

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

Job # 105.00248

District: Grande Prairie AB	Skid No.
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Facility: Gold Creek Field	Location (LSD): 07-20-68-05W6M
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Vessel Name Equipment Number: **Inlet Separator**

Orientation: **Horizontal**

Status: In Service	Regulatory Inspection
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PRESSURE VESSEL NAMEPLATE DATA

“A” or “G” or “S” (Sask.) or BC Registration Number. A400835	CRN Number: L8583.2
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Vessel serial number: C1102A:HS	Size: 42 in. X 16 ft.
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Shell thickness: 12.7mm	Shell material: SA 106 B
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Head thickness: 12.7mm	Head material: SA 105/SA 516 70
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Tube wall thickness:	Tube material:
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Tube diameter:	Tube length:
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Channel thickness:	Channel material:
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Design pressure	Shell: 720 PSI	Operating pressure	Shell: 0 – 610 PSI
	Tubes:		Tubes:

Design Temp.	Shell: 130 Deg F	Operating temperature	Shell: 0 – 250 Deg F.
	Tubes:		Tubes:

X-ray: RT 2	Heat treatment: Nil
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Code parameters: ASME VIII, Div 1	Coated: no
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Manufacturer: Rushton	Year built:2000
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Corrosion allowance: 1.6mm	Manway: Yes
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PRESSURE SAFETY VALVE NAME PLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (kPa)	Capacity (scfm)	Service Date
21147G	Farris	26KA12-120	416772-2-A10	720 PSSI	25900	10/09
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
OG2369.5C	Unified valve	No	Inlet piping	3”x 4”	UV/NB	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

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

Other (Describe):

Inspection Interval _____ **PSV Service Interval** _____

(Determined by MIC in conjunction with Chief Inspector following guidelines of CNRL's 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. Cladding secure and sealed around man way.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	X				Paint peeling to 15% of area. Corrosion on exposed metal – no pitting noted.
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: bolted directly to support frame and skid building. No buckling or dents. Saddle attachment weld cracked at support pad inside side building. 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	
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				Stud threads are fully engaged to nuts. No leaks, no damage or deflection. No short bolting. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Clear and clean, no leakage. Suitable for operational range of vessel. Pressure gauge 0 – 610 PSI/Temperature gauge 0 – 250 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				Well supported – all clamps and supports are in place. No structural overloads or deflection. Piping insulated no damage present and no egress of moisture.
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				Located on inlet piping to vessel. Set at MAWP of vessel – PSV seal in place. No block valve between vessel and PSV. Discharge piping is same size as valve outlet.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)				X	None performed at this inspection time.
Other					
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: See internal inspection report. Vessel is fit for service.					

Internal Inspection Items	G	F	P	N/A	Comments
Coating Assess coating. Describe area coated, general condition of coating.				X	Vessel not coated.
Anodes. How many, type, condition. % consumed. Are they being replaced?				X	No anodes in vessel.
Internal Piping Is there any? If so, carbon or stainless steel. Describe condition, dents, corrosion, erosion, etc. Ensure supports are secure and any bolts are suitable for future use.				X	No internal piping.
Trays How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?				X	No trays
Baffles, deflector plates, etc. If present, describe condition. Look closely at welds attached to vessel wall.	X				Inlet deflector plate: In good condition – no corrosion or pitting. No mechanical damage – no erosion.
South Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				Man way access - Gasket seating face is clean and no mechanical or corrosion noted.
North Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)				X	Not accessible.
Shell Sections Record number of shell sections. Record location, size and depth of all erosion, corrosion or mechanical damage. Describe general condition. If any corrosion greater than corrosion allowance is observed in either shell or head, discuss with Chief Inspector before closing vessel.	X				2 shell sections - in good condition –No mechanical damage or dents. Surge weir not bent or damaged - attachment welds to shell in good condition – no corrosion or erosion. Bottom boot in good condition- no corrosion or mechanical damage. Nozzles are clean and no obstructions. Flow weir – in good condition- no dents or corrosion – attachment welds have no corrosion or erosion.
Demister pad Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.	X				Support frame attachment welds to shell in good condition- no corrosion. All bolts in place and secure- demister pad not damaged – pad in place.
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.	X				Over all welds are in good condition – head to shell weld has no corrosion – no erosion or pitting. Attachment welds are in good condition no corrosion or erosion.
Repairs Required. If yes, ensure procedure and copy of AB 40 is on file, and one sent to local ABSA, and Chief Inspector				X	
NDE Was any NDE done. (MI coordinator to review results)				X	
<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: Remove demister pad at next inspection frequency to view outlet piping and shell.</p> <p>Summary: Vessel in good overall condition, Visual external and internal visual inspection performed on vessel. No visible defects observed.</p> <p>Vessel is fit for service.</p>					

Inspected By: Gerry Avery

Date: May 4, 2010

Photo Table



LSD



Vessel data plate



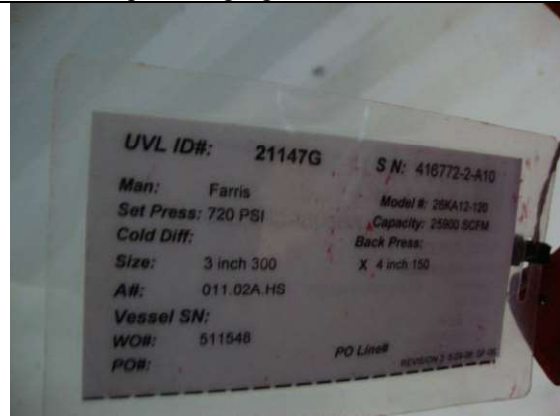
Crack at saddle attachment weld



Vessel temperature gauge



Vessel pressure gauge



PSV data tag



Vessel PSV



Vessel overview in side skid building



Vessel man way



Vessel overview



Inlet nozzle



Internal overview



Bottom boot overview



Demister pad



North head overview



Overview of north head, weir and boot



Demister pad support frame



Shell tee weld



Surge wier



Shell to head weld



Inlet deflector plate attachment welds



Man way attachment weld