

Existing Equipment Integrity Assessment Report

BPV-066727

Date July 2023

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Inspect Date: July 27, 2023 Clie	ent: Yoho Resources	District: Inga, BC	LSD: 10-19-087-23W6								
Facility:	Client Ref #	IRM R	Ref # P004								
Equipment #: BPV-066727		ge Liquids Boot									
MFR: EFX Compression	Mfr S/N: 0505	1-01 Mfr Date: 2005	Status: Operating								
Fit for Service: Yes So Online PSV Inspection has been			SV set at or below MAWP: Yes								
PSV Capacity Verified:	N/A										
Repair / Alteration / PSV Calibra	tion Required No)									
	Current Inspec	ction Results									
VE Cat D nozzles have not had magnetic particle completed on them. UT No concerns noted PSV No concerns noted MPI All the areas inspected did not exibit any relevant indications of defects/discontinuities at the time of inspection Assessment completed by Aaron Bischoff UT readings above Nom-C.A and MIL tolerance Tmin (12.5%),. No issues on concerns noted. 5 year / 60 month acceptable. VE reviewed; no major concerns noted. AJB. MPI on Category D welds completed and areas inspected did not exhibit any relevant defects or indications at time of inspection. AJB VE reviewed; no major concerns noted. AJB.											
	Past PSV Serv	icing Results									
SN 1101-1707-091526 serviced 2020 Unified Valve Fort St John. No issues											
	Past Inspection	History Results									
No historical inspections											
,	NEXT NDE & Insp	ection Methods									
	□ VI	☑ UT 2028	⊠ BW 2028								
☐ WF	☐ LF	□ ET	☐ HIC								
☐ CREEP	□ BHN	CDR	☐ MFL								
Other:											
	Previous Insp	ection Plan									
No historical ITP											
	Next Inspe										
Expected damage mechanisms and lot Primary Areas of degradation: Bottom NDE examinations (type & extent): VE Preparation for next inspection: None PSV: Last service September 2020, re	head and piping elbows. E on 5-year Interval – due July 2028	UT on 5-year DUE July 2028 ; M	PI on 5 year DUE September 2028								
0 10											

Inspector: Aaron Bischoff Qual: IBPV#644

FINAL

Report date: 20-Nov-2023 status:



Report No.:

Client Yoho	Resources				Inspect	tor	Rya	n Cad	ieux			Date	Jul	y 27, 2	023
District Inga	BC	L9-087-2	3W6			D	ownh	ole LSD							
,		•			Vessel	Data									
Vessel Descripti	on BPV-00	5 6727 – 1	L st Stage Li	quid	Boot	RT	- 1	L	PW	HT ⊠	Yes [□ No	Pai	tial 🗆]
A# / NB# A0	545047	Ç	Serial #	0509	1-01		•		CRN	#	P7515.21	.3			
Manufacturer	EFX Compr	ession							Mar	ıway[□ Yes	⊠No	Size	e :	
Owner Tag N	/S	9	Skid Co	omp S	Skid #050	0903			OD	24"		Lengt	h	6'	
MAWP1 ⊠S	hell□Tube	740 p	si	kPa	MAW	/ T		С	100	F	MDMT		С	-20	F
MAWP 2 \square S	hell□Tube	p:	si	kPa	MAW	/T		С		F	MDMT		С		F
Operating Press	sure	psi		kPa	Oper	ating ⁻	Гетр)	(2	F Fla	nge Rat	ing ‡	30	00
Process Conditi	ons: 🗵 Swee	et 🗆 So	ur					Inte	rnal C	oatin	g: N/S				
Product: ⊠Ga	s 🗌 Water	☐ Air [☐ Effluen	t 🗆 (Other:										
PSV #1 Data															
Owner ID/Tag	10 Yoho					PSV	Locat	ion	Pipi	ng					
Manufacturer	Crosby					Mod	el#		1.5F	2JOS	-#15J				
Serial #	1101-1707-	091526				Mfg	Date		01/	L 7					
CRN # 0G15494.5CL Code UV/NB															
Set Pressure	Set Pressure 285 ⊠psi □kPa Service Company Unified														
Capacity 1807	scfm		gpm		Other	Serv	ce D			2020	Servic	e Tag #	4	10777F	
Inlet Size 1.5	" NPS	Type 🗆	∃THD⊠FL	G #	150	Outle	et Siz	e	2.0"	NPS	Type		⊠ FL	G# :	150
Inlet Block Valve	□Yes ⊠No	Locke	ed/Sealed [☐ Yes	□ No	Outle	t Blo	ck Val	⁄e □ Y	es ⊠I	No Locke	ed/Seale	d 🗆	Yes \square	No
Seal Intact:			⊠ Yes		No	Prop	erly S	Suppo	rted			\boxtimes '	Yes		No
Drainage (i.e. po			Satisfacto												
Discharge Piped			•			е									
PSV General Co	ndition/Com	ments:	No issue	es not	ted.										
					PSV #2	Data									
Owner ID/Tag					130 π2	PSV		ion							
Manufacturer						Mod		.1011							
Serial #						Mfg									
CRN#						Code									
Set Pressure			□psi		□kPa			ompa	nv						
Capacity															
Inlet Size															
Inlet Block Valve	□Yes □No	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' 	ed/Sealed [□ No	Outle	t Bloc	ck Valv	/e □ Y	es 🗆 I		ed/Seale			No
Seal Intact:			☐ Yes		No			Suppo			•		Yes		No
	Drainage (i.e. pocketed, missing tailpipe):														
Discharge Piped			k, FKO, atmo	sphere	e):										
PSV General Co	ndition/Com	ments:	-		÷										

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Report No.:

External Inspection	Good	Fair*	Poor*	N/A	External Inspection	Good	Fair*	Poor*	N/A
Skid Foundation/Supports	X				Ladder(s)/Platforms				X
Insulation/Cladding				X	Gauges	X			
Vessel Nameplate	X				Valves	X			
Vessel Saddle/Skirt/Supports/Bolts	X				Piping	X			
Vessel Paint/Coating	X				Flanges/Bolting (per Code)	X			
Vessel Shell	X				Piping Support	X			
Vessel Head	X				Catadyne Heaters (zip ties)				X
Nozzles	X				Surface Staining of Ground	X			
Pig Traps (ie evidence of hammering)				X	Signage (i.e. stand alone)				X
Regulators Vented	⊠ Yes	· 🗆	No		Vessel/Skid Grounded	⊠ Yes		No	

^{*} Fair and Poor selections require comments

Comments:								
1. Cat D nozzles have not had magnetic particle completed on them.								
☑In Service ☐Idle ☐Blinded/Disconnected	Signature	Ryan Cadisux	Date	July 27, 2023				

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Vessel External Inspection PHOTOS

Report No.:





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Report No.:



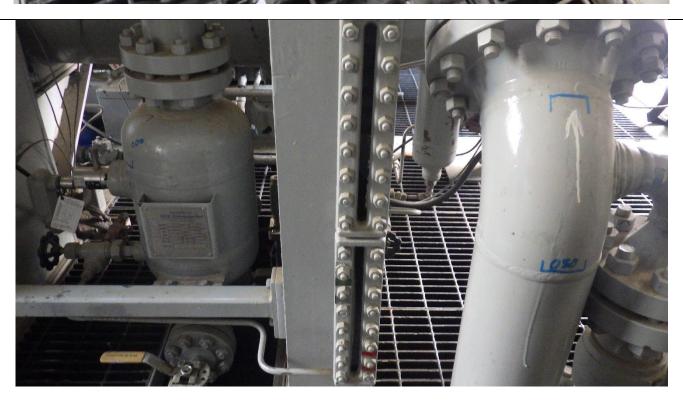


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Report No.:





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Report No.:

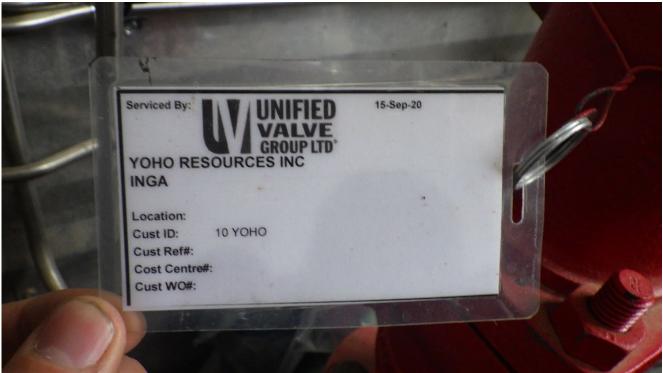


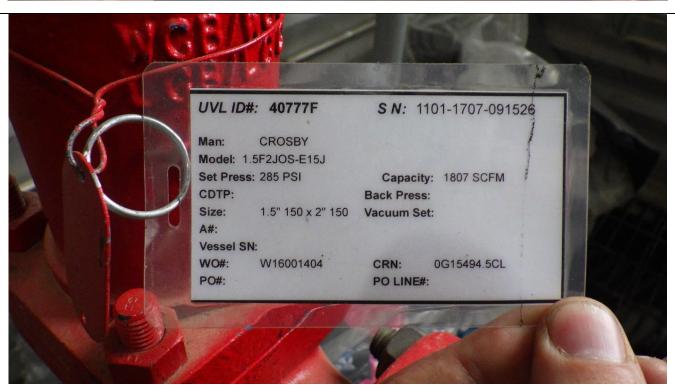


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Report No.:





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UT readings above Nom-C.A and MIL tolerance Tmin (12.5%),. No issues on concerns noted. 5 year / 60 month acceptable. VE reviewed; no major concerns noted. AJB.

osion Survey Report عبات

(780) 242-2204 RyanC@RJCIntegrity.com www.RJCIntegrity.com



Date: Thursday, July 27, 2023

Client: Yoho Resources	A0545047 - UT - 001 - RC

Work Location: Inga, BC Scanning Surface: O.D. Job No.: 2023-0033

Examination Standard:ASME V Article 4 - 2021Material:Carbon SteelP.O. No.:Acceptance Standard:Client's Spec.Surface Condition:PaintedW.O. No.:RJC Procedure:RJCI-UT-001 Rev.0Temperature:AmbientOther:

Instrument: Olympus Couplant: UTX

Model: Epoch 600 Calibration Block: C.S. Step Wedge Serial No. 3886-20

Serial No.: 140708306 Calibration Block:

Cal Due Date: Monday, January 15, 2024 Scanning Limitation: See comments below

Probe	Ser. No.	Angle	MHz	Crystal Size / Type	Primary Ref. Reflector / Amp. / Distance / dB	Scan Sens.	Calibrated Range
V-110	180002	0°	5 MHz	0.500" / Single	1st Back wall	As required	0.100" - 1.000"

Purpose: To perform an ultrasonic thickness survey.

Results: Refer to attached pages for recorded data.

Notes:

- 1. Thickness readings do NOT include paint thickness.
- 2. * = Assumed nominal thickness
- 3. Piping wall loss between 12.6% 30% = Caution
- 4. Piping wall loss greater then 30% = Urgent

	VESSEL DATA											
Vessel Description: 1st Stage Liquids Boot												
vess	ei Description:	1St Stage Li	quias Boot									
A No.:	0545047	Vessel ID:	N/S	Manufacturer:	EFX Compression							
CRN No.:	P7515.213	Year Built:	2005	District:	Inga, BC							
Serial No.:	050955-01	C.A.:	0.125"	LSD:	10-19-087-23W6							

Interpretation is in accordance with the above mentioned standards, to the best of my professional ability.											
Print:	Ryan Cadieux	CGSB/SNT Level: II/	II Reg. No.:	18219	Sign:	Ryan Cadwux					
Client Represent	ative:										
Print:		Date:			Sign:						

RJC_UT_Rev.0



Band ID	Location	Direction	Material	Nominal (in)	CA (in)		Baseline (in)	Previous (in)	Current (in)	% Wall Loss	Tmin (in)	STCR (mpy)	LTCR (mpy)	Years Remaining	
000	Top Head	T - B	SA516 - 70N	0.375	0.125	Year: Min: Avg:	2005 0.375		2023 0.480 0.511	0.00%	0.250	0.00	0.00	20	Acceptable
	Comments:														Acc
005	Shell	T - B	SA106 - B	0.500	0.125	Year: Min: Avg:	2005 0.500		2023 0.506 0.508	0.00%	0.375	0.00	0.00	20	Acceptable
	Comments:														Acc
010	Btm Head	T - B	SA516 - 70N	0.375	0.125	Year: Min: Avg:	2005 0.375		2023 0.478 0.501	0.00%	0.250	0.00	0.00	20	Acceptable
	Comments:														Acc
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Comments:		1			1			•		1		I		#
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Comments:														#
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0i
	Comments:														#

Piping and Nozzle UT Data

Band ID	Location	Direction	Material	Nominal (in)	CA (in)		Baseline (in)	Previous (in)	Current (in)	% Wall Loss	Tmin (in)	STCR (mpy)	LTCR (mpy)	
015	2" XXS Drain Tee	N - S	Carbon Steel	0.436	0.055	Year: Min: Avg:	2005 0.436		2023 0.607 0.611	0.00%	0.382	0.00	0.00	Acceptable
	Comments:	12.5% used fo	or C.A											4
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!
	Comments:													
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!
	Comments:													**
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0i
	Comments:													#
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!
	Comments:													,-
						Year: Min: Avg:				#DIV/0!	0.000	#DIV/0!	#DIV/0!	#DIV/0!
	Comments:													



Vessel Overview



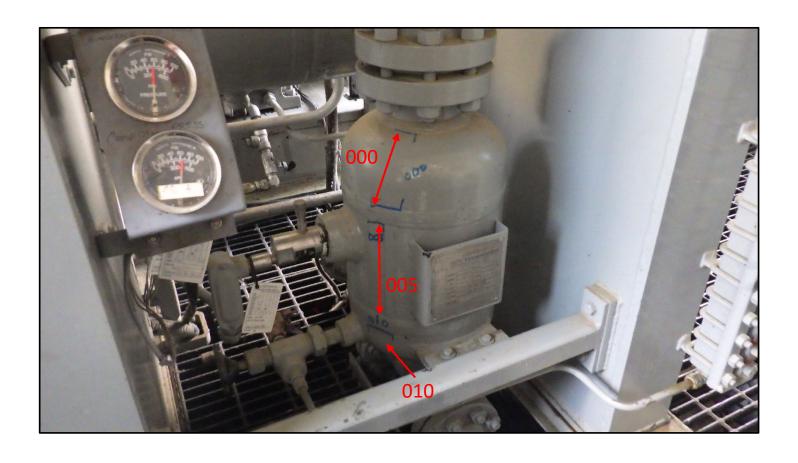


Nameplate





TML Locations





TML Locations



MPI on Category D welds completed and areas inspected did not exhibit any relevant defects or indications at time of inspection.AJB



WET VISIBLE BLACK ON WHITE MAGNETIC PARTICLE INSPECTION OF "D" CATEGORY WELDS

ASSOCIATED WITH COMPRESSOR C-100, C-200 & C-300 BOTLLES AT THE INGA LAKE 10-19-87-23

W6 SITE

September 20th, 2023

ALTEC INSPECTION LTD. FORT ST. JOHN, B.C.

Client:	Yoho Resources	Report Date:	September 27 th , 2023
Attn:	Jack Tarnowsky	Inspection Date:	September 20 th , 2023
CC:	-	Client P.O. No.	AFE # 2207007-9330
		Job No.	230965
		Report No.	NN200923-1

Subject: MPI on D category welds associated with C-100, C-200 & C-300 compressors.

Introduction:

An inspection was completed on September 20th, 2023 at the Inga Lake 10-19-87-23 W6 site. The subject of inspection were D category welds associated with compressors C-100, C-200 & C-300. Some other areas of interest were also inspected.

Equipment:

Reese Permanent Magnets, SN# R0365A-R0365B, 50lb lift test September 20th, 2023 Magnavis (Magnaflux) WCP-2 White Contrast Paint Magnavis (Magnaflux) 7HF Prepared Bath

Items Inspected: D category welds associated with C-100, C-200 & C-300 compressor bottles and gusset welds associated with the pressure release device.

Compressor C-100:





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Items Inspected Cont'd:







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Items Inspected Cont'd:



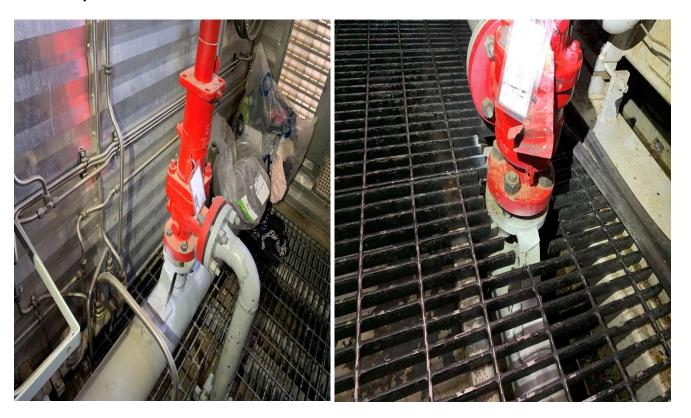






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Items Inspected Cont'd:

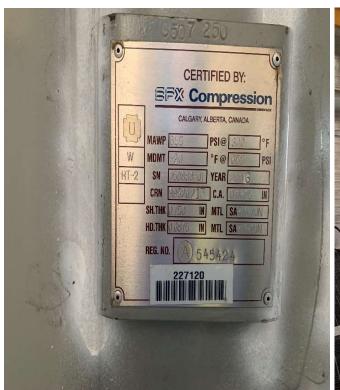


Compressor C-200:



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Items Inspected Cont'd:









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Items Inspected Cont'd:









Items Inspected Cont'd:

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Items Inspected Cont'd:





Compressor C-300:

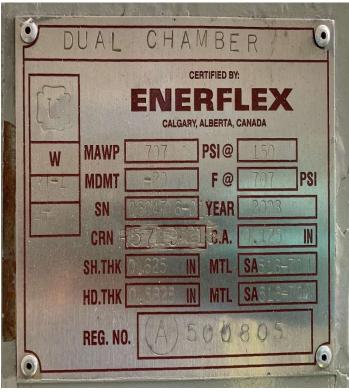




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Items Inspected Cont'd:









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Items Inspected Cont'd:





Inspection Procedure:

A wet visible black on white magnetic particle inspection with permanent magnets was used for the inspection.

Inspection Results:

All the areas inspected did not exhibit any relevant indications of defects/discontinuities at the time of inspection.

Yours Sincerely,



Nirmal Neupane, CGSB MTII (CGSB Reg. # 24478)

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PSV Service report reviewed using PSV assessment calculator. PSV serviced by Unified Valve Fort St John. No issues or concerns at time of servicing, suggested interval of 5 years / 60 months. AJB

PRV INSPECTION AND TEST REPORT

BRANCH: Fort St John **UVL ID#:** 40777F W16001404 Work Order: Customer PO#: Date: 09/03/2020 YOHO RESOURCES INC Customer **INGA** LSD: Facility: **PSV Location:** Cust Id: 10 YOHO Vessel SN: A#: Cust. Ref.: Valve PO: PO LINE#: Cust. WO#: Cost Centre#: Cust AFE#: **VALVE DATA CROSBY** Model: 1.5F2JOS-E15J Serial: 1101-1707-091526 Seat: HARD Man.: Flanged Inlet: 1.5" 150 Orifice:F Conn. Outlet: 2" 150 Vacuum: Set Press. 285 PSI Back Press.: N/A PSI CDTP: N/A PSI Cap: 1,807 SCFM Temp: N/A F Lift Lever Cap Assembly: Closed RFID: Code Symbol: UV CRN#: 0G15494.5CL **CUSTOMER INSTRUCTIONS** Full Service \square Instructions: Pretest Required? Reset Required? **CONDITION AS RECEIVED** Fair Visual Condition: **Data Plate Condition:** Date of last service: Seal Condition: Intact Bottom: Intact Top: Insignia: Fittings Attached: Inlet: Outlet: Inlet: Inlet Plugged: Outlet: Outlet Plugged: ☐ Initial Insp. Signoff: K-anna Jobson PRETEST 1 222 PSI Leakage: FSJ9/10 Simmer: 291 PSI Set Press: Reseat: 10 BPM Test Gauge: 294 PSI Tested By: Chance Pomeroy **Pretest Comments: PRETEST 2** FSJ9/10 Set Press: Test Gauge: Simmer: Reseat: Leakage: Tested By: **Pretest Comments: COMPONENTS INSPECTION** (0 Like New / 1 Minor /2 Medium / 3 Major) CORRODED GROOVED Service CLEAN GOUGED SCALE PITTED DENTED COMMENTS ITEM DISC \square \square \square NOZZLE П П $\overline{\mathbf{V}}$ \checkmark $\overline{\mathbf{V}}$ CAP-LEVER ASSY П П COMP SCREW and LC 1 AS FOUND: AS LEFT SPRING and BUTTONS SPINDLE / STEM 1 STEM RETAINER DISC HOLDER 1 GUIDE / UPPER RING LOWER RING 1 RING PIN(S) **BELLOWS** 20027S GASKET / SEALS \square П CONNECTION ENDS 1 OTHER П П П .370 .360 4.013 4.059 NOZZLE: MIN/MAX SPRING NUMBER: DISC: Min: ACT -ACT -Patrick Burton Patrick Burton Sean Moore Disassembly: Inspection: Reassembly: **FINAL TEST** Air **Test Medium** Simmer: 283 PSI Set Pressure: 285 PSI Reseat: 179 PSI B.P. Test: 60 PSI Vacuum: N/A ADJ. RING SETTING (NOTCHES): Upper: N/A Lower: Test Gauge: FSJ9/10 Set Press Def POP Dale Welsh Tested by: 09/16/2020 Date Final Tested: **FINAL INSPECTION:** Top: 🔽 Bottom: 🔽 End Protectors Installed: Ship Container: $\overline{\mathbf{Q}}$ Flex Gaskets Supplied: SEAL: Randy Rowsell Final Inspection: **Customer Inspection:** Comments: