

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



ML

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

JUL 28 2008

OCD-ARTESIA

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: **BEPCO, L.P.** OGRID #: **001801**
Address: **P.O. BOX 2760 Midland, TX 79702**
Facility or well name: **Poker Lake Unit # 295**
API Number: **30-015-35549** OCD Permit Number:
U/L or Qtr/Qtr **SWNW** Section **19** Township **24S** Range **30E** County: **Eddy**
Center of Proposed Design: Latitude **N 32.205556** Longitude **W 103.926306** 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 **30 mil** ☒ LDPE ☐ HDPE ☐ PVC

☐ Other _____ ☐ String-Reinforced

Seams: ☐ Welded ☐ Factory ☐ Other _____

Volume: 12,500 bbl Dimensions: L _____ x W _____ x D _____

☐ **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

☐ **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.

Please check a box if one or more of the following is requested, if not leave blank:

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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.
(Applies to temporary, emergency, or cavitation pits and below-grade tanks)
- 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.
(Applies to permanent pits)
- 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: **30-015-35549** or Permit Number: _____

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 NMAC
☐ 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)

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. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | <input type="checkbox"/> 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). | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Topographic map; Visual inspection (certification) of the proposed site | |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | |
| 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. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | |
| 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. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Written confirmation or verification from the municipality; Written approval obtained from the municipality | |
| Within 500 feet of a wetland. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | |
| Within the area overlying a subsurface mine. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | |
| Within an unstable area. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | |
| Within a 100-year floodplain. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - FEMA map | |

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: _____ Disposal Facility Permit Number: _____

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): Annette Childers

Title: Administrative Assistant

Signature: _____

Date: 7-25-08

e-mail address: machilders@basspet.com

Telephone: (432) 683-2277

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

OCD Representative Signature: _____ Approval Date: 8-7-08

Title: _____

OCD Permit Number: 0208261

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): Annette Childers

Title: Administrative Assistant

Signature: _____

Date: 7-25-08

e-mail address: machilders@basspet.com

Telephone: (432) 683-2277

BEPCO, L.P.
Poker Lake Unit #295
Section 19, T-24-S, R-30-E
Eddy County, NM

API# 30-015-35549

SITTING CRITERIA

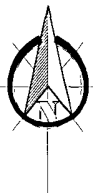
Satellite images, iWATERS database search and topographic maps are attached to prove compliance with 19.15.17.10 NMAC SITTING REQUIREMENTS.

OPERATING AND MAINTENANCE PLAN

Temporary pit will maintain at least two feet of freeboard and shall contain a 30 mil LDPE liner. The liner and pit will be inspected and monitored closely on a daily basis by each tour and any necessary maintenance performed. If the pit liner's integrity is compromised, it will be repaired or replaced. Within 48 hours should a spill, release or leak occur, the NMOCD District II office in Artesia (575-748-1283) will be notified. Please note that notifications may be made earlier to the district office should a greater release occur. This is in accordance with the reporting requirements specified in NMOCD's Rule 116. All free liquids from temporary pit will be removed 30 days after drilling or workover rig is released.

CLOSURE PLAN

During and after drilling operations, liquids (which apply), all drill cuttings, drilling fluids and pit liner will be hauled and disposed of at CRI (Controlled Recovery Incorporated - Permit R-9166). A five point aliquot soil sample will be collected from the excavation floor and walls. To ensure the soil does not exceed acceptable BTEX, TPH, and Chloride concentrations. After sampling program is completed, the temporary pit will be backfilled with native, earthen material, contoured and re-vegetated, described in attached SITE RECLAMATION PLAN.



BEPCO, L.P.
Poker Lake Unit #295
Section 19, Township 24S, Range 30E
Eddy County, New Mexico

SATELLITE MAP

Drawing Not To Scale

New Mexico Office of the State Engineer
POD Reports and Downloads

Township 24S Range 30E Sections 1-30

NAD27 X Y Zone ☐ Search Radius

County ☐ Basin ☐ Number Suffix

Owner Name (First) (Last) ☐ Non-Domestic ☐ Domestic ☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

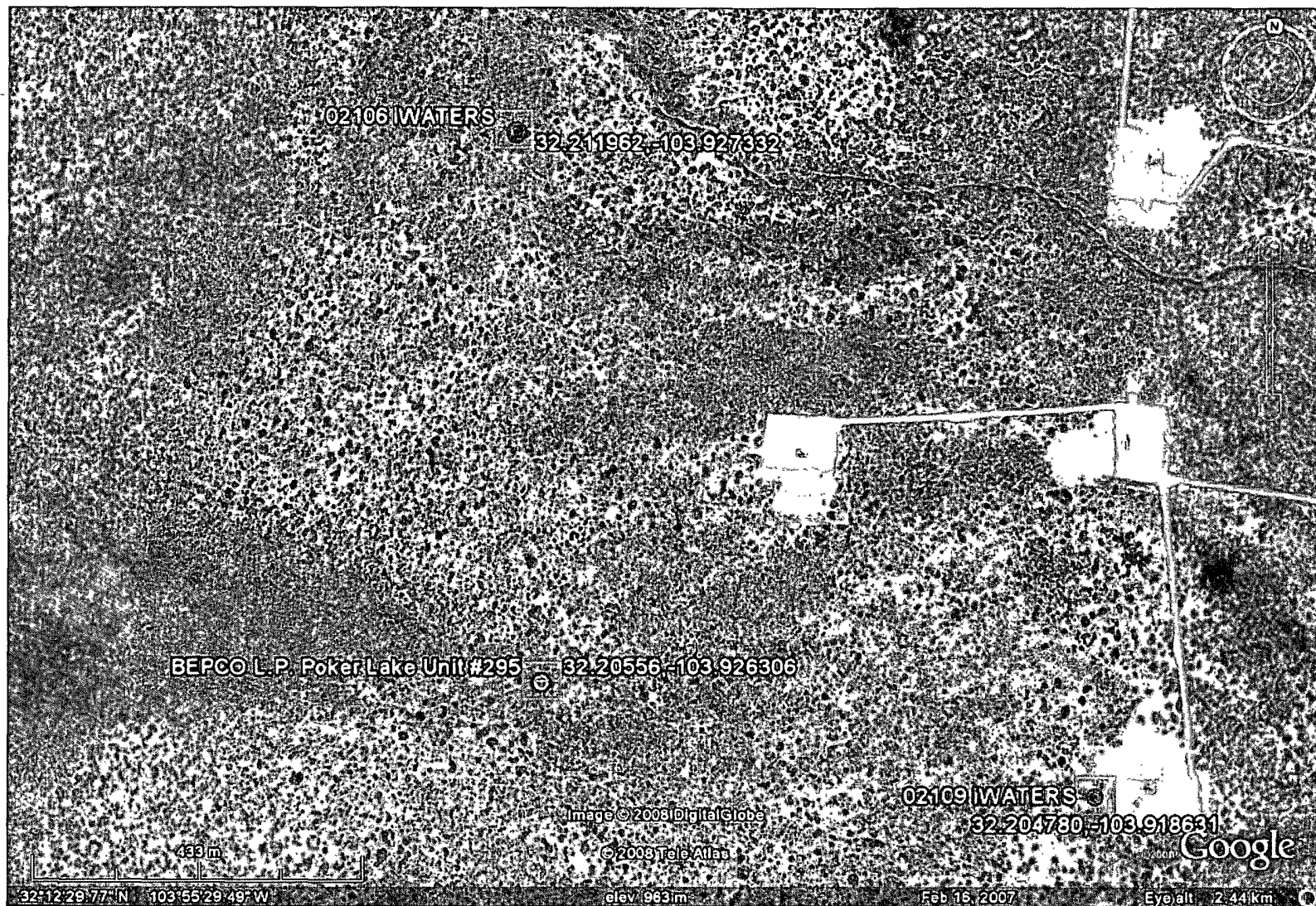
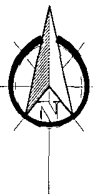
iWATERS Menu

Help

POD / SURFACE DATA REPORT 06/30/2008

DB File Nbr	(acre ft per annum)	Use	Diversion	Owner	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE)				X Y are in Feet		UTM are in Meters			Start Date	Finish Date	Depth Well	Depth (in feet) Water
						Source	Tw	Rng	Sec	q	q	Zone	X	Y				
C 01934	PFO	3		PEERY R. BASS	C 01934		24S	30E	16	2	2	13	605664	3565821			300	
C 02106	DOM	0		A PARTNERSHIP M&M CATTLE CO	C 02106		24S	30E	19	3	3	13	601088	3564435				
C 02107	DOM	0		A PARTNERSHIP M&M CATTLE CO	C 02107		24S	30E	21	2	3	13	605174	3563706				
C 02108	STK	3		A PARTNERSHIP M&M CATTLE CO	C 02108		24S	30E	03	3	1	13	602702	3566487	12/31/1963		200	186
C 02109	STK	3		A PARTNERSHIP M&M CATTLE CO	C 02109		24S	30E	19	2	3	13	601916	3563617	12/31/1963		130	150
C 02110	STK	3		CLARENCE W MCDONALD	C 02110		24S	30E	23	3	4	13	608036	3562950	12/31/1967		600	400
C 02780	MON	0		U S. DEPT. OF ENERGY - WIPP	C 02780		24S	30E	23	2	3	13	608535	3563857	12/31/1979		505	
C 02781	MON	0		U S. DEPT. OF ENERGY - WIPP	C 02781		24S	30E	23	2	3	13	608535	3563657	12/31/1979		624	
C 02782	MON	0		U S. BUREAU OF LAND MANAGEMENT	C 02782		24S	30E	23	2	3	13	608535	3563657	12/31/1979		808	

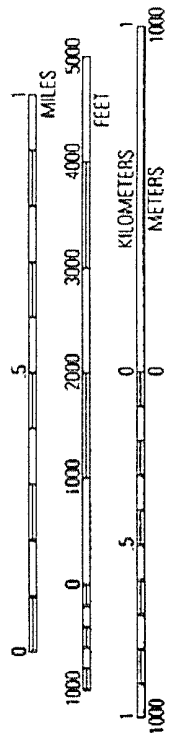
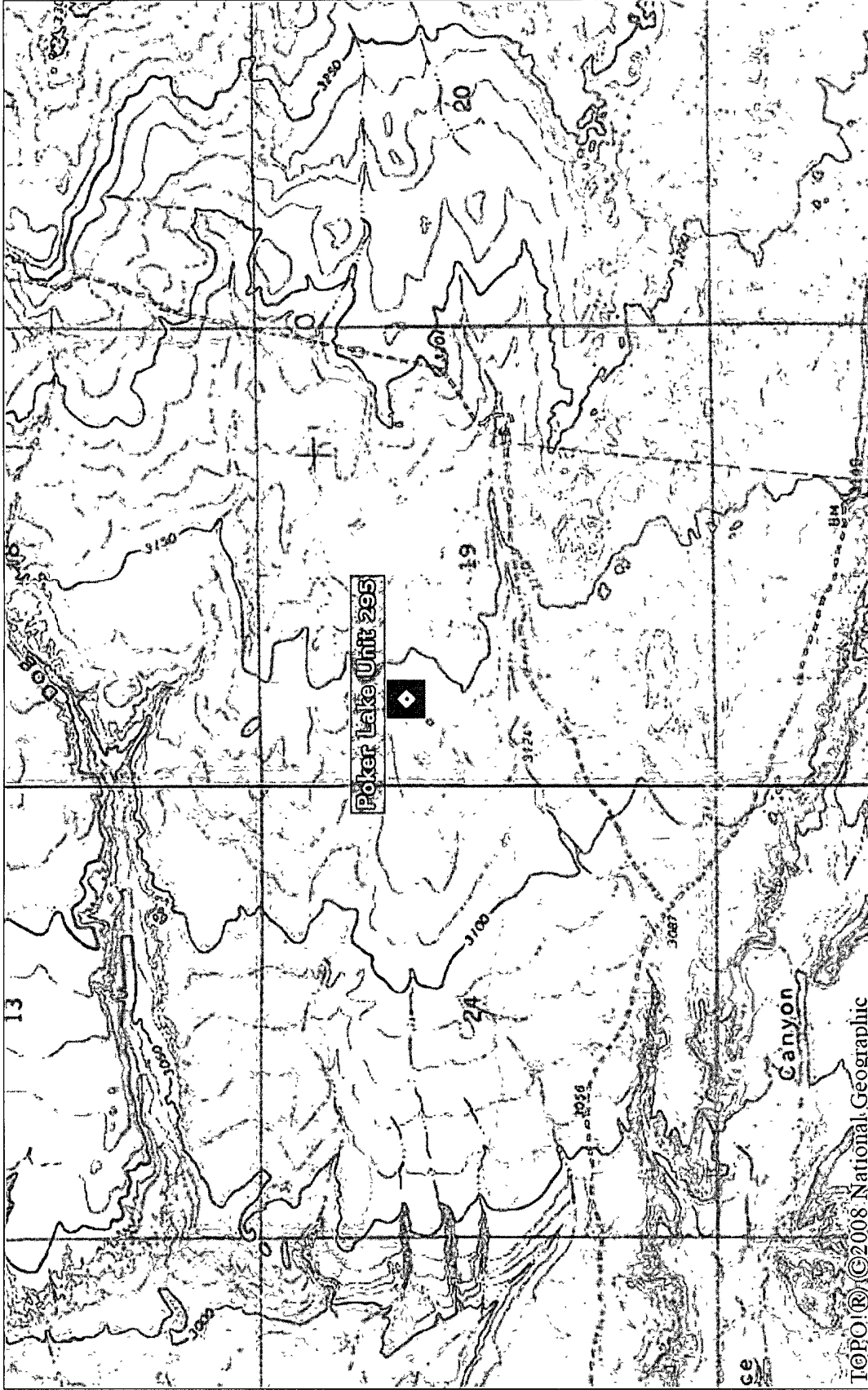
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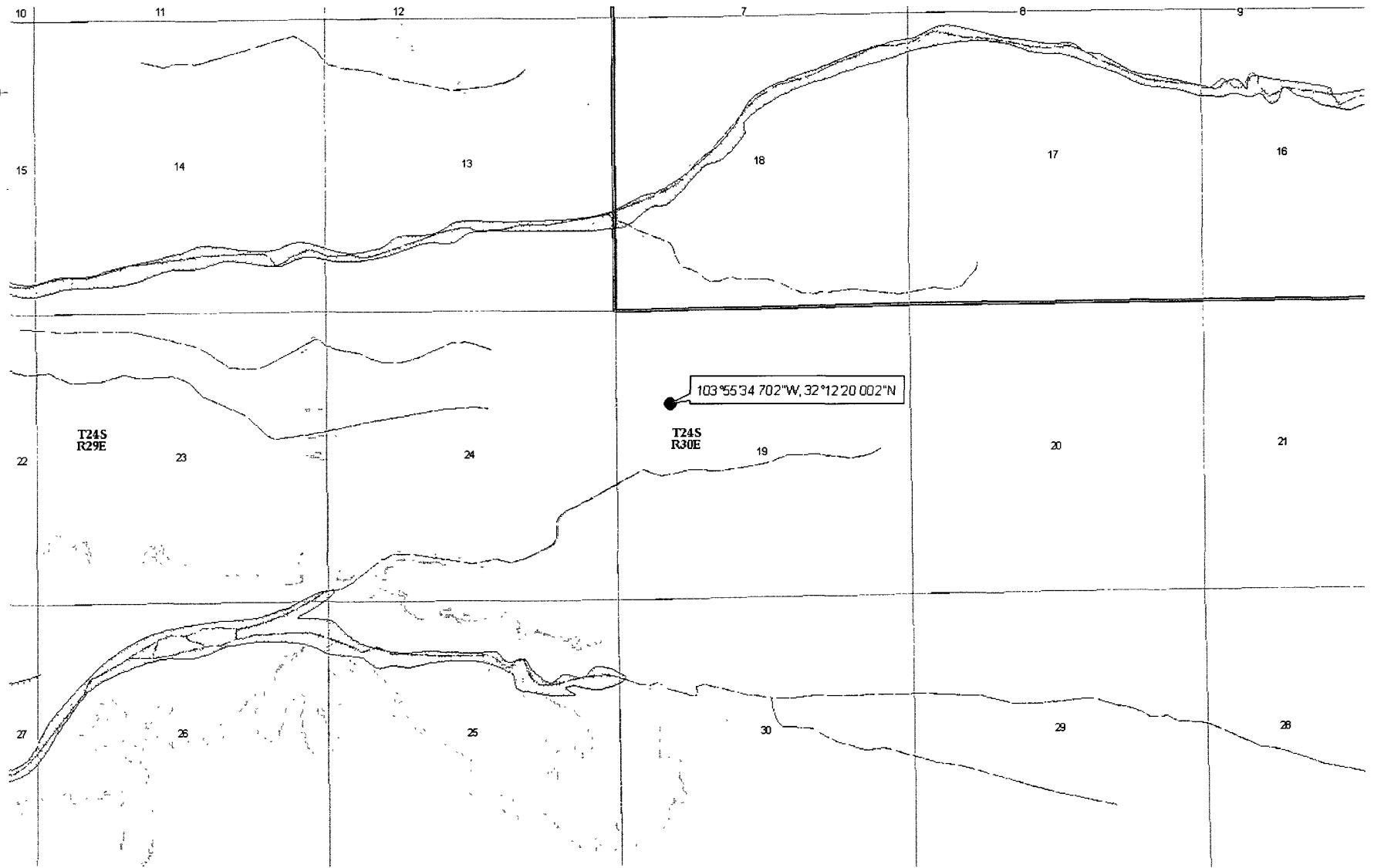
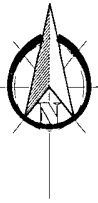
BEPCO, L.P.
Poker Lake Unit #295
Section 19, Township 24S, Range 30E
Eddy County, New Mexico

FRESH WATER WELL LOCATIONS

Drawing Not To Scale



NAT GEO
MAPS



BEPCO, L.P.
Poker Lake Unit #295
Section 19, Township 24S, Range 30E
Eddy County, New Mexico

FEMA 100 YEAR FLOOD PLAIN

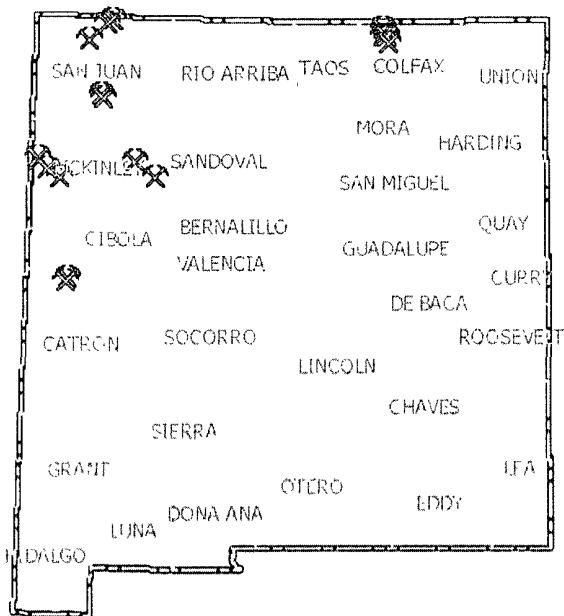
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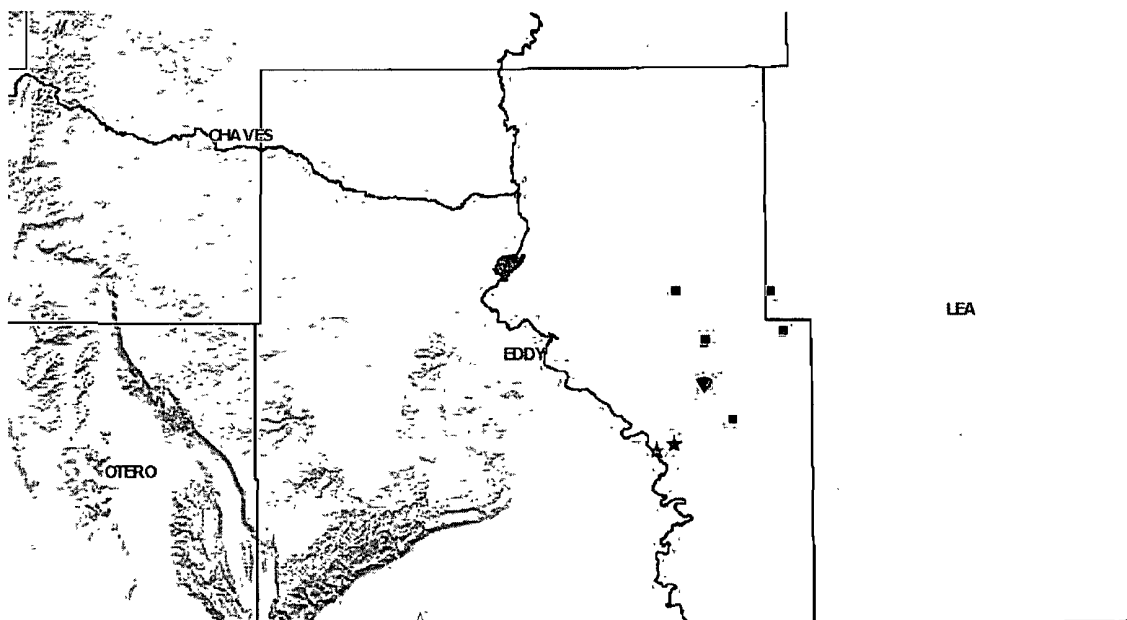
NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

MINING AND MINERALS DIVISION

Coal Mine Locations



Mines, Mills and Quarries Locations





The Oilfield Waste Disposal Experts.SM



**The Smarter, Safer Solution
to Your Oil and Gas Related
Waste Management Needs.**

Disposal Facility Name

Controlled Recovery, Inc

Permit Number

R-9166



SITE RECLAMATION PLAN

RECLAMATION OBJECTIVE

(This reclamation objective is in accordance with Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development: Based upon the appropriate requirements of 19.15.17.13 NMAC)

Oil and gas development is one of many uses of the public lands and resources. While development may have a short- or long-term effect on the land, successful reclamation can insure the effect is not permanent. At final abandonment, well locations, production facilities, and access roads must undergo “final” reclamation so that the character and productivity of the land and water are restored.

The long-term objective of final reclamation is to set the course for eventual ecosystem restoration, including the restoration of the natural vegetation community, hydrology, and wildlife habitats. In most cases, this means returning the land to a condition approximating or equal to that which existed prior to the disturbance.

The reclamation process involves restoring the original landform or creating a landform that approximates and blends in with the surrounding landform. It also involves revegetating disturbed areas to native species, controlling erosion, controlling invasive non-native plants and noxious weeds, and monitoring results.

Reclamation generally can be judged successful when a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community is established on the site, with a plant density sufficient to control erosion and non-native plant invasion and to re-establish wildlife habitat or forage production. Erosion control is generally sufficient when adequate groundcover is reestablished, water naturally infiltrates into the soil, and gullying, headcutting, slumping, and deep or excessive rilling is not observed. The site must be free of State- or county-listed noxious weeds, oilfield debris, contaminated soil, and equipment.

RECLAMATION PLAN

A reclamation plan is included in the Surface Use Plan of Operations and should discuss plans for final reclamation. Reclamation is required of any surface previously disturbed. The operator should submit a new plan with the Notice of Intent to Abandon (NIA) or Subsequent Report Plug and Abandon (SRA) using the Sundry Notices and Reports on Wells Form 3160-5 when abandoning wells and other facilities that do not have an approved reclamation plan. Additional reclamation measures may be required based on the conditions existing at the time of abandonment and made a part of the conditions of approval of the NIA or SRA. Earthwork for final reclamation generally must be completed within 6 months of plugging.

Pit Reclamation The site will be reclaimed to a natural condition that blends with the rest of the reclaimed pad area. In addition, the reclaimed pit will be restored to a safe and stable condition.

Site Preparation and Revegetation Disturbed areas will be revegetated after the site has been satisfactorily prepared. Site preparation will include respreading topsoil to an adequate depth, described by the sections below, and may also include ripping, tilling, disking on contour, and dozer track-imprinting. Seeding will be accomplished by drilling on the contour whenever practical or by other approved methods such as a dozer track-walking followed by broadcast seeding. Seeding will be performed according to the application specifications outlined by the BLM. BLM Seed Mixture 2 for sandy sites is to be applied as addressed below.

Soil Cover Designs

The soil cover for site reclamation shall consist of one or more of the following parameters:

- (A) The soil cover for closures where the operator has removed the pit contents or remediated the contaminated soil to the divisions' satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.
- (B) The soil cover for burial-in-place or trench burial shall consist of a minimum of four feet of compacted, non-waste containing, earthen material. The soil cover shall include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.
- (C) The holder shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

Re-vegetation Procedure, using BLM Seed Mixture 2, for Sandy Sites

The holder will begin seeding the first growing season after the holder closes a pit or trench or is no longer using a drying pad, below-grade tank or an area associated with a closed-loop system, pit or below-grade tank, including access roads. Seeding shall be accomplished by drilling on the contour whenever practical or by other division-approved methods. The holder will seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State Law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first). The holder will take appropriate measures to ensure that this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The holder shall obtain coverage that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native plants native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. During the two growing seasons, that prove viability, there will be no artificial irrigation of the vegetation. The holder will repeat seeding or planting as necessary, until it successfully achieves the required vegetation cover. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

When conditions are not favorable for the establishment of vegetation, such as periods of drought, the holder may delay seeding or planting, with the division's approval, until soil moisture conditions become favorable. However, the division may require the holder to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing, or other practices to establish re-vegetation. The holder may propose an alternative to the re-vegetation plan if the holder demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health, and the environment. The proposed alternative shall be agreed upon by the surface owner. The holder will then submit the

proposed alternative, with written documentation, that the surface owner agrees to the alternative, to the division for approval.

The holder will notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

BLM Seed Mixture 2, for Sandy Sites

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sand love grass (<i>Eragrostis trichodes</i>)	1.0
Plains bristlegrass (<i>Setaria macrostachya</i>)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

WELL RECLAMATION

Pit Locations, On-Site Burial Locations, and Drying Pads

Once the holder has closed a pit or trench, or is no longer using a drying pad, below-grade tank or an area associated with a closed-loop system, pit, trench or below-grade tank, the holder will reclaim the pit location, drying pad location, below-grade tank location, or trench location and all areas associated with the closed-loop system, pit, trench or below-grade tank, including associated access roads, to a safe and stable condition that blends with the surrounding, undisturbed area. The holder shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as stated previously, recontour the location and associated areas to a contour that approximates the original contour, and blends with the surrounding topography and re-vegetate the site as stated previously.

Final Reclamation Restoration of the original landform is a key element in ensuring that the effects of oil and gas development are not permanent. To achieve final reclamation, the well site will be recontoured to original contour or a contour that blends with the surrounding landform, stockpiled topsoil redistributed, and the site revegetated.

In recontouring areas that have been surfaced with gravel or similar materials (caliche), the material must be removed from the well location or buried deep in the recontoured cut to prevent possible surface exposure. All excavations and pits will be closed in accordance with New Mexico Oil Conservation Division standards and graded to conform to the surrounding terrain.

Salvaged topsoil must be respread evenly over the surfaces to be revegetated. The topsoiled site will be prepared to provide a seedbed for reestablishment of desirable vegetation.

Water breaks and terracing will only be installed when absolutely necessary to prevent erosion of fill material.

BLM Serial Number _____
Company Reference _____

BLM SEEDING REQUIREMENTS IN THE ROSWELL DISTRICT

Seed Mixture 2 (Sandy Sites)

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)/acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine months prior to purchase. Commercial seed shall be either certified or registered seed. The seed mixture container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre noted below are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth will not be made before completion of the first growing season after seeding.

Species to be planted in pounds of pure live seed per acre:

Sand dropseed (<u>Sporobolus cryptandrus</u>)	1.0
Sand lovegrass (<u>Eragrostis trichodes</u>)	1.0
Plains bristlegrass (<u>Setaria macrostachya</u>)	2.0

Pounds of pure live seed: Pounds of seed X percent purity X percent germination = pounds pure live seed