District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	Form C-144 Revised June 6, 2013 For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office. For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.
13087 Proposed Alter Type of action: Below g Sector 29-31338 Permit of Closure ☐ Modific ☐ Closure or proposed alternative methor Instructions: Please submit one Please be advised that approval of this request does not	<u>Pit, Below-Grade Tank, or</u> <u>mative Method Permit or Closure P</u> grade tank registration of a pit or proposed alternative method of a pit, below-grade tank, or proposed alternati eation to an existing permit/or registration plan only submitted for an existing permitted or od <i>e application (Form C-144) per individual pit, below</i> - relieve the operator of liability should operations result in	Plan Application OIL CONS. DIV DIST. 3 AUG 27 2015 r non-permitted pit, below-grade tank, -grade tank or alternative request n pollution of surface water, ground water or the
I. Operator: Logos Operating, LLC. Address: 4001 North Butler Ave, Building 7101. Facility or well name: Logos Jicarilla 9P API Number: 30-039 - 31338 U/L or Qtr/Qtr P Section 09 Center of Proposed Design: Latitude Surface Owner: Federal State Private	OGRID #: 289408 OGRID #: 289408 OCD Permit Number: Township	County: NAD:1927 🖾 1983
2. ∑ Pit: Subsection F, G or J of 19.15.17.11 NM. Temporary: ∑ Drilling ☐ Workover ☐ Permanent ☐ Emergency ☐ Cavitation ☐ P ∑ Lined ☐ Unlined Liner type: Thickness ∑ String-Reinforced Liner Seams: ∑ Welded ∑ Factory ☐ Other	&A □ Multi-Well Fluid Management La 20mil ⊠ LLDPE □ HDPE □ PVC □ 0 Volume:16,000L	val Attached ow Chloride Drilling Fluid ⊠ yes □ no Other bbl Dimensions: L_130'_x W_75'_x D_12'
3. Below-grade tank: Subsection I of 19.15.17. Volume:	11 NMAC d:	verflow shut-off
Alternative Method: Submittal of an exception request is required. Exc s. Fencing: Subsection D of 19.15.17.11 NMAC (Ap Chain link, six feet in height, two strands of bar institution or church)	eptions must be submitted to the Santa Fe Environme oplies to permanent pits, temporary pits, and below-gr bed wire at top (Required if located within 1000 feet of	ental Bureau office for consideration of approval. rade tanks) of a permanent residence, school, hospital,
Alternate. Please specify: <u>4' hog wire with on</u>	ne strand of barbed wire on top	

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Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) Screen Netting Other Monthly inspections (If netting or screening is not physically feasible) Signs: Subsection C of 19.15.17.11 NMAC 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 and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks. **General siting** Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. Yes X No □ NM Office of the State Engineer - iWATERS database search; □ USGS; □ Data obtained from nearby wells NA NA Yes 🛛 No Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. **NA** NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance Yes No adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) Written confirmation or verification from the municipality; Written approval obtained from the municipality Within the area overlying a subsurface mine. (Does not apply to below grade tanks) Yes X No Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division Within an unstable area. (Does not apply to below grade tanks) Yes No Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map Yes X No Within a 100-year floodplain. (Does not apply to below grade tanks) FEMA map **Below Grade Tanks** Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured Yes No from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site Yes No Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter) Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, Yes X No or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) Topographic map; Visual inspection (certification) of the proposed site Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial Yes No application. Visual inspection (certification) of the proposed site; Aerial photo; Satellite image Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock Yes No watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes 🛛 No
Temporary Pit Non-low chloride drilling fluid	
 Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No
 Within 300 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 private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No
 Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No
Permanent Pit or Multi-Well Fluid Management Pit	
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	
 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
 10. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.10 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number: 	IMAC cuments are 9 NMAC 15.17.9 NMAC
11.	
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the dot attached.	cuments are .15.17.9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number: _	A. 1
	Constanting of the second

	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the attached.	documents are
 Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment 	
 Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC 	
Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan	
 Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H₂S, Prevention Plan 	
 Emergency Response Plan Oil Field Waste Stream Characterization 	
 Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC 	
13. Proposed Closure: 19 15 17 13 NMAC	
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: \square Drilling \square Workeyer \square Emergency \square Cavitation \square B&A \square Permanent Pit \square Pelow grade Tank \square Multi-well E	uid Management Dit
Alternative Proposed Closure Method: Waste Excavation and Removal	and management I it
 Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial 	
Alternative Closure Method	
 Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC 	
15. <u>Siting Criteria (regarding on-site closure methods only)</u> : 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. F 19.15.17.10 NMAC for guidance.	rce material are Please refer to
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes ⊠ No □ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes ⊠ No □ NA
Ground water is more than 100 feet below the bottom of the buried waste NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
 Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🛛 No
 Within 300 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 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	🗋 Yes 🖾 No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes 🛛 No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	
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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
Within the area overlying a subsurface mine	
 Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division 	🗌 Yes 🛛 No
Within an unstable area	
 Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM C 	Geological
Society; Topographic map	Ves 🕅 No
Within a 100-year floodplain.	
- FEMA map	Yes 🛛 No
 16. On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC 	o the closure plan. Please indicate, K of 19.15.17.11 NMAC irements of 19.15.17.11 NMAC standards cannot be achieved)
17. Operator Application Certification: I hereby certify that the information submitted with this application is true, accurate and complete to the best of my know	wledge and belief.
Name (Print): Tamra Sessions Title: Operations Technicia	n
0-17	
Signature: Date: 8-01-	15
". II	
e-mail address: tsessions@iogosresourcesnc.com relephone: 303-330-9333	
18. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see a	attachment)
OCD Representative Signature: Approval D	Pate: 101/2015
Cut aller 0	A Start Burger
Title: OMPLUMIC REALE OCD Permit Number:	
19. <u>Closure Report (required within 60 days of closure completion)</u> : 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities of The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Completion Date:	and submitting the closure report. Please do not complete this
 20. Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal If different from approved plan, please explain. 	oval (Closed-loop systems only)
21. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure for private land only) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (required for on-site closure) Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation)	port. Please indicate, by a check

Oil Conservation Division

22. Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge	and
belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.	

Name (Print):	1itle:	
Signature:	Date:	
e-mail address:	Telephone:	

Logos Operating, LLC San Juan Basin Variance Explanation for Temporary Pits

All requested variances provide equal or better protection of fresh water, public health and the environment.

C-144 Item #5 Fencing

Logos is requesting a variance to rule 19.15.17.11 D (3) and shall construct all new fences utilizing 48' steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post.

Public Entity Closure Notification -Temporary Pit Closure Plan Attachment Item #3.

Rule 19.15.17.13 E. If the surface owner is a public entity (BLM/State/Tribal) then an email notification will be sent, of plans to close the temporary pit at least 72 hours, but no more than 1 week, prior to any closure operation. The notice will include the well name, API number, and location.

Visible Marker - Temporary Pit Closure Plan Attachment Item #13 a.

Logos has requested a variance for the visible marker that should 'extend at least four feet above mean ground level'. Logos plans to use a steel plate at least 12" x 12", flush with ground level and contain the same information as the four foot riser would have as per the rule. Upon the abandonment of all the wells on the pad, the plate will be removed and replaced with a four foot tall riser containing the same information as per the rule.

none: (975) 393-6161 ISTRICT II 1 S. First St., Artesis None: (575) 748-1283 ISTRICT III 00 Eio Brance Rd., A None: (505) 334-6176 ISTRICT IV	Fax: (575) a, N.M. 88210 Fax: (575) 7 atteo, N.M. 874 Fax: (505) 3	383-0720 148-9720 410 134-6170	Er	OIL C	onservatio Onservatio 20 South St. 1 Santa Fe, NM	N DIVISION Francis Dr. & 87505	Henr	Su	abmit one co	py to appropr District Of
20 S. St. Francis Dr., 1008: (505) 476-3450	, Santa Fe, N) Fax: (505) 4	M 87505 175-3462 TA	TOT T	004000		DEAGE DEDI		ON DI	4 m	
	1.201	N Sec. N	ل بليلظ/	OCATIO.	N AND AC.	REAGE DEDI	CATI	ON PL	AT	1.1.1.1.1
*API	Number		2	*Pool Code 97232			E	*Pool Name	NCOS	
* Property Co	ode		-	1.1.1.1	*Property	Name				⁶ Well Number
	1012				LOGOS JICAR	RILLA			Tent 3	9P
"OGRID No.	• 1. cars	1000			⁸ Operator	Name		4.0		^e Elevation
289408	3			L	OGOS OPERAT	ING, LLC	1. A.	18	differ to	6755
		100		1.15	¹⁰ Surface	Location	1	Terra.	Jacob Contractor	
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet	from the	East/West line	County
F	9	23-N	11 D-11	TT_1_	T T	Different De	- 0	005	EAST	KIU AKKIE
UL or lot no.	Section	Township	Bott	Lot Idn	LOCATION I	I DIIIErent Fr	OIN S	trom the	East/West line	County
		1100								
Dedicated Acres	5		¹⁸ Joint or	Infill	¹⁴ Consolidation (Code	18 Orde	r No.	1948 - 1949 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 -	
6 SIS OF BEARIN TWEEN SET MONU THE NORTHEAST ST, N.M.P.M. RIO E BEARS: N 00 ⁻¹	NG: JMENT AT CORNER (ARRIBA CO 43'52" E A	OR A N THE SOUTHEA OF SECTION S DUNTY, NEW DISTANCE O	ST CORNER , TOWNSHIP MEXICO. F 5316.72	ANDARD	MONUMENT RANGE 5	EEN APPROVED FND REB IN STO PI	BY	THE DIV 17 OPE 1 hereby ce is true and beliaf, and a working land includ has a right	TISION CRATOR CEI ritify that the inform complete to the be that this organisati intervet or unleased tog the proposed bo to defil the sual	RTIFICATION nation contained her at of my knowledge on either owns mineral interest in time hole location or it this location pure
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LOGOS OPERATING, LLC LOGOS JICARILLA #9P, 901' FSL & 1063' FEL SECTION 9, T-25-N, R-5-W, NMPM, RIO ARRIBA COUNTY, NM GROUND ELEVATION: 6755', DATE: JUNE 29, 2015



HORIZ. SCALE: 1" = 50' VERT. SCALE: 1" = 30'

NOTE:

VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION. 0

Annual Street Connector	New Water	v Mexic Colur	0 0: nn/	ffice Av	e of tl erag	he Stat je De j	e Eng oth te	inee o V	er Vat	er
(A CLW###### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)	(quarters ar (quarters ar	re 1=NW	2=NE 3= st to larg	=SW 4=SE est) (N	i) AD83 UTM in n	neters)	(1	in feet)	
POD Number	POD Sub- Code basin Co	Q Q Q unty 64 16 4 5	Sec Tws	Rng	x	Y	Distance	Depth Well	Depth Water	Water Column
SJ 00201	F	RA 14	03 25N	06W	280124	4034064*	8667	1346	500	846
RG 70162	la el su e	ТА			295149	4025729	9063	150	95	55

Average Depth to Water: 297 feet	
Minimum Depth: 95 feet	
Maximum Depth: 500 feet	

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 288519

Northing (Y): 4031909

Radius: 10000

*UTM location was derived from PLSS - see Help

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





MINES, MILLS & QUARRIES MAP

LOGOS JICARILLA 9P



LOGOS JICARILLA 9P - Latitude 36.410121° N / Longitude 107.359405° W (NAD83) There are no mines, mills or quarries within any close distance. Data Source: New Mexico Active Mines, Feb 2012 spreadsheet http://www.emnrd.state.nm.us/MMD/gismapminedata.html

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FOLD A PION SELLOR. - CALINSON

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WELL X	WORK DEEP	плек [BENVR.	Other _1			1-	S. FARM OR	LEAME N	AND	DE	
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AMOCO PTO	ERATOR	pany		. 5	VE	n.D_		B. WELL NU.	120		DDS	
501 Airpo	ort Drive, Fa	armington,	NM 87401	- = "	11.	-		10. FIELD AN	D POOL	UR WILDOA	h cr	OK
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			ALLORD INC.	port all string	a set in	werll)						
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CABING RIZE 8-5/8" 4-1/2"	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI тор (мр)	с. рерти нет 5 32 -80 745 INER RECORD	аска, сен Бут.	port all atring DLE-RIZE -1/4" -7/8" SCREEN (1)	35 Stag tail 1,70	CEME 24 c.f. 24 c.f. 26 l: 1 26 din 2-3/8"		ECORD SS B. Id c.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363'	eal ss E lass 35 po DRD D)	AMOUNT P 50:50 B St. Z. PACKER BE	poz & age ·2	-
CABING RIEE 8-5/8" 4-1/2"	weight, lb./FT 24#, K-55 11.6#, N- Li TOP (MD) COED (Interval, size	And number)	(нер) 3' 0' заска, сеньяхт.	port all atring DLE-512E -1/4" -7/8" SCREEN (1) 	ACIL	64 c.f. 64 c.f. 64 c.f. 64 c.f. 64 c.f. 70. 8125 2-3/8 ¹¹ 70. 8107.	Cla: 024 0 w/112 Cla: T T FRACTU	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH SET (M 7363' URE. CEMEN'	eal ss E lass 35 po DRD b)	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC	poz & age-2	-
CABING BIEE 8-5/8" 4-1/2" 8. . BIEE . FERFORATION REC 7370'-735	иенант. LB./FT 24#, K-55 11.6#, N- LI тор (MD) Совр (Interval, succ 0', 7330'-73	с. рерти нет 5 32 -80 745 INER RECORD ноттон (мр) and number) 308 [†] 2 isi	аска, сенент:	port all atring 01.E - 612E - 1/4" - 7/8" SCREEN (3)	ACII	CEMF 4 c.f. 94 c.f. 94 c.f. 94 c.f. 94 c.f. 90. 512E 2-3/8 ¹¹ 0. SHOT. (MD)	Clas Clas 024 (w/11) Clas T FRACTU	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT UNT AND KIN	eal ss E lass 35 po DRD D) cr sque	AMOUNT P 50:50 B St. Z. FACKER BE EZE, ETC.	DOZ & age 2 r (MD)	-
CABING BILE 8-5/8" 4-1/2" 9. . BILE 1. FERPORATION REC 7370'-735 total of	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI тор (MD) СОЕВ (Interval. succ 0', 7330'-73 84 holes	с. регти нет 5 32 -80 745 INER RECORD воттом (мв) and number) 308', 2 js	ял. насоно (же (мр) 3' 3' 3' 12: 7: то то то то то то то то то то	port all atring DLE -512E -1/4" -7/8" SCREEN (1) SCREEN (1) 	ACII -7370	well) GEME 64 c.f. ge 1: 1 ed in 04 c.f. 30. stze 2-3/8" D. SHOT. (MD) '	Clas (024 d w/112 Clas T P FRACTU AMO 70,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH SET (M 7363' URE, CEMEN' URE, CEMEN' OUNT AND KIN 00 gal.	eal ss E lass 35 po DRD p) r sque p or wi 20# g	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. ITERIAL US elled	ULLED POZ & age 2 T (ND) ED Water	- - -
CABING BILE 8-5/8" 4-1/2" 9. - SIZE 1. PERFORATION REV 7370'-735 total of	weight. LB./FT 24#, K-55 11.6#, N- LI тор (MD) Совр (Interval. suc 0', 7330'-73 84 holes	с. рерти нет 5 32 -80 745 INER RECORD воттом (мр) and number) 308', 2 js	(нер) ле 3' 12: 0' 7: зыска, самылт: рf, .51",	port all atring -1/4" -7/8" screen (1) screen (1)	ACII	werll) CEME 4 c.f. 94 c.f. 94 c.f. 94 c.f. 30. size 2-3/8" c.shot. (MD) 1	Clas 024 0 w/112 Clas T P FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT NURE, CEMENT NUNT AND KIN 00 gal. 00# 20-4	eal ss E lass 35 po DRD D) r sque 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. ITERIAL US elled th h sand	DOZ & age 2 r (ND) cD water	- :
CABING BILE 8-5/8" 4-1/2" 8. . BILE . FERFORATION REC 7370'-735 total of	weicht. LB./FT 24#, K-55 11.6#, N- LI тор (мр) п совр (Interval, suc 0', 7330'-73 84 holes	с. рерти нет 5 32 32 32 32 32 32 32 32 32 32	(нер) ли 3' 12. 0' 7. заска, сем Бут. рf, .51",	port all atring DLE-512E -1/4" -7/8" SCREEN (1) SCREEN (1) 	Actin Actin	well) CEME 94 c.f. 94 c.f. 96 11 91 1 92 3/8" 93 SHOT. (MD) 1	Clas 024 (w/11) Clas T P FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE. CEMENT NUNT AND KIN 00 gal. 00# 20-4	eal ss E lass 35 po DRD p) r sque 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER BE EZE, ETC. ITERIAL US elled U h sand	ULLED POZ & age 2 T (MD) ED Water	- :
CABING NILE 8-5/8" 4-1/2"	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI тор (мр) В Совр (Interval. succ 0', 7330'-73 84 holes	and number)	(нер) 3' 0' 3' 12: 7: заска, сем ват. рf, .51", ГВО	port all atring DLE -512E -1/4" -7/8" SCREEN (1) SCREEN (1) 	ACII	well) CEME 64 c.f. ge 1: 1 ed in 04 c.f. 30. SIZE 2-3/8" >, SHOT. (MD) ' -	Cla: 024 0 w/112 Cla: T P FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT AND KIN 00 gal. 00# 20-4	eal ss E lass 35 po DRD p) r sque c sque 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. ITERIAL US elled 1 h sand	ULLED POZ & age 2 r (ND) F (ND) ED Water	۔ د
CABING NILE 8-5/8" 4-1/2" 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) COLD (Interval, size 0', 7330'-73 84 holes ION	с. рерти нет 5 32 32 32 32 32 32 32 32 32 32	(нер) 3' 0' ли заска, сем Бут. васка, сем Бут. рf, .51", ГВО lowing, gas lift, р	DIF - 1/4" - 1/4" - 7/8" -	ACII ACII TERVAL	CEMP 4 c.f. 4 c.f. ed in 4 c.f. 30. 512E 2-3/8" 0. SHOT. (MD) 1 1 1 1 1 1 1 1 1 1 1 1 1	Clas 024 (w/11) Clas T FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT NUNT AND KIN DO gal. DO# 20-4 WELL AND	eal ss E lass 35 po DRD D) r sque b or NA 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. TTERIAL VS elled v h sand	ULLED poz & age 2 r (MD) r (MD) eb water	ά
CABING NILE 8-5/8" 4-1/2" 4-1/2" 6. 6. 6. 7. 6. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) COED (Interval, succ 0', 7330'-73 84 holes ION PRODUCT HOUGHS TESTED	And number) 308', 2 js Flowing CHORE BILLE	(нер) 3' 0' 3' 12- 12- 12- 7- 5ACKS, СЕЙБЛТ" рf, .51", ГRO Гокоіпд, дая lift, р 3' 12- 7- 5АСКВ, СЕЙБЛТ"	port all atring DLE -512E -1/4" -7/8" SCREEN (1) SCREEN (1)	ACII	CEMP CEMP 4 c.f. 94 c.f. 94 c.f. 94 c.f. 30. 512E 2-3/8 ¹¹ 0. SHOT. (MD) 1 	Clas (024 / w/11) Clas T Clas T FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMEN' URE, CEMEN' O gal. 00 # 20-4 WELL AND WATER-BEL	eal ss E lass 35 po DRD p) r sque b or wi 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. itenial US elled th h sand (Producing ut-in	ULLED POZ & age 2 T (MD) ED Water	- :
CABING RIEE 8-5/8" 4-1/2" 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) COED (Interval, succ 0', 7330'-73 84 holes ION PRODUCT MOURS TESTED 3	And number) and number) 308', 2 js Flowing CHOKE SIZE .75"	(мр) ли 3' 12: 0' 7. заска, семелт.	port all atring DLE-SIZE -1/4" -7/8" SCREEN (1) SCREEN (1) SCREEN (1) -7/8" DEPTH IN 7308" DU'CTION SUMPING-eize OIL-BEL.	ACII ACII TERVAL	CEMP 4 c.f. 4 c.f. 94 c.f. 94 c.f. 30. 512E 2-3/8 ¹¹ 1 1 1 1 1 1 1 1 1 1 1 1 1	Cla: Cla: 024 (w/11) Cla: T P FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT NURT AND KIN 00 gal. 00# 20-4 WELL AND WATER-BBL	eal ss E lass 35 po DRD D) r sque b or wa 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. ITERIAL US elled U h sand (Producing ut-in AB-OIL RAT	ULLED POZ & age 2 age 2 r (ND) ED Water	δ
CABING NILE 8-5/8" 4-1/2" 	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) COED (Interval, succ 0', 7330'-73 84 holes ION PRODUCT MOURS TESTED 3 CABINO PRESSURE	And number) and number) 308', 2 js CHON METHOD (FI Flowing CHOKE GIZE .75" 1 CALCULATED 24-BOLE BALLED	(мр) ли 3' 12. 0' 7. заска, семент.	port all atring DLE - 612E - 1/4" - 7/8" SCREEN (1) SCREEN (1) - 7/8" -	ACII ACII TERVAL -7370 and typ	CEMP 4 c.f. 4 c.f. 4 c.f. 94 c.f. 104 c.f. 30. 512E 2-3/8 ¹¹ 0. SHOT. (MD) 1 	Cla: Cla: 024 (w/11) Cla: T FRACTU AMO 70,00 95,00 	ECORD SS B. Id c.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT NUNT AND KIN 00 gal. 00# 20-4 WELL #AN WATER-BEL	eal ss B lass 35 po DRD D) F SQUE D OF NO 20# g 0 mes tim) Sh Coll Ga	AMOUNT P 50:50 B. St. Z. PACKER BE EZE, ETC. TTENIAL US elled u h sand (Producing ut-in AB-OIL EAT	ULLED POZ & age 2 T (MD) T (MD) ED Water	δ
CABING RIEE 8-5/8" 4-1/2" 	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) B COED (Interval. size 0', 7330'-73 84 holes ION PRODUCT HOURS TESTED 3 CASING PRESSURE 612 psig	CHOSE SIZE .75" CHOSE SIZE .75" CHOSE SIZE .75" CHOSE SIZE .75" CHOSE SIZE .75" CHOSE SIZE .75" CHOSE SIZE .75"	(мр) ли 3' 12: 0' 7. зласка, семерат.	port all atring DLE-SIZE -1/4" -7/8" SCREEN (1) SCREEN (1) S	Acti Acti TERVAL -7370 and typ -wcr. 913	CEMP 4 c.f. 94 c.f. 94 c.f. 94 c.f. 104 c.f. 30. 512E 2-3/8 ¹¹ 0. SHOT. (MD) 1 1 1 1 1 1 1 1 1 1 1 1 1	Cla: Cla: 024 (w/112 Cla: T P FRACTU AMO 70,00 95,00 95,00 	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMEN' TRE, CEMEN' UNT AND KIN DO gal. DO# 20-4 WELL ahu WATER-BBL	eal ss E lass 35 po DRD p) p) r sque 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. ITERIAL US elled 1 h sand (Producing ut-in AS-OIL RAT	ULLED POZ & age 2 T (ND) ED Water	δ
CABING RIEE 8-5/8" 4-1/2" 8. 8:2E 1. FERFORATION REG 7370'-735 total of 12/4/84 TE FIRST PRODUCT 12/4/84 TE OF TRET , 12/5/84 OW, TUBING PRESS. 152 psig Disposition of a	WEIGHT. LB./FT 24#, K-55 11.6#, N- II.6#, N- TOP (MD) TOP (MD) COED (Interval, size 0', 7330'-73 84 holes ION PRODUCT HOURS TESTED 3 CASIMO PRESETRE 612 psig AS (Sold, used for fu	And number) and number) 308 ⁺ , 2 js Flowing CHORE SIZE .75 ¹¹ CHORE SIZE .75 ¹¹ .75 ¹	(мс) лис 3' 12. 0' 7. заска, семерут	port all atring DLE-SIZE -1/4" -7/8" SCREEN (1) SCREEN (1) SCREEN (1) SCREEN (1) -7/8" DEPTH IN 7308" DU'CTION SCREEN (1) 	Acti Acti TERVAL -7370 NCF. 913	CEMP 4 c.f. 4 c.f. 94 c.f. 94 c.f. 30. 512E 2-3/8 ¹¹ 0. SHOT. (MD) 1 1 1 1 1 1 1 1 1 1 1 1 1	NTINC R Class 1024 (w/112 Class T FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT UNT AND KIN 00 gal. 00 # 20-4 WELL AND WATER-BBL NBL.	eal ss B lass 35 po DRD D) r sque b or NA 20# g 0 mes	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. TREBIAL US elled W h sand (Producing MUT-in AB-OIL RAT	ULLED POZ & age 2 age 2 r (MD) ED Water	δ
CABING NILE 8-5/8" 4-1/2" 4-1/2" 6. C. GIZE C. FERFORATION REC 7370'-735 total of C. TOTAL OF C. TUBING PRESS. 152 PSIG DISPOSITION OF G TO be sol. LIST OF ATTACH	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) B COED (Interval. succ O', 7330'-73 84 holes ION PRODUCT HOURS TESTED 3 CASING PRESSURE 612 psig AS (Sold, used for function for functio	And number) and number) 308', 2 js CHON METHOD (FI Flowing CHOKE SIZE 	(нер) ли 3' 12- 0' 7- заска, сём яхт. рf, .51", PRO'N. FOR ТЕДТ РЕЙОД ОЦ.—ВВІ.	port all atring DLE - 512E -1/4" -7/8" SCREEN (3) SCREEN (3) -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -7/8" -1/4" -1/4" -7/8" -1/4"	Acti Action Acti	CEMP 4 c.f. 4 c.f. 94 c.f. 94 c.f. 94 c.f. 30. 512E 2-3/8 ¹¹ 0. SHOT. (MD) 1 	NTINC R Class 1024 (w/112 Class T P FRACTL AMO 70,00 95,00	ECORD SS B. Id c.f. Cla B c.f. C SS B 65: "BING RECO EPTH BET (M 7363' JRE. CEMENT 7363' JRE. CEMENT OO gal. 00# 20-4 WELL #BL. TEST WITNEE J. Ba	eal ss E lass 35 po DRD p) p) r sque p or wi 20# g 0 mes status fin) Sh out can	AMOUNT P 50:50 B. St. Z. PACKER BE EZE, ETC. GTEBIAL UB elled 1 h sand (Producing UL-in AB-OIL RAT AD-OIL RAT	ULLED POZ & age 2 T (MD) ED Water	δ
CABING NILE 8-5/8" 4-1/2" 9. - CIEC - CIE	WEIGHT. LB./FT 24#, K-55 11.6#, N- LI TOP (MD) B COED (Interval, size 0', 7330'-73 84 holes ION PRODUCT MOURS TESTED 3 CASING PRESSURE 612 psig AS (Sold, used for ju MENTS	CHORE BILE CHORE BILE	(нер) (нер) 3' 12: 0' 7: заска, семелт. рf, .51", PRO Iowing, gas lift, р PRO Iowing, gas lift, р С	port all atring DLE -512E -1/4" -7/8" SCREEN (1) SCREEN (1)	Acti Acti TERVAL -7370 and typ 913	CEMP 4 c.f. 94 c.f. 94 c.f. 94 c.f. 100 110 110 110 110 110 110 11	NTINC R Class 1024 (w/113 Class T P FRACTU AMO 70,00 95,00	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT URE, CEMENT UNT AND KIN 00 gal. 00# 20-4 WELL AND WATER-BBL NBL. J. Ba ACCEP	eal ss B lass 35 PO DRD D) r SQUE b or NA 20# g 0 mes status (-in) onl. can rnett IED F	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. TEBIAL US elled 1 th sand (Producing NUT-in AS-OIL BAT AS-OIL BAT	ULLED POZ & age 2 age 2 r (ND) ED Water	6
CABING BILE 8-5/8" 4-1/2" 9. - BILE 1. PERPORATION REC 7370'-735 total of 1. PERPORATION REC 7370'-735 total of 1. PERPORATION REC 7370'-735 total of 	WEIGHT, LB./FT 24#, K-55 11.6#, N- LI TOP (MD) TOP (MD) COED (Interval, size 0', 7330'-73 84 holes 10N PRODUCT HOURS TESTED 3 CASING PRESSURE 612 psig AS (Sold, used for ju d MENTS	CHORE RECORD and number) 308', 2 js CHORE BIZE .75'' CHORE BIZE .75''' .75'' .75'' .75'' .75'' .75'' .75'' .75'' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75''' .75'''	(ALD) JIC 3' 12. 0' 7. sacks, cempst* pf, .51'', PROD'N, FOR TEST FEGOD OIL-BBL. OIL-BBL. OIL-BBL. OIL-BBL. OIL-BBL.	port all atring DLE -512E -1/4" -7/8" SCREEN (1) SCREEN (1)	Acti Acti TERVAL -7370 	CEMP 4 c.f. 94 c.f. 94 c.f. 94 c.f. 104 c.f. 105 105 105 105 105 105 105 105	NTINC R Class 1024 d w/112 Class T P FRACTU AMO 70,00 95,00 NATUR I From a	ECORD SS B. Id C.f. Cla B c.f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT UNT AND KIN DO gal. DO# 20-4 WELL WATER-BEL NBL. J. Ba ACCEP II available r	eal ss E lass 35 po DRD D) r sque b or wa 20# g 0 mes statua Sh out can sstp st rnett IED F cords	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. TTEBIAL US elled 1 th sand (Producing tut-in AS-OIL EAT () 198.2	ULLED POZ & age 2 T (MD) ED Water	5
CABING BILE 8-5/8" 4-1/2" 8. 8. 8. 8. 9. 1. PERFORATION REC 7370'-735 total of 1. 7370'-735 total of 1. 7470'-735 total of 1. 7470'-735	WEIGHT, LB./FT 24#, K-55 11.6#, N- LI TOP (MD) TOP (MD) COED (Interval, succost 0', 7330'-73 84 holes 10N PRODUCT HOURS TESTED 3 CASING PRESSURE 612 psig AS (Sold, used for function for the foregoing foregoing for the foregoing for the foregoing for the foreg	And number) and number) 308', 2 js CHON METHOD (FI Flowing CHOKE GIZE .75 ¹¹ CALCULATED 24-ROUE GIZE .75 ¹¹ CALCULATED 24-ROUE GIZE .75 ¹¹ CHOKE GIZE .75 ¹¹ .75	(мр) лю 3' 12: 0' 7. заска, семулт:	port all atring DIE-SIZE -1/4" -7/8" SCREEN (1) SCREEN (1) S	Actin Actin Actin TERVAL -7370 ond typ 913	CEMP 4 c.f. 4 c.f. 94 c.f. 94 c.f. 30. 512E 2-3/8" 0. SHOT. (MD) 1 1 1 1 1 1 1 1 1 1 1 1 1	NTINC R Class 1024 (w/113 Class T FRACTU AMO 70,00 95,00 NATUR Ifrom a Prvise	INCORD SS B. Id C. f. Cla B c. f. C SS B 65: UBING RECO EPTH BET (M 7363' URE, CEMENT UNT AND KIN 00 gal. 00# 20-4 WELL AND AND WELL AND AND AND AND AND AND AND AND	eal ss B lass 35 PO DRD D) r sque 20% g 0 mes 20% g 0 0 0 00% g 0 0 00% g 0 00% g 0 00% g 00% g	AMOUNT P 50:50 B. St. Z. PACKER SE EZE, ETC. TREBIAL US elled 1 h sand (Producing tut-in AB-OIL RAT AB-OIL RAT () 1984 12/84	ULLED POZ & age 2 age 2 r (MD) r (MD) water	۵

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U. S. LAND OFFICE JIGATILLS Tribel SERIAL NUMBER COMPACY NO. 146 LHASE ON PERMIT TO PROSPECT NO. 146 "" UNITED STATES OFFARTMENT OF THE INTERIOR

Budget Bureau No. 43-R366.4. Approval appires 12-31-60.

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so far as car	be determined	from all av	ailable reco	rds.		· ONGINAL SI	GNED BY	100	
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Completed	January 30,	1961 28	Shut In	DATES	(Shut In for	r pipeline com	nection)		
Seals Date	ota Field De	AcToriate s	well.	Put to	producing	January 30	19.51		
The pro	duction for the	first 24 ho	urs was	barr	rels of fluid of wh	nich% was	oil;%		
emulsion;	% water; an	d	diment.	Oallana	Gravity, "I	50 tit	*****		
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1.	Jackie Shite	••••••	, Driller		/a/ Stille	Priddy	, Driller		
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Logos Operating, LLC Logos Jicarilla 9P Temporary Reserve Pit Application Siting Criteria

- According to the iWaters Database from the State Engineers Office, the closest known water well is 8667 meters (5.3miles) away in Section 3 of T25N R6W. The depth of the well is 1346, and water depth is 500'.
- As shown on the attached topographic map and aerial photos, there are no continuously flowing watercourses within 100' of the temporary pit, or lakebeds, sinkholes or playa lakes within 200' of the temporary pit.
- 3. There are no permanent residences, schools, hospitals, institutions, or churches within 300' of the temporary pit.
- 4. There are no domestic water wells or springs within 200' of the temporary pit. See iWaters Database printout.
- 5. The temporary pit is not located within any municipal boundaries.
- 6. The temporary pit is not within 100' of any wetlands. See attached topographic map and aerial photos.
- There are no subsurface mines in Section 9, T25N, R5W. See attached map from the NM EMNRD Mining and Mineral Division.
- 8. The temporary pit is not located in an "unstable" area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material will not be located within 100' of a continuously flowing watercourse or 200' from any other watercourse. The stockpile will be on location and will meet the criteria.
- The FEMA map for the subject well is unavailable due to its location being on the reservation. FEMA does not provide floodplain information for Reservation Land. Visual inspection was made during the onsite and the TOPO map was referenced; the temporary pit will not be within the 100 year floodplain.
- In the event that the composite pit sample that is mixed 3:1 with native soils does not meet the requirements for onsite burial, the pit contents will be removed and disposed of at the Envirotech Land Farm #2 (NMOCD Permit #11).

Hydro geological report for Logos Jicarilla 9P

Referenced Well Location:

The Logos Jicarilla 9P is located on tribal lands managed by the Jicarilla Apache Nation in Rio Arriba County, New Mexico. The general region surrounding the proposed project area is characterized by badlands, mesas, and relatively flat lowland valleys. The proposed project area is situated on the canyon floor of an unnamed side canyon of Lapis Valley, approximately 1.3 mi northwest of the Eagle Nest butte on Wild Horse Mesa. within gently rolling sagebrush and grass terrain. Ground elevation at the proposed well head is approximately 6755 feet.

General Regional Groundwater Description:

As a portion of the San Juan Basin, the FFO region is underlain by sandstone aquifers of the Colorado Plateau. The primary aquifer of potential concern at this location is the Uinta-Animas Aquifer, composed primarily of Lower Tertiary rocks in the San Juan Basin. The aquifer consists of the San Jose Formation; the underlying Animas formation and its lateral equivalent, the Nacimiento formation; and the Ojo Alamo Sandstone. The thickness of the Uinta-Animas aquifer generally increases toward the central part of the basin. In this region, the maximum thickness of the aquifer is approximately 3500 feet (USGS, 2001). This aquifer contains fresh to moderately saline water. Groundwater generally flows toward the San Juan River and its tributaries, where it becomes alluvial groundwater or is discharged to stream flow.

Site Specific Information:

Surface Hydrology: The temporary pit area is situated on a gentle, southwest-facing slope of Tapicito Canyon. The confluence of Tapicito Canyon (Creek) and Apache Bull Pasture Canyon is approximately 1.15 mile east of the project area.

1st Water Bearing Formation: San Jose, Tertiary; Formation Thickness: Approximately 200 - 700 ft. Underlying Formation: Nacimiento, Tertiary

In 1956, the Jicarilla Contract 146 8 (30-039-06069) was drilled approximately 600' west of our proposed project area. It is at an elevation of 6735' with no indication of water being encountered. Surface casing was set at 160', which would be at 6575'. This would be 180' shallower than our location.

In 1984, the Jicarilla Contract 146 13R (30-039-23567) was drilled approximately 850' northwest of our proposed project area. It is at an elevation of 6749' with no indication of water being encountered. Surface casing was set at 323', which would be at 6426'. This would be 329' shallower than our location.

In 1961, the Jicarilla Contract 146 10 (30-039-06079) was drilled approximately 2800' west of our proposed project area. It is at an elevation of 6714' with no indication of water being encountered. Surface casing was set at 506', which would be at 6208'. This would be 547' shallower than our location.

See attached Aerial map showing the proximity of these wells to our project area. We believe that the shale and limestone will prevent any migration of fluids.

Depth to Groundwater:

Depth to groundwater is estimated at greater than 100' below bottom of the temporary pit.

Tamra Sessions

From: Sent: To: Cc:

Subject:

Tamra Sessions Thursday, August 27, 2015 11:35 AM Kurt Sandoval (kurt.sandoval@bia.gov) Marlena Reval (marlena.reval@bia.gov); Deedra Mike (Deedra.Mike@bia.gov); CascindraWillie@jicarillaoga.com; guillermo.deherrera@jicarillaoga.com Logos Jicarilla 9P_SURFACE OWNER NOTIFICATION for Temporary Pit 08-27-15

Logos Jicarilla 9P JAN Lease 146 P, Section 9, T25N, R05W Rio Arriba County

According to NMOCD rules, Logos Operating, LLC is notifying you, as the surface owner, that there will be a temporary pit on the subject well and that they intend to bury the drill cuttings in the reserve pit, assuming that they qualify as per Subsection D of 19.15.17.13 NMAC. No action is required on your part. If you have any questions, please do not hesitate to call me. Please let me know if I need to add anyone else to this notification.

Thank you,

Tamra Sessions Logos Resources, LLC Operations Technician <u>tsessions@logosresourcesllc.com</u> (o) 505-436-2606 (c) 505-330-9333

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Logos Operating, LLC San Juan Basin Temporary Pit Design and Construction Plan

In accordance with Rule 19 15 17 the following information describes the design and construction for temporary pits on Logos Operating, LLC (Logos) locations; this is Logos standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit that does not conform to this plan.

General Plan

- 1 Logos will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment
- 2 Prior to constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration
- 3 Logos will post a well sign, in compliance with 19.15.17.11C on the well site prior to construction of the temporary pit. The sign will list the operator on record as the operator, the location of the well by unit letter, section, township range, and emergency telephone numbers
- 4 Logos shall construct all new fences utilizing 48' steel mesh field-fence (hogwire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. If the temporary pit is within 1000' of an occupied residence, it will be enclosed with a chain link fence, as least six feet in height with at least two strands of barbed wire at the top. Temporary pits will be fenced at all times excluding drilling or overwork operations, when the front side of the fence will be temporarily removed for operational purposes
- 5 Logos shall construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure
- 6 Logos shall construct the pit so that the slopes are no steeper than two horizontal feet to 1 vertical foot
- 7 Pit walls will be walked down by a crawler type tractor following construction
- 8 All temporary pits will be lined with a 20-mil, string reinforced, LLDPE liner, complying with EPA SW-846 method 9090A requirements
- 9 Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided
- 10 All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep
- 11 Logos will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. Logos will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. Logos will minimize the number of field seams in corners and irregularly shaped areas
- 12 The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system
- 13 The pit shall be protected from run-on by constructing and maintaining diversion ditched around the location or around the perimeter of the pit in some cases
- 14 The volume of the pit shall not exceed 10 acre-feet, including freeboard
- 15 Temporary blow pits will be constructed to allow gravity flow to discharge into lined drill pit
- 16 The lower half of the blow pit (nearest lined pit) will be lined with the same 20 mil liner. The upper half of the blow pit will remain unlined as allowed in Rule 19 15 17 11 F 11
- 17 Logos will not allow freestanding liquids to remain on the unlined portion of temporary blow pit

Logos Operating, LLC San Juan Basin Temporary Pit Maintenance and Operating Plan

In accordance with Rule 19 15 17 the following information described the operation and maintenance of temporary pits on Logos Operating, LLC (Logos) locations. This is Logos standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit that does not conform to this plan.

General Plan

- 1 Logos will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment
- 2 Logos will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed at Basin Disposal, Inc. Permit # NM-01-005
- 3 Logos will not discharge or store any hazardous waste in any temporary pit
- 4 If any pit liner's integrity is compromised or if any penetration of the liner occurs above the liquid's surface, then Logos shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner
- 5 If a leak develops below the liquid's level, Logos shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. Logos shall notify the Aztec Division office by phone or email within 48 hours of the discovery pursuant to 19.15.29 NMAC.
- 6 The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or manifold system
- 7 The pit shall be protected from run-on by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases
- 8 Logos shall immediately remove any visible layer or oil from the surface of temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will be stored on-site until closure of pit
- 9 Only fluids generated during the drilling or workover process may be discharged into a temporary pit
- 10 Logos will maintain the temporary pit free of miscellaneous solid waste or debris
- 11 During drilling or workover operations, Logos will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports. Logos will file this log with the Aztec Division office upon closure of the pit
- 12 After drilling or workover operations, Logos will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at Logos office electronically and will be filed with the Aztec Division office upon closure of the pit
- 13 Logos shall maintain at least two feet of freeboard for a temporary pit
- 14 Logos shall remove all free liquids from a temporary pit within 60 days from the date the operator releases the drilling or workover rig
- 15 Logos shall remove all free liquids from cavitations put within 48 hours after completing cavitations. Logos may request additional time to remove liquids from Aztec Division office if it is not feasible to remove liquids within 48 hours

Logos Operating, LLC San Juan Basin Temporary Pit Closure Plan

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of temporary pits on Logos Operating, LLC (Logos) locations. This is Logos is standard procedure for all temporary pits. A Separate plan will be submitted for any temporary pit that does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of the pit closure. Closure report will be filed on C-144 and incorporated the following:

- Detail on Capping and Covering, where applicable
- Plot Plan (Pit diagram)
- Inspection reports
- Sampling Results
- C-105
- Copy of Deed Notice will be filed with County Clerk

General Plan

- 1 All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves
- 2 The preferred method of closure for all temporary pits will be on-site burial, assuming that all criteria listed in sub-section (D) of 19.15.17.13 are met
- 3 Logos will notify the surface owner by certified mail, return receipt requested, unless surface owner is a public entity (BLM/State/Tribal) then an email notification will be sent, of plans to close the temporary pit at least 72 hours, but no more than 1 week, prior to any closure operation. The notice will include the well name, API number, and location
- 4 Within 6 months of the Rig Off status occurring on the continuous drilling of dual pad wells, Logos will ensure that temporary pits are closed, re-contoured, and reseeded
- 5 Notice of Closure will be given to the Aztec Division office between 72 hours and one week of closure via email, or verbally, The notification of closure will include the following:
 - i. Operator's name
 - ii. Well name and API Number
 - iii. Location by Unit Letter, Section, Township, and Range.
- 6 Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed as safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents
- 7 A five point composite sample will be taken of the pit using sampling tools and all samples tested per 19.15.17.13 (D)(5). In the event that the criteria are not met, all contents will be handled per 19.15.17.13 (D)(7) i.e., Dig and haul

Components	Tests Method	Limit (mg/Kg)
		>100' bottom of pit to GW
Benzene	EPA SW-846 8021B or 8015M	10
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	1000
Chlorides	EPA 300.0	80,000

- 8 Upon completion of solidification and testing; and contents are below concentrations listed in TABLE II, Logos will fold the outer edges of the trench liner to overlap the waste material in the pit area, then install a geomembrane cover over the waste material in the pit to prevent collections of infiltration water after the soil cover is in place; geomembrane a 20-mil, string reinforced, LLDPE liner, or equivalent complying with EPA SW-846 method 9090A requirements and impervious resistance to ultra violet light, hydrocarbons, salts, alkaline.
- 9 Pit area will be backfilled with compacted, non-waste containing, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater
- 10 Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape
- 11 Notification will be sent to OCD when the reclaimed area is seeded
- 12 Logos shall seed the disturbed areas the first favorable growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixed will be used on federal lands. Vegetative cover will be established that will reflect a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and will equal seventy (70%) of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover thorough two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs
 - On Federal/Tribal/Forest lands we will comply with their stipulations as they are more stringent
- 13 The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be a four foot tall riser with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and Number, unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location
 - a. If the well goes into production, then an alternate interim marking system will be used to allow for safer and more efficient operations. A minimum 4" O.D. steel pipe will be set at least 36" deep at the center of the pit. A threaded collar will be on the top of the pipe. A minimum 12" x 12" steel plate will be welded atop the threaded collar. Top of the plate will be flush with ground level. The steel plate will contain the Operator Name, Lease Name, Well Number, and location information including unit letter, section, township and range, and that the marker designates an onsite burial location. This information will be welded, stamped or otherwise permanently engraved into the metal of the plate. Upon the abandonment of all the wells on the pad, the plate will be removed and replaced with a four foot tall riser containing the same information as described for the steel plate pursuant to 19.15.17.13.H.5D.

State of New Mexico Energy, Minerals and Natural Resources Department

API WELL #	Well Name	Well #	Operator Name	Type Stat	County	Surf_ Owner	U L	Sec	Twp	N/S	Rng	W/E
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Site informa	tion:		Below Grade Tank		Other:							
	🛛 Ten	npora	ry Pit 🗌 Multi-W	ell Fluid	Manage	ment I	Pit					
Application	Туре:											
			(C-144)									
			Conditions									
New Me	exico Oil	Cons	servation Divisio	on App	oroval an	nd			E.			
Brett F. Woods, Deputy Cabinet S	Ph.D. Secretary		Section of the		1		1	One 8	VSERV	ATION	DIVISION	/
David Martin Cabinet Secretar	у		David Oil Co	R. Catanac	h, Division D Division	irector	(• f	~		1	5	•
Governor	62						1	5/1			EXCO	
Susana Martin	07							1	OFN	EW	~	

Conditions of Approval:

The approval of this permit is contingent on a required modification being submitted and approved prior to the construction or use of the temporary pit. The modification must correct the below issues and be a complete and valid permit, which includes all required attachments. Any temporary pit constructed without meeting these conditions will be out of compliance with 19.15.17 or 19.15.5.11.

Issues:

- Documentation providing site specific depth to ground water information.
 - Due to lack of groundwater information for the area, a test well will needed to be conducted. Please give the NMOCD Aztec Office a minimum of 48 hours to 1 week notification prior to drilling the test well to allow for an inspector to be scheduled to witness. Please see attached test well procedures.
- · Updated Siting Criteria Page
 - o (Include site specific siting information for depth ground water)
- An updated Closure Plan in compliance with 19.15.17.13

Please note: A complete review of the entire application will be conducted upon receipt of the modification. It is recommended the operator conduct a review of the application to ensure it is complete and correct. This will help to insure no additional issues are discovered when it is submitted for review.

Approved by Signature

<u>9/01/2015</u> Date

1220 South St. Francis Drive - Santa Fe, New Mexico 87505 Phone (505) 476-3460 - Fax (505) 476-3462 - www.emnrd.state.nm.us/ocd

State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

David Martin Cabinet Secretary

Brett F. Woods, Ph.D. Deputy Cabinet Secretary David R. Catanach, Division Director Oil Conservation Division



Test Well Requirements

- Provide minimum 72 hr Notification to NMOCD Aztec Office prior to drilling
- Test Well must be air drilled to the following depths, terminating at the shallowest interval where groundwater is encountered
- Formula for drilling depths: Proposed Pit depth + Variable Siting Depths
- Typical Intervals Used
 - 40 ft (25 ft requirement + 15 ft pit depth)
 - 65 ft (50 ft requirement + 15 ft pit depth)
 - 115 ft (100 ft requirement + 15 ft pit depth)
- Wait 1 hr following reaching each depth prior to running down hole with conductivity probe
 - If water is encountered, leave hole open for 24 hrs to allow water level to stabilize and re-measure
- Provided test well coordinates and elevation

*Test well is to remain uncased during the investigation