

Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/11/2013
 Invoice # 12562
 API# _____
 Foreman: Kirk

Customer: bill barrett
Well Name: helton 5-63-27-4956 cdh

County: weld Consultant: casey
 State: Colorado Rig Name & Number: major 43
 Distance To Location: _____
 Sec: 27 Units On Location: 3103-3211
 Twp: 5n Time Requested: 630 am
 Range: 63w Time Arrived On Location: 430 am
 Time Left Location: 10:00am

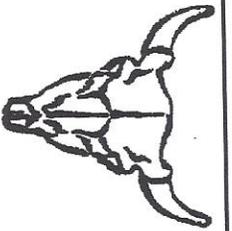
WELL DATA		Cement Data	
Casing Size OD (in) :	9.6250	Cement Name:	BFN III
Casing Weight (lb) :	36	Cement Density (lb/gal) :	15.2
Casing Depth (ft.) :	774	Cement Yield (cuft) :	1.27
Total Depth (ft) :	800	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	13.50	% Excess:	30%
Conductor Length (ft) :		Displacement Fluid lb/gal:	8.3
Conductor ID :		BBL to Pit:	
Shoe Joint Length (ft) :	41	Fluid Ahead (bbls):	
Landing Joint (ft) :	8	H2O Wash Up (bbls):	20.0
Max Rate:		Spacer Ahead Makeup	
Max Pressure:			

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results	Displacement: 57.29 bbls
cuft of Shoe 17.80 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 0.00 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus
cuft of Casing 378.28 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 611.15 PSI
Total Slurry Volume 396.07 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing
bbls of Slurry 91.70 bbls (Total Slurry Volume) X (.1781) X (% Excess Cement)	Displacement: 316.06 psi
Sacks Needed 405 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 32.37 psi
Mix Water 56.86 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 348.43 psi
	Differential Pressure: 262.72 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 76.86 bbls

X Casey Jan
 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
Single Cement Surface Pipe

Customer
 Well Name

bill barrett
 helton 5-63-27-4956 cdh

INVOICE #
 LOCATION
 FOREMAN
 Date

12562
 weld
 Kirk
 12/11/2013

Treatment Report Page 2

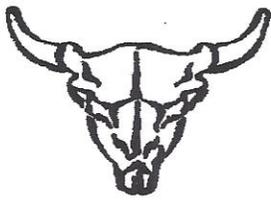
DESCRIPTION OF JOB EVENTS

	818am 800am 834am	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BbLS	Time	PSI												
Safety Meeting																
MIRU																
CIRCULATE		0	905	20	0			0			0			0		
Drop Plug		10	907	50	10			10			10			10		
		20	909	80	20			20			20			20		
905 am		30	911	180	30			30			30			30		
		40	913	240	40			40			40			40		
		50	915	250	50			50			50			50		
M & P		60			60			60			60			60		
Time	Sacks	60			60			60			60			60		
845 am		70			70			70			70			70		
903 am stop		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
% Excess		130			130			130			130			130		
Mixed bbLS		140			140			140			140			140		
Total Sacks		150			150			150			150			150		
bbL Returns		19			19			19			19			19		

Notes:

bumped plug at 919 am 420 psi 84.5 bbLS slurry

X *Carryover* _____ X *Co-man* _____ X *12-11-13* _____
 Work Performed _____ Title _____ Date _____



Bison Oil Well Cementing Single Cement Surface Pipe

Cementing Customer Satisfaction Survey

Service Date	12/11/2013
Well Name	helton 5-63-27-4956 cdh
County	weld
State	Colorado
SEC	27
TWP	5n
RNG	63w

Invoice Number	20511
API #	0
Job Type	Single Cement Surface Pipe
Company Name	bill barrett

Customer Representative **casey**

Supervisor Name **kirk**

Employee Name (Including Supervisor)
chris
eric
zack

Exposure Hours (Per Employee)
5.5
5.5
5.5
16.5

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
5	Personnel -
5	Equipment -
5	Job Design -
5	Product/Material -
5	Health & Safety -
5	Environmental -
5	Timeliness -
5	Condition/Appearance -
5	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 -

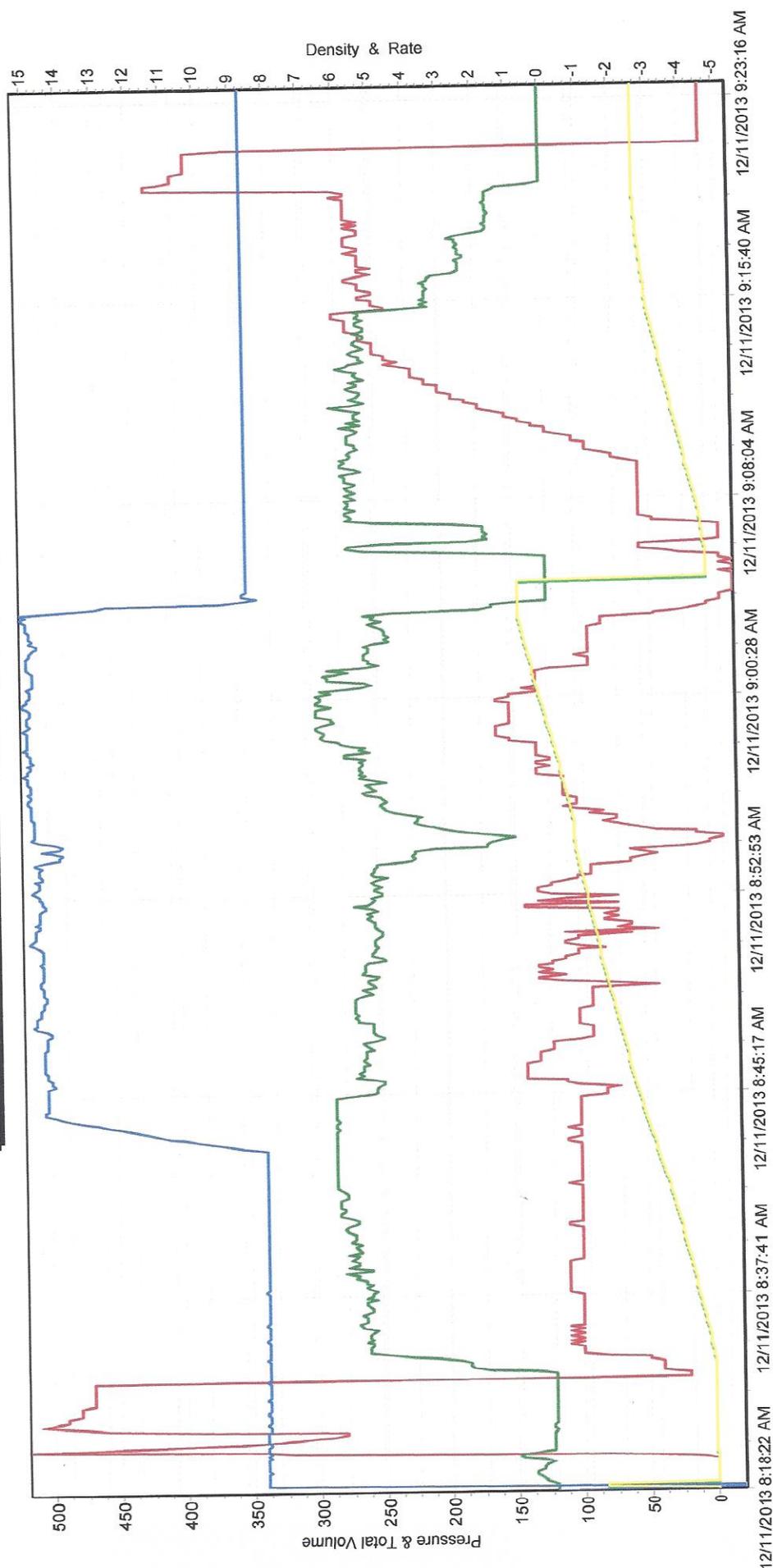
X *Casey*
Customer Representative's Signature

DATE: 12-11-13

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

M/D TOTCO 2000 SERIES

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





BISON
Oil Well Cementing Inc.

PRE TRIP CEMENT CALL OUT SHEET

INVOICE # 12562 DATE/TIME 12-11-13
 WELL NAME Heldan 5-63-27-4956 CDH OPERATOR Casey
 CUSTOMER Bill Barrett
 LOCATION/RIG major 43
 DELIVERED TO 394-63

PRE CHECK CALL OUT

CHECK ITEMS	Supervisor Initials	Other Initials	BULK TRUCK DRIVER	Supervisor Initials	Other Initials
DRY SAMPLE #	KK		VACUUM BREAKER PORT CLEANED & INSPECTED	/	
REQUIRED CEMENT CONNECTIONS	KK		WATER JET AT MIX HEAD REMOVED, INSPECTED & CLEANED	/	
TYPE OF CEMENT <u>BFW 30%</u>	KK		CEMENTING HEAD INSPECTED & CLEANED	/	
# OF LBS/SACKS <u>Full</u>	KK		MIX TUB INSPECTED & CLEANED	/	
FLOAT EQUIPMENT			CENTRIFUGALS GREASED, TIGHTENED & INSPECTED	/	
BEGINNING FUEL <u>3/4</u>	KK		DECK MOTORS STARTED	/	
STATING MILAGE			VERIFY ALL AIR VALVES ARE FUNCTIONAL	/	
PERSONAL PROTECTIVE EQUIPMENT	/		VERIFY ALL VALVES ARE FUNCTIONAL ON BULK TRUCK	/	
DRIVING DIRECTIONS	/		VERIFY BERMS ARE ON BULK TRUCK	/	
DRIVERS LOGS	/		VERIFY SPARE CEMENT HEAD IS ON BULK TRUCK	/	
TRUCK PRE TRIP COMPLETED	/		VERIFY 1" TUBING IS ON BULK TRUCK	/	
ROCK CATCHERS REMOVED & CLEANED	/		VERIFY 1" IS ADEQUATELY SECURED ON BULK TRUCK	/	
VACUUM BREAKER REMOVED & CLEANED	/		VERIFY SPARE VACUUM BREAKER IS IN PUMP TRUCK	/	
VERIFY CORRECT POP OFF PIN IN PLACE	/		TOP OFF FUEL IN TRUCKS POST TRIP		
VERIFY PRESSURE TRANSDUCERS ARE CLEAN OF CEMENT	/				

CEMENT HEAD CHECK LIST

	Supervisor Initials	Other Initials
THREADS	KK	
VALVES	KK	
PIN	KK	

COMMENTS: Spare head need manifold

BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET



BISON

p plug	Slips, trips, falls. Miscommunication between pump operator and cementer, pressure against a closed stop	-Utilize 3 points of contact while descending/climbing ladder and stairs -Have visual contact between cementer and pump operator before pump is engaged	kk
placement	Unexpected pressure associated with resuming of pumping, casing hydraulic from hole, serious injury from high pressure line failure or catastrophic equipment failure.	-Ensure rig floor remains clear and non-essential personnel stay clear from buffer area -Pump operator monitors pump pressure constantly -Utilize proper PPE	kk
pmp plug- Test float and release pressure	Pressure jumps before expected (calculated) displacement. Pressure jumps rapidly and higher than expected.	-Pump operator slows rate to 2 BPM when 5 bbls from calculated displacement and down to 1 bpm within 2 bbls of calculated displacement -Pump operator monitors pressure constantly -Pressure relief valve installed on pump	kk
pressure test casing (required)	Test to: PSI- FOR: MIN-	-Ensure rig floor remains clear and non-essential personnel stay clear from the buffer area	kk
dash up / rig down	Splashing cement slurry, heavy lifting, pinch points, unsecured hoses	-Utilize stakes or portable tank manifold to secure hoses -Use proper lifting technique (2 man lift, lift with legs, plan your route)	kk
part location	Other traffic and personnel and location, overhead lines	-All Bison crew member walk the planned exit route to access possible obstacles and hazards -Utilize spotters while backing	kk
<p>General Precautions/Stop Work</p> <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. 			
<p>OTHER HAZARDS SPECIFIC TO LOCATION OR COMMENT NOT ADDRESSED ABOVE:</p>			
<p>NATED EMERGENCY MUSTER AREA: access rd</p>		<p>NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911): grealey</p>	
<p>COUNT-- 1 /</p>			



Signature and Company

<i>[Signature]</i> Bison	
<i>[Signature]</i> NOV	
<i>[Signature]</i> Bison	
Spansylvia MAJOR	
<i>[Signature]</i> NOV	
<i>[Signature]</i> Major	
Russell Woodworth Major	
ERIC Reimer BISON	
Chris Olson BISON	
<i>[Signature]</i> BBL	