

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

The onsite inspection for the subject well was conducted on Wednesday, July 13, 2011 at approximately 1:50 p.m. Weather conditions were cloudy, warm, and breezy. In attendance were the following individuals;

Shawn Weiser	Natural Resource Specialist	Bureau of Land Management
Gayle Martinez	Wildlife Biologist	Bureau of Land Management
Cris Rhyne	Range Specialist	Bureau of Land Management
Emily Spencer	Ecologist	Bureau of Land Management
Renata Kawgak	Land Law Examiner	Bureau of Land Management
Bonnie Hickey	Land Law Examiner	Bureau of Land Management
Gina Combs	Intern	Bureau of Land Management
Stan Page	Sr. VP	Quicksilver Resources Inc.
Russ Snoden	Pumper	Quicksilver Resources Inc.
Scott Latka	Production Superintendent	Quicksilver Resources Inc.
Don Cotten	ROW Manager	Quicksilver Resources Inc.
Randy Smith	Field Tech	PermitCo Inc.
Glen McElroy	Surveyor	Uintah Engineering and Land Surveying
Colton Ingram	Survey Helper	Uintah Engineering and Land Surveying

1. EXISTING ROADS

- a. Directions to the location from Craig, Colorado are as follows:

Proceed west on Highway 40 from Craig, Colorado for 10.6 miles. Turn left onto County Road 174 and proceed south for 0.6 miles. Turn right onto County Road 90 and proceed south for 1.4 miles. Turn right and proceed in southwesterly direction approximately 0.6 miles to the beginning of the proposed access for the K- Diamond Ranch 32-10. Follow the road flags in a southerly, then westerly, then southwesterly, then northwesterly, then northerly direction approximately 2.4 miles (on an existing two-track road). Turn right onto the new access road and proceed northeasterly 267 feet to the location.

- b. For access roads, see Maps "A" and "B".

- c. All existing roads within a 2-mile radius are shown on Maps "A" and "B".
- d. Improvement to existing roads (County) will be done in accordance with County requirements. If needed, a road maintenance permit will be filed with the Moffat County Road Department.
- e. Existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.
- f. Existing roads and newly constructed roads on surface under the jurisdiction of any Surface Managing Agency shall be maintained in accordance with the standards of the SMA.

2. ACCESS ROADS TO BE CONSTRUCTED AND RECONSTRUCTED

- a. Approximately 12,929 feet of existing two-track road will be upgraded. Because of additional drilling that is to occur west of this proposed location on private lands, the road will be constructed with an 18' running surface and will be crowned and ditched per Gold Book Standards.
- b. The width of the road during drilling will be 18 feet. Surfacing will only be placed in specific areas as needed at this time.
- c. If the well is productive, gravel will be placed along the entire route to accommodate year round traffic.
- d. The maximum grade of the new access is approximately 6%.
- f. Cuts and fills along the access road will be kept to a minimum .
- j. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.
- k. All access to this location is maintained by the County Road Department, is on private surface owned by the K-Diamond Ranch, or is within the lease boundary. Therefore, a road right of way will not be necessary.

**3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION.
SEE MAP "C".**

- a. Water Wells - none
- b. Injection or Disposal Wells - none
- c. Producing Wells - none
- d. Drilling Wells - none
- e. Temporarily Abandoned Wells - none
- f. Shut In Wells - none
- g. Plugged and Abandoned wells - none

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES IF THE WELL IS PRODUCTIVE.

- a. All permanent structures (onsite for six months or longer) constructed or installed (including oil well pump jacks) will be painted a flat, non-reflective color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. The color specified by the BLM is Shale Green. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.
- b. Compaction and construction of the berms surrounding the tank batteries will be designed to prevent lateral movement of fluids through the utilized materials, prior to storage of fluids. The berms must be constructed to contain a minimum of 110 percent of the storage capacity of the largest tank within the berm. All loading lines will be placed inside the berm.
- c. See production facility layout attached. It is anticipated that equipment will include a 1 water tank, 2 separators, 1 pump jack, 2 oil tanks, and 1 gas or diesel motor. All production facilities will be set on the cut-side of location. All portions of the pad not required for production operations will be reclaimed.
- d. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the BLM - Little Snake Field Office.
- e. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

- f. Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.
- g. The oil and gas measurement facilities will be installed on the well location. Oil and gas meters will be calibrated in place prior to any deliveries. The Field Office Petroleum Engineer will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the BLM - Little Snake Field Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.
- h. A schematic facilities diagram as required by CFR 43, Part 3162.7-2, 3162.7-3, and 3162.7-4 shall be submitted to the BLM - Little Snake Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in CFR 43, Part 3162.7 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 3162.7-4.
- i. Any venting or flaring of gas will be done in accordance with Notice of Lessees (NTL 4A) and may need prior approval from the Resource Area Petroleum Engineer.
- j. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in Notice to Lessees (NTL-3A) will be reported to the BLM - Little Snake Field Office. Major events will be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production (Form 3160-6, formerly 9-329).
- k. A dike will be constructed completely around the production facilities (i.e. production tanks, water tanks, and/or heater-treater). The dikes for the production facilities will be sufficiently impervious, made of a non-porous material and designed to contain one hundred and ten percent of the capacity of the largest tank. Any production pits will be fenced with at least four (4) strands of barbed wire and held in place by side posts and corner H-braces.
- l. All access roads will be upgraded and maintained as necessary to prevent erosion and accommodate year-round traffic.
- m. Any necessary pits will be fenced to prevent wildlife entry.

- n. Water produced from this well will be flowed into a tank and hauled to an approved facility. No produced water may be disposed of in the cuttings pit.
- o. The cuttings pit will be closed in accordance with Colorado Oil & Gas Conservation Commission 900 and 100 Series Rules. Operator shall ensure that soils meet the concentration levels of Table 910-1. If the pit is lined, a liner material shall be removed and disposed of in accordance with applicable regulations for solid waste disposal.

5. LOCATION AND TYPE OF WATER SUPPLY

- a. The source of water will be from the municipal water supply in Craig, Colorado. Water will be hauled by Hyland Enterprises (307-320-7411). If an alternate source is selected, the new water source will be identified via Sundry Notice.
- b. Water will be hauled to the location along the proposed access roads shown on Maps A & B.
- c. No water wells are to be drilled.
- d. The total amount of water to be used during drilling will be approximately 500 Bbls.

6. CONSTRUCTION MATERIALS

- a. Surface and subsoil materials in the immediate area will be utilized.
- b. No construction materials will be removed from Federal lands.
- c. Where surfacing material is needed for the access roads, it will be obtained from a private or commercial source.
- d. Any materials to be used which are under BLM jurisdiction shall be approved in advance, as per CFR 3610.2-3.

7. METHODS FOR HANDLING WASTE DISPOSAL

- a. The cuttings pit will be closed in accordance with Colorado Oil & Gas Conservation Commission 900 and 100 Series Rules. The operator shall ensure that soils meet the concentration levels of Table 910-1. If the pit is lined, liner material shall be removed and disposed of in accordance with applicable regulations for solid waste disposal.
- b. Oil based mud will be used during the drilling operation. At the end of drilling this mud will either be hauled to an additional drill site or will be disposed of at an approved disposal site.
- c. Trash and garbage will be contained in a closed receptacle. Burning and/or burying is not authorized unless previously approved by the Authorized Officer during winter conditions. Contents from trash receptacle will be hauled to an approved landfill.
- d. Cuttings pit fluids will evaporate or authorization for removal and disposal will be requested from the AO prior to backfilling the cuttings pit.
- e. Any unused salts and/or chemicals will be removed from the location and not disposed of with the drilling fluid.
- f. A chemical porta-toilet will be furnished with the drilling rig and its contents will be hauled to an approved disposal facility at the end of drilling operations.

8. ANCILLARY FACILITIES

No camps, airstrips or other facilities will be necessary.

9. WELLSITE LAYOUT

- a. A typical rig layout is attached (Figure 3).
- b. The well pad along with cuts and fills are shown on Figure 1.
- c. The location of cuttings pit, trash cage, access roads onto the pad, living facilities, soil material stockpiles and orientation of the rig with respect to the pad and other facilities is shown on Figures 1 and 3.

- d. Any sagebrush on the location will be stripped or brush hogged prior to stripping of any topsoil.
- e. Approximately 6 inches of topsoil will be stripped from this location and stockpiled (separately from the sage brush) at the site.
- f. The cuttings pit will be lined with a plastic liner of sufficient mil to prevent seepage.
- g. Excavation of the cuttings pit will require that a minimum of one-half the fluid capacity is below the ground level.
- h. Three sides of the cuttings pit will be fenced during drilling, and the fourth side will be fenced immediately upon rig release. Fencing will consist of sheep fence with 2 strands of barbed wire on top. Corner "H" Braces will be constructed at all corners. The fencing will be maintained until the cuttings pit is backfilled.
- i. A two-foot freeboard will be maintained within the cuttings pit. All produced water will be flowed into a tank and hauled to an approved facility.

10. PLANS FOR RECLAMATION OF THE SURFACE

- a. The cuttings will be dry and tested prior to backfilling the pit.
- b. The cuttings pit will be closed in accordance with Colorado Oil & Gas Conservation Commission 900 and 100 Series Rules. Operator shall ensure that soils meet the concentration levels of Table 910-1. If the pit is lined, liner material shall be removed and disposed of in accordance with applicable regulations for solid water disposal.
- c. Immediately upon completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash cage and will then be hauled to an approved landfill.
- c. Earthwork for interim and final reclamation must be completed within 6 months of well completion or well plugging (weather permitting), unless an alternate method of disposal is approved. After the fluids disappear, the cuttings pit muds will be allowed to dry sufficiently

to allow backfilling. The backfilling of the cuttings pit will be completed within 30 days after dry conditions exist and will meet the following requirements.

1. Backfilling will be done in such a manner that the muds and associated solids will be confined to the pit and not squeezed out and incorporated in the surface materials.
 2. There will be a minimum of 5 feet of cover (overburden) on the pit.
 3. When the work is completed, the pit area will support the weight of heavy equipment without sinking and over time shall not subside over 6-inch depth.
- d. The Little Snake Field Office will be given 48-hour notification prior to construction and prior to any backfilling and/or recontouring activities.
- e. The wellsite will be re-contoured and topsoil will be replaced over the areas to be reclaimed.
- f. In the event a producing well is completed, interim reclamation will be done to include the following: 1) Unused areas of the well location (back to the deadmen) will be re-contoured to appropriate configuration (that allows lease operations and alleviates steep cut and fill slopes, minimizing accelerated erosion). 2) If the pit is dry, it will be backfilled. 3) All of the stockpiled topsoil will be redistributed over the re-contoured area and seeded with a seed mixture (to be specified by the surface owner).
- g. In the event of a dry hole, the location will be re-contoured to the original grade, top soiled, seeded with the specified seed mixture. The stockpiled brush and topsoil will be evenly distributed over the location. Dry hole markers will include the proper well identification including well name, operator and legal location.
- h. All pits, cellars, rat holes and other bore holes unnecessary for further lease operations, excluding the cuttings pit, will be backfilled immediately after the drilling rig is released. Pits, cellars and/or bore holes that remain on location must be fenced as specified for the cuttings pit.
- i. The lessee/operator is required to use the reclamation practices necessary to reclaim all disturbed areas. Reclamation will ensure surface and subsurface stability, growth of a self-regenerating permanent vegetative cover and compatibility with post land use. The vegetation will be diverse and of the same seasonal growth as adjoining vegetation.
- j. Submission of the Final Abandonment Notice (FAN) will include the data collected and used

to determine this reclamation standard has been met.

- k. Waste materials will be disposed of as stated in #7 of this Surface Use Plan.
- l. Control of noxious weeds will be required through successful vegetation establishment and/or herbicide application. Applications of herbicide are prescribed, however, it is the responsibility of the lease operator to insure compliance with the local, state and Federal laws and regulations, as well as labeling directions specific to the use of any given herbicide.

11. SURFACE AND MINERAL OWNERSHIP

- a. Surface Ownership

Bureau of Land Management (at wellsite)
K-Diamond Ranch (Access)

All access agreements have been obtained from Cody Deakins for use of this access route.

- b. Mineral Ownership
Federal

12. OTHER INFORMATION

- a. There will be no change from the proposed drilling and/or workover program without prior approval from the Field Office Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.
- b. "Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.
- c. All contractors employed to perform work on this location will be furnished and have onsite, a copy of the Surface Use Program and a copy of any supplemental conditions.
- d. The operator is responsible for informing all persons in the area who are associated with this

project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
 - the mitigation measures the operator will likely have to undertake before the site can be used (assuring in situ preservation is not necessary); and,
 - a time frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.
- e. This permit will be valid for a period of two years from the date of approval.
- f. A Class III archeological survey has been conducted by Grand River Institute. A copy of this report will be submitted directly to the appropriate agencies by Grand River Institute.
- g. All state and local permits required for proposed operations will be obtained prior to commencing any activity that may be affected by such authorization.

PERMIT MATTERS

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DRILLING & COMPLETION MATTERS

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Ryan Hord
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FEDERAL STIPULATIONS

There appear to be no Timing Limitation Stipulations (TLS) which would prohibit the drilling of this well at this time.

ARCHEOLOGY

A Class III archeological survey has been conducted by Grand River Institute. A copy of this report has been submitted directly to the appropriate agencies by Grand River Institute.