HALLIBURTON

iCem® Service

CONOCO/PHILLIPS COMPANY EBUSINESS

United States of America, COLORADO

Date: Monday, October 16, 2017

Tiberius 4-64 8 4H Surface

Job Date: Saturday, September 30, 2017

Sincerely,

Bryce Hinsch

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Tiberius 4-64 8 4H** cement **surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 58 bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton [Fort Lupton]

The Road to Excellence Starts with Safety

Sold To #: 352431	**Ship To #:** 3600895	**Quote #:** 0022347544	**Sales Order #:** 0904324167
Customer: CONOCO/PHILLIPS COMPANY-EBUS		**Customer Rep:**	
Well Name: TIBERIUS 4-64 8	**Well #:** 4H	**API/UWI #:** 05-005-07231-00	
Field: WILDCAT	**City (SAP):** WATKINS	**County/Parish:** ARAPAHOE	**State:** COLORADO
Legal Description: SE SE-8-4S-64W-560FSL-355FEL			
Contractor: H & P DRLG	**Rig/Platform Name/Num:** H & P 448		
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HB41307	**Srvc Supervisor:** Aaron Smith		

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	1972ft		**Job Depth TVD**	1967
Water Depth			**Wk Ht Above Floor**	5
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
Open Hole Section			13.5				0	1449		0
Casing		9.625	8.921	36	LTC	J-55	0	1967		0
Open Hole Section			13.5				1449	1972		0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625					**Top Plug**	9.625	1	HES
Float Shoe	9.625	1	WCS	1967		**Bottom Plug**	9.625	1	HES
Float Collar	9.625	1	WCS	1921		**SSR plug set**	9.625		HES
Insert Float	9.625					**Plug Container**	9.625	1	HES
Stage Tool	9.625					**Centralizers**	9.625		HES

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	10 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	10	8.82			

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	SwiftCem Lead	SWIFTCEM (TM) SYSTEM	428	sack	12	2.56		5	15.11

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	SwiftCem Tail	SWIFTCEM (TM) SYSTEM	250	sack	14.2	1.59		5	7.89

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	148	bbl	8.33			6	

Cement Left In Pipe	**Amount**	45 ft	Reason	**Shoe Joint**

Comment 58 bbls cement to surface TOTC 1502'. 428 sks were pump for the job by the request of the customer rep., 485 sks were loaded off of approved proposal.

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	9/30/2017	04:00:00	USER				For on location @0900
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	9/30/2017	07:30:00	USER				Journey management meeting held prior to departure
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	9/30/2017	07:45:00	USER				Journe called into dispatch.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	9/30/2017	08:45:00	USER				With all equipment and materials. Rig running casing.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/30/2017	09:00:00	USER				JSA to discuss the hazards of rig-up.
Event	6	Rig-Up Equipment	Rig-Up Equipment	9/30/2017	09:05:00	USER				Rig-up all surface lines and equipment
Event	7	Wait on HES or HES Sub-Contractor Equipment - Start Time	Wait on HES or HES Sub-Contractor Equipment - Start Time	9/30/2017	09:30:00	USER				Wait on containment to arrive for pump truck.
Event	8	Wait on HES or HES Sub-Contractor Equipment - End Time	Wait on HES or HES Sub-Contractor Equipment - End Time	9/30/2017	11:10:00	USER				Containment arrive on location.
Event	9	Rig-Up Completed	Rig-Up Completed	9/30/2017	11:45:00	USER				After containment arrived on location.
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/30/2017	12:00:00	USER				With all essenital personnel to discuss the job procedure and hazards of the job.
Event	15	Start Job	Start Job	9/30/2017	12:28:00	USER	0.84	8.21	1079.15	With water supplied from uprights water tested good to mix cement. PH7.5, Cl 88

										ppm, Temo 68.
Event	16	Test Lines	Test Lines	9/30/2017	12:28:10	USER	0.74	8.25	981.65	@3000 psi. Pressure test was good.
Event	39	Pump Spacer 1	Pump Spacer 1	9/30/2017	12:44:25	USER	2.20	8.27	58.19	50 bbls Tuned Spacer @ 10 ppg, 8.82 ft3/sk, 60.4 gal/sk. Verified with pressurized scales. 5 bpm 480 psi.
Event	64	Drop Bottom Plug	Drop Bottom Plug	9/30/2017	12:57:58	USER	0.31	9.81	19.76	Pre-loaded hwe bottom plug in plug container, verified by customer rep.
Event	67	Pump Lead Cement	Pump Lead Cement	9/30/2017	13:02:46	USER	1.83	9.80	33.82	428 sks (195.14 bbls) SwiftCem @ 12 ppg, 2.56 ft3/sk, 15.11 gal/sk. Verified with pressurized scales. 7 BPM 470 psi. 485 sks were loaded from the proposal that was sent to the customer rep @75% excess. Customer requested to pump 55%.
Event	87	Pump Tail Cement	Pump Tail Cement	9/30/2017	13:37:21	USER	7.03	12.76	279.45	250 sks (70.79 bbls) SwiftCem @ 14.2 ppg, 1.59 ft3/sk, 7.89 gal/sk. Verified with pressurized scales. 8 bpm 250 psi.
Event	96	Shutdown	Shutdown	9/30/2017	13:50:00	USER	3.98	14.57	55.38	
Event	104	Drop Top Plug	Drop Top Plug	9/30/2017	13:51:21	USER	0.24	15.02	5.69	Pre-loaded HWE top plug in plug container, verified by customer rep.
Event	105	Pump Displacement	Pump Displacement	9/30/2017	13:53:10	USER	9.24	9.58	328.20	148 bbls fresh water.
Event	106	Spacer Returns to Surface	Spacer Returns to Surface	9/30/2017	13:57:35	USER	7.95	8.27	322.57	@40 bbls displacement, 50 bbls to surface.
Event	108	Cement Returns to Surface	Cement Returns to Surface	9/30/2017	14:04:17	USER	6.31	8.22	354.45	@90 bbls displacement, 58 bbls to surface. TOTC 1502'

Event	109	Bump Plug	Bump Plug	9/30/2017	14:19:46	USER	0.01	8.32	1324.78	@500 psi over, final circulating pressure 485 psi.
Event	118	Comment	Casing Test	9/30/2017	14:40:01	USER	0.55	8.35	1958.54	1800 psi for 30 min.
Event	119	Check Floats	Check Floats	9/30/2017	15:10:58	USER	0.01	8.29	38.51	Floats good 1 bbl back.
Event	120	End Job	End Job	9/30/2017	15:15:00	USER	0.01	8.30	39.44	End recording data.
Event	121	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/30/2017	15:20:00	USER	0.00	8.30	39.44	JSA to discuss the hazards of rig-down.
Event	122	Rig-Down Completed	Rig-Down Completed	9/30/2017	15:45:00	USER	0.01	-0.09	41.32	With no incidents or injuries.
Event	123	Depart Location Safety Meeting	Depart Location Safety Meeting	9/30/2017	16:20:00	USER				Journey managment meeting held prior to departure.
Event	124	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	9/30/2017	16:30:00	USER				Thank you for choosing Halliburton Cementing, Aaron Smith and Crew.

3.0 Attachments

3.1 ConocoPhillips Tiberius 4-64 8 4H Surface Job Chart