Canadian Natural Resources Limited GENERAL PRESSURE VESSEL INFORMATION	
District: **Grande Prairie.**	Skid No.
Facility: **Knopcik North Gas Gathering**.	Location (LSD): **07-11-75-11-W6M.**
Vessel Name Equipment Number: **3 Phase Separator.**	
Orientation: **Vertical**	
Status: **In service.**	**Regulatory Inspection**

PRESSURE VESSEL NAMEPLATE DATA			
"A" or "G" or "S" (Sask.) or BC Registration Number. **A 2708362**		CRN Number: **K-2545.2**	
Vessel serial number: 108-56-91		Size: 16in x 103in	
Shell thickness: 21.4 mm		Shell material: SA106B	
Head thickness: 22.2 mm		Head material: SA516-70	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 1440 psi	Operating pressure	Shell: 20 psi
	Tube:		Tubes:
Design Temp.	Shell: 100 F	Operating temperature	Shell: 60 F.
	Tubes:		Tubes:
X-ray: RT-2		Heat treatment: Nil	
Code parameters: ASME VIII/Div 1		Coated: Nil	
Manufacturer: Mar-Quinn.		Year built: 1991	
Corrosion allowance: Nil.		Manway: Nil.	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (psi)	Capacity (scfm)	Service Date
2031	Mercer	9100 1X1-MD.	83331	720	1477	05/2005.
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
OG2606.2C	IPV	Nil	Upper shell.	.75 in x 1 in.	UV/NB.	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet	Sour	Oil	Gas	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**	• Non insulated vessel.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)		**X**			• Paint in fair condition. • Slight surface corrosion occurring. Nodamage noted. • No bare metal.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	**X**				• No leakage noted.
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: Paint fair with no corrosion buckling or dents noted. • All attachment welds are acceptable with no leakage noted. • Grounded through the skid.
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	**X**				• All bolts tight and secure. • No deformation or cracking noted.
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**			• Paint fair with no leakage noted. • All studs are fully engaged. • No damage or deflection noted. • No gussets.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	**X**				• All gauges visible and in working condition. • Suitable for MAWP/ Temp.
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**				• All piping well supported. • All clamps and shoes in place. • No overload or deflection noted. • Paint in fair condition.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	**X**				• No leaks noted. • Properly supported with no chaining required.
PSV Ensure PSV is set at pressure at or below that of vessel.	**X**				• PSV set at MAWP.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)		**X**			• Ultrasonic thickness survey carried out – head, shell and pipe metal thickness detected below nominal minus corrosion allowance. Critical thickness calculations carried out to ensure sufficient metal exists for safe operation.

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: Vessel is in overall good condition, visual external inspection and ultrasonic corrosion survey performed – head, shell and pipe metal thickness detected below nominal minus corrosion allowance. Critical thickness calculations carried out to ensure sufficient metal exists for safe operation.
Vessel is fit for service.

Inspected By: Dellas Wiedman / Carey Menzies
Date: March 26, 2010

Photo Table

Site overview.

Upper shell.

Lower shell/skirt.

Vessel data plate.

Temp gauge.

Pressure gauge.