

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

Form C-144 CLEZ
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office

9447
Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

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: Dugan Production Corp. OGRID #: 006515
Address: 709 East Murray Drive, Farmington, New Mexico 87401
Facility or well name: Federal I Com #103S
API Number: 30-045-35348 OCD Permit Number: _____
U/L or Qtr/Qtr M Section 12 Township 29N Range 14W County: San Juan
Center of Proposed Design: Latitude 36.73682 N Longitude 108.26914 W NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2. ☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☐ Above Ground Steel Tanks or ☐ Haul-off Bins

3. **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 19.15.3.103 NMAC

RCVD JAN 18 '12
OIL CONS. DIV.
DIST. 3

4. **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.
☒ 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 Box 5) - 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: _____

5. **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 identify 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: Liquids to Basin Disposal Disposal Facility Permit Number: NM-01-005
Disposal Facility Name: Solids to IEI Disposal Facility Permit Number: NM-01-001B
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

6. **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): Kurt Fagrelus Title: VP-Land and Exploration
Signature: Kurt Fagrelus Date: 1-16-2012
e-mail address: kfagrelus@duganproduction.com Telephone: 505-325-1821

7.
OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only)
OCD Representative Signature: Jonell O. Kelly Approval Date: 1/24/2012
Title: Compliance Officer OCD Permit Number: _____

8.
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: _____

9.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:
Instructions: Please identify 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

10.
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): Kurt Fagrelus Title: VP-Land and Exploration
Signature: _____ Date: _____
e-mail address: kfagrelus@duganproduction.com Telephone: 505-325-1821

Federal I Com #103S Closed Loop Drilling System

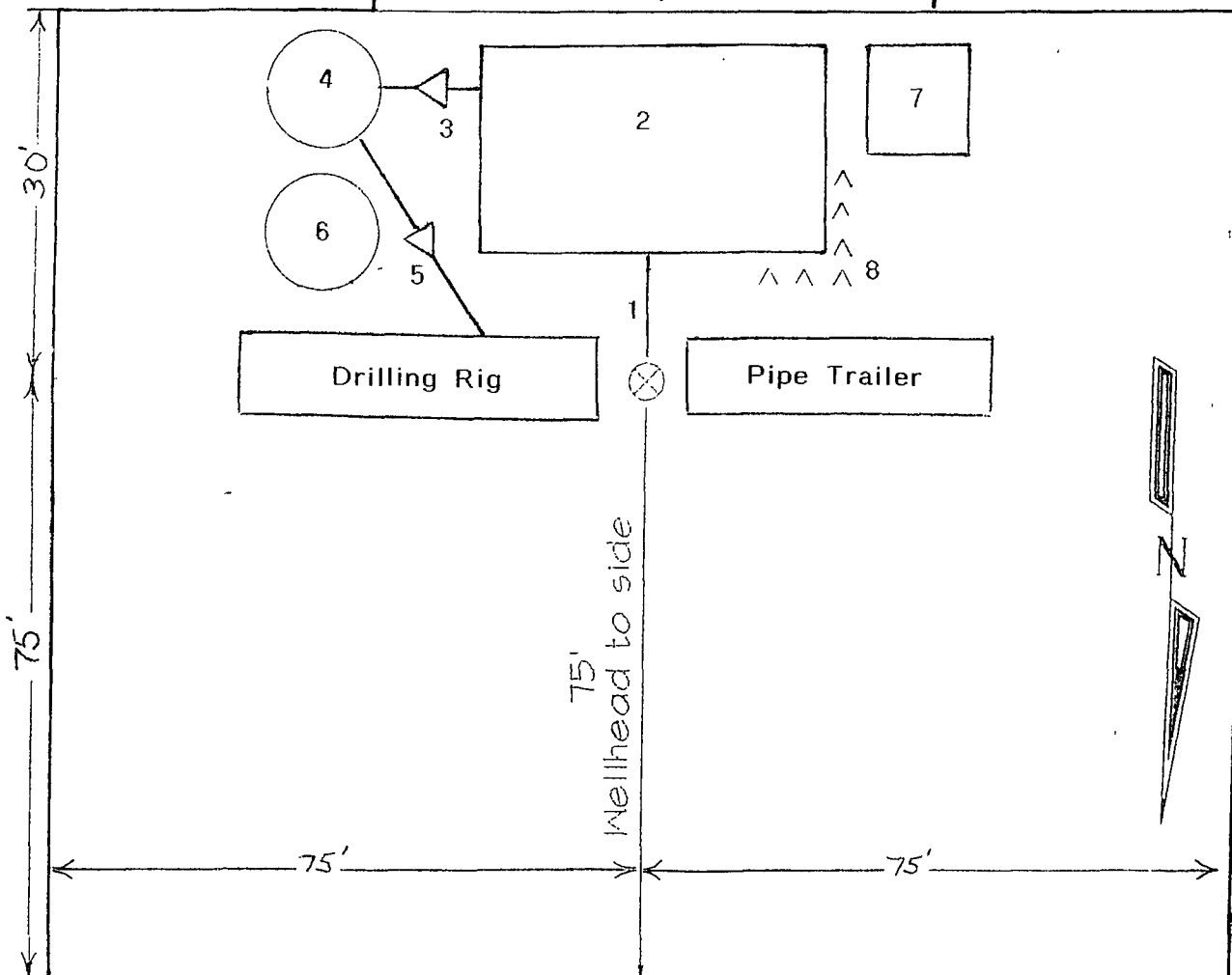
Design and Construction Plan

1. The Federal I Com #103S closed loop drilling system will be designed and constructed in accordance with the following requirements:
2. Closed loop drilling system will be designed and constructed to contain liquids and solids and prevent contamination of fresh water and protect public health and the environment.
3. Stockpile top-soil prior to leveling pad and digging depression, keep separate from sub-soil and use as a final cover for interim or final reclamation of the depression and well pad.
4. A depression approximately 45-feet long by 12-feet wide and 3-feet deep with vertical sidewalls will be constructed. The depression will be constructed with a firm foundation and interior slopes, smooth and free of rocks or sharp edges.
5. An open-top steel tank approximately 40-feet long by 10-feet wide and 4-feet deep with internal baffles will be set in the depression and used to separate solids from the drilling fluids.
6. An upright, 400-bbbls tank will be set adjacent to the open-top steel tank and used for circulation and storage of drilling fluids.
7. An upright, 400-bbbls tank will be set adjacent to the circulation / storage tank and used for storage of fresh water.
8. Diversionary berms, ditches or sloping will be constructed as necessary to prevent surface run-off water from flowing into depression.
9. Sub-surface soil will be used to construct a 1-foot tall berm around the perimeter of the depression to prevent surface run-off water from entering the depression.
10. No drying pads or sumps will be used with this closed loop drilling system.
11. Fencing around the Federal I Com #103S closed loop drilling system will be constructed and operated in a manner that prevents unauthorized access and shall be maintained in good condition to protect the public and wildlife.
12. The proposed location and closed loop drilling system will be enclosed on all four sides with a 6-foot chain link fence to prevent un-authorized access by livestock, wildlife or people.
13. Sign-12" by 24" with operator name, lease name, well #, location (unit letter, qtr/qtr, Sect., Twp., and Rge.) and emergency phone #'s will be posted on location. Sign will be posted in a location where it can be easily read.
14. Federal I Com #103S closed loop drilling system will be designed and constructed to ensure the confinement of liquids and prevent unauthorized releases.

**Dugan Production Corp.
Closed Loop Drilling Mud System
Federal I Com #103S**

Sec. 12, T29N, R14W, NMPM
1065' FSL & 335' FWL
San Juan County, New Mexico

Ia. Closed Loop Drilling System



Closed Loop Drilling System

- 1 Flow line from well head to open-top steel tank
2. Open-top steel tank with internal baffles (approx. 40-ft. long by 10-ft. wide and 4-ft. deep, 285-bbbls) set in an un-lined depression (approx. 45-ft. long by 12-ft. wide and 3-ft. deep).
- 3 Transfer pump to move drilling fluid from open-top steel tank to circulation / storage tank
4. 400-bbbls circulation / storage tank
- 5 Transfer pump to move drilling fluid from circulation / storage tank to drilling rig circulation system
6. 400-bbbls fresh water storage tank
7. 200—400-bbbls. steel flow-back tank for collection of circulated cement returns and flow-back after frac
- 8 1-foot tall berm around perimeter of depression to prevent surface run-off water from entering depression

Federal I Com #103S Closed Loop Drilling System

Maintenance and Operations Plan

1. Dugan Production Corp. will operate and maintain the closed loop drilling system to contain all liquids and solids associated with drilling operations, prevent contamination of fresh water and protect wildlife, public health and the environment.
2. Federal I Com #103S closed loop drilling system will be maintained and operated in accordance with the following requirements:
3. Do not dispose of or store any hazardous material in the open-top steel tank. All work-over and completion fluids associated with flow-back or circulation from the well will be stored in a separate flow-back tank.
4. Recycle, re-use, reclaim or dispose of all fluids in a manner approved by the NMOCD rules.
5. Drilling fluids will be transferred to the next well in drilling program to be re-used in drilling the next well. If the Federal I Com #103S is the last well to be drilled in the program, all liquids will be transferred to Basin Disposal.
6. Do not dispose of solid waste, trash, debris or hazardous material into the closed loop drilling system.
7. Monitor the condition and integrity of the closed loop drilling system from the date of installation until drilling operations are complete to insure there are no leaks or spills.
8. If a leak or spill occurs in the closed loop drilling system, notify the appropriate NMOCD district office within 48-hours and repair or replace and remove all liquid above leak (505) 334-6178. If a hole occurs below the fluid level, call the NMOCD office within 24-hours.
9. All injection or withdrawal of liquids from the closed loop drilling system will be conducted in a manner that protects the system from damage.
10. One foot of free-board will be maintained in the open-top steel tank during daily drilling operations. Every night, and whenever drilling operations are suspended, the fluid level will be pulled down to below two-feet of free-board by transferring drilling fluid to the circulating tank.
11. Do not discharge any drilling fluids or solids outside of the open-top steel tank or circulating tank into the depression or surrounding area.
12. All drilling fluid will be transferred to the circulating tank immediately upon completion of drilling operations.

13. All accumulated solids (cuttings) in the open-top steel tank and circulating tank will be removed by a vacuum truck and hauled to the IEI land farm for disposal.
14. Transfer all drilling fluids from the closed loop drilling system to the next well in the drilling program for re-use or haul to the Basin Disposal.
15. Closed loop drilling system will be constructed and operated in a manner that prevents surface run-off water from entering the shallow depression. Containment berm will be constructed around perimeter and diversion berms will be constructed along the upslope sides of the depression.

Federal I Com #103S Closed Loop Drilling System

Closure Plan

1. Closed loop drilling system will be closed within 60-days of release of drilling rig.
2. Remove all liquid from closed loop drilling system and reclaim, re-use or dispose of at an NMOCD approved facility (Basin Disposal).
3. Remove all solids from closed loop drilling system and dispose of at an NMOCD approved facility (IEI).
4. Remove open-top steel tank from depression.
5. Collect at a minimum, a five point, composite sample; also, collect individual grab samples from any area that is wet, discolored or showing other evidence of a release and analyze for Benzene, BTEX, TPH, GRO and chlorides to demonstrate that Benzene, BTEX, GRO/DRO, TPH and chlorides (depth to groundwater from bottom of depression is greater than 100-feet) do not exceed the standards as specified in 19.15.17.9.B or the background concentration, whichever is greater.

Components	Test Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	1000 / 500

6. Other methods if the standards in 19.15.17.9.B can not be met will include:
The contents of the depression may be mixed to a ratio not to exceed 3:1, uncontaminated soil or other material to depression contents. A second five point, composite sample of the contents after treatment or stabilization will be taken to demonstrate that the contents do not exceed the standards. If the second soil analyses do not satisfy the closure standards, the operator will close the depression using the waste excavation and removal method.
7. If the soil testing meets the standards in 19.15.17.9.B, stockpiled sub-surface soil will be used to backfill depression and re-contour well pad (to a final or intermediate cover that blends with the surrounding topography).
8. The area will be re-seeded as per BLM guidelines. Re-seeding will be repeated until 70% of the native natural cover is achieved and maintained for two successive growing seasons. The first growing season after the depression is closed the disturbed area will be re-seeded. The seeding method will be to drill on contour whenever possible.
9. The NMOCD will be notified once successful re-vegetation has been achieved.
10. Closure Report will be submitted to the NMOCD 60-days after re-seeding.

Closed Loop Drilling System

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5. Transfer pump to move drilling fluid from circulation / storage tank to drilling rig circulation system.
6. 400-bbbls. fresh water storage tank.
7. 200—400-bbbls. steel flow-back tank for collection of circulated cement returns and flow-back after frac.
8. 1-foot tall berm around perimeter of depression to prevent surface run-off water from entering depression.