



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau
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BUTCH TONGATE
Cabinet Secretary

J.C. BORREGO
Deputy Secretary

MEMORANDUM

Date: June 11, 2018

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
Neal Butt, Air Quality Bureau

Subject: **NMED Comments, David and Chris Corelis, Corelis Minimal Impact Exploration Project, Santa Fe County, New Mexico, MMD Permit No. SF038EM**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on May 24, 2018 requesting NMED review and provide comments on the above-referenced MMD permitting action. In accordance with 19.10.3.302.G NMAC, NMED is providing comments within the 20-day period prescribed by the regulation. NMED has the following comments.

Background

David and Chris Corelis (Applicants) propose a minimal impact exploration project through excavation of multiple small pits and/or trenches throughout the project/claim area. The exploration will occur on mining claims held by the Applicants on land managed by the Bureau of Land Management. The mining claims are located in the New Placers Mining District of the San Pedro Mountains located approximately two miles southeast of Golden, New Mexico in Sections 21 and 22, T12N, R7E. The purpose of the proposed exploration project is to evaluate potential reserves of gold, silver and copper minerals.

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

The Applicant did not provide the ground water total dissolved solids concentration information in the application as required by 19.10.3.302.D.(5) NMAC. NMED cannot evaluate potential water quality impacts to ground water without the information required by regulation. MECS personnel did review the Office of the State Engineer (OSE) Points of Diversion (POD) database to evaluate the presence of ground water production wells in the area of the proposed project. Numerous ground water production wells were listed in the OSE POD database in the general area of the project. The depth to ground water in the wells was observed to be 120 to 600 feet below ground surface. As stated in the application, the exploration project will consist of excavation of multiple small pits and trenches that will be advanced to evaluate potential mineral reserves. MECS does not expect impacts to water quality due to the excavations being conducted in unconsolidated material. Due to the shallow nature of surface and subsurface disturbance of the excavations, little potential exists to contaminate ground water resources in the vicinity of the project assuming that the excavations are filled and reclaimed in the manner described in the application.

NMED Summary Comment

NMED finds that the minimal impact 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: Bruce Yurdin, Division Director, NMED-WPD
Shelly Lemon, Bureau Chief, SWQB
Liz Bisbey-Kuehn, Bureau Chief, AQB
Fernando Martinez, Division Director, EMNRD-MMD
Jimmy Hollen, Lead Staff, EMNRD-MMD
Kurt Vollbrecht, Program Manager, MECS



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BUTCH TONGATE
Cabinet Secretary

J.C. BORREGO
Deputy Secretary

MEMORANDUM

DATE: June 11, 2018

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

FROM: Alan Klatt, Environmental Scientist & Specialist
Watershed Protection Section
Surface Water Quality Bureau

Jennifer Foote, Environmental Scientist & Specialist
Point Source Regulation Section
Surface Water Quality Bureau

RE: **Request for Comments, Minimal Impact Exploration Project, Corelis
Exploration Project, Santa Fe County, MMD Permit No. SF038EM**

The New Mexico Surface Water Quality Bureau (SWQB) has completed its review of the above-mentioned mining project. On May 24, 2018 SWQB received a request for comments from the Minerals and Mining Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department through the Groundwater Quality Bureau of the New Mexico Environment Department regarding the proposed exploration for precious metals within the New Placers Mining District located on lands and mining claims managed by the Bureau of Land Management approximately 2 miles southeast of Golden, New Mexico. The total disturbance area will be limited to 1.29 acres and will involve the use of a D6 bulldozer and trackhoe to expose mineralized areas to a maximum depth of 20 feet below current adit levels. Rolling reclamation will be performed such that the total excavation will not exceed 1000 yards. The application does not report expected direct impacts to waters of the state or riparian areas.

Pursuant to Section 19.10.3.304.G NMAC, SWQB has the following comments:

Surface runoff from the proposed exploration areas would flow to Arroyo Una de Gato, Arroyo Tonque, and then to the Rio Grande. Arroyo Una de Gato is subject to 20.6.4.98 NMAC (State of New Mexico, Standards for Interstate and Intrastate Surface Waters) and has designated uses for livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. The New Mexico surface water quality standards (20.6.4 NMAC) apply at all times.

The existing network of roads and associated gullies already present throughout this area constitute a major pathway for accelerated erosion and sedimentation. The proper design and maintenance of roads plays a critical role in protecting water quality. 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).
- 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”¹. 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. Operator should commit to repair any surface disturbance they caused.
- Roads, pads, and other facility structures should be set back a minimum of 100 feet from any watercourses, including springs, wetlands, and arroyos.
- 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.
- The applicant should design and construct containment systems capable of retaining stormwater running off of the mining area during precipitation events. The containment system should be sufficient in size to contain stormwater generated within its catchment area from 100-year, 3-day storm event or less.

¹ <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/operations-and-production/the-gold-book>

- A National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) is required for stormwater discharges associated with certain industrial activities. This project will disturb one or more acres, therefore a MSGP stormwater discharge permit under Section G Metal Mining is required. To be covered (i.e., authorized to discharge) under the MSGP, the operator(s) must submit to USEPA a complete and accurate Notice of Intent (NOI). Permit information and information on how to apply for permit coverage is available at:
<https://www.epa.gov/npdes/stormwater-discharges-industrial-activities>.
- A Stormwater Pollution Prevention Plan (SWPPP) must be prepared for the site prior to submitting the NOI for coverage under the MSGP. In addition, appropriate Best Management Practices (BMPs) must be designed, installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (e.g., sediment, oil and grease, etc.) in stormwater runoff from entering waters of the U.S. If pre-active mining earth disturbances do not result in an active mine being established, the permittees must stabilize the site before permit termination (see Part 8.G.4.5 of the MSGP Permit). However, when active mining activities are to occur and a well-delineated active mining area is established, disturbed areas within the active mine area would not need to be stabilized, because the active mining-related MSGP requirements would then apply up to the point of mine closure.
- Discharge of stormwater from disturbed areas to any water of the U.S. without a NPDES permit may be a violation of the Clean Water Act.

If you have any questions related to these comments, please contact Alan Klatt at 505-827-0388.



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BUTCH TONGATE
Cabinet Secretary
JUAN CARLOS BORREGO
Deputy Cabinet Secretary

MEMORANDUM

DATE: June 4, 2018

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

FROM: Neal Butt, Environmental Analyst
Control Strategies Section, Air Quality Bureau

RE: Request for Comments, Minimal Impact Exploration Project, Corelis Exploration Project, Santa Fe County, MMD Permit No. SF038EM

The New Mexico Air Quality Bureau (AQB) has completed its review of the above-mentioned mining project. 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

The applicant, David Corelis, is proposing to explore for precious metals within the New Placers Mining District in the San Pedro Mountains and located on federal lands and mining claims managed by the Bureau of Land Management. The proposed mining exploration project is located in Township 12N Range 7E Sections 21-22, approximately 2 miles southeast of Golden, in Santa Fe County, New Mexico.

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.”

In addition, pursuant to Subsection A of 19.10.3.302 NMAC, *Minimal Impact Exploration Operations*:

“A minimal impact exploration operation will not exceed 1000 cubic yards of excavation per permit. Disturbances for constructed roads, drill pads and mud pits shall be no more than 5 acres total and will not be counted in the excavated materials. The type of road construction, the number and type of drill pads, and other disturbances when considered with site specific conditions will be major factors in determining eligibility for minimal impact status which is in the discretion of the director.”

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

Although fugitive dust is a common problem at mining sites, the AQB does not have a rule that regulates fugitive dust at this time. Meanwhile, we recommend controls to minimize emissions of particulate matter from fugitive dust sources to limit public health and traffic safety impacts. The following control strategies can be included in a comprehensive fugitive dust control plan (from EPA’s *Compilation of Air Pollutant Emission Factors*, AP-42):

Unpaved haul roads and traffic areas: paving of permanent and semi-permanent roads, application of surfactant, watering, and traffic controls, such as speed limits and traffic volume restrictions.

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 a permit.

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) 476-4317.

GOVERNOR
Susana Martinez



DIRECTOR AND SECRETARY
TO THE COMMISSION
Alexandra Sandoval

DEPUTY DIRECTOR
Donald L. Jaramillo

STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

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RALPH RAMOS
Las Cruces
BOB RICKLEFS
Cimarron
ELIZABETH A. RYAN
Roswell
THOMAS "DICK" SALOPEK
Las Cruces

15 June 2018

James Hollen
Permit Lead, Mining Act Reclamation Program
Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505

***RE: Minimal Impact Exploration Permit Application, Corelis Exploration Project,
SF038EM; NMDGF No. 18467***

Dear Mr. Hollen,

The New Mexico Department of Game and Fish (Department) has reviewed the project referenced above. David Corelis is proposing to conduct minimal impact exploration activities for precious metals within the New Placers Mining District in the San Pedro Mountains on federal lands and mining claims managed by the Bureau of Land Management (BLM). Exploration activities will consist of multiple small pits and/or trenches utilizing a bulldozer, track-hoe, and skid steer front end loader and rock hammer attachment.

To prevent wildlife entrapment, the permit states that planned pit excavations will incorporate 3:1 slopes for wildlife escape ramps. For trenches, the Department provides the following recommendations.

- Whenever possible, locate trenching activities within previously disturbed areas, such as existing roads, right-of-ways, or previously explored areas. To the extent possible, avoid trenching in undisturbed habitat.
- Trench during the cooler months, (October – March).
- Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at minimum every 300 feet, and preferably no more than 100 feet apart. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should not exceed 45 degrees (1:1), and ideally be less than 30 degrees. Alternatively, and more effectively, wildlife can be protected from trench entrapment by constructing silt fencing or similar barriers that are tied to T-posts surrounding the open trench. Silt fencing should be buried at the base to preclude terrestrial animals from moving below the fence.
- Trenches that have been left open overnight should be inspected the following day, preferably by a professional biologist. Any animals trapped in the trench should be removed prior to backfilling, especially where state- or federally-listed Threatened or Endangered amphibians, reptiles, or small mammals occur. Required tools include

snake tongs for removing snakes, and a dip net for capturing and removing amphibians, lizards, and small mammals. Many animals trapped in a trench will burrow under loose soil, so to the extent possible, disturb loose soil in the trench to uncover trapped animals for removal. Animals should be relocated at least 50 yards away from the open trench in undisturbed habitat.

Migratory birds are protected against direct take under the federal Migratory Bird Treaty Act (16 U.S.C. Sections 703-712) and New Mexico State Statutes (17-2-13 and 17-2-14 NMSA), unless permitted by the applicable regulatory agency. To minimize the likelihood of adverse impacts to migratory bird nests, eggs or nestlings, the Department recommends that ground disturbance and vegetation removal activities be conducted outside of the breeding season for songbirds and raptors (1 March – 1 September). If ground disturbing and clearing activities during the breeding season cannot be avoided, the area should be surveyed for active nest sites, and when occupied, nest disturbance should be avoided until young have fledged. For any active nests, an adequate buffer zone should be established to minimize disturbance to nesting birds. Buffer distances should be ≥ 100 feet from songbird and raven nests, and 0.25 mile from raptor nests. Active nest sites in trees or shrubs that must be removed 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.

On page 17 of the permit application, the reclamation native plant list for forbs and shrubs was erroneously inserted into the list of what should be native grasses. This error should be corrected by including a list of appropriate native grasses for reclamation. The Department also recommends requesting seed test results from the vendor to avoid inadvertently introducing exotic 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 proposed disturbance area.

Thank you for the opportunity to review and comment on the proposed 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.

Sincerely,



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

cc: USFWS NMES Field Office



Susana Martinez
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 20, 2018

James Hollen, P.G.
Permit Lead
Mining Act Reclamation Program
Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Minimal Impact Exploration Permit Application, Corelis Exploration Project, Santa Fe County, New Mexico, SF038EM (HPD log 107930)

Dear Mr. Ennis:

This letter is in response to the above minimal impact exploration permit application received at the Historic Preservation Division (HPD) on July May 29, 2018. According to the application, the project is within Township 12 North, Range 7 East, Sections 21 and 22.

In accordance with rule 19.10.3 NMAC, *Minimal Impact Operations*, I reviewed our records to determine if cemeteries, burial grounds or cultural resources listed on the State Register of Cultural Properties or the National Register of Historic Places exist within or near the permit area. Our records show that there are no cultural resources listed on the National Register or State Register within or near the proposed permit area and no known cemeteries or burial grounds. Although there are no cultural resources listed on the State or National Register, our records shows two archaeological surveys within the permit areas. These surveys identified two archaeological sites, which are eligible for listing in the National Register of Historic Places (NRHP).

The application states that the surface estate owner is the Bureau of Land Management (BLM), Taos Field Office with privately owned mineral claims. The BLM will consider project effects on any archaeological sites that may be eligible for listing on the National Register pursuant to Section 106 of the National Historic Preservation Act. The BLM may require avoidance of any eligible archaeological sites and an archaeological monitor to ensure that eligible sites are not affected. To the best of my knowledge, the BLM has not consulted with our office about the project.

Please do not hesitate to contact me if you have any questions regarding these comments. I can be reached by telephone at (505) 827-4064 or by email at bob.estes@state.nm.us.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bob Estes", with a long horizontal flourish extending to the right.

Bob Estes Ph.D.
Archaeologist

Log: 107930
Cc: Merrill Dicks
Archaeologist, Bureau of Land Management
Taos Field Office

Ennis, David, EMNRD

From: Roth, Daniela, EMNRD
Sent: Tuesday, May 29, 2018 9:14 AM
To: Hollen, James, EMNRD
Subject: RE: Request for Review and Comment---SF038EM - Corelis Exploration Project

Dear James Hollen:

Thank you for giving me the opportunity to review and comment on the Minimal Impact Exploration Permit Application, Corelis Exploration Project in Santa Fe County, NM (Permit No. SF038EM).

I do not anticipate any impacts to state listed endangered plants from the proposed exploration project as described.

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

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: Hollen, James, EMNRD
Sent: Thursday, May 24, 2018 11:47 AM
To: Roth, Daniela, EMNRD <Daniela.Roth@state.nm.us>
Subject: Request for Review and Comment---SF038EM - Corelis Exploration Project

Attached, please find your electronic copy of correspondence from the NM Mining and Minerals Division regarding the above-referenced subject. Please print copies for your files, as needed. A hard-copy of the letter has been mailed to the recipient via U.S. Mail.

Thank you,

James Hollen - Sr. Mine Reclamation Specialist/Geologist/Archaeologist
Mining Act Reclamation Program, Mining & Minerals Division
New Mexico Energy, Minerals & Natural Resources Dept.
Wendell Chino Building - 3rd Floor, Rm. 360
1220 S. St. Francis Dr. - Santa Fe, NM 87505 - USA
505/476-3436 - james.hollen@state.nm.us
Visit us on the Web at: www.emnrd.state.nm.us




MEMORANDUM


OFFICE OF THE STATE ENGINEER

Hydrology Bureau

DATE: June 12, 2018

TO: James Hollen, Permit Lead, Mining Act Reclamation Program ("MARF")/MMD

THROUGH: Ghassan Musharrafieh, Ph.D., Chief, Hydrology Bureau 

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

SUBJECT: Review and Comments, Minimal Impact Exploration Permit Application, Corelis Exploration Project, Santa Fe County, NM; Permit Tracking No. SF038EM

Introduction & Conclusion

On May 24, 2018, the Hydrology Bureau of the Office of the State Engineer (OSE) received a request from the New Mexico Mining and Minerals Division (MMD) to review and comment on a Minimal Impact Exploration Permit Application, Corelis Exploration Project in Santa Fe County, with Permit Tracking No. SF038EM submitted by David Corelis.

The proposed mining exploration project is located in Township 12N, Range 7E sections 21 and 22 in the San Pedro Mining District, approximately two miles southeast of Golden in Santa Fe County, New Mexico on land administered by the Bureau of Land Management (BLM). The exploration will consist of multiple small pits and/or trenches. The minerals to be explored for are gold, silver, and copper. No dimensions of the pits and trenches are given but the applicant states that the total excavation will be limited to 1000 yards.

No water use, water supply development, or well drilling was discussed in the application. Also no dimensions of the test pits and exploratory trenches were given. The applicant stated that the depths may not exceed 20 feet below the existing adit level, so it is highly unlikely that groundwater will be encountered. Depth to water within one mile of the project area ranges from 150 to 210 feet below ground level (see attached Point of Diversion Summary for two wells in the project area). Provided the trench excavations and pits do not encounter groundwater or are less than 30 feet below the ground level, there are no issues or concerns identified by the Hydrology Bureau with the project, otherwise applicant should contact the OSE Water Rights Division's District office. Section 19.27.4 of New Mexico Administrative Code (NMAC) may apply.

Please find attached the General Concerns List. The Mining and Minerals Division exploratory application and associated filings can be found at:
<http://www.emnrd.state.nm.us/MMD/MARP/SF038EM.html>



New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)	(NAD83 UTM in meters)	X	Y
	RG 35020	Q64 Q16 Q4 Sec Tws Rng			
		1 3 1 28 12N 07E		390075	3900234*

Driller License: 873**Driller Company:** MOORMAN, RONALD L.**Driller Name:** ESTANCIA VALLEY DRILLING**Drill Start Date:** 10/04/1980**Drill Finish Date:** 10/30/1980**Plug Date:****Log File Date:** 12/08/1980**PCW Rcv Date:****Source:** Shallow**Pump Type:****Pipe Discharge Size:****Estimated Yield:****Casing Size:****Depth Well:** 245 feet**Depth Water:** 210 feet

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

6/7/18 3:55 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)	Q64 Q16 Q4 Sec Tws Rng	X	Y
	RG 32946			391948	3903357

Driller License:**Driller Company:****Driller Name:** GRIFFITH**Drill Start Date:****Drill Finish Date:** 01/01/1957**Plug Date:****Log File Date:****PCW Rcv Date:****Source:** Shallow**Pump Type:** WINDMI**Pipe Discharge Size:****Estimated Yield:****Casing Size:****Depth Well:** 250 feet**Depth Water:** 159 feet

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

6/7/18 4:02 PM

POINT OF DIVERSION SUMMARY

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) 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) 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.