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Surface Use Plan of Operations

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 Barlow 34 Fed Com 704H_vicinity map. 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 cross lease boundaries and a BLM road right-of-way will be acquired from the BLM prior to construction activities.
- 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.

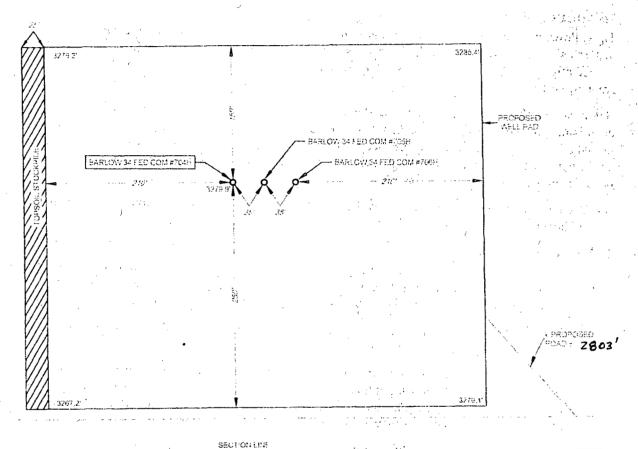
2. New or Reconstructed Access Roads

- 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 2803 feet.
- c. The maximum driving width of the access road will be 24 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.



SECTION 34 TOWNSHIP 26-S, RANGE 33-E, N.M.P.M. LEA COUNTY, NEW MEXICO

DETAIL VIEW :



._____

LEASE NAME & WELL NO. BARLOW 34 FED COM #704H #704H LATITUDE N 32.0009545 #704H LONGITUDE W 103.5630537

LEGEND

SECTION LINE
PROPOSED BOAD

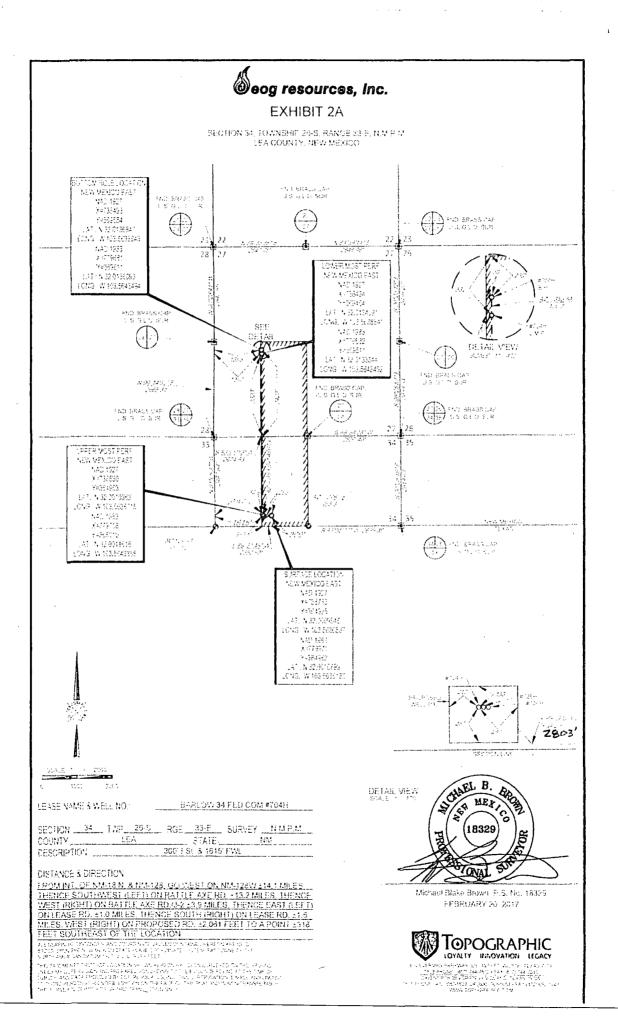
SCALE 1' = 100'

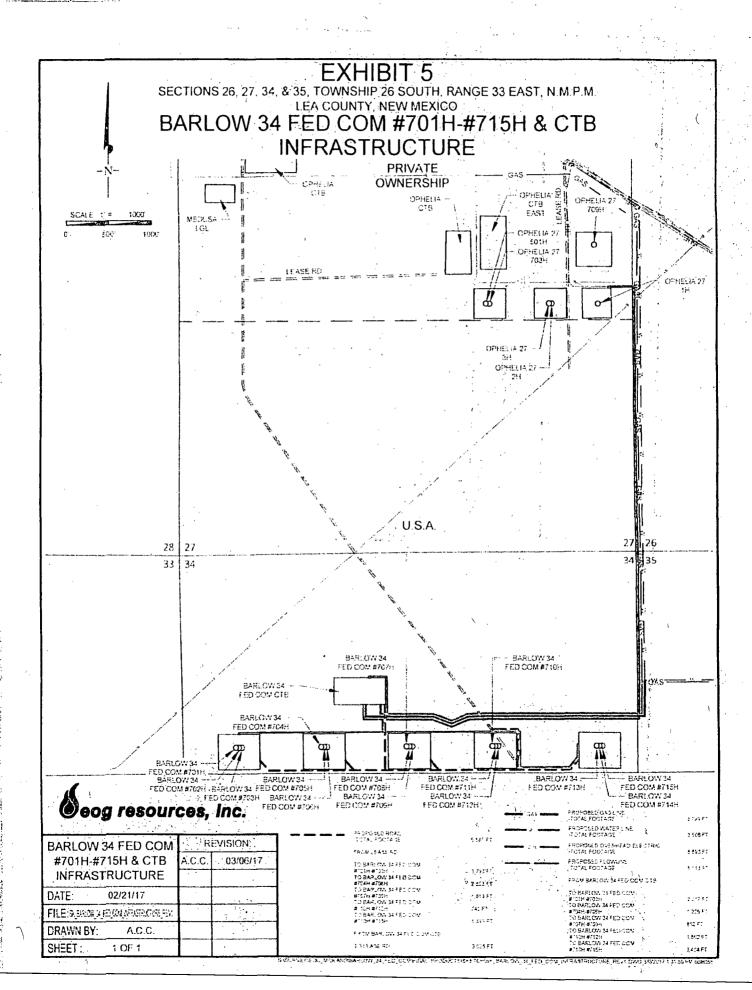
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THE PROPOSED FACE SIZE LOCATION SHOWN HE PEON HAS BEEN SUBJECTED ON THE GROUND FIDER MY SUPERVISION AND PREPARED ADDERROADED TO THE TWIDENCE FOUND AT THE TIME OF SUBJECT AND DATA PROVIDED BY EGG BESTEREES INC. THIS OSCITHICATION IS MADE AUDIEMITED TO THOSE PROPOSED FOR INTIRE SHOWN ON THE PROPOSE THIS PLATA OF BOTH THAN SEPRATE TO THIS FLATANCE FOR THE STANDARD FOR THIS SEPARATION OF THE PROPOSED FOR THIS PLATANCE FRAME.



1400 EVERMAN PARAWAY, GR. 197 - FT. WORTH, TEZAB 76140 TELEPHONE (817) 744-7512 - FAZ/8177 744-7540 7503 NORTH BIG SPRING - MIDI AND TEXAB 75703 TELEPHONE (437) EZI-1653 OR (603) JEZ/465 - FAZ/432/492 1743 WWW TOPOGRAPHIC COM





ADDENDUM - Deficient

Surface Comments

- New and Reconstructed Roads Deficiency:

Please identify how much road is needed from existing lease road. Be sure to differentiate between what will be built for the 701-703H wells and how that road would be utilized. Please make sure plat and SUPO reflect same information.

Corrected plats and SUPO attached

Engineering Comments

- BOP requirements are not met

1. BOP Schematic must have a 10M Annular. Please resubmit with correction.

Altached

- Engineering Review: Other identified drilling plan deficiencies

Not a deficiency but cannot approve APD without a waste minimization plan. Please attach state submitted gas capture plan (this will be a sufficient substitute for waste minimization plan).

Attached

NOTE: The BLM will return your APD package to you, unless you correct all deficiencies identified above (item 1) within 45 calendar days.

• The BLM will not refund an APD processing fee or apply it to another APD for any returned APD.

Extension Requests:

- If you know you will not be able to meet the 45-day timeframe for reasons beyond your control, you must submit a written request through email/standard mail for extension prior to the 45th calendar day from this notice, 07/02/2017.
- The BLM will consider the extension request if you can demonstrate your diligence (providing reasons and examples of why the delay is occurring beyond your control) in attempting to correct the deficiencies and can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an extension, the BLM will return the APD as incomplete after the 45 calendar days have elapsed.
 - The BLM will determine whether to grant an extension beyond the required 45 calendar days and will document this request in the well-file. If you fail to submit deficiencies by the date defined in the extension request, the BLM will return the APD.

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APDs remaining Incomplete:

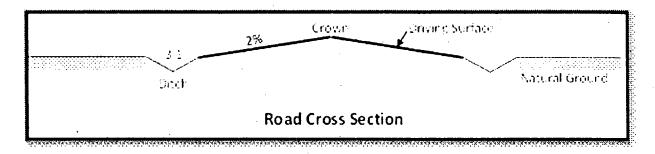
- If the APD is still not complete, the BLM will notify you and allow 10 additional business days to submit a written request to the BLM for an extension. The request must describe how you will address all outstanding deficiencies and the timeframe you request to complete the deficiencies.
 - The BLM will consider the extension request if you can prove your diligence (providing reasons and examples of why the delay is occurring) in attempting to correct the deficiencies and you can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an additional extension, the BLM will return the APD as incomplete.

If you have any questions, please contact Alana Baker at (575) 234-5922.

Sincerely.

Cody Layton Assistant Field Manager Lands and Minerals

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- 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 2 percent.
- h. No turnouts will be constructed on the proposed access road.
- 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 this 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.
- I. 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.

3. Location of Existing Wells

- a. Barlow 34 Fed Com 704H₂ 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.

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 are located on the well-pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.
- e. A production facility is proposed to be installed off the proposed well location. Production from the well will be processed at this production facility. Barlow 34 Fed Com infrastructure sketch depicts the location of the production facilities.
- 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 percipitation, unless more stringent

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protective requirements are deemed necessary.

e. There is no other diagram that depicts production facilities.

f. A pipeline to transport production from the proposed well to the production facility will be installed.

- i. We plan to install a 4 inch buried poly pipeline from the proposed well to the offsite production facility. The proposed length of the pipeline will be 1226 feet. The working pressure of the pipeline will be about 125 psi. A 50 feet wide work area will be needed to install the buried 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.
- ii. Barlow 34 Fed Com Infrastructure depicts the proposed production pipeline route from the well to the existing production facility.
- iii. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

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 3 additional pipeline(s):

- 1. Buried gas lift pipeline:
 - a. We plan to install a 3 inch buried flex steel pipeline from the proposed well to the central tank battery. The proposed length of the pipeline will be 1226 feet. The working pressure of the pipeline will be about 125 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. Barlow 34 Fed Com 704H infrastructure depicts the proposed gas lift pipeline route.
 - c. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.
- 2. Buried produced water pipeline:
 - a. We plan to install a 12 inch buried poly pipeline from the central tank battery to water disposal tie-in. The proposed length of the pipeline will be 3506 feet. The working pressure of the pipeline will be about 125 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. Barlow 34 Fed Com infrastructure depiets the proposed produced water pipeline route.
 - e. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to

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be acquired from the BLM.

3. Buried gas sales pipeline:

a. We plan to install a 16 inch buried steel pipeline from the central tank battery to the gas sales tie-in. The proposed length of the pipeline will be 3799 feet. The working pressure of the pipeline will be about 125 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. Barlow 34 Fed Com infrastructure depicts the proposed gas sales pipeline route.
- c. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

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 8893 feet. Barlow 34 Fed Com infrastructure depicts the location of the proposed electric line route. The electric line will be construction to provide protection from raptor electrocution.
- b. The proposed electric line does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

5. Location and Types of Water

a. The source and location of the water supply are as follows: Water will be supplied from the frac pond as shown on the attached water source map This location will be drilled using a combination of water mud systems (outlined in the drilling program). The water will be obtained from commercial water stations in the area or recycled treated water and hauled to location by trucks or poly pipelines using existing and proposed roads depicted on the proposed existing access road maps. In these cases where a poly pipeline is used to transport fresh water for drilling purposes. Proper authorizations will be secured by the contractor.

b. Barlow 27 Fed Com water source and caliche map depicts the proposed route for a 12 inch poly temporary (<90 days) water pipeline supplying water for drilling operations.

6. Construction Material

a. Caliche will be supplied from pits shown on the attached caliche source map.

Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "Flipping" a well location is as follows:

- -An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat.
- -An area will be used within the proposed well site dimensions to excavate caliche.
- Subsoil will be removed and stockpiled within the surveyed well pad dimensions.
- -Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions.
- -Then, subsoil will be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available).

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-Neither caliche, nor subsoil will be stock piled outside of the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat.

In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

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.
- e. 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, reserve pit location/dimensions if applicable
 - ix, other disturbances needed (flare pit, stinger, frac farm pad, etc.)
 - x, existing structures within the 600' x 600' archaeoligical 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.
- e. A title of a well site diagram is Barlow 27 Fed Com 704H rig layout. This diagram depicts the rig layout.
- d. Topsoil Salvaging

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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 respread evenly on the site following topsoil respreading. 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.

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 similar to 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. Barlow 27 Fed Com 704H interim reclamation depicts the location and dimensions of the planned interim reclamation for the well site.

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 respread 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 in order to break the soil crust and create seed germination micro-sites.

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- 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 yegetation 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.
- 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 in order 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. An onsite meeting was conducted 02/16/17.

We plan to use a 12-inch lay-flat-hose to transport water.

We are asking for 4 associated pipelines all depicted on the attached Barlow 34 Fed Com infrastructure sketch:

One 3-inch flex steel gas lift line per well.

One 4-inch poly production flowline per well

One 12-inch produced water disposal from the CTB to the existing disposal line.

One 16-inch gas sales line from the CTB to the gas sales tie-in.

The well is planned to be produced using gas lift as the artificial lift method.

Produced water will be transported via pipeline to the EOG produced water gathering system.

13. Maps and Diagrams

Barlow 34 Fed Com 704H vicinity map - Existing Road

Barlow 34 Fed Com 70411 radius map - Wells Within One Mile

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Barlow 34 Fed Com infrastructure sketch - Production Facilities Diagram

Barlow 34 Fed Com Infrastructure - Production Pipeline

Barlow 34 Fed Com 704H infrastructure - gas lift Pipeline

Barlow 34 Fed Com infrastructure - produced water Pipeline

Barlow 34 Fed Com infrastructure - gas sales Pipeline

Barlow 34 Fed Com infrastructure - Electric Line

Barlow 34 Fed Com water source and caliche map - Drilling Water Pipeline

Barlow 34 Fed Com 704H rig layout - Well Site Diagram

Barlow 34 Fed Com 704H Interim reclamation - Interim Reclamation