Canadian Natural Resources Limited
GENERAL PRESSURE VESSEL INFORMATION **Job # 05.001766**

District: **Fort St. John BC**	Skid No.
Facility: **Lagarde Compressor Stn.**	Location (LSD): **01-21-87-15-W6M**
Vessel Name Equipment Number: **Glycol Contactor**	
Orientation: **Vertical**	
Status: **In Service**	**Regulatory Inspection**

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. **A 3182406**		CRN Number: M 2316.21	
Vessel serial number: 96-8306-OREPL/01-2674-IREP		Size: 24 in. x 32 ft.	
Shell thickness: 28.67mm		Shell material: SA 516-70N	
Head thickness: 27.02mm		Head material: SA 516-70N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 1440 PSI	Operating pressure	Shell: 0- 1500 PSI
	Tubes:		Tubes:
Design Temp.	Shell: 130 Deg F	Operating temperature	Shell: 0 – 250 Deg F
	Tubes:		Tubes:
X-ray: RT 1		Heat treatment: no	
Code parameters: ASME VIII, Div 1		Coated: no	
Manufacturer: Hanouer Wells-Hall Fabrication		Year built: 1996	
Corrosion allowance: 3.2mm		Manway: no	

PRESSURE SAFETY VALVE NAMEPLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (kPa)	Capacity (scfm)	Service Date
1822V	**Consolidated**	**1912FC**	**70C810**	**1100 PSI**	**6857**	**08/07**
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
not stated	**unified valve**	**no**	**lower shell**	**1.5"x 2"**	**UV**	

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 CNRL's Owner-User Inspection Program)

Reports reviewed and accepted by:

Mechanical Integrity Coordinator_____ **Date**_____

Fill out all forms as completely as possible. <u>All information</u> 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**
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**				**Skirt: Bolted directly to skid deck – 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**				**Anchor bolts are 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 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**				**Clear and clean – no leakage** **Suitable for range of MAWP/Temperature** **Pressure gauge: 0 – 1500 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**				**Piping is well supported – all clamps and supports are in place.** **No structural overloads or deflections.** **Paint in good condition – no corrosion.**
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**				**Location: Lower shell of vessel - set below MAWP of vessel.** **Discharge piping is same size as valve outlet. PSV seal in place – no block valve between vessel and PSV.**
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)	**X**				**Ultrasonic thickness survey carried out – outlet piping metal thickness detected below nominal minus corrosion allowance. 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— outlet piping metal thickness detected below nominal minus corrosion allowance. Calculations carried out to ensure sufficient metal exists for safe operation.

Vessel is fit for service.

Inspected By: Gerry Avery **Date:** May 14, 2008

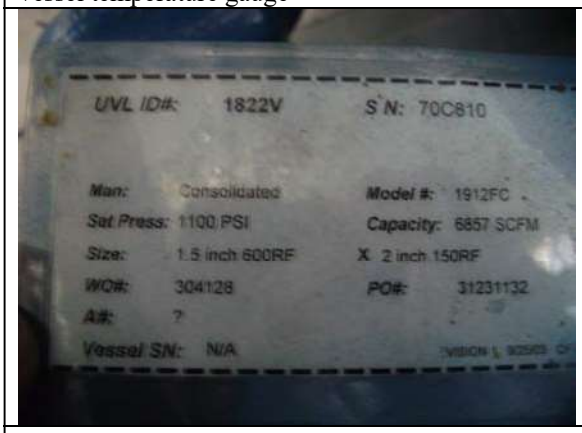
Photo Table

LSD

vessel data plate

vessel temperature gauge

vessel pressure gauge



PSV data tag

Vessel PSV

vessel overview

vessel overview


REPAIRED BY
HANOVER WELL
EDMONTON, ALBERTA
MAWP 1440 psi @ 130 °F
9928 kPa @ 54 °C
W
RT1
HT
MDMT -20 °F @ 1440 psi
-29 °C @ 9928 kPa
MANUF. SER. NO. 98-8306-0 REPL/0F-2674-1 REP
YEAR BUILT 1996/2002 CRN M2316121
INSP. NO. A318240 6
VESSEL GLYCOL CONTACTOR
REPLACEMENT PLATE WELD-HALL FAB & CON LTD
SHELL SA516 70N 1.125 28.6
HEADS SA516 70N 1.064 27.0
CORROSION ALLOWANCE 0.125 3.2
DRWG NO. 3-A-8306-0 / 33-