

**VESSEL DATA SHEET**

SHT 1 OF 2

1 CLIENT Devon Canada  
 2 PROJECT Ferrier Central Processing Facility (Job 5B1107)  
 3 FABR. SPEC DEVON GS-3310  
 4 MANUFACTURER 5Blue Process Equipment Inc.

REQ NO. 407014-00120  
 ITEM NO. 002-V-01-1510  
 SERVICE L.P. Inlet Separator  
 REGISTRATION NO. \_\_\_\_\_

**DESIGN DATA**

6 REGISTERED Yes with CRN PROVINCE OF Alberta  
 7 OPERATE (internal) 703 kPag @ 13 °C  
 8 OPERATE (external) 90 kPag @ 15 to 40 °C  
 9 DESIGN (internal) 1,379 kPag @ 150 °C  
 10 DESIGN (external) Full Vacuum kPag @ 150 °C  
 11 MINIMUM DESIGN METAL TEMPERATURE (°C) -45  
 12 STRESS RELIEF N/A WHY \_\_\_\_\_  
 13 RADIOGRAPHY UW-11a JOINT EFF SHELL (%) 100% HEAD (%) 100%  
 14 WIND VELOCITY (km/h) 100 EARTHQUAKE ZONE per NBC  
 15 ALTITUDE (m) 1025 Barometric (kPaa) 90 SNOW LOAD (kg/m2) Per NBC  
 16 AMBIENT TEMPERATURE (°C) -40 / +35  
 17  ASME VIII DIV I  ASME VIII DIV II  
 18  SWEET SERVICE  SOUR SERVICE  
 19  HORIZONTAL  VERTICAL

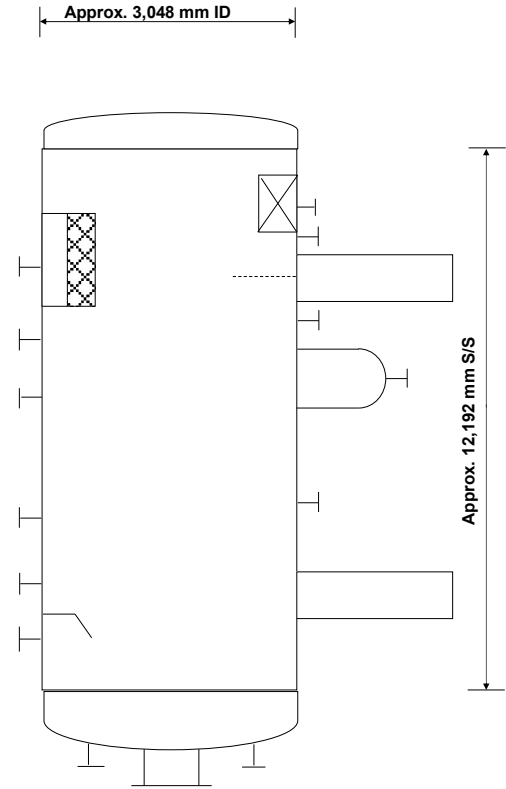
**WEIGHT**

LESS INTERNALS (kg) 33,479 INTERNALS WT (kg) 450  
 OPERATING WT (kg) 41,965-91,039 HYDROTEST WT (kg) 131,496

	SHELL	HEADS
22 TYPE	<u>Rolled Plate</u>	<u>SE 2:1</u>
23 ASME MATERIAL	<u>SA-516-70N</u>	<u>SA-516-70N</u>
24 DESIGN THICKNESS (mm)	<u>25.4</u>	<u>25.4</u>
25 CORROSION ALLOW (mm)	<u>3.2</u>	<u>3.2</u>
26 TOTAL MIN THICK (mm)	<u>25.4</u>	<u>23.4</u>

**FABRICATOR TO PROVIDE**

- |  |   |
|--|---|
| <input type="checkbox"/> SKIRT & BASE RING               | <input type="checkbox"/> SUPPORT GRID                                       |
| <input type="checkbox"/> LEGS                            | <input type="checkbox"/> PIPE COIL  |
| <input checked="" type="checkbox"/> SADDLES              | <input checked="" type="checkbox"/> LIFTING LUGS                            |
| <input checked="" type="checkbox"/> PLATFORM CLIPS       | <input type="checkbox"/> TAILING LUG  |
| <input checked="" type="checkbox"/> PLATFORMS            | <input checked="" type="checkbox"/> SAND BLASTING                           |
| <input checked="" type="checkbox"/> LADDER CLIPS         | <input checked="" type="checkbox"/> EXTERNAL PAINTING                       |
| <input checked="" type="checkbox"/> LADDERS              | <input checked="" type="checkbox"/> INTERNAL COATING                        |
| <input checked="" type="checkbox"/> INSULATION RINGS     | <input checked="" type="checkbox"/> GROUND LUGS <u>(2) - 2"x3/8"FBx2"LG</u> |
| <input checked="" type="checkbox"/> PIPE SUPPORT CLIPS   | <input type="checkbox"/> INLET DIVERTER <u>N1</u>                           |
| <input checked="" type="checkbox"/> PIPE SUPPORTS        | <input type="checkbox"/> SPECIAL NOZZLE BKR                                 |
| <input type="checkbox"/> TOP DAVIT                       | <input checked="" type="checkbox"/> VORTEX BREAKER <u>N3, N4</u>            |
| <input checked="" type="checkbox"/> MANWAY DAVIT & RUNGS | <input type="checkbox"/> SYPHON DRAIN                                       |
| <input type="checkbox"/> MANWAY HINGE                    | <input checked="" type="checkbox"/> STUDS & NUTS <u>M1, M2</u>              |
| <input type="checkbox"/> PAINTERS TROLLEY                | <input checked="" type="checkbox"/> GASKETS <u>M1, M2</u>                   |
| <input type="checkbox"/> TRAY SUPPORT RINGS              | <input checked="" type="checkbox"/> BLIND FLANGES <u>M1, M2</u>             |
| <input type="checkbox"/> SEAL PAN SUPPORT                | <input checked="" type="checkbox"/> INSULATION <u>(Note 1-2)</u>            |
| <input checked="" type="checkbox"/> VANE PACK <u>N2</u>  | <input type="checkbox"/> GLYCOL TRACING                                     |
| <input checked="" type="checkbox"/> VANE PACK SUPPORT    | <input type="checkbox"/> ELEC. HEAT TRACING                                 |
| <input type="checkbox"/> DOWNCOMER SUPPORTS              |   |
| <input type="checkbox"/> ANCHOR BOLT CHAIRS              |   |



**CONNECTION SCHEDULE**

MARK	SIZE	QTY	SERVICE	RATING	TYPE	MARK	SIZE	QTY	SERVICE	RATING	TYPE
N1	16"	1	Inlet	150#	RFHB	N9A/B	2"	2	Water Bridle	300#	RFLWN
N2	16"	1	Gas Outlet	150#	RFHB	N10	2"	1	PG/PIT	300#	RFLWN
N3	4"	1	HC Outlet	150#	RFLWN	N11	2"	1	PIT	300#	RFLWN
N4	6"	1	Water Outlet	150#	RFSCH80	N12	2"	1	TG/TW	300#	RFLWN
N5	8"	1	PSV	150#	RFLWN	N13	2"	1	TIT/TE/TW	300#	RFLWN
N6A/B	2"	2	HC Bridle	300#	RFLWN	N14A/B	3"	2	Vent	150#	RFLWN
N7A/B	2"	2	Water Bridle	300#	RFLWN	N15	3"	1	Utility	300#	RFLWN
N8A/B	2"	2	HC Bridle	300#	RFLWN	N16	4"	4	Anode	150#	RFHB
M1	20"	1	Manway	150#	RFHB						
M2	20"	1	Manway	150#	RFV1						

60 REMARKS: BALANCE OF INFORMATION TO BE PROVIDED BY VENDOR  
 61 1-1 VENDOR to confirm Vessel dims, nozzle sizes and quantities to meet Process guarantees.  
 62 1-2 Part of the Vessel outside the building shall be insulated with 50mm H  
 63 1-3 See drawing number 5B1107-02-DR-20-002 to reference vessel tags.  
 64  
 65

Description	REV	DATE	MECH	PROC	CHKD	APPR
Inlet Separator	0					

JOB NO. 5B1107  
 DATA SHEET NO. \_\_\_\_\_

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**VESSEL PROCESS DESIGN SHEET**

SHT 2 OF 2

1 CLIENT Devon Canada REQ. NO. 407014-00120  
 2 PROJECT Ferrier Central Processing Facility (Job 5B1107) ITEM NO. 002-V-01-1510  
 3 FABR. SPEC \_\_\_\_\_ SERVICE L.P. Inlet Separator

OPERATING CASE			CASE 1	CASE 2
Fluid				
Operating Pressure	Max/Norm/Min	kPag	800/700/600	
Operating Temperature	Max/Norm/Min	°C	23/13/3	
Design Pressure		kPag	1379	
Design Temperature	Min/Max	°C	-28/150	
Slug/Surge Volume	NOTE 2	m <sup>3</sup>	-	
Hazard Level			Class 1, Div 2	

VAPOUR				
Mass Flowrate		kg/h	25,420	
Density	(@ P & T)	kg/m <sup>3</sup>	6.70	
Viscosity		cP	0.0110	
Molecular Weight			-	

LIQUID HYDROCARBON				
Volume Flowrate		BBL/day	127 to 218	
Density	(@ P & T)	kg/m <sup>3</sup>	669	
Viscosity		cP	0.36	
Surface Tension		dyne/cm	-	

LIQUID AQUEOUS				
Volume Flowrate		BBL/day	66 to 114	
Density	(@ P & T)	kg/m <sup>3</sup>	1016	
Viscosity		cP	1.19	

VESSEL				
Horizontal / Vertical				Horizontal
Shell Diameter ID		mm		3,048.0
Shell seam to seam length		mm		12,192.0

BOOT				
Diameter		mm		609.6
Height		mm		1175.8

INTERNALS				
Demister Type				Vane Pack
Vortex Breaker Required				Yes
Other Internals				Weir, 4x Annodes

**COMPOSITION**

Component	Vapour Phase mol fraction
CO2	0.021484
H2S	0.000000
N2	0.004188
C1	0.813619
C2	0.096055
C3	0.037836
iC4	0.005622
nC4	0.008689
iC5	0.002291
nC5	0.002163
C6	0.001618
C7	0.003671
H2O	0.001937
Oil (38 deg API)	

**NOTE**

- 5-1) Seller to size this equipment as 3-phase separator.
- 5-2) Sizing to include slug catching provision of 400 BBL (dissipation over 8 hours) consisting of 240 BBL condensate and 112 BBL water.
- 5-3) Seller to recommend and provide any internals to facilitate proper operation.



JOB NO. 5B1107  
 DATA SHEET NO. \_\_\_\_\_

Description	REV	DATE	MECH	PROC	CHKD	APPR
Inlet Separator	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0



the pressure equipment safety authority

PRESSURE PIPING CONSTRUCTION AND TEST DATA REPORT

In accordance with the provisions of the PESR Section 31(1)

Shop Construction [x]; Field Construction [ ];
Final Data Report [x]; Partial Data Report [ ] (from one ABSA- authorized Contractor to another ABSA- authorized Contractor).

Complete both sides of this Form

1. Constructed By: 5 Blue Process Equipment Inc Owner's Job No: 01-00348.01
(Name of ABSA authorized primary contractor or subcontractor)
2303 - 8th Street, Nisku, Alberta, CANADA, T9E 7Z3
(Address)

Certificate of Authorization Permit No. AQP-1507 Expiry Date: February 4th, 2017

2. Constructed For:
(Name of primary contractor if different from above)

(Address)

Certificate of Authorization Permit No. AQP-N/A Expiry Date: N/A
(Required when the primary contractor undertakes some/all of the quality functions, e.g., NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

3. Owner: DEVON NEC CORPORATION.#400.3 Ave suit 2000 Calgary, Alberta T2P 4H2, Canada
(Name and address)

LSD 11-02-038-08 W5M
(Location of installation)

Certificate of Authorization Permit No. AQP- N/A Expiry Date: N/A
(Required when the owner undertakes some/all of the quality functions, e.g., NDE, PWHT, Tie-in, fabrication, hydro test, final assembly etc.)

4. Piping Design Alberta Registration No.: PP-N/A
(Required if aggregate piping volume is over 0.5m³)

5. Design Responsibility: Owner [x]; Contractor [ ]

6. WP No.: WP-3146.2 ; Company: 5Blue Process Equipment Inc. Owner's WP No. (If used): WP-N/A
(Alberta Registration No.) (Alberta Registration No.)

WPS No(s). used: 5B-102 aw/pwht, 5B-103 aw/pwht ; Owner's WPS No(s). (If used): N/A

7. Code: ASME B31.1 Non Boiler External Piping [ ]; ASME B31.1 Boiler External Piping [ ];
B31.5 [ ]; B31.9 [ ]; CSA Z662 Steam Pipelines [ ];
ASME B31.3 [x] - Service Category: Normal [x], D [ ], M [ ], High Pressure [ ]; Severe Cyclic Condition [ ]
High Purity [ ]

Table with 12 columns: Drawing No. Rev. No. Line No., Fluid (Air/Stm. Etc.), Des. Press. kPa, Des. Temp. °C (Max. & Min.), Pressure Test kPa, Test Medium, Pipe Mat'l Spec. & Grade, C.A. mm, Pipe NPS & Schedule, Flange Material & Rating, PWHT/ Preheat Temp. °C, NDE

Partial Data Reports certified by sub-contractors are listed below and attached to this Data Report

No.	Line No.	Spool No.	Dwg. No. (with Rev. No.)	Sub-contractor (Name)	AQP No. (if from Alberta)	Expiry (if from Alberta)

Remarks: For partial data report provide information about the code work that was not completed by the subcontractor (e.g., hydrostatic test, PWHT etc.). For final data report provide information about the code work that was not completed by subcontractors and subsequently completed by the primary contractor (e.g., hydrostatic test of entire assembly, PWHT etc.)

Please see attached LL # 5B1106-02-LL-80-001 rev 2 sheet 2 of 2  
sheet 3 of 2

Endorse certificate 'A' or 'B'

<p><b>A. CERTIFICATE OF COMPLIANCE</b> Signed by the subcontractor when supplying this certificate as a <b>Partial Data Report</b></p> <p>We certify that the statements in this Data Report are correct and that materials, construction and workmanship of the piping fabrication conform to the registered quality system and the applicable Piping code(s).</p> <p>Date: _____ Contractor</p> <p>_____ Print Authorized Representative's Name      Signature</p> <p><b>This certificate is not valid unless it forms part of a Final Data Report signed by Primary Contractor</b></p>	<p><b>B. CERTIFICATE OF COMPLIANCE</b> Signed by the primary contractor when supplying this certificate as a <b>Final Data Report</b></p> <p>We certify that the statements in this Data Report are correct and that piping job no. <u>5B1107</u> described in this Data Report was constructed in accordance with the Province of Alberta Safety Codes Act and Regulations, and applicable ASME Piping Code(s).</p> <p>Date: 9 Feb-14      5 Blue Process Equipment Inc</p> <p>_____ Contractor</p> <p><b>JOELLE DERY-BROCHU</b> <b>QUALITY CONTROL</b> 780-955-2040 Ext 241 _____ Print Authorized Representative's Name      Signature</p>
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**CERTIFICATE OF INSPECTION**

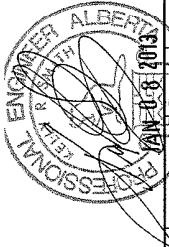
I, the undersigned, employed by Devon REC have verified that all required examination and testing has been completed, and inspected the piping described in this construction data report to the extent necessary to be satisfied that it conforms to all applicable examination requirements of the Code and of the engineering design, and state that, to the best of my knowledge and belief, the contractor has constructed this piping in accordance with the Alberta Safety Codes Act and Regulations. By signing this certificate neither the inspector nor his or her employer makes any warranty, expressed or implied, concerning the piping described in this construction data report. Furthermore, neither the inspector nor his or her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date: March 31, 2014      Date: \_\_\_\_\_

Dan de Groot      \_\_\_\_\_  
Owner's Inspector Name (please print)      ABSA Safety Codes Officer (please print)  
**(BOILER EXTERNAL PIPING ONLY)**

Dale H      \_\_\_\_\_  
Owner's Inspector Signature      ABSA Safety Codes Officer's Signature

Current version of this Form may be obtained from [www.absa.ca](http://www.absa.ca)



**Line Designation Table - Calgary Division**  
 Devcon - Ferriter - LIQUID EXTRACTION PLANT  
 Devcon Job no. 01-00348.01  
 581107-LP Inlet Separator Package

NPS	COMMODITY	PIPING MATL. LINE CLASS	LINE NUMBER	PIPE SCHED OR THICK.	REFERENCE PSID (1)	SERVICE INFORMATION			OPERATING CONDITIONS				DESIGN CONDITIONS				INSULATION		LEAK TEST		PAINT	NDE (%)	P.W.M.T.	ABSA REQUIRED (Y/N)	SPECIAL NOTES (14)	REVISION	
						FLUID	FROM	TO	PHASE (2)	NORMAL PRESS. kPag	TEMP. °C	UPSET PRESS. kPag	MAX. TEMP. °C	CODE (4)	TEMP. °C	MIN. TEMP. °C	THICK. (7)	MATL. (8)	THICK. (9)	TYPE (1)							PRESS. kPag
324	P	600	C11	1335	80	581107-02-DR-00-001	L.P. GAS	SKID EDGE	VESSEL	GAS	700	13			9930	50 to -29	-29			HYDRO	15315	YES	10% X-RAY	NO	YES		
219	P	600	C11	1335	80	581107-02-DR-00-001	L.P. GAS	SKID EDGE	VESSEL	GAS	700	13			9930	50 to -29	-29			HYDRO	15315	YES	10% X-RAY	NO	YES		
88	P	600	C11	1335	80	581107-02-DR-00-001	L.P. GAS	SKID EDGE	VESSEL	GAS	700	13			9930	50 to -29	-29			HYDRO	15315	YES	10% X-RAY	NO	YES		
324	P	150	A11	1338	STD	581107-02-DR-00-001	L.P. GAS	SKID EDGE	VESSEL	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
406	P	150	A11	1338	STD	581107-02-DR-00-001	L.P. GAS	SKID EDGE	VESSEL	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
219	PG	150	A11	1343	STD	581107-02-DR-00-001	VAPOUR	VESSEL	PSV 1510E	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
168	PG	150	A11	1343	STD	581107-02-DR-00-001	VAPOUR	VESSEL	PSV 1510E	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
219	HF	150	A11	9340	STD	581107-02-DR-00-001	VAPOUR	PSV 1510E	SKID EDGE	GAS	700	13			1580	150 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
273	HF	150	A11	9340	STD	581107-02-DR-00-001	VAPOUR	PSV 1510E	SKID EDGE	GAS	700	13			1580	150 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
406	PG	150	A11	1342	STD	581107-02-DR-00-001	VAPOUR	VESSEL	REDUCER 406X324	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
324	PG	150	A11	1342	STD	581107-02-DR-00-001	VAPOUR	REDUCER 324X273	REDUCER 324X273	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
273	PG	150	A11	1342	STD	581107-02-DR-00-001	VAPOUR	REDUCER 324X273	REDUCER 324X273	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
324	PG	150	A11	1342	STD	581107-02-DR-00-001	VAPOUR	REDUCER 324X273	REDUCER 324X273	GAS	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
48	UHMW	300	A11a	21393	80	581107-02-DR-00-001	UTILITY HEAT MEDIUM RETURN	UHG/UMI	REDUCER	LIQUID	300	65			1693	120 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	UHMW	300	A11a	21393	80	581107-02-DR-00-001	UTILITY HEAT MEDIUM RETURN	REDUCER	SKID EDGE	LIQUID	300	65			1693	120 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	UHMS	300	A11a	21399	80	581107-02-DR-00-001	UTILITY HEAT MEDIUM SUPPLY	SKID EDGE	REDUCER	LIQUID	500	90			1693	120 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
48	UHMS	300	A11a	21399	80	581107-02-DR-00-001	UTILITY HEAT MEDIUM SUPPLY	REDUCER	UHG/UMI	LIQUID	500	90			1693	120 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
114	PL	150	A11	1311	STD	581107-02-DR-00-001	CONDENSATE	VESSEL	REDUCER 114X60	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	PL	150	A11	1311	80	581107-02-DR-00-001	CONDENSATE	REDUCER 114X60	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
168	PW	150	A11	7320	STD	581107-02-DR-00-001	PRODUCED WATER	WATER BOOT	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
114	PW	150	A11	7320	STD	581107-02-DR-00-001	PRODUCED WATER	WATER BOOT	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	PW	150	A11	7320	STD	581107-02-DR-00-001	PRODUCED WATER	WATER BOOT	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	PW	150	A11	7320	80	581107-02-DR-00-001	PRODUCED WATER	WATER BOOT	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	PW	150	A11	7321	80	581107-02-DR-00-001	PRODUCED WATER	REDUCER 168X60	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		
60	HCD	150	A11	28461	80	581107-02-DR-00-001	CONDENSATE	HYDRO-CARBON LINE	SKID EDGE	LIQUID	700	13			1980	50 to -29	-29			HYDRO	2940	YES	10% X-RAY	NO	YES		



**FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS**  
**(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)**

A627092

**As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1**

- Manufactured and certified by 5Blue Process Equipment Inc. 2303-8<sup>th</sup> Street, Nisku Alberta, Canada, T9E-7Z3  
(Name and address of Manufacturer)
- Manufactured for DEVON NEC CORPORATION, #400, 3 Ave Suite 2000 Calgary, Alberta T2P 4H2, Canada  
(Name and address of Purchaser)
- Location of installation Ferrier Central Processing Facility- LSD: 11-02-038-08 W5M  
(Name and address)
- Type: Horizontal 5B1107-20 W2982.2 5B1107-02-DR-20-001/002 N/A 2013  
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year built)
- The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2010 edition  
Year
- to 2011a n/a n/a  
(Addenda, if applicable (Date)) (Code Case numbers) (Special Service per UG-120(d))
- Shell SA-51670N 1.000" 0.125" 120" ID 40'-0"S/S  
(Material spec. number, grade) (Nominal thickness) (Corr. Allow.) (Inner diameter) (Length (overall))
- Seams: TYPE 1 Full 100% NONE N/A TYPE 1 Full 100% 4  
(Long. welded, dft. wgt., insp. bars) (R.T. (Spot or Full)) (EFF. %) (D.T. temp. (°F)) (Time, hr) (Grth welded, dft., wgt., insp. bars) (R.T. (Spot or Full)) (EFF. %) (No. of Courses)
- Heads: (a) Material SA-51670N (b) Material SA-51670N  
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness (inch)	Corrosion Allowance (inch)	Crown Radius (inch)	Knuckle Radius (inch)	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius (inch)	Flat Diameter (inch)	Side to Pressure (Convex or Concave)
(a)	Manway Head	0.92	0.125	N/A	N/A	2:1	N/A	N/A	N/A	Concave
(b)	Other Head	0.92	0.125	N/A	N/A	2:1	N/A	N/A	N/A	Concave

If removable, bolts used (describe other fastenings) N/A

(Material spec. number, grade, size, number)

- MAWP 200 15 psi at max temp. 302 302 °F  
(Internal) (External) (Internal) (External)  
Min. design metal temp. -50 °F at 200 psi. Hydro., pneu., or comb. test press. 260 psi.  
Proof test N/A

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size (inch)	Type	Material		Nozzle Thickness (inch)		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
N1 Inlet	1	16 ID	RFHB CL 150	SA-350LF2 CL1	-	1.81	0.125	N/A	UW-16.1{c}	-	Shell
N2 Gas Outlet	1	16 ID	RFHB CL 150	SA-350LF2 CL1	-	1.81	0.125	N/A	UW-16.1{c}	-	Shell
N3 Hydrocarbon Outlet	1	4 ID	RFLWN CL 150	SA-350LF2 CL1	-	0.75	0.125	N/A	UW-16.1{c}	-	Shell
N4 Water Outlet / Drain	1	NPS 6	RFWN CL 150	SA-333GR6	SA-350LF2 CL1	0.43	0.125	N/A	UW-16.1{c}	TYPE 1	Boot Head
N5 PSV-1110E	1	8 ID	RFLWN CL 150	SA-350LF2 CL1	-	0.88	0.125	N/A	UW-16.1{c}	-	Shell

- Supports: Skirt NO Lugs NO Legs NO Other Saddles Attached Welded to Shell  
(Yes or no) (Number) (Number) (Number) (Describe) (Where and how)

- Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A

Name of part, item number, Manufacturer's name and identifying stamp)

3447 cu.ft. See attached U4 forms for additional nozzles. Owner's tag# (002-V-01-1510).  
Heads and Shells I.T @ -50F per UG-84(i). Production I.T of main shell and boot circ seams and long seams per UG-84(i) @ -50F.  
Rest exempt per UCS-66(g) UCS-66(a) UCS-67(a)(3). Bolting exempt per Fig UCS66 note (c).  
RT FULL PER UW-11(a).  
Item #6- Boot Shell: SA-51670N, Nom thk: 1.0", Corr: 0.125", OD: 24", 3'-10 1/4" S/S, attached per UW-16.1(c).  
Boot Repad: 36" OD x 1/2" x 24 1/8" ID, SA-51670N  
Item #7- Seam: Type 1, RT: Full, EFF: 100%, NONE, N/A, Type 1, RT: Full, EFF: 100%, 1 Course  
Item #8- Boot Head: SA-51670N, Min thk: 0.9062", Corr: 0.125", 2:1 SE Concave to pressure, OD: 24".  
N17 NPS 4 RFBL SA350LF2CL1 CL 150, Studs 5/8"x3 1/2" LG c/w 2 nuts each. SA-193-B7M and SA-194-2HM, UNRC-2A.  
M1 and M2 NPS 20 RFBL SA350LF2CL1 CL 150, Studs 1 1/8"x6 1/4" LG c/w 2 nuts each. SA-193-B7M and SA-194-2HM, 8UNR 2A.  
Construction drawing number: 5B1107-02-DR-20-001/002/003 Rev.5/6/B

**CERTIFICATE OF SHOP/FIELD COMPLIANCE**

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. "U" Certificate of Authorization Number 40,338  
 Expires February 4, 2014

Date 8-Nov-2013 Co. name 5Blue Process Equipment Inc. Signed Joelle Dery-Brochu  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by 5Blue Process Equipment Inc. at 2303, 8<sup>th</sup> Street Nisku, Alberta  
 I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Alberta and employed by ABSA have inspected the component described in this Manufacturer's Data Report on 8-Nov-2013 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 8-Nov-2013 Signed [Signature] Commissions NB14446A, AB422  
(Authorized Inspector) (National Board (incl endorsements), State, Province and number)

627092

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by 5Blue Process Equipment Inc. 2303-8th Street, Nisku, Alberta, Canada, T9E-7Z3
2. Manufactured for DEVON NEC CORPORATION. #400, 3 Ave Suite 2000 Calgary, Alberta T2P 4H2, Canada
3. Location of installation Ferrier Central Processing Facility Central Oil Battery
4. Type Horizontal L.P. Inlet Separator 5B1107-20
W2982.2 001/002 Rev.2/5 N/A 2013
(CRN) (Drawing number) (Nat'l Bd No.) (Year built)

Nozzles, inspection, and safety valve openings:

Table with columns: Purpose (Inlet, Outlet, Drain, etc), No., Diameter or Size (inch), Flange Type, Material (Nozzle, Flange), Nozzle Thickness (Nom., Corr.), Reinforcement Material, How Attached (Nozzle, Flange), Location (Insp. Open.). Rows include N6A/B LIT-1110C, N7 A/B LIT-1110B, N8 A/B LIT-1110, N9 A/B LIT-1110A, N10 PG-1110D, N11 PIT-1110A, N12 TG/TW-1110B, N13 TIT/TE/TW-1110A, N14 A/B VENT, N15 UTILITY, N16 A-D ANODE, N17 SPARE, M1 MANWAY, M2 MANWAY.

Data Report Item Number Remarks table with multiple empty rows for reporting.

Certificate of Authorization: Type: "U" Cert. No. 40,338 Expires February 4, 2014
Date 8-Nov-2013 Name 5Blue Process Equipment Inc. Signed Joelle Dery-Brochu (Representative)
Date 8-Nov-2013 Name M. Land (Authorized Inspector) Commission NB14446A, AB422 [National Board (incl. Endorsement), State, Province and number]