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.

2873

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 an d Gas Company, LP OGRID #: 14538
Address: c/o Huntington Energy, L.L.C., 908 N.W. 71st St., Oklahoma City, OK 73116
Facility or well name: Ute Mountain Ute #77
API Number: 30-045-34512 OCD Permit Number:
U/L or Qtr/Qtr E Section 15 Township 32N Range 14W County: San Juan Co., NM
Center of Proposed Design: Latitude 36.99147° N Longitude 108.30257° 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 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other
☒ String-Reinforced
Liner Seams: ☒ Welded ☒ Factory ☐ Other Volume: 280 bbl Dimensions: L 135' 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

RECEIVED
DEC 2008
OIL CONS. DIV. DIST. 3

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

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.

6.

Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, 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_____

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. - 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). - 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)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ 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	☐ Yes ☐ No ☐ 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	☐ 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

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 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

16.

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. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☒ No ☐ NA
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 ☐ NA
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 ☐ 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). - 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
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; 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

18.

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): Alan McNally Title: Operations Engineer

Signature: Alan McNally Date: 12/1/2008

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

20.
OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Brandon Powell **Approval Date:** 1-23-09

Title: Environ 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 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:

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 32N Range: 14W Sections: 15,29

NAD27 X: Y: Zone: Search Radius:

County: SJ 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

WATER COLUMN REPORT 12/05/2008

(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)

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township 32N Range 14W Sections 15,29

NAD27 X Y Zone Search Radius

County SJ 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 12/05/2008

DB File Nbr	Use	(acre ft per annum) Diversion	Owner	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest Source	Tws	Rng	Sec	q	q	q	X Y are in Feet Zone	X	Y	UTM are in Meters) UTM_Zone	Easting	N

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 32N Range: 14W Sections: 15,29

NAD27 X: Y: Zone: Search Radius:

County: SJ Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

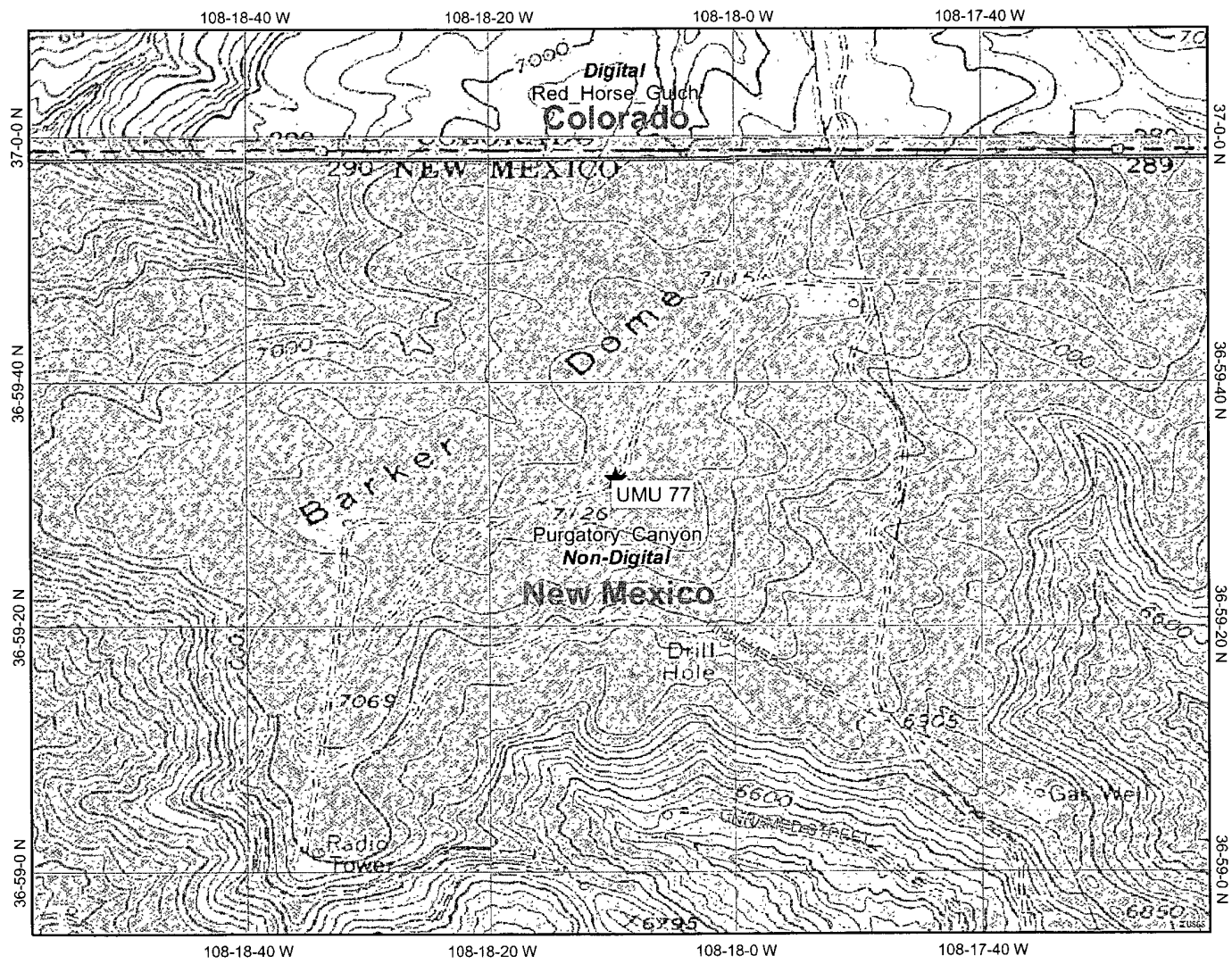
Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 12/05/2008

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg

No Records found, try again

USGS TOPO MAP UMU 77



Legend

- Roads
- 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

Map center: 36° 59' 32" N, 108° 18' 10" W

Scale: 1:16,000

Ute Mountain Ute Mines, Mills and Quarries Web Map

Mines, Mills & Quarries Commodity Groups

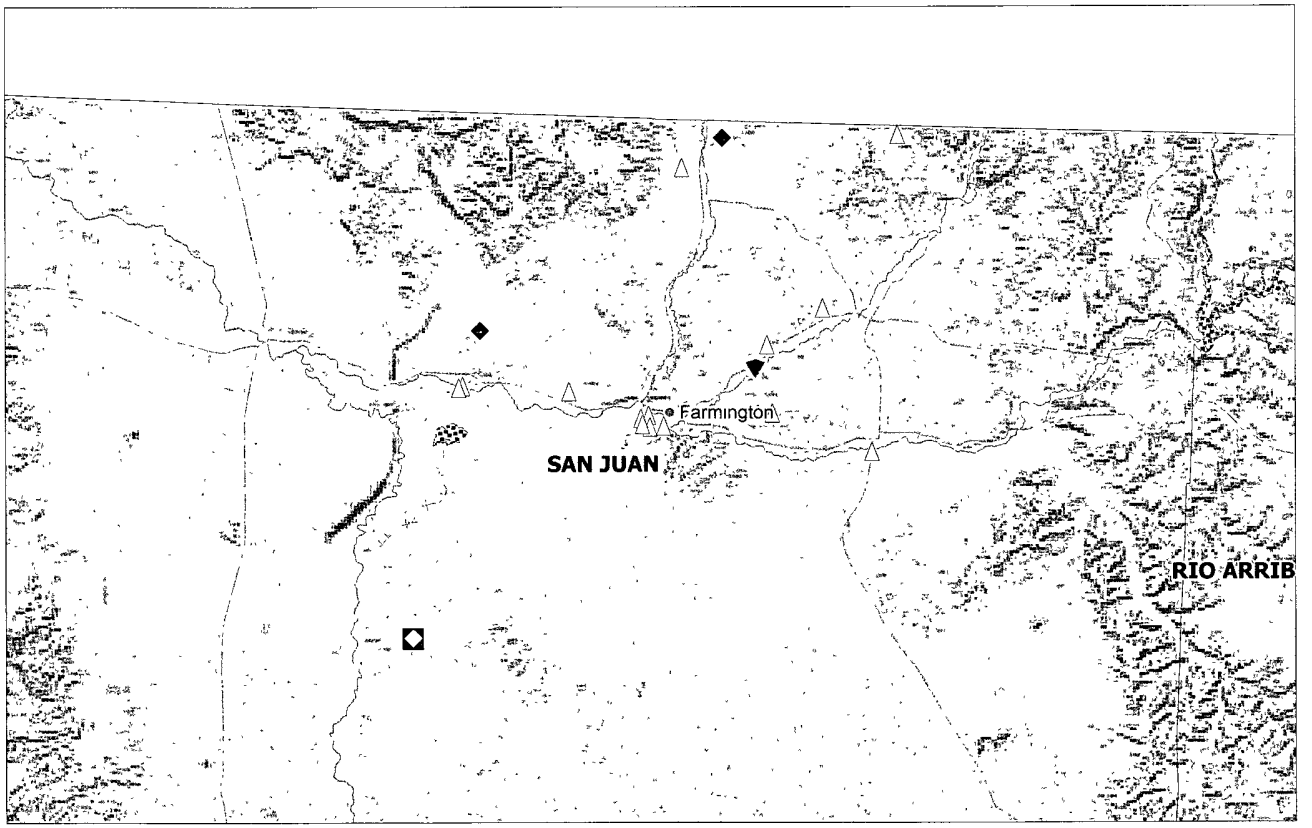
- Aggregate & Stone Mines
- Coal Mines
- Industrial Minerals Mines
- Industrial Minerals Mills
- Metal Mines and Mill Concentrate
- Potash Mines & Refineries
- Smelters & Refinery Ops
- Uranium Mines
- Uranium Mills

Population

- Cities - major

Transportation

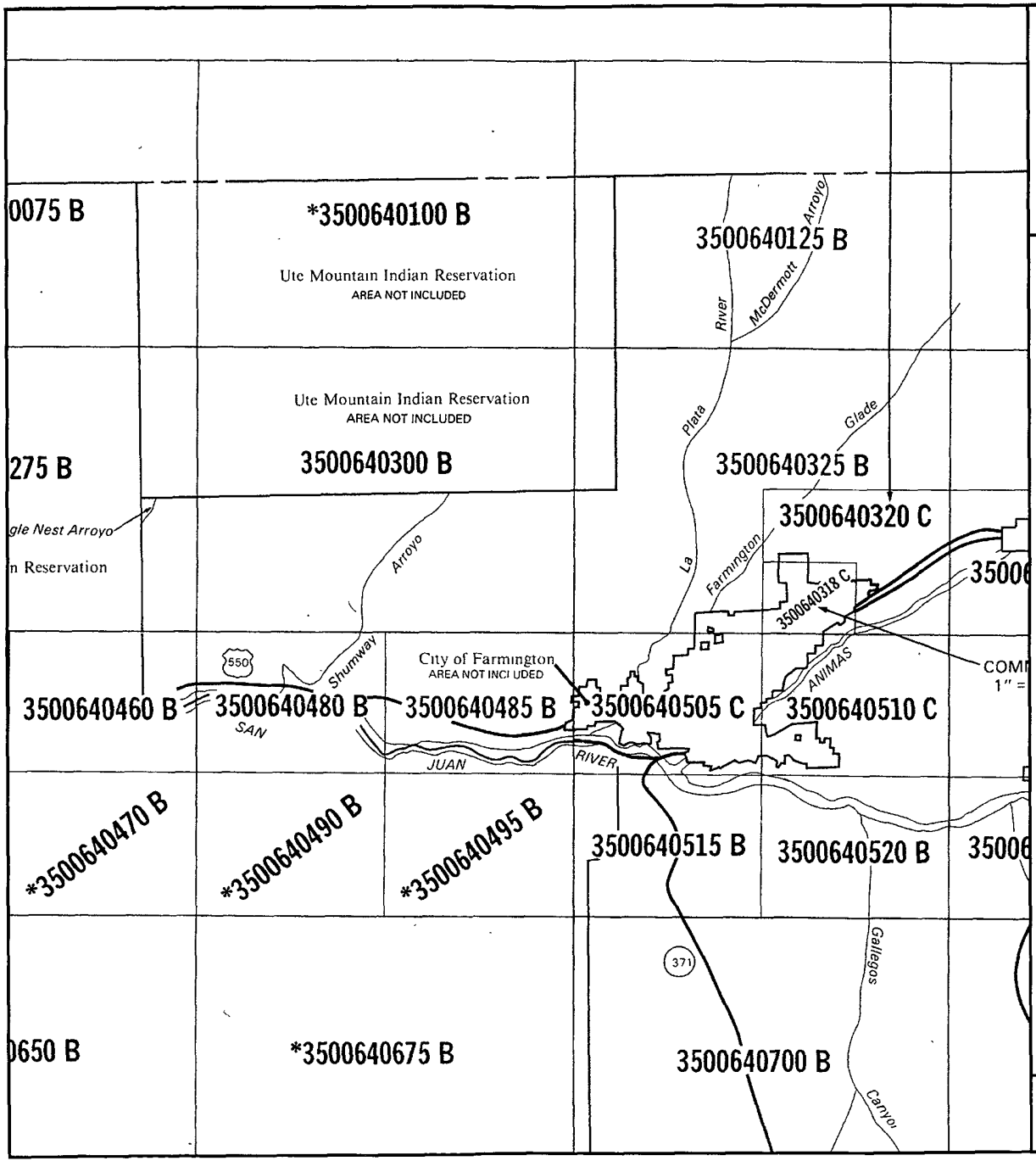
- Railways
- Interstate Highways
- Major Roads



SCALE 1 : 762,251

10 0 10 20 30

MILES



Ute Mountain Ute

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

SAN JUAN COUNTY,
NEW MEXICO
(UNINCORPORATED AREAS)

MAP INDEX

PANELS PRINTED: 125, 150, 175, 200, 275, 300, 318, 320, 325, 340, 350, 375, 400, 460, 480, 485, 505, 510, 515, 520, 540, 550, 575, 700, 725, 750, 875, 900, 925, 1050, 1075, 1100, 1225, 1250, 1275, 1400, 1425, 1450

COMMUNITY-PANEL NUMBER
350064IND0

MAP REVISED
MAY 15, 2002

Federal Emergency Management Agency

Hydrogeological report for Ute Mountain Ute #77

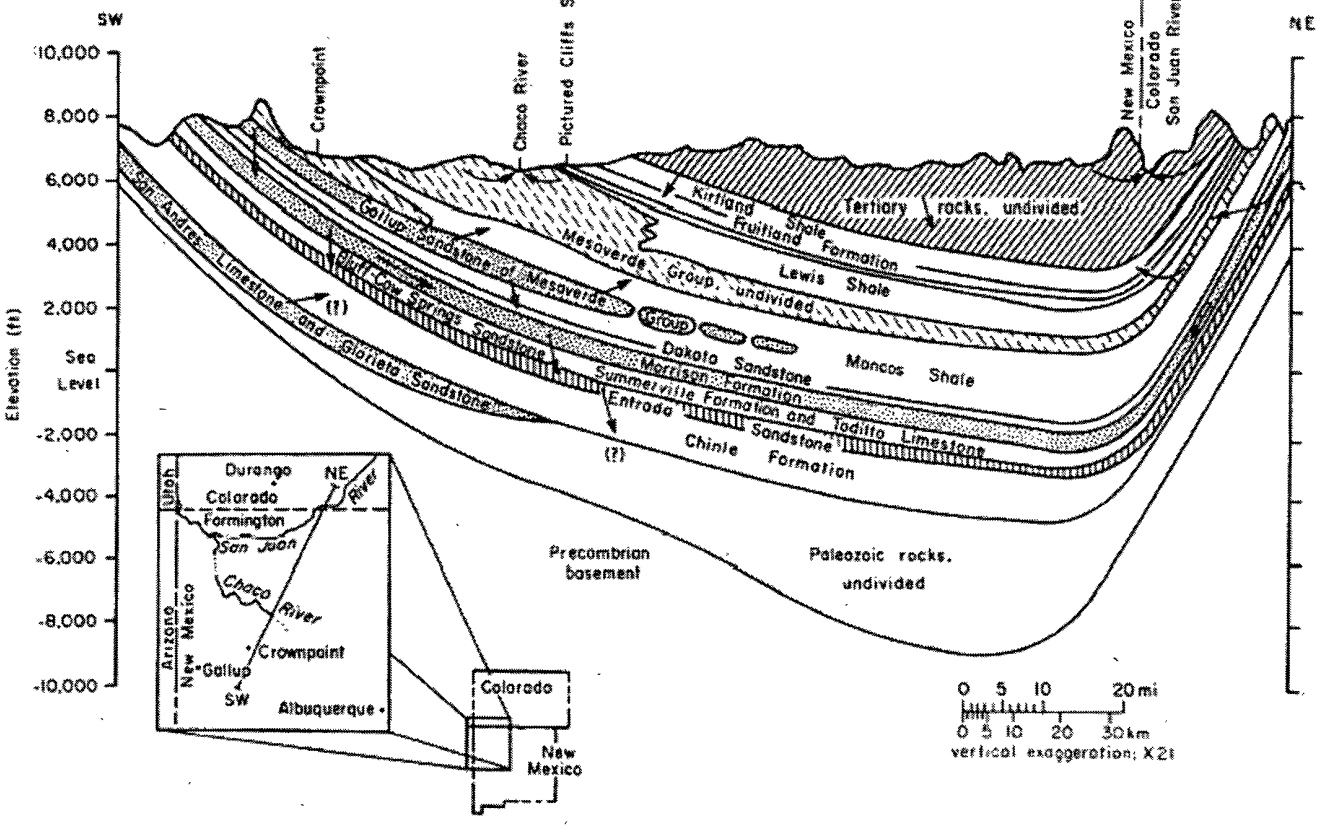
Geological Context:

Tertiary sandstones and Quaternary alluvial deposits are present at the surface over much of the basin interior. These serve as the primary drinking water aquifers in the basin (Figure A1-2), and produced 55 million gallons per day in 1985 (Wilson, 1986). Cretaceous sandstones are an important source of water on the basin's periphery (Choate et al., 1993). The Paleocene Ojo Alamo Sandstone yields as much as 30 gallons per minute of potable water (Hale et al., 1965) and is mentioned as one of the primary drinking water aquifers of the region (Brown and Stone, 1979). Cleats and larger fractures in the Fruitland coals and the presence of interbedded permeable sandstones make the Fruitland Formation an aquifer and source of drinking water along the northern margin of the basin where TDS in the groundwater are less than 10,000. The Fruitland and upper Pictured Cliffs Sandstone aquifer is underlain and confined by the low-permeability main Pictured Cliffs Formation and is overlain and partly confined by the Kirtland shale, which is up to 1,000 feet thick in the central basin.
In the northern part of the basin, the Fruitland Formation and the underlying upper Pictured Cliffs Sandstone can be considered a single hydrogeologic unit on a regional scale because they exhibit the same hydraulic head and water quality characteristics and are the source of both the water and gas in the Pictured Cliffs sand tongues (Ayers and Zellers, 1994; Ayers et al., 1994). At the local scale, however, the two formations appear to exhibit poor hydraulic continuity, as evidenced by areas of over-pressuring (greater than 0.5 pounds per square inch per foot), abrupt changes in potentiometric surface (Figure A1-8), and upward flow (Kaiser et al., 1994). Discrete flow within individual units here is likely due to pinch out of thick, laterally extensive coal seams and truncation and offset of the beds by faults.

Mostly, the Fruitland system produces water containing less than 10,000 mg/L TDS, the water quality criteria for a USDW. Groundwater is usually freshest at the outcrop in recharge areas. The water dissolves salts and mixes with formation water as it flows, and the groundwater becomes increasingly saline as distance from the recharge source increases. The presence of low-salinity water at given locations in the San Juan Basin usually marks close proximity to the recharge source or the most permeable flow paths and implies a dynamic, active aquifer system (Kaiser et al., 1994). Figure A1-12 shows the chloride concentration of groundwater in the Fruitland Formation, and indicates that water nearest the northern recharge areas has a low dissolved solids and chloride content. Kaiser et al. (1994) reported that wells produced water containing from 180 to 3,015 mg/L TDS. This was found to be the case over large portions of the region, especially within freshwater plumes resulting from areas of high permeability or fracture trends (Kaiser and Swartz, 1990; Oldaker, 1991).

Kaiser et al. (1994) conducted a water-quality sampling program in the San Juan Basin. Analyses taken from Fruitland coal wells show that the majority of wells (16 of 27 wells) produce water containing less than 10,000 mg/L TDS, (Figures A1-13a and A113b), although some nearby wells thought to be in less permeable zones produce water with higher TDS concentrations up to 23,000 mg/L (Kaiser et al., 1994). The boundary between waters with more and less than 10,000 TDS has not been published. Another group of wells throughout the same area was also sampled, but these wells were completed (constructed) in the adjacent and underlying Pictured Cliffs Sandstone bodies, which are in hydrologic communication with the Fruitland system (Kaiser et al., 1994).
Although from the above information it would seem that the Fruitland would be classified a USDW, the following additional information about disposal of brackish water produced along with the methane would seem to indicate that most of the water in the Fruitland would not meet the TDS

criteria for USDW. Coalbed methane wells in the San Juan Basin produced from 0 to over 10,500 gallons of water per day, which contain from less than 300 mg/L TDS to over 25,000 mg/L (Kaiser et al., 1994; Kaiser and Ayers, 1994). Brackish water of various TDS concentrations and brine are produced in the basin.



Generalized Hydrogeologic Cross-Section of the San Juan Basin (Stone et al., 1983)

7-1401 fx 1027-8.a2.cdr | Figure A1-2

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Ayers, W.B. and Zellers. 1994. Coalbed methane in the Fruitland Formation, Navajo Lake area – geologic controls on occurrence and producibility. New Mexico Bureau of Mines and Minerals Bulletin 146: Coalbed methane in the upper Cretaceous Fruitland Formation, San Juan Basin, New Mexico and Colorado, pp. 63-86.

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Wilson, B. 1986. Water Use in New Mexico. New Mexico State Engineer Technical Report 46, 84 p.

Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Ute Mountain Ute #77 is not located in an unstable area. The location is not over a mine or located on the side of a hill. The pit material will not be located within 300' of any flowing water source or 200' from any other water source. It is not within a 100 yr floodplain area. There are no iWATERS data to indicate groundwater depth. Therefore, the well location and formation will be a stable area for this location.

Cathy Smith

From: Cathy Smith
Sent: Monday, December 08, 2008 2:58 PM
To: 'brandon.powell@state.nm.us'; Ute Mountain Utes (ghammond@utemountain.org)
Cc: Alan McNally; Mike McKinney
Subject: UMU Pit Information

Huntington Energy gives notification of pit closure for the Ute Mountain Ute #77, #83 & #84, San Juan County, NM. Temporary pits closed on-site.

Please contact me if you need any additional information.

Thank you!

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

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

[1] API Number	[2] Pool Code	[3] Pool Name

[4] Property Code	[5] Property Name	[6] Well Number
	UTE MOUNTAIN UTE	77

[7] OGRID No.	[8] Operator Name	[9] Elevation
	BURLINGTON RESOURCES OIL & GAS COMPANY LP	7128'

[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
E	15	32-N	14-W		1455 1425'	NORTH	800	WEST	SAN JUAN

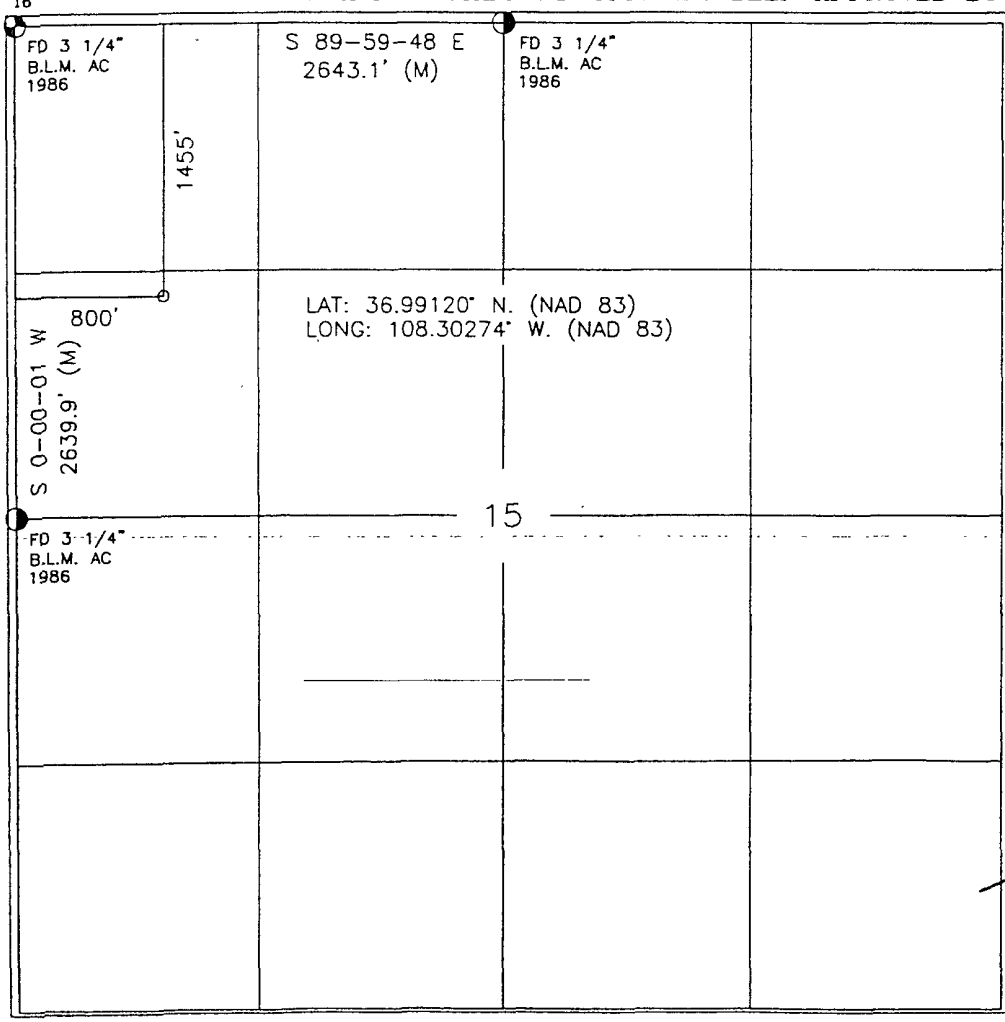
[11] Bottom Hole Location If Different From Surface

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

Signature Date

Printed Name

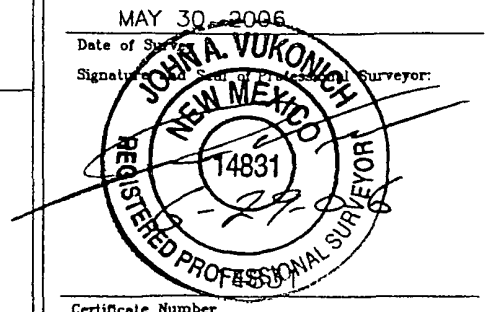
18 SURVEYOR CERTIFICATION

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.

MAY 30, 2006

Date of Survey

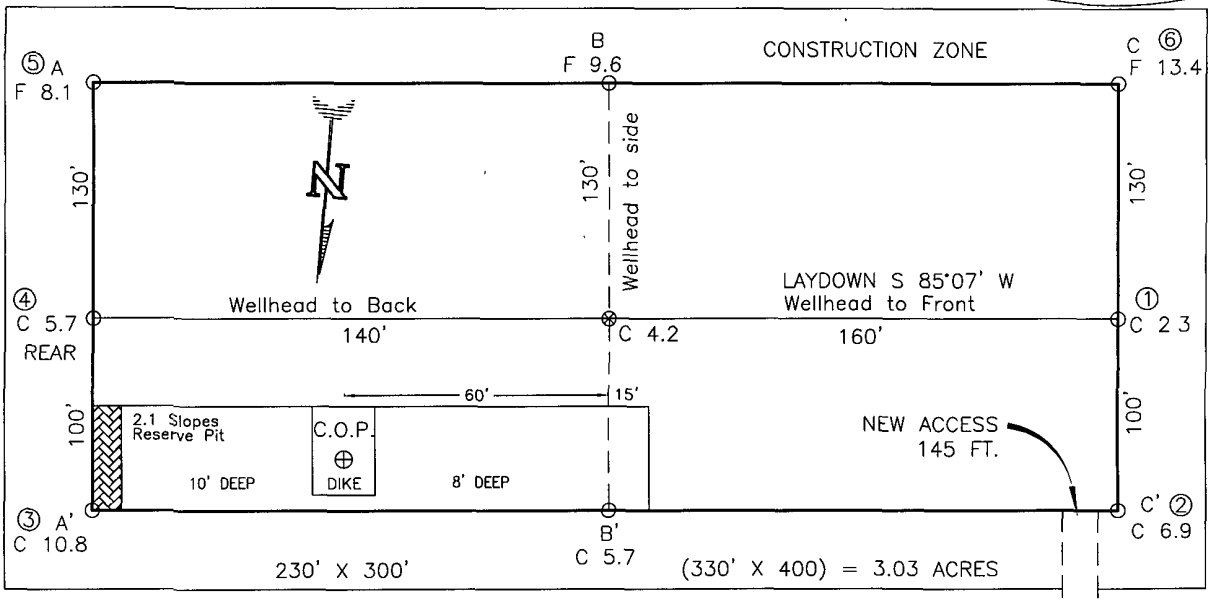
Signature and Seal of Professional Surveyor:



Certificate Number

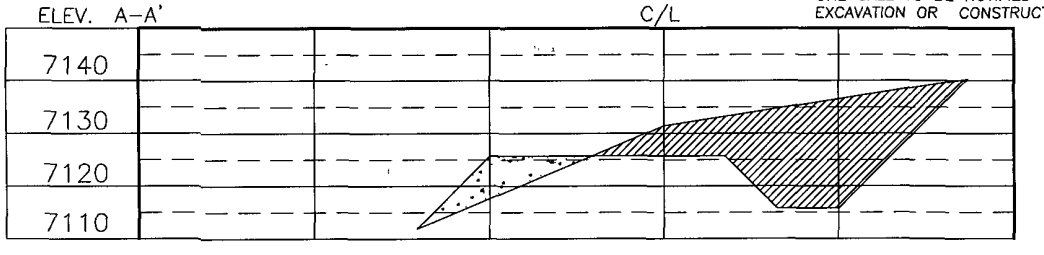
HUNTINGTON ENERGY, LLC
UTE MOUNTAIN UTE No. 77, 1425 FNL 800 FWL
SEC. 15, T-32-N, R-14-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 7130, DATE: OCTOBER 16, 2007

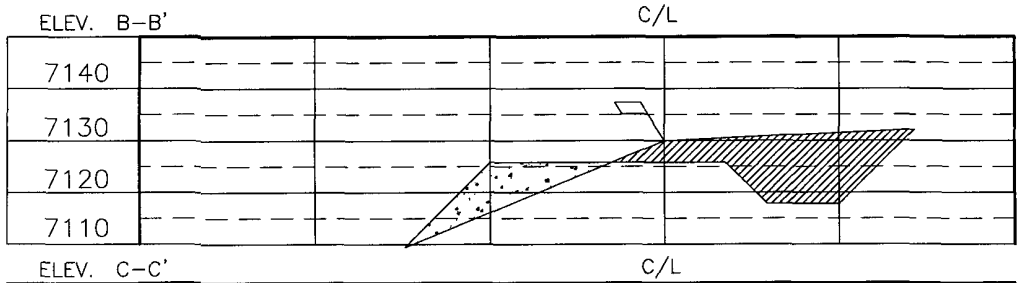
CENTER OF PIT
NAD 83
LAT. = 36.99147° N
LONG. = 108.30257° W
NAD 27
LAT. = 36°59'29.31138" N
LONG. = 108°18'06.94791" W

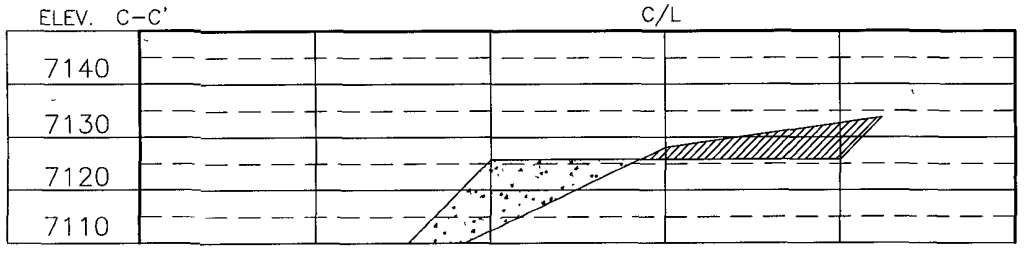


RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).
BLOW PIT: OVERFLOW PIPE HALFWAY BETWEEN TOP AND BOTTOM AND TO EXTEND OVER PLASTIC LINER AND INTO BLOW PIT.

NOTE:
DAGGETT ENTERPRISES, INC IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.







NOTE: CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION

REVISION:	DATE	REVISED BY
ADDED C O P	12/17/08	GV
WELL RESTAKE	10/30/07	A.G

Daggett Enterprises, Inc.
Surveying and Oil Field Services
P. O Box 510 · Farmington, NM 87499
Phone (505) 326-1772 · Fax (505) 326-6019
NEW MEXICO P.L.S. No. 8894

CADFILE HTG046CFB
DATE: 04/13/06
DRAWN BY A.G
ROW# HTG046

Submit 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
Energy, 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. 30-045-34512

5. Indicate Type of Lease STATE ☐ FEE ☒

6. State Oil & Gas Lease No. I-22-IND-2772

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: Ute Mountain Ute

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

8. Well Number 77

2. Name of Operator: Burlington Resources Oil & Gas Company

9. OGRID Number 14538

3. Address of Operator: c/o Huntington Energy, LLC, 908 N.W. 71st St., Oklahoma City, OK 73116

10. Pool name or Wildcat: Barker Creek-Dakota Pool

4. Well Location
Unit Letter E : 1425 feet from the North line and 800 feet from the West line
Section 15 Township 32N Range 14W NMPM San Juan County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 7130' GR

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Drilling Depth to Groundwater >100' Distance from nearest fresh water well > 1000' 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: ☒		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., agent for Burlington Resources, proposes to construct a drilling pit in order to drill the subject well. Huntington Energy, L.L.C., as agent for Burlington Resources, anticipates constructing and closing the pit according to the general pit permit requirements on file at the NMOCD office.

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: Agent for Burlington Resources Oil & Gas Co. DATE 11/27/2007

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

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Burlington Resources Oil & Gas Company, LP/Huntington Energy, L.L.C., as Agent
San Juan Basin-Ute Mountain Ute Lands
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), Huntington Energy, L.L.C. (HE), as agent, locations. This is BR/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 BR/HE's closing.
4. Within 6 months of the rig off status occurring, BR/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, BR/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. 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 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

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.