

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.

4467 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: Approach Operating, LLC OGRID #: 248343
Address: 6500 West Freeway, Suite 800 Fort Worth, Texas 76116
Facility or well name: Edward Spill No. 4
API Number: 30-039-30863 OCD Permit Number:
U/L or Qtr/Qtr E Section 31 Township 28N Range 04E County: Rio Arriba
Center of Proposed Design: Latitude 36.6156 NORTH Longitude -106.5620 WEST 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

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: TNT Environmental Inc. Disposal Facility Permit Number: NM-01-0008
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

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): Brice A. Morgan Title: Landman
Signature: [Signature] Date: 11-23-09
e-mail address: bmorgan@approachresources.com Telephone: 817-989-9000

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

OCD Representative Signature: [Signature] Approval Date: 1-5-10

Title: Env: 12/Spec 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): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

APPROACH OPERATING, LLC
CLOSED-LOOP SYSTEM
DESIGN AND CONSTRUCTION
OPERATING AND MAINTENANCE
AND CLOSURE PLANS

CHAMA BASIN, NEW MEXICO

In accordance with Rule 19.15.17 NMAC, the following describes the general design and construction, operating and maintenance and closure plans for Approach Operating, LLC (Approach) drilling locations in the Chama Basin of New Mexico. This is Approach's standard procedure for all Approach drilling locations in the Chama Basin. For proposed drilling locations that do not conform to this standard, Approach will file separate, well-specific plans.

A. Closed-Loop Design and Construction Plan

1. Approach will design and construct a closed-loop system to contain liquids and solids associated with drilling, completion and workover of oil and gas wells, prevent contamination of fresh water and protect public health and the environment.
2. The basic design of the closed-loop system is set forth in Exhibits "A" and "A1" attached hereto and incorporated herein by reference.
3. The closed-loop system will not use drying pads, temporary pits, below grade tanks or sumps.
4. The closed-loop system will include one or more above-ground tank(s) suitable for holding drilling liquids and cuttings. The tank(s) will be of sufficient volume to maintain a safe freeboard between disposals of the liquids and cuttings.
5. Before constructing the closed-loop system, Approach will strip and stockpile topsoil for use as final cover at the time of closure.
6. A 12" x 24" sign will be posted in a conspicuous place providing Approach's name, site location and emergency telephone numbers in 2" lettering.
7. Fencing is not required for an above-ground closed-loop system.
8. The above-ground tank(s) will be protected from run-on, and run-off will be controlled, by construction of diversion ditches and/or dikes around the location or the perimeter of the tank(s).

B Closed-Loop Operating and Maintenance Procedures

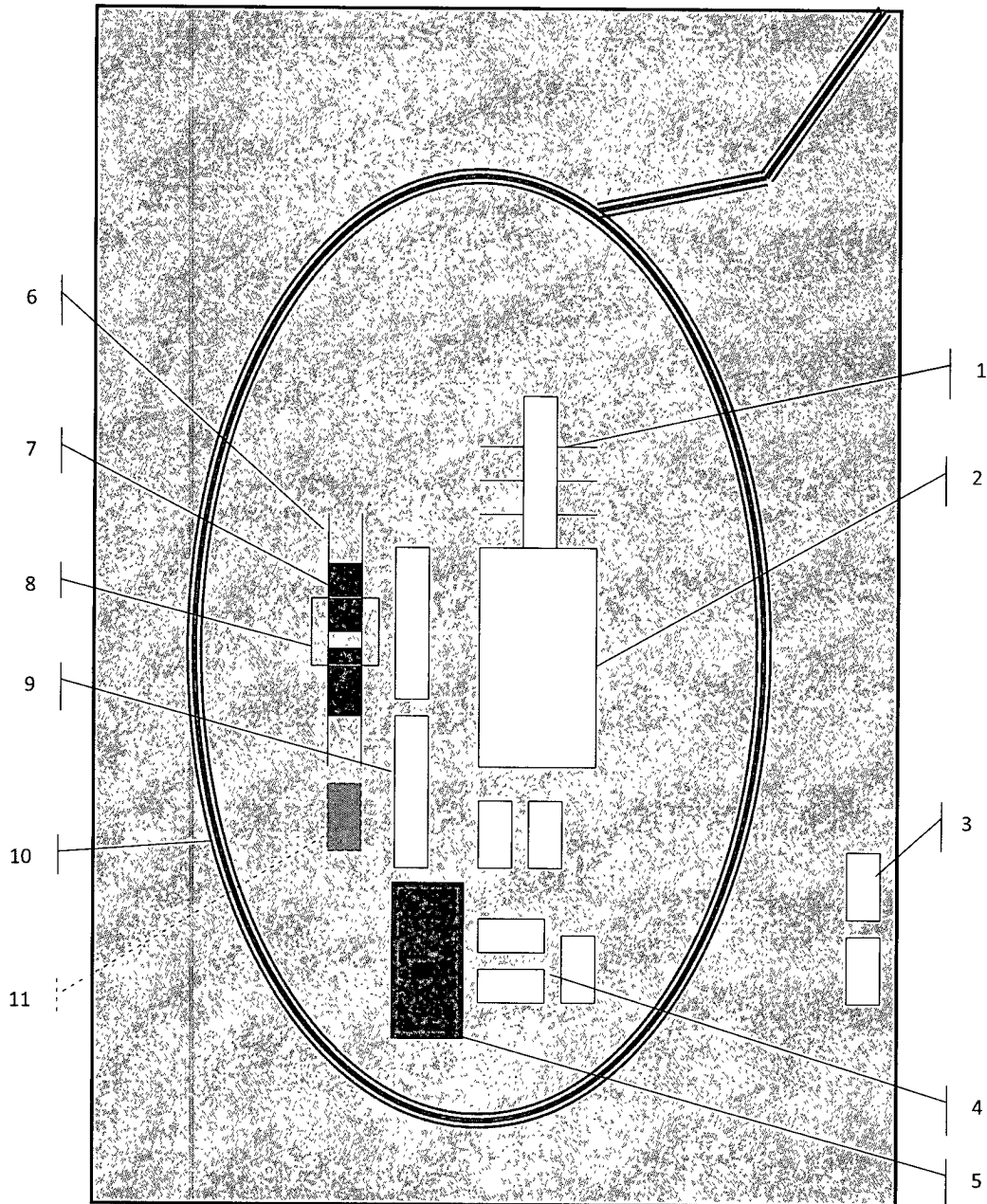
1. Approach will operate and maintain its closed-loop system to contain liquids and solids associated with drilling, completion and workover of oil and gas wells, prevent contamination of fresh water and protect public health and the environment.
2. The procedures contemplated by the design and construction plan set forth in Section A. above are incorporated herein by reference.
3. The surface hole will be drilled with air, if possible, or fresh water mud. The production hole will be drilled with air or air/mist.
4. Drilling liquids and cuttings will be vacuumed out of the above-ground storage tank(s) and disposed of at the NMOCD approved facility, TNT Environmental Inc., Permit No. NM-01-0008. Liquids and cuttings will be removed on a periodic basis to prevent overtopping.
5. No hazardous waste as defined in 19.15.1.7.W(3) NMAC, miscellaneous solid waste or debris will be discharged or stored in the above-ground tank(s). Only fluids or cuttings used or generated by drilling operations will be placed or stored in the tank(s).
6. Impermeable pads will be placed underneath any storage container to control a release if it should occur.
7. If the integrity of the closed-loop system is compromised, or if any leak occurs:
 - a. Above the liquid's surface, Approach will repair the damage as necessary. Approach will notify the NMOCD Aztec District Office by phone or email within 48 hours of discovery.
 - b. Below the liquid's surface, Approach will suspend operations, remove all liquids above the leak within 48 hours and repair the damage or replace the damaged portion of the closed-loop system. Approach will notify and report to NMOCD as follows:
 - (i) If the release is a Minor Release as defined in 19.15.3.116.B(2) NMAC, the Aztec District Office by phone or email within 48 hours of discovery and repair.
 - (ii) If the release is a Major Release as defined in 19.15.3.116.B(1) NMAC, the Aztec District Office and the Environmental Bureau Chief by phone for immediate verbal notification.
 - c. A written spill/release report will be submitted on Form C-141 per 19.15.3.116.C NMAC within 15 days to the Aztec District Office.

8. Diversion ditches or dikes, around the location or the above-ground tank(s), will be maintained as protection from run-on.
9. Approach will inspect the closed-loop system as follows to ensure compliance with this plan:
 - a. Daily during drilling or workover operations.
 - b. Weekly as long as materials remain in the tank(s).
 - c. Copies of the inspections will be filed with Aztec District Office upon closure.

C. Closed-Loop Closure Plan

1. The closed-loop system will be closed in accordance with 19.15.17.13 NMAC.
2. The contents of the above-ground steel tank(s) will not be buried on-site. These contents will be transferred to the NMOCD approved facility of TNT Environmental Inc., Permit No. NM-01-0008, for disposal.
3. Above-ground storage tank(s) will be removed from the location within six months of the rig move.
4. Once Approach is no longer using the area associated with its closed-loop system, it will reclaim the area to a safe and stable condition that blends with the surrounding undisturbed area.
5. At the time of well abandonment, unless otherwise agreed to in writing by Approach and surface owner, Approach will:
 - (i) substantially restore the surface area affected by oil and gas operations to the condition that existed prior to oil and gas operations by the placement of soil cover as provided in Subsection H of 19.15.17.13 NMAC;
 - (ii) re-contour the location and associated areas, to the extent practical, to a contour that approximates the original contour and blends with the surrounding topography; and
 - (iii) re-vegetate according to Subsection I of 19.15.17.13 NMAC.

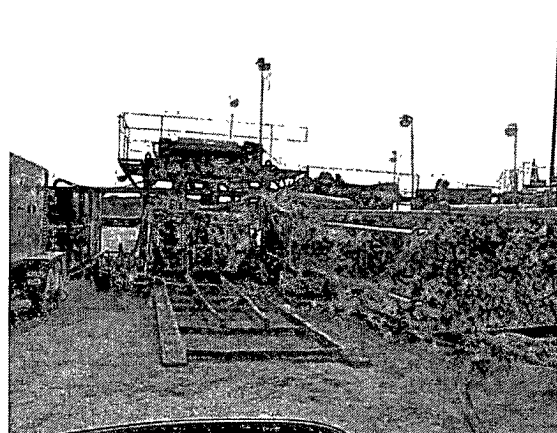
Exhibit "A"



Schematic Closed Loop Drilling Rig*

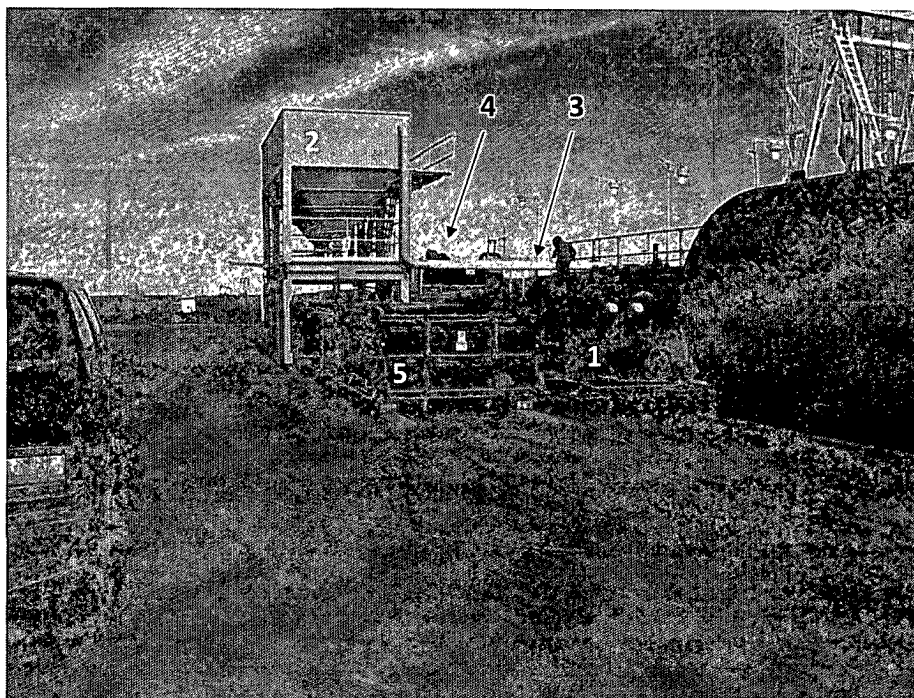
1. Pipe Rack
2. Drill Rig
3. House Trailers/ Offices
4. Generator/Fuel/Storage
5. Overflow-Frac Tank
6. Skids
7. Roll Offs
8. Hopper or Centrifuge
9. Mud Tanks
10. Loop Drive
11. Generator (only for use with centrifuge)

*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available



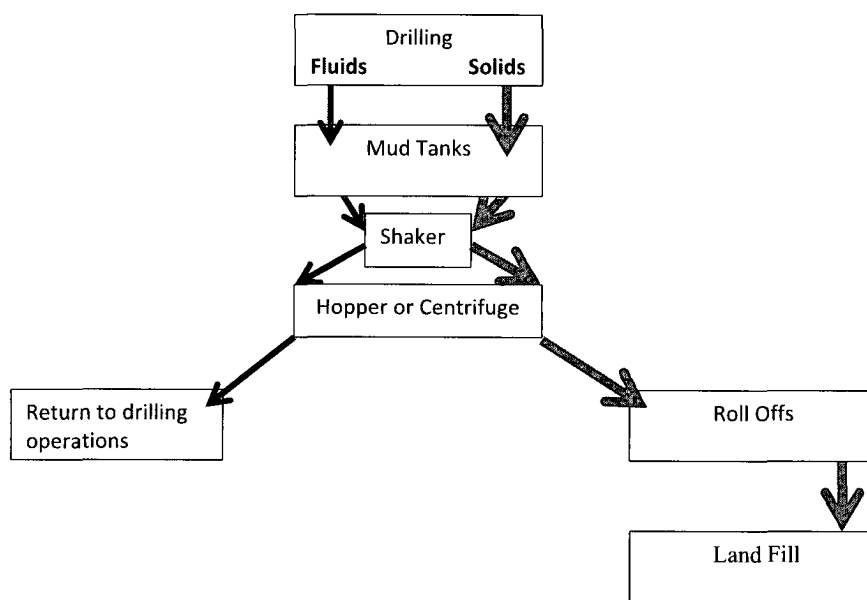
Above: Centrifugal Closed Loop System

Exhibit "A1"



Closed Loop Drilling System: Mud tanks to right (1)
Hopper in air to settle out solids (2)
Water return pipe (3)
Shaker between hopper and mud tanks (4)
Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids



Photos of Gandy Corporation Oil Field Service's equipment