

CONFIDENTIAL



**Spicer 3-32H**  
**SW/SW, Section 32-T7N-R80W**  
**Jackson County, Colorado**  
**SURFACE USE PLAN**  
Revised 5-14-08

**1. EXISTING ROADS:**

Refer to the attached maps for location of existing access roads. Access to the location will occur on State Highway 14 and Jackson County Road #28.

The proposed location is approximately 18.9 miles southwest of Walden, Colorado. Driving directions are attached.

The existing roads will be maintained in the same or better condition as existed prior to the commencement of operations.

**2. ACCESS ROADS TO BE CONSTRUCTED:**

Refer to the attached Topographic Map "B" for the location of the proposed access road. The proposed access road was centerline staked.

The new access road will be approximately 528' long and will be completed as a single lane, 16' wide, 40' sub-grade, crowned road. See attached Topographic Map "B".

Maximum grade of the new access road will be 2 percent.

There will be no turnouts and wing ditches along the proposed access route.

No Major cuts, fills, or bridges anticipated along the proposed access route.

No Gates, cattle guards, fence cuts, or modifications to existing facilities will be required on or along the proposed access route.

A minimum of six inches of topsoil will be stripped from the proposed access road prior to any further construction activity. The stripped topsoil will be stored along the sides of the new access road.

The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with wing ditches installed as necessary to provide for proper drainage along the access road route.

In the event that commercial production is established from the subject well, the access road will be surfaced to an average minimum depth (after compaction) of four inches with three

inch minus pit run gravel or crushed rock, if and/or as required by the Authorized Officer. These surfacing material(s) will be purchased from a contractor having a permitted source of materials within the general area. The entire road bed, inslopes and outslopes, will be seeded with the approved seed mixture.

The access road and associated drainage structures will be constructed and maintained in accordance with roading guidelines contained in the joint BLM/USFS publication: *Surface Operating Standards for Oil and Gas Exploration and Development*, Fourth Edition, and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction. During the drilling and production phase of operations, the road surface and shoulders will be kept in a safe and useable condition and drainage ditches and culverts will be kept clear and free flowing.

**3. LOCATION OF EXISTING WELLS WITHIN A ONE-MILE RADIUS:**

See attached Topographic Map "C" showing all wells within a one-mile radius.

**4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:**

See Figure #5 *Rehab Plat* diagram for proposed production facility layout at a 1" – 50' scale and the areas of the well pad not required for production that will be reclaimed. All production facilities shall be placed so as to minimize long-term pad disturbance.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope. As agreed to at the onsite conducted 4/28/08, EOG will utilize Low Profile Tanks at this location.

All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted Shale Green (5Y 4/2).

Containment berms will be constructed around produced oil and water tanks. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 110 percent of the capacity of the largest tank, and be independent of the back cut.

A flowline will not be applied for with this permit.

**5. LOCATION AND TYPE OF WATER SUPPLY:**

Fresh water will be obtained from the Buffalo Creek, point of diversion, located in Section 28, T7N, R80W (NW/SW) Latitude 40 32.795' Longitude 105.32.277', via an independent water hauler. EOG estimates 10,000 bbls± of Missouri Basin water will be required for drilling operations based on comparable historic use. No water well will be drilled for this well.

If the existing access road, proposed access road, and proposed pad are dry during construction, drilling, and completion activities, water will be applied to help facilitate compaction during construction and to minimize soil loss as a result of wind erosion. Anticipated water depletion, due to dust abatement, is 374 bbls±.

**6. SOURCE OF CONSTRUCTION MATERIALS:**

Any construction materials that may be required for surfacing of the drill pad and access road will be obtained from a contractor having a permitted source of materials within the general area. Gravel used will be pit run gravel obtained from the John Rich's Gravel Pit located in Section 32, T7N, R80W, NW/SW.

No construction materials will be removed from Federal or Indian lands without prior approval from the appropriate surface management agency.

**7. METHODS OF HANDLING WASTE DISPOSAL:**

Cuttings and drilling fluids will be contained in the reserve pit.

If operationally necessary, the reserve pit will be used temporarily for storage of produced fluids during testing. Fracture stimulation fluids will be flowed back into the reserve pit for evaporation. Pit will be closed and reclaimed within six (6) months of the last date of completion (weather permitting).

Portable, self-contained chemical toilets will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.

All garbage and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage. Upon completion of operations, or as needed, the accumulated trash will be transported to a state approved waste disposal site. No trash will be placed in the reserve pit.

Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location. Any open pits will be fenced during drilling operations and said fencing will be maintained until such time as the pits have been backfilled.

EOG Resources, Inc. maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be found at the site may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous and EHS and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

**8. ANCILLARY FACILITIES:**

None anticipated.

**9. WELL SITE LAYOUT:**

**A. General Information:**

See the attached diagrams, Figure #1 and Figure #2, showing the proposed drill pad cross sections and cut and fills in relation to topographic features as well as access onto the pad and soil stockpiles.

All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad, and spoil and topsoil storage areas).

If necessary, in order to divert surface runoff, a drainage ditch will be constructed around the upslope side of the well site.

The fill section of the pad that supports the drilling rig and any other heavy equipment will be compacted.

Production tank(s) will be 400 bbl (12' x 20') and the heater/treater will be 6' x 20' w/12' x 12' insulated building, the dehydrator/meter run will be 6' x 6' x 7', the methanol tank will be 500 gal. All equipment will be located on the reclaimed well pad.

**B. Reserve Pit:**

A reserve pit will be required for the referenced location. The reserve pit will be constructed in a way that minimizes the accumulation of surface precipitation runoff into the pit. This may be accomplished by appropriate placement of subsoil/topsoil storage areas and/or construction of berms or ditches.

The reserve pit will be fenced on three sides during drilling operations and the fourth side will be fenced after the drilling rig moves off the location. This fence will be either: (1) woven wire at least 28 inches high and within 4 inches of ground surface with 2 strands of barbed wire above the woven wire with 10 inch spacing, or (2) at least 4 strands of barbed wire spaced, starting from the ground, at approximately 6, 8, 10, and 12 inch intervals.

Siphons, catchments, drip pans, and absorbent pads will be installed to keep hydrocarbons produced by the drilling and/or completion rigs from entering the reserve pit. Hydrocarbons and contaminated pads will be disposed of in accordance with Colorado DEQ requirements.

The reserve pit will be backfilled as soon as dry after drilling and completion operations are finished. Pit will be closed and reclaimed no later than six (6) months following drilling and completion activities (weather permitting). If natural evaporation of the reserve pit is not feasible, alternative methods of drying, removal of fluids, or other treatment may be utilized. If fluids will be disposed of by any method other than evaporation or hauling to a DEQ approved disposal pit, prior approval from the Authorized Officer will be obtained. NOTE: If disposal involves proposed discharge or transport, Colorado DEQ approval will be obtained.

If a liner is required, then the reserve pit will be lined with a pit liner that has a permeability less than  $10^{-7}$  cm/sec and have a burst strength equal to or exceeding 300 pounds per square inch (psi) or puncture strength of 160 psi or greater and grab tensile strength of 150 psi or greater. The liner will be resistant to deterioration by hydrocarbons. The liner will not be installed directly on rock. Where necessary, pits will first receive a layer of bedding material (e.g., sand or geotextile fiber liner) sufficient to prevent contact between the liner and any exposed rock.

#### **10. PLANS FOR RECLAMATION OF THE SURFACE:**

##### **Interim Reclamation:**

Rat and mouse holes will be filled and compacted from bottom to top immediately after release of the drilling rig from the location.

Topsoil from the berms and/or storage piles will be spread along the road's cut and fill slopes. Drainage ditches or culverts will not be blocked with topsoil and associated organic matter. The topsoil areas will be seeded as stated below. The unused area of the pad will be recontoured and topsoil spread six inches deep. The area on the contour will be ripped one foot deep using ripper teeth set on one-foot centers.

EOG will, promptly after completion of drilling operations (depending on seasonal/weather constraints), reseed the entire drill pad and access road using a drill equipped with a depth regulator, resulting in reclamation of the drillsite to approximately 0.25 acres. All seed will be drilled on the contour. The seed will be planted between one-quarter and one-half inch deep. Where drilling is not possible (i.e., too steep, rocky, etc), the seed will be broadcast and the area raked or chained to cover the seed. If the seed mixture is broadcast, the rate listed below will be doubled. Attached is the plant profile for this area. EOG will seed with certified or registered seed per BLM recommendations below:

Drill Seeding Rate

<u>SEED NAME</u>	<u>Application Rate</u> PLS/Acre	<u>Seeds/SQ. FT.</u>
<i>Grasses</i>		
Western wheatgrass Pascopyrum smithii, variety. Arriba	2.97	7.5
Thickspike Wheatgrass Elymus lanceolatus var. Critana	2.13	7.5
Bluebunch wheatgrass Pseudoroegneria spicata, var. Secar (Alternate var. Goldar)	2.51	7.5
Sheep fescue Festuca ovina, var. Covar	.62	7.5
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Total	8.23	30
<i>Forbs</i>		
Alfalfa var. Ladak	.73	3.5
Big sagebrush Artemisia tridentata ssp. wyomingensis	.06	3.5
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Total	.79	7

\* Big sagebrush and Alfalfa may be seeded when it would be better for success

\* Seed will be broadcast at twice the rate

*(Seed tags will be submitted to BLM after seeding.)*

**\* Seeding will not occur prior to October 1, to avoid sprouting.**

\*Pure live seed (PLS) formula: percent of purity of seed mixture times percent germination of seed mixture equals portion of seed mixture that is PLS.

Seeding will be done between October 1 to November 15, (before ground freeze) after completion, or as early as possible the following Spring to take advantage of available ground moisture.

Monitoring will be conducted by a qualified Operator representative (in coordination with the BLM) following initial rehabilitation work. Monitoring areas will be re-examined at the end of the first growing season. Results will be documented in a report to the BLM. Problem areas identified during monitoring will receive follow-up rehabilitation/erosion control measures. The seeding shall be repeated until a satisfactory stand, as determined by the Authorized Officer, is obtained.

**Final Reclamation:**

Prior to final abandonment reclamation work, a Sundry Notice will be submitted to the Authorized Officer for approval.

Configuration of the re-shaped topography will be returned, as near as possible, to the original condition. Cut and fill slopes will be 3 to 1 or less. All topsoil will be re-stripped from interim reclamation and redistributed over the entire location. The entire location will be scarified 12" deep at 8" intervals. Water bars will be constructed at 8% grade. The entire location and 50' of access road will be re-seeded with the recommended seed mixture

Monitoring will be conducted by a qualified Operator representative (in coordination with the BLM) following initial rehabilitation work. Monitoring areas will be re-examined at the end of the first growing season. Results will be documented in a report to the BLM. Problem areas identified during monitoring will receive follow-up rehabilitation/erosion control measures. The seeding shall be repeated until a satisfactory stand, as determined by the Authorized Officer, is obtained.

**11. SURFACE OWNERSHIP:**

Surface ownership of the proposed well site, access road, and pipeline route is as follows:

Well Site: Bureau of Land Management

Roads: All roads to the location after leaving Highway 14 and County Road # 28 are on lands managed by the Bureau of Land Management or are located on private surface and are covered under existing agreements or rights of way.

**12. OTHER INFORMATION:**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice of Lessees. The operator is fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Construction activity will not be conducted using frozen or saturated soils material or during periods when watershed damage is likely to occur.

Weeds will be controlled on disturbed areas within the exterior limits of the access road and well pad. The control methods shall be in accordance with guidelines established by the EPA, BLM, state, and local authorities. Approval will be obtained from the Authorized Officer prior to use of pesticides.

A Class III archeological survey for the subject location has been performed and submitted by Pronghorn Archeology on December 12/11/07.

EOG Resources, Inc. completes the installation of facilities on new well locations.

Transportation Plan: Topographic Map "B" illustrates and Sections 1 and 2 of this Surface Use Plan describes EOG's planned road construction for this area.

Reclamation and Monitoring Plan: The reclamation plan is described in Section 10 above. EOG or the operator of record will monitor the success of reclamation by inspecting the site three times a year to confirm desired vegetative growth. If the inspection shows unsuccessful re-vegetation and/or invasive weeds, then appropriate remedial work will be implemented.

EOG or the operator of record, in consultation with the BLM, will monitor raptor nesting and sage grouse lek use on or near the project area and will monitor project activity in big game crucial ranges during critical periods to ensure that no unauthorized use occurs.