

1738 Wynkoop St., Ste. 102
Denver, Colorado 80202
Phone: 303-296-3010
Fax: 303-298-8143
E-mail: bisonoil1@qwestoffice.net

[illegible]

WELL NO. AND FARM Hardisty 10-0546		COUNTY Weld	STATE CO	DATE 12-27-13	
CHARGE TO Noble		WELL LOCATION SEC. 10 TWP. 6N RANGE 66W		CONTRACTOR Chris	
			DELIVERED TO 72 + 31	LOCATION 1 chop	CODE
			SHIPPED VIA 2106-	LOCATION 2 72 + 31	CODE
			TYPE AND PURPOSE OF JOB Amplifier fill	LOCATION 3 chop	CODE
				WELL TYPE logs	CODE

[illegible]

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 REFERENCES

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

TAX

TOTAL

SUBJECT TO CORRECTION

Customer or His 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, INC.

1547 Gaylord Street
Denver, Colorado 80206
Phone: 303-296-3010
Fax: 303-298-8143
E-mail: bisonoil1@qwestoffice.net



INVOICE #
LOCATION
FOREMAN

12543
72431
mate

TREATMENT REPORT

DATE	WELL NAME	SECTION	TWP	RGE	COUNTY
10-27-13	Hardesty 10-0566	10	6N	66W	Weld
BILL TO	CONSULTANT				
nable	Chris				
OWNER	RIG NAME & NUMBER				
	Ensign 303				
MAILING ADDRESS	DISTANCE TO LOCATION		UNITS ON LOCATION		
	20.5		3106 - 3204		
CITY	TIME REQUESTED		TIME ARRIVED ON LOCATION		
	1000 AM		1000 AM		
STATE, ZIP	TIME LEFT LOCATION				
	12:30 PM				

WELL DATA

HOLE SIZE	TUBING SIZE	PERFORATIONS
	1 1/4	
TOTAL DEPTH	TUBING DEPTH	SHOTS/FT
	823	
CASING SIZE	TUBING WEIGHT	OPEN HOLE
CASING DEPTH	TUBING CONDITION	TREATMENT VIA
	Good	
CASING WEIGHT	PACKER DEPTH	
	15	
CASING CONDITION		
Max Rate		
Max Pressure		

Cement Makeup

Cement Blend	BFN 3070 BCC-1.25/6BFLA-1		
Cement - Specs	lbs	Yield	Water Requirements
	15.2	1.27	5.89
Annulus Factor	Capacity Factor		
	.00097		

TYPE OF TREATMENT

<input type="checkbox"/> Surface Pipe	<input type="checkbox"/> Production	<input type="checkbox"/> Squeeze
<input type="checkbox"/> MISC Pump	<input checked="" type="checkbox"/> P&A	

HYD HHP = RATE X PRESSURE / 40.8

% Excess
BBL to Pit

DESCRIPTION OF JOB EVENTS

X

Authorization To Proceed

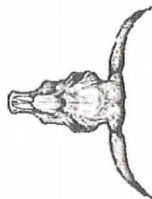
Title

X/2 27-13
Date

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INVOICE #
LOCATION
FOREMAN

12543
72+31
monte

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting	MIRU	CIRCULATE	Drop Plug	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5			Displace 5		
				BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI	BLS	Time	PSI
				0	11:33	380	0			0			0			0			0		
				20			20			10			20			20			20		
				30			30			30			30			30			30		
				40			40			40			40			40			40		
				50			50			50			50			50			50		
				60			60			60			60			60			60		
				70			70			70			70			70			70		
				80			80			80			80			80			80		
				90			90			90			90			90			90		
				100			100			100			100			100			100		
				110			110			110			110			110			110		
				120			120			120			120			120			120		
				130			130			130			130			130			130		
				140			140			140			140			140			140		
				150			150			150			150			150			150		

Notes:

Concrete 5bbls Ahead mix + Pump 165 sacks 15.2 1,27 yield 5.81 H₂O displace 2 bbl H₂O

X Work Performed Title Date

X 11-22-13

**BISON**

BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

OILGJOB/TASK: Plug and Abandon		CEMENTER/SUPERVISOR: monte bedeaux		PAGE 1	OF 3
WELL NAME: hardest 10-05g6		RIG # 606303	LOCATION: 72-31	DATE: 12-27-13	
OPERATOR: noble		CONSULTANT: chris I		INVOICE # 12543	
PPE REQUIRED: <input checked="" type="checkbox"/> Hard Hat <input checked="" type="checkbox"/> FR CoverallsADDITIONAL PPE (based on job specific hazards) <input type="checkbox"/> Goggles <input type="checkbox"/> Air Purifying Respirator <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Faceshield <input type="checkbox"/> Supplied Air Respirator <input type="checkbox"/> Steel Toe Boots <input type="checkbox"/> Reflective Vest <input type="checkbox"/> Chemical Resistant GlovesPersonal H2S Monitor <input type="checkbox"/> Impact Gloves <input type="checkbox"/> Chemical Resistant ClothingPersonal Methane Monitor					
JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE		REVIEWED BY	
1. Review JSA	Misunderstanding	Clarify job and associated hazards and safety concerns		MB	
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 from 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	Test to: PSI- 2500 Maximum pressure allowed for job: PSI- 2000	Equipment failing under high pressures		Pressure relief valve set to: PSI- 3500 Max. pump pressure: PSI- 4000	

BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET



BISON

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 	m/s
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 	
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) 	
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 	
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. 		
OTHER HAZARDS SPECIFIC TO LOCATION OR ENVIRONMENT NOT ADDRESSED ABOVE:			
DESIGNATED EMERGENCY MUSTER AREA: access rd		NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911): greelley	
HEAD COUNT- 14			

M/D TOTCO 2000 SERIES

— Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume

