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

RECEIVED OCD

District IV

2013 MAY 20 A 11: 12

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

Reliant Exploration & Production, LLC. 10817 West county Road 60 Midland, Texas 79707						,	251905	API Number	0		
Property Code LIB				Property Name BBY MINERALS LLC 2032					Well No	Well No. 24-1-K	
911	7 =	9]	Proposed Pool 1				1		10 Propose	ed Pool 2	
· ··· · · · · · · · · · · · · · · · ·		Bra	vo Dome 9601								
					Surfa	ce Locatio	n				
UL or lot no.	Section	Township	Range	Lot Idr	1	Feet from the	North/South line Feet from the		East/West line	East/West line County	
K	24	20 North	32 East NMPM			1655'	Count		1655'	****	TT
	<u> </u>	L	· · · · · · · · · · · · · · · · · · ·	ad Dattam l		antian ICDi	South			West	Harding
UL or lot no.	Santian .	Tanashia				cation If Di				T N.V E	<u> </u>
OL of lot no.	Section	Township	Range	Lot Idr	١	Feet from the	North/S	outh line	Feet from the	East/West line	County
				Addit	ional V	Well Infor	mation				1
11 Work	Type Code		12 Well Type Co			13 Cable/Rotary	-		Lease Type Code		evel Elevation
18.	N Cdi d		C 17 2 1 12			R			P		68.4
	fultiple NO		¹⁷ Proposed De 2600'	pth		18 Formation TUBB			¹⁹ Contractor Reliant	878	ıd Date /2013
Depth to Grou	ındwater			Distance f	rom near	est fresh water	well		Distance fr	om nearest surface w	
	100' Synthetic	20	mils thick Cla	v □ Pit Vo	> 10 lume: 8	 		Dailling		>1000'	
	-		mis mick Cia;	у 🗀 Ри Vo	iume:a	30bbis	P t	Drilling 1		1/031 haved 17 10 cm/	a: 🗖
Close	d-Loop Sys	tem []	21 1						Brine Diese	/Oil-based Gas/	ar 🗀
				Proposed	Casing	g and Cen	nent Pr	ogram			
Hole Si	ze	Casing	Size	Casing weigh	t/foot	Setting	Depth	S	acks of Cement	Estimated	TOC
12-1/-	4"	8-5/	8"	24#		70	700' 300SX SURFA			ACE.	
			5.9#FG/15.5# 2600'			400SX S		SURF	SURFACE		
22 December 4		T6	41.1 11 41	. A. DEPRE	. DI II	C D t CK :	41 1 4			one and proposed ne	
	be the blowe		n program, if an					on the pres	ent productive 20	ne and proposed ne	w productive
23 7 1 1											
²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ⊠, a general permit □, or an (attached) alternative OCD-approved plan □.											
Signature: Approved by: Ad Marto											
Printed name:	Printed name: Vance S. Vanderburg				Tit	le:	DIS	TRICTS	UPERVISO	R	
Title: Manag	er .					Ap	proval Da	ite: 6/1.	8/20/3	Expiration Date	13/2015
E-mail Addre	ss: vance@	reliantholdin	gsltd.com						-		
Date:	5-16-1	۶ ک	Phor	ne: 432-559-7	085	Co	nditions o	f Approval	Attached		
								Tr			

ATTACHMENT C-101 RELIANT EXPLORATION & PRODUCTION WELL 24-1-K

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

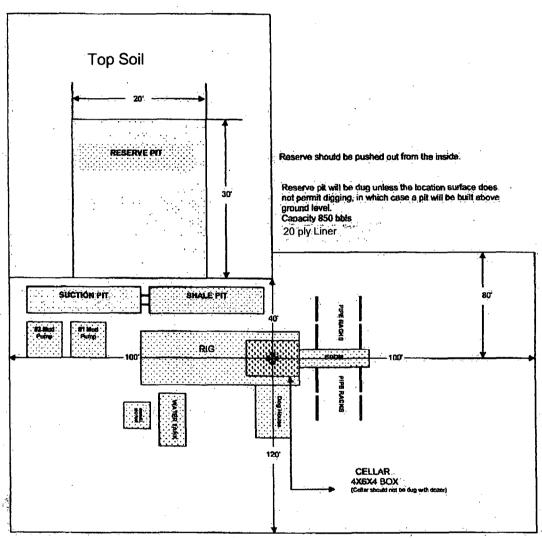
700-2600'

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

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phane: (575) 393-6161 Fax: (575) 393-0720 Paties: (3/3) 339-0/20 District II. 811 S. First St., Artesia, NM 88210 Phane: (3/75) 748-1283 Fax: (3/75) 748-9720 District III. 1000 Rio Brazos Road, Aztec, NM 87410 Phane: (3/5) 334-6178 Fax: (5/5) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

Property Code

API Number 30-021-20579

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

Pool Name

Bravo Dom

☐ AMENDED REPORT

Well Number

WELL LOCATION AND ACREAGE DEDICATION PLAT

Property Name

Pool Code

96010

3 9 77 2 LIBBY MINERALS LLC 2032						24	1-1-K				
OGRID No.		Operator Name							Elevation		
251905			RELIANT .				DUCTION,	LLC.		5	068.4'
	la l	<i>m</i> 11				ocation	Internal Control	F C	E - 1/171		Country
UL or lot no.	l I	Township	Range		Lot Idn	Feet from the	North/South line		East/W		County
K	24	20 NORTH	32 EAST, 1			1655'	SOUTH	1655'	WES		HARDING
[xrz z .	la .: I						From Surfac		F. 4/11	**	
UL or lot no.	Section	Township	Range	,	Lot lan	Feet from the	North/South line	reet from the	East/W	est iine	County
Dediena	7.4	7-1-47-611	Constitution Code	0-4							
Dedicated		Joint or Infill	Consolidation Code	Order No.							
64											
No allowa division.	ible wil	I be assigned to	o this completion	until all inter	ests ha	ve been con	solidated or a	non-standard	unit has	been app	roved by the
aivisioii.											
								O.	PERATOR	CERTIFIC	ATION
		ı	i			1		I hereby cert	ify that the infor	mation containe	d herein is true and
								complete to 1	the best of my kn	owledge and bel	ief, and that this
			I					organization	either owns a w	orking interest o	r unleased mineral
		.	l					interest in the	e land including	the proposed bo	ttom hole location or
			•								ersuant to a contract
L		'				'		_	r of such a mine		
								l l	oling agreement utered by the divi		pooling order
								يرز ا		1	// >>
,				•				Signature		_ 3 7	16-13 Date
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		Y								WO# 13	0417WL-k (KA)

Form C-144 Revised August 1, 2011

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

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 Applicat	<u>ion</u>

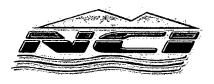
Proposed Alternative Method Permit or Closure Plan Application
Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only 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: Libby Minerals LLC 2032 24-1-K
API Number: 30-021-20579 OCD Permit Number:
U/L or Qtr/Qtr K Section 24 Township 20N Range 32E County: Harding
Center of Proposed Design: Latitude 35.9475214° N Longitude 103.4944859° W NAD: 1927 1983
Surface Owner: TFederal State Private Tribal Trust or Indian Allotment
Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: Drilling Workover Permanent Emergency Cavitation P&A Lined Unlined Liner type: Thickness 20 mil LLDPE HDPE PVC Other String-Reinforced Liner Seams: Welded Factory Other Volume: 850 bbl Dimensions: L 80" x W 80" x D 6" 3. Closed-loop System: Subsection H of 19.15.17.11 NMAC Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) Drying Pad Above Ground Steel Tanks Haul-off Bins Other Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other Liner Seams: Welded Factory Other
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.

Chain link, six feet in beight, two strands of barbed wire at top (flequired if located within 1000 feet of a permanent residence, school, hospital, institution or church)					
Screen Netting Other	☐ 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) ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet				
Screen Netting Other	7.				
Screen Netting Other	Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)				
Monthly in spections (If netting or screening is not physically feasible)					
Sign: Subsection C of 19.15.17.11 NMAC					
212"s 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers Signed in compliance with 19.15.16.8 NMAC Administrative Approvals and Exceptions: Institutions and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a bar 8/ in one or more of the following is requested, if not leave hank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for considerations: The application must demonstrate compliance for each 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.	Monthly inspections (If netting or screening is not physically feasible)				
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Exception(8): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Sting 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 attack 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 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. Yes No NA Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. Yes No NA Within 500 horizontal feet of a private, domestic fresh water well or spring, in existence at the time of initial application. Yes No NA Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. NM NA Yes No NA Yes No NA Within 1000 feet of the State Engineer - iWATERS database search; Visual inspection (certification) of the prop		lince for			
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11.					
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 19.15.17.11 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: or Permit Number:					
12.					
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)					
13. 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					
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 H ₂ S, 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					
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 Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two				
facilities are required.	-			
Disposal Facility Name: Disposal Facility Permit Numb				
Disposal Facility Name: Disposal Facility Permit Number:				
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not to Yes (If yes, please provide the information below) No	be used for future serv	ice and operations?		
Required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H on 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	of 19.15.17.13 NMAC	:		
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendation provided below. Requests regarding changes to certain siting criteria may require administrative approval from considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	the appropriate distr	ict 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 ☐ 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 ☐ NA		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	, sinkhole, or playa	Yes No		
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	al application.	Yes No		
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for d watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time o NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed si	f initial application.	Yes No		
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a mu 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	ne 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; Society; Topographic map	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 following items must be attached to the closure plan. Please indicate, 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 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC 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 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 Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Soil Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC				

Operator Application Certification: I hereby certify that the information submitted with this application is true, a	ccurate and complete to the best of my knowledge and belief.				
Name (Print): <u>Vance Vanderburg</u>	Title: <u>Manager</u>				
Signature:	Date: 5-/6-13				
e-mail address: vance@reliantholdingsltd.com	Telephone: <u>432-559-7085</u>				
20. OCD Approval: Permit Application (including closure plan) Closu	1 -				
OCD Representative Signature:	Approval Date: 6/13/2013				
DISTRICT SUPERVISOR	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:				
22. Closure Method: Waste Excavation and Removal On-Site Closure Method Al If different from approved plan, please explain.	ternative Closure Method Waste Removal (Closed-loop systems only)				
23. Closure Report Regarding Waste Removal Closure For Closed-loop Sys Instructions: Please indentify the facility or facilities for where the liquids two facilities were utilized.	, drilling fluids and drill cuttings were disposed. Use attachment if more than				
Disposal Facility Name:	Disposal Facility Permit Number:				
Disposal Facility Name:					
Were the closed-loop system operations and associated activities performed of Yes (If yes, please demonstrate compliance to the items below) \(\bigcap \) N					
Required for impacted areas which will not be used for future service and op Site Reclamation (Photo Documentation)	erations:				
Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique					
	ng 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 clos	ure)				
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 L	ongitude NAD:				
Operator Closure Certification:					
I hereby certify that the information and attachments submitted with this closure left. I also certify that the closure complies with all applicable closure required.					
Name (Print):	Title:				
Signature:	Date:				
e-mail address:	Telephone:				



Environmental, Compliance, and GIS Services

Hydrogeological Data

Well Name:

Libby Minerals LLC 2032 24-1-K

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 5068 feet above mean sea level. The location is on a gentle to moderate northwestern slope.

Soils:

The soils within the proposed well pad area are mapped as Campus loam, 0-9% slopes. This soil is found on hillslopes. It is well drained, and the depth to the water table is more than 80 inches. There is no frequency of ponding or flooding.

Within 500 feet of the proposed well pad, Mansker-Portales association, gently sloping, soils are also found. These soils are found on backslopes and footslopes. They are considered well drained and have a depth to water table of greater than 80 inches. They have no frequency of ponding or flooding.

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 Ogallala Formation. This formation consists of alluvium, eolian, and carbonate.

Sources:

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

U.S. Geological Survey (USGS). 2005. New Mexico Geologic Map Data. http://mrdata.usgs.gov/geology/state/sgmc-unit.php?unit=NMTo;0

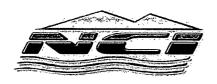
Surface Hydrology:

Runoff from the location would flow northwestward, toward Cone Lake. Cone Lake is located approximately 800 feet northwest of the proposed well pad.

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 3.8 miles from the location (see Siting Criteria Map I, attached). The nearest water wells identified on the OSE shapefile are listed below:



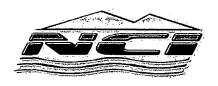
Environmental, Compliance, and GIS Services

<u>Well</u>	Distance/Direction from Proposed Project Area	Elevation	Depth to Water
[25 TU wells]	~0.9 to 4.3 miles southwest, south, southeast, & east	~4680 to 5140 ft	No Data
TU 1036	~3.8 miles north-northwest	~4820 ft	20 ft
TU 1034	~4.7 miles northwest	~4750 ft	50 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.



Environmental, Compliance, and GIS Services

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 3.8 miles from the location (see Siting Criteria Map 1). The nearest water wells identified on the OSE shapefile are listed below:

Well	Distance/Direction from Proposed Project Area	Elevation	Depth to Water
[25 TU wells]	~0.9 to 4.3 miles southwest, south, southeast, & east	~4680 to 5140 ft	No Data
TU 1036	~3.8 miles north-northwest	~4820 ft	20 ft
TU 1034	~4.7 miles northwest	~4750 ft	50 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):

There are no significant watercourses, lakebeds, sinkholes, or playa lakes within 300 feet of the proposed pit (see Siting Criteria Maps 1 and 2).

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

Aerial photos 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, and OSE shapefiles 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. Topographic maps, aerial photos, and soil data indicate that there are no wetlands within 500 feet of the proposed pit (see Hydrogeological Data – Soils, and Siting Criteria Maps 1 and 2).

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

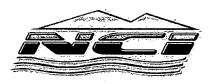
The pit would not overlie a mine. The New Mexico Energy, Minerals, and Natural Resources Department Mines, Mills, and Quarries map website is currently not available. However, the 2009 Mines, Mills, and Quarries map, a topographic map, and an aerial photo indicate that there are no subsurface mines in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

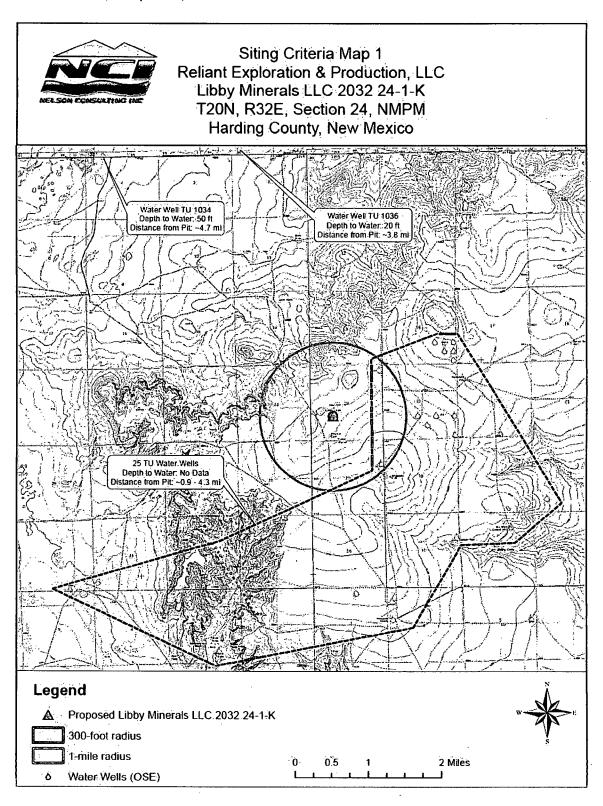
8. Presence within unstable area (should not be within an unstable area):

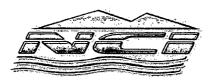
A topographic map and aerial photo indicate the location would not be within an unstable area. The location would be on a gentle to moderate slope (See Siting Criteria Maps 1 and 2).

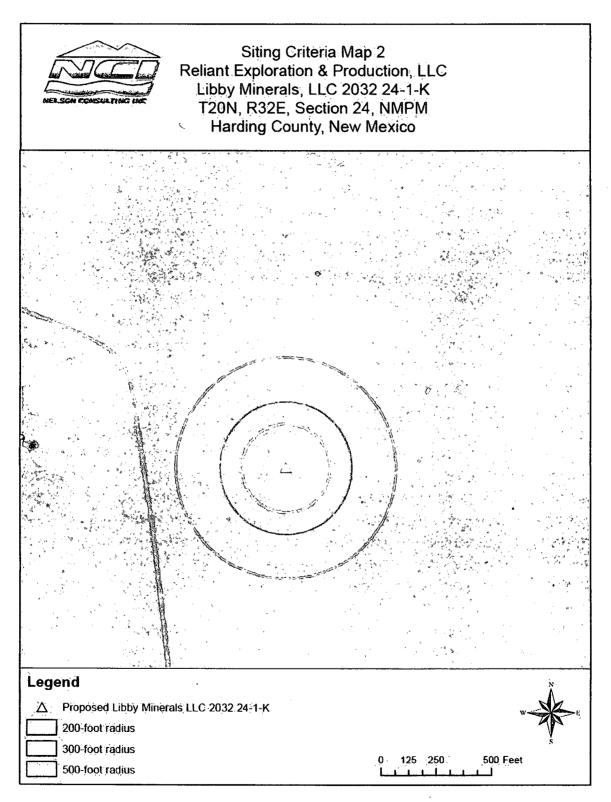
9. Presence within floodplain (should not be within a 100-year floodplain):

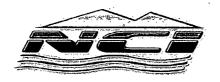
The location has not been mapped by FEMA (see FEMA Map Service Center screenshot, attached). Therefore, the proposed pit is not located within a FEMA-designated 100-year floodplain.







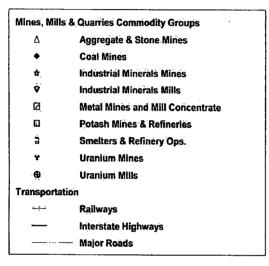


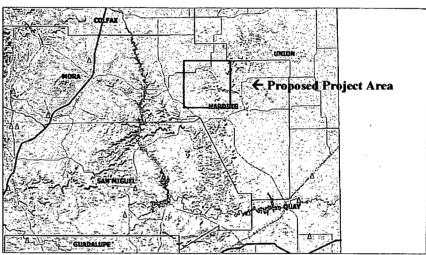


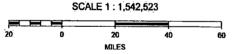
Environmental, Compliance, and GIS Services

MINES, MILLS, AND QUARRIES IN NEW MEXICO

MMQonline Public Version









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

Tuesday, March 31, 2009 11:13 AM

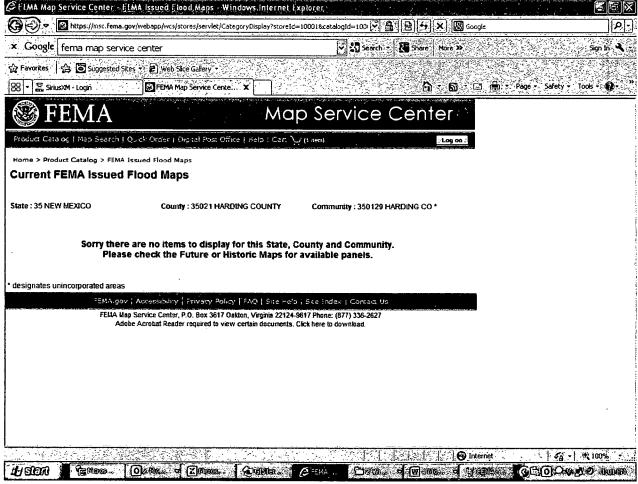
Source:

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.

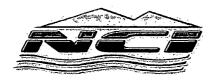
600 Reilly Ave. Farmington, NM 87401 Phone (505) 327-6331 Fax (505) 327-6332

835 E. 2nd Ave. Suite 250 Durango, CO 81301





May 8, 2013

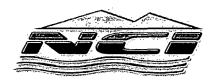


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Design Plan (Based on Appropriate Requirements of 19.15.17.11 NMAC)

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.

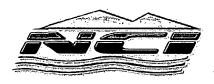


Environmental, Compliance, and GIS Services

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.



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

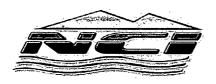
Closure specifications for this temporary pit are as follows:

- 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 division-approved EPA method): 0.2 mg/kg
 - o BTEX (as determined by EPA SW-846 method 8021B or 8260B or other division-approved EPA method): 50 mg/kg
 - TPH (as determined by EPA SW-846 method 418.a or other division-approved EPA method):
 2500 mg/kg
 - o GRO and DRO combined fraction (as determined by EPA SW-846 method 8015M): 500 mg/kg
 - 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:
 - 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).

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- 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 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.
- 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.
- Seeding or planting would be repeated until the required vegetative cover is successfully achieved.
- O 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.
- 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.