



- GENERAL NOTES**
- COVER NOT IN PARENTHESIS IS TO TOP OF KEYSTONE PIPELINE. COVER IN PARENTHESIS IS TO TOP OF FOREIGN PIPELINE OR UTILITY LINE.
  - 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 LOW LEVEL CROSSING. 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 CALIPER PIG RUN, WAS SEPTEMBER 23, 2009 FOR M.P. 114.00 TO M.P. 130.00, AUGUST 05, 2009 FOR M.P. 129.90 TO M.P. 168.72 AND AUGUST 07, 2009 M.P. 168.73 TO M.P. 195.68.
  - 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 6528+26 AND DIVIDE BY 5280.

**OPERATING AND TEST PRESSURE**

- THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
- THE MINIMUM TEST PRESSURE (MTP) IS 1800 PSIG.

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T. API 5L-X70 W/FBE COATING	12,770'
3	30" O.D. X 0.516" W.T. API 5L-X70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	240'

**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	8/7/08	UEI	GTG	LAG	REVISED PIPE LENGTH ISSUED FOR AS-BUILT
3	9/10/08	UEI			REPLACES COVERAGE OF 1830-03-ML-02-009 IFC DRAWINGS 1830-03-ML-02-014, 1830-03-ML-02-015

**ENGINEERING RECORDS**

DRAWN BY	INITIAL	DATE	ENY. APPRD.	INITIAL	DATE
UEI		10/01/18			

**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) LIVERNE SECTION

FILE# 1830    SPREAD 2A    DISCIPLINE 03

**AS-BUILT ALIGNMENT**

M.P. 143.36 TO M.P. 145.82

SHEET 9 OF 20 SHEETS

STA. 1041+06 TO STA. 1171+16 (3D)

DRAWING NO. 1830-03-ML-02-009    REV. 3

**DISCLAIMER**

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TEST SECTION 2A-1  
ILTO-022-2010

**PIPELINE SCHEMATIC**

STATION	DESCRIPTION
1041+06	MATCHLINE 1041+06
1041+41	4.3' C.V.R.
1041+43	4.9' C.V.R.
1041+45	5.1' C.V.R.
1041+47	5.3' C.V.R.
1041+49	5.5' C.V.R.
1041+51	5.7' C.V.R.
1041+53	5.9' C.V.R.
1041+55	6.1' C.V.R.
1041+57	6.3' C.V.R.
1041+59	6.5' C.V.R.
1041+61	6.7' C.V.R.
1041+63	6.9' C.V.R.
1041+65	7.1' C.V.R.
1041+67	7.3' C.V.R.
1041+69	7.5' C.V.R.
1041+71	7.7' C.V.R.
1041+73	7.9' C.V.R.
1041+75	8.1' C.V.R.
1041+77	8.3' C.V.R.
1041+79	8.5' C.V.R.
1041+81	8.7' C.V.R.
1041+83	8.9' C.V.R.
1041+85	9.1' C.V.R.
1041+87	9.3' C.V.R.
1041+89	9.5' C.V.R.
1041+91	9.7' C.V.R.
1041+93	9.9' C.V.R.
1041+95	10.1' C.V.R.
1041+97	10.3' C.V.R.
1041+99	10.5' C.V.R.
1042+01	10.7' C.V.R.
1042+03	10.9' C.V.R.
1042+05	11.1' C.V.R.
1042+07	11.3' C.V.R.
1042+09	11.5' C.V.R.
1042+11	11.7' C.V.R.
1042+13	11.9' C.V.R.
1042+15	12.1' C.V.R.
1042+17	12.3' C.V.R.
1042+19	12.5' C.V.R.
1042+21	12.7' C.V.R.
1042+23	12.9' C.V.R.
1042+25	13.1' C.V.R.
1042+27	13.3' C.V.R.
1042+29	13.5' C.V.R.
1042+31	13.7' C.V.R.
1042+33	13.9' C.V.R.
1042+35	14.1' C.V.R.
1042+37	14.3' C.V.R.
1042+39	14.5' C.V.R.
1042+41	14.7' C.V.R.
1042+43	14.9' C.V.R.
1042+45	15.1' C.V.R.
1042+47	15.3' C.V.R.
1042+49	15.5' C.V.R.
1042+51	15.7' C.V.R.
1042+53	15.9' C.V.R.
1042+55	16.1' C.V.R.
1042+57	16.3' C.V.R.
1042+59	16.5' C.V.R.
1042+61	16.7' C.V.R.
1042+63	16.9' C.V.R.
1042+65	17.1' C.V.R.
1042+67	17.3' C.V.R.
1042+69	17.5' C.V.R.
1042+71	17.7' C.V.R.
1042+73	17.9' C.V.R.
1042+75	18.1' C.V.R.
1042+77	18.3' C.V.R.
1042+79	18.5' C.V.R.
1042+81	18.7' C.V.R.
1042+83	18.9' C.V.R.
1042+85	19.1' C.V.R.
1042+87	19.3' C.V.R.
1042+89	19.5' C.V.R.
1042+91	19.7' C.V.R.
1042+93	19.9' C.V.R.
1042+95	20.1' C.V.R.
1042+97	20.3' C.V.R.
1042+99	20.5' C.V.R.
1043+01	20.7' C.V.R.
1043+03	20.9' C.V.R.
1043+05	21.1' C.V.R.
1043+07	21.3' C.V.R.
1043+09	21.5' C.V.R.
1043+11	21.7' C.V.R.
1043+13	21.9' C.V.R.
1043+15	22.1' C.V.R.
1043+17	22.3' C.V.R.
1043+19	22.5' C.V.R.
1043+21	22.7' C.V.R.
1043+23	22.9' C.V.R.
1043+25	23.1' C.V.R.
1043+27	23.3' C.V.R.
1043+29	23.5' C.V.R.
1043+31	23.7' C.V.R.
1043+33	23.9' C.V.R.
1043+35	24.1' C.V.R.
1043+37	24.3' C.V.R.
1043+39	24.5' C.V.R.
1043+41	24.7' C.V.R.
1043+43	24.9' C.V.R.
1043+45	25.1' C.V.R.
1043+47	25.3' C.V.R.
1043+49	25.5' C.V.R.
1043+51	25.7' C.V.R.
1043+53	25.9' C.V.R.
1043+55	26.1' C.V.R.
1043+57	26.3' C.V.R.
1043+59	26.5' C.V.R.
1043+61	26.7' C.V.R.
1043+63	26.9' C.V.R.
1043+65	27.1' C.V.R.
1043+67	27.3' C.V.R.
1043+69	27.5' C.V.R.
1043+71	27.7' C.V.R.
1043+73	27.9' C.V.R.
1043+75	28.1' C.V.R.
1043+77	28.3' C.V.R.
1043+79	28.5' C.V.R.
1043+81	28.7' C.V.R.
1043+83	28.9' C.V.R.
1043+85	29.1' C.V.R.
1043+87	29.3' C.V.R.
1043+89	29.5' C.V.R.
1043+91	29.7' C.V.R.
1043+93	29.9' C.V.R.
1043+95	30.1' C.V.R.
1043+97	30.3' C.V.R.
1043+99	30.5' C.V.R.
1044+01	30.7' C.V.R.
1044+03	30.9' C.V.R.
1044+05	31.1' C.V.R.
1044+07	31.3' C.V.R.
1044+09	31.5' C.V.R.
1044+11	31.7' C.V.R.
1044+13	31.9' C.V.R.
1044+15	32.1' C.V.R.
1044+17	32.3' C.V.R.
1044+19	32.5' C.V.R.
1044+21	32.7' C.V.R.
1044+23	32.9' C.V.R.
1044+25	33.1' C.V.R.
1044+27	33.3' C.V.R.
1044+29	33.5' C.V.R.
1044+31	33.7' C.V.R.
1044+33	33.9' C.V.R.
1044+35	34.1' C.V.R.
1044+37	34.3' C.V.R.
1044+39	34.5' C.V.R.
1044+41	34.7' C.V.R.
1044+43	34.9' C.V.R.
1044+45	35.1' C.V.R.
1044+47	35.3' C.V.R.
1044+49	35.5' C.V.R.
1044+51	35.7' C.V.R.
1044+53	35.9' C.V.R.
1044+55	36.1' C.V.R.
1044+57	36.3' C.V.R.
1044+59	36.5' C.V.R.
1044+61	36.7' C.V.R.
1044+63	36.9' C.V.R.
1044+65	37.1' C.V.R.
1044+67	37.3' C.V.R.
1044+69	37.5' C.V.R.
1044+71	37.7' C.V.R.
1044+73	37.9' C.V.R.
1044+75	38.1' C.V.R.
1044+77	38.3' C.V.R.
1044+79	38.5' C.V.R.
1044+81	38.7' C.V.R.
1044+83	38.9' C.V.R.
1044+85	39.1' C.V.R.
1044+87	39.3' C.V.R.
1044+89	39.5' C.V.R.
1044+91	39.7' C.V.R.
1044+93	39.9' C.V.R.
1044+95	40.1' C.V.R.
1044+97	40.3' C.V.R.
1044+99	40.5' C.V.R.
1045+01	40.7' C.V.R.
1045+03	40.9' C.V.R.
1045+05	41.1' C.V.R.
1045+07	41.3' C.V.R.
1045+09	41.5' C.V.R.
1045+11	41.7' C.V.R.
1045+13	41.9' C.V.R.
1045+15	42.1' C.V.R.
1045+17	42.3' C.V.R.
1045+19	42.5' C.V.R.
1045+21	42.7' C.V.R.
1045+23	42.9' C.V.R.
1045+25	43.1' C.V.R.
1045+27	43.3' C.V.R.
1045+29	43.5' C.V.R.
1045+31	43.7' C.V.R.
1045+33	43.9' C.V.R.
1045+35	44.1' C.V.R.
1045+37	44.3' C.V.R.
1045+39	44.5' C.V.R.
1045+41	44.7' C.V.R.
1045+43	44.9' C.V.R.
1045+45	45.1' C.V.R.
1045+47	45.3' C.V.R.
1045+49	45.5' C.V.R.
1045+51	45.7' C.V.R.
1045+53	45.9' C.V.R.
1045+55	46.1' C.V.R.
1045+57	46.3' C.V.R.
1045+59	46.5' C.V.R.
1045+61	46.7' C.V.R.
1045+63	46.9' C.V.R.
1045+65	47.1' C.V.R.
1045+67	47.3' C.V.R.
1045+69	47.5' C.V.R.
1045+71	47.7' C.V.R.
1045+73	47.9' C.V.R.
1045+75	48.1' C.V.R.
1045+77	48.3' C.V.R.
1045+79	48.5' C.V.R.
1045+81	48.7' C.V.R.
1045+83	48.9' C.V.R.
1045+85	49.1' C.V.R.
1045+87	49.3' C.V.R.
1045+89	49.5' C.V.R.
1045+91	49.7' C.V.R.
1045+93	49.9' C.V.R.
1045+95	50.1' C.V.R.
1045+97	50.3' C.V.R.
1045+99	50.5' C.V.R.
1046+01	50.7' C.V.R.
1046+03	50.9' C.V.R.
1046+05	51.1' C.V.R.
1046+07	51.3' C.V.R.
1046+09	51.5' C.V.R.
1046+11	51.7' C.V.R.
1046+13	51.9' C.V.R.
1046+15	52.1' C.V.R.
1046+17	52.3' C.V.R.
1046+19	52.5' C.V.R.
1046+21	52.7' C.V.R.
1046+23	52.9' C.V.R.
1046+25	53.1' C.V.R.
1046+27	53.3' C.V.R.
1046+29	53.5' C.V.R.
1046+31	53.7' C.V.R.
1046+33	53.9' C.V.R.
1046+35	54.1' C.V.R.
1046+37	54.3' C.V.R.
1046+39	54.5' C.V.R.
1046+41	54.7' C.V.R.
1046+43	54.9' C.V.R.
1046+45	55.1' C.V.R.
1046+47	55.3' C.V.R.
1046+49	55.5' C.V.R.
1046+51	55.7' C.V.R.
1046+53	55.9' C.V.R.
1046+55	56.1' C.V.R.
1046+57	56.3' C.V.R.
1046+59	56.5' C.V.R.
1046+61	56.7' C.V.R.
1046+63	56.9' C.V.R.
1046+65	57.1' C.V.R.
1046+67	57.3' C.V.R.
1046+69	57.5' C.V.R.
1046+71	57.7' C.V.R.
1046+73	57.9' C.V.R.
1046+75	58.1' C.V.R.
1046+77	58.3' C.V.R.
1046+79	58.5' C.V.R.
1046+81	58.7' C.V.R.
1046+83	58.9' C.V.R.
1046+85	59.1' C.V.R.
1046+87	59.3' C.V.R.
1046+89	59.5' C.V.R.
1046+91	59.7' C.V.R.
1046+93	59.9' C.V.R.
1046+95	60.1' C.V.R.
1046+97	60.3' C.V.R.
1046+99	60.5' C.V.R.
1047+01	60.7' C.V.R.
1047+03	60.9' C.V.R.
1047+05	61.1' C.V.R.
1047+07	61.3' C.V.R.
1047+09	61.5' C.V.R.
1047+11	61.7' C.V.R.
1047+13	61.9' C.V.R.
1047+15	62.1' C.V.R.
1047+17	62.3' C.V.R.
1047+19	62.5' C.V.R.
10	