

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Wednesday, May 15, 2013 9:06 AM
To: dave.kubeczko@state.co.us
Subject: FW: PetroShare Corporation, Voloshin 3-25 Pad, Lot 11 Sec 25 T6N R90WW, Moffat County, Form 2A (#400387403) Review

Categories: Operator Correspondence

Scan No 2106602 CORRESPONDENCE 2A#400387403

From: Kimberly Rodell [mailto:krodell@upstreampm.com]
Sent: Monday, May 13, 2013 4:20 PM
To: 'Dave Kubeczko - DNR'
Cc: 'Frederick J Witsell'; Jacob Davidson
Subject: RE: PetroShare Corporation, Voloshin 3-25 Pad, Lot 11 Sec 25 T6N R90WW, Moffat County, Form 2A (#400387403) Review

Dave,

Per a discussion between myself and Fred Witsell with PetroShare and as discussed at the onsite, PetroShare requests the following COA be added to the approved Voloshin 3-25 OGLA.

“In emergency situations or if the well experiences mechanical failures and were in need of a completion rig or other service equipment to bring the well back on production and avoid environmental concerns and maintain the wellbore integrity, PetroShare will provide reasonable notice to COGCC that it will need to bring in such equipment and will make every reasonable effort to accommodate Elk Winter Concentration Area timing stipulations. If such repairs are needed during this timing limitation, PetroShare will make every reasonable effort to proceed with the work during the hours of 9:00 a.m. to 4:00 p.m. from December 1 through April 15.”

Please let me know what your thoughts are. Otherwise, PetroShare agrees to all other COAs that will be attached to the Voloshin 3-25 OGLA.

Thank you.

Kim Rodell
Permit Agent for PetroShare

From: Dave Kubeczko - DNR [mailto:dave.kubeczko@state.co.us]
Sent: Sunday, May 12, 2013 10:38 AM
To: fwitsell@petrosharecorp.com
Cc: krodell@upstreampm.com
Subject: PetroShare Corporation, Voloshin 3-25 Pad, Lot 11 Sec 25 T6N R90WW, Moffat County, Form 2A (#400387403) Review

Fred,

I have been reviewing the Voloshin 3-25 Pad **Form 2A** (#400387403). COGCC would like to attach the following conditions of approval (COAs) based on the information and data PetroShare Corporation has submitted on or attached

to the Form 2A, as well as information from the recent field consultation on May 10, 2013, prior to passing the Oil and Gas Location Assessment (OGLA) review.

Construction (Section 6): The box answering the question will salt (>15,000 ppm TDS Cl) or oil based muds (OBM) be used? has been marked **Yes**; therefore the following conditions of approval (COAs) will apply:

COA 11 - A closed loop system (which operator has indicated on the Form 2A) must be implemented during drilling. All cuttings generated during drilling with OBM/high chloride mud must be kept in containers or on a lined/bermed portion of the well pad; prior to analysis and/or offsite disposal.

COA 38 - The moisture content of any drill cuttings in a cuttings area or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, if the freshwater mud generated drill cuttings are to remain/disposed of onsite, they must also meet the applicable standards of table 910-1.

General: The following conditions of approval (COAs) will apply:

COA 91 - Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).

COA 5 - Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines

COA 23 - Operator must ensure 110 percent secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

COA 28 - The location is in an area of moderate run-on/run-off potential; therefore standard stormwater BMPs must be implemented at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off, as well as sufficient diversion of the nearby drainage.

COA 44 - The access road will be constructed to prevent sediment migration from the access road to nearby surface water or any drainages leading to other nearby surface waters.

COA 25 - Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.

COA 58 - Berms or other containment devices shall be constructed to be sufficiently impervious (preferably corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.

COA 22 - Prior to drilling, operator shall collect surface water samples from the two ponds identified during the May 10, 2013 field consultation, as well as the two nearby water wells located downgradient from the well pad location. After 90 days, but less than 180 days of completion of the proposed wells a "post-completion" test shall be performed for the same analytical parameters listed below and repeated once between 60- and 72-months. If the wells are non-producing wells, then the 60- to 72-month sample will not be required. If no significant changes from the baseline have been identified after the 60- to 72-month sample, no further testing shall be required. Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing. At a minimum, the groundwater and surface water samples will be analyze for the following parameters: pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO₃), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium,

sodium), other elements (barium, boron, selenium and strontium), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene, and xylenes). Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be documented. The location of the sampled Water Sources shall be surveyed in accordance with Rule 215. Copies of all test results described above shall be provided to the COGCC Director and the landowner where the water quality testing is located within three (3) months of collecting the samples used for the test. The analytical data and surveyed locations shall also be submitted to the Director in an electronic data deliverable format.

Documented refusal to grant access by well owner or surface owner (for surface water and spring sampling) shall not constitute a violation of this COA.

Pipelines: The following conditions of approval (COAs) will apply to the Form 2A Permit if any temporary surface pipelines (poly or steel) or permanent pipelines (poly or steel) are used during drilling and completion operations:

COA 45 - Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service.

COA 48 - Operator must implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located.

COA 49 - Operator must routinely inspect the entire length of the surface pipeline to ensure integrity.

COA 54 - Operator must ensure 110 percent secondary containment for any potential volume of fluids that may be released from the surface pipeline at all stream, intermittent stream, ditch, and drainage crossings.

COA 55 - Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

Based on the information provided in the Form 2A by PetroShare, COGCC will attach these COAs to the Form 2A permit, PetroShare does not need to respond, unless you have questions or concerns with details in this email. If you have any questions, please do not hesitate to call me at (970) 309-2514 (cell), or email. Thanks.

Dave

David A. Kubeczko, PG
Oil and Gas Location Assessment Specialist
Western Colorado

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