

Bulldog #22-41V-890
API #05-081-07784-00
Axia Energy, LLC
Change in Drilling Plan Narrative

Axia Energy, LLC respectfully requests approval for a Change in Drilling Plan for the Bulldog #22-41V-890 per the below.

In an attempt to adhere to the COA's placed on the Form 4 approved on 10/29/13 concerning cement requirements, Axia Energy designed and pumped the 7 5/8" intermediate casing cement job to obtain cement coverage from the intermediate casing shoe to 200' into surface casing. During cementing, loss circulation was encountered 186 bbls into the cement job. The cement continued to be pumped per design to job completion.

Per the attached annotated temperature log, in combination with the calculations based on loss of circulation volume, it is Axia Energy's assertion that lead cement is present to +/- 4,750'. The COA's were not achieved, but a Change in Drilling Plan approval is requested and COGCC regulations fulfilled per:

- Rule 209 – This requirement has been met. The estimated Ft. Union formation base/Lance formation top is 1,506' MD. 10 3/4" surface casing was set and cemented to surface at 1,510' protecting any fresh water present in the Ft. Union formation. All fresh water wells in the vicinity are at a shallower depth than the surface casing shoe of 1,510' therefore fresh water has been adequately protected. There are no significant coal seams present based on GR on the subject well and offset open hole logs between 1,510' – 4,750'.
- Rule 317d – This requirement has been met. The surface casing set and cemented at 1,510' prevents the migration of oil, gas and water from lower zones to fresh ground water zones.
- Rule 317g – This requirement has been met. The surface casing set and cemented at 1,510' adequately protects fresh water aquifers in the vicinity.
- Rule 317h – This requirement has been met. Based on the subject well's location outside of the established Craig North field, the shallowest known producing horizon is the Niobrara formation. Cement was successfully brought 200' above the Niobrara formation top.