



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #
 72029

FIELD INVOICE

WELL NO. AND FARM RITCHEY H27-12	COUNTY WELD	STATE Colorado	DATE 12/1/2014	Contractor LEED#710
CHARGE TO Noble Energy Inc.	WELL LOCATION			
Attn: Accounting	Section 27	TWP 3N	RANGE 65W	
1625 Broadway Ste 2000	DELIVERED TO CR-43-CR-30		LOCATION 1 LA SALLE	CODE
Denver, CO 80202	SHIPPED VIA 3101-4029-4019-3206		LOCATION 2 CR43-CR-30	CODE
	TYPE AND PURPOSE OF JOB ANULLAR FILL		LOCATION 3 LA SALLE	CODE
			WELL TYPE GAS	CODE

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					\$
ANULLAR FILL		1			
MILLEAGE CHARGE					
Pickup	\$1.50 per Mile	24			
Truck/Equipment	\$4.00 per Mile	24			
Truck/Equipment	\$4.00 per Mile	24			
CEMENT CHARGE:					
G Cement		200			
ADDITIVES CHARGE:					
Sugar		50			
FLOAT EQUIPMENT:					
HEATER CHARGE		1			
OTHER CHARGES:					
DEPTH CHARGE					
Iron Inspection		1			
DATA ACQUISITION FEE		1			
Supervisor Charge		1			
Wait Time					

If this account is not paid within 30 days of invoice date a FINANCE CHARGE will be made. Computed at a single monthly rate of 1 1/2% which is equal to an ANNUAL PERCENTAGE RATE OF 18%.

SUB TOTAL		
TAX	#N/A	#N/A
TOTAL		#N/A

SUBJECT TO CORRECTION

Amber Gaudin

 Bison Oil Well Cementing, Inc. Representative

Customer or Agent

Customers hereby acknowledges and specifically agrees to the terms and conditions on this work order, including, without limitation, the provisions on the reverse hereof which include the release and indemnity.



Bison Oil Well Cementing

Invoice # 72029
 API# 05-123-261
 Foreman: AARON
 Date 12/1/201

Customer: NOBLE
 Well Name: RTTCHEY H27-12

County: Weld
 State: Colorado
 Sec: 27
 Twp: 3N
 Range: 65W

Consultant: ALLEN
 Rig Name & Number: LEED # 710
 Distance To Location: 24-MILLES
 Units On Location: 3101-4029=108-4019-3206
 Time Requested: NOON
 Time Arrived On Location: 11:30AM

Plug Job

Well Data		
OD Inches	1.315	
String Weight Per ft	3.02	
First Plug Sacks	200	
First Plug Depth	1230	
Second Plug Sacks		
Second Plug Depth		
Third Plug Sacks		
Third Plug Depth		
Fourth Plug Sacks		
Fourth Plug Depth		
ID	#N/A	
First Plug Displacement	#N/A	bbl
Second Plug Displacement	#N/A	bbl
Thirst Plug Displacement	#N/A	bbl
Fourth Plug Displacement	#N/A	bbl
bbls of Spacer Ahead	5	bbls

bbls of Slurry	
First Plug bbls of Slurry	40.9630 bbls
Second Plug bbls of Slurry	0.0000 bbls
Third Plug bbls of Slurry	0.0000 bbls
Fourth Plug bbls of Slurry	0.0000 bbls

First Plug Cement Data	
Cement Name:	neat g
Cement Density (lb/gal) :	15.8
Cement Yield (cuft) :	1.15
Gallons Per Sack:	5.00
Second Plug Cement Data	
Cement Name:	Neat g
Cement Density (lb/gal) :	15.8
Cement Yield (cuft) :	1.15
Gallons Per Sack:	5.00
Third Plug Cement Data	
Cement Name:	neat g
Cement Density (lb/gal) :	
Cement Yield (cuft) :	
Gallons Per Sack:	
Fourth Plug Cement Data	
Cement Name:	
Cement Density (lb/gal) :	
Cement Yield (cuft) :	
Gallons Per Sack:	
Displacement Fluid lb/gal:	8.3
Fluid Ahead (bbls):	15.0
H2O Wash Up (bbls):	20.0

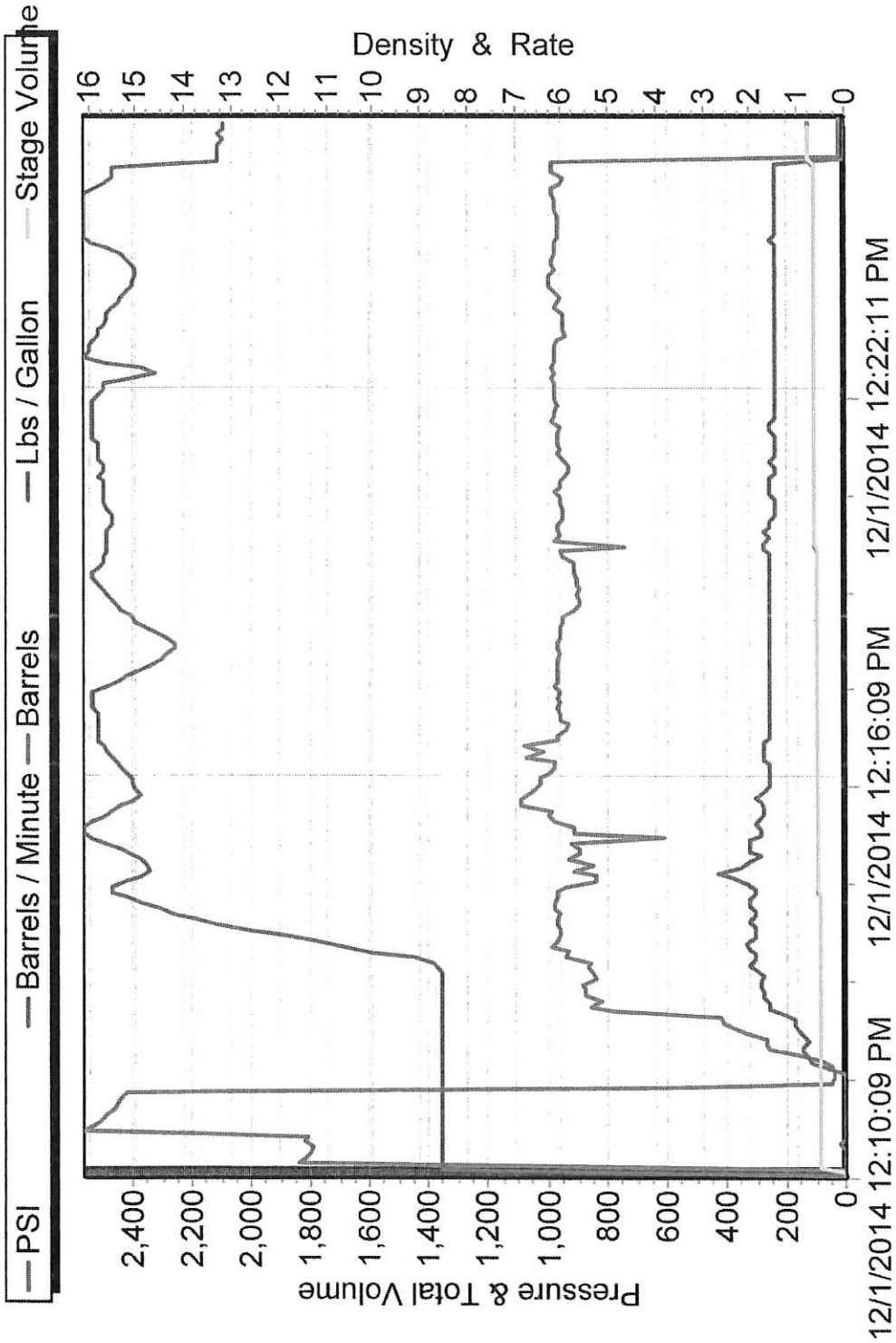
bbls of Mix Water	
First Plug bbls Mix Wate	23.8095 bbls
Second Plug bbls Mix Wat	0.0000 bbls
Third Plug bbls Mix Wate	0.0000 bbls
Fourth Plug bbls Mix Wat	0.0000 bbls



Authorized To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.

SERIES 2000





BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

JOB/TASK: Plug and Abandon		CEMENTER/SUPERVISOR: AARON CARRASCO	PAGE 1	OF 3
WELL NAME: RITCHEY H27-12		RIG #LEED #710	DATE: 12-1-14	
OPERATOR: NOBLE		CONSULTANT: ALLEN	INVOICE # 72029	
PPE REQUIRED: <ul style="list-style-type: none"> <input type="checkbox"/> Hard Hat <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Steel Toe Boots <input type="checkbox"/> Impact Gloves <input type="checkbox"/> FR Coveralls <input type="checkbox"/> Reflective Vest ADDITIONAL PPE (based on job specific hazards) <ul style="list-style-type: none"> <input type="checkbox"/> Goggles <input type="checkbox"/> Faceshield <input type="checkbox"/> Chemical Resistant Gloves <input type="checkbox"/> Chemical Resistant Clothing <input type="checkbox"/> Air Purifying Respirator <input type="checkbox"/> Supplied Air Respirator <input type="checkbox"/> Personal H2S Monitor <input type="checkbox"/> Personal Methane Monitor 				
JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE	REVIEWED BY	
1. Review JSA	Misunderstanding	Clarify job and associated hazards and safety concerns	AC	
2. Conduct pre job safety meeting	Misunderstanding	<ul style="list-style-type: none"> -Hold safety meeting with all personnel on location, ensure everyone pays attention to ensure they understand their role and responsibility during the job -Review treatment report with consultant and attain signature for authorization to proceed -Identify and address short service employees (SSE) who are on location -Verify method of relaying hand signals to rig crew for shutting down mud pump 	AC	
3. Move trucks in and rig up equipment	Other traffic on location, overhead lines, pinch points, heavy lifting, slips/falls	<ul style="list-style-type: none"> -Coordinate with well site supervisor for directions on where and when to park the equipment -All Bison crew members walk the location prior to driving in to access specific hazards -Utilize spotters when trucks are in motion -Establish buffer zone around equipment utilizing cones and caution tape -Cementer follows up to ensure connections are secure -Lift with your legs and use teamwork when rigging up -Utilize reflective vests and wands to increase visibility at night -Deploy spill berms and buckets -Verify connections on mudline for compatibility 	AC	
4. Raise hose to rig floor	Overhead work, improper hook up/load not properly secured, miscommunication between ground personnel and the crane/tugger operator	<ul style="list-style-type: none"> Inspect chains, slings, hooks prior to lift -Ensure line of sight with crane/tugger operator is maintained throughout the lift and hand signals are clarified before the lift. -Ensure no personnel are under suspended loads -Utilize tag line 	AC	
5. Attach swage to tubing/Connect to swage on drill pipe	Connections/equipment failing under pressure, spills, slips and falls	<ul style="list-style-type: none"> -Insure swage has proper pressure rating for the job and falls within the parameters of the <i>Bison Oilwell Cementing Iron Inspection Program</i> -Verify the compatibility of the connections on a swage/pin provided by the rig -Minimize number of people on rig floor, utilize Bison personnel to attach cement lines -Be aware of surroundings when swinging a hammer 	AC	
6. Pressure test lines	Equipment failing under high pressures	<ul style="list-style-type: none"> -Ensure rig floor is clear and personnel are away from hoses prior to test -Establish buffer area around high pressure hoses -Lines are checked from a distance and using pressure gauges -Cementer ensures pressure gauges are working properly 	Test to: PSI- 1500	Pressure relief valve set to: PSI- 1500



BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

Maximum pressure allowed for job: PSI- 1500		Max. pump pressure: PSI- 5000	
7. Pump Spacer/Mix and Pump Cement	Serious injury from high pressure line failure or catastrophic equipment failure. Burns or skin irritation from splashing cement, uncontrolled spills	<ul style="list-style-type: none"> -Pressure test prior to job, utilize heavy duty hose hobbles and pressure relief valve -Keep rig floor and buffer area clear while pumping -Utilize proper PPE -Have access to water to rinse affected skin -Deploy spill berms and buckets 	AC
8. Displacement	Unexpected pressure associated with resuming of pumping, serious injury from high pressure line failure catastrophic equipment failure, spills, overpressure of mudlines	<ul style="list-style-type: none"> -Ensure rig floor remains clear and non-essential personnel stay clear from buffer area -Pump operator monitors pump pressure constantly -Utilize proper PPE -During displacement ensure one mudline valve is always open -Review method of relaying hand signals to rig crew to engage/disengage mud pumps 	AC
REPEAT STEPS 7 AND 8 AS REQUIRED			
9. Wash up / rig down	Splashing cement slurry, heavy lifting, pinch points, unsecured hoses	<ul style="list-style-type: none"> -Utilize stakes or portable tank manifold to secure hoses -Use proper lifting technique (2 man lift, lift with legs, plan your route) 	AC
10. Depart location	Other traffic and personnel and location, overhead lines	<ul style="list-style-type: none"> -All Bison crew member walk the planned exit route to access possible obstacles and hazards -Utilize spotters while backing 	AC
11. General Precautions/Stop Work		<ul style="list-style-type: none"> -if you see a leaking connection, notify the cementer. Do not attempt to hammer up a leaking connection as there may be pressure on the lines. - Any person on location, regardless of their position or experience level has the authority and responsibility to stop the job if they witness an unsafe act or condition. 	AC
OTHER HAZARDS SPECIFIC TO LOCATION OR ENVIRONMENT NOT ADDRESSED ABOVE:			
DESIGNATED EMERGENCY MUSTER AREA:		NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911):	
HEAD COUNT-		GREELEY COLORADO WELD COUNTY	