

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Ft. Lupton District, COLORADO

Date: Tuesday, September 24, 2019

Interchange A S22-30-9N Surface

Job Date: Tuesday, September 24, 2019

Sincerely,

Bryce Hinsch

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Interchange A S22-30-9N** 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 15 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 #: 369404	Ship To #: 3901324	Quote #:	Sales Order #: 0905995101
Customer: EXTRACTION OIL & GAS -		Customer Rep: HANS CARY	
Well Name: INTERCHANGE A		Well #: S22-30-9N	API/UWI #: 05-014-20771-00
Field: WATTENBERG	City (SAP): BROOMFIELD	County/Parish: BROOMFIELD	State: COLORADO
Legal Description: SW NW-10-1S-68W-2278FNL-1156FWL			
Contractor: ENSIGN DRLG		Rig/Platform Name/Num: ENSIGN 147	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HX38199		Srvc Supervisor: Vitali Neverdasov	

Job

Formation Name			
Formation Depth (MD)	Top	Bottom	
Form Type		BHST	
Job depth MD	1653ft	Job Depth TVD	1653
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	1653	0	1653
OH		13.5					0	1658	0	1658

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	NA	1653	Bottom Plug	9.625		
Float Collar	9.625	1	NA	1609	SSR plug set	9.625		
Insert Float	9.625				Plug Container	9.625	1	HES
Stage Tool	9.625				Centralizers	9.625		

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	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33			5	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	SwiftCem	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74	9.17	8		
9.17 Gal		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
3	Fresh Water	Fresh Water	124.4	bbl	8.33			8		
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint		
Comment : 15 BBLS OF CEMENT BACK TO SURFACE.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Recirc Density <i>(ppg)</i>	Comments
Event	1	Call Out	Call Out	9/24/2019	01:00:00	USER					CUSTOMER ASKED FOR BULK TRUCKS TO BE BACK BEFORE 07:00 BECAUSE OF DRIVING RESTRICTIONS.
Event	2	Arrive at Location from Service Center	Arrive at Location from Service Center	9/24/2019	03:30:00	USER					24 MILES. 1 BULK TRUCKS CAME BACK RELOADED
Event	3	Other	OTHER	9/24/2019	07:00:00	USER					2ND BULK TRUCK HANE NOT ARRIVED ON LOCATION
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	9/24/2019	07:15:00	USER					JSA PRIOR RIGGING UP
Event	5	Other	RIG UP	9/24/2019	07:20:00	USER					RIG UP BULK TRUCK AND HARD LINE TO THE STAND PIPE.
Event	6	Other	Other	9/24/2019	08:04:00	USER					COORDINATOR TOLD ME THAT DRIVER JUST CALLED AND SAY THAT HE DON'T HAVE DOT HOURS TO DRIVE TO MAKE IT TO LOCATION. CORDINATOR CALLED ANOTHER DRIVER.
Event	7	Other	Other	9/24/2019	08:15:00	USER					NEW DRIVER FOUND NOT WORKING LIGHTS. MECHANICS WORKING ON IT.
Event	8	Other	CASING ON BOTTOM	9/24/2019	10:00:00	USER	0.00	25.00	10.70	8.38	RIG UP CEMENT HEAD AND MANIFOLD FOR RIG TO CIRCULATE.

Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/24/2019	10:10:00	USER	0.00	26.00	10.70	8.38	DISCUSS HAZARDS AND JOB PROCEDURE WITH ALL PERSONAL INVOLVED. RIG IS CIRCULATING 8 BPM/ 145 PSI.
Event	10	Start Job	Start Job	9/24/2019	11:05:52	COM4	0.00	22.00	10.70	8.38	
Event	11	Other	TRUCK ARRIVED	9/24/2019	11:06:00	USER	0.00	23.00	10.70	8.38	2ND BULK TRUCK ARRIVED ON LOCATION.
Event	12	Pressure Test	Pressure Test	9/24/2019	11:09:00	USER	0.00	1734.00	2.30	8.38	LOAD LINE AND TEST TO 3225 PSI
Event	13	Pump Spacer	Pump Spacer	9/24/2019	11:12:00	USER	0.00	11.00	0.00	8.29	PUMP 10 BBLS OF DYE WATER.
Event	14	Check Weight	Check Weight	9/24/2019	11:16:00	USER	0.00	17.00	12.20	13.81	
Event	15	Pump Cement	Pump Cement	9/24/2019	11:18:00	USER	5.00	130.00	2.10	13.30	BATCH/WEIGHT/ PUMP 550 SKS (170.4 BBLS) OF SWIFTCEM @ 13.5 PPG. 8.0 BPM/ 170 PSI.
Event	16	Check Weight	Check Weight	9/24/2019	11:21:37	COM4	8.00	294.00	28.80	13.52	
Event	17	Shutdown	Shutdown	9/24/2019	11:44:00	USER	4.50	104.00	184.80	0.04	FINISHED PUMPING CEMENT.
Event	18	Drop Top Plug	Drop Top Plug	9/24/2019	11:46:00	USER	0.00	33.00	0.00	0.04	DROP TOP PLUG, VERIFIED BY CUSTOMER.
Event	19	Pump Displacement	Pump Displacement	9/24/2019	11:47:00	USER	2.50	27.00	1.50	8.36	124.4 BBLS OF FRESH WATER.
Event	20	Bump Plug	Bump Plug	9/24/2019	12:06:00	USER	0.00	1086.00	136.60	5.60	BUMP PLUG 3 BPM / 500 OVER FINAL LIFT PRESSURE OF 503 PSI.
Event	21	Check Floats	Check Floats	9/24/2019	12:06:00	USER	0.00	1086.00	136.60	5.60	FLOATS HELD, 1 BBL BACK
Event	22	End Job	End Job	9/24/2019	12:08:21	COM4	0.00	9.00	0.00	4.82	
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	9/24/2019	12:10:00	USER	7.20	5.00	2.60	7.92	HELD JSA PRIOR TO RIG DOWN

3.0 Attachments

3.1 INTERCHANGE A S22-30-9N.png

