



- 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) 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.
 - 7) THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALPER 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.
 - 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 6528+26 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
1	30" O.D. X 0.438" W.T. API 5L-X70 W/FBE COATING	247'
2	30" O.D. X 0.398" W.T. API 5L-X70 W/FBE COATING	12,406'
3	30" O.D. X 0.516" W.T. API 5L-X70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	360'

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	ISSUED FOR CONSTRUCTION
2	8/17/08	UEI			FPL ROAD ADD ISSUED FOR AS-BUILT
3	3/27/08	UEI			REPLACES COVERAGE OF IFC DRAWINGS 1830-03-ML-02-005, 1830-03-ML-02-006, 1830-03-ML-02-007

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:



KEYSTONE MAINLINE (NPS 30 2008) LUVERNE SECTION
 FWF 1830 SPREAD 2A DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 131.04 TO M.P. 133.50
 SHEET 4 OF 20 SHEETS
 STA. 390+48 TO STA. 520+61 (3D)

- 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
 - 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
 - WELHEAD PROTECTION AREA

HORIZONTAL REPRESENTATION (2D)
 HORIZONTAL REPRESENTATION (2D)
 PIPELINE PLAN (SCALE 1" = 500') HORIZONTAL REPRESENTATION (2D)

HORIZONTAL STATIONS (2D)
 SLOPE STATIONS (3D)
 STATION DESCRIPTION
 PIPELINE DATA
 REPRESENTATION (3D)
 CPS (3D)

STATION	DESCRIPTION
390+00	MATCHLINE 390+00
390+15	P.I. 0.007372' LT.
390+31	P.I. 0.010396' LT.
391+46	FIBER OPTIC CABLE
391+48	FIBER OPTIC CABLE
391+48	ROAD BAR DITCH
391+48	ROAD BAR DITCH
392+32	EDGE OF ROAD
392+46	EDGE OF ROAD
392+46	EDGE OF ROAD
394+28	5.1' CVR. 5.1' CVR. 5.1' CVR.
394+28	P.I. 0.007553' LT.
394+28	P.I. 0.007443' RT.
402+43	4.5' CVR.
410+23	6.5' CVR.
413+28	4.5' CVR.
414+75	UNDERGROUND POWERLINE
414+75	UNDERGROUND POWERLINE
419+07	6.0' CVR.
431+25	4.5' CVR.
441+34	M.P. 132
444+37	P.I. 0.027745' RT.
445+67	P.I. 0.041321' LT.
445+67	P.I. 0.041321' LT.
446+15	EDGE OF ROAD
446+26	CL 19TH STREET SE
446+36	EDGE OF ROAD
446+36	EDGE OF ROAD
446+36	EDGE OF ROAD
446+36	EDGE OF ROAD
446+36	EDGE OF ROAD
446+36	EDGE OF ROAD
452+08	5.5' CVR.
454+06	6.5' CVR.
457+05	TOP BANK
457+05	TOP BANK
457+23	TOP BANK
457+23	TOP BANK
460+97	4.5' CVR.
464+11	P.I. 0.007493' LT.
464+11	P.I. 0.007493' LT.
467+43	UNDERGROUND POWERLINE
467+43	UNDERGROUND POWERLINE
470+41	4.4' CVR.
472+89	EDGE OF ROAD
473+05	EDGE OF ROAD
473+05	EDGE OF ROAD
477+64	BEGIN SLOUGH
479+54	CL SLOUGH
481+19	END SLOUGH
482+72	P.I. 0.003155' LT.
485+06	P.I. 0.002721' RT.
485+06	P.I. 0.002721' RT.
492+13	P.I. 0.007091' RT.
494+14	M.P. 133
498+07	
499+08	FENCE (NO WIRE)
499+08	FENCE (NO WIRE)
502+38	6.0' CVR.

STATION	DESCRIPTION
390+48	MATCHLINE 390+48
390+48	P.I. 0.007372' LT.
391+38	FIBER OPTIC CABLE
391+38	FIBER OPTIC CABLE
391+46	5.0' CVR. (ABOVE)
391+46	5.0' CVR. (ABOVE)
392+06	ROAD BAR DITCH
392+32	EDGE OF ROAD
392+46	EDGE OF ROAD
392+46	EDGE OF ROAD
394+28	5.1' CVR. 5.1' CVR. 5.1' CVR.
394+28	P.I. 0.007553' LT.
394+28	P.I. 0.007443' RT.
402+43	4.5' CVR.
410+23	6.5' CVR.
413+28	4.5' CVR.
414+75	UNDERGROUND POWERLINE
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419+07	6.0' CVR.
431+25	4.5' CVR.
441+34	M.P. 132
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499+08	FENCE (NO WIRE)
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502+38	6.0' CVR.

TEST SECTIONS (3D)
 TOPSOIL SALVAGE METHOD
 STREAMS
 WETLANDS
 TIMING CONSTRAINTS
 STATIONS
 MONITORING
 RECLAMATION
 SPECIAL CONSIDERATIONS