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Energy Minerals and Natural Resources

JUN 30 2010 Department Oil Conservation Division HOBBSOCD⁰ South St. Francis Dr. 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.

Form C-144 CLEZ

July 21, 2008

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

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

Santa Fe, NM 87505 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 environment. Nor does approval relieve the operator of its responsibility to comply v	y should operations result in pollution of surface water, ground water or the with any other applicable governmental authority's rules, regulations or ordinances.
Operator: Cimarex Energy Co. of Colorado	OGRID #: 162683
Address: 600 N, Marienfeld St., Ste, 600; Midland, TX 79701	
P. 11: 10 P. 1 1 1	
API Number: 30-005- 29138 OCD	Damit Mumbary P1 - 02178
U/L or Qtr/Qtr C Section 18 Township 15S Range 311	
Center of Proposed Design: Latitude 33°01′19.09" N Longitude 103	
Surface Owner: Sederal State Private Tribal Trust or Indian Allot	Iment
2. ⊠ Closed-loop System: Subsection H of 19.15.17.11 NMAC Operation: ⊠ Drilling a new well □ Workover or Drilling (Applies to activit □ Above Ground Steel Tanks or ⊠ Haul-off Bins	ies which require prior approval of a permit or notice of intent) 🏻 P&A
3. Signs: Subsection C of 19.15.17.11 NMAC ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emerge ☐ Signed in compliance with 19.15.3.103 NMAC	ency telephone numbers
Closed-loop Systems Permit Application Attachment Checklist: Subsection Instructions: Each of the following items must be attached to the application attached. □ Design Plan - based upon the appropriate requirements of 19.15.17.11 N □ Operating and Maintenance Plan - based upon the appropriate requirements of Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Previously Approved Design (attach copy of design) API Number: □ Previously Approved Operating and Maintenance Plan API Number: □	n. Please indicate, by a check mark in the box, that the documents are mAC ents of 19.15.17.12 NMAC irements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
s. Waste Removal Closure For Closed-loop Systems That Utilize Above Grou Instructions: Please indentify the facility or facilities for the disposal of liqui facilities are required.	und Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC) ids, drilling fluids and drill cuttings. Use attachment if more than two
Disposal Facility Name: CRI	Disposal Facility Permit Number: R.9166- Nm-DI-0006
Disposal Facility Name:	Disposal Facility Permit Number:
Will any of the proposed closed-loop system operations and associated activities ☐ Yes (If yes, please provide the information below) ☑ No	es occur on or in areas that will not be used for future service and operations?
Required for impacted areas which will not be used for future service and oper Soil Backfill and Cover Design Specifications based upon the approp Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection Plan - based upon the appropr	riate requirements of Subsection H of 19.15.17.13 NMAC tion 1 of 19.15.17.13 NMAC
6. Operator Application Certification:	
I hereby certify that the information submitted with this application is true, acc	curate and complete to the best of my knowledge and belief.
Name (Print): Zeno Farris	Title: Manager Operations Administration
Signature: Zeno farris	Date: 2.5.2010
e-mail address: zfarris@cimarex.com	Telephone: 432-620-1938

]		
OCD Approval: Permit Application (including closure plan) Closure Plan (only)		
OCD Representative Signature:	Approval Date:	
Title: Geologist	OCD Permit Number: P1-D2178	
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:		
5. 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 operation. Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation. Re-vegetation Application Rates and Seeding Technique	ions:	
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:	

Cimarex Energy Co. of Colorado - Closed-Loop System Design Plan

Equipment List

- Primary Shakers
- Mud Cleaner hydro-cyclones
- 1 or 2 Centrifuges (depending on well depth)
- De-watering system with pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing (may not be necessary for shallower wells)
- Drying Augur
- Sump Drying Augur
- Sump
- Cuttings Boxes
- Reserve Fluids Tank Farm
- Wire Mesh Trash Enclosure (spent motor oils kept in separate containers and later sent to approved landfill)

Operation and Maintenance

The Cimarex Zero Discharge system is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This ensures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

These closed loop operations can be monitored by our service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and tested for all regulated toxic materials. If found they are removed and disposed of per regulatory requirements.

Closure Plan

During drilling operations, all liquids, drilling fluids, and cuttings will be hauled off via CRI (Controlled Recovery Incorporated, Permit R-9166).



Closed Loop with Drying Auger and Dewatering System

