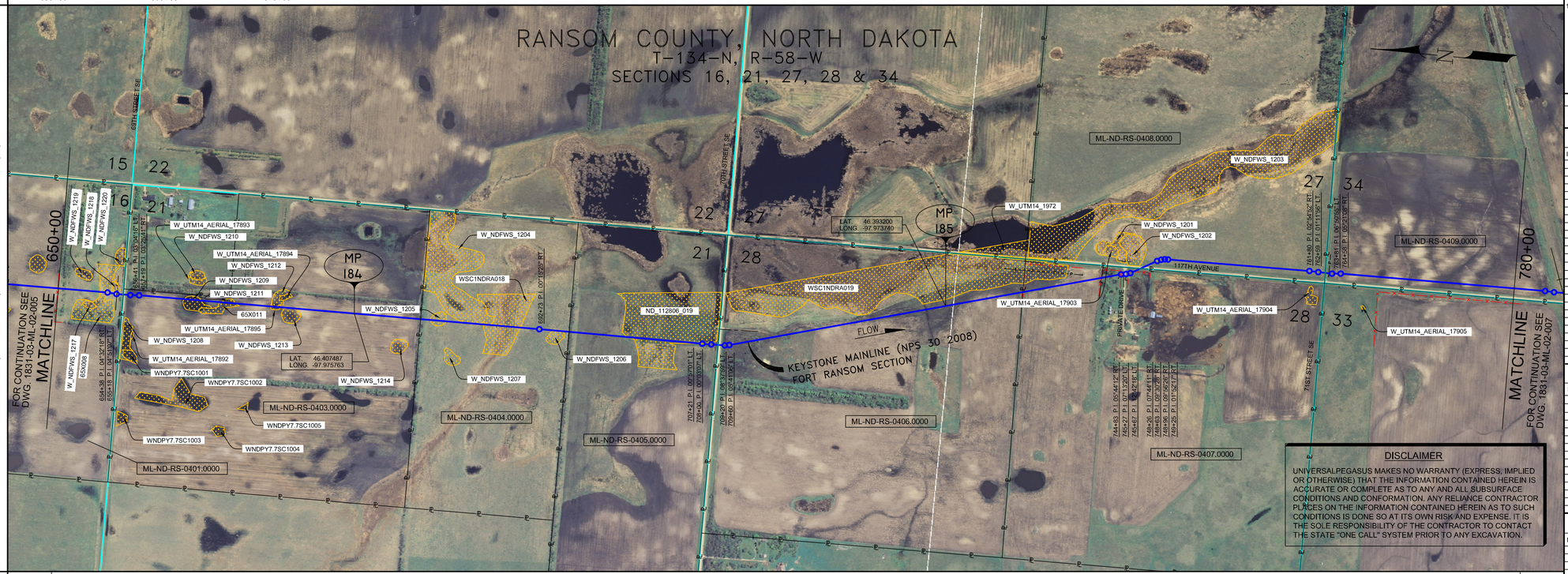
HORIZ. 1"=500' VER. 1"=100'
HORIZONTAL REPRESENTATION (2D)



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
- 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 650+00
651+77 BEGIN SLOUGH
652+42 CL SLOUGH
652+52 END SLOUGH
654+38 PI 04°51'07" LT.
655+18 PI 04°51'07" LT.
655+48 EDGE OF ROAD
655+48 CL 69TH STREET SE
655+48 EDGE OF ROAD
655+48 TELEPHONE/FIBER/POWERLINE
656+41 PI 03°26'41" RT.
657+19 PI 03°26'41" RT.
657+48 EDGE OF ROAD
657+48 CL 69TH STREET SE
657+48 EDGE OF ROAD
660+45 BEGIN SLOUGH
663+57 CL SLOUGH
666+36 END SLOUGH
668+44 BEGIN SLOUGH
669+18 CL SLOUGH
669+28 END SLOUGH
692+73 PI 00°19'25" RT.
694+52 END SLOUGH
700+39 BEGIN SLOUGH
704+04 CL SLOUGH
707+21 PI 00°57'01" LT.
707+29 END SLOUGH
708+00 PI 00°03'07" LT.
708+00 EDGE OF ROAD
708+41 CL 70TH STREET SE
708+73 EDGE OF ROAD
709+20 PI 08°37'59" LT.
709+60 PI 05°41'06" LT.
736+00 FENCE (BARBED WIRE)
743+08 FENCE (BARBED WIRE)
743+10 OVERHEAD POWERLINE
744+83 PI 05°44'12" RT.
744+83 FENCE (BARBED WIRE)
745+09 CL PRIVATE DRIVE
745+47 FENCE (ELECTRIC)
745+52 PI 07°13'20" LT.
745+57 PI 07°13'20" LT.
746+02 FENCE (ELECTRIC)
746+51 EDGE OF ROAD
746+51 CL PRIME ENRGY AVENUE
747+00 EDGE OF ROAD
749+26 PI 07°44'11" RT.
749+43 PI 09°30'28" RT.
749+43 EDGE OF ROAD
749+43 CL 75TH STREET SE
749+43 EDGE OF ROAD
750+03 PI 01°52'17" RT.
761+80 PI 05°54'52" RT.
762+89 PI 01°13'56" LT.
763+14 EDGE OF ROAD
763+14 CL 75TH STREET SE
763+31 EDGE OF ROAD
763+33 OVERHEAD POWERLINE
763+81 PI 08°50'55" LT.
764+38 PI 05°21'08" RT.
MATCHLINE 780+00

SLOPE STATIONS (3D)

MATCHLINE 650+71
652+47 BEGIN SLOUGH
653+22 CL SLOUGH
653+32 END SLOUGH
655+48 PI 04°51'07" LT.
656+18 PI 04°51'07" LT.
656+48 EDGE OF ROAD
656+48 CL 69TH STREET SE
656+48 EDGE OF ROAD
657+18 TELEPHONE/FIBER/POWERLINE, HT. = 25'
657+18 CL CVR. (ABOVE)
657+48 PI 03°26'41" RT.
658+38 CL CVR.
659+28 CL SLOUGH
664+28 CL SLOUGH
667+07 END SLOUGH
669+36 BEGIN SLOUGH
670+48 CL SLOUGH
670+58 END SLOUGH
677+04 M.P. 184
677+47 4.8' CVR.
683+46 PI 00°19'25" RT.
686+25 END SLOUGH
697+04 5.6' CVR.
699+13 4.6' CVR.
701+13 BEGIN SLOUGH
704+18 CL SLOUGH
707+95 PI 00°57'01" LT.
708+02 END SLOUGH
708+74 PI 00°03'07" LT.
708+94 EDGE OF ROAD
709+43 CL 70TH STREET SE
709+47 EDGE OF ROAD
709+94 PI 08°37'59" LT.
710+54 PI 05°41'06" LT.
720+36 5.9' CVR.
723+13 5.9' CVR.
727+09 5.0' CVR.
729+84 M.P. 185
729+87 5.9' CVR.
736+15 FENCE (BARBED WIRE)
743+84 FENCE (BARBED WIRE)
743+96 OVERHEAD POWERLINE, HT. = 20'
744+83 PI 05°44'12" RT.
745+09 FENCE (BARBED WIRE)
745+47 CL PRIVATE DRIVE
745+52 FENCE (ELECTRIC)
745+57 PI 07°13'20" LT.
746+03 FENCE (ELECTRIC)
746+51 EDGE OF ROAD
746+51 CL PRIME ENRGY AVENUE
747+00 EDGE OF ROAD
749+03 PI 07°44'11" RT.
749+43 PI 09°30'28" RT.
749+43 EDGE OF ROAD
749+43 CL 75TH STREET SE
749+43 EDGE OF ROAD
750+03 PI 01°52'17" RT.
758+10 5.8' CVR.
762+89 PI 02°54'52" RT.
763+14 EDGE OF ROAD
763+14 CL 75TH STREET SE
763+31 EDGE OF ROAD
763+33 OVERHEAD POWERLINE, HT. = UNK.
764+38 PI 08°50'55" LT.
764+38 PI 05°21'08" RT.
770+19 6.0' CVR.
MATCHLINE 780+80

PIPE SLOPE REPRESENTATION (2D)

650+71 | 656+09 | 656+89 | 708+95 | 709+74 | 746+63 | 748+43 | 763+58 | 764+37 | 780+80

- ② 538' FBE
- ③ 80' FBE & ARO BR.
- ② 5,206' FBE
- ③ 79' FBE & ARO BR.
- ② 3,689' FBE
- ③ 180' FBE & ARO BR.
- ② 1,515' FBE
- RS ③ 79' FBE & ARO BR.
- ② 1,643' FBE

CPS (3D)

TEST SECTIONS (3D)
TEST SECTION 2A-2
ILTO-022-2010

ENVIRONMENTAL MITIGATION/RECLAMATION STATIONS (2D)

- TOPSOIL SALVAGE METHOD
- STREAMS
- WETLANDS
- TIMING CONSTRAINTS
- **STATIONS**
- MONITORING
- RECLAMATION
- SPECIAL CONSIDERATIONS

HIGHWAY 94

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 07, 2009 FOR M.P. 168.73 TO M.P. 195.68 AND SEPTEMBER 01, 2009 FOR M.P. 195.68 TO M.P. 218.50.

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 9038+16 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	12,591'
3	30" O.D. X 0.516" W.T., API -5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	418'
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	8 EA
	CATHODIC TEST STATION	4 EA
	AERIAL MARKER	1 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	10/12/02	UEI				ISSUED FOR AS-BUILT
						1831-03-ML-02-006 REPLACES COVERAGE OF IFC DRAWINGS
						1831-03-ML-02-009, 1831-03-ML-02-010

ENGINEERING RECORDS

	INITIAL	DATE		INITIAL	DATE
DRAWN BY	UEI	10/01/25	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 PEGASUS

KEYSTONE MAINLINE (NPS 30 2008) FORT RANSOM SECTION

FIA# 1831 | SPREAD 2A | DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 183.50 TO M.P. 185.97

SHEET 6 OF 19 SHEETS

STA. 650+71 TO STA. 780+80 (3D)

DRAWING NO. 1831-03-ML-02-006 REV. 2

Z:\00_KEYSTONE_AS_BUILT\4-alignment sheets for North Dakota\ND1831_ASBUILTND1831-606.dwg, 3/10/2011 7:04:01 AM, pdfFactory.pc3