

Patara Oil & Gas LLC  
**Hamm Canyon 20-44-45-18**  
SHL: 2,391' FSL 528' FWL  
NW/4 SW/4 SEC 21 T45N R18W  
BHL: ± 1,069' FSL ±213' FEL  
SE/4 SE/4 SEC 20 T45N R18W  
San Miguel County, CO  
Federal Lease #: COC71783

CONFIDENTIAL

Onshore Oil & Gas Order No. 1  
Twelve Point Surface Use Plan of Operations

The proposed wellsite will be an exploration well to be drilled from a new location, located in the NW/4 SW/4 of SEC212 T45N R18W of San Miguel County, Colorado. The wellsite for the Hamm Canyon 20-44-45-18 was staked at 2,391' FSL 528' FWL, NW/4 SW/4 of SEC 21 T45N R18W on October 17, 2011, by Ronald Renke, surveyor. Two Notice of Staking(s) (NOS) have been submitted to The Bureau of Land Management (BLM) in Durango, Colorado via the Well Information System (WIS). Both applications resulted in onsite inspections, one on August 17, 2011 and the second on November 10, 2011. The upper alternate route was carefully examined at an onsite held on November 10, 2011 as a potential alternate to the lower route which was examined at an onsite held on August 17, 2011. Numerous concerns with the use of the upper route were voiced by Colorado Division of Wildlife regarding the Desert Big Horn Sheep and the impact an access road could have on their potential sustained viability. Additional concerns associated with the upper route were raised regarding a 1000' proximity to a Wilderness Study Area and potential impacts to a view shed. The upper access route would also require the excavation of exposed bedrock and have portions of the road with grades in excess of the Gold Book Standard of 8%, thus necessitating the engineering of an access road with much greater surface impacts than the lower route and with less chance of eventual successful reclamation. The lower access route while having far more complex cultural concerns, presents less impact to wildlife and to the viewshed. The identified herd of Big Horn Sheep, per the radio collar data provided by CDOW, do not use the flat grassy area where the pad would be located. Use of the lower route also allows for the construction of an access road that will provide for a more successful reclamation because large quantities of bedrock will not need to be excavated and the grade is virtually 0% for the ±11,540' of existing two-track that would be used coming from County Road 16Z. Historically, the lower access route has been used for drilling activity, i.e. the Merrion well located a short distance away from our proposed well. Thus, this Application for Permit to Drill is being filed under the first Notice of Staking which examined the lower access route. In attendance at the first onsite were Robert Garrigues – Dolores BLM, Bob Noonan – Patara, Keith Dana – Dana Consultants, Brad Banulis – Colorado Parks and Wildlife, Eric Freels – Dolores BLM, Tony Bonacguish – CDOW, Brian McGee – CDOW, Dave Kubeczko –

COGCC, Tracy Prefors – Dolores BLM, Richard Bullen – D.R. Griffin, Nick Hall – Grasslands Consulting, Scott Carson – Smiling Lake Consulting, Carl Conner – GrandRiver Institute, Theresa Garcia – Patara, Danny White – Patara, David Munsell – BLM, Pam Leschak – Durango San Juan Public Lands, and Dee Foote - Patara. Specific requests of the BLM have been addressed within this plan.

#### A. EXISTING ROADWAYS

The proposed wellsite is located approximately 15.25 miles from the Basin Store in San Miguel County, Colorado. The location can be reached by following the directions below.

1. From the junction of Highway 141 and County Road, U29W, at the Town of Basin Colorado, travel west and northwest on County Road U29W for 15.4 miles to the intersection with County Road 16Z. Turn left onto 16Z and travel west and southwest and northwest for 4.8 miles to the end of County Road 16Z. Continue on an existing two-track road (the beginning of access for the Hamm Canyon Fed 20-44-45-18) for 2.2 miles to the location.
2. This well is an exploratory well.
3. For access roads, please refer to Exhibits 3-1, 3-2, 3-3, & Topo Maps 7, 8 and 9.
4. Existing roads within a 1-mile radius are shown on Topo Map 9, and consist of graveled roads that provide direct access to the proposed location referred to in the above described directions.
5. Upgraded roads (County Road 16Z) will be maintained to the resource road standard during drilling, completion, and production operations.

#### B. ACCESS ROAD AND WELL PAD CONSTRUCTION

Proposed access road to wellsite is approximately 11,540 feet in length and is shown on Exhibits 3-1, 3-2, 3-3, and Exhibits 7, 8, & 9.

1. The BLM, Tres Rios Field Office authorized officer (Robert Garrigues at 970-882-6845 or at 970-749-9583 or Daniel Rabinowitz 970-385-1363) will be contacted forty-eight hours prior to commencement of construction activities for information on field conditions.
2. There will be approximately 11,540' of new access road to be constructed. The new road will utilize an existing primitive two track measuring 10,905' in distance that crosses BLM lands. An additional 200' of new disturbance will be required, please see Exhibit 8 for precise breakdown of distance, this also crosses BLM land. The remaining 435' of road will cross Lost Brothers LLC lands. No portion of the new access road construction will utilize below ground excavation. All road upgrades including installation of all culverts will be laid on the existing surface and gravel will be laid over the top. Geo-textile will be laid on top of the existing grade and have Class 2 sub base to a depth of 8" and Class 6 to a depth of 4" put on top to ensure maximum protection to any below ground archaeological sites.
3. Newly constructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM 9113 manual for a

resource road and employing the minimum guidelines and best management practices contained in the Gold Book, 4<sup>th</sup> Edition.

4. The initial access road will be constructed with a maximum total disturbed width of 35 feet with a 16 foot travel surface and 2 foot borrow ditches on either side. The additional width is to allow for possible radial turns and pipeline installation.
5. The maximum grade of the new access road will be approximately 10% and will not exceed BLM standards. See Exhibits 3-1, 3-2, 3-3, 3-4 & 8.
6. Culverts – (1) culvert will be placed at the entrance of the access road to the well pad. The corrugated metal pipe, CMP, will have 2 feet of overburden placed on top of it. The culvert will be removed during final reclamation. Please reference Exhibit A for exact placement and sizing of additional culverts required along access road. All culverts used along the access road will have a minimum of 12” of overburden placed on top of them. Depth of overburden will be in compliance with BLM’s Road Manual 9113 and Gold Book, 4<sup>th</sup> Edition.
7. Road maintenance – during both the drilling and production phases of operations; the road surface and shoulders will be kept in a safe, legal condition and will be maintained in accordance with the original construction standards. The access road right-of-way will be kept free of trash during operations. If the well is a producer, Patara will upgrade and maintain access roads as necessary to prevent soil erosion, and accommodate year round traffic. Road construction on public lands shall meet the minimum standards listed in BLM Manual Section 9113 and shall be constructed under the direction of a qualified construction supervisor(s).
8. Dust will be controlled on the roads and locations during construction and drilling by periodic watering of the roads and locations or application of various dust agents, surfactants and road surfacing material. Dust agents and surfactants (except water) will require pre-approval before use on BLM lands.
9. The blooie pit will be fenced on three (3) sides during drilling operations. Upon rig release, the pit will be fenced and netted until backfilled and closed.
10. All vegetative materials (trees, sagebrush) to be cut down for construction of road and well pad to be stockpiled on the side of the pad for use during final reclamation operations. Stockpiled material will be kept separate from topsoil.
11. No fence cuts, gates, or cattle guards will be necessary.
12. Big game winter range stips will apply from 12/1 to 4/30. Peregrine Falcon stips will apply from 3/1 to 8/31.
13. A Special Construction permit will be required from San Miguel County Road Department and will applied for under separate cover. A copy of the Application for Special Construction Permit, San Miguel County Road Department has been included. Please see attachment.
14. Vehicle travel will be restricted to the well pad and access roads only. No pullouts or off-road parking will be allowed unless specifically authorized. Shortcutting by vehicles operated by Patara or its contractors, on roads not identified as access routes in the APD, will not be allowed. Patara conducts daily safety meetings with all contractors and monitors activities on a daily basis. Patara will also post signs

at both the access road entrance and at the exit of the location stating, “KEEP VEHICLES ON ROAD SURFACE ONLY”.

15. All heavy equipment will be pressure washed at an offsite location prior to entering the site, per onsite 8/17/11. This is a preventative measure for reducing noxious weed infestation at the drilling sites. This pertains to heavy equipment such as motor graders, bulldozers, backhoes, etc. Pickup trucks and passenger vehicles will not be pressure washed prior to entering the well site.
16. Due to the considerable number of archaeological sites, all construction beginning with the access road and continuing through construction of the well pad will be monitored by a BLM approved and permitted archaeologist.
17. Protective fencing will be installed between the access road and the northeast side of the pad, per the onsite on 8/17/11. It will be removed after drilling is complete.

#### C. LOCATION OF EXISTING WELLS WITHIN A TWO-MILE RADIUS

Proposed	NONE
Drilling	NONE
Abandoned	SEE TABLE 1
Disposal/injection	NONE
Shut-In	NONE
Producing	ONE
Water Wells	SEE TABLE 1

The nearby well data has been taken from the COGCC website on November 1, 2012. Please see attached Table.

#### D. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES

1. BLM will be contacted prior to construction of production facilities. Please reference Exhibits 3-1, 3-2, and 3-3 for clarification of construction layout and proposed facilities. A Sundry Notice (SN) will be filed if requested by BLM. Existing specifications are as follows:
  - i. Dimensions of the pad are 250' x 350' =87,500 ft<sup>2</sup> for drilling operations. Total disturbance is approximately 4.0 acres; see Exhibit 3-1. The well pad is sized to accommodate the drilling rig and associated equipment and supplies, and to permit safe drilling and completion operations.
  - ii. Well pad construction will conform to the guidelines for well sites as contained in the Gold Book, 4th Edition, Chapter 4 – Construction and Maintenance Protective measures and devices will be utilized to protect livestock and wildlife.
  - iii. Construction/installation of production facilities will conform to BLM guidelines as contained in the Gold Book, 2007, Chapter 5 – Drilling and Production Operations.
  - iv. The area used to contain production facilities will be built using native materials.

- v. Traveled portions of the production site will be gravel surfaced upon completion of production facility installation and prior to production.
  - vi. Secondary containment will be constructed completely around any production facilities which contain fluids (i.e. production tanks, produced water tanks, etc.) These dikes will be constructed of compacted subsoil, be impervious, hold 110% of the capacity of the largest tank, and be independent of the back cut slope. A blooie pit is being proposed in this APD. Our engineering team is concerned that due to the proximity of this proposed well to the cliff edge, there may not be enough hydrostatic pressure in the available surface depths to support circulation of drilling mud. Therefore Patara intends to drill the surface hole with air, thus necessitating a blooie pit to discharge used water into.
  - vii. All permanent (onsite for six months or longer) above the-ground constructed or installed, including pumping units, will be painted a flat non-reflective, earth tone color to match one of the standard environmental colors as determined by the BLM. All production facilities will be painted within 30 days of installation unless weather precludes. The color specified is given with the Munsell Color Chart® reference color, Shale Green. Facilities required to comply with Occupation Health and Safety Act Rules and Regulations will be excluded from this painting requirement.
2. The rig layout, and pad layout plats for the site are illustrated on Exhibits 3-1, 3-2, 3-3.
  3. The proposed pipeline (4" steel) will be laid on the surface a few feet off the edge of the borrow ditch associated with the access road. No staging areas will be needed. The tie in point for the pipeline will be the existing 4" gathering line owned by Wild Horse LLC which the producing Merrion owned well taps into and is adjacent to the access road. Please reference Exhibits 7 & 8, total proposed length of pipeline 13,695'. Pipeline length is 11,540' along proposed access road. The additional 2,155' is along County Road 16Z, for a total length 13,695'.
  4. All site security regulations as specified in Onshore Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 3162.7-5 (b.4.).
  5. Any venting or flaring of gas will be done in accordance with Notice of Lessees (NTL) 4A and may need prior approval from the Field Office Petroleum Engineer.
  6. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in Notice to Lessees (NTL-3A) will be reported to the BLM – Tres Rios 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 (3160-6).

7. During drilling and subsequent operations, all equipment and vehicles will be confined to the access road right-of-way and any additional areas as specified in the approved Application for Permit to Drill.
8. Topsoil will be stripped to a minimum depth of 6" or to the depth of all growth medium above sub-soils. Topsoil storage will take the form of a perimeter berm and be seeded to maintain viability. Stored topsoils will be seeded within 48 hours of completed pad construction or as soon as weather permits. The same seed mixture will be used for initial topsoil seeding as will be used for both interim and final reclamation seeding.
9. All production facilities will comply with Colorado Oil & Gas Conservation's Rules regarding noise. Regardless of whether the operation is at the construction, drilling, or production phase, adequate muffling techniques, if necessary, will be applied.

Patara will be responsible for road maintenance from the beginning to completion of operations.

#### E. LOCATION AND TYPES OF WATER SUPPLY

1. Water that will be used for drilling and completion purposes will be transported by truck from either Patara's existing Fossil Federal #9, #05-113-06076, water well or by purchasing it from Mex & Sons or from Reams Construction under existing permits. All three sources of water allow for year round supply.
2. Anticipated water use is as follows:  
Drilling water requirements are anticipated to be approximately 2,500bbls. If the well is deemed economical, completion water requirements are anticipated to be approximately 2,500bbls.
3. The water haul routes are depicted on Exhibit 9. An estimated 40 truckloads will be required to move the rig into the location. Estimated 4-5 truckloads per day will be required for water hauling for the duration of construction, drilling, and completion. Additional truck trips will be required on an as needed basis for resupplying required diesel fuel and watering for fugitive dust control.

#### F. SOURCE OF CONSTRUCTION MATERIALS

1. Access roads crossing Federal and County lands are described and shown under Exhibits 3-1, 3-2, 3-3, 7, 8 & 9. Onsite material accumulated during initial installation will be used for subsequent construction of access road and location site. Additional surface construction materials like Class 2 or Class 6 gravel will be obtained from either Jim Sutherland's or Hank William's (Angie Pit) both located in Redvale. Materials used for construction will be hauled in using County Roads and the depicted access route. See Exhibits.

#### G. METHODS FOR HANDLING WASTE MATERIALS

1. Drill cuttings are to be contained with berms and piled on the surface, please see Exhibits 3-1, 3-2, 3-3 for location of proposed solids pile. Upon completion of operations, they will be used during interim reclamation. If solids are unable to be used for reclamation, they will be disposed of at the Reams disposal facility, located  $\pm$  5 miles east of Naturita, under existing permits.
2. Construction, operation, and closure of the solids/blooiie pit and the flare pit will be in accordance with the guidelines contained in the Gold Book, 4<sup>th</sup> Edition.
3. In accordance with 43 CFR 3162.7-1, (b), oil shall not go to the solids pit except in an emergency. An emergency discharge of oil into the solids pit shall be reported to the authorized officer in accordance with Notice to Leasees-3A. In accordance with Onshore Oil and Gas Order No. 7, any emergency discharge of oil into the solids pit shall be emptied and the properly disposed of within 48 hours.
4. During drilling operations, the blooiie pit will be fenced on three sides. When drilling operations are complete the fourth side will be fenced. At a minimum, the fence will be constructed using steel T or wood line posts set 16.5 feet apart. Corner posts will be 6 inches or greater diameter wood, and anchored with a rock deadman. Woven wire will be placed from 0 to 32 inches, and twisted smooth or barbed wire will be place at 4 and 16 inches above the woven wire. When fencing is completed, netting will be placed over the pit and fence, extending to the ground level, to prevent birds and small animals from gaining access to and becoming trapped in the contents of the pit. The netting will be supported to maintain adequate clearance between the net and the contents of the pit. The fencing and netting will be maintained until the pit is closed and reclaimed.
5. Produced fluids – fluid produced during drilling, completion, and testing operations will be placed in test tanks on the location. Disposal of produced fluids will be done in accordance with the guidelines contained in the Gold Book, 4<sup>th</sup> Edition and Onshore Oil and Gas Order No. 7 and other Federal and State regulations. Upon cessation of drilling and completion operations, any remaining produced fluid will be transferred into water hauling trucks and disposed of at the Reams Disposal Facility, located  $\pm$ 5 miles east of Naturita, under existing permits.
6. Sewage – sewage disposal facilities will be in accordance with State of Colorado (DEQ) regulations. No sewage boreholes will be allowed. Chemical porta-toilets will be furnished and their contents hauled to an approved disposal site.
7. Garbage, trash and other waste materials will be collected in a portable, self-contained and fully-enclosed trash cage during drilling and completion operations. Upon completion of operations (or as needed) the accumulated trash will be disposed of at an authorized sanitary landfill. At no time will trash will be burned on location or placed in pits or bore holes.

#### H. ANCILLARY FACILITIES

1. No production related ancillary facilities anticipated.

## I. WELLSITE LAYOUT

1. The survey plats, drilling facility layout, and production facility layout are attached, Exhibits 1, 2, 3-1, 3-2, 3-3, 3-4. A certified cross section of the original well pad with cut and fill diagram is attached, Exhibit 3-4.
2. The wellsite layout reflects Patara's intention to drill this well with a closed loop mud system.
3. The well will be drilled from a newly constructed pad. The well pad plan is attached with the location of the lined solids/blooiie pit and access road onto the well pad. See Exhibits 2, 2-A, & 2-B.
4. No permanent living facilities are planned (refer to the rig location layout plat). One to four (1 -4) trailers may be required on location during drilling operations, for use by the rig crew. These trailers will be placed adjacent to the drilling rig, and a safe minimum distance from all operational equipment.
5. Topsoil and Excess pile will be clearly separated as shown on Exhibits 3-1, 3-2, 3-3. Both the Excess Material and Topsoil Stockpile have been moved, per BLM request, from the northern side of the pad to the western and southern side, as illustrated on Exhibits 3-1, 3-2, 3-3.
6. The cut and fill slopes will be protected against erosion with measures such as water bars, lateral furrows, or other measures approved by the Authorized Officer. Woody vegetative debris, weed free straw bales and/or a fabric silt fence will be used at the toe of the fill slopes.
7. Trees cleared from the well site will be reserved within the maximum disturbed area for use during interim and final reclamation. All available topsoil will be salvaged and stockpiled adjacent to the well site within the maximum disturbed area shown on the well site plat. Topsoil and spoils pile will be clearly separated as shown on Exhibits 3-1, 3-2, 3-3. Stored topsoil will be seeded within 48 hours of completed pad construction.
8. There shall be a sign or marker on location with the name of the operator, lease serial number, well number, and legal location of the well.

## PIPELINES AND FLOWLINES

Please see Exhibit A, Pipeline Exhibit.

*A separate Right-of-Way (ROW) application for the pipeline route will not be necessary as the entire pipeline route falls within the mineral lease.*

1. No blading of the surface will be required for the pipelines. The pipeline will be laid on the surface within the 35' ROW. Please see Exhibits 7 & A for details.
2. Pipelines will be constructed of steel and include an 8" product line. The pipeline will leave the pad and run along the access road to tie in to existing 4" tap owned by Wild Horse Energy Partners, LLC and continue to the Merrion well.

## J. PLANS FOR SURFACE RECLAMATION

### Interim Reclamation will:

- Conform to the guidelines contained in the Gold Book, 4<sup>th</sup> Edition, chapter 6.
- Will be conducted on all areas of the well pad not required for production operations (See Exhibit 3-3).

- Be conducted on all areas of the new access road not required for vehicle travel. This will include spreading reserved top soil on cut/fill slopes and borrow ditches, preparing the final seed bed, and seeding.
- Be conducted on areas of existing road upgrade as appropriate or as directed by the authorized officer.
- Patara's current Stormwater Management Plan for Andy's Mesa, Hamilton Creek, and Fossil Federal Fields will be added to. Management strategies will be adhered to and continue to comply with the construction general permit issued by CDPHE.
- Interim reclamation will be performed on the remaining unused portions of the ROW.

The sequence for interim reclamation on the well pad is:

1. In accordance with Onshore Oil and Gas Order No. 1, earthwork for interim and/or final reclamation, including pit closure, shall be completed within six months or well completion or abandonment.
2. Solids and flare pits will be closed as stated in Section G – Wastes
3. The well pad will be reduced to the minimum area necessary to safely conduct production operations. All other areas will be subject to interim reclamation which will include re-contouring, spreading of top soil, seedbed preparation, and seeding. Exhibit 23-3 shows the areas of the well pad subject to interim reclamation.
4. Re-contouring will utilize excess cut material (spoil) and well pad fill material to achieve the original contour and grade, or a contour that blends with the surrounding topography. Slopes will be reduced to 3:1 or shallower. Storm water management, re-vegetation requirements and visual resources shall be considered in re-contouring the site. If necessary, and prior to spreading of topsoil (limited top soil available), the rough grade will be ripped to a depth of 18 to 24 inches on 12 to 24 inch spacing, the last pass to be on the contour to promote water infiltration. No depressions will be left that would cause water to pool or pond.
5. All salvaged top soil will be spread and seeded. No top soil will remain in a stock pile. If salvaged top soil volume is inadequate to cover the entire reclaimed area it will be spread in the following priority: south slopes, west slopes, east slopes, north slopes, and shallow slopes.
6. Final seedbed preparation will depend on the condition of the soil surface and would include scarifying a crusted soil surface or roller packing an excessively loose soil surface.
7. Seeding will occur no more than 24 hours after final seedbed preparation. Seed will be certified weed free, minimum germination rate of 80%, and minimum purity of 90%. The seed mix to be applied is:

A proposed seed mixture for this location is:

- 1.6#/acre PLS - Indian Ricegrass
- 2.6#/acre PLS – Galleta Grass
- 0.1#/acre PLS-Sand Dropseed
- 5.7#/acre PLS — Needle and Thread
- 1.4#/acre PLS-Squirreltail
- 0.2#/acre PLS-Alkali Sacaton
- 0.6#/acre PLS — Blue grama
- 12.2#/acre PLS — TOTAL

Seed may be drilled or broadcast. Seed drills will be operated on the contour. If seed is broadcast the seeding rate will be doubled and the seed covered with some type of drag. Seed will be planted to the appropriate depth for the species, generally ¼ to ½ inch deep.

8. Trees cleared during site preparation and large rocks excavated during construction will be scattered across the interim reclamation area.
9. If noxious weeds become established along access roads, pipelines, or within the well pad disturbance, Patara will, following BLM protocols, treat and control these weeds utilizing integrated pest management techniques. All control activities will be coordinated with the BLM prior to treatment.

#### Final Reclamation

Final reclamation will:

- Conform to the guidelines contained in the Gold Book, 4th Edition, Chapter 6.
- Will be accomplished on the new access roads and areas of the well pad where interim reclamation does not meet the standards for final reclamation.

The sequence for final reclamation of the well pad is:

1. In accordance with Onshore Oil and Gas Order No. 1, earthwork for interim and/or final reclamation, including pit closure, shall be completed within six months or well completion or abandonment.
2. All weather surfacing material on the well pad will be removed from the location.
3. As appropriate, top soil will be salvaged and reserved for final reclamation.
4. Re-contouring, spreading of salvaged top soil, seed bed preparation, seeding, and scattering trees (woody debris) will be conducted as described in the preceding interim reclamation section.
5. If necessary or as directed by the authorized officer, reclaimed areas will be protected from livestock grazing by fencing for two years or until vegetation becomes firmly established. Fencing will meet the standards specified in the Gold Book, 4<sup>th</sup> Edition (pg. 18).

The sequence for final reclamation for new access roads will include:

1. All weather surfacing material will be removed for the driving surface of the access road.

2. All top soil that was spread and re-vegetated during interim reclamation will be salvaged and reserved for final reclamation.
3. The access road will be re-contoured using excess cut and fill material to achieve the original contour and grade, or a contour that blends with the surrounding topography
4. Ripping of the rough grade, spreading of salvaged top soil, seed bed preparation, seeding, erosion control, and scattering trees (woody debris) will be conducted as described in the preceding interim reclamation section.

#### Goals and Monitoring for Interim and Final Reclamation.

The goal of interim reclamation is to achieve, to the extent possible, final reclamation standards including re-contouring to achieve the original contour and grade, or a contour that blends with the surrounding topography; and the establishment on the areas of the well pad and access roads subject to interim reclamation of a self-sustaining, vigorous native and/or desirable vegetation community with a density sufficient to provide a stable soil surface.

The goal of final reclamation is to restore all areas of the well pad and access roads to the original land form or a land form the blends with the surrounding landform, and the establishment of a self-sustaining, vigorous, diverse native and/or desirable vegetation community with a density sufficient to provide a stable soil surface and inhibit non-native plant invasion (Gold Book, 4<sup>th</sup> Edition, pg.43).

Patara will monitor interim and final reclamation efforts and document the results in a reclamation monitoring report to be submitted to the authorized officer annually. The report will:

- Document if reclamation objectives have been met or if objectives are likely to be met within a reasonable time.
- Identify additional actions that may be required to meet reclamation objectives within a reasonable time.
- Document the acreage for: initial disturbance, successful interim reclamation, and successful final reclamation.

Interim and final reclamation will be considered successful if all of the following criteria are met:

1. Seventy percent vegetative cover (basal for grasses; canopy for shrubs) of a comparable adjacent area.
2. Ninety percent of the vegetative cover consists of species included in the seed mix or native species of the area.
3. The vegetation established on the site provides erosion control where water naturally infiltrates into the soil, and gullying, headcutting, slumping, and deep or excessive drilling is not observed (Gold Book, 2007, pg. 43).

If additional reclamation efforts are identified in the reclamation report, Patara will coordinate these efforts in advance with the authorized officer.

K. OWNERSHIP

1. Mineral Lessor  
Bureau of Land Management  
Tres Rios Field Office  
29211 Hwy. 184  
Dolores, CO 81323 Phone: 970-882-7296
  
2. Surface Owner  
Bureau of Land Management  
Tres Rios Field Office  
29211 Hwy. 194  
Dolores, CO 81323 Phone: 970-882-7296

L. ADDITIONAL INFORMATION

1. A Class III Cultural Resource Inventory of the proposed drill sites, access roads and other facilities on Federal lands has been conducted and a report has been made to the BLM Tres Rios Field Office.
2. If archaeological, historical or vertebrate fossil materials are discovered during the course of any construction activities, Patara will suspend all operations that further disturb such materials and immediately contact the appropriate BLM office. Operations in the area of discovery will not resume until written authorization to proceed has been issued by the BLM Authorized Officer (AO). If Patara wishes at any time to relocate activities to avoid the expense of mitigation and or delays associated with this process, the BLM would assume responsibility for whatever recordation and stabilization of the exposed materials may be required. The BLM will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the BLM that the required mitigation has been completed, Patara will then be allowed to resume construction.
3. Patara will be fully responsible for the actions of their subcontractors. A copy of the approved APD and Conditions of Approval will be on location during drilling and completion operations.
4. Archaeological, cultural and historical information will be submitted under separate cover.
5. Patara Oil & Gas LLC maintains a file, per 29 CFR 1910.1200(g) containing current Materials 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 material (substances) which may be transported across these lands 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). All hazardous substances, EHS, and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

6. **Patara point of contact:**

Danielle Gavito  
Permitting & Regulatory Supervisor  
303-563-5378 (office)  
303-524-4651 (cell)

Ryan Calhoun  
Drilling Manager  
303-563-5373 (office)  
303-710-1713 (cell)

Patara Oil & Gas LLC  
**HAMM CANYON FED 20-44-45-18**  
SHL: 2,391' FSL 528' FWL  
NW/4 SW/4 SEC 21 TWN 45N RNG18W  
BHL: 796' FSL 328' FEL  
SE/4 SE/4 SEC 20 TWN 45N RNG 18W  
San Miguel County, CO  
Federal Lease #: COC71783

CONFIDENTIAL

Operator Certification

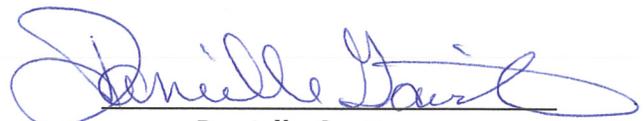
I hereby certify that Patara Oil & Gas LLC and its contractors and sub-contractors are responsible for the operations conducted under this application subject to the terms and conditions of the mineral lease. Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Patara Oil & Gas LLC under their statewide bond, BLM Bond No. COB000277.

I hereby certify that I or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved, I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

OPERATORS REPRESENTATIVES

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EMPLOYEE AGENT  
Danielle Gavito - 303-563-5378



Danielle Gavito

Executed this 31<sup>st</sup> day of October, 2012

**TABLE 1 - LOCATION OF WELLS WITHIN A TWO-MILE RADIUS**

Patara Oil & Gas LLC  
**Hamm Canyon Fed 20-44-45-18**  
2391' FSL & 528' FWL  
Sec. 21 T45N R18W  
San Miguel County, Colorado  
Surface: Federal

API #	OPERATOR	WELL NAME	STATUS	QTR/QTR	SEC	TWN	RNG
05-113-06156	Encana Oil & Gas Inc	Hamm Canyon #21-43	AL	SWSE	21	45N	18W
05-113-06155	Encana Oil & Gas Inc	Hamm Canyon #21-21	AL	SWNW	21	45N	18W
05-113-06040	Champlin Petroleum Company	Husky Federal #41-21	AL	NENE	21	45N	18W
05-113-06036	Champlin Petroleum Company	Hamm Canyon #2	DA	NWNE	27	45N	18W
05-113-06033	Merrion Oil & Gas Corp	Hamm Canyon Federal #14-26	PR	NWSW	26	45N	18W
05-113-06035	Champlin Petroleum Company	Hamm Canyon Federal 11E-2 #4	AL	NENW	27	45N	18W

WATER WELL	PERMIT #	DATE OF INSTALL	DEPTH	QTR/QTR	SEC	TWN	RNG
US BLM	156166	NEVER INSTALLED					
Jimmy G & Larry Suckla	265630	4/2/2006	42'	NWNW	33	45N	18W