



136046

Field Inspection Report
Vessel # 136046

Client	Canadian Natural Resources Ltd.			Inspection Date	June 05, 2001		
Prov. Reg.#	136046			Location	Big Bend		
Equipment	Separator - Inlet			LSD	13-36-66-27W4		
Tag/Equip. #	V101			Comp./Unit #			
Vessel Status	In Operation			Job #	01-282		
Manufacturer	Plains	Serial #		MAWP/Temp	450 psi	150 ° F	
CRN#	C6549.2	Shell Material		Shell Thickness	0.625 in		
Corrosion All.	in	Head Material		Head Thickness	0.625 in		
		Head Material 2		Head Thickness 2	in		
		Channel Material		Channel Thickness	in		
Diameter	48 in	Length	144 in	RT	1	HT	No
Year Built	1977	Next Inspection	2003	Inspection Type	VEMI		
Service	Sour	Manway	Yes	Coating	Yes		

PSV #.	77C1143		
Mfg.	Consolidated	Serial #	77C1143
Type/Model	191030GC	Capacity	4487 SCFM
Date of Service	2001/06/01	Next Service	2004
		Set Pressure	299 psi
		Size	1.500 in
		Service Co.	Powercomm

Field Inspection Report
Vessel # 136046

Observations:

External

Paint dis-bonded from Approximately 10% of surface rusting is ongoing.

Internal

Vessel cleaned. Some wax remaining in corners and hard to reach areas. Drain line full of water. Vessel is lined - generally good condition. Several patches have dis-bonded 1 pit approximately 3/16" deep by 3/4" diameter located at bottom shell near east head. Some corrosion also seen under dis-bonded patches.

Note

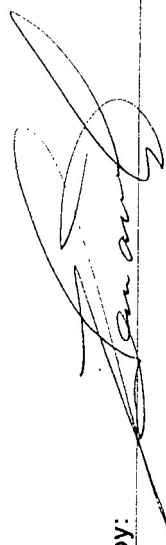
Repaired by Edmonton Exchanger 1991

Recommendations:

Repair 5 areas of coating damage.

Inspector: Len Semanuik

Reviewed by:



AB-40 to be attached

Client	Canadian Natural Resources			Date of Insp.	June 14, 1999
Prov. Reg.#	136046	Location			Big Bend
Equipment	Inlet Separator	LSD			13-36-66-27W4
Tag/Equip. #	V101	Comp./Unit #			
Vessel Status	In Operation	Job #			99-093
Fabricator	Plains Mfg.	Serial #	P1318	MAWP/Temp	450psi/150F
CRN#	C6549.2	Shell Mat'l	70,000	Shell Thick	.625"
Corr. All		Head Mat'l	70,000	Head Thick	.625"
Diameter	48"	Length	12'	RT	1 HT No
Year Built	1977	Next Insp	2002	Insp. Type	VE/VI/UT
Service	Sour	Manway	Yes	Coating	Yes
PSV #	12771				
Mfg.	Consolidated	Serial #	77C1143	Set Pressure	300psi
Type/Model	191030GC	Capacity	4487 SCFM	Size	1 1/2" x 2"
Date of Service	June 2, 1998	Next Service	2002	Service Co.	JRV

Report #2213

Observations:

99/06/14

Vessel was shutdown, steam washed and cleaned. Internal inspection was carried out to determine the present condition of the vessel from the previous inspection (June 1998). Epoxy patches (Devoe 142) that were previously applied to the damaged coating and pitting looks good and intact. There were no corrosion activities observed on the areas that were patched.

010 External-Rusty with some coating blisters.

Internal-Coating generally good, observed isolated pitting, depth from 0.010" to 0.070"

020 External-No evidence of corrosion, in good condition.

Internal-Coating generally good, observed isolated pitting 0.010" to 0.070", some pits were previously patched with epoxy coating (Devoe 142), looks good and no evident corrosion observed.

RAE Inspection Service (1979) Ltd.
#111, 4808 - 87 Street, Edmonton, Alberta T6E 5W3
Phone: (403) 469-2401 Fax: (403) 468-2422

**Field Inspection Report
Vessel A# 136046**

- 030 Demister pad was removed, steam washed and cleaned. In good shape. Reinstalled prior to service.
- 040 External-No evidence of corrosion, in good condition.
Internal-Coating generally looks good, observed scattered pitting at the bottom of shell near the manhole. Depth of pitting taken from four locations - 0.170", 0.170", 0.110" and 0.110".
- 050 External - In good condition.
Internal - In good condition.
- 060 Internal of manhole with epoxy patches (Devoe 142), intact, no corrosion activity.

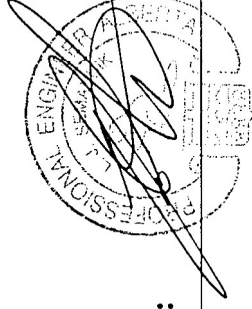
UT Readings (measurements in inches)

Test Point	Nominal	A	B	C	D
1	0.625	0.752	0.753	0.754	0.755
2	0.625	0.755	0.765	0.755	0.752
3	0.625	0.660	0.668	0.662	0.665
4	0.625	0.644	0.678	0.643	0.648
5	0.625	0.761	0.756	0.759	0.753
6	0.625	0.753	0.752	0.746	0.750

Recommendations:

1. Areas with coating damage and pitting found during this inspection should be properly cleaned to bare metal and to be patched with epoxy coating (Devoe 142) before returning vessel to service.

Note - These were done on June 16, 1999.



Inspected by: Ramon Jimeno Reviewed by:

98/06/02

010- East head coating in good condition.

020- Section east of demister location, coating generally in good condition, except damaged areas as indicated.

RAE Inspection Service (1979) Ltd.

#111, 4808 – 87 Street, Edmonton, Alberta T6E 5W3

Phone: (403) 469-2401 Fax: (403) 468-2422

**Field Inspection Report
Vessel A# 136046**

021- Damaged coating, some pitting (approx. 0.040").

030- Demister pad was removed and steam cleaned before reassembly.

040- Shell section west of demister location, coating generally good except as indicated.

041- Damaged coating has resulted in corrosion damage approximately 3/16" deep, 1 1/2" x 1" in size.

042- Damaged coating resulted in corrosion damage approx. 0.090" deep, 1 1/2" x 1" in size.

044- Damaged coating resulted in corrosion damage in several pits, up to 3/16" deep, overall size 3" x 2".

045- Damaged coating in manway resulted in corrosion damage up to 3/16" deep.

050- West head in good condition.

Discussion: The corrosion damage is the result of mechanical damage to the coating. The corrosion damage has to be repaired. It can be considered to be on the limit of what is allowable under current operating conditions.

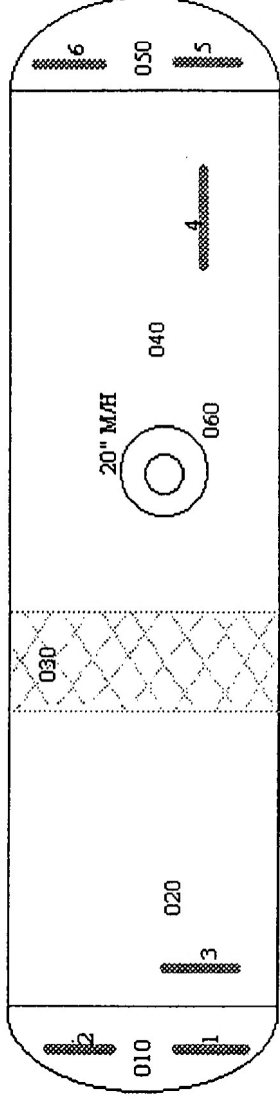
Recommendations: Repair damaged coating before returning to service. (Note: this was done on June 2, 1998). Schedule repair welding and coating repair/replacement no later than 1999. Redirect production to have the main inlet flow directed to the second inlet separator (V107, A136043).

Next inspection: June 1999. Inspector: Hennie Prinsloo

RAE Inspection Service (1979) Ltd.
 #111, 4808 – 87 Street, Edmonton, Alberta T6E 5W3
 Phone: (780) 469-2401 Fax: (780) 468-2422

Vessel Drawing
 (not to scale)

Client	Canadian Natural Resources	Location	Big Bend
Prov. Reg.#	136046	LSD	13-36-66-27W4
Equipment	Inlet Separator		
Diameter	48"	Shell Material	70,000
Length/Height	12'	Head Material	70,000
		Shell Thickness	0.625"
		Head Thickness	0.625"



Client	Canadian Natural Resources Ltd.	Date of Insp.	January 13, 1999
Prov. Reg. #	A 136046	Location	Big Bend Gas Plant
Equipment	Inlet Separator Piping	I.S.D	13-36-66-27W4
Tag/Equip. #		Comp./Unit #	
		Job #	99-029
PSV #	Tag PSV #1		
Mfg.	Consolidated	Serial #	77C1143
Type/Model	191030GC	Capacity	4487 scfm
Date of Service	98\06	Next Service	
		Set Pressure	300 psi
		Size	2"
		Service Co.	JRV

Observations:

UT Measurements:

Drain Line (Not Modified)

	Point 1	2	3	4	5	6
	2" REWLN		Bottom	2 x 1.5 red.	2"	
Nominal	0.154"	0.154"	0.154"	0.154"	0.154"	0.154"
Readings	N 0.670"	N 0.159"	0.179"	T 0.240"	T 0.169"	0.166"
	E 0.703"	E 0.169"	0.144"	E 0.226"	E 0.164"	0.149"
	S 0.685"	S 0.167"	0.129"	B 0.257"	B 0.194"	0.172"
	W 0.684"	W 0.172"	0.177"	W 0.232"	W 0.155"	0.174"
	7	8	9	10	11	12
Nominal	0.154"	0.154"	0.154"	0.154"	0.154"	0.154"
Readings	N 0.148"	0.170"	T 0.152"	T 0.168"	T 0.157"	T 0.153"
	E 0.169"	0.165"	E 0.155"	E 0.159"	E 0.159"	E 0.156"
	S 0.153"	0.158"	B 0.165"	B 0.204"	B 0.164"	B 0.146"
	W 0.152"	0.159"	W 0.158"	W 0.156"	W 0.156"	W 0.155"

Note: Flanges - 2" 300# STD (nom. 0.0154")
 "T" - 2" STD (nom. 0.0154")
 Elbows - 2" S 40 (nom. 0.0154")

Note: Point # 10 has rust corrosion on surface due to a previous drain nipple/valve leak. Leak has been corrected at time of piping inspection.

Drain Line (Modified)

	Point 1 1 1/2"	2 1 1/2"	3 1 1/2"	4 1 1/2"	5 1 1/2"
Nominal	0.200"	0.200"	0.200"	0.200"	0.200"
Readings	T 0.206"	T 0.198"	T 0.201"	N 0.195"	N 0.201"
	N 0.205"	N 0.202"	N 0.202"	S 0.205"	S 0.195"
	B 0.207"	B 0.194"	B 0.204"	W 0.199"	W 0.207"
	S 0.210"	S 0.196"	S 0.202"	E 0.203"	E 0.195"

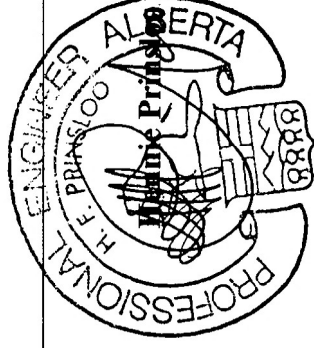
Note: 1 1/2" pipe schedule 80

Inspector:



Jim Longstreet

Chief Inspector:

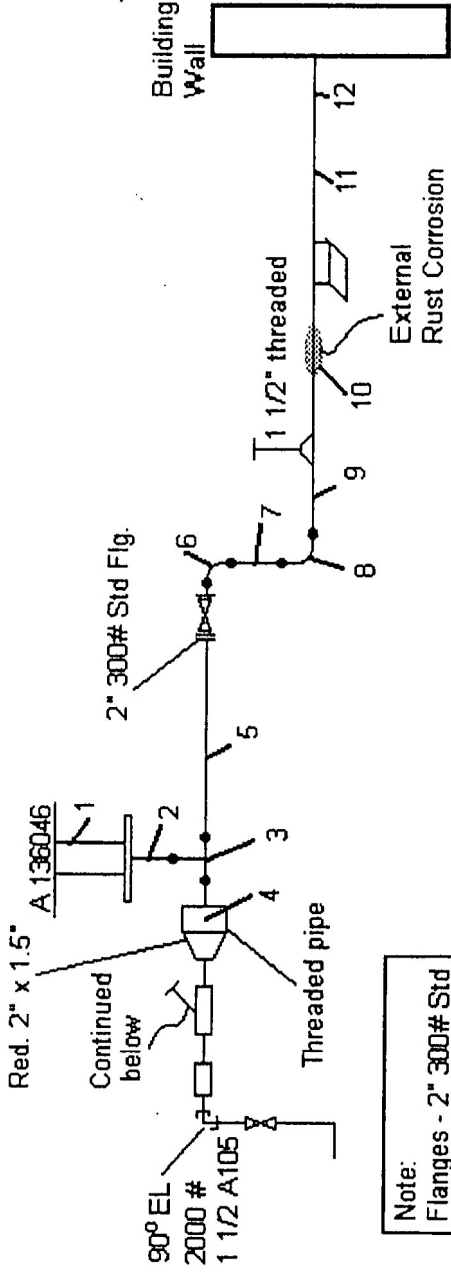


Canadian Natural Resources Ltd.
 Big Bend Gas Plant
 13-36-66-27W4

A 136046
 Inlet Separator Piping

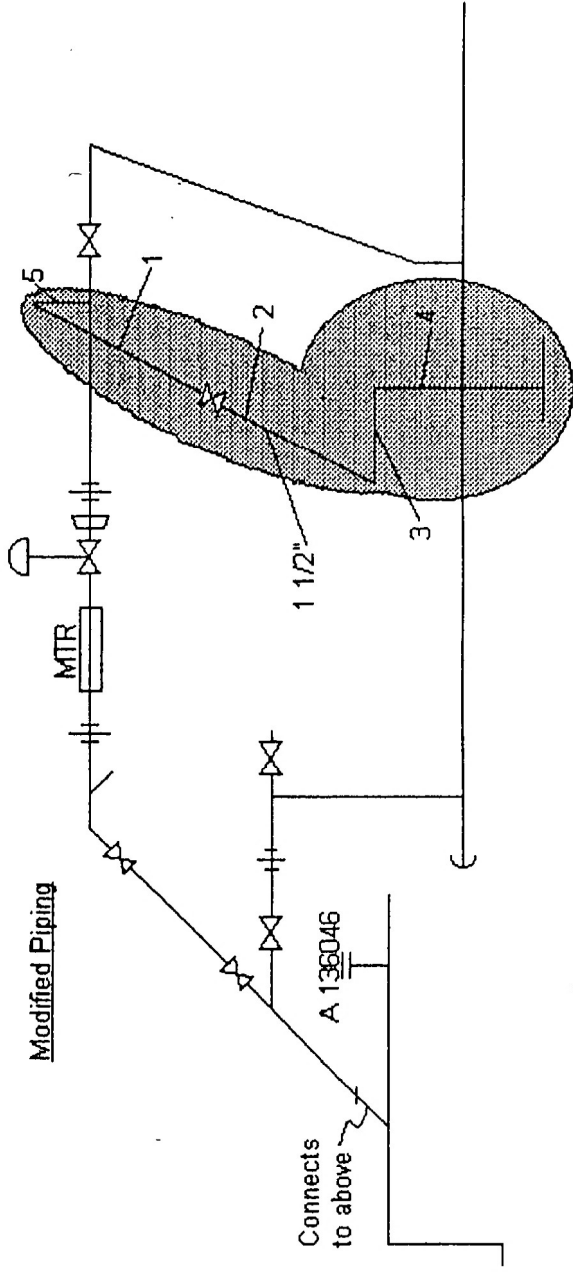
January 12, 1999

Drain Line (not modified)



Note:
 Flanges - 2\"/>

Note: Point # 10 has rust corrosion on surface due to a previous drain nipple/valve leak.
 Leak has been corrected at time of piping inspection.



1 1/2" pipe Schedule 80

Client	Canadian Natural Resources			Date of Insp.	June 2, 1998	
Prov. Reg.#	136046			Location	Big Bend	
Equipment	Inlet Separator			LSD	13-36-66-27W4	
Tag/Equip. #	V101			Comp./Unit #		
				Job #	98-093	
Fabricator		Serial #		MAWP/Temp	450psi/150F	
CRN#	C-6549.2	Shell Mat'l	70,000	Shell Thick	.625"	
Corr. All		Head Mat'l	70,000	Head Thick	.625"	
Diameter		Length	Height	RT	HT	
Year Built	1977	Next Insp.	06/99	Insp. Type	VE/VI	
Service	Sour	Manway	Y	Coating	Y	N
PSV #	12771					
Mfg	Consolidated	Serial #	77C1143	Set Pressure	300psi	
Type/Model	191030GC	Capacity	4487 SCFM	Size	1 1/2" x 2"2"	
Date of Service	June 2, 1998	Next Service	06/1999	Service Co	JRV	

Observations:

- 010- East head coating in good condition.
- 020- Section east of demister location, coating generally in good condition, except damaged areas as indicated.
- 021- Damaged coating, some pitting (approx. 0.040").
- 030- Demister pad was removed and steam cleaned before reassembly.
- 040- Shell section west of demister location, coating generally good except as indicated.
- 041- Damaged coating has resulted in corrosion damage approximately 3/16" deep, 1 1/2" x 1" in size.
- 042- Damaged coating resulted in corrosion damage approx. 0.090" deep, 1 1/2" x 1" in size.
- 044- Damaged coating resulted in corrosion damage in several pits, up to 3/16" deep, overall size 3" x 2".
- 045- Damaged coating in manway resulted in corrosion damage up to 3/16" deep.
- 050- West head in good condition.

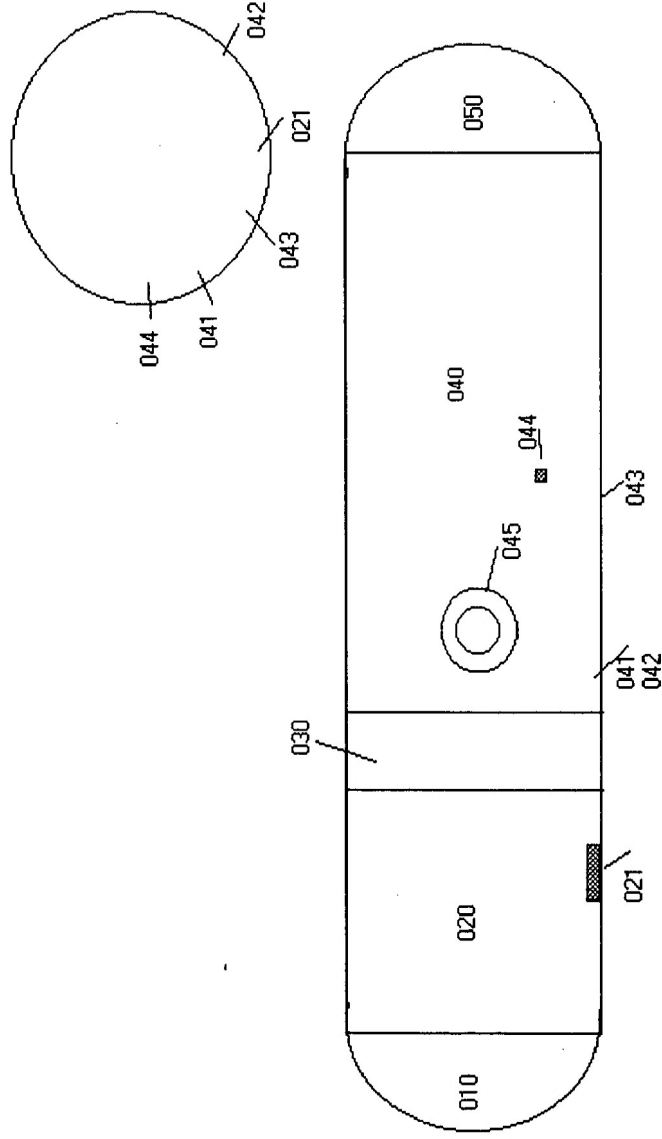
RAE Inspection Service (1979) Ltd.

#111, 4808 - 87 Street, Edmonton, Alberta T6E 5W3

Phone: (403) 469-2401 Fax: (403) 468-2422

Field Inspection Report

Discussion: The corrosion damage is the result of mechanical damage to the coating. The corrosion damage has to be repaired. It can be considered to be on the limit of what is allowable under current operating conditions.

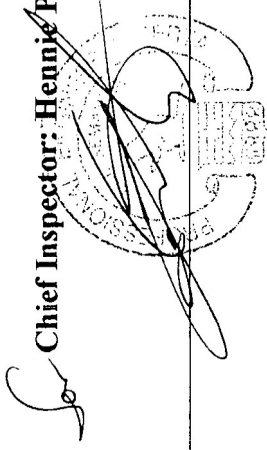


Recommendations: Repair damaged coating before returning to service. (Note: this was done on June 2, 1998). Schedule repair welding and coating repair/replacement no later than 1999. Redirect production to have the main inlet flow directed to the second inlet separator (V107, A136043).
Next inspection: June 1999.

Suitable to Return to Service: (Y) N
Repair and Alteration Form (AB40): Y N (NA)

Inspector: Hennie Prinsloo

Chief Inspector: Hennie Prinsloo



Client: Canadian Natural Resources Ltd.
Item Inspected: Inlet Separator
Location: Big Bend

REPORT DISTRIBUTION (* by RAE Inspection)

*Casey McWhan
Alberta Boilers Branch

NAMEPLATE DATA

Tag Number	V101	Serial Number	C-6549.2
Provincial Number	A-136046	C.R.N.	
MAWP	450 psi @ 150° F	MDMT	
Shell Material	70,000 UST	Thickness	0.625"
Head Material	70,000 UST	Thickness	0.625"
Corrosion Allowance		Diameter	
Length		Height	
Manufacturer		Year built	1977

PSV DATA The PSV set pressure was reduced in 1994

Manufacturer		Serial Number	
Model Number		Capacity	
Set Pressure		Outlet Size	
Inlet Size			
Service Company		Next Service	
Service Date			

GENERAL

Inspection	Visual Int	Cleaning	Poor
Access	Internal	Service	Sour gas/water

INSPECTION RESULTS

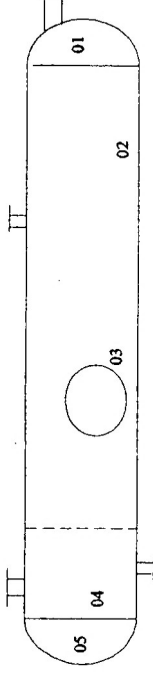
The vessel was inspected visually by entering through the manway. ~~Internal seating was inspected visually and by 67.5V dc holiday tester.~~

is generally in good condition. Damage had occurred in locations as marked. Corrosion damage up to 3/16" deep is present in PSV was not removed for servicing. The PSV set pressure was reduced to 300 psi in 1994.

The UT readings and the sketch of the equipment showing the locations of UT are given in the next

Client: Canadian Natural Resources Ltd.
Item Inspected: Inlet Separator
Location: Big Bend

File: 95-007
Page: 2 of 2
Date Inspected: March 2, 1995



Location	UT readings in inches
01	0.815, 0.780, 0.813
02	0.658, 0.690
03	0.700, 0.745, 0.685
04	0.709, 0.689
05	0.792, 0.786

CONCLUSIONS

The vessel appears to be in good condition.

RECOMMENDATIONS

Attach the PSV service data with this report for the sake of completion of documentation. The PSV should be located close to the vessel as far as practicable.

Inspector: Saroj Bhattacharya

Signature:



□ EDMONTON (403)463-4858
□ COCHRANE (403)932-3940



(1)V-101 A# 136046

DATE June 2 198 WO # F-150 ID # 12771
 CUSTOMER CARL LOCATION BIG BEND PO #
 MAKE Consolidated TYPE 191030GC SIN 77C 1143
 SIZE 1 1/2 x 2 1/2" ENDS FE TAG #
 SET PRESS 300 PSI PSI KPA 0 COLD/DIFF SET PRESS
 TEMP 600F CAPACITY 4477 SCFM ORIFICE G
 CAP ASSY. OPEN CLOSED UV IV NONE OTHER
 SERVICE MEDIUM: VAPOUR STEAM LIQUID GAS AIR OTHER
 CUSTOMER INSTRUCTIONS: SEAVICE

VISUAL CONDITION: GOOD FAIR POOR SCRAP OTHER
 SEAL CONDITION: TOP BTM VSL INSNIAL LAST SERVICE DATE 05/95 DATA PLATE CONDITION Reset tag
 INLET Clean BODY Acc
 OUTLET Clean BONNET Acc
 INDICATE FOULING: SCALE, RUST, CARBON, OIL, SULPHUR, CLEAN ETC.
 PRETEST: SIMMER 290 PSI FULL LIFT 304 RESEAT 270 LEAKAGE BPM @ 90% 60
 COMMENTS: Set point was bad. Short lower.

INSPECTION	REPAIRS REQUIRED	PARTS REPLACED	CRITICAL DIMENSIONS
CAP ASSEMBLY	V	Acc	
ADJUSTING SCREW	V	Acc	
SPRING/NUMBER	V	Acc	
GUIDE	V	Acc	
SPINDLE/STEM	V	Acc	.003
STEM RETAINER	V	Acc	
DISC HOLDER	V	Acc	
DISC SEAT	D	Ritted	pp .003
NOZZLE SEAT	D	Ritted	lps .002
BLOWDOWN RING	V	Acc	
RING PINS	V	Acc	
BELLOWS	P	Acc	
GASKETS	V	res	
OTHER	V		

CODES: N/A = NOT APPLICABLE N/R = NOT REQUIRED ACC = ACCEPTABLE
 V = VISUAL CHECK D = DIMENSIONAL CHECK P = PERFORMANCE CHECK REJ = REJECTED
 MEDIUM: AIR OIL STEAM NEW SETTING
 FINAL TEST: SIMMER 205 PSI FULL LIFT 300 RESEAT 265 PSI NEW KPA CAPACITY
 B.P. TEST: PRESSURE 10 PSI BLOW DOWN 10 PSI KPA RING SETTING LOWER 1 UPPER NA LEAKAGE BPM @ 90% 0 (NOTCHES)

SEALED: TOP BTM ENDS COVERED: YES NO PAINTED: YES NO APPEARANCE see
 COMMENTS:
 SIGN OFF: DISASSEMBLY CD REASSEMBLY DS TESTED BY AS
 FINAL INSPECTION CD CUSTOMER/INSPECTOR AS

REFERENCE DATA

CONDITION AS RECEIVED

670

DS

PART INSPECTION

Start Serv 11:00
 S.S. 11:02
 BP 22:50
 Pretest 35:00
 GSKTS 51:00
 TAGS 15:00
 244771

TESTING DATA

FINAL INSPECTION

Client: Canadian Natural Resources Ltd.
Item Inspected: Inlet Separator
Location: Big Bend

File: 95-007
Page: 1 of 2
Date Inspected: March 2, 1995

REPORT DISTRIBUTION (* by RAE Inspection)

*Casey McWhan
Alberta Boilers Branch

NAMEPLATE DATA

Tag Number	A-136046	Serial Number	C-6549.2
Provincial Number	450 psi @ 150 ° F	C.R.N.	MDMT
MAWP	70,000 UST	Thickness	0.625"
Shell Material	70,000 UST	Thickness	0.625"
Head Material		Diameter	
Corrosion Allowance		Height	
Length		Year built	1977
Manufacturer			

PSV DATA The PSV set pressure was reduced in 1994

Manufacturer	Serial Number
Model Number	Capacity
Set Pressure	Outlet Size
Inlet Size	Next Service
Service Company	
Service Date	

GENERAL

Inspection	Visual, UT	Cleaning	Poor
Access	Internal	Service	

INSPECTION RESULTS

The vessel was inspected visually by entering through the manway. Internal coating was inspected visually and by 67.5 V dc holiday tester.

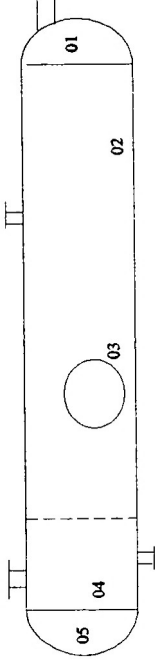
Internal coating was found in good condition.

PSV was not removed for servicing. The PSV set pressure was reduced to 300 psi in 1994.

The UT readings and the sketch of the equipment showing the locations of UT are given in the next page.

Client: Canadian Natural Resources Ltd.
Item Inspected: Inlet Separator
Location: Big Bend

File: 95-007
Page: 2 of 2
Date Inspected: March 2, 1995



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CONCLUSIONS

The vessel appears to be in good condition.

RECOMMENDATIONS

Attach the PSV service data with this report for the sake of completion of documentation. The PSV should be located close to the vessel as far as practicable.

Inspector: Saroj Bhattacharya

Signature:





MANPOWER AND LABOUR
 Boilers Branch

AFFIDAVIT OF MANUFACTURER
 COVERING BOILER OR PRESSURE VESSEL

① 136046 PURCHASE ORDER NO.

MAR 01 1977

As Approved by the Boiler & Pressure Vessel Committee of the C.S.A.

Upon shipment of Boiler or Pressure Vessel this form fully and correctly filled in and attested to 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 boilers and pressure vessels, otherwise the use of same may be prohibited or the working pressure severely penalized.

- Manufactured by PLAIN'S MANUFACTURING LTD. 610 Moraine Rd. N.E., Calgary, Alta.
 Manufactured for CANDEL OIL LTD. 2800 PIR. and address of Manufacturer 606 Calgary Place, Calgary, Alberta
 (Name and Address of Purchaser or Passenger)
 Ultimate owner CANDEL OIL LTD. (Name and Address)
 Location of installation BIG BEND GAS PLANT (Name and Address)
 Mfg. Serial No. P 1318
- Type of boiler or pressure vessel INLET SEPARATOR Mfg. Serial No. P 1318
 Provincial Registration No. C 651 Drawg. No. 425-420-02
- To be used for: (Air, CO₂, Propane, Ammonia, Steam, Hot Water, etc.) GAS
 Overall length 14' 10 1/2" Cu. ft. capacity 129.8 Flaring surface sq. ft.
 Dia. 42" Overall length 14' 10 1/2" Cu. ft. capacity 129.8 Flaring surface YES
- Were test reports checked on oil plates used in the fabrication of this vessel? YES
 Does all material meet A.S.M.E. Code requirements? YES
 A.S.M.E., A.S.T.M. or other material specification No. A516-70 Tensile strength 70,000
 F. Payback NO X.R. COMPLETE
 Fabrication to A.S.M.E. Code, Para. No. UM12-1274 Probed: (Yes) Post-weld heat procedure (Yes) N/A
- Are the following records on mfg's files? YES Post-weld heat procedure YES
 Were X-ray films examined and found to meet Code requirements? YES
- Welders employed upon vessel:

Name of welder and Province or State in which qualified	Identifying Symbol	Date of last weld test	Qualifies for welding under Code Para.	Name of Inspector Examining tests	National Board No.
<u>Adrien Heppin, Alta.</u>	<u>NA</u>	<u>OCT. 20/76</u>		<u>R. Davison</u>	<u>WA 11858</u>
<u>Clement Laduke, Alta</u>	<u>LG</u>			<u>E. Hilberg</u>	<u>W 945</u>
<u>Herman Baas, Altn.</u>	<u>BH</u>	<u>DEC. 19/75</u>			<u>W2557</u>

Does all welding on this vessel and the testing of coupons which required meet A.S.M.E. Code requirements? YES

NAME OF PART	Temperature of Testing Medium	Fluid Test Pressure	Maximum Working Pressure	Maximum operating temperature depress. F.
<u>WHOLE VESSEL</u>	<u>AMBIENT</u>	<u>675</u>	<u>450</u>	<u>150</u>

7. Hydrostatic tests and Working Pressures. Did the hydrostatic test fully conform to Code requirements? YES

8. Boiler rating, maximum capacity (refer B.I.U. Bulletin for hot water boilers)

9. SAFETY VALVES

No. of Valves	Manufacturer's Code	Provincial Registration No.	Serial Diameter	Serial Pressure	Capacity lbs. per hour

A/36046
FOR POWER

10. Actual minimum stamping of the vessel shall conform to the following and shall be reproduced here: **FOR POWER & HEATING BOILERS** (an attached plate is cast iron)

Canadian Registration Number _____
 National Board Number (if manufactured in U.S.A.) _____
 Manufacturer and manufacturer's serial number _____
 Plate mfg's serial, spec. No. and tensile strength (SA 285 steel) _____
 Maximum working pressure _____ (for S and W if both)
 Date of surface and year built (1957 etc.) _____

UNFIRED PRESSURE VESSEL

Inspection authorized only inspector _____
 Canadian Registration number _____
 National Board number (if manufactured in U.S.A.) _____
 Manufacturer and manufacturer's serial number **PLAINS MANUFACTURING LTD.**
 Plate mfg's serial, spec. No. and tensile strength (Steel SA 285 steel) **A 516-70**
 Maximum working pressure and temperature **450** **150** **OF.**
 Thickness of shell and heads **5/8** **Y. Heads** **5/8**
 Code paragraph number and year built **12-1a** **19 37.**



Initials of Authorized Shop Inspector _____ P1318

11. I HEREBY DECLARE that the foregoing statements, having reference to Vessel bearing manufacturer's Serial No. _____
 built by **PLAINS MANUFACTURING LTD.** of **CALGARY**
 and completed on the **2nd** day of **FEBRUARY** **19 77** are in all respects correct and true and
 that the said Vessel has been built in accordance with Provincial registered design No. **C6549.2**
 and that it complies fully with the A.S.M.E. Code and regulations of the Province of Alberta under the Act governing the

construction of all boilers and pressure vessels.
 Sworn before me at **CALGARY** **ALBERTA**
 in the Province (or State) of _____
 this **2nd** day of **FEBRUARY** **19 77**

 Provincial Commissioner, Boilers, J.P. or R.P.
 My commission expires **1st January 1978**

Signed *[Signature]* Shop Foreman
 For **PLAINS MANUFACTURING LTD.**
610 Moraine Rd. N.E.
 Full Name and Address

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, a duly authorized Inspector of Boilers and Pressure Vessels employed by
BOILERS BRANCH of **PROVINCE OF ALBERTA**
 do hereby certify that the foregoing statements are correct and that the vessel, construction and work-
 manship are in accordance with the A.S.M.E. Code
 Date **FEBRUARY 1977** Signed *[Signature]*
 Provincial Commissioner, Boilers

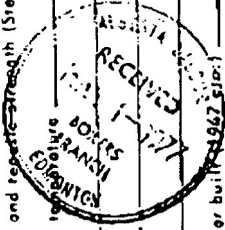
TO BE FILLED IN BY ALBERTA INSPECTOR

12. Received _____ 19 _____ Inspector's Pressure Vessel No. (A) _____
 Checked _____ 19 _____
 I have allowed a working pressure of _____ of Shell side.
 and have issued Certificate No. _____ of Tube side.

A/36046

10. Actual minimum stamping of the vessel shall conform to the following and shall be reproduced here: **FOR POWER & HEATING BOILERS** (on attached plate for cast iron)

Canadian Registration number _____ C.R.N. _____
 National Board number (if manufactured in U.S.A.) _____
 Manufacturer and manufacturer's serial number _____ Sr. No. _____
 Plate mfg's initials, spec. No. and tensile strength (Steelco. SA 285 etc.) _____ T.S. _____
 Maximum working pressure _____ p.s.i. Temp. _____ °F.
 Effective heating surface and year built (1967 etc.) _____ U.S. _____ Sq. Ft. _____ 19 _____
 Initials of authorized shop inspector _____
UNFIRED PRESSURE VESSEL--
 Canadian Registration number _____ C.R.N. _____ C 6549.2
 National Board number (if manufactured in U.S.A.) _____
 Manufacturer and manufacturer's serial number **PLAINS MANUFACTURING LTD.** Sr. No. **P 1318**
 Plate mfg's initials, spec. No. and tensile strength (Steelco. SA 285 etc.) **A 516-70** T.S. **70,000**
 Maximum working pressure and temperature _____ p.s.i. Temp. **150** °F.
 Thickness of shell and heads **T. Shell 5/8** T. Heads **5/8**
 Code paragraph number and year built (1967 etc.) _____ U.W. **12-1a** _____ 19 **77**
 Initials of Authorized Shop Inspector _____



11. I HEREBY DECLARE that the foregoing statements, having reference to Vessel bearing manufacturer's Serial No. **P1318** built by **PLAINS MANUFACTURING LTD.** of **CALGARY** and completed on the **2nd** day of **FEBRUARY** 19 **77** are in all respects correct and true, and that the said Vessel has been built in accordance with Provincial registered design No. **C6549.2** and that it complies fully with the A.S.M.E. Code and regulations of the Province of Installation under the Act governing the construction of boilers and pressure vessels.

Sworn before me at **CALGARY** **ALBERTA**
 in the Province (or State) of _____
 this **2nd** day of **FEBRUARY** 19 **77**

 A Commissioner for Oaths, J.P. or N.P.
 My commission expires **1st January 1978**

Signed *[Signature]* Shop Foreman,
 For **PLAINS MANUFACTURING LTD.**
610 Moraine Rd. N.E.

 Firm Name and Address.

12.

CERTIFICATE OF SHOP INSPECTION	
I, the undersigned, a duly authorized Inspector of Boilers and Pressure Vessels employed by	_____
BOILERS BRANCH	_____ of _____
	PROVINCE OF ALBERTA
do hereby certify that the foregoing statements are correct and that the material, construction and workmanship are in accordance with the A.S.M.E. Code	_____
Date FEBRUARY 1977 Signed <i>[Signature]</i>	No. _____
	Provincial or National Board Inspector.

TO BE FILLED IN BY ALBERTA INSPECTOR

13. Received _____ 19 _____ Inspector's Pressure Vessel No. (A) _____
 Checked _____ 19 _____
 I have allowed a working pressure of _____ p.s.i. at _____ °F. Shell side.
 _____ p.s.i. at _____ °F. Tube side.
 and have issued Certificate No. _____ therefor.