

**PEYTO EXPLORATION & DEVELOPMENT CORP. PRESSURE VESSEL
ABACUS # 9469**

Provincial Registration #: (AB)0578667

<u>Date Added:</u>	Aug 23 2010	<u>CRN:</u>	L5670.52
<u>Serial Number:</u>	S0700020	<u>Volume (M³):</u>	11356.01
<u>Tag/ID Number:</u>		<u>Compressor/Unit Number:</u>	
<u>Vessel Status:</u>	In Service	<u>Manufacturer:</u>	TRINITY INDUSTRIES INC.
<u>Field:</u>	GALLOWAY	<u>Location:</u>	LSD 09-34-53-20 W5M
<u>Equipment Type:</u>	LPG Storage Bullet	<u>Year Built:</u>	2007
<u>Shell Material:</u>	SA-612	<u>Shell Thickness:(nom)</u>	0.589 Inch
<u>Right Head Material:</u>	SA-612	<u>Right Head Thickness:(min)</u>	0.338 Inch
<u>Left Head Material 2:</u>	SA-612	<u>Left Head Thickness 2:(min)</u>	0.338 Inch
<u>Corrosion Allowance:</u>	0 Inch	<u>Coating:</u>	None
<u>MAWP:</u>	250 psi	<u>@Temperature:</u>	125 F
<u>MDMT:</u>	-20 F	<u>@Pressure:</u>	250 psi
<u>RT:</u>	2	<u>HT:</u>	No
<u>Diameter:</u>	10 Inch	<u>Length:</u>	57 Feet
<u>Height:</u>		<u>Manway Present:</u>	No
<u>Subject to Fees:</u>	Yes	<u>Subject to Act:</u>	Yes
<u>Service:</u>	Sweet		

Comments:

Inspection Schedule	
<u>Grade: 2</u>	<u>Inspection Interval: 5 (Years)</u>
<u>Previous Inspection: Aug 16 2016</u>	<u>Previous Inspection Type: Ultrasonic Corrosion Survey</u>
<u>Next Inspection Due: Aug 16 2021</u>	

PSV FORM ABACUS # 50321

Serial #: 22342-1 Protecting Vessel: (AB)0578667

<u>PSV Number:</u>		<u>CRN Number:</u>	0G0515.9C
<u>PSV Manufacturer:</u>	Squibb-Taylor	<u>Model Number:</u>	AA 1310A
<u>Capacity:</u>	5795 SCFM	<u>Set Pressure:</u>	250 psi
<u>Inlet size:</u>	1.25" NPT	<u>Outlet size:</u>	1.25" NPT
<u>Tag Number:</u>		<u>Date Added:</u>	May 27 2016

Comments:

<u>Last Service: Feb 9 2016</u>	<u>Last Serviced By: Wizard Valve Services Ltd.</u>
<u>Next Service Due: 2/8/2022</u>	<u>Service Interval: 6 (Years)</u>

PSV FORM ABACUS # 50322

Serial #: 22342-2

Protecting Vessel: (AB)0578667

PSV Number:

CRN Number:

0G0515.9C

PSV Manufacturer: Squibb-Taylor

Model Number:

AA 1310A

Capacity: 5795 SCFM

Set Pressure:

250 psi

Inlet size: 1.25" NPT

Outlet size:

1.25" NPT

Tag Number:

Date Added:

May 27 2016

Comments:

<u>Last Service:</u> Feb 9 2016	<u>Last Serviced By:</u> Wizard Valve Services Ltd.
<u>Next Service Due:</u> 2/8/2022	<u>Service Interval:</u> 6 (Years)

PSV FORM ABACUS # 50320

Serial #: 22246-08

Protecting Vessel: (AB)0578667

PSV Number:

CRN Number:

0G0515.9C

PSV Manufacturer: Squibb-Taylor

Model Number:

A1310A

Capacity: 5795 SCFM

Set Pressure:

250 psi

Inlet size: 1.25" NPT

Outlet size:

Tag Number:

Date Added:

May 27 2016

Comments:

<u>Last Service:</u> Dec 14 2015	<u>Last Serviced By:</u> Wizard Valve Services Ltd.
<u>Next Service Due:</u> 12/13/2021	<u>Service Interval:</u> 6 (Years)

PSV FORM ABACUS # 50320

Serial #: 22246-08

Protecting Vessel: (AB)0578667

PSV Number:

CRN Number:

0G0515.9C

PSV Manufacturer: Squibb-Taylor

Model Number:

A1310A

Capacity: 5795 SCFM

Set Pressure:

250 psi

Inlet size: 1.25" NPT

Outlet size:

Tag Number:

Date Added:

May 27 2016

Comments:

PSV FORM ABACUS # 50319

Serial #: 22246-07

Protecting Vessel: (AB)0578667

PSV Number:

CRN Number:

0G0515.9C

PSV Manufacturer: Squibb-Taylor

Model Number:

A1310A

Capacity: 5795 SCFM

Set Pressure:

250 psi

Inlet size: 1.25" NPT

Outlet size:

Tag Number:

Date Added:

May 27 2016

Comments:

<u>Last Service:</u> Dec 14 2015	<u>Last Serviced By:</u> Wizard Valve Services Ltd.
<u>Next Service Due:</u> 12/13/2021	<u>Service Interval:</u> 6 (Years)

PSV FORM ABACUS # 50324

Serial #: 22342-4

Protecting Vessel: (AB)0578667

PSV Number:

CRN Number:

0G0515.9C

PSV Manufacturer: Squibb-Taylor

Model Number:

AA 1310A

Capacity: 5795 SCFM

Set Pressure:

250 psi

Inlet size: 1.25" NPT

Outlet size:

1.25" NPT

Tag Number:

Date Added:

May 27 2016

Comments:

<u>Last Service:</u> Feb 9 2016	<u>Last Serviced By:</u> Wizard Valve Services Ltd.
<u>Next Service Due:</u> 2/8/2022	<u>Service Interval:</u> 6 (Years)

PSV FORM BACUS # 50318

Serial #: 22246-06

Protecting Vessel: (AB)0578667

PSV Number:

CRN Number:

0G0515.9C

PSV Manufacturer: Squibb-Taylor

Model Number:

A1310A

Capacity: 5795 SCFM

Set Pressure:

250 psi

Inlet size: 1.25" NPT

Outlet size:

Tag Number:

Date Added:

May 27 2016

Comments:

Day Consulting Inc.		External Visual Inspection				63-33 Donlevy Avenue, Red Deer, AB, Phone 403-396-2127	
Location: 9 - 34 - 53 - 20 W 5 M		(A) 0578667		Date: August 17, 2016			
Sub Facility: LPG Bullet		Manufacturer's Serial Number: S0700020		Year Built: 2007		Client: Peyto Exploration and Development Corp. Galloway	
MAWP@Temp / MDMT / RT/HT: 250 psi @ 125F 2F		Equipment: LPG Bullet				CRN: L5670.51234	
G=Good F=Fair P=Poor N/A=Not Applicable		G	F	P	N/A	Comments	
Insulation - Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture. Are straps secure?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Vessel Extends through the building roof?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>			
External Condition - Assess paint condition, areas peeling, record any corrosion, damage, distortion etc. (record location, size and depth of corrosion or damage)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Paint is 98%.	
Flanges and Threaded Joints - Record any leakage at joints, threaded connections, etc.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No issues.	
Skirt/Saddle - 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.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No issues.	
Access to bottom Head for UT?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input checked="" type="checkbox"/>	Existing Access is: <input type="checkbox"/> Good <input type="checkbox"/> Adequate <input type="checkbox"/> Poor		
Is ground wire attached?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>			
Anchor Bolts - Visually confirm all fasteners. Look for corrosion, cracking in threads or signs of deformation. You can "hammer tap" to ensure secure.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The studs were loosened on one end of the vessel to allow for expansion and contraction. 4 Studs	
Welded to the Floor?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
Concrete Foundation - Check for cracks, spalling, etc.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Installed on Piles?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
Ladder/Platform - Describe general condition, ensure support is secure to vessel, stable, describe any hazards.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Ladder.	
Nozzle - Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted? Inspect gussets for cracking. Any leaks or seepage from weep holes on repads.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Weep Hole(s) are clear on repad(s)?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
Gauges - Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/Temp. Upright ? Vertical?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vessel was not in service.	
Temperature ←	Pressure ←	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
←	←	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
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?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Valving - Ensure no leaks are visible. Valves are properly supported and chained if necessary.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Vessel Nameplate: accessible, securely mounted, legible?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
Manways: present or acceptable access? Condition of flange and davit?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	16" X 150# RF		
Vibration: Vibration affecting Pressure Equipment Integrity?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
NDE Methods - Was UT, Shear Wave, AUT, MPI, PT done on the vessel with this VT Ext Inspection? Include any vibration analysis done for compressor vessels.		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WFMT, Partial UT and VT Internal See the Internal Inspection Report Dated Aug. 15, 2016 for details.	
PRD - Are PRD seals in place? Ensure no block valves between PRD and vessel, or if there are that they are locked/sealed open. Any PRD Non-conformances?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PSVs were all serviced in December of 2015.	
PRD - Is the outlet piping the same size or larger than PRD outlet on the valve? Is properly supported and routed to a safe location?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
PRD - Is the PRD set at pressure at or below that of the MAWP?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>			
Serial # 4 - SEE ABADATA PAGES		PRD Manufacturer Squibb-Taylor		Capacity 5795 SCFM		CRN OG 0515.9C	
Inlet Size 1.25"		Last Service December 14, 2015		Next Service		Set Pressure 250 psi	
HLSD <input type="checkbox"/>		LLSD <input type="checkbox"/>		HPSD <input type="checkbox"/>		LPSD <input type="checkbox"/>	
Hi/LoPSD <input type="checkbox"/>		Model/Part Number A1310A		Outlet Size NA		Last Serviced By Wizard	
Tag Number		Accept and Approve: (Sign)		ISI Certification Number: 000232			
Recommendations Notes or Follow-Up Necessary? Set a task for this vessel?							
MT Inspection identified pitting in one of the PSV nozzle welds. This vessel was repaired in August 2016. See the repair report.							
This vessel is acceptable for continued service for 5 years under existing conditions.							

Day Consulting Internal Inspection					Date:	August 18, 2016			
Inspector: Bill Day		Equipment:			LPG Bullet				
Provincial Registration:		A 0578667	Serial Number:		S0700020	CRN: L5670.51234			
Client: Peyto		Location: 09-34-53-20 W5M		Subfacility: NGL Storage					
G=Good, F=Fair, P=Poor, N/A=Not Applicable					Comments				
Internal Coating General condition of coating. Look at nozzles, coupling, and areas of most severe corrosion to ensure coating is intact. If coating is in poor condition make decision now if re-coating necessary? If so, when?					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No internal coating. Approximately 30% of the mill scale is in place.
Anodes How many, type, condition. % consumed. Are they being replaced?					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Anodes.
Internal Piping Is there any? Describe condition, dents, corrosion, erosion, material etc. Ensure supports are secure and any bolts are suitable for future use.					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3" pipe riser Sched 40.
Trays How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Trays.
Baffles, deflector plates, impingement etc. If present, describe condition. Look closely at welds attached to vessel wall.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No impingement
Entry End Head (West) Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify "Right" or "Left" are oriented while facing the Nameplate.					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only superficial corrosion not exceeding 0.005". No Erosion or Mechanical Damage
Rear Head (East) Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify "Right" or "Left" are oriented while facing the Nameplate.					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only superficial corrosion not exceeding 0.005". No Erosion or Mechanical Damage
Shell Sections Record location, size and depth of all erosion, corrosion or mechanical damage. Describe general condition. If any corrosion greater than corrosion allowance is observed in either shell or head, discuss with Chief Inspector before closing vessel.					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only superficial corrosion not exceeding 0.005". No Erosion or Mechanical Damage
Demister Pad Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No demister.
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.					<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Welds have original profile and are not experiencing any preferential corrosion except a pit was found in a PSV nozzle at 12 o'clock that exceeded the minimum thickness allowable. Measured to 0.125". Porosity found throughout the weld. We removed a 3/4" welding rod freeze from a circumferential weld. North head to shell.
Firetube, Tubing Coil Inspect for pitting, generalized corrosion, deformation, fretting and cracks.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NA
NDE Methods Was UT, Shear Wave, AUT, MPI, PT done on the vessel in conjunction with this internal visual inspection?					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WFMT and partial UT.(See the attached NDE Report). (defects found)
Manway					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No corrosion, erosion or mechanical damage.
Summary MT Inspection identified pitting of a PSV nozzle welds. This vessel was repaired in August 2016. See the repair report. In consultation with the Facilities Engineer the inspection interval remains at 5 years under current operating conditions. This vessel is acceptable for continued use under current service conditions for 5 years. (Repair completed)									
Inspector (print) Bill Day					API or IPVI Certification Number 000232			Sign 	



Peyto Exploration & Development Corp.
Galloway Plant 9-34-53-20 W5M

August 18, 2016
LPG Storage Tank
A 0578667, Sn S0700020, CRN L5670.51234
Internal Inspection,
Wet Fluorescent Magnetic Particle Inspection
& Partial Ultrasonic Inspection

Nameplate



External View



North Head



PSV Nozzles at 12 o'clock



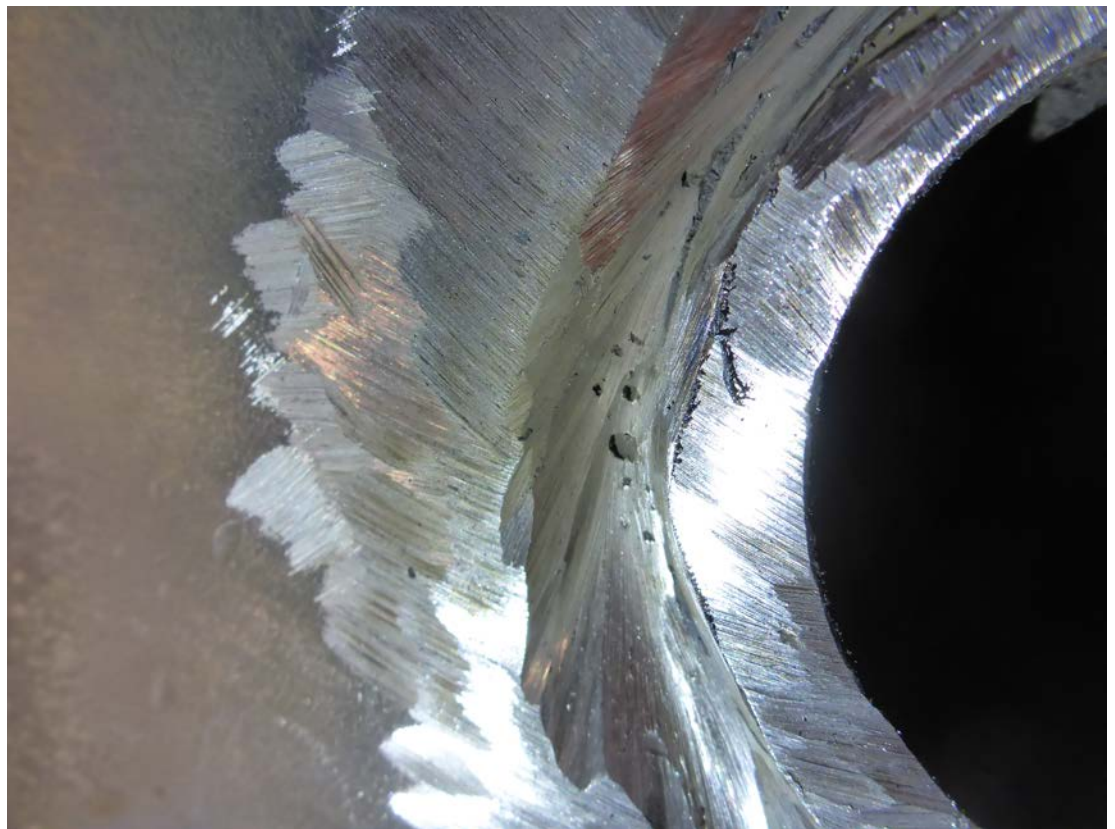
View toward the South (Entry) Head



South Head to Shell Weld



Pit found in a PSV Nozzle weld exceeding the minimum thickness allowed.



Porosity was found throughout the nozzle weld as the pit was excavated.