

District I
1625 N French Dr, Hobbs, NM 88240

District II
1301 W Grand Ave, Artesia, NM 88210

District III
1000 Rio Brazos Rd, 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
July 21, 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

4143

Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application

- 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
 - ☐ Modification to an existing permit
 - ☒ Closure plan only submitted for an existing permitted or non-permitted 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.

1	
Operator: Burlington Resources Oil & Gas Company, LP	OGRID#: 14538
Address: PO Box 4289, Farmington, NM 87499	
Facility or well name: Leo Manning #100S	
API Number: 30-045-34668	OCD Permit Number: _____
U/L or Qtr/Qtr: N(SE/SW) Section: 11 Township: 29N Range: 11W County: Rio Arriba	
Center of Proposed Design: Latitude: 36.73606 °N Longitude: 107.96153 °W NAD: <input type="checkbox"/> 1927 <input checked="" type="checkbox"/> 1983	
Surface Owner: <input checked="" type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Tribal Trust or Indian Allotment	

2	
<input checked="" type="checkbox"/> Pit: Subsection F or G of 19.15.17.11 NMAC	
Temporary: <input checked="" type="checkbox"/> Drilling <input type="checkbox"/> Workover	
<input type="checkbox"/> Permanent <input type="checkbox"/> Emergency <input type="checkbox"/> Cavitation <input type="checkbox"/> P&A	
<input checked="" type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness 12 mil <input checked="" type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	
<input checked="" type="checkbox"/> String-Reinforced	
Liner Seams: <input checked="" type="checkbox"/> Welded <input checked="" type="checkbox"/> Factory <input type="checkbox"/> Other _____ Volume: 4400 bbl Dimensions L 65' x W 45' x D 10'	

3	
<input type="checkbox"/> Closed-loop System: Subsection H of 19.15.17.11 NMAC	
Type of Operation: <input type="checkbox"/> P&A <input type="checkbox"/> Drilling a new well <input type="checkbox"/> Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)	
<input type="checkbox"/> Drying Pad <input type="checkbox"/> Above Ground Steel Tanks <input type="checkbox"/> Haul-off Bins <input type="checkbox"/> Other _____	
<input type="checkbox"/> Lined <input type="checkbox"/> Unlined Liner type: Thickness _____ mil <input type="checkbox"/> LLDPE <input type="checkbox"/> HDPE <input type="checkbox"/> PVD <input type="checkbox"/> Other _____	
Liner Seams: <input type="checkbox"/> Welded <input type="checkbox"/> Factory <input type="checkbox"/> Other _____	

4	
<input type="checkbox"/> Below-grade tank: Subsection I of 19.15.17.11 NMAC	
Volume: _____ bbl	Type of fluid: _____
Tank Construction material _____	
<input type="checkbox"/> Secondary containment with leak detection <input type="checkbox"/> Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
<input type="checkbox"/> Visible sidewalls and liner <input type="checkbox"/> Visible sidewalls only <input type="checkbox"/> Other _____	
Liner Type: Thickness _____ mil <input type="checkbox"/> HDPE <input type="checkbox"/> PVC <input type="checkbox"/> Other _____	

5	
<input type="checkbox"/> Alternative Method:	
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval	



6. **Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pit, temporary pits, and below-grade tanks*)
- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☒ Alternate. Please specify 4' hogwire fence with a single strand of barbed wire on top.

7. **Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)
- ☐ Screen ☐ Netting ☐ Other _____
- ☐ Monthly inspections (*If netting or screening is not physically feasible*)

8. **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

9. **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 of the Santa Fe Environmental Bureau office for consideration of approval. (Fencing/BGT Liner)
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval

10. **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
- Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).**
- 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.**
(*Applies to temporary, emergency, or cavitation pits and below-grade tanks*)
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image
- Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.**
(*Applied to permanent pits*)
- 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.**
- NM Office of the State Engineer - iWATERS database search; 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**
- Written confirmation or verification from the municipality; Written approval obtained from the municipality
- Within 500 feet of a wetland.**
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site
- Within the area overlying a subsurface mine.**
- Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division
- Within an unstable area.**
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map
- Within a 100-year floodplain**
- FEMA map

☐ Yes ☐ No

☐ Yes ☐ No

☐ Yes ☐ No

☐ NA

☐ Yes ☐ No

☐ NA

☐ Yes ☐ No

☐ Yes ☐ No

☐ Yes ☐ No

☐ Yes ☐ No

☐ Yes ☐ No

☐ Yes ☐ No

11

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
☐ 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 (Please complete Boxes 14 through 18, if applicable) - 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 _____ or Permit _____

12

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 (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
☐ Siting Criteria Compliance Demonstrations (only 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 (Please complete Boxes 14 through 18, if applicable) - 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 _____
☐ Previously Approved Operating and Maintenance Plan API _____

13

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 (I) 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

14

Proposed Closure: 19.15.17.13 NMAC

Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☒ Drilling ☐ Workover ☐ Emergency ☒ Cavitation ☐ P&A ☐ 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
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15

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 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: _____ Disposal Facility Permit #: _____

Disposal Facility Name: _____ Disposal Facility Permit #: _____

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) ☐ No

Required for impacted areas which will not be used for future service and operations

☐ Soil Backfill and Cover Design Specification - 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

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.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No

☐ N/A

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☒ Yes ☐ No

☐ N/A

Ground water is more than 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No

☐ N/A

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

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; satellite image

☐ Yes ☒ No

☐ Yes

☒ No

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 the initial application.

- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site

☐ Yes

☒ 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

☐ Yes ☒ No

Within 500 feet of a wetland

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes

☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes

☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes

☒ No

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/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - 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

19

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) Crystal Tafoya Title: Regulatory Technician
 Signature: Crystal Tafoya Date: 10/13/2009
 e-mail address: crystal.tafoya@conocophillips.com Telephone: 505-326-9837

20

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

OCD Representative Signature: Bob Bell **Approval Date:** 10/19/09

Title: Enviro Spec **OCD Permit Number:** _____

21

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:** _____

22

Closure Method:

- ☐ Waste Excavation and Removal ☐ On-site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain

23

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

24

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 (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (if applicable)
☐ 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

25

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: _____



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00007	IND	SJ	3	2	2	14	29N	11W	236085	4069024*	752		
SJ 00987	DOM	SJ		4	13	29N	11W	237549	4068086*	415	300	115	
SJ 01426	DOM	SJ		4	1	14	29N	11W	235366	4068747*	155	10	145
SJ 01774	DOM	SJ	2	4	3	14	29N	11W	235440	4068045*	82	6	76
SJ 01851	DOM	SJ		4	4	10	29N	11W	234586	4069572*	125	48	77
SJ 02378	DOM	SJ	2	3	4	15	29N	11W	234229	4068080*	75	12	63
SJ 02466	POL	SJ	3	3	4	11	29N	11W	235694	4069436*	66		
SJ 02466 S	POL	SJ	3	3	4	11	29N	11W	235694	4069436*	65		
SJ 02991	DOM	SJ	2	4	3	13	29N	11W	237048	4067998*	60		
SJ 03136	DOM	SJ	4	4	3	13	29N	11W	237048	4067798*	20		
SJ 03164	DOM	SJ	1	2	4	14	29N	11W	236060	4068423*	75	56	19
SJ 03175	DOM	SJ	1	2	4	14	29N	11W	236060	4068423*	60	24	36
SJ 03360	DOM	SJ	2	4	3	14	29N	11W	235440	4068045*	40		
SJ 03550	STK	SJ	1	2	3	14	29N	11W	235252	4068445*	10		
SJ 03579	DOM	SJ	1	4	4	15	29N	11W	234431	4068068*	83	30	53
SJ 03733 POD1	DOM	SJ	1	2	4	15	29N	11W	234444	4068469*	64	20	44
SJ 03847 POD1	DOM	SJ	3	3	3	14	29N	11W	234873	4067937	74	27	47

Average Depth to Water: **53 feet**

Minimum Depth: **6 feet**

Maximum Depth: **300 feet**

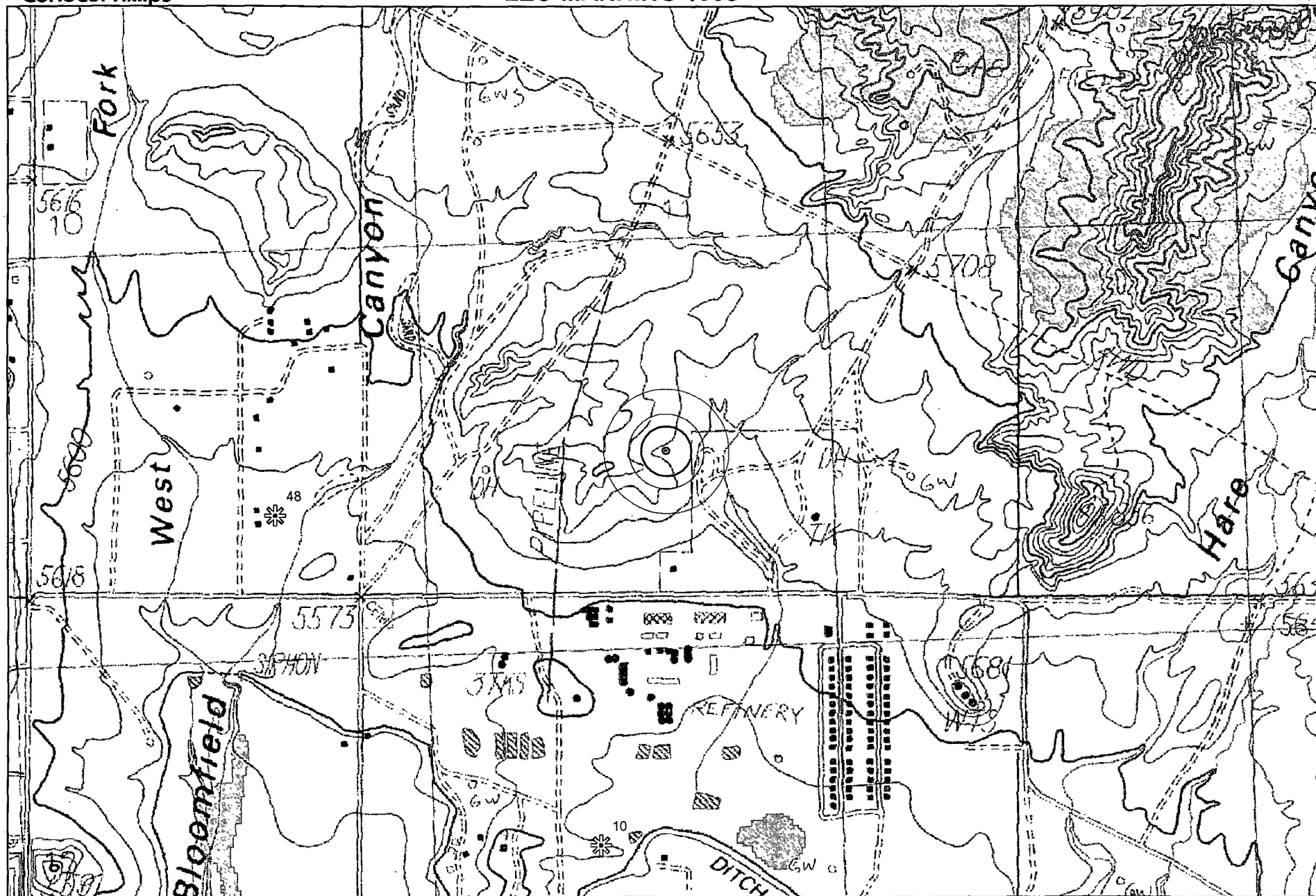
Record Count: 17

PLSS Search:

Section(s): 1, 2, 3, 10, 11, 12, 13, 14, 15 **Township:** 29N **Range:** 11W

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



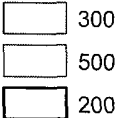
Data Source
Aerial flown locally Sedgewick in 2005
Wetlands Data Aquired from U.S. Fish
and Wildlife [Http://wetlandswms.er.usgs.gov](http://wetlandswms.er.usgs.gov)
USGS Topo



COPCathodic



iWaters



Wetlands



City Limits

1:12,000

NAD_1983_SP_
NM West_FIPS_
3003
Sep 22, 2008

OCD CATHODIC PROTECTION DEEPWELL GROUND BED REPORT
DATA SHEET: NORTHWESTERN NEW MEXICO

LOCATION INFORMATION

API Number

WELL NAME OR PIPELINE SERVED: Leo Mancini #1005 LEGAL LOCATION: SPLIT GAP R11 W INSTALLATION DATE: 1/27/09
PPCO, RECTIFIER NO.: ADDITIONAL WELLS:
TYPE OF LEASE: LEASE NUMBER: NM-048571

GROUND BED INFORMATION

TOTAL DEPTH: 300' CASING DIAMETER: 8" TYPE OF CASING: PVC CASING DEPTH: 20' CASING CEMENTED: NO
TOP ANODE DEPTH: 200' BOTTOM ANODE DEPTH: 290
ANODE DEPTHS: 290, 280, 270, 260, 250, 240, 230, 220, 210, 200
AMOUNT OF COKE: 2600 lbs

WATER INFORMATION

WATER DEPTH (1): 95' none WATER DEPTH (2): none
GAS DEPTH: none CEMENT PLUGS: none

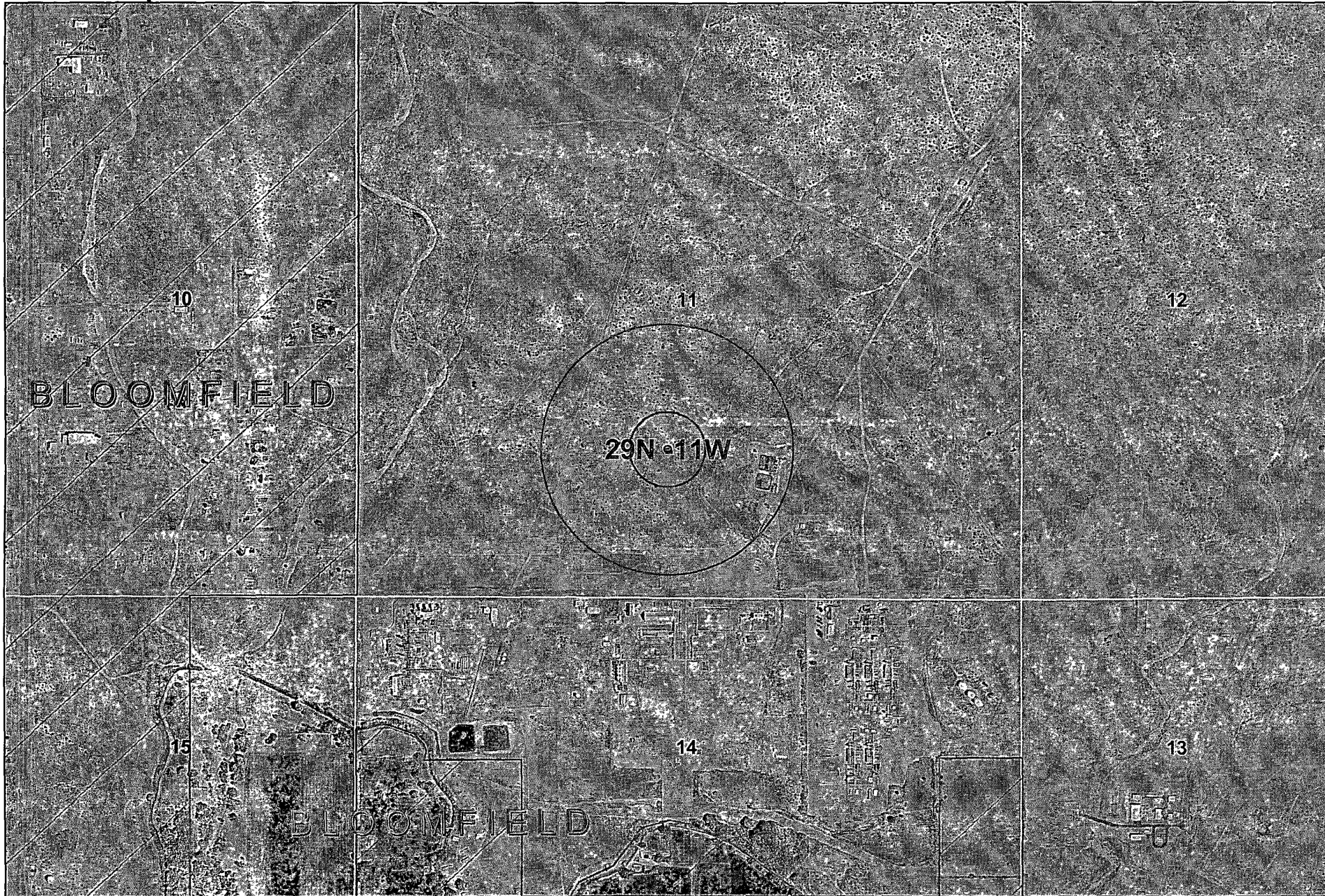
OTHER INFORMATION

TOP OF VENT PERFORATIONS: 240' VENT PIPE DEPTH: 300'

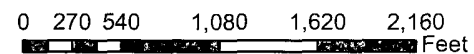
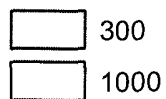
REMARKS:

IF ANY OF THE ABOVE DATA IS UNAVAILABLE, PLEASE INDICATE SO. COPIES OF ALL LOGS, INCLUDING DRILLERS LOGS, WATER ANALYSIS, AND WELL BORE SCHEMATICS SHOULD BE SUBMITTED WHEN AVAILABLE. UNPLUGGED UNABANDONED WELLS ARE TO BE INCLUDED.

* - LAND TYPE MAY BE SHOWN: F-FEDERAL; I-INDIAN; S-STATE; P-FEE
IF FEDERAL OR INDIAN, ADD LEASE NUMBER.



Data Source
Aerial flown locally Sedgewick in 2005.
Wetlands Data Acquired from U.S. Fish
and Wildlife [Http://wetlandswms er usgs.gov](http://wetlandswms.er.usgs.gov)
USGS Topo



1:12,000

NAD_1983_SP_
NM West_FIPS_
3003
Sep 23, 2008

LEO MANNING 100S MINES, MILLS & QUARRIES WEB MAP

Mines, Mills & Quarries Commodity Groups

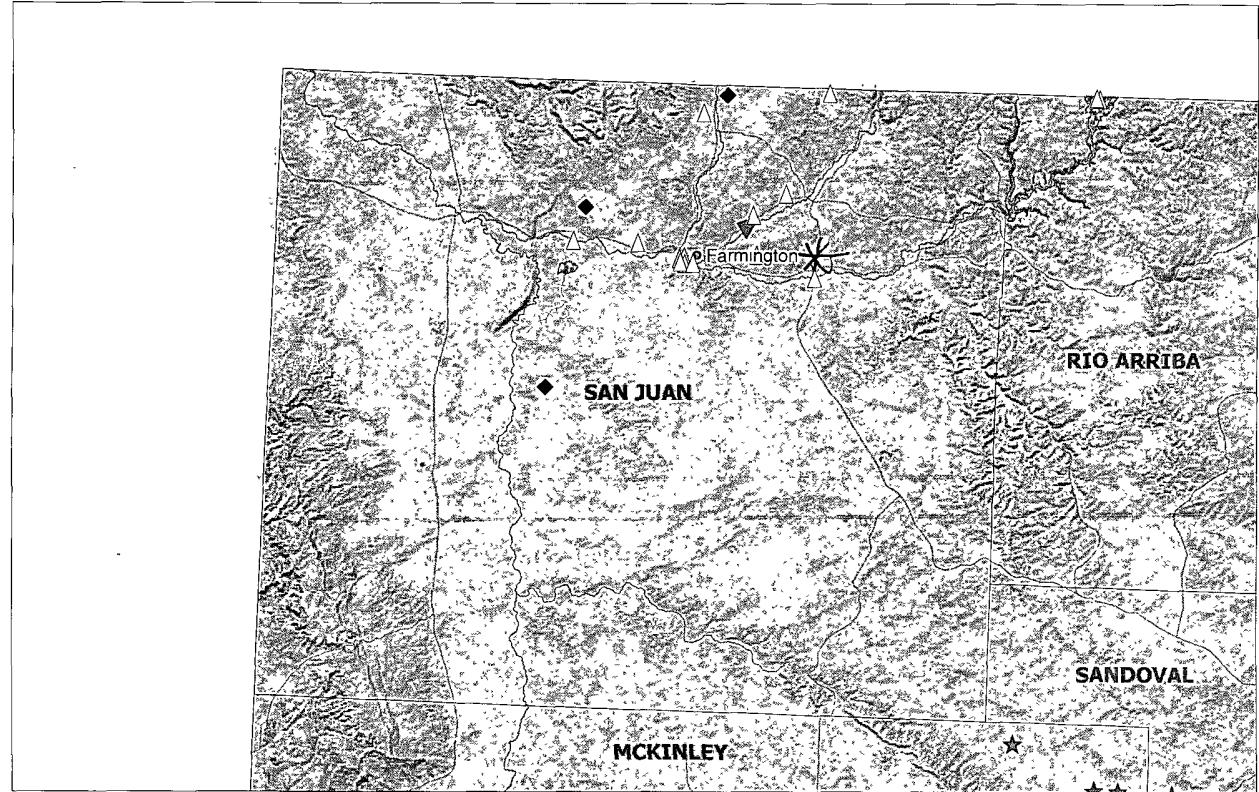
-  **Aggregate & Stone Mines**
-  **Coal Mines**
-  **Industrial Minerals Mines**
-  **Industrial Minerals Mills**
-  **Metal Mines and Mill Concentrate**
-  **Potash Mines & Refineries**
-  **Smelters & Refinery Ops.**
-  **Uranium Mines**
-  **Uranium Mills**

Population

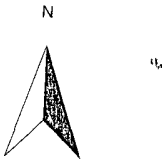
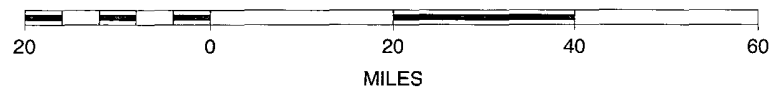
-  **Cities - major**

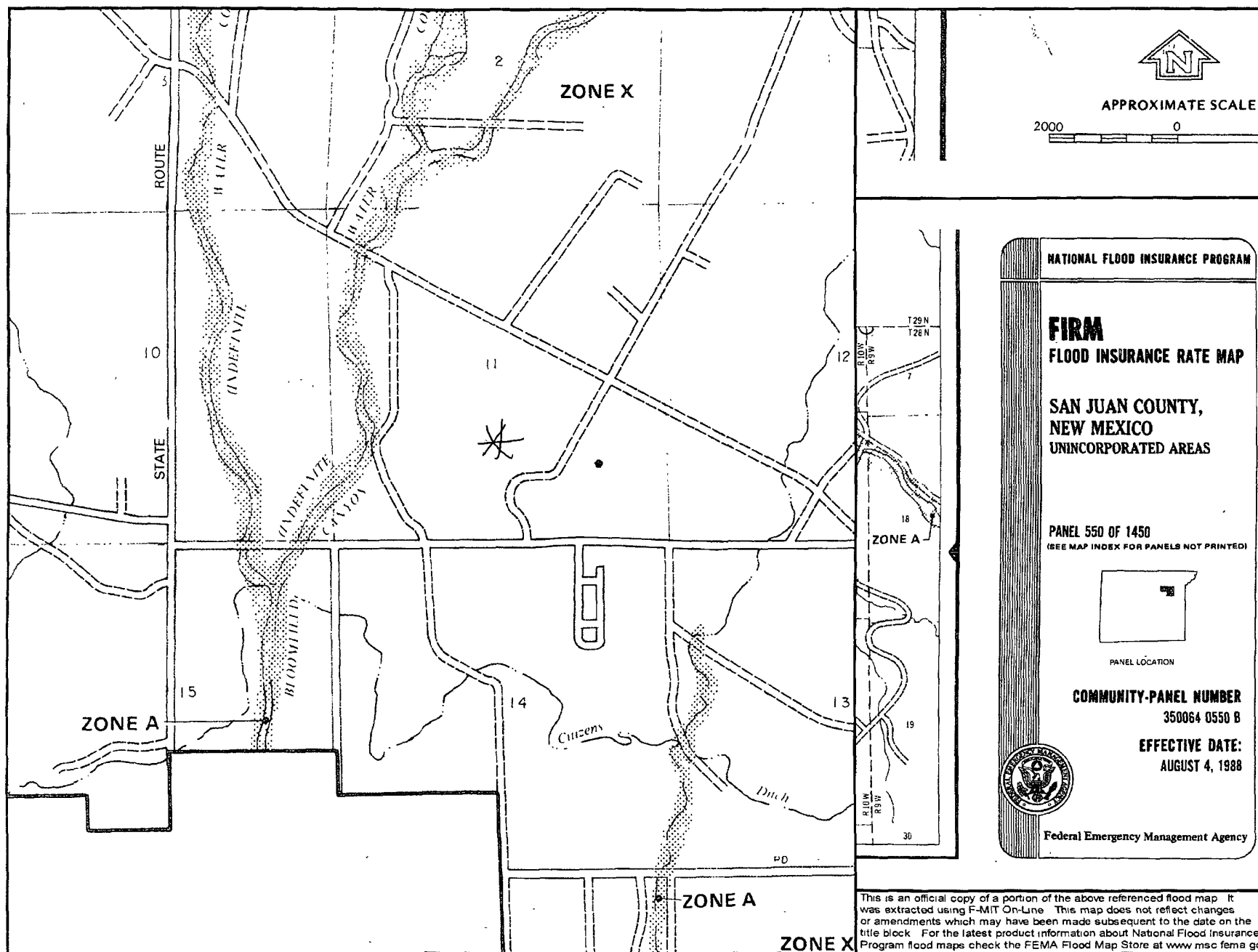
Transportation

-  **Railways**
-  **Interstate Highways**
-  **Major Roads**



SCALE 1 : 1,303,666





Hydrogeological Report for Leo Manning 100S

Regional Geological context:

The Nacimient Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimient Uplift. The Nacimient is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimient Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimient Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimient Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimient consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone et al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimient Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimient Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimient Formations ranges from 500 to more than 3,500 feet.

Hydraulic Properties:

Reported well yields for 53 wells completed in either the Animas or Nacimient Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimient and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimient Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimient Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimient Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conducive to runoff than retention of precipitation.

References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper

552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p.

Levings, G.W., Craig, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources, Hydrologic Report 6.

Tafoya, Crystal

From: Tafoya, Crystal
Sent: Monday, October 12, 2009 10:02 AM
To: 'Mark Kelly'
Subject: Leo Manning 100S Pit Closure

The subject well's temporary pit will be closed on-site. Please let me know if you have any questions.

Thank you,

Crystal Tafoya
Regulatory Technician
Phone: (505) 326-9837
Email: crystal.tafoya@conocophillips.com

"Safety has no quitting time"

Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Leo Manning 100S is not located in an unstable area. The location is not over a mine and is not on the side of a hill as indicated on the Mines, Mills and Quarries Map and Topographic Map. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse as indicated on the Topographic Map. The location is not within a 100-year floodplain area as indicated on the FEMA Map. The Cathodic well data from the Leo Manning 100S has an elevation of 5660' and groundwater depth of 95'; therefore the groundwater depth is greater than 90'. There are no iWATERS data points located in the area as indicated on the TOPO Map. The hydro geologic analysis indicates the groundwater depth and the Nacimientto formation will create a stable area for this new location.

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 12, 2005

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code	⁵ Property Name LEO MANNING		⁶ Well Number 100 S
⁷ GRID No.	⁸ Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP		⁹ Elevation 5660'

¹⁰ Surface Location

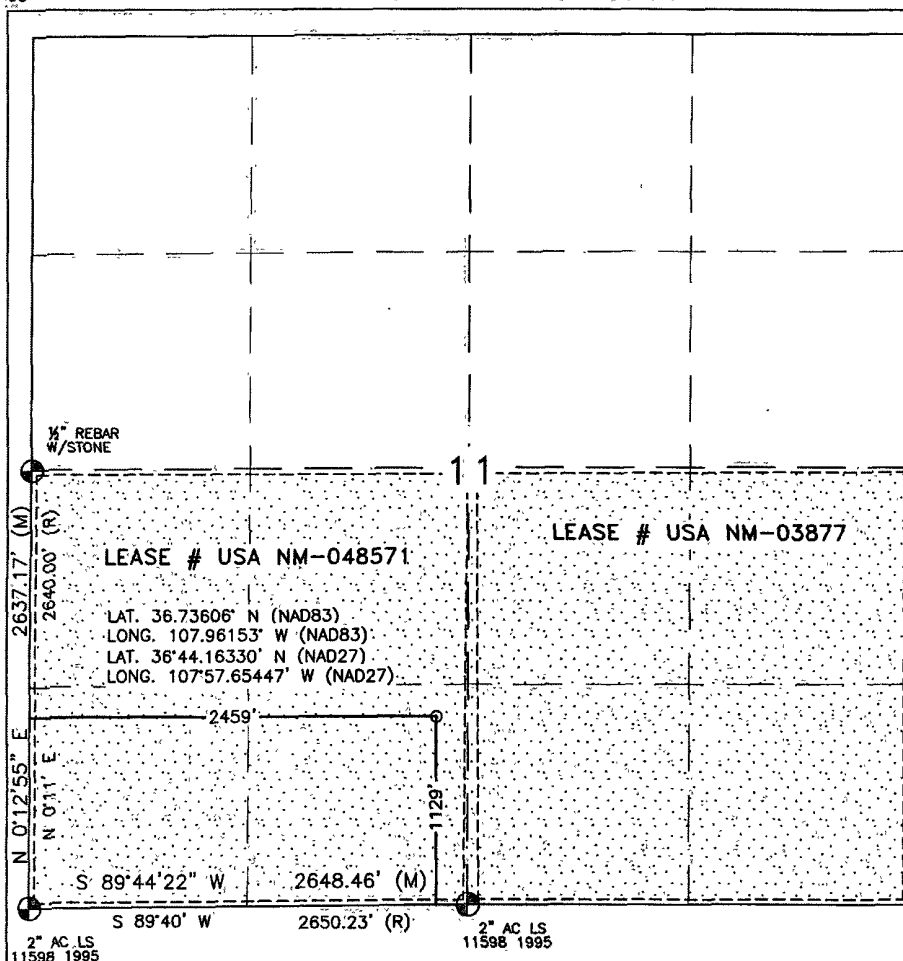
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	11	29N	11W		1129'	SOUTH	2459'	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 320.00 Acres - (S/2)					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner or a compulsory pooling order heretofore entered by the division.

Signature

Date

Printed Name

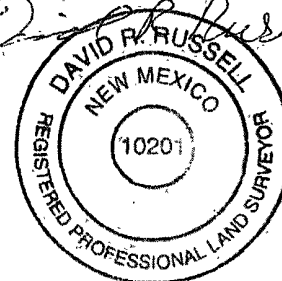
18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 5, 2007

Date of Survey

Signature and Seal of Professional Surveyor:



DAVID RUSSELL

Certificate Number

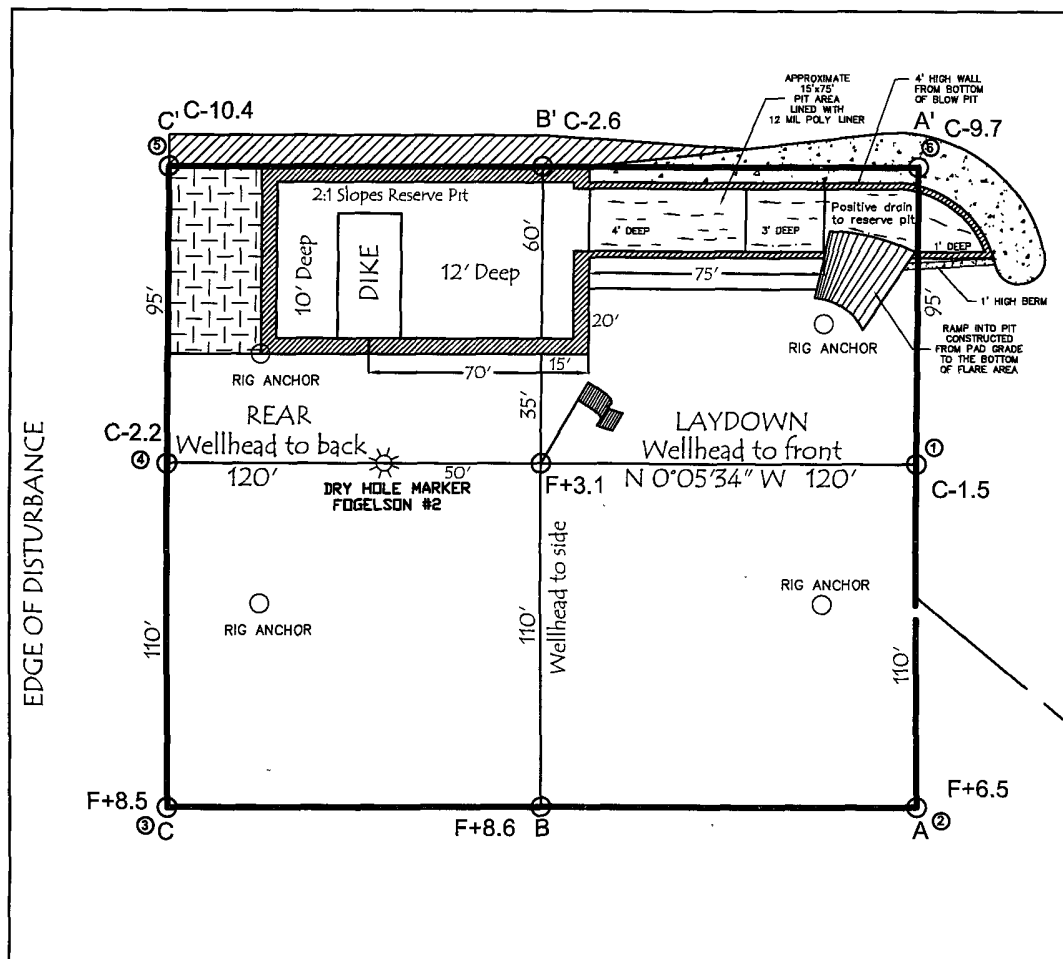
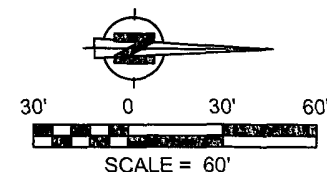
10201

LATITUDE: 36.73606°N
 LONGITUDE: 107.96153°W
 DATUM: NAD 83

BURLINGTON RESOURCES O&G CO LP

LEO MANNING #100 S
 1129' FSL & 2459' FWL
 LOCATED IN THE SE/4 SE/4 OF SECTION 11,
 T29N, R11W, N.M.P.M.,
 SAN JUAN COUNTY, NEW MEXICO
 GROUND ELEVATION: 5660', NAVD 88
 FINISHED PAD ELEVATION: 5663.4', NAVD 88

SLOPES TO BE CONSTRUCTED TO
 MATCH THE ORIGINAL CONTOURS
 AS CLOSE AS POSSIBLE.



±1557 LF OF NEW ACCESS
 ACROSS BLM LANDS
 TO EXISTING ROAD

305' x 340' = 2.38 ACRES OF DISTURBANCE
 SCALE: 1" = 60'
 JOB No.: COPC127
 DATE: 11/20/07

NOTE:
 RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).
 RUSSELL SURVEYING, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
 CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED, BURIED PIPELINES OR
 CABLES ON WELL PAD, IN CONSTRUCTION ZONE AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR
 TO CONSTRUCTION.



Russell Surveying
 1409 W. Aztec Blvd. #2
 Aztec, New Mexico 87410
 (505) 334-8637

Russell Surveying
1409 W. Aztec Blvd. #2
Aztec, New Mexico 87410
(505) 334-8637

Burlington Resources Oil & Gas Company, LP

San Juan Basin

Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of pit closure. Closure report will be filed on C-144 and incorporate the following:

- Details on Capping and Covering, where applicable.
- Plot Plan (Pit Diagram)
- Inspection Reports
- Sampling Results
- C-105
- Copy of Deed Notice will be filed with County Clerk

General Plan:

1. All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011)
2. The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
3. The surface owner shall be notified of BR's closing of the temporary pit prior to closure as per the approved closure plan via certified mail, return receipt requested.
4. Within 6 months of the Rig Off status occurring BR will ensure that temporary pits are closed, re-contoured, and reseeded.
5. Notice of Closure will be given prior to the Aztec Division office between 72 hours and one week via email, or verbally. The notification of closure will include the following:
 - i. Operator's name
 - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
6. Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at the San Juan County Landfill located on CR 3100.
7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

Components	Tests 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

9. A five point composite sample will be taken from the cavitation pit pursuant to 19.15.17.13(B)(1)(b)(i) in order to assure there has not been any type of release.

Components	Tests 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	500

10. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. If standard testing fails BR will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
11. During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
12. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM010011
13. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
14. Notification will be sent to OCD when the reclaimed area is seeded.
15. BR shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Type	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	3.0
Indian ricegrass	Paloma or Rimrock	3.0
Slender wheatgrass	San Luis	2.0
Crested wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

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

Present Pure Live Seed (PLS) = Purity X Germination/100

Two lots of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)

Purity 50 percent

Germination 40 percent

Percent PLS 20 percent

5 lb. bulk seed required to make

1 lb. PLS

Source No. two (better quality)

Purity 80 percent

Germination 63 percent

Percent PLS 50 percent

2 lb. bulk seed required to make

1 lb. PLS

16. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.