

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address	3b. Phone No. (include area code)	9. API Well No.
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish
16. No of acres in lease		13. State
17. Spacing Unit dedicated to this well		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		
19. Proposed Depth		
20. BLM/BIA Bond No. in file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		
22. Approximate date work will start*		
23. Estimated duration		
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: LOT 3 / 245 FNL / 887 FWL / TWSP: 4S / RANGE: 95W / SECTION: 18 / LAT: 39.708995 / LONG: -108.104518 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 147 FNL / 1419 FWL / TWSP: 4S / RANGE: 95W / SECTION: 18 / LAT: 39.70926 / LONG: -108.102629 (TVD: 8715 feet, MD: 8748 feet)

BHL: NENW / 181 FNL / 1325 FWL / TWSP: 4S / RANGE: 95W / SECTION: 18 / LAT: 39.709166 / LONG: -108.102963 (TVD: 13162 feet, MD: 13196 feet)

CONFIDENTIAL

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

CONFIDENTIAL

STANDARD CONDITIONS OF APPROVAL (FEDERAL SURFACE AND SPLIT-ESTATE)

General

1. The Operator will submit a Sundry Notice a minimum of 48-hours prior to commencing construction and/or reclamation work.
2. Notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
 - a. The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
 - b. The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
 - c. The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.
 - d. Natural ignitions caused by lightning will be managed by Federal fire personnel. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not endangered. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.

Wildlife

3. In the event a producing well is established, all new production equipment which has open-vent exhaust systems, such as heater treaters, separators, dehydration units, and flare stacks, will be designed and constructed to prevent birds and bats from entering or nesting in or on such units, and to the extent practical, to discourage birds from perching on the exhaust stacks.
4. The operator will prevent access to facilities that store or are expected to store fluids which may pose a risk to such birds and bats (e.g., toxicity, compromised insulation, drowning). Features that prevent access to such fluids must be in place and functional within 24 hours of installation and will remain effective until such features are removed or incapable of storing fluids. Deterrence methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. All lethal and non-lethal events that involve migratory birds will be reported to the BLM Authorized Officer immediately.
5. Water Use. The purpose of this COA is to assist the BLM with ensuring that water depletions associated with Federal oil and gas development activities are adequately

covered by the U.S. Fish and Wildlife Service (FWS) Programmatic Biological Opinion for the four endangered Colorado River fishes.

The Operator will provide the volumes of fresh water and reused/recycled water used during project development. The river sub-basin of origin (i.e., Colorado, Dolores, Green, Gunnison, White, and Yampa) will be identified for fresh water. The volumes per well will be identified by each development phase (construction, drilling, and completion) and by activity (e.g., dust abatement, pipeline hydrostatic testing, drilling, and completion operations). The water volumes will be identified in an attachment to the BLM Form 3160-4, "Well Completion or Recompletion Report and Log" (completion report) submitted to the BLM Field Office. All volumes are to be reported in barrels per well.

For reporting the water used during construction, submit the total water used for construction with the first completion report. Completion reports submitted subsequent to the first completion report will have the water-use that was not included in the previous completion reports.

Well Name/No.:			API No.:		
County:			Well Pad:		
Operator:					
Water Source (River Sub-Basin)					
Purpose	Water Use (barrels)				
	Construction	Drilling		Completion	
	Fresh	Fresh	Reused/ Recycled	Fresh	Reused/ Recycled
Dust Abatement (Road/Pipeline/Pad)					
Pipeline Hydrostatic Testing					
Cementing					
Mud					
Acid Wash/ Hydraulic Fracturing					

Paleontological Resources

- The operator/holder is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.
- If any paleontological resources are discovered as a result of operations under this authorization, the operator/holder or any of his agents must stop work immediately at that site, immediately contact the Authorized Officer, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the Authorized Officer. The BLM or

designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

Cultural Resources

8. The applicant is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
9. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the Authorized Officer. The applicant will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The applicant, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
10. Pursuant to 43 CFR 10.4(g), the applicant must notify the Authorized Officer, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the Authorized Officer. Colorado Statute CRS 24-80-1302 must be adhered to upon the identification of suspected human skeletal remains and associated funerary items on Colorado State and private lands. The applicant will immediately notify the coroner of the county wherein the remains are located as well as the sheriff, police chief, or land managing agency official.

Invasive, Noxious, and Non-Native Species

11. It is recommended all vehicles and construction equipment be cleaned using compressed air or high-pressure water spraying equipment prior to use to reduce the potential for introduction of invasive, noxious weeds or other undesirable non-native species. The wash/blow down will concentrate on tracks, feet, or tires and on the undercarriage, with special emphasis on axles, frame, cross members, motor mounts, and on underneath steps, running boards, and front bumper/brush guard assemblies. Operator will dispose of solid wastes collected from the cleaning station.
12. All seed, straw, mulch, or other vegetative material to be used on reclamation will comply with United States Department of Agriculture (USDA) state noxious weed seed requirements and must be certified by a qualified Federal, State, or county office as free

of noxious weeds. Any seed lot with test results showing presence of State of Colorado A or B list species will be rejected in its entirety and a new tested lot will be used instead.

13. All sites will be monitored and treated for noxious weeds for the life of the project until Final Abandonment has been approved by the BLM. Monitoring will be conducted annually during the growing season to determine the presence of any State-listed noxious weeds. Noxious weeds that have been identified during monitoring will be promptly treated and controlled.

Waste

14. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).
15. All substances that pose a risk of harm to human health or the environment will be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to oil, condensate, and/or produced water, must be stored in appropriate containers and in secondary containment systems at 110 percent of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries must be lined with a minimum 24 mil impermeable liner.
16. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO by phone at 970-878-3800 or by email to BLM_CO_WR_NRS@blm.gov.
17. As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

Range Management

18. The operator must coordinate with the livestock grazing permittee Piceance Creek Ranch, Ltd. authorized to graze livestock within the project area a minimum of 72 hours prior to drilling activities associated with this permit. Livestock grazing permittee contact information may be found at www.blm.gov/ras/ or by contacting the appropriate BLM

Field Office. The operator will provide the grazing permittee the location, nature, and extent of the anticipated activity being completed.

19. Any range improvement projects such as fences, water developments, cattleguards, gates, or other livestock handling/distribution facilities that are damaged or destroyed either directly or indirectly as a result of implementation of the Proposed Action will be promptly repaired or replaced by the applicant to restore pre-disturbance functionality. If the operator damages any range improvement project(s) the operator will notify the Authorized Officer and identify the actions taken to repair the feature(s).

Visual Resource

20. All long-term above ground structures will be painted an appropriate color from the BLM “Supplemental Environmental Colors” chart to blend with the natural color of the landscape background. The BLM has determined that the appropriate environmental color for this well location is “Shale Green” on the BLM’s Standard Environmental Colors Chart CC-001: June 2008.

Reclamation Procedures

▪ *Interim Reclamation*

21. All long-term above-ground structures will be painted and maintained Shale Green from the BLM “Supplemental Environmental Colors” chart to blend with the natural color of the landscape background.
22. To reduce erosion and reduce the risk of weed establishment, interim reclamation will be initiated when either there are no drilling activities expected on the pad for the next six months or there has been no activity on the pad within the last six months, regardless of whether or not there are outstanding approved APDs.
23. In order to inspect and operate the well or complete workover operations, it may be necessary to drive, park, and operate equipment on restored, interim vegetation within the previously disturbed area. Damage to soils and interim vegetation will be repaired and reclaimed following use. To prevent soil compaction, under some situations, such as the presence of moist, clay soils, the vegetation and topsoil will be removed prior to workover operations and restored and reclaimed following workover operations.

▪ *Final Reclamation*

24. Final abandonment of pipelines and flow lines will involve flushing, capping, and properly disposing of any fluids in the lines. All surface lines and any lines that are buried close to the surface that may become exposed in the foreseeable future due to water or wind erosion, soil movement, or anticipated subsequent use, must be removed. Deeply buried lines may remain in place unless otherwise directed by the Authorized Officer.

▪ *Monitoring and Final Abandonment Approval*

25. All seed tags will be submitted via Sundry Notice (SN) to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended. The SN will include the purpose of the seeding activity (i.e., seeding well pad, cut

and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the pipeline, well(s) or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his/her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

26. Each year by January 1st, Caerus Piceance LLC. will submit a Reclamation Status Report to the WRFO via the most current BLM approved data management system that includes the pipeline name and/or well number, API number, legal description, UTM coordinates, project description (e.g., well pad, pipeline, etc.), reclamation status (e.g., interim or final), whether the well pad and/or pipeline has been re-vegetated and/or re-contoured, date seeded, photos of the reclaimed site, acres seeded, seeding method (e.g., broadcast, drilled, hydro-seeded, etc.), and contact information for the person responsible for developing the report. The report will include maps showing each point (), polygon (e.g., well pad), and/or polyline (e.g., road, pipeline) feature that was included in the report. The data must be submitted in UTM Zone 13N, NAD 83, in units of meters. In addition, scanned copies of seed tags that accompanied the seed bags will be included with the report. Internal and external review of the WRFO Reclamation Status Report and the process used to acquire the necessary information will be conducted annually, and new information or changes in the reporting process will be incorporated into the report.
27. The operator will be responsible for ensuring that all disturbance GIS and reclamation data will be submitted via White River Data Management System (WRDMS) which can be accessed at <https://my.usgs.gov/wrfo/>

Reclamation Performance Standards

▪ *Interim Reclamation Standard*

28. Disturbed areas not needed for long-term production operations or vehicle travel have been recontoured, protected from erosion, and revegetated with a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious weeds.

▪ *Final Reclamation Standard*

29. The operator must meet the following reclamation success criteria, and these standards apply to both interim and final reclamation:
 - a. Self-sustaining desirable vegetative groundcover consistent with the site Desired Plant Community (DPC) (as defined by the range site, WRFO Assessment, Inventory, and Monitoring (AIM) protocol site data (BLM TN 440), ecological site or an associated approved reference site) is adequately established, as described below, on disturbed surfaces to stabilize soils through the life of the project.
 - b. Vegetation with 80 percent similarity of desired foliar cover, bare ground, and shrub and/or forb density in relation to the identified DPC. Vegetative cover values for woodland or shrubland sites are based on the capability of those sites in an herbaceous state.

- c. The resulting plant community must have composition of at least five desirable plant species, and no one species may exceed 70 percent relative cover to ensure that site species diversity is achieved. Desirable species may include native species from the surrounding site, species listed in the range/ecological site description, AIM data, reference site, or species from the BLM approved seed mix. If non-prescribed or unauthorized plant species (e.g., yellow sweetclover, *Melilotus officinalis*) appear in the reclamation site, BLM may require their removal.
 - d. Bare ground does not exceed the AIM data, range site description, or if not described, bare ground will not exceed that of a representative undisturbed DPC meeting the Colorado Public Land Health Standards.
 - e. Reclamation sites affected by cheat grass and or other invasive annuals will be qualified based on the condition of the site (i.e., the relative vegetative cover) prior to disturbance.
 - i. If the Project site contains less than 25 percent relative cover of undesirable species, interim and final reclamation will be considered acceptable when relative cover of undesirable species on the project site does not exceed 5percent.
 - ii. If the project site contains 25 percent to 50 percent relative cover of undesirable species, interim and final reclamation will be considered acceptable when relative cover to of undesirable species on the project site does not exceed 10 percent.
 - iii. If the project site contains more than 50 percent relative cover of undesirable species on the project site does not exceed the level defined by site-specific criteria established in the reclamation plan for that site.
30. Reclamation success criteria in GRSG habitat would be contingent on evidence of successful establishment of desired forbs and sagebrush. Reclaimed acreage would be expected to progress without further intervention to a state that meets GRSG cover and forage needs (see Table H-1, NWCO GRSG ARMPA) based on site capability and seasonal habitat, as described in the Colorado Greater Sage Grouse Conservation Plan (Colorado Greater Sage-grouse Steering Committee 2008). Reclamation would ensure surface and subsurface stability, growth of self-generating, permanent, vegetative cover and compatibility with post land use. The vegetation should be diverse and of the same seasonal growth as adjoining vegetation. Post land use would be determined by the AO but normally would be the same as adjoining uses.

SITE SPECIFIC CONDITIONS OF APPROVAL

1. The BLM recommends that Caerus Piceance, LLC would reseed reclamation areas at the first appropriate seeding window (September 1st – March 31st) following disturbance using Standard BLM seed mix #6 outlined in the table below. Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application and drill seeding depth shall be no greater than ½ inch. If drill seeding cannot be accomplished, seed should be broadcast at double the rate used for drill seeding and harrowed or raked into the soil.

Cultivar	Common Name	Scientific Name	Application Rate (lbs PLS/acre)
UP Plateau	Sandberg bluegrass	<i>Poa secunda ssp. sandbergii</i>	0.5
San Luis	slender wheatgrass	<i>Elymus trachycaulus ssp. trachycaulus</i>	2
Sherman	big bluegrass	<i>Poa secunda ssp. ampla</i>	1
Bromar	mountain brome	<i>Bromus marginatus</i>	2
Maple Grove	Lewis flax	<i>Linum lewisii</i>	1
Bandera	Rocky Mountain penstemon	<i>Penstemon strictus</i>	0.5
Alternates:			
Canbar	Canby bluegrass	<i>Poa secunda ssp. canbyi</i>	0.5
	balsamroot	<i>Balsamorhiza sagittata</i>	3

2. GRSG-TL-46e: No surface disturbing or disruptive activities are authorized within 4 miles from active leks during lekking, nesting, and early brood-rearing from March 1 to July 15 to minimize disturbance, displacement, or mortality to greater sage-grouse.

Criteria*:

- Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat
- An evaluation of the potential threats from proposed lease activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation
- An evaluation of the proposed lease activities, including design features, in relation to the site-specific terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors. This is particularly likely in Colorado MZ 17, which has an atypical GRSG habitat featuring benches with GRSG habitat interspersed with steep ravines.

To authorize an activity based on the criteria above, the environmental record of review must show no significant direct disturbance, displacement, or mortality of GRSG.

3. Caerus will minimize the temporary noise levels of well operations during drilling, completions, re-completions, workovers, or similar activities to a maximum permissible noise level of 70 decibels or less measured 350 feet (4 feet above ground level) from the source to reduce disturbance to greater sage-grouse.
4. To prevent long term impacts associated with noise, sound producing equipment (such as compressors or pump jacks) must be equipped with a hospital grade muffler or similar device which limits sound emissions to 55 decibels or less measured 350 feet (4 feet above ground level) from the source.
5. A full reclamation bond specific to the site (in accordance with MD MR-14 [GRSG RMPA 2015]) is required for the well pads and access roads. This bond will be necessary prior to the construction of the well pads and access roads. Therefore, operator must submit an estimated cost to fully reclaim the location within 30-days of the APDs' approval. Once the estimate is received, the BLM will review the information and provide the operator with the necessary bond amount to ensure bonds are sufficient. The bond is required to cover all overhead and contracting costs anticipated to be incurred by the BLM to result in full restoration of the lands to the condition it was found prior to disturbance.
6. Prior to beginning construction of the proposed well, the operator is required to coordinate with both the BLM and CPW to identify appropriate beneficial actions that would net a minimum of 104.3 credits as per state agency standards and calculations. Possible beneficial actions could include road decommissioning, conifer removal treatments, removal of invasive species, or brood-rearing habitat improvements. The agreed upon action(s) would take place within MZ 17 of the PPR greater sage-grouse population. CPW and BLM are coordinating with Caerus to design a mitigation plan during the 2020 winter to be implemented prior to or within a year of construction of the 1st well pad approved in this proposed action.
7. WR-TL-15: Surface-disturbing and disruptive activities will not be allowed within 0.25 miles of active nest sites of those raptors that are not considered special-status during the period from nest territory establishment to dispersal of young from nest (from February 1 through August 1).

Exception: An exception to the TL can be granted if an environmental analysis of the Proposed Action indicates that nature or conduct of the activity could be conditioned so as not to interfere with adult attendance and visitation of the nest site, jeopardize survival of the eggs or nestlings, or otherwise impair the utility of nest for current or subsequent nesting activity or occupancy. The Authorized Officer may also grant an exception if the nest is unattended or remains unoccupied by May 15 of the project year. An exception may be granted to these dates by the Authorized Officer, consistent with policies derived from federal administration of the Migratory Bird Treaty Act.

- a. WR-TL-15: On the M23A, B26, and A18 locations, surface-disturbing and disruptive activities (including construction, drilling, completion, and intensive maintenance activities) will not be allowed within 0.25 miles of active nest sites of those raptors that are not considered special-status during the period from nest territory establishment to dispersal of young from nest (from February 1 through August 1). The current survey is valid until June 1, 2021.
 - b. WR-TL-15: No active nests were located near the P25, O13, and M12 locations and an exception to this stipulation is granted until June 1, 2021, at which time the timing limitation will be applied or a new biological survey must be conducted to consider another exception to the timing limitation.
8. The following stipulation applies to M23A, B25, and P25 well pads:

WR-TL-13: No surface disturbing activities (including construction, drilling, completion, and intensive maintenance activities) from May 15 through August 15 would be permitted in order to reduce the disturbance of big game animals on summer range. Exceptions and modifications to this Condition of Approval may be considered as expressed in WR-TL-13 in the WRFO Oil and Gas RMPA ROD (2015).
9. The following stipulation applies to O13, A18, and M12 well pads:

WR-TL-12: No surface disturbing activities (including construction, drilling, completion, and intensive maintenance activities) from December 1 through April 30 would be permitted in order to reduce the disturbance of big game animals on severe winter range. Exceptions and modifications to this Condition of Approval may be considered as expressed in WR-TL-12 in the WRFO Oil and Gas RMPA ROD (2015).
10. Any excavations into the underlying native sedimentary rock must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact the underlying rock.

CAERUS PICEANCE LLC, ELU A18 FED PAD, CONDITIONS OF APPROVAL

October 27, 2020

The drilling plan of the APD will be supplemented as follows:

1. **When the Approved APD expires, if the Operator is not drilling the well with a rig capable of reaching total depth, has not drilled the well to total depth, or has not reached a lesser depth that can produce oil or gas in paying quantities, then the Operator must either submit a new APD with its associated APD fee, or submit a plan to plug and abandon the wellbore.**
2. All operations, unless a variance has been granted in writing by the Authorized Officer, must be conducted in accordance with 43 CFR PART 3160 - Onshore Oil and Gas Operations, Onshore Oil and Gas Order No.1; Approval of Operations on Onshore Federal and Indian Oil and Gas Leases; and Onshore Oil and Gas Order No. 2; Drilling Operations. If air or mist drilling is used, operations must be in accordance with Onshore Oil and Gas Order No. 2; Drilling Operations, Part E; Special Drilling Operations.
3. Approval is based on a **5M BOPE** utilized after setting surface casing. All components, including the annular preventer, shall be rated to this pressure rating. The BOPE shall be installed, tested, and operated in conformance with Onshore Order #2 for a 5M system.
4. The Operator is responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations.
5. Major deviations from the drilling plan require prior approval from the Authorized Officer. The Operator shall verbally notify either Supervisor Petroleum Engineering Technician, and/or other designated Petroleum Engineering Technicians 24 hours prior to the following operations to provide notice of:
 - a. Well spud (Breaking ground for drilling surface casing)
 - b. Running and cementing of all casing strings
 - c. Pressure testing of BOPE or any casing string
 - d. Commencing completion operations

A written sundry notice of the well spud must be submitted within five (5) working days.

6. All BOPE tests will be done by a tester and not by the rig pumps. The tests will include a low-pressure test of 250 psi for five minutes prior to initiating the high-pressure tests discussed in Onshore Order No. 2
7. No "new" hardband drill pipe abrasive to casing will be rotated inside the surface casing unless it can be shown to be casing friendly in the manufacturer's specifications. Hardband drill pipe will be considered new until it has been run at least once.

Approval Date: 12/09/2020

CAERUS PICEANCE LLC, ELU A18 FED PAD, CONDITIONS OF APPROVAL

October 27, 2020

8. The WRFO shall be contacted for approval prior to commencing remedial work, plugging operations on newly drilled boreholes, changes within the drilling plan, changes or variances to the BOPE, deviating from conditions of approval, and conducting other operations not specified within the APD. If a well control issue arises (e.g. kick, blowout, or water flow), casing failure occurs, or an increase in bradenhead pressure occurs during fracturing operations, the Authorized Officer shall be notified within 24 hours from the time of the event.
9. Drilling muds with chlorides testing more than 3,000 ppm or those containing hydrocarbons shall not be used in drilling operations until after the surface casing has been set. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite and/or a benign lost circulation material – that is a lost circulation material that does not pose a threat to human health or the environment, e.g. cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls.
10. During surface cementing operations, should cement not be circulated to surface the WRFO shall be verbally notified as soon as reasonably possible. A log acceptable to the WRFO shall be run to determine the top of cement prior to commencing remedial cementing operations. If cement is circulated to surface and subsequently falls back, top job(s) will be performed until cement remains at surface.
11. Due to the extensive lost circulation problems that are being encountered in the Piceance Basin during drilling operations from surface to total depth (TD), and given that all usable water zones, potential productive zones, and lost circulation zones shall be protected and/or isolated per Onshore Order #2, the WRFO requires sufficient volumes of cement be pumped to meet these requirements. Cement tops behind production casing will be verified by an acceptable log to ensure compliance with this Order.
12. Chronologic drilling progress reports must be sent directly to the WRFO daily, either electronically Supervisor Petroleum Engineering Technician, and/or other designated Petroleum Engineering Technicians until the well is drilled to total depth.
13. All drill cuttings shall be contained in a pit on the pad of the well being drilled or hauled to an approved disposal site. All pits shall always maintain a minimum of two feet of free board.

Approval Date: 12/09/2020

CAERUS PICEANCE LLC, ELU A18 FED PAD, CONDITIONS OF APPROVAL

October 27, 2020

14. For foam and ultralight cement jobs that are performed in cementing the intermediate or production strings, the Operator will wait at least 36 hours for cement to harden before running a specialized log capable of reading pipe cement bond and verifying tops of cement. The WRFO shall be verbally notified prior to running such specialized log with enough advance notice to allow a representative from this office to witness. Logs showing pipe cement bond and tops of cement for intermediate and production cement jobs will be forwarded to the BLM.
15. The completion report shall be filed within 30 days of completion of operations and submitted prior to, or along with the first production report.
16. The WRFO requires the measurement of individual gas, oil (condensate) and water production streams at the wellhead, unless otherwise approved in advance by the BLM. The sales point for natural gas will be at the wellhead. All meters will be calibrated in place prior to any deliveries. The WRFO will be provided with a date and time for the initial meter calibration and all future meter proving and calibration schedules with enough advance notice (24 hours minimum) to allow a representative from this office to witness. A copy of the meter proving and calibration reports will be submitted to the WRFO. Oil will be sold from secured tanks on location, unless otherwise approved in advance by the BLM.
17. This APD shall be valid for 2 years from the date of approval unless an extension is granted by the Authorized Officer.
18. Approval to flare is granted while drilling and testing.

Approval Date: 12/09/2020

CAERUS PICEANCE LLC, ELU A18 FED PAD, CONDITIONS OF APPROVAL
October 27, 2020

The Bureau of Land Management, White River Field Office address is:
220 E. Market St.
Meeker, CO 81641
(970) 878-3800

WRFO CONTACTS:

Supervisory Petroleum Engineering Technician:

Bud Thompson	Work Phone	(970) 878-3828	blthomps@blm.gov
	Cell Phone	(970) 942-7040	

Petroleum Engineering Technicians:

Justin Wilson	Work Phone	(970) 878-3825	jrwilson@blm.gov
	Cell Phone	(970) 942-7042	

Erika Miller	Work Phone	(970) 878-3808	emiller@blm.gov
	Cell Phone	(970) 296-0850	

Petroleum Engineer:

Kenneth Rennick	Work Phone	(970) 878-3846	krennick@blm.gov
-----------------	------------	----------------	------------------