

# HALLIBURTON

Brook LC28-77-1HNA  
Plug  
Case 1

hoses to rig										
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	9/6/2014	18:52:23	USER	3.00	0.00	9.00	Discussed with all involved parties about the hazards of the job & procedures discussed JSA & Halliburton policy
Event	11	Start Job	Start Job	9/6/2014	20:09:19	COM7	5.00	0.00	9.05	Start Job
Event	12	Test Lines	Test Lines	9/6/2014	20:14:22	COM7	0.00	0.00	9.07	Test Kickouts to 500 psi Test lines to 4000 psi no leaks
Event	13	Pump Spacer 1	Pump Tune Spacer III	9/6/2014	20:26:48	COM7	10.00	0.00	9.77	Pump 35 bbls Tune Spacer III @ 13.5 #
Event	14	Pump Cement	Pump Cement	9/6/2014	20:40:13	COM7	11.00	0.00	0.01	Pump 44 bbls cmt @ 15.8 # 166 sks 5675-6275'
Event	15	Pump Spacer 2	Pump Tune Spacer III	9/6/2014	20:52:07	COM7	130.00	4.00	14.59	Pump 5 bbls Tune Spacer III @ 13.5 #
Event	16	Pump Displacement	Pump Displacement	9/6/2014	20:55:16	COM7	197.00	6.30	11.49	Pump 55 bbls Water Base Mud to balance
Event	17	Clean Lines	Clean Pumps & Lines	9/6/2014	21:23:10	USER	10.00	4.80	9.27	Clean truck to wash up tank
Event	18	Wait on Cement	Wait on Cement	9/6/2014	21:49:07	USER	-4.00	0.00	9.28	Wait 5 hrs on cmt to harden rig to tag after set up time
Event	19	Test Lines	Test Lines	9/7/2014	03:32:16	COM7				Test kick outs to 500 psi Test lines to 4000 psi
Event	20	Pump Spacer 1	Pump Tune Spacer III	9/7/2014	03:43:57	COM7				Pump 35 bbls tune spacer III @ 13.5
Event	21	Pump Cement	Pump Cement	9/7/2014	03:55:17	COM7	31.00	1.60	15.91	Pump 48 bbls cmt @ 17.5 # 289 sks 5025-5675'
Event	22	Pump Spacer 2	Pump Tune Spacer III	9/7/2014	04:09:09	COM7	60.00	2.70	13.16	Pump 5 bbls Tune Spacer III @ 13.5 #
Event	23	Pump Displacement	Pump Displacement	9/7/2014	04:10:32	COM7	59.00	3.20	12.51	Pump 48 bbls water base mud
Event	24	Shutdown	Shutdown	9/7/2014	04:26:29	COM7				Shut down release psi back to truck go to floor & brake Halliburton lines rig pulled drill pipe

iCem<sup>®</sup> Service

## 1.2 Cementing Job Summary

The Road to Excellence Starts with Safety					
Sold To #: 345242		Ship To #: 3282064		Primary Sales Order #: 0901649575	
Customer: NOBLE ENERGY INC E-BUSINESS			Job Purpose: 7529 CMT WHIPSTOCK PLUG BOM		
Well Name: BROOK		Well #: LC28-77-1 HNA		API/UWI #: 05-123-38856-00	
Field: WILDCAT		City: KEOTA		Country/Parish: WELD	
State/Prov: COLORADO					
Legal Description:					
Rig Name & Number / Phone Number: H&P 326 / 970-986-4411					Location: LAND
myCem id# :		Job Criticality Status: YELLOW		iFacts Request id #:	
Contacts					
Type	Name	Email	Phone		
Proposal Contact - Sr. Drilling Engineer	Aaron , Duncan	aduncan@nobleenergyinc.com	303-228-4372		
Proposal Contact - Sr. Drilling Engineer	Kelli, Hale	khale@nobleenergyinc.com	303-228-4172		
Company Man					
Account Rep	Nicholas Wilson	Nicholas.Wilson@halliburton.com	+13037203334		
Service Coordinator	Mark Dean	Chris.Dean@Halliburton.com	+18323120276		
PPE, Safety Huddles, JSA's, HOC & Near Miss Reporting, BBP Observations					
Distance/Mileage(1 way)		60 mile	Distance/Mileage(1 way) Mtls:		60 mile
Srvcs:			Rqstd Job Start Date/Time:		09/30/2014
HSE Information					
H2S Present:		Unknown	CO2 Present:		Unknown
<b>Drive Safely. Lights On for Safety. Wear Seat Belts. Observe all HES / Customer Safety Policies.</b>					
Directions:					
HWY 14 & CR 115, NORTH 6.5 MILES, WEST 1 MILES, NORTH INTO LOCATION					
Instruction					
General Equipment					
3rd Party / Inventory Items					
SAP Number	Description	Quantity	UoM	Pricing Enabled	
Job Info / Well Data					
Job Depth (MD) ft	Job Depth (TVD) ft	Well Fluid Type	Well Fluid Weight lbm/gal	Displacement Fluid	Displ Fluid Weight lbm/gal
7337	7308	Oil Based		Oil Based Mud-9.0 #/gal	9
BHST degF	BHCT degF	Log Temp degF		Time Since Circ Stopped HH:MM:SS	

Job Tubulars/Tools											
Description	Size in	Weight lbm/ft	ID in	Thread	Grade	Top MD ft	Btm MD ft	Top TVD ft	Btm TVD ft	Shoe Jnt ft	% Excess
8 3/4" Open Hole			8.75			0	7337	0	7000		
4" Drillpipe	4	14	3.34			0	6487	0	6487	42	
2 7/8" Tubing	2.875	6.5	2.441			6487	7337	6487	7308		
PTA							7337				
KOP							6687				

  

Mud conditioning plan											
The condition of the drilling fluid is one of the most important variables in achieving a cement barrier. Prior to cementing, circulate the mud at the planned highest displacement rate for the cement job for at least 2 bottoms-up until the well is clean, mud is free of gas and pump pressures have stabilized.											

  

Materials											
Stage/Plug #: 1											
Stage/Plug #: 2											
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time	
1	13.5 lb/gal Tuned Spacer III		35	bbl	13.5	2.11	12.5	4			
264.86 lbm/bbl		Barite									
iFacts Test id #											
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time hr	
2	HalCem	PLUGCEM (TM) SYSTEM	166	sack	15.8	1.51	6.18	5	6.18		
iFacts Test id #											
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time	
3	13.5 lb/gal Tuned Spacer III		5	bbl	13.5	2.11	12.5	4			
264.86 lbm/bbl		Barite									
iFacts Test id #											



Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
4	Oil Based Mud-9.0 #/gal		151.4	bbl	9			5		
iFacts Test id #										
Stage/Plug #: 3										
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
1	13.5 lb/gal Tuned Spacer III		35	bbl	13.5	2.11	12.5	4		
264.86 lbm/bbl		Barite								
iFacts Test id #										
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time hr
2	GraniteCem	GRANITECEM (TM) SYSTEM	289	sack	17.5	0.94	3.31	5	3.31	
iFacts Test id #										
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
3	13.5 lb/gal Tuned Spacer III		5	bbl	13.5	2.11	12.5	4		
264.86 lbm/bbl		Barite								
iFacts Test id #										
Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft <sup>3</sup> /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
4	Oil Based Mud-9.0 #/gal		151.4	bbl	9			5		
iFacts Test id #										
Caution: Displacement quantities and densities are estimates ONLY! Do not use them for the actual job.										
Packaged Materials										