

EOG Resources, Inc. 5509 Champions Drive Midland, Texas 79706

April 23, 2018

EMNRD/OCD Attn: Bradford Billings 1220 South St Francis Dr. Santa Fe, NM 87505

Re: Form C-147 with accompanying documentation Condor Reuse Water Facility and Containment Pit

Dear Mr. Billings,

Thank you for allowing EOG to continue to promote water reuse in the State of New Mexico for our operations. Please find attached C-147 form with accompanying documentation for the Condor Reuse Water Facility and Containment Pit.

Please do not hesitate to contact me with any questions, comments for concerns.

Sincerely,

4

Dustin Kinder EOG Resources, Water Resource Manager

energy opportunity growth

Recycling Facility and/or Recycling Containment
Type of Facility: Recycling Facility Recycling Containment*
Type of action: Permit Registration Modification Extension Closure Other (explain)
* At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.
Be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
1. Operator: <u>EOG Resources, Inc.</u> (For multiple operators attach page with information) OGRID #: <u>OGRID #7377</u>
Address: _5509 Champions Dr. Midland, TX 79706
Facility or well name (include API# if associated with a well): <u>Condor Water Recycling Facility and Containment Pit</u>
OCD Permit Number:(For new facilities the permit number will be assigned by the district office)
U/L or Qtr/Qtr <u>SWNW4 / SENW4</u> Section <u>32</u> Township <u>25S</u> Range <u>34E</u> County: <u>Lea</u>
Surface Owner: 🗌 Federal 🖾 State 🗌 Private 🗌 Tribal Trust or Indian Allotment
2.
X <u>Recycling Facility</u> :
Location of recycling facility (if applicable): Latitude 32.0899627 32°05'23.86" Longitude -103.4969305 -103°29'48.94" NAD83
Proposed Use: Drilling* 🛛 Completion* 🗌 Production* 🗌 Plugging *
*The re-use of produced water may NOT be used until fresh water zones are cased and cemented
Other, requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on
groundwater or surface water.
⊠ Fluid Storage
Above ground tanks Recycling containment Activity permitted under 19.15.17 NMAC explain type
Activity permitted under 19.15.36 NMAC explain type:
For multiple or additional recycling containments, attach design and location information of each containment
Closure Report (required within 60 days of closure completion): Recycling Facility Closure Completion Date:
3. X Recycling Containment:
Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)
Center of Recycling Containment (if applicable): Latitude <u>32.0884853</u> <u>32°05'18.54</u> " Longitude <u>-103.4969439</u> <u>-103°29'48.99</u> " NAD83
\Box For multiple or additional recycling containments, attach design and location information of each containment
\square Lined \square Liner type: Thickness <u>60</u> mil \square LLDPE \square HDPE \square PVC \square Other
String-Reinforced
Liner Seams: \square Welded \square Factory \square Other Volume: <u>1MM_bbl</u> Dimensions: L_600_ x W_600_ x D_16 (inside)
Recycling Containment Closure Completion Date:
Keyving Containment Closure Completion Date

Bonding:

4.

Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC (These containments are limited to only the wells owned or

operated by the owners of the containment.)

Bonding in accordance with 19.15.34.15(A)(1). Amount of bond \$_____ (work on these facilities cannot commence until bonding

amounts are approved)

Attach closure cost estimate and documentation on how the closure cost was calculated.

Fencing:

5.

Four foot height, four strands of barbed wire evenly spaced between one and four feet

Alternate. Please specify: <u>Please see attached Variance Request Detail</u>

6. Signs:

7.

🛛 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

Signed in compliance with 19.15.16.8 NMAC

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

 \boxtimes Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting

Ground water is less than 50 feet below the bottom of the Recycling Containment. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes ⊠ No □ NA
 Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. Written confirmation or verification from the municipality; written approval obtained from the municipality 	□ Yes ⊠ No □ NA
 Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division 	🗌 Yes 🛛 No
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; topographic map 	🗌 Yes 🛛 No
Within a 100-year floodplain. FEMA map	🗌 Yes 🛛 No
 Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; visual inspection (certification) of the proposed site 	🗌 Yes 🛛 No
 Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. Visual inspection (certification) of the proposed site; aerial photo; satellite image 	🗌 Yes 🛛 No
 Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site 	🗌 Yes 🛛 No
 Within 500 feet of a wetland. US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site 	🗌 Yes 🛛 No

Recycling Facility and/or Containment Checklist:

Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

Design Plan - based upon the appropriate requirements.

- Operating and Maintenance Plan based upon the appropriate requirements.
- Closure Plan based upon the appropriate requirements.
- Site Specific Groundwater Data -
- Siting Criteria Compliance Demonstrations –
- Certify that notice of the C-147 (only) has been sent to the surface owner(s)

^{10.} Operator Application Certification:

I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): <u>Dustin Kinder</u>	Title: <u>Water Resource Manager</u>
Signature:	Date: 4/23/2018
e-mail address: <u>dustin_kinder@eogresources.com</u>	Telephone:713-571-4670
OCD Representative Signature: for Bradfor	rd Billings Approval Date: August 7, 2018
Title: Environmental Specialist	OCD Permit Number: 1RF-31
OCD Conditions Sequential, dated photo documentat	tion of the construction and build-up process.
Additional OCD Conditions on Attachment	

fOY1821958759

pOY1821959157



Variance Request for Bird Deterrent

Re: Condor Reuse Water Recycling Facility and Containment Pit

EOG Resources, Inc. would like to request the OCD's approval for a variance regarding bird deterrents at the location described above. EOG proposes to utilize the Bird-X Mega Blaster Pro, creating intermittent distress calls to create a "danger zone" that frightens native and or migrating birds and wildlife from the water recycling facility and containment pit area. Two units would be installed, each containing 2 built-in high output amplifiers and houses 20 speakers, capable of producing up to 125 decibels and a frequency range from 2,000 – 10,000 Hz.

Please note that EOG Resources, Inc. is currently utilizing this same bird deterrent, which was approved on OCD Permit No. 12

Please see details below.

Mega Blaster Pro – Specs:

- Coverage: Up to 30 acres from single unit
- Box dimensions: Box 1: 23" x 18" x 16" (23 lbs., unit & speaker), Box 2: 32" x 24" x 5" (17 lbs., solar panel)
- Power Input: 12vDC (3 amps) via solar panel and battery
- Sound Pressure: up to 125 decibels
- Frequency: 2,000–10,000 Hz
- Library of predator calls



- Full customizable to the species of bird in our area of operation
- Compliance: UL & CE listed
- EPA Est. 075310-OR-001
- Included: Generating unit with two built-in high-output amplifiers, 20speaker tower with audio cables, 40 watt solar panel, battery clips, & all mounting hardware
- The unit is typically mounted with a tripod pole setup. The tripod would be a typical sturdy tripod that would be used to support a large PA speaker. The pole that would fit into the top of the tripod that the speaker tower, control box and solar panel would mount to should be ³/₄" diameter and be 6-12 feet tall. The taller the pole the greater the distance the sound will travel.
- The effective range of the Mega Blaster Pro is 30 acres, in a circular coverage pattern around the 20-speaker tower with a radius of about 666 feet. The 20-speaker tower features 5 speakers pointing in each direction to create the even dispersal



This is the typical configuration EOG Resources is currently utilizing at the Southern Red Hills Water Recycling Facility and Containment Pit.







Variance Request for Fencing

Re: Condor Reuse Water Recycling Facility and Containment Pit

EOG Resources, Inc. would like to request the OCD's approval for a variance regarding fencing at the location described above. EOG proposes to utilize a 6 foot galvanized chain link fence with 3 strands of barb wire on the top of the chain link fencing. The 3 strands of barb wire will mounted on a galvanized barb bracket with a 45 degree angle pointing towards the outside of the location. Each post hole will be drilled via auger to ensure a consistent and accurate depth and will be set in concrete. Six 18" x 18" swinging gates will be installed at ground level for temporary waterlines to pass through. The gates will remain closed as depicted in the pictures below to ensure no wildlife can access the containment site when no waterlines are present.

Please note that EOG Resources, Inc. is currently utilizing this same fence design, which was approved on OCD Permit No. 12

Please see details below.



This is the typical configuration EOG Resources is currently utilizing at the Southern Red Hills Water Recycling Facility and Containment Pit.





Condor Reuse Water Recycling Facility and Containment Pit

NMOCD Submittal - C147 Registration Application



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	Recycling Facility and Containment Checklist
III.	List of Attachments
	Attachments and Supporting Documents

Introduction

EOG Resources respectfully requests registration of the herein described Reuse Water Recycling Facility and Containment Pit located in Lea County, New Mexico. The enclosed/attached information will demonstrate compliance with all rules as outlined in 19.15.34 NMAC.

C-147 Detail

Operator and Facility / Location Detail

The proposed reuse water containment facility & containment pit, referred to as the Condor Reuse Water Recycling Facility and Containment Pit, will be owned and operated by EOG Resources, Inc. (EOG) and located in Township 25 South, Range 34 East, and Section 32 in southwestern Lea County.

Recycling Facility Detail

The proposed containment pit will be located adjacent to the Condor Water Recycling Facility and will hold treated water for use in EOG hydraulic fracturing operations. As depicted in the attached schematic, the adjacent recycling facility will utilize advanced water treatment technologies to produce a clean brine effluent prior to storage and subsequent reuse. An oxidation and solids removal/filtering system will treat the incoming influent stream to internal standards sufficient for hydraulic fracturing reuse applications.



Recycling Containment Detail

EOG Resources is proposing to construct a multi-liner containment pit utilizing leak detection systems to ensure an intact leak free barrier system. As depicted in the attached design plan and schematics, *Condor*, the proposed pit will incorporate standards that meet or exceed the required standards per 19.15.34.12 NMAC. The proposed recycle containment will be approximately 600 x 600 inside floor dimensions with 4:1 inside and outside berm grades. Approximate wall height will average 11ft from outside ground level to ensure no surface water run on will occur. The top of levee shall be approximately 20ft wide 2% outside sloping grade to ensure no surface water run on will occur. The containment pit floor and wall preparation will include laser finished grade free of rocks, debris and sharp edges, compacted to a density to ensure an unyielding base. At onset of pit construction, all vegetative material and top soil will be removed and stockpiled at the outside toe of the levee slopes. The interior liner system of the containment pit will consist of a 10 ounce geotextile felt base layer to protect the secondary geomembrane liner from any protruding floor irregularities. The secondary geomembrane liner will be composed of 40 mil HDPE. Between the secondary and primary liners will consist of 200 mil geonet sloping to the leak detection trough. The primary liner consist of 60 mil HDPE liner. All liners will meet or exceed EPA SW-846 method 9090A. All seams will be oriented vertically with 4-6 inch liner overlap and all seam testing shall exceed all guidelines. As depicted in the attached design plan, *Condor*, the proposed containment pit will include a center aligned leak detection trough and collection sump completed with perforated pipe and pump casing allowing for installation of a leak detection pump system. Both inlet and discharge manifold systems, depicted in *Condor*, will be installed to prevent any liner damage from water entrance velocity or hose installation. Two audible bird deterrents will be utilized to deter any native birds and wildlife from the containment pit area.

Bonding

EOG Resources will source and distribute reuse water for the Condor Reuse Water Recycling Facility and Containment Pit from wells solely operated by EOG. Therefore, attached are the details of Bond Number SUR0013939 – Megabond #OGB0959 – State of New Mexico Land Office Oil and Gas Minerals Division

Fencing

Please see Variance detail.

Signage

As shown in the attached example sign, EOG shall place the appropriate signage along the water recycling facility and containment pit perimeter that meets all guidelines established in 19.15.34.12 C NMAC. *See List of Attachments*

Variances

EOG Resources is seeking two variances as indicated in Section 7 of the C-147 registration form, to install two audible Mega Blaster Pro bird deterrents capable of covering up to 30 acres each. The second request is to enclose the perimeter with a 6 foot galvanized chain link fence with 3 strand 45 degree barbed wire arm toppers.

Siting Criteria for Recycling Containment

Enclosed within this submittal are comprehensive third party reports detailing conformity to siting criteria described in Section 8 of the C-147 registration form; a detailed list and description of these attachments can be found in the subsequent section: *List of Attachments*.

Recycling Facility and Containment Checklist

As indicated in Section 9 on the attached C-147 form, all the required attachments have been included on the submittal and certification of C-147 delivery to the landowner is acknowledged.

List of Attachments

Attachments and Supporting Documents

- Water Containment Design and Engineered Drawing
- Water Containment Liner / Leak Detection Detail
- Bond Detail
- Signage Sample



EOG RESOURCES CONDOR AREA CONTAINMENT POND **CONSTRUCTION PLAN** LEA COUNTY, NEW MEXICO

	INDEX
SHEET 1	COVER PAGE
SHEET 2	OVERALL SITE LAYOUT
SHEET 3	POND LAYOUT
SHEET 4	POND CALCULATIONS
SHEET 5	POND CROSS SECTION PROFILES
SHEET 6	DETAILS 1 OF 3
SHEET 7	DETAILS 2 OF 3
SHEET 8	DETAILS 3 OF 3

GENERAL NOTES

- COORDINATE INFORMATION ARE BASED ON STATE PLANES COORDINATE, NEW MEXICO EAST ZONE (4726), NAD 83. THE CONTRACTOR SHALL IDENTIFY ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE CONTRACTOR SHALL IDENTIFY AND LOCATE UTILITY LINES, MONITORING WELLS, SURVEY MONUMENTS, AND OTHER NEARBY STRUCTURES PRIOR TO PERFORMING WORK. UTILITIES, MONITORING WELLS, SURVEY MONUMENTS AND OTHER NEARBY STRUCTURES SHALL BE PROTECTED FROM DAMAGE DURING THIS WORK. ANY DAMAGE TO UTILITY LINES, MONITORING WELLS, SURVEY MONUMENTS, AND OTHER NEARBY STRUCTURES DURING THE WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. COSTS ASSOCIATED WITH THESE REPAIRS SHALL INCLUDE THE ACTUAL REPAIR COSTS AND ANY ENGINEER OR SURVEY COSTS NECESSARY TO COMPLETE THE REPAIR.



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140 TELEPHONE: (817) 744-7512 • FAX (817) 744-7548 WWW.TOPOGRAPHIC.COM





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Description	Unit Quantity	Unit
Liner Areas		
Out-Slope Area	101,583	SQ. FT
Pond Area	525,940	SQ. FT
Rub Sheet	14,800	SQ. FT
I		
6" HDPE Casing Pipe	100	LN. FT
4" HDPE Collection Pipe	642	LN. FT
12" HDPE Suction line	412	LN. FT
Roads		
Berm Drive (6" Gravel)	62,121	SQ. FT
Culverts		
24" CMP	110	LN. FT
Fence		
6' Chainlink Fence	4,270	LN. FT
Mass Grading		
Clearing and Grubbing	18.84	ACRE
Grading	105,804.00	CU. YE

|--|

SCALE: 1" = 200'

100'

LEGEND:

- EXISTING 2' CONTOUR - EXISTING 10' CONTOUR

- PROPOSED 10' CONTOUR

PROPOSED 2' CONTOUR

200'

0'

CUT VOLUME:	105,804 YD ³
FILL VOLUME:	87,397 YD ³
TOPSOIL (6" STOCKPILED):	15,200 YD ³
TOTAL EXPORT(IMPORT):	3,207 YD ³
TOTAL GRADING AREA:	18.84 ACRES
*VOLUMES ASSUME A FILL FACTOR OF 1.20	

POND SUMMARY

MAX VOLUME:	1,276,527 BBLS
MAX AREA:	11.93 ACRES
MAX ELEVATION OF POND:	3,325.90 FT
3' FREEBOARD ELEVATION:	3,322.90 FT
VOLUME AT FREEBOARD:	1,008,398 BBLS

								U U	LEGACY 46	
			S	STAGE ST	ORAGE			ΙŢ	146 LE	
	ELEV	DEPTH (FT)			VOLUME (ACRE FT)	VOLUME (CY)				512 OM
LEAK DECT. SUMP BOTTOM	3,299.40	0.00	0.00	0.00	0.00	0.00			LOYALTY INNOVATION 1400 EVERMAN PARKWAY, STE. FORT WORTH, TEXAS 76140	TELEPHONE: (817) 744-7512 FAX: (817) 744-7548 WWW.TOPOGRAPHIC.COM
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PROFILE A - A

PROFILE B - B







S:\SURVEY\EOG_MIDLAND_ENGINEERING\CONDOR\WORKING\CONDOR_041018.DWG









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- (1) Acceptance of pit construction for liner install:
 - a. Pit foundation and laterals properly compacted, smooth, and free of rocks/debris/sharp edges
 - b. Pit top wide enough to install an anchor trench, and provide adequate room for inspection/maintenance
 - c. Slope of interior subgrade, drainage lines and laterals per specs
- (2) Geomembrane Liner Layers
 - a. Geotextile
 - b. Secondary (lower) liner
 - c. Leak detection system
 - d. Primary (upper) liner
 - e. Anchor trench- Liner edges anchored in the bottom of a compacted earth-filled trench >18"deep
- (3) Geomembrane Properties
 - a. Primary: 60 mil HDPE, equivalent, or better
 - b. Secondary: 40 mil HDPE, equivalent, or better
 - c. Impervious, synthetic material resistant to UV, petroleum hydrocarbons, salts, and acidic and alkaline solutions
 - d. Comply with EPA SW-846 Method 9090A, or subsequent relevant publication
- (4) Geomembrane Install
 - a. Field- Welded Liner seams
 - i. Performed by Qualified Personnel
 - ii. Thermally seamed (hot wedge) with a double track weld to create air pocket
 - iii. 4-6" liner overlap
 - iv. Number of seams minimized
 - v. Seams oriented seams up and down slopes
 - vi. No horizontal seams <5' of the slope toe
 - b. Geomembrane Testing
 - i. Performed by Qualified Personnel
 - ii. Non-destructive Air Channel Testing
 - iii. Destruct testing
 - iv. Vacuum Testing
 - v. Spark Testing

PO Box 1806 Aledo, TX 76008 P: (817) 441-1235 F: (817) 441-1270 www.mustangenergyservices.com

- (5) Other installed items
 - i. Vents
 - ii. Rub Sheets
 - iii. Boots
 - iv. Sump aggregate
 - v. Solid/perforated pipes
 - vi. Escape Ladders
 - vii. Height Markers
 - viii. Conductive Liner
- (6) Leak Detection System
 - a. 200 mil or greater Geonet or Geocomposite drainage liner
 - b. Installed between upper/lower geomembrane liners
 - c. Piping collection system
 - d. Drainage, collection, and removal system sloped to facilitate the earliest possible leak detection
 - e. Pipe to convey collected fluids to a collection/disposal system located outside the permanent **pit's perimeter**

PO Box 1806 Aledo, TX 76008 P: (817) 441-1235 F: (817)4411270 www.mustangenergyservices.com



RIDER

To be attached to and form part of Bond No. SUR0013939.

Issued on behalf of EOG Resources, Inc as Principal, and in favor of Commissioner of Public Lands, New Mexico State Land Office as Obligee.

It is agreed that:

Bond is changed to include the following EOG Subsidiaries under State Land Bond No. OGB0959:

EOG Resources & Meridian Oil, EOG Resources & Mitchell Energy, EOG Resources & Murchison O&G, EOG Resources & Nortex G&O Co., EOG Resources & Read & Stevens, EOG Resources Marketing, Inc., EOG Resources Inc, Enron Oil and Gas Co., Enron Oil & Gas, EOG Resources & Internorth Inc, EOG Resources & Meridian Oil, EOG Resources & Sun Operating, Enron Oil & Gas Company, & EOG Resources

This rider shall become effective as of February 13, 2012

PROVIDED, however, that the liability of the Surety under the attached bond as changed by this Rider shall not be cumulative.

Signed, sealed and dated February 13, 2012.

Commissioner of Public Lands, New Accepted: Mexico State Land Office

Obligee

Ву: _____

By: Argonaut Insurance Company Attorney-in-Fact Gina Rodrig

EOG Resources, Inc

Principal

By: Helen Y. Lim, VP & Treasurer

Argonaut Insurance Company 225 W. Washington, 6th Floor Chicago, IL 60606

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the Argonaut Insurance Company, a Corporation duly organized and existing under the laws of the State of Illinois and having its principal office in the County of Cook, Illinois does hereby nominate, constitute and appoint: Donald R. Gibson, Sandra Parker, Tannis Mattson, Melissa Haddick, Terri Morrison, Gina Rodriguez

its true and lawful agent and attorney-in-fact, to make, execute, seal and deliver for and on its behalf as surety, and as its act and deed any and all bonds, contracts, agreements of indemnity and other undertakings in suretyship provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$15,000,000.00

This Power of Attorney is granted and is signed and sealed under and by the authority of the following Resolution adopted by the Board of Directors of Argonaut Insurance Company:

"RESOLVED, That the President, Senior Vice President, Vice President, Assistant Vice President, Secretary, Treasurer and each of them hereby is authorized to execute powers of attorney, and such authority can be executed by use of facsimile signature, which may be attested or acknowledged by any officer or attorney, of the Company, qualifying the attorney or attorneys named in the given power of attorney, to execute in behalf of, and acknowledge as the act and deed of the Argonaut Insurance Company, all bond undertakings and contracts of suretyship, and to affix the corporate seal thereto."

IN WITNESS WHEREOF, Argonaut Insurance Company has caused its official seal to be hereunto affixed and these presents to be signed by its duly authorized officer on the 15th day of September, 2008. Argonaut Insurance Company

By:

Michael E. Arledge President

STATE OF TEXAS COUNTY OF BEXAR SS:

On this 15th day of September, 2008 A.D., before me, a Notary Public of the State of Texas, in and for the County of Bexar, duly commissioned and qualified, came THE ABOVE OFFICER OF THE COMPANY, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of same, and being by me duly sworn, deposed and said that he is the officer of the said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution adopted by the Board of Directors of said Company, referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my Official Seal at the County of Bexar, the day and year first above written.



(Notary Public)

I, the undersigned Officer of the Argonaut Insurance Company, Illinois Corporation, do hereby certify that the original POWER OF ATTORNEY of which the foregoing is a full, true and correct copy is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand, and affixed the Seal of said Company, on the 13th day of February

Robert F. Thomas Vice President

THIS DOCUMENT IS NOT VALID UNLESS PRINTED ON SHADED BACKGROUND WITH BLUE SERIAL NUMBER IN THE UPPER RIGHT HAND CORNER. IF YOU HAVE QUESTIONS ON AUTHENTICITY OF THIS DOCUMENT CALL (210) 321 - 8400.

ONLINE Version NEW MEXICO STATE LAND OFFICE – Oil, Gas, and Minerals Division BOND FOR CONTRACT PERFORMANCE AND SURFACE OR IMPROVEMENT DAMAGE Surface Improvement Damage Megabond

	BOND NO. SUR0013920 (For use of Surety C
Know all men by these presents	BOND NO (For use of State Land Office)
EOG Resources, Inc., P.O. Box 4362, Houston, TX 77210-4362	, as Principal,
and Argonaut Insurance Company	_, as Surety, a corporation organized,

existing and doing business under and by virtue of the laws of the State of <u>Illinois</u> and

authorized to transact a surety business in the State of New Mexico, are held and firmly bound unto the New Mexico Commissioner of Public Lands in the sum of Twenty-five Thousand Dollars (\$25,000) for the following uses:

1. For the use and benefit of the Commissioner, to secure the performance of said Principal as lessee under one or more state leases or permits for minerals, oil and gas, coal or geothermal resources or as holder under one or more state rights-of-way or easements which Principal has heretofore executed or may hereafter execute with the Commissioner; and

2. For the use and benefit of the Commissioner, state surface lessees, state land contract purchasers, state patentees, and their successors and assigns, to pay for damages to the surface of lands subject to a state lease or permit for minerals, oil and gas, coal or geothermal resources or a state right-of-way or easement held by Principal, or for damages to surface improvements located thereon, suffered by reason of Principal's operations under a state lease or permit for minerals, oil and gas, coal or geothermal resources or under a state right-of-way or easement.

For the payment of said sum, well and truly to be made, Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

The conditions of the foregoing obligations are:

1. If the above bound Principal or its successors or assigns shall well and truly perform and keep all terms, covenants, conditions, and requirements of all state leases for minerals, oil and gas, coal or geothermal resources and of all state rights-of-way and easements heretofore or hereafter executed by the Commissioner and Principal, including the payment of royalties when due and compliance with all established mining plans; and

2. If Principal or its successors or assigns shall in all respects make good and sufficient recompense, satisfaction or payment to the Commissioner of Public Lands for damages to the surface of lands subject to a state lease or permit for minerals, oil and gas, coal or geothermal resources or a state right-of-way or easement held by Principal and for damages to livestock, water, crops, tangible improvements or surface improvements of any kind located thereon suffered by reason of Principal's operations under such state lease, permit, right-of-way or easement heretofore or hereafter executed by the Commissioner and Principal;

THEN, the obligation to pay the sum of Twenty-five Thousand Dollars (\$25,000) shall be null and void.

If, however, Principal shall default or otherwise fail in performance under such state lease, permit, right-ofway or easement, including the failure to pay royalties when due or to comply with established mining plans, or if Principal shall fail or refuse to make good and sufficient recompense, satisfaction or payment to the Commissioner for damages to the surface of the above designated lands or to improvements located thereon, then the obligation to pay said sum shall remain in full force and effect.

The liability of Surety upon this bond shall not expire upon the termination of any state lease or permit or any

renewal or extension thereof for minerals, oil and gas, coal or geothermal resources or any state right-of-way or easement or any renewal or extension thereof which Principal or its successors or assigns has heretofore executed or may hereafter execute with the Commissioner, but shall be and remain in full force and effect until released in writing by the Commissioner of Public Lands.

Principal and Surety further agree that in the event an action is brought on this bond and a court of competent jurisdiction determines Principal or Surety is in breach of the agreements contained in this bond, Principal or Surety or both of them shall pay to the Commissioner the costs associated with the recovery of the amounts due hereunder, including reasonable attorneys' fees.

This bond is executed pursuant to the laws of the State of New Mexico, including Sections 19-8-24, 19-9-12, 19-10-26, 19-13-19, and 46-6-1 through -9, NMSA 1978.

The premium for which	this bond is written is One H	undred Thirteen and No/100De	ollars.
In witness whereof we h	ereunto set our hands this <u>3</u>	0th day of January, 20 12	
EOG Resources, Ir PRINCIPAL P.O. Box 4362, Hous Andress BY By Signature Helen Title	ston, TX 77210-4362	Argonaut Insurance Company SURETY 225 W. Washington, 6th Floor, Chicago, Address BY Ter Altorney-in-Fact Signature Gina Rodriguez	
(Note: Principal, if corp Corporate seal here.)	poration, affix	(Note: Corporate surety, affix Corporate seal here.)	
STATE OF)) ss.		
COUNTY OF)		
	of, 20		
		me as (his, her, their) free act and deed.	own io
- ,		seal on the day and year in this certificate first above written.	
		(Notary Seal)	
		(Notary Seal)	

	ACKNOWLEDGMENT FOR	RM FOR CORPORATION
STATE OF TEX	AS::)	
) ss.	
COUNTY OF <u>HAR</u>	RIS)	
On this <u>19th</u> day o	f January , 20 12	,
before me personally ap	opeared <u>Helen Y. Lim</u>	, to me personally known, who, being by
me duly sworn, did say	that s/ he is <u>VP & Treasurer</u>	ofEOG Resources, Inc
and that this instrument	t was signed and sealed on behalf of s	aid corporation by authority of its board of directors, and
acknowledged said inst	rument to be the free act and deed of s	said corporation.
IN WITNESS WHEREOF,	I have hereunto set my hand and seal on a	the day and year in this certificate first above written
pril 3, 2014 My commission expires	Mary J. Grisaffi Notary Public name	Signature notary: MARY J. GRISAFFI Notary Public, State of Texas My Commission Expires
	ACKNOWLEDGMENT FORM	FOR CONDORATE SUPPLY 203, 2014
STATE OF TEXAS		
) ss.	
COUNTY OF Harris		
	;)	
		12,
On this 30th day		12, , to me personally known, who, being
On this <u>30th</u> day before me personally ap	y of, 20, 20	, to me personally known, who, being
On this <u>30th</u> day before me personally ap by me duly sworn, did s	y of January , 20 1 ppeared Gina Rodriguez say that s/ he is Attorney-in-Fact	, to me personally known, who, being
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen acknowledged said inst IN WITNESS	y of, 20, 20 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s rument to be the free act and deed of s	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen acknowledged said inst IN WITNESS	y of, 20, 20 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s rument to be the free act and deed of s	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation.
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen acknowledged said inst IN WITNESS above written. 11-30-2014	y ofJanuary, 20_1 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s rument to be the free act and deed of s WHEREOF, I have hereunto set my ha Elizabeth Rhodes	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation.
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen acknowledged said inst IN WITNESS above written.	y ofJanuary, 20_1 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s rument to be the free act and deed of s WHEREOF, I have hereunto set my ha	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation.
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrument acknowledged said inst IN WITNESS above written. <u>11-30-2014</u> My commission expires	y ofJanuary, 20_1 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s rument to be the free act and deed of s WHEREOF, I have hereunto set my ha Elizabeth Rhodes	ito me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation. and and seal on the day and year in this certificate first Eligabether Rhodes Signature, notary
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen, acknowledged said inst IN WITNESS above written. <u>11-30-2014</u> My commission expires Note: Corporate surety	y ofJanuary, 20_1 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s trument to be the free act and deed of s WHEREOF, I have hereunto set my ho <u>Elizabeth Rhodes</u> Notary Public name	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation. and and seal on the day and year in this certificate first ELIZABETH RHODES NOTARY PUBLIC STATE OF TEXAS COMM. EXPIRES 11-30-2014
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen, acknowledged said inst IN WITNESS above written. <u>11-30-2014</u> My commission expires Note: Corporate surety	y ofJanuary, 20_1 opearedGina Rodriguez say that s/ he isAttorney-in-Fact t was signed and sealed on behalf of s trument to be the free act and deed of s WHEREOF, I have hereunto set my ha <u>Elizabeth Rhodes</u> Notary Public name	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation. and and seal on the day and year in this certificate first ELIZABETH RHODES NOTARY PUBLIC STATE OF TEXAS COMM. EXPIRES 11-30-2014
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrumen, acknowledged said inst <i>IN WITNESS</i> above written. <u>11-30-2014</u> My commission expires Note: Cooperate surety APPROVED this NOTE: File <u>before</u> den	y ofJanuary, 20 opearedGina Rodriguez say that s/ he is _Attorney-in-Fact t was signed and sealed on behalf of s trument to be the free act and deed of s WHEREOF, I have hereunto set my ha <u>Elizabeth Rhodes</u> Notary Public name , attach power of attorney. day of	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation. and and seal on the day and year in this certificate first <i>Lubble Rhodes</i> Signature, notary (Notary Seal) ELIZABETH RHODES NOTARY PUBLIC STATE OF TEXAS COMM. EXPIRES 11-30-2014
On this <u>30th</u> day before me personally ap by me duly sworn, did s and that this instrument acknowledged said inst <i>IN WITNESS</i> above written. <u>11-30-2014</u> My commission expires Note: Corporate surety APPROVED this NOTE: File before det Com	y ofJanuary, 20 opearedGina Rodriguez say that s/ he is _Attorney-in-Fact t was signed and sealed on behalf of s. trument to be the free act and deed of s WHEREOF, I have hereunto set my have <u>Elizabeth Rhodes</u> Notary Public name , attach power of attorney. 	, to me personally known, who, being of Argonaut Insurance Company aid corporation by authority of its board of directors, and said corporation. and and seal on the day and year in this certificate first <i>Lubble Rhodes</i> Signature, notary (Notary Seal) ELIZABETH RHODES NOTARY PUBLIC STATE OF TEXAS COMM. EXPIRES 11-30-2014

Argonaut Insurance Company 225 W. Washington, 6th Floor Chicago, IL 60606

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the Argonaut Insurance Company, a Corporation duly organized and existing under the laws of the State of Illinois and having its principal office in the County of Cook, Illinois does hereby nominate, constitute and appoint: Donald R. Gibson, Sandra Parker, Tannis Mattson, Melissa Haddick, Terri Morrison, Gina Rodriguez

its true and lawful agent and attorney-in-fact, to make, execute, seal and deliver for and on its behalf as surety, and as its act and deed any and all bonds, contracts, agreements of indemnity and other undertakings in suretyship provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

\$15,000,000.00

This Power of Attorney is granted and is signed and sealed under and by the authority of the following Resolution adopted by the Board of Directors of Argonaut Insurance Company:

"RESOLVED, That the President, Senior Vice President, Vice President, Assistant Vice President, Secretary, Treasurer and each of them hereby is authorized to execute powers of attorney, and such authority can be executed by use of facsimile signature, which may be attested or acknowledged by any officer or attorney, of the Company, qualifying the attorney or attorneys named in the given power of attorney, to execute in behalf of, and acknowledge as the act and deed of the Argonaut Insurance Company, all bond undertakings and contracts of suretyship, and to affix the corporate seal thereto."

IN WITNESS WHEREOF, Argonaut Insurance Company has caused its official seal to be hereunto affixed and these presents to be signed by its duly authorized officer on the 15th day of September, 2008. Argonaut Insurance Company

By:

Michael E. Arledge President

STATE OF TEXAS COUNTY OF BEXAR SS:

On this 15th day of September, 2008 A.D., before me, a Notary Public of the State of Texas, in and for the County of Bexar, duly commissioned and qualified, came THE ABOVE OFFICER OF THE COMPANY, to me personally known to be the individual and officer described in, and who executed the preceding instrument, and he acknowledged the execution of same, and being by me duly sworn, deposed and said that he is the officer of the said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said corporation, and that Resolution adopted by the Board of Directors of said Company, referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my Official Seal at the County of Bexar, the day and year first above written.



(Notary Public)

I, the undersigned Officer of the Argonaut Insurance Company, Illinois Corporation, do hereby certify that the original POWER OF ATTORNEY of which the foregoing is a full, true and correct copy is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand, and affixed the Seal of said Company, on the 30^{\pm}

Robert F. Thomas Vice President

THIS DOCUMENT IS NOT VALID UNLESS PRINTED ON SHADED BACKGROUND WITH BLUE SERIAL NUMBER IN THE UPPER RIGHT HAND CORNER. IF YOU HAVE QUESTIONS ON AUTHENTICITY OF THIS DOCUMENT CALL (210) 321 - 8400.



EOG Resources, Inc. 1111 Bagby Sky Lobby 2 Houston, Texas 77002

Date: 1-12-2012

P.O. Box **43**62 Houston, Texas **77**210-4362

Requestor: Roger Motley	Division: Midland	
Telephone: 432-686-3642	Fax: 432-686-3733	
<u>Principal</u>	(Name & Address of EOG Entity,	
EOG Resources, Inc.	if other than EOG Resources, Inc.):	
P.O. Box 4362		
Houston, TX 77210 4362		
Obligee (Name & Physical Add	ress of Party requiring bond) Phone:	
Commissioner of Public Lands		
New Mexico State Land Office		
310 Old Santa Fe Trail		
Santa Fe, New Mexico		
Effective Date of Bond:	<u>1-30-2012</u> Date Bond Required: <u>1-20-2012</u>	
Amount of Bond:	\$25,000	
Bond Type:		
Performance		
License/Permit		
Road Crossing		
Right of Way		
Oil & Gas Drilling		
Plugging & Surface Restor	ation	
Other:	Surface Improvement Damage Megabond	
(If court bond, please pro	ovide a copy of judgment and bond form)	

Bond Description: (Road, mileage, Well #, Location, County, etc) This Megabond will cover all operations by EOG Resources, Inc. on our State of New Mexico leases.

Other Comments/Information:

Deliver completed Bonds by Fed Ex To: Requestor Roger Motley, Midland Division Land Dept. Obligee Nick Jaramillo, New Mexico State Land Office – Right of Way Division 310 Old Santa Fe Trail Santa Fe, New Mexico 78501-2708



48" x 48" Aluminum Sign



CONDOR REUSE WATER CONTAINMENT PIT

1. Overview

The attached plan details the operational requirements regarding the Condor Reuse Water Containment Pit. In addition, the required reporting and inspections as well as the appropriate actions/notifications are listed.

2. Purpose

The attached plan implements the operational requirement as outlined by NMOCD under 19.15.34 NMAC. Application of this plan will ensure the reuse water containment pit is operated in a manner that minimizes any risk to health, safety, and environment.

3. Operational Requirements

Below are the operational requirements that must be adhered to at all times. Deviation from these requirements is prohibited.

- Inlet flow
 - Recycling facility effluent stream water must meet all water quality norms before water is introduced into the containment pit. These norms are to include no detected oil in the stream.
 - Inlet water may only be introduced into the containment pit via the diffuser manifold as to not cause any stress or damage to the liner system.
 - o A minimum of 3ft of freeboard will be maintained in the reuse water containment pit at all times.
- Effluent Flow
 - Effluent water may only exit the reuse water containment via the permanent discharge header system
 - Effluent water may only be transferred through an EOG leak detection transfer system; all protocols and procedures regarding the automated leak detection system must be followed
- Volume Reporting
 - All influent and effluent volumes are to be logged daily. These volumes are to be tracked via inbound and outbound mag meters and tracked via paper and SCADA systems



- Site Inspection
 - The pit and surrounding area are to be inspected daily while water is contained within the pit. These inspections are to include all inlet/outlet piping, berms, exposed liner, surrounding grounds and fencing
- Leak Detection Testing
 - Leak detection testing shall be conducted daily. Testing shall include starting the leak detection sump pump to determine if any is fluid has collected in the collection sump. The sump pump shall be run for a minimum of 5 minutes to allow for inlet flow. If any flow is detected the proper notification to the Hobbs NMOCD will occur and drainage will commence

4. Daily Reporting & Inspections

- List of Daily Reporting and Inspections to be completed:
 - o Influent and Effluent Volume Reporting
 - Site and Containment Pit Inspection
 - o Leak Detection

5. Notifications

In the event of a leak detection denoting a compromised liner below the water level, notice shall be provided to be the Hobbs division office of the NMCOD within 48 hours of detection.

District 1

1625 N. French Drive Hobbs, New Mexico 88240

OFFICE: (575) 393-6161 FAX: (575) 393-0720 EMERGENCY NUMBER - MOBILE: (575) 370-3186 Business Hours: 7:00 AM-12:00 PM and 1:00 - 4:00 PM Monday through Friday

6. Associated Forms

- List of Associated forms for Operating and Maintenance Plan
 - o NA


CONDOR REUSE WATER CONTAINMENT PIT

1. Overview

The attached plan details the requirements regarding the closure of the Condor Reuse Water Containment Pit. In addition, the required sampling and reporting obligations are detailed.

2. Purpose

The attached plan implements the closure requirement as outlined by NMOCD under 19.15.34.14 NMAC. Application of this plan will ensure the reuse water containment pit is closed and reclamation is completed in a manner that minimizes any risk to health, safety, and environment.

3. Closure Requirements

- Containment Pit Drainage
 - All reuse water remaining in the containment pit shall be removed from the impoundment within 60 days operations cessation. The removed fluids will then be transferred a division approved disposal facility. Records of all removal, transfer and disposal activities shall be retained for inclusion in the final closure report submittal.
- Liner Material Removal and Disposal
 - Removal of the liner shall be conducted in manner that minimizes any risk of soil disturbance to the surface within and surrounding the containment. The removed liner material will then be transferred to and disposed of at a division approved disposal facility. Records of all removal, transfer and disposal activities shall be retained for inclusion in the final closure report submittal.
- Soil Sampling
 - Soil sampling shall be conducted at the locations depicted in the below schematic, Sampling Point Diagram, by a qualified third party contractor and analyzed at NELAC certified laboratory.
 - If any contaminant concentration is higher than the parameters listed in Table 1 in 19.15.34.14
 NMAC, notice shall be provided the Hobbs NMOCD office before proceeding with closure.
 - If all sample concentrations are less than or equal to the parameters listed in Table 1 in 19.15.34.14 NMAC, then closure can proceed, backfilling with non-waste containing, uncontaminated, earthen material



o Sampling Diagram



- Site Reclamation and Re-vegetation
 - Following closure, reclamation of the containment's location can commence and ensure that it is
 returned to a safe and stable location that blends with the surrounding undisturbed area. Topsoils
 and subsoils shall be replaced to original positions and contoured to achieve erosion free long term
 stability and preservation of surface water flow patterns.
 - The disturbed area shall then be reseeded in the first favorable growing season following closure of the containment. The surface area shall be restored to the condition that existed prior to the construction of the containment
 - Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed and a uniform vegetative cover has been established that reflects a life form ration of +/- 50% of pre-disturbance levels and a total percent plant cover of at least 70% of pre-disturbance levels, excluding noxious weeds.



4. Closure and Reclamation Report Submittal / Notice

- Closure Report
 - Within 60 days of closure completion, EOG shall submit a closure report on form C-147 to the NMOCD Hobbs office, including required attachments, to document all closure activities including sampling results and the details of any backfilling, capping or covering.
 - The closure report shall certify that all information in the report and attachments is correct and that EOG has complied with all applicable closure requirements and conditions specified in the division rules or directives
- Reclamation Notice
 - EOG shall notify the NMOCD Hobbs office when all reclamation and re-vegetation are complete

5. Notifications

In the event of any deviance from this closure plan or exceeding of a sampling constituent, notice shall be provided to the NMOC Hobbs office.

District 1

1625 N. French Drive Hobbs, New Mexico 88240

OFFICE: (575) 393-6161 FAX: (575) 393-0720 EMERGENCY NUMBER - MOBILE: (575) 370-3186 Business Hours: 7:00 AM-12:00 PM and 1:00 - 4:00 PM Monday through Friday

6. Associated Forms

- List of Associated forms for containment pit closure
 - o NA

PROJ	ECT: J	al, NM - Pit Si	tes				DRILLING COMPANY: Talon/LPE				
		JMBER: <u>7004</u>	138.209.0)2							
		G Resources					DRILLING METHOD: Hollow Stem Auger/Continuous Con	e			
		ELL NUMBER	: Condo	r - S	B1						
	L DEPT						SCREEN: Diam Length Slot Size				
		EVATION:									
GEOL	OGIST						DATE DRILLED: <u>3/26/2018</u>				
LATIT	UDE:		1	-			LONGITUDE: PAG	<u>E 1</u>	of 2		
DЕРТН (FT.)		WELL CONSTRUCTION	Pt. Sample ID:	ES	.E /AL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM		(FT.)		
DEP	Soil Symbol	WELL	Pt. Sam	SAMPL	SAMPLE INTERVAL	DESCF			DEPTH (FT.)		
0									0		
						1	Silty/Sandy Top Soil				
		E====					Dry - No Moisture Light Reddish Brown		1		
		E			0'-						
					5'						
		EEEEE						-	-		
5		FEEE	SB1-5'			-	Caliche		5		
		E					Dry - No Moisture				
					5'-		Tan/White				
		EEEEE			10'						
		E									
10									10		
			SB1-10'				Caliche Dry - No Moisture				
		EEEE		N			Tan/White				
		<u>E===</u>			10'- 15'						
					15						
15		EEEE							15		
15			SB1-15'				Caliche - Hard Pan		15		
							Dry - No Moisture Tan/White		-		
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23 January 2018

Mr. Dustin Kinder EOG Resources, Inc. 5509 Champions Drive Midland, TX 79706

Re: **Comprehensive Resource Review – Condor Water Reuse Site** Lea County, New Mexico

Dear Mr. Kinder:

Goshawk Environmental Consulting, Inc. (Goshawk) conducted a comprehensive desktop resource review and limited field investigations for the Condor Water Reuse Site in Lea County, New Mexico. This resource review included Waters of the US (WATERS), Threatened or Endangered (T/E) Species, and Cultural Resources. The purpose of these investigations was to evaluate whether the proposed water reuse site contained any protected resources, the approximate size and location of identified protected resources, and associated development constraints, if applicable. Goshawk also conducted a cultural resources archival review and survey for the site. All figures are in Appendix A.

INTRODUCTION

The Condor Water Reuse Site will include a double-lined water pit with leak detection, a tanker off load and storage area, a reuse water treatment facility, and freshwater blending system. The site is approximately 1,225 feet long (north to south) and 910 feet wide (east to west) and encompasses approximately 25.59 acres. The site is generally located in a very rural portion of Lea County, where land use is primarily cattle ranching and oil/gas exploration and production.

WATERS REVIEW

REGULATORY BACKGROUND AND METHODOLOGY

Investigations to identify potential WATERS within the proposed Condor Water Reuse Site included a resource review, followed by a field investigation. The resource review included inspection of available United States Geological Survey (USGS) 7.5-minute topographic quadrangle for Andrews Place, New Mexico; recent digital aerial orthoimagery; and the Natural Resource Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO). Field investigations were performed in accordance with US Army Corps of Engineers (USACE) guidelines, utilizing the Corps of Engineers Wetlands Delineation Manual – Technical Report Y-87-1 (January 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) – ERDC/EL TR-08-28 (September 2008).

The jurisdictional status of identified features was determined based on 33 CFR 328.3(a), along with the US Army Core of Engineers (USACE)-Environmental Protection Agency (EPA) joint guidance on Clean Water Act (CWA) jurisdiction, following the US Supreme Court's decision in Rapanos v. United States and Carabell v. United States. Current guidance states that the USACE and EPA will assert jurisdiction over (1) traditionally navigable waters (TNWs) and all wetlands adjacent to TNWs; (2) relatively permanent waters (RPWs), which include non-navigable tributaries of TNWs that typically flow year-round or have continuous flow at least seasonally, and all wetlands that are directly abutting RPWs; and (3) other water bodies such as non-RPWs; wetlands adjacent to non-RPWs;





and wetlands adjacent to but not directly abutting an RPW that are analyzed and determined to have a significant nexus with a TNW. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW.

LITERATURE REVIEW

Topographic Map

The topographic quadrangle (Figure 1) indicates the Condor Water Reuse Site is entirely within shrublands (stippled green background). The terrain is relatively flat, with a slight down-dip in elevation from the 3,320 feet above mean sea level contour. Drainage occurs by overland sheet flow. The nearest potential WATERS is an unnamed tributary, located approximately 3.3 miles northwest of the site. The Condor Water Reuse Site is within the Lower Pecos River Watershed. The nearest direct line point to the Pecos River is approximately 27 miles southwest. There are no improvements noted on the site; however, there is an improved road, several unimproved roads, pipelines, and the Diamond and a Half Ranch mapped in the general vicinity. There is no indication of any potential WATERS within the boundary of the site.

Aerial Orthoimagery

The aerial orthoimagery (Figure 2) indicates the Condor Water Reuse Site is within relatively dense shrublands. The improved road, unimproved roads, pipelines, and Diamond and a Half Ranch indicated in the topographic map are evident on the aerial orthoimagery. Other oil/gas development is evident to the north and northeast of the proposed water reuse site. There are no potential WATERS indicated on or near the site.

Soils

The NRCS SSURGO spatial data (Figure 3) indicate the soil map units underlying the Condor Water Reuse Site are Kermit-Wink complex (KE) and Pyote and Maljimar fine sands (PU). The primary soil components of these map units are Wink fine sand, Kermit fine sands, Pyote fine sands, and Maljimar fine sands. None of the primary components of these soils are listed as hydric soils.

FIELD INVESTIGATION

A field investigation was conducted on 8 January 2018 in order to determine the presence of potential WATERS within the Condor Water Reuse Site. The site was traversed on-foot. The site conditions are generally consistent with those depicted on the topographic map and aerial orthoimagery described above. Topographically, the site is relatively flat. Vegetation within the site consists primarily of plains lovegrass (*Eragrostis intermedia*), plains blackfoot daisy (*Melampodium leucanthum*), honey mesquite (*Prosopis glandulosa*), plains yucca (*Yucca glauca*), doveweed (*Croton* sp.), and broom snakeweed (*Gutierrezia sarothrae*), with a few other desert forbs and grasses.

Surface water run-off from the site is likely very rare. Drainage occurs primarily by overland sheet flow in varying directions. No evidence of any Ordinary High Water Mark (OHWM) or standing water was found within the site. Additionally, no flowing watercourse, lake bed, sinkhole, or playa exhibiting an OHWM are found on the site or within 300 feet of the site. A search in the general vicinity of the site did not reveal any seeps, springs, wetlands, or water wells within 500 feet of the site.

REGULATORY DEVELOPMENT CONSTRAINTS

It is Goshawk's opinion that construction of the Condor Water Reuse Site will not impact any WATERS. It is important to note that only the USACE has the authority to make a formal determination defining its jurisdictional

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limits under the CWA. Approved jurisdictional determinations are made by the USACE in accordance with internal policies and procedures in place at that time, and on a case-by-case basis using information at its disposal (such as other permits in the local area and case law) that may not be readily available to the public. Therefore, Goshawk's opinion should not be considered authoritative, and cannot wholly eliminate uncertainty regarding the USACE's jurisdictional limits.

THREATENED OR ENDANGERED SPECIES

REGULATORY BACKGROUND AND METHODOLOGY

The Endangered Species Act prohibits any action that causes a "take" of any listed T/E species. "Take" is defined as harm or harassment, including hunting, wounding, killing, trapping, and the capture or collection of individuals of listed species. The law also protects against the degradation or loss of vital habitat for listed species. The United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service are the regulatory authorities for federally listed T/E species.

State-listed T/E species are protected under New Mexico Wildlife Conservation Act (17-2-41). The New Mexico Department of Game and Fish (NMDGF) has the authority to establish a list of fish and wildlife species that are endangered or threatened. Unlike the federal Act, the state's regulation makes no provision for the protection of wildlife species from indirect take (e.g., destruction of habitat or unfavorable management practices); rather, it protects from the unlawful killing, trade, or transportation of state-listed species. Therefore, the state-listed species are only a potential development constraint if listed species are determined to be currently occupying the tract.

Literature and agency file searches were conducted to identify the potential occurrence of any federally and statelisted T/E species near the Condor Water Reuse Site. An internet search of the USFWS *Information, Planning, and Conservation System* (IPaC) was conducted for Lea County to identify federally listed T/E species "that should be considered as part of an effects analysis" for the site. Additionally, a report from the NMDGF Biota Information System of New Mexico (BISON-M) was obtained and reviewed for the Lea County.

RESOURCE REVIEW

The T/E species listed in the IPaC Trust Resource Report for Lea County is the northern aplomado falcon (*Falco femoralis*). Critical habitat for this species is not designated within the Condor Water Reuse Site or the immediate vicinity.

The state-listed T/E species on NMDGF BISON-M County List for Lea County dated 31 December 2017 include: bald eagle (*Haliaeetus leucocephalus*), aplomado falcon, peregrine falcon (*Falco peregrinus*), artic peregrine falcon (*Falco peregrinus tundrius*), least tern, broad-billed hummingbird (*Cynanthus latirostris*), Bell's vireo (*Vireo bellii*), Baird's sparrow (*Ammodramus bairdii*), and dunes sagebrush lizard (*Sceloporus arenicolus*).

DEVELOPMENT CONSTRAINTS

The northern aplomado falcon is listed for many southern New Mexico counties (including Lea County) and west Texas counties within its historic range. Historically, the falcon utilized open desert grasslands and/or savannas, where scattered shrubs and trees provide roosting and nesting locations. Although the proposed site is within shrublands, the land uses of this area (heavy cattle grazing and oil/gas production) likely precludes the northern aplomado falcon from utilizing the site.

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State regulations prohibit the taking, possession, transportation, or sale of any state-listed T/E species. Because Lea County has the potential to support state-listed T/E species, care should be taken to avoid direct impacts (including harassment, harm, killing, and/or collection) to any species that may inhabit the site. The state-listed birds would have the ability to leave the site during active construction to avoid impacts. However, the dunes sagebrush lizard is ground-dwelling and relatively slow-moving, which makes it more likely to be impacted by construction activities than other state-listed species. The dunes sagebrush lizard is more commonly found in the northern and eastern portions of Lea County. The site lacks suitable habitat for the dunes sagebrush lizard.

The lack of habitat for the northern aplomado falcon, coupled with the current land use, makes it highly unlikely that this species is utilizing the site. Furthermore, only the dunes sagebrush lizard would be susceptible to direct impacts during construction of the site. Care should be taken to avoid harassment, harm, killing, and/or collecting of the dunes sagebrush lizard. No further investigations relative to T/E species are recommended.

CULTURAL RESOURCES DESKTOP REVIEW

REGULATORY BACKGROUND AND METHODOLOGY

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires Federal agencies to consider the effects of their actions on historic properties and provide the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on their projects. Historic properties are defined as archaeological sites, standing structures, or other historic resources listed on or eligible for listing on the National Register of Historic Places (NRHP). The New Mexico Prehistoric and Historic Sites Preservation Act and the New Mexico Cultural Properties Act provide protection of archaeological sites (prehistoric and historic) listed in the State Register of Cultural Properties or on the NRHP.

The regulatory process seeks to determine if a project will have an "effect" upon historic properties. The term "effect" is defined as an "alteration to the characteristics of historic property qualifying it for inclusion in, or eligibility for the National Register (of Historic Places)." An effect is "adverse" when it will endanger those qualities that make the property eligible for inclusion on the NRHP.

Goshawk performed a Class I archival review to evaluate the potential for historic properties present near the Condor Water Reuse Site. The Archaeological Records Management Section's New Mexico Cultural Resources Information System (NMCRIS) online database, geospatial data obtained from the US Bureau of Land Management (BLM) Carlsbad Field Office, and the Natural Resources Conservation Service Web Soil Survey were utilized for the review. Following the archival review, a Class III Archaeological Survey was conducted for the site and 100-foot buffer around the site.





ARCHIVAL REVIEW *Nearby Archaeological Sites*

According to NMCRIS, there are no previously recorded archaeological sites within the proposed Condor Water Reuse Site. The nearest recorded archaeological site, LA #108613, lies 279 feet (85 meters) east of the water reuse site. Site LA #108613 is an undifferentiated prehistoric site recorded to contain lithic debitage, chipped stone tools, ground stone tools, and fire-cracked rock with three recorded fire-cracked rock features. The site was originally recorded by Pecos Archaeological Consultants under NMCRIS Activity #48237. NMCRIS does not list an original recording date for LA #108613, but NMCRIS Activity #48237 is listed as beginning in 1995. The site has been revisited three times, most recently by Lone Mountain Archaeological Services in 2013 under NMCRIS Activity #129811. The site was originally determined to be eligible for listing on the National Register of Historic Places (NRHP) by the recorder in 1999, but most recently, in 2004, the recorder and BLM determined the site to be ineligible and the SHPO determined the site to be unevaluated for listing on the NRHP.

National Register Properties

No NRHP-listed properties have been recorded near the proposed site. According to the NMCRIS database, the nearest NRHP-listed property is the Pope's Wells Site (LA #69016). This site consists of the remains of a camp and well site that was part of efforts to establish a water well in the area in the 1850's. The site lies 18.85 miles west-southwest of the proposed reuse site.

Soils Analysis

Soils mapped within the proposed site consist of Kermit-Wink complex and Pyote and Maljamar fine sands. Kermit-Wink complex soils are very deep, fine sandy loams that formed in calcareous, loamy, eolian, or alluvial sediments. These soils are excessively drained with very slow runoff and very rapid permeability. The soils are used primarily as native rangeland with minor amounts of recreation and wildlife. Pyote and Maljamar fine sands are sandy eolian deposits derived from sedimentary rock. Considering the soils present, there is a low to moderate probability for the presence of temporally stratified cultural resources within the proposed Condor Water Reuse Site.

ARCHAEOLOGICAL SURVEY

Goshawk performed a cultural resources survey on 8 January 2018 for the proposed Condor Water Reuse Site and 100-foot archaeological survey buffer, encompassing a total of 37.94 acres (Figure 4). Transects were walked at 50-foot intervals over the entire survey area. Terrain is relatively flat and was composed primarily of loose sands with some caliche exposures. Coppice dunes, one to four feet tall, dominated the eastern portion of the survey area. Surface visibility ranged from high visibility of 70-80% on the eastern side to low visibility of 20-40% on the western portion. The intensive survey yielded no cultural material.

DEVELOPMENT CONSTRAINTS

The cultural resources archival review determined there is a low to moderate probability for the presence of significant prehistoric resources within the site. No cultural material or archaeological sites were identified during the cultural resources survey. No impacts to cultural resources would be expected by the development of the Condor Water Reuse Site.

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SUMMARY

Based on the results of the Resource Review, it is Goshawk's opinion that the construction of the Condor Water Reuse Site is unlikely to impact any sensitive natural resources, including WATERS and T/E species. Based on the negative results from the cultural resources survey, it is Goshawk's opinion that the site does not contain significant cultural resources. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be immediately halted and a qualified archaeologist should be notified. If you have any questions or desire additional information, please contract our office.

Sincerely,

thi

Natasia Mitchell Environmental Specialist

Cc: Michael Yemm, EOG Resources, Inc. Galan Kelley, EOG Resources, Inc. Wesley Moss, EOG Resources, Inc.

Stur ans

Steven Evans Project Archaeologist

Condor Water Reuse Site

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APPENDIX A FIGURES

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Condor Water Reuse Site















Active Mines in New Mexico



Active, Registered Mines

× Aggregate, Stone etc.



Sources: Esri, DeLorme, USGS, NPS Sources: Esri, USGS, NOAA



April 19, 2018

#5E26751

Mr. Dustin Cole Kinder EOG Resources, Inc. 421 West 3rd Street, Suite 150 Fort Worth, TX 46102

Subject:C-147 Recycling Containment Permit Siting Criteria Attachment, Proposed
Condor 32 State Recycling Facility, Lea County, New Mexico

Dear Mr. Kinder:

Souder, Miller & Associates (SMA) is pleased to submit the enclosed C-147 Recycling Containment Permit Siting Criteria Attachment, for the Proposed Condor 32 State Recycling Facility, located in Lea County, New Mexico. The facility will be located in Township 25S, Range 34E, NW ¹/₄ of Section 32, south of U.S. Highway 128, approximately 17.6 miles west of the City of Jal, New Mexico. The proposed recycling facility will include a containment pit comprising a lined pond with an approximate capacity of 27.5 million gallons.

Below are details on the siting criteria in Section 8 of the C-147 permit. Supporting documentation are included in the Appendices indicated in each siting criteria explanation. Information obtained from the supporting documentation was confirmed during a site visit by Austin Weyant of SMA on March 3, 2018.

8.1 Groundwater is less than 50 feet below the bottom of the recycling containment

The proposed facility is located near the eastern boundary of a large geologic feature named the San Simon Swale, a structure formed by infilling of collapse structures that has resulted in a thick package of alluvial sediments overlying Triassic-aged redbed units, including the Chinle Formation and the Santa Rosa Sandstone (Nicholson & Clebsch, 1961). Near the proposed facility, the alluvium is estimated to be approximately 150-200 feet thick, however, further west, the alluvial thickness increases to nearly 300 feet. East of the proposed project, the most commonly utilized aquifer occurs within the regionally extensive Triassic redbeds, with the most productive zone consisting of the Santa Rosa Sandstone. To the west of the proposed facility, several smaller wells are completed within the Quaternary alluvial sediments of the San Simon Swale. The groundwater elevation measured in a monitoring well approximately two miles west and within the alluvial sediments is 140 feet below ground surface (elevation of 3,220 feet above mean sea level) (USGS, 2017). Groundwater flow in the area is thought to be to the west into the San Simon Swale (Nicholson & Clebsch, 1961).

Groundwater was not encountered at depths less than 45-50 feet below ground surface (bgs), as indicated by lithology logs (SB-1 and SB-2) from recent drilling activities near the proposed facility (location indicated on Figure 1). The depth of the borings SB-1 and SB-2 (10-feet apart) limit the maximum groundwater elevation in the area to no greater than 3,265 feet above mean sea level (amsl). The proposed facility is located at an elevation of approximately 3,315 feet above mean sea level, and the base of the containment pond will be installed to a maximum depth of 20 feet bgs, or an elevation of approximately 3,295 ft amsl. As such, groundwater may be present at an elevation of 30 feet from below

the bottom of the proposed facility. Supporting information from nearby New Mexico Office of the State Engineer (NMOSE) registered wells, United States Geological Society (USGS) monitoring wells, and recent lithology logs are included as Appendix A. The approximate borehole coordinates from the recent drilling activities are: LAT N32 18.589; LONG W-103 23.623.

Recent drilling activities at proposed facility encountered refusal at a depth of approximately 45 feet bgs, with no evidence of groundwater encountered. NMOSE registered well C-02316 is located approximately 2,208 feet northeast of the proposed facility and has a recorded depth-to-water of approximately 50 feet bgs. NMOSE registered well C-02291 is located one mile southwest of the project site and has a recorded depth-to-water of approximately 160 feet bgs (Appendix A).

8.2 Facility is located within municipal boundary or within a defined fresh water well field

The proposed facility is located approximately 17.6 miles from the nearest municipality (City of Jal) in an area consisting predominantly of oil and gas development. The proposed facility is not within any defined freshwater field as no municipal water wells are present near the facility location. A vicinity map of the proposed facility on a USGS topographic map is included as Figure 1. A map indicating the location of wells registered with the NMOSE is included as Appendix A.

8.3 Facility is located within an area overlying a subsurface mine

Information from the USGS Topographic map covering the location of the proposed facility as well as a map from the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) indicates that no subsurface mines or quarries are present within the proposed facility boundaries. There are no quarries or subsurface mines within a one (1) mile radius of the proposed facility boundaries. A vicinity map of the proposed facility on a USGS topographic map is included as Figure 1. A map indicating the location of active mines from the EMNRD website is included as Appendix B.

8.4 Facility is located within an unstable area

The proposed facility is in generally flat topography with no nearby mapped faults. The USGS Seismic hazard map places the region as a low-risk area for potential earthquakes or other seismic hazards. Based on the seismic hazards map the proposed facility is not located in an unstable area. A vicinity map of the proposed facility on a USGS topographic map is included as Figure 1, and a geologic map of the area with known faults is included as Figure 3. A seismic hazards map is included as Appendix C.

8.5 Facility is located within a 100-year floodplain

The proposed facility is located within FEMA Zone D in an area that is not covered by <u>printed</u> flood maps. Information from the FEMA Floodplain online database indicates that no known 100-year floodplains are present within 10 miles of the proposed facility. A screenshot of the proposed facility area from the online FEMA Floodplain database is included as Appendix D.

8.6 Facility is located within 300 feet of a continuously flowing watercourse or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake

The nearest continually flowing watercourse, as indicated on the USGS topographic map, is over 3 miles from the proposed facility boundary; the nearest ephemeral water course is located approximately 2.8 miles to the northeast of the proposed facility. A lake is located approximately 1 mile southwest of the proposed facility. A vicinity map of the facility on a USGS topographic map is included as Figure 1,

and an aerial photo of the proposed project area is included as Figure 2. The absence of watercourses, lakebeds, sinkholes, and playa lakes in the near vicinity of the proposed facility was confirmed during SMA's site visit.

8.7 Facility is located within 1,000 feet of an existing residence, school, hospital, institution, or church at time of initial inspection

The proposed facility is located over 2.18 miles from the nearest private residence. The closest facilities to the proposed facility are existing oil field tank batteries and well pads surrounding the proposed facility. A vicinity map of the proposed project area on a USGS topographic map is included as Figure 1, and an aerial photo of the project area is included as Figure 2. The absence of residences, schools, hospitals, churches, or institutions near the proposed facility was confirmed by SMA's site visit.

8.8 Facility is located within 500 feet of a spring or fresh water well in existence at time of initial inspection

The nearest freshwater well registered with the NMOSE or USGS is located approximately 4,660 feet to the southwest of the proposed facility. No springs are indicated on USGS topographic maps within 1,000 feet of the proposed facility. A vicinity map of the project area on a USGS topographic map is included as Figure 1, and an aerial photo of the project area indicating the location of registered wells is included as Figure 2. Supporting information from nearby NMOSE wells and the USGS monitoring wells is included as Appendix A. The absence of springs or drinking water wells near the proposed facility was confirmed by the SMA site visit.

8.9 Facility is located within 500 feet of a wetland

The nearest wetland as mapped by the United States Fish and Wildlife Service is approximately 1 mile from the proposed facility. A map prepared by the US FWS online wetland database is included as Appendix E. The absence of wetlands near the proposed facility was confirmed by the SMA site visit.

If you have any questions, please do not hesitate to call me at 505-215-6569 or to e-mail me at Curtis.Pattillo@soudermiller.com.

Sincerely, SOUDER, MILLER AND ASSOCIATES

(unt and

Curtis Pattillo Project Scientist

Vonlording

R. Jay Vanlandingham, R.G. Senior Geoscientist

Enclosures:

Figure 1: Vicinity Map on USGS Topographic Quad
Figure 2: Site Aerial Photo
Figure 3: Geologic Map of Proposed Facility Area
Appendix A: Groundwater & Well Information (NMOSE & USGS)
Appendix B: Active Mine/Quarry Map (NM EMNRD)

Appendix C: USGS Seismic Hazard Map Appendix D: FEMA Floodplain Information Appendix E: Wetlands & Critical Habitat Map (US FWS)



Figures





Appendix A Groundwater & Well Information (NMOSE & USGS)



PROJ	ECT: J	al, NM - Pit Si	tes				DRILLING COMPANY: Talon/LPE				
		JMBER: <u>7004</u>	138.209.0)2							
		G Resources					DRILLING METHOD: Hollow Stem Auger/Continuous Con	e			
		ELL NUMBER	: Condo	r - S	B1						
	L DEPT						SCREEN: Diam Length Slot Size				
		EVATION:									
GEOL	OGIST						DATE DRILLED: <u>3/26/2018</u>				
LATIT	UDE:		1	-			LONGITUDE: PAG	6E 1	of 2		
DЕРТН (FT.)		WELL CONSTRUCTION	Pt. Sample ID:	ES	.E /AL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM		(FT.)		
DEP	Soil Symbol	WELL	Pt. Sam	SAMPL	SAMPLE INTERVAL	DESCF			DEPTH (FT.)		
0									0		
						1	Silty/Sandy Top Soil				
							Dry - No Moisture Light Reddish Brown		1		
		E			0'-						
					5'						
		EEEEE						-	-		
5		FEEE	SB1-5'			-	Caliche		5		
		E					Dry - No Moisture				
					5'-		Tan/White				
		=====			10'						
		E									
10									10		
			SB1-10'				Caliche Dry - No Moisture				
		EEEE		N			Tan/White				
		<u>E===</u>			10'- 15'						
					15						
15		EEEE							15		
15			SB1-15'				Caliche - Hard Pan		15		
							Dry - No Moisture Tan/White		-		
		EEEE			15'-			-			
		EEEE			20'						
		E===3									
20		EEEE	SB1-20'	Ц					20		
			1301-20				SB1-26' Caliche w/ Sands				
					0.01		Dry - No Moisture Tan/Reddish Brown Sands				
		FEEE			20'- 25'			L			
		E									
25		E							25		
		E===3	SB1-25'			1	Caliche - Showing Sand				
		E					Dry - Low Moisture Tan to Light Yellow Brown		1		
					25'-			\vdash			
		EEEEE			30'			\vdash	-		
		E						\vdash			
30		E	SB1-30'	H		-	Sand/Stone/Silts - Med to Coarse	\vdash	30		
RFM	ARKS	<u> </u>	1001-00			ļ					
		THIS BORI	ING LOG	SH	OULD	NOT B	E USED SEPERATE FROM THE ORIGINAL REPORT				

		al, NM - Pit Si					DRILLING COMPANY: Talon/LPE				
		JMBER: <u>7004</u>)1			DRILLER: Ronnie Rodriguez				
		G Resources					DRILLING METHOD: Hollow Stem Auger/Continuous Co	re			
			: Condo	r - S	B1						
	_ DEPT						SCREEN: Diam Length Slot Size				
		EVATION:									
LATIT							DATE DRILLED: <u>3/26/2018</u>				
LAIII		7					LONGITUDE: PAC	<u>3E 2</u>	of 2		
DEPTH (FT.)	Soil Symbol	WELL CONSTRUCTION	Pt. Sample ID:	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTER VAL	DESCRIPTION OF STRATUM		DEPTH (FT.)		
		EEEE					Med Moisture Light Red to Tan		-		
				N	30'-			_	-		
		EEEE		1	35'						
								_			
35			SB1-35'				Sand/Stone/Silts - Hard Pack		35		
							Med Moisture				
		<u> </u>		N	35'-		Light Red to Tan				
		EEEE			40'						
40		F3333		\square			Cand/Otana/Oilta Hand Daaly, Dafuad		40		
		E	SB1-40'				Sand/Stone/Silts - Hard Pack - Refusal Low Moisture				
							Light Red to Tan				
		EEEE			40'- 45'						
		<u>E===</u>									
45									45		
			SB1-45'				Bottom of Hole				
									1		
50									50		
30									- 30		
								-			
55									55		
									-		
									-		
								_			
60								_	60		
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RÉM	ARKS		ING LOG	SH	IOULD	NOT B	E USED SEPERATE FROM THE ORIGINAL REPORT				

		al, NM - Pit Si					DRILLING COMPANY: Talon/LPE				
		JMBER: 7004	38.209.0)2							
		G Resources					DRILLING METHOD: Hollow Stem Auger/Continuous Co	re			
		ELL NUMBER	Condo	r - S	B2						
	L DEPT						SCREEN: Diam Length Slot Size				
		EVATION:									
GEOL	OGIST:						DATE DRILLED: <u>4/9/2018</u>				
LATIT			r	<u> </u>			LONGITUDE: PA	<u>GE 1</u>	of 2		
DEPTH (FT.)	Soil Symbol	WELL CONSTRUCTION	Pt. Sample ID:	SAMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM		ОЕРТН (FT.)		
	0,0,	>0		100	0) <u>=</u>			+			
0							Silty/Sandy Top Soil	_	0		
							Dry - No Moisture		-		
		FEEE			0'- 5'	Light Reddish Brown					
		E									
5									5		
		FEEE	SB2-5'				Caliche				
		E		N			Dry - No Moisture Tan/White		1		
					5'- 10'						
				11					-		
		FEEE									
10		E	SB2-10				Caliche		10		
		<u>E===</u>	002-10				Dry - No Moisture		4		
					101		Tan/White				
		EEEEE		1	10'- 15'						
		EEEE			10						
15		EEEE							15		
			SB2-15				Caliche - Hard Pan				
		FEEE		N			Dry - No Moisture Tan/White	-			
		EEEE			15'-			_	-		
		EEEE		1	20'			_	-		
									-		
20		EEEE	600 000	\square			SP1 26'		20		
		E	SB2-20'				SB1-26' Caliche w/ Sands		↓ I		
		EEEE					Dry - No Moisture				
					20'- 25'		Tan/Reddish Brown Sands				
	1	EEEE			20				1		
25		E							25		
20			SB2-25				Caliche - Showing Sand		25		
		E===3					Dry - Low Moisture	-			
		EEEE			25'-		Tan to Light Yellow Brown	_	┥┃		
		E			30'				-		
		EEEEE							↓ ┃		
30		ÊEEEE	000000						30		
		<u>E</u>	SB2-30				Sand/Stone/Silts - Med to Coarse				
KEM	ARKS						TALC	J	N		
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		THIS BORI	NG LOG	SH	IOULD	NOT B	E USED SEPERATE FROM THE ORIGINAL REPORT				

		al, NM - Pit Si					DRILLING COMPANY: Talon/LPE				
		JMBER: 7004	438.209.0)2			DRILLER: Ronnie Rodriguez	DRILLER: Ronnie Rodriguez			
		G Resources					DRILLING METHOD: Hollow Stem Auger/Continuous Co	re			
BORIN	NG / WE	ELL NUMBER	: Condo	r - S	B2						
	L DEPT						SCREEN: Diam Length Slot Size				
SURF	ACE EL	EVATION:					CASING: Diam Length Type				
GEOL	OGIST:						DATE DRILLED: <u>4/9/2018</u>				
LATIT	UDE:			_			LONGITUDE: PAC	<u>E 2</u>	of 2		
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DЕРТН (FT.)	Soil Symbol	WELL CONSTRUCTION	ot. Sample ID:	AMPLES	SAMPLE INTERVAL	DESCRIPTION INTERVAL	DESCRIPTION OF STRATUM		ЭЕРТН (FT.)		
	ο Ν Ο	≥ŏ	<u>t</u>	ري ا	ര്≚	ΞΞ		\vdash	ā		
		+					Med Moisture				
							Light Red to Tan				
					30'-				1		
					35'				1		
		E									
35			SB2-35'			-	Sand/Stone/Silts - Hard Pack	\vdash	35		
							Med Moisture	-	-		
		=====			35'-		Light Red to Tan		-		
					40'				-		
40									40		
			SB2-40'				Sand/Stone/Silts - Hard Pack - Refusal Low Moisture				
		EEEE					Light Red to Tan				
					40'- 45'						
		FEEE			45						
45									45		
45		<u> </u>	SB2-45'	1			Bottom of Hole		45		
									-		
50									50		
55									55		
									1		
								-	-		
60									60		
RÉM	ARKS						E USED SEPERATE FROM THE ORIGINAL REPORT				
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PLATE 1. GEOLOGIC MAP OF SOUTHERN LEA COUNTY, NEW MEXICO



PLATE 2. GROUND-WATER MAP OF SOUTHERN LEA COUNTY, NEW MEXICO



Appendix B Active Mine/Quarry Map (NM EMNRD)

Active Mines in Lea County, New Mexico, November 2014



Active Mines in New Mexico



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Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Appendix C USGS Seismic Hazard Map

Information by Region-New Mexico



2014 Seismic Hazard Map

USGS National Seismic Hazard Maps



Appendix D FEMA Floodplain Information





Appendix E Wetlands & Critical Habitat Map (US FWS)



U.S. Fish and Wildlife Service National Wetlands Inventory

EOG Condor Reuse Pit Wetland Habitat



February 27, 2018

Wetlands

Estuarine and Marine Wetland

- Estuarine and Marine Deepwater Freshwater Forested/Shrub Wetland
 - Freshwater Pond

Freshwater Emergent Wetland

Lake Other Riverine This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.