



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

72022

FIELD INVOICE


WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
RITCHEY H27-05	WELD	Colorado	11/19/2014	LEED#710
CHARGE TO	WELL LOCATION			
Noble Energy Inc.	Section	TWP	RANGE	
	27	3N	65W	
Attn: Accounting	DELIVERED TO		LOCATION 1	CODE
	CR-43-CR30		LA SALLE	
1625 Broadway Ste 2000	SHIPPED VIA		LOCATION 2	CODE
	3101-4029-3205-4033		CR43-CR-30	
Denver, CO 80202	TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
	PLUG		LA SALLE	
			WELL TYPE	CODE
			GAS	

PUMP CHARGE			
PLUG		1	
MILEAGE CHARGE			
Pickup	\$1.50 per Mile	30	
Truck/Equipment	\$4.00 per Mile	30	
Truck/Equipment	\$4.00 per Mile	30	
CEMENT CHARGE:			
G Cement		386	
ADDITIVES CHARGE:			
Sugar		50	
FLOAT EQUIPMENT:			
OTHER CHARGES:			
IRON INSPECTION		1	
DATA ACQUISITION FEE		1	
DEPTH CHARGE			
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%.

TAX

Customer or Agent


Bison Oil Well Cementing, Inc. Representative

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



Bison Oil Well Cementing

Customer: NOBLE
Well Name: RITCHEY H27-05

Invoice # 72022
API# 05-123-21908
Foreman: AARON
Date 11/20/2014

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

Consultant: ALLEN
Rig Name & Number: LEED #710
Distance To Location: 15-MILLES
Units On Location: 3101-4029-108-4033-3205
Time Requested: 9AM
Time Arrived On Location: 8:30AM

Time Left Location:

Plug Job

Well Data

OD Inches	1.315	
String Weight Per ft	2.3	
First Plug Sacks	386	
First Plug Depth	1251	
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
Third 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	79.0586 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:
Cement Density (lb/gal) :
Cement Yield (cuft) :
Gallons Per Sack:

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

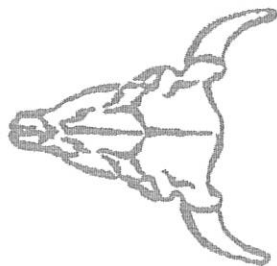
bbls of Mix Water

First Plug bbls Mix Water	45.9524 bbls
Second Plug bbls Mix Water	0.0000 bbls
Third Plug bbls Mix Water	0.0000 bbls
Fourth Plug bbls Mix Water	0.0000 bbls

X

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.



Bison Oil Well Cementing
Single Cement Surface Pipe

Customer
Well Name

NOBLE
RITCHEY H27-05

INVOICE #
LOCATION
FOREMAN
Date

72022
Weld
AARON
11/20/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting	9:20AM	Displace 1			Displace 2			Displace 3			Displace 4		
	8:45AM	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI
MIRU		0			0			0			0		
CIRCULATE	9:27AM	10			10			10			10		
CIRCULATE		20			20			20			20		
CIRCULATE		30			30			30			30		
CIRCULATE		40			40			40			40		
M & P		50			50			50			50		
	Time	Sacks	60		60			60			60		
First Plug	9:31AM	386	70		70			70			70		
Second Plug		#DIV/0!	80		80			80			80		
Third Plug		#DIV/0!	90		90			90			90		
Fourth Plug		#DIV/0!	100		100			100			100		
			110		110			110			110		
First Plug	46		120		120			120			120		
Second Plug			130		130			130			130		
Third Plug			140		140			140			140		
Fourth Plug			150		150			150			150		
Water Temp	49												

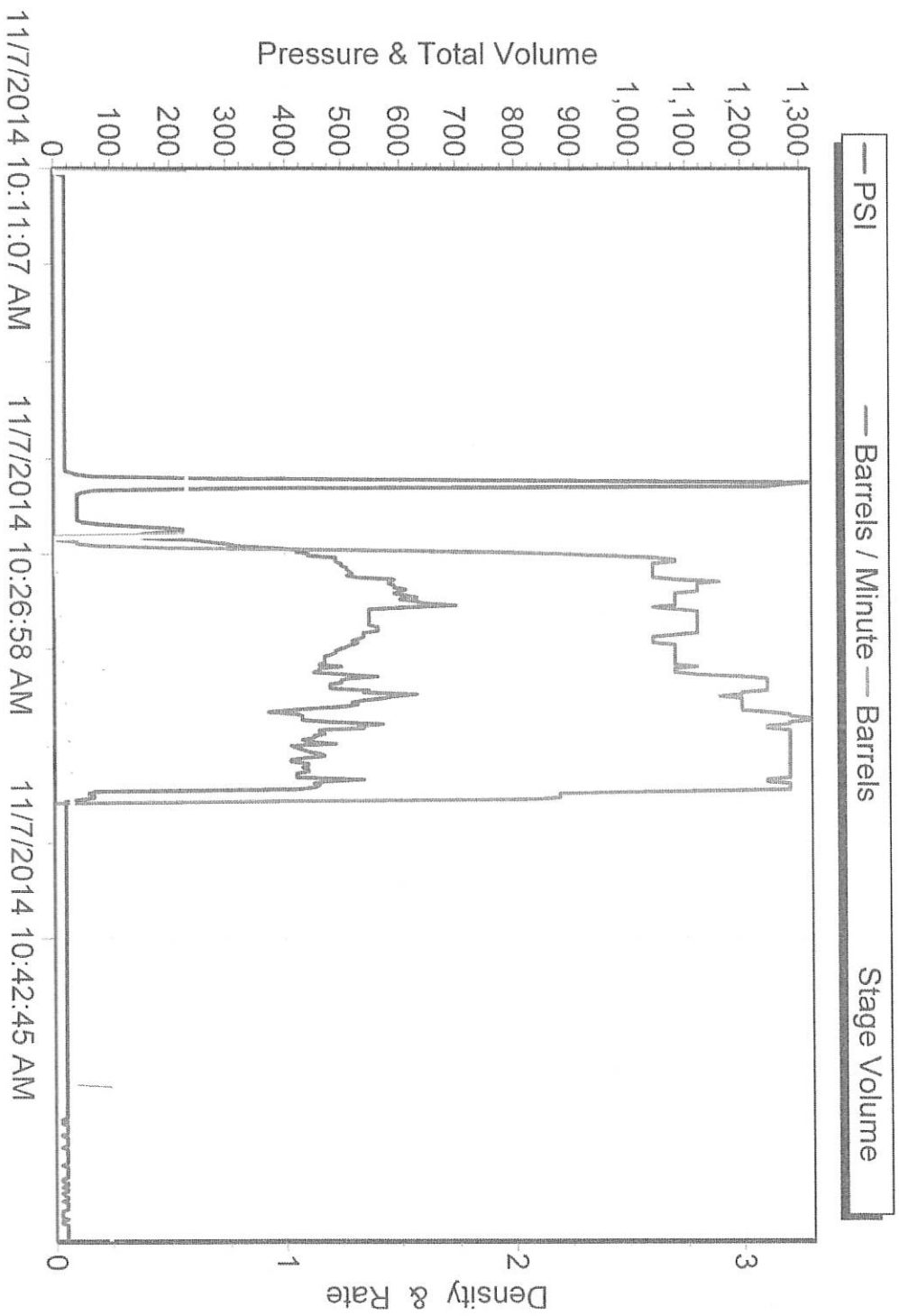
Notes:

X
Work Preformed

X
Title

X
Date

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 H27-05		RIG #LEED #710	LOCATION: CR-43-CR-30	DATE: 11-20-14	
OPERATOR: NOBLE		CONSULTANT: ALLEN		INVOICE # 72022	
PPE REQUIRED: <input type="checkbox"/> Hard Hat <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Steel Toe Boots <input type="checkbox"/> Impact Gloves		ADDITIONAL PPE (based on job specific hazards) <input type="checkbox"/> FR Coveralls <input type="checkbox"/> Reflective Vest <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	
1. Review JSA		Misunderstanding		Clarify job and associated hazards and safety concerns	
2. Conduct pre job safety meeting		Misunderstanding		-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	
3. Move trucks in and rig up equipment		Other traffic on location, overhead lines, pinch points, heavy lifting, slips/falls		-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	
4. Raise hose to rig floor		Overhead work, improper hook up/load not properly secured, miscommunication between ground personnel and the crane/tugger operator		-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	
5. Attach swage to tubing/Connect to swage on drill pipe		Connections/equipment failing under pressure, spills, slips and falls		-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	
6. Pressure test lines		Equipment failing under high pressures		-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	
				AC	

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	-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.			
OTHER HAZARDS SPECIFIC TO LOCATION OR ENVIRONMENT NOT ADDRESSED ABOVE:			AC	
DESIGNATED EMERGENCY MUSTER AREA:		NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911):		
HEAD COUNT-		GREELEY COLORADO WELD COUNTY		