



TIE-IN SCHEDULE:

- 1 NPS 6(150)-CL150 ASME RF HC DRAIN INLET, B.O.P. @ ELEV. 15'-11¹/₁₆" (4859)
- 2 NPS 2(50)-CL150 ASME RF VENT GAS CONN., B.O.P. @ ELEV. 15'-11¹/₁₆" (4859)
- 3 NPS 3(80)-CL150 ASME RF RECOVERED HC DRAIN, B.O.P. @ ELEV. 8'-0" (2438)
- 4 NPS 3(80)-CL150 ASME RF TRUCK OUT CONNECTION, @ ELEV. 5'-3" (1600)
- 5 NPS 2(50)-CL300 ASME RF HEAT MEDIUM SUPPLY, @ ELEV. 4'-4" (1321)
- 6 NPS 2(50)-CL300 ASME RF HEAT MEDIUM RETURN, @ ELEV. 3'-3" (991)
- 7 NPS 2(50)-CL150 ASME RF FUEL GAS INLET, B.O.P. @ ELEV. 14'-4⁷/₁₆" (4380)
- 8 2(50)-CL150 ASME RF UTILITY AIR SUPPLY, @ ELEV. 1'-0" (305)
- 9 2(50)-CL150 ASME RF INSTRUMENT AIR SUPPLY, @ ELEV. 2'-0" (610)
- 10 2(50)-CL150 ASME RF FLOOR DRAIN, @ ELEV. 0'-4" (102) BELOW TOP OF MAIN SKID
- 11 NPS 6(150)-CL150 ASME RF HP FLARE GAS, B.O.P. @ ELEV. 15'-11¹/₁₆" (4859)
- 12 24" CABLE TRAY ENTRY FOR 575V OUT OUT SIZE 35" WIDE x 14" HIGH @ ELEV. 8'-11" (2715mm)

HEAT TRACING NOTES:

- 2'-8" PIPE USE 1/2" 316 SS (0.035") TUBING;
- 10" PIPE USE 3/4" 316 SS (0.049") TUBING;
- SS BANDING TO SECURE TRACING;
- SHOP TO SEE PROJECT MANAGER FOR INSTALLATION DETAILS.

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE MECHANICAL FLOWSHEET.
2. PROCESS PIPING TO BE DESIGNED TO ASME B31.3 2012 EDITION AND REGISTERED IN ALBERTA.
3. PRESSURE VESSELS ARE TO BE REGISTERED IN ALBERTA.
4. VESSELS AND PIPING TO BE INSULATED AS PER FLOWSHEET AND/OR FABRICATION DRAWINGS.
5. PAINTING AS PER GS-6100:
 - **INDOOR UNINSULATED VESSEL & PIPING, STRUCTURAL (SYSTEM P1):**
SURFACE PREPARATION: SSPC-SP6
PRIMER: 4-6 mils CLOVAGUARD 8315 EPOXY
FINISH: 2-3 mils CLOVATHANE 834 POLYURETHANE
(VESSEL & PIPING 16376 LIGHT GRAY, STRUCTURAL 15090 BLUE, LADDERS AND HANDRAILS FS13591 SAFETY YELLOW)
 - **INSULATED VESSEL & PIPING (SYSTEM P3):**
SURFACE PREPARATION: SSPC-SP10
PRIMER: 5-8 mils CLOVALINE 8329 HEAVY DUTY EPOXY NOVOLAC LINING (GREY)
FINISH: NONE
 - **INTERNAL COATING VESSEL:**
SURFACE PREPARATION: SSPC-SP5
PRIMER: 5-8 mils DFT HIGHLAND 74
TOP COAT: 5-8 mils DFT HIGHLAND 74
 - **OUTDOOR STRUCTURAL (SYSTEM NP):**
STRUCTURAL: UN-PAINTED
 - **GRATING:**
GALVANIZED
6. ALL ELEVATIONS SHOWN ARE FROM TOP OF MAIN SKID MEMBERS. DEPTH OF SKID IS 1'-0".
7. ALL SKID EDGE CONNECTIONS TO BE HELD AT DIMENSIONS AND ELEVATIONS SHOWN FOR CUSTOMER TIE-INS.
8. SKID IS DESIGNED FOR AN EIGHT (8) POINT LIFT.
9. **1/4 SERVICE VENTING:** BLEED TYPE INSTRUMENTS, REGULATOR BONNETS, INSTRUMENT CASES AND CONTROL VALVE ACTUATORS ARE NOT VENTED.
10. 1" INSTRUMENT AIR HEADER AS SHOWN ON FLOWSHEET (SHOP TO RUN AS REQ'D) WITH 1/4" TAKE-OFFS c/w ISOLATION NEEDLE VALVE, REGULATOR, AND TUBING TO COMPLETE.
11. REMOVE ALL FLOATS/DISPLACERS FROM ALL LEVEL CONTROLLERS AND SWITCHES. TAG AND CRATE FOR SHIPPING.
12. ALL INSTRUMENTS SHALL BE TAGGED AS FOLLOWS: 002-XX-10-XXXX, SO PG-2012 WOULD BE TAGGED 002-PG-10-2012.
13. PROTECT ALL OPENINGS FOR SHIPPING.
14. ESTIMATED SHIPPING WEIGHT UNIT: 51,000 lbs.
15. ALL PIPING HYDRO TESTS TO BE CHART RECORDERS

DESIGN CONDITIONS:		A11 (SWEET)
D.P. & TEMP.		229 PSIG @ -20/300°F
BW C.A.		1/16" (1.5mm)
NPT/SW C.A.		1/16" (1.5mm)
RADIOGRAPHY		10%
P.W.H.T.		NONE
HYDROTEST		1.5 TIMES D.P.
PIPING:		
BW PIPING		3" - 20" SCH. STD, SA-106-B 2" SCH. 80, SA-106-B
SW PIPING		≤ 1 1/2" SCH. 80 SA-106-B
NPT PIPING		≤ 1 1/2" SCH. 80 SA-106-B
INSTRUMENT TUBING		1/4" O.D. 316 STAINLESS STEEL (0.035") 1/8" VENTS
PROCESS TUBING		1/2" O.D. 316 STAINLESS STEEL (0.049")
FITTINGS:		
BW FITTINGS		3" - 20" SCH. STD, SA-234-WPB 2" SCH. 80, SA-234-WPB
** SW FITTINGS		≤ 1 1/2" CL3000 SA-105N
NPT FITTINGS		≤ 1 1/2" CL3000 SA-105N
* FLANGES		RFWN BORE TO PIPE, SA-105N
GASKETS		316 SS 'CGI' FLEXICARB
BOLTING		SA-193-B7/SA-194-2H SCH. 160, SA-106-B
PUMP/L.G. NIPPLES		316 SS SWAGelok (DOUBLE FERRULE)
INSTR. TUBING FITTINGS		316 SS SWAGelok (DOUBLE FERRULE)
PROCESS TUBING FITTINGS		316 SS SWAGelok (DOUBLE FERRULE)

- * INSTRUMENT NOZZLES AND PIPING CONTAINING GLYCOL SHALL BE CL300
- ** 5% RT FIT-UP
- *** 10% MPI ON ANY PIPING FILLET WELDS (SW).
- **** PIPE SCHEDULE IS SELECTED BASED ON PRESSURE AND CORROSION LIMITS.
- ***** SEE SOCKETWELD PROCEDURES FOR GAP.

ISOMETRIC VIEW

SCALE: 1/2"=1'-0"
BUILDING NOT SHOWN

DWG.	DESCRIPTION	REV.	DATE	REV. BY	DESCRIPTION	DATE	REV. BY	DESCRIPTION
D-2013-8440-51F-001	MECHANICAL FLOWSHEET	A	2013-07-21	ZR	ISSUED FOR CUSTOMER APPROVAL			
		B	2013-07-24	VIK	ISSUED FOR CUSTOMER APPROVAL			
		C	2013-08-23	ZR	ISSUED FOR CUSTOMER APPROVAL			
		D	2013-09-10	DD	RE-RE-ISSUED FOR CUSTOMER APPROVAL			
		O	2013-10-15	DD	ISSUED FOR CONSTRUCTION			
		1	2013-11-26	HZ	REVISED TAG NUMBERS			

DRAWN	ZR	DATE	2013-06-17
SCALE	NTS	CHK'D	

LOCATION:	FERRIER CPF PROJECT, AB
CUSTOMER:	DEVON CANADA CORPORATION
DWG./SHOP ORDER:	D-2013-8440-51A-001/003
REV.	1

ONE (1) UNIT REQ'D

ALCO GAS & OIL
PRODUCTION EQUIPMENT LTD.
*GP of the ALCO GAS & OIL PRODUCTION EQUIPMENT LIMITED PARTNERSHIP.

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ISOMETRIC VIEW & NOTES
LEP CLOSED HYDROCARBON DRAIN PACKAGE
TAG: 002-PK-10-2000