

# HALLIBURTON

iCem® Service

**MALLARD EXPLORATION LLC**

**For: Hans Carry**

**Date: Sunday, March 14, 2021**

**Goldeneye 21-16-2HN So#907023356**

**Sincerely,**

**Vaughn Oteri and crew**

## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 380921	Ship To #: 9049197	Quote #:	Sales Order #: 0907023356
Customer: MALLARD EXPLORATION LLC-EBUS		Customer Rep: Hans Carry	
Well Name: GOLDENEYE FED	Well #: 21-16-3HN	API/UWI #: 05-123-50841-00	
Field: WILDCAT	City (SAP): BRIGGSDALE	County/Parish: WELD	State: COLORADO
Legal Description: SE NW-21-8N-60W-2365FNL-2196FWL			
Contractor: CYCLONE		Rig/Platform Name/Num: CYCLONE 37	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307		Srcv Supervisor: Vaughn Oteri	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	17679ft	Job Depth TVD	
Water Depth	Wk Ht Above Floor		
Perforation Depth (MD)	From		To

### Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing	0	9.625	8.921	36			0	1938	0	1938
Casing	0	5.5	4.778	20			0	17664	0	6340
Open Hole Section			8.5				1938	17679	1938	6340

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	Team
Float Shoe	5.5			17664	Bottom Plug	5.5	1	Team
Float Collar	5.5			17664	SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5		HES

### Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Prime Cement Spacer Base - RKS/SE	TUNED PRIME CEMENT SPACER SYS	50	barrel	11.5	3.71		6	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	ElastiCem	SBM CEM ELASTICEM™ SYS	2850	sack	13.2	1.6		8	7.65
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal

## Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	MMCR Displacement	MMCR Displacement	20	bbl	8.33			8	
4	Displacement	Displacement	370	bbl	8.33			8	
<b>Cement Left In Pipe</b>		<b>Amount</b>	27 ft		<b>Reason</b>			Shoe Joint	
<b>Mix Water:</b>		pH 7	<b>Mix Water Chloride:</b>		0ppm		<b>Mix Water Temperature:</b> 70 °F °C		
<b>Cement Temperature:</b>		## °F °C	<b>Plug Displaced by:</b>		## lb/gal kg/m3 XXXX		<b>Disp. Temperature:</b> ## °F °C		
<b>Plug Bumped?</b>		Yes	<b>Bump Pressure:</b>		#### psi MPa		<b>Floats Held?</b> Yes		
<b>Cement Returns:</b>		## bbl m3	<b>Returns Density:</b>		## lb/gal kg/m3		<b>Returns Temperature:</b> ## °F °C		
<b>Comment</b> 60bbbls of cement back to surface,									

## Legal Notice

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### Disclaimer:

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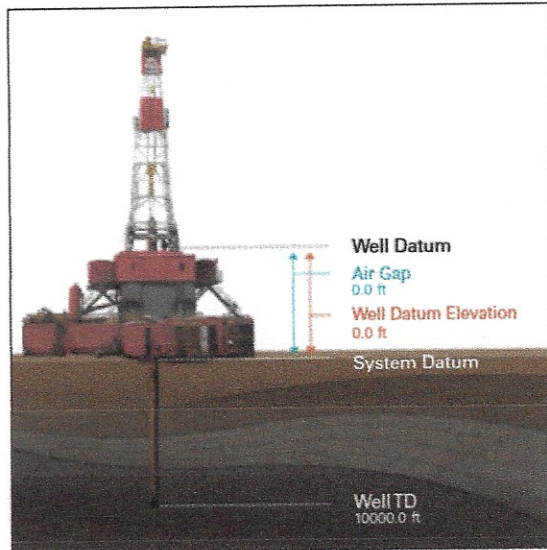
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## 1.0 Job Design

### 1.1 Overview

Job Type	Primary Cement Job
Injection Path	Casing/Conventional
Foam Job	No

#### Well Snapshot



#### Simulations Performed

### 1.2 Pressure Schedule Inputs

Pressure Mode	Conventional
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### 1.3 Pressure Schedule Table

Start (Pump Volume in bbl)	End (Pump Volume in bbl)	Pressure (psi)
0.00	End	0.00

### 1.4 Time of Stages

Graph Label	Time (min)	Stage Starts Pumping	Stage Enters Annulus
①	0.0	Call Out	
②	0.0	Depart from Service Center or Other Site	
③	0.0	Arrive At Loc	
④	0.0	Pre-Convoy Safety Meeting	

⑤	0.0	Start Job
⑥	0.0	Other
⑦	0.0	Drop Bottom Plug
⑧	0.0	Test Lines
⑨	0.0	Pump Spacer 1
⑩	0.0	Pump Cement
⑪	0.0	Check Weight
⑫	0.0	Check Weight
⑬	0.0	
⑭	0.0	Drop Top Plug
⑮	0.0	Clean Lines
⑯	0.0	Pump Displacement
⑰	0.0	Bump Plug
⑱	0.0	Other
⑲	0.0	End Job

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Event	Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press	DH Density	Comb Pump Rate	Comments
								(psi)	(ppg)	(bbl/mh)	
Event 1	Call Out		Call Out		3/13/2021	16:00:00	USER				Call out from ARC hub.
Event 2	Pre-Convoy Safety Meeting		Pre-Convoy Safety Meeting		3/13/2021	18:30:00	USER				Held pre-convoy meeting with all HES drivers to discuss driving directions and hazards.
Event 3	Depart from Service Center or Other Site		Depart from Service Center or Other Site		3/13/2021	19:00:00	USER				Depart from Ft. Lupton co HES yard.
Event 4	Arrive At Loc		Arrive At Loc		3/13/2021	21:00:00	USER				Arrived on location met with company rep to discuss job process and concerns.
Event 5	Start Job		Start Job		3/14/2021	03:43:10	COM6	0.00	8.46	0.00	Held pre-job safety meeting with all hands on location to discuss job process and hazards.
Event 6	Other		Other		3/14/2021	03:44:09	COM6	24.00	8.24	0.00	Prime pumps and lines with fresh water.
Event 7	Drop Bottom Plug		Drop Bottom Plug		3/14/2021	03:44:50	COM6	339.00	8.61	2.00	Released Bottom plug witnessed by company rep.
Event 8	Test Lines		Test Lines		3/14/2021	03:45:43	COM6	402.00	8.57	0.00	Pressure tested pumps and lines with fresh water. 4550psi found no leaks and pressure held good.
Event 9	Pump Spacer 1		Pump Spacer 1		3/14/2021	03:53:23	COM6	53.00	8.33	0.00	Mixed and pumped 50bbls of 11.5ppg Turled Prime spacer at 6.0bpm 582psi.

# HALLIBURTON

Customer: MALLARD EXPLORATION LLC  
 Job: Mallard Goldeneye 21-16-2HN So#907023356  
 Case: Case 1

Event	Description	Date	Time	Code	Weight	Volume	Pressure	Notes
Event 10	Pump Cement	3/14/2021	04:09:32	COM6	414.00	11.97	6.20	Mixed and pumped 2850sks or 812bbls of 13.2ppg Y-1.6 G/sk-7.65 Elasticem at 8.0bpm 852psi
Event 11	Check Weight	3/14/2021	04:11:54	COM6	875.00	13.18	8.10	Confirmed weight of 13.2ppg on scales
Event 12	Check Weight	3/14/2021	05:11:54	COM6	567.00	13.19	9.00	Confirmed weight of 13.2ppg on scales
Event 13	Shutdown	3/14/2021	05:48:49	COM6	187.00	13.83	0.00	
Event 14	Drop Top Plug	3/14/2021	05:50:49	COM6	67.00	14.05	0.00	Released plug witnessed by company rep
Event 15	Clean Lines	3/14/2021	05:52:22	COM6	62.00	14.03	0.00	Washed pumps and lines with fresh water.
Event 16	Pump Displacement	3/14/2021	06:00:41	COM6	142.00	8.33	0.90	Pumped 390bbls of fresh water to displace cement.
Event 17	Bump Plug	3/14/2021	07:00:11	COM6	3376.00	8.38	0.00	Bump plug 1000psi over final pump pressure.
Event 18	Other	3/14/2021	07:01:03	COM6	3426.00	8.36	0.00	Release pressure back to pump truck to check floats, floats held good 4.5bbls back.
Event 19	End Job	3/14/2021	07:02:39	COM6	90.00	5.07	0.00	60bbls of cement back to surface.

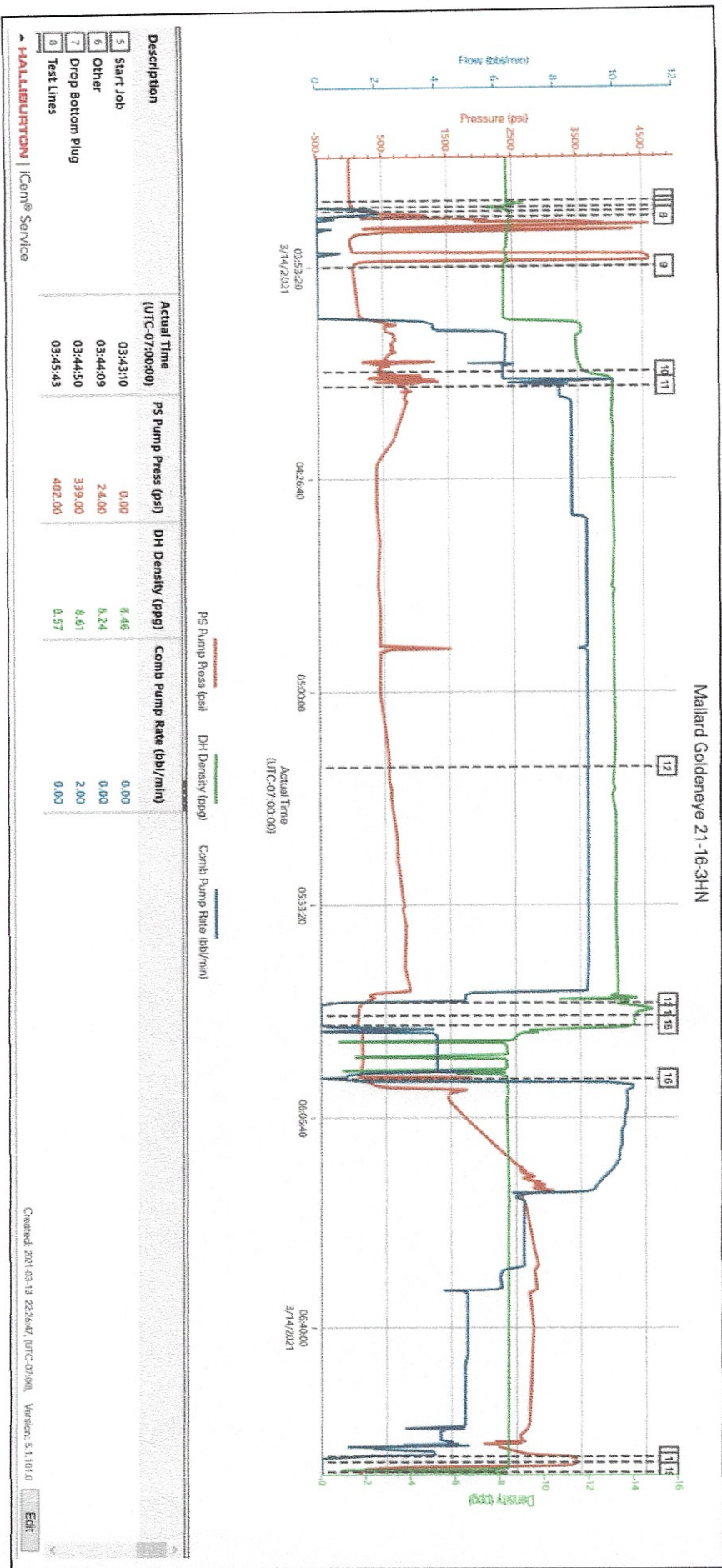
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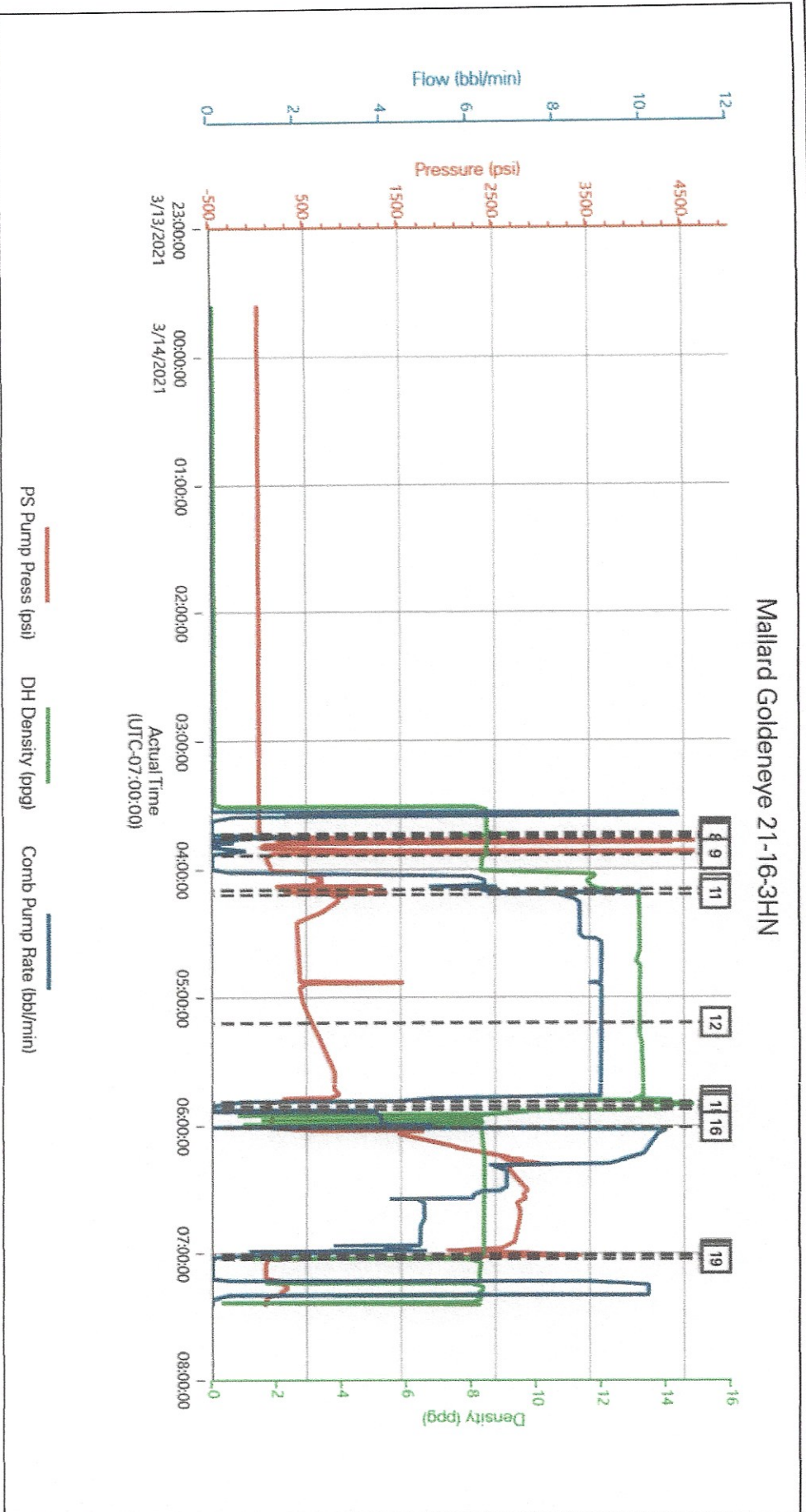
## 3.0 Attachments

### 3.1 Mallard .png



## 4.0 Custom Graphs

### 4.1 Custom Graph



# HALLIBURTON

Customer: MALLARD EXPLORATION LLC  
Job: Mallard Goldeneye 21-16-2HN Sg#907023356  
Case: Case 1

## 5.0 Appendix

### 5.1 3D Wellbore Schematic

