

(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only) **As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1**

**A491804**

1. Manufactured and certified by Opasco Energy Industries Ltd., 2601 Centre Ave East, Calgary, AB T2A 2L1  
(Name and address of manufacturer)  
2. Manufactured for Penn West Petroleum Ltd., 2000, 425-1st Street S.W., Calgary, AB T2P 3L8  
(Name and address of purchaser)  
3. Location of installation LSD: 07-23-079-16 W5M  
(Name and address)  
4. Type Vert. Absorber 02-3836-1 L9071.213 V-00-QBABS36 R.P2Q2 N/A 2003  
(Horiz or vert. tank) (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l Bd No.) (Year built)  
5. The chemical and physical properties of all parts meet the requirements of material specification of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2001  
Year

6. Shell: SA-516-70 N 1.375" 0.125" 2' - 9.25" 26' - 0"  
(Addenda (date)) (Code Case Nos.) (Special service per UG-1 20(d))  
(Mat'l (Spec. No., Grade)) (Nominal Thk. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (overall) (ft. & in.))  
7. Seams: Type 1 Full 100% N/A N/A Type 1 \*Spot 3  
(Long (VWelded Dbl. Sngl. Lap, Butt)) (R.T. (Spot or Full)) (Eff. (%)) (H.T. Temp. (F)) (Time (hr)) (Girth (Welded Dbl. Sngl. Lap, Butt)) (R.T. (Spot, Partial or Full)) (No. of Courses)

8. Heads: (a) Mat'l SA-516-70 N (b) Mat'l SA-516-70 N  
(Spec. No. Grade) (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 Pres (Con c/Co nv)
(a)	<u>Top Bottom</u>	<u>1.3125"</u>	<u>0.125"</u>			<u>2:1</u>				<u>Concave</u>
(b)										

if removable, bolts used (describe other fasteners)

9. MAWP 1345 psi at max. temp 150 F \*F  
(Mat'l Spec. No., Gr., Size, No.)  
Min. Design Metal Temp. \*\*20 °F at 1345 Psi Hydro., pneu. or comb. test 2017 psi.

10. Nozzles, Inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l	How Attached	Location
<u>Inlet</u>	<u>1</u>	<u>6"</u>	<u>CI 600 RFWN</u>	<u>SA-333-Gr.6/SA-105N</u>	<u>.432"</u>	<u>SA-516-70N</u>	<u>Fig. UW-16.1(h)</u>	
<u>PSV/Insp/SPARE</u>	<u>2</u>	<u>2"</u>	<u>TOL</u>	<u>SA-105 N</u>	<u>6000#</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	<u>Shell</u>
<u>Equalizer/PSV</u>	<u>1</u>	<u>1.5"</u>	<u>TOL</u>	<u>SA-105 N</u>	<u>6000#</u>	<u>Integral</u>	<u>Fig. UW-16.1(a)</u>	<u>Head</u>
<u>Drain</u>	<u>1</u>	<u>1.5"</u>	<u>NPT</u>	<u>SA-105 N</u>	<u>.400"</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	
<u>LG/HEC/HECO</u>	<u>3</u>	<u>1"</u>	<u>CPLG</u>	<u>SA-105 N</u>	<u>6000#</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	
<u>RGO/INSP/SP/RTA</u>	<u>12</u>	<u>1"</u>	<u>TOL</u>	<u>SA-105 N</u>	<u>6000#</u>	<u>Integral</u>	<u>Fig. UW-16.1(a)</u>	<u>Shell</u>
<u>WLG/TI/HCLG</u>	<u>5</u>	<u>.75"</u>	<u>TOL</u>	<u>SA-105 N</u>	<u>6000#</u>	<u>Integral</u>	<u>Fig. UW-16.1(a)</u>	<u>Shell</u>
<u>Outlet</u>	<u>1</u>	<u>6"</u>	<u>CI 600 RFWN</u>	<u>SA-333-Gr.6/SA-105N</u>	<u>.864"</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	
<u>PI</u>	<u>1</u>	<u>.5"</u>	<u>TOL</u>	<u>SA-105 N</u>	<u>6000#</u>	<u>Integral</u>	<u>Fig. UW-16.1(a)</u>	

11. Supports: Skirt YES Lugs (No.) Legs (No.) Other (Describe) Attached Btm Head Welded  
(Yes or no) (No.) (No.) (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:

Impact Testing: \*\*Exempt as per UCS-66(a) and UG-20(f)(1-5) Radiography per: \*As per UW-11(a) and UW-51  
(Name of part, item number, Mfr's name and identifying stamp)  
Tag No.: V-600 V-500 Volume: 161.37 cu. ft. (4.57 cu. m)

A No: CONSTRUCTION DWG. NO.: V-03-3836-2360 R.4

**CERTIFICATE OF SHOP 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 Code for Pressure Vessels, Section VIII, Division 1. 'U' Certificate of Authorization No. 21,356 expires July 21, 2004

Date: March 19, 2003 Co. Name Opasco Energy Industries Ltd. Signed [Signature]  
(mm/dd/yy) (Manufacturer) (Representative)

**CERTIFICATE OF SHOP INSPECTION**

Vessel constructed by Opasco Energy Industries Ltd. at Calgary, Alberta, Canada  
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and I or the State or Province of Alberta and employed by ABSA, Alberta Boilers Safety Association

have inspected the component described in the Manufacturer's Data Report on 03/19/03, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed, or implied, concerning the pressure vessel described in the Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage

loss of any kind arising from or connected with this inspection.

Date March 19, 2003 Signed [Signature] Commissions Alberta 175  
(mm/dd/yy) (Authorized Inspector) (Nat'l Bnd (incl. endorsements), State, Prov and No.)