

The Road to Excellence Starts with Safety

Sold To #: 306489	Ship To #: 3112285	Quote #:	Sales Order #: 900923008
Customer: WHITING OIL & GAS CORP - EBUS		Customer Rep: Pettjohn, Will	
Well Name: Razor		Well #: 21B-2810B	API/UWI #:
Field:	City (SAP): NEW RAYMER	County/Parish: Weld	State: Colorado
Contractor: Frontier		Rig/Platform Name/Num: Frontier 26	
Job Purpose: Cement Production Liner			
Well Type: Development Well		Job Type: Cement Production Liner	
Sales Person: PLIENESS, RYAN		Srvc Supervisor: OTERI, VAUGHN	MBU ID Emp #: 443828

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BARNES, BRIAN L	14.5	485204	HARRAH, THADDEUS Gregory	14.5	552592	MULLER, MICHEL B	14.5	529830
OTERI, VAUGHN Steeves	14.5	443828						

Equipment

HES Unit #	Distance-1 way						
10829457	100 mile	10857080	100 mile	10982754	100 mile	11527037	100 mile
11633846C	100 mile	11812069C	100 mile				

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
TOTAL								

Total is the sum of each column separately

Job				Job Times			
Formation Name	Formation Depth (MD)	Top	Bottom	Date	Time	Time Zone	
				Called Out	25 - Nov - 2013	21:30	MST
Form Type			BHST	On Location	26 - Nov - 2013	03:00	MST
Job depth MD	12713. ft		Job Depth TVD	Job Started	26 - Nov - 2013	11:51	MST
Water Depth			Wk Ht Above Floor	Job Completed	26 - Nov - 2013	16:17	MST
Perforation Depth (MD)	From	To		Departed Loc	26 - Nov - 2013	17:30	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbf/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
6" Open Hole Section				6.				6186.	12749.		
4-1/2" Production Liner	Unknown		4.5	4.	11.6		L-80	5405.	12749.		
7" Intermediate Casing	Unknown		7.	6.276	29.		L-80		6186.		
4" Drill Pipe	Unknown		4.	3.34	14.				5405.		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
Stage Tool										Centralizers			

Miscellaneous Materials

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Conc	Qty

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Tuned Spacer III	TUNED SPACER III - SBM (483826)	20.00	bbl	11.	6.74	.0	.0	
	36.83 gal/bbl	FRESH WATER							
	119.55 lbm/bbl	BARITE, 100 LB SK (100003680)							
2	13.8# ExpandaCem B2	EXPANDACEM (TM) SYSTEM (452979)	437.0	sacks	13.8	1.68	7.74		7.74
	7.74 Gal	FRESH WATER							
Calculated Values		Pressures			Volumes				
Displacement		Shut In: Instant		Lost Returns	0	Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns	0	Actual Displacement	150	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	
Rates									
Circulating		Mixing	4.0	Displacement	3.0	Avg. Job			
Cement Left In Pipe	Amount	42 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
The Information Stated Herein Is Correct				Customer Representative Signature					

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Field:	City (SAP): NEW RAYMER	County/Parish: Weld	State: Colorado
Legal Description:			
Lat:		Long:	
Contractor: Frontier		Rig/Platform Name/Num: Frontier 26	
Job Purpose: Cement Production Liner			Ticket Amount:
Well Type: Development Well		Job Type: Cement Production Liner	
Sales Person: PLIENESS, RYAN		Srvc Supervisor: OTERI, VAUGHN	MBU ID Emp #: 443828

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	11/25/2013 21:30							CALL OUT FROM CHRIS IN ARS OFFICE
Arrive at Location from Service Center	11/26/2013 03:00							ARRIVE ON LOCATION MET WITH COMPANY AND BAKER TOOL HAND TO DISCUSS JOB PROCESS AND CONCERNS, ADVISE THAT RIG WAS HAVE PROBLEMS AND THAT THEY JUST STARTED RUNNING DRILL PIPE, STARTED SPOTING AND RIGGING UP TRUCKS AND HOSES
Casing on Bottom	11/26/2013 10:30							ADVISED BY BAKER TOOL HAND THAT CASING AT BOTTOM AND WAS OK TO START RIGGING UP TO FLOOR, HELD SAFTY MEETING IN DOG HOUSE TO DISCUSS JOB PROCESS AND ANY HAZARDS
Pump Ball	11/26/2013 11:00							RIG PUMPED BALL TO SEAT AND BLEW THE SEAT AS DESIGNED
Start Job	11/26/2013 11:51							LINED ALL VALVES UP TO START JOB
Test Lines	11/26/2013 11:55						4912.0	PRESSURE TESTED PUMPES AND LINES FOUND NO LEAKS AND PRESSURE HELD GOOD

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Spacer 1	11/26/2013 12:00		3	20			478.0	MIXED 11.0PPG TUNE SPACER WITH FRESH WATER
Pump Cement	11/26/2013 12:17		3.3	130			700.0	MIXED 13.8PPG EXPANDACEM WITH FRESH WATER
Shutdown	11/26/2013 12:56							
Drop Top Plug	11/26/2013 12:57							BAKER HAND RELEASED DART FROM BAKER HEAD WITNESSED BY COMPANY REP(WILL)
Pump Displacement	11/26/2013 12:58		3	150			1600.0	PUMPED FRESH WATER TO DISPLACE CEMENT
Bump Plug	11/26/2013 14:00		2				2000.0	BUMPED PLUG 500PSI OVER FINAL PUMP PRESSURE
Check Floats	11/26/2013 14:05			1.5			2580.0	RELEASED PRESSURE BACK TO PUMP TRUCK TO CHECK FLOATS, FLOATS HELD GOOD
Pressure Up Well	11/26/2013 14:06		2					PRESSURE UP ON DART TO BURST SEAT
Release Casing Pressure	11/26/2013 14:10							RELEASED PRESSURE BACK TO PUMP TRUCK
Pressure Up Well	11/26/2013 14:30		2					PRESSURE UP BACK FOUND THAT PRESSURE WOULD NOT CLIMB, BAKER HAND MADE SOME PHONE CALLS AND WE ALL MET WITH COMPANY REP TO DISCUSS NEW JOB PROCESS, HAVE RIGG PULL UP AND LET HES CIRCULATE WELL FREE FROM SPACER AND CEMENT
Circulate Well	11/26/2013 14:38		3	126			955.0	PUMPED FRESH WATER WITH CLAY WEB ADDITIVE
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	

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Quote #:

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SUMMIT Version: 7.3.0106

Tuesday, November 26, 2013 05:01:00

Cementing Job Log

Pressure Up Well	11/26/2013 15:55		2				2500. 0	PRESSURE UP BACK SIDE AGAIN PRESSURE HELD GOOD
Release Casing Pressure	11/26/2013 16:15							RELEASED PRESSURE BACK TO PUMP TRUCK
End Job	11/26/2013 16:17							