0335

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS

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

(A)3112(46

1 Manufactured and certified by **Maloney Steel Ltd. 8825 Shepard Road S.E. Calgary, Alberta T2H 1X1**
(Name and address of manufacturer)

2 Manufactured for **SUNCOR INC. 112 - 4 Ave. S.W., Calgary, Alberta T2P 2V5**
(Name and address of purchaser)

3 Location of installation **2-32-73-6-W6M**
(Name and address)

4 Type **VERTICAL** (Horizontal or vert. tank) | **94-C3159-3002-B** (Mfg's serial No.) | **M8970.2** (CRN) | **C3059-3002 R.2** (Drawing No.) | **N/A** (Nat'l. Bd. No.) | **1995** (Year Built)

5 The chemical and physical properties of all parts meet the requirements of material specification of the ASME BOILER AND PRESSURE VESSELS CODE The design,construction, and workmanship conform to ASME Rules, Section VIII, Division 1 **1992** (Year)

to **A93** (Addenda (date)) | **N/A** (Code Case Nos.) | **N/A** (Special service per UG-120(d))

6 Shell: **SA106-B** (Mat'l (Spec. No., Grade)) | **1.156"** (Nominal Thk. (in.)) | **.126"** (Corr Allow.(in)) | **18" OD** (Diameter I.D.(ft.&in.)) | **8'-0" S/S** (Length (overall)(ft & in))

7 Seams:

Long.(Welded, Dbl., Sngl.,Lap,Butt)	R.T.(Spot or Full)	Effy.(%)	H.T. Temp (°F)	Time (hr)	Girth (Welded Dbl., Sngl,Lap,Butt)	R.T. (Spot, Partial, or Full)	No. of Courses
SEAMLESS	**N/A**	**100**	**1100**	**1 1/4**	**TYPE NO.1**	**FULL**	**1**

8 Heads: (a) Matl. **SA516-70** (Spec. No. Grade) (b) Matl. **SA516-70** (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**	**1.056"**	**.126"**	-	-	**2:1 SE**	-	-	-	**CONCAVE**
(b)	**BOTTOM**	**1.056"**	**.126"**	-	-	**2:1 SE**	-	-	-	**CONCAVE**

If removable, bolts used (describe other fasteners) **N/A** (Matl., Spec. No., Gr.,Size, No.)

9 MAWP: **1347** psi at max. temp **200** °F

Min.Design Met.Temp. **32** °F at **1347** psi Hydro.,pneu, or comb. test pressure **2021** psi

10 Nozzles, Inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diameter or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached	Location
INLET,OUTLET,	**5**	**3"**	**RFLWN 600#**	**SA105N**	**.61"**	**INTEGRAL**	**WELDED**	**SHELL, TOP HEAD**
INSPECTION,L.S.H.H.								
H_2O L.C., H.C. L.C.	**2**	**4"**	**RFLWN 600#**	**SA105N**	**1.00"**	**INTEGRAL**	**WELDED**	**SHELL**
H_2O L.G.,H.C. L.G.,	**8**	**2"**	**RFWN/PIPE**	**SA106-B**	**.436"**	**INTEGRAL**	**WELDED**	**SHELL**
CONDENSATE OUT,								
WATER OUT,P.I.,T.I.								
DRAIN	**1**	**2"**	**RFWN/PIPE/ELBOW**	**SA106-B**	**.436"**	**INTEGRAL**	**WELDED**	**BOTTOM HEAD**

11 Supports: Skirt **YES** (Yes/No) Lugs **0** (No.) Legs **0** (No.) Other **N/A** (Describe) Attached **WELDED TO 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: MATERIALS, FABRICATION, WELDING AND RADIOGRAPHY ONLY OF VESSEL, MALONEY STEEL LTD. 2, KELOWNA, SERIAL NO. 95-8450-B
(Name of part, item number, Mfg's name and identifying stamp)

WELLSITE SEPARATOR TAG

IMPACT TESTING: **IMPACT TEST EXEMPTION PER UCS-66** **THIS REPORT COVERS PWHT AND HYDROTESTING ONLY.**

VOLUME: **12 FT.³ (0.340M³)**

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. **15742** expires **MAY 5, 1998**

Aug 11/95 Co. Name **Maloney Steel Ltd** (Manufacturer) Signed (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by **Maloney Steel Ltd** at **Calgary, Alberta, Canada**

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 the Manufacturer's Data Report on Aug 11 19 95, 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 or a loss of any kind arising from or connected with this inspection.

Aug 11, 95 Signed (Authorized Inspector) Commission **Alberta #11** (Nat'l Bd.(incl.endorsements) State, Prov.and No.)

FORM U-2A MANUFACTURER'S PARTIAL DATA REPORT (ALTERNATIVE FORM) (A) 3112146
A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

38

1. Manufactured and certified by: Maloney Steel Ltd.-2, 1655 Dilworth Drive, Kelowna, B.C. V1Y 8M4 (Name and address of Manufacturer)
2. Manufactured for: Maloney Steel Ltd., 8825 Shepard Rd. S.E., Calgary, Alberta T2H 1X1 (Name and address of Purchaser)
3. Location of installation: Wellsites 15-20, 2-32 and 18-31 (Name and address)
4. Type: Vertical Separators (Description of vessel part (shell, two-piece head, tube bundle)) | 95-K8450-B (Mfg's serial No.) | N/A (CRN)
   N/A (Nat'l. Bd. No.) | C3159-3002/2 (Drawing No.) | Maloney Steel Ltd. Calgary, AB (Drawing prepared by) | 1995 (Year built)
5. ASME Code, Section VIII, Div. 1: 1992 A 93 (Edition and Addenda (date)) | N/A (Code Case No.) | N/A (Special Service per UG-120(d))
6. Shell (a) No. of course(s): One (b) Overall length (ft & in.): 7'-11½"

Course(s)			Material	Thickness		Long Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter, in.	Length (ft & in.)	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	18" OD	7'-11½"	SA106-B	1.156	.126	N/A	N/A	N/A	1	Full	100%	N/A	N/A

7. Heads: (a) SA516-70 (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp (b) SA516-70 (Mat'l Spec. No., Grade or Type) H.T. - Time & Temp

	Location (Top, Bottom, Ends)	Thickness Min.	Thickness Corr.	Radius Crown	Radius Knuckle	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure Convex	Side to Pressure Concave	Category A Type	Category A Full, Spot, None	Category A Eff.
(a)	Top	1.056	.126	-	-	2:1	-	-	-	-	Concave	N/A	N/A	N/A
(b)	Btm	1.056	.126	-	-	2:1	-	-	-	-	Concave	N/A	N/A	N/A

If removable, bolts used (describe other fastening): N/A (Mat'l Spec. No., Grade, Size, No.)

8. MAWP 1347 (internal) / ____ (external) psi at max. temp. 200 (internal) / ____ (external) °F Min. design metal temp. 32 °F at 1347
9. Impact test: N/A (Indicate yes or no and the component(s) impact tested)
10. Hydro., pneu., or comb. test press.: N/A Proof test: N/A
11. Nozzles, inspection, and safety valve openings:

Purpose (inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material Nozzle	Material Flange	Nozzle Thickness Nom.	Nozzle Thickness Corr.	Reinforcement Material	How Attached Nozzle	How Attached Flange	Location (Insp. Open,
				SEE SUPPLEMENTARY							
				SHEET U-4 ATTACHED							

12. Supports: Skirt YES (Yes or No) Lugs N/A (No.) Legs N/A (No.) Others N/A (Describe) Attached Welded to Head (Where and How)
13. Remarks: Impact test exemption per UCS66
This report covers materials, fabrication, welding and radiography only.

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of material, construction, and workmanship of this pressure vessel part conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

U Certificate of Authorization No. 23,596 Expires August 19, 19 97
Date July 21-95 Name Maloney Steel Ltd.-2, Kelowna (Manufacturer) Signed [signature] (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the State or Province of B.C. and employed by Provincial Government of B.C. have inspected the pressure vessel part described in this Manufacturer's Data Report on Jul. 21, 19 95, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel part 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 part 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 95-07-21 Signed [signature] (Authorized Inspector) Commissions BC 7451 (Nat'l Board incl. endorsement, State, Province and No.)

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1 (A)311246

Manufactured and certified by: Maloney Steel Ltd.-2, 1655 Dilworth Drive, Kelowna, B.C. V1Y 8M4
(name and address of manufacturer)

Manufactured for: Maloney Steel Ltd., 8825 Shepard Rd. S.E., Calgary, Alberta T2H 1X1
(name and address of purchaser)

Location of installation: Wellsites 15-20, 2-32 and 18-31
(name and address)

Type: Vertical (horiz., vert., or sphere) | Wellsite Separators (tank, separator, heat exh., etc.) | 95-K8450-B (mfg's serial no.)

N/A (CRN) | C3159-3002 REV 2 (drawing no.) | N/A (Nat'l. Bd. no.) | 1995 (year built)

See U-2A Data Report Attached

Data Report Item Number — Remarks

MK	PURPOSE	NO	SIZE	TYPE	MAT'L	THK.	REINFORCEMENT	ATTACHED	LOC'N
N1	Inlet	2	3"	RFLWN	SA105N	0.81	Integral	Welded	
N2	Outlet								
N3a&b	Insp	2	3"	RFLWN	SA105N	0.81	Integral	Welded	Shell
N4	H_2O L.C.	2	4"	RFLWN	SA105N	1.00	Integral	Welded	
N5	H.C.L.C.								
N6a&b	H_2O L.G.	4	2"	RFWN	SA105N	600#		Welded	
N7a&b	H.C.L.G.	4	2"	SCH XXH Pipe	SA106-B	.436"	Integral	Welded	
N8	Cond.Out	2	2"	RFWN	SA105N	600#		Welded	
	H_2O Out	2	2"	SCH XXH Pipe	SA106-B	.436"	Integral	Welded	
N10	Drain	1	2"	RFWN	SA105N	600#		Welded	
		1	2"	SCH XXH Pipe	SA106-B	.436"	Integral	Welded	
N11	L.S.H.H.	1	3"	RFLWN	SA105N	0.81	Integral	Welded	
N12	P.I.	1	2"	RFWN	SA105N	600#		Welded	
N13	T.I.	1	2"	SCH XXH Pipe	SA106-B	.436"	Integral	Welded	

Certificate of Authorization: Type U No. 23,596 Expires August 19 ,19 97

Date July 21-95 Name Maloney Steel Ltd.-2, Kelowna, B.C. (manufacturer) Signed (representative)

Date 95-07-21 Name (Authorized Inspector) Commission BC # 5 (Nat'l. Board incl. endorsement, state, province and no.)