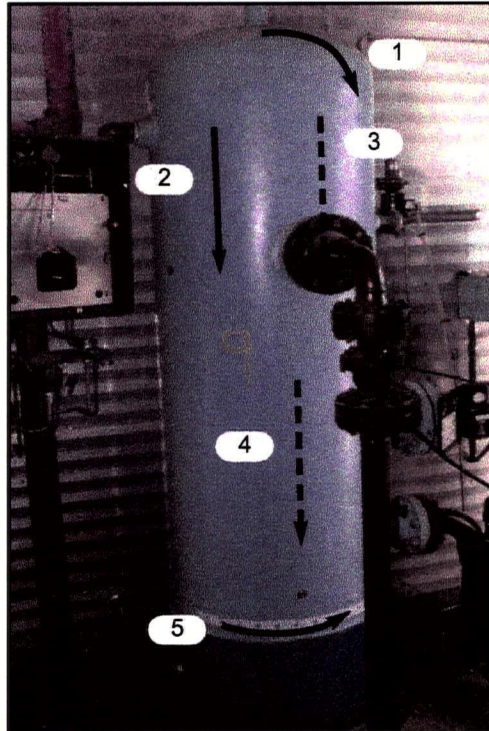


66033701



## VESSEL UT LOCATIONS



<b>Name:</b>	<b>Vertical Separator</b>	<b>MAWP:</b>	<b>600 PSI</b>
<b>A:</b>	<b>2659547</b>	<b>Des. Temp.:</b>	<b>100 °F/-20 °F</b>
<b>S/N:</b>	<b>04223</b>	<b>Head Material:</b>	<b>SA516-70</b>
<b>CRN:</b>	<b>F 7238.23</b>	<b>Head Thick:</b>	<b>0.500"</b>
<b>LSD:</b>	<b>10-04-10-16 W4M</b>	<b>Shell Material</b>	<b>SA516-70</b>
<b>Location:</b>	<b>Crowsnest Oil Battery Well Site</b>	<b>Shell Thick:</b>	<b>0.477"</b>
<b>Corr. Allow.:</b>	<b>0.0625"</b>	<b>Date Built:</b>	<b>1990</b>

**Corrosion Monitoring Eq/ c ID Analysis Report**

**Report For: Canadian 88 Energy Corporation**  
**Presented By: Alliance Engineering & Inspection Ltd.**  
**Address: 333-50 Avenue SE, Calgary, AB T2G 2B3**  
**Tel: (403) 255-5100 Fax: (403) 255-5171 Web: www.aeiltd.com**

Report Date:05/16/2002

(Report in Inches, Corrosion Rates in MPY)  
Analysis: Straight Line

Unit: CROWSNES  
Eq/Circ ID: 2659547  
Eq Type:  
Class:  
RBI:  
Design Code:

Flange Rating: 0 lb/in<sup>2</sup>  
Design Pressure: 600 lb/in<sup>2</sup>  
Design Temperature: 100 °F

Description: VERTICAL SEPARATOR  
A#2659547

Summary: Group Name: 10-04-10-16 W4M  
Insp. Due Date = 04/24/2007  
Pred. Ret. Date = 04/24/2069

Group Description: CROWNEST OIL BATTERY WELL SITES  
RCR = 2.0 MPY  
Rem. Life (from last survey 04/24/2002) = 67.0 yrs

0 C.A. Status: No  
Total Caution TMLs = 0

TML No	Location Description	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	U	Rep TML CR	TML Retirement Date	TML Inspection Date
1.01	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.504	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2091	04/24/2007
1.02	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.491	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2078	04/24/2007
1.03	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.492	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2079	04/24/2007
1.04	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.498	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2085	04/24/2007
1.05	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.496	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2083	04/24/2007
1.06	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.505	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2092	04/24/2007
1.07	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.502	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2089	04/24/2007
1.08	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.494	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2081	04/24/2007
1.09	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.500	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2087	04/24/2007
1.10	TOP HEAD	N *	0.477 NM	01/01/1990		N/A	0.482	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2069	04/24/2007
1.11	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.509	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/24/2096	04/24/2007
1.12	TOP HEAD	N	0.477 NM	01/01/1990		N/A	0.538	04/24/2002	N/A	0	N/A	0	0.415	U	1.0	04/25/2125	04/24/2007
2.01	SHELL	N	0.500 NM	01/01/1990		N/A	0.527	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2091	04/24/2007
2.02	SHELL	N	0.500 NM	01/01/1990		N/A	0.534	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2098	04/24/2007
2.03	SHELL	N	0.500 NM	01/01/1990		N/A	0.535	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2099	04/24/2007
2.04	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2093	04/24/2007
2.05	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2093	04/24/2007
2.06	SHELL	N	0.500 NM	01/01/1990		N/A	0.526	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2090	04/24/2007
2.07	SHELL	N	0.500 NM	01/01/1990		N/A	0.530	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2094	04/24/2007
2.08	SHELL	N	0.500 NM	01/01/1990		N/A	0.524	04/24/2002	N/A	0	N/A	0	0.438	U	1.0	04/24/2088	04/24/2007

**Corrosion Monitoring Eq, c ID Analysis Report**

**Report For: Canadian 88 Energy Corporation**  
**Presented By: Alliance Engineering & Inspection Ltd.**  
**Address: 333-50 Avenue SE, Calgary, AB T2G 2B3**  
**Tel: (403) 255-5100 Fax: (403) 255-5171 Web: www.aeiltld.com**

Report Date: 05/16/2002

(Report in Inches, Corrosion Rates in MPY)  
Analysis: Straight Line

Unit: CROWSNES  
 Eq/Circ ID: 2659547  
 Eq Type:  
 Class:  
 RBI:  
 Design Code:

Flange Rating: 0 lb/in<sup>2</sup>  
 Design Pressure: 600 lb/in<sup>2</sup>  
 Design Temperature: 100 °F

Description: VERTICAL SEPARATOR  
 A#2659547

Summary: Group Name: 10-04-10-16 W4M  
 Insp. Due Date = 04/24/2007  
 Pred. Ret. Date = 04/24/2069

Group Description: CROWNEST OIL BATTERY WELL SITES  
 RCR = 2.0 MPY  
 Rem. Life (from last survey 04/24/2002) = 67.0 yrs

O C.A. Status: No  
 Total Caution TMLs = 0

TML No	Location Description	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date
2.09	SHELL	N	0.500 NM	01/01/1990		N/A	0.527	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2091	04/24/2007
2.10	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2093	04/24/2007
2.11	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2093	04/24/2007
2.12	SHELL	N	0.500 NM	01/01/1990		N/A	0.531	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2095	04/24/2007
3.01	SHELL	N	0.500 NM	01/01/1990		N/A	0.552	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/25/2116	04/24/2007
3.02	SHELL	N	0.500 NM	01/01/1990		N/A	0.568	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2132	04/24/2007
3.03	SHELL	N	0.500 NM	01/01/1990		N/A	0.536	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/25/2100	04/24/2007
3.04	SHELL	N	0.500 NM	01/01/1990		N/A	0.534	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2098	04/24/2007
3.05	SHELL	N	0.500 NM	01/01/1990		N/A	0.538	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/25/2102	04/24/2007
3.06	SHELL	N	0.500 NM	01/01/1990		N/A	0.540	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/25/2104	04/24/2007
3.07	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2093	04/24/2007
3.08	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2093	04/24/2007
3.09	SHELL	N	0.500 NM	01/01/1990		N/A	0.523	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2087	04/24/2007
3.10	SHELL	N	0.500 NM	01/01/1990		N/A	0.526	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2090	04/24/2007
3.11	SHELL	N	0.500 NM	01/01/1990		N/A	0.522	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2086	04/24/2007
3.12	SHELL	N	0.500 NM	01/01/1990		N/A	0.526	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2090	04/24/2007
4.01	SHELL	N	0.500 NM	01/01/1990		N/A	0.524	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2088	04/24/2007
4.02	SHELL	N	0.500 NM	01/01/1990		N/A	0.534	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2098	04/24/2007
4.03	SHELL	N	0.500 NM	01/01/1990		N/A	0.522	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2086	04/24/2007
4.04	SHELL	N	0.500 NM	01/01/1990		N/A	0.526	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2090	04/24/2007
4.05	SHELL	N	0.500 NM	01/01/1990		N/A	0.525	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2089	04/24/2007

**Corrosion Monitoring Eq, ID Analysis Report**

**Report For: Canadian 88 Energy Corporation**  
**Presented By: Alliance Engineering & Inspection Ltd.**  
**Address: 333-50 Avenue SE, Calgary, AB T2G 2B3**  
**Tel: (403) 255-5100 Fax: (403) 255-5171 Web: www.aeilt.com**

Report Date: 05/16/2002

(Report in Inches, Corrosion Rates in MPY)  
Analysis: Straight Line

Unit: CROWSNES  
 Eq/Circ ID: 2659547  
 Eq Type:  
 Class:  
 RBI:  
 Design Code:

Flange Rating: 0 lb/in<sup>2</sup>  
 Design Pressure: 600 lb/in<sup>2</sup>  
 Design Temperature: 100 °F

Description: VERTICAL SEPARATOR  
 A#2659547

Summary: Group Name: 10-04-10-16 W4M  
 Insp. Due Date = 04/24/2007  
 Pred. Ret. Date = 04/24/2069

Group Description: CROWNEST OIL BATTERY WELL SITES  
 RCR = 2.0 MPY  
 Rem. Life (from last survey 04/24/2002) = 67.0 yrs

O C.A. Status: No  
 Total Caution TMLs = 0

TML No	Location Description	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date
4.06	SHELL	N	0.500 NM	01/01/1990		N/A	0.533	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2097	04/24/2007
4.07	SHELL	N	0.500 NM	01/01/1990		N/A	0.523	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2087	04/24/2007
4.08	SHELL	N	0.500 NM	01/01/1990		N/A	0.526	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2090	04/24/2007
4.09	SHELL	N	0.500 NM	01/01/1990		N/A	0.522	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2086	04/24/2007
4.10	SHELL	N	0.500 NM	01/01/1990		N/A	0.521	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2085	04/24/2007
4.11	SHELL	N	0.500 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2093	04/24/2007
4.12	SHELL	N	0.500 NM	01/01/1990		N/A	0.525	04/24/2002	N/A	0	N/A	0	0.438 U	1.0	04/24/2089	04/24/2007
5.01	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.540	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2127	04/24/2007
5.02	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.535	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2122	04/24/2007
5.03	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.536	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2123	04/24/2007
5.04	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.538	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2125	04/24/2007
5.05	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.529	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2116	04/24/2007
5.06	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.536	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2123	04/24/2007
5.07	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.535	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2122	04/24/2007
5.08	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.534	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2121	04/24/2007
5.09	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.530	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2117	04/24/2007
5.10	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.528	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2115	04/24/2007
5.11	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.532	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2119	04/24/2007
5.12	BOTTOM HEAD	N	0.477 NM	01/01/1990		N/A	0.536	04/24/2002	N/A	0	N/A	0	0.415 U	1.0	04/25/2123	04/24/2007

Report For: Canadian 88 Energy Corporation  
 Presented By: Alliance Engineering & Inspection Ltd.  
 Address: 333-50 Avenue SE, Calgary, AB T2G 2B3  
 Tel: (403) 255-5100 Fax: (403) 255-5171 Web: www.aeiltd.com

Report Date: 05/16/2002

(Report in Inches, Corrosion Rates in MPY)  
 Analysis: Straight Line

Unit: CROWSNES  
 Eq/Circ ID: 2659547  
 Design Code:  
 Eq Type:  
 Class:  
 RBI:

Flange Rating: 0 lb/in<sup>2</sup>  
 Design Pressure: 600 lb/in<sup>2</sup>  
 Design Temperature: 100 °F

Description: VERTICAL SEPARATOR  
 A#2659547

TML Corrosion Rates are each the Maximum of:

(A) -- Calculated Corrosion Rates x 1.00 : Varies  
 (B) -- Default Corrosion Rate : 1.0 MPY

Representative Corrosion Rate is the Maximum of:

(A) -- Average Corrosion Rate x 1.10 : Not Used.  
 (B) -- Average Max 25.0% of TMLs, Min of 2 : Not Used.  
 (C) -- Formula Corrosion Rate (Sigma = 1.28) : Not Used.  
 (D) -- Default Corrosion Rate : 2.0 MPY

Representative Corrosion Rate = 2.0 MPY

TML thickness readings have not been compensated for high Temperatures.  
 TML thickness readings have not been compensated for growths.

TML Life calculations are based on the Representative TML Corrosion Rate using Short Term and Long Term Corrosion Rates.

Nominal thickness is used for TML corrosion rate calculations with less than 3 surveys.

Minimum time between inspections required for corrosion rate calculation is 6 months.

TML Inspection Interval is:

(A) -- Minimum( TML Life / 2.00, 5.0 years )

Eq/Circ ID Last Survey Date is based on the LAST of the last 0% of TML survey dates (Min 1).

Eq/Circ ID Estimated life = 67.0 years from the most recent survey date.  
 (Estimated Life based on the ave of the earliest 0% (Min 1) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 04/24/2069

Recommended Eq/Circ UT/RT Inspection Date is 04/24/2007  
 UT/RT Inspection Interval is the minimum( Remaining life / 2.0, 5.0 years ).

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining Life < 1.00 Years.  
 There are 0 Caution TMLs in this Eq/Circ ID.

2949  
04223

(A) 26595313  
2659547

ALBERTA LABOUR  
General Safety Services Division  
Boilers Branch  
6th Floor, 10808 - 99 Avenue  
Edmonton, Alberta  
T5K 0G2

MANUFACTURER'S DATA REPORT  
FOR PRESSURE VESSEL

DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR  
D'APPAREILS SOUS PRESSION

Partial/Partiel

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by Construit par	Name and address of Manufacturer Nom et adresse du constructeur BROWNE MACH. SERVICES (1985) LTD. 773 16 St. S.W. BOX 753 MED. HAT
Manufactured for Construit pour	Name and address of Purchaser or Consignee Nom et adresse du client ou de son représentant ANADARKO PETROLEUM OF CANADA LTD. T1A 737 SUITE 4200 700 2ND St. S.W. CALGARY ALTA. T2P 2W2
Ultimate owner Utilisateur	Name and address Nom et adresse SAME
Location of Installation Lieu d'installation	Address Adresse TOWER 2-4-10-16-W4 10-4-10-16 W4

Pressure vessel/Appareil			
Type/Genre SEPARATOR (GAS/WATER)	Serial No/ N° de série 04222, 04223	Year Built/ Année de fabrication 1990	Overall Length/ Long totale 7'6"
Province Register or No - CRN N° d'enregistrement provincial - NEC	National Board No/ N° National Board F7238.23	Drawing No/ N° de dessin 24-600	Diameter/ Diamètre 24"

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.  
Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51 La conception, la construction et la façon sont conformes à ACNOR B51	ASME Sec VIII	Division I	ASME Supplement 1989	Code case No N° de cas
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Manufacturers' partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report:  
Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:

Names of parts/ Nom de la composante	Item No/ N° d'item	Manufacturer's Name/ Nom du constructeur	Identifying Stamp/ Estampe d'identification

Description	Material/ Matériau	Thickness/ Épaisseur	Corr Allow/ Surépais de corr	Diameter/ Diamètre	Overall Length/ Long totale	Number of courses/ Nombre de sections	Girth Joints/ Joints de circonférence		Longitudinal Joints/ Joints longitudinaux			Exam/ Traitements	
							Type	RT/ Radiog	Type	RT/ Radiog	Efficacy/ Efficacité	Temp/ Temp	Time/ Durée
SHELL	SA516-70	.5	.062	24"	5'	1	1	FULL	1	FULL	1	--	--

Description	Material/ Matériau	Min. Thickness/ Épais min	Corr Allow/ Surépais de corr	Crown Radius/ Rayon couron	Annular Radius/ Rayon ann.	Ends Radi/ Ray. extré	Conic Apex Angle/ Angle conique	Membr Radius/ Ray. Membr	Exam/ Traitements	Temp/ Temp	Time/ Durée	Spec/ Spéc

Removable bolts used - describe other fastenings.  
Boulons amovibles utilisés - décrire tout autre attaché

Pressure - Temperature/ Pression - température	Constructed for max. allowed working pressure Construit pour une pression max. permise	At max. temp. A une temp. max.	Max. Temp. when installed Temp. max. installée	Test Pressure/ Pression d'essai
		100°F		

A2652547

Tube Section / Faisceau tubulaire					
Tube / Faisceau tubulaire	Material / Matériau	Diameter / Diamètre	Nominal Thickness / Épaisseur nominale	Corrosion Allowance / Surépaisseur de corrosion	Attachment / Mode de rattachement
Tube material / Matériau des tubes	Diameter / Diamètre	Nominal Thickness / Épaisseur nominale	Gauge / calibre	Type / Straight or U / Type Droit ou U	Heating Surface / Surface de chauffe
Jacket / Chemise					
Type of Jacket / Genre de chemise	Jacket Closure / Fermeture de chemise	Proof Test / Pression d'épreuve	Heating Surface / Surface de chauffe	Sketch / Schéma	

Safety Valve Outlets / Soupapes de sûreté		
Number / Nombre	Dimension	Location / Endroit
1	2"	SHELL

Nozzles and Openings / Tubulures et ouvertures								
Purpose / But	Number / Nombre	Dimension	Type	Material / Matériau	Nominal Thickness / Épaisseur nominale	Reinforcement / Renforcement	How Attached / Genre d'attaches	Location / Endroit
GAUGE	3	1/2 3/4	TOL	SA105	3000	--	WELD	SHELL
OUTLET / LLC	2	3"	NOZZLE	SA106	.300	SA 516-70	WELD	SHELL
TRIP	1	2"	NOZZLE	SA106	.436	--	WELD	TOP/HEAD
DRAIN	1	2"	WELD 90	SA224 / WFB	sch 160	--	WELD	BTM/HEAD
CONTROLLER	1	4"	NOZZLE	SA106	.331	SA 516-70	WELD	SHELL

Supports / Supports				
Skirt / Jupe	Lugs / Créelles	Legs / Pieds	Other / Autres (Description)	Attached / Attaches (Where and How / Méthode et endroit)
Yes / Oui <input checked="" type="checkbox"/> No / Non <input type="checkbox"/>	Yes / Oui <input type="checkbox"/> No / Non <input type="checkbox"/>	Yes / Oui <input type="checkbox"/> No / Non <input type="checkbox"/>		BTM HEAD / WELD

**Remarks / Observations / Cubical capacity / Volume**

.47M<sup>3</sup> or 16.6 Cu. Ft.  
 M.J.M.T. -20 °F at 600psi  
 UG20 IMPACT TESTING NOT REQUIRED

**Certificate of Compliance / Certificat de conformité**

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51

Provincial Registered Design: 7723E.23  
 Enregistrement provincial

BRONLEY MECH. SERVICES (1985) LTD.  
 Manufacturer / Constructeur

Signature: [Signature] Date: Sept 7 1990

**Certificate of Shop Inspection / Certificat d'inspection en usine**

I, the undersigned a duly authorized Boiler and Pressure Vessel Inspector / Je soussigné inspecteur autorisé de chaudières et appareil sous pression employé par PROVINCE of ALBERTA

have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN 7723E.23 and the requirements of standard CSA B51.

a inspecté l'appareil précité et autant que je sache crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC 7723E.23 et les exigences de la norme ACNOR B51

Inspector's Name / Nom de l'inspecteur: H. MATHESON  
 Signature: [Signature] Date: Sept 7 1990

**Certificate of Compliance / Certificat de conformité Field Work**

We certify that the field installation of parts of the vessel conforms with the requirements of Provincial Regulations

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux

Installer's Name / Nom de l'installateur: \_\_\_\_\_  
 Signature: \_\_\_\_\_

**Certificate of / Certificat d'inspection Field Inspection / Installation au chantier**

I, the undersigned a duly authorized Boiler and Pressure Vessel Inspector / Je soussigné inspecteur autorisé de chaudières et appareil sous pression employé par \_\_\_\_\_

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations

a inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et autant que je sache la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux

Inspector's Name / Nom de l'inspecteur: \_\_\_\_\_  
 Signature: \_\_\_\_\_

<b>FACILITY</b> Crowsnest Oil BTY	<b>DATE</b> April 12, 2011	<b>Equip #</b> 66033701
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VESSEL STATIC DATA					
Prov. Insp. #	2659547	CRN	F7238.23	Equip Tag #	V 100
Equipment Location (LSD)	10-4-10-16w4			Serial #	04223
Equipment Description	Test Separator			Vessel Class	
Manufacturer	Bromley Mechanical			Year Built	1990
MAWP	600	PSI	@ 100	°F	MDMT -20 °F
CODE : UM	U U2	RT :	1 2 3 4	PWHT :	YES NO
Diameter	Mm/in	Length	(T/T) Mm/in	OAL	Mm/in
Shell	Mat'l	SA 516-70	Thickness	0.500	mm
Head	Mat'l	SA 516-70	Thickness	0.477	mm
Nozzle	Mat'l		Thickness		Mm/in
Internal Coating :	YES NO x	Internal Clad :	YES NO x	Capacity	m <sup>3</sup>
Manway :	YES NO x	Inspection Port :	YES x NO	Skirt x Legs	Saddle
Nozzle Rating	300	lb ANSI	Painted :	YES x NO	Insulated : YES NO x

PROCESS DATA	
Product Description	Emulsion Sweet Sour x
Operating Pressure	KPag / Operating Temperature °C /

PSV STATIC DATA								
Tag / Serial No.	Location	Size		Set Pressure	Capacity	Manufacturer	Model / Type	Service Date
		Inlet	Outlet		SCFM /			
1041	shell	2"	2"	500 psi	2095	Taylor		09/10

INSPECTION HISTORY									
RBI Category	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>			Last Inspection Date	N/A			W.O. #	
Inspection Task List #				Inspection Type	VE/UT			Inspection Reason	
Inspection Techniques Required				Next Inspection Type				Due Date	
VE	VI	RT	UT	MT	PT	PT	TT	Outstanding Repairs	

**INSPECTION SUMMARY**

A complete inspection was done to verify the integrity of this vessel VE and UT were used. No notable defects were found this vessel is recommended fit for continued service

**RECOMMENDATIONS**

REPAIRS COMPLETED			
Object Name	Cause	Damage	Repair Activity

VESSEL STATUS			
Integrity Status	x Suitable for Continued Service	<input type="checkbox"/> Immediate Repairs Required	<input type="checkbox"/> Replace
		<input type="checkbox"/> Future Repairs Required	



**Husky Energy**  
**PRESSURE VESSEL INSPECTION REPORT**

<b>FACILITY</b> Crowsnest Oil BTY	<b>DATE</b> April 12, 2011	<b>Equip #</b> 66033701
<b>Inventory Status</b> <input checked="" type="checkbox"/> In service Fully Utilized	<input type="checkbox"/> Idle	<input type="checkbox"/> Surplus <input type="checkbox"/> Scrap
This IR completes a thorough inspection. Reschedule as indicated	<input type="checkbox"/>	Partial IR only. Do not reschedule <input type="checkbox"/>

**INSPECTION OBSERVATIONS**  
**NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED**

**EXTERNAL VISUAL INSPECTION**

The nameplate, instrumentation, piping and piping attachments are in acceptable condition.  
 The vessel is bolted to a skid floor, anchor bolts are in acceptable condition.  
 There are no apparent leaks in the system.  
 There is access to bottom head.  
 The gauges and site glass are clear and good condition.  
 The structural attachments are in good condition.  
 The vessel is protected by a PSV that is in acceptable condition.  
 The vessels grounding is in satisfactory condition.  
 The vessel is painted with no notable defects.

**EXTERNAL NDE EXAMINATION**

A spot UT inspection was performed by Forrest Lester the values recorded are on the TML drawing

**INTERNAL VISUAL INSPECTION**

**INTERNAL NDE EXAMINATION**

**PRESSURE TEST**

Test Completed <input type="checkbox"/> Yes <input type="checkbox"/> No	Test Acceptable <input type="checkbox"/> Yes <input type="checkbox"/> No	Test Report #
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**INSPECTOR CERTIFICATION**

*I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings*

Inspectors Name Forrest Lester	Inspector's Signature
Inspection Company Husky Oil	

**LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION**

Lead Inspector <u>DALE MURPHY</u>	Signature <u>[Signature]</u>	Date <u>APRIL 15, 2011</u>
Vessel Inspection Interval	Leave "as-is" <input checked="" type="checkbox"/>	Change to
PSV Inspection Interval	Leave "as-is" <input checked="" type="checkbox"/>	Change to



<b>FACILITY</b>	Crowsnest Oil BTY	<b>DATE</b>	April 12, 2011	<b>Equip #</b>	66033701
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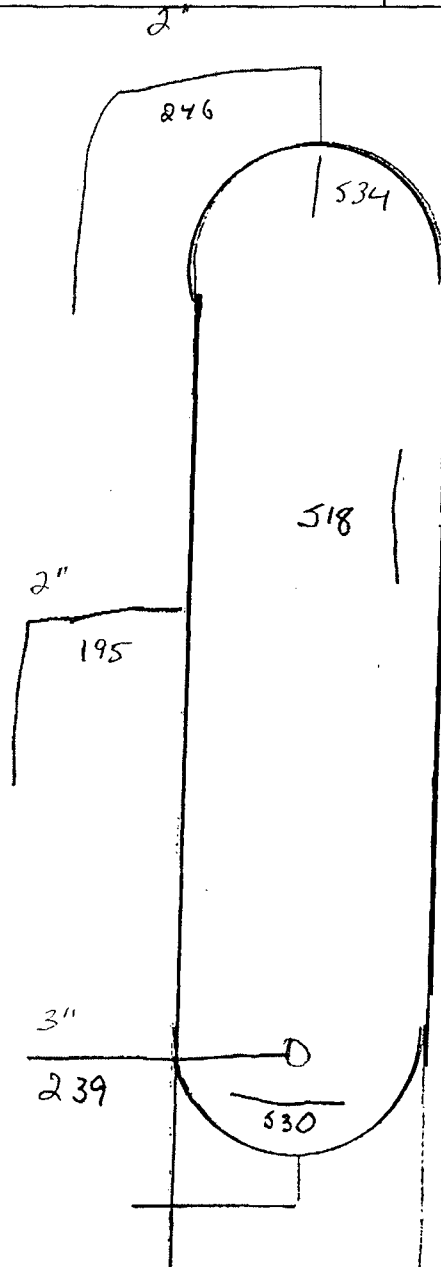
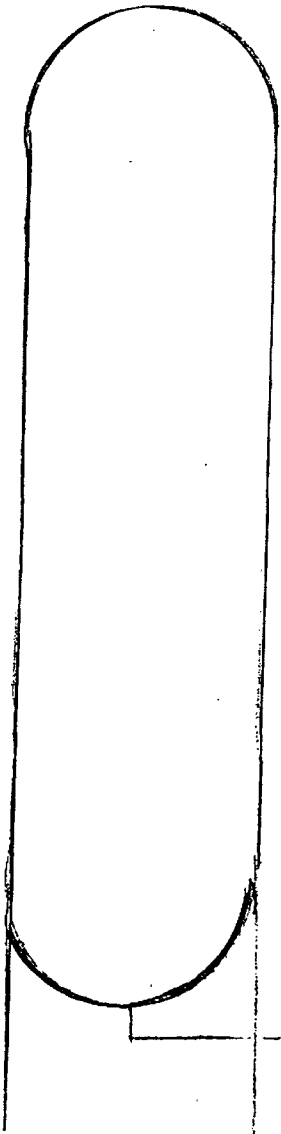
Office Use Only

Report Entered to SEQA Database by  
Static Data Verified by

Date

Date

DEPARTMENT	CHARGE CODE	DATE (Y-M-D)	PAGE	OF
PROJECT	10-4-10-16	FILE		
SUBJECT	AF 2659547			
COMMENTS	EQ# 66033701			
PREPARED BY	CHECKED BY	DATE (Y-M-D)		



0949  
04223

(A) 2659520  
2659547

ALBERTA LABOUR  
General Safety Services Division  
Boilers Branch  
6th Floor, 10808 - 99 Avenue  
Edmonton, Alberta  
T5K 0G2

MANUFACTURER'S DATA REPORT  
FOR PRESSURE VESSEL

DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR  
D'APPAREILS SOUS PRESSION

Partial Partiel

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by Construit par	Name and address of Manufacturer Nom et adresse du constructeur
Manufactured for Construit pour	Name and address of Purchaser or Consignee Nom et adresse du client ou de son représentant
Ultimate owner Utilisateur	Name and address Nom et adresse
Location of Installation Lieu d'installation	Address Adresse

Pressure vessel / Appareil			
Type / Genre	Serial No. / N° de série	Year built / Année de fabrication	Overall Length / Longueur totale
SEPARATOR (GAS/WATER)	04222, 04223	1990	7'6"
Provincial Registration No. / C.R.N. N° d'enregistrement provincial - N.E.C.	National Board No. / N° National Board	Drawing No. / N° de dessin	Diameter / Diamètre
F7238.23		24-600	24"

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.  
Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51 La conception, la construction et la façon sont conformes à ACNOR B51	ASME Sec VIII	Division I	Appendix Supplement 1989	Code case No. N° de cas
--	------------------	---------------	--------------------------------	----------------------------

Manufacturers' partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report:  
Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:

Names of parts / Nom de la composante	Item No. / N° d'item	Manufacturer's Name / Nom du constructeur	Identifying Stamp / Estampe d'identification

Shell / Viole													
Description	Material / Matériau	Thickness / Épaisseur	Corr Allow / Surepais de corr	Diameter / Diamètre	Overall Length / Longueur totale	Number of courses / Nombre de sections	Girth joints / Joints de circonférence		Longitudinal joints / Joints longitudinaux			F.W.T. / Traitement	
							Type	RT Radiog	Type	RT Radiog	Efficiency / Efficacité	Temp	Time / Durée
SHELL	SA516-70	.5	.062	24"	5'	1	1	FULL	1	FULL	1	--	--

Heads / Têtes													
Description	Material / Matériau	Min. Thickness / Épaisseur min	Corr Allow / Surepais de corr	Dip / Rayon	Radius / Rayon	Anchored / Perforé	Embossed / Radiog	Conical / Angle conique	Welded / Radius	Flange / Diamètre	Stitch / Épaisseur	Type	Time / Durée
HEADS	SA516-70	.477	.062	2:1									COND.

Removable bolts used - describe other fastenings -  
Boulons amovibles utilisés - décrire tout autre attaché

Pressure - Temperature / Pression - température			
Pressure vessel Part / Partie de l'appareil	Constructed for max. allowable working pressure / Construit pour une pression max. admissible	Max. Temp. when installed / Temp. max. d'installation	Test pressure / Pression d'essai

A2659547

<b>Tube Section Faisceau tubulaire</b>					
Type of Tube / Matière des tubes	Material / Matière	Tube Size / Taille des tubes	Tube Thickness / Épaisseur des tubes	Tube End / Extrémité des tubes	Attachment / Mode d'attachement
Tube Material / Matière des tubes	Material / Matière	Tube Diameter / Diamètre des tubes	Nominal Thickness / Épaisseur nominale	Gauge / Calibre	Number of Tube / Nombre des tubes
					Tube Straightness / Type d'écrouissage
					Welding Surface / Surface de soudure

<b>Jacket/Chemise</b>				
Type of Jacket / Genre de chemise	Jacket Closure / Fermeture de chemise	Proof Test / Pression d'épreuve	Welding Surface / Surface de soudure	Welding Schema / Schéma de soudure

<b>Safety Valve Outlets / Soupapes de sûreté</b>		
Number / Nombre	Dimension	Location / Endroit
1	2"	SHELL

<b>Nozzles and Openings / Tubulures et ouvertures</b>								
Purpose / But	Number / Nombre	Dimension	Type	Material / Matériau	Nominal Thickness / Épaisseur nominale	Reinforcement Material / Matériau de renfort	How Attached / Genre d'attaches	Location / Endroit
GAUGE	3	1/2 3/4	TGL	SA105	3000	--	WELD	SHELL
OUTLET / LLO	2	3"	NOZZLE	SA106	.300	SA516-70	WELD	SHELL
TRIP	1	2"	NOZZLE	SA106	.436	--	WELD	TOP/HEAD
DRAIN	1	2"	WELD 90	SA224/WFB	sch 160	--	WELD	BTM/HEAD
CONTROLLER	1	4"	NOZZLE	SA106	.331	SA516-70	WELD	SHELL

<b>Supports / Supports</b>				
Skirt / Jupe	Legs / Pies / No. / Nbre	Other / Autres (Description)	Attached / Attaches (Where and How / Méthode et endroit)	
Yes / Oui <input checked="" type="checkbox"/> No / Non <input type="checkbox"/>			BTM HEAD/WELD	

**Remarks / Observations (Cubical capacity / Volume)**

.47M<sup>3</sup> or 16.6 Cu. Ft.  
 M.D.M.T. -20 °F at 600psi  
 UG20 IMPACT TESTING NOT REQUIRED

**Certificate of Compliance / Certificat de conformité**

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51

Provincial Registered Design: F723E.23  
 Enregistrement provincial: \_\_\_\_\_

Manufacturer / Constructeur: BROMLEY MECH. SERVICES (1985) LTD.

Signature: [Signature] Date: Sept 7 1990

**Certificate of Shop Inspection / Certificat d'inspection en usine**

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector / Je, soussigné, inspecteur autorisé de chaudières et appareils sous pression employé par PROVINCE of ALBERTA have inspected the above vessel and state that to the best of my knowledge and belief the manufacturer has constructed the vessel in accordance with the Provincial registration CRN F723E.23 and the requirements of standard CSA B51.

J'ai inspecté l'appareil précité et autant que je sache crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial / NEC et les exigences de la norme ACNOR B51

Inspector's Name / Nom de l'inspecteur: H. MATHESON

Signature: [Signature] Date: Sept 7 1990

**Certificate of Compliance / Certificat de conformité Field Work / Installation au chantier**

We certify that the field installation of the parts of the vessel conforms with the requirements of Provincial Regulations

Nous certifions que l'installation au chantier des parties et composants de l'appareil est conforme aux règlements provinciaux

Inspector's Name / Nom de l'inspecteur: \_\_\_\_\_

**Certificate of Field Inspection / Certificat d'inspection Installation au chantier**

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector / Je, soussigné, inspecteur autorisé de chaudières et appareils sous pression employé par \_\_\_\_\_ have inspected the items indicated by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations

J'ai inspecté les composants non couverts par le certificat d'inspection en usine et l'installation de l'appareil et autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux

Inspector's Name / Nom de l'inspecteur: \_\_\_\_\_

✓ 74

# SEPARATOR INSPECTION REPORT

## Inspection Report

Notification Number 6057334      Work Order 6059704  
 Notification Desc Separator, TEST      Maintenance Plan QPSEPAR3135  
 Tasklist Operation ( 5Y Inspection Interval ) 5Y Code Inspection Separator-Sour Servic

### Equipment Static Data

Equipment Number 66033701      Equipment Description SEPARATOR, INLET TEST  
 Class SEPARATOR      Tag Number  
 Serial Number 04223      Year Built 1990  
 Manufacturer BROMLEY  
 Location SS-SA-006-00001-0126      Location Description 100/10-04-010-16W4/00 ET AL TABER 10-4-1  
 Provincial Number 2659547      PM Activity Code  
 Status Codes NOPR ORAS      Equipment Status In Service - Fully Utilized

CRN Number F7238.23      Code Stamp      Fluid Description EMULSION  
 Fluid Service SOUR      Internal Coating Exists N      Length 5.00 FOOT  
 MDMT - Min. Design Metal Temp -20 DEGF      Shell MAWP 600 PSI      Stress Relief  
 Vessel Diameter 24.0 IN      Volume      X-Ray

### PRD Static Data

Equip ID	Location	Size		Set Pressure	Capacity	Manufacturer	Serial Number	Model Number	Next Service Date
		Inlet	Outlet						
66049206	100/10-04-010-16W4/0	2.00 IN	2.00 IN	500 PSI	2095.00 SCFM	TAYLOR	1041	T-7900-2	2005.06.30

### Process Data

Product Description EMULSION      Fluid Service  Sweet  Sour      PPM  
 Operating Pressure KPA      Operating Temperature °C

### Pressure Test

Test Completed  Yes  No      Test Acceptable  Yes  No      Test Report #

### PSV Data

Tag/Serial No.	Location	Size		Set Pressure	Capacity	Model / Type	Service Date
		Inlet	Outlet				
	PIPING	2	2	500 PSI	2095 SCFM	TAYLOR	06/2005

### Inspection History

Inspected By RICE JIM      Inspection Date 2006.09.11

### Inspection Summary

An external inspection was performed to verify the vessels integrity.  
 No concerns were found and the vessel is considered acceptable for continued service.

### Recommendations

none

**Repairs Completed**

**Equipment Status**

Integrity Status  Suitable for Continued Service  Immediate Repairs Required  Replace  
 Future Repairs Required

Inventory Status  In Service - Fully Utilized  Idle  Surplus  Scrap

**QA Activities**

Leave As-Is  Weld Overlaid  Part / Component Replaced  
 Equipment Replaced  Grind Dressed  Patch Installed  
 MAWP Derated  Coating - Cleaned & Patched  Coating - Removed & Replaced  
 Defect Removed & Rewelded  Part Cleaned  Lapped & Dressed  
 Epoxy Patched

**Noncompliances or Inspection Deficiencies Issued**

**External Visual Inspection**

The vessel is painted and is in good condition with no notable corrosion being found.  
 The nameplate, piping, bolting and external attachments are in good condition.  
 The vessel is protected with a PSV that is attached and in good condition.  
 The gauges are clear and in good condition.  
 The vessel appears to be secure and level.  
 The overall condition of this vessel is good.

**External NDE Examination**

Spot UT inspection was performed by Jim Rice.  
 All UT values were found to be acceptable.

**Internal Visual Inspection**

**Internal NDE Examination**


**Data Integrity**

**Inspection Interval**


**Damages**

**Inspector Certification**

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings.

Inspector Name RICE JIM Inspector Signature   
 Inspection Company HUSKY ENERGY Date \_\_\_\_\_

**Lead Inspector's Acceptance & Schedule Confirmation**

Lead Inspector Jim Rice Signature  Date OCT 2-06  
 Vessel Inspection Interval  Leave as-is / Change to: \_\_\_\_\_  
 PSV Inspection Interval \_\_\_\_\_  Leave as-is / Change to: \_\_\_\_\_

Top

# 66033701 QPSEPAR2135 NH 6015897 CT.

FACILITY <u>CROWSNEST O.B.</u>		DATE <u>APRIL 25, 2002</u>		REPORT # <u>1R020425-DD-A</u>				
VESSEL STATIC DATA								
Prov. Insp. # <u>2659547</u>		CRN <u>F7238.23</u>		Equip Tag # <u>V-100</u>				
Equipment Location (LSD) <u>10-04-10-16 W4</u>				Serial # <u>04223</u>				
Equipment Description <u>VERTICAL SEPARATOR</u>				Vessel Class				
Manufacturer <u>BROMLEY MECHANICAL SERVICES LTD</u>				Year Built <u>1990</u>				
MAWP <u>600</u> KPag / <u>psig</u> @ <u>100</u> °C / <u>°F</u>				MDMT <u>-20</u> °C / <u>°F</u>				
CODE : UM <input type="checkbox"/> U <input type="checkbox"/> U2 <input type="checkbox"/>		RT: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>		PWHT : YES <input type="checkbox"/> NO <input type="checkbox"/>				
Shell Mat'l		Thickness <u>.5"</u>	Mm/in	Corr Allowance	Mm/in			
Head Mat'l		Thickness	Mm/in	Corr Allowance	Mm/in			
Nozzle Mat'l		Thickness	Mm/in	Corr Allowance	Mm/in			
Internal Coating : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Internal Clad : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Capacity <u>m<sup>3</sup></u>				
Manway : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Inspection Port : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Skirt <input checked="" type="checkbox"/> Legs <input type="checkbox"/> Saddle <input type="checkbox"/>				
Nozzle Rating	lb ANSI	Painted : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Insulated : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>				
PROCESS DATA								
Product Description <u>EMULSION</u>				Sweet <input type="checkbox"/> Sour <input checked="" type="checkbox"/>				
Operating Pressure <u>270</u> KPag / <u>psig</u>		Operating Temperature <u>74</u> °C / <u>°F</u>						
PSV STATIC DATA								
Tag / Serial No.	Location	Size		Set Pressure	Capacity	Manufacturer	Model / Type	Service Date
<u>PSV-100</u>	<u>VESSEL</u>	<u>2"</u>	<u>2"</u>	<u>500 PSIG</u>	<u>2095</u>	<u>TAYLOR</u>	<u>7900</u>	<u>2000</u>
INSPECTION HISTORY								
RBI Category <u>A</u> <input type="checkbox"/> <u>B</u> <input type="checkbox"/> <u>C</u> <input type="checkbox"/> <u>D</u> <input type="checkbox"/>		Last Inspection Date		W.O. # <u>6016087</u>				
Inspection Task List #		Inspection Type <u>VE, UT</u>		Inspection Reason <u>1002</u>				
Inspection Techniques Required		Next Inspection Type <u>VE, UT, VI</u>		Due Date <u>2006</u>				
<input checked="" type="checkbox"/> VE	<input type="checkbox"/> VI	<input type="checkbox"/> RT	<input checked="" type="checkbox"/> UT	<input type="checkbox"/> MT	<input type="checkbox"/> PT	<input type="checkbox"/> PT	<input type="checkbox"/> TT	Outstanding Repairs
INSPECTION SUMMARY								
<p>VESSEL IS FIT FOR CONTINUED SERVICE.</p> <p>UT SURVEY CARRIED OUT ON VESSEL AND PIPING. NO SIGNIFICANT FINDINGS.</p>								
RECOMMENDATIONS								
<p>- SEVERAL DEAD LEGS EXIST ON TEST MANIFOLD. LINES SHOULD BE REMOVED AND PLUGGED AT MANIFOLD.</p> <p>- DEAD LEG OFF OF THE VESSEL DRAIN NOZZLE. LINE SHOULD BE FLUSHED AND/OR INHIBITED TO PREVENT CORROSION.</p>								
REPAIRS COMPLETED								
Object Name	Cause		Damage		Repair Activity			
VESSEL STATUS								
Integrity Status <input checked="" type="checkbox"/> Suitable for Continued Service		<input type="checkbox"/> Immediate Repairs Required		<input type="checkbox"/> Replace				
		<input type="checkbox"/> Future Repairs Required						
Inventory Status <input checked="" type="checkbox"/> Inservice Fully Utilized		<input type="checkbox"/> Idle		<input type="checkbox"/> Surplus		<input type="checkbox"/> Scrap		



FACILITY <u>CROWSNEST OIL BTY</u>	DATE <u>APRIL 25, 2002</u>	REPORT # <u>IR 020426-DD-A</u>
Prov. Insp. # <u>2659547</u>	CRN <u>F7238.23</u>	Equip Tag # <u>V-100</u>

### INSPECTION OBSERVATIONS

#### NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED

### EXTERNAL VISUAL INSPECTION

- PAINTED SURFACES ARE ACCEPTABLE.
- PIPING ON GAS OFF OF THE VESSEL IS THREADED.  
PIPING IS SECURE AND PROPERLY SUPPORTED.
- BRAIDED STEEL LINE FROM STEEL FLOW LINE TO TEST HDR. IS BURIED FOR 2FT. BY SEPARATOR BUILDING.
- SIGHT GLASS IS ACCEPTABLE
- VESSEL IS SITTING ON CONCRETE PAD.

### EXTERNAL NDE EXAMINATION

UT CARRIED OUT BY ALLIANCE ENGINEERING. REVIEWED RESULTS ON SITE. NO SIGNIFICANT FINDINGS. SEE REPORT JOB # 02-0124

### INTERNAL VISUAL INSPECTION

### INTERNAL NDE EXAMINATION

### PRESSURE TEST

Test Completed  Yes  No      Test Acceptable  Yes  No      Test Report #

### INSPECTOR CERTIFICATION

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings

Inspectors Name DOUG DAVEY      Inspector's Signature [Signature]  
 Inspection Company ALLIANCE ENG. + INSPECTION      Date APR. 30, 2002

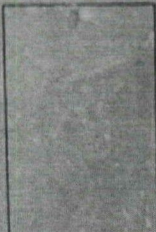
### LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION

Lead Inspector [Signature]      Signature [Signature]      Date May 27/02  
 Vessel Inspection Interval 4      Leave "as-is"       Change to  
 PSV Inspection Interval 4      Leave "as-is"       Change to

Office Use Only      Report Entered to SEQA Database by      Date  
 Static Data Verified by      Date



CERTIFIED BY  
**B**ROMLEY **M**ECHEICAL **S**ERVICES 1985 **L**TD.  
MEDICINE HAT ALBERTA



600 PSI AT 100 °F

( MAX. ALLOWABLE WORKING PRESSURE )

-20 °F AT 600 PSI

( MIN. DESIGN METAL TEMPERATURE )

MFR'S SER NO 04223 YR. BUILT 1990

VESSEL TYPE SEPARATOR

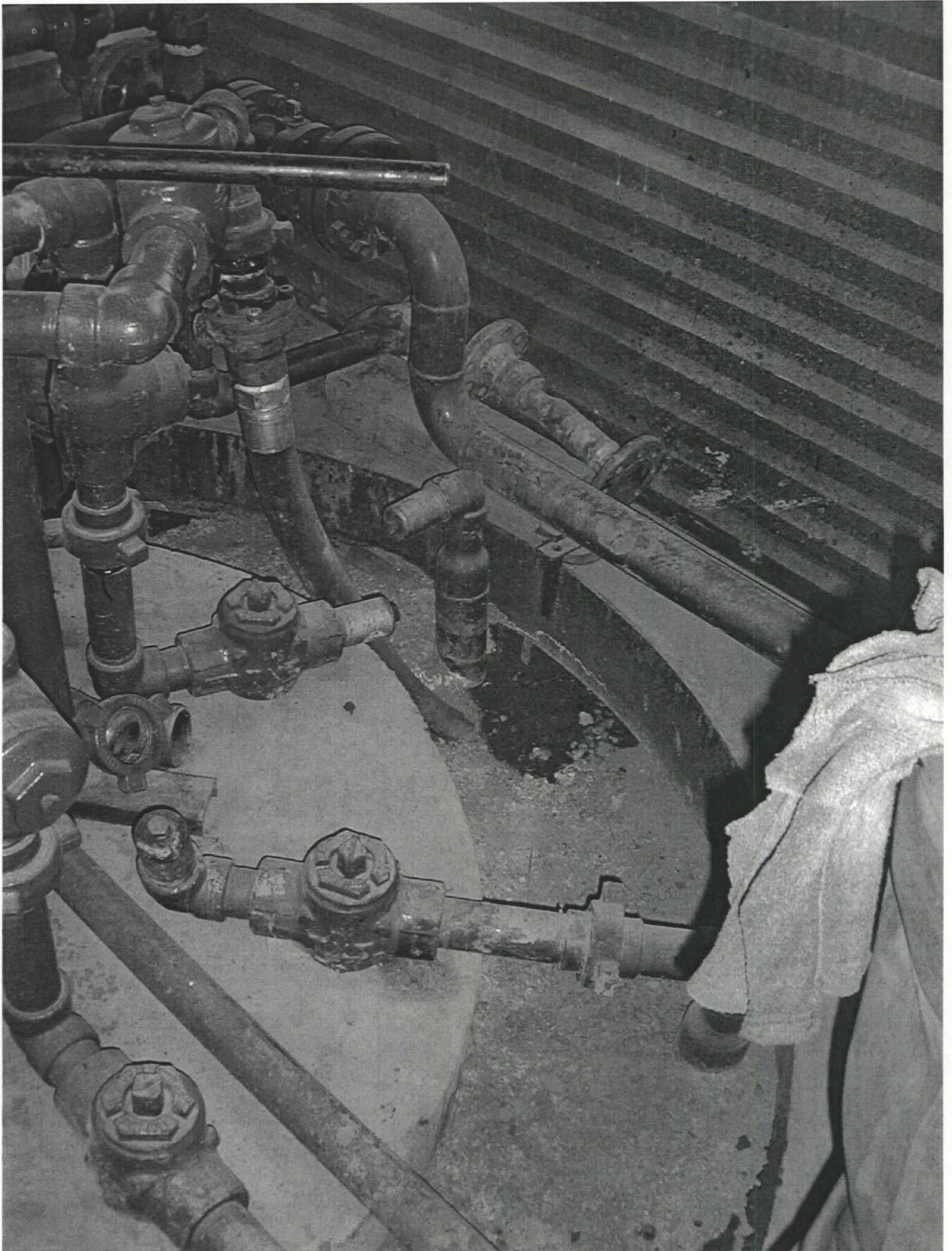
M.A.W.P. 4138 KPA AT 38 °C

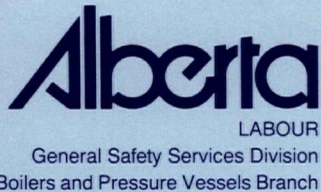
SHELL THICKNESS .5 IN. TS 70M PSI  
12.7 MM. 413 MPI

TAG [ ] CODE PARA UW12A

CRN F7238.23

ⓐ 2659547





VESSEL (A) : 2659547

DATE OF INSPECTION : 1990 SEP 07

# Certificate of Inspection

ANADARKO PETROLEUM OF CANADA LTD  
3200 - 700 2ND STREET S.W.  
CALGARY T2P 2W2

LOCATION: TABER AREA

COMPANY CODE:

PREFERRED RE-INSP. INTERVAL: .00 YRS

DESCRIPTION: GAS/WATER SEPARATOR

CRN: F7238.23

MANUFACTURER: BROMLEY MECHANICAL SERVICES LTD.

SERIAL # : 04223

YEAR BUILT: 1990

HEATING SURFACE:

m2

CUBICAL CAPACITY:

0.470 m3

PART	MAX. AUTHORIZED PRESSURE	MAX. TEMP / MIN. TEMP	SAFETY VALVES ID/LOCATION	SET / CAPACITY	AT TEMP
SEPARATOR	4137 kPa	37 C -29 C	SV1 TO BE INSTALLED	0 kPa 0	

\*\*\* BOILER OR PRESSURE VESSEL NOT SUBJECT TO ANNUAL REGISTRATION FEES

OWNER INSTRUCTIONS/REMARKS:

SHOP INSPECTION ONLY.  
TO BE INSTALLED IN ACCORDANCE WITH THE BOILERS & PRESSURE VESSEL ACT & REGULATIONS  
OWNER TO VERIFY INTEGRITY OF VESSEL BY PERIODIC INSPECTION PROGRAM.  
VERIFY THAT VESSEL IS PROTECTED BY A 'UV' SAFETY RELIEF VALVE, OF ADEQUATE CAPACITY, SET AT NO MORE THAN MAXIMUM PRESSURE AUTHORIZED, HAS BEEN INSTALLED IN ACCORDANCE WITH THE REGULATIONS.

INSPECTOR: MATHESON, HAROLD W.

SIGNATURE: *Harold W. Matheson*

NOTE: REQUIREMENTS OF THE BOILERS AND PRESSURE VESSELS ACT AND THE REGULATIONS ISSUED THEREUNDER:

THE OWNER OR PERSON IN CHARGE SHALL REPORT ALL ACCIDENTS INVOLVING A BOILER, PRESSURE VESSEL OR PRESSURE PIPING SYSTEM TO THE DISTRICT INSPECTOR IMMEDIATELY AND SHALL SEND A FULL REPORT IN WRITING TO THE CHIEF INSPECTOR AS REQUIRED BY THE ACT. NO REPAIRS OR ALTERATIONS MAY BE MADE UNLESS AUTHORIZED BY AN INSPECTOR.

A2659547

Tube Section / Faisceau tubulaire					
Tube / Section tubulaire	Material / Matériau	Diameter / Diamètre	Nominal Thickness / Épaisseur nominale	Joint Allowance / Surépaisseur de soudure	Attachment / Mode de rattachement
Tube material / Matériau des tubes	Diameter / Diamètre	Nominal Thickness / Épaisseur nominale	Joint Allowance / Surépaisseur de soudure	Attachment / Mode de rattachement	Attachment / Mode de rattachement

Jacket / Chemise				
Type of Jacket / Genre de chemise	Jacket Closure / Fermeture de chemise	Proof Test / Pression d'épreuve	Heating Surface / Surface de chauffe	Sketch / Schéma

Safety Valve Outlets / Soupapes de sûreté		
Number / Nombre	Dimension	Location / Endroit
1	2"	SHELL

Nozzles and Openings / Tubulures et ouvertures								
Purpose / But	Number / Nombre	Dimension	Type	Material / Matériau	Nominal Thickness / Épaisseur nominale	Reinforcement / Matériau de renfort	How Attached / Genre d'attaches	Location / Endroit
GAUGE	3	1/2 3/4 TOL		SA105	3000	--	WELD	SHELL
OUTLET / LIC INLET	2	3"	NOZZLE	SA106	.300	SA516-70	WELD	SHELL
DRAIN	1	2"	WELD 90	SA106	.436	--	WELD	TOP/HEAD
CONTROL	1	2"	WELD 90	SA234/WPB	sch 160	--	WELD	BTM/HEAD
CONTROLLER	1	4"	NOZZLE	SA106	.331	SA516-70	WELD	SHELL

Supports / Supports				
Skirt / Jupe	Lugs / Ombrelles / No / Nbre	Legs / Pieds / No / Nbre	Other / Autres (Description)	Attached / Attaches (Where and How / Méthode et endroit)
Yes / Oui <input checked="" type="checkbox"/> No / Non <input type="checkbox"/>				BTM HEAD/WELD

**Remarks / Observations (Cubical capacity / Volume)**

.47M<sup>3</sup> or 16.6 Cu. Ft.  
 M.D.M.T. -20 °F at 600psi  
 UG20 IMPACT TESTING NOT REQUIRED

**Certificate of Compliance / Certificat de conformité**

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51

Provincial Registered Design: F7238.23  
 Enregistrement provincial: F7238.23

Manufacturer / Constructeur: BROMLEY MECH. SERVICES (1985) LTD.

Signature: *[Signature]* Date: Sept 7 1990

**Certificate of Shop Inspection / Certificat d'inspection en usine**

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector / Je, soussigné, inspecteur autorisé de chaudières et appareils sous pression employed by PROVINCE / employé par ALBERTA of ALBERTA

have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN F7238.23 and the requirements of standard CSA B51.

ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC et les exigences de la norme ACNOR B51

Inspector's Name / Nom de l'inspecteur: H. MATHESON  
 Signature: *[Signature]* Date: Sept 7 1990

**Certificate of Compliance / Certificat de conformité Field Work / Installation au chantier**

We certify that the field installation of the parts of the vessel conforms with the requirements of Provincial Regulations

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux

Installer's Name / Nom de l'installateur: \_\_\_\_\_  
 Signature: \_\_\_\_\_

**Certificate of Field Inspection / Certificat d'inspection Installation au chantier**

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector / Je, soussigné, inspecteur autorisé de chaudières et appareils sous pression employed by \_\_\_\_\_

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations

ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux

Inspector's Name / Nom de l'inspecteur: \_\_\_\_\_  
 Signature: \_\_\_\_\_