

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

Corrected

4454381

1. Manufactured and Certified by: ALCO GAS & OIL PRODUCTION EQUIPT LTD 5203-75 ST. EDMONTON ALBERTA
(Name and Address of Manufacturer)

2. Manufactured for: UNION PACIFIC RESOURCES 425 - 1st STREET CALGARY ALBERTA
(Name and Address of Purchaser)

3. Location of installation: GRAHAM CENTRAL MODIFICATION B.C C-76-K/94-B-08
(Name and Address)

4. Type: HORIZONTAL 2000-6332-01 P-0334.21 A-24498 R3 N/A 2000
(Horiz or Vert., tank) (Mfr'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
1998 Edition

to A-1999 Addenda (date) N/A Code Case No.s .125" Special Service per UG-120(d) 24'-0"

6. Shell: SA-516-70N 3" 100 1150 66" TYPE 1 FULL UW11a 3
Mat'l (Spec. No., Grade) Nom. thk. (in.) Corr. Allow. (in.) Diam. I. D. (ft. & in.) Length (overall) (ft. & in.)

7. Seams FULL 100 1150 66" TYPE 1 FULL UW11a 3
Long. (Welded, Dbl., R. T. (Spot, Girth (Welded, Partial, or Full) No. of Sngl., Lap, Butt.) or Full) H. T. Temp. (F) Time (hr.) Dbl., Sngl., Laps, Courses

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

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Radius	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) END	2.9"	.125"	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE
(b) END	2.9"	.125"	N/A	N/A	2:1	N/A	N/A	N/A	CONCAVE

If removable, bolts used (describe other fastenings)

9. MAWP 1332 psi at max. temp. 200 °F
Min. design metal temp. -20 °F at 1332 psi. Hydro, pneu., or comb. test pressure 1732 psi.

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. Or Size	Type	Mat'l	Norm. Thk.	Reinforcement Mat'l	How Attached	Location
INLET	1	8" RFWN	600#	SA-106B/SA-135N	SCH 160	SA-516-70N	UW16.1a1	SHELL
GAS OUTLET	1	8" RFWN	600#	SA-106B/105N	SCH 160	N/A	UW16.1c	GAS DOME HEAD
WATER OUTLET	1	2" RFWN	600#	SA-106B/105N	SCH 160	SA-516-70N	UW16.1a1	SHELL

11. Supports: Skirts NO Lugs NO Legs NO Other SADDLES Attached: WELDED TO SHELL
(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:
PRODUCTION IMPACTS PER UG 84 TO -20 DEGREES F ITEMS#1-3,11,15,17, 18, 24, 29,69. /OTHER ITEMS EXEMPT PER UG 20(f)

(Name of part, item number, Mfr's name, and identifying stamp)
INLET SEPARATOR/SLUG CATCHER CAPACITY 17.92 CUM
SEE ATTACHED U4 DATA REPORT

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. 14259 expires OCT 7 2001

Date June 28/00 Co. name ALCO GAS & OIL PROD EQUIPT LTD Signed [Signature] (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by ALCO GAS & OIL PROD. EQUIPT LTD at EDMONTON
I, the undersigned, hold 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

I have inspected the component described in this Manufacturer's Data Report on June 16, 2000, 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 loss of any kind arising from or connected with this inspection.

Date June 18, 2000 Signed [Signature] Commissions ALBERTA #487
(Authorized Inspector) (Nat'l Board Incl. Endorsement, State, Prov. 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

4454381

Corrected Copy

Manufactured and certified by: Alco GAS & OIL PRODUCTION EQUIPT LTD 5203-75th STREET EDMONTON


Manufactured for: UNION PACIFIC RESOURCES 425 -1st STREET CALGARY ALBERTA

Location of Installation: GRAHAM CENTRAL MODIFICATION B.C. C-76-KJ94-B-08

Type: HORIZONTAL INLET SEPARATOR/SLUG CATCHER (Name and address)
(Horiz., vert., or sphere) (Tank, separator, heat exch., etc.)
P-0334.21 A-24498 R3 (Mfg.'s. serial number) 2000

Item Number	No.	Size	Facing Type	Material	SCH	Reinforcement	Attached	Location
PANIC WATER OUT	1	3"	RFWN	SA-106B/105N	SCH 160	SA-516-70N	UW16.1a1	SHELL
DRAIN	1	2"	RFWN	SA-106B/105N	SCH 160	N/A	UW16.1c	BOOT HEAD
PSV	1	2"	RFWN	SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
WATER BRIDLE	1	3"	RFHB	SA-350 LF2	2.90"	N/A	UW16.1c	SHELL
WATER BRIDLE	1	3"	RFWN	SA-106B/105N	SCH 160	SA-516-70N	UW16.1a1	BOOT SHELL
CONDENSATE BRIDLE	2	2"	RFWN	SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
PRESS CONN.	1	2"	RFWN	SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
STEAM OUT	2	2"	RFWN	SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
VENT	1	6"	RFWN	SA-105N/106B	SCH XXH	SA-516-70N	UW 16.1a1	SHELL
WATER BRIDLE	2	3"	RFHB	SA-350LF2	2.90"	N/A	UW 16.1c	SHELL
TEMP IND	1	2"	RFWN	SA-105N/106B	SCH 160	N/A	UW 16.1c	SHELL
TEMP TRANS	1	2"	RFWN	SA-105N/106B	SCH 160	N/A	UW 16.1c	SHELL
RADAR TRAN.	1	2"	RFWN	SA-105N/106B	SCH 160	N/A	UW16.1c	SHELL
PANIC ALARM	1	3"	RFWN	SA-105N/106B	SCH XXH	SA-516-70N	UW16.1a1	SHELL
LOW LEVEL ALARM	1	3"	RFWN	SA-105N/106B	SCH XXH	SA-516-70N	UW16.1a1	SHELL
GAS DOME	1	16"	PIPE	SA-106B	SCH 100	SA-516-70N	UW16.1a1	SHELL
GAS DOME HEAD	1	16"	ELLIPT	2:1 SA-516-70N	.900"	SA-516-70N	APP2-4	DOME
BOOT CONN	1	18"	RFLWN	600# SA-350LF2	18"	SA-516-70N	UW16.1c	SHELL
BOOT SHELL	1	18"	PIPE	SA-333-6	SCH 100	N/A	N/A	BOLTED TO NOZZLE
BOOT FLANGE	1	18"	RFWN	600# SA-105N	SCH 100	N/A	APP2-4	BOOT SHELL
BOOT HEAD	1	18"	ELLIPT	2:1 SA-516-70N	.875"	N/A	APP2-4	BOOT SHELL
MANWAY	1	24"	RFWN	600# SA-105N/516-70N	2.750"	N/A	UW16.C	head
BOLTING	24	1.875"	OD X	13" LG SA-193B7M STUDS	C/W	SA194 2HM NUTS	BOLTING	MANWAY
BOLTING	20	1.625"	OD X	10.75" LONG SA-193B7M STUDS	C/W	SA194 2HM NUTS	BOLTING	BOOT

Certificate of Authorization: Type: U No.: 14259 Expires: OCTOBER 7 2001

Date: June 28/00 Name: ALCO GAS & OIL PROD. EQUIPT LTD. Signed: 

Date: June 28, 2000 Name: Harold Lake Commission: ALBERTA #187
(Authorized Inspector) (Representative)

(Nat'l Board Incl. Endorsement, State, Province and No.)

4454381

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: ALCO GAS & OIL PRODUCTION EQUIPT LTD 5203-75 ST. EDMONTON ALBERTA
 (Name and Address of Manufacturer)
2. Manufactured for: UNION PACIFIC RESOURCES 425 - 1st STREET CALGARY ALBERTA
 (Name and Address of Purchaser)
3. Location of installation: GRAHAM CENTRAL MODIFICATION B.C. C-76-K/94-B-08
 (Name and Address)
4. Type: HORIZONTAL 2000-5332-01 P-0334-2 A-24498 R3 N/A 2000
 (Horiz. or Vert., tank) (Mfg'r'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
 1998 Edition
 Year

- to A-1999 Addenda (date) N/A Special Service per UG-120(d) 24'-0"
6. Shell: SA-516-70N 3" .125" Code Case No.s 66" Length (overall) (ft. & in.) 24'-0"
7. Seams: TYPE1 FULL 100 Corr. Allow. (in.) 135 MIN. Diam. I. D. (ft. & in.) TYPE 1 FULL UW11a 3
 R. T. (Spot or Full) 1150 H. T. Temp. (F) 135 MIN. Time (hr) TYPE 1 Girth (Welded, Dbl., Sng'l, Laps, or Full) R T. (Spot, Partial, or Full) Courses
8. Heads: (a) Mat'l SA-516-70N (b) Mat'l (b) Mat'l SA-516-70N
 (Spec. No., Grade) (Spec. No., Grade)

Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crack. Radius	Knuckle Radius	Elliptical Radius	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a) END	2.8"	.125"	N/A	N/A	2.1	N/A	N/A	N/A	CONCAVE
(b) END	2.8"	.125"	N/A	N/A	2.1	N/A	N/A	N/A	CONCAVE

If removable, bolts used (describe other fastenings)

9. MAWP 1332 psi at max. temp. 200 °F
 Min. design metal temp. -20 °F at 1332 psi. Hydro pneu., or comb. test pressure 1732 psi.
10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. Or Size	Type	Mat'l	Norm. Thk.	Reinforcement Mat'l	How Attached	Location
INLET	1	8" RFWN	600#	SA-106B/ SA-105N	SCH 160	SA-516-70N	UW16.1a1	SHELL
GAS OUTLET	1	8" RFWN	600#	SA-106B/ 105N	SCH 160	N/A	UW16.1c	GAS DOME HEAD
WATER OUTLET	1	2" RFWN	600#	SA-106B/ 105N	SCH 160	SA-516-70N	UW16.1a1	SHELL

11. Supports: Skirts NO Lugs NO Legs NO Other NO Attached: WELDED TO SHELL
 (Yes or No) (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: PRODUCTION IMPACTS PER UG 84 TO -20 DEGREES F ITEMS#1-3,11,15,17, 18, 24, 29,69. /OTHER ITEMS EXEMPT PER UG 20(f)
 (Name of part, item number, Mfg'r's name, and identifying stamp)

INLET SEPARATOR/SLUG CATCHER CAPACITY 17.92 CUM
 SEE ATTACHED U4 DATA REPORT

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. 14259 expires OCT 7 2001

Date June 16, 2000 Co. name ALCO GAS & OIL PROD EQUIPT LTD Signed [Signature] (Representative)

Vessel constructed by ALCO GAS & OIL PROD. EQUIPT LTD at EDMONTON
 I, the undersigned, hold 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

I have inspected the component described in this Manufacturer's Data Report on June 16, 2000, 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 loss of any kind arising from or connected with this inspection.

Date June 16, 2000 Signed [Signature] (Authorized Inspector) Commissions ALBERTA #87
 (Nat'l Board Incl. Endorsement, State, Prov 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

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Manufactured and certified by: **ALCO GAS & OIL PRODUCTION EQUIPT LTD 5203-75th STREET EDMONTON**

Manufactured for: **UNION PACIFIC RESOURCES 425 -1st STREET CALGARY ALBERTA**
 (Name and address of Manufacturer)

Location of Installation: **GRAHAM CENTRAL MODIFICATION B.C. C-76-K/94-B-08**
 (Name and address of Purchaser)

Type: **HORIZONTAL** **INLET SEPARATOR/SLUG CATCHER** **2000-6332-01**
 (Horiz., vert., or sphere) (Tank, separator, heat exch., etc.) (Mfg.'s. serial number)
P-0334.2 **A-24498 R3** **N/A** **2000**
 (CRN) (Drawing No.) (Nat'l Bd. No.) (Year Built)

Item Number	No.	Size	Facing Type	Material	SCH	Reinforcement	Attached	Location
PANIC WATER OUT	1	3"	RFWN	600# SA-106B/105N	SCH 160	SA-516-70N	UW16.1a1	SHELL
DRAIN	1	2"	RFWN	600# SA-106B/105N	SCH 160	N/A	UW16.1c	BOOT HEAD
PSV	1	2"	RFWN	600# SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
WATER BRIDLE	1	3"	RFHB	600# SA-350 LF2	2.90"	N/A	UW16.1c	SHELL
WATER BRIDLE	1	3"	RFWN	600# SA-106B/105N	SCH 160	SA-516-70N	UW16.1a1	BOOT SHELL
CONDENSATE BRIDLE	2	2"	RFWN	600# SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
PRESS CONN.	1	2"	RFWN	600# SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
STEAM OUT	2	2"	RFWN	600# SA-106B/105N	SCH 160	N/A	UW16.1c	SHELL
VENT	1	6"	RFWN	600# SA-105N/106B	SCH XXH	SA-516-70N	UW 16.1a1	SHELL
WATER BRIDLE	2	3"	RF1.8	600# SA-350LF2	2.90"	N/A	UW 16.1c	SHELL
TEMP IND	1	2"	RFWN	600# SA-105N/106B	SCH 160	N/A	UW 16.1c	SHELL
TEMP TRANS	1	2"	RFWN	600# SA-105N/106B	SCH 160	N/A	UW 16.1c	SHELL
RADAR TRAN.	1	2"	RFWN	600# SA-105N/106B	SCH 160	N/A	UW16.1c	SHELL
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GAS DOME	1	16"	PIPE	SA-106B	SCH 100	SA-516-70N	UW16.1a1	SHELL
GAS DOME HEAD	1	16"	ELLIPT	2:1 SA-516-70N	.900"	SA-516-70N	APP2-4	DOME
BOOT CONN	1	18"	RFLWN	600# SA-350LF2	18"	SA-516-70N	UW16.1c	SHELL
BOOT SHELL	1	18"	PIPE	SA-333-6	SCH 100	N/A	N/A	BOLTED TO NOZZLE
BOOT FLANGE	1	18"	RFWN	600# SA-105N	SCH 100	N/A	APP2-4	BOOT SHELL
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MANWAY	1	24"	RFWN	600# SA-105N/516-70N	2.750"	N/A	UW16.C	head
BOLTING	24	1.875"	OD X	13" LG SA-193B7M STUDS	C/W	SA194 2HM NUTS	BOLTING	MANWAY
BOLTING	20	1.625"	OD X	10.75" LONG SA-193B7M STUDS	C/W	SA194 2HM NUTS	BOLTING	BOOT

Certificate of Authorization: Type: **U** No.: **14259** Expires: **OCTOBER 7 2001**

Date: June 16, 2000 Name: Harold Lake (Manufacturer) Commission: ALBERTA #87 (Representative)
 Name: ALCO GAS & OIL PROD. EQUIPT LTD. Signed: Keith Lake
 (Authorized Inspector) (Nat'l Board Incl. Endorsement, State, Province and No.)