

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

Job 10.180106

District: Fort St. John, BC.	Skid No.
Facility: Adsett Water Injection Facility	Location (LSD): b-63-G/94-J-02
Vessel Name Equipment Number: Separator	
Orientation: Horizontal	
Status: Not in Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A0416035		CRN Number: N-2385.213	
Vessel serial number: 4626		Size: 36 in x 10 Ft	
Shell thickness: 40.5mm		Shell material: SA 516 70 N	
Head thickness: 41.3mm		Head material: SA 516 70 N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 1440 PSI	Operating pressure	Shell:
	Tubes:		Tubes:
Design Temp.	Shell: 130 F	Operating temperature	Shell:
	Tubes:		Tubes:
X-ray: RT 1		Heat treatment: HT	
Code parameters: ASME VIII / Div 1		Coated: No	
Manufacturer: Penfabco LTD		Year built: 1996	
Corrosion allowance: 3.2 mm		Manway: No	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture / Model / Serial	Set Pressure (PSI / kPa)	Capacity (scfm)	Size	Block Valve	Location	Service by Date
N/S	Farris / 26JA13-120/SP / CE-43315-3-A10	1440 PSI	35894	2.5 x 4	No	Top shell	Dalco 07/2013

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet	Sour X	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 Canadian Natural Resources Ltd. 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	Vessel is not 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 – vessel is out of service.
Saddle/skirt Assess condition of paint, fire protection, and 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				Skirt: Bolted directly to skid floor – no buckling or dents. No 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				Vessel is securely bolted to skid floor – no signs of deformation
Concrete foundation Check for cracks, spalling, etc.				X	None
Ladder / Platform Describe general condition, ensure support is secure to vessel, and describe any hazards.				X	None
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				Stud threads are fully engaged to nuts – no short bolting. No damage or deflections – no leaks. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Gauges are clear and functional – within range for service – Pressure gauge: 0 – 2000 PSI.
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 properly supported – no visible leaks
PSV Ensure PSV is set at pressure at or below that of vessel.	X				Located at top shell – set at MAWP of vessel. Seal intact – no block valve – discharge piping same size as outlet orifice.
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.
Other					
<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: No recommendations at this time. Summary: This vessel is in good condition, visual external and ultrasonic thickness inspection carried out – no metal thickness detected below nominal minus corrosion allowance. Corrosion rate based on greatest thickness loss (nozzle) 0.041mm per year. Retirement Date to “T”min is year 2148. Vessel is fit for service.</p>					

Inspected By: Dellas Wiedman 
API 20981 / IBPV 275

Date: July 5th, 2018



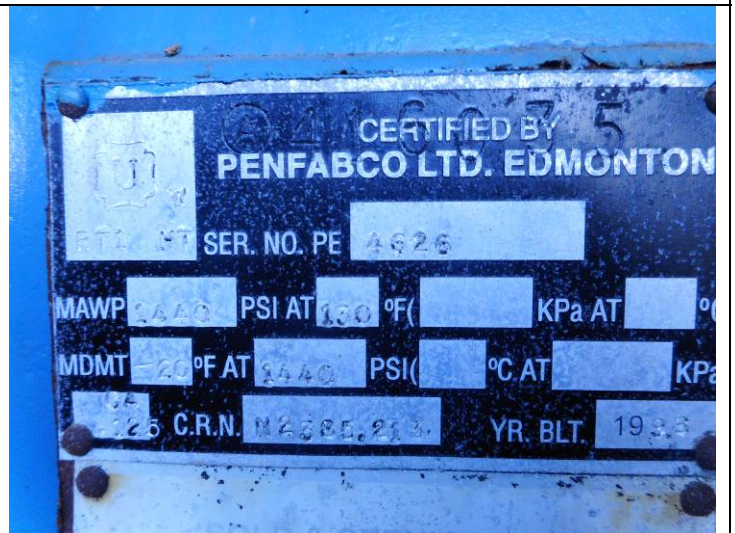
LSD



Vessel overview



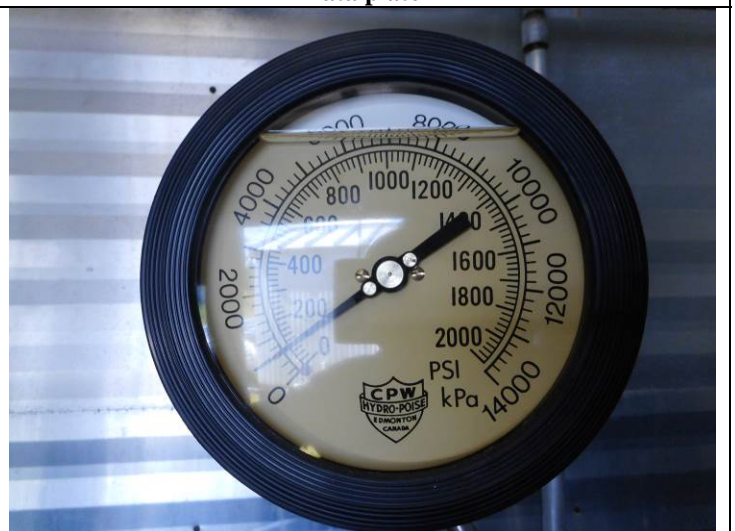
Vessel overview



Data plate



Saddle



Pressure gauge



External piping support



PSV



PSV service tag



PSV service tag