From: Westerdale, Barbara
To: Yokley, Bill
Subject: PLEASE PDF--CLOUGH NR 512-3
Date: Friday, August 17, 2012 8:54:01 AM

From: Stanczyk, Jane
Sent: Monday, July 02, 2012 8:55 AM
To: Westerdale, Barbara; Freese, Steve
Cc: Davis, Gregory
Subject: FW: NR 512-3 update Clough NR 512-3 045-20524

Barbara & Steve

Clough NR 512-3 045-20524

WPX will be submitting the Form 5 & 5A for this well soon.
Due to the circumstances, the Form 5A will be unusual.
Let's discuss when you get these forms in – *before* you talk to the operator

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From: Burt, Samuel [mailto:Samuel.Burt@wpxenergy.com]
Sent: Friday, June 29, 2012 2:42 PM
To: Andrews, David
Cc: Tannehill, Julie; Hejl, Kent; Davis, Gregory
Subject: RE: NR 512-3 update

Dave,

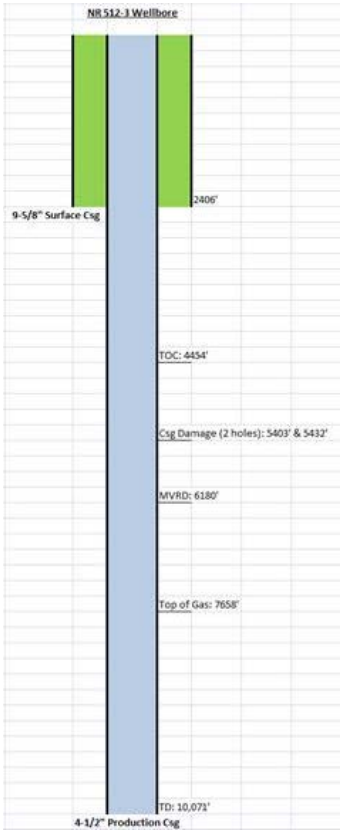
As per our earlier conversation today, here is the information you requested:

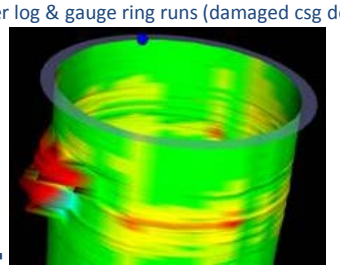
- MVRD: 6180'
- Top of Cement: 4454'
- The CBL can be found at the following site:

  https://www.dropbox.com/s/43l29hrdo0u8run/WPX%20CLOUGH%20NR%20512-3%20CBL.PDF

Here are some additional information to summarize the situation:

- Wellbore diagram outlining TOC, damage, MVRD, TOG, and TD

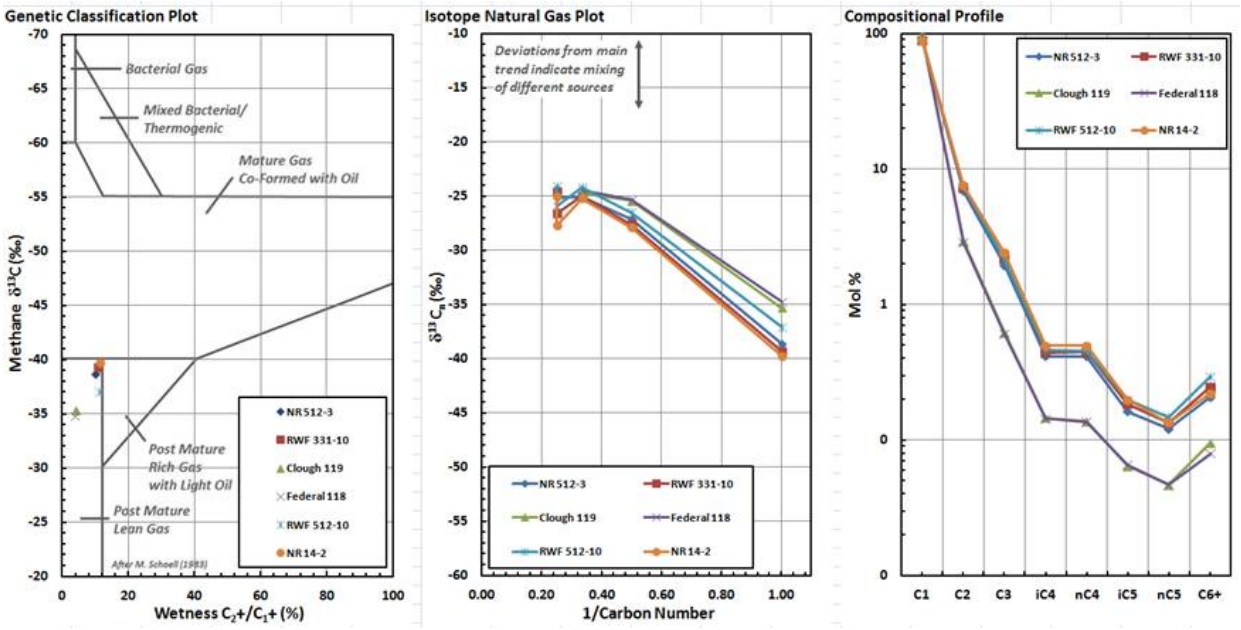
- 

- **Timeline of events**
  - Spud: 11/5/11
  - TD well: 11/30/11
  - Winter Stipulations through May 2012
  - Logged CBL: 5/1/12 – No notable casing issues
  - Well Control Issue Identified: 5/19/12
  - Control well & swap out washed-out tubing head assembly: 5/20 & 5/21/12, respectively
  - Caliper log & gauge ring runs (damaged csg depths located): 5/29/12
    - 
  - Temp log and production survey run (confirmed gas produced only through csg holes and not up through casing): 5/31/12
  - Gas samples taken: 6/7/12
  - Down-hole camera run: 6/10/12
  - Well dead due to hydrostatic pressure: 6/11/12 – present
  - Gas sample analysis results (indicated Upper Williams Fork source): 6/27/12

Given the fact that the gas is from the Williams Fork and not from the Wasatch formation, WPX Energy would like approval to produce the well through the casing holes for several reasons.

Firstly, HSE is always of great concern to WPX. Flowing the well will keep pressure off the backside. Given the proximity to TOC, WPX would feel better flowing the well than shutting it in and allowing pressure to build. Running in the hole with a tubing string would not only aide in production, but also provide means to easily maintain well control and possibly kill the well if need be.

Secondly, WPX is permitted to produce gas from the Williams Fork formation. Gas samples were taken from the NR 512-3, as well as from the closest bottom-hole Wasatch (Clough 119 & Federal 118) and Williams Fork (RWF 331-10, NR 14-2, & RWF 512-10) wells, for comparison purposes. Samples were tested for composition, isotopes, and wetness. Conclusive results indicate that the gas being produced from the NR 512-3 is from the Upper Williams Fork. Please refer to the graphs below for gas analysis results:



Lastly, the well is located in an area that is highly undeveloped. Thus, there is limited data available for reservoir modeling. This situation provides a unique opportunity to learn more about the shallow Williams Fork reservoir in the North Rulison area. How do we learn about the reservoir in this case? Only an open-hole (OH) log has been run to date. WPX would like to run a cased-hole (CH) log at this time. After producing the well through next spring, another CH log would be run. The neutron curve would then be compared to the earlier CH log to help identify reservoir depletion…providing the source depth(s) of the produced gas through the current casing holes.

Completing any zones below the casing damage will require remediation (squeeze and casing patch) of the holes. The current market environment does not make such remediation operations very attractive at this point in time. Likewise, searching for the source of this Upper Williams Fork gas would also be less economic if WPX has to perforate all the suspect sands. Although unfortunate, these casing holes can still be of use and provide the same valuable information. WPX will gladly file appropriate variance request forms with the State of Colorado.

Please let me know your thoughts and concerns regarding our proposed plan. We are committed to providing you with any information you may need to help make an informed decision.

Thanks,
Tyler

Samuel "Tyler" Burt
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From: Andrews, David [mailto:David.Andrews@state.co.us]
Sent: Tuesday, June 05, 2012 8:14 AM
To: Hejl, Kent
Cc: Burt, Samuel; Tannehill, Julie
Subject: RE: NR 512-3 update

Kent,

Thanks for the update. When you are ready to remediate, please email your procedure on a Sundry Notice (Notice of Intent) and include a pdf copy of the production casing CBL. Do not send a duplicate hard copy of the Sundry Notice.

Thanks,

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

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From: Hejl, Kent [mailto:Kent.Hejl@wpxenergy.com]
Sent: Tuesday, June 05, 2012 7:59 AM
To: Andrews, David
Cc: Burt, Samuel; Tannehill, Julie; Hejl, Kent
Subject: RE: NR 512-3 update

Dave,

We've ran a caliper log on the NR 512-3, API # 05-045-20524. Based on the caliper log we have a hole in the 4 ½" production casing string at `5432', we also have some damage at ~5403'. We also ran, in combination, a spinner survey and a temperature log. The spinner and temperature log, confirmed that the well is flowing from the hole at ~5432'. The temperature log does not indicate we have any flow from below this point. We are going to continue our investigation a bit further before we put together a remediation plan.

We're going to have a gas sample analyzed to try to determine the origin of the gas. We are also looking into running a camera down the 4 ½" casing to try and understand the extent of the damage and possibly learn a bit about what happened to cause the casing to fail.

We are currently flowing the well to sales, it's flowing at 600 psi on a 20/65" choke, ~1mmcf/day. Our geologist are also look at logs on the NR 512-3 well and off set wells to see if they can determine the source of the gas flowing from the hole at ~5432'.

I'll continue to update you on ongoing operations.

Thanks

Kent Hejl
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WPXENERGY

From: Hejl, Kent
Sent: Thursday, May 24, 2012 10:24 AM
To: 'david.andrews@state.co.us'
Cc: Burt, Samuel; Tannehill, Julie
Subject: NR 512-3 follow up e-mail

Dave,

Here is some information on the issues we talked about on Tuesday the 22nd.

We may have an issue with the integrity of the 4 ½" production casing string on the NR 512-3 well, API# 05-045-20524. For reasons to be determined, the 4 ½" production casing started flowing on May 19th, no completion operation had began. The production casing string is 4 ½" P-110, 11.6# set at 10,060', the casing was ran and cemented on December 3, 2011. We are currently working to find it issue with the 4 ½" production casing, until we pin point the problem I don't have an answer on how we are going to remediate.

The surface casing on this well is 9 5/8" is H-40,32# & J-55,36# set at 2406', there is no pressure on the Bradenhead at this time.

When find out what may have caused the 4 ½" production casing to flow we will update you with our findings, at that time we should have a remediation plan in place.

Thank you

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