

Aspire Energy Resources Ltd.

4304 – 39139 HWY 2A
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4484 - 01 Rev.0

1.0 VESSEL

- 1 24" O.D. x 7'6" S/S 1440 psi MAWP VERTICAL SEPARATOR
Manufactured by Natco Canada in 2000
Constructed with Alberta Registration
-20 / 100°F design temperature
0.125" corrosion allowance
Inlet diverter and support skirt
Radiography: Partial
3 phase design

VESSEL CONNECTIONS:

N1	Inlet	(1) - 3" 600# RF Flange
N2	Gas Outlet	(1) - 3" 600# RF Flange
C1	Drain	(1) - 2" NPT
C2	H2O LLC	(1) - 2" NPT
C3	H2O Outlet	(1) - 2" NPT
C4	H2O LG	(2) - 3/4" NPT
C5	HC LLC	(1) - 2" NPT
C6	HC Outlet	(1) - 2" NPT
C7	HC LG	(2) - 3/4" NPT
C8	PI	(1) - 1/2" NPT
C9	TI	(1) - 3/4" NPT
C10	PSV	(1) - 1" NPT
C11	HLSD	(1) - 2" NPT

2.0 INSTRUMENTATION

"Dressed Two Phase"

FE-100 "Recond."	(1)	DANIELS SENIOR ORIFICE FITTING (or equal) 3" 600# ANSI flanged upstream and downstream Schedule 80 AGA 3C configuration c/w vanes. One (1) 1" TOL and (1) 1/2" TOL on downstream
FR/PR-100	(1)	NONE
BPCV-100 "Recond."	(1)	FISHER 2" 600# RFF D-BODY CONTROL VALVE 2" 600# RFF connections 667-40 actuator. Air to open/fail closed 3/4" trim 6 to 30 psi
BPC-100 "Recond."	(1)	FISHER 4150-R PRESSURE CONTROLLER Reverse acting control module 6 to 30 psi range 0 to 1500 psi bourdon tube
LC-100 "Recond"	(1)	NORRISEAL 1001A LIQUID LEVEL CONTROLLER 2" NPT connections 6 – 30 psi Output Snap acting control module 1 7/8" x 12" long PVC vertical displacer
LCV-100 "Recond."	(1)	NORRISEAL 2220 LIQUID LEVEL CONTROL VALVE (or equal) 2" NPT connections 6 to 30 psig input Air to open / fail closed 1" trim
LG-100 "Recond."	(1)	QUALITY LIQUID LEVEL GAUGE (or equal) Q-15-R20 (Reflex type) c/w gauge valves and isolation valves
PRV-100 "Recond."	(1)	FISHER 630 PRESSURE REDUCING VALVE 1" FNPT connections 1/8" orifice 46 to 95 psi range Standard service construction
PRV-200	(2)	BELLOFRAM T-50 PRESSURE REDUCING VALVES 5 to 35 psi Standard construction c/w vented bonnet

- PSV-100 (1) **TAYLOR 8200 PRESSURE RELIEF VALVE**
 1 " FNPT x 1" FNPT connections
 Set at 1440 Psi, mounted on vessel
 "E" Orifice
 Standard service construction
- PSV-200 (1) **TAYLOR 8200 PRESSURE RELIEF VALVE**
 1" FNPT x 1" MNPT connections
 Set @ 150 Psi, mounted on FGS
 "E" Orifice
 Standard service construction
- PI-100 (1) **WESTERN GAUGE PRESSURE INDICATOR**
 4" dial, 1/2" bottom mount
 0 to 1500 Psi range
 Mounted on separator
 Standard service construction
- PI-200 (1) **WESTERN GAUGE PRESSURE INDICATOR**
 2 1/2" dial, 1/4" bottom mount
 0 to 160 Psi range
 Mounted on Fuel Gas Scrubber
 Standard service construction
- TI-100 (1) **TREND TEMPERATURE INDICATOR**
 2 1/2" dial
 -20 to 110 C range
 3/4" x 1/2" x 6" U length 304 CS thermowell

3.0 SKID AND BUILDING SPECIFICATIONS

1 SKID BASE 10'0" WIDE x 9'0" LONG

8" Channel Main Members
 8" Channel Cross Members
 3/16" checker-plate decking
 Lift lugs

1 FOAM PANEL METAL BUILDING

10'0" Wide x 9'0" Long x 8'6" High Eave, Shed Type
 22 Gauge Galvalume
 One (1) 3'0" Wide x 7'0" High Mandoor c/w panic hardware
 One (1) 36" x 36" Double-glazed sliding window with screen
 Two (2) 12" x 12" louvers c/w closures

1 **BUILDING HEATER**

24,000 Btu/hr Catalytic type heater c/w the following;
Vent hood, thermostat, regulator, safety shutoff, protective grill
and 25 feet of 12 VDC start cables. Natural Gas Orifice

4.0 **FUEL GAS SYSTEM**

- 1 8 5/8" O.D. x 30" S/S x 150 psi FUEL GAS SCRUBBER
Constructed with AB Registration
c/w HLSD

5.0 **MATERIAL SPECIFICATIONS**

Welded Piping

Pipe	A-106-B Sch. XH
Flanges	A-105, Sch. XH
Fittings	A-234-WPB, Sch. XH
Threadolets	A-105-N
Bolting	A-193-B7, A-194-2H
Gasket	304 SS Spiral Wound

Threaded Piping

Pipe	A-106-B, Sch. 80/160
Threaded Fittings	A-105, 3000#

Instrument Tubing

Tube Fittings	Galvanized Hylok
Tubing	304 SS 0.035" wall welded

6.0 **TESTING / PWHT SPECIFICATIONS**

Hydrotesting

Pressure Vessel	Will be hydrotested to 1.5 times the maximum allowable working pressure as per ASME Section VIII
Pressure Piping	Will be hydrotested to 1.5 times the maximum allowable working pressure as per ASME B31.3

PWHT

Vessel	Yes
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Piping None

Radiography

Vessel RT-1

Piping 10%

7.0 PAINT AND COATING SPECIFICATIONS

<i>External Preparation</i>	SSPC-SP#3
<i>External Finish</i>	One (1) Shop Coat Industrial Primer
	One (1) Shop Coat Grey Enamel

8.0 MANUAL VALVE SPECIFICATIONS

Description

- 2" NPT RP, 2000 Psi, Frontier, Nace, Ball Valves
- 3/4" NPT RP, 2000 Psi, Frontier, Nace, Ball Valves
- 1/2" NPT RP, 2000 Psi, Frontier, Nace, Ball Valves
- 1/2" NPT, 6000#, Century, C.S., Needle Valves
- 1/4" NPT, 6000#, Century, C.S., Needle Valves