District I       State of New Mexico       For         1625 N. French Dr., Hobbs, NMI 88240       Energy Minerals and Natural Resources       For closed-loop systems that of the population	<i>bins and propose</i> r closure, submit	
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 CLLZ) per individual closed-loop system request. For any application request other than for a		
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 chvironment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.		
Detator OGRID #: 162683		
Operator		
Facility or well name.     Hat Mesa 10 Fed Com No. 2H		
API Number: 30-045: 025- 40365 OCD Permit Number. PI-03998		
U/L or Qtr/Qtr A Section 10 Township 21S Range 32E County: Lea		
Center of Proposed Design Latitude <u>32° 29' 55 80" N</u> Longitude <u>103° 39' 18 41" W</u> NAD. []1927 [2] 1983		
Surface Owner.   Federal State Private Tribal Trust of Indian Allotment		
Image: Subsection If of 19 15 17 11 NMAC         Operation Image: Operation Image: Subsection If of 19 15 17 11 NMAC         Image: Above Ground Steel Fanks or Image: Haul-off Bins         Image: Subsection C of 19.15.17.11 NMAC         Image: Image: Subsection C of 19.15.17.11 NMAC		
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.           Image: Structure		
Previously Approved Design (attach copy of design) API Number:		
Previously Approved Operating and Maintenance Plan API Number:		
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.1) 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. CRI Disposal Facility Permit Number Mon		
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 <i>will not</i> 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 Q 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) <u>Jerri Stathem</u> / Title <u>Regulatory Analyst</u>	-	
Signature Date: 12.13.2011		
e-mail àddress / tstathem@cimarex.com     Telephone:     432-620-1936       Vit     Form C-114 CLEZ     Oil Conservation Division     Page 1 of 4		

7. <u>OCD Approval</u> : Permit Application (including closure plan) Closure Plan (only)		
OCD Representative Signature:	Approval Date: 12/13/15	
Title:	OCD Permit Number: P1-03998	
<sup>8</sup> <u>Closure Report (required within 60 days of closure completion)</u> : 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. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:</u> 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 <i>will not</i> be used for future service and operations? Yes (If yes, please demonstrate compliance to the items below)		
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:	

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## 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, berined 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.

## <u>Closure Plan</u>

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

