District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
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

3795

# 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 Huntington Energy, L L C OGRID # 208706
Address 908 N W 71st St , Oklahoma City, OK 73116
Facility or well name Canyon Largo Unit #491
API Number 30-039-30054 OCD Permit Number
U/L or Qtr/Qtr Lot D, NWNW Section 20 Township 25N Range 6W County Rio Arriba
Center of Proposed Design. Latitude 36 38958° N Longitude 107 49590° W NAD ☐1927 ☒ 1983
Surface Owner ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2
☒ **Pit:** Subsection F or G of 19 15.17 11 NMAC
Temporary ☒ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☒ Lined ☐ Unlined Liner type Thickness 40 mil ☐ LLDPE ☒ HDPE ☐ PVC ☐ Other
☒ String-Reinforced
Liner Seams ☒ Welded ☒ Factory ☐ Other Volume 7000 bbl Dimensions L 140' x W 65' x D 10'

3.
☐ **Closed-loop System:** Subsection H of 19 15 17 11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other
☐ Lined ☐ Unlined Liner type Thickness mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other
Liner Seams ☐ Welded ☐ Factory ☐ Other

4.
☐ **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

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JUL 2009
OIL CONS. DIV. DIST. 3

5.
☐ **Alternative Method:**
Submittal of an exception request is required Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval



18

6

**Fen**: Subsection D of 19 15 17 11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*

☐ ...ik, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, insti... or church)*

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate Please specify_____

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 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

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<br>- NM Office of the State Engineer - iWATERS database search; USGS, Data obtained from nearby wells | ☐ Yes ☐ 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)<br>- 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 *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)*<br>- Visual inspection (certification) of the proposed site, Aerial photo, Satellite image | ☐ Yes ☐ No<br>☐ 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)*<br>- Visual inspection (certification) of the proposed site; Aerial photo, Satellite image | ☐ Yes ☐ No<br>☐ 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.<br>- NM Office of the State Engineer - iWATERS database search, 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<br>- Written confirmation or verification from the municipality, Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within 500 feet of a wetland<br>- 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<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area<br>- 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<br>- FEMA map | ☐ Yes ☐ No |

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**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 (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 Number _____ or Permit Number _____

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 Number _____

☐ Previously Approved Operating and Maintenance Plan API Number _____ *(Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

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 (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 $H_2S$, 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 Burial
- ☐ 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

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**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 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 _____ Disposal Facility Permit Number: _____

Disposal Facility Name _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

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

☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19 15 17 13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15 17 13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 NMAC

17

**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<br>- NM Office of the State Engineer - iWATERS database search, USGS, Data obtained from nearby wells | ☐ Yes ☒ No<br>☐ NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search, USGS, Data obtained from nearby wells | ☐ Yes ☒ No<br>☐ NA |
| Ground water is more than 100 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search, USGS, Data obtained from nearby wells | ☒ Yes ☐ No<br>☐ 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)<br>- 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<br>- Visual inspection (certification) of the proposed site, Aerial photo, Satellite image | ☐ 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 initial application<br>- 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.<br>- Written confirmation or verification from the municipality, Written approval obtained from the municipality | ☐ Yes ☒ No |
| Within 500 feet of a wetland<br>- 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<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☒ No |
| Within an unstable area<br>- 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<br>- FEMA map | ☐ Yes ☒ No |

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**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) Catherine Smith Title Regulatory

Signature Catherine Smith Date 7/27/09

e-mail address csmith@huntingtonenergy com Telephone 405-840-9876

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

**OCD Representative Signature:** Jonathan D. Kelly **Approval Date:** 10/25/2011

**Title:** Compliance Officer **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 indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.***

Disposal Facility Name Disposal Facility Permit Number

Disposal Facility Name Disposal Facility Permit Number

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and 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 (required for on-site closure)

☐ 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

## Cathy Smith

**From:** Cathy Smith
**Sent:** Monday, July 27, 2009 10 01 AM
**To:** 'brandon powell@state nm.us', 'mark_kelly@nm.blm gov'
**Cc:** Alan McNally
**Subject:** CLU 491 - Notice of Pit Closure

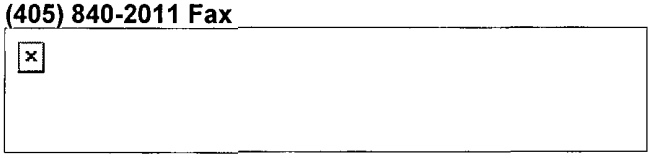
Pit Closure Notification as per NMOCD pit rule

Canyon Largo Unit #491
API# 30-039-30054
Lease #· NMSF 078882
NWNW Sec 20, T25N-R6W
Rio Arriba Co , NM
Rig Release 5/26/09

Please contact me if you need any additional information

Thank you!

**Cathy Smith**
**(405) 840-9876 ext. 129**
**(405) 840-2011 Fax**



# Huntington Energy, L.L.C.
# San Juan Basin-Canyon Largo Unit
# Closure Plan

In accordance with Rule 19 15 17 12 NMAC the following information describes the closure requirements of temporary pits on Huntington Energy, L.L C (HE) locations This is HE'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 report will be filed on C-144 and include 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 for liquids will be IEI – NM-010010B and IEI will be used for solids (#01001010B).
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 HE's closing of the temporary pit
4 Within 6 months of the rig off status occurring, HE will ensure that the temporary pits are closed, re-contoured and reseeded
5 Notice of Closure will be given prior to closure 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 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 as 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 | Test 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. 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, HE will dig and haul all contents pursuant to 19 15 17 13 i a After doing so, confirmation sampling will be conducted to ensure a release has not occurred
10 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
11 Dig and Haul Material will be transported to IEI (Permit # 010010B)
12 Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Reshaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be placed 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.
13 Notification will be sent to the OCD when the reclaimed area is seeded
14. HE 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 stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (unimpacted) 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 Repeated 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 | 0 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) | | Source No two (better quality) | |
|---|---|---|---|
| Purity | 50 percent | Purity | 80 percent |
| Germination | 40 percent | Germination | 63 percent |
| Percent PLS | 20 percent | Percent PLS | 50 percent |
| **5 lb bulk seed required to make 1 lb PLS** | | **2 lb bulk seed required to make 1 lb PLS** | |

15 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 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.

xSubmit 3 Copies To Appropriate District Office
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
ergy, Minerals and Natural Resources

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

Form C-103
May 27, 2004

WELL API NO.
30-039-30054

5. Indicate Type of Lease
STATE ☐ FEE ☒

6 State Oil & Gas Lease No.
SF 078882

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS )

7. Lease Name or Unit Agreement Name
Canyon Largo Unit

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

8. Well Number 491

2. Name of Operator
Huntington Energy, L.L.C.

9. OGRID Number
208706

3. Address of Operator
908 N W. 71st St., Oklahoma City, OK 73116

10. Pool name or Wildcat
Basin Dakota

4. Well Location
Unit Letter D : 1035 feet from the North line and 980 feet from the West line
Section 20 Township 25N Range 6W NMPM Rio Arriba County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
6696' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Drilling Depth to Groundwater >300' Distance from nearest fresh water well >500' Distance from nearest surface water >100'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume N/A bbls; Construction Material

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | ☐ | PLUG AND ABANDON | ☐ | REMEDIAL WORK | ☐ | ALTERING CASING | ☐ |
| TEMPORARILY ABANDON | ☐ | CHANGE PLANS | ☐ | COMMENCE DRILLING OPNS. | ☐ | P AND A | ☐ |
| PULL OR ALTER CASING | ☐ | MULTIPLE COMPL | ☐ | CASING/CEMENT JOB | ☐ | | |
| OTHER Drilling Pit | ☒ | | | OTHER. | | | ☐ |

13 Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion

Huntington Energy, L.L.C. proposes to construct a drilling pit in order to drill the subject well. Huntington Energy anticipates constructing and closing the pit according to the general pit permit requirements on file at the NMOCD office.

RCVD MAR12'07
OIL CONS. DIV.

DIST. 3

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Catherine Smith TITLE Land Associate DATE March 7, 2007

Type or print name Catherine Smith E-mail address: csmith@huntingtonenergy.com Telephone No. (405) 840-9876

**For State Use Only**

APPROVED BY: Brandon Powell TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE MAR 12 2007

Conditions of Approval (if any):

**CLU 491**

Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The subject well is not located in an unstable area. Visual inspection has been performed (see attached siting checklist): location is not within 300' of flowing watercourse or 200' from any other water course or lake bed; not within 300' of any permanent residence, school, institution, not within 500' of any private water well or spring. The topographic map confirms visual inspection of water course. FEMA Map confirms the location is not within a 100 year floodplain 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. iWaters search indicates the closest water is 1 6 miles. POD# SJ00681, STK Use, TD 80'. Huntington Energy CLU 491 reported the top of San Jose water sand at 909', as demonstrated on attached log.

*New Mexico Office of the State Engineer*
***POD Reports and Downloads***

Township [25N] Range [06W] Sections [ ]

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 04/09/2009

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest X Y are in Feet UTM are in Meter

| DB File Nbr | Use | (acre ft per annum) Diversion | Owner | POD Number | Source | Tws | Rng | Sec | q | q | q | Zone | X | Y | UTM_Zone | Easting |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SJ 00201 | OFM | 4 | BURLINGTON RESOURCES OIL & GAS | SJ 00201 | Artesian | 25N | 06W | 03 | 4 | 1 | | | | | 13 | 280124 |
| SJ 00207 | OFM | 16 | BURLINGTON RESOURCES OIL & GAS | SJ 00207 | Shallow | 25N | 06W | 04 | 1 | 1 | | | | | 13 | 277738 |
| SJ 00681 | STK | 8 | HOMER C BERRY | SJ 00681 | | 25N | 06W | 21 | 4 | 1 | 4 | | | | 13 | 278527 |
| SJ 00681 1 | STK | 8 | HOMER C BERRY | SJ 00681 1 | | 25N | 06W | 31 | 1 | 4 | | | | | 13 | 274734 |
| SJ 00681 12 | IRR | 200 | HOMER C BERRY | SJ 00681 12 | | 25N | 06W | 33 | 4 | 4 | 4 | | | | 13 | 278833 |
| SJ 00681 18 | STK | 16 13 | HOMER C BERRY | SJ 00681 18 | | 25N | 06W | 21 | 4 | 2 | 2 | | | | 13 | 278932 |
| SJ 00681 19 | STK | 24 195 | HOMER C BERRY | SJ 00681 19 | | 25N | 06W | 28 | 4 | 2 | 4 | | | | 13 | 278887 |
| SJ 00681 24 | STK | 3 | HOMER C BERRY | SJ 00681 24 | | 25N | 06W | 11 | 3 | 2 | 3 | | | | 13 | 281194 |
| SJ 00681 31 | STK | 32 | HOMER C BERRY | SJ 00681 31 | | 25N | 06W | 21 | 4 | 4 | | | | | 13 | 278820 |
| SJ 00681 33 | STK | 48 | HOMER C BERRY | SJ 00681 33 | | 25N | 06W | 27 | 3 | 3 | | | | | 13 | 279176 |
| SJ 00885 | DOM | 24 | TRUBY RANCH | SJ 00885 3 | | 25N | 06W | 03 | 1 | 4 | 1 | | | | 13 | 279636 |
| | | | | SJ 00885 6 | | 25N | 06W | 11 | 3 | 2 | 3 | | | | 13 | 281194 |
| | | | | SJ 00885 7 | | 25N | 06W | 03 | 4 | 1 | 4 | | | | 13 | 280223 |

Record Count 13

*New Mexico Office of the State Engineer*
**POD Reports and Downloads**

Township 25N Range 06W Sections

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

AVERAGE DEPTH OF WATER REPORT 04/09/2009

| | | | | | | | (Depth Water in Feet) | | |
|---|---|---|---|---|---|---|---|---|---|
| Bsn | Tws | Rng | Sec | Zone | X | Y | Wells | Min | Max | Avg |
| SJ | 25N | 06W | 03 | | | | 1 | 500 | 500 | 500 |
| SJ | 25N | 06W | 21 | | | | 1 | 80 | 80 | 80 |

Record Count: 2

*New Mexico Office of the State Engineer*
**POD Reports and Downloads**

Township: 25N Range: 06W Sections:

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 | WATERS Menu | Help

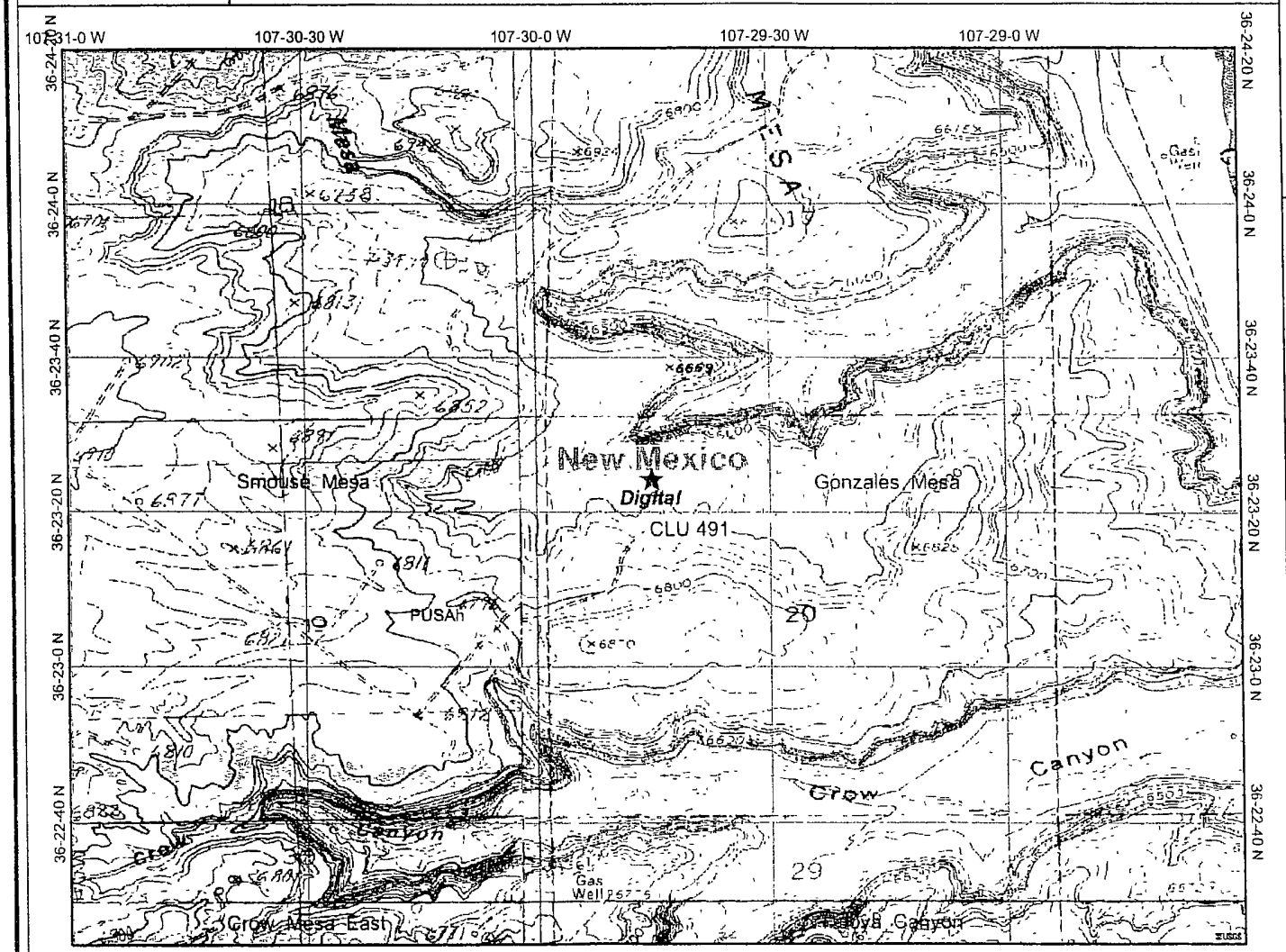
WATER COLUMN REPORT 04/09/2009

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

| POD Number | Tws | Rng | Sec | q | q | q | Zone | X | Y | Depth Well | Depth Water | Water Column (in feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SJ 00201 | 25N | 06W | 03 | 4 | 1 | | | | | 1346 | 500 | 846 |
| SJ 00681 | 25N | 06W | 21 | 4 | 1 | 4 | | | | | 80 | |
| SJ 00681 12 | 25N | 06W | 33 | 4 | 4 | 4 | | | | 435 | | |

Record Count: 3

# CLU 491 USGS TOPO MAP



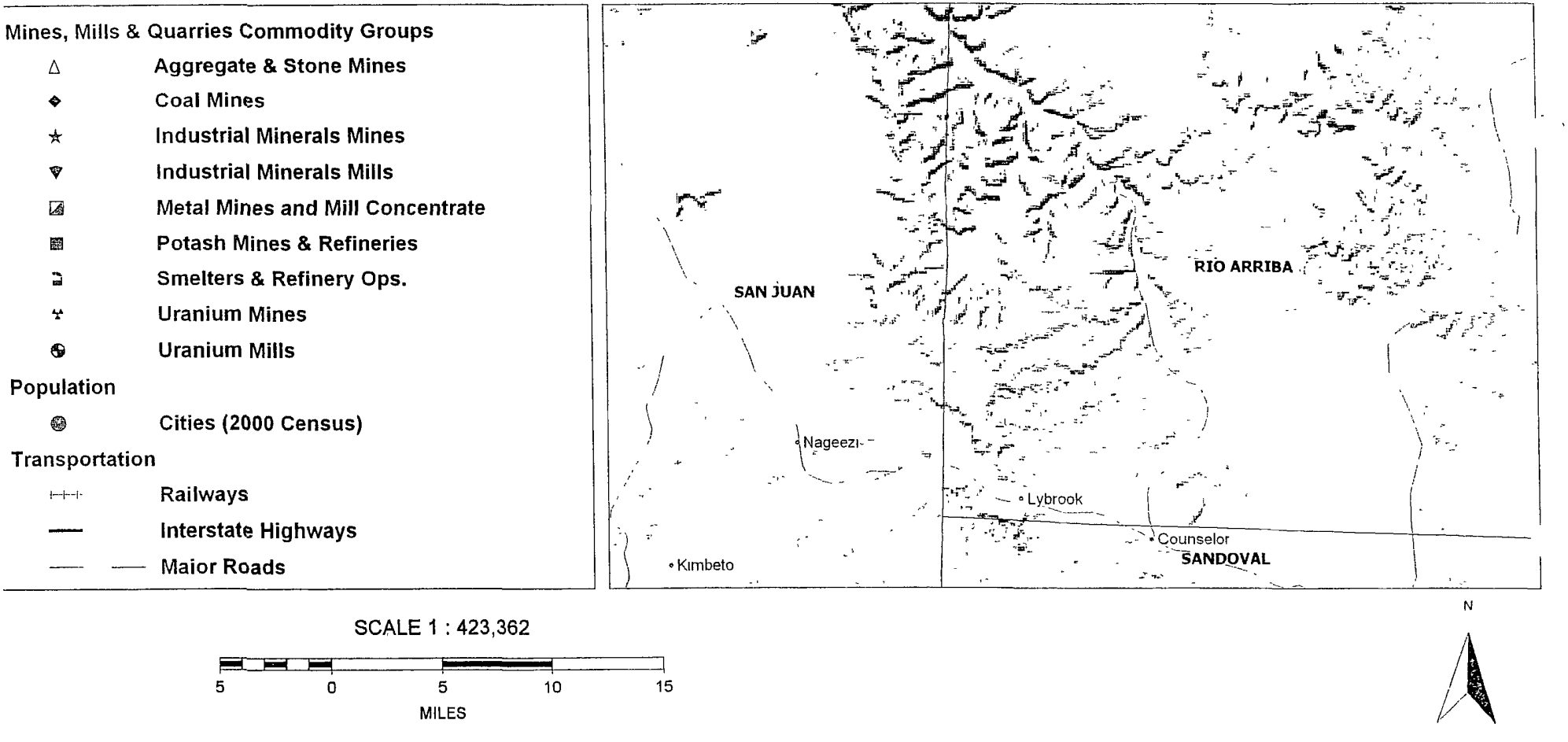

## Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America

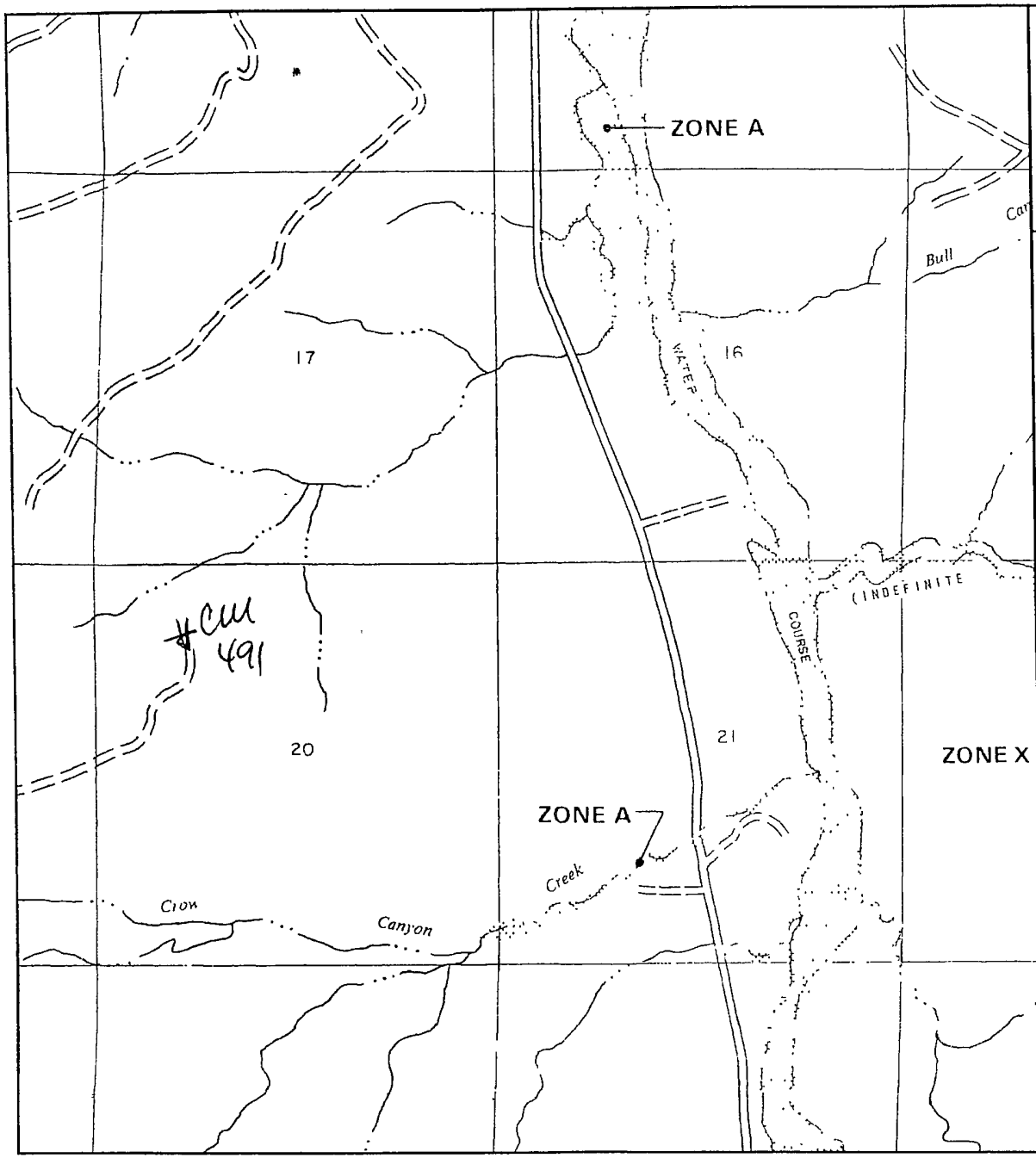
Map center: 36° 23' 22" N, 107° 29' 45" W

Scale. 1.25,000

# Canyon Largo Unit 491 Mines, Mills and Quarries Web Map



Canyon Largo Unit 491




APPROXIMATE SCALE

2000 0 2000 FEET

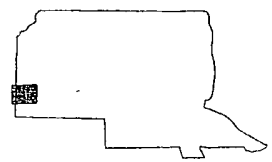
NATIONAL FLOOD INSURANCE PROGRAM

# FIRM

## FLOOD INSURANCE RATE MAP

RIO ARRIBA COUNTY, NEW MEXICO
UNINCORPORATED AREAS

PANEL 725 OF 1325
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

**COMMUNITY-PANEL NUMBER**
350049 0725 B

**EFFECTIVE DATE:**
JANUARY 5, 1989

Federal Emergency Management Agency

# *Hydrogeological Report for Canyon Largo Unit #491*

**Regional Hydrogeolocial Context:**

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line.

The San Jose Formation was deposited in various fluvial-type environments In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al., 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use.

The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily absorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective recharge to the unit.

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87504-2088

Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| ¹API Number | ²Pool Code | ³Pool Name |
|---|---|---|
| | 71599 | Basin Dakota |

| ⁴Property Code | ⁵Property Name | ⁶Well Number |
|---|---|---|
| 6886 | CANYON LARGO UNIT | 491 |

| ⁷OGRID No. | ⁸Operator Name | ⁹Elevation |
|---|---|---|
| 208706 | HUNTINGTON ENERGY, LLC | 6696' |

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| D | 20 | 25-N | 6-W | | 1035' | NORTH | 980' | WEST | RIO ARRIBA |

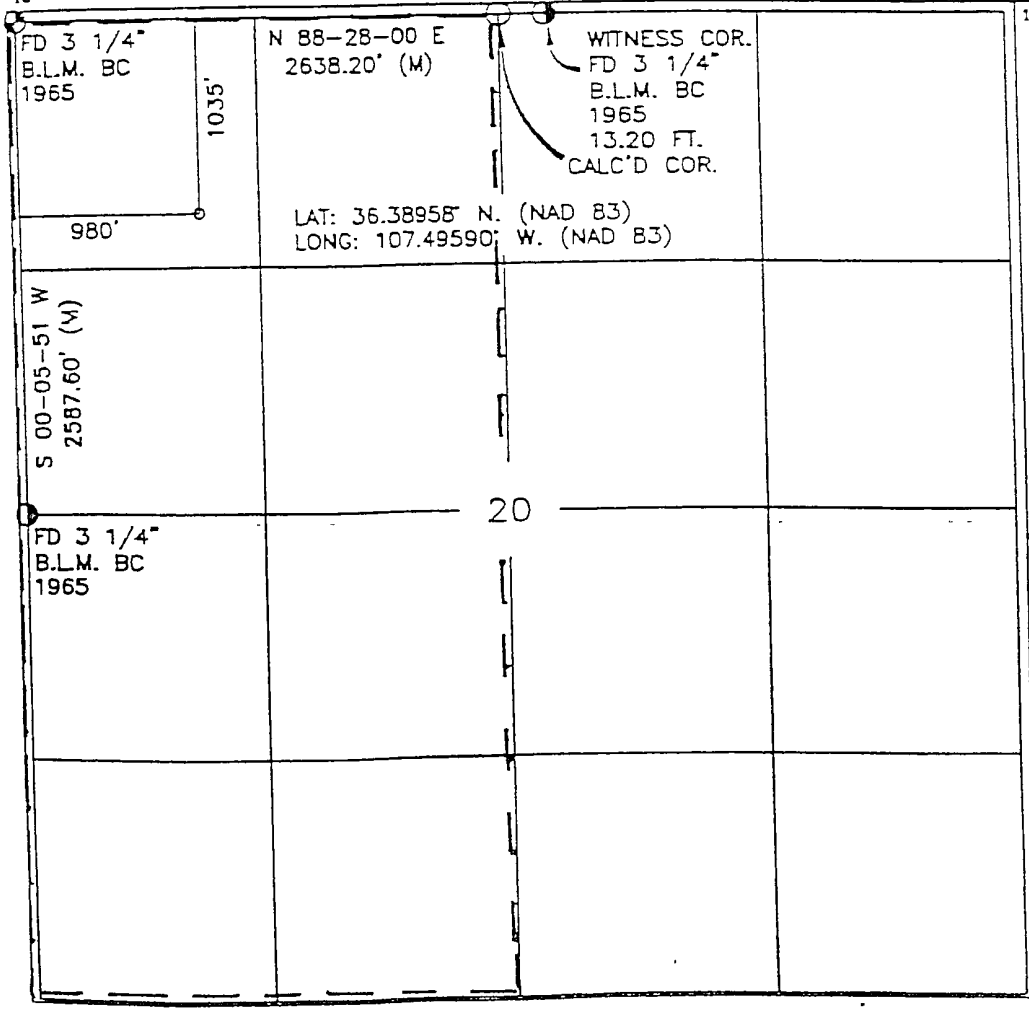
## ¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| ¹²Dedicated Acres | ¹³Joint or Infill | ¹⁴Consolidation Code | ¹⁵Order No. |
|---|---|---|---|
| W/320 | | | |

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

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## 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 of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.*

Catherine Smith 6/22/06
Signature Date

Catherine Smith
Printed Name

18 SURVEYOR CERTIFICATION

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

MARCH 8, 2006
Date of Survey

Signature and Seal of Professional Surveyor

JOHN A. VUKONICH
NEW MEXICO
14831
REGISTERED PROFESSIONAL SURVEYOR

14831
Certificate Number