

## PRESSURE EQUIPMENT DATA REPORT

### EQUIPMENT GENERAL INFORMATION

<b>District:</b>	Medicine Hat		
<b>Facility:</b>	Grand Forks East		
<b>Location /LSD:</b>	04-01-013-13W4	<b>Operating Province:</b>	Alberta
<b>Equipment Name:</b>	FREE WATER KNOCK OUT		
<b>Equipment Status:</b>	Operating	<b>Orientation:</b>	Horizontal
<b>Skid No.:</b>	<b>Unit:</b>		

### EQUIPMENT STATIC DATA

<b>AB Registration No.:</b>	0161444		<b>Serial No.:</b>	LM-1671	
<b>Registration No./Other:</b>			<b>Equipment No.:</b>	N/S	
<b>CRN NO.:</b>	C-8805.2		<b>Unique ID No.:</b>		
<b>National Board No.:</b>	N/S		<b>Oncor ID No.:</b>	158937	
<b>Manufacturer:</b>	C.E Natco		<b>Year Built:</b>	1980	
<b>MAWP:</b>	75.00 (psi)	517.11 (Kpa)	<b>Temperature:</b>	200.00 (F)	93.33 (C)
<b>Diameter.:</b>	92.000 (In)	2336.80 (mm)	<b>Length:</b>	240.00 (In)	6096.00 (mm)
<b>Radiography:</b>	RT2		<b>Heat Treatment:</b>	No	
<b>Corrosion allowance:</b>	0.000 (In)	0.000 (mm)	<b>MDMT:</b>		
<b>Lining Or Coated:</b>			<b>Painted:</b>	Yes	
<b>Insulated:</b>	Yes		<b>Internally Clad:</b>		
<b>Hand Hole:</b>			<b>Support Type:</b>	Saddle	
<b>Manway:</b>	Yes		<b>Manway Size(In):</b>	16.00	
<b>Capacity/Volume(m3):</b>			<b>Nozzle Rating:</b>	150.00	

### MATERIALS/COMPONENTS

Name	Joint Efficiency	Outside Diameter(in.)	Head Type	Material Type	Stress Value (PSI)	Nominal Thickness(In.)
SHELL	1.00	92.000		SA-285 C	13800	0.31
HEAD	1.00	92.000	Ellipsoidal	SA-285 C	13800	0.50
HEAD B	1.00	92.000	Ellipsoidal	SA-285 C	13800	0.63

### PIPING STATIC DATA

<b>Primary Flange Rating:</b>	150	<b>ASME B16.5 - Table 2-1.1 @ 150F:</b>	285 (psi)		
<b>Pressure Use For TMin:</b>	Vess Design Press	<b>Piping Operating Press:</b>	75 (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	<b>Condensate</b>	<b>Air</b>	<b>Glycol</b>

### COMMENTS

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**VISUAL INSPECTION REPORT**

<b>District:</b>	Medicine Hat	<b>Facility:</b>	Grand Forks East	<b>Location/LSD:</b>	04-01-013-13W4
<b>Equipment Name:</b>	FREE WATER KNOCK OUT			<b>Prov Reg No. :</b>	0161444
<b>Serial No.:</b>	LM-1671	<b>Equip No.:</b>	N/S	<b>National Board No.:</b>	N/S

**INTERNAL INSPECTION**

<b>INSPECTION DATE:</b>	May 3, 2016	<b>INSPECTION INTERVAL:</b>		<b>NEXT INSPECTION DATE:</b>	
<b>ITEM</b>	<b>CONDITION</b>	<b>INSPECTION COMMENTS</b>			
COATING	ACCEPT				
ANODES	ACCEPT				
INTERNAL PIPING	ACCEPT				
TRAYS	N/A				
BAFFLES, DEFLECTOR PLATES, ETC	ACCEPT				
BOTTOM HEAD	ACCEPT				
TOP HEAD	ACCEPT				
SHELL SECTIONS	ACCEPT				
DEMISTER PAD	N/A				
WELDS	ACCEPT				
REPAIRS REQUIRED	N/A				
NDE	N/A	VTI			
OTHER	N/A				

**RECOMMENDATIONS:**

VESSEL IS FIT FOR SERVICE

I have performed the above inspections and certify that they have been done in accordance with our approved manual and that the information is accurate.

<b>Inspector:</b>	Selva Nadar	<b>Signature:</b>		<b>Date:</b>	May 3, 2016
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**REPORT SIGN-OFF**

*Where required , the above reports has been reviewed and accepted as noted below:*

<b>WQS Supervisor Name:</b>			
<b>WQS Supervisor Title/Cert No.:</b>		<b>Cert No.:</b>	
<b>WQS Supervisor Signature/Date:</b>		<b>Date:</b>	

*Where required , the above reports has been reviewed and accepted as noted below:*

<b>Client Supervisor Name:</b>			
<b>Client Supervisor Title/Cert No.:</b>			
<b>Client/Supervisor Signature/Date:</b>		<b>Date:</b>	

### PRESSURE RELIEF VALVE SUMMARY

<b>District:</b>	Medicine Hat	<b>Facility:</b>	Grand Forks East	<b>Location/LSD:</b>	04-01-013-13W4
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#### PSV STATIC DATA

<b>Tag/Equip No.:</b>	0401-1A	<b>Serial No.:</b>	52256
<b>Manufacturer:</b>	WELLMARK	<b>CRN No.:</b>	
<b>Model No.:</b>	9503-125N	<b>Code Stamp:</b>	
<b>Side (Shell or Tube):</b>	Shell	<b>Outlet Size:</b>	3
<b>Inlet Size:</b>	3	<b>Outlet Type / ANSI Rating:</b>	Flanged / 150
<b>Inlet Type / ANSI Rating:</b>	Flanged / 150		

#### PSV SERVICE DATA

<b>Set Date:</b>	1 May, 2016	<b>Service Interval:</b>	60
<b>Set Pressure (psig)</b>	75	<b>Capacity (scfm):</b>	3528
<b>Service Company:</b>	TARPON ENERGY SERVICES LTD	<b>Next Service Date:</b>	1 May, 2021

#### PSV FIELD INSPECTION

**Inspector** Selva Nadar      **Company** Western Quality Services      **Signature:**       **Inspection Date:** 03-May-2016

**Inspection Type:**

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

#### EQUIPMENT PROTECTED

Prov Reg No.	Equipment No.	Serial No.	Equipment Name	Status	MAWP
0161444	N/S	LM-1671	FREE WATER KNOCK OUT	Operating	75.00

**PHOTOGRAPHS**

<b>EQUIP NAME:</b>	FREE WATER KNOCKOUT#2	<b>PROV REG No.:</b>	0161444
<b>SERIAL No.:</b>	LM-1671	<b>Equip No.:</b>	N/S
		<b>National Board No.:</b>	



NAMEPLATE



NAMEPLATE



INTERNAL FROM WEST MANWAY



WEST SIDE INTERNAL ON THE BOTTOM OF SHELL



ANODE #1



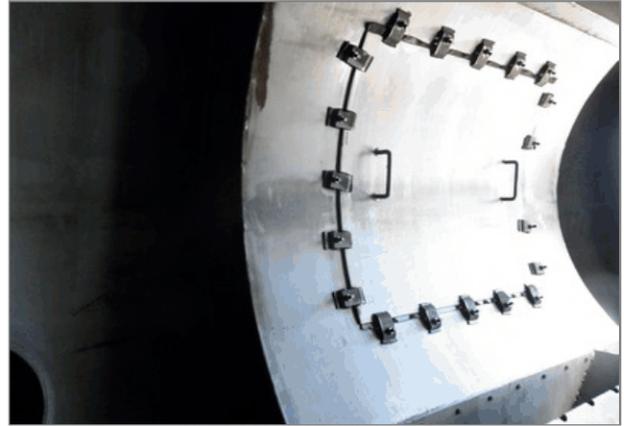
ANODE #1

**PHOTOGRAPHS**

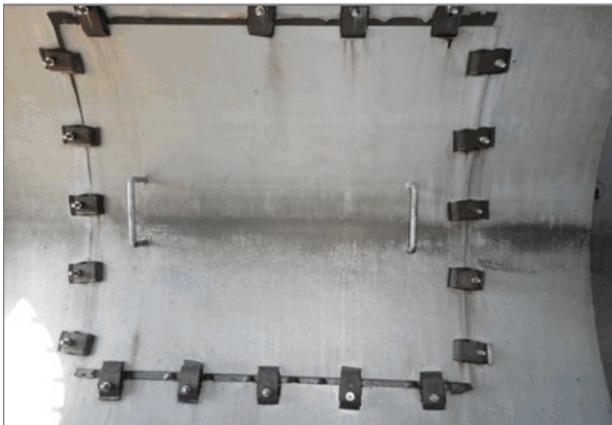
<b>EQUIP NAME:</b>	FREE WATER KNOCKOUT#2	<b>PROV REG No.:</b>	0161444
<b>SERIAL No.:</b>	LM-1671	<b>Equip No.:</b>	N/S
		<b>National Board No.:</b>	



SHELL WELD T JOINT



INLET COMPARTMENT COVER



INLET COMPARTMENT COVER



INTERNAL PIPING



ANODE #2



EAST SIDE DISCHARGE (BOTTOM)

NOTES:

**PHOTOGRAPHS**

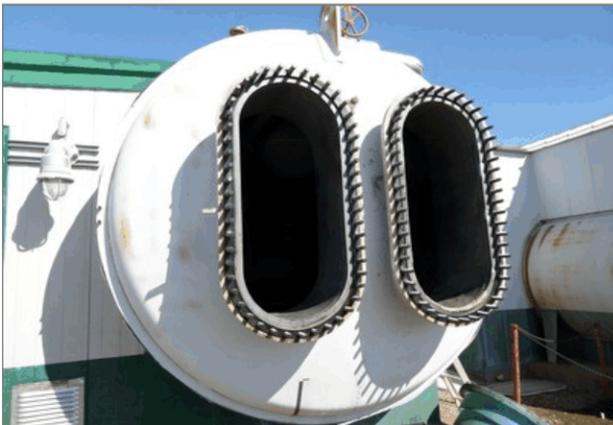
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<b>SERIAL No.:</b>	LM-1671	<b>Equip No.:</b>	N/S
		<b>National Board No.:</b>	



EAST SIDE DISCHARGE (TOP)



EAST SIDE DISCHARGE SHELL T JOINT



MANWAY WEST SIDE



OVERALL INSIDE BUILDING



WEST SIDE HEAD



OVERALL OUTSIDE BUILDING

**PHOTOGRAPHS**

<b>EQUIP NAME:</b>	FREE WATER KNOCKOUT#2	<b>PROV REG No.:</b>	0161444
<b>SERIAL No.:</b>	LM-1671	<b>Equip No.:</b>	N/S
		<b>National Board No.:</b>	



EQUIPMENT #



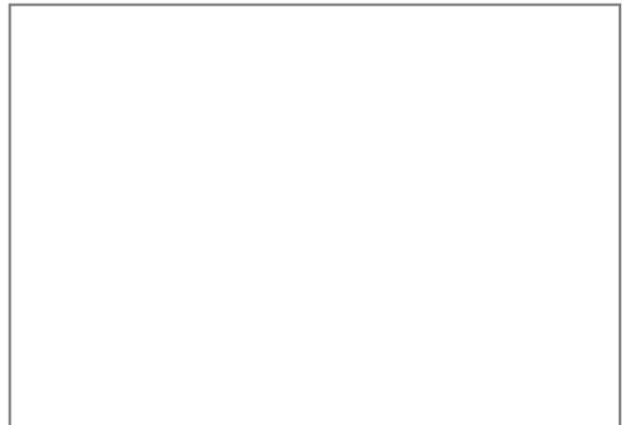
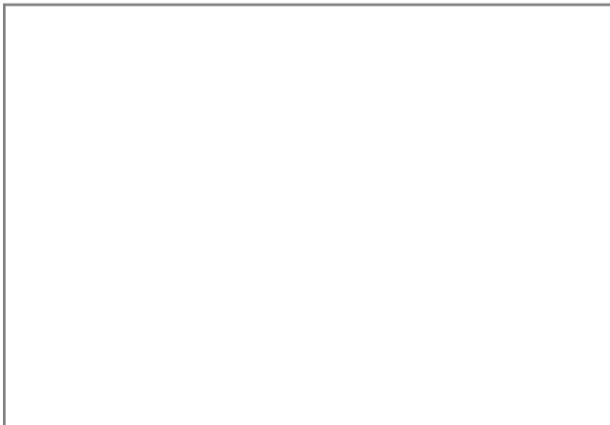
PSV NAMEPLATE



PSV TAG



OVERALL AFTER INSTALLATION



NOTES: