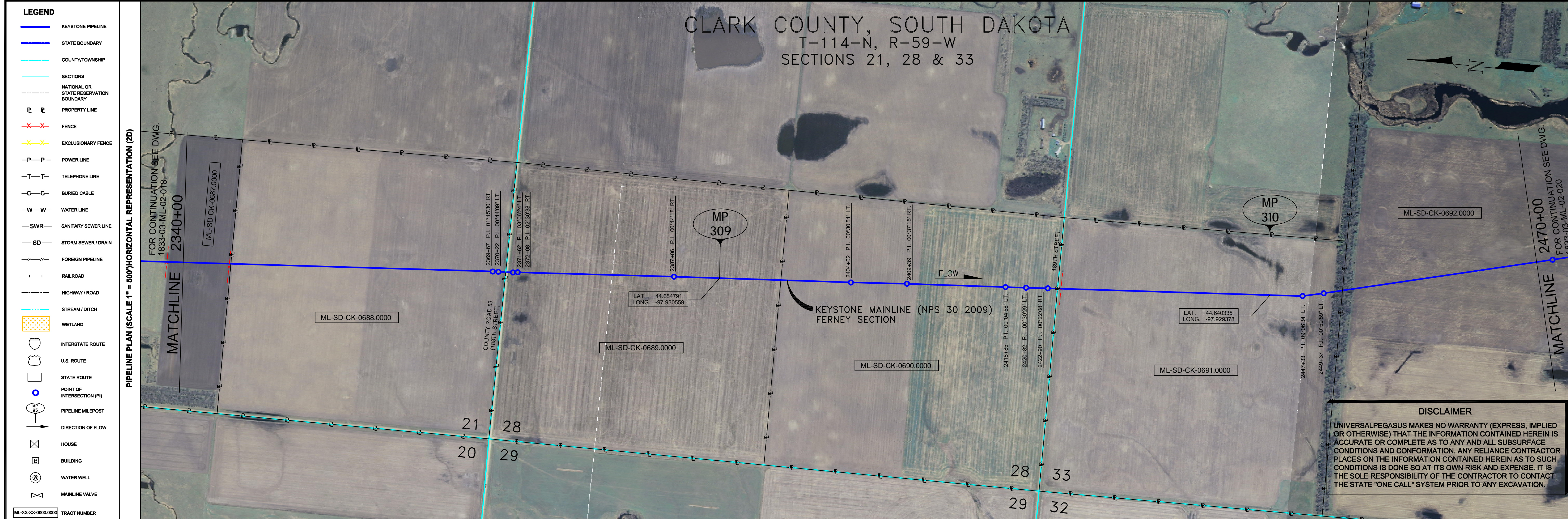


**GENERAL NOTES**

- COVER NOT IN PARENTHESIS IS TO TOP OF KEYSTONE PIPELINE. COVER IN PARENTHESIS IS TO TOP OF FOREIGN PIPELINE OR UTILITY LINE.
- DATUM ELEVATION AND PROJECTION ARE BASED ON MEAN SEA LEVEL AND NAD 83.
- FIELD PIPE LOCATING REQUIRED TO DETERMINE PLACEMENT OF PIPELINE WITHIN PERMANENT EASEMENT.
- UNLESS OTHERWISE NOTED, 48 INCHES MINIMUM COVER EXCEPT 36 INCHES IN AREAS OF CONSOLIDATED ROCK.
- NO ACTUAL AS-BUILT GROUND SHOTS WERE TAKEN AT THIS LOCATION. THE PROFILE REPRESENTS A PROJECTION FROM SHOTS TAKEN AT 150' TO 250' INTERVALS.
- 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.
- THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIPER PIG RUN, WAS OCTOBER 08, 2009 FOR M.P. 259.21 TO M.P. 301.75 AND OCTOBER 10, 2009 FOR M.P. 301.75 TO M.P. 343.98.
- ORIGINAL IN-SERVICE DATE OF THE KEYSTONE PIPELINE (PHASE 1): JUNE 30, 2010.
- CPS CALCULATION DATE: MAY 2010.
- ORION STATION SERIES NUMBER: 1182700.
- TO DETERMINE THE MILE POST AT A GIVEN LOCATION, ADD THE 3D STATION NUMBER FROM THIS SEGMENT TO STATION NUMBER 13922+16 AND DIVIDE BY 5280.



**OPERATING AND TEST PRESSURE**

- THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
- THE MINIMUM TEST PRESSURE WAS 190 PSIG.

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T., API-5LX-70 W/FBE COATING	12,812
3	30" O.D. X 0.516" W.T., API-5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	195

**REFERENCE DRAWINGS**

REF. NO.	DRAWING NO.	REV. NO.	DRAWING TITLE

**REVISIONS**

NO.	DATE	REV. BY	CHK. BY	APPR. BY	ENY. APPR. BY	DESCRIPTION
1	5/17/08	UEI	RDG	LAG	SEC	ISSUED FOR CONSTRUCTION
2	10/17/08	UEI				ISSUED FOR AS-BUILT
						1833-03-ML-02-019
						REPLACES COVERAGE OF IFC DRAWINGS
						1833-03-ML-02-030
						1833-03-ML-02-031

**PIPELINE SCHEMATIC**

SYMBOL	DESCRIPTION	STATION
HEAVY WALL PIPE	2369+67 P.I. 01+1530' RT.	2369+67
WELD FITTING	2371+80 P.I. 01+4100' LT.	2371+80
CONCRETE COATING	2372+38 EDGE OF ROAD (188TH STREET)	2372+38
SET-ON WEIGHTS	2372+49 EDGE OF ROAD (188TH STREET)	2372+49
PIPELINE WARNING SIGN	2372+42 EDGE OF ROAD (188TH STREET)	2372+42
PIPELINE MARKER	2372+408 P.I. 02+3038' RT.	2372+408
MATERIAL ITEM	2372+408 P.I. 02+3038' RT.	2372+408
GROUNDING MAT	2371+35 P.I. 01+1530' RT.	2371+35
ZINC RIBBON	2371+80 P.I. 01+4100' LT.	2371+80
AERIAL MARKER	2372+38 EDGE OF ROAD (188TH STREET)	2372+38
CATHODIC TEST STATION	2372+49 EDGE OF ROAD (188TH STREET)	2372+49
MAINLINE VALVE	2372+42 EDGE OF ROAD (188TH STREET)	2372+42
CHECK VALVE	2372+408 P.I. 02+3038' RT.	2372+408
OPEN CUT	2372+408 P.I. 02+3038' RT.	2372+408
BORE	2372+408 P.I. 02+3038' RT.	2372+408
DRINKING WATER USA	2371+35 P.I. 01+1530' RT.	2371+35
ECOLOGICAL USA	2371+80 P.I. 01+4100' LT.	2371+80
HIGHLY POPULATED AREA	2372+38 EDGE OF ROAD (188TH STREET)	2372+38
OPERATOR (KEYSTONE) DEFINED	2372+49 EDGE OF ROAD (188TH STREET)	2372+49
OTHER POPULATED AREA	2372+42 EDGE OF ROAD (188TH STREET)	2372+42
SOURCE WATER PROTECTION AREA	2372+408 P.I. 02+3038' RT.	2372+408
WELLHEAD PROTECTION AREA	2372+408 P.I. 02+3038' RT.	2372+408

**ENGINEERING RECORDS**

DRAWN BY	INITIAL	DATE	ENY. APPR.	INITIAL	DATE
UEI		10/02/08			

**PROFESSIONAL ENGINEER**

NAME	STATE	LIC#	REV#	DATE
LOYS ALVIN GRAY, III	SD	CE9004		

**TEST SECTIONS (3D)**

TEST SECTION 3B-2  
ILTO-025-2010

**ENVIRONMENTAL MITIGATION/RECLAMATION STATIONS (2D)**

STATION	TOPSOIL SALVAGE METHOD	STREAMS	WETLANDS	TIMING CONSTRAINTS	MONITORING	RECLAMATION	SPECIAL CONSIDERATIONS

**SCALE:** 0 125 250 500 Feet

**TransCanada**  
In business to deliver

KEYSTONE MAINLINE (NPS 30 2009) FERNEY SECTION

**AS-BUILT ALIGNMENT**

M.P. 308.03 TO M.P. 310.49  
SHEET 19 OF 20 SHEETS

STA. 2341+56 TO STA. 2471+63 (3D)

DRAWING NO. 1833-03-ML-02-019 REV. 2