

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

10.117757

District: Grande Prairie, AB.	Skid No.
Facility: North Wapiti Gas Gathering	Location (LSD): 04-15-69-10 W6M
Vessel Name Equipment Number: Line Heater	Location (DH):
Orientation: Horizontal	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A0413607		CRN Number: L-3369.213	
Vessel serial number: C-9906.B		Size: 48 in. x 16 ft	
Shell thickness: 9.5 mm		Shell material: SA 36	
Head thickness: 9.5 mm		Head material: SA 36	
Tube wall thickness:		Tube material: SA 106 B	
Tube diameter: 3 in		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: Atmospheric	Operating pressure	Shell:
	Coil 1: 27193 kPa		Tubes:
Design Temp.	Shell: 93 deg C	Operating temperature	Shell:
	Coil 1: 93deg C		Tubes:
X-ray: RT 1		Heat treatment: Yes	
Code parameters: ASME VIII, Div 1		Coated: No	
Manufacturer: Chadco Canada Limited		Year built: 1999	
Corrosion allowance: 1.6 mm		Man way: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

Tag Number(s)	Manufacturer /Model / Serial# and Code Stamp	Set Pressure (PSI)	Capacity (Scfm/ usgpm)	Size	Block Valve	Location	Serv by / Date
Atmospheric							

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet <input checked="" type="checkbox"/>	Sour	Oil	Gas <input checked="" type="checkbox"/>	Water <input checked="" type="checkbox"/>
Amine	LPG	Condensate <input checked="" type="checkbox"/>	Air	Glycol <input checked="" type="checkbox"/>

Other (Describe):

Inspection Interval _____ **PSV Service Interval** _____

(Determined by MIC in conjunction with Chief Inspector following guidelines of Canadian Natural Resources Limited Owner-User Inspection Program)

Reports reviewed and accepted by:

Mechanical Integrity Coordinator _____ **Date** _____

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				Insulation is in good condition – no open or torn section – no evidence of wet insulation.
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				Saddle: No buckles or dents – welded directly to skid deck and skid. No evidence of corrosion at attachment welds to vessel – no leaks. Ground wire attached to skid.
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Welded to skid deck.
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.				X	
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				Threaded and flanged joints are fully engaged – no leaks. No damage or deflections. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Temperature gauge: 50 to 500 deg F.
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, no deflection, all clamps and supports are in place. Paint in good condition – no exposed metal.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Valves are well supported – no leaks.
PSV Ensure PSV is set at pressure at or below that of vessel.				X	No PSV
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	X				Ultrasonic corrosion survey carried out – pipe metal thickness detected below nominal minus corrosion allowance. 2” 90° Elbow – nominal thickness is 8.7mm / min thickness is 7.4mm
<p>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. No recommendations. Summary: Vessel is in overall good condition, visual external inspection and ultrasonic corrosion survey performed—no metal thickness detected below nominal minus corrosion allowance on gas coil. Pipe metal thickness detected below nominal minus corrosion allowance. Vessel is fit for service.</p>					



[Signature]

API 20981 / IBPV 275

Inspected By: Dellas Wiedman

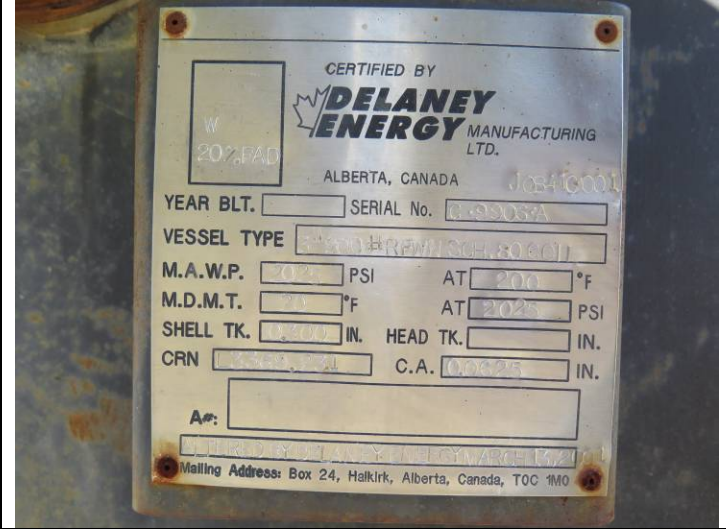
Date: Sept 13, 2016

Photo Table



LSD

Data Plate



Coil data plate

Overview



Temperature gauge

