

SEPARATORS INSPECTION REPORT

(Metric)

Page 1 of 3
Rev. 8-06-08

Facility: **MARIE LAKE BOOSTER** Date: **September 3, 2008** Report #: **IR080903GENc**

Area Supervisor: **ROGER BUREAU** W.O. / C.C.# **70975**

STATIC DATA

Alberta Reg. #:	412562	CRN:	L-5187.123	National Board #:	73
Equipment Number:	66048540	Notification #:	-	Classification:	-
Manufacturer:	THE HANOVER COMPANY			Serial Number:	D99-9
Equip. Description:	OIL SEPARATOR			Location (LSD):	15-15-065-02W4
Equipment Tag #:	-	Year Built:	1999	Company I.D.#:	BC-034757
Province Installed:	ALBERTA	Registration #:	-	Skid / Building #:	BC-034764
Nameplate Attached:	YES	Legible:	YES	U1A Available:	YES

MAWP:	1689 Kpa	Diameter: O.D.	610 mm	Radiography:	RT1	Efficiency:	150
MAWT:	121 °C	Diameter: I.D.	591 mm	Stress Relief:	NO	Code Stamp:	U
MDMT:	-29 °C	Length:	s/s 1524 mm	Ext. Coating:	YES	Position:	HORIZONTAL
Capacity:	- m3	Overall Length:	2388 mm	Insulated:	NO	Support:	LEGS

Internal Coating:	NO	Type:	-	Thickness:	- mm	Manway:	NO	Size:	- mm
Internal Cladding:	NO	Type:	-	Thickness:	- mm	Test Pressure:	2537 kpa		
Inspection Port:	YES	Size:	610 mm	-	mm	Location: #1	TOP HEAD	#2	-

	Type	Material	Thickness	Corrosion Allowance
SHELL	-	SA-106B	9.53 mm	1.60 mm
TOP HEAD	ELLIPTICAL	SA-516-70	9.53 mm	1.60 mm
BOTTOM HEAD	ELLIPTICAL	SA-516-70	9.53 mm	1.60 mm

Nozzle Description	I.D. #	NPS	Flange Rating	Type	Material	Thickness	Length
Inlet	-	152 mm	150 #	RFWN	SA-106B	11.0 mm	- mm

PROCESS DATA

Product Description:	NATURAL GAS	Service:	SWEET
Operating Pressure:	427 Kpa	Operating Temperature:	38 °C

PSV STATIC DATA

Tag Number:	-	Manufacturer:	MERCER
Company I.D. #:	-	Model # / Type:	9143H511780
Serial Number:	64998	CRN:	OG2606.5C
Inlet Size:	51 mm	Rating:	- #
Outlet Size:	51 mm	Rating:	- #
Location of PSV:	TOP OF SEPARATOR		
Set Pressure:	1379 Kpa	Capacity:	3046 SCFM
Code Stamp:	UV	Back Pressure:	NB
Service Date:	09/2006		

INSPECTION DETAILS

Inspection Reason:	CODE INSPECTION	Inspections Required:	VE	UT
Inspection Test Plan:	-	Inspection Type Used:	VE	UT
Last Inspection Date:	-	Next Inspection Type:	VE	UT
Next Inspection Due:	2013	Outstanding Repairs:	NO	RBI Category: A B C D

VESSEL STATUS

Integrity Status:	SUITABLE FOR CONTINUED SERVICE	Inventory Status:	ISF
This IR completes a thorough inspection; reschedule as indicated. YES		Partial inspection; do not reschedule. -	

INSPECTION SUMMARY

A thorough inspection to verify the equipments integrity was done by VE and UT.
There were no rejectable defects observed at this time; the vessel can be recommended fit for service.
There are no recommendations to be made at this time.
There were no repairs performed that were related to this inspection.
No NCR's were issued at this time.
No IDR's were issued at this time.
There was no internal inspection performed at this time.
There was no internal NDE performed during this inspection.

WO# 6082018

EQ # 66048540	NO # 6078708
Copied <input checked="" type="checkbox"/>	Scanned <input checked="" type="checkbox"/>
Entered <input checked="" type="checkbox"/>	HDMS Linked <input checked="" type="checkbox"/>

RECOMMENDATIONS

REPAIRS COMPLETED

Facility:	MARIE LAKE BOOSTER	Date:	September 3, 2008	Report #:	IR080903GENc
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INSPECTION OBSERVATIONS

NON COMPLIANCES ISSUED

INSPECTION DEFICIENCIES ISSUED

EXTERNAL VISUAL INSPECTION

The nameplate is in tact and legible.
The instrumentation and its tubing are in good working condition with no detectable leaks.
The pressure retaining welds are in tact with no evidence of deterioration or visible cracking.
The vessel support is securely welded to the skid floor.
The vessel's ground connection is through a ground wire and ground rod.
The vessel is protected by a PSV that is in fair condition.
The vessel is painted with no notable coating defects.
The piping and piping attachments are in fair condition with no detectable leaks.
The piping bolt up grading is B7 and 2H.
The attached piping is painted with no notable defects.

EXTERNAL NDE

NDE inspections were performed by Silvertip Inspection Services Ltd.
The UT values recorded on the vessel are above nominal.
See the attached NDE reports for more detailed information.

INTERNAL VISUAL INSPECTION

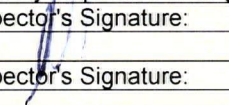
INTERNAL NDE

PRESSURE TESTS

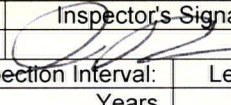
Test Completed:	-	Test Pressure:	-	Kpa	Test Acceptable:	-	Test Report #:	-
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INSPECTOR CERTIFICATION AND ACCEPTANCE

I, the undersigned, certify that the equipment stated above has been inspected in accordance with the assigned task list and that the statements within this report are correct and represent my inspection findings.

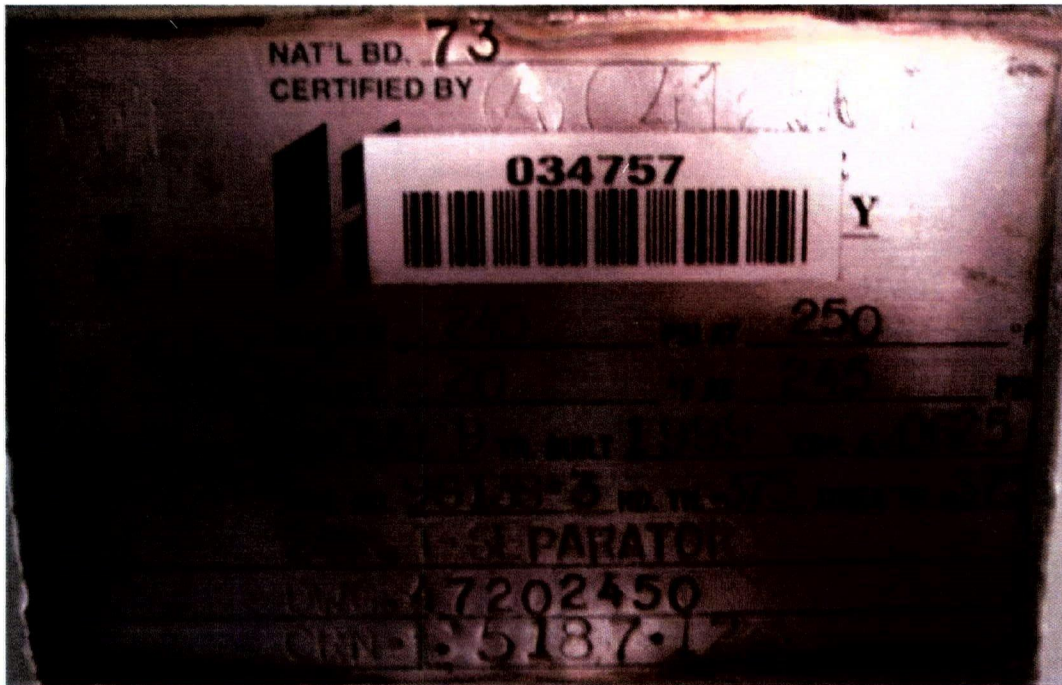
External Inspector's Name:	Inspector's Certification:	Inspector's Signature:	Date:
GUY NORMAND C.E.T.	API 510, 653, ABSA PESL, NACE		SEPTEMBER 3, 2008
Internal Inspector's Name:	Inspector's Certification:	Inspector's Signature:	Date:
-	-	-	-

CHIEF OR LEAD INSPECTOR'S ACCEPTANCE AND SCHEDULE CONFIRMATION

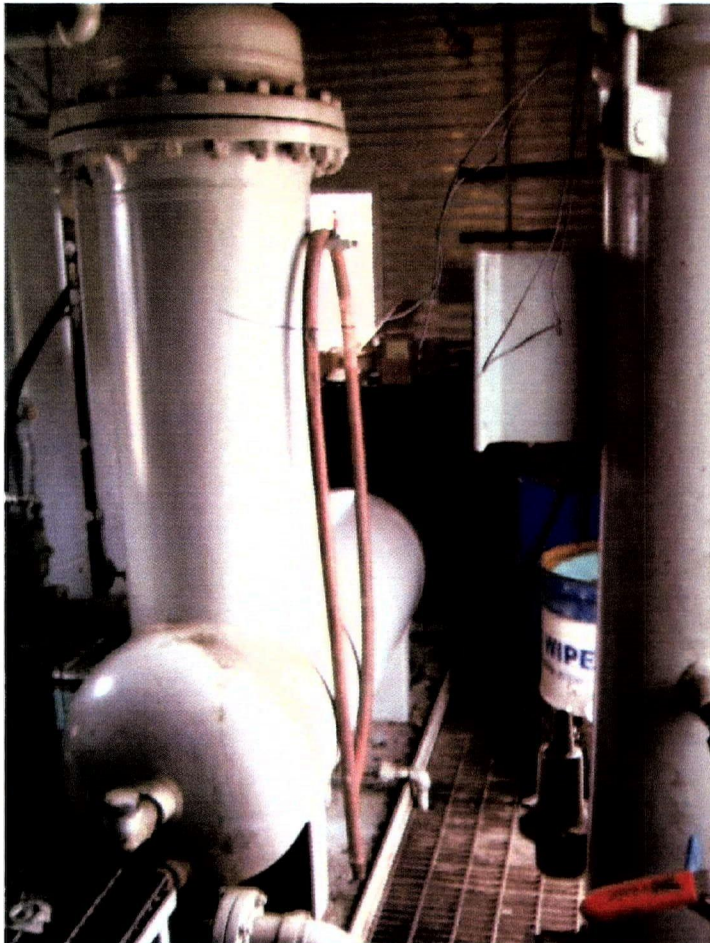
Inspector's Name:	Inspector's Certification:	Inspector's Signature:	Date:		
JIM RICE			sept 29, 08		
Vessel Inspection Interval:	Leave "As Is":	Change to:	PSV Inspection Interval:	Leave "As Is":	Change to:
5 Years		Years	5 Years		Years

Office Use	Report Entered to SEQA Database by:	Date:
Only:	Static Data Verified by:	Date:

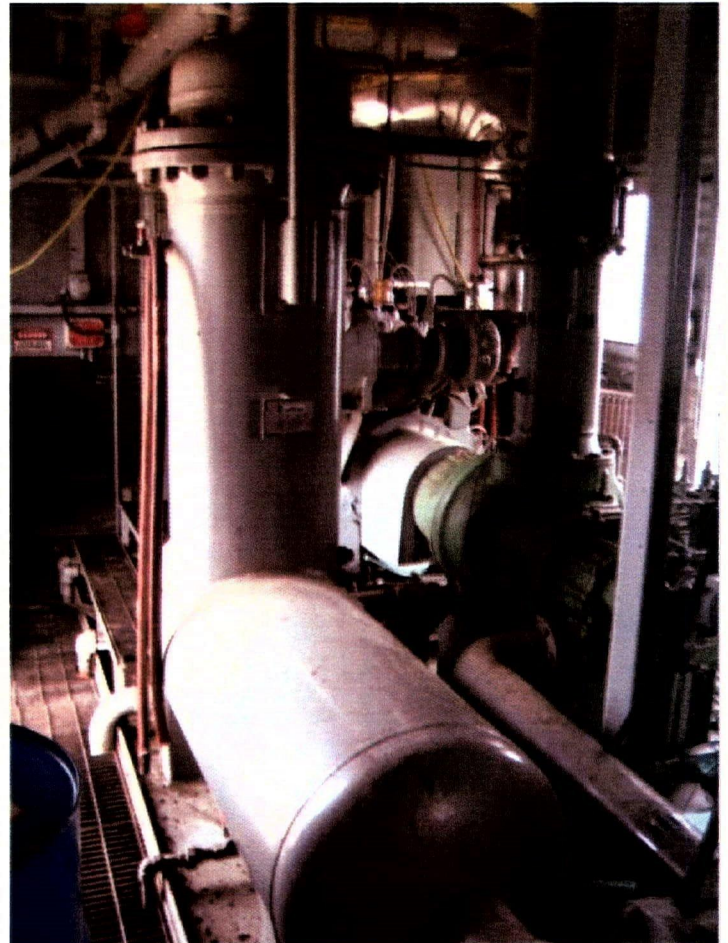
Facility:	MARIE LAKE BOOSTER	Date:	September 3, 2008	Report #:	IR080903GENc
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NAMEPLATE



OVERALL VIEW



OVERALL VIEW

Isometric view of a mechanical assembly. The assembly consists of a main cylindrical body with a vertical flange and a horizontal flange. A curved arrow indicates rotation around the longitudinal axis. A north arrow is present in the upper left corner. Callouts include:

- 2-010: Horizontal flange
- 2-015: Main cylindrical body
- 2-020: Vertical flange
- 2-025: Vertical flange detail
- 2-030: V - 6" 90L (vertical flange detail)
- 2-005: V - 6" 90L (horizontal flange detail)

S.O.B. = START OF BAND
E.O.B. = END OF BAND
LOW POINT= LOWEST READING IN THE BAND

TML	TML LOCATION		THICKNESSES			UT READINGS - POINTS						LOW RDG @ POINT	BELOW NOMINAL	BELOW MINIMUM
	ITEM DESC.		NOM.	C.A	MIN.	1	2	3	4	5	6			
2-005	V - 6" I/L 90° ELL	N-W	11.0	1.6	9.4	13.0	13.0	12.9	12.9	13.0	13.2	3	-	-
2-010	SOUTH HEAD	T-B	9.5	1.6	7.9	10.0	10.0	10.0	10.0	10.0	10.0	2	-	-
2-015	WEST SHELL	T-B	9.5	1.6	7.9	10.7	10.6	10.4	10.4	10.4	10.5	5	-	-
2-020	NORTH HEAD	T-B	9.5	1.6	7.9	9.7	9.6	9.7	9.7	9.8	9.7	2	-	-
2-025	TOP SHELL	T-B	9.5	1.6	7.9	10.6	10.4	10.6	10.5	10.4	10.4	6	-	-
2-030	V - 6" O/L 90° ELL	B-T	9.5	1.6	7.9	11.5	10.8	10.7	10.5	11.4	11.7	4	-	-

SEPARATORS INSPECTION REPORT

(Metric)

Page 1 of 3
Rev. 9-24-07

Facility: **MARIE LAKE BOOSTER** Date: **October 29, 2007** Report #: **IR071029GENb**

Area Supervisor: **ROGER BUREAU** W.O. / C.C.# **76580**

STATIC DATA

Alberta Reg. #:	412562	CRN:	L-5187.123	National Board #:	73
Equipment Number:	66048540	Notification #:	- 6068871	Vessel Class:	-
Manufacturer:	THE HANOVER COMPANY			Serial Number:	D99-9
Equip. Description:	OIL SEPARATOR			Location (LSD):	15-15-065-02W4
Equipment Tag #:	-	Year Built:	1999	Company I.D.#:	BC-034757
Province Installed:	ALBERTA	Registration #:	-	Skid / Building #:	BC-034764

MAWP:	1689	Kpa	Diameter: O.D.	610	mm	Radiography:	RT1	Nozzle Rating:	150	#
MAWT:	121	°C	Diameter: I.D.	591	mm	Stress Relief:	NO	Code Stamp:	U	
MDMT:	-29	°C	Length:	s/s 1524	mm	Ext. Coating:	YES	Position:	HORIZONTAL	
Capacity:	-	m3	Overall Length:	2388	mm	Insulated:	NO	Support:	LEGS	

Internal Coating:	NO	Type:	-	Thickness:	-	mm	Manway:	NO	Size:	-	mm
Internal Cladding:	NO	Type:	-	Thickness:	-	mm	Test Pressure:	2537 kpa			
Inspection Port:	YES	Size:	610 mm	-	mm	Location:	#1 TOP HEAD	#2	-		

	Material	Thickness	Corrosion Allowance
Shell	SA-106B	9.53 mm	1.60 mm
Top Head	SA-516-70	9.53 mm	1.60 mm
Bottom Head	SA-516-70	9.53 mm	1.60 mm
Inlet Nozzle	SA-105N	7.11 mm	1.60 mm
Outlet Nozzle	SA-105N	7.11 mm	1.60 mm

PROCESS DATA

Product Description:	NATURAL GAS	Service:	SWEET	-
Operating Pressure:	427 Kpa	Operating Temperature:	38 °C	

PSV STATIC DATA

Tag Number:	-	Manufacturer:	MERCER
Company I.D. #:	-	Model # / Type:	9143H511780
Serial Number:	64998	CRN:	OG2606.5C
Inlet Size:	51 mm	Rating:	- #
Outlet Size:	51 mm	Rating:	- #
Location of PSV:	TOP OF SEPARATOR		

INSPECTION DETAILS

Inspection Reason:	CODE INSPECTION	Inspections Required:	VE	UT						
Inspection Test Plan:	-	Inspection Type Used:	VE	UT						
Last Inspection Date:	-	Next Inspection Type:	VE	UT						
Next Inspection Due:	2012	Outstanding Repairs:	NO	RBI Category:	A	B	C	D		

VESSEL STATUS

Integrity Status:	SUITABLE FOR CONTINUED SERVICE	Inventory Status:	ISF
This IR completes a thorough inspection; reschedule as indicated.		YES	Partial inspection; do not reschedule.

INSPECTION SUMMARY

A thorough inspection to verify the equipments integrity was done by VE and UT.
There were no rejectable defects observed at this time; the vessel can be recommended fit for service.
There are no recommendations to be made at this time.
There were no repairs performed that were related to this inspection.
No NCR's were issued at this time.
No IDR's were issued at this time.
There was no internal inspection performed at this time.
There was no internal NDE performed during this inspection.

RECOMMENDATIONS

REPAIRS COMPLETED

Facility:	MARIE LAKE BOOSTER	Date:	October 29, 2007	Report #:	IR071029GENb
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INSPECTION OBSERVATIONS

NON COMPLIANCES ISSUED

INSPECTION DEFICIENCIES ISSUED

EXTERNAL VISUAL INSPECTION

The nameplate is in tact and legible.
The instrumentation and its tubing are in good working condition with no detectable leaks.
The pressure retaining welds are in tact with no evidence of deterioration or visible cracking.
The vessel support is securely welded to the skid floor.
The vessel's ground connection is through a ground wire and ground rod.
The vessel is protected by a PSV that is in fair condition.
The vessel is painted with no notable coating defects.
The piping and piping attachments are in fair condition with no detectable leaks.
The piping bolt up grading is B7 and 2H.
The attached piping is painted with no notable defects.

EXTERNAL NDE

NDE inspections were performed by Silvertip Inspection Services Ltd.
The UT values recorded on the vessel are above nominal.
See the attached NDE reports for more detailed information.

INTERNAL VISUAL INSPECTION

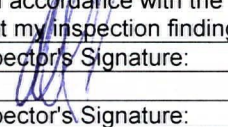
INTERNAL NDE

PRESSURE TESTS

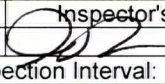
Test Completed: - Test Pressure: - Kpa Test Acceptable: - Test Report #: -

INSPECTOR CERTIFICATION AND ACCEPTANCE

I, the undersigned, certify that the equipment stated above has been inspected in accordance with the assigned task list and that the statements within this report are correct and represent my inspection findings.

External Inspector's Name:	Inspector's Certification:	Inspector's Signature:	Date:
GUY NORMAND C.E.T.	API 510, 653, ABSA PESL, NACE		OCTOBER 29, 2007
Internal Inspector's Name:	Inspector's Certification:	Inspector's Signature:	Date:
-	-	-	-

CHIEF OR LEAD INSPECTOR'S ACCEPTANCE AND SCHEDULE CONFIRMATION

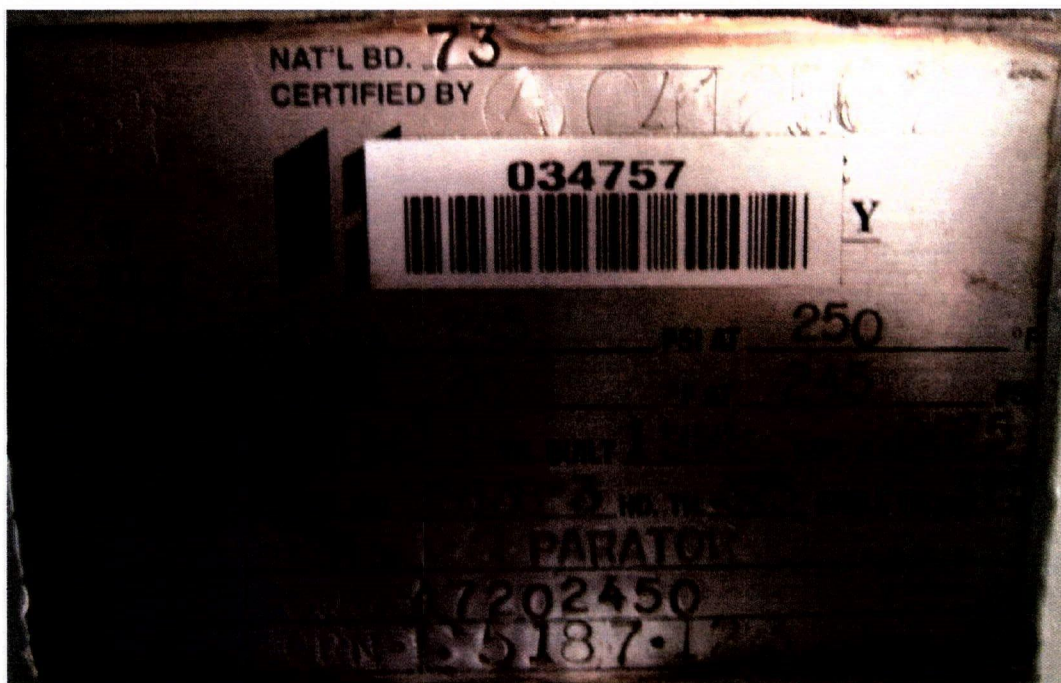
Inspector's Name:		Inspector's Certification:		Inspector's Signature:		Date:	
JIM RICE						NOV 14, 07	
Vessel Inspection Interval:	Leave "As Is":	Change to:	PSV Inspection Interval:	Leave "As Is":	Change to:		
5 Years		Years	5 Years		Years		

Office Use Only: Report Entered to SEQA Database by: _____ Date: _____
Static Data Verified by: _____ Date: _____

Facility: **MARIE LAKE BOOSTER**

Date: **October 29, 2007**

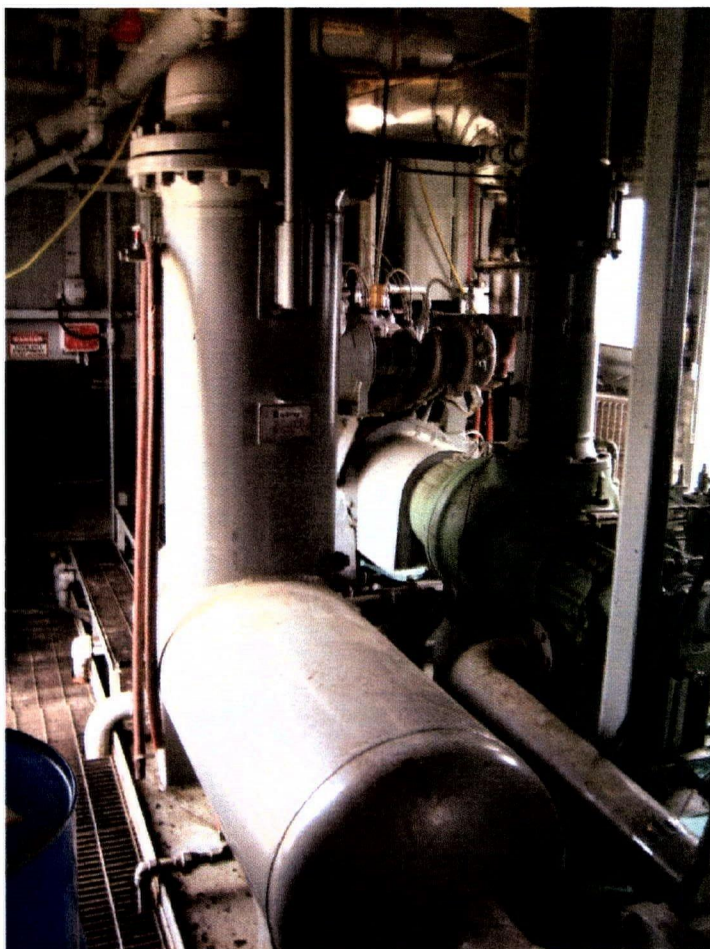
Report #: **IR071029GENb**



NAMEPLATE



OVERALL VIEW



OVERALL VIEW

[illegible]

S.O.B. = START OF BAND
E.O.B. = END OF BAND
LOW POINT= LOWEST READING IN THE BAND

TML	TML LOCATION		THICKNESSES			UT READINGS - POINTS						LOW RDG @ POINT	BELOW NOMINAL	BELOW MINIMUM
	ITEM DESC.		NOM.	C.A	MIN.	1	2	3	4	5	6			
1-005	V - 6" I/L 90° ELL	E-N	0.432	0.063	0.369	0.510	0.510	0.508	0.508	0.510	0.520	3	-	-
1-010	SOUTH HEAD	T-B	0.375	0.063	0.312	0.395	0.393	0.395	0.395	0.394	0.394	2	-	-
1-015	WEST SHELL	T-B	0.375	0.063	0.312	0.421	0.418	0.411	0.411	0.410	0.413	5	-	-
1-020	NORTH HEAD	T-B	0.375	0.063	0.312	0.380	0.379	0.381	0.383	0.385	0.381	2	-	-
1-025	TOP SHELL	T-B	0.375	0.063	0.312	0.419	0.411	0.416	0.412	0.411	0.409	6	-	-
1-030	V - 6" O/L 90° ELL	B-T	0.375	0.063	0.312	0.453	0.424	0.423	0.412	0.447	0.460	4	-	-



PRESSURE VESSEL INSPECTION REPORT

66048540

GPSEPR3069

C.T.

N#6607535

PAGE : 1 of 2

FACILITY	Jackfish Creek CS	DATE	August 22, 2002	REPORT #	IR_020822_MKY- 12
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VESSEL STATIC DATA

Prov. Insp. #	A 0412562 ✓	CRN	L-5187.123	Equip Tag #	N.B # 73
Equipment Location (LSD)	15-15-65-02 W4M "Marie Lake South" Booster	Serial #	D99-9		
Equipment Description	(Discharge) "T" Separator	Vessel Class			
Manufacturer	Collicutt Hanover Services Ltd.	Year Built	1999		
MAWP	245 psig	@	250 °F	MDMT	-20 °F
CODE : UM <input type="checkbox"/> U <input checked="" type="checkbox"/> U2 <input type="checkbox"/>	ASME Sect VIII, Div 1	RT : 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>		PWHT : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Diameter	24"	Length (T/T)	5'- 00"	(OAL)	58"
Shell Mat'l	Unknown - smls	Thickness	0.375"	Mm/ in	Corr Allowance 0.0625" Mm/ in
Head Mat'l	unknown	Thickness	0.375"	Mm/ in	Corr Allowance 0.0625" Mm/ in
Nozzle Mat'l		Thickness		Mm/ in	Corr Allowance Mm/ in
Internal Coating : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Internal Clad : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Capacity	ft ³
Manway : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Inspection Port : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Skirt <input type="checkbox"/> Legs <input type="checkbox"/> Saddle <input checked="" type="checkbox"/>	
Nozzle Rating	150 lb ANSI	Painted : YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Insulated : YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

PROCESS DATA

Product Description	Gas	Sweet <input checked="" type="checkbox"/> Sour <input type="checkbox"/> PPM:	
Operating Pressure	95 psig	Operating Temperature	200 °F

PSV STATIC DATA

Tag / Serial No.	Location	Size Inlet	Size Outlet	Set Pressure	Capacity	Manufacturer	Model / Type	Service Date
64998	Discharge line	2"	2"	200 psi	3046 scfm	Mercer	9143H511780	2-07-2002 new

INSPECTION HISTORY

RBI Category	A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>	Last Inspection Date	W.O. #	6017725
Inspection Task List #		Inspection Type	Inspection Reason	No inspection history
Inspection Techniques Required		Next Inspection Type	Due Date	
VE <input checked="" type="checkbox"/> VI <input type="checkbox"/> RT <input type="checkbox"/> UT <input checked="" type="checkbox"/> MT <input type="checkbox"/> PT <input type="checkbox"/> TT <input type="checkbox"/>		Outstanding Repairs		

INSPECTION SUMMARY

Vessel has excellent external appearance.

No significant findings. Vessel is a component of compressor package "# FH 107".

Vessel is suitable for continued service.

RECOMMENDATIONS

REPAIRS COMPLETED

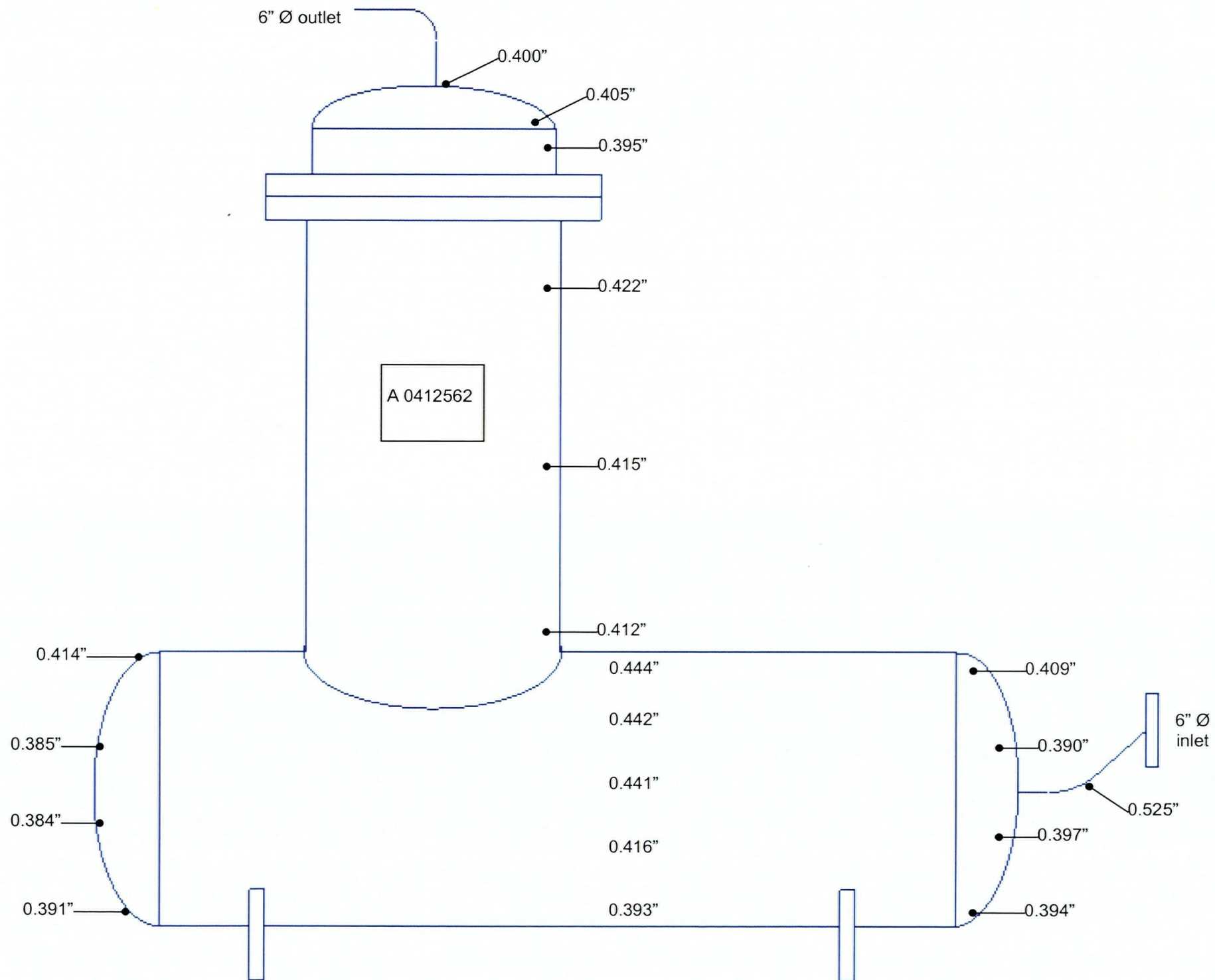
Object Name	Cause	Damage	Repair Activity

VESSEL STATUS

Integrity Status	<input checked="" type="checkbox"/> Suitable for Continued Service	<input type="checkbox"/> Immediate Repairs Required	<input type="checkbox"/> Replace
		<input type="checkbox"/> Future Repairs Required	
Inventory Status	<input checked="" type="checkbox"/> Inservice Fully Utilized	<input type="checkbox"/> Idle	<input type="checkbox"/> Surplus
			<input type="checkbox"/> Scrap
This IR completes a thorough inspection. Reschedule as indicated		<input checked="" type="checkbox"/>	Partial IR only. Do not reschedule <input type="checkbox"/>



FACILITY	Jackfish Creek CS	DATE	August 22, 2002	REPORT #	IR_020822_MKY- 12
INSPECTION OBSERVATIONS					
NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED					
None.					
EXTERNAL VISUAL INSPECTION					
The vessel has excellent external appearance. No visible corrosion.					
Vessel is horizontal with a 24" x 51" gas boot.					
Foundation and saddles are in good condition.					
Piping and nozzles are in good alignment and are well supported. Bolts are secure.					
No signs of leakage.					
EXTERNAL NDE EXAMINATION					
Ultrasonic wall thickness measurements were performed at random locations.					
No significant findings, current wall thickness is acceptable. UT readings are all greater than nominal values.					
INTERNAL VISUAL INSPECTION					
INTERNAL NDE EXAMINATION					
PRESSURE TEST					
Test Completed <input type="checkbox"/> Yes <input type="checkbox"/> No		Test Acceptable <input type="checkbox"/> Yes <input type="checkbox"/> No		Test Report #	
INSPECTOR CERTIFICATION					
I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings					
Inspectors Name		Manley Yuen			
Inspection Company		Ramtech Consulting Inc.			
Inspector's Signature		Manley Yuen			
Date		August 22, 2002			
LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION					
Lead Inspector		Greg Murray		Signature	
Vessel Inspection Interval		5 years		Leave "as-is" <input checked="" type="checkbox"/>	
PSV Inspection Interval		5 years		Leave "as-is" <input checked="" type="checkbox"/>	
Office Use Only		Report Entered to SEQA Database by		Date	
		Static Data Verified by		Date	



Jackfish Creek CS "Marie Lake South" Booster



100/ 15-15-65-02 W4M

Discharge Separator A 0412562

