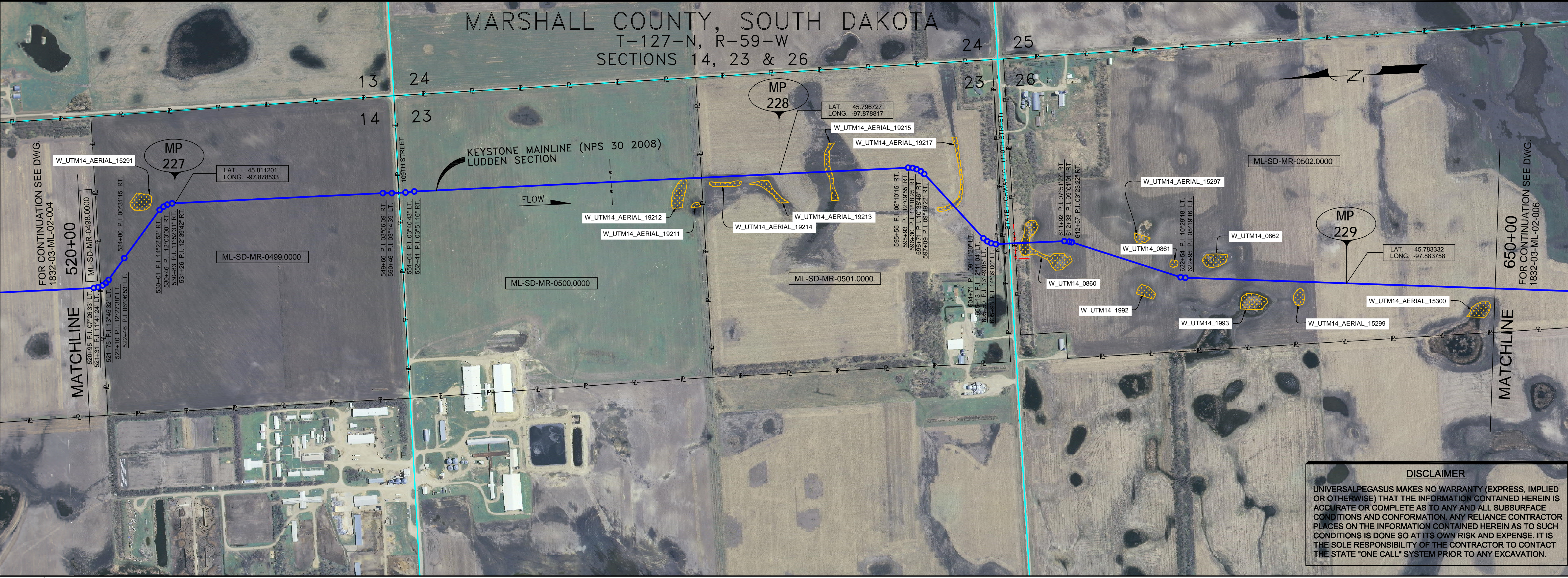
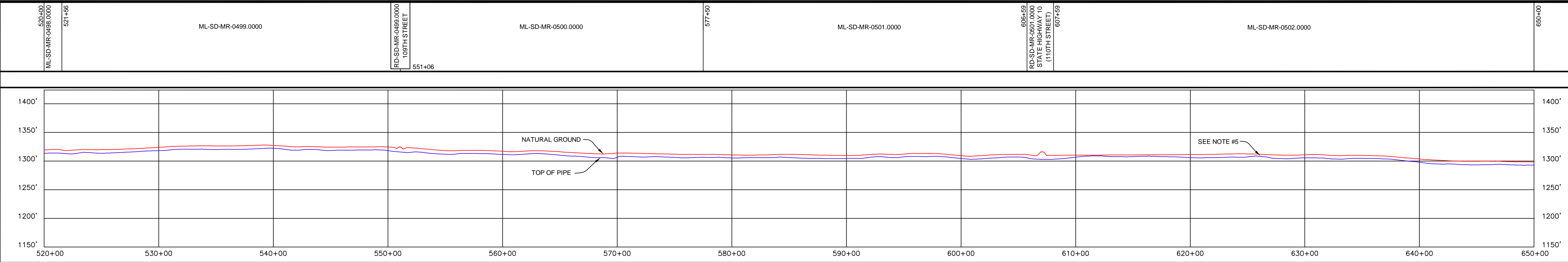


<b>RIGHT-OF-WAY HORIZONTAL REPRESENTATION (2D)</b>		TRACT NUMBER OWNERSHIP AGENCY		LENGTH APPLICABLE DWG. NO.		LAND USE	
<b>PIPELINE PROFILE</b>		HORIZ: 1"=500' VER: 1"=100'		HORIZONTAL REPRESENTATION (2D)			
<b>LEGEND</b>		KEYSTONE PIPELINE		STATE BOUNDARY		COUNTY/TOWNSHIP	
<b>PIPELINE SCHEMATIC</b>		HEAVY WALL PIPE		WELDS		TRANSITION PIECE	
<b>PIPELINE DATA REPRESENTATION (3D)</b>		SLOPE DESCRIPTION		STATION DESCRIPTION		STATIONS (2D)	
<b>TEST SECTIONS (3D)</b>							
<b>ENVIRONMENTAL MITIGATION/RECLAMATION STATIONS (2D)</b>		TOPSOIL SALVAGE METHOD		STREAMS		WETLANDS	
		TIMING CONSTRAINTS					
<b>STATIONS</b>		MONITORING		RECLAMATION			
		SPECIAL CONSIDERATIONS					



**DISCLAIMER**  
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- GENERAL NOTES**
- ALL CHAINAGES ARE IN FEET UNLESS OTHERWISE SPECIFIED.
  - 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 CALIBER PIG RUN, WAS SEPTEMBER 01, 2009 FOR M.P. 195.68 TO M.P. 218.50, SEPTEMBER 02, 2009 FOR M.P. 218.50 TO M.P. 259.00 AND OCTOBER 08, 2009 FOR M.P. 259.21 TO M.P. 301.75.
  - 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 11453+73 AND DIVIDE BY 5200.

**OPERATING AND TEST PRESSURE**

- THE MAXIMUM OPERATING PRESSURE (MOP) IS 1400 PSIG
- THE MINIMUM TEST PRESSURE WAS 1800 PSIG

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T. API 5LX-70 WFBE COATING	12,809
3	30" O.D. X 0.516" W.T. API 5LX-70 WFBE COATING & ABRASION RESISTANT OVERCOAT	199'
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	4 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	CHECK APPR BY	REV APPR	DESCRIPTION
1	5/17/09	UEI	RDG	LAG	ISSUED FOR CONSTRUCTION
2	9/17/09	UEI			ISSUED FOR AS-BUILT
					1832-03-MI-02-005
					REPLACES COVERAGE OF IFC DRAWINGS
					1832-03-MI-02-007
					1832-03-MI-02-008
					1832-03-MI-02-009

**ENGINEERING RECORDS**

DRAWN BY	INITIAL	DATE	ENY APPR.	INITIAL	DATE
UEI		10/02/01			

CHECKED BY: [Signature]

**PROFESSIONAL ENGINEER**

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

**SCALE:** 0 125 250 500 Feet

**TransCanada**  
In business to deliver

KEYSTONE MAINLINE (NPS 30 2008) LUDDEN SECTION

**AS-BUILT ALIGNMENT**  
M.P. 226.78 TO M.P. 229.25  
SHEET 5 OF 19 SHEETS  
STA. 520+34 TO STA. 650+42 (3D)  
DRAWING NO. 1832-03-ML-02-005 REV. 2