

1.1-FRM-001VS Visual External Inspection Report

Report #:	PSV Service Report Avail. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N MDR Avail. <input checked="" type="checkbox"/> Y <input type="checkbox"/> N UT Verified <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Installation <input checked="" type="checkbox"/> External <input checked="" type="checkbox"/> Internal
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Date:	2022-11-04	WO #:	1038-TI	Proc. Used:	Cat 1 - Unfired Separator	Rec. Insp. Interval:	3
Inspected By:	Dwight Colp ISI-PVPP Cert# 000692, API 510 #43558, API 570 #45288			Radiography:	1		
Client:	Tara Energy			Heat Treatment:	Yes		
Coordinator:	Jeff Warr			National Board Number:	10		
Region:	NE B.C. Alberta	Area:	North Peace	Notes:			
Facility:	Portable						
Location, LSD	Portable						
Description:	<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Tank <input type="checkbox"/> Heater						
Service Fluid:	<input type="checkbox"/> Sweet <input checked="" type="checkbox"/> Sour Fluid Name: Well Emulsion						
Unit Name / #:	ST-04	Equip#:	ST-04				
Equip. Name:	Horizontal Separator						
Jurisdiction #:	0639935	CRN:	V9366.21				
Manufacturer:	Coral Oilfield Services Inc.						
Year Built:	2014	S/N:	4132-02				

Components:	Diameter	Length	Material	Nominal t	CA	Comment
Shell:	108"	30'	SA516-70N	0.5"	0.125"	
Head:	108"	2:1	SA516-70N	0.5"	0.125"	
Channel:						
Tube:						
Other:						

PSV Data: PSV Capacity Verified: ☐ Y ☒ N Block Valve(s) Installed: ☐ Yes ☒ No Car-sealed Open: ☐ Yes ☐ No ☒ N/A

Zones:	MDMT	Design T	MAWP	Set Press	Tag#	Model	Manf.	PSV CRN	Serial Number	In.	Out.	Capacity	Serv. Co.	Serv. Date
Shell Side:	50F	300F	125 PSI	125 PSI	ST-04	83J5811341-60-60-0	Taylor	0G01316.2C	025659-11	3"	3"	3227 SCFM	Kings Energy	2018-08-13
Tube Side:														
Other:														

Orientation: ☒ Hor. ☐ Ver. **Foundation:** ☐ Concrete ☐ Gravel ☐ Timbers ☒ Steel ☐ Other: Condition: Good

Support:	<input checked="" type="checkbox"/> Saddle: <input checked="" type="checkbox"/> Seal-welded <input checked="" type="checkbox"/> Free to move	Condition: Good
	<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):	Condition:

Overall:	General Condition: Good <input type="checkbox"/> Dead Legs Exist	Electrical Grounding: <input type="checkbox"/> None <input type="checkbox"/> Indirect <input checked="" type="checkbox"/> Direct <input checked="" type="checkbox"/> Secure
Ext. Surface:	<input checked="" type="checkbox"/> Painted <input type="checkbox"/> Fire-proofed <input type="checkbox"/> Cladded <input type="checkbox"/> Insulated <input type="checkbox"/> Other:	Condition: Good
Ext. Fixtures:	<input type="checkbox"/> Ladder <input type="checkbox"/> Platform(s) <input type="checkbox"/> Other (Specify):	Condition:
Int. Surface:	<input type="checkbox"/> Coated <input type="checkbox"/> Weld Overlay <input type="checkbox"/> Cladded <input type="checkbox"/> Lined <input type="checkbox"/> Thermal Sprayed	Condition:
Int. Fixtures:	<input checked="" type="checkbox"/> Baffle <input type="checkbox"/> Vortex Breaker <input type="checkbox"/> Float <input checked="" type="checkbox"/> Weir <input checked="" type="checkbox"/> Impingement plate	Condition: Good

Nozzles:	<input checked="" type="checkbox"/> MW <input type="checkbox"/> Inspection port only MW Size: 18", 20"	<input checked="" type="checkbox"/> Davit arm: <input type="checkbox"/> Greased <input checked="" type="checkbox"/> Double-nutted	Condition: Good
	<input checked="" type="checkbox"/> Reinforcement pads used <input checked="" type="checkbox"/> Weep holes visible	<input checked="" type="checkbox"/> No evidence of weeping	Comment: Good

Piping:		Well-coated	Proper joints	Free of leaks	Proper supports	Fluid is identified	Flow dir. shown	Drains properly	Comments:
	<input checked="" type="checkbox"/> PSV piping:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PSV is mounted on Piping <input type="checkbox"/> or Vessel <input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/> Inlet piping:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/> Outlet piping:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/> Drain piping:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/> Instrument piping:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Valves:	<input checked="" type="checkbox"/> Manual isolation valves:	<input checked="" type="checkbox"/> Free from leaks	Comment: No Concerns
	<input checked="" type="checkbox"/> Automated control valves:	<input checked="" type="checkbox"/> Free from leaks	Comment: No Concerns
	<input checked="" type="checkbox"/> Vents and/or drains:	<input checked="" type="checkbox"/> Properly plugged	Comment: No Concerns

Gauges:	<input type="checkbox"/> Pressure:	Range: 0 -	Reading:	Condition: Good
	<input type="checkbox"/> Temperature:	Range:	Reading:	Condition:
	<input checked="" type="checkbox"/> Sight Glass Level:		Reading: MT	Condition: Good

Recommended Actions:	1.		NCR#
	2.		
	3.		

Summary: The vessel exterior and the associated piping are considered to be in Good condition.

Additional notes are attached: ☐

Item ☒ is suitable for service.

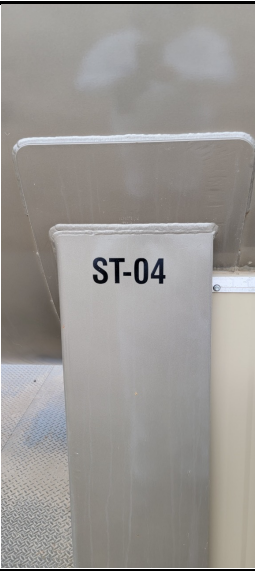
☐ is **NOT**

Inspector's Signature: _____

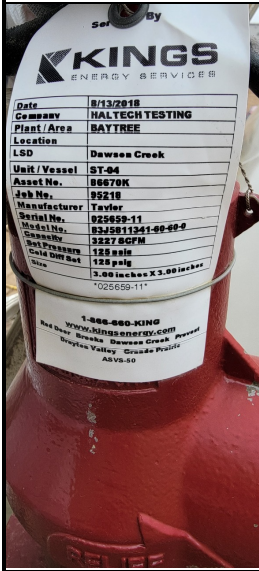
PHOTOS



Vessel Nameplate



Unit ID



PSV Service Tag



PSV Nameplate



Inlet Piping



Level Gauges

PHOTOS

Corrected copy. A-639935

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)
As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by Coral Oilfield Services Inc. 15303-94st. Grande Prairie, AB T8X 0L2 Canada
(Name and address of Manufacturer)
2. Manufactured for Haltech Testing Inc. Box 92 Baytree AB, T0H 0A0 Canada
(Name and address of Purchaser)
3. Location of installation Not Known
(Name and address)
4. Type: Horizontal 4132-02 V9366.21 3968 Rev. 3 10 2014
(Horizontal or vertical, tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year built)
5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2013
Year
- to N/A N/A N/A
(Addenda, if applicable (Date)) (Code Case numbers) (Special Service per UG-120(d))
6. Shell SA-516-70N 0.5" 0.125" 108" 30' S-S
(Material spec. number, grade) (Nominal thickness) (Corr. Allow.) (Inner diameter) (Length (overall))
7. Seams: Welded, Sngl Full 100 1125F 0.75 Hr Welded, Sngl Full 100 3
(Long. welded, dbl, sngl, lapp, butt) (R.T. (Spot or Full)) (Eff. %) (H.T. temp.) (Time, hr) (Girth welded, dbl, sngl, lap, butt) (R.T. (Spot or full)) (Eff. %) (No. of Courses)
8. Heads: (a) Material SA-516-70N (b) Material SA-516-70N
(Spec. no., grade) (Spec. no., grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	End	0.5"	0.125"	N/A	N/A	2:1	N/A	N/A	N/A	Concave
(b)	End	0.5"	0.125"	N/A	N/A	2:1	N/A	N/A	N/A	Concave

If removable, bolts used (describe other fastenings)

N/A

(Material spec. number, grade, size, number)

9. MAWP 125 PSI 0 PSI at max temp. 300F N/A °F
(Internal) (External) (Internal) (External)
- Min. design metal temp. -50 F °F at 125 PSI Hydro test press. Hydro 1 Hr @ 163 PSI
- Proof test N/A

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size (NPS)	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Gas Inlet/Outlet	5	4"	RFWN	SA-106 Gr.B	SA-105N	XXH	0.125"	N/A	UW16.1 (D)	Type 1	Shell
PSV, Water/Oil Outlet	4	3"	RFWN	SA-106 Gr.B	SA-105N	XXH	0.125"	N/A	UW16.1 (D)	Type 1	Shell/Head
Sparge, Heater Coil	11	2"	RFWN	SA-106 Gr.B	SA-105N	XXH	0.125"	N/A	UW16.1 (D)	Type 1	Head
Sight Glass, PI, Spare	12	1"	RFWN	SA-106 Gr.B	SA-105N	XXH	0.125"	N/A	UW16.1 (D)	Type 1	Head
Manway	2	20"	RFWN	SA-106 Gr.B	SA-105N	STD	0.125"	SA-516-70N	UW16.1 (H)	Type 1	Shell
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

11. Supports: Skirt No Lugs 2 Legs N/A Other Saddles 2 Attached Shell, Welded
(Yes or no) (Number) (Number) (Number) (Describe) (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report:

Name of part, item number, Manufacturer's name and identifying stamp)

- Impact test Exempt as per UCS-66a, UCS-66b, UCS 67a(3)

- Heater Coil: MAWP 150 PSI @ 350F, MAEWP 125PSI, MDMT -50F @ 150 PSI, C.A 1/16", 2" 150 RFSO SA-105N Flange

2" NPS XH SA-106B Pipe

- Vessel Capacity 2122FT3 (60M3)

- Construction DWG NO. 3968-01 Rev.2

- 1 1/8" x 6 1/4" Studs c/w 2 Nuts Each SA-193-2HM for Both M1A and M1B

CERTIFICATE OF SHOP/FIELD COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. "U" Certificate of Authorization Number 45.860 expires 09/17, 2016

Date 06/05/2014

Co. name Coral Oilfield Services Inc.

(Manufacturer)

Signed

Ryan O'Toole (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Coral Oilfield Services Inc

at 15303-94st Grande Prairie AB, T8X 0L2

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of

Alberta

and employed by

ABSA

have inspected the component described in this Manufacturer's Data Report on May 06, 2014, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date May 23/14

Signed

[Signature] (Inspector)

Commissions NB-14773; AB-430A
(National Board (incl endorsements), State, Province and number)

Work to be performed in accordance with "QF9.51 PSV Production and Service Control Procedure Listing"

Owner:	TARA ENERGY SERVICES	AFE:	.	Date:	03/07/2023	Job:	113756
Instructions:	<input type="checkbox"/> Rental <input type="checkbox"/> Quote <input checked="" type="checkbox"/> Pretest <input checked="" type="checkbox"/> Repair <input type="checkbox"/> Test Only <input type="checkbox"/> New <input type="checkbox"/> Reset <input type="checkbox"/> B.E.R <input type="checkbox"/> VR Update	V-Ord:	VORD-12885				
L.S.D.:	NOT REQUIRED	Loc:					
Unit(Vessel):	ST-04	Plant \ Area:	CLAIRMONT				

Valve Data:	Seal:	Intact	Style:	FLG_Conv	Inlet:	RF	Outlet:	RF	
	Seal ID:	KGP	Bonnet:	Closed	Inlet Size:	3.00 inches	Outlet Size:	3.00 inches	
Make:	Taylor	NamePlate:	Original	Cap:	Closed	Inlet Rating:	150#	Outlet Rating:	150#
CRN:	0G01316.2C	Service:	Gas	Orifice:	J	Capacity:	3227 SCFM	Cold Diff Set	125 psig
Asset No:	136893	Product:	Gas	Orifice Area:	1.431 sq in.	Code Stmp:	NB/UV	Set Press:	125 psig
Model No:	83J5811341-60-60-0	Serial No:	025659-11	Replacing:					

Pilot Data:	Model:			Serial No:		
Pretest Data:	Test Data:	Value:	Units:	Pretest Date:	03/08/2023	
Media:	Air	Test 1:	130	psig	Pretest By:	Jacques Blackb
Method:	Bench	Test 2:	126	psig	Notes1:	Required
		Test 3:	0	psig	Notes2:	

Disassembly:	Height:	2.053 IN	Guide Ring:	Nozzle Ring:	Dismantled Date:	03/08/2023
					Dismantled By:	Jim Alford

Inspection:	Crit Dim Data:	Minimum:	Actual:	Insp Tool Data:	Inspected Date:	03/08/2023
Seat Matl:	Viton(FKM) 9	Disc:	SUB	Insp Tool 1:	Inspected By:	Jacques Blackb
Replaced:	N	Disc Step:		Insp Tool 2:		
Converted:	N	Nozzle:	SOFT	Insp Tool 3:		
Inlet Cond:	Good	Nozzle Step 1:		Spring No:		
Outlet Cond:	Good	Nozzle Step 2:				

Component	Clean	Oily	Rusty	Carbon	Other	Action	Part Number
Gasket(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WORN	Replaced	K82J11
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Supply	FG3-150-316
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Supply	PV-SP
PCDF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Supply	LABVPDF
Poly Tag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Supply	107032

Assembly:	Converted From:	Converted To:	Assemble Date:	03/08/2023
	Replace Nameplate affixed & Original Lined out:	No	Assembled By:	Jesse Marshall

Final Test:	Set Press:	125 psig	Gauge 1:	KGP-3-10K	Vacuum Set:	Test Date:	03/08/2023		
Media:	Air	Back Press:	0	Gauge 2:	544312	Leakage Vac:	Tested By:	Aaron Hermar	
Method:	Bench	Cold Diff Set:	125 psig	BLD %:		Vacuum Act:	Witness:		
Simmer:		Act Test Press:	125 psig	Leakage:	0 BPM	Set Press Def:	POP	Back Pres Test:	50 psig
Re-Seal:		Leak Test Press:	113 psig						

Final Insp:	Tag:	Painted:	Pallet:	Sealed:	End Protect:	Flex Gasket:	Inspected By:	Josh Stark
	Yes	Yes	Yes	Yes	Yes	Yes	Signed Off By:	Josh Stark

Pre-Test

-

Comments:

Reset

Comments:

PRETEST-REPAIR-PAINT RED

Inspection

Comments:

-

Final Test

Comments:

-

Sign Off

Comments:

PSV Service Report reviewed, Passed Pre-pop API 510 #43558, ABSA ISIPV-PP #000692

CLIENT NAME:	TARA ENERGY SERVICES INC.			PROJECT NAME:	ST-04		
Client Address:	9526 – 81 Avenue, Clairmont, AB T8X 0M2			Client Job No.:	NA		
Client Contact Information:	Name:	Jeff Warr		Purchase Order Number:	NA		
	Phone:	587-259-8523		AFE Number:	NA		
Work Dates:	November 04, 2022			Other:	NA		
Work Location:	Grande Prairie Yard			Report Page Number:	Page 1 of 16		
UT Procedure #	UT-001	Rev: 1	Client Specs:	N/A	Acc. Std.:		

PIMS TESTING EQUIPMENT
UT TESTING EQUIPMENT:

UT Instrument:		Olympus		Calibration Date:		February 7, 2022						
UT Instrument Model:		Epoch 650						Material Thickness:		Various		
UT Instrument Serial:		160160802		Calibration Blocks:		Step Wedge		DWG. #:		N/A		
Cable Type	Cable Length	Test Angle	Probe S/D	Freq.(MHZ)	Serial No.	Dia.	Transfer Value	Test From	dB	% FSH	Scan Sens.	Range
Coaxial	36"	0 DEG	S	5MHZ	A924D	0.25 0"	-	-	60	80	-	20mm

MPI TESTING EQUIPMENT


MPI Instrument:		Yoke		Calibration Date:		January 18, 2022						
Make:		Contour Probe		Model:		B-300		Serial Number:		2443		

Inspection Data

Scope:	UT Report Package for 0639935 Horizontal Separator			Area to be Inspected:	Vessel		
Results:	See attached report for results.						
	Note: Flag Thickness for ASME B31.3 Piping is Nom-12.5%. ASME Sec VIII Div 1 flags established at Nom-(CA/2) unless otherwise specified by client.						

Photo	Report

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views expressed by employees performing this work which falls outside the exact terms of reference. All certificates and/or reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the company will not be responsible for deviations with in normal limits of accuracy in accordance with the standard practices. Final Code acceptance shall require Client/Manufacture representative signature.

UT Technician: Anna Gibbons	Certification: Technician in Training	Level: -
Reviewed By: Steve Gillingham	Certification: CGSB REG: 11441	Level: CGSB Level 2
Client Representative:	Signature: 	Date: November 4, 2022

Location Name:	Grande Prairie AB	LSD:	Portable
Jur #:	0639935	Equipment/Tag No.	ST-04
Equipment Description:	Horizontal Separator		
Manufacturer:	Coral Oilfield Services Inc.		
Serial Number:	4132-02	CRN:	V9366.21
Shell MAWP:	125	PSI	Shell Design Temp: 300 °F
Tube MAWP:	-	PSI	Tube Design Temp: - °F
Shell Material:	SA516-70N		Head Material: SA516-70N
Shell Thickness:	12.7	mm	Head Thickness: 12.7 mm
Corrosion Allowance:	3.2	mm	Date Built: 2014
Size:	108"	in	Pipe / Rolled Plate: Plate
RT:	1		Client DWG #: -

Photos



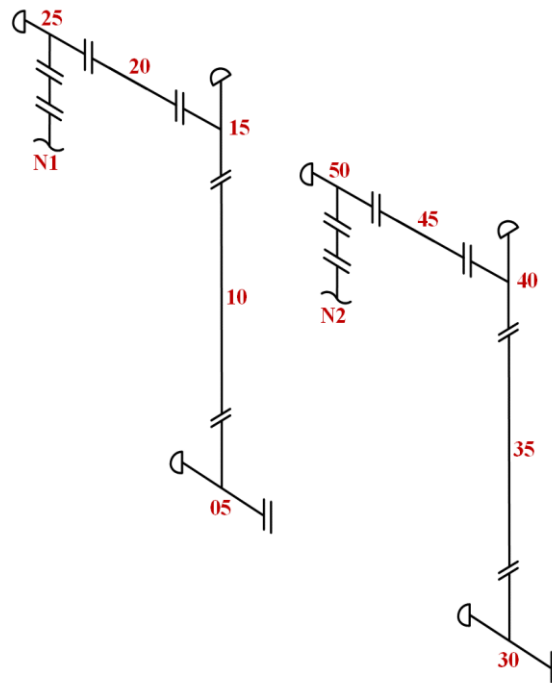
View of Data Plate



Overall view of Equipment

Location Name:	Grande Prairie AB	LSD:	Portable
Jur #:	0639935	Equipment/Tag No.	ST-04
Equipment Description:	Horizontal Separator		
Manufacturer:	Coral Oilfield Services Inc.		
Serial Number:	4132-02	CRN:	V9366.21
Shell MAWP:	125	PSI	Shell Design Temp: 300 °F
Tube MAWP:	-	PSI	Tube Design Temp: - °F
Shell Material:	SA516-70N		Head Material: SA516-70N
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Size:	108"	in	Pipe / Rolled Plate: Plate
RT:	1		Client DWG #: -

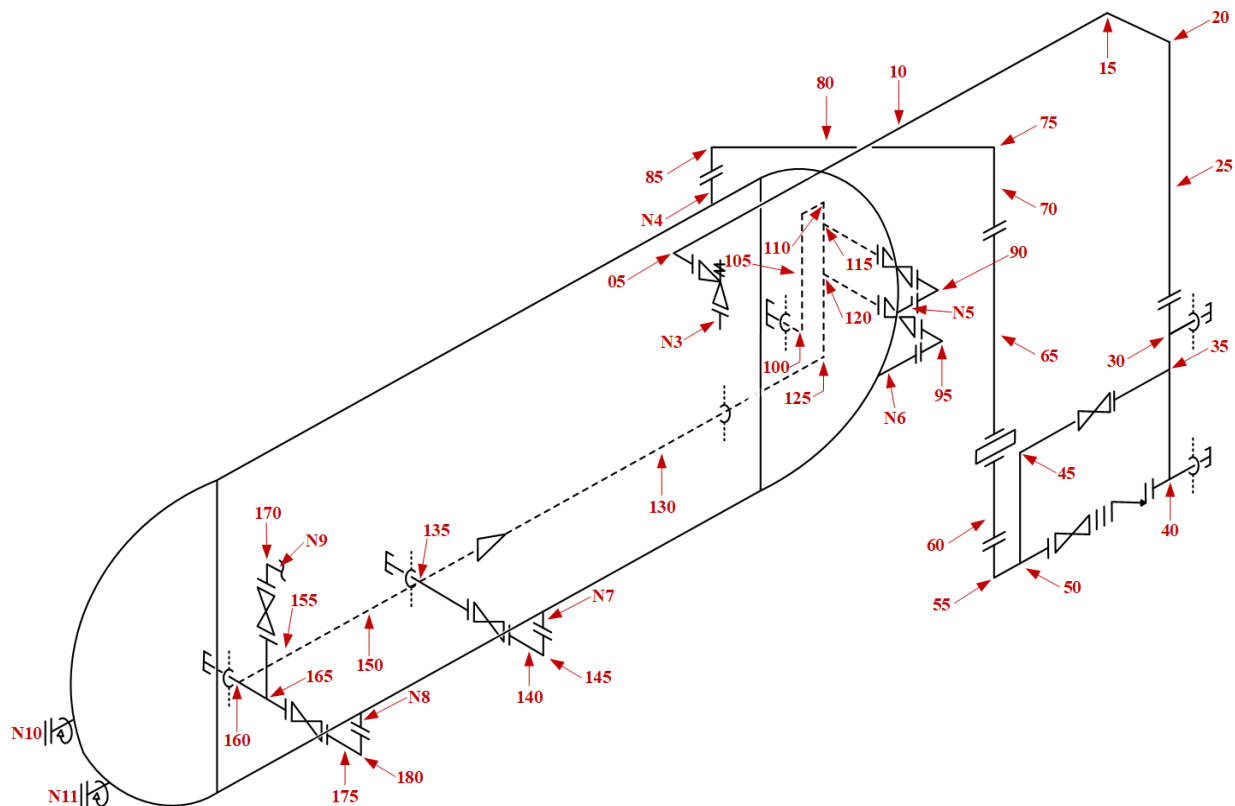
ISO Drawing of TML's - INLET LINE



All flagged thicknesses were verified as above the minimum thickness required for pressures up to 125 PSI.

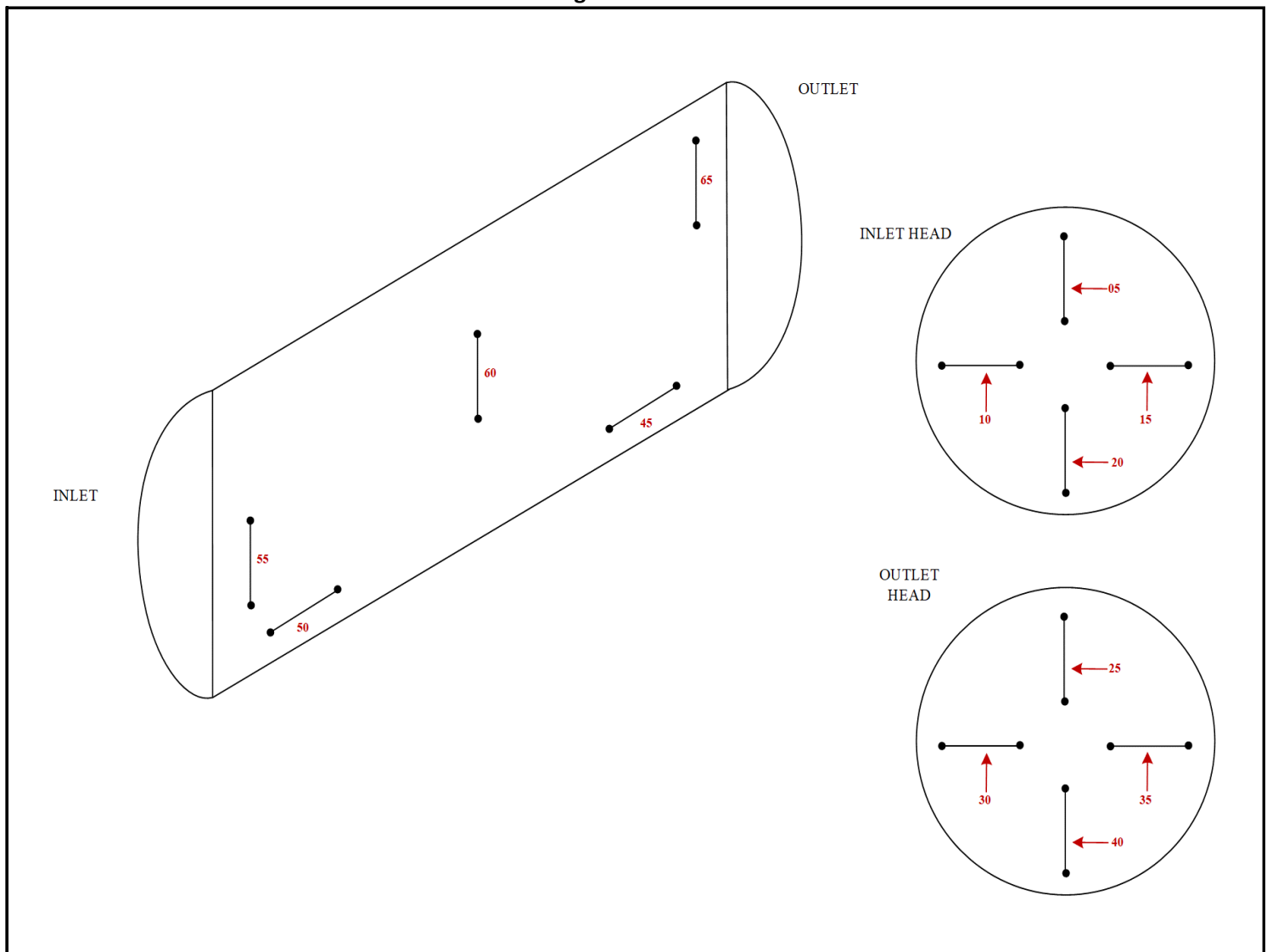
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Jur #:	0639935		Equipment/Tag No.	ST-04	
Equipment Description:	Horizontal Separator				
Manufacturer:	Coral Oilfield Services Inc.				
Serial Number:	4132-02		CRN:	V9366.21	
Shell MAWP:	125	PSI	Shell Design Temp:	300	°F
Tube MAWP:	-	PSI	Tube Design Temp:	-	°F
Shell Material:	SA516-70N		Head Material:	SA516-70N	
Shell Thickness:	12.7	mm	Head Thickness:	12.7	mm
Corrosion Allowance:	3.2	mm	Date Built:	2014	
Size:	108"	in	Pipe / Rolled Plate:	Plate	
RT:	1		Client DWG #:	-	

ISO Drawing of TML's - INLET LINE



Location Name:	Grande Prairie AB	LSD:	Portable
Jur #:	0639935	Equipment/Tag No.	ST-04
Equipment Description:	Horizontal Separator		
Manufacturer:	Coral Oilfield Services Inc.		
Serial Number:	4132-02	CRN:	V9366.21
Shell MAWP:	125	PSI	Shell Design Temp: 300 °F
Tube MAWP:	-	PSI	Tube Design Temp: - °F
Shell Material:	SA516-70N		Head Material: SA516-70N
Shell Thickness:	12.7	mm	Head Thickness: 12.7 mm
Corrosion Allowance:	3.2	mm	Date Built: 2014
Size:	108"	in	Pipe / Rolled Plate: Plate
RT:	1		Client DWG #: -

ISO Drawing of TML's - FLUID LEGS



Client: Tara Energy Services Inc.

Date: 2022-11-04

Inspector: Anna Gibbons

Location Name:	Grande Prairie AB			LSD:	Portable		
Jur #:	0639935			Equipment/Tag No.	ST-04		
Equipment Description:	Horizontal Separator						
Manufacturer:	Coral Oilfield Services Inc.						
Serial Number:	4132-02			CRN:	V9366.21		
Shell MAWP:	125	PSI		Shell Design Temp:	300	°F	
Tube MAWP:	-	PSI		Tube Design Temp:	-	°F	
Shell Material:	SA516-70N			Head Material:	SA516-70N		
Shell Thickness:	12.7	mm		Head Thickness:	12.7	mm	
Corrosion Allowance:	3.2			Date Built:	2014		
Size:	108"	in		Pipe/Rolled Plate:	Plate		
RT:	1			Client DWG #:	-		

TML#	Description	Shape	Size	Sch	Nom	Flag		2022-11-04 Min Avg	
NOZZELS									
N1	Inlet Nozzel	Circ	4"	NS	17.12	14.98		16.05	16.35
N2	Inlet Nozzel	Circ	4"	NS	17.12	14.98		16.00	16.45
N3	PSV Nozzel	Circ	3"	NS	15.24	13.34		14.63	14.78
N4	Gas Out Nozzel	Circ	4"	NS	17.12	14.98		18.19	18.95
N5	Water/Oil Out Nozzel	Circ	3"	NS	15.24	13.34		16.92	18.25
N6	Water/Oil Out Nozzel	Circ	3"	NS	15.24	13.34		15.19	15.48
N7	Drain Nozzel	Circ	4"	NS	17.12	14.98		18.77	19.34
N8	Drain Nozzel	Circ	4"	NS	17.12	14.98		19.53	21.25
N9	Water/Oil Out Nozzel	Circ	3"	NS	15.24	13.34		15.09	15.42
N10	Sparge Nozzel	Circ	2"	NS	11.07	9.69		10.85	11.21
N11	Sparge Nozzel	Circ	2"	NS	11.07	9.69		11.35	11.73
INLET									
5	Pipe	C/S	4"	Sch160	13.49	11.80		11.43	16.46
10	Pipe	Pipe	4"	Sch160	13.49	11.80		12.55	12.79
15	Pipe	Tee Cap	4"	Sch160	13.49	11.80		14.45	17.69
20	Pipe	Pipe	4"	Sch160	13.49	11.80		12.45	13.12
25	Pipe	Tee Cap	4"	Sch160	13.49	11.80		13.23	16.88
30	Pipe	C/S	4"	Sch160	13.49	11.80		9.50	14.54
35	Pipe	Pipe	4"	Sch160	13.49	11.80		12.73	13.26
40	Pipe	Tee Cap	4"	Sch160	13.49	11.80		13.28	17.16
45	Pipe	Pipe	4"	Sch160	13.49	11.80		12.80	13.04
50	Pipe	Tee Cap	4"	Sch160	13.49	11.80		11.89	16.68
VESSEL PIPING									
5	Pipe	Elbow	3"	Sch40	5.50	4.80		6.15	6.22
10	Pipe	Pipe	3"	Sch40	5.50	4.80		5.36	5.50
15	Pipe	Elbow	3"	Sch40	5.50	4.80		5.79	6.26
20	Pipe	Elbow	3"	Sch40	5.50	4.80		5.66	5.88
25	Pipe	Pipe	3"	Sch40	5.50	4.80		5.36	5.51

30	Pipe	Tee Neck	3"	Sch40	5.50	4.80		5.56	6.53
35	Pipe	Tee Neck	3"	Sch80	7.62	6.67		7.37	9.62
40	Pipe	Tee Neck	4" x 3"	Sch80	8.56	7.49		8.13	10.13
45	Pipe	Elbow	3"	Sch80	7.62	6.67		6.45	6.96
50	Pipe	Tee Neck	4" x 3"	Sch80	8.56	7.49		8.86	11.60
55	Pipe	Elbow	4"	Sch80	8.56	7.49		8.36	8.47
60	Pipe	Pipe	4"	Sch80	8.56	7.49		8.46	8.77
65	Pipe	Pipe	4"	Sch80	8.56	7.49		7.98	8.09
70	Pipe	Pipe	4"	Sch80	8.56	7.49		7.29	7.38
75	Pipe	Elbow	4"	Sch80	8.56	7.49		7.44	7.87
80	Pipe	Pipe	4"	Sch80	8.56	7.49		7.54	7.87
85	Pipe	Elbow	4"	Sch80	8.56	7.49		8.46	8.75
90	Pipe	Elbow	3"	Sch80	7.62	6.67		6.35	6.63
95	Pipe	Elbow	3"	Sch80	7.62	6.67		7.16	7.37
100	Pipe	Elbow	3"	Sch80	7.62	6.67		7.75	7.96
105	Pipe	Pipe	3"	Sch80	7.62	6.67		7.34	7.42
110	Pipe	Elbow	3"	Sch80	7.62	6.67		6.58	7.11
115	Pipe	Tee Neck	3"	Sch80	7.62	6.67		8.00	9.55
120	Pipe	Tee Neck	3"	Sch80	7.62	6.67		7.85	9.11
125	Pipe	Elbow	3"	Sch80	7.62	6.67		7.37	7.58
130	Pipe	Pipe	3"	Sch80	7.62	6.67		7.82	8.03
135	Pipe	Cross	4"	Sch80	8.56	7.49		9.40	10.69
140	Pipe	Pipe	4"	Sch80	8.56	7.49		8.43	8.54
145	Pipe	Elbow	4"	Sch80	8.56	7.49		8.36	8.58
150	Pipe	Pipe	4"	Sch80	8.56	7.49		8.31	8.42
155	Pipe	Pipe	4"	Sch80	8.56	7.49		8.15	8.43
160	Pipe	Tee Neck	4"	Sch80	8.56	7.49		7.80	9.41
165	Pipe	Tee Neck	4" x 3"	Sch80	8.56	7.49		8.99	10.70
170	Pipe	Elbow	3"	XXS	15.24	13.34		13.61	13.85
175	Pipe	Pipe	4"	Sch80	8.56	7.49		8.46	8.73
180	Pipe	Elbow	4"	Sch80	8.56	7.49		7.65	7.82

HEAD & SHELL

5	Head	Ellipsoidal	108"	NS	12.70	11.10		14.71	14.98
10	Head	Ellipsoidal	108"	NS	12.70	11.10		14.66	14.84
15	Head	Ellipsoidal	108"	NS	12.70	11.10		14.68	14.92
20	Head	Ellipsoidal	108"	NS	12.70	11.10		14.53	14.71
25	Head	Ellipsoidal	108"	NS	12.70	11.10		15.52	15.64
30	Head	Ellipsoidal	108"	NS	12.70	11.10		15.16	15.30
35	Head	Ellipsoidal	108"	NS	12.70	11.10		15.24	15.41
40	Head	Ellipsoidal	108"	NS	12.70	11.10		15.21	15.36
45	Shell	Cylindrical	108"	NS	12.70	11.10		12.22	12.31
50	Shell	Cylindrical	108"	NS	12.70	11.10		11.66	11.87
55	Shell	Cylindrical	108"	NS	12.70	11.10		11.96	12.05
60	Shell	Cylindrical	108"	NS	12.70	11.10		12.12	12.29
65	Shell	Cylindrical	108"	NS	12.70	11.10		12.32	12.40

All flagged thicknesses were verified as above the minimum thickness required for pressures up to 150 PSI.

API 570 #45288 Dwight Colp CCI