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

№ 12627

PRICE REFERENCE	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
	Pump Charge	1	EA.		
	BFN TH 3% BCCA-1.25 16/sk BFLA-1	552	SK.		
	BCLY-1	3	QT.		
	Pink Dye	16	OZ.		
	TRUCK MILEAGE 4.00 mile 60 mile min ONE WAY	2	EA.		
	PICKUP MILEAGE 1.50 mile 60 mile min. ONE WAY	1	EA.		
	DATA ENT.	1	EA.		
	COLO STATE NORTH IS-66W-S36 3225 CDH				
	AFF 09787				
	CC 830.130				
	Total Weight				
	Loaded Miles				
	Ton Miles				

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%.

Thanks Calvin

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

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 Tail & Lead

Date: 2/13/2014
Invoice # 12627
API# 05-001-09787
Foreman: Calvin Reimers

Customer: Bill Barrett
Well Name: State of Colorado North 3225CDH

County: Adams
State: Colorado
Sec: 36
Twp: 1N
Range: 66W

Consultant: Pete
Rig Name & Number: Major 43
Distance To Location: 38 Miles
Units On Location: 3106/3205
Time Requested: 400am
Time Arrived On Location: 140am
Time Left Location: 4:45 AM

WELL DATA

Casing Size (in) : 9.625
Casing Weight (lb) : 36
Casing Depth (ft) : 1,481
Total Depth (ft) : 1490
Open Hole Diameter (in) : 13.50
Conductor Length (ft) :
Conductor ID :
Shoe Joint Length (ft) : 41
Landing Joint (ft) : 8

Sacks of Tail Requested : 100
HOC Tail (ft) : 0

One or the other, cannot have quantity in both

Max Rate: 7
Max Pressure: 2500

Cement Data

Lead

Cement Name:
Cement Density (lb/gal) : 13.1
Cement Yield (cuft) : 1.69
Gallons Per Sack : 8.64
% Excess : 25%

Tail

Cement Name:
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack : 5.89
% Excess : 0%

Fluid Ahead (bbls) : 112.0
H2O Wash Up (bbls) : 20.0

Spacer Ahead Makeup

30bbls H2O+KCL+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Lead Calculated Results

HOC of Lead : 1249.01 ft
Casing Depth - HOC Tail
Volume of Lead Cement : 610.43 cuft
HOC of Lead X Open Hole Ann
Volume of Conductor : 0.00 cuft
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
Total Volume of Lead Cement : 610.43 cuft
(cuft of Lead Cement) + (Cuft of Conductor)
bbls of Lead Cement : 135.90 bbls
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)
Sacks of Lead Cement : 451.50 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
bbls of Lead Mix Water : 92.88 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42
Displacement : 111.95 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)
Total Water Needed: 224.83 bbls

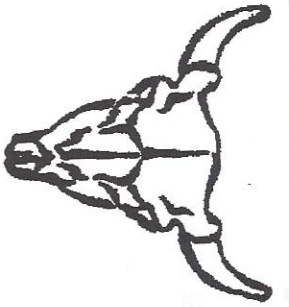
Tail Calculated Results

Tail Cement Volume In Ann : 127.00 cuft
(HOC Tail) X (OH Ann)
Total Volume of Tail Cement : 109.40 Cuft
(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
bbls of Tail Cement : 22.62 bbls
(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
HOC Tail : 223.84 ft
(Tail Cement Volume) ÷ (OH Ann)
Sacks of Tail Cement : 100.00 sk
(Total Volume of Tail Cement) ÷ (Cement Yield)
bbls of Tail Mix Water : 14.02 bbls
(Sacks of Tail Cement X Gallons Per Sack) ÷ 42
Pressure of cement in annulus
Hydrostatic Pressure : 1007.72 PSI
Collapse PSI: 2020.00 psi
Burst PSI: 3520.00 psi

X

Authorization 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
Two Cement Surface Pipe**

Customer
Well Name

Bill Barrett
State of Colorado North 3225CD

Date 2/13/2014
INVOICE # 12627
LOCATION Adams
FOREMAN Calvin Reimers

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
Safety Meeting	236am															
MIRU	145am															
	302am															
CIRCULATE		0	340am	50	0			0			0			0		
Drop Plug		10	343am	100	10			10			10			10		
		20	345am	100	20			20			20			20		
		30	347am	100	30			30			30			30		
		40	348am	130	40			40			40			40		
		50	350am	190	50			50			50			50		
M & P		60	352am	250	60			60			60			60		
		70	354am	310	70			70			70			70		
		80	355am	360	80			80			80			80		
		90	357am	410	90			90			90			90		
		100	359am	470	100			100			100			100		
		110	401am	470	110			110			110			110		
		120	402am	450	120			120			120			120		
		130	Bump	540	130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		
Lead mixed bbls	92.98															
Lead % Excess	25%															
Lead Sacks	452															
Notes:																
Tail mixed bbls	14.02															
Tail % Excess	0%															
Tail Sacks	100															
Total Sacks	552															
bbl Returns	35															

X *Don*

X Title _____ X Date _____

Work Preformed



Bison Oil Well Cementing Tail & Lead

Cementing Customer Satisfaction Survey

Service Date	2/13/2014
Well Name	State of Colorado North 3225CDH
County	Adams
State	Colorado
SEC	36
TWP	1N
RNG	66W

Invoice Number	12627
API #	05-001-09787
Job Type	
Company Name	Bill Barrett

Customer Representative **Pete**

Supervisor Name **Calvin Reimers**

Employee Name (Including Supervisor)
Calvin Reimers
Pablo S
Lee S
Keith P

Exposure Hours (Per Employee)

3
3
3
3
12

Total Exposure Hours

Did we encounter any problems on this job? ☐ Yes ☒ No

To Be Completed By Customer

Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
 - 4 - Exceeded Expectation (Provided more than what was required/expected)
 - 3 - Met Expectations (Did what was expected)
 - 2 - Below Expectations (Job problems/failures occurred - *Recovery made)
 - 1 - Poor Performance (Job problems/failures occurred - *Some recovery made)
- *Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING	CATEGORY
4	Personnel -
4	Equipment -
4	Job Design -
4	Product/Material -
4	Health & Safety -
4	Environmental -
4	Timeliness -
4	Condition/Appearance -
4	Communication -

CUSTOMER SATISFACTION RATING

- Did our personnel perform to your satisfaction?
- Did our equipment perform to your satisfaction?
- Did we perform the job to the agreed upon design?
- Did our products and materials perform as you expected?
- Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc.)?
- Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc.)?
- Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
- Did the equipment condition and appearance meet your expectations?
- How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

- Yes ☒ No Did an accident or injury occur?
- Yes ☒ No Did an injury requiring medical treatment occur?
- Yes ☒ No Did a first-aid injury occur?
- Yes ☒ No Did a vehicle accident occur?
- Yes ☒ No Was a post-job safety meeting held?

Please Circle:

- Yes ☒ No Was a pre-job safety meeting held?
- Yes ☒ No Was a job safety analysis completed?
- Yes ☒ No Were emergency services discussed?
- Yes ☒ No Did environmental incident occur?
- Yes ☒ No Did any near misses occur?

Additional Comments:

THE INFORMATION HEREIN IS CORRECT -

X

Customer Representative's Signature

DATE: _____

Any additional Customer Comments or HSE concerns should be described on the back of this form



BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

ASK: SURFACE CASING CEMENTING		CEMENTER/SUPERVISOR: Calvin Reimers		PAGE 1	OF 3
NAME: State of Colorado North 3225CDH		RIG # Major 43	LOCATION: Piccadilly + 128" Ave	DATE: 2-13-14	
ATOR: Bill Barrett		CONSULTANT: Pete		INVOICE # 12627	
EQUIPED: <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			REVIEWED BY
iew JSA	Misunderstanding	Clarify job and associated hazards and safety concerns			CR
duct 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			CR
ve 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			CR
e cement head and hoses to rig floor	Overhead work, improper hookup/load not properly secured, poor communication between ground personnel and crane/tugger operator	-Inspect slings, chains and hooks prior to lift -Ensure line of sight with crane/tugger operator is maintained throughout the lift and hand signals are understood -Ensure no personnel are under suspended equipment -Utilize a tag line to control the load			CR
irect Cement head/swage/pin, chickens and es.	Working in a congested area, pinch points, swinging hammers, slippery rig floor	-Only Bison personnel install the cement head and hoses -Maintain line of sight and communication with crane/tugger operator -Remove non-essential personnel from rig floor, wait until other activity is done -Rig crew does not install chains until head and hoses are installed -Ensure a clear path when swinging a hammer -Ensure all fittings and hoses have proper pressure rating for the job and fall within the parameters of the <i>Bison Oilwell Iron Inspection Program</i>			CR
ssure test lines	Test to: PSI- 500 Maximum pressure allowed for job: PSI- 2500	Equipment failing under high pressures			CR
np Spacer (dye marker)/Mix and Pump tent	PSI- 2500	-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 functioning properly			CR
Serious injury from high pressure line failure or catastrophic equipment failure. Casing hydraulicing from hole, causing injury. Burns or skin irritation from splashing cement, uncontrolled spills		-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			CR

BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET



p plug	Slips, trips, falls. Miscommunication between pump operator and cementer, pressure against a closed stop	<ul style="list-style-type: none"> -Utilize 3 points of contact while descending/climbing ladder and stairs -Have visual contact between cementer and pump operator before pump is engaged 	CR
placement	Unexpected pressure associated with resuming of pumping, casing hydraulizing from hole, serious injury from high pressure line failure or catastrophic equipment failure.	<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 	CR
imp plug-Test float and release pressure	Pressure jumps before expected (calculated) displacement. Pressure jumps rapidly and higher than expected.	<ul style="list-style-type: none"> -Pump operator slows rate to 2 BPM when 5 bbls from calculated displacement and down to 1 bpm -Pump operator monitors pressure constantly -Pressure relief valve installed on pump -Ensure rig floor remains clear and non-essential personnel stay clear from the buffer area 	CR
assure test casing (required) Test to: PS- N/A FOR: MIN-	Serious injury from high pressure line or catastrophic equipment failure	<ul style="list-style-type: none"> -Ensure rig floor remains clear and non-essential personnel stay clear from the buffer area 	CR
ash 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) 	CR
part 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 	CR
Internal 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.			CR
OTHER HAZARDS SPECIFIC TO LOCATION OR COMMENT NOT ADDRESSED ABOVE:			
NATED EMERGENCY MUSTER AREA: Lease Road to Rig COUNT-- 11		NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911): Brighton	



Signature and Company	
Edgar P. Bison	
for from	
Russell Woodworth Major Drilling	
Sean Sylva Major Drilling	
Logan Densley Major Drilling	
Mark Anderson Major	
Frank Vuk	
John Deneal Bison	
Walt Hark Bison	
Greggville Nov	