

④ 617865

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

- Manufactured and certified by Opesco Energy Industries Ltd., 285175 Kleysen way, Rocky View , AB. T1X 0K1
(Name and address of Manufacturer)
- Manufactured for Encana Corporation, 150 9th Ave. SW, Calgary, AB T2P 3H9
(Name and address of Purchaser)
- Location of installation SWAN COMPRESSOR STATION LSD: c-12-B/93-P-9
(Name and address)
- Type Horizontal Separator 02-0780-01 V7339.213 V-02-0780-01-001 R.1 2012
(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 2010ED.

to SA-516-70N 4" .125" (Addenda (date)) (Code Case numbers) 8'-0" (Special service per UG-120(d)) 18'-0"

6. Shell SA-516-70N (Material spec. number, grade) FULL (Nominal thickness) 1150 F 4 hr Type 1 (inner diameter) FULL 100% 2 (Length (overall))

7. Seams Type 1 FULL 100% (Corr. allow.) (Hi T. temp.) (Time, hr) (Girth (welded, dbl, sngl, lap, butt)) (IR, T. spotor ful (Eff, % (No. of courses))

8. Heads: (a) Material SA-516-70N (Spec. no., grade) (b) Material SA-516-70N (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	MANWAY HEAD	3.95"	.125"			2:1				CONCAVE
(b)	OTHER HEAD	3.613"	.125"			2:1				CONCAVE

If removable, bolts used (describe other fasteners)

9. MAWP 1440 PSI (Internal) 15 PSI (External) 100 F at max. temp. 100 F (Internal) 2160 PSI (External) Hydro. test pressure

10. Nozzles, inspection, and safety valve openings:

Purpose (inlet, Outlet, Drain)	Number	Diameter or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached	Location
INLET/GAS OUTLET	2	16"	RFV3/CL600	SA-350LF2CL1	4.5"	Integral	Fig. UW-16.1(c)	SHELL
Drain/Outlet/PSV/Spare	4	4"	RFV1/CL600	SA-350LF2CL1	1.96"	Integral	Fig. UW-16.1(c)	SHELL
LIQ. OUTLET	1	3"	RFV1/CL600	SA-350LF2CL1	1.74"	Integral	Fig. UW-16.1(c)	SHELL
Desand water inlet/outlet	2	2"	REFWN/CL600	SA-350LF2CL1	0.66"	Integral	Fig. UW-16.1(c)	SHELL
BR-1110&1111/TI/PI	6	2"	RFWN/CL600	SA-350LF2CL1/333-6	.344"	Integral	Fig. UW-16.1(c)	SHELL
SPARE/PURGE	2	2"	RFWN/CL600	SA-350LF2CL1/333-6	.344"	Integral	Fig. UW-16.1(c)	SHELL
MANWAY	1	20"	RFV2/CL600	SA-350LF2CL1	4.625"	Integral	Fig. UW-16.1(c)	HEAD

11. Supports: Skirt YES (Yes or no) Lugs YES (Number) Legs YES (Number) Other SADDLES (Describe) Attached SADDLES WELDED (Where and how)

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

Production Impact Tested TO - 49 °F Per UCS-66(A) & UCS-67(a). Material impact test required on Shells, Heads, per UG-84. All other material exempt Per UCS-66(g). Volume: 1056 CuFt. (30 Cu.M) PSV on Attached Spools. Construction DWG. NO: V-02-0780-01-001 R.5 Tag #V-111 20" & 4" & 2" BLINDS Mat. SA-350-LF2. STUDS: SA-193-B7M & NUTS: SA-194-2HM Thread UNC. SIZE: (1 5/8" x 11 1/2") & (7/8" x 5 3/4") & (5/8" x 1 1/4"). (20") 24 Bolts and 48 Nuts. (4") 8 Bolts and 16 Nuts. (2") 4 Bolts and 8 Nuts.

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 21,356 expires July 21, 2013

Date April 27, 2012 Co. name Opesco Energy Industries Ltd (Manufacturer) Signed Hagan (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Opesco Energy Industries Ltd at CALGARY, ABERTA, CANADA
1, 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 APR 30 2012 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 APR 30 2012 Signed T. Bugh (Authorized Inspector) Commissions AB 340 NB 13780 A (National Board Uncl. endorsements), State, Province, and number]