

STATE OF  
COLORADO

Westerdale - DNR, Barbara &lt;barbara.westerdale@state.co.us&gt;

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**RE: 70 Ranch State BB18-622 MWD Resistivity Failure**

3 messages

**Diana Burn - DNR** <diana.burn@state.co.us>

Wed, Jul 15, 2015 at 5:42 PM

To: Holly Duncan &lt;Holly.Duncan@nblenergy.com&gt;, Barbara Westerdale - DNR &lt;barbara.westerdale@state.co.us&gt;

Cc: Denver Regulatory &lt;Denverregulatory@nobleenergyinc.com&gt;

Hi there – I have copied Barb Westerdale on this, she is the permitting supervisor and the logging exception is permitting's purview. From an engineering standpoint, this log does not get us where we want to be and if this was a pad that open hole logs were required, we would have every expectation that the next well on the pad becomes a candidate for an OH log. Barb will be in tomorrow to respond. Apologize for the necessary handoff.

Thanks,

Diana

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**From:** Holly Duncan [mailto:[Holly.Duncan@nblenergy.com](mailto:Holly.Duncan@nblenergy.com)]**Sent:** Wednesday, July 15, 2015 2:14 PM**To:** [Diana.burn@state.co.us](mailto:Diana.burn@state.co.us)**Cc:** Denver Regulatory**Subject:** 70 Ranch State BB18-622 MWD Resistivity Failure

Hello Diana,

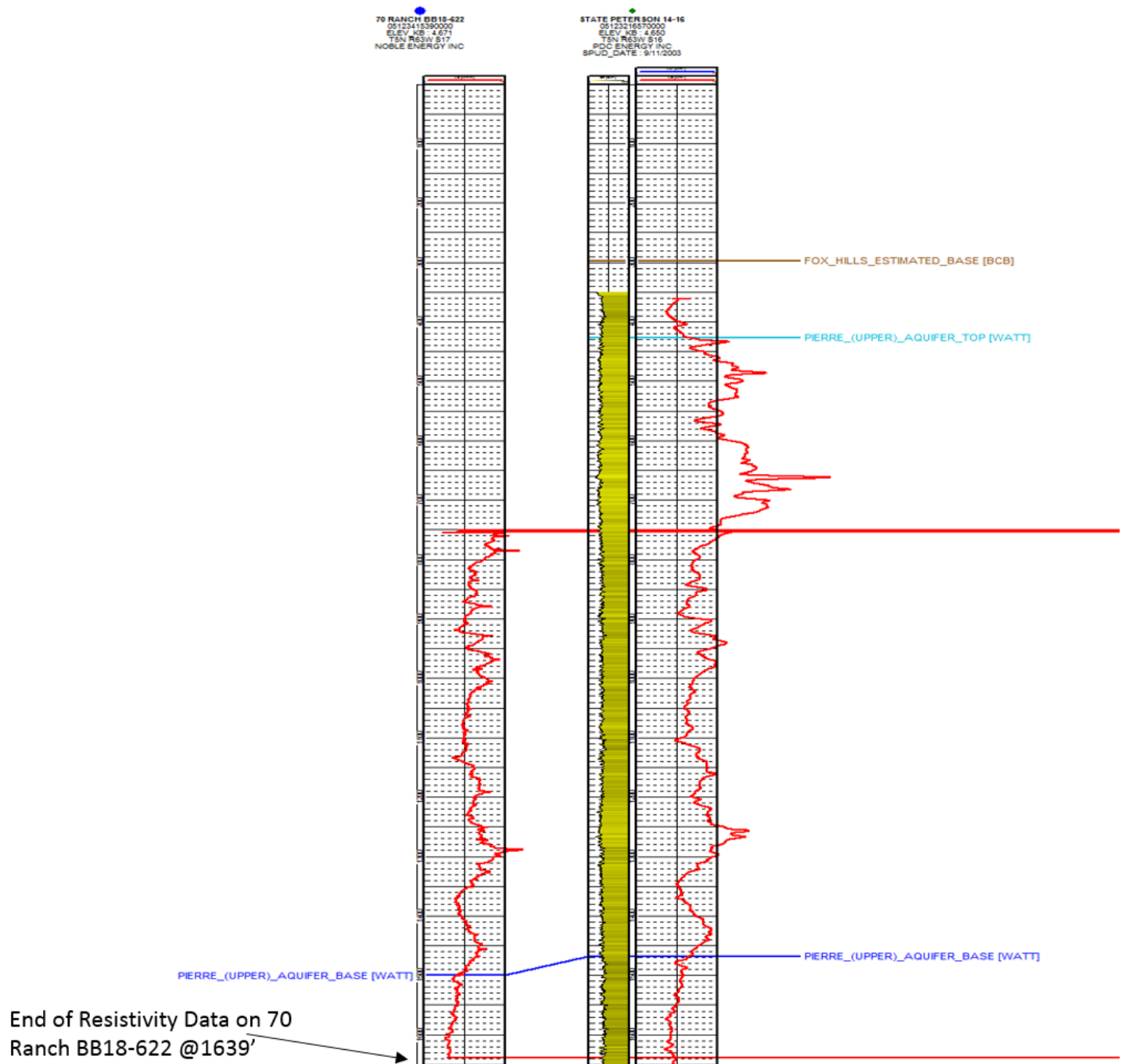
Please see below and let us know if this Resistivity log, plus our planned CBL and whole-well Gamma Ray will be sufficient for rule 317.p (We have an exception but prefer to run the MWD Resistivity tool rather than a cased-hole neutron; this is our second attempt on the pad).

We were able to identify the base of the complete aquifer column, but were not able to take the log to KOP. However, the Gamma Ray and CBL will provide a look at the rest of the stratigraphy, surface casing depth and cement coverage.

Thank you,

Holly

70 Ranch State BB18-622 is the well on the left, offset well with correlated aquifer coverage is on the right.



NOTE NEW EMAIL ADDRESS

**Holly Duncan**  
Noble Energy  
Geologist

(303) 228-4083 Office Direct  
(303) 506-3940 Mobile  
[Holly.Duncan@nobleenergy.com](mailto:Holly.Duncan@nobleenergy.com)



7/16/2015

State.co.us Executive Branch Mail - RE: 70 Ranch State BB18-622 MWD Resistivity Failure

**Westerdale - DNR, Barbara** <barbara.westerdale@state.co.us>

Thu, Jul 16, 2015 at 7:24 AM

To: Diana Burn - DNR <diana.burn@state.co.us>

Cc: Holly Duncan <Holly.Duncan@nbleenergy.com>, Denver Regulatory <Denverregulatory@nobleenergyinc.com>

Hi, Holly,

Noble does have an open hole logging exception approved for this pad since there are two existing wells with open hole logs within acceptable distances from this location. There is a BMP that Noble will run a cased hole pulsed neutron log with GR from TD into the surface casing on one of the first wells drilled on this pad.

I appreciate the effort to obtain an open hole log instead of the cased hole log, but if Noble can't obtain a complete open hole log on one of the remaining wells on this pad, then the requirement to obtain a cased hole log still stands.

Let me know if you still have questions about this,

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Barbara Westerdale

Permit Supervisor



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1120 Lincoln Street, Suite 801, Denver, CO 80203

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**Holly Duncan** <Holly.Duncan@nbleenergy.com>

Thu, Jul 16, 2015 at 7:32 AM

To: "Westerdale - DNR, Barbara" <barbara.westerdale@state.co.us>

Thanks so much, Barbara!

Holly

**From:** Westerdale - DNR, Barbara [mailto:[barbara.westerdale@state.co.us](mailto:barbara.westerdale@state.co.us)]

**Sent:** Thursday, July 16, 2015 7:24 AM

**To:** Diana Burn - DNR

**Cc:** Holly Duncan; Denver Regulatory

**Subject:** EXTERNAL: Re: 70 Ranch State BB18-622 MWD Resistivity Failure

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