

PRESSURE VESSEL & COLUMN INSPECTION REPORT

LSD: 02-33-049-19W5

Date: Jun 16, 2018

SAP Equipment ID: 66181956

VESSEL STATIC DATA									
Plant Minehead				Op Unit Satellite				System Field	
Prov. Insp. # A611112				CRN P7217.231				Equip Tag # NA	
Equipment Description Gas Separator								Serial # 12197	
Manufacturer RJV Gasfield Services								Vessel Class	
Internal Access: Description: NA								Year Built 2008	
MAWP 1480		PSI		@ 100		°F		MDMT -20 °F	
CODE : U				RT : 2				PWHT : No	
Diameter 16"		Length (T/T) 88 in		OAL 112 in		Vertical			
Shell	Mat'I	SA-106B		Thickness 21.44 mm		Corr Allowance 1.6 mm			
Head	Mat'I	SA-516-70		Thickness 20.63 mm		Corr Allowance 1.6 mm			
Nozzle	Mat'I	NA		Thickness NA mm / in		Corr Allowance 1.6 mm			
Internal Coating: NO				Internal Clad : NO				Capacity NA m ³	
Manway : NO				Inspection Port : NO				Skirt	
Nozzle Rating 600		lb ANSI		Painted : YES				Insulated NO	

PROCESS DATA									
Product Description Separator									
Operating Pressure 1480		PSI		Operating Temperature 100		°F			

PSV STATIC DATA						
Serial No.	Location	Set Pressure	Capacity SCFM	Manufacturer	Model / Type	Service Date / Company
011653-233	Separator	1440 psi	5180	Taylor	82E8351311	21/09/17/Access

PSV DETAILS			
	Type (Thread/Flange)	ANSI Rating	Size (inches)
PRD Inlet	Threaded	N/A	1"
PRD Outlet	Threaded	N/A	1"

NDE Equipment Records					
Procedure#	Description	Manufacturer	Model#	Serial#	Due Date

INSPECTION SUMMARY

Inspection noted surface rusting on the lower head and drain nozzle. One leak was found on the lower site glass bottom drain. All other items were found acceptable, separator was fit for continued service at time of inspection.

RECOMMENDATIONS

Repair of leaking sight glass.

NONCONFORMANCES / INSPECTION DEFICIENCIES

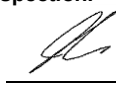
None noted

INSPECTION PLANNING

Inspection Strategy	Availability	Inspection Interval
Inspection Date	Date of Last Inspect	Date of Next Inspect

REPORT CERTIFICATION

The signatures below certify that inspections/tests have been completed in accordance with the identified inspection strategy and that the specified equipment is considered fit for service until the date of next inspection.

Inspected by Justin Currie  Date Jun 16, 2018

Company Streamline Inspection Ltd PESL # 000885 API # 57452

Reviewed and Approved by _____ Date _____

PESL # _____ API # _____

Criticality Assessment Rerun

Inspection Planning Rerun

PRESSURE VESSEL & COLUMN INSPECTION REPORT

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Assessed Next Inspection Date

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DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR	Comments
V1	General Other (Please Explain)	Acceptable			
V2	General Corrosion	Good	Surface corrosion		
V3	General Leaks	Good	Sight Glass		
V4	Vibration	Acceptable	No vibration		
V5	Dissimilar Flange Rating	N/A			
V6	Ladder/Stairway	N/A			
V7	Heads	Acceptable	Surface rust, lower head		
V8	Guy Wires	N/A			
V9	Electrical Ground	Acceptable	Secured/Indirect		
V10	Painted Inactive Corrosion	N/A			
V11	Coating/Painting	Acceptable			
V12	Expansion Joint or Bellows	N/A			
V13	Gauge/Site Glass	Acceptable			
V14	Shell	Acceptable			
V15	Jacket	N/A			
V21	Support Other (Please explain)	N/A			
V22	Foundation	N/A			
V23	Anchor Bolts	N/A			
V24	Saddle/Skirt	Acceptable	Skirt, welded		
V25	Davit	N/A			
V26	Fireproofing	N/A			
V31	Connections Other (Please explain)	Acceptable	Flanged and threaded okay		
V32	Small Branches	Acceptable			
V33	Nozzles	Acceptable			
V34	Manways	N/A			
V35	Reinforcing Pads	N/A			
V36	Inadequate Thread Engagement	Acceptable			
V37	Bolting	Acceptable			
V38	Flanges	Acceptable			
V39	Leak Clamps	N/A			
V41	Insulation Other (Please explain)	N/A			
V42	Damage	N/A			
V43	Penetrations	N/A			
V44	Insulation Jacket	N/A			
V45	Banding	N/A			
V46	Seals/Joints	Acceptable			
V51	Relief Devices Other (Please explain)	Acceptable	Good condition		
V52	Corrosion	Good	Surface corrosion		
V53	Leaks	Good	Sight Glass		
V54	Restricted Inlet/Outlet	Acceptable	No restrictions located		
V55	Manual Operation Lever	N/A			

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PHOTOS



LSD



VESSEL DATA PLATE



Overview



Overview 2



Lower head and Drain surface rust



Lower sight glass leak

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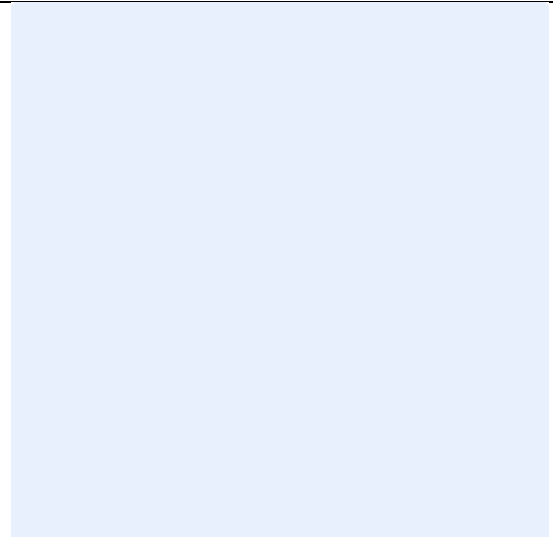
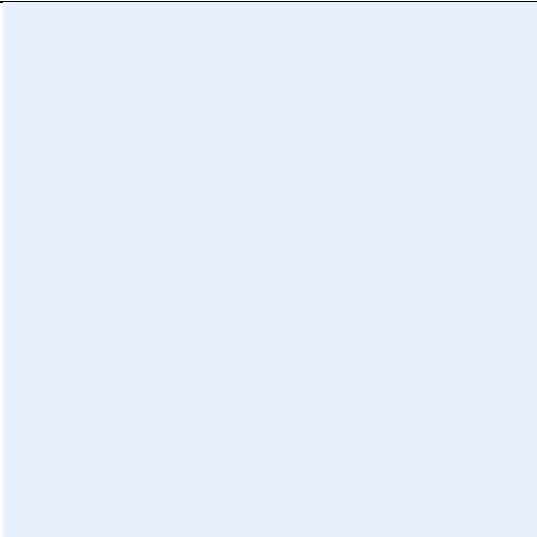
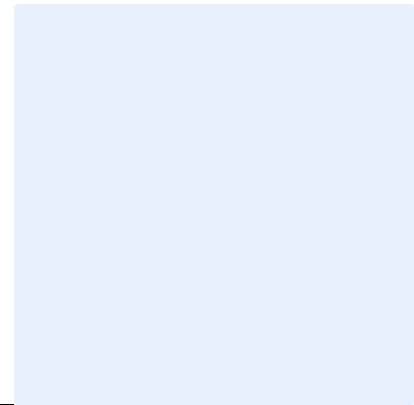
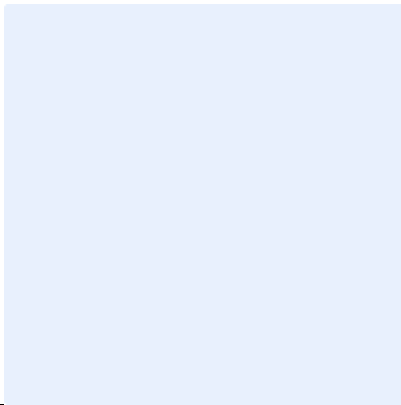
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PSV Overview



PSV Service tag



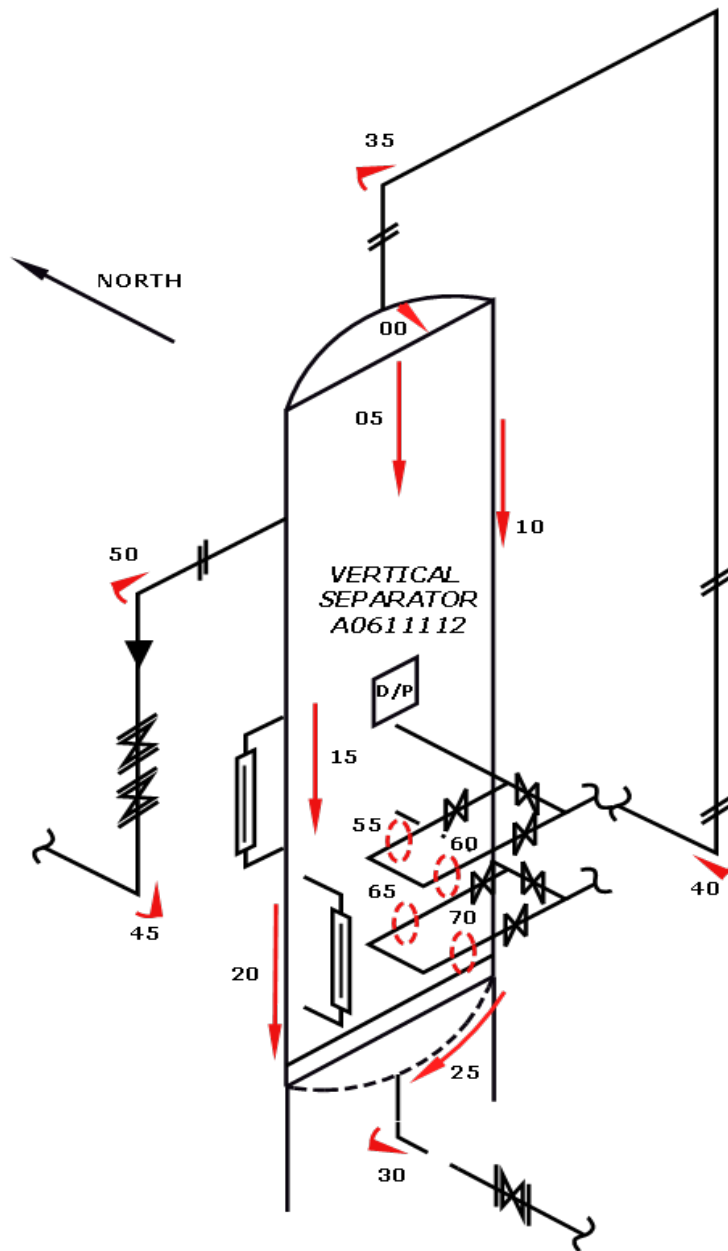


Husky Energy

Location Name:	MINEHEAD	LSD:	06-33-49-19W5 (SURF)/02-33-49-19W5 (DH)	
Jur #:	A0611112	Equipment/Tag No.		
Equipment Description:	VERTICAL SEPARATOR			
Manufacturer:	RJV GASFIELD SERVICES LTD.			
Serial Number:	12197	CRN:	P7217.231	
Shell MAWP:	10205	KPA	Shell Design Temp:	38 °C
Tube MAWP:		KPA	Tube Design Temp:	°C
Shell Material:	SA-106-B		Head Material:	SA-516-70
Shell Thickness:	21.44	mm	Head Thickness:	20.63 mm
Corrosion Allowance:	1.6	mm	Date Built:	2011
Size:	406	mm	Pipe / Rolled Plate:	PIPE
RT:	2		Streamline Report #:	STL-18-xxx-DMS 46

NOTES: SAP# 66181956









Ultrasonic Corrosion Survey

*All values are in millimeters unless otherwise stated.

Survey Name: Husky Energy

Date: Jun 18, 2018

Streamline Report #: STL-18-xxx-DMS 46

Inspector: J. Smith

06-33-49-19W5 (SURF)/02-									
LSD:	33-49-19W5 (DH)	Area:	MINEHEAD	Location:	FIELD				
Jur #:	A0611112	Tag Number:		Vessel Name:	VERTICAL SEPARATOR				
CRN:	P7217.231	Year Built:	2011	Serial Number:	12197				
RT:	2	Vessel CA:	1.600 mm	Manufacturer:	RJV GASFIELD SERVICES LTD.				
		Shell MAWP:	10205 KPA	MAWT:	38 °C	Tube MAWP:		MAWT:	
									Pipe/Plate
									PIPE

CML Description		Baseline			Flange ANSI:		Material:	SA-516-70	
00	HEAD	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	Ellipsoidal	Min	20.85	19.030	1.600	20.630		0.000	0.000
OD:	406.4	Avg	21.56						
Spec:	ASME VIII Div.1	Comments:						Remaining Life:	Retirement Date:

CML Description		Baseline			Flange ANSI:		Material:	SA-106-B	
05	SHELL	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	Cylindrical	Min	23.95	19.840	1.600	21.440		0.000	0.000
OD:	406.4	Avg	24.74						
Spec:	ASME VIII Div.1	Comments:						Remaining Life:	Retirement Date:

CML Description		Baseline			Flange ANSI:		Material:	SA-106-B	
10	SHELL	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	Cylindrical	Min	22.63	19.840	1.600	21.440		0.000	0.000
OD:	406.4	Avg	23.14						
Spec:	ASME VIII Div.1	Comments:						Remaining Life:	Retirement Date:

CML Description		Baseline			Flange ANSI:		Material:	SA-106-B	
15	SHELL	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	Cylindrical	Min	23.50	19.840	1.600	21.440		0.000	0.000
OD:	406.4	Avg	24.05						
Spec:	ASME VIII Div.1	Comments:						Remaining Life:	Retirement Date:



Ultrasonic Corrosion Survey

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Survey Name: Husky Energy

Date: Jun 18, 2018

Streamline Report #: STL-18-xxx-DMS 46

Inspector: J. Smith

06-33-49-19W5 (SURF)/02-									
LSD:	33-49-19W5 (DH)	Area:	MINEHEAD	Location:	FIELD				
Jur #:	A0611112	Tag Number:		Vessel Name:	VERTICAL SEPARATOR				
CRN:	P7217.231	Year Built:	2011	Serial Number:	12197				
RT:	2	Vessel CA:	1.600 mm	Manufacturer:	RJV GASFIELD SERVICES LTD.				
		Shell MAWP:	10205 KPA	MAWT:	38 °C	Tube MAWP:		MAWT:	
							KPA		°C
									Pipe/Plate PIPE

CML Description		Baseline			Flange ANSI:		Material:	SA-106-B	
20	SHELL	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	Cylindrical	Min	22.61	19.840	1.600	21.440		0.000	0.000
OD:	406.4	Avg	23.44						
Spec:	ASME VIII Div.1	Comments:						Remaining Life:	Retirement Date:

CML Description		Baseline			Flange ANSI:		Material:	SA-516-70	
25	HEAD	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	Ellipsoidal	Min	21.74	19.030	1.600	20.630		0.000	0.000
OD:	406.4	Avg	22.15						
Spec:	ASME VIII Div.1	Comments:						Remaining Life:	Retirement Date:

CML Description		Baseline			Flange ANSI:	Unknown	Material:	SA-234-WPB	
30	NOZZLE	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	90° Elbow	Min	7.67	7.112	1.600	8.712		0.000	0.149
OD:	60.325	Avg	8.43						
Spec:	ASME VIII Div.1	Comments:	ASSUMED NOMINAL. EROSION FOUND.					Remaining Life:	Retirement Date:

CML Description		Baseline			Flange ANSI:	Unknown	Material:	SA-234-WPB	
35	PIPING	2018		Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	90° Elbow	Min	4.93	4.801	0.686	5.486		0.000	0.080
OD:	88.9	Avg	5.44						
Spec:	ASME B31.3	Comments:	EROSION FOUND					Remaining Life:	Retirement Date:



Survey Name: Husky Energy

Date: Jun 18, 2018

Inspector: J. Smith

Location:	FIELD		
Vessel Name:	VERTICAL SEPARATOR		
Serial Number:	12197		
Manufacturer:	RJV GASFIELD SERVICES LTD.		
Tube MAWP:	MAWT:	Pipe/Plate	
KPA	°C	PIPE	

CML Description		Baseline		Flange ANSI: Unknown		Material: SA-106-B		
60	PIPING	2018	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	360° Circ	Min	6.48	5.556	0.794	6.350	0.000	0.000
OD:	33.401	Avg	6.73				Remaining Life:	
Spec:	ASME B31.3	Comments:	ASSUMED NOMINAL				Retirement Date:	

CML Description		Baseline	Flange ANSI: Unknown		Material: SA-106-B			
65	PIPING	2018	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	360° Circ	Min	6.40	5.556	0.794	6.350	0.000	0.000
OD:	33.401	Avg	6.83				Remaining Life:	
Spec:	ASME B31.3	Comments:	ASSUMED NOMINAL				Retirement Date:	

CML Description		Baseline	Flange ANSI: 600		Material: SA-234-WPB			
70	PIPING	2018	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape:	90° Elbow	Min	6.48	5.556	0.794	6.350	0.000	0.000
OD:	33.401	Avg	6.86				Remaining Life:	
Spec:	ASME B31.3	Comments:					Retirement Date:	