

HALLIBURTON

iCem[®] Service

NOBLE ENERGY INC

For:

Date: Wednesday, February 04, 2015

NOBLE CROW CREEK AAO1-743

NOBLE CROW CREEK AAO1-743

Job Date: Sunday, January 25, 2015

Sincerely,

Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Noble Crow Creek AA01-743** 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.

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 Brighton

Job times

	Date	Time (24hr)
Callout:	1/25/2015	1030
On Location:	1/25/2015	1630
Job Started:	1/25/2015	2000
Job Completed:	1/25/2015	0
Departed Location:	1/26/2015	100

Cementing Job Summary

HALLIBURTON

The Road to Excellence Starts with Safety					
Sold To #: 345242		Ship To #: 3590154		Primary Sales Order #: 0902047749	
Customer: NOBLE ENERGY INC E-BUSINESS			Job Purpose: 7521 CMT SURFACE CASING BOM		
Well Name: CROW CREEK			Well #: AA01-743		API/UWI #: 05-123-40161-00
Field: WATTENBERG		City: BRIGGS DALE		Country/Parish: WELD	State/Prov: COLORADO
Legal Description:					
Rig Name & Number / Phone Number: H & P 343 / 970-361-3274					Location: LAND
myCem id#: 151825		Job Criticality Status: GREEN		iFacts Request id #: 2211354, 2211353	
Contacts					
Type	Name	Email	Phone		
Company Man 1					
Account Rep	Kory	Kory.Hugentobler@halliburton.com	+19704621468		
Service Coordinator	Mark	Chris.Dean@Halliburton.com	+13035068462		
COMPANY ENGINEER	Aaron	aduncan@nobleenergyinc.com	303-228-4372		
COMPANY ENGINEER	Kelli	khale@nobleenergyinc.com	303-228-4172		
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:	01/31/2015		
HSE Information					
H2S Present:	Unknown	CO2 Present:	Unknown		
Drive Safely. Lights On for Safety. Wear Seat Belts. Observe all HES / Customer Safety Policies.					
Directions:					
CR 392 & CR 74, EAST 2 MILES, SOUTH ONTO PAD (MIDDLE PAD)					
Instruction					
Cementer: Bring a 9 5/8" Plug Container & Manifold. 100# of Sugar					
General Equipment					
3rd Party / Inventory Items					
SAP Number	Description	Quantity	UoM	Pricing Enabled	
Job Info / Well Data					
Job Depth (MD)	Job Depth (TVD) ft	Well Fluid Type	Well Fluid Weight	Displacement	Displ Fluid Weight

ft			lbm/gal	Fluid	lbm/gal
2270	2270	Water Based Mud		Water Based Mud- 8.5 #/gal	8.5
BHST degF	BHCT degF	Log Temp degF		Time Since Circ Stopped HH:MM:SS	
128	94				

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
16" Conducto r	16	55	15.376			0	124	0	124		
9 5/8" Casing	9.625	36	8.921	LTC	J-55	0	2270	0	2270	42	
13 1/2" Open Hole			13.5			124	2270	124	2270		25

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

Fluid #	Fluid Name	Package/SBM/Mat erial Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/ sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
1	Water		50	bbl	8.34					

Fluid Loss

iFacts Test id #

Fluid #	Fluid Name	Package/SBM/Mat erial Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/ sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time hr
2	SwiftCem B1	SWIFTCM (TM) SYSTEM	650	sack	13	2.01	11.01	5	11.01	

11.01 Gal FRESH WATER Mix-On-Fly to Slurry

iFacts Test id # 2211353

Fluid #	Fluid Name	Package/SBM/Mat erial Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft3/ sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time hr
3	SwiftCem B1	SWIFTCM (TM) SYSTEM	100	sack	14.2	1.53	7.63	5	7.63	

7.63 Gal FRESH WATER Mix-On-Fly to Slurry

iFacts Test id # 2211354

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(v. 4.1.85)

Fluid #	Fluid Name	Package/SBM/Material Name	Rqstd Del Qty	UOM	Density lbm/gal	Yield ft ³ /sack	Water Req Gal/sack	Rate bbl/min	Total Mix Fluid Gal/sack	Surface Batch Mixing Time
4	Water Based Mud-8.5 #/gal		172.2	bbl	8.5			5		
Fluid Loss										
iFacts Test id #										
Caution: Displacement quantities and densities are estimates ONLY! Do not use them for the actual job.										
Packaged Materials										
SAP #		Material		Qty		UOM		Comments		
		FRESH WATER		7919.5		Gal				
Casing Equipment										

Pre-Job Customer Review Risk Assessment for Call Sheet:

The following risks must be reviewed and discussed with the Customer Representative before the job. If all of the steps of the listed Mitigation Plans or Contingency Plans cannot be followed, conducting a Management of Change (reference ST-GL-HAL-HMS-712) invoking your Stop Work Authority (reference ST-GL-HAL-HSE-0612) may be appropriate. Contact the Halliburton office to discuss how to resolve any issues, including whether Contingency Plans can be applied or whether you should exercise your Stop Work Authority so that any changes can be managed with the Customer. Reminder: You are empowered to exercise Stop Work Authority any time (reference ST-GL-HAL-HSE-0612), even before contacting the Halliburton office.

Note: This pre-job customer review risk assessment does not replace the need to complete and review the job specific JSA's.

Planned Pumping Schedule

Pumping Schedule

Stage/ Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume
1	1	Spacer	FW	8.33	4	50 bbl.
1	2	Cement Slurry	Lead Cement	13	7	650 sacks
1	3	Cement Slurry	Tail Cement	14.2	5	100 sacks
1	4	Disp	FW	10.4	5	170 bbl.