

Surface Use Plan of Operations

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Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

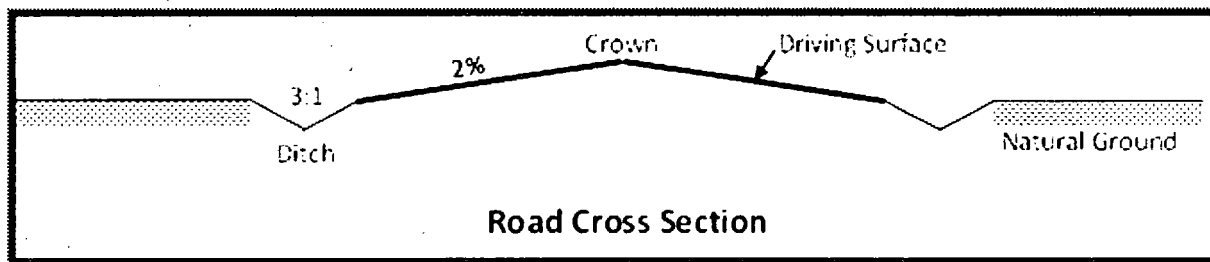
If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

1. Existing Roads

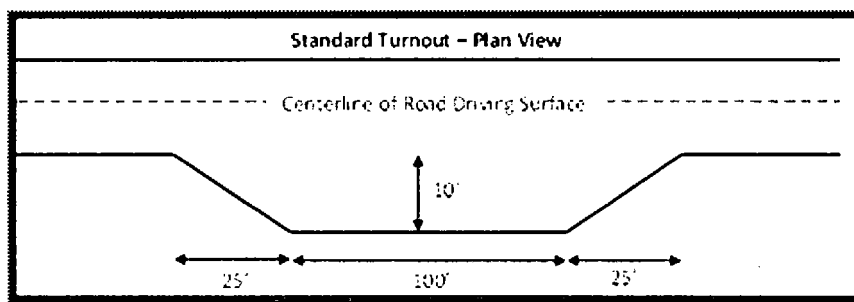
- a. The existing access road route to the proposed project is depicted on Access Road Map, TOPO A & Access Road Map TOPO B. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan.
- b. The existing access road route to the proposed project does not cross lease or unit boundaries, so a BLM right-of-way grant will not be acquired for this proposed road route.
- c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.
- d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

2. New or Reconstructed Access Roads

- a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.
- b. The length of access road needed to be constructed for this proposed project is about 6440 feet.
- c. The maximum driving width of the access road will be 30 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.
- d. The access road will be constructed with 6 inches of compacted Caliche.
- e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



- f. The access road will be constructed with a ditch on each side of the road.
- g. The maximum grade for the access road will be 1 percent.
- h. Turnouts will be constructed for the proposed access road and will be constructed to the dimensions shown in the diagram below. See survey plat or map for location of the turnouts.



- i. No cattleguards will be installed for this proposed access road.
- j. Since the proposed access road crosses lease boundaries, a right-of-way will be required for the access road. A right-of-way grant will be applied for through the BLM. The access road will not be constructed until an approved BLM right-of-way grant is acquired.
- k. No culverts will be constructed for this proposed access road.
- l. No low water crossings will be constructed for the access road.
- m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.
- n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.
- o. The access road and existing road will be 30' wide for a 20' wide drivable surface (to accommodate the rig) and 5' on each side. 102' of the 6,640' of road is new road and the remainder is existing road that will be upgraded. There is a cattle guard on the SW side of the pad that will be replaced.

3. Location of Existing Wells

- a. Zia Hills 19 Federal COM 105H, One Mile Radius Map of the APD depicts all known wells within a one mile radius of the proposed well.
- b. There is no other information regarding wells within a one mile radius.

b. Pipeline R-O-W depicts the proposed Water pipeline route.

c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

3. Buried Oil pipeline:

a. We plan to install a 10-inch buried Coated Steel pipeline from Proposed Well Pad to the Proposed Facility, the proposed length of the pipeline will be 4534.54 feet. The working pressure of the pipeline will be about 270 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. Pipeline R-O-W depicts the proposed Gas pipeline route.

c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

4. Buried Gas pipeline:

a. We plan to install an 8-inch buried Coated Steel pipeline from Proposed Well Pad to the Proposed Facility. The proposed length of the pipeline will be 4534.54 feet. The working pressure of the pipeline will be about 1250 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. Pipeline R-O-W depicts the proposed Gas pipeline route.

c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

Electric Line(s)

a. We plan to install an overhead electric line for the proposed well. The proposed length of the electric line will be 1598 feet. Power Line R-O-W depicts the location of the proposed electric line route. The electric line will be construction to provide protection from raptor electrocution.

b. The existing power line route to the proposed project does not cross lease or unit boundaries, so a BLM right-of-way grant will not be acquired for this proposed power route.

5. Location and Types of Water

a. The source and location of the water supply are as follows: The water source is from an approved source and a temporary permit to lay the lines will be filed under a separate cover.

b. The water will be from two wells in Texas, the HP 51914 (31.967544°, -103.760114°) and HP 41714 (31.970142°, -103.758269°) that are located in Section 16, Block 51 T1, T&P RR Co., Loving County, TX.

6. Construction Material

a. Clean caliche will be from a BLM source or a third-party provider.

4. Location of Existing and/or Proposed Production Facilities

- a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.
- b. If any type of production facilities is located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.
- c. A production facility is proposed to be installed on the proposed well location. Production from the well will be processed on site in the production facility. Location Layout, Figure #1 & Reclamation Diagram, Figure #4 depicts the location of the production facilities as they relate to the well and well pad.
- d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.
- e. Preliminary Plot Plan depicts the production facility as well.

If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.

Additional Pipeline(s)

We propose to install 2 additional pipeline(s):

1. Buried Gas pipeline:

- a. We plan to install a 12-inch buried Coated Steel pipeline from Proposed Well Pad to the Proposed Facility. The proposed length of the pipeline will be 4534.54 feet. The working pressure of the pipeline will be about 270 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

- b. Pipeline R-O-W depicts the proposed Gas pipeline route.

- c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

2. Buried Water pipeline:

- a. We plan to install a 10-inch buried poly pipeline from Proposed Well Pad to the Proposed Facility. The proposed length of the pipeline will be 4534.54 feet. The working pressure of the pipeline will be about 250 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10-foot-wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

10. Plans for Surface Reclamation

Reclamation Objectives

- i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- ii. The long-term objective of final reclamation is to return the land to a condition like what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.
- iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.
- iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.
- v. Interim reclamation will be performed on the well site after the well is drilled and completed. Reclamation Diagram, Figure # 4 depicts the location and dimensions of the planned interim reclamation for the well site. The pad will be reclaimed to 359'x420' (approximately 1.676 acres will be reclaimed leaving the pad at approximately 4.141 acres). The facility pad will not be reclaimed.

Interim Reclamation Procedures (If performed)

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.
2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.
4. Topsoil will be evenly respreads and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting to break the soil crust and create seed germination micro-sites.
5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.
6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation (well pad, buried pipelines, etc.)

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

7. Methods for Handling Waste

- a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.
- b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.
- c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.
- d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.
- e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

8. Ancillary Facilities

- a. No ancillary facilities will be needed for this proposed project.

9. Well Site Layout

- a. The following information is presented in the well site survey plat or diagram:
 - i. reasonable scale (near 1":50')
 - ii. well pad dimensions
 - iii. well pad orientation
 - iv. drilling rig components
 - v. proposed access road
 - vi. elevations of all points
 - vii. topsoil stockpile
 - viii. serve pit location/dimensions if applicable
 - ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)
 - x. existing structures within the 600' x 600' archaeological surveyed area (pipelines, electric lines, well pads, etc.)
- b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.
- c. The submitted survey plat does depict all the necessary information required by Onshore Order No. 1.
- d. Topsoil Salvaging
 - i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respreads evenly on the site following topsoil rereading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.
3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting to break the soil crust and create seed germination micro-sites.
5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.
6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.
7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

11. Surface Ownership

- a. The surface ownership of the proposed project is Federal.

12. Other Information

- a. The following well pad and facility location was staked with Colleen Cepero Rios on April 18th, 2017. Please review this application with the Zia Hills 19 Federal COM 101H, Zia Hills 19 Federal COM 102H, Zia Hills 19 Federal COM 103H, Zia Hills 19 Federal COM 104H, Zia Hills 19 Federal COM 106H, Zia Hills 19 Federal COM 107H, Zia Hills 19 Federal COM 108H. All ROW's will be filed separately.

13. Maps and Diagrams

- Access Road Map, TOPO A & Access Road Map TOPO B - Existing Road
- One Mile Radius Map - Wells Within One Mile
- Location Layout, Figure #1 & Reclamation Diagram, Figure #4 - Production Facilities Diagram
- Preliminary Plot Plan - Additional Production Facilities Diagram
- Pipeline R-O-W - Gas Pipeline
- Pipeline R-O-W - Water Pipeline
- Pipeline R-O-W - Oil Pipeline
- Pipeline R-O-W - Gas Pipeline
- Power Line R-O-W - Electric Line
- Reclamation Diagram, Figure # 4 - Interim Reclamation