

FORM

2

Rev
12/05

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



DE	ET	OE	ES
----	----	----	----

APPLICATION FOR PERMIT TO:

1. ☒ Drill, ☐ Deepen, ☐ Re-enter, ☐ Recomplete and Operate

2. TYPE OF WELL

 OIL ☒ GAS ☐ COALBED ☐ OTHER _____
 SINGLE ZONE ☒ MULTIPLE ☐ COMMINGLE ☐
Refiling ☐Sidetrack ☐

Document Number:

400173176

Plugging Bond Surety

20090100

3. Name of Operator: TEXAS AMERICAN RESOURCES COMPANY4. COGCC Operator Number: 101385. Address: 410 17TH STREET SUITE 1610City: DENVER State: CO Zip: 802026. Contact Name: Melissa Lasley Phone: (720)279-6805 Fax: (303)592-3030Email: mlasley@texasarc.com7. Well Name: Cass Farms Well Number: 44-34H

8. Unit Name (if appl): _____ Unit Number: _____

9. Proposed Total Measured Depth: 11000

WELL LOCATION INFORMATION

10. QtrQtr: SESE Sec: 34 Twp: 8N Rng: 62W Meridian: 6Latitude: 40.611130 Longitude: -104.299740
 Footage at Surface: 290 feet FNL/FSL 660 feet FEL/FWL FEL
11. Field Name: Wildcat Field Number: 9999912. Ground Elevation: 4877 13. County: WELD

14. GPS Data:

Date of Measurement: 04/12/2011 PDOP Reading: 1.1 Instrument Operator's Name: Adam Kelly15. If well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**
 Footage at Top of Prod Zone: FNL/FSL 600 FSL 600 FEL 600 FEL 600
 Bottom Hole: FNL/FSL 600 FNL 600 FEL 600 FEL 600
 Sec: 34 Twp: 8N Rng: 62W Sec: 34 Twp: 8N Rng: 62W
16. Is location in a high density area? (Rule 603b)? ☐ Yes ☒ No17. Distance to the nearest building, public road, above ground utility or railroad: 285 ft18. Distance to nearest property line: 290 ft 19. Distance to nearest well permitted/completed in the same formation: 1 mi

20. LEASE, SPACING AND POOLING INFORMATION

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
Niobrara	NBRR	Unspaced	640	All

21. Mineral Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian Lease #: _____22. Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian23. Is the Surface Owner also the Mineral Owner? ☒ Yes ☐ No Surface Surety ID#:23a. If 23 is Yes: Is the Surface Owner(s) signature on the lease? ☒ Yes ☐ No23b. If 23 is No: ☐ Surface Owners Agreement Attached or ☐ \$25,000 Blanket Surface Bond ☐ \$2,000 Surface Bond ☐ \$5,000 Surface Bond

24. Using standard QtrQtr, Sec, Twp, Rng format enter entire mineral lease description upon which this proposed wellsite is located (attach separate sheet/map if you prefer):

Section 34 All

25. Distance to Nearest Mineral Lease Line: 600 ft

26. Total Acres in Lease: 640

DRILLING PLANS AND PROCEDURES

27. Is H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.

28. Will salt sections be encountered during drilling? ☐ Yes ☒ No

29. Will salt (>15,000 ppm TDS CL) or oil based muds be used during drilling? ☐ Yes ☒ No

30. If questions 28 or 29 are yes, is this location in a sensitive area (Rule 901.e)? ☐ Yes ☐ No

31. Mud disposal: ☒ Offsite ☐ Onsite

If 28, 29, or 30 are "Yes" a pit permit may be required.

Method: ☐ Land Farming ☐ Land Spreading ☒ Disposal Facility Other: _____

Note: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	14+3/4	10+3/4	45.5	0	1,000	675	1,000	0
1ST	9+7/6	7	26	5000	6,000	500	6,000	5,000
2ND	6+1/8	4+1/2	11.6	6400	11,000	350	11,000	6,400

32. BOP Equipment Type: ☐ Annular Preventer ☒ Double Ram ☐ Rotating Head ☐ None

33. Comments No Conductor Casing will be used. 30 Day was waved in SUA. SUA is attached

34. Location ID: _____

35. Is this application in a Comprehensive Drilling Plan ? ☐ Yes ☐ No

36. Is this application part of submitted Oil and Gas Location Assessment ? ☒ Yes ☐ No

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Melissa Lasley

Title: Sr. Operations Analyst Date: _____ Email: mlasley@texasarc.com

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____ Director of COGCC Date: _____

API NUMBER

05

Permit Number: _____ Expiration Date: _____

CONDITIONS OF APPROVAL, IF ANY: _____

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

Attachment Check List

Att Doc Num	Name
400173574	PLAT
400173575	OIL & GAS LEASE
400173578	SURFACE AGRMT/SURETY
400173580	DEVIATED DRILLING PLAN

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)

BMP

<u>Type</u>	<u>Comment</u>
General Housekeeping	<p>Waste Management</p> <p>Two "very effective" BMPs for general housekeeping in construction projects are Solid Waste Management and Hazardous Waste Management. Large amounts of Solid Waste are produced in construction projects; including paper, cardboard, Styrofoam, wood cuttings, etc... To manage solid waste, employees should be educated in practicing proper disposal techniques, keeping waste off the ground in order to reduce storm water contamination. Emphasis should be on minimizing production of solid wastes, but also the responsible segregation and timely disposal of wastes in a licensed landfill. Non-hazardous wastes should always be kept separate from hazardous wastes. In Hazardous Waste Management, wastes such as paint, solvents, stains, fuels, or other toxic chemicals pose a special threat to environmental health. Hazardous waste disposal and safety training is a top priority. Limiting the use of hazardous materials is ideal, but when it is necessary, disposal should be done in clearly marked containers. A regular hazardous waste disposal schedule should be created to minimize on-site storage. Disposal should only be done by reputable, licensed hazardous waste haulers. For a more complete list of disposal specifications, along with specifics for all topics listed in this document, please refer to the Texas American Resources Best Management Practices (BMP) Manual.</p>

Construction	<p>Introduction</p> <p>This document serves as a basic summary of the Texas American Resources Best Management Practices (BMPs) Manual. The techniques listed herein consist of temporary and permanent solutions to reduce erosion and pollution at construction sites. These practices have a rating of either “effective or “very effective.” Specific construction and design parameters for these techniques go unmentioned; however, this document provides a complete list of erosion control BMPs and general guidelines for selecting an appropriate BMP for a project. For more detailed information, and specifics on construction and design, please refer to the full BMP manual.</p> <p>General Construction BMPs</p> <p>Texas American Resources currently enlists BMPs rated as “very effective” during three types of construction; Well Site Construction, Road and Access Way Construction, and Pipeline Construction. In addition, Drainage and Drainage Structure BMPs are considered “very effective” and are implemented during construction projects. During Well Site Construction, sites should be determined based on their topographic features. Sites should be placed on level surfaces relatively close to an access road, with steep slopes avoided or properly mitigated. Consideration of Road and Access Way Construction guarantees the engineering and environmental success of a road construction project. Before road construction, the roadway speed limits, travelway width, road gradient limits, water drainage, and other design parameters all ensure a road that can be easily maintained with minimal environmental impacts. When planning for Pipeline and Flowline Construction, the manual’s construction guidelines provide for minimal surface disturbance, reduced impact to natural resources, and adequate clearance for wildlife, livestock, or debris. When placing a pipeline or flowline, the guidelines state that steep terrain or watercourses should be avoided, under story vegetation should remain along the pipeline or flowline route, and soils should be stockpiled to the side of trenches in order to maintain reclamation potential for the site. In order to best minimize soil erosion during construction, Drainage and Drainage Structures are properly constructed; promoting the long-term success of the construction site. Both surface and subsurface drainage needs are identified and properly constructed to allow for adequate movement of silt and debris, as well as to mitigate potential buildup of water in undesired areas.</p>
--------------	--

Storm Water/Erosion Control	<p>Erosion Control</p> <p>Four “very effective” erosion control techniques that can be implemented are Interceptor Swales, Erosion Dikes, Vegetation, and Mulching. Interceptor Swales are small v-shaped or parabolic channels, and can be used to direct either sediment or clean water runoff around disturbed areas. They may be lined with either grass, matting, stone or concrete. Interceptor swales serve as a first defense against erosion. Diversion Dikes can also be used to direct runoff. These are usually made of a compacted soil mound, earthen berm, or waddle used to direct offsite water flow to a desired location (sometimes a sediment basin or protected inlet) before erosion takes place. The use of natural Vegetation is another highly effective method of erosion control and is used in either temporary or permanent situations. In temporary uses, vegetation can be used to stabilize stockpiles or barren areas, or in permanent situations it can stabilize soils in runoff areas and provide for some water absorption. The use of vegetation may not be appropriate for areas with heavy pedestrian or vehicle traffic, and a cost/benefit analysis should be done as initial seeding may be expensive. Mulching of organic materials can be used to protect newly seeded areas. Mulch will protect soils from erosion or desiccation, giving vegetation a chance to establish for further erosion control. All four of these erosion control techniques can be used in conjunction with one another, depending on the project needs.</p> <p>Sediment Loss Prevention</p> <p>In order to prevent sediment loss, Texas American implements four “effective” techniques; the use of Silt Fence, Straw Bales, Check Dams, and Sandbag Berms. Silt Fence consists of a geotextile fabric; part of which is secured in the ground. The fence is supported by poultry netting and is stretched between wooden or metal posts. The fence forms a sediment filter, and also allows for a reduction in runoff velocity. The silt fence is most effective with coarse to silty soil types. It is an economical means of sediment control because it can be relocated for use in future projects; however, it may lead to minor local flooding as runoff may collect upstream of the fence in pools. Straw Bale Dikes are simply straw bales fastened to the surface with wooden posts. Straw bales serve as sediment filters, and can act as a dam/dike to manipulate runoff flow direction. These are for temporary use only as they have a tendency to degrade, and should be replaced every three months. Check Dams consist of various materials including straw bales, rock, or earth berms placed across drainage swales or ditches. They are effective in reducing sediment erosion in areas where vegetation may not be present. Used in conjunction with other sediment control techniques, check dams can reduce the initial runoff velocity and provide for some sediment reduction; making other downstream erosion control techniques more effective. They are usually used for long linear construction projects such as roadways. Minor pooling may occur between and upstream of check dams. The final listed sediment loss control technique is the utilization of Sandbag Berms, which are ideal for construction projects in creeks, channels, or any other watercourse with a high/consistent flow of water. These berms consist of bags of sand, but also contain overflow pipes on top of the berm to direct water flow once sedimentation has occurred. They can be used to direct stream flow as check dams, but can also be used to form small sedimentation ponds while constructing a detention basin. Sandbag berms are ideal in that they can be moved to accommodate changing needs; however they are labor intensive and not suitable for areas with low flow. Sandbag berms should be inspected daily, with silt removed after it reaches six inches.</p>
-----------------------------	---

Total: 3 comment(s)