



**TIE-IN SCHEDULE:**

- 1 NPS 6(150)-CL150 ASME RF HC DRAIN INLET, B.O.P. @ ELEV. 15'-11<sup>5</sup>/<sub>16</sub>" (4859)
- 2 NPS 2(50)-CL150 ASME RF VENT GAS CONN., B.O.P. @ ELEV. 15'-11<sup>5</sup>/<sub>16</sub>" (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'-4<sup>7</sup>/<sub>16</sub>" (4380)
- 8 NPS 2(50)-CL150 ASME RF UTILITY AIR SUPPLY, ⌀ @ ELEV. 1'-0" (305)
- 9 NPS 2(50)-CL150 ASME RF INSTRUMENT AIR SUPPLY, ⌀ @ ELEV. 2'-0" (610)
- 10 NPS 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'-11<sup>5</sup>/<sub>16</sub>" (4859)
- 12 24" CABLE TRAY ENTRY FOR 575V CUT 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 P4):  
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<sup>1</sup>/<sub>2</sub>".
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. I/A 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: 001-XX-10-XXXX, SO PG-1012 WOULD BE TAGGED 001-PG-10-1012
13. PROTECT ALL OPENINGS FOR SHIPPING.
14. ESTIMATED SHIPPING WEIGHT UNIT: 51,000 lbs.
15. ALL PIPING HYDRO TESTS TO BE CHART RECORDERS

A11 (SWEET)	
<b>DESIGN CONDITIONS:</b>	
D.P. & TEMP.	229 PSIG @ -20 <sup>2</sup> / <sub>40</sub> F
BW C.A.	1/16" (1.5mm)
NPT/SW C.A.	1/16" (1.5mm)
RADIOGRAPHY	10%
P.W.H.T.	NONE
HYDROTEST	426 PSIG
<b>PIPING:</b>	
BW PIPING	3" - 20" SCH. STD. SA-106-B
SW PIPING	2" SCH. 80, SA-106-B
NPT PIPING	≤ 1 1/2" SCH. 80 SA-106-B
INSTRUMENT TUBING	≤ 1 1/2" SCH. 80 SA-106-B
PROCESS TUBING	1/2" O.D. 316 STAINLESS STEEL (0.035") 3/8" VENTS
<b>FITTINGS:</b>	
BW FITTINGS	3" - 20" SCH. STD. SA-234-WPB
SW FITTINGS	2" SCH. 80, SA-234-WPB
NPT FITTINGS	≤ 1 1/2" CL3000 SA-105N
FLANGES	≤ 1 1/2" CL3000 SA-105N
GASKETS	RFWN BORE TO PIPE, SA-105N
BOLTING	316 SS 'CG' FLEXICARB
PUMP/L.G. NIPPLES	SA-193-B7/SA-194-2H
INSTR. TUBING FITTINGS	SCH. 160, SA-106-B
PROCESS TUBING FITTINGS	316 SS SWAGelok (DOUBLE FERRULE)
	316 SS SWAGelok (DOUBLE FERRULE)

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

\* 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.

DWG.	DESCRIPTION	REV.	DATE	BY	CHK'D
D-2013-8440-50F-001	MECHANICAL FLOWSHEET	A	2013-07-24	ZR	
		B	2013-08-29	ZR	
		C	2013-09-10	DD	
		D	2013-10-08	VJK	
		E	2013-11-15	HZ	
		O	2013-11-15	HZ	

ONE (1) UNIT REQ'D

DRAWN	ZR	<b>ALCO GAS &amp; OIL</b> PRODUCTION EQUIPMENT LTD.	The information contained herein is the confidential property of Alco Gas and Oil Production Equipment Ltd. and is not for publication. The information is based on the understanding that no part thereof shall be copied or communicated to a third party without authorization in writing from Alco Gas and Oil Production Equipment Ltd.
DATE	2013-06-17		
SCALE	NTS	<b>ISOMETRIC VIEW &amp; NOTES</b> <b>COB CLOSED HYDROCARBON DRAIN PACKAGE</b> TAG: 001-PK-10-1000	
LOCATION: FERRIER CPF PROJECT, AB		L.S.D.: 11-02-039-08 WSM	
CUSTOMER: DEVON CANADA CORPORATION		DWG/SHOP ORDER: <b>D-2013-8440-50A-001/003</b>	
		REV. <b>0</b>	