



**Client:**  
**CNRL**

UT SURVEY	Accept
PSV INSP	Accept
VTE INSP	Accept
VTI INSP	N/A

**EQUIPMENT DEFICIENCY SUMMARY**

District:	Fort St John	Facility	Bulrush	Location/LSD	B-088-F/094-A-16
Equipment Name	GLYCOL CONTACTOR			Prov Reg No.:	3098509
Serial No.:	95-7937-0	Equip No.:	N/S	National Board No.:	N/S

**UT SURVEY**      LATEST UT DATE USED IN SUMMARY      July 31, 2017

LOCATION	Nom - CA	Low RDG	Avg RD	TMin	UT Flag	RECOMMENDATION	QUALITY ACTION	RESULT
N/A					No TMLs Flagged for This	N/A	N/A	Accept

**PSV INSPECTION**      LATEST PSV INSP DATE USED IN SUMMARY      July 31, 2017

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
No Deficiencies Found	N/A	N/A	Accept

**VISUAL EXTERNAL INSPECTION**      LATEST VTE DATE USED IN SUMMARY      July 31, 2017

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
No Deficiencies Found	N/A	N/A	Accept

**VISUAL INTERNAL INSPECTION**      LATEST VTI DATE USED IN SUMMARY

DEFICIENCY	RECOMMENDATION	QUALITY ACTION	RESULT
N/A	N/A	N/A	N/A



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## PRESSURE EQUIPMENT DATA REPORT

### EQUIPMENT GENERAL INFORMATION

<b>District:</b>	Fort St John		
<b>Facility:</b>	Bulrush		
<b>Location /LSD:</b>	B-088-F/094-A-16	<b>Operating Province:</b>	British Columbia
<b>Equipment Name:</b>	GLYCOL CONTACTOR		
<b>Equipment Status:</b>	Operating	<b>Orientation:</b>	Vertical
<b>Skid No.:</b>	<b>Unit:</b>		

### EQUIPMENT STATIC DATA

<b>AB Registration No.:</b>	3098509	<b>Serial No.:</b>	95-7937-0	
<b>Registration No./Other:</b>		<b>Equipment No.:</b>	N/S	
<b>CRN NO.:</b>	M2316.21	<b>Unique ID No.:</b>		
<b>National Board No.:</b>	N/S	<b>Oncor ID No.:</b>	163133	
<b>Manufacturer:</b>	WELLS HALL		<b>Year Built:</b>	1995
<b>MAWP:</b>	1440.00 (psi)	9928.51 (Kpa)	<b>Temperature:</b>	130.00 (F) 54.44 (C)
<b>Diameter.:</b>	24.000 (In)	609.600 (mm)	<b>Length:</b>	384.00 (In) 9753.60 (mm)
<b>Radiography:</b>	RT1		<b>Heat Treatment:</b>	Yes
<b>Corrosion allowance:</b>	0.000 (In)	0.000 (mm)	<b>MDMT:</b>	-20.00
<b>Lining Or Coated:</b>			<b>Painted:</b>	Yes
<b>Insulated:</b>	No		<b>Internally Clad:</b>	No
<b>Hand Hole:</b>	Yes		<b>Support Type:</b>	Skirt
<b>Manway:</b>	No		<b>Manway Size(In):</b>	
<b>Capacity/Volume(m3):</b>			<b>Nozzle Rating:</b>	600.00

### MATERIALS/COMPONENTS

Name	Joint Efficiency	Outside Diameter(in.)	Head Type	Material Type	Stress Value (PSI)	Nominal Thickness(In.)
SHELL	1.00	24.000		Unknown	17500	1.13
HEAD	1.00	24.000	Ellipsoidal	Unknown	17500	1.09

### PIPING STATIC DATA

<b>Primary Flange Rating:</b>	600	<b>ASME B16.5 - Table 2-1.1 @ 150F:</b>	1480 (psi)	
<b>Pressure Use For TMin:</b>	Vess Design Press	<b>Piping Operating Press:</b>	1440 (psi)	
<b>Stress Value:</b>	20000 (psi)	<b>E Value:</b>	1.00	<b>Joint:</b> SMLS

### SERVICE CONDITIONS

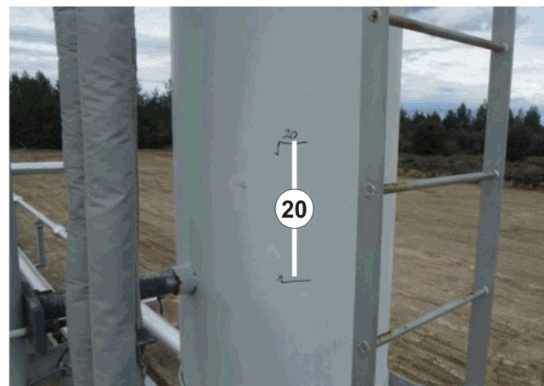
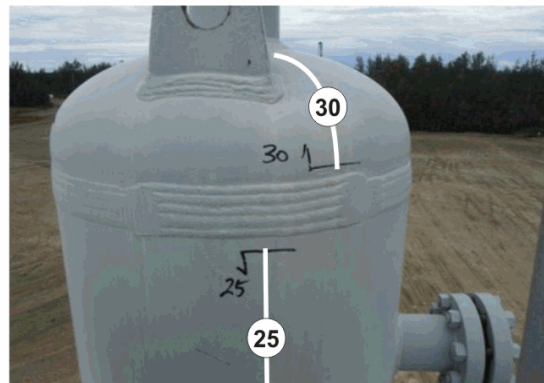
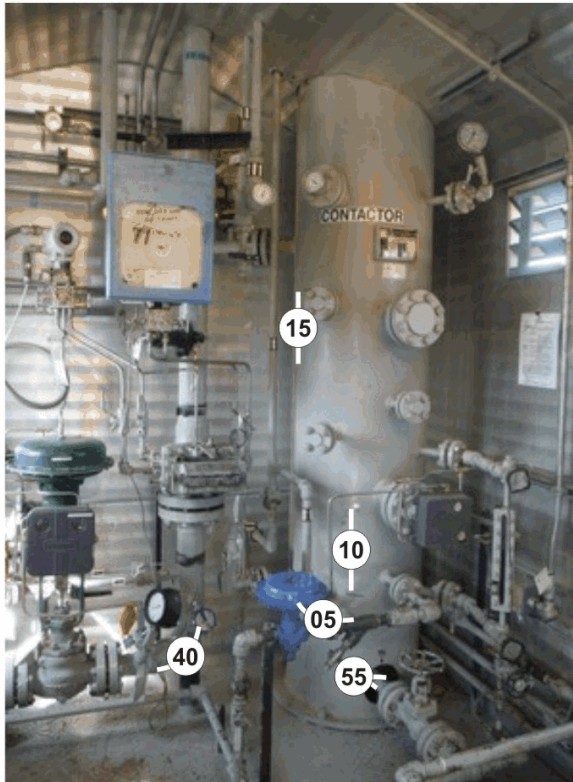
<b>Sweet</b>	<b>Sour</b> ✓	<b>Oil</b>	<b>Gas</b>	<b>Water</b>
<b>Amine</b>	LPG	Condensate	Air	Glycol

### COMMENTS

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**EXAMINATION ILLUSTRATION**

<b>DISTRICT:</b>	Fort St John	<b>FACILITY:</b>	Bulrush	<b>LOCATION/LSD:</b>	B-088-F/094-A-16
<b>EQUIP NAME:</b>	GLYCOL CONTACTOR			<b>PROV REG No.:</b>	3098509
<b>SERIAL No.:</b>	95-7937-0	<b>Equip No.:</b>	N/S	<b>National Board No.:</b>	N/S



NOTES:

3098509



Client:  
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## ULTRASONIC CORROSION SURVEY REPORT

DISTRICT:	Fort St John	FACILITY:	Bulrush	LOCATION/LSD:	B-088-F/094-A-16
EQUIP NAME:	GLYCOL CONTACTOR			PROV REG No.:	3098509
SERIAL No.:	95-7937-0	Equip No.:	N/S	National Board No.:	N/S

### SUMMARY

TYPE	LAST INSPECTIONS	INSPECTION INTERVAL (YEARS)	CORROSION RATE (IN/YR)		REMAINING LIFE (YEARS)	NEXT INSPECTION DATE
			SHORT TERM	LONG TERM		
VESSEL	Jul 31, 2017	5.0	0.0000	0.0000	198.0	Jul 31, 2022
PIPING	Jul 31, 2017	5.0	0.0016	0.0016	86.9	

### VESSEL SURVEY READINGS

POINT DATA (INCH)					SURVEY READINGS				CALCULATIONS			
POINT NUMBER	TYPE	NOM.	C.A.	NOM-CA	DATE	LOW	AVG	T Req (inch)	short term corr	long term	remaining life	Flag
05	HEAD	1.0860	0.0000	1.0860	Jul 31/17	1.185	1.200	0.919	0.0000	0.0000	198.0	NO COMMENTS
10	SHELL	1.1250	0.0000	1.1250	Jul 31/17	1.146	1.160	0.956	0.0000	0.0000	198.0	NO COMMENTS
15	SHELL	1.1250	0.0000	1.1250	Jul 31/17	1.156	1.160	0.956	0.0000	0.0000	198.0	NO COMMENTS
20	SHELL	1.1250	0.0000	1.1250	Jul 31/17	1.144	1.160	0.956	0.0000	0.0000	198.0	NO COMMENTS
25	SHELL	1.1250	0.0000	1.1250	Jul 31/17	1.139	1.150	0.956	0.0000	0.0000	198.0	NO COMMENTS
30	HEAD	1.0860	0.0000	1.0860	Jul 31/17	1.104	1.115	0.919	0.0000	0.0000	198.0	NO COMMENTS

### PIPING SURVEY READINGS

POINT DATA (INCH)							SURVEY READINGS				CALCULATIONS			
POINT NUMBER	TYPE	SIZE	SCH	NOM.	Mill Tol./CA	NOM-CA	DATE	LOW	AVG	T Req (inch)	short term corr	long term corr rate	remaining life	Flag
35	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Jul 31/17	0.313	0.325	0.126	0.0000	0.0000	198.0	NO COMMENTS
40	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Jul 31/17	0.343	0.360	0.126	0.0000	0.0000	198.0	NO COMMENTS
45	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Jul 31/17	0.276	0.290	0.126	0.0011	0.0011	141.7	NO COMMENTS
50	90L 3 XS	3.00	XS	0.3000	0.0375	0.2625	Jul 31/17	0.264	0.285	0.126	0.0016	0.0016	86.9	NO COMMENTS
55	BAND 2 160	2.00	160	0.3440	0.0430	0.3010	Jul 31/17	0.336	0.355	0.086	0.0004	0.0004	709.7	NO COMMENTS

### INSPECTOR-EQUIPMENT DATA

Inspected By	Signature	CGSB Level	CGSB No.	Survey Dat	UT Equipment	Due Date OF Calibration	NDE Procedure #
Justin Orichowski		SNT LV 2	16325	07/31/2017	104_91638503_EPOCH4	04/30/2018	WQS UT-001



**Client:**  
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District	Fort St John	Facility	Bulrush	Location/LSD	B-088-F/094-A-16
Equipment Name:	GLYCOL CONTACTOR			Prov Reg No.:	3098509
Serial No.:	95-7937-0	Equip No.:	N/S	National Board No.:	N/S

**External Inspection**

Inspector:	Justin Orichowski	ABSA PESL #:000758	Signature:		Date:	07/31/2017
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**External Corrosion**

There was no significant external corrosion found on the vessel/piping

Accept

**External Damage**

There was no external corrosion found on the vessel/piping

Accept

**Leakage**

No Leaks were found on the vessel or piping connections

Accept

**Vessel and Piping Supports**

Vessel support is Skirt and is acceptable

Accept

Vessel support anchor bolts are in place and acceptable

Accept

Vessel Foundation is Metal and is acceptable

Accept

Piping is supported by clamp and is acceptable

Accept

**Insulation/Paint**

	Type	Findings	
Vessel	Painted	Accept	Accept
Inlet Piping	Painted	Accept	Accept
Outlet Piping	Painted	Accept	Accept

**Pressure Envelope Flanging**

	Bolting	Thread engagement	Gaskets	Flange Rating	
Manway	NA				Accept
Vessel	NA				Accept
Inlet Piping	Accept	Accept	Accept	Accept	Accept
Outlet Piping	Accept	Accept	Accept	Accept	Accept
Other Piping	Accept	Accept	Accept	Accept	Accept

**General**

Pressure Gauge is acceptable, Temp Gauge is acceptable, Level Gauge is acceptable, Grounding is acceptable, Vibration is acceptable, Ladder/Stairway is acceptable,

Accept

**Comment**



**Client:**  
**CNRL**

**PRESSURE RELIEF VALVE SUMMARY**

<b>District:</b>	Fort St John	<b>Facility:</b>	Bulrush	<b>Location/LSD:</b>	B-088-F/094-A-16
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**PSV STATIC DATA**

<b>Tag/Equip No.:</b>	1883V	<b>Serial No.:</b>	CE-42794-1-A10
<b>Manufacturer:</b>	FARRIS	<b>CRN No.:</b>	OG2369.5C
<b>Model No.:</b>	26EA13-120	<b>Code Stamp:</b>	
<b>Side (Shell or Tube):</b>	Shell	<b>Outlet Size:</b>	2
<b>Inlet Size:</b>	1	<b>Outlet Type / ANSI Rating:</b>	Flanged / 150
<b>Inlet Type / ANSI Rating</b>	Flanged / 600		

**PSV SERVICE DATA**

<b>Set Date:</b>	5 Sep, 2012	<b>Service Interval:</b>	60
<b>Set Pressure (psig)</b>	1440	<b>Capacity (scfm):</b>	5650
<b>Service Company:</b>	UNIFIED	<b>Next Service Date:</b>	5 Sep, 2017

**PSV FIELD INSPECTION**

**Inspector** Justin Orichowski **Company** Western Quality Services **Signature:**  **Inspection Date:** 31-Jul-2017

**Inspection Type:**

<b>RESTRICTIONS</b>	<b>BLINDS</b>	INLET:	No Blinds found btwn vessels and psv inlet	<b>Accept</b>
		OUTLET:	No blinds found btwn PSV and discharge point	<b>Accept</b>
	<b>REDUCERS</b>	INLET:	No reducers found btwn Vessel(s) and PSV Inlet	<b>Accept</b>
		OUTLET:	No reducers found btwn PSV and Discharge Point	<b>Accept</b>
	<b>BLOCK VALVES</b>	INLET:	No block valve	<b>Accept</b>
		OUTLET:	No block valve	<b>Accept</b>
<b>SERVICING</b>	<b>SET PRESSURE</b>	PSV set pressure is at or less than MAWP of all linked vessels in the system.		<b>Accept</b>
	<b>SERVICE DATE</b>	PSV set date is current at time of inspection		<b>Accept</b>
	<b>SERVICE SEAL</b>	Service seal is intact		<b>Accept</b>
<b>OPERATION</b>	<b>TAGGING</b>	Service tag is properly attached to the psv		<b>Accept</b>
	<b>VIBRATION</b>	None		<b>Accept</b>
	<b>DISCHARGE</b>	PSV Discharge point is in a safe location and is acceptable		<b>Accept</b>
	<b>LEAKS</b>	INLET:	No visible leaks found at psv inlet connection	
OUTLET:		No visible leaks found at psv outlet connection		<b>Accept</b>
<b>INSTALLATION</b>	<b>PSV SUPPORTS</b>	PSV supported		<b>Accept</b>
	<b>ANGLE</b>	PSV is installed in the proper upright positon		<b>Accept</b>

**EQUIPMENT PROTECTED**

Prov Reg No.	Equipment No.	Serial No.	Equipment Name	Status	MAWP
3098509	N/S	95-7937-0	GLYCOL CONTACTOR	Operating	1440.00



## PHOTOGRAPHS

<b>EQUIP NAME:</b>	GLYCOL CONTACTOR	<b>PROV REG No.:</b>	3098509
<b>SERIAL No.:</b>	95-7937-0	<b>Equip No.:</b>	
		<b>National Board No.:</b>	



LSD



NAMEPLATE



OVERALL



PSV



PSV TAG



PSV TAG

NOTES: