



- GENERAL NOTES**
- 1) ALL CHAINAGES ARE IN FEET UNLESS OTHERWISE SPECIFIED.
  - 2) DATUM ELEVATION AND PROJECTION ARE BASED ON MEAN SEA LEVEL AND NAD 83.
  - 3) FIELD PIPE LOCATING REQUIRED TO DETERMINE PLACEMENT OF PIPELINE WITHIN PERMANENT EASEMENT.
  - 4) UNLESS OTHERWISE NOTED, 48 INCHES MINIMUM COVER EXCEPT 36 INCHES IN AREAS OF CONSOLIDATED ROCK.
  - 5) NO ACTUAL AS-BUILT GROUND SHOTS WERE TAKEN AT THIS LOCATION. THE PROFILE REPRESENTS A PROJECTION FROM SHOTS TAKEN AT 150' TO 250' INTERVALS.
  - 6) TWO TYPES OF COATING WERE APPLIED TO THE FIELD WELDS DURING THE ORIGINAL CONSTRUCTION: ONE TYPE WAS TWO COMPONENT LIQUID EPOXY. THE PRODUCTS USED WERE DENSO 7200 OR SPC SP-2888. THE OTHER TYPE THAT WAS APPLIED TO THE FIELD WELDS WAS FBE. THE PRODUCT NAME WAS 3M 6223 11G.
  - 7) THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIPER PIG RUN, WAS AUGUST 17, 2009 FOR M.P. 403.90 TO 422.96 AND OCTOBER 28, 2009 FOR M.P. 422.96 TO 463.18.
  - 8) ORIGINAL IN-SERVICE DATE OF THE KEYSTONE PIPELINE (PHASE 1): JUNE 30, 2010.
  - 9) CPS CALCULATION DATE: MAY 2010.
  - 10) ORION STATION SERIES NUMBER: 1182700.
  - 11) TO DETERMINE THE MILE POST AT A GIVEN LOCATION, ADD THE 3D STATION NUMBER FROM THIS SEGMENT TO STATION NUMBER 21496-76 AND DIVIDE BY 5280.



**OPERATING AND TEST PRESSURE**

1. THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
2. THE MINIMUM TEST PRESSURE WAS 1601 PSIG.

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T. API-XL70 W/FBE COATING	12,556'
3	30" O.D. X 0.516" W.T. API-XL70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	458'
	PIPELINE MARKERS	0 EA
	PIPELINE WARNING SIGNS	6 EA
	CATHODIC TEST STATION	4 EA
	AERIAL MARKER	1 EA

**REFERENCE DRAWINGS**

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

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**REVISIONS**

NO.	DATE	REV. BY	CHECKED BY	APPROVED BY	DESCRIPTION
1	5/17/08	UEI	RDG	LAG	ISSUED FOR CONSTRUCTION
2	10/17/18	UEI			ISSUED FOR AS-BUILT
					1836-03-ML-02-002
					REPLACES COVERAGE OF IFC DRAWINGS
					1836-03-ML-02-002
					1836-03-ML-02-003
					1836-03-ML-02-004

STATION	PIPELINE SCHEMATIC		HORIZONTAL STATIONS (2D)		SLOPE STATIONS (3D)	
	DESCRIPTION	STATION	DESCRIPTION	STATION	DESCRIPTION	STATION
130+00	MATCHLINE	130+00	MATCHLINE	130+00		
132+41	5.0' C.V.R.	132+41		132+41		
135+43	FENCE (BARBED WIRE)	135+43		135+43		
142+75	FENCE (BARBED WIRE)	142+75		142+75		
143+19	FENCE (BARBED WIRE)	143+19		143+19		
148+22	FENCE (BARBED WIRE)	148+22		148+22		
151+24	M.P. 410	151+24		151+24		
156+23	FENCE (BARBED WIRE)	156+23		156+23		
157+13	FENCE (BARBED WIRE)	157+13		157+13		
157+43	FENCE (BARBED WIRE)	157+43		157+43		
171+64	FENCE (BARBED WIRE)	171+64		171+64		
183+31	FENCE (BARBED WIRE)	183+31		183+31		
188+34	TOP BANK	188+34		188+34		
188+42	CL DITCH	188+42		188+42		
189+38	FENCE (BARBED WIRE)	189+38		189+38		
190+38	FENCE (BARBED WIRE)	190+38		190+38		
201+17	WATER SUPPLY LINE	201+17		201+17		
201+81	WATER SUPPLY LINE	201+81		201+81		
202+01	OVERHEAD POWER LINE (BARBED WIRE)	202+01		202+01		
202+12	FIBER OPTIC CABLE	202+12		202+12		
203+18	3.0' C.V.R. (ABOVE)	203+18		203+18		
203+48	3.0' C.V.R. (ABOVE)	203+48		203+48		
203+51	3.0' C.V.R. (ABOVE)	203+51		203+51		
203+52	3.0' C.V.R. (ABOVE)	203+52		203+52		
203+53	3.0' C.V.R. (ABOVE)	203+53		203+53		
203+54	3.0' C.V.R. (ABOVE)	203+54		203+54		
203+55	3.0' C.V.R. (ABOVE)	203+55		203+55		
203+56	3.0' C.V.R. (ABOVE)	203+56		203+56		
203+57	3.0' C.V.R. (ABOVE)	203+57		203+57		
203+58	3.0' C.V.R. (ABOVE)	203+58		203+58		
203+59	3.0' C.V.R. (ABOVE)	203+59		203+59		
203+60	3.0' C.V.R. (ABOVE)	203+60		203+60		
203+61	3.0' C.V.R. (ABOVE)	203+61		203+61		
203+62	3.0' C.V.R. (ABOVE)	203+62		203+62		
203+63	3.0' C.V.R. (ABOVE)	203+63		203+63		
203+64	3.0' C.V.R. (ABOVE)	203+64		203+64		
203+65	3.0' C.V.R. (ABOVE)	203+65		203+65		
203+66	3.0' C.V.R. (ABOVE)	203+66		203+66		
203+67	3.0' C.V.R. (ABOVE)	203+67		203+67		
203+68	3.0' C.V.R. (ABOVE)	203+68		203+68		
203+69	3.0' C.V.R. (ABOVE)	203+69		203+69		
203+70	3.0' C.V.R. (ABOVE)	203+70		203+70		
203+71	3.0' C.V.R. (ABOVE)	203+71		203+71		
203+72	3.0' C.V.R. (ABOVE)	203+72		203+72		
203+73	3.0' C.V.R. (ABOVE)	203+73		203+73		
203+74	3.0' C.V.R. (ABOVE)	203+74		203+74		
203+75	3.0' C.V.R. (ABOVE)	203+75		203+75		
203+76	3.0' C.V.R. (ABOVE)	203+76		203+76		
203+77	3.0' C.V.R. (ABOVE)	203+77		203+77		
203+78	3.0' C.V.R. (ABOVE)	203+78		203+78		
203+79	3.0' C.V.R. (ABOVE)	203+79		203+79		
203+80	3.0' C.V.R. (ABOVE)	203+80		203+80		
203+81	3.0' C.V.R. (ABOVE)	203+81		203+81		
203+82	3.0' C.V.R. (ABOVE)	203+82		203+82		
203+83	3.0' C.V.R. (ABOVE)	203+83		203+83		
203+84	3.0' C.V.R. (ABOVE)	203+84		203+84		
203+85	3.0' C.V.R. (ABOVE)	203+85		203+85		
203+86	3.0' C.V.R. (ABOVE)	203+86		203+86		
203+87	3.0' C.V.R. (ABOVE)	203+87		203+87		
203+88	3.0' C.V.R. (ABOVE)	203+88		203+88		
203+89	3.0' C.V.R. (ABOVE)	203+89		203+89		
203+90	3.0' C.V.R. (ABOVE)	203+90		203+90		
203+91	3.0' C.V.R. (ABOVE)	203+91		203+91		
203+92	3.0' C.V.R. (ABOVE)	203+92		203+92		
203+93	3.0' C.V.R. (ABOVE)	203+93		203+93		
203+94	3.0' C.V.R. (ABOVE)	203+94		203+94		
203+95	3.0' C.V.R. (ABOVE)	203+95		203+95		
203+96	3.0' C.V.R. (ABOVE)	203+96		203+96		
203+97	3.0' C.V.R. (ABOVE)	203+97		203+97		
203+98	3.0' C.V.R. (ABOVE)	203+98		203+98		
203+99	3.0' C.V.R. (ABOVE)	203+99		203+99		
203+00	MATCHLINE	203+00		203+00		

**TEST SECTIONS (3D)**

TEST SECTION 4B-1  
ILTO-027-2010

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

STATION	TOPSOIL SALVAGE METHOD	STREAMS	WETLANDS	TIMING CONSTRAINTS

**STATIONS**

STATION	MONITORING	RECLAMATION	SPECIAL CONSIDERATIONS

**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) FREEMAN SECTION

**AS-BUILT ALIGNMENT**

M.P. 409.60 TO M.P. 412.06  
SHEET 2 OF 13 SHEETS  
STA. 130+13 TO STA. 260+27 (3D)

DRAWING NO. 1836-03-ML-02-002 REV. 2