

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

Job # 10.113785

District: Fort St John, BC				Skid No.			
Facility: West Blueberry Gas Gathering				Location (LSD): b-28-L/94-A-12			
Vessel Name Equipment Number: Line Heater							
Orientation: Horizontal							
Status: In Service				Regulatory Inspection			
PRESSURE VESSEL NAMEPLATE DATA							
"A" or "G" or "S" (Sask.) or BC Registration Number. A0418376				CRN Number: M-1551.21			
Vessel serial number: BW139.073				Size: 30 in X 12 ft			
Shell thickness: 7.9 mm				Shell material: SA 36			
Head thickness: 7.9 mm				Head material: SA 36			
Tube wall thickness:				Tube material:			
Tube diameter:				Tube length:			
Channel thickness:				Channel material:			
Design pressure	Shell: Atmos			Operating pressure	Shell:		
	Tubes: Coil A 2500 PSI Coil B 1300 PSI				Tubes:		
Design Temp.	Shell:			Operating temperature	Shell:		
	Tubes: 200 deg F				Tubes:		
X-ray: RT-1 coil only				Heat treatment: No			
Code parameters: ASME B 31.3				Coated: No			
Manufacturer: Brooks Welding Ltd.				Year built: 1998			
Corrosion allowance: 1.6 mm				Manway: No			
PRESSURE SAFETY VALVE NAMEPLATE DATA							
PSV Tag #	Manufacture / Model / Serial	Set Pressure (PSI / kPa)	Capacity (scfm)	Size	Block Valve	Location	
NO PSV	Vessel out of	Service					
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:

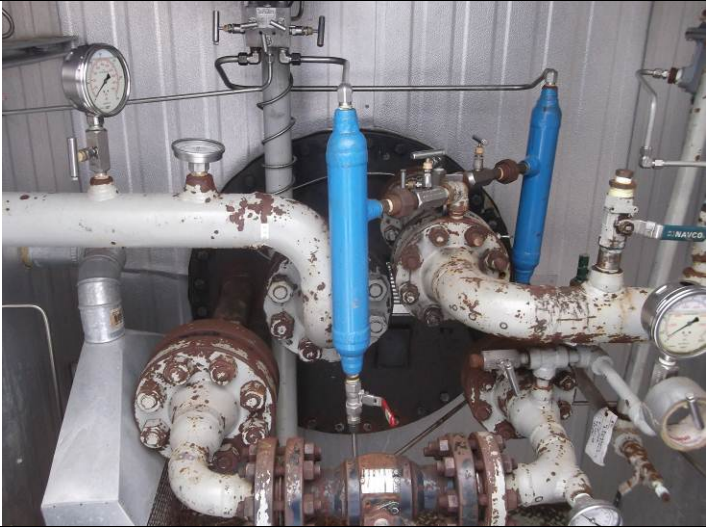
Mechanical Integrity Coordinator _____ **Date** _____

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				No damage present- no egress of moisture. Sealed around nozzles and saddles (90 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 is in fair overall condition – Exposed metal located inside the utilidoor box to approx 10% of the exposed shell – Some general rusting no corrosion.
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				Anchor bolts are secure. No signs of deformation.
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 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	No Gauges
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 fair condition- exposed metal to 40% of piping.
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	No PSV on this vessel.
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. Thickness calculations carried out: UT point 210 (2" elbow) – nominal thickness is 8.7mm / min thickness is 7.5mm / T min thickness is 3.0mm.
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 at this time Summary: This vessel is in good over all condition, visual external and ultrasonic thickness survey carried out-pipe metal thickness detected below nominal minus corrosion allowance. Thickness calculations carried out to ensure sufficient metal exists for safe operation. Vessel is fit for Service					

Photo Table



LSD

vessel Overview



vessel data plate

External overview