

CEL Quality Services Ltd.

VISUAL INSPECTION

Tel: (403) 845-5881 • (403) 844-3341



Pressure Equipment Inspection

REPORT

Report#: SN 30606-VE,UT-2022-03-28

Type of Inspection:		<input type="checkbox"/> INSTALLATION		<input checked="" type="checkbox"/> EXTERNAL		<input type="checkbox"/> INTERNAL		<input type="checkbox"/> IN SERVICE		<input checked="" type="checkbox"/> OUT OF SERVICE		<input type="checkbox"/> INVENTORY		
Date:	28/Mar/2022	Job #:							*all measurements are in inches unless otherwise stated *ns-not stated *na-not applicable					
Inspected By:	Ben Piers	CEL Job #:							Pre Purchase Inspection					
Client:	Pipestone Energy Corp.							PO# E22-191-PO-01						
Owner:	Pipestone Energy Corp.							Service PSV prior to returning to service						
Region:	Alberta							NB # 1510						
Area:	Sunchild	Location/ LSD:	Surface:	01-04-044-11w5										
Facility:	Compressor		UWI/DH:											
Service:	Sweet	if other describe:												
Description:	<input type="checkbox"/> Vessel <input checked="" type="checkbox"/> Exchanger <input type="checkbox"/> Tank <input type="checkbox"/> Furnace <input type="checkbox"/> Boiler													
Unit #:	BU-640	Equip #:	ns											
Equip. Name:	Exchanger	Equip. Type:	Shell and Tube Exchanger											
Jurisdiction #:	ns	CRN:	V7416.2											
Manufacturer:	Vahterus							Diameter OD (in):	18		Height/Length (in):	42		
Serial No.:	30606		Year Built:	2012		<input type="checkbox"/> PSV on Vessel <input checked="" type="checkbox"/> Piping								
Volume:	ns		PSV Data:	<input type="checkbox"/> Isolation Valve(s) Installed <input type="checkbox"/> Car-sealed <input type="checkbox"/> CRN:										
Zones:	MAWP	Des. T	MDMT	Op.P	Op.T	Set P	Tag #	Manufacturer	Serial No.	In	Out	Capacity	Serv. Co.	Serv. Date
Shell Side:	150	450	-20	0	60	150	27129R	Crosby	C12-10724	1	1	26.7	RMV	Apr. 17, 2015
Tube Side:	ns	ns	ns	0	60	150	27120R	Crosby	C12-09547	1	1	26.7	RMV	Apr. 17, 2015
Units	PSI	F	F	PSI	F	PSI						GPM		
Components:	Material	Nominal (in)	Sgl./Dbl/ Weld	Calc. Trim	Retire t	CA (in)	UT TML	Lowest t	Acc.	Ret.	Dia. (OD),(in)	RT	HT	
Shell:	ns	ns				ns	00	0.401	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18	ns	ns	
Head:	ns	ns				ns			<input type="checkbox"/>	<input type="checkbox"/>	18			
Tube/Coil:									<input type="checkbox"/>	<input type="checkbox"/>				
Channel:									<input type="checkbox"/>	<input type="checkbox"/>				
Other									<input type="checkbox"/>	<input type="checkbox"/>				
Manway/Port:	Port Size (in): 4		<input type="checkbox"/> Davit Arm Present <input type="checkbox"/> Davit Arm Greased <input type="checkbox"/> Double Nitted Condition:											
Nozzles:	<input type="checkbox"/> Reinforcement pads used <input type="checkbox"/> Weep Holes Present Comment: None <input checked="" type="checkbox"/> Piping well supported <input checked="" type="checkbox"/> Joining as per code Comment: Secure and intact													
Piping:	<input checked="" type="checkbox"/> PSV Piping <input checked="" type="checkbox"/> Drains properly <input checked="" type="checkbox"/> Well coated Comment: Secure <input checked="" type="checkbox"/> Inlet Piping <input checked="" type="checkbox"/> Free from leaks <input checked="" type="checkbox"/> Well coated Comment: Secure <input checked="" type="checkbox"/> Outlet Piping <input checked="" type="checkbox"/> Free from leaks <input checked="" type="checkbox"/> Well coated Comment: Secure <input checked="" type="checkbox"/> Drain Piping <input checked="" type="checkbox"/> Free from leaks <input checked="" type="checkbox"/> Well coated Comment: Secure <input checked="" type="checkbox"/> Instrumentation Piping <input checked="" type="checkbox"/> Free from leaks/kinks Comment: Secure and intact <input checked="" type="checkbox"/> Process Fluid Identified <input checked="" type="checkbox"/> Flow direction marked Comment: Rich Glycol													
Valves:	<input checked="" type="checkbox"/> Manual Isolation Valve <input checked="" type="checkbox"/> Free from leaks Comment: Acceptable, no leaks noted <input checked="" type="checkbox"/> Automated Control Valve <input checked="" type="checkbox"/> Free from leaks Comment: Acceptable, no leaks noted <input checked="" type="checkbox"/> Vents and Drains Plugged Comment: Acceptable, no leaks noted													
Gauges:	<input checked="" type="checkbox"/> Pressure Condition: Clear and intact x1 <input checked="" type="checkbox"/> Temperature Condition: Clear and intact x1													
Sight Glass:	<input type="checkbox"/> Fluid Level Condition: None													
Orientation:	Horizontal	Foundation:	<input type="checkbox"/> Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Timber <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: Condition: Skid secure and level on piles											
Support:	<input checked="" type="checkbox"/> Saddle <input type="checkbox"/> Seal-welded <input type="checkbox"/> Free to move Condition: Bolted to skid floor, secure and level <input type="checkbox"/> Skirt <input type="checkbox"/> Free of debris Comment: Condition: <input type="checkbox"/> Hangers <input type="checkbox"/> Secure Comment: Condition: <input type="checkbox"/> Other Specify: <input type="checkbox"/> Electrical Grounding: <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Indirect <input type="checkbox"/> None													
Overall:	General condition:		Suitable for continued service										Condition: Acceptable	
Ext. Surface:	<input type="checkbox"/> Painted <input type="checkbox"/> Insulated <input type="checkbox"/> Fire-proofed <input checked="" type="checkbox"/> Cladded <input type="checkbox"/> Other: Condition: Cladding is acceptable, no damage noted													
Ext. Fixtures:	<input type="checkbox"/> Ladder <input type="checkbox"/> Platform(s) <input type="checkbox"/> Other: Condition: None													
Int. Surface:	<input type="checkbox"/> Coated <input type="checkbox"/> Lined <input type="checkbox"/> Thermal sprayed <input type="checkbox"/> Cladded <input type="checkbox"/> Welded overlay Condition: External Inspection Only													
Int. Fixtures:	<input type="checkbox"/> Baffle <input type="checkbox"/> Float <input type="checkbox"/> Impingement <input type="checkbox"/> Weir <input type="checkbox"/> Vortex Breaker Condition: External Inspection Only													
Recommended Actions:														NCR#:
Both PSV's must be serviced prior to returning to service.														
Summary Comment: Vessel found to be acceptable for service.														Inspection interval: Set by Chief Inspector
Additional notes on continuation page: <input checked="" type="checkbox"/> Equipment is suitable for continued service: <input checked="" type="checkbox"/> Inspector Certificate No: IPV #000770														Quality Check: Signature of Inspector: Ben Piers Received by: (print) Received by: (sign)
Terms and Conditions: Refer to "Scope of Services" and "Standard of Care"														

Report #: SN 30606-VE,UT-2022-03-28					
<input type="checkbox"/> New Equipment UT Survey		<input checked="" type="checkbox"/> Existing Equipment UT Survey		<input type="checkbox"/> In-Service <input checked="" type="checkbox"/> Out of Service	
Client Job #:			CEL Job #:		
Client:	Pipestone Energy Corp.	Location:	Surface:	01-04-044-11w5	
Date:	28/Mar/2022		UW/DH:		
Region:	Alberta	Access Considerations:		Year-Round Access	
Area:	Sunchild	Scope of Inspection	<input type="checkbox"/> Inventory	<input checked="" type="checkbox"/> External	<input checked="" type="checkbox"/> UT
Facility:	Compressor				
Static Data					
Equipment Name:	Exchanger	MAWP Shell (PSI):	150	Pre/Post 1999:	Post
Equipment #:	ns	MAWP Tube (PSI):	ns	Diameter (in):	18
Jurisdiction #:	ns	MAWT Shell (F):	450	CA Head (in):	ns
Manufacturer:	Vahterus	MAWT Tube (F):	ns	CA Shell (in):	ns
Year Built:	2012	Shell Material:	ns	Nominal (in):	ns
SN #:	30606	Head Material:	ns	Nominal (in):	ns
CRN #:	V7416.2			RT (Joint Eff):	ns
Acceptance Criteria & Specifications:		Client Evaluation			
Method					
Procedure:	USB-001, Rev 01	Mode:	<input checked="" type="checkbox"/> Zero Degree <input type="checkbox"/> Shear Wave		
Equipment Type:	DMS Go	Serial No:	12105442	Last Calibration:	Jan 3, 2022
Transducer:	0.250"	Serial No:	90849	Type/Frequency:	Duel / 5.0 MHZ
Cable Length (in):	72"	Couplant:	Echo Mix - water based powder mix		
Surface Condition:	<input type="checkbox"/> Clean Base Metal <input type="checkbox"/> As Ground <input type="checkbox"/> Machined <input type="checkbox"/> Sand Blast <input checked="" type="checkbox"/> Painted <input type="checkbox"/> Other:				
Cal Block(s):	SN#: 17-4164	Type:	1" 4 step Block		
Notes:					
Interval:	Set by Chief Inspector after review				

*NS=Not Stated

**NA=Not Applicable



CEL Quality Services Ltd.



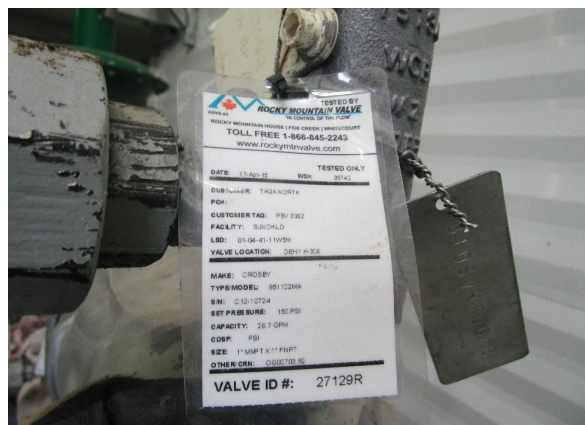
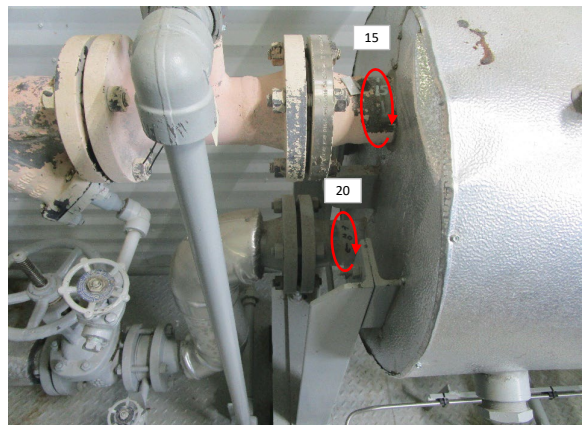
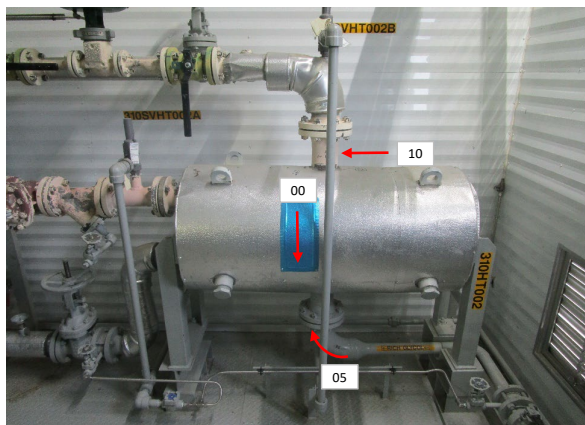
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PHOTOS PAGE

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A#: ns	S/N#: 30606	or Other: ns
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Signature of Inspector:

Ben Piers

UT Corrosion Survey Readings													
Date:	28-Mar-22	Area:	Sunchild	Equipment Name:	Exchanger	Equipment #:	ns						
Client:	Pipestone Energy Corp.	LSD:	01-04-044-11w5	Jurisdiction #:	ns	SN #:	30606					Job #:	

Vessel TML Readings													
	Baseline	# of Years	Previous	# of Years	Actual	MAWP (PSI)	Shell OD (in)	Shell Nom	Head Nom	Shell Stress	Head Stress	Joint Efficiency	Comments
	2012	10	2012	10	2022	150	18	0.400	ns	17100	ns	0.70	
TML ID	Baseline	Low	High	Low	High	OD (in)	ID (in)	STCR (in/YR)	LTCR (in/YR)	T min (in)	RL (YRS)	% Loss	Component
5	0.400	0.401	0.418	0.401	0.418	18.000	17.200	0.0000	0.0000	0.1086	50+	0.00%	Shell

Vessel Attachment Piping TML Readings																		
	Baseline	# of Years	Previous	# of Years	Actual		MAWP (PSI)		Shell OD (in)			Stress		Joint Efficiency				
	2012	10	2012	10	2022		150		18			17100		1.00				
TML ID	Baseline		Low	High	Low	High	OD (in)	ID (in)	STCR (/YR)	LTCR (/YR)	T min (in)	RL (YRS)	% Loss	SCH	Nominal (in)	Attached Component	Type	Shape
10	0.237		0.245	0.253	0.245	0.253	4.500	4.026	0.0000	0.0000	0.0178	50+	0.00%	STD	0.237	Shell	Piping	90
15	0.531		0.525	0.563	0.525	0.563	4.500	3.438	0.0000	0.0006	0.0152	50+	1.13%	S160	0.531	Shell	Piping	90
20	0.438		0.443	0.476	0.443	0.476	3.500	2.624	0.0000	0.0000	0.0116	50+	0.00%	S120	0.438	Shell	Piping	90
25	0.438		0.467	0.482	0.467	0.482	3.500	2.624	0.0000	0.0000	0.0116	50+	0.00%	S120	0.438	Shell	Piping	90

- * All readings are in inches.
- * Head and shell nominal are assumed
- * Vessel stress is assumed



Inspector:	Ben Piers	Certifications:
Signature:	BEN PIERS	ASNT Level 2 UT(SB); CGSB UT Level 1 #18240



Scope of Services

The agreement of CEL Quality Services Ltd. to perform services extends only to those services provided for in writing. Under no circumstance shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of CEL Quality Services Ltd. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. CEL Quality Services Ltd. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by CEL Quality Services Ltd. In no event shall, CEL Quality Services Ltd., liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, CEL Quality Services Ltd. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by CEL Quality Services Ltd.