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An Environmental Assessment of Major Oil International LLC's Application for a Permit to Drill the Eblana-2 Oil Well

File Number: N-87414

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1.0 INTRODUCTION

Major Oil International, LLC (Major Oil), has leased a parcel of Federal land for potential oil and gas development under the Mineral Leasing Act of 1920, as amended and supplemented, and Part 3100 of Title 43, Code of Federal Regulations (CFR). On April 5, 2012, the BLM received an Application for Permit to Drill (APD) from Major Oil to drill Federal Eblana-2 in Hot Creek Valley, Nevada. The proposed well location (Eblana-2) would be situated approximately 17 miles north-northeast of Warm Springs in Hot Creek Valley in Section 36, T. 7 N., R. 50 E., MDM.

The approval of APD is a federal action subject to analysis under the National Environmental Policy Act (NEPA) of 1969 (Public Law [PL] 1-91-190, as amended [42 United States Code (USC) 4321 *et seq*.]). The BLM-TFO has determined that an environmental assessment (EA) is required prior to the potential approval of the Eblana-2 APD. The EA will analyze the direct, indirect, and the cumulative impacts of the proposal to determine if significant impacts would occur that would require the development of an Environmental Impact Statement (EIS).

Purpose and Need

The purpose of the action is to provide Major Oil with authorized use of the public land managed by the BLM to drill the Eblana-2 well and develop associated infrastructure in compliance with the Federal Land and Policy Management Act of 1976 (FLPMA) and other applicable federal and state laws. The need for the action is to respond to Major Oil's APD to drill Eblana-2 on Oil and Gas lease N-87414 on which they have valid existing lease rights.

Land Use Plan Conformance

The Proposed Action is in conformance with the Tonopah Resource Management Plan (RMP) and Record of Decision approved on October 2, 1997.

The Fluid Minerals Objective in the Tonopah RMP (page 22) is, "To provide opportunity for exploration and development of fluid minerals such as oil, gas, and geothermal resources, using appropriate stipulations to allow for the preservation and enhancement of fragile and unique resources."

The proposal is within an area that is designated as "open to fluid minerals leasing subject to standard lease terms and conditions" (Tonopah RMP, page 22).

Relationship to Statues, Regulations, Policy, Plans or Other EAs

BLM Onshore Order #1 was established pursuant to the authority prescribed in 43 CFR 3160. It requires that approval of all proposed exploratory, development, and service wells, and all required approvals of subsequent well operations and other lease operations be obtained in accordance with 43 CFR 3162.3-1, 3162.3-2, 3162.3-3, 3162.3-4 and 3162.5-1. Pursuant to 43 CFR 3101.1-2, a lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a

leasehold subject to: stipulations attached to the lease; restrictions deriving from specific, nondiscretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed.

The exploration must be in conformance with all Nevada State and Federal requirements including, but not limited to, those of the BLM, State of Nevada Division of Minerals, State of Nevada Division of Environmental Protection, Nevada State Engineer, and the Federal Environmental Protection Agency.

Conformance with Nye County Plans

The Proposed Action is in conformance with Nye County Policy Plan for Public Lands (2011, page 38) which states, "Oil and gas resources should be inventoried and development encouraged. Public lands with a high potential for oil or gas resources should not be withdrawn from exploration".

Scoping and Public Involvement

Letters were sent to the Duckwater and Yomba Shoshone Tribes informing them of the Proposed Action on June 7 and 14, 2012. On June 7, 2012, a representative of the Duckwater Shoshone Tribe informed BLM that a field tour of the project area was not necessary and that the Tribe had no resource concerns. No comments were received from the Yomba Shoshone Tribe.

The Nevada Department of Wildlife (NDOW) was informed of the Proposed Action on June 8, 2012. A response was received from NDOW on June 22, 2012. Resource conflicts identified by NDOW are considered in this EA in the section titled, ***Wildlife***.

2.0 The Proposed Action and Alternatives

The Proposed Action

Major Oil has leased a parcel of Federal land for potential oil and gas development under the Mineral Leasing Act of 1920, as amended and supplemented, and Part 3100 of Title 43, Code of Federal Regulations (CFR). On April 5, 2012, the BLM received an APD from Major Oil to drill Eblana-2 in Hot Creek Valley, Nevada. The proposed well location would be situated in the NW¼SW¼NE¼ sec. 36, T. 7 N., R. 50 E., MDM, approximately 17 miles north-northeast of Warm Springs in Hot Creek Valley.

The proposed wellhead would be located on a 2.81-acre gravel pad (350 x 350 ft.). The drilling mud would be contained in a reserve pit located on the well pad which would cover approximately 0.36 acres (195 x 80 ft.). Due to the low permeability of soils and the depth of the water table in this area (approximately 1, 000 ft.), the reserve pit would not be lined. The reserve pit would be fenced and netted to prevent access by wildlife, livestock, avian species and humans. Escape ramps, ladders or other methods of escape would be incorporated into the design (Appendix A). The proposed well would be drilled to an approximate depth of 8,000 feet.

Access to the project area would be by County Road 535 and Major Oil's right-of-way, N-90827. Major Oil has secured permission from the landowner to cross a small portion of private land at Blue Jay Spring. In order to access the well pad, a 2,065-foot long access road would be constructed on lease (Figure 1). The new access road would be bladed to accommodate a 20-foot-wide running surface. Two turnouts would be constructed on opposite sides of the new access road. Additionally, two other turnouts would be constructed on opposite sides of a segment of the existing two-track road which lies between the existing Eblana-1 and the proposed Eblana-2 access roads, which would be on lease. Each turnout would be approximately 10 feet by 30 feet for a total of 0.03 acres.

Where necessary, the proposed road would be surfaced with gravel removed from a private source located in section 34, T. 8 N, R. 50 E., Mount Diablo Meridian (MDM). Culverts would be installed and drainage ditches would be developed if determined necessary by the Authorized Officer. The total surface disturbance for the well pad, new access road, and the turnouts is estimated to be 3.79 acres.

Water for the drilling of the proposed oil well would be obtained from a proposed water well which would be drilled on the proposed Eblana-2 well pad. A waiver for the temporary use of ground water was obtained from the Nevada Division of Water Resources on July 3, 2013. Approximately 120,000 gallons of water would be used during drilling operations.

All authorized construction and reclamation would be consistent with the Gold Book (2007 ed.) and BLM Manual 9113 (Engineering Road Standards). Lease-specific stipulations associated with Oil and Gas lease N-87414 are presented in Appendix B and Standard Operating Procedures (SOPs) and Conditions of Approval are presented in Appendix C.

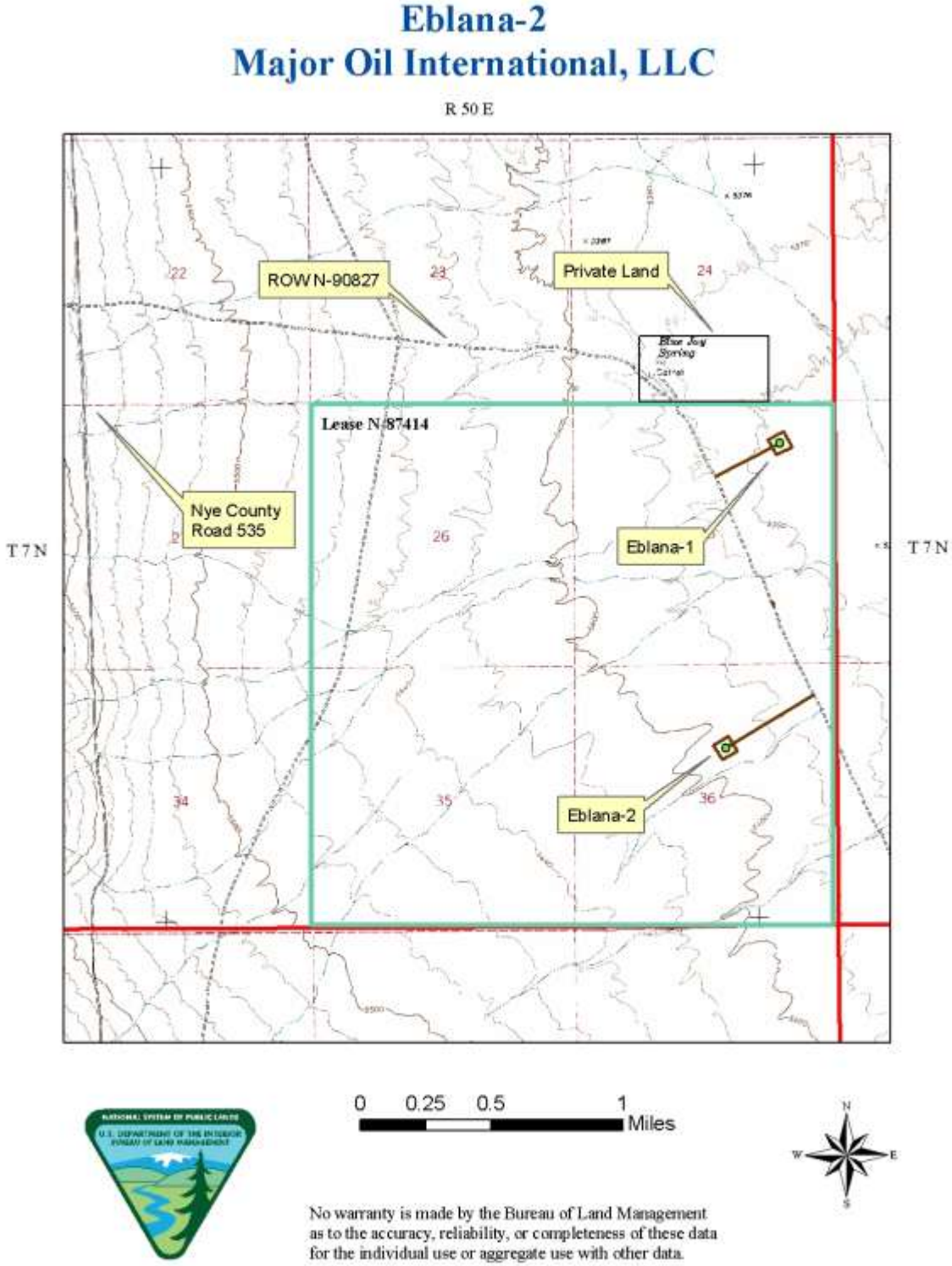

Figure 1. Locational map of the proposed oil well.

No Action Alternative

Under the No Action alternative, the BLM would not approve the APD for Major Oil to drill the proposed oil well. BLM's authority to implement the No Action alternative is limited because oil and gas leases holders possess valid existing rights to explore and potentially develop their lease subject to the stipulations of the specific lease agreement. BLM can deny the APD if the proposal would violate lease stipulations, applicable laws and regulations and also can impose restrictions to prevent undue or unnecessary environmental degradation.

3.0 Affected Environment and Environmental Consequences

This section describes the current status of supplemental authorities and resources that may be affected by either the Proposed Action or No Action Alternative.

Supplemental Authorities

The NEPA is only one of many authorities that contain procedural requirements that pertain to treatment of elements of the environment when the BLM is considering a federal action. To comply with NEPA and these supplemental authorities, the BLM mandates that all EAs address specific elements of the environment that are subject to requirements specified in statute, regulation, or by Executive Order. Table 1 identifies the supplemental elements that must be addressed in all EAs and whether or not the Proposed Action potentially affects those elements. The supplemental elements that are "Present/May be Affected" will be analyzed.

Table 1. Supplemental Authorities Considered in the Analysis.

Supplemental Authority[1]	Not Present[2]	Present/Not Affected	Present/May be Affected[3]	Rationale
Air Quality		●		There would not be any potentially significant effects to the air quality associated with the implementation of the Proposed Action because the Standard Operating Procedures (SOPs) presented in Appendix C require dust abatement.
Area of Critical Environmental Concern (ACEC)	●			There are no ACECs within or near the area of the Proposed Action.
Cultural/Historical		●		Cultural resources identified during a Class III survey would not be affected because an avoidance buffer would be established to mitigate adverse effects.
Environmental Justice	●			No minority or low-income populations would be disproportionately affected by the Proposed Action.
Farmlands Prime or Unique	●			No prime or unique farmlands are located within the area of the Proposed Action.
Noxious Weeds/ Invasive Non-native Species	●			The Proposed Action would have little effect on noxious weed species because there are no weeds in the project area currently. In addition, the Proposed Action incorporates SOPs which commits Major Oil to prevent the

[1] See H-1790-1 (January 2008) Appendix 1 Supplemental Authorities to be Considered.
[2] Supplemental Authorities determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document.
[3] Supplemental Authorities determined to be present/May be Affected *must* be carried forward for analysis in the document.

Table 1. Supplemental Authorities Considered in the Analysis.				
Supplemental Authority[1]	**Not Present[2]**	**Present/Not Affected**	**Present/May be Affected[3]**	**Rationale**
				establishment of weeds and eradicate them where they occur.
Native American Religious Concerns	●			The Proposed Action would not compromise the integrity of any known traditional, spiritual, cultural or ceremonial use area, nor would it limit or prevent access to any traditional or ceremonial sites that may be currently in use.
Floodplains	●			The proposed project is not located within a FEMA-designated 100-year flood zone.
Riparian/Wetlands		●		The nearest area that can be called a wetland is associated with Blue Jay Spring which is located approximately 1.25 miles from the proposed water well. The pumping of 120,000 gallons from the proposed water well is a negligible amount of water at the aquifer scale and no effects are anticipated.
Threatened and Endangered Species	●			The proposed well site is 9 miles downslope from Hot Creek Canyon which contains an introduced population of Railroad Valley springfish, a threatened species. However, there is no expectation that the waters in the spring would be affected by drilling of the proposed well since the water bearing zones in the oil well would be cemented and cased. The pumping of 120,000 gallons of water is not likely to have an effect either since this is a negligible amount of water at the aquifer scale.
Migratory Birds		●		The Proposed Action would not affect migratory birds because the SOPs presented in Appendix C contain time limitations during the nesting season or require survey and avoidance of nests.
Waste – Hazardous/Solid		●		The operator or any contractor company working for the operator would have Material Safety Data Sheets (MSDS) available for all chemicals, compounds, or substances that are used during the course of drilling, completion, and production operations. Additionally, all chemicals would be handled in an appropriate manner to prevent leaks or spills to the environment. Because the project operations would comply with all applicable federal and state laws

Table 1. Supplemental Authorities Considered in the Analysis.				
Supplemental Authority[1]	**Not Present[2]**	**Present/Not Affected**	**Present/May be Affected[3]**	**Rationale**
				concerning hazardous materials and the operator's Spill Prevention, Control, and Countermeasure Plan, and NTL-3A Reporting of Undesirable Events, there would be no impacts from hazardous or solid waste.
Water Quality		•		The Proposed Action would have little potential for affecting water quality of either surface or ground waters in the project area because the proposed oil and gas well would be cased and cemented from the surface to near the bottom of the hole. After testing, the well would either be set up for production or the well would be shut in or plugged in accordance with BLM regulations and Nevada State laws. The State laws also require capping and containing artesian flow.
Wild & Scenic Rivers	•			No wild and scenic rivers are located within the area of the Proposed Action.
Wilderness/Wilderness Study Areas/Lands with wilderness characteristics	•			The proposed project is located approximately 6 miles northeast of the Rawhide WSA, 7 miles northwest of Palisades Mesa WSA, and 8 miles southeast of Moray Peak WSA. The project area was found to not possess wilderness characteristics based on a LWC inventory conducted in 2013.
Forests and Rangelands (HFRA only)	•			This project does meet the requirements to qualify as a HFRA project.
Human Health and Safety		•		Human health and safety would not be affected by the proposal because Major Oil is committed to the implementation of SOPs and Condition of Approval (Appendix C) which are designed, in part, to ensure human health and safety

Other Resources Considered in the Analysis

Other resources of the human environment that have been considered for this environmental assessment (EA) are listed in the table below. Elements that may be affected are further described in the EA. Rationale for those elements that would not be affected by the Proposed Action and alternative is listed in the table below.

Table 1: Other Resources Considered in the Analysis.				
Other Resources	**Not Present[4]**	**Present/Not Affected**	**Present/May be Affected**	**Rationale**
Grazing Management		●		The Proposed Action would not result in a reduction in AUMs or any other effects to grazing management.
Land Use Authorizations		●		Access to the lease boundary would be by a pre-existing, two-track road. A ROW application was filed by Major Oil (N-90827) on February 16, 2012 and the grant issued on April 13, 2012. The ROW is 10-feet wide and 2.16 miles long and is accessed from Nye County Road 535 and terminates at the western boundary of private land adjacent to the lease boundary. The two-track road continues on-lease for 6,500 feet before it reaches the new access to the well site.
Minerals	●			There are no active, pending, or expired mining Plans of Operation or Notices, or active or pending sodium or potassium prospecting permits located within 4-mile radius of the proposed project.
Paleontological Resources	●			There are no fossil-bearing formations outcropping in the area of the Proposed Action.
Recreation		●		There are only dispersed recreational resources in the project area. Impacts to dispersed recreational opportunities (hiking, horseback riding, bird watching) would be very slight and temporary.
Socio-Economic Values	●			The Proposed Action would take place over the course of 2-3 weeks and would not be expected to create new jobs or significant revenues for local communities.
Soils			●	See the discussion under the section titled, ***Soils***
Special Status Species			●	See the discussion under the section titled, ***Special Status Species***.
Vegetation			●	See the discussion under the section titled, ***Vegetation***.
Visual Resources			●	See the discussion under the section titled, ***Visual Resources***.
Wild Horses and Burros	●			No wild horse or burros are known to inhabit the project area.
Wildlife		●		See the discussion under the section, titled, ***Wildlife***.

[4] Other Resources determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document based on the rational provided.

Table 1: Other Resources Considered in the Analysis.				
Other Resources	**Not Present[4]**	**Present/Not Affected**	**Present/May be Affected**	**Rationale**
Water Quantity		•		120,000 gallons is a negligible amount of water at the aquifer scale and it use would not substantially affect ground water quantity in Railroad Valley

The supplemental elements that are not "Present/Not Affected" will not be discussed further, as there is no alternative that has the potential to affect these elements.

Soils

Affected Environment

The project area lies within the Koyen-Watoopah-Geer association. This complex, which is common in inter-mountain valleys, covers approximately 7,665 acres surrounding the area of the Proposed Action. The soils representative of this complex are well drained. The surface texture is gravelly sandy loam. Clay and silt are also present in small amounts. This soil is well drained. The runoff is typically slow, water erodibility is slight and wind erodibility is slight to moderate.

Environmental Consequences of the Proposed Action on Soils

The construction of 2,065 ft. of proposed road, 4 turnouts, and 1 well pad would disturb 3.79 acres of the Koyen-Watoopah-Geer association. These actions would result in an increase in wind and water erosion potential due to the removal of vegetation and the disturbance of surface soils.

These effects are not likely to substantial because the area is generally flat, gravel would be added as necessary, and water would be used to abate dust. Use of the proposed road and the construction of the well pad would result in soil compaction which would be alleviated during reclamation.

Environmental Consequences of the No Action Alternative on Soils

Under the No Action alternative, there would be no affects to soil.

Special Status Species

Affected Environment

Eagles

Bald eagles have not been documented within the project area, however, the project area provides foraging habitat for Golden eagles.

There is Golden eagle stick nest on the west side of the north end of The Wall Wilderness Study (WSA) situated in the Pancake Range. The nest is located approximately 9 miles east of the proposed drill pad location, and was recorded as active in 2007.

Environmental Consequences of the Proposed Action on Special Status Species

Due to the topography of the area and the distance to the proposed developments, no effects to nesting Golden eagles are anticipated. The nest location would be screened from any visual disturbances by high-walled mesas and hills, as well as spatially and topographically screened from any noise effects. The temporary disturbance of 3.79 acres would not result in a significant loss of foraging habitat.

Environmental Consequences of the No Action Alternative on Special Status Species

Under the No Action alternative, there would be no change to the Golden eagle or its habitat.

Vegetation

Affected Environment

The area is mapped as Sandy Loam 5-8 precipitation zone, 029XY046NV, ATCA2-KRLA2/ACHY. Vegetation in the project area is characterized as mixed salt desert scrub where fourwing salt brush, winterfat, and Indian Ricegrass are dominant with galleta, squirrel tail, bud sage and spiny hopsage being present. Vegetative cover ranges from 15 to 25 percent. This vegetation is typical of the Koyen-Watoopah-Geer soil association which covers 7,665 acres in and around the project area.

Environmental Consequences of the Proposed Action on Vegetation

Implementation of the Proposed Action would result in the temporary removal of vegetation across 3.79 acres. Due to the temporary, small-scale nature of the removal, impacts to the vegetation community would be minimal. Reclamation and re-seeding after the drilling of the well would enable the re-establishment of native vegetation within several years.

Environmental Consequences of the No Action Alternative on Vegetation

Under the no action alternative, there would be no change to the existing vegetation.

Visual Resources

Affected Environment

The project area is located in a Class IV Visual Resource Management (VRM) area. The Class IV objective allows for contrasts that may attract attention and be a dominant feature of the landscape, however, the change should repeat the basic elements inherent in the characteristic landscape. The level of change to the characteristic landscape can be high.

Environmental Consequences of the Proposed Action on Visual Resources

The drill rig would be visible and the operation likely noticeable in the foreground-middleground zone of three to five miles during drilling operations. At greater distances, the drill rig would fall into the background zone and be less discernible due both to distance and the varying patterns of the mountainous background.

These activities are within the allowable limits of Class IV Visual Resource Management areas identified in the Tonopah RMP and Record of Decision, 1997.

Environmental Consequences of the No Action Alternative on Visual Resources

Under the No Action alternative, there would be no change to the existing visual environment.

Wildlife

Affected Environment

Pronghorn antelope occur in the general area. Mule deer winter range is identified to the west, northwest, and southwest in the Hot Creek Range. Bighorn sheep are also found in the Hot Creek Range to the west and the Pancake Range to the east. There is also the basic component of non-game species of lizards, birds, and rodents throughout the project area.

Environmental Consequences of the Proposed Action on Wildlife

The removal of approximately 3.79 acres of wildlife habitat would result in a minimal impact to local wildlife populations, including pronghorn, as the habitat disturbed by project activities would ultimately be reclaimed and would eventually support wildlife in the same manner it does today.

Vehicle traffic in the proposed project area and along the access road could cause some wildlife mortalities or temporary displacement. However, impacts to wildlife from vehicle traffic would be short-term due to the temporary nature of the project. Reduced vehicle speeds in the project area would alleviate most, if not all, wildlife mortalities from vehicle collisions.

Fluids produced during drilling would be directed to a fenced reserve pit. The proposed well would include blow-out preventers that are designed to prevent the release of hydrocarbon-contaminated fluids to the environment. Therefore, there would be minimal potential for wildlife to encounter any hazardous materials during drilling or operations.

Environmental Consequences of the No Action Alternative on Wildlife

Under the No Action alternative, there would be no change to the existing wildlife populations or their habitat.

4.0 Cumulative Effects

The Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1508.7) define cumulative impacts as:

> ". . . the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

The following analysis identifies past, present, or reasonably foreseeable future actions which, together with the proposed project, may incrementally impact the environment. In order to provide structure to the analysis, a geographic scope and a timeframe were established. The geographic scope or the Cumulative Effects Study Area (CESA) includes the distribution of the Koyen- Watoopah-Geer soil association and associated vegetation types. The CESA covers approximately 7,665 acres in the area of the Proposed Action. This CESA was selected because its represents the maximum spatial extent of the resources that would be impacted by the Proposed Action.

A 5-year timeframe, both in the past and into the future, was selected for the analysis. This timeframe for considering cumulative effects was selected because it represents the maximum amount of time that effects associated with the Proposed Action are likely to persist.

Past and Present Actions

Past and present actions that have occurred or are occurring in the CESA include dispersed cattle ranching and oil exploration. The CESA is located within the Hot Creek Allotment which is permitted for 350 head of cattle with a year-round season of use. Oil exploration in the CESA in the last 5 years has been limited to the drilling of Major Oil's Eblana-1 well which was completed in 2012. The well encountered shows of oil and gas and is currently shut in.

Reasonable Foreseeable Future Actions (RFFA's)

Other than additional oil exploration and the continuation of highly dispersed cattle grazing, there are no reasonably foreseeable future actions anticipated in this area during the 5-year timeframe under consideration. At this time, there are no proposals for projects, pending decisions, nor allocated funding for land management actions in the CESA.

Cumulative impacts associated with past, present, and reasonably foreseeable future actions

Cumulative Impacts on Soils

Past and present grazing activity has resulted in localized areas of soil disturbance and compaction where cattle congregate, such as trails, trough locations, springs and salting grounds.

These impacts have increased wind and water erosion potential in these areas, especially on slopes. However, the dispersed nature of grazing, in general, and particularly areas of congregation, has limited the impact to relatively few intensively impacted areas within the CESA. Since cattle tend to congregate habitually, it is likely that the areas that have been impacted in the past will be repeatedly impacted into the foreseeable future.

Past and present oil exploration has resulted in the disturbance of 3.14 acres associated with access road and well pad construction. The Eblana-1 well location has not been reclaimed and surface soils have been denuded of vegetation, creating an increase in erosion potential. This impact would be temporary if the well remains shut in and the surrounding area is reclaimed.

As described in the section titled, ***Soils***, the Proposed Action would temporarily disturb 3.79 acres of surface soils due to access road, turnout, and well pad construction, increasing erosion potential in these areas. Once reclamation and seeding are completed, the project area should return to a natural condition, which could take perhaps five years.

Taken together, the cumulative impact to soils associated with past, present and reasonably foreseeable future actions have been minor. Although there are some localized areas of increased erosion potential and compaction, the intensity of the impact has been, and will remain, very low because so few acres have been impacted relative to the size of the CESA.

Cumulative Impacts on Special Status Species

Past and present grazing activity has destroyed or disturbed potential foraging habitat for Golden Eagles in localized areas of intensive use. These impacts are not likely to increase in the foreseeable future because the areas of intensive use tend to remain more or less static, especially over the short-term (i.e., 5 years).

Past and present and oil exploration has removed 3.14 acres of potential foraging habitat which would be of a short-term nature. The Proposed Action would temporarily remove an additional 3.79 acres. It is reasonably foreseeable that the impact would be reduced and eventually eliminated once reclamation activities are completed.

The intensity of the cumulative impact to Golden Eagle foraging habitat associated with past, present and reasonably foreseeable future actions have been, and will continue to be, very low because such a small area of foraging habitat has been, or will be, impacted relative to the total available foraging habitat in the CESA.

Cumulative Impacts on Vegetation

Past and present grazing activities has resulted in the denuding of vegetation in areas of intensive use including trails, trough locations and salting grounds. Though native vegetation is unlikely to return to these areas due to repeated intensive use, they tend to be dispersed widely across the landscape which reduces the intensity of the collective effect.

The disturbance associated with past and present oil exploration has removed 3.14 acres of vegetation and the Proposed Action would remove an additional 3.79 acres. It is reasonably foreseeable that reclamation and seeding would render these impacts temporary in nature.

Consider together, the intensity of the cumulative impacts to vegetation associated with past, present and reasonably foreseeable future actions would be very slight because such a small amount of the vegetation has been impacted relative to the total amount of vegetation in the CESA.

Cumulative Impact on Visual Resources Management

Past and present grazing activity has resulted in few impacts to visual resources because areas of intensive grazing activity, where impacts are most likely to occur, a widely dispersed across the CESA. While there are some cases where intensive grazing activity may be seen in the foreground zone, especially from roads, these would be uncommon. At greater distances, evidence of intensive grazing activity would not likely be seen at all. Since it is typical for areas of intensive grazing activity to remain consistent through time, it is not likely that impacts to visual resources would accumulate substantially over the next 5 years.

Past and present oil exploration has created short-term effects since the drill rig associated with the drilling of Eblana-1 would have been noticeable in the foreground-middle ground zone during drilling operations. Once the drilling operation was completed, there would have been no further impacts to visual resources. The same short-terms effects would be associated with the Proposed Action.

Impacts to visual resources associated with past, present and reasonably foreseeable actions are not likely to accumulate because the same areas of intensive grazing activity would likely be used over the 5-year period and impacts from oil exploration would be temporary.

Cumulative Impact on Wildlife

Impacts associated with past, present and reasonably foreseeable grazing activity and oil exploration would be very minor. While there has been, and would be, some competition between wildlife and cattle for forage and water, there are ample amounts of these resources within the CESA to accommodate both.

Given its temporary nature, oil exploration activity is unlike to contribute in any substantial way to cumulative impacts to wildlife. Construction of access roads and drill pads and increased vehicular traffic in the vicinity of an active drilling operation could temporarily impede the passage of a variety of wildlife that may pass through the area. However, the short duration of these activities, both past and proposed, and subsequent reclamation of disturbed areas would eliminate any long-term impact to wildlife.

5.0 TRIBES, PERSONS, ORGANIZATION, or AGENCIES CONSULTED

Duckwater Shoshone Tribe
Yomba Shoshone Tribe
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Appendix A

Mitigation Measures

Mitigation Measures

One segment of the existing access road will be flagged or fenced on both sides to prevent vehicles from driving outside of the road berms and accidentally damaging cultural resources. No grading or road maintenance shall be done in the flagged area.

The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

The operator will minimize or preclude releases of oil into open pits. Unless the authorized officer approves the release, no oil should go into a pit except in an emergency. The operator must remove any accumulation of oil or condensate in a pit within 48 hours of discovery.

The operator will design, construct, and maintain exclosure fencing for all open cellars and pits containing freestanding fluids to prevent access to livestock and large forms of wildlife such as deer, elk, and pronghorn. At a minimum, the operator will adequately fence all fluids pits and open cellars during and after drilling operations until the pit is free of fluids and the operator initiates backfilling. The operator will maintain the fence in order to protect public health and safety, wildlife, and livestock.

Adequate fencing includes all of the following:

a. Construction materials will consist of steel and/or wood posts. Use a fence with five separate wires (smooth or barbed) or hog panel (16-foot length by 50-inch height) with connectors such as fence staples, quick-connect clips, hog rings, hose clamps, twisted wire, etc. Do not use electric fences.

b. Set posts firmly in the ground. Stretch the wire, if used, tightly and space it evenly, from the ground level to the top wire, effectively keeping out animals. Tie hog panels securely into posts and to one another using fence staples, clamps, etc. Construct the fence at least 2 feet from the edge of the pit.

c. For reserve pits, fence all four sides as soon as the pit is constructed. Reconstruct any damage to the rig side of the fence immediately following release of the drilling rig.

d. Maintain the erect fences in adequate condition until the pit has been closed.

The operator will prevent wildlife and livestock access (including avian wildlife) to fluids pits that contain or have the potential of containing salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, surfactants, or Resource Conservation and Recovery Act-exempt hazardous substances. At a minimum, the operator will install approved netting in these circumstances, in accordance with the requirements below, immediately following release of the

drilling rig. **Note:** The BLM does not approve of the use of flagging, strobe lights, metal reflectors, or noisemakers as techniques for deterring wildlife.

Minimum Netting Requirements: The operator will:

a. Construct a rigid structure made of steel tubing or wooden posts with cable strung across the pit at no more than 7-foot intervals along the X- and Y-axes to form a grid of 7-foot squares.

b. Suspend netting a minimum of 4 to 5 feet above the pit surface.

c. Use a maximum netting mesh size of 1½ inches to allow for snow loading while excluding most birds in accordance with Fish and Wildlife Service recommendations. Refer to: http://www.fws.gov/mountain-prairie/contaminants/contaminants1c.html.

d. Cover the top and sides of the netting support frame with netting and secure the netting at the ground surface around the entire pit to prevent wildlife entry at the netting edges. **Note:** Hog wire panels or other wire mesh panels or fencing used on the sides of the netting support frame is ineffective in excluding small wildlife and songbirds unless covered by smaller meshed netting.

e. Monitor and maintain the netting sufficiently to ensure the netting is functioning as intended, has not entrapped wildlife, and is free of holes and gaps greater than 1½ inches.

The operator will construct and maintain pits, cellars, open-top tanks, and trenches, that are not otherwise fenced, screened, or netted, to exclude livestock, wildlife, and humans (for example, lined, clean water pits; well cellars; or utility trenches) to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in pits, cellars, open-top tanks, or at frequent intervals along trenches where entrapment hazards may exist.

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock.

Any authorized construction and reclamation is to be consistent with the Gold Book (2007 ed.) and BLM Manual 9113 (Engineering Road Standards).

Any cultural or paleontological resource (historic or prehistoric site or object) or Native American human remains, funerary item, sacred object, or objects of cultural patrimony discovered by the permit holder, or any person working on their behalf, during the course of the

road and pad construction, shall be immediately reported to the Authorized Officer by telephone, with written confirmation. The permit holder shall suspend all operations in the immediate area of such discovery and protect it until an evaluation of the discovery is made by the Authorized Officer.

For cultural resources other than Native American human remains, funerary item, sacred object, or objects of cultural patrimony, this evaluation will determine the significance of the discovery and what mitigation measures are necessary to allow activities to proceed. The holder is responsible for the cost of evaluation and mitigation. Any decision on treatment and/or mitigation will be made by the Authorized Officer after consulting with the permit holder. Operations may resume only upon written authorization to proceed from the Authorized Officer.

If the well is dry, the proponent will paint the dry hole marker with Sand Beige Paint or install the marker below grade to mitigate the effects to visual resources.

Upon the proper plugging and abandonment of the well, the proponent would remove as much gravel as practicable from the proposed well pad and scarify the area and remove gravel to grade and scarify the access road.

If the gravel to construct the proposed road and drill pad is removed from a nearby abandoned well site and access road, the previously disturbed site would be scarified prior to vacating the site.

The impacts to sensitive and migratory bird species would be reduced or eliminated by one of the following mitigation measures:

1. Construction activities would be limited to August 1 through February 29, or

2. If construction or other ground disturbing activities would occur during March 1 to July 31, a survey for all migratory bird species, including the snowy plover and burrowing owl, would be required to be completed by a certified wildlife biologist (approved by the BLM) prior to ground disturbing activities. If active migratory bird nests were found, avoidance of the nest location with a 300-foot radius buffer during construction would be required.

Appendix B

Lease-specific Stipulations

Form 3100-11
(July 2006)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number

N87414

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (page 2) offers to lease all or any of the lands in Item 2 that are available for lease pursuant to the Mineral Lands Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359), or _____ (other).

READ INSTRUCTIONS BEFORE COMPLETING

1. Name MAJOR OIL INTERNATIONAL LLC
Street 1208 WEST DREW STREET
City, State, Zip Code HOUSTON, TEXAS, 77006

REC'D - BLM - NSO
9:00 A.M. MAY 11 2009

2. This application/offer/lease is for: (Check Only One) ☑ PUBLIC DOMAIN LANDS ☐ ACQUIRED LANDS (percent U.S. interest: _____)

Surface managing agency if other than Bureau of Land Management (BLM): _____ Unit/Project: _____

Legal description of land requested: *Parcel No.: _____ *Sale Date (mm/dd/yyyy): _____

***See Item 2 in Instructions below prior to completing Parcel Number and Sale Date.**

T.	R.	Meridian	State	County
T-0070N	R-0500E	21	NV	NYE County.
Sec 025 Prot ALL				BATTLE MOUNTAIN FO.
026 Prot ALL				
035 Prot ALL				
036 Prot ALL				

Amount remitted: Filing fee $ 365 Rental fee $ 3840 Total acres applied for 2560 Total $ 4205

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T.	R.	Meridian	State	County

SAME AS ITEM 2

Total acres in lease 2560.00
Rental retained $ 3840.00

This lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in Item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

NOTE: This lease is issued to the high bidder pursuant to his/her duly executed bid or nomination form submitted under 43 CFR 3120 and is subject to the provisions of that bid or nomination and those specified on this form.

Type and primary term:

☐ Noncompetitive lease (ten years)

☐ Competitive lease (ten years)

☐ Other _____

THE UNITED STATES OF AMERICA

by ATANDA CLARK
(BLM)

Chief, Branch of Minerals Adjudication MAY 19 2009
(Title) (Date)

EFFECTIVE DATE OF LEASE JUN - 1 2009

(Continued on page 2)

4. (a) Undersigned certifies that (1) offeror is a citizen of the United States; an association of such citizens; a municipality; or a corporation organized under the laws of the United States or of any State or Territory thereof; (2) all parties holding an interest in the offer are in compliance with 43 CFR 3100 and the leasing authorization; (3) offeror's chargeable interests, direct and indirect, in each public domain and acquired lands separately in the same State, do not exceed 246,080 acres in oil and gas leases (of which up to 200,000 acres may be in oil and gas options or 300,000 acres in leases in each leasing District in Alaska of which up to 200,000 acres may be in options, (4) offeror is not considered a minor under the laws of the State in which the lands covered by this offer are located; (5) offeror is in compliance with qualifications concerning Federal coal lease holdings provided in sec. 2(a)2(A) of the Mineral Leasing Act; (6) offeror is in compliance with reclamation requirements for all Federal oil and gas lease holdings as required by sec. 17(g) of the Mineral Leasing Act; and (7) offeror is not in violation of sec. 41 of the Act.

(b) Undersigned agrees that signature to this offer constitutes acceptance of this lease, including all terms, conditions, and stipulations of which offeror has been given notice, and any amendment or separate lease that may include any land described in this offer open to leasing at the time this offer was filed but omitted for any reason from this lease. The offeror further agrees that this offer cannot be withdrawn, either in whole or in part unless the withdrawal is received by the proper BLM State Office before this lease, an amendment to this lease, or a separate lease, whichever covers the land described in the withdrawal, has been signed on behalf of the United States.

This offer will be rejected and will afford offeror no priority if it is not properly completed and executed in accordance with the regulations, or if it is not accompanied by the required payments.

Duly executed this 11 day of May, 2009

(Signature of Lessee or Attorney-in-fact)

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.

LEASE TERMS

Sec. 1. Rentals--Rentals must be paid to proper office of lessor in advance of each lease year. Annual rental rates per acre or fraction thereof are:

(a) Noncompetitive lease, $1.50 for the first 5 years; thereafter $2.00;

(b) Competitive lease, $1.50; for the first 5 years; thereafter $2.00;

(c) Other, see attachment, or

as specified in regulations at the time this lease is issued.

If this lease or a portion thereof is committed to an approved cooperative or unit plan which includes a unit capable of producing leased resources, and the plan contains a provision for allocation of production, royalties must be paid on the production allocated to this lease. However, annual rentals must continue to be due at the rate specified in (a), (b), or (c) rentals for those lands not within a participating area.

Failure to pay annual rental, if due, on or before the anniversary date of this lease (or next official working day if office is closed) must automatically terminate this lease by operation of law. Rentals may be waived, reduced, or suspended by the Secretary upon a sufficient showing by lessee.

Sec. 2. Royalties--Royalties must be paid to proper office of lessor. Royalties must be computed in accordance with regulations on production removed or sold. Royalty rates are:

(a) Noncompetitive lease, 12 1/2%;

(b) Competitive lease, 12 1/2 %;

(c) Other, see attachment; or

as specified in regulations at the time this lease is issued.

Lessor reserves the right to specify whether royalty is to be paid in value or in kind, and the right to establish reasonable minimum values on products after giving lessee notice and an opportunity to be heard. When paid in value, royalties must be due and payable on the last day of the month following the month in which production occurred. When paid in kind, production must be delivered, unless otherwise agreed to by lessor, in merchantable condition on the premises where produced without cost to lessor. Lessee must not be required to hold such production in storage beyond the last day of the month following the month in which production occurred, nor must lessee be held liable for loss or destruction of royalty oil or other products in storage from causes beyond the reasonable control of lessee.

Minimum royalty in lieu of rental of not less than the rental which otherwise would be required for that lease year must be payable at the end of each lease year beginning on or after a discovery in paying quantities. This minimum royalty may be waived, suspended, or reduced, and the above royalty rates may be reduced, for all or portions of this lease if the Secretary determines that such action is necessary to encourage the greatest ultimate recovery of the leased resources, or is otherwise justified.

An interest charge will be assessed on late royalty payments or underpayments in accordance with the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) (30 U.S.C. 1701). Lessee must be liable for royalty payments on oil and gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator, or due to the failure to comply with any rule, regulation, order, or citation issued under FOGRMA or the leasing authority.

(Continued on page 3)

THE FOLLOWING NOTICE WILL BE ATTACHED TO ALL ISSUED LEASES

NOTICE TO LESSEE

Provisions of the Mineral Leasing Act (MLA) of 1920, as amended by the Federal Coal Leasing Amendments Act of 1976, affect an entity's qualifications to obtain an oil and gas lease. Section 2(a)(2)(A) of the MLA, 30 U.S.C. 201(a)(2)(A), requires that any entity that holds and has held a Federal coal lease for 10 years beginning on or after August 4, 1976, and who is not producing coal in commercial quantities from each such lease, cannot qualify for the issuance of any other lease granted under the MLA. Compliance by coal lessees with Section 2(a)(2)(A) is explained in 43 CFR 3472.

In accordance with the terms of this oil and gas lease with respect to compliance by the initial lessee with qualifications concerning Federal coal lease holdings, all assignees and transferees are hereby notified that this oil and gas lease is subject to cancellation if: (1) the initial lessee as assignor or as transferor has falsely certified compliance with Section 2(a)(2)(A) or (2) because of a denial or disapproval by a State Office of a pending coal action, i.e., arms-length assignment, relinquishment, or logical mining unit, the initial lessee as assignor or as transferor is no longer in compliance with Section 2(a)(2)(A). The assignee or transferee does not qualify as a bona fide purchaser and, thus, has no rights to bona fide purchaser protection in the event of cancellation of this lease due to noncompliance with Section 2(a)(2)(A).

Information regarding assignor or transferor compliance with Section 2(a)(2)(A) is contained in the lease case file as well as in other Bureau of Land Management records available through the State Office issuing this lease.

Appendix C

Standard Operating Procedures and Conditions of Approval

Standard Operating Procedures (SOP's) associated with the Proposed Action

The operator shall obtain and maintain all necessary State of Nevada permits as well as local permits applicable to drilling the well.

The operator shall stockpile a volume equivalent to at least 8 inches of topsoil from the access road, pad and reserve pit for use in reclamation.

Maximum width of any road, including drainage ditches and berms, is 30 feet. Culverts and turnouts may be installed if deemed necessary by the Field Manager, Tonopah Field Office.

A 15 mph speed limit shall be required for all project vehicles on the project site and unposted access roads.

The mud pit shall be fenced on three sides during drilling. Upon completion of the well, when the site is not occupied, the fourth side of the pit shall be fenced. The pit shall remain fenced until reclaimed (see Appendix A).

Trash shall be contained on-site and hauled to an approved landfill. Burial of trash on-site is not permitted.

Portable toilets shall be used for human waste. The latter may not be chemically treated or buried on site.

Any additives to the drilling mud that are considered hazardous substances will be stored in appropriate containment to prevent site contamination.

Upon abandonment, the operator shall:

Remove all trash and debris from the site and dispose of it properly.

Recontour the mud pit to as near original grade as possible, and spread stockpiled topsoil over the covered pit.

If installed, all culverts shall be removed.

The operator shall rehabilitate the drill pad and new access road by stripping as much gravel as possible from the pad and travel surface of the road and re-contour. The operator shall also reduce the berm and cover any remaining gravel with the soil from the access road, pad, and mud pit excavation. The access road and the drill pad will be scarified and re-seeded with the BLM recommended seed mix.

Existing roads that are improved shall be reclaimed to their original condition. Berms shall be reduced and all widths in excess of the original width shall be scarified and revegetated.

Interim reclamation of the drill pad and mud pit, reducing the surface disturbance to the minimum area required to place a workover rig on the site, will be required within 1 year if the

well is a producer.

All reclamation of the disturbed areas shall be completed within one (1) year from the date of the proper plugging and abandonment of the well.

The Authorized Officer of the Bureau of Land Management shall be notified in writing when reclamation operations commence and when reclamation is completed and shall accept the reclamation in writing.

Conditions of Approval (COA's)

A Tonopah Field Office representative shall be contacted for a verbal 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. Please contact Tim Coward at 775-482-7801 for verbal approvals. The secondary contact is Mark Ennes who may be reached at 775-482-7835.

If a well control issue arises (e.g. kick, blowout, or water flow), the Authorized Officer (AO) shall be notified within 24 hours from the time of the event.

The BOPE shall be installed, tested and operated in conformance with (to) Order #2 for a 2M system.

Onshore Order No. 2, Drilling Operations, requires that all formations containing usable quality water (less than 10,000 ppm) be protected via cement. If encountered while drilling below the surface casing shoe yet above the anticipated cement top for the usable quality water would require protection by bringing the cement at least ±200' above the usable quality water zone. Results (cementing reports, CBL, depth of flow, rate of flow, water quality, if available, etc.) will be reported to the BLM. Any necessary remedial operations will be conducted prior to drilling out that casing shoe.

Prior approval will be required if the operator drills beyond the depth indicated in the APD.

If the well is productive and it is determined that the reservoir extends beyond the lease boundary a Communization Agreement will be set up.

A CBL shall be run (from TD to 200' above the TOC) and an electronic copy submitted to the AO. If the TOC is lower than required or the cement sheath is of poor quality, then, within 48 hours from running the CBL, a BLM petroleum engineer shall be notified for further instruction.

After running and cementing the production casing and in order to determine cement top and quality a cement bond log, cement evaluation tool, or equivalent shall be run. Results will be reported to BLM, Attn: Tonopah Field Office. Any necessary remedial operations will be conducted prior to drilling out of the casing shoe.

Submit the (a) mud/drilling log (e.g. Pason disc), (b) driller's event log/operations summary report, (c) production test volumes, (d) directional survey, and (e) Formation Integrity Test results with the well completion report. Please contact the AO for clarification.

In accordance with 43 CFR 3162.4(b), the operator shall submit a complete set of electrical/mechanical logs in .LAS format or hard copies with standard Form 3160-4, Form 3260-4 Well Completion or Recompletion Report and Log. Please contact John Menghini at 775-861-6573 if there are any questions.

Two copies of all logs, and a single copy of core descriptions, core analyses, drill stem tests, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling and/or completion operations shall be submitted to the BLM, Tonopah Field Office.

Daily drilling and completion progress reports shall be submitted to the BLM, Nevada State Office and Tonopah Field Office on a daily basis, and shall include daily mud reports, details of casing that has been run and its cementing, water flows, lost circulation zones, hydrocarbon shows and other information that describes drilling conditions.

A formation integrity test shall be performed at the surface casing shoe. Prior to drilling more than 20 feet below the shoe, the test shall expose the shoe to the minimum mud weight equivalent necessary to control anticipated pressure at the next casing point or total depth.

Gamma Ray Log shall be run from total depth to surface.

All cement bond logs shall be run by the logging company at zero pressure. Logs determined to be run under pressure shall be re-run.

Nevada State Office personnel shall be contacted for approval prior to running non-API Standard casing downhole. Please contact John Menghini at 775-861-6573 with the specifications and manufacturer of the pipe, and a decision will be made whether the pipe can be used.

Prior to running used or reconditioned API-grade casing downhole, a petroleum engineer in the Nevada State Office shall be contacted to obtain approval. Approval will be granted if the pipe has been tested and shown to have retained 87½ (or greater) of its original wall thickness.