



029-06108

CEMENT SUMMARY

**NOTE TO WELL FILE:**

Post-Remediation Segmented Bond Log/GR, dated 8/9/2010 shows intermediate casing cement up into the surface casing.

David Andrews  
COGCC Engineering Supervisor

**From:** Neil Allen [mailto:Neil.Allen@OXBOW.COM]  
**Sent:** Saturday, August 07, 2010 10:25 AM  
**To:** Andrews, David  
**Subject:** Oak Mesa Unit Hughes 1393 #12-22

David, I am forwarding the copy of the bond log from Baker Hughes for the Oak Mesa Unit Hughes 1393 #12-22.

After running and cementing the 9 5/8" casing at 3264' with DV-tool at 1981' using 923 sx of cement over 2 stages without any returns on either stage a bond log run on 8/06/10 found the top of the cement at 2238'. This is approximately 24' below the first lost circulation zone at 2214' and is most likely in a coal seam.

Please see the attached Excel spreadsheet which summarizes the significant drilling events for the Oak Mesa well.

Given the amount of lost circulation material used while drilling the well to this depth and the very large volumes of cement (2663 sx) in six cement squeezes and an attempt to cement the 9 5/8" casing without significantly healing the lost circulation Gunnison Energy recommends pumping the attached cement mixture as proposed by BJ through the bradenhead valve and attempt to get a cement bond to the surface. The cement mixture proposed by BJ is a thixotropic design preceded by flowguard. The cement volume has a volume safety factor of 200%.

David, I know you mentioned that you prefer to pump cement with 1". However, given the depth of the cement top pumping from the bradenhead just seems to be the best approach. In addition, to use 1" would require lifting the BOP's which have already been pressure tested and picking up the 9 5/8" to pull the slips. We are reluctant to do that because of potential damage to the surface casing cement bond and the possibility of damaging the cement bond we have on the 9 5/8" casing.

Hopefully you will concur with our recommendation.



Proposal No: 1001135330A

**Gunnison Energy Corporation**  
Oak Mesa 1393#12-22

Garfield County, Colorado  
August 7, 2010

**Cement Proposal**

**Prepared for:**

Neil Allen  
Gunnison Energy

**Prepared by:**

Steve Phillips  
Senior District Sales Supv.  
Grand Junction, Colorado  
Bus Phone: (970) 241-0592  
Mobile: (970) 219-2801



**POWERVISION®**

POWERPRO • POWERTRAX • POWERLINK

**Service Point:**

Grand Junction  
Bus Phone: (970) 241-0592  
Fax: (970) 241-2144

**Service Representatives:**

Steve Phillips  
Senior District Sales Supv.  
Grand Junction, Colorado  
Bus Phone: (970) 241-0592  
Mobile: (970) 219-2801

**Operator Name:** Gunnison Energy Corporation  
**Well Name:** Oak Mesa 1393#12-22  
**Job Description:** 9 5/8" Surface Casing @ 2300  
**Date:** August 7, 2010



**Proposal No:** 1001135330A

## JOB AT A GLANCE

<b>Depth (TVD)</b>	2,300 ft
<b>Depth (MD)</b>	2,300 ft
<b>Hole Size</b>	12.25 in
<b>Casing Size/Weight</b>	9 5/8 in, 36 lbs/ft
<b>Pump Via</b>	9 5/8" O.D. (8.921" I.D) 36 #
<b>Total Mix Water Required</b>	9,725 gals
<b>Spacer</b>	
<b>CaCl<sub>2</sub></b>	20 bbls
<b>Density</b>	8.4 ppg
<b>Spacer</b>	
<b>Fresh Water</b>	10 bbls
<b>Spacer</b>	
<b>SMS Spacer</b>	10 bbls
<b>Density</b>	8.4 ppg
<b>Spacer</b>	
<b>Fresh Water</b>	5 bbls
<b>Density</b>	8.3 ppg
<b>2nd Lead Slurry</b>	
<b>Premium Lite Cement</b>	602 sacks
<b>Density</b>	11.6 ppg
<b>Yield</b>	2.81 cf/sack
<b>Displacement</b>	
<b>Water</b>	178 bbls
<b>Density</b>	8.5 ppg

Operator Name: Gunnison Energy Corporation  
 Well Name: Oak Mesa 1393#12-22  
 Job Description: 9 5/8" Surface Casing @ 2300  
 Date: August 7, 2010



Proposal No: 1001135330A

## WELL DATA

### ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.515 CASING	800	800
12.250 HOLE	2,300	2,300

### SUSPENDED PIPES

DIAMETER (in)		WEIGHT (lbs/ft)	DEPTH(ft)	
O.D.	I.D.		MEASURED	TRUE VERTICAL
9.625	8.921	36	2,300	2,300

Mud Density 8.50 ppg  
 Est. Static Temp. 119 ° F  
 Est. Circ. Temp. 93 ° F

### VOLUME CALCULATIONS

800 ft x 0.3490 cf/ft with 0 % excess = 279.2 cf  
 1,500 ft x 0.3132 cf/ft with 201 % excess = 1411.9 cf  
**TOTAL SLURRY VOLUME** = 1691.0 cf  
 = 301 bbls

**Operator Name:** Gunnison Energy Corporation  
**Well Name:** Oak Mesa 1393#12-22  
**Job Description:** 9 5/8" Surface Casing @ 2300  
**Date:** August 7, 2010



**Proposal No:** 1001135330A

### FLUID SPECIFICATIONS

Spacer	20.0 bbls Cacl2 + 2101 lbs Calcium Chloride @ 8.4 ppg
Spacer	10.0 bbls Fresh Water
Spacer	10.0 bbls SMS Spacer + 850 lbs Sodium Metasilicate @ 8.4 ppg
Spacer	5.0 bbls Fresh Water @ 8.34 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
2nd Lead Slurry	1691	/ 2.81	= 602 sacks (35.65) Poz (Fly Ash):Type III Cement + 0.04 lbs/sack Static Free + 0.25 lbs/sack Cello Flake + 2 lbs/sack Kol Seal + 5% bwoc A-10 + 5% bwoc Sodium Metasilicate + 0.5 gals/100 sack FP-13L + 10 lbs/sack CSE-2 + 154.9% Fresh Water
Displacement			177.8 bbls Water @ 8.5 ppg

### **CEMENT PROPERTIES**

#### **SLURRY NO.1**

Slurry Weight (ppg)	11.60
Slurry Yield (cf/sack)	2.81
Amount of Mix Water (gps)	16.15
Amount of Mix Fluid (gps)	16.16
Estimated Pumping Time - 70 BC (HH:MM)	3:13

#### **COMPRESSIVE STRENGTH**

24 hrs @ 98 ° F (psi)	315
72 hrs @ 98 ° F (psi)	

Oak Mesa Unit Hughes 1393 #12-22  
Section 12, T13S, R93W  
Delta County, Co

#### Chronology of well

1. 13 3/8" Casing set at 808', cemented with full returns and circulate 10 bbls to pit
2. Drilled to 2214' and lost circulation
3. Drilled to 2737 using significant lost circulation material
4. At 2337' pumped 6 cement plugs totalling 1740 sx @ 12.2 #
5. Drilled from 2737 to 3389' with aerated mud with full to partial returns
6. Ran and cemented 9 5/8" casing set at 3264' with DV tool at 1981'. Cemented with 736 sx at 12.3 # and 187 sx at 15.8 # over 2 stages
7. Bond log run on 8/06/10 found cement top at 2238'

#### Anticipated formation tops

Wasatch	Surface
Cameo B	2433'
Rollins	2515'
Cozzette	3000'
Corcoran	3130'
Dakota	7050'
TD	7300'