



Andrews, David

From: Andrews, David
Sent: Thursday, December 09, 2010 1:39 PM
To: 'Caplis, Chris'
Subject: RE: GM 34-32 - Final squeeze (hopefully) and completion procedure

Chris,

Based on my review of your 12/7/2010 CBL, this plan is acceptable. Please proceed.

Thanks,

David D. Andrews, P.E., P.G.
Engineering Supervisor - Western Colorado

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From: Caplis, Chris [<mailto:Chris.Caplis@Williams.com>]
Sent: Thursday, December 09, 2010 11:17 AM
To: Andrews, David
Subject: GM 34-32 - Final squeeze (hopefully) and completion procedure

Dave,

I've posted the CBL run after our 4th squeeze (block) and 5th – 6th squeeze (Circulation squeeze) on the GM 34-32 on our FTP site. I've also posted the full completion procedure with perforation depths and the final squeeze procedure to raise TOC.

The block squeeze did a decent job of isolating the MV1 from the MV2 frac. The circulation squeeze did a very good job of establishing almost an additional 100' of solid bond at the top of the wellbore and provided decent isolation between the MV2 and MV3 stage.

The current plan, pending your approval (and the BLM's), is to now frac the MV1 – MV3 stages. We will then squeeze one last time to raise the TOC before we frac the MV4 stage. I've designed the squeeze with enough cement to obtain a TOC 200' above the Mesaverde. If we do not achieve circulation to surface before the squeeze I want to reduce the cement volume to 175 sacks which calculates to 528' of coverage in the annulus.

If you could provide verbal approval via email that would be great as we are going to try and squeeze this into the frac schedule ASAP.

Regards,

Chris Caplis
Completions Engineer

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Williams Production RMT Co.

Production Casing Remediation Procedure

Wellname: **GM 34-32**

Date: 12/09/2010

Field: Grand Valley

Prepared By: Chris Caplis

Cell phone: 303-601-4884

Purpose: Remediate failed Primary Cement Job

Well Information:

API Number:	05-045-17829
Production Casing:	4-1/2" 11.6# E-80
Shoe Depth:	7,275 ft
Float Collar Depth	7,243 ft
Surface Casing Depth	1,070 ft
Top of Mesaverde:	4,124 ft
Top of Gas:	5,319 ft
Correlate Log:	Baker CH Log dated 9/9/2010
Max pressure:	7,000 psi

Well History:

- Six squeeze jobs have been attempted on this well with marginal success
- Current TOC is at 5,080 ft. Current Top Perf is at 5,360 ft.
- The LC - MV3 stages will have been completed by the time we pump this squeeze

Proposed Procedure:

- 1 MIRU Wireline unit
Set kill plug above MV3 stage, ~5,630 ft
Perforate 2 squeeze holes at 4,950 ft.
- 2 MIRU Service Unit. RIH with 2 3/8" workstring/packer or set retainer at 4,850 ft.
Circulate hole to work out all gas, set packer/ sting into retainer at 4,850 ft.
Pump injection test / establish circulation to surface

- 3 MIRU HES Cement Crew
IF WE HAVE CIRCULATION TO SURFACE, Pump 350 sx 17.0 ppg w/0.5% CFR-3, hesitate and attempt to squeeze
IF WE DO NOT HAVE CIRCULATION TO SURFACE, Pump 175 sx 17.0 ppg w/0.5% CFR-3, hesitate and attempt to squeeze
Displace to within 1.0 bbls of EOT
Unseat packer/ sting out of retainer, pull up ~30 ft and reverse circulate tubing
POOH with tubing
- 4 Allow for 24 hrs cement set time.
- 5 RIH with bit and 2 3/8" tubing. Drill out cement (and retainer if used) at 4,950 ft and clean out to top of kill plug.
Run CBL from kill plug up to 3,500 ft. Call Denver with results.
No need to pressure test as these perfs will see fracture pressure
- If all successful, continue with completion operations.