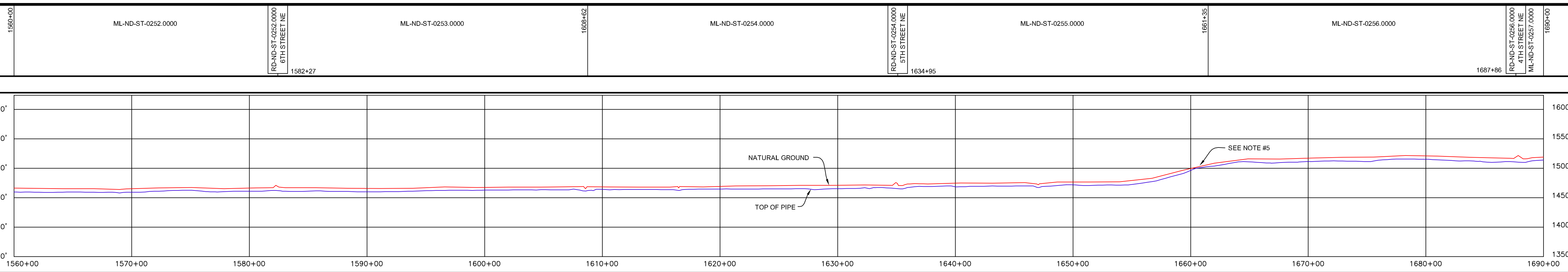


**RIGHT-OF-WAY HORIZONTAL REPRESENTATION (2D)**  
 TRACT NUMBER  
 OWNERSHIP AGENCY  
 LENGTH APPLICABLE DWG. NO.



**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

**PIPELINE SCHEMATIC**

- HEAVY WALL PIPE
- WELD FITTING
- TRANSITION PIECE
- CASING PIPE
- CONCRETE COATING
- SET-ON WELDS
- PIPELINE WARNING SIGN
- PIPELINE MARKER
- MATERIAL ITEM
- GROUNDING MAT
- ZINC RIBBON
- AERIAL MARKER
- CATHODIC TEST STATION
- CHECK VALVE
- OPEN CUT
- BORER
- DRINKING WATER USA
- ECOLOGICAL USA
- HIGHLY POPULATED AREA
- OPERATOR (KEYSTONE) DEFINED
- OTHER POPULATED AREA
- SOURCE WATER PROTECTION AREA
- WELLHEAD PROTECTION AREA

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

TEST SECTIONS (3D)

TOPSOIL SALVAGE METHOD

STREAMS

WETLANDS

TIMING CONSTRAINTS

**STATIONS**

MONITORING

RECLAMATION

SPECIAL CONSIDERATIONS

**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 SFC SP-2888.
- THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIPER PIG RUN, WAS AUGUST 16, 2009 FOR M.P. 66.90 TO M.P. 88.54, SEPTEMBER 16, 2009 FOR M.P. 88.54 TO M.P. 114.00 AND SEPTEMBER 23, 2009 FOR M.P. 114.00 TO M.P. 130.00.
- ORIGINAL IN-SERVICE DATE OF THE KEYSTONE PIPELINE (PHASE 1): JUNE 30, 2010.
- CPS CALCULATION DATE: MAY 2010.
- ORION STATION SERIES NUMBER: 1162700.
- TO DETERMINE THE MILE POST AT A GIVEN LOCATION, ADD THE 3D STATION NUMBER FROM THIS SEGMENT TO STATION NUMBER 4028+46 AND DIVIDE BY 5280.

**OPERATING AND TEST PRESSURE**

- THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
- THE MINIMUM TEST PRESSURE WAS 1600 PSIG.

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T. API-5L-X70 WFBE COATING	12,763'
3	30" O.D. X 0.516" W.T. API-5L-X70 WFBE COATING & ABRASION RESISTANT OVERCOAT	240'

FOR CONTINUATION SEE DWG. 1829-03-ML-02-012

FOR CONTINUATION SEE DWG. 1829-03-ML-02-013

**REFERENCE DRAWINGS**

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

**REVISIONS**

NO.	DATE	REV. BY	CHECKED BY	APPROVED BY	DESCRIPTION
1	5/7/08	UEI	RDG	LAG	ISSUE FOR CONSTRUCTION
2	10/17/09	UEI			ISSUED FOR AS-BUILT
					1829-03-ML-02-013
					REPLACES COVERAGE OF IFC DRAWINGS
					1829-03-ML-02-020
					1829-03-ML-02-021
					1829-03-ML-02-022

**ENGINEERING RECORDS**

DRAWN BY	INITIAL	DATE	ENY APPROV.	INITIAL	DATE
UEI		10/01/11			

CHECKED BY: [Signature]

**PROFESSIONAL ENGINEER**

NAME	STATE	LIC#	REV#	DATE
LOYS A. GRAY, III	ND	PE5714		

**SCALE:** 0 125 250 500 Feet

**TransCanada**  
In business to deliver

KEYSTONE MAINLINE (NPS 30 2008) NIAGRA SECTION

DATE: 1829

SPREAD 1A

DISCIPLINE 03

**AS-BUILT ALIGNMENT**

M.P. 105.87 TO M.P. 108.33

SHEET 13 OF 20 SHEETS

STA. 1561+35 TO STA. 1691+38 (3D)

DRAWING NO. 1829-03-ML-02-013

REV. 2

Z:\00\_KEYSTONE\_AS\_BUILT\14-alignment sheets for North Dakota\ND1829-03.dwg, 3/9/2011 1:09:54 PM, pdfFactory.pd