

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM018463

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. CHACO 23 08 03 3H
2. Name of Operator LOGOS OPERATING, LLC Contact: TAMRA SESSIONS E-Mail: tsessions@logosresourcesllc.com		9. API Well No. 30-045-38171
3a. Address 2010 AFTON PLACE FARMINGTON, NM 87401	3b. Phone No. (include area code) Ph: 505-324-4145 Fx: 505-326-6112	10. Field and Pool or Exploratory Area BASIN MANCOS
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 3 T23N R08W Mer NMP SENE 1982FNL 223FEL 36.258111 N Lat, 107.660911 W Lon		11. County or Parish, State SAN JUAN COUNTY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

NEPA CLARIFICATION for approval of the following APDs.

Chaco 23 08 03 3H API 30-045-38171
Omega 2308 03 4H API 30-045-38179
Omega 2308 03 5H API 30-045-38180

See attached response.

14. I hereby certify that the foregoing is true and correct.
**Electronic Submission #501727 verified by the BLM Well Information System
For LOGOS OPERATING, LLC, sent to the Farmington**

Name (Printed/Typed) TAMRA SESSIONS	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 01/31/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office _____

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

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Chaco 23 08 03 3H API 30-045-38171

Zeus 2308 03 4H API 30-045-38179

Omega 2308 03 5H API 30-045-38180

- 1) Gallons of water the lake tank to hold?
 - a. Expected water volumes for the pad are approximately 120,000 bbls. The Chaco 3H is expected to use ~ 32,000 bbls, the Zeus 4H and Omega 5H is expected to use ~ 44,000 bbls each. There are 2 sizes of Lake tanks available for use. The larger capacity lake tank holds ~ 58,000 bbls and the smaller capacity lake tank holds ~38,000 bbls. If there is adequate space on location and TUA areas, Logos Operating would like to place both sized lake tanks on location /TUA area to hold approximately 96,000 bbls of water. The remaining water will be held in frac tanks or trucked during the job after water volumes have diminished adequately.
- 2) Match color to existing facilities color (please stick with Juniper Green)
 - a. Additional facilities will match the currently painted Juniper Green equipment
- 3) How will waste water be handled?
 - a. Produced water will either be hauled via truck or piped through Whiptail lines and then trucked to a permitted disposal well such as Central Basin SWD, Agua Moss, Basin Disposal.
- 4) Time frame for construction?
 - a. 7 to 10 days
- 5) Air: Need either the State air permit or EURs for production numbers (estimate alternative recovery)
 - a. See attached Chaco Well Pad NMED Permit #6558R4.
- 6) Design features (see attached). Please review and verify LOGOs is ok with including these for each well.
 - a. The question of design features was addressed in an email to Sarah Scott.
- 7) Water info needs more specifics: preferably can we narrow down which source will be used? Otherwise describe what will drive using which source. Also need to see an estimate of how much water will be used for drilling and completion for each well. The volumes listed in the permits seem very high for a Nitrogen frac--are these numbers for the entire project, perhaps? That would explain the large number but need to see it broken out for each well.
 - a. Water usage will be based on availability during drilling and completion operations, proximity to the wellpad and facility output capacity. In order of proximity and preference Logos would like to source fresh water from the following:
 1. Harvest Lybrook Water well which can supply ~2,500 bbls/day
 2. Blanco Trading Post which can supply ~10,000 bbls/day
 3. Hilcorp Herfano water well which can supply ~2,000 bbls/day
 4. Hilltop water well which can supply ~1,500 bbls/day
 5. In case all other sources are exhausted the San Juan Basin Water Haulers would source the remaining water for completion operations. This is unlikely but could occur if multiple operators are completing at the same time
 - b. Additionally, produced water or recycled water may be used and sourced from nearby Logos Operating wells or from Basin Recycling facility as available and practical. Produced and recycled water would be stored separate from fresh water sources on location in frac tanks.



MICHELLE LUJAN GRISHAM
GOVERNOR

HOWIE C. MORALES
LT. GOVERNOR

New Mexico
ENVIRONMENT DEPARTMENT

525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505-1816
Phone (505) 476-4300
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www.env.nm.gov



JAMES C. KENNEY
CABINET SECRETARY

JENNIFER J. PRUETT
DEPUTY SECRETARY

January 10, 2020

Certified Mail No. 7019 2280 0000 9597 8760

Samantha Gomez
Associate Engineer
Logos Resources II, LLC
2010 Afton Place
Farmington, NM 87401

Notice of Intent No. 6558R4
IDEA ID No. 36108 - PRN20190002
Chaco Well Pad
AIRS No. 350451051

Dear Ms. Gomez:

This letter acknowledges the receipt of your Air Quality Bureau Notice of Intent (NOI) application dated December 5, 2019 to construct and operate the LOGOS Operating - Chaco Well Pad. The facility is located at latitude 36 degrees, 15 minutes, 29.1 seconds and longitude - 107 degrees, 39 minutes, 38.8 seconds in San Juan County, New Mexico. The Department received the application on December 11, 2019.

This application and accompanying materials are provided for revision to the Notice of Intent (NOI) application for the Chaco 2308 03 1H/2H facility permit (No. 6558), located near Nageezi, NM. The site is owned by LOGOS Resources II, LLC and operated by LOGOS Operating, LLC. LOGOS Resources II, LLC intends to complete three additional well on the well pad which will require additional equipment and updated facility emission calculations. Logos would like to change the permit name for this facility for the Chaco Well Pad as the Chaco 3H, Zeus and Omega wells will be completed. Equipment being added to the facility includes two compressors, two capstones, two separators, three oil tanks, one water tank, two gun barrel separators, one slop tank and a LACT unit, reducing loading emissions capable of transporting oil, gas and water. Emissions calculations for this permit revision are based off of current production and anticipated production values, as well as the addition of select equipment. Estimated facility production: Oil 1100 BOPD, 1400 MCFD, 15 BCPD and 170 BWPD.

In accordance with the application, this facility shall consist of the following equipment:

Check box indicating if applicable	Equipment type	Quantity
<input checked="" type="checkbox"/>	Engine(s)	10
<input checked="" type="checkbox"/>	Heater(s)	7
<input checked="" type="checkbox"/>	Fugitives	1
<input checked="" type="checkbox"/>	Tanks	8 OT, 2 PWTK, 2 GBS, 1 STK
<input checked="" type="checkbox"/>	Loading	1 PWL
<input checked="" type="checkbox"/>	VRU	1
<input type="checkbox"/>	Other	

Based on the information provided in the submitted application, the Department has determined that the potential emission rate (PER) of any regulated air pollutant from this facility for which there is a National or New Mexico Ambient Air Quality Standard is less than ten (10) pounds per hour and twenty-five (25) tons per year. Therefore, in accordance with Title 20, Chapter 2, Part 72 of the New Mexico Administrative Code (20.2.72 NMAC), an air quality permit is not required, and construction may commence. Because the potential emission rate is greater than ten (10) tons per year, this facility is subject to 20.2.73 NMAC. The submitted application will serve as the Notice of Intent in accordance with 20.2.73.200.A. NMAC.

In addition to 20.2.73 NMAC, this facility may be subject to additional state and federal regulations *such as* those found in Table 1. The issuance of an NOI does not constitute a determination of regulatory applicability, regardless of statements of anticipated applicability made in the application. It is the permittee's responsibility to determine applicability and to comply with all applicable regulations.

Table 1: Other Regulations

Citation	Title
20.2.38 NMAC	Hydrocarbon Storage Facilities
20.2.61 NMAC	Smoke and Visible Emissions
20.2.70 NMAC	Operating Permits
40 CFR 60 Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984
40 CFR 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) For Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
40 CFR 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
40 CFR 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmissions and Distribution for which

	Construction, Modification or Reconstruction Commenced After August 23, 2011 and on or before September 18, 2015
40 CFR 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines
40 CFR 63 Subpart HH	National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities

Note: Some New Mexico state regulations are not federally enforceable (e.g., 20.2.35 and 20.2.38 NMAC) and while these regulations can be used for determining the PER, they cannot be used in determining facility-wide potential to emit (PTE) unless included in a federally enforceable permit, such as a 20.2.72 NMAC permit. Applicability of 20.2.70 NMAC (Title V) and 20.2.74 NMAC (PSD) is based on PTE and it is the permittee's responsibility to determine applicability of these regulations. Note that this determination could result in additional permitting requirements under 20.2.70 NMAC and/or 20.2.74 NMAC and, thus, applicability of these regulations should be considered.

This NOI issuance was based upon the information provided in the application. These sources, when constructed, will be subject to inspection.

Before any asbestos demolition or renovation work, you shall determine whether 40 CFR 61 Subpart M, National Emission Standard for Asbestos applies.

Any changes in the method of operation or addition of more units at the site may constitute a modification, which requires the Department's prior approval for construction and/or operation.

In the event of any change in ownership or operator of this facility, the new owner or operator shall notify the Department in writing within thirty (30) days of that change.

If you have any questions, please call me in Santa Fe at 505-476-4360.

Sincerely,


Deepika Saikrishnan
Air Permit Specialist
Permit Section
Air Quality Bureau

cc by email: Larissa Farrell

Enclosure: Instructions to access the Industry/Consultant Feedback Questionnaire online.