

# 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

**№ 12719**

WELL NO. AND FARM Billings 1A-34H		COUNTY Weld	STATE CO	DATE 10-15-13
CHARGE TO Encana	WELL LOCATION SEC. 34 TWP. 2N RANGE 68W		CONTRACTOR Coby	
DELIVERED TO #25 + 16			LOCATION 1 Shop	CODE
SHIPPED VIA 3106-			LOCATION 2 #25 + 16	CODE
TYPE AND PURPOSE OF JOB Surface			LOCATION 3 Shop	CODE
			WELL TYPE Gas	CODE

PRICE REFERENCE	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT	
		QTY.	MEAS.			
	Pump charge	1	ea	1400 <sup>00</sup>	1400	00
	BFW # 3% Bcc-1 .25lb BFLA.1	356	SKS	2245	7992	20
	BFLY-1	3	qt	15 <sup>00</sup>	45	00
	Blue dye	16	oz	15 <sup>00</sup>	240	00
	Data Ace	1	ea	225 <sup>00</sup>	225	00
	millage 1.5 per mile 60 mile min Round Trip	1	ea	90 <sup>00</sup>	90	00
	millage 4.00 per mil, 60 mile min Round Trip	2	ea	240 <sup>00</sup>	480	00
	Torn Inspection	1	ea	500 <sup>00</sup>	500	00
	Sugar	50	lb	2 <sup>00</sup>	100	00
	wait time	2	hr	250 <sup>00</sup>	500	00
	BFW # 3% Bcc-1 .25lb BFLA.1 40p off	47	SKS	2245	1055	15
		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%.

**TAX REFERENCES**

Encana Oil & Gas (USA) Inc		TOTAL	12627 35
DJ Basin	Date: 10-15-13	TAX	
Well: Billings 1A-34H	AFE: 13171950	TOTAL	
Major / Minor CC: 8715.618	Total Amount: \$12,627.35	SUBJECT TO CORRECTION	
Signature: <i>Dennis Z...</i>	Approver: <i>RC MS</i>		

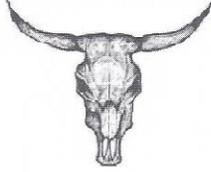
"TAXES WILL BE ADDED AT CORPORATE RATE"

Customer or His Agent

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

12719  
 #2416  
 monte

## TREATMENT REPORT

DATE	WELL NAME	SECTION	TWP	RGE	COUNTY
10-15-13	Billings 1A-34H	34	2N	68W	weld
BILL TO	CONSULTANT				
Quinn	Cody				
OWNER	RIG NAME & NUMBER				
	Ensign 133				
MAILING ADDRESS	DISTANCE TO LOCATION		UNITS ON LOCATION		
	27.3		3106-3203		
CITY	TIME REQUESTED		TIME ARRIVED ON LOCATION		
	500		400		
STATE, ZIP	TIME LEFT LOCATION				

### WELL DATA

HOLE SIZE	TUBING SIZE	PERFORATIONS
12 1/4		
TOTAL DEPTH	TUBING DEPTH	SHOTS/FT
1043		
CASING SIZE	TUBING WEIGHT	OPEN HOLE
9 5/8		
CASING DEPTH	TUBING CONDITION	TREATMENT VIA
1048		
CASING WEIGHT	PACKER DEPTH	
40		
CASING CONDITION	good	
Max Rate		
Max Pressure		

### Cement Makeup

Cement Blend	BFN # 30% BCC-1.2516BFLA-1		
Cement - Specs	lbs	Yield	Water Requirements
	13.1 + 15.2	8164 + 189	8.64 + 3.89
Annulus Factor	Capacity Factor		
3131	10758		

### TYPE OF TREATMENT

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

HYD HHP = RATE X PRESSURE / 40.8

% Excess	60
BBL to Pit	24

### DESCRIPTION OF JOB EVENTS

safety meeting MFRU Pressure test Per Company manual + Pump  
 256 sks lead cement m H + Pump 100sk tail cement drop  
 plug + Disp 76.6 bbls H<sub>2</sub>O Redesse pressure wash up Rig  
 down

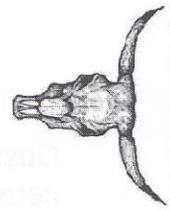
X Authorization To Proceed

Title

X 10-15-13 Date

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INVOICE #  
 LOCATION  
 FOREMAN

12719  
 F25416  
 note

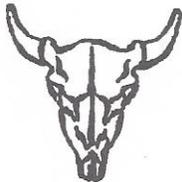
Treatment Report Page 2

## DESCRIPTION OF JOB EVENTS

	LID	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	
Safety Meeting	545																			
MIRU	545																			
CIRCULATE	673	0	734	30	0			0			0			0			0			
Drop Plug		10	740	90	10			10			10			10			10			
		20	742	80	20			20			20			20			20			
		30	744	150	30			30			30			30			30			
		40	746	200	40			40			40			40			40			
		50	748	270	50			50			50			50			50			
M & P		60	750	350	60			60			60			60			60			
		70	753	360	70			70			70			70			70			
705	356	70	753	360	70			70			70			70			70			
732	stop	<del>70</del>	755	560	80			80			80			80			80			
945	47	90			90			90			90			90			90			
1000	stop	100			100			100			100			100			100			
	top off 2	110			110			110			110			110			110			
lead	77.34	120			120			120			120			120			120			
	52.96	130			130			130			130			130			130			
tail	24.02	140			140			140			140			140			140			
	2.252	140			140			140			140			140			140			
	10.68	150			150			150			150			150			150			
Notes:	79911 X 6.59																			

circulate 30 bbls Ahead with dye in and 10 mix + Pump 256 sls lead 13.1 6.84 H2o 1.69  
 yield at 6090 excess mix + Pump 100 sls tail cement at 15.2 1.27 5.89 H2o  
 drop plug + dsp 76.6 bbls H2o Pump plug at 7:55 Am at 560 PSI Hold 5 min Release  
 pressure wash up  
 top 2 wells off with 47 sls cement  
 24 bbls back to P.T

X Garwin Z... X Title \_\_\_\_\_ X 10-15-13  
 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	<u>10-15-13</u>	Invoice Number	<u>12719</u>
Invoice Amount	_____	Well Permit Number	_____
Well Name	<u>Ballings 1A-34H</u>	Well Type	<u>Gas</u>
Well Location	<u>#25416</u>	Well Number	<u>1A-34H</u>
County	<u>Weld</u>	Lease	_____
SEC/TWP/RNG	<u>34 2N 68W</u>	Job Type	<u>Surface</u>
State	<u>CO</u>	Company Name	<u>Encore</u>
Supervisor Name	<u>Marty</u>	Customer Representative	<u>Bob</u>
		Customer Phone Number	_____

Employee Name	Exposure Hours (Per Employee)
<u>Ronald</u>	<u>7</u>
<u>Steven</u>	<u>7</u>
<u>Buck</u>	<u>7</u>
_____	_____
_____	_____
Total Exposure Hours <u>21</u>	Did we encounter any problems on this job? Yes / <u>No</u>

**To Be Completed By Customer**

- |  |                         |
|--|-------------------------|
| <b>Rating/Description</b>  | <b>Opportunity</b>      |
| 5 - Superior Performance ( Established new quality / performance standards )       | Best Practices          |
| 4 - Exceeded Expectations ( Provided more than what was required / expected )      | Potential Best Practice |
| 3 - Met Expectations ( Did what was expected )                                     | Prevention/Improvement  |
| 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       |                         |

<b>RATING / CATEGORY</b>	<b>CUSTOMER SATISFACTION RATING</b>
_____ Personnel -	Did our personnel perform to your satisfaction ?
_____ Equipment -	Did our equipment perform to your satisfaction ?
_____ Job Design -	Did we perform the job to the agreed upon design ?
_____ Product / Material -	Did our products and materials perform as you expected ?
_____ Health & Safety -	Did we perform in a safe and careful manner ( Pre / post mtgs, PPE, TSMR, etc.. ) ?
_____ Environmental -	Did we perform in an environmentally sound manner ( Spills, leaks, cleanup, etc.. ) ?
_____ Timeliness -	Was job performed as scheduled (On time to site, accessible to customer, completed when expected)?
_____ Condition / Appearance -	Did the equipment condition and appearance meet your expectation?
_____ Communication -	How well did our personnel communicate during mobilization, rig up, and job execution?
_____ Improvement -	What can we do to improve our service?

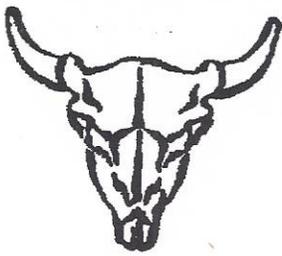
<b>Please Circle:</b>	<b>Please Circle:</b>
Yes / No - Did an accident or injury occur?	Yes / No - Was a pre-job safety meeting held?
Yes / No - Did an injury requiring medical treatment occur?	Yes / No - Was a job safety analysis completed?
Yes / No - Did a first-aid injury occur?	Yes / No - Were emergency services discussed?
Yes / No - Did a vehicle accident occur?	Yes / No - Did environmental incident occur?
Yes / No - Was a post-job safety meeting held?	Yes / No - Did any near misses occur?
Additional Comments:	
_____	
_____	

THE INFORMATION HEREIN IS CORRECT -

Dennis E. [Signature] Date 10-15-13

Customer Representative's Signature

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



# Bison Oil Well Cementing Surface Pipe Tail & Lead

Invoice # 12719  
API# 05-123-37472  
Foreman: monte bedeaux

Customer: encana  
Well Name: billings 1a-34h

County: Weld  
State: Colorado  
Sec: 34  
Twp: 2n  
Range: 68w

Consultant: cody  
Rig Name & Number: ensign 133  
Distance To Location: 27  
Units On Location: 3106 3202  
Time Requested: 400am  
Time Arrived On Location: 500am  
Time Left Location:

WELL DATA		Cement Data	
Casing Size (in) :	9.625	<b>Lead</b>	
Casing Weight (lb) :	40	Cement Name:	
Casing Depth (ft.) :	1,048	Cement Density (lb/gal) :	13.1
Total Depth (ft) :	1043	Cement Yield (cuft) :	1.69
Open Hole Diameter (in) :	12.25	Gallons Per Sack :	8.64
Conductor Length (ft) :	93	% Excess :	60%
Conductor ID :	16		
Shoe Joint Length (ft) :	42	<b>Tail</b>	
Landing Joint (ft) :	5	Cement Name:	
		Cement Density (lb/gal) :	15.2
		Cement Yield (cuft) :	1.27
		Gallons Per Sack :	5.89
		% Excess :	0%
Sacks of Tail Requested :	100	Fluid Ahead (bbls) :	76.6
HOC Tail (ft):	0	H2O Wash Up (bbls) :	20.0
One or the other, cannot have quantity in both			
Max Rate:	7	<b>Spacer Ahead Makeup</b>	
Max Pressure:	2500	10fresh 10 dye 10 fresh	

Casing ID 8.835 Casing Grade J-55 only used

Lead Calculated Results	
HOC of Lead	602.06 ft
Casing Depth - HOC Tail	
Volume of Lead Cement	188.55 cuft
HOC of Lead X Open Hole Ann	
Volume of Conductor	82.86 cuft
(Conductor ID Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	
Total Volume of Lead Cement (cuft of Lead Cement) + (Cuft of Conductor)	271.41 cuft
bbls of Lead Cement (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	77.34 bbls
Sacks of Lead Cement (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	256.96 sk
bbls of Lead Mix Water (Sacks Needed) X (Gallons Per Sack) ÷ 42	52.86 bbls
Displacement (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	76.61 bbls
<b>Total Water Needed:</b>	<b>149.47 bbls</b>

Tail Calculated Results	
Tail Cement Volume In Ann (HOC Tail) X (OH Ann)	127.00 cuft
Total Volume of Tail Cement (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)	108.97 Cuft
bbls of Tail Cement (HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)	22.62 bbls
HOC Tail (Tail Cement Volume) ÷ (OH Ann)	347.94 ft
Sacks of Tail Cement (Total Volume of Tail Cement) ÷ (Cement Yield)	100.00 sk
bbls of Tail Mix Water (Sacks of Tail Cement X Gallons Per Sack) ÷ 42	14.02 bbls
<b>Pressure of cement in annulus</b>	
Hydrostatic Pressure	713.16 PSI
<b>Collapse PSI:</b>	<b>2570.00 psi</b>
<b>Burst PSI:</b>	<b>3950.00 psi</b>

X Authorization To Proceed

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