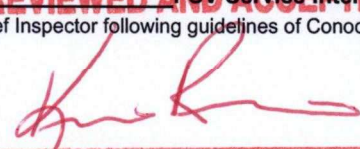


GENERAL INSPECTION FORM						
District: Northern Plains			Skid No. : 16718			
Facility: FireBird Oil Battery			Location (LSD) Surface: 14-01-98-08-W6M			
Vessel Name & Equipment Number: Free Water Knock Out						
Orientation: Horizontal <input checked="" type="checkbox"/> or Vertical <input type="checkbox"/>			Location (LSD) Downhole:			
Status: In Service <input checked="" type="checkbox"/> or Out of Service (blinded / fully isolated) <input type="checkbox"/>			Commissioning Inspection <input type="checkbox"/> or Regulatory Inspection <input checked="" type="checkbox"/>			
PRESSURE VESSEL NAMEPLATE DATA						
"A" or "G" or "S" (Sask.) or BC Registration Number.			CRN Number			
A 2706762			K-5656.2			
Vessel serial number: 91-6066-0			Size (diameter x length- estimate if necessary): 96 in X 30 ft S/S			
Shell thickness: 9.5 mm			Shell material: SA-516-70N			
Head thickness: 9.2 mm			Head material: SA-516-70N			
Tube wall thickness:			Tube material:			
Tube diameter:			Tube length:			
Channel thickness:			Channel material:			
MAWP	Shell: 75 Psi		Operating pressure	Shell:		
	Tubes:			Tubes:		
Design Temp.	Shell: 100 F		Operating temperature	Shell:		
	Tubes:			Tubes:		
X-ray: RT-1			Heat treatment? Yes			
Code parameters: ASME VIII, Div 1			Joint efficiency (if on nameplate):			
Manufacturer: Wells Hall Fabrication			Year built: 1991			
Corrosion allowance: 3.2 mm			Manway? Yes 20 inch			
PRESSURE SAFETY VALVE NAMEPLATE DATA						
Tag Number(s)	Set Pressure	CRN #	Manufacturer/ Model / Serial / Code Stamp	Capacity (Scfm)	Size (Inlet x Outlet)	Set Date (mm/dd/yyyy)
Shell Side G# 705641	75 Psi		Farris, 26JB10L-120/S7, sn-CE-35876-A15 UV, NB	2183 SCFM	2" #150 X 3" #150	7/3/2006
Tube Side G#						
SERVICE CONDITIONS-INDICATE ALL THAT APPLY						
Sweet <input checked="" type="checkbox"/>	Sour <input type="checkbox"/>	Oil <input checked="" type="checkbox"/>		Gas <input checked="" type="checkbox"/>	Water <input checked="" type="checkbox"/>	
Amine <input type="checkbox"/>	LPG <input type="checkbox"/>	Condensate <input checked="" type="checkbox"/>		Air <input type="checkbox"/>	Glycol <input type="checkbox"/>	
Other (Describe):						

Inspection Interval MONTHS 3 6 3 Years PSV Service Interval AS PER MAXITRAK
 (Determined by integrity specialist in conjunction with Chief Inspector following guidelines of ConocoPhillips Canada Owner-User Inspection Program)
 Reports reviewed and accepted by:

REVIEWED AND ACCEPTED

KEVIN REAVILLE
 AP 310 # 21100
 ABSA ISFVI # 000274

Integrity Specialist _____ Date AUG 2 8 2008
 Fill out all forms as completely as possible. All information is important! Use back of sheets to record additional information or sketch if required.

** MUST IMPLEMENT PLAN TO MONITOR ANODE CONSUMPTION
 IF ANODES CONSUMED THEN INTERNAL MAY NEED TO BE COMPLETED PRIOR TO YR 3
 KR.*

External Inspection Items	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?				X	
External Condition Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	X				No scratches or peeling of pain external surface. Vessel is suited with a 20" #150 man way closure, davit arm appears to be in good condition with no visible damage.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.				X	No leaking detected.
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. Is ground wire attached?	X				No distortion to saddles – no buckles or dents. Saddles are seal welded to shell, weld appears full and complete – no leaking. Paint is in good condition – no exposed metal. Ground attached to saddle.
Anchor Bolts Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.	X				In Place and secure – firmly bolted to skid deck.
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.				X	
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.	X				All nozzles are clean with no visible deflection noted. Paint condition is good – no exposed metal.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp.	X				Pressure and temperature gauge attached – covers range listed on data plate.
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?	X				All external piping is well supported with no visible deflection or signs of any leakage present at time of inspection.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				Well supported – no leaks.
PSV Ensure PSV is set at pressure at or below that of vessel. Discharge piping is same size as valve outlet and is properly supported and routed. Are PSV seals in place? Ensure no block valves between PSV and vessel, or if there are ensure they are locked/sealed open.	X				Located o top shell - PSV is set at the vessel MAWP. Seal is intact. Block valve attached on inlet to PSV – car seal in place. Discharge piping is same size as outlet orifice.
NDE methods Was UT/ MPI done on vessel	X				Ultrasonic thickness inspection carried out, piping metal thickness detected below nominal minus corrosion allowance. Thickness calculations carried out - insufficient metal exits for safe operation.
Other Observations:					
See internal inspection for summary and recommendations.					

Inspected By: Jerald Zaderey

(Please Print)

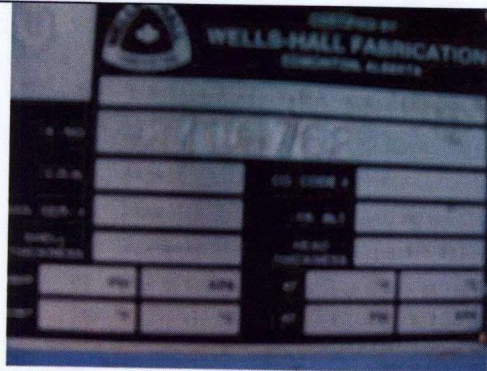
Date: July 29, 2008

Internal Inspection Items	G	F	P	N/A	Comments
Coating Assess coating. Describe area coated, 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 <u>now</u> if re-coating necessary? If so, when?		X			The internal coating is in good condition with exception of isolated areas located throughout the lower shell and 3" lower shell 90 deg Elle.
Anodes. How many, type, condition. % consumed. Are they being replaced?			X		The anodes located in the vessel were found to be 100% gone. It is suggested the doubling up the anodes may help, also to monitor anode usage to determine usage.
Internal Piping Is there any? If so, carbon or stainless steel. Describe condition, dents, corrosion, erosion, etc. Ensure supports are secure and any bolts are suitable for future use.				X	No internal piping.
Trays How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?				X	
Baffles, deflector plates, etc. If present, describe condition. Look closely at welds attached to vessel wall.				X	
Bottom Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				North head found to be in good clean condition with no coating defects noted.
Top Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				South head has a 20" #150 man way opening and is found to be in good clean condition with some minor coating defects noted on the man way edges. These will be repaired prior to placement of vessel back into service.
Shell Sections Record number of 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.			X		The vessel is constructed with three shell sections. All three shell sections have isolated pitting in areas located at the lower shell where the coating had failed. The measured depths in six separate areas range from .070 inches to .140 inches in depth with one measured at a depth of .260 inches in depth. These will be repaired. The lower 3" 90 deg Elle also has to be replaced as internal corrosion has attacked the back side of the elbow and is down to 2.0 mm remaining wall thickness. This was replaced with a 3" flanged nozzle so will be internally coated.
Demister pad Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.				X	No demister pad.
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.	X				All welds appear to be full and complete with no coating failures noted.
Repairs Required. If yes, ensure procedure and copy of AB-40 is on file, and one sent to local ABSA Inspector					<ol style="list-style-type: none"> 1. Install new 3 inch nozzle – water drain. 2. Weld build up of wasted areas on shell. Yes, the AB-40 will be included once the repairs are completed and recoated. Repairs completed by Natco Canada.
NDE Was any NDE done.	X				Ultrasonic thickness carried out on area of weld prep for new 3 inch nozzle installation – no laminations present. Magnetic Particle Inspection carried out on weld prep area and after welding operation – no cracking detected. Magnetic Particle Inspection carried out on weld build up areas on shell – no cracking detected.
Other Observations					
<p>Recommendations: See repairs required. Summary: This vessel is in good condition, visual external and internal carried out – pitting detected to .140 inches deep on shell and 3 inch drain nozzle corroded to 70% wall loss. Repairs carried out by NATCO – shell build up and nozzle replaced.</p> <p style="text-align: right; color: blue; font-size: 1.2em;">MOC# 19498</p>					
1- Vessel is fit to return back into service. An internal inspection should be conducted within 3 years or sooner.					

36 MONTH INTERVAL DUE TO CORROSION HISTORY + COATING REPAIRS.

Inspected By: _____ Jerald Zaderey _____ Date: _____ July 29, 2008 _____
 (Please Print)

Photo Table



Nameplate



Vessel External Over View



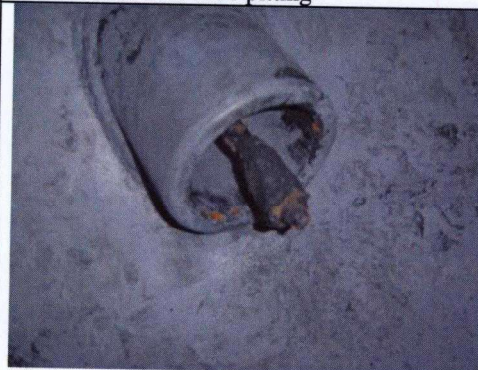
Lower 3" nozzle 90 deg Elle off vessel.



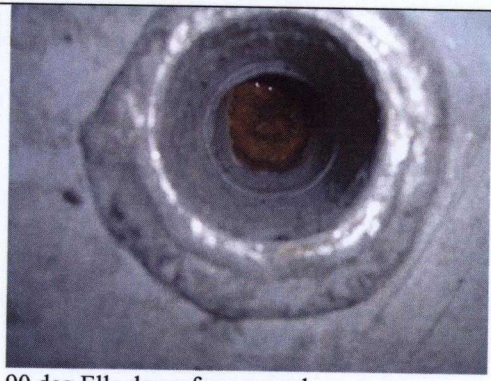
Lower Shell 260/1000 pitting



Lower shell 140/1000 pit and 130/1000 pit



Consumed Anode



90 deg Elle down from vessel



Consumed anode.



Repaired Patches



Repaired Patches



Patches coated after repair



Man Way patch coating



RTD QUALITY SERVICES INC.
GRANDE PRAIRIE OPERATIONS
GRANDE PRAIRIE ALBERTA
PHONE: 1 - 780 - 814 - 7227
FAX: 1 - 780 - 402 - 3030

GENERAL NDE REPORT

Matt July/08

Date July 31, 2008 Page 1 of 2
 RTD Job #: 05.002109
 RTD Dep. #:

Client: Conoco Phillips
 Address: Grand Prairie, AB
 P.O.#: MOX # 19498
 Client Rep.: Toby Chambers

Field: Firebird Oil Battery
 Location: 14-01-98-08 W6M
 Procedure: (RTD) MT.001
 Code: ASME VIII / Div 1

Job Description: To performed Mag Particle Inspection on Free Water KO A2706762 shell metal build up and replacement nozzle welds.

Surface Condition: Weldment Machined Painted
 Ground Sandblasted Other

Surface Temp (C°): < 5 > 5 < 60 > 60

MAGNETIC PARTICLE INSPECTION

Equipment Type: Yoke Bench *Asset No.:* 0975 *Calibration Due Date:* 10 - 2008
 Blacklight: Intensity Check: _____ $\mu W/cm^2$ *Asset No.:* _____ *Calibration Due Date:* _____
 Method: A/C D/C Type: Continuous Residual Power Supply: 120 V Battery Natural
 Type: Dry Powder: Colour: _____ Wet: Black and White Fluorescent
 Product Manufacturer: Magnaflux Product Identification Code: 7HF

INSPECTION DETAILS

Background: Free Water Knockout A # 2706762
Corroded nozzle and pitting on shell to be repaired.
Scope: 1. To perform wet magnetic particle inspection of Free Water Knockout shell repair welds and nozzle replacement weld.

Results

No cracking found during MT testing of shell and nozzle replacement weld repairs.

Photos attached see below.

REVIEWED AND ACCEPTED

KEVIN REAVILLE
API 510 # 27489
ABSA ISPVI # 000274

AUG 28 2008

Technician: Matthew Heatcoat 12966 II Start Time: _____ Stop Time: _____ ST _____ OT _____
 Signature: _____ Method: MT Unit: _____ Km: _____ Travel Time: _____
 Assistant: _____ CGSB /ASNT/SNT Level: II Subsistence required OT Meal
 Client Signature: _____ Consumables: _____

*Results are an interpretation of the inspection method, not a guarantee. Client signature indicates acceptance of report, results and applicable charges.



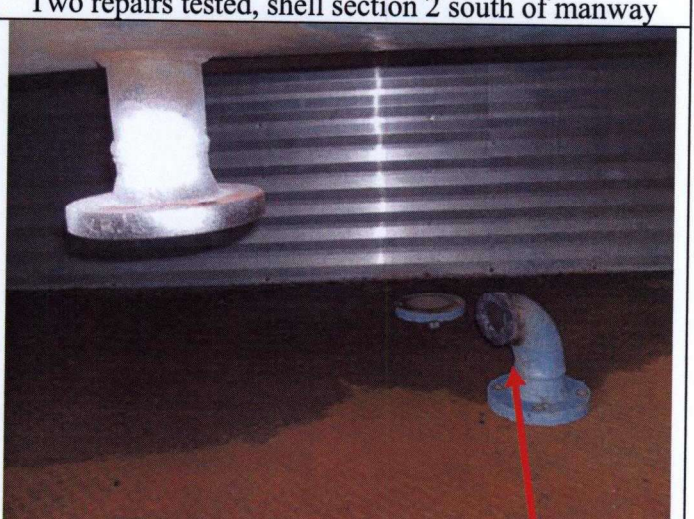
Five repairs tested, shell section 2 south of manway



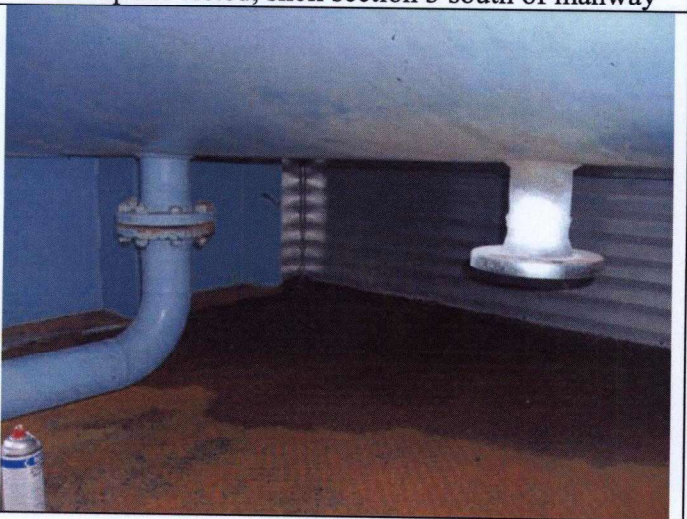
Two repairs tested, shell section 2 south of manway



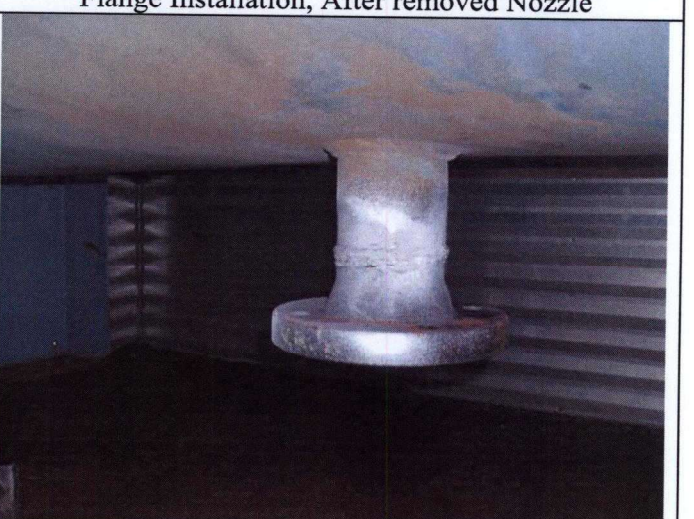
Two repairs tested, shell section 3 south of manway



Flange Installation, After removed Nozzle



Overview



MT tested no cracking detected.

Internal Inspection Form

"A" Number: 2706762 Serial Number: 91-6066-0 CRN: K5656.2
Plant/Facility: Firebird Location (LSD): 14-01-98-08 W6M Tag Number: V-203
Description: Free Water Knock Out Process: Free Water Knock Out Status: In Service

External Inspection External Inspection Done? (Check Box if Yes) [X]

External Inspection Details:

Ok

Internal Inspection Internal Inspection Done? (Check Box if Yes) [X]

Internal Inspection Details:

Ok - anodes; 2x 100% consumed, 2x 60% consumed, covered with waxy substance. Vessel in very good condition. Increase inspection interval suggested.

PSV Block Valve? [] Yes [X] No

Point in time status: [X] In Service [] Out of Service [] Shut In [] Sold [] Other [] Unspecified

Block valve locked open? [] Yes [] No

Guages:

Foundation:

PSV Data Check? [] Yes [X] No

Block Valve Present? [] Yes [X] No

PSV Locked Open? [] Yes [X] No

Additional Comments:

Flagged? [] Yes [] No

Remedial Actions Required? [X] No [] Yes

If yes, indicate required work:

Suitable for continued service? [X] Yes [] No

Inspector Name: Shane Caume Inspector Company: Northern Materials Engineering

Inspector Signature: Inspection Date: Mon Mar 11, 2002

Pressure Equipment Integrity Management System Manual
Internal Inspection Form

Exhibit 0.0

"A" Number: 2706762 Serial Number: 91-6066-0 CRN: K5656.2
Plant/Facility: Firebird Location (LSD): 14-01-98-08 W6M Tag Number: V-203
Description: Free Water Knock Out Process: Free Water Knock Out Status: In Service

External Inspection External Inspection Done? (Check Box if Yes)

External Inspection Details:

Internal Inspection Internal Inspection Done? (Check Box if Yes)

Internal Inspection Details:

Shell, heads and internals are in good condition. All bolts are in place and tight.

Internal coating is in good condition. Minor chips in manways were repaired.

PSV Block Valve? Yes No

Point in time status: In Service Out of Service Shut In Sold Other Unspecified

Block valve locked open? Yes No

Guages: Good

Foundation: Good

PSV Data Check? Yes No

Block Valve Present? Yes No

PSV Locked Open? Yes No

Additional Comments:

Flagged? Yes No

Remedial Actions Required? No Yes

If yes, indicate required work:

Suitable for continued service? Yes No

Inspector Name: Don Campbell Inspector Company: NWS Inspections Inc.

Inspector Signature: _____ Inspection Date: Tue Dec 2, 1997