

State of New Mexico  
Energy, Minerals and Natural Resources Department

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Mining and Minerals Division



April 27, 2020

Mr. Pat Siglin, Exploration Manager, North America  
Comexico LLC  
242 Linden St.  
Fort Collins, CO 80524

**RE: Comments on Regular Exploration Application, Tererro Exploration Project,  
Permit No. SF040ER, Comexico, LLC**

Dear Mr. Siglin:

On June 4, 2019, the New Mexico Mining and Minerals Division (“MMD”) received an application from Comexico LLC (“Comexico”) for a regular exploration operation (“Application”). The Application proposes to drill up to thirty (30) drill holes up to 4,000 ft. deep on up to 30 drill pads to explore for copper, gold, zinc, lead and silver in Santa Fe County, New Mexico. Comexico’s Application identified 84 possible locations for the up to 30 drill pads. The Application is assigned Permit No. SF040ER by MMD, for the Tererro Exploration Project.

MMD received a request for public hearing from the New Mexico Wilderness Alliance, dated June 11, 2019. MMD deemed the request for public hearing timely and will advertise the date, time, and location of the public hearing in accordance with 19.10.9.904.B NMAC. MMD has also received requests for a public hearing from the Upper Pecos Watershed Association, the New Mexico Acequia Association, and the Board of San Miguel County Commissioners.

On June 12, 2019 MMD deemed the Application administratively complete and requested comments on the Application from the New Mexico Environment Department (“NMED”), New Mexico Department of Game & Fish (“NMDG&F”), New Mexico Office of the State Engineer (“NMOSE”), New Mexico Department of Cultural Affairs (“NMDCA”), New Mexico State Forestry Division (“NMSFD”), the U.S. Forest Service Santa Fe National Forest (“USFS”), and Santa Fe County (“SF County”) (collectively, the “Agencies”). MMD received amendments on the Application from Comexico in an email, dated August 6, 2019. Comments from the Agencies on the amended Application are attached for your review and response.

MMD also requested tribal consultation on the Application from the Pueblo of Jemez, the Ohkay Owingeh, the Pueblo of Tesuque, the Pueblo of Santo Domingo, the Pueblo of Santa Clara, the Pueblo of Sandia, the Pueblo of San Ildefonso, the Pueblo of Pojoaque, the Pueblo of Nambe, the Pueblo of Isleta, the Pueblo of Cochiti, the Navajo Nation, the Kiowa Tribe, the Jicarilla Apache Nation, the Hopi Tribe, and the Comanche Nation.

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On October 18, 2019, MMD received a Hydrogeologic Resources Report (“Hydro Report”) to supplement the Application. MMD requested and received comments on the Hydro Report from NMED, NMOSE, NMDG&F and SF County. The NMED comments were sent to Comexico by email on January 14, 2020, the NMOSE and NMDG&F comments were sent to Comexico by email on February 12, 2020, and the SF County comments were sent to Comexico by email on April 8, 2020.

On November 4, 2019, MMD received a copy of a Road Maintenance Plan that was submitted to the USFS for the access roads to the proposed exploration site.

Pursuant to 19.10.4.403 NMAC, the exploration operations shall be designed and conducted to mitigate disturbance caused by exploration operations and, to the extent practicable, provide for the stabilization of disturbed areas to minimize future impact to the environment and protect air and water resources following closure. The reclamation plan must be developed to address site-specific characteristics and the exploration work to be performed.

MMD provides the following comments on the Application (as amended), the Hydro Report, and the Road Maintenance Plan:

#### Amended Application

On July 16, 2019, Comexico amended the Application (“Amended Application”), reducing the number of potential exploration drill pad locations from 84 to 36, with the number of proposed drill holes remaining at 30. On August 1, 2019, Agency staff joined Comexico in an inspection of the proposed permit area. Following the inspection, MMD received an email dated August 6, 2019, from Comexico supplementing the Amended Application which reduced the number of potential exploration drill pad locations from 36 to 32, identified on an amended map and spreadsheet, identifying eight (8) “High Certainty of Use” exploration drill pad locations, a reduced number of overland routes, and listing the number of small diameter (3 inch or less) trees that would need to be removed along the overland routes. As stated above, the Application has also been supplemented with submittal of the Hydro Report and the Road Maintenance Plan. MMD is currently awaiting submittal of the final Biological Survey Report and Assessment and notification from Comexico that the Cultural Resources Report has been sent to the NMDCA for their review and comments.

#### Comments:

1. Section 5.E Exploration Description of the Application indicates that the drill pad dimensions would be 50 to 60 feet in width by 30 to 40 feet in length. Section 5.G indicates that if a RC (reverse circulation) drill rig is used, that the drill pad dimension would be 60 feet by 50 feet. For the purposes of calculating the proposed disturbed area and the reclamation cost estimate, MMD assumes that the drill pad dimensions will be 60 feet by 50 feet.

2. Section 5.E also describes excavation of two (2) mud pits within the proposed drill pad footprint, with each mud pit being 5- to 10-feet wide and 5- to 10-feet long by 5-feet deep. In an email dated August 30, 2019, Comexico responded to comments by the USFS on the Plan of Operations (“POO”) regarding the use of surface tanks instead of mud pits for the exploration project. Please indicate if mud pits or surface tanks will be used to contain drilling fluids during the exploration drilling project. If mud pits are proposed, provide specifications of the plastic liner to be used to line each mud pit. If surface tanks are proposed, provide specifications of the surface tanks, and specify the disposal method for the waste fluids generated during the exploration project.
3. Section 5.H, Roads, of the Application lists seven overland travel routes proposed for the exploration project along with their dimensions. Comexico’s August 6, 2019 supplement to the Amended Application reduced the number of proposed new roads to three: DH46 (208 feet long), Jones Hill (634 feet long), and South Jones Hill (296 feet long) for a total length of 1,138 feet. In addition to these disturbances, MMD requires reclamation costs for regrading, repair and erosion mitigation of disturbance caused by the exploration project of the USFS roads (approximately 3 miles) within the proposed permit area be included. Based on the review of the information provided by Comexico, MMD estimates that the proposed surface disturbance (for reclamation cost estimate purposes) will be:

<b>Disturbance Type</b>	<b>Area (Acres)</b>
30 Drill Pads (60 ft. by 50 ft.)	2.10
Overland Travel (1,242 ft. by 15 ft. wide)	0.43
New Roads (1,138 ft. by 15 ft. wide, amended 8/6/19)	0.39
Equipment Laydown Area (Old Camp area, per USFS estimate)	1.00
USFS Roads (w/in Permit Area, 3 mi. long by 15 ft. wide)	5.50
<b>Total</b>	<b>9.42</b>

Please revise the reclamation cost estimate for the proposed surface disturbance outlined in the table above.

In addition, Section 5.H states that tree removal would not be required for the proposed overland travel routes. Comexico provided MMD with a table in the August 6, 2019 email amending the Application, that includes the number of trees that would be removed from some of the proposed drill pad locations. MMD observed small trees located in the proposed overland routes leading to some of the drill pad locations during the August 1, 2019 inspection of proposed permit area. Please clarify if Comexico intends to remove any trees from the proposed overland routes.

4. Section 6.B, Chemical Use of the Application states that, “No chemicals will be disposed of onsite. All trash and waste will be removed from the site and disposed of properly.” If mud pits are employed at the drilling sites, please specify the chemicals that would

potentially be buried with the mud pits after drilling has been completed. In addition, all trash and waste must be disposed of at approved sites in compliance with state, local, or federal laws and regulations.

5. Section 7, Ground Water Information of the Application, has been supplemented by Comexico amendments to the Application and the Hydro Report.
  - a) Section 7.A indicates that the total dissolved solids (TDS) concentration for well UP-00286 is, “unknown”. Comexico proposes to use up to 3 acre-feet of water from this well (Chapter 5.1, Points of Diversion of the Hydro Report) for the exploration project. MMD requires that TDS be determined from a water sample taken by Comexico from well UP-00286 prior to its use.
  - b) The depth to ground water has been revised to approximately 17 feet below ground surface (bgs) as measured on August 1, 2019, during the inspection by Comexico and the Agencies. In an email to MMD, dated August 6, 2019, Comexico indicated that the 8,305-foot elevation stated in the Application was an error. The well elevation reported in the amended Application is 8,835 feet amsl (above mean sea level). MMD concurs with these estimates for the depth to ground water and the well elevation.
  - c) MMD recommends that well UP-00286 be improved by installing a locked cap on the top of the well casing and a concrete pad installed at the surface base of the well casing to safeguard the well from contamination. MMD concurs with Comexico’s commitment for, “capping, covering, welding or cinching” the historic drill collars located in the permit area (*see* August 6, 2019 amendment to the Application).
6. Section 8, Reclamation and Operation Plan of the Application, has been supplemented by Comexico in the amendments to the Application, the Hydro Report, and the Road Maintenance Plan. MMD provides the following comments on Section 8 of the Application:
  - a) In Section 8.A Comexico indicates that downed trees in many locations within the proposed permit area form an almost impenetrable barrier over the forest floor. If downed trees or slash are removed, what measures will Comexico take to prevent erosion and to reclaim the disturbance caused by removal of the downed trees? Will the downed trees or slash be put back in place during reclamation?
  - b) Section 8.B requires a description of how the operation will salvage topsoil and how disturbed areas including roads will be protected from eroding. The Application states that topsoil will be scraped and stockpiled. What specific equipment will Comexico use to do this? The Application states that silt fencing will be used to protect salvaged topsoil piles from eroding and that drill pads as well as the overland travel routes will be bounded on the upslope and downslope sides with silt fencing. MMD recommends

additional best management practices (“BMP’s”) be considered such as compost bio socks and other BMP’s where appropriate in addition to silt fencing to prevent erosion of sediment from the drill pads and overland travel routes. Additionally, Comexico does not specify how the existing USFS roads within the proposed permit will be protected from erosion during the exploration project. Please provide a plan to protect these roads from eroding and how disturbances created on these roads by the exploration project will be reclaimed.

- c) Section 8.C requires a description of the proposed seed mix for revegetation of disturbed areas. The proposed seed mix includes species such as orchard grass, brome, yellow sweet clover and weeping lovegrass that MMD considers as non-native to the permit area and are therefore not recommended. Comexico states that it will work with the USFS to determine a final seed mix, however, MMD must also approve the seed mix. Comexico must develop a seed mix that may include planting tree seedlings that are mutually satisfactory to MMD and the USFS for the reclamation of the disturbance caused by the exploration project.
- d) Section 8.D and 8.E require the revegetation methods and a schedule for revegetation and proposed reclamation dates. MMD concurs with Comexico regarding the proposed seeding methods, however, the proposed revegetation schedule needs to be updated based on current information.
- e) Section 8.F requires a detailed reclamation plan to mitigate riparian areas and wetlands, if they exist in the permit area supported by explanation of the methods to minimize disturbance during the exploration project. Comexico does not indicate whether riparian or wetland areas exist in the permit area. Chapter 4, Surface Water Hydrology, of the Hydro Report provides information on the wetlands in the proposed permit area (Chapter 4.1.2, Presence of Wetland). The NMED Surface Water Quality Bureau (“SWQB”) commented on the Hydro Report in a memorandum to MMD, dated January 13, 2020 which MMD forwarded to Comexico on January 14, 2020. MMD requests that Comexico respond to the SWQB comments. In addition, the NMDG&F and NMOSE provided comments on the Hydro Report, in part on the potential impacts to surface water by the proposed exploration project, that MMD forwarded to Comexico in an e-mail, dated February 12, 2020, requesting Comexico’s response which it has not yet received.
- f) In Section 8.F Comexico indicated that no major drill pad grading would be required. Additionally, in Section 5.G and in Section 8.H of the Application Comexico indicates that minor grading of the proposed drill pad sites may be necessary. Because minor grading of any drill pads may be necessary, please describe how these drill pads would be regraded during reclamation to prevent erosion and to provide a suitable revegetation surface.

- g) Section 8.G provides general requirements for the plugging of exploration drill holes and requires a description of how the exploration drill holes that may encounter or do not encounter ground water will be plugged and abandoned. Comexico states that the exploration drill holes less than approximately 1,300 feet deep generally will not encounter groundwater. MMD believes that groundwater is likely to be encountered at shallower exploration drill hole depths (i.e., at approximately 200 feet bgs) and therefore, it should be assumed that all exploration drill holes will be permitted by the NMOSE and plugged in accordance with NMOSE and NMED requirements for exploration drill holes that encounter groundwater. The 10 ft. long concrete plug that will be installed in the upper portion of the drill hole must be installed to within 2 ft. of the ground surface with the final 2 feet to the surface backfilled with soil material.
  - h) Section 8.H requires a description of dewatering activities and location and construction of mud pits and drill pads in addition to other activities that will cause disturbance. Comexico states that the maximum drill pad size will be 60 feet by 40 feet, however, Section 5.G states that if an RC drill is used the drill pad dimensions will be 60 by 50 feet. For estimating the drill pad disturbance, MMD is assuming an estimate for drill pad size of 60 ft. by 50 ft. (see MMD Comment 1 above). In Section 8.H Comexico proposes that each drill pad will have two mud pits of 10 ft. long by 5 ft. wide by 5 ft. deep. In an email to MMD, dated August 6, 2019, amending the Application, Comexico commented that it is considering using tanks in place of mud pits. MMD would support using tanks instead of mud pits as this would lessen potential environmental impacts and impacts to wildlife. MMD requires the proper disposal of materials collected in the tanks to a facility approved to accept that type of waste. If mud pits are ultimately used they must be designed and maintained to prevent releases of drilling muds and to protect humans and wildlife by employing methods such as covering, fencing, and construction of escape ramp(s) in the mud pits (see NMDG&F comments dated October 10, 2019). Regarding the topsoil excavated in the construction of the mud pits, MMD recommends that the topsoil pile(s) be covered with tarps in addition to being bound by silt fence and other BMP's.
  - i) Section 8.I requires information on how portals, drilling mud and/or waste pits, adits, shafts, ponds, roads, or other disturbances will be reclaimed. Comexico proposed how the mud pits would be reclaimed. However, Comexico does not propose how portals, shafts, adits and ponds (if applicable); roads and other disturbances such as the equipment laydown area will be reclaimed. MMD requests that Comexico explain whether the disturbances listed in the previous sentence are anticipated and if so, provide a description of those disturbances and the reclamation of the equipment laydown area and the proposed drill pads.
7. Section 9, Cultural Resources, requires that disturbances to cultural resources be avoided until clearance has been granted by the MMD Director after consultation with the State Historic Preservation Officer ("SHPO"). Although the MMD Subpart 4, Exploration Application form requests that Archeological and Cultural Resource Survey(s) performed

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on the proposed permit area be submitted to MMD as a stand-alone submittal, separate from the Application, in consideration of the confidential information likely contained in these reports, MMD has indicated to Comexico that these report(s) should be submitted directly to the SHPO and that MMD would consult with the SHPO on the report(s). Comexico indicates that a third-party contractor will be conducting the cultural survey of the proposed permit area and writing the report(s). To date, MMD has not received confirmation from Comexico that the report(s) have been completed and submitted to the SHPO. Please update MMD on the status of the cultural survey report(s).

8. Section 10, Safeguarding, requires a description of measures to be taken to safeguard the proposed permit area from unauthorized access to hazardous areas. The August 6, 2019 amendment to the Application states that Comexico could commit to capping (or covering, welding, or cinching) the historic drill collars in the proposed permit area. Please provide a plan on how this will be accomplished. Additionally, Comexico has committed to fencing the mud pits, if used, to keep wildlife out. Please describe the type of fencing that will be used and whether and how it will safeguard the mud pits from human entry.
9. Section 11, Protection of Wildlife and Important Habitat, requires a description of the measures that will be taken to minimize impacts to wildlife and important habitat during the proposed exploration project. The Application states that a third-party contractor is performing a general biology survey, in addition to other surveys and report(s) will be submitted to MMD for review. Comexico provided MMD with a draft Biological Survey Report, dated August 2019, and MMD requested review of this report by the NMDG&F. MMD received the NMDG&F comments, dated October 10, 2019, and forwarded them to Comexico for review and response in an email, dated March 4, 2020. MMD withheld sending the NMDG&F comments on the draft Biological Report to Comexico until March 2020, because MMD was reasonably expecting, based on Comexico's projection, that the final Biological Survey Report and Assessment would be completed and provided for review by January 2020. MMD has not yet received the final version of the report. Please submit this report to MMD as soon as possible so that MMD and other agencies may review and comment on it.
10. Section 12, Operations to Minimize Erosion, requires a description of the measures that will be taken, including proposed BMP's, during exploration and reclamation to prevent and minimize erosion. Comexico provided information that describes measures to prevent and minimize erosion at the proposed drill pad locations and overland travel routes in Section 5, Exploration Description and Section 8, Reclamation and Operation Plan of the Application. MMD provided comments on these sections in Comment 6, above. A list of acceptable BMP's is provided in Section 12 of the Application. Please provide a table that lists these BMP's (including additional BMP's, if any) and indicates how and where they will be used during the exploration and reclamation.

The Tererro Exploration Project Road Maintenance Plan, dated November 4, 2019, addresses the USFS roads leading to the proposed permit area. MMD will comment

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separately in this letter on the Road Maintenance Plan. MMD recommends that travel on the access roads and overland routes be avoided when they are wet from precipitation.

11. Section 14, Financial Assurance, Public Notice and Permit Fees requires a third-party cost estimate for reclamation of the proposed permit area and a financial assurance proposal in accordance with 19.10.12 NMAC. In addition, the proposed forms of public notice in accordance with 19.10.9 NMAC and the permit application fee in accordance with 19.10.2 NMAC are required. MMD has received acceptable forms of public notice and the application fee from Comexico.

Comexico provided a Financial Assurance Cost Estimate (“Cost Estimate”) as Attachment 3 of the Application, dated June 3, 2019, for 15 drill holes. MMD has reviewed it and has the following comments:

- a) The Cost Estimate states that the Reclamation Unit Cost Calculations are based on 2015 David Bacon wage rates for Lemhi County, Idaho. MMD requires that the Cost Estimate labor rates be based on New Mexico labor rates. The New Mexico Labor Rates may be found at:

[https://www.dws.state.nm.us/Portals/0/DM/LaborRelations/Prevailing\\_Wage\\_Poster\\_H\\_2020.pdf](https://www.dws.state.nm.us/Portals/0/DM/LaborRelations/Prevailing_Wage_Poster_H_2020.pdf)

In addition, MMD provides Guidance for Estimating 3<sup>rd</sup> Party Reclamation (Financial Assurance) Costs for Minimal Impact Mining and Exploration Permit Applications, that may be found at:

<http://www.emnrd.state.nm.us/mmd/MARP/MARPGuidanceGuidelines.html>

These guidelines may provide information applicable to the preparation of the Cost Estimate.

- b) Section I. of the Cost Estimate, Miles of Road Reclamation (earthwork only), Overland travel – Scarify and Cross Ditch specifies 0.3 miles. Section 5.E of the Application indicates that Overland routes would be 1,242 ft. long (approximately 0.24 miles) and Section 5.H Roads, indicates that New Roads would be 1,565 ft. long (approximately 0.3 miles long). Please clarify whether this section applies to New Roads or Overland Travel. If it is for New Roads, the amendments made on August 6, 2019 reduced the number of New Roads six to three segments with a cumulative length of 1,138 ft. or 0.22 miles. A table, Recommended disturbance widths to be used for the Bond calculations, is attached to the Financial Assurance Estimate. Please explain how the calculations in this table contribute to the costs shown in the Cost Estimate and specify the equipment proposed to be used during reclamation operations.



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- c) Section II. of the Cost Estimate: Number of Drill Pads Off Road specifies a Track Drill Rig operation. Please explain in detail what this operation consists of and how it is related to the reclamation of the roads.
- d) Section III. Number of Sumps. MMD would support using a closed loop system with tanks instead of sumps, however, if sumps are used, when the mud pits are excavated will the excavated dirt be stockpiled with the topsoil scraped from the drill pad? If the dirt (and topsoil) are stockpiled off the drill pad area, is the surface disturbance that is created accounted for in the reclamation plan? In addition, if plastic-lined mud pits are used, then during reclamation where will the plastic liner be disposed? If it is taken offsite it must be disposed of at an approved facility and a tipping fee may be required that would need to be included in the cost estimate. Section 8.I of the Application indicates that the mud pits would be allowed to dry out prior to removing the plastic liner and backfilling the mud pits. How will this be accomplished within the one-year permit duration?
- e) Section IV. Acres of seeding Required (include roads) specifies 2.2 acres at a cost of \$495.00 per acre. MMD has calculated the area that should be seeded is approximately 3.92 acres (see Table in MMD Comment #3 above). The approximate 5.50 acres of USFS roads within the permit area requires reclamation costs for erosion prevention and mitigation, but not necessarily seeding unless needed to prevent erosion. Please revise the cost estimate for seeding at least 4 acres (the surface reclamation area that includes all 30 drill pads, access routes and associated disturbance). In addition, MMD believes that the proposed seeding cost of \$495.00 per acre is underestimated. Please provide information to support the proposed \$495.00 cost per acre, or alternately revise the seeding cost upward. In the past, MMD has reviewed and approved reclamation plans where the cost for seeding is approximately \$1,000 per acre, depending on the seeding method, whether mulch is used, and the site-specific conditions.
- f) Section V. Equipment Walk into Project and around Work Area. Does this section account for regrading the drill pads and other disturbed areas? Please specify the dozer and excavator and the number of hours expected for each piece of equipment.
- g) Section VI. Open Drill Holes, and Drill Hole Plugging attachment. Exploration drill hole plugging costs are proposed. MMD provides guidance on exploration drill hole plugging in Figure 1. Borehole Abandonment Schematics, of Guidance Document for Part 4 Permitting under the New Mexico Act. This document may be accessed at:  
  
<http://www.emnrd.state.nm.us/mmd/MARP/MARPGuidanceGuidelines.html>
- h) MMD believes that the proposed drill hole plugging costs are underestimated. The MMD guidance for calculating reclamation costs for Part 3 and Part 4 exploration applications may be found on the MMD website at:  
  
<http://www.emnrd.state.nm.us/mmd/MARP/MARPGuidanceGuidelines.html>

The range of \$14.00 per ft. to \$25.00 per ft. drill hole plugging cost found in the MMD guidance is for drill holes that are plugged with a bentonite cement grout and is dependent on site-specific conditions. The Tererro Exploration Project proposes exploration drill holes ranging in depth from 1,500 ft. deep up to 4,000 ft. deep (3-inch to 5.5-inch diameter, cumulative length of 32,500 ft.) and with the site-specific conditions that the drill holes are likely to encounter ground water and possibly artesian conditions. Therefore, the third-party drill hole plugging costs would likely be in the higher portion of the cost range. For example, MMD and Freeport-McMoRan Chino Mines Company recently (2019) agreed on average drill hole plugging costs of \$18.17 per ft. for monitor wells and exploration drill holes from 4-inch to 5.5-inch diameter and a cumulative length of over 160,000 ft. (plugging from the bottom of drill hole to the ground surface) for the Freeport-McMoRan Continental Mine updated closure/closeout plan. These drill hole plugging costs are for drill holes that are generally shallower than the drill holes proposed by Comexico. Please revise the proposed exploration drill hole plugging costs in accordance with the MMD guidance.

- i) Section VII. Other lists items such as Fencing, Road repair and other items that there are no costs entered. Silt fencing and road repair are proposed in the closeout plan and MMD has recommended additional fencing around the mud pits, if used to limit access by humans and wildlife. It appears that the costs for these items are not included in the cost estimate. Fencing costs would need to include labor and disposal costs in addition to the fencing material cost, installation, and maintenance costs. Please provide the costs for these items and additional items that are included in the closeout plan (include separate justification pages, as needed). Alternately, explain why these costs have been omitted from the cost estimate.
- j) Section VIII. Long Term Maintenance & Monitoring lists Noxious Weeds, Road Maintenance, and other items that there are no costs entered. An attachment to the cost estimate, titled "Other" Calculations, list weed control costs. It appears that the costs for the other items, such as Road Maintenance, are not included in the cost estimate. Please provide the costs for these items and additional items that are included in the closeout plan (including separate justification pages, as needed). Alternately, explain why these costs have been omitted from the cost estimate.
- k) Indirect Costs. Please provide the reference for calculating the Indirect Costs in the Financial Assurance Estimate of the Application. In addition, adjust the Indirect Costs in accordance with changes made to the Direct Costs based on the MMD comments herein this letter.

MMD requests that Comexico meet with MMD at the earliest convenient date to review and discuss the comments on the reclamation cost estimate. MMD can provide Comexico with an example of a cost estimate spreadsheet upon request.

Hydrologic Resources Report (Hydro Report)

The *Hydrogeologic Resources Report for the Tererro Project in Santa Fe County, New Mexico*, dated October 2019, was received by MMD on October 18, 2019. The Hydro Report was prepared by SWCA Environmental Consultants for Comexico to fulfill the hydrology requirements under the National Environmental Policy Act (“NEPA”) permitting for the USFS and/or permitting by state and local agencies.

MMD requested comments on the Hydro Report from NMED, NMOSE, NMDG&F and SF County. MMD received comments from NMED, dated January 13, 2020, and sent them to Comexico by email on January 14, 2020. Similarly, MMD received comments from the NMOSE and NMDG&F on the Hydro Report and sent them to Comexico by email on February 12, 2020. Comments on the Hydro Report from SF County comments were sent to Comexico by email on April 8, 2020. MMD requests that Comexico respond to the comments on the Hydro Report by these agencies and the following MMD comments:

1. Chapter 4.1.2, Presence of Wetlands. The NMED Surface Water Quality Bureau (“SWQB”) commented on the Hydro Report in a memorandum to MMD, dated December 31, 2019, in part on the existence on wetlands in the vicinity of the proposed project area. MMD forwarded the SWQB comments to Comexico on January 14, 2020. MMD requires that adverse effects on riparian areas and wetlands be mitigated during reclamation. In addition, the NMDG&F and NMOSE provided comments on the Hydro Report, in part, regarding the potential impacts to surface water by the proposed exploration project and the critical importance of the use of effective BMP’s both within the proposed permit area and the USFS access roads. MMD forwarded these comments to Comexico in an e-mail, dated February 12, 2020, requesting Comexico’s response. MMD concurs with the concerns of these agencies.
2. Section 4.1.3, Soil Types, indicates that the soil types within the proposed permit area have moderate to severe erosion potentials. Comexico has proposed that ground surface disturbances will be sited in previously disturbed locations during the exploration project and has committed to implementing BMP’s and drainage control features to mitigate soil erosion potential. Evidence of erosion in the previously disturbed areas was observed by MMD during the August 1, 2019 inspection. In the Application, Comexico has specified using silt fencing, wattles, and if needed, water bars would be constructed in the roads within the permit area. In addition, Comexico has committed to mitigate erosion on the USFS access road that leads up to the permit areas (Road Maintenance Plan). MMD is concerned that the effectiveness of silt fencing, wattles and water bars is dependent on proper siting, installation and maintenance, and that other BMP’s may need to be used in order to effectively prevent erosion in the project area. MMD requests that Comexico provide an erosion control plan for MMD approval based on site specific conditions of the actual drill pad sites and travel routes chosen for the exploration project at least 60-days prior to commencement of the project. This plan should also provide details on the

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erosion controls that will be implemented during and after reclamation of the disturbed areas.

3. Section 7.2.2, Exploratory Drilling, bullet 2 states that the proposed disturbance includes exploration drill pads of 50 ft. by 30 ft. for diamond drilling and 60 ft. by 40 ft. for reverse circulation drilling. However, Section 5.G of the Application states that reverse circulation (RC) drill pads will be 60 ft. by 50 ft. Please revise the reclamation plan based on 60 ft. by 50 ft. drill pad dimensions.
4. Section 7.2.2, Exploration Drilling, bullet 3 states that the total cumulative disturbance of up to 2.1 acres is proposed. This is the same amount of total disturbed acreage proposed in Section 5, Exploration Description in the Application. However, MMD calculates that the total cumulative disturbance is approximately 9.42 acres (see MMD Comment #3 on the Application, above). Although the MMD calculation of cumulative disturbance includes approximately 5.5 acres of access roads within the proposed permit area that the Hydro Report may not take into account, MMD requests financial assurance be provided for erosion monitoring and mitigation on the approximately 5.5 acres of access roads. MMD believes the cumulative disturbance of the drill pads, overland travel routes, new roads and equipment laydown area proposed in the Application is approximately 4 acres. Please revise the reclamation plan and the financial assurance cost estimate for the reclamation of at least 4 acres of surface disturbance.
5. Section 7.2.2, Exploratory Drilling lists the equipment proposed for the exploration project but does not include equipment such as a motor grader and dozer that are mentioned in the Application for use in the exploration project and reclamation.
6. Section 7.2.2.2, Planned Road Improvements and Best Management Practices, provides information regarding the road conditions and planned activities on the USFS roads including road maintenance. MMD has received a Road Maintenance Plan from Comexico, dated November 4, 2019, and will comment separately on it in this letter. MMD requests that a protocol be provided by Comexico to cease vehicular traffic when road conditions are wet, muddy or snow and ice packed to prevent road degradation and erosion.
7. Section 7.2.2.2.3 Planned Activities for Overland Routes and Section 7.2.2.2.4 Planned Activities for Drilling Sites, in part, provides information on the reclamation of these sites. MMD requires Comexico to notify MMD at least 30-days prior to the start of the exploration project and provide the locations of the first three to five drill sites chosen for drilling so that MMD may plan to inspect these sites as the exploration project progresses, and notify MMD at least 14-days prior to moving to the next 3 to 5 drill sites, and so forth during the exploration project.
8. Section 7.3, Potential Impacts to Groundwater, states that ground water is likely associated with discrete fracture zones of Precambrian granite. It is further stated that impacts to

RE: Comments on Regular Exploration Application, Tererro Exploration Project, Permit No. SF040ER,  
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perennial surface waters in the area from the exploration project are unlikely. MMD regards the proper plugging and abandonment of the exploration drill holes as critical in preventing impacts to groundwater in exploration drilling projects. MMD requests Comexico to submit for each three to five drill holes completed, copies of NMOSE drilling permits, NMOSE approved plugging plans of operations, certifications from the well driller that the drill holes were plugged in accordance with the MMD and NMOSE permits, and drill hole plugging records for each drill hole signed by the driller, prior to allowing the driller move on to the next three to five drill hole sites. MMD may inspect the drill sites prior to approving the drilling records and will work with Comexico and the driller so that MMD's review may be done in a timely manner.

### Road Maintenance Plan

MMD received a submittal from Comexico titled, *Jones Hill (Tererro) Exploration Project Access – Road Maintenance Plan* (“Road Maintenance Plan”), dated November 4, 2019, that was submitted to the USFS to describe road maintenance measures that Comexico will take to mitigate erosion and potential impacts to surface water resources on the USFS access road to the proposed exploration project area. MMD has reviewed the Road Maintenance Plan and has the following comments:

1. Access Summary, page 2 of the Road Maintenance Plan, states that, “Additional Forest System roads Comexico has proposed to use during drilling operations include FR 120L, 120K, 120KA, 120KB, 120KBA, 120KC, 120KD, 120KDA, and 120KE; no maintenance is proposed for these Forest Service roads.” These roads are not shown on Figure 2 or other maps in the Road Maintenance Plan. Please provide a map showing the Forest Service Roads that no maintenance is proposed.
2. Access Maintenance Work Proposed, page 4 of the Road Maintenance Plan, bullet 5 states that the shoulder ditches leading to the culverts will be cleaned/graded and that the excavated material will be considered for use on the road. MMD recommends that if the material is finer grained or erosive that it not be used on the road.
3. Access Maintenance Work Proposed, pages 4 to 5 of the Road Maintenance Plan, states that traffic will be regulated during wet periods. Please explain how maintenance work will be affected and how traffic will be regulated during and after precipitation events. In addition, indicate the erosion BMP's that will be utilized during the road maintenance work.
4. Access Maintenance Work Proposed, page 5 of the Road Maintenance Plan, states that, “No aggregate material is planned to be hauled in from offsite.” Please provide a contingency plan in the event that adequate quantities of suitable aggregate are not available onsite.

RE: Comments on Regular Exploration Application, Tererro Exploration Project, Permit No. SF040ER,  
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5. Segment Specific Maintenance, page 5 to 6 of the Road Maintenance Plan, refers to Figures 8 through 11 that show the locations of proposed road maintenance segments A through J on topographic drawings. Please indicate the topographic elevation intervals shown on Figures 8 through 11.
6. Segment Specific Maintenance, page 6 of the Road Maintenance Plan, states that, "No road maintenance work is proposed on existing Indian Creek culverts." Please provide an explanation of this statement including the location(s) of the Indian Creek culverts.

Please review and provide a response to MMD and the Agencies' comments within 60-days of receipt. If you have any questions, please contact me at (505) 476-3432 or at David.Ohori@state.nm.us.

Sincerely,



David Ohori, Permit Lead  
Mining Act Reclamation Program ("MARF")  
Mining and Minerals Division

Enclosures

cc: (w/out attachments)

Holland Shepherd, MARP Program Manager  
Larry Gore, Forest Geologist, Santa Fe National Forest  
Jose Larranaga, Development Review Team Leader, Santa Fe County  
Kurt Vollbrecht, Program Manager, NMED GWQB, Mining Environmental Compliance  
Section  
Matthew Wunder, PhD., Chief, Ecological and Environmental Planning Division,  
NMDG&F  
Mine File (SF040ER)



**Michelle Lujan Grisham**  
Governor

**Howie C. Morales**  
Lieutenant Governor

**NEW MEXICO  
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Ground Water Quality Bureau

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**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

Date: August 10, 2019

To: Holland Shepherd, Program Manager, Mining Act Reclamation Program

Through: Jeff Lewellin, Mining Act Team Leader, Mining Environmental Compliance Section

From: Alan Klatt, Surface Water Quality Bureau  
Rhett Zyla, Air Quality Bureau

Subject: **NMED Comments, Regular Exploration Project, Comexico, LLC, Tererro Exploration Project, Santa Fe County, New Mexico, New Mexico Mining Act Permit No. SF040ER**

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The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on June 12, 2019 requesting NMED review and provide comments on the above-referenced MMD permitting action. In accordance with 19.10.4.402.F. NMAC, NMED has the following comments.

**Background**

Comexico, LLC (Applicant) proposes a regular exploration project to advance up to 30, 3 to 5.5-inch diameter borings to a depth of up to 4,000 feet below ground surface. The project is on federal land managed by the United States Forest Service in Section 1, T17N, R11E. The purpose of the proposed exploration project is to evaluate potential reserves of copper, gold, zinc, lead, and silver.

**Air Quality Bureau**

The Air Quality Bureau comments are attached under separate letterhead.

### **Surface Water Quality Bureau**

The Surface Water Quality Bureau comments are attached under separate letterhead.

### **Mining Environmental Compliance Section**

On August 1, 2019 personnel from the Mining Environmental Compliance Section (MECS), Surface Water Quality Bureau, Energy Minerals and Natural Resources Department Mining and Minerals and Forestry Divisions, New Mexico Department of Game and Fish, New Mexico Office of the State Engineer, U.S. Forest Service-Santa Fe National Forest (USFS), and Santa Fe County inspected all 30 of the proposed drilling locations. During the inspection, the Forest Geologist for the USFS, Santa Fe National Forest, suggested to the representative of the Applicant that drilling fluids be contained in tanks instead of containment of the drilling fluids in earthen pits. The MECS representative endorsed the suggestion but emphasized that either practice meets industry standards.

The Applicant does not provide the total dissolved solids concentration of ground water in the application. One ground water supply well is in the project area and it was indicated that it was the supply well used during previous mining exploration projects in the Jones Hill area. The Office of the State Engineer Points of Diversion database designates this well as UP00826 with a depth of the well 240 feet below ground surface and ground water is indicated to be 95 feet below ground surface. In the likely instance ground water is encountered while advancing the borings to the total depth of up to 4,000 feet below ground surface, plugging and abandonment of the borings should comply with New Mexico Office of the State Engineer regulations for wet holes as is indicated in the application. In addition, the applicant must contain any water produced from the exploration holes at the drill sites.

### **NMED Summary Comment**

NMED finds that the exploration project is likely to have a minimal impact to the environment if operated and reclaimed with the approved permits, pollution controls, and the comments above.

If you have any questions, please contact Jeff Lewellin at (505) 827-1049.

cc: Rebecca Roose, Director, Water Protection Division  
Shelly Lemon, Bureau Chief, SWQB  
Liz Bisbey-Kuehn, Bureau Chief, AQB  
Fernando Martinez, Division Director, EMNRD-MMD  
David Otori, Lead Staff, EMNRD-MMD  
Kurt Vollbrecht, Program Manager, MECS





**Michelle Lujan Grisham**  
Governor

**Howie C. Morales**  
Lt. Governor

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**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

**DATE:** September 4, 2019

**TO:** Jeff Lewellin, Mining Act Team Leader, NMED-GWQB

**FROM:** Alan Klatt, Watershed Protection Section, NMED-SWQB  
Jennifer Foote, Point Source Regulation Section, NMED-SWQB

**SUBJECT:** Request for Comments, Regular Exploration Project, Comexico LLC, Tererro Exploration Project, Santa Fe County, MMD Permit No. SF040ER

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On June 12, 2019 the Surface Water Quality Bureau (SWQB) received a request for comments regarding the above referenced application. Comexico LLC, a subsidiary of New World Cobalt, proposes to drill up to thirty (30) drill holes up to 4,000 feet deep to explore for copper, gold, zinc, lead and silver in Santa Fe County, New Mexico approximately 3 miles west of Tererro on federal land managed by the U.S. Forest Service at the approximate latitude and longitude 35.731540° North, -105.731540° West. The proposed total disturbance area is 2.1 acres located within an approximate 200-acre permit boundary and will include up to thirty (30) drill pads and 1,242 linear feet of overland routes. Pursuant to the regulations for non-coal mining exploration in Subsection F of 19.10.4.402 NMAC, SWQB is providing the following comments.

Surface water runoff from Jones Hill and the proposed exploration area flows either to the west towards Macho Canyon Creek or to the east towards Indian Creek which are both tributaries of the Pecos River. The perennial portions of Macho Canyon Creek and Indian Creek are subject to 20.6.4.217 NMAC with designated uses that include Domestic Water Supply, Fish Culture, High Quality Coldwater Aquatic Life, Irrigation, Livestock Watering, Primary Contact, and Wildlife Habitat. Non-perennial portions are subject to 20.6.4.98 NMAC. Water quality in Indian Creek fully supports these designated uses; however, Macho Canyon Creek is currently listed on the Clean Water Act Section 303(d) list of impaired waters for specific conductance levels that exceed the water quality standard for High Quality Coldwater Aquatic Life<sup>1</sup>. Mining exploration activities that have the potential to contribute to this impairment, including activities that have the potential to contribute total dissolved solids (TDS) as TDS is connected to conductivity, should be implemented with appropriate and reasonable Best Management Practices (BMPs) to prevent further degradation.

SWQB staff attended a site visit to the Tererro Exploration Project area on August 1, 2019 with personnel from NMED-Ground Water Quality Bureau (GWQB), EMNRD-Mining and Minerals Division

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<sup>1</sup> <https://www.env.nm.gov/wp-content/uploads/2018/03/Appendix-A-Integrated-List.pdf>

(MMD), EMNRD-Forestry Division, New Mexico Department of Game and Fish (NMDGF), New Mexico Office of the State Engineer (OSE), U.S. Forest Service-Santa Fe National Forest (USFS), and Santa Fe County.

To protect and maintain surface water quality standards, SWQB recommends the following:

- Appropriate spill clean-up materials such as absorbent pads must be available on-site at all times during road construction, site preparations, and drilling activities to address potential spills. Report all spills immediately to the NMED as required by the New Mexico Water Quality Control Commission Regulations (20.6.2.1203 NMAC). For non-emergencies during normal business hours, call 505-428-2500. For non-emergencies after hours, call 866-428-6535. For emergencies only, call 505-827-9329 twenty-four hours a day (New Mexico Department of Public Safety).
- The applicant must contain any water produced from the exploration holes at the drill site to prevent erosion and gully formation. Drilling cores and drilling mud must be collected and disposed of properly.

During the August 1<sup>st</sup> site visit, in response to questions from NMDGF and the USFS regarding the handling of drilling mud, New World Cobalt stated that the use of a tank to implement a closed system would be considered and that a closed system would require the addition of a vacuum truck as well as locating a slurry disposal facility. NMED stated support for the use of a closed system as a preferred BMP for this activity. The application includes a chemical list for approximately 79 products. SWQB identified eight products to be used as drilling additives, six of which are to be prevented from entering drainages and natural waterways or may otherwise constitute a hazard following a spill. If drilling muds are left on site, the applicant should further demonstrate that the mud is safe and does not pose a risk to drainages and natural waterways. SWQB recommends that the applicant confirm the method for which drilling mud will be contained, collected and disposed.

If an unidentified artesian stratum is encountered, the applicant should notify SWQB in addition to the Office of the State Engineer to ensure appropriate containment measures are in place to protect surface waters of the state.

- Pressure wash and/or steam clean all mobile equipment used in the project area before the start of the project and inspect daily for leaks. A written log of inspections and maintenance should be completed.
- The use of overland travel and site selection, design, and construction of well pads, reserve pits, and roads should comply with the guidelines described in the Bureau of Land Management "Gold Book"<sup>2</sup>. Suspend construction, maintenance activities, or off-road travel during periods when the soil is too wet to adequately support heavy equipment without causing surface disturbance. The operator should commit to repair any surface disturbance they caused.

Forest Road access from New Mexico State Road 63 to Jones Hill parallels the mainstem of Indian Creek for approximately 1.5 miles and a tributary of Indian Creek for another 1.5 miles increasing 1,000 ft in elevation from the mainstem before reaching the claim

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<sup>2</sup> <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/operations-and-production/the-gold-book>

boundary and the mining permit boundary. SWQB recommends that the applicant verify whether the current condition of this road is suitable for the transport of heavy equipment.

Multiple proposed pads are located on existing road cuts that require cutting further into the hill slope to accommodate drilling equipment. Over-steepened hill cuts have the potential to accelerate erosion and impact surface water quality. SWQB recommends that the percent slope and slope length for stable cut slopes be determined and extending beyond this stability threshold is to be avoided. Drill pad and access roads should be recontoured back to the original contour as described in the Gold Book.

- Roads, pads, and other facility structures should be set back a minimum of 100 feet from any watercourses, including springs, wetlands, and arroyos.

Proposed drill holes (DH) at the following pad sites approach an ephemeral drainage that is a tributary to Macho Canyon Creek: Pad 17/DH03, Pad 18/DH28, and Pad 13/DH05. Pad 17 and 18 are located near a historical mine and are being excluded from the proposed exploration plan. SWQB estimates that Pad 13 is more than 100 feet away from the drainage; however, SWQB recommends that the applicant verify the proposed pad locations have a sufficient set back distance from watercourses necessary to protect and maintain surface water quality standards.

- Implement Best Management Practices to prevent direct impacts to watercourses, including springs, wetlands, and arroyos. For temporary surface disturbances during exploration and reclamation activities, the operator should implement erosion control measures that are designed, constructed and maintained using professionally recognized standards (e.g., Natural Resource Conservation Service standards or the Bureau of Land Management "Gold Book").
- The applicant should ensure that stormwater entering the project area ("run-on") is diverted from soil storage piles and should place piles uphill of excavations when possible.
- This project may qualify for coverage under Sector G Metal Mining, of the National Pollutant Discharge Elimination System (NPDES) 2015 Multi-Sector General Permit (MSGP) for storm water discharges. Information on permit coverage requirements can be found at <https://www.epa.gov/npdes/stormwater-discharges-industrial-activities>.

Among other things, the MSGP requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be designed, installed and maintained to prevent, to the extent practicable, pollutants in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures, and permanent storm water management measures be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. Section 9.6.2.2 of the MSGP describes additional New Mexico specific requirements for inspections and stabilization.

- Activities within watercourses or wetlands may require coverage under a Clean Water Act Section 404 permit. If you have questions about this permitting, please contact:

Regulatory Division, US Army Corps of Engineers, Albuquerque District  
4101 Jefferson Plaza NE  
Albuquerque, New Mexico 87109-3435  
Ph: 505-342-3678

- SWQB requests an opportunity to review the supplemental application materials, such as the hydro-geologic survey and biological surveys, that are referenced in the permit application but were not yet completed at the time this request for comments was made.

For questions related to these comments, please contact Alan Klatt, SWQB, at 505-827-0388.



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**James C. Kenney**  
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**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

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**DATE:** August 5, 2019

**TO:** Jeff Lewellin, Mining Act Team Leader  
Mining Environmental Compliance Section, Ground Water Quality Bureau

**FROM:** Rhett Zyla, Environmental Scientist & Specialist  
Modeling Section, Air Quality Bureau

**RE:** Request for Comments, Regular Exploration Project, Comexico, LLC, Tererro  
Exploration Project, Santa Fe County, MMD Permit No. SF040ER

The New Mexico Air Quality Bureau (AQB) has completed its review of the above-mentioned mining reclamation Closeout Plan. Pursuant to the New Mexico Mining Act Rules, the AQB provides the following comments.

**Air Quality Permitting History**

The AQB has not issued any air quality permits for this operation.

**Details**

Comexico, LLC (a subsidiary of New World Cobalt), is requesting a new exploration permit for Section 1, Township 17 North, Range 11 East, in Santa Fe County, New Mexico, approximately 15 miles north of Pecos, New Mexico. The area is on National Forest land, with no people or residential structures in the area that would be affected by dust, diesel emissions, etc. The applicant has had past operations in the area, but have since been reclaimed (2003).

The applicant is seeking to explore for copper sulfides, zinc sulfides, gold, lead (galena), silver (electrum, sulfides), and will utilize air drilling and fluid drilling.

The applicant proposes to drill up to 30 holes (up to 5 holes per pad), 3 inches to 5.5 inches in diameter, 500 ft. to 4,000 ft. in depth, using up to 30 drill pads, with a footprint of between 1,500 to 3,000 ft<sup>2</sup> per pad, the latter depending on the depth and corresponding type of drilling

rig needed. Mud pits are proposed to be utilized within the footprint of the drill pad while diamond drilling (coring) and are generally 5-10 ft long by 5-10 ft wide and about 5 ft deep.

Comexico has identified 36 potential drill pads, with the proposed permit area at approximately 160 acres, at elevations up to 9,500 feet. The proposed drilling program would utilize existing roads and historic disturbance for drill pads, resulting in minimal new disturbance or grading. Total disturbance is expected to be up to 2.1 acres.

Applicant proposes reclamation of the disturbed area shall be initiated as soon as possible following the completion or abandonment of the exploration operation (anticipated September 2020), unless the disturbed area is included within a complete permit application for a new mining operation.

### **Air Quality Requirements**

The *New Mexico Mining Act* of 1993 states that “Nothing in the *New Mexico Mining Act* shall supersede current or future requirements and standards of any other applicable federal or state law.” Thus, the applicant is expected to comply with all requirements of federal and state laws pertaining to air quality. Current requirements which may be applicable in this mining project include, but are not limited to the following:

Paragraph (1) of Subsection A of 20.2.72.200 NMAC, *Application for Construction, Modification, NSPS, and NESHAP - Permits and Revisions*, states that air quality permits must be obtained by:

“Any person constructing a stationary source which has a potential emission rate greater than 10 pounds per hour or 25 tons per year of any regulated air contaminant for which there is a National or New Mexico Ambient Air Quality Standard. If the specified threshold in this subsection is exceeded for any one regulated air contaminant, all regulated air contaminants with National or New Mexico Ambient Air Quality Standards emitted are subject to permit review.”

Further, Paragraph (3) of this subsection states that air quality permits must be obtained by:

“Any person constructing or modifying any source or installing any equipment which is subject to 20.2.77 NMAC, *New Source Performance Standards*, 20.2.78 NMAC, *Emission Standards for Hazardous Air Pollutants*, or any other New Mexico Air Quality Control Regulation which contains emission limitations for any regulated air contaminant.”

Also, Paragraph (1) of Subsection A of 20.2.73.200 NMAC, *Notice of Intent*, states that:

“Any owner or operator intending to construct a new stationary source which has a potential emission rate greater than 10 tons per year of any regulated air contaminant or 1 ton per year of lead shall file a notice of intent with the department.”

The above is not intended to be an exhaustive list of all requirements that could apply. The applicant should be aware that this evaluation does not supersede the requirements of any current federal or state air quality requirement.

### **Fugitive Dust**

Fugitive dust is a common problem at mining sites and this project will temporarily impact air quality as a result of these emissions. However, with the appropriate dust control measures in place, the increased levels should be minimal. Disturbed surface areas, within and adjacent to the project area, should be reclaimed to avoid long-term problems with erosion and fugitive dust. EPA's *Compilation of Air Pollutant Emission Factors, AP-42, "Miscellaneous Sources"* lists a variety of control strategies that can be included in a comprehensive facility dust control plan. A few possible control strategies are listed below:

Paved roads: covering of loads in trucks to eliminate truck spillage, paving of access areas to sites, vacuum sweeping, water flushing, and broom sweeping and flushing.

Material handling: wind speed reduction and wet suppression, including watering and application of surfactants (wet suppression should not confound track out problems).

Bulldozing: wet suppression of materials to "optimum moisture" for compaction.

Scraping: wet suppression of scraper travel routes.

Storage piles: enclosure or covering of piles, application of surfactants.

Miscellaneous fugitive dust sources: watering, application of surfactants or reduction of surface wind speed with windbreaks or source enclosures.

### **Recommendation**

The AQB has no objection to the current request for an exploration permit from MMD.

The applicant is expected to comply with all requirements of federal and state laws pertaining to air quality. This written evaluation does not supersede the applicability of any forthcoming state or federal regulations.

If you have any questions, please contact me at (505) 476-4304.

GOVERNOR  
Michelle Lujan Grisham



DIRECTOR AND SECRETARY  
TO THE COMMISSION  
Michael B. Sloane

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Las Cruces  
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Placitas

10 October 2019

David Otori, Permit Lead  
Mining Act Reclamation Program  
Mining and Minerals Division (MMD)  
1220 South St. Francis Drive  
Santa Fe, NM 87505

***RE: Amended Regular Exploration Application, Tererro Exploration Project, Comexico, LLC., Permit No. SF040ER; NMDGF# 19150***

Dear Mr. Otori:

The New Mexico Department of Game and Fish (Department) has reviewed the proposed exploration project referenced above. Comexico, LLC (Comexico) is proposing 36 potential drill pad sites for drilling up to 32 boreholes that will range from 400 to 4000 feet in depth. The Department, MMD, New Mexico Environment Department, U.S. Forest Service (USFS), New Mexico Office of the State Engineer, New Mexico State Forestry Division, Santa Fe County and Comexico conducted an inspection of the site on 1 August 2019. The Department provides the following recommendations to minimize impacts to wildlife and habitats.

A biological survey was conducted by SWCA Environmental Services (SWCA) on 15 July 2019 at the staging area, 32 proposed drill pad locations and at proposed new overland routes, including a 50 foot buffer for each site. The Department believes that the 50 foot buffer was inadequate to document wildlife that might be impacted by drilling activities. A minimum buffer distance of 0.25 mile is recommended for the survey to better document wildlife use near the project area, and to identify any Mexican spotted owl (MSO) territories or nest site locations that could potentially be impacted by drilling activities. Therefore, the Department does not concur with SWCA's "No Effect" determination for MSO from the proposed project.

The Department agrees with the proposal that all construction and drilling activities be conducted outside of the primary breeding season for migratory songbirds and raptors (1 March – 1 September). However, the Department is concerned that drilling operations may not be able to be completed outside of the breeding season as proposed. Delayed completion could result from the number of proposed drill holes (some with depths up to 4,000 feet) and unforeseen delays from winter conditions experienced while working at elevations above 9,000 feet. If drilling activities are not completed by March and the USFS permits Comexico to continue drilling operations into the breeding season, the remaining drill pads in the project site and a 0.25 mile buffer area should be re-surveyed for active nest sites (with birds or eggs present in the nesting territory). If occupied, nest disturbance should be avoided until young have fledged. For active nests, buffer zones  $\geq 100$  feet from songbird and raven nests, and 0.25 mile from



raptor nests should be established to minimize disturbance to nesting birds. Active nest sites in trees or shrubs that must be removed, or are in immediate proximity to proposed drilling activities, should be mitigated by qualified biologists or wildlife rehabilitators. Department biologists are available for consultation regarding nest site mitigation, and can facilitate contact with qualified personnel.

During the biological survey, SWCA did not observe any state or U.S. Department of Agriculture-listed noxious weeds within the proposed project area. However, Scotch thistle (*Onopordum acanthium*) was documented along Indian Creek Road. In order to prevent inadvertently introducing invasive weed species into the project area, the Department recommends that prior to arriving on site vehicles and equipment be thoroughly cleaned of all visible dirt and mud in a manner that will help control and contain the potential spread of weed seeds.

Indian Creek Road is a rugged unmaintained dirt road that leads into the project area and, depending on the size of rigs to be used, will require a currently undefined amount of road work to accommodate drilling equipment. The lower portion of the access road is directly adjacent to Indian Creek, and crosses through State Game Commission owned lands. Comexico must commit to coordinating with the Department and implementing best management practices to control storm water runoff and erosion along the access route and to incorporate appropriate measures to prevent excess sediment runoff from impacting Indian Creek and riparian vegetation.

The Department does not support the use of open "mud pits" to contain the large volumes of drilling fluids that are generated during drilling operations. The Department strongly recommends the use of closed loop containment systems with tank batteries. Closed containment systems require minimal or no maintenance, and can be relocated to another site when no longer needed. Closed containment systems also eliminate soil contamination, reduce reclamation expenses, and will not attract wildlife.

If closed containment systems are not used, mud pits should be covered or netted to exclude flying and terrestrial animals from contacting sources of potentially contaminated water and to prevent wildlife entrapment. Extruded plastic, knit or woven netting material is preferred. Monofilament nylon netting should not be used due to its tendency to ensnare wildlife and cause injury or death. All materials should be resistant to corrosion and ultraviolet radiation. The Department recommends a mesh size of  $\frac{3}{8}$  inch to exclude smaller animals. If drilling operations occur during the winter months when there is the potential for snow loading to occur, a maximum mesh size of 1  $\frac{1}{2}$  inches is acceptable. Netting must be held taut and securely fastened to a rigid and adequately supportive frame to prevent sagging. Regular inspection and maintenance is critical to repair holes and to restore tension to prevent sagging. Following heavy snow or high wind events, an inspection should be conducted as soon as possible to assess netting for damage, or to clear excessive snow loading if necessary.

Loud, persistent noise can disturb wildlife and create behavioral and/or physiological impacts. Behavioral responses can include the temporary or permanent displacement of birds and other wildlife from the affected area, while physiological effects may range from temporary elevation in pulse rates to chronic stress that adversely impacts wildlife health. Life history needs for wildlife can be precluded by high noise levels that overwhelm natural sounds and communications among individual animals. Exploratory drilling activities can expose wildlife to excessive noise levels. To reduce the potential impacts to wildlife from noise disturbance, the Department recommends evaluating the well pad site (including a 0.25 mile buffer) to identify potential habitat for state or federally-listed Threatened or Endangered species, and raptor nesting or

roosting sites, , prior to drill pad development. If any of these noise-sensitive features are present, the Department recommends that mitigation measures be implemented to maintain noise levels at or below 48.6 dB(A) Leq at 400 feet in all directions from the noise source. This is consistent with the Bureau of Land Management's noise policy described within the Notice to Lessees and Operators on Onshore Oil and Gas Leases within the Jurisdiction of the Farmington Field Office (NTL 04-2 FFO).

The reclamation seed mix in the permit application contains three non-native plant species: orchard grass (*Dactylis glomerata*), yellow sweetclover (*Melilotus indicus*), and weeping lovegrass (*Eragrostis curvula*). The Department recommends using only native plant species in the reclamation seed mix. The Department also recommends that the seed mix and mulch be certified weed-free, and requesting seed test results from the vendor to avoid inadvertently introducing unwanted species to the reclamation site. Any alternate seeds used to substitute for primary plant species that are unavailable at the time of reclamation should also be native. When possible, the Department recommends using seeds that are sourced from the same region and habitat type as the reclamation site.

Thank you for the opportunity to review and comment on the proposed exploration project. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 476-8159 or [ronald.kellermueller@state.nm.us](mailto:ronald.kellermueller@state.nm.us).

Sincerely,



Matt Wunder, Ph.D.  
Chief, Ecological and Environmental Planning Division

cc: USFWS NMES Field Office  
Erin Duvuvuei, NMDGF Nongame Ornithologist

**From:** [Reycraft, Richard, DCA](#)  
**To:** [Ohoi, David, EMNRD](#)  
**Subject:** HPD Log# 110988, Request for Comments on Amended Regular Exploration Application, Tererro Exploration Project, Permit No. SF040ER, Comexico, LLC  
**Date:** Thursday, July 25, 2019 11:14:49 AM  
**Attachments:** [Log#110988.pdf](#)

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Dear Mr. Ohoi:

I am writing in response to your request for comment on the above referenced exploration project received at this office July 22, 2019.

Pursuant to 19.10.5.505 NMAC, Permit Modifications and Revisions, the Director shall determine whether a permit modification would have an adverse impact on cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties or be located in a known cemetery or other burial ground.

According to our files, there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties in the permit area. There are also no known cemeteries or other burial grounds. Based on this information, this permit will have no adverse impacts to cultural resources listed on the National or State Registers.

Although there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties, our records indicate that the permit area has never been archaeologically surveyed; therefore this office recommends a cultural resources survey be conducted on any portions of mine property where proposed new ground disturbance will occur for this permit.

This survey should be performed by a qualified professional to determine if any historic or archaeological properties are present and if so, to provide documentation of those resources to our office. This information can then be used to evaluate the National Register of Historic Places eligibility of any resources identified during the survey and determine project effects on those resources. A list of state permitted archaeologists and archaeological firms are available from this office upon request or can be downloaded from our web site at:

<http://www.nmhistoricpreservation.org/documents/consultants.html>

Also, the mine application states that the surface estate owner is the USDA Forest Service, Santa Fe National Forest. Therefore, we recommend that you also consult with USDA Forest Service to ensure that the project meets their cultural resource and other environmental requirements.

If you have any questions concerning these comments, please do not hesitate to contact me by phone at (505)-452-6115 or e-mail me at [richard.reycraft@state.nm.us](mailto:richard.reycraft@state.nm.us)

Sincerely,

Richard. Reycraft  
Staff Archaeologist



Michelle Lujan  
Grisham  
Governor

STATE OF NEW MEXICO  
**DEPARTMENT OF CULTURAL AFFAIRS**  
**HISTORIC PRESERVATION DIVISION**

BATAAN MEMORIAL BUILDING  
407 GALISTEO STREET, SUITE 236  
SANTA FE, NEW MEXICO 87501  
PHONE (505) 827-6320 FAX (505) 827-6338

July 25, 2019

David Otori  
Permit Lead, Mining Act Reclamation Program  
Mining and Minerals Division  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

Re: HPD Log# 110988, Request for Comments on Amended Regular Exploration Application, Tererro  
Exploration Project, Permit No. SF040ER, Comexico, LLC

Dear Mr. Otori:

I am writing in response to your request for comment on the above referenced exploration project received at this office July 22, 2019.

Pursuant to 19.10.5.505 NMAC, Permit Modifications and Revisions, the Director shall determine whether a permit modification would have an adverse impact on cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties or be located in a known cemetery or other burial ground.

According to our files, there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties in the permit area. There are also no known cemeteries or other burial grounds. Based on this information, this permit will have no adverse impacts to cultural resources listed on the National or State Registers.

Although there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties, our records indicate that the permit area has never been archeologically surveyed; therefore this office recommends a cultural resources survey be conducted on any portions of mine property where proposed new ground disturbance will occur for this permit.

This survey should be performed by a qualified professional to determine if any historic or archaeological properties are present and if so, to provide documentation of those resources to our office. This information can then be used to evaluate the National Register of Historic Places eligibility of any resources identified during the survey and determine project effects on those resources. A list of state permitted archaeologists and archaeological firms are available from this office upon request or can be downloaded from our web site at:

<http://www.nmhistoricpreservation.org/documents/consultants.html>

Also, the mine application states that the surface estate owner is the USDA Forest Service, Santa Fe National Forest. Therefore, we recommend that you also consult with USDA Forest Service to ensure that the project meets their cultural resource and other environmental requirements.

If you have any questions concerning these comments, please do not hesitate to contact me by phone at (505)-452-6115 or e-mail me at [richard.reycraft@state.nm.us](mailto:richard.reycraft@state.nm.us)

Sincerely,

*Richard Reycraft*

Richard. Reycraft  
Staff Archaeologist

**From:** [Reycraft, Richard, DCA](#)  
**To:** [Ohori, David, EMNRD](#)  
**Cc:** [Rodriguez, Stephanie, EMNRD](#)  
**Subject:** HPD Log# 110719, Request for Comments on Regular Exploration Application, Tererro Exploration Project, Permit No. SF040ER, Comexico, LLC  
**Date:** Thursday, June 13, 2019 10:13:36 AM  
**Attachments:** [Log#110719.pdf](#)

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Dear Mr. Ohori:

I am writing in response to your request for comment on the above referenced exploration project received at this office June 12, 2019.

Pursuant to 19.10.5.505 NMAC, Permit Modifications and Revisions, the Director shall determine whether a permit modification would have an adverse impact on cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties or be located in a known cemetery or other burial ground.

According to our files, there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties in the permit area. There are also no known cemeteries or other burial grounds. Based on this information, this permit will have no adverse impacts to cultural resources listed on the National or State Registers.

Although there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties, our records indicate that the permit area has never been archeologically surveyed; therefore this office recommends a cultural resources survey be conducted on any portions of mine property where proposed new ground disturbance will occur for this permit.

This survey should be performed by a qualified professional to determine if any historic or archaeological properties are present and if so, to provide documentation of those resources to our office. This information can then be used to evaluate the National Register of Historic Places eligibility of any resources identified during the survey and determine project effects on those resources. A list of state permitted archaeologists and archaeological firms are available from this office upon request or can be downloaded from our web site at:

<http://www.nmhistoricpreservation.org/documents/consultants.html>

Also, the mine application states that the surface estate owner is the USDA Forest Service, Santa Fe National Forest. Therefore, we recommend that you also consult with USDA Forest Service to ensure that the project meets their cultural resource and other environmental requirements.

If you have any questions concerning these comments, please do not hesitate to contact me by phone at (505)-452-6115 or e-mail me at [richard.reycraft@state.nm.us](mailto:richard.reycraft@state.nm.us)

Sincerely,

Richard Reycraft

Richard. Reycraft  
Staff Archaeologist





Michelle Lujan  
Grisham  
Governor

STATE OF NEW MEXICO  
**DEPARTMENT OF CULTURAL AFFAIRS**  
**HISTORIC PRESERVATION DIVISION**

BATAAN MEMORIAL BUILDING  
407 GALISTEO STREET, SUITE 236  
SANTA FE, NEW MEXICO 87501  
PHONE (505) 827-6320 FAX (505) 827-6338

June 13, 2019

David Ohori  
Permit Lead, Mining Act Reclamation Program  
Mining and Minerals Division  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

Re: HPD Log# 110719, Request for Comments on Regular Exploration Application, Tererro Exploration Project, Permit No. SF040ER, Comexico, LLC

Dear Mr. Ohori:

I am writing in response to your request for comment on the above referenced exploration project received at this office June 12, 2019.

Pursuant to 19.10.5.505 NMAC, Permit Modifications and Revisions, the Director shall determine whether a permit modification would have an adverse impact on cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties or be located in a known cemetery or other burial ground.

According to our files, there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties in the permit area. There are also no known cemeteries or other burial grounds. Based on this information, this permit will have no adverse impacts to cultural resources listed on the National or State Registers.

Although there are no cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties, our records indicate that the permit area has never been archeologically surveyed; therefore this office recommends a cultural resources survey be conducted on any portions of mine property where proposed new ground disturbance will occur for this permit.

This survey should be performed by a qualified professional to determine if any historic or archaeological properties are present and if so, to provide documentation of those resources to our office. This information can then be used to evaluate the National Register of Historic Places eligibility of any resources identified during the survey and determine project effects on those resources. A list of state permitted archaeologists and archaeological firms are available from this office upon request or can be downloaded from our web site at:

<http://www.nmhistoricpreservation.org/documents/consultants.html>

Also, the mine application states that the surface estate owner is the USDA Forest Service, Santa Fe National Forest. Therefore, we recommend that you also consult with USDA Forest Service to ensure that the project meets their cultural resource and other environmental requirements.

If you have any questions concerning these comments, please do not hesitate to contact me by phone at (505)-452-6115 or e-mail me at [richard.reycraft@state.nm.us](mailto:richard.reycraft@state.nm.us)

Sincerely,

*Richard Reycraft*

Richard. Reycraft  
Staff Archaeologist


# MEMORANDUM


## OFFICE OF THE STATE ENGINEER

### *Hydrology Bureau*

DATE: August 31, 2019

TO: David Otori, Permit Lead, Mining Act Reclamation Program ("MARF")/MMD

THROUGH: Ghassan Musharrafieh, Ph.D., P.E., Chief, Hydrology Bureau, Santa Fe 

FROM: Steve Acheampong, Ph.D., Hydrologist, Hydrology Bureau, Santa Fe 

SUBJECT: Comments on Regular Exploration Application, Tererro Exploration Project, Santa Fe County, NM; Permit No. SF040ER, Comexico, LLC

### I. Introduction

The State of New Mexico Mining and Minerals Division (MMD) requested the Hydrology Bureau of the Office of the State Engineer (OSE) to review and comment on the Regular Exploration Application Permit submitted by Comexico LLC of 242 Linden Street, Fort Collins, Colorado 80524 for Tererro Exploration Project for copper sulfides, gold, zinc sulfides, lead (galena) and silver in Santa Fe County, New Mexico on June 12, 2019. The application was assigned Permit No. SF040ER.

Comexico LLC proposed to drill up to 30 drill holes with depths ranging from 500 to 4000 feet deep and diameters ranging from 3 to 5.5 inches on up to 84 drill pads on land located at Township 17 North, Range 11 East, Section 01 (Figure 1). The land is owned by the United States Department of Agriculture, U.S. Forest Service and Santa Fe National Forest in Santa Fe County, New Mexico. The applicant proposes to undertake the exploration activities from October 1, 2019 to February 29, 2020 using air and fluid drilling methods. A core drilling rig (LF90 or equivalent), and/or a reverse circulation (RC) rig (Prospector 750 or Explorer 1500 or equivalent) may be used for drilling. In addition, two mud pits with dimensions of 5-10 ft by 5-10 ft by 5 ft deep will be dug at each site and lined with plastic to keep the fluid from seeping into the ground. The mud pits will allow for fluid recirculation during drilling and will reduce the required amount of water needed per drill hole.

On July 17, 2019, the Hydrology Bureau received a letter (by email) from MMD with supplemental information from Comexico LLC for their application for permit number SF040ER.

The supplemental information is a modification to the application that reduces the proposed number of drill pad locations from 84 to 36 for drilling up to 30 drill holes.

## **II. Site Inspection**

A field trip was undertaken on Thursday August 1, 2019 by personnel from the Hydrology Bureau, Energy, Minerals and Mining Department and other state and federal agencies with regulatory oversight of the project to all the thirty sites selected by the applicant for drilling.

The proposed project will disturb a total of up to 2.1 acres of land.

Available data in the New Mexico Water Rights Reporting Systems (NMWRRS) database show that the nearest existing water well at the proposed exploration permit area is well UP 00826 which the applicant proposes to use for their operations. Well UP 00826 has a total depth of 239 feet and a recorded depth to water of 95 feet below ground level (bgl). The well is located at an elevation of approximately 8,400 feet above mean sea level (amsl).

Depth to water measurement at well UP 00826 made on Thursday August 1, 2019 during the field inspection was 17.48 ft bgl. Data on total depths of approximately twenty wells reported in NMWRRS located between 2 and 3 miles from well UP 00826 range from 85 to 400 feet bgl with depths to water ranging from 6 to 52 feet bgl.

There is no available information on the water quality in terms of major ions and total dissolved solids (TDS) concentrations of the groundwater in the area and none was provided by the applicant. The electrical conductivity (EC) of water measured in two adits at elevations of 9,000 and 8,700 ft amsl during the field inspection on August 1, 2019 were 230.85 and 260.66  $\mu\text{S}/\text{cm}$  respectively. The water temperatures were 8.99°C and 9.36°C for the upper and lower adits respectively.

The test holes will be plugged upon completion and evaluation of the mineral resources. No Well Plugging Plan of Operation, form WD-08 was attached.

## **III. Comments**

The Hydrology Bureau has completed a review of the project application and provides the following comments:

### **III. A. Surface Water**

According to the applicant, the proposed exploration permit area is near four surface water channels at an average elevation of 9,053 ft. These channels do not appear to have permanent flows. Also no water will be extracted from the proposed drilled wells and so there will be no impact on surface water during the exploration activities.

### **III. B. Groundwater**

No dewatering plan was described in the application. The applicant intends to use well UP 00826 for their operations. According to the applicant, recent reports on existing underground workings nearby did not encounter any water. Depth to groundwater measured at well UP 00826 on August 1, 2019 during field inspection was shallow at 17.48 feet bgl, approximately 77 ft higher than the measured value of 95 ft bgl reported by the well driller in 1981. This shows that groundwater in the area is under artesian conditions. Available depth to water in wells within three miles of well UP 00826 suggests a strong possibility of encountering groundwater during the proposed drilling exploration. Comexico LLC should therefore file and receive approval for a Well Plugging Plan of Operations (Form WD-08), and a Plugging Record (Form WD-11) in accordance with Subsection C of NMAC 19.27.4.30, as revised on 6/30/2017.

Even though the salinity of water in the two adits was very low, Portland neat cement should be used to plug the wet wells from the total depth to 2 feet below ground level (bgl) due to the lack of information on the pH of the groundwater in the area. All other requirements for well plugging are given in NMAC 19.27.4.36.

In the event that artesian conditions are encountered during drilling resulting in the free flow of water to the surface, drilling operations should cease immediately and the District 6 Office of the Water Rights Division of the NMOSE in Santa Fe should be contacted. The well shall be plugged from the bottom upwards with an OSE-approved sealant in accordance with Subsection A of 19.27.4.31 NMAC. The well plugging shall be witnessed by an authorized representative of the state engineer.

Attached is the General Concerns related to NMOSE Regulation of Exploratory Borehole Drilling Encountering Groundwater and Associated Plugging of those Borings.

The Mining and Minerals Division exploratory application and associated filings can be found at: [http://www.emnrd.state.nm.us/MMD/MARP/Emma\\_Project.html](http://www.emnrd.state.nm.us/MMD/MARP/Emma_Project.html)

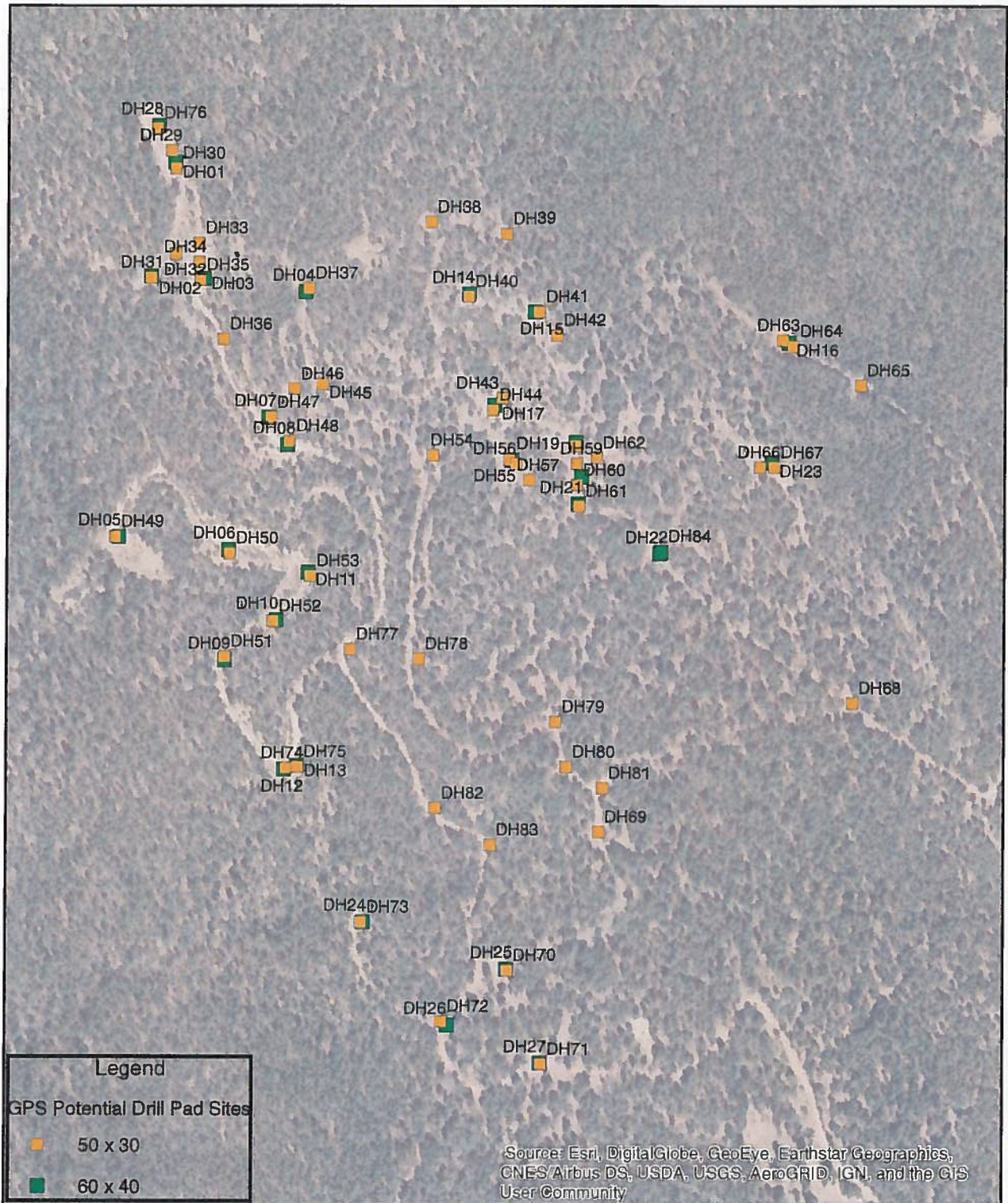


Figure 1: CoMexico LLC Potential Drill Sites for Tererro Exploration Project, Santa Fe County, New Mexico.

## **General Concerns Related to NMOSE Regulation of Exploratory Borehole Drilling Encountering Groundwater and Associated Plugging of those Borings**

Well drilling activities, including exploratory borehole drilling (drilling of “mine drill holes”) that penetrate a water-bearing stratum and well plugging, are regulated in part under 19.27.4 NMAC (New Mexico Administrative Code) promulgated 6/30/2017, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the NMOSE (New Mexico Office of the State Engineer). Therefore, a New Mexico licensed Well Driller shall perform the drilling and plugging of exploratory boreholes that encounter groundwater.

Additionally, all onsite well drilling activities, including but not limited to exploratory borehole drilling encountering groundwater and plugging of such water-bearing boreholes shall be conducted under the supervision of the New Mexico licensed Well Driller or a NMOSE-registered Drill Rig Supervisor under the direction of the licensed Well Driller.

Plugging of exploratory boreholes that encounter groundwater will occur under joint jurisdiction of the NMOSE and MMD (Mining and Minerals Division). Filing and acceptance of the NMOSE Well Plugging Plan of Operations ([http://www.ose.state.nm.us/STST/Forms/WD-08%20Well%20Plugging%20Plan%20of%20Operations\\_2016-01-20\\_final.pdf](http://www.ose.state.nm.us/STST/Forms/WD-08%20Well%20Plugging%20Plan%20of%20Operations_2016-01-20_final.pdf)) in conjunction with filing NMOSE Applications for Permit to Drill a Well with no Consumptive Use of Water ([http://www.ose.state.nm.us/WR/Forms/WR-07%20Application%20for%20Permit%20to%20Drill%20a%20Well%20with%20No%20Consumptive%20Use\\_2012-06-14\\_final.pdf](http://www.ose.state.nm.us/WR/Forms/WR-07%20Application%20for%20Permit%20to%20Drill%20a%20Well%20with%20No%20Consumptive%20Use_2012-06-14_final.pdf)) are required where it is expected water-bearing stratum/strata may be penetrated by project boreholes.

Additional NMOSE filings will be required where it is requested that an exploratory borehole be converted to a water well. The well design and construction shall be subject to the provisions of 19.27.4 NMAC Regulations. Appropriation of water from such a conversion may require a water right. **The MMD may disallow the conversions of exploratory borings to water wells if not permitted specifically in the MMD permit.**

Any exploration drilling where a water-bearing stratum is encountered will be subject to pertinent sections of those rules and regulations contained in 19.27.4 NMAC (6/30/2017), including but not limited to Sections 19.27.4.30.C NMAC for plugging and abandonment of non artesian wells; 19.27.4.31 NMAC for artesian wells; and 19.27.4.36 NMAC for mine drill holes that encounter water. A complete version of the NMOSE 19.27.4 NMAC regulations can be found on the NMOSE website at:  
<http://164.64.110.239/nmac/parts/title19/19.027.0004.htm>

### **Use/extraction of Temporary Casing**

When drilling through caving overburden or unconsolidated geologic units, use of temporary casing may be desired. Any temporary casing should be inserted into a borehole of sufficiently large diameter to allow easy extraction upon termination of all drilling. To help prevent deleterious fall-in or drainage of cuttings/sediments into the annulus outside the temporary casing, the top of the annulus should be made appropriately fluid-tight.

If the temporary casing becomes stuck in-place, difficulties in the proper plugging of the borehole and resultant potential for commingling of aquifers or surface water drainage may occur via an

unsealed annulus. When setting of temporary casing occurs or is expected, appropriate detail of the proposed casing extraction and borehole clean-out process prior to plugging will be required in the NMOSE Well Plugging Plan of Operations if the borehole encounters a water-bearing stratum. Should casing be left in a water-bearing boring, 19.27.4 NMAC provisions apply, including those requiring an appropriate type and extent of annular seal surrounding the well casing.

#### **Exploratory Borehole Plugging**

Terms of borehole plugging will be established jointly by the evaluation of the NMOSE Well Plugging Plan of Operations and the review of the relevant MMD application for water-bearing boreholes. Approved high-solids bentonite abandonment-grade sealants and/or approved cement slurries will be required for plugging as deemed hydrogeologically appropriate by the agencies. If the exploratory borings do not encounter groundwater, MMD plugging regulations (19.10.3 NMAC) prevail over those of 19.27.4 NMAC.

NMOSE well plugging regulations require tremie placement of the column of well sealant, which shall extend from the bottom of the borehole to ground surface. The NMOSE defers to the discretion of the MMD for the choice of sealant versus natural fill in the upper ten to twelve feet of a borehole plug to facilitate site restoration.

Required plugging of water-bearing exploratory borings shall occur within the timeframe specified by either the NMOSE or MMD. The MMD may enforce a plugging time frame that would minimize cave-in and the potential for incomplete plugging due to blockages in the borehole.

#### **Drill Rig Fuels, Oils and Fluids**

Drill rigs contain and consume fuels, oil, and hydraulic fluids, and are subject to leaks. The rig often remains in-place longer than other pieces of exploration equipment onsite, are frequently running, and are positioned immediately above and adjacent to the open borehole. As a standard practice to prevent contamination and reduce site cleanup activities, it may be beneficial to use bermed, impermeable ground sheeting under the drill rig. Consideration of bermed containment volume sufficient to accommodate a high-intensity precipitation event is also a good practice.



State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Michelle Lujan Grisham**  
Governor

**Sarah Cottrell Propst**  
Cabinet Secretary

**Todd E. Leahy, JD, PhD**  
Deputy Cabinet Secretary

**Christy Tafoya**, Director  
State Parks Division



July 8, 2019

Fernando Martinez, Director  
Mining and Minerals Division  
Energy, Minerals and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Dear Director Martinez:

The Energy, Minerals and Natural Resources Department (EMNRD), State Parks Division (State Parks) has been made aware of a mining exploration permit submitted to the EMNRD, Mining and Minerals Division regarding the potential Terrero mine exploration. State Parks is an interested party as related to this exploration permit as a new park, Pecos Canyon State Park, is being developed east of the proposed mine exploration area.

Enclosed please find a map that depicts the proposed mine exploration area as related to the recreation areas that will be a part of Pecos Canyon State Park.

It appears that the only impact that the proposed mine exploration could have on Pecos Canyon State Park would be increased traffic within the canyon. However, if the mine exploration were to result in an operating mine, there could be significant resource and operational impacts to Pecos Canyon State Park.

For example, in the past, the Terrero mine operated east of the Jamie Koch recreation area. This operation resulted in a superfund site that affected both soil and water quality in this area and limits operations and recreational development within the Jamie Koch recreation area.

If the mine exploration is permitted, State Parks requests information as related to the permit stipulations with regard to opportunities for input and collaboration. In addition, State Parks would like to be identified as a stakeholder regarding any mine development beyond the exploration in Pecos Canyon.

July 8, 2019

Page 2

Please let me know if you have any questions. I can be reached at 505-476-3366. Thank you for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Christy Tafoya". The signature is fluid and cursive, with a long horizontal stroke at the end.

Christy Tafoya, Director  
State Parks Division

Enclosure

cc: Sarah Cottrell Propst, Cabinet Secretary, Energy, Minerals and Natural Resources  
Department

**From:** [Roth, Daniela, EMNRD](#)  
**To:** [Ohori, David, EMNRD](#)  
**Cc:** [Frederick, Andrew G, EMNRD](#); [McCarthy, Laura, EMNRD](#); [Burton, Melvin D -FS](#); [Kennedy, Kathryn L -FS](#); [Pruitt, Mary; Romero, Steve F -FS](#)  
**Subject:** RE: Regular exploration application, Tererro Exploration Project, Comexico, LLC (Permit No. SF040ER)  
**Date:** Tuesday, August 6, 2019 10:25:55 AM

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Dear David Ohori:

Thank you for inviting me to participate in the site visit of the proposed Tererro Exploration Project by Comexico , LLC, in Santa Fe County, NM (Permit No. SF040ER).

Based on my observations during the site visit I have the following recommendations to avoid or minimize potential impacts to the state and federally listed Holy Ghost ipomopsis (*Ipomopsis sancti-spiritus*), which is known to occur within a mile of the lease area and immediately adjacent to one of the proposed access roads:

Presence/absence surveys need to be performed along all proposed access roads, well pads, staging areas and any other areas where ground disturbance may occur. Surveys should include a buffer allow for incidental expansion of the project footprint during project activities. Our current understanding of the species' habitat preference indicates that it primarily occurs in disturbed sites, especially along road cuts. Hence special emphasis should be given to thorough surveys along all access roads. Surveys should be performed by a qualified, experienced botanist at the appropriate time of year when detection of plants is possible (now through the middle of September). If plants are detected during the surveys, appropriate mitigation measures need to be established to avoid or minimize impacts to plants. Consultation with the USFWS would be required.

In order to avoid impacts to the Indian Creek population of the Holy Ghost ipomopsis, the Indian Creek access road passing by this population should be off-limits for access. If this is not possible, traffic associated with the project would likely adversely affect this population, hence consultation with the USFWS would be required. Although plants are currently fenced, they grow within a foot or less of the fence, which is immediately adjacent to the access road. Traffic may impact the seed bank and seedlings occurring outside the fenced area, neither of which may be documented through surveys. Increased traffic and potential road improvements along the Indian Creek access road will likely compact soils, rendering the habitat for establishing new plants in the future unsuitable. In addition, increased traffic along the road has the potential of introducing invasive species to this site, including Scotch thistle (*Onopordum acanthium*) and smooth brome (*Bromus inermis*), both of which I observed along the lower portions of the access roads. This could negatively impact the continued existence of the very fragile population of Holy Ghost ipomopsis at Indian Creek.

Please let me know if I can be of any further assistance.

Sincerely,

**Daniela Roth**

Botany Program Coordinator  
EMNRD – Forestry Division  
1220 S. Saint Francis Drive  
Santa Fe, NM 87505  
505-476-3347

<http://www.emnrd.state.nm.us/SFD/>

**From:** [Roth, Daniela, EMNRD](#)  
**To:** [Ohori, David, EMNRD](#)  
**Subject:** RE: Request for comments on the amended regular exploration application, Tererro Exploration Project, Comexico, LLC (Permit No. SF040ER)  
**Date:** Wednesday, July 24, 2019 8:39:26 AM

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Dear David Ohori:

Thank you for giving me the opportunity to review and comment on the amended regular exploration application, Tererro Exploration Project, Comexico, LLC, in Santa Fe County, NM (Permit No. SF040ER).

The proposed decrease in the number of drill holes does not change my previous analysis of the potential impacts to the federally and state listed endangered Holy Ghost ipomopsis (*Ipomopsis sancti-spiritus*) and recommend surveys for the species during the appropriate time of year throughout the project area. If plants are found potential impacts need to be avoided or mitigated in consultation with the USFWS.

Please let me know if I can be of further help.

Sincerely,

**Daniela Roth**

Botany Program Coordinator  
EMNRD – Forestry Division  
1220 S. Saint Francis Drive  
Santa Fe, NM 87505  
505-476-3347  
<http://www.emnrd.state.nm.us/SFD/>

**From:** [Roth, Daniela, EMNRD](#)  
**To:** [Ohori, David, EMNRD](#)  
**Subject:** RE: Regular Exploration Application, Terrero Exploration Project, Comexico , LLC (Permit No. SF040ER)  
**Date:** Friday, June 21, 2019 7:37:38 AM

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Dear David Ohori:

Thank you for providing me the opportunity to review and comment on the Regular Exploration Application, Terrero Exploration Project, by Comexico , LLC, in Santa Fe County, NM (Permit No. SF040ER).

Based on the information provided, the project has a significant potential to impact the federally and state listed endangered Holy Ghost Ipomopsis (*Ipomopsis sancti-spiritus*). Although the application states in multiple locations that a biological report is supplementing the application, no such a report appears to be attached to documents provided through the Permit website. In the absence of a survey and a report addressing potential impacts on this highly endangered plant, I have to assume that the project will have potentially significant impacts to this endangered species. If the biological survey report is available, please provide it for a more detailed review and analysis. Either way, I highly recommend formal consultation with the U.S. Fish & Wildlife Service to address potential impacts and mitigation measures to avoid or minimize impacts.

Please let me know if you have any questions.

Sincerely,

**Daniela Roth**

Botany Program Coordinator  
EMNRD – Forestry Division  
1220 S. Saint Francis Drive  
Santa Fe, NM 87505  
505-476-3347

<http://www.emnrd.state.nm.us/SFD/>