

cmt - prod.

# INVOICE

## HALLIBURTON

Halliburton Energy Services, Inc.

Remit To: P.O. Box 301341, Dallas, TX 75303-1341

### Wire Transfer Information

Account Number: Account 00032969

ABA Routing Number: 021000089

Invoice Date: January 12, 2015

Invoice Number: 9501288281

#### DIRECT CORRESPONDENCE TO:

13100 WELD COUNTY RD 8  
FORT LUPTON, CO 80621  
US  
Tel: (303) 825 4346  
Fax: (303) 857 9408

Rig Name: H & P 322  
Well Name: MAHALO STATE AA09-78-1B HNB WELD  
Ship to: GILL, CO 80624  
WELD

Job Date: January 11, 2015  
Cust. PO No.: 200291  
Payment Terms: Net 30 days from Invoice date  
Quote No.:

Sales Order No.: 902024893

Manual Ticket No.:  
Shipping Point: FORT LUPTON Shipping Point  
Ultimate Destination Country: US  
Customer Account No.: 345242

#### TO:

NOBLE ENERGY INC - EBUS  
DONOTMAIL-1001 NOBLE ENERGY WAY  
HOUSTON TX 77070

Contract No.:  
Contract from:  
Contract to:

Material	Description	QTY	UOM	Base Amount	Unit Amount	Gross Amount	Discount	Net Amount
7525	CMT PRODUCTION LINER BOM JP055	1.00	JOB					
16100	CMTG LINER/SHORT CSG STRING 009-407 / CMTG LINER/SHORT CSG STRING,0-4HRS,ZI DEPTH	11759	EA					
2	MILEAGE FOR CEMENTING CREW 000-119	102.000	MI					
	Number of Units	1						
1	ZI-MILEAGE FROM NEAREST HES BA 000-117	102.000	MI					
	Number of Units	1						
114	R/A DENSOMETER W/CHART RECORDER 019-500	1.000	JOB					
	NUMBER OF UNITS	1						
139	ADC (AUTO DENSITY CTRL) SYS, / 046-050	1.000	JOB					
	NUMBER OF JOBS	1	JOB					
	NUMBER OF UNITS	1						
130104	PORT. DATA ACQUIS. W/OPTICEM R PORT. DATA ACQUIS. W/OPTICEM RT W/HES	1.000	EA					
	DAYS OR PARTIAL DAY(WHOLE NO.)	1						
7	ENVIRONMENTAL CHARGE,/JOB,ZI 000-150	1.000	JOB					

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Material	Description	QTY	UOM	Base Amount	Unit Amount	Gross Amount	Discount	Net Amount
8	IRON SAFETY INSPECTION SURCHAR 000-151	1.000	JOB					
86954	ZI FUEL SURCHG-CARS/PICKUPS< 1 FUEL SURCHG-CARS/PICKUPS< 1 1/2TON/PER/MI Number of Units	102.000	MI					
		1						
86955	ZI FUEL SURCHG-HEAVY TRKS > 1 1 FUEL SURCHG-HEAVY TRKS > 1 1/2 TON/PER MI Number of Units	102.000	MI					
		1						
*87605	FUEL SURCHG-CMT & CMT ADDITIVE FUEL SURCHG-CMT & CMT ADDITIVES/PER TNM NUMBER OF TONS	51.000	MI					
		26.8						
372867	Cmt PSL - DOT Vehicle Charge, Cmt PSL - DOT Vehicle Charge, CMT	4.000	EA					
*76400	MILEAGE,CMT MTLS DEL/RET MIN 500-306 / MILEAGE,CMTG MTLS DEL/RET PER/TON MI.MIN NUMBER OF TONS	51.000	MI					
		26.8						
*3965	HANDLE&DUMP SVC CHRg, CMT&ADDI 500-207 NUMBER OF EACH	674.000	CF					
		1	EA					
*452979	CMT, ExpandaCem (TM) system	100.00	SK					
*483826	SBM, CMT, Tuned Spacer III SBM, CMT, Tuned Spacer III	60.000	BBL					
*100003681	CHEM, BARITE, BULK Barite	88.000	SK					
*452979	CMT, ExpandaCem (TM) system	300.00	SK					
*100003781	CHEM, MICRO MATRIX RETARDER, 100003781	5.000	GAL					
*100008028	CHEM, SUGAR,GRANULATED, 50LB B	100.000	LB					

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**Invoice Date: January 12, 2015**

**Invoice Number: 9501288281**

Material	Description	QTY	UOM	Base Amount	Unit Amount	Gross Amount	Discount	Net Amount
	Taxable							31,792.11
	Non-Taxable							10,455.84
	<b>Total</b>					139,183.50	96,935.55-	42,247.95
						139,183.50	96,935.55-	42,247.95
	Due on February 11, 2015							
	Sales Tax - State -CO							921.97
	Invoice Total							43,169.92
								US Dollars
	<b>CUSTOMER ROUTING DATA:</b>							
	AFE/Project Number : 200291							
	Lease/Well Number : MAHALO STATE AA09-78-1B NB							
	Accounting code : 320.10.0017							
	Noble Remit-To Dept : DJ BASIN~ ~ NON-DRILLING WORK IN MULTIPLE CO COUNTIES AND ALL WORK FOR CORPORATE							

**Payment Terms:**

If Customer does not have an approved open account with Halliburton, all sums are payable in cash at the time of performance of services or delivery of equipment, products, or materials. If Customer has an approved open account, invoices are payable based upon the payment terms stated on this invoice or as otherwise stated in the applicable Halliburton contract governing performance or delivery. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable. In the event Halliburton employs an attorney for collection of any amount, Customer agrees to pay all reasonable and necessary attorney fees to recover the unpaid amount, plus all collection and court costs.

Sharon Gurule Phone: 3035718249 Cell: 3038547187  
E-mail: sharon.gurule@halliburton.com



## 1.2 Cement Job Summary

## HALLIBURTON

### *Cementing Job Summary*

*The Road to Excellence Starts with Safety*

Sold To #: 345242		Ship To #: 3367385		Quote #:		Sales Order #: 0902024893					
Customer: NOBLE ENERGY INC E-BUSINESS				Customer Rep: Jeremy Stolz							
Well Name: MAHALO STATE		Well #: AA09-78-1B HNB		API/UWI #: 05-123-39120-00							
Field: WATTENBERG		City (SAP): GILL		County/Parish: WELD		State: COLORADO					
Legal Description: SW SW-4-6N-63W-75FSL-833FWL											
Contractor: H & P DRLG				Rig/Platform Name/Num: H & P 322							
Job BOM: 7525											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA/H117930				Srvc Supervisor: Mark Turner							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST		240 degF					
Job depth MD		11758.5ft		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	
Drill Pipe	3	4	3.34	14	BTC	P-110	0	6729	0	6447	
Casing	3	7	6.276	28	BTC	P-110	0	6938	0	6484	
Casing	3	4.5	4	11.6	BTC	P-110	6729	11758.5	6447	6500	
Open Hole Section			6.125		BTC		6938	11758.5	6484	6500	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	4.5			11758.5		Top Plug	4.5		HES		
Float Shoe	4.5			48.2		Bottom Plug	4.5		HES		
Float Collar	4.5			11710.3		SSR plug set	4.5		HES		
Insert Float	4.5					Plug Container	4.5		HES		
Stage Tool	4.5					Centralizers	4.5		HES		
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/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Water Based Mud-10 #/gal				0	bbl	9.6			6	
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

## HALLIBURTON

## Cementing Job Summary

2	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	60	bbl	11.5	3.86	24.8	6	
145.18 lbm/bbl		BARITE, BULK (100003681)							
36 gal/bbl		FRESH WATER							
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
3	Lead Cement no Super CBL	EXPANDACEM (TM) SYSTEM	100	sack	13.8	1.65	7.6	6	7.6
7.60 Gal		FRESH WATER							
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
4	Tail with Super CBL	EXPANDACEM (TM) SYSTEM	300	sack	13.8	1.65	7.6	6	7.6
7.60 Gal		FRESH WATER							
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
5	Water	Water	142	bbl	8.33			6	
Cement Left in Pipe		Amount	48.2 ft	Reason		Shoe Joint			

## 1.3 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	40
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	Wbm
3	Actual mud density	lb/gal	9.6
4	Actual mud Plastic Viscosity (PV)	cP	
5	Actual mud Yield Point (YP)	lb <sub>f</sub> /100ft <sup>2</sup>	
6	Actual mud 30 min Gel Strength	lb <sub>f</sub> /100ft <sup>2</sup>	
7	Time circulated before job	HH:MM	1:00
8	Mud volume circulated	bbls	
9	Rate at which well was circulated	bpm	
10	Pipe movement during hole circulation	Y/N	N
11	Rig pressure while circulating	psi	
12	Time from end mud circulation to start of job	HH:MM	0:20
13	Pipe movement during cementing	Y/N	N
14	Calculated displacement	bbls	142
15	Job displaced by	Rig/HES	Hes
16	Annular flow before job	Y/N	
17	Annular flow after job	Y/N	
18	Length of rat hole	ft	10
19	Units of gas detected while circulating	units	N
20	Was lost circulation experienced at any time?	Y/N	N

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	1/11/2015	05:30:00	USER				Call out for job
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/11/2015	10:00:00	USER				Pre convoy safety meeting with crew to discuss route and driving safety
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	1/11/2015	10:15:00	USER				Depart from yard for location with approval from journey management
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	1/11/2015	11:30:00	USER				Arrive at location at desired time safely. Journey ended.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/11/2015	11:40:00	USER				Pre rig up safety meeting with crew to discuss rig up and rig up safety
Event	6	Rig-Up Equipment	Rig-Up Equipment	1/11/2015	11:50:00	USER				Rig up all equipment on the ground
Event	7	Standby Rig	Standby Rig	1/11/2015	12:30:00	USER				Standby for rig to finish running drill pipe, and to circulate
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/11/2015	15:00:00	USER	7.00	2.07	0.00	Pre job safety meeting with crew, rig crew, customer, and all third parties to discuss job procedures and safety throughout the job
Event	9	Rig-up Lines	Rig-up Lines	1/11/2015	15:15:00	USER	7.00	2.08	0.00	Rig up line to cement head
Event	10	Start Job	Start Job	1/11/2015	16:22:04	COM4	9.00	10.89	0.00	Fill Lines with 2 BBL of Fresh Water
Event	11	Test Lines	Test Lines	1/11/2015	16:27:01	COM4	53.00	10.88	0.00	Test lines to 4500, good test no leaks
Event	12	Pump Spacer 1	Pump Spacer 1	1/11/2015	16:30:18	COM4	44.00	10.94	0.00	Pump 60 BBL of Tune Spacer @ 11.5 PPG 5.5 bpm 1100 psi
Event	13	Pump Lead Cement	Pump Lead Cement	1/11/2015	16:44:30	COM4	14.00	-0.21	0.00	Pump 29 BBL of Lead Cement with No CBL @ 13.8 PPG, 5.5 bpm 720 psi
Event	14	Pump Tail Cement	Pump Tail Cement	1/11/2015	16:51:12	COM4	253.00	13.86	6.00	Pump 88 BBL of Tail Cement with CBL @ 13.8 PPG, 5.5 bpm 570 psi

Event	15	Shutdown	Shutdown	1/11/2015	17:11:04	COM4	82.00	13.45	0.00	Shutdown and wash lines
Event	16	Drop Top Plug	Drop Top Plug	1/11/2015	17:19:53	COM4	5.00	-0.19	0.00	Drop Top Plug with Third party head
Event	17	Pump Displacement	Pump Displacement	1/11/2015	17:19:59	COM4	10.00	-0.04	0.00	Pump 141 BBL of Fresh Water to Displace. Slow to 2 bpm @ 53 gone to shear plug. Sheared @ 62.5 bbl 2600 psi. Slow to 2 bpm last 10 to land plug 1000 psi over final circulating pressure
Event	18	Bump Plug	Bump Plug	1/11/2015	17:49:47	COM4	3286.00	8.25	0.00	Bump plug @ 141 BBL 1000 psi over final circulating pressure 1900 to 2900 psi
Event	19	Other	Other	1/11/2015	17:50:09	COM4				Bleed off Pressure. Floats held, 2 bbl back
Event	20	End Job	End Job	1/11/2015	17:51:04	COM4	1.00	8.21	0.00	
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/11/2015	17:55:00	USER				Pre rig down safety meeting with crew to discuss rig down safety
Event	22	Rig-Down Equipment	Rig-Down Equipment	1/11/2015	18:05:00	USER				Rig down all equipment
Event	23	Rig-Down Completed	Rig-Down Completed	1/11/2015	18:50:00	USER				Rig down completed
Event	24	Depart Location	Depart Location	1/11/2015	19:30:00	USER				Depart location



3.0 Attachments

3.1 Noble Energy Mahalo State AA09-78-1B HNB Liner.png

