

**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 Code Rules, Section VIII, Division 1**

A59543C

1. Manufactured and certified by Tornado Technologies Inc. 3236 50<sup>th</sup> Ave S.E. Calgary Alberta T2B 3A3  
(Name and address of Manufacturer)

2. Manufactured for Husky Energy LTD 300, 2749 - 39 AVE NE, Calgary AB T1Y 4T8, Canada  
(Name and address of Purchaser)

3. Location of installation LSD # b-049-C1093-P-02 Tumbler Ridge B.C. Canada  
(Name and address)

4. Type Horizontal 007094-01 U 8388.213 CRN-60-5-S-T-02 Rev0 N/A 2009  
(Horiz. Or vert., tank) (Mfg'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 specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2007  
Year

to 2008 N/A  
Addenda (Date) Code Case Nos. Special Service per UG-120(d)

6. Shell: SA 516-70N 0.375" 0.125" 4'-11-1/4" 12'-0"  
Mat'l. (Spec. No., Grade) Nom. Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams: TYPE 1 FULL 100% 1150 1 TYPE 1 FULL 100 2  
Long. (Welded, 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 or Full) Eff. (%) No. of Courses

8. Heads: (a) Mat'l. SA 516 70N (b) Mat'l. SA 516 70N  
(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 Pressure (Convex or Concave)
(a)	LEFT	0.3125"	0.125"	-	-	2:1	-	-	-	Concave
(b)	RIGHT	0.3125"	0.125"	-	-	2:1	-	-	-	Concave

If removable bolts used (describe other fastenings) N/A  
(Mat'l., Spec. No., Gr., Size, No.)

9. MAWP 50 N/A psi at max. temp. 212 N/A °F  
(Internal) (external) (Internal) (external)

Min. design metal temp. 49 °F at 50 psi. Hydro., pneu., or comb. test pressure 65 Hydro psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Material	How Attached	Location
Inlet/Outlet	2	10" 150cl	RFWN	SA 105NISA-106B	0.500	INTEGRAL	UW16.1(c)	Left/Right Head
Bridle Conn. Spare	3	3" 150cl	RFWN	SA 105NISA-106B	0.300	INTEGRAL	UW16.1(c)	Shell
Pump Out	1	3" 150cl	RFWN	SA 105NISA-106B	0.300	INTEGRAL	UW16.1(c)	Shell
Anode, LSHH	2	4" 150cl	RFWN	SA 105NISA-106B	0.337	INTEGRAL	UW16.1(c)	Left Head/Shell
Blanket Gas	1	2" 150cl	RFWN	SA 105NISA-106B	0.343	INTEGRAL	UW16.1(c)	Shell
Vent	1	10" 150cl	RFWN	SA 105NISA-106B	0.500	INTEGRAL	UW16.1(c)	Shell
Manway	1	30" 150cl	RFWN	SA 105NISA 516-70N	0.500	INTEGRAL	UW16.1(c)	Shell

11. Supports: Skirt NO Lugs 2 Legs 2 Other NONE Attached Shell-Welded  
(Yes or No) (No.) (No.) (Describe) (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: N/A

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

Sour Horizontal Flare Knockout Vessel, Construction Drawing: 007094-VES-01-02 R3, Volume is 267.896 cu.ft.

Impact Testing No: Exempt as per UCS-66(b), RT-1: Full on circ per UW11(a)5(a) & UW51

Pressure Relief device to be installed as per UG-125

**CERTIFICATE OF SHOP/FIELD COMPLIANCE**

We certify that the statements 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. 35,571 expires January 19 2012

Date JUN 2 5 2009 Co. name Tornado Technologies Inc. Signed [Signature]  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by Tornado Technologies Inc. at 3236 50<sup>th</sup> Ave S.E. Calgary Alberta T2B 3A3  
 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

the pressure vessel described in this Manufacturer's Data Report on JUN 2 5 2009, 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 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 JUN 2 5 2009 Signed [Signature] Commissions ALTA #11  
(Authorized Inspector) (Nat'l Board (incl. endorsements), State, Prov. and No.)