

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

United States of America, COLORADO

### **For:**

Date: Monday, July 16, 2018

### **RINN VALLEY N17-20-14N**

WELD, RINN VALLEY N17-20-14N

Case 1

Job Date: Monday, July 16, 2018

Sincerely,

**VITALI NEVERDASOV**

## Legal Notice

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*The Road to Excellence Starts with Safety*

Sold To #: 369404	Ship To #: 3888635	Quote #:	Sales Order #: 0904990530
Customer: EXTRACTION OIL & GAS		Customer Rep: SHAYNE	
Well Name: RINN VALLEY EAST		Well #: N17-20-14N	API/UWI #: 05-123-47177-00
Field: WATTENBERG	City (SAP): FIRESTONE	County/Parish: WELD	State: COLORADO
Legal Description: SE SE-18-2N-68W-201FSL-561FEL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 346	
Job BOM: 7523 7523			
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	17505ft	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		J-55	0	1602	0	1602
Casing	0	5.5	4.778	20	BTC	P-110	0	17503	0	7320
Open Hole Section			8.5				1602	17510	1602	7320

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	KLX
Float Shoe	5.5	1	N/A	17503	Bottom Plug	5.5	0	
Float Collar	5.5	1	N/A	17499	SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5		

**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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.73		4		
149.34 lbm/bbl		<b>BARITE, BULK (100003681)</b>								
35 gal/bbl		<b>FRESH WATER</b>								

0.50 gal/bbl		<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>									
0.50 gal/bbl		<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>									
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>	<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>		
2	ElastiCem	ELASTICEM (TM) SYSTEM	2880	sack	13.2	1.57		8	7.5		
7.50 Gal		<b>FRESH WATER</b>									
0.45 %		<b>SCR-100 (100003749)</b>									
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>	<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>		
3	Displacement	Displacement	388	bbl	8.33			5			
Cement Left In Pipe		<b>Amount</b>	0 ft		<b>Reason</b>			<b>WET SHOE</b>			
<b>Comment : 70 BBLs OF CEMENT BACK TO SURFACE. 3 BBLs BACK WHEN CHECK FLOATS. DISPLACE @ 5 BPM PER CUSTOMER REQUEST.</b>											

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	7/16/2018	03:30:00	USER					For Location @ 09:00
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	7/16/2018	07:20:00	USER					Journey management meeting held prior to departure
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/16/2018	07:30:00	USER					Called Journey
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/16/2018	08:25:00	USER					24 MILES. Discussed numbers and job procedures with Customer
Event	5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/16/2018	08:40:00	USER					JSA to discuss the hazards of rig-up
Event	6	Rig-Up Equipment	Rig-Up Equipment	7/16/2018	08:45:00	USER					Rig-up all surface lines and equipment up to the Buffer zone
Event	7	Casing on Bottom	Casing on Bottom	7/16/2018	14:10:00	USER	8.08	0.00	-1.00	24.00	CASING LANDED. RIG IS CIRCULATING THRU CRT
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/16/2018	15:35:00	USER	8.08	0.00	-1.00	24.00	With all essential personnel, to discuss the hazards of pumping the job, and pump schedule.
Event	9	Pump Spacer	Pump Spacer	7/16/2018	16:10:00	USER	8.40	1.70	185.00	30.30	BATCH/ WEIGHT/ PUMP 50 BBLS OF SPACER WITH SURFACTANS @ 11.5 PPG
Event	10	Start Job	Start Job	7/16/2018	16:10:02	COM4	8.41	1.70	181.00	30.30	
Event	11	Test Lines	Test Lines	7/16/2018	16:10:06	COM4	8.42	1.70	186.00	30.50	LOAD AND TEST LINES TO 5110 PSI

Event	12	Pump Lead Cement	Pump Lead Cement	7/16/2018	16:25:00	USER	13.28	4.00	278.00	7.50	BATCH/WEIGHT/PUMP 2880 sks( 805.3 bbls) Elasticem @ 13.2 ppg, verified with pressurized scales
Event	13	Check Weight	Check Weight	7/16/2018	16:44:22	COM4	13.23	8.00	581.00	164.70	
Event	14	Shutdown	Shutdown	7/16/2018	18:16:00	USER	7.98	0.00	-1.00	866.60	Finished pumping cement
Event	15	Drop Top Plug	Drop Top Plug	7/16/2018	18:20:35	COM4	8.04	1.80	11.00	877.40	LOAD AND DROP TOP PLUG
Event	16	Pump Displacement	Pump Displacement	7/16/2018	18:21:38	COM4	7.86	0.00	15.00	0.00	
Event	17	Pump Displacement - Start	Pump Displacement - Start	7/16/2018	18:24:00	USER	8.29	4.90	100.00	5.50	388.2 bbls fresh water
Event	18	Bump Plug	Bump Plug	7/16/2018	19:47:00	USER	8.43	0.00	3127.00	412.40	@500 psi over final circulating pressure of 3050 psi. DISC GOT BURSTED AT THE TIME OF BUMPING PLUG
Event	19	Pump Water	Pump Water	7/16/2018	19:48:00	USER	8.48	2.00	2574.00	413.20	Pump 5 bbl wet shoe
Event	20	Check Floats	Check Floats	7/16/2018	19:49:00	USER	8.41	4.70	2974.00	417.30	Floats held. 3 bbls back
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/16/2018	19:55:00	USER	8.37	0.00	5.00	418.30	JSA to discuss the hazards of rig-down
Event	22	End Job	End Job	7/16/2018	20:01:12	COM4	8.38	0.00	4.00	418.30	

## 2.0 Attachments

### 2.1 Case 1-Custom Results.png

