

NOT IN SERVICE

Equip. No. _____ Prov. Reg. No. **A** 429575 C.R.N. H-9622.12 Serial No. 1893 H401-5 Yr. Inst. _____
 Code/Div. ASME B31.3 Size: 55in x 20ft Manufacturer: PLAINS OIL LTD. Yr. Bld. 1996
 C. Stamp: _____ Service: SWEET PWHT: HT Radiography: RT-1 Insulated: 70%

Design & Materials Data

HEAD:
 Top Mat'l. SA 36 Top Nom. 9.5mm Top C.A. 3.2mm
 Btm. Mat'l. _____ Btm. Nom. _____ Btm. C.A. _____

CHANNEL:
 Material: _____ Nominal: _____ C.A. _____

BOOT
 Head Mat'l. _____ Head Nom. _____ Head C.A. _____
 Shell Mat'l. _____ Shell Nom. _____ Shell C.A. _____

SHELL
 Material: SA 36 Nominal: 9.5mm C.A. 3.2mm

MAWP Shell Side: 9308 kPa @ Temp. 93°C
 MAWP Tube Side: _____ @ Temp. _____

CLIENT	CANADIAN NATURAL RESOURCES LTD
FACILITY	PASS CREEK FIELD LSD: 05-05-61-19 W5M
ITEM	LINE HEATER
BY: NB	DATE: 09/2005 DWG.# 46

UTS DATA

CLIENT: CANADIAN NATURAL RESOURCES
EQUIPMENT: LINE HEATER
CRN#: H-9622.12
PROV REG: A 429575
TESTED ON STREAM

FACILITY: PASS CREEK FIELD
SERVICE: SWEET
LOCATION: 05-05-61-19 W5M
RTD JOB #: 10.114960
REFER TO DRAWING: 46

Test Point	THICKNESS DATA				Flag	T-Min	C.A.	Nom.	Short Term	Long Term	Ave. mm/yr	Retirement Date
305												
Description:	3" 90° ELBOW											
	2008	7	2014	8								
Min. Thick.	7.5		7		6.60		1	7.60	.08		.08	
Average:	7.8		7.3						.08		.08	
Analysis:												
310												
Description:	3" 90 ELBOW											
	2008	7	2014	8								
Min. Thick.	7.6		7.3		6.60		1	7.60	.05		.05	
Average:	7.9		7.6						.05		.05	
Analysis:												
315												
Description:	3" 90° ELBOW											
	2008	7	2014	8								
Min. Thick.	7.9		7.4		6.60		1	7.60	.08		.08	
Average:	7.2		7.2						0		0	
Analysis:												

**Canadian Natural Resources Limited
GENERAL PRESSURE VESSEL INFORMATION**

Job # 10.114960

District: SwanHills, Ab.	Skid No.
Facility: Pass Creek Field	Location (LSD): 05-05-61-19 W5M
Vessel Name Equipment Number: Line Heater	
Orientation: Horizontal	
Status: Not In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A429575		CRN Number: H9622.12	
Vessel serial number: 1893 H401-5		Size: 55in x 180in	
Shell thickness: 9.5mm		Shell material: SA 36	
Head thickness: 9.5mm		Head material: SA 36	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 9308 Kpa	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 93 degC	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT 1		Heat treatment: Yes	
Code parameters: ASME B31.3		Coated: no	
Manufacturer: Plains Oil Ltd		Year built: 1996	
Corrosion allowance: 3.2mm		Manway: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture / Model / Serial	Set Pressure (PSI / kPa)	Capacity (scfm)	Size	Block Valve	Location
NO PSV	Removed					

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet X	Sour	Oil	Gas X	Water X
Amine	LPG	Condensate	Air	Glycol X

Other (Describe):

Inspection Interval _____ **PSV Service Interval** _____
(Determined by MIC in conjunction with Chief Inspector following guidelines of CNRL Owner-User Inspection Program)

Reports reviewed and accepted by:

Mechanical Integrity Coordinator *[Signature]* Date *Feb 22/15*

Fill out all forms as completely as possible. All information is important! Use back of sheets to record additional information or sketch if required.
Copy of report to be filed by MIC at site, and copy sent to Chief Inspector

External Inspection Items	G	F	P	N/A	Comments
Insulation Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.	X				No damage present- no egress of moisture. Sealed around nozzles and saddles (Outside 70 percent insulated)
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	X				Paint in good overall condition – No exposed metal.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed.
Saddle/Skirt Assess condition of paint, fire protection, concrete. Look for corrosion, buckling, dents, etc. Look at vessel surface area near supports. Verify no signs of leakage at attachment to vessel and attachment welds are acceptable. Ground wire attached?	X				Saddles: bolted directly to skid floor. No buckling or dents – no obvious leaks at attachment welds – saddle to shell. No corrosion at attachment welds to vessel. Ground wire attached to skid.
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Securely fastened- no deformation.
Concrete foundation Check for cracks, spalling, etc.				X	No Concrete
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.				X	No ladders or platforms
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				Threaded nozzle joints fully engaged- no leaks. No leaks observed. No damage or deflections. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Pressure gauge: No pressure gauge. Temp gauge: No gauge. Sight glass on accumulator is unobstructed.
External Piping Ensure pipe is well supported. All clamps, supports, shoes, etc. in place. Look for evidence of structural overload, deflection, etc. Paint condition, external corrosion?	X				Piping is well supported – all clamps and supports are in place. No structural overloads or deflections. Paint in good condition- no exposed metal.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				No leaks are visible. Valves are supported properly.
PSV Ensure PSV is set at pressure at or below that of vessel.				X	PSV should be installed and serviced before putting heater back into service.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic thickness survey carried out – no metal thickness detected below nominal minus corrosion allowance.
Recommendations or corrective actions : Vessel is Fit for Service or describe corrective actions required) (MIC to review corrective actions with Operations, discuss with Chief Inspector where necessary, and get remedial action implemented)					
Recommendations: 1 Install PSV before returning to service					
Summary: This vessel is in good condition, visual external and ultrasonic thickness inspection carried out – no metal thickness detected below nominal minus corrosion allowance.					
Vessel is out of service.					

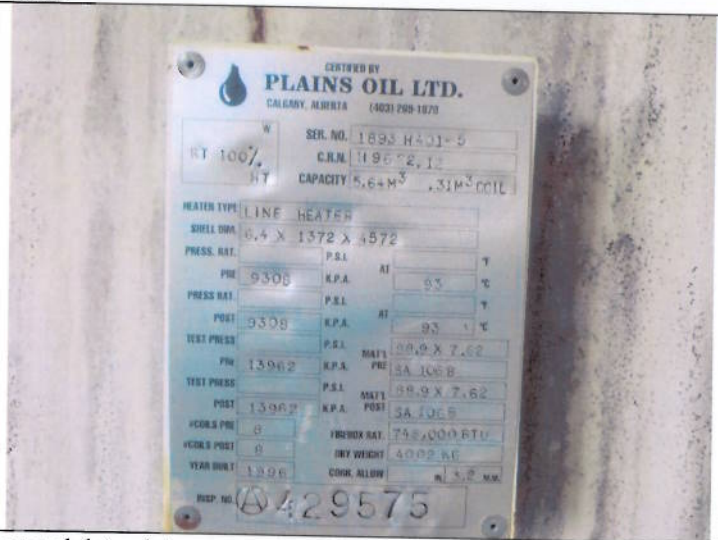
Inspected By: Matt Wood (API 510# 42758)

Date: Aug 26, 2014



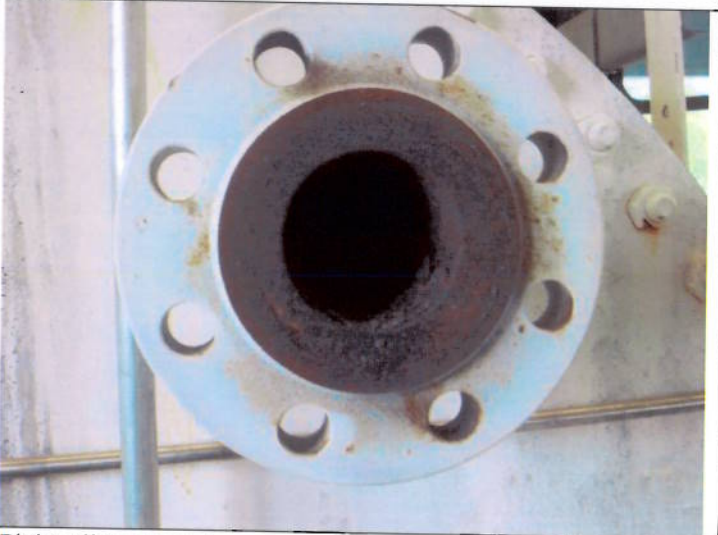
LSD

vessel Overview



vessel data plate

vessel overview inside



Piping disconnected

