

# BISON OIL WELL CEMENTING, INC.

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



## SERVICE INVOICE

**Nº 11704**

WELL NO. AND FARM <i>State Peterson</i>	COUNTY <i>Weld</i>	STATE <i>CO</i>	DATE <i>3-2-13</i>
CHARGE TO <i>Encana</i>	WELL LOCATION SEC. <i>20</i> TWP. <i>5N</i> RANGE <i>63W</i>		CONTRACTOR <i>Ensign 135</i>
DELIVERED TO <i>61-388</i>		LOCATION <i>1 Shop</i>	CODE
SHIPPED VIA <i>3/03-3211</i>		LOCATION <i>2 61-388</i>	CODE
TYPE AND PURPOSE OF JOB <i>Surface Pipe</i>		LOCATION <i>3 Shop</i>	CODE
		WELL TYPE <i>645</i>	CODE

PRICE REFERENCE	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT	
		QTY.	MEAS.			
	Pump charge	1	each	1400 <sup>00</sup>	1400	00
	BFLA 30% BFLA-1, 25 lbs per SR BFLA-1	428	lbs	22 <sup>45</sup>	9608	60
	Mileage Trucks 4 <sup>1/2</sup> prime 60 mile in Round trip	2	each	240 <sup>00</sup>	480	00
	Mileage Pickup 1 <sup>1/2</sup> prime 60 mile in Round trip	1	each	90 <sup>00</sup>	90	00
	BFLA-1	3	lbs	25 <sup>00</sup>	75	00
	Dye - Blue	10	oz	15 <sup>00</sup>	150	00
	Data fee	1	each	225 <sup>00</sup>	225	00
	Sugar	100 lbs	lbs	2 <sup>00</sup>	200	00

Bison Oil & Gas (USA) Inc.	
Oil Basin	State Peterson 2E-20H
Well:	13172458
AFE:	
Major/Minor CC:	8715-618
Signature:	<i>[Signature]</i>
Approver:	<i>[Signature]</i>
Total Weight	11 Loaded 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%.

### TAX REFERENCES

SUB TOTAL

12228<sup>60</sup>

TAX

12228<sup>60</sup>

TOTAL

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

SUBJECT TO CORRECTION

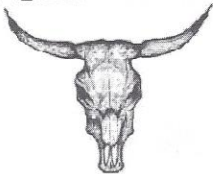
*[Signature]*  
Customer or His Agent

*[Signature]*  
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

11704  
61-388  
Kirk

## TREATMENT REPORT

DATE	WELL NAME	SECTION	TWP	RGE	COUNTY
3-2-13	Shade Peterson 2F-20H	20	5N	63W	Weld
BILL TO	CONSULTANT				
Encana	Dennis				
OWNER	RIG NAME & NUMBER				
	Ensign 135				
MAILING ADDRESS	DISTANCE TO LOCATION		UNITS ON LOCATION		
			3103-3211		
CITY	TIME REQUESTED		TIME ARRIVED ON LOCATION		
	12:00am		10:30pm		
STATE, ZIP	TIME LEFT LOCATION				
	4:30am				
WELL DATA		Cement Makeup			
HOLE SIZE	TUBING SIZE	PERFORATIONS	Cement Blend		
12 1/4			BFNTH 3/6 BCLA-1 .25 lbs per sk BPLA-1		
TOTAL DEPTH	TUBING DEPTH	SHOTS/FT	Cement - Specs	lbs	Yield
982				15.2	1.27
CASING SIZE	TUBING WEIGHT	OPEN HOLE	Annulus Factor	Capacity Factor	
9 5/8			13/31	1.0758	
CASING DEPTH	TUBING CONDITION	TREATMENT VIA	TYPE OF TREATMENT		
982			<input checked="" type="checkbox"/> Surface Pipe <input type="checkbox"/> Production <input type="checkbox"/> Squeeze <input type="checkbox"/> MISC Pump <input type="checkbox"/> P&A		
CASING WEIGHT	PACKER DEPTH	HYD HHP = RATE X PRESSURE / 40.8			
40 lb					
CASING CONDITION	% Excess				
good	60%				
Max Rate	BBL to Pit				
	23				
Max Pressure					

## DESCRIPTION OF JOB EVENTS

Set key meeting, Rig up, Ps. test, Per cement cis 30 BBLs full H2O 2nd 10w/ Dye mix & Pump 428 SKS cement at 60% Excess at 1.27 yield at 15.2 lbs, Release Plug Disp 714 BBLs H2O, Pump Plug at 150 PSI over L.P. PSI wait 5 min Release PSI wash up Rig Down

Arrived w/ 600 SKS cement 4/5 all full 1600 Dye  
H2O test OK  
96.8 BBLs slurry

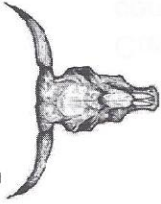
X   
Authorization To Proceed

Title

x 3-2-13  
Date



# 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

11704  
61-388  
L. F. L.

## Treatment Report Page 2

### DESCRIPTION OF JOB EVENTS

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5			Displace 5		
		BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI
Safety Meeting	2:10pm	0	3:13	10	0			0			0			0			0		
MIRU	1:30	10	3:15	360	10			10			10			10			10		
CIRCULATE	2:45	20	3:17	400	20			20			20			20			20		
Drop Plug		30	3:18	450	30			30			30			30			30		
3:13		40	3:25	490	40			40			40			40			40		
		50	3:27	550	50			50			50			50			50		
M & P		60	3:29	560	60			60			60			60			60		
Time	Sacks	70	3:33	410	70			70			70			70			70		
2:52 am	4120	70	3:35	400	80			80			80			80			80		
3:11 am		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:

Bump Plug 3:35 910 psi

6040 EXCESS

96.8 BBS slurry

23 BBS BACK

LFTW/ 172 SLS cement 3 gal 16 ft cu 607 Dye

X

X Title

X 3-2-13 Date

Work Performed



Bison Oil Well Cementing, Inc  
1738 Wynkoop St., Ste. 102  
Denver, CO 80202  
303-296-3010  
www.Bisonoilwell.com

### Cementing Customer Satisfaction Survey

Service Date 3-2-13  
Invoice Amount \_\_\_\_\_  
Well Name State Peterson  
Well Location 61-388  
County Weld  
SEC/TWP/RNG 20-SN-63W  
State CO  
Supervisor Name Lark Kalhofer  
Employee Name \_\_\_\_\_

Invoice Number 11704  
Well Permit Number \_\_\_\_\_  
Well Type Gas  
Well Number 2F-20H  
Lease \_\_\_\_\_  
Job Type Surf Face Pipe  
Company Name Encana  
Customer Representative Dennis  
Customer Phone Number \_\_\_\_\_  
Exposure Hours (Per Employee)  
6  
6  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 Expectations ( 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

#### Opportunity

- Best Practices
- Potential Best Practice
- Prevention/Improvement

#### RATING / CATEGORY

- \_\_\_\_ Personnel -
- \_\_\_\_ Equipment -
- \_\_\_\_ Job Design -
- \_\_\_\_ Product / Material -
- \_\_\_\_ Health & Safety -
- \_\_\_\_ Environmental -
- \_\_\_\_ Timeliness -
- \_\_\_\_ Condition / Appearance -
- \_\_\_\_ Communication -
- \_\_\_\_ Improvement -

#### 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 customer, completed when expected)?
- Did the equipment condition and appearance meet your expectation?
- How well did our personnel communicate during mobilization, rig up, and job execution?
- What can we do to improve our service?

#### 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?

Additional Comments:

#### 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?

THE INFORMATION HEREIN IS CORRECT -

Customer Representative's Signature

Date

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





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

## B.O.C. Tailgate Safety Meeting Report

INVOICE 11764

Date 3-2-13 Time 2:10 ☒ AM ☐ PM Meeting Facilitator Kirk Kalloff

Facility Name and Location State Peterson 2P-2611 Work to be Undertaken Surface Pipe

Nearest Emergency Medical Service Number (Other than 911) Greeley

### MINIMUM STANDARDS REQUIREMENT VERIFICATION (must be verified for all members of a work party)

- ☒ Hard Hat ☒ Safety Glasses w/sideshields ☒ Safety Toed Footwear ☐ Personal Methane Monitor ☐ Verify Safety Training  
☐ Flame Resistant Clothing ☐ New on Job Review ☐ Onsite Orientation ☐ Other (specify) \_\_\_\_\_

### HAZARD IDENTIFICATION AND SAFETY BRIEFING DISCUSSION (Check and Discuss all Relevant Hazards)

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Positions of People<br><input type="checkbox"/> Falling from Heights<br><input checked="" type="checkbox"/> Slips/Trips/Falls<br><input type="checkbox"/> Extreme Heat/Cold<br><input type="checkbox"/> Electrical Current<br><input type="checkbox"/> Overexertion/Heavy Lifting<br><input type="checkbox"/> Spills/Releases<br><input type="checkbox"/> Flying Particles<br><input type="checkbox"/> Overhead Power Lines | <input checked="" type="checkbox"/> Job Safety Analysis Reviewed (if applicable)<br><input type="checkbox"/> NORM or Other Radiation<br><input checked="" type="checkbox"/> Overhead work/suspended Loads/Chains/Slings<br><input type="checkbox"/> Trapped Pressure<br><input type="checkbox"/> Flammable/Combustible/Explosives<br><input type="checkbox"/> Pinch Points/Moving/Rotating Equipment<br><input type="checkbox"/> Waste Handling/Disposal<br><input checked="" type="checkbox"/> Excavation Collapse<br><input type="checkbox"/> _____ | <input type="checkbox"/> Hazardous Substance<br><input type="checkbox"/> Hazardous Atmosphere<br><input checked="" type="checkbox"/> Walking/Working Surfaces<br><input type="checkbox"/> Noise Levels<br><input type="checkbox"/> Sharp Edges<br><input type="checkbox"/> Insects/Snakes/etc.<br><input type="checkbox"/> MSDS's Reviewed<br><input checked="" type="checkbox"/> Walk Around Site Assessment<br><input type="checkbox"/> _____ |
|---|---|---|






### ADDITIONAL PPE REQUIREMENT (based on the job specific hazards, check all that apply)

- |  |   |  |   |
|--|---|--|---|
| <b>Eyes/Face</b><br><input type="checkbox"/> Tinted Lenses<br><input type="checkbox"/> Goggles<br><input type="checkbox"/> Faceshield<br><input type="checkbox"/> Hearing Protection<br><input type="checkbox"/> _____ | <b>Hands</b><br><input type="checkbox"/> Chemical Resistant Gloves<br><input type="checkbox"/> Heat Resistant Gloves<br><input type="checkbox"/> Cotton or Leather Gloves<br><input type="checkbox"/> Dielectric Gloves<br><input type="checkbox"/> _____ | <b>Feet</b><br><input type="checkbox"/> Rubber Boots<br><input type="checkbox"/> Over Boots<br><input type="checkbox"/> Dielectric Boots<br><input type="checkbox"/> _____ | <b>Other</b><br><input type="checkbox"/> Air Purifying Respirator<br><input type="checkbox"/> Supplied Air Respirator<br><input type="checkbox"/> Personal H2S Monitor (if in sour area)<br><input type="checkbox"/> Chemical Resistant Clothing<br><input type="checkbox"/> Personal Fall Arrest Systems<br><input type="checkbox"/> _____ |
|--|---|--|---|

### EMERGENCY PREPARATIONS

- ☒ Muster Areas ☒ Communication Methods ☒ Means of Egress ☒ Emergency Equipment

Additional Topics Covered:

Attendees (Signature)/Company	Attendees (Signature)/Company
	
	
	

Other Considerations and Field Notes:

# BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET



JOB/TASK: SURFACE CASING CEMENTING		CEMENTER/SUPERVISOR: Kirk Kallhoff		PAGE: 1	OF: 2		
WELL NAME: state peterson 2f-20h		RIG #	ensign 135	LOCATION: 61-388	DATE: 3-2-13		
OPERATOR: Encana		CONSULTANT: Dennis	INVOICE # 11704				
PPE REQUIRED: <input checked="" type="checkbox"/> Hard Hat <input checked="" type="checkbox"/> FR Coveralls <input checked="" type="checkbox"/> Safety Glasses <input checked="" type="checkbox"/> Reflective Vest <input checked="" type="checkbox"/> Steel Toe Boots <input checked="" type="checkbox"/> Impact Gloves		ADDITIONAL PPE (based on job specific hazards) <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 -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 obtain signature for authorization to proceed -Identify and address short service employees (SSE) who are on location -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 into access specific hazards -Utilize spotters when trucks are in motion -Establish buffer zone around equipment utilizing cones and caution tape -Cementor 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 -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		KIC	
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 obtain signature for authorization to proceed -Identify and address short service employees (SSE) who are on location -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 into access specific hazards -Utilize spotters when trucks are in motion -Establish buffer zone around equipment utilizing cones and caution tape -Cementor 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 -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		KIC	
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 into access specific hazards -Utilize spotters when trucks are in motion -Establish buffer zone around equipment utilizing cones and caution tape -Cementor 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 -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		KIC	
4. Raise cement head and hoses to rig floor		Overhead work, improper hookup/load not properly secured, poor communication between ground personnel and crane/tugger operator		-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 Bison Oilwell Iron Inspection Program		KIC	
5. Connect Cement head/swage/pin, chickens and hoses.		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 Bison Oilwell Iron Inspection Program		KIC	
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 -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		Test to: PSI: 800 Maximum pressure allowed for job: PSI: 2000 Pressure relief valve set to: PSI: 1750 Max. pump pressure: PSI: 3000	
7. Pump Spacer (dye marker)/Mix and Pump Cement		Serious injury from high pressure line failure or catastrophic equipment failure. Casing hydraulics 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		KIC	



# BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET



		-Deploy spill berms and buckets		
8. Drop 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		
9. Displacement	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	LIC	
10. Bump 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	LIC	
11. Pressure test casing (if required)	Test to: <input type="text"/> PSI- FOR: MIN- <input type="text"/>	Serious injury from high pressure line or catastrophic equipment failure	-Ensure rig floor remains clear and non-essential personnel stay clear from the buffer area	LIC
12. Wash 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)	LIC	
13. Depart 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	LIC	
OTHER HAZARDS SPECIFIC TO LOCATION OR ENVIRONMENT NOT ADDRESSED ABOVE:				
DESIGNATED EMERGENCY MUSTER AREA:		NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911):		
access road		greeley		

State Peterson ZF-20h

### M/D TOTCO 2000 SERIES

