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

1. Manufactured and certified by ABAX ENERGY SERVICES LTD., 5929-6th Street N.E., Calgary Alta T2K 5R5 (Name and address of manufacturer)

2. Manufactured for TOTAL PETROLEUM CANADA LTD. 639-5th Avenue S.W., Calgary, Alta (Name and address of purchaser)

3. Location of installation LSD 6-34-72-8 W6M (Name and address)

4. Type VERT. TANK (Horiz. or vert., tank) | 1581-V400B (Mfg's serial No.) | F-6669.2 (CRN) | 1581B501 (Drawing No.) | -------- (Nat'l. Bd. No.) | 2/86 (Year built)

5. 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 1983 (Year)

to WINTER 84 (Addenda (Date)) ---------- ----------

| | | | | | |
|---|---|---|---|---|---|
| 6. Shell: | SA-516-70 (Mat'l. (Spec. No., Grade)) | 28.6 mm (Nom. Thk. (in.)) | 3.2 mm (Corr. Allow. (in.)) | 610mm (Diam. I.D. (ft. & in.)) | 238 mm S/S (Length (overall) (ft. & in.)) |
| | | 1.125" | .125" | 2' | 7' - 6" |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7. Seams: | DBL BUTT (Long. (Welded, Dbl., Sgl., Lap, Butt)) | FULL (R.T. (Spot or Full)) | 100 (Eff. (%)) | 1150 (H.T. Temp. (°F)) | 70min. (Time (hr)) | DBL BUTT (Girth (Welded, Dbl., Sgl., Lap, Butt)) | FULL (R.T. (Spot, Partial or Full)) | 1 (No. of Courses) |

8. Heads: (a) Mat'l. SA-516-70 (Spec. No., Grade) (b) Mat'l. SA-516-70 (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) | TOP | 25.73mm | 3.2mm | ---- | ---- | 2:1 | ---- | ---- | ---- | CONCAVE |
| (b) | BOTTOM | 1.013" | .125" | ---- | ---- | 2:1 | ---- | ---- | ---- | CONCAVE |

If removable, bolts used (describe other fastenings) ---------- (Mat'l., Spec. No., Gr., Siz., No.)

9. MAWP 9488 KPA 1376 psi at max. temp. 82°C 180 °F

Min. temp. (when less than -20°F) ---------- °F. Hydro., pneu., or comb. test pressure 14232 KPA 2064 psi.

10. Nozzles, inspection and safety valve openings:

| Purpose (Inlet, Outlet, Drain) | No. | Diam. or Size | Type | Mat'l. | Nozzle Thk. | Reinforcement Mat'l. | How Attached | Location |
|---|---|---|---|---|---|---|---|---|
| HLSD | 1 | 168mm | RFWN | SA-106-B | 14.2mm | SA-516-70 | WELDED | SHELL |
| | | 6" | | | .562" | | | |
| INLET | 2 | 88.9mm | RFWN | SA-106-B | 11.1mm | SA-516-70 | WELDED | SHELL |
| | | 3" | | | .438" | | | |

11. Supports: Skirt YES (Yes or no) Lugs NO (No) Legs NO (No) Other BASE RING (Describe) Attached WELDED TO BTM HEAD (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: ---------- (Name of part, item number, Mfg's name and identifying stamp)

VOLUME: 0.62 $M^3$

3 PHASE VERTICAL SEPARATOR

**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. 14941 expires Dec 28, 19 87.

Date Feb. 12/86 Co. name ABAX ENERGY SERVICES LTD. (Manufacturer) Signed [signature] (Representative)

**CERTIFICATE OF SHOP INSPECTION**

Vessel constructed by ABAX ENERGY SERVICES LTD. at CALGARY

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 LABOUR have inspected the component described in this Manufacturer's Data Report on Feb. 13, 19 86, 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 this Manufacturer's Data Report. Furthermore, neither the Inspector nor his 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 86-02-13 Signed [signature] (Authorized Inspector) Commissions ---------- (Nat'l Board and endorsements) State, Prov. and No.)

(12/82) This form (E00117) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017