

State of Colorado Oil and Gas Conservation Commission

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OGCC RECEPTION

Document Number:

400356093

EARTHEN PIT REPORT / PERMIT

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days is required for pits. Submit required attachments and forms.

Form Type: ☒ PERMIT ☐ REPORT

OGCC PIT NUMBER: 432419

NOTE: Operator to provide OGCC Pit Number only if available on an existing pit for pit report

OGCC Operator Number: 10150 Contact Name: Jessica Donahue
 Name of Operator: BLACK HILLS PLATEAU PRODUCTION LLC
 Address: 1515 WYNKOOP ST STE 500 Phone: (720) 210-1333
 City: DENVER State: CO Zip: 80202 Email: Jessica.Donahue@blackhillscorp.com

ATTACHMENTS

Detailed Site Plan

Design/Cross Sec

Topo Map

Calculations

Sensitive Area Info

Mud Program

Form 2A

Form 26

Water Analysis

Pit Location Information

Operator's Pit/Facility Name: Homer Deep Unit Operator's Pit/Facility Number: 9-11
 API Number (associated well): 05- 00
 OGCC Location ID (associated location): Or Form 2A # 400356087
 Pit Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNW-9-8S-98W-6
 Latitude: 39.380250 Longitude: -108.339710 County: GARFIELD

Operation Information

Pit Use/Type (Check all that apply): Pit Type: ☒ Lined ☐ Unlined
☐ Drilling: (Ancillary, Completion, Flowback, Reserve Pits) ☐ Oil-based Mud; ☐ Salt Sections or High Chloride Mud
☐ Production: ☐ Skimming/Settling; ☐ Produced Water Storage; ☐ Percolation; ☐ Evaporation
☐ Special Purpose: ☐ Flare; ☐ Emergency; ☐ Blowdown; ☐ Workover; ☐ Plugging; ☐ BS&W/Tank Bottoms
☒ Multi-Well Pit: Construction Date: 04/01/2013 Actual or Planned: Planned
 Method of treatment prior to discharge into pit: Separator
 Offsite disposal of pit contents: ☒ Injection; ☐ Commercial; ☒ Reuse/Recycle; ☐ NPDES; Permit Number: _____
 Other Information: The primary plan is to reuse/recycle all contents from the pit. If the volume becomes too great to manage however, the contents will be taken to the Hancock Gulch #1 injection well, Facility ID #159293.

Site Conditions

Distance (in feet) to the nearest surface water: 618 Ground Water (depth): 59 Water Well: 1051
 Is this location in a Sensitive Area? No Existing Location? _____

Pit Design and Construction

Size of Pit (in feet): Length: 365 Width: 74 Depth: 20 Calculated Working Volume (in barrels): 41320
 Flow Rates (in bbl/day): Inflow: 200 Outflow: _____ Evaporation: _____ Percolation: _____
 Primary Liner. Type: HDPE Thickness (mil): 24
 Secondary Liner (if present): Type: HDPE Thickness (mil): 24
 Is Pit Fenced? Yes Is Pit Netted? Yes Leak Detection? No
 Other Information: Measured distance to Receipt No 9503204A, Permit No 279875-- Owner #10 Enterprises. Initially the pit will only contain freshwater. During this period, the pit will not be netted. Once flowback water is introduced to the pit, it will be netted in accordance with COGCC regulations.

Operator			
Comments:			
Certification			
I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.			
Signed:		Print Name:	Jessica Donahue
Title:	Regulatory Technician	Email:	Jessica.Donahue@blackhillscorp.com
		Date:	12/14/2012

Approval		
Signed: 	Title: <u>Director of Cogcc</u>	Date: <u>04/08/2013</u>

<u>BMP</u>	
<u>Type</u>	<u>Comment</u>
Total: 0 comment(s)	
CONDITIONS OF APPROVAL:	
<p>SITE SPECIFIC COAs:</p> <p>Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, pit liner installation, 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).</p> <p>Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface or buried pipelines.</p> <p>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 or wetlands areas.</p> <p>Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations (as described on the BMPs tab and shown on the Construction Layout Drawings attachment); 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.</p> <p>The moisture content of any freshwater generated cuttings in a cuttings pit, trench, 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 drill cuttings are to be left onsite, they must also meet the applicable standards of Table 910-1.</p> <p>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 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.</p> <p>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.</p>	

FORM 15 EARTHEN PIT PERMIT COAs:

Per Black Hills Plateau Production's De Beque Exploratory Proposal (which is currently being analyzed by BLM), "It is estimated that initially the flowback fluids (before evaporation) would contain about 3,500 ppm of total dissolved solids (TDS). The concentration of solids in the fluid would increase as water evaporated. The fluids pit would be double lined, with both liners a minimum of 24 mil thick, and they would be installed in accordance with Colorado Oil and Gas Conservation Commission (COGCC) regulations as well as the BLM GJFO Standard Conditions. The pit liner would be maintained in good working condition, with no tears or holes, until the pit was closed."; the multi-well pit must be double-lined.

After installation of the uppermost liner and prior to operating the pit, the synthetic liner(s) shall be tested by filling the pit with at least 70 percent of operating capacity of water, measured from the base of the pit (not to exceed the 2-foot freeboard requirement). The operator shall monitor the pit for leaks for a period of 72 hours prior to either draining the pit or commencing operations. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) 48 hours prior to start of the hydrotest. Hydrotest monitoring results must be maintained by the operator for the life of the pit and provided to COGCC prior to using the pit.

In lieu of conducting an initial hydrostatic test of the pit, the operator can monitor fluid levels in the pit continuously using a minimum of two pressure transducers located at the upgradient and downgradient ends of the pit (based on the original topographic profile). These pressure transducers should be linked to the operator's SCADA system such that they can be remotely monitored. In addition, the pit liner will be marked at the two foot freeboard depth line so that operations personnel (as well as COGCC inspectors) can easily verify that the required fluid free board is being maintained. The electronically collected water level measurement data shall be used to confirm changes in pit inflow and outflow during operations based on estimates from truck and/or pipeline delivery or removal activities. Any abnormalities that are noticed during operations will be reported to the operator's field supervisor immediately so that any necessary follow-up can be scheduled.

No portion of any pit that will be used to hold liquids shall be constructed on fill material, unless the pit and fill slope are designed and certified by a professional engineer, subject to review and approval by the director prior to construction of the pit. The construction and lining of the pit shall be supervised by a professional engineer or their agent. The entire base of the pit must be in cut.

For pits containing fluids other than freshwater only; the pit must be fenced. If the pit is not drained, or closure has not begun within 30 days after last use for well completion, the pit must be netted. The operator must maintain the fencing and netting until the pit is closed.

Surface water samples (one upgradient and one downgradient from the pit/well pad location) from Dry Fork (if water is present) shall be collected prior to pit use and every 12 months (until pit closure) to evaluate potential impacts from pit operations. At a minimum, the surface water samples will be analyze for the following parameters: major cations/anions (chloride, fluoride, sulfate, sodium); total dissolved solids (TDS); and BTEX/DRO.

The operator shall submit, and receive approval of, a reuse and recycling plan per Rule 907.a.(3), prior to any offsite reuse/recycling of pit fluids.

Pits used exclusively for drilling shall be closed in accordance with the 1000-Series Rules. Any pit(s) used for purposes other than drilling shall be closed in accordance with Rule 905. Closure of Pits, and Buried or Partially Buried Produced Water Vessels; with an approved Site Investigation and Remediation Workplan, Form 27.

Submit additional disposal facilities (wells, pits, etc.), if necessary (i.e., if original disposal option changes), for pit liquid contents to COGCC via a Form 4 Sundry prior to disposal.

At the time of pit closure, operator must submit disposal information for solids, if necessary, via a Form 4 Sundry Notice to the COGCC Location Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us). The disposal method will need to be approved prior to operator starting pit closure.