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**WHITING OIL & GAS CORP - EBUS**

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**Razor 21B-2811A  
Wattenberg  
Weld County , Colorado**

**Cement Production Liner**  
05-Jan-2014

**Job Site Documents**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 366960		<b>Ship To #:</b> 3186824		<b>Quote #:</b>		<b>Sales Order #:</b> 901016048	
<b>Customer:</b> WHITING OIL & GAS CORP - EBUS				<b>Customer Rep:</b> WILKERSON, KENNY			
<b>Well Name:</b> Razor			<b>Well #:</b> 21B-2811A			<b>API/UWI #:</b>	
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> NEW RAYMER		<b>County/Parish:</b> Weld		<b>State:</b> Colorado	
<b>Contractor:</b> whiting oil & gas corp			<b>Rig/Platform Name/Num:</b> FRONTIER26				
<b>Job Purpose:</b> Cement Production Liner							
<b>Well Type:</b> Development Well				<b>Job Type:</b> Cement Production Liner			
<b>Sales Person:</b> GREGORY, JON			<b>Srvc Supervisor:</b> LAVALLEY, LARRY		<b>MBU ID Emp #:</b> 419296		

**Job Personnel**

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BROOM, KENDALL L	19	524682	GRIFFITHS, ZACHARY Sakae	19	551430	LAVALLEY, LARRY P	19	419296
NESBITT, ROY Iverson	19	537416						

**Equipment**

HES Unit #	Distance-1 way						
10857080	107 mile	10994445	107 mile	11410662	107 mile	11488570C	107 mile
11518549	107 mile	11633846C	107 mile				

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
1/4/14	2.5	0	1/5/14	16.5	4.5			

**TOTAL** *Total is the sum of each column separately*

**Job**

**Job Times**

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
					04 - Jan - 2014	15:00	MST
<b>Form Type</b>			<b>BHST</b>	<b>On Location</b>	04 - Jan - 2014	21:30	MST
<b>Job depth MD</b>	12145. ft		<b>Job Depth TVD</b>	5878. ft	<b>Job Started</b>	05 - Jan - 2014	11:30
<b>Water Depth</b>			<b>Wk Ht Above Floor</b>	40. ft	<b>Job Completed</b>	05 - Jan - 2014	16:00
<b>Perforation Depth (MD)</b>	<b>From</b>		<b>To</b>		<b>Departed Loc</b>	05 - Jan - 2014	17:00

**Well Data**

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
6" Open Hole Section				6.				6242.	12145.		
4-1/2" Production Liner	Unknown		4.5	4.	11.6		L-80	5187.	12145.		5878.
7" Intermediate Casing	Unknown		7.	6.276	29.		L-80	.	6242.		
4" Drill Pipe	Unknown		4.	3.34	14.			.	5250.		

**Sales/Rental/3<sup>rd</sup> Party (HES)**

Description	Qty	Qty uom	Depth	Supplier
CHEM, CLA-WEB - TOTE	20	GAL		

**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		Qty	
Fluid Data													
Stage/Plug #: 1													
Fluid #	Stage Type	Fluid Name			Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/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	12.	7.74	57.88	.0			
	36.83 gal/bbl	FRESH WATER											
	177.85 lbm/bbl	BARITE, 100 LB SK (100003680)											
2	13.8# ExpandaCem B2	EXPANDACEM (TM) SYSTEM (452979)			440.0	sacks	13.8	1.68	7.74		7.74		
	7.74 Gal	FRESH WATER											
Calculated Values			Pressures			Volumes							
Displacement	146	Shut In: Instant			Lost Returns	0	Cement Slurry		132	Pad			
Top Of Cement		5 Min			Cement Returns	20	Actual Displacement		146	Treatment			
Frac Gradient		15 Min			Spacers	20	Load and Breakdown			Total Job		459	
Rates													
Circulating		Mixing		3	Displacement		3	Avg. Job		3			
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						
<b>The Information Stated Herein Is Correct</b>				Customer Representative Signature									

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<b>Well Name:</b> Razor			<b>Well #:</b> 21B-2811A		<b>API/UWI #:</b>		
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> NEW RAYMER		<b>County/Parish:</b> Weld		<b>State:</b> Colorado	
<b>Legal Description:</b>							
<b>Lat:</b> N 0 deg. OR N 0 deg. 0 min. 0 secs.				<b>Long:</b> E 0 deg. OR E 0 deg. 0 min. 0 secs.			
<b>Contractor:</b> whiting oil & gas corp			<b>Rig/Platform Name/Num:</b> FRONTIER26				
<b>Job Purpose:</b> Cement Production Liner					<b>Ticket Amount:</b>		
<b>Well Type:</b> Development Well			<b>Job Type:</b> Cement Production Liner				
<b>Sales Person:</b> GREGORY, JON			<b>Srvc Supervisor:</b> LAVALLEY, LARRY		<b>MBU ID Emp #:</b> 419296		

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	01/04/2014 15:00							CREW CALLED @ 15:00
Arrive at Location from Service Center	01/04/2014 21:30							WAITED FOR REMAINDER OF DRILL PIPE TO BE RAN. DID HAZARD HUNT AND PRE RIG UP SAFETY MEETING.
Assessment Of Location Safety Meeting	01/04/2014 21:35							
Wait on Customer or Customer Sub-Contractor Equip	01/04/2014 21:45							
Wait on Customer or Customer Sub-Contractor Equipm	01/05/2014 11:00							
Safety Meeting - Pre Job	01/05/2014 11:15							HELD WITH ALL THIRD PARTIES. TOOL HAND DROPPED AND SET BALL BEFORE START JOB
Start Job	01/05/2014 11:34							
Test Lines	01/05/2014 11:34						4242.0	RIG WATER WITH NO ADDITIVES
Pump Spacer 1	01/05/2014 11:39		3	20	20		86.0	TUNED SPACER III MIXED @ 12.0 PPG YIELD 7.74 FT/SK AND 57.88 GAL/SK
Pump Lead Cement	01/05/2014 11:48		3	132	152		1884.0	440 SKS EXPANDACEM B2 MIXED @ 13.8 PPG YIELD 1.68 FT3/SK AND 7.74 GAL/SK

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Shutdown	01/05/2014 12:55							
Clean Lines	01/05/2014 12:56							
Drop Top Plug	01/05/2014 13:01							PRELOADED BAKER HUGHS PLUG
Pump Displacement	01/05/2014 13:12		3	146	298		2498.0	3% KCL WATER SUPPLIED BY RIG
Bump Plug	01/05/2014 14:12		1				2994.0	CHECKED FLOATS, FLOATS HELD AND GOT 2 BBLS BACK
Pressure Up Annulus	01/05/2014 14:38		2				2667.0	PRESSURE UP BACKSIDE TO 2500 PSI AND HOLD FOR 5 MIN
Reverse Circ Well	01/05/2014 14:48		3	160	459		1108.0	REVERSE CIRCULATE TO REMOVE CEMENT FROM PIPE.CALCULATED WAS 20 BBLS SPACER AND 17 BBLS CEMENT.
End Job	01/05/2014 15:52							
Return to Service Center from Job	01/05/2014 16:45							

# HALLIBURTON

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## **WHITING OIL & GAS CORP - EBUS**

**For:**

Date: Sunday, January 05, 2014

**RAZOR 21B-2811A**

WHITING OIL & GAS CORP RAZOR 21B-2811A

Sincerely,

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## 1.0 Job Design

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## 2.0 Temperature Modeling

## 3.0 Real-Time Job Summary

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### 3.1 Stage Summary - Liquid Volume, Density, & Design Shutdown

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### 3.2 Stage Summary - Pump Pressure & ECD

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### 3.3 Stage Summary - Pump Rate & Nitrogen Rate

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### 3.4 Shutdown Summary

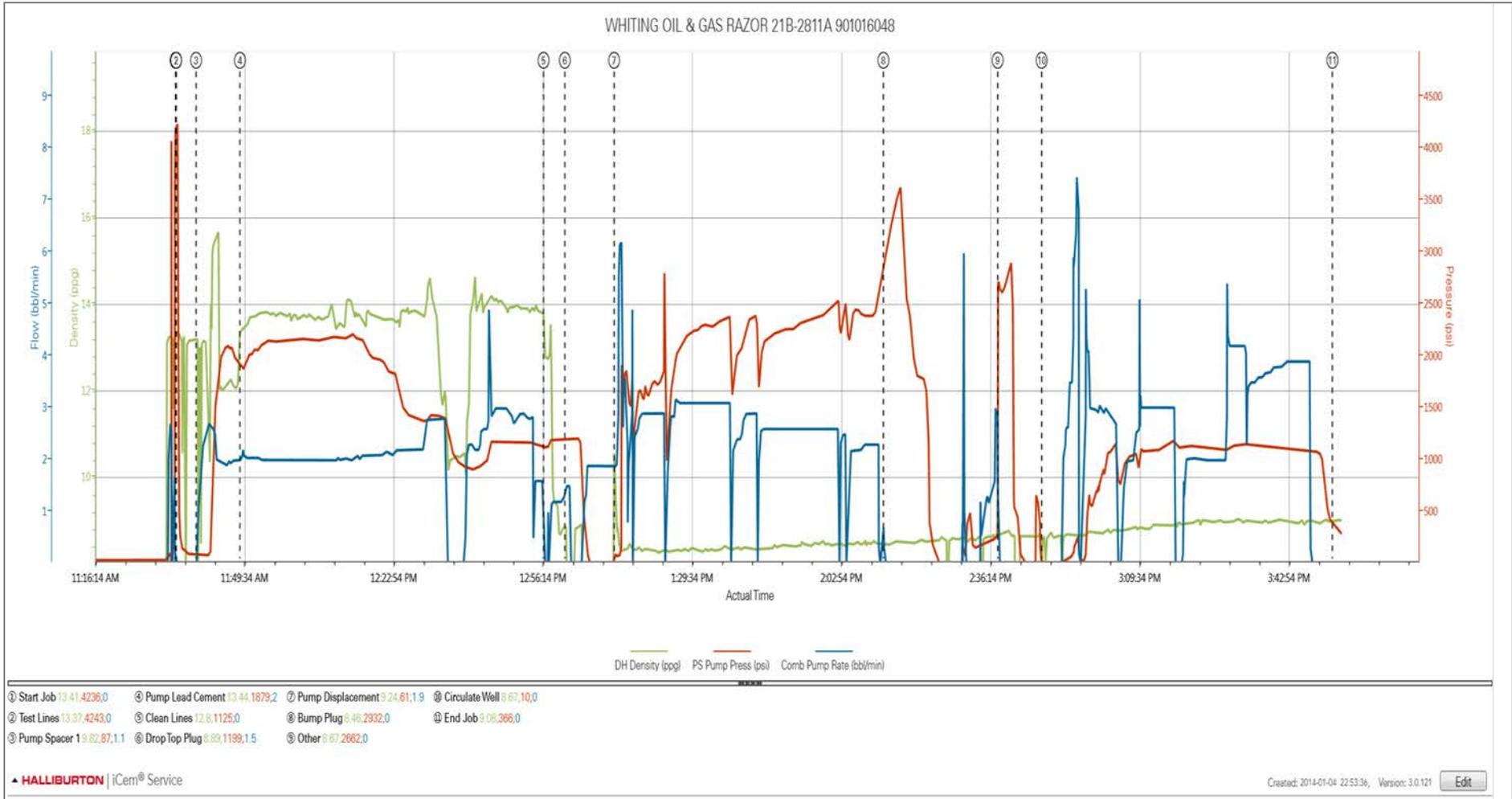
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### 3.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comment
Event	1	Start Job	Start Job	1/5/2014	11:34:31	COM6	13.41	4236.00	0.00	
Event	2	Test Lines	Test Lines	1/5/2014	11:34:40	COM6	13.35	4242.00	0.00	
Event	3	Pump Spacer 1	Pump Spacer 1	1/5/2014	11:39:06	COM6	13.19	86.00	1.10	
Event	4	Pump Lead Cement	Pump Lead Cement	1/5/2014	11:48:53	COM6	13.44	1884.00	2.00	
Event	5	Clean Lines	Clean Lines	1/5/2014	12:56:43	COM6	12.80	1126.00	0.00	
Event	6	Drop Top Plug	Drop Top Plug	1/5/2014	13:01:28	COM6	8.89	1199.00	1.50	
Event	7	Pump Displacement	Pump Displacement	1/5/2014	13:12:29	COM6	9.39	63.00	1.90	
Event	8	Bump Plug	Bump Plug	1/5/2014	14:12:38	COM6	8.46	2932.00	0.00	
Event	9	Other	Other	1/5/2014	14:38:10	COM6	8.68	2667.00	0.00	
Event	10	Circulate Well	Circulate Well	1/5/2014	14:48:00	COM6	8.67	10.00	0.00	
Event	11	End Job	End Job	1/5/2014	15:52:57	COM6	9.08	366.00	0.00	

4.0 Attachments

4.1 WHITING OIL & GAS CORP RAZOR 21B-2811A-Custom Results.png



5.0 Custom Graphs

5.1 Custom Graph

