State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 8705

District IV

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Reliant Exploration & Production, LLC. 10817 West county Road 60 Midland, Texas 79707							251905 30 - <i>OZ</i>	OGRID N	mber	i 		
Property Code 37025 LIBBY MINERAL				operty Name NERALS LL	.C 1931	[130-02		Well No 6-2-A			
			Proposed Pool 1				¹⁰ Proposed Pool 2					
		Bra	vo Dome 96010		7 5 6	T4:-	<u> </u>					
	 			,	·····	ce Locatio						
UL or lot no.	Section 6	Township 19 North	·		Lot Idn Feet from 660'		North/S	outh line	Feet from the 660'	East/	West line	County
	<u> </u>		NMPM			***************************************		orth			East	Harding
			8 Proposed	Bottom	Hole L	ocation If Di	fferent l	From Sur	face	·		1
UL or lot no.	Section	Township	Range	Lot I	dn	Feet from the	n the North/South line		Feet from the	East/	West line	County
				Addi	itional	Well Inform	mation					
	Type Code N	''''''''	12 Well Type Code C			13 Cable/Rotary R			Lease Type Code P			evel Elevation 69.7
	lultiple NO		17 Proposed Depth 2600'	1		18 Formation TUBB		CAP	Contractor CAPSTAR DRILLING		²⁰ Spud Date 3/5/2013	
Depth to Grou				Distance		rest fresh water v	well	·	Distance fro	om neares	t surface w	ater
	100' Synthetic	2 0	mils thick Clay	☐ Pit V	olume: 8	000° 850 bbls	,	Drilling M	ethod:	> 1000		
Close	d-Loop Sys	tem 🔲	-		_		Fresh		Brine Diesel	<i>:</i> Oil-based	I ☐ Gas/	Air 🗌
			²¹ Pr	oposeo	d Casin	g and Cem						
Hole Si	ze	Casing		asing weig		Setting			cks of Cement		Estimated	тос
12-1/4	4"	8-5/	5/8" 24#		/ 700		0,	300SX			SURFACE	
7-7/8	,,,	5-1/	2" 5.	5.9#FG/15		5.5# 2600'			400SX		SURFACE	
						<u> </u>						<u> </u>
						ļ						!
	e the blowe		this application is n program, if any,				the data	on the prese	nt productive zo	ne and pr	oposed nev	w productive
SEE ATTAC	HMENIS			,						*		
of my knowle	dge and bel according t	ief. I <mark>furthe</mark> i o NMOCD ;	given above is true certify that the c guidelines , a g	drilling p	it will be		O	IL CON	ISERVATI	ON D	IVISIO	N
Signature:	OFF.	1/2		<i>></i> ~	\checkmark	. Арр	proved by	r.	PM	at.	and the same of th	1
Printed name:	Scott S. V	anderburg	- W. F		0	Titl	e:	DIST	RICTS	PER	VISOI	₹
Title: President				App	Approval Date: 2 /14/2013 Expiration Date: 2 /14/201,							
E-mail Addre	ss: scottv@	reliantholdin	gsltd.com					•				•
Date:			Phone:	432-362-	-9206	Cor	nditions o	f Approval A	Attached [

ATTACHMENT C-101 RELIANT EXPLORATION & PRODUCTION WELL 6-2-A

PROPOSED TD: 2600'

BOP PROGRAM:

0-700' None

700 - 2600' 9" annular 3000# Ragan Tuaras

Casing:

Surface:

8-5/8" OD 24# J55 8rd ST&C new casing set at

700' 12-1/4" hole Centralizers from TD – Surface, every fourth

joint

Production:

5 -1/2" OD new casing from 0-2600'

300' - 15.5# J55 8rd LTC 2300' - 5.9# 10rd FG

7 -7/8" hole - 5 centralizers

* This well will have fiberglass casing from the surface down to the productive interval (Tubb). Steel casing will be used across the Tubb. The fiberglass casing will at a minimum penetrate the Cimarron formation, with the optimum setting point being the midpoint of the Cimarron formation.

Cement:

Surface – Circulate cement with 300sx class C – additives 2# C45, weight of 12.4# per gallon. Yield 2.14 and 1/8# of Celaflake per sx. Tail Cement 100sx class C 2%CACl with 1/8# per sx. Celaflake Yield of 1.32# with weight of 14.8# per gallon

Production- Circulate cement with 400sx class C – additives 2# C45, weight of 12.4# per gallon. Yield 2.14 and 1/8# of Celaflake per sx. Tail Cement 100sx class C 2%CACl with 1/8# per sx Celaflake Yield of 1.32# with weight of 14.8# per gallon

Mud

0-700'

Fresh water/native mud. Wt 8.6-9.2ppg,

Vis 32.=-36sec

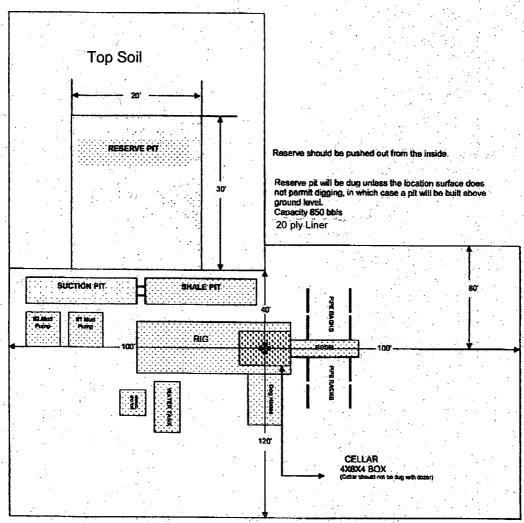
700-2600'

Fresh water/ Starch/Gel with ph control as needed.

Wt 9.0-9.2ppg, Vis 28-29 sec

Utilizing Metal Pits with a 30' by 20' reserve lined pit with 20 ply liner.

LOCATION SPECIFICATION AND RIG LAYOUT FOR STEEL PITS (PICTURE NOT TO SCALE)



Cellar can be 4X4X4 if using a screw-on wellhead

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (375) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (305) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

☐ AMENDED REPORT

WO# 121101WL-c (KA)

WELL LOCATION AND ACREAGE DEDICATION PLAT

		,	VLLL LOCATIA	OTTI	1101	LAIGE D	LDICITIO.				
		Number		Code			^	Pool Name			
		20557	96					Done	Done		
	rty Code	.			Property		1001			Well Number	
37025			LI			ALS LLC	1931			6-2-A	
	ID No.	_			Operator					Elevation	
a	5150	5	RELIANT E	XPLORA	TION	& PROI	DUCTION,	LLC.		4469.7'	
				Surfa	ice L	ocation					
UL or lot no.	Section	Township	Range		Lot Idn	Feet from the	North/South line	Feet from the	East/West li	ine County	
A	6	19 NORTH	31 EAST, N.	М. Р. М.		660'	NORTH	660'	EAST	HARDING	
	Bottom Hole Location If Different From Surface										
UL or lot no.	Section	Township	Range	- Double			North/South line		East/West li	ine County	
Dedicated	4	7.17.611	0 1111 01	0.1.11							
Dedicated		Joint or Infill	Consolidation Code	Order No.							
160)										
No allowa	ble wil	ll be assigned to	this completion un	til all inter	ests ha	ve been cons	solidated or a	non-standard	unit has bee	n approved by the	
division.											
			1				. 1	0.	PERATOR CER	RTIFICATION	
		1	1				099	I hereby cert	ify that the information	n contained herein is true and	
			1					complete to 1	he best of my knowled	ige and belief, and that this	
		1	1			1	660'	organization	either owns a working	g interest or unleased mineral	
							660	interest in the	e land including the pr	roposed bottom hole location or	
		ī			n' -	/ /		has a right to	drill this well at this	location pursuant to a contract	
				3102.	9					neral or working interest, or to a	
<u> </u>		— ' —				_/_				compulsory pooling order	
									ntered by the division.		
		1		SURFACE L	OCATION	N 1		no dayor da		1/2/10	
		6-1		NAD 1	927	11		Signature	- 11) //S0//3	
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		I						Date of S	WOVEMBER urvex	1, 2012	
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								Certificat	Number (15070 1917 191	
II .		1	1					Ceruncai	P TAMETICAL	130/9	

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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 August 1, 2011

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method						
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request						
Please 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.						
Operator: Reliant Exploration & Production, LLC OGRID #: 251905						
Address: 10817 West County Road 60 Midland, TX 79707						
Facility or well name: <u>Libby Minerals LLC 1931 6-2-A</u>						
API Number: 30-021-20557 OCD Permit Number:						
U/L or Qtr/Qtr A . Section 6 Township 19N Range 31E County: Harding						
Center of Proposed Design: Latitude 35.9118489° N Longitude 103.6799522° W NAD: ⊠1927 □ 1983						
Surface Owner: Federal State Private Tribal Trust or Indian Allotment						
Pit: Subsection F or G of 19.15.17.11 NMAC						
Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume:						
5. Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.						

Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church) Sour foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify						
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)						
8. 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						
9. Administrative Approvals 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: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for					
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. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.						
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No Unknown					
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 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☑ No ☐ NA					
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☑ NA					
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, 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 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					
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ 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 Geological Society; Topographic map	☐ Yes ☑ No					
Within a 100-year floodplain FEMA map	☐ Yes 🖾 No					

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment 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 documents are 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 19.15.17.12 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 19.15.17.9 NMAC and 19.15.17.13 NMAC							
Previously Approved Design (attach copy of design) API Number: or Permit Number:							
Closed-loop Systems Permit Application Attachment 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 documents are attached. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 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 19.15.17.9 NMAC and 19.15.17.13 NMAC							
Previously Approved Design (attach copy of design) API Number:							
Previously Approved Operating and Maintenance Plan API Number: (Applies only to closed-loop system that use							
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)							
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 documents are attached. 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 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 H Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control 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							
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: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative Proposed Closure Method: Waste Excavation and Removal 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 (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)							
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. ☐ 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 F 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 I of 19.15.17.13 NMAC ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC							

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground S Instructions: Please indentify the facility or facilities for the disposal of liquids, disposal of liqu		
facilities are required.	·	
	Disposal Facility Permit Number:	di
Disposal Facility Name:	Disposal Facility Permit Number:	<u> </u>
Will any of the proposed closed-loop system operations and associated activities occ Yes (If yes, please provide the information below) \(\subseteq \) No	ur on or in areas that will not be used for future serv	rice and operations?
Required for impacted areas which will not be used for future service and operation. Soil Backfill and Cover Design Specifications based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection I Site Reclamation Plan - based upon the appropriate requirements of Subsection	requirements of Subsection H of 19.15.17.13 NMAC of 19.15.17.13 NMAC	
17. <u>Siting Criteria (regarding on-site closure methods only)</u> : 19.15.17.10 NMAC <u>Instructions: Each siting criteria requires a demonstration of compliance in the comprovided below. Requests regarding changes to certain siting criteria may require considered an exception which must be submitted to the Santa Fe Environmental demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for</u>	administrative approval from the appropriate distr Bureau office for consideration of approval. Justif	rict office or may be
Ground water is less than 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 between 50 and 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 .
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 ☐ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other sign lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	ificant watercourse or lakebed, sinkhole, or playa	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in Visual inspection (certification) of the proposed site; Aerial photo; Satellite	• •	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less watering purposes, or within 1000 horizontal feet of any other fresh water well or sp - NM Office of the State Engineer - iWATERS database; Visual inspection (c	ring, in existence at the time of initial application.	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approva	·	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
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 Society; Topographic map	& Mineral Resources; USGS; NM Geological	☐ Yes ☐ No
Within a 100-year floodplain FEMA map		☐ Yes ☐ No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Siting Criteria Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate of a drying part of Protocols and Procedures - based upon the appropriate requirements of 19.15. Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Siting Disposal Facility Name and Permit Number (for liquids, drilling fluids and draw Soil Cover Design - based upon the appropriate requirements of Subsection H	irements of 19.15.17.10 NMAC Subsection F of 19.15.17.13 NMAC oropriate requirements of 19.15.17.11 NMAC d) - based upon the appropriate requirements of 19.1 17.13 NMAC irements of Subsection F of 19.15.17.13 NMAC Subsection F of 19.15.17.13 NMAC ill cuttings or in case on-site closure standards cannot	15.17.11 NMAC
Re-vegetation Plan - based upon the appropriate requirements of Subsection I	of 19.15.17.13 NMAC) H

19. Operator Application Certification: I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.						
Name (Print): Scott Vanderburg Title: President						
Signature: Date: 1/31/20/3						
e-mail address: scottv@reliantholdingsltd.com Telephone: 432-362-9206						
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: 2/14/2013 Title: OCD Permit Number:						
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.						
Closure Completion Date:						
Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only) If different from approved plan, please explain.						
23. Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed Use attachment if more than two facilities were utilized.						
Disposal Facility Name: Disposal Facility Permit Number:						
Disposal Facility Name: Disposal Facility Permit Number:						
Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations? Yes (If yes, please demonstrate compliance to the items below) No						
Required for impacted areas which will not be used for future service and operations: Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique						
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check 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) 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) On-site Closure Location: Latitude Longitude NAD: □1927 □ 1983						
25. 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): Title:						
Signature: Date:						
e-mail address:						

Hydrogeological Data

Well Name:

Libby Minerals LLC 1931 6-2-A

Topography:

This location is within the Great Plains Physiographic Province, with flat to rolling prairie and scattered hills and bluffs. The land gradually rises westward, giving way to the frontal ranges of the Rocky Mountains. Elevation of the referenced well is approximately 4470 feet above mean sea level. The location is on a gentle, south-southeastern slope, approximately 0.4 mile west of Ute Creek.

Soils:

Two soil units are mapped within the proposed project area: Kinkead clay loam, alkali, and Berthoud loam, 1- to 5-percent slopes. Both soils are found within alluvial fans. Both soils are considered well drained, and have a depth-to-water table greater than 80 inches. Kinkead clay loam, alkali, has a rare frequency of flooding and no frequency of ponding. Berthoud loam, 1- to 5-percent slopes, has no frequency of flooding or ponding.

Within a 500-foot radius of the proposed well pad, Guadalupe fine sandy loam is also found. This soil is found within floodplains. It is considered a well-drained soil, and has a depth to water table of greater than 80 inches.

Source:

Natural Resources Conservation Service. No Date. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed January 2013.

Geology:

The surface geology within the proposed project area is the Upper Triassic Chinle Group, which consists of medium- and fine-grained mixed clastic rock.

Sources:

U.S. Geological Survey (USGS). 2005. GIS shapefile: nmgeol_dd_polygon. http://mrdata.usgs.gov/geology/state/metadata/nm.html.

Surface Hydrology:

Northeastern New Mexico is drained by the Arkansas River and its tributary, the Canadian River. Runoff from the location would flow south-southeastward for approximately 600 feet before draining into an unnamed tributary of Ute Creek. From this point, the tributary would flow south-southeastward for approximately 1 mile before draining into Ute Creek, a continuously flowing tributary of the Canadian River. Topographic maps and aerial photos indicate that the pit would be greater than 300 feet from any significant waterways or surface water (see Siting Criteria Maps 1 and 2, attached).

Ground Water Hydrology:

This location is within central Harding County, New Mexico, within the Great Plains Physiographic Province. The High Plains aquifer extends westward into eastern Harding County, but in the proposed project region there is no principal aquifer. Aquifers do not exist here, yield too little water to wells to be significant, or yield sufficient water to supply local requirements but are not extensive enough to be classified as a major aquifer.

Depth to groundwater is unknown at this location, because the nearest recorded well with available water-depth information is approximately 1.3 miles from the location (see Siting Criteria Map I, attached). The nearest water well identified on the OSE shapefile is listed below:

Well	Distance/Direction from Proposed Project Area	Elevation	Depth to Water
TU 1363	~1.3 miles north-northeast	~4480 ft	24 ft

Sources:

United States Geological Survey. 2001. Groundwater Atlas of the United States: Arizona, Colorado, New Mexico and Utah. USGS Publication HA 730-C. http://capp.water.usgs.gov.

New Mexico Office of the State Engineer. 2011. GIS shapefile: ose_wells_July2011. http://www.ose.state.nm.us/water_info_data.html.

Siting Criteria Compliance Demonstrations

1. Depth to groundwater (should not be less than 50 feet):

Depth to groundwater is unknown at this location, because the nearest recorded well with available water-depth information is approximately 1.3 miles from the location (see Siting Criteria Map 1). The nearest water well identified on the OSE shapefile is listed below:

Well	Distance/Direction from Proposed Project Area	Elevation	Depth to Water
TU 1363	~1.3 miles north-northeast	~4480 ft	24 ft

2. Distance to watercourse (should not be within 300 feet of a continuously flowing watercourse or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake):

Topographic maps and aerial photos indicate that the pit would be greater than 300 feet from any significant waterways, surface waters, etc. (see Siting Criteria Maps 1 and 2, attached).

3. Distance to buildings (should not be within 300 feet of a permanent residence, school, hospital, institution, or church):

Aerial photos and a site visit indicate that the pit would not be within 300 feet of any of these locations (see Siting Criteria Map 2).

4. Distance to springs or wells (should not be within 500 feet of a private, domestic fresh water well or spring used by less than five (5) households or within 1000 feet of any other fresh water well or spring):

Topographic maps and OSE shapefiles indicate the pit would not be within 1000 feet of any recorded well or spring (see Siting Criteria Maps 1 and 2).

5. Presence within incorporated area (should not be within incorporated municipal boundaries or within defined municipal fresh water well field covered under municipal ordinance):

Topographic maps, aerial photos, OSE shapefiles, and a site visit indicate the pit would not be within an incorporated area or municipal fresh water well field (see Siting Criteria Maps 1 and 2).

6. Distance to wetlands (should not be within 500 feet):

The USFWS has not mapped this location for wetlands. However, soils data, a topographic map, and an aerial photo indicate that the location is not within 500 feet of a wetland.

7. Location above subsurface mine (should not overlie a subsurface mine):

The pit would not overlie a mine. The New Mexico Energy, Minerals, and Natural Resources Department Mines, Mills, and Quarries map website is currently not available. However, the 2009 Mines, Mills, and Quarries map, a topographic map, an aerial photo, and a site survey indicate that there are no subsurface mines in the area (see Mines, Mills, and Quarries map, attached).

8. Presence within unstable area (should not be within an unstable area):

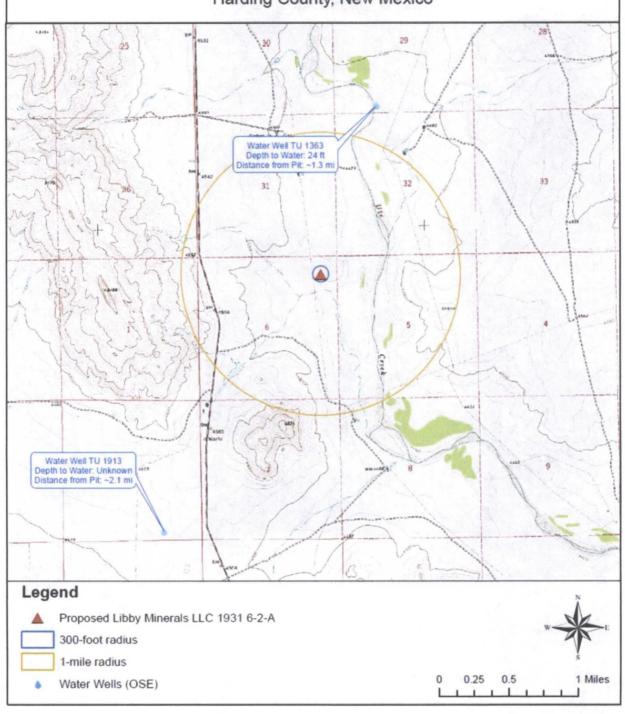
A topographic map, aerial photo, and site survey indicate the location would not be within an unstable area. The location would be on a gentle slope (See Siting Criteria Maps 1 and 2).

9. Presence within floodplain (should not be within a 100-year floodplain):

FEMA data is not available for the location. However, soils data, a topographic map, an aerial photo, and a site survey indicate that the location is not within a floodplain. The proposed pit would be more than 40 feet higher in elevation than Ute Creek.

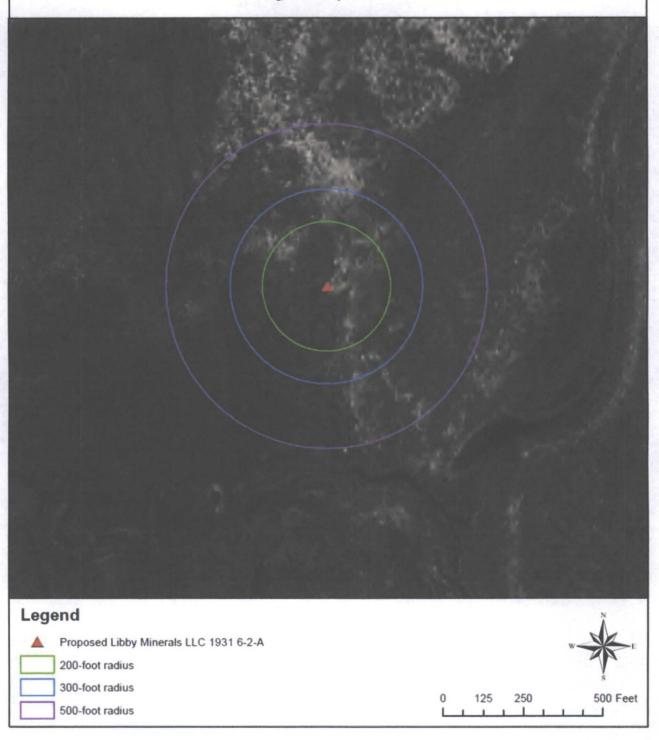


Siting Criteria Map 1 Reliant Exploration & Production, LLC Libby Minerals, LLC 1931 6-2-A T19N, R31E, Section 6, NMPM Harding County, New Mexico

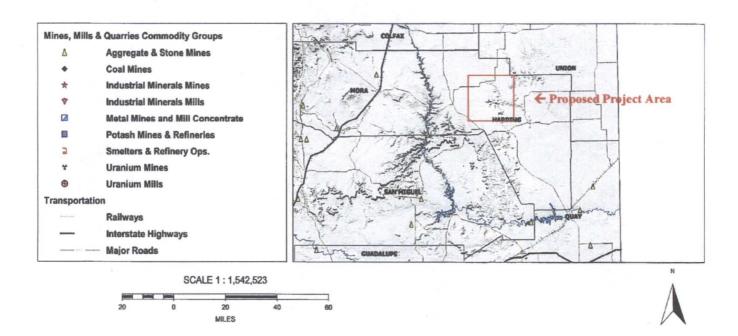




Siting Criteria Map 2 Reliant Exploration & Production, LLC Libby Minerals, LLC 1931 6-2-A T19N, R31E, Section 6, NMPM Harding County, New Mexico



MMQonline Public Version



http://www.emnrd.state.nm.us/MMD/MMQonline/MMQonline-PUBLIC-PROD.mwf

Tuesday, March 31, 2009 11:13 AM

Source

New Mexico Energy, Minerals and Natural Resources Department, Division of Mining and Minerals. Database. 2008. http://www.emnrd.state.nm.us/MMD/MRRS/MinesMillsQuarriesWebMap.htm. Accessed March 2009.

Design Plan (Based on Appropriate Requirements of 19.15.17.11 NMAC)

Design and construction specifications for this temporary pit are as follows:

- Prior to constructing the pit, topsoil would be stripped and stockpiled for use as final cover or fill at the time of closure.
- An upright sign (at least 12" x 24" with lettering at least 2" in height) would be placed conspicuously on the fence surrounding the pit, unless the site has an existing well sign (complying with 19.15.3.103 NMAC). The sign would be posted in a manner and location such that the legend can be easily read, and would contain the following information: operator's name, legal location (quarter-quarter or unit letter, section, township, and range), and emergency telephone number(s).
- If an adequate surrounding perimeter fence does not already prevent unauthorized access to the well site or facility, the pit would be fenced or enclosed in a manner that prevents unauthorized access. The fence would be at least four (4) foot in height with at least four (4) strands of barbed wire evenly spaced between the top and bottom. Fences would be maintained in good repair. During drilling or workover operations, three (3) sides of the pit would be fenced; the side adjacent to the drilling or workover rig would remain open only during such operations.
- The pit would be designed and constructed to ensure the confinement of liquids.
- The pit would be constructed with a properly constructed foundation and interior slopes consisting of a firm, unyielding base. The pit would be smooth and free of rocks, debris, sharp edges, or irregularities to prevent the liner's rupture or tearing. Slopes would be no steeper than two (2) horizontal feet to one (1) vertical foot (2H:1V).
- The pit would have a geomembrane liner with 20-mil string-reinforced LLDPE or its equivalent (approved by the division district office). This liner would be composed of an impervious, synthetic material resistant to petroleum hydrocarbons, salts, and acidic and alkaline solutions. The liner would be resistant to ultraviolet light. The liner would comply with EPA SW-846 method 9090A.
- Qualified personnel would perform field seaming. Liner seams would be minimized, particularly in
 corners and irregularly shaped areas. Field liner seams would be welded. Factory-welded seams would
 be used where possible. Prior to field seaming, liners would be overlapped four (4) to six (6) inches
 and would be oriented parallel to the line of maximum slope (along, not across, the slope).
- Construction would avoid excessive stress-strain on the liner.
- Geotextile would be used under the liner where needed to reduce localized stress-strain or protuberances that may compromise the liner's integrity.
- The edges of all liners would be anchored in the bottom of a compacted, earth-filled trench that is at least 18" deep.
- The liner would be protected from any fluid force or mechanical damage at any point of discharge into
 or suction from the pit.
- A berm, ditch, proper sloping, or other diversion would be constructed around the pit to prevent run-on
 of surface water. During drilled operations, the edge of the pit adjacent to the drilling or workover rig
 may not have protection if the pit is being used to collect liquids escaping from the rig and run-on will
 not result in a breach of the pit.
- The volume of the pit would not exceed 10 acre-feet, including freeboard.

Operating & Maintenance Plan (Based on Appropriate Requirements of 19.15.17.12 NMAC)

Operating and maintenance specifications for this temporary pit are as follows:

- The pit would be maintained to contain liquids and solids, prevent contamination of fresh water, and protect public health of the environment.
- All drilling fluids would be recycled, reused, reclaimed, or disposed of in a manner approved by division rules and that prevents contamination of fresh water and protects public health and the environment.
- Hazardous waste would not be discharged into or stored in the pit.
- If the pit liner's integrity is compromised or if penetration of the liner occurs above the liquid's surface, the appropriate division district office would be notified within 48 hours of the discovery, and the liner would be repaired or replaced.
- If the pit develops a leak or if any penetration of the liner occurs below the liquid's surface, all liquid above the damake or leak line would be removed within 48 hours, the appropriate division district office would be notified within 48 hours, and the liner would be repaired or replaced.
- The injection or withdrawal of liquids from the pit would be accomplished via a header, diverter, or other hardware that prevents damage to the liner by erosion, fluid jets, or impact from installation and removal of hoses or pipes.
- Pit operation would prevent the collection of surface water run-on.
- An oil-absorbent boom or other device would be installed and maintained onsite to contain and remove oil from the pit's surface.
- Only fluids used or generated during drilling or workover processes would be discharged into the
 pit. The pit would remain free of miscellaneous solid waste or debris. A tank made of steel or
 other division district office-approved material would be used to contain hydrocarbon-based
 drilling fluids. Immediately after cessation of a drilling or workover operation, any visibly or
 measurable layer of oil would be removed from the surface of the pit.
- At least two (2) feet of freeboard would be maintained.
- The pit would be inspected at least once daily while the drilling or workover rig is onsite.

 Thereafter, the pit would be inspected weekly as long as liquids remain within it. An inspection log would be maintained and made available to the division district office upon request. A copy of the log would be filed with the division district office at the time of pit closure.
- All free liquids would be removed from the pit within 30 days from release of the drilling or
 workover rig. On form C-105 or C-103, the date of the drilling or workover rig's release would
 be noted. If necessary, an extension of up to three (3) months may be requested from the division
 district office; this extension may or may not be granted.
- Any liquids used for cavitation would be removed from the pit within 48 hours after completing cavitation. If it is not feasible to access the location within 48 hours, this would be demonstrated to the district office's satisfaction and additional time would be requested.

Closure Plan (Based on Appropriate Requirements of Subsection C, 19.15.17.9 NMAC & 19.15.17.13 NMAC)

Closure specifications for this temporary pit are as follows:

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- The pit would be closed within six (6) months from the date that the drilling or workover rig is released. If necessary, the division district office may grant an extension not to exceed three (3) months.
- All liquids from the pit would be removed prior to closure. Liquids would be disposed of at the Sundance Services, Inc. Parabo Disposal Facility (Permit No. 010003), unless they are recycled, reused, or reclaimed in a division district office-approved manner.
- All contents, including synthetic pit liners, would be excavated from the pit and transported to Sundance Services, Inc. Parabo Disposal Facility (Permit No. 010003).
- The soils beneath the pit would be tested to determine whether a release occurred. A five-point composite sample would be collected. In addition, grab samples would be gathered from any area that is wet, discolored, or showing evidence of a release. The samples would be sent to an approved laboratory and analyzed for benzene, total BTEX, TPH, the GRO and DRO combined fraction, and chlorides. The following should not be exceeded:
 - Benzene (as determined by EPA SW-846 method 8021B or 8260B or other divisionapproved EPA method): 0.2 mg/kg
 - BTEX (as determined by EPA SW-846 method 8021B or 8260B or other division-approved EPA method): 50 mg/kg
 - O TPH (as determined by EPA SW-846 method 418.a or other division-approved EPA method): 2500 mg/kg
 - GRO and DRO combined fraction (as determined by EPA SW-846 method 8015M):
 500 mg/kg
 - O Chlorides (ads determined by EPA method 300.1): 500 mg/kg or background concentration, whichever is greater

The division would be notified of the results on form C-141, at which point the division may require additional delineation.

- If it is determined that a release has occurred, Reliant would comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.
- If it is determined that a release has not occurred, or that any release doesn't exceed the above-specified concentrations, the pit excavation would be backfilled with compacted, non-waste-containing, earthen material. A division-prescribed soil cover would be constructed and the site would be recontoured and revegetated, per Subsections G, H, and I of 19.15.17.13 NMAC:
 - O All areas associated with the pit that are no longer being used would be substantially restored to the condition that existed prior to oil and gas operations by placement of the soil cover (detailed below), recontouring to match original contours and surrounding topography, and revegetating (detailed below).
 - O If an alternative to the revegetation requirements is required to prevent erosion, protect fresh water, or protect human health and the environment, this alternative would be proposed to the surface owner. The proposed alternative, with written documentation

Form C-144 Oil Conservation Division Page 16 of 17

- demonstrating that the surface owner approves the alternative, would be submitted to the division for approval.
- O Soil cover would consist of the background thickness of topsoil or one (1) foot of material suitable for establishing vegetation at the site, whichever is greater.
- O Soil cover would be constructed to the site's existing grade and would prevent ponding of water and erosion of the cover material.
- O The first growing season following pit closure, all disturbed areas associated with the pit and no longer being used would be seeded or planted.
- O Seeding would be accomplished by drilling on the contour whenever practical, or by other division-approved methods. Vegetative cover equaling 70% of the native perennial vegetative cover (unimpacted by overgrazing, fire, or other damaging intrusion) would be obtained. This cover would consist of at least three (3) native plant species, including one (1) grass species but not including noxious weeds. That cover would be maintained through two (2) successive growing seasons, during which time no artificial irrigation would occur.
- O Seeding or planting would be repeated until the required vegetative cover is successfully achieved.
- When conditions aren't favorable for the establishment of vegetation (such as during periods of drought), the division would be contacted for approval to delay seeding or planting, or for approval to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing, etc.
- O The division would be notified when seeding or planting is completed, and when successful revegetation has been achieved.
- Within 60 days of closure, completion, a closure report would be submitted on form C-144, with necessary attachments, to document closure activities, including sampling results, a plot plan, and backfilling details. In this closure report, Reliant would certify that all information in the report and attachments is correct and that Reliant has complied with all applicable closure requirements and conditions specified in the approved Closure Plan. A plat of the temporary pit location would be provided on form C-105.