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

(A) 475230

1 Manufactured and certified by: Black, Sivalls & Bryson (Canada) Ltd., 2314 - 8 Street, Nisku, Alberta, T9E 7Z2

2 Manufactured for: Tundra Engineering Ltd., 18th flr, 250-6th Ave. S.W. Calg., AB. T2P 3H7

3 Location of installation: LSD 4-03-57-23 W5M

4 Type: Horizontal Sep. (Horiz. or vert. tank) | 011055-V100 (Mfg's Serial No) | P6409.2 (CRN) | 30-CL-12351A Rev.0 (Drawing No) | (National Bd. No) | 2001 (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, SectionVIII, Division 1. 1998 (year) to 2000 (Addenda (Date)) | (Code Case No) | (Special service per UG 120(d))

6 Shell: SA-516-70S (Matl. (Spec. No., Grade)) | 1" (Nom.Thk. (in.)) | 0.0625" (Corr. Allow. (in.)) | 48" OD (Diam. I.D. (ft. & in.)) | 20'-0" S/S (Length (overall)(ft. & in.))

7 Seams:

Long (Welded, Dbl., Snlg., Lap, Butt)	RT (Spot or full)	Eff. (%)	H.T. Temp. (°F)	Time (hr.)	Girth (Welded, Dbl. Snlg., Lap, Butt)	RT (Spot Partial or Full)	No. of Courses
Type 1	full	100	N/A	N/A	Type 1	full	2

8. Heads: (a) Matl. SA-516-70N (Spec. No., Grade) (b) Matl. SA-516-70N (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allow.	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	end	1.0625"	0.0625"			2:1				concave
(b)	end	1.0625"	0.0625"			2:1				concave

If removable, bolts used (describe other fastenings) _____ (Matl., Spec. No., Gr., Size, No.)

9. MAWP 720 psi at max. temp. 130 °F
Min. design metal temp. -20 °F at 720 psi. **Hydro.**, pneu., or comb. test pressure 936 psi

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. Or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached	Location
				See attached				
				form U-4				

11. Supports: Skirt No (Yes or No) Lugs _____ (No.) Legs _____ (No.) Other: Saddles (Describe) Attached Welded to shell (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)
Constructed to drawing # 30-CL-12351 Rev. 4. Impact exempt per UG-20(f) & UCS-66(a). Volume: 250 CU.FT.
Boot Shell: SA-106-B; 20"OD X 1.031"THK NOM. X 2'-3-5/16" LG.
Boot Head: SA-516-70N; 20"OD X 1.0" THK(MIN); 2:1 SE

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. 27894 expires August 8, 2003.

Date: Oct 9/0. Co. name: Black, Sivalls & Bryson (Canada) Ltd. (Manufacturer) Signed: Scott Kosa (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Black, Sivalls & Bryson (Canada) Ltd. at 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 Alberta Boilers Safety Association have inspected the component described in this Manufacturer's Data Report on OCT 09, 2001 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 2001-10-09 Signed: M Hennyz Commissions Alberta #132

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

(A) 47523

1. Manufactured and certified by Black, Sivalls & Bryson (Canada) Ltd., 2314 - 8 Street, Nisku, Alberta T9E 7Z2

2 Manufactured for Tundra Engineering Ltd. 18th flr. 250-6th Ave. S.W. Calg., AB. T2P 3H7

3 Location of Installation LSD 4-03-57-23 W5M

4 Type Horizontal (Horizontal, vertical, or spherical) Separator (Tank, Separator, Heat exch., etc.) 011055-V100 (Mfg's Serial No.)

P6409.2 (CRN) 30-CL-1235LA Rev.0 (Drawing No.) (National Bd. No.) 2001 (Year built)

10 Nozzles, inspection and safety valve openings:

Purpose	No.	Size	Type	Material	Thickness.	Reinf. Mat.	How Attach	Location
INLET	1	10"	300#RFWN	SA-105N/SA-106-B	1.125"	SA-516 70N	UW-16.1(c)	SHELL
GAS OUT	1	10"	300#RFWN	SA-105N/SA-106-B	1.125"	SA-516-70N	UW-16.1(c)	SHELL
WATER OUT	1	2"	300#RFWN	SA-105N/SA-106-B	0.343"		UW-16.1(c)	SHELL
OIL OUT	1	3"	300#RFWN	SA-105N/SA-106-B	0.600"		UW-16.1(c)	SHELL
WATER LC CAGE	2	2"	300#RFWN	SA-105N/SA-106-B	0.343"		UW-16.1(c)	SHELL
OIL LC	2	2"	300#RFWN	SA-105N/SA-106-B	0.343"		UW-16.1(c)	SHELL
PSV	1	3"	300#RFWN	SA-105N/SA-106-B	0.600"		UW-16.1(c)	SHELL
MANWAY	1	18"	300#RFWN	SA-105N/SA-106-B	0.750"	SA-516-70N	UW-16.1(c)	HEAD
TI	1	¾"	CPLG	SA-105N	6000#		UW-16.1(c)	SHELL
PI	1	¾"	CPLG	SA-105N	6000#		UW-16.1(c)	SHELL
WATER BOOT	1	20"	PIPE	SA-106-B	1.031"	SA-516-70N	UW-16.1(c)	SHELL

Certificate of Authorization: Type U No 27894 Expires August 8, 2003

Date Oct 9/01 Co name Black, Sivalls & Bryson (Canada) Ltd. (Manufacturer) Signed Scott Kass (Representative)

Date 2001-10-09 Name [illegible] (Authorized Inspector) Commission Alberta #132 (Nat'l Board (include endorsements), State, Prov. and No.)