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

RECEIVED OCD

2013 MAY 20 A 11: 15

District IV

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

[1] Operator Name and Address	[2] OGRID Number
Reliant Exploration & Production, LLC. **10817 West county Road 60** **Midland, Texas 79707**	251905
	[3] API Number 30 - 021-20572

[5] Property Code	[7] Property Name	[6] Well No.
39772	**LIBBY MINERALS LLC 2032**	**8-1-J**

[9] Proposed Pool 1	[10] Proposed Pool 2
Bravo Dome 96010	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	8	20 North	32 East NMPM		1655'	South	1655'	East	Harding

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	C	R	P	4753.7
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
NO	2600'	TUBB	Reliant	6/22/2013

Depth to Groundwater	Distance from nearest fresh water well	Distance from nearest surface water
> 100'	> 1000'	> 1000'

Pit: Liner: Synthetic ☐ 20 mils thick Clay ☐ Pit Volume: 850 bbls Drilling Method:

Closed-Loop System ☐ Fresh Water x Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4"	8-5/8"	24#	700'	300SX	SURFACE
7-7/8"	5-1/2"	5.9#FG/15.5#	2600'	400SX	SURFACE

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

SEE ATTACHMENTS

[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: Vance S. Vanderburg

Printed name: Vance S. Vanderburg

Title: Manager

E-mail Address: vance@reliantholdingsltd.com

Date: 5-16-13 Phone: 432-559-7085

OIL CONSERVATION DIVISION

Approved by: Ed Martin

Title: DISTRICT SUPERVISOR

Approval Date: 6/13/2013 Expiration Date: 6/13/2015

Conditions of Approval Attached ☐

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 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: (505) 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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-021-20572	96010	Bravo Dome

Property Code	Property Name	Well Number
39772	LIBBY MINERALS LLC 2032	8-1-J

OGRID No.	Operator Name	Elevation
251905	RELIANT EXPLORATION & PRODUCTION, LLC.	4753.7'

Surface Location

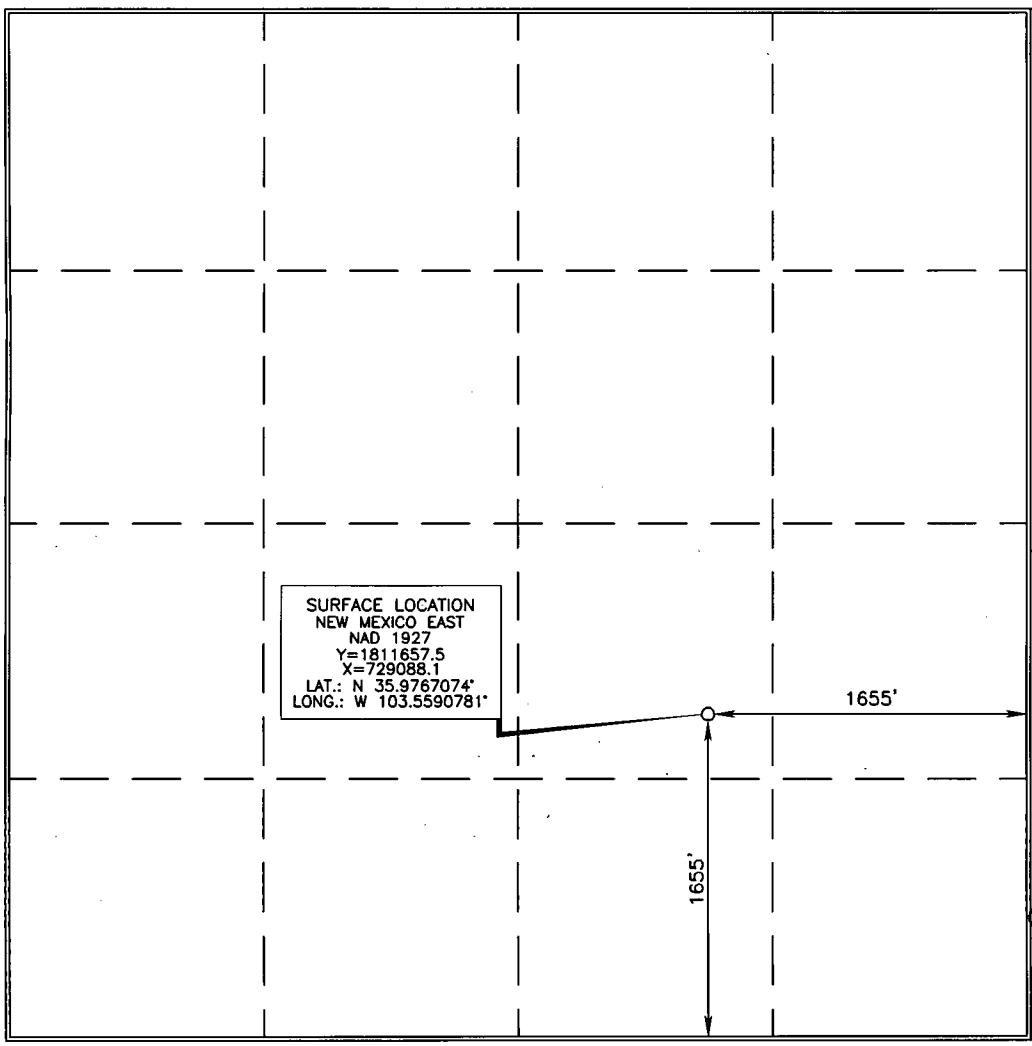
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	8	20 NORTH	32 EAST, N.M.P.M.		1655'	SOUTH	1655'	EAST	HARDING

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 5-16-13 Date

Vance Vanderburg
Printed Name

vance@reliantgases.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 17, 2013
Date of Survey

Signature and Seal of Professional Surveyor:

JERRY JASO — NEW MEXICO — 15079 — PROFESSIONAL LAND SURVEYOR

Jerry Jaso 4/24/2013
Certificate Number 15079

WO# 130417WL-d (KA)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
Revised 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.

1.
Operator: Reliant Exploration & Production, LLC OGRID #: 251905
Address: 10817 West County Road 60 Midland, TX 79707
Facility or well name: Libby Minerals LLC 2032 8-1-J
API Number: 30-021-20572 OCD Permit Number:
U/L or Qtr/Qtr J Section 8 Township 20N Range 32E County: Harding
Center of Proposed Design: Latitude 35.9767074° N Longitude 103.5590781° W NAD: ☒ 1927 ☐ 1983
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **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

4.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: bbl Type of fluid:
Tank Construction material:
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other
Liner type: Thickness mil ☐ HDPE ☐ PVC ☐ Other

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.

6.

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)*

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

☐ Alternate. Please specify_____

7.

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 office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

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	☐ Yes ☒ No
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

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_2S, 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

14.
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)

15.
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

16.

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 Number: _____

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* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

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 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

17.

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. 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. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

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, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a 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; 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

18.

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 Subsection F 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 19.15.17.11 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

☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)

☐ Soil Cover Design - 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

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): Vance Vanderburg Title: Manager

Signature: Vance Vanderburg Date: 5-16-13

e-mail address: vance@reliantholdingsltd.com Telephone: 432-559-7085

20.
OCD Approval: ☑ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Ed Martin **Approval Date:** 6/12/2013

Title: DISTRICT SUPERVISOR **OCD Permit Number:**

21.
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 ☐ 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

24.
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: Telephone:

Nelson Consulting, Inc.

Environmental, Compliance, and GIS Services

Hydrogeological Data

Well Name:
Libby Minerals LLC 2032 8-1-J

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 4754 feet above mean sea level. The location is on a gentle to moderate western slope. According to topographic maps and an aerial photo, the well pad is located approximately 1.6 miles east-southeast of Del Muerto Creek.

Soils:
Soils within the proposed well pad are mapped as Springer loamy fine sand, 1- to 9-percent slopes. These soils are found on backslopes. 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.

Within a 500-foot radius of the proposed well pad, Amarillo fine sandy loam is found. This soil is found on plains. It is a well-drained soil, and the depth to the water table is more than 80 inches. There is 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 Jurassic Entrada Sandstone, a formation of the San Rafael group. Entrada sandstone consists of fine-grained sandstone in regular beds less than a foot thick. It includes thin sheets and small aggregates of gypsum, many lenticular beds of gypsiferous shale, some calcareous shales, and small amounts of conglomerate made up of pellets of clay and fragments of quartz.

Sources:
U.S. Geological Survey (USGS). 2005. GIS shapefile: nmgeol_dd_polygon.
http://mrdata.usgs.gov/geology/state/metadata/nm.html.
Weaver, Lance. 2006. Utah Geology. http://www.utahgeology.com/fm_entrada.php.

Surface Hydrology:
Northeastern New Mexico is drained by the Arkansas River and its tributary, the Canadian River. Depending on local topography, runoff from the location would flow southwestward to westward for 0.5 to 1.6 mile, respectively, into an unnamed, ephemeral tributary of Del Muerto Creek, or west-northwestward for 1.6 mile into Del Muerto Creek.

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

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Well	Distance/Direction from Proposed Project Area	Elevation	Depth to Water
TU 1034	~1.6 miles north-northeast	~4750 ft	50 ft
TU 1037	~2.3 miles north	~4720 ft	10 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.

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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 1.6 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
TU 1034	~1.6 miles north-northeast	~4750 ft	50 ft
TU 1037	~2.3 miles north	~4720 ft	10 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 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 soils indicate that there are no wetlands within 500 feet of the proposed pit (see Hydrogeological Data – Soils and Siting Criteria Maps 1 and 2).

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, 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.

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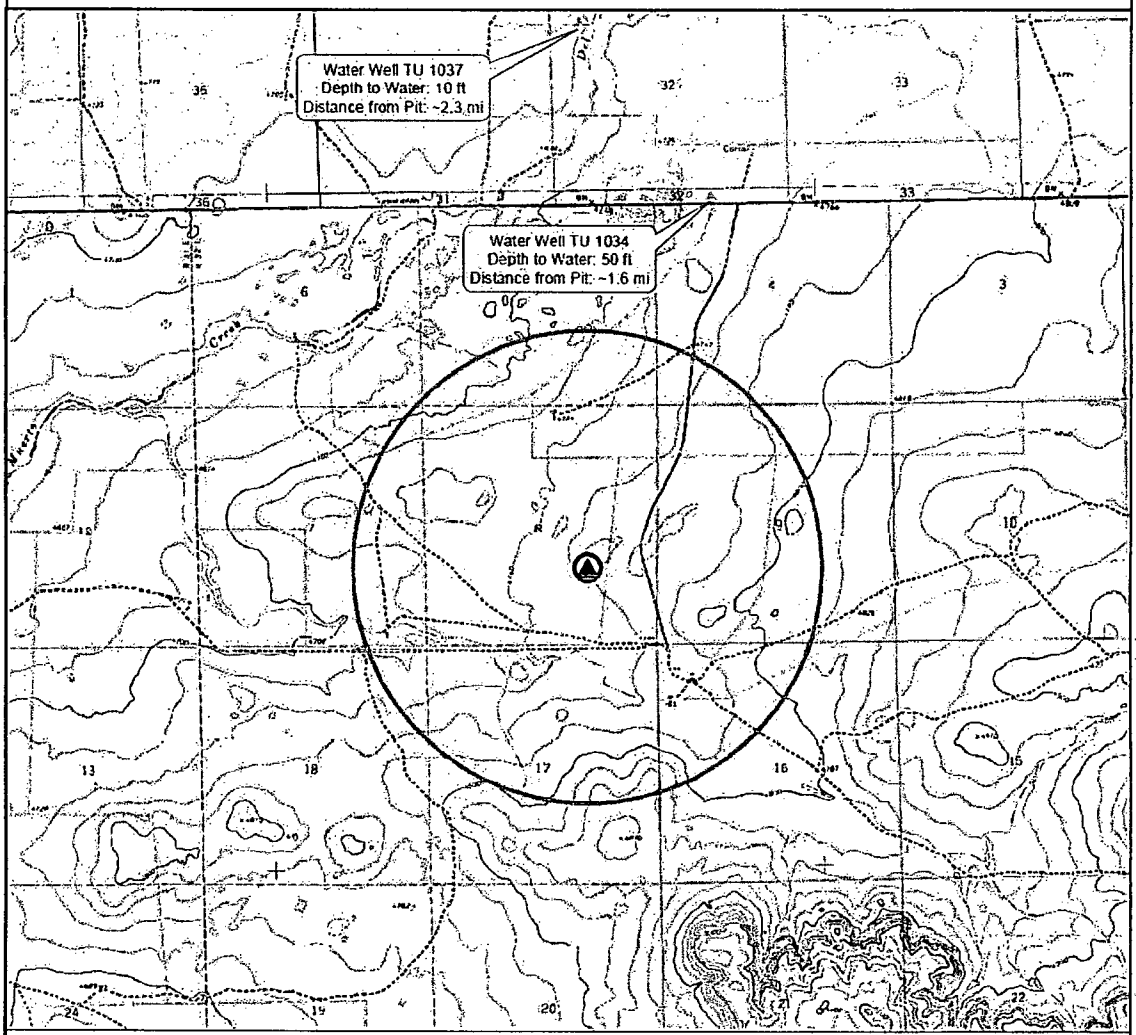
Siting Criteria Map 1
Reliant Exploration & Production, LLC
Libby Minerals LLC 2032 8-1-J
T20N, R32E, Section 8, NMPM
Harding County, New Mexico



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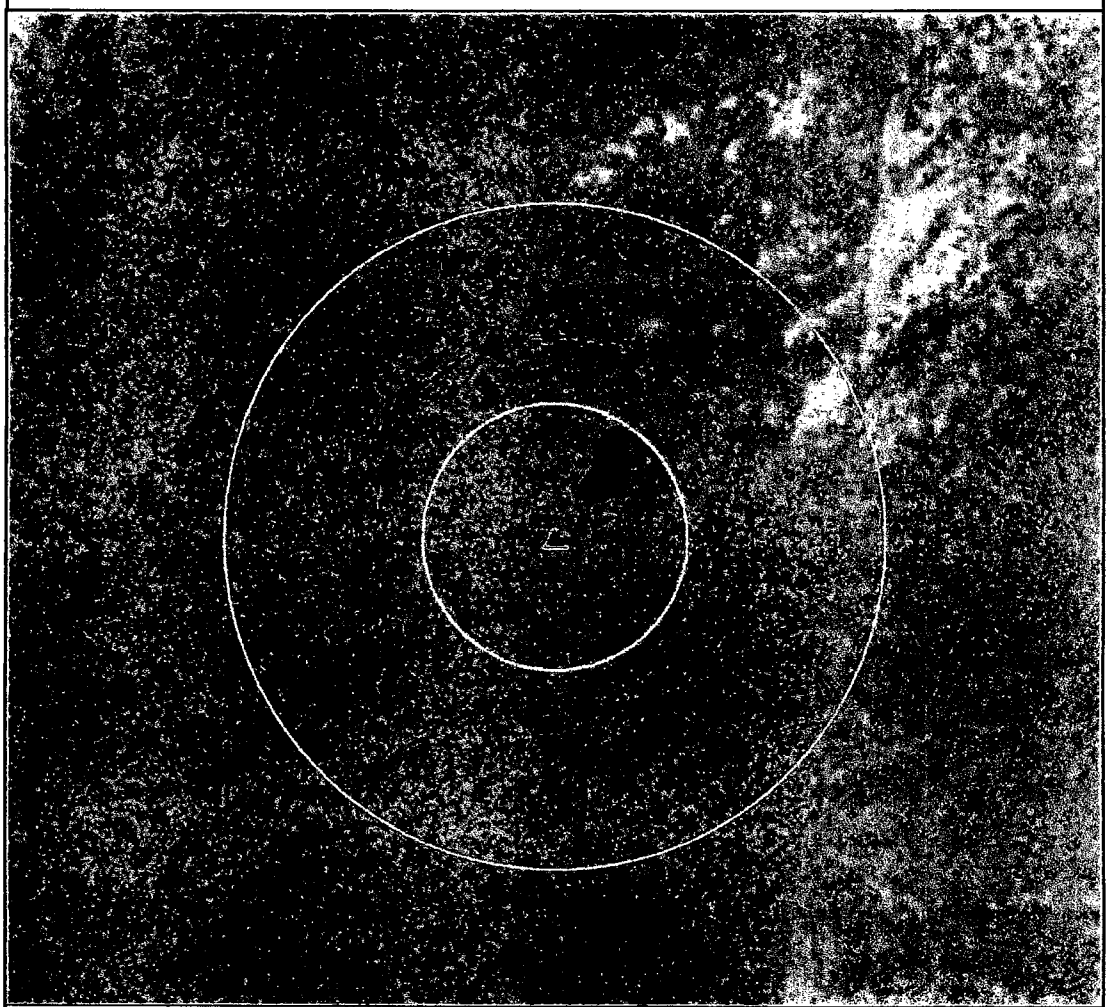
Siting Criteria Map 2
Reliant Exploration & Production, LLC
Libby Minerals, LLC 2032 8-1-J
T20N, R32E, Section 8, NMPM
Harding County, New Mexico



Legend

- Proposed Libby Minerals LLC 2032 8-1-J
- 200-foot radius
- 300-foot radius
- 500-foot radius

N W E S

0 125 250 500 Feet

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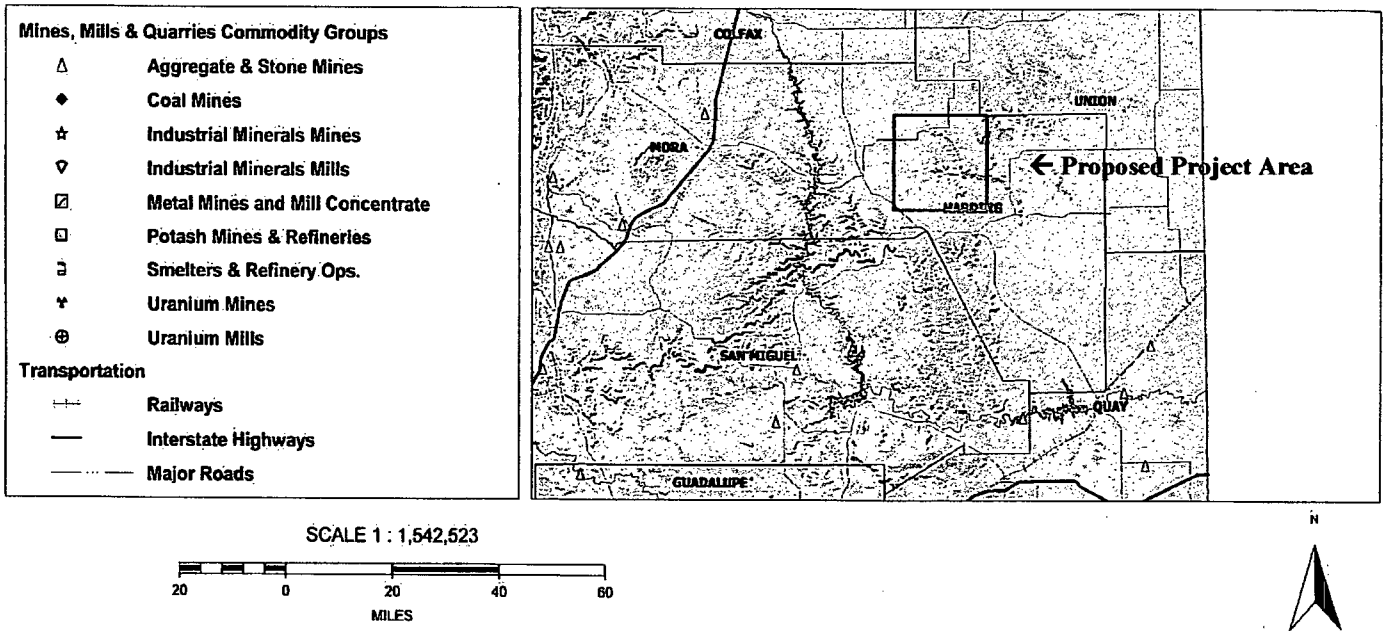
MINES, MILLS, AND QUARRIES IN NEW MEXICO

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.

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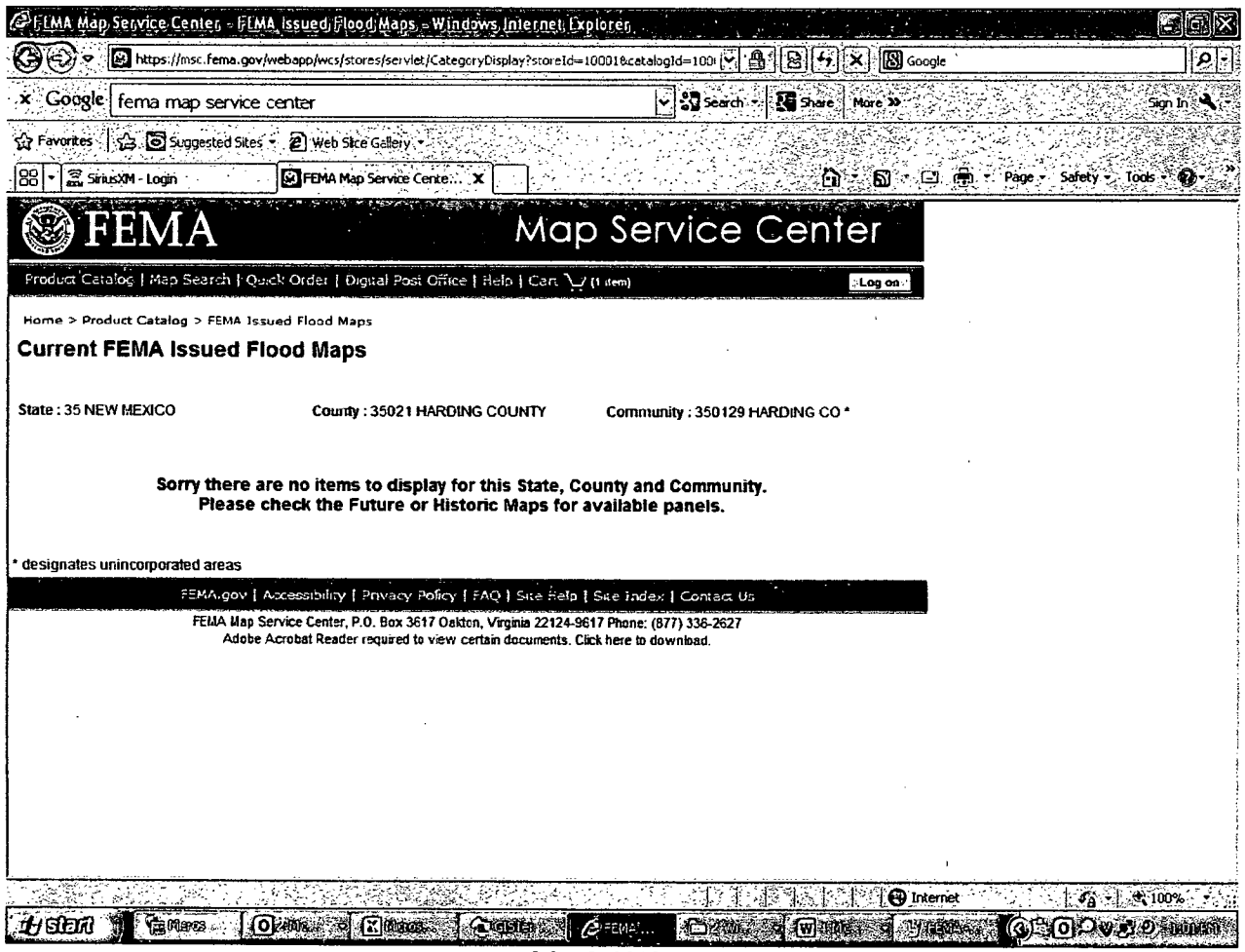

May 8, 2013

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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.

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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
    - 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
    - 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).

- 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.

- 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.

- The first growing season following pit closure, all disturbed areas associated with the pit and no longer being used would be seeded or planted.

- 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.

- 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.

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