

District I
1625 N French Dr, Hobbs, NM 88240
District II
1301 W Grand Avenue, 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
Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 24, 2008

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

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: Rubicon Oil & Gas, LLC OGRID #:194266
Address: 508 W Wall St, Ste 500, Midland, TX 79701
Facility or well name: Lakewood 28-1
API Number: 30-015-36400 OCD Permit Number:
U/L or Qtr/Qtr L Section 28 Township 19S Range 26E County: Eddy
Center of Proposed Design: Latitude N32°37'43.16" Longitude W104°23'35 66" NAD: ☐ 1927 ☒ 1983
Surface Owner. ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

☒ **Pit:** Subsection F or G of 19.15.17 11 NMAC
Temporary: ☒ Drilling ☐ Workover
☐ Permanent ☒ Emergency ☐ Cavitation ☐ Steel Pit
☒ Lined ☐ Unlined
Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC
☐ Other String-Reinforced
Seams: ☐ Welded ☒ Factory ☐ Other
Volume: 3000 bbl Dimensions: L 90 x W 120 x D 8

☒ **Closed-loop System:** Subsection H of 19.15.17 11 NMAC
☐ Drying Pad ☐ Tanks ☒ Haul-off Bins ☐ Other
☐ Lined ☐ Unlined
Liner type: Thickness mil ☐ LLDPE ☐ HDPE ☐ PVC
☐ Other
Seams: ☐ Welded ☐ Factory ☐ Other
Volume: bbl yd³
Dimensions: Length x Width

☐ **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

Fencing: Subsection D of 19 15.17 11 NMAC
☐ Chain link, six feet in height, two strands of barbed wire at top
☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet
Netting: Subsection E of 19.15.17.11 NMAC
☐ Screen ☐ Netting ☐ Other
☐ Monthly inspections
Signs: Subsection C of 19.15 17.11 NMAC
☒ 12'x24', 2' lettering, providing Operator's name, site location, and emergency telephone numbers
☐ Signed in compliance with 19.15.3.103 NMAC

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<input type="checkbox"/> Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance <i>Please check a box if one or more of the following is requested, if not leave blank:</i> <input type="checkbox"/> Administrative approval(s). Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval <input type="checkbox"/> Exception(s). Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
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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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. <i>(Applies to temporary, emergency, or cavitation pits and below-grade tanks)</i> - Visual inspection (certification) of the proposed site; Aerial photo, Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. <i>(Applies to permanent pits)</i> - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society, Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan - 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 _____

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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 (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19 15 17 9
- ☐ Siting Criteria Compliance Demonstrations (required 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 - based upon the appropriate requirements of Subsection C of 19 15 17.9 NMAC and 19.15.17.13 NMAC

NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

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 H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17 13 NMAC

Proposed Closure: 19 15.17.13 NMAC

Type: ☒ Drilling ☐ Workover ☒ Emergency ☐ Cavitation ☐ 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)

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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

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 Haul-off Bins Only: (19.15.17.13.D NMAC) **Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings.

Disposal Facility Name _____ Controlled Recovery Inc _____ Disposal Facility Permit Number: _____ R-9166 _____

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 and Design of Burial Trench (if applicable) 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

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): _____ Hal Lee _____ Title: _____ Agent / Operations Mgr _____

Signature: _____ Date: 7/14/2008 _____

e-mail address: _____ hal@adventure-energy.com _____ Telephone _____ 432-687-5100 _____

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OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: _____ Approval Date: 7/29/08 _____

Title: _____ Permit Number: 0208722 _____

Closure Report (required within 60 days of closure completion): Subsection K of 19.15 17.13 NMAC

☐ Closure Completion Date: _____

Closure Method:

- ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method
☐ If different from approved plan, please explain _____

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
☐ Proof of Deed Notice (if applicable)
☐ Plot Plan
☐ Confirmation Sampling Analytical Results
☐ Waste Material Sampling Analytical Results
☐ 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

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: _____

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OCD-ARTESIA

Mr Hal Lee
RUBICON OIL AND GAS, LLC
508 W. Wall Ave
Suite 500
Midland, TX 79701

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OCD-ARTESIA

14 July 2008

Mr Mike Bratcher
OIL CONSERVATION DIVISION
1301 West Grand Avenue
Artesia, NM 88210

Re Lakewood 28 No 1 Pit Closure Plan

Dear Mr. Bratcher:

Pursuant to the State of New Mexico regulatory requirements for permanent closure of drilling pits, please be advised the following documents are herewith enclosed: (1) new Form C-144 and (2) additional information constituting the proposed "Closure Plan" for closure of the Rubicon Oil and Gas, LLC, hereinafter "Rubicon", Lakewood 28 No. 1 drilling pit, hereinafter "Lakewood 28-1", (API No. 30-015-36400) located in U/L L S28 T19S R26E, SHL 1600' FSL and 600' FWL of Eddy County, New Mexico.

Rubicon herewith notifies the New Mexico Oil Conservation Division (NMOCD) that its reserve/emergency pit will be used for drilling operations to 1,600' while drilling with fresh water mud. Upon drilling out of the 1,600' depth, Rubicon shall employ the closed loop system with bins to contain the disposal material, which shall be hauled off to CRI (Permit No. R-9166). Final transport of the above cited Lakewood 28-1 drilling pit contents to disposal will occur no later than 60 days after completion of the well. The Lakewood 28-1 was permitted and its drilling pit had been constructed, lined and put into service under the old Pit Rule 50.

Remediation of the Rubicon, Lakewood 28-1 drilling pit is targeted to begin immediately following the closure of drilling operations with completion expected by 29 August 2008, permitting weather and the occurrence of unexpected conditions not within the Operator's control do not create delays or exacerbate the proposed schedule in any way. Rubicon intends to maintain its commitment to environmental health and safety and fully comply with the Regulatory Performa of the NMOCD regarding this disposal action culminating in permanent closure of the Lakewood 28-1 drilling pit.

Potential, temporary contamination from the Lakewood 28-1 drilling pit site, should any exist, will have resulted solely from oil and gas production activities. Potential contaminates are typically mid to high-level concentrations of brines, typical polymers (such as, xanthium gum and starch) and in general, drilling mud and fluids remaining upon completion of said drilling operations.

Area land use is primarily ranching with domestic pasturage commensurate with significant oil and gas production activities. The Rubicon Lakewood 28-1 drilling pit is located in an area wherein groundwater depth to surface data is shown on the State of New Mexico, State Engineer's web site as 95 feet.

This compliance action shall strictly apply NMOCD standards, i.e. clean-up level for the Lakewood 28-1 drilling pit shall meet the BTEX, TPH and 250 ppm chlorides unless approved otherwise and substantiated by (1) background analytical data documented to be higher than the above cited indices, (2) geological evidence of salt stringers and/or other geological features which support salt retaining soil types or features, (3) rock to soil ratios predicated upon analytical calculations of infield data acquisitions and (4) soil types which geologically typify, substantiate and uphold analytical investigations in areas with i.e. documented, non-perforated clay lenses, allowing for "risked closures" in non-sensitive groundwater table areas approved by the NMOCD. However, Rubicon believes this closure shall proceed as have the others in this geographic area and will meet NMOCD standards for a haul off disposition.

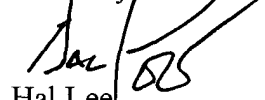
Prior to initiation of backfilling, the Operator shall take appropriate samples of the pit area to ensure compliance with NMOCD Standards for remediation of possible soil chloride levels greater than 250 ppm. However if levels at the bottom of the drilling pit test hot or are not within acceptable range, a background set of samples shall be obtained for testing from the immediate vicinity and compared to those of the pit bottom. Simultaneously, more soil shall be removed from the "hot spots". Once completed, a new data acquisition shall occur and sample results determine whether or not compliance has been reached in order to begin backfilling.

Backfilling of the Lakewood 28-1 drilling pit shall be commensurate with existing topography and terrain relief features (contouring) so as to return it to its "near-as" previous condition, including a contour for prevailing wind conditions and moisture accumulation which prevents abnormal or unsustainable water impoundment resulting in erosive actions. All sites shall be seeded in compliance with BLM seed mixtures, which are currently being used by the NMOCD as well.

Rubicon wishes to extend its appreciation to the NMOCD for considering the closure of these pits as described above due to their existence during the transitory period between the Pit Rule 50 amendments.

Should you have questions, please call 432-684-8006 (office) or 432-664-9040 (cell).

Sincerely,



Hal Lee
Operation Manager

Enclosure. Form C-144

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