



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 WELDERS
- PIPELINE WARNING SIGN
- PIPELINE MARKER
- MATERIAL ITEM
- GROUNDING MAT
- ZINC RIBBON
- AERIAL MARKER
- CATHODIC TEST STATION
- MANLINE VALVE
- 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

TEST SECTIONS (3D)

TEST SECTION 3B-1
ILTO-024-2010

ENVIRONMENTAL MITIGATION/RECLAMATION STATIONS (2D)

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 DENS0 7209 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. 343.96.
 - 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 1600 PSIG

BILL OF MATERIALS (3D)

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T., API 5L-X70 W/FBE COATING	12,681'
7	30" O.D. X 0.516" W.T., API 5L-X70 W/FBE COATING	158'
416	FERNEY PUMP STATION ASSEMBLY (+169')	1 EA
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	0 EA
	CATHODIC TEST STATION	2 EA
	AERIAL MARKER	0 EA

REFERENCE DRAWINGS

REF. NO.	DRAWING NO.	REV. NO.	DRAWING TITLE
416	1833-01-ML-03-116		FERNEY PUMP STATION
	1833-01-ML-03-117		FERNEY PUMP STATION
	1833-01-ML-03-118		FERNEY PUMP STATION

REVISIONS

NO.	DATE	REV. BY	CHK. BY	APP. BY	DESCRIPTION
1	5/17/08	UEI	RDG	LAG	ISSUED FOR CONSTRUCTION
2	9/17/08	UEI			ISSUED FOR AS-BUILT
					1833-03-ML-02-001
					REPLACES COVERAGE OF IFC DRAWINGS
					1833-03-ML-02-001
					1833-03-ML-02-002

ENGINEERING RECORDS

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

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 2009) FERNEY SECTION

SCALE: 1833 SPREAD 3B DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 263.68 TO M.P. 266.14

SHEET 1 OF 20 SHEETS

STA. 0+00 TO STA. 130+08 (3D)

DRAWING NO. 1833-03-ML-02-001 REV. 2

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