



Andrews, David

From: Andrews, David
Sent: Wednesday, May 18, 2011 2:51 PM
To: 'Joan_Proulx@oxy.com'
Cc: Ellsworth, Stuart; Krabacher, Jay; King, Kevin; Weems, Mark
Subject: RE: OXY/H&P330/CC-697-09-15B/CC-609-33PAD CEMENT SUMMARY

Joan,

This variance request is currently not acceptable for approval. Oxy's CBL demonstrates that a significant portion of the surface casing annulus, from approximately 814' to 85' does not have adequate cement coverage to prevent annular fluid crossflow of shallow nuisance gas and/or groundwater. If Oxy does not provide remedial cement to cover this interval, then a demonstration must be made to show that gas and/or groundwater zones do not exist within this interval or that crossflow will not occur. While there doesn't appear to be any nearby water wells to demonstrate the presense shallow groundwater in the area, COGCC would be willing to consider an evaluation of potential shallow gas or groundwater occurrence based on any available mud logs, drilling records, or open-hole logs (induction and/or neutron-density) for surface holes on this pad or nearby pads. Oxy could also consider running cased-hole logs on the surface casing for this well, if they would provide similar results to document the presence or absence of groundwater or gas within the interval from 814' to 85'.

Oxy's current request assumes that the surface casing will prevent flow of production gas into the interval, but if the surface casing develop holes through corrosion, then two potential sources of gas could infiltrate the uncovered annular space:

1. Wasatch gas between the top of production casing cement and the surface casing shoe.
2. Production gas from a possible production casing leak in the future.

While it would not alleviate the problem of potential crossflow behind the surface casing in zones from 814' to 85', as discussed above, these other concerns could be dealt with by placing cement behind the production casing from 2800' to surface utilizing a DV tool at 2800'. Other options would be considered by COGCC staff (e.g., cement the entire production casing to surface). Oxy's current plan of a production casing TOC of 5870' is not acceptable if the surface casing cement is not remediated.

I look forward to reviewing any additional documentation that Oxy can provide for identifying shallow gas or groundwater zones and your planned changes to the production casing and cement design for this well to provide adequate protection of the environment. Upon receipt of your additional submittals, I will re-evaluate this variance request.

Thanks,

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

State of Colorado
Oil and Gas Conservation Commission
707 Wapiti Court, Suite 204
Rifle, Colorado 81650
Office Phone: (970) 625-2497 Ext. 1
Cell Phone: (970) 456-5262
Fax: (970) 625-5682
E-mail: David.Andrews@state.co.us
Website: <http://www.colorado.gov/cogcc>

OXY RE-SUBMITTED REVISED
VARIANCE REQUEST ON
5-26-2011. SEE SUNDRY
NOTICE, Doc. NO. 2055138

-----Original Message-----

From: Joan_Proulx@oxy.com [mailto:Joan_Proulx@oxy.com]
Sent: Tuesday, May 17, 2011 2:53 PM
To: Andrews, David
Subject: RE: OXY/H&P330/CC-697-09-15B/CC-609-33PAD CEMENT SUMMARY

David:

Attached is a scan of the Form 4 sundry, as well as a pdf of the CBL run on the 697-09-15B well. The engineer also asked for a timeline for approval of the variance request so that they can properly plan the rig schedule for this pad.

Please let me know if you have any questions.

Regards,

Joan

-----Original Message-----

From: Andrews, David [mailto:David.Andrews@state.co.us]

Sent: Wednesday, April 20, 2011 3:20 PM

To: Carestia, Nicolas A; GJRig01

Cc: Ahlquist, Brad G; Kuether, Linda J; Padilla, Daniel; Proulx, Joan M; Benavides, Simon (BISON ENERGY PARTNERS LTD); Townsend, Paul B; Guerra, Victor; Ramires, Guillermo; Ellsworth, Stuart; King, Kevin; Krabacher, Jay; Weems, Mark

Subject: RE: OXY/H&P330/CC-697-09-15B/CC-609-33PAD CEMENT SUMMARY

Nicolas,

I came up with a similar estimate for the top of lead cement (worst case, assuming water above the lead cement was 915'). Assuming some loss of lead cement with a partially-evacuated annulus, the TOC may be higher. If all annular fluid was lost to the formation above the lead cement top, then highest TOC would be approximately 295', which is still too much void to cover with the 18 sx top-out cement that was pumped.

As discussed during our telephone call, I am requiring a cement bond log to verify the actual cement coverage on this surface casing job. Please email a PDF copy of the CBL after you run the log. A hard copy will also be required when Oxy submits its Form 5 (Drilling Completion Report) for this well.

If significant gaps in cement coverage are observed on the CBL, then Oxy has two options: 1) pump a remedial squeeze (I understand that you are not in favor of this approach because it would compromise the integrity of the casing), or 2) request for a variance to Rule 317.h., which requires a continuous column of cement on the surface casing from TD to surface.

If Option #2 is chosen, then Oxy must submit a Form 4 (Sundry Notice).

On Page 1 of the Sundry Notice, mark the box at the bottom of the form entitled, "Rule 502 variance requested." On Page 2 of the Sundry Notice, add the following statement: "Oxy USA WTP LP ("Oxy") is requesting a Rule 502.b.(1) variance to Rule 317.h., which requires that all surface casing shall be cemented with a continuous column from the bottom of the casing to the surface. Oxy has made a good faith effort to comply, and is unable to comply with Rule 317.h. because [INSERT YOUR JUSTIFICATION HERE FOR NOT MEETING COGCC STANDARDS]. The current surface casing and cement configuration is protective of groundwater resources because [INSERT YOUR ENGINEERING AND HYDROGEOLOGIC JUSTIFICATION HERE]. Therefore, the requested variance will not violate the basic intent of the Oil and Gas Conservation Act." COGCC will approve the variance request if it demonstrates that groundwater resources are adequately protected by the current casing and cement configuration.

Thanks,

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

State of Colorado
Oil and Gas Conservation Commission
707 Wapiti Court, Suite 204
Rifle, Colorado 81650
Office Phone: (970) 625-2497 Ext. 1
Cell Phone: (970) 456-5262
Fax: (970) 625-5682

E-mail: David.Andrews@state.co.us
Website: <http://www.colorado.gov/cogcc>

-----Original Message-----

From: Nicolas_Carestia@oxy.com [mailto:Nicolas_Carestia@oxy.com]
Sent: Tuesday, April 19, 2011 12:44 PM
To: Andrews, David; GJRig01@oxy.com
Cc: Brad_Ahlquist@Oxy.com; Linda_Kuether@oxy.com; Daniel_Padilla@oxy.com; Joan_Proulx@oxy.com; Simon_Benevides@oxy.com; Paul_Townsend@oxy.com; Victor_Guerra@oxy.com; Guillermo_Ramires@oxy.com
Subject: RE: OXY/H&P330/CC-697-09-15B/CC-609-33PAD CEMENT SUMMARY

David,

As we have talked recently by phone, I am sending you some comments on my calculations for this cement job. We are discussing this cement job the Drilling Engineer Supervisor, Drilling Superintendent and Drilling Manager.

My comments:

Considering the U-tube phenomenon calculations we should have top of cement near 900 feet (Final cementing pressure was 375 psi) from the primary cementing job, later we cover an additional 40 ft from surface with the top job. The principal assumption; the U-tube phenomenon; doesn't fit to our cementing operation as we were experiencing some losses, so the calculation above could be wrong.

Please let me know your comments.

Regards,

Nicolas Carestia
Senior Drilling Engineer
Occidental Oil and Gas Corporation
A subsidiary of Occidental Petroleum Corporation Mid-Continent Business Unit
#5 Greenway Plaza, Suite 110 Houston TX, 77046-0521 Direct 713.366.5520 Mobile 281.740.0521
nicolas_carestia@oxy.com

-----Original Message-----

From: Andrews, David [mailto:David.Andrews@state.co.us]
Sent: Monday, April 18, 2011 6:12 PM
To: GJRig01
Cc: Ahlquist, Brad G; Carestia, Nicolas A; Kuether, Linda J; Padilla, Daniel; Proulx, Joan M; Benavides, Simon (BISON ENERGY PARTNERS LTD); Townsend, Paul B; Guerra, Victor
Subject: RE: OXY/H&P330/CC-697-09-15B/CC-609-33PAD CEMENT SUMMARY
Importance: High

All,

I would have expected a larger top-out volume based on the information provided below. Have you drilled out the shoe yet? Was the hole size 14-3/4"? Please have an oxy engineer call my cell phone at 970-456-5262 to discuss this cement job.

Thanks,

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

YES. PER RIG STAFF.

D.A.

4-18-2011

State of Colorado
Oil and Gas Conservation Commission
707 Wapiti Court, Suite 204
Rifle, Colorado 81650
Office Phone: (970) 625-2497 Ext. 1
Cell Phone: (970) 456-5262
Fax: (970) 625-5682

E-mail: David.Andrews@state.co.us
Website: <http://www.colorado.gov/cogcc>

-----Original Message-----

From: GJRig01@oxy.com [mailto:GJRig01@oxy.com]

Sent: Sunday, April 17, 2011 2:25 PM

To: Andrews, David

Cc: Brad_Ahlquist@Oxy.com; Nicolas_Carestia@oxy.com; Linda_Kuether@oxy.com; Daniel_Padilla@oxy.com; Joan_Proulx@oxy.com; Simon_Benevides@oxy.com; Paul_Townsend@oxy.com; Victor_Guerra@oxy.com
Subject: OXY/H&P330/CC-697-09-15B/CC-609-33PAD CEMENT SUMMARY

SHOE DEPTH: 2672' SHOE DEPTH IS SHORT DUE TO RIG GETTING STUCK WITH THE CASING AT 2672'
ORIGINAL HOLE DEPTH IS 2740'

API: 050452008800

WELL: CC697-09-15B

TESTED LINES TO 3500 PSI.

PUMPED 20 BBLS FRESH WATER; 20 BBLS OF GEL SPACER; 20 BBLS OF FRESH WATER.

CEMENTED 9.625" SURFACE CASING WITH:

1,050 SACKS OF LEAD - 435.7 BBLS OF 12.3 PPG - 2.33 CU. FT/SK VERSACEM LEAD AT 6.5 BPM.

169 SACKS OF TAIL - 62.3 BBLS OF 12.8 PPG - 2.07 CU. FT/SK VERSACEM TAIL AT 6.5 BPM.

50% EXCESS ON LEAD AND TAIL.

OBSERVED NO RETURNS WHILE PUMPING LEAD. OBSERVED PARTIAL RETURNS WHILE PUMPING TAIL.

DROPPED PLUG AND DISPLACED WITH 202 BBLS FRESH WATER AT 6.5 BPM WITH 590 PSI LIFT PRESSURE.

SLOWED RATE TO 2 BPM AND OBSERVED 375 PSI LIFT PRESSURE.

BUMPED PLUG WITH 915 PSI AND HELD FOR 5 MINUTES.

bled pressure to zero and checked floats. floats held.

OBSERVED PARTIAL RETURNS WHILE PUMPING DISPLACEMENT WITH NO CEMENT RETURNS TO SURFACE.

FLUSHED PARASITE LINE WITH 10 BBLS SUGAR WATER - HAD RETURNS AT 5 BBLS.

TEST CASING TO 1500 PSI 30 MIN., TEST PASSED.

TOPPED OUT OFF LINE WITH 18 SKS (6.5 BBLS) OF 13PPG VERSACEM CEMENT. 1.5 BBLS CEMENT TO SURFACE.

Marco Silva/Victor Benavides

DSM

H&P 330

281-436-6424