



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
- SD - 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
- TRACT NUMBER

PIPELINE SCHEMATIC

- HEAVY WALL 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
- OPEN CUT
- BORE
- DRINKING WATER USA
- ECOLOGICAL USA
- HIGHLY POPULATED AREA
- OPERATOR (KEYSTONE) DEFINED
- OTHER POPULATED AREA
- SOURCE WATER PROTECTION AREA
- WELLHEAD PROTECTION AREA

STATION	DESCRIPTION	STATION	DESCRIPTION
1950+00	MATCHLINE 1950+00	2080+00	MATCHLINE 2080+00
1950+71	5.7 C.V.R.	2080+44	P.I. 01'00'57.77 RT. 4.4 C.V.R.
1955+49	P.I. 02'29'28" RT.	2080+49	EDGE OF ROAD
1957+47	M.P. 254	2080+49	EDGE OF ROAD
1958+42	BEGIN SLOUGH	2080+49	BEGIN ROCK SHIELD
1959+42	END SLOUGH	2080+49	BEGIN OPTIC CABLE
1962+42	6.2 C.V.R.	2080+49	END ROCK SHIELD
1965+41	TOP BANK	2080+49	END ROCK SHIELD
1965+42	CL DITCH	2080+49	END ROCK SHIELD
1965+46	TOP BANK	2080+49	END ROCK SHIELD
1984+30	P.I. 04'10'35.1 RT.	2080+49	P.I. 02'42'36" RT.
1984+31	P.I. 04'10'35.1 RT.	2080+49	P.I. 02'42'36" RT.
1984+32	OVERHEAD POWERLINE	2080+49	P.I. 02'42'36" RT.
1984+33	P.I. 04'10'35.1 RT.	2080+49	P.I. 02'42'36" RT.
1984+34	P.I. 04'10'35.1 RT.	2080+49	P.I. 02'42'36" RT.
1984+35	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+36	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+37	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+38	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+39	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+40	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+41	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+42	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+43	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+44	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+45	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+46	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+47	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+48	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+49	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+50	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+51	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+52	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+53	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+54	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+55	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+56	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+57	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+58	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+59	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+60	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+61	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+62	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+63	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+64	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+65	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+66	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+67	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+68	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+69	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+70	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+71	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+72	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+73	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+74	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+75	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+76	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+77	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+78	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+79	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+80	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+81	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+82	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+83	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+84	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+85	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+86	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+87	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+88	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+89	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+90	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+91	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+92	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+93	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+94	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+95	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+96	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+97	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+98	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1984+99	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.
1985+00	EDGE OF ROAD	2080+49	P.I. 02'42'36" RT.

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 7200 OR SP-2888.
- THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIBER PIG RUN, WAS AND 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 5280.

OPERATING AND TEST PRESSURE

- THE MAXIMUM OPERATING PRESSURE (MOP) IS 1400 PSIG.
- THE MINIMUM TEST PRESSURE WAS 1600 PSIG.

BILL OF MATERIALS (3D)

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.388" W.T., API-5L-X-70/WFBE COATING	11,975
3	30" O.D. X 0.516" W.T., API-5L-X-70/WFBE COATING & ABRASION RESISTANT OVERCOAT	1,033

PIPELINE MARKERS 0 EA
PIPELINE WARNING SIGNS 11 EA
CATHODIC TEST STATION 5 EA
AERIAL MARKER 1 EA

REFERENCE DRAWINGS

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

REVISIONS

NO.	DATE	REV. BY	CHK. BY	APP. BY	REV. BY	APP. BY	DESCRIPTION
1	5/17/08	UEI	RDG	LAG	SEC		ISSUED FOR CONSTRUCTION
2	10/10/08	UEI					ISSUED FOR AS-BUILT
							REPLACES COVERAGE OF IFC DRAWINGS
							1832-03-ML-02-025
							1832-03-ML-02-026

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ENGINEERING RECORDS

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

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

SPREAD 2A DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 253.88 TO M.P. 256.34
 SHEET 16 OF 19 SHEETS

STA. 1951+16 TO STA. 2081+24 (3D)

DRAWING NO. 1832-03-ML-02-016 REV. 2