

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.

6594

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.

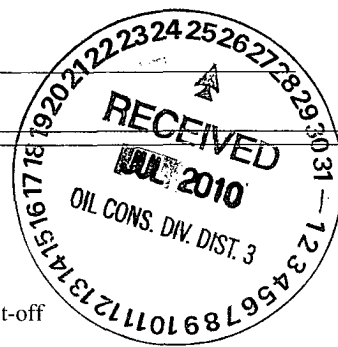
1.
Operator: Benson-Montin-Greer Drilling Corporation OGRID #: 002096
Address: 4900 College Blvd. Farmington, NM 87402
Facility or well name: Canada Ojitos Unit # 47
API Number: 30-039-30980 OCD Permit Number: _____
U/L or Qtr/Qtr N Section 4 Township 25N Range 1W County: Rio Arriba, NM
Center of Proposed Design: Latitude 36 25 16.5 N Longitude 106 57 2.044 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 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☒ String-Reinforced
Liner Seams: ☒ Welded ☒ Factory ☒ Other Field welded between sections Volume: 7700 bbl Dimensions: L 120' x W 65' x D 8'

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 _____

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 _____ 4 ft high hog wire fence w/ T posts _____

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. **Hogwire fence, 48" steel mesh.**
- ☐ 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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map (NOTE: This location is not included in the FEMA maps, it is in an unstudied area.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 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 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 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 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 **NOTE: This location is not included in the FEMA maps, it is in an unstudied area.**

☐ 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): Loren Diede Title: Drilling and Completions

Signature:  Date: 7-26-2010

e-mail address: ldiede@bmgdrilling.com Telephone: 505 325 8874

20.

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

OCD Representative Signature:  Approval Date: 12-8-10

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 (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: _____

Benson-Montin-Greer Drilling Corporation (BMG)

COU # 47

574' FSL, 1809' FWL

Unit N Sec. 4, T25N R01W

Rio Arriba County, NM

- j. The Santa Fe National Forest is the surface owner and therefore no deed notice is required.

4. Siting Requirements Substantiation

- a. The New Mexico Office of the State Engineer (NMOSE) reports four water wells within the 9-section area around the COU # 47 location. The wells are described below and are listed in order of distance from the proposed COU # 47.
 - i. The NMOSE POD # RG 34345 on the SFNF is approximately 3000 ft. SE of the COU # 47 location. This well is no longer being used. The reported water level is 304 ft.
 - ii. NMOSE POD # RG 83113 is located on the Johnny Cundiff ranch. This well is approximately 4500 ft west/northwest of the COU #47. The reported water level is 68 ft.
 - iii. NMOSE POD # RG 86745 is the original homestead well (1914) and is located on the Cundiff ranch. This well is approximately 5000 ft from the COU # 47 location. This well was hand-dug to a depth of 50 ft. The well still supplies a small amount of low quality water and is only used for livestock.
 - iv. NMOSE POD # 86747 is located in the NW/NW/NW of Sec 8. This well is approximately 6400 ft from the COU # 47 location. The reported water level is 180 ft.

The calculated water level at the proposed COU #47 location is calculated to 65 to 100 ft below ground level. The water levels of the wells in the 9 section area and the relative distances of the wells to the COU # 47 location were plotted and an estimated depth to water for the COU # 47 site was calculated. The calculations were based on the assumption that the alluvium in the Lleguas Canyon is somewhat uniform, the depth to the bottom of the wash relative to the well site and that a "straight-line" calculation with elevation considerations can be utilized.

- b. There are no continuously flowing watercourses, lakebeds, sinkholes or playas within 300 ft of the proposed COU # 47 location. The Lleguas Canyon wash is an intermittent watercourse in the area of this proposed well site. The COU # 47 location is approximately 900 ft from the wash.
- c. There are no residences, schools or other public buildings within 500 ft of the COU #47 location. The Cundiff ranch is approximately 4500 ft west northwest of the COU # 47 location.
- d. There are no water wells or springs used for domestic or livestock within 1000 ft of the COU # 47 location.
- e. The COU # 47 location is located in a rural area.
- f. The COU # 47 location is not within 500 ft of a wetland.
- g. The COU # 47 location is not within an area overlying a subsurface mine and is not located in an unstable area.
- h. The area in which the COU # 47 is located is in an unstudied area in regards to the FEMA 100 yr floodplain designations.

Benson-Montin-Greer Drilling Corporation (BMG)

COU # 47

574' FSL, 1809' FWL

Unit N Sec. 4, T25N R01W

Rio Arriba County, NM

Temporary Pit
Operating and Maintenance Procedures

1. Design and Construction Specifications

- a. Prior to construction of the pit, the topsoil will be stripped from the location area and stockpiled as a berm above the cut slope at the perimeter of the location for future reclamation.
- b. In lieu of a pit sign, BMG will install and maintain a sign on the well site in accordance with the provisions of Rule 103.
- c. Upon completion of the construction and liner installation of the temporary pit, the reserve pit will be fenced on four sides with a 4 foot hogwire fence (Administrative approval requested) installed on steel tee posts. The fourth side (rig side) will be removed when the drilling operations begin and replaced upon completion of the drilling operation and removal of the drilling rig. This fence will be maintained to insure no access by livestock or wildlife as long as there is fluid in the temporary pit. This location is over 1000 feet from the nearest residential building.
- d. The temporary pit will be constructed 120 feet by 65 feet and approximately 8 ft deep. The approximate volume of the pit is 1.0 acre feet (7700 bbl). It is anticipated that the top 6 to 10 feet will be alluvial material associated with the valley bottom. The excavated soil will be stockpiled as berm material on the north or west sides of the location and will be replaced when the pit is closed. The sides of the pit will be constructed on 2:1 slopes. Any benches of rock encountered will be scraped to a depth to allow cover by soil if possible. The side slopes will be walked down by tractor to insure a smooth bottom and side walls for liner installation.
- e. The edges of the pit will be raised to prevent the run-on of surface water. During drilling operations the pit will not be required to have run-on protection on the side adjacent to the rig if the temporary pit is used to collect liquids from the drilling rig and there is no breach of the temporary pit in doing so.
- f. The edges of the liner will be anchored in an 18 inch deep compacted earth filled trench.
- g. A header system or hoses with smooth ends will be used to loading liquid into or removing liquid from the temporary pit so as to not compromise the liner integrity.
- h. No blow pit will be constructed at this location; a steel blow tank will be used for the air-drilled portion of the hole.
- i. The reserve pit will be lined with 2 sections of 20 mil string-reinforced LLDPE liner material with factory welded seams. One section of liner will be used for the smaller portion of the pit and another liner section will be used for the larger portion of the pit. The 2 sections of liner will be overlapped and field welded together on site and pulled into the pit. The factory seams will be aligned running from the rig side to the outside wall of the pit. In the event a smooth bottom or wall slope cannot be attained on construction this liner will be underlain with a geotextile liner. The edges of the liner on the level part of the pad will be anchored in a trench around the perimeter at least eighteen inches deep and filled with dirt.

Benson-Montin-Greer Drilling Corporation (BMG)

COU # 47

574' FSL, 1809' FWL

Unit N Sec. 4, T25N R01W

Rio Arriba County, NM

2. Operational Plan

- a. BMG will use the proposed temporary pit to drill this well. The time table for the reclamation of the pit will begin after the well is drilled and the drilling rig removed.
- b. BMG will operate and maintain the pit to contain the liquids and solids associated with the drilling phase of this operation to prevent contamination of the fresh water supply and protect the public health and environment.
- c. BMG will not store or dispose of any hazardous material in this pit. All cement returns, work over and completion fluids associated with flow back or circulation during these operations will be stored in a flow back tank on location and disposed of in keeping with NMOCD rules.
- d. The edges of the liner are to remain firmly anchored in an 18 inch deep compacted earth filled trench.
- e. A header system or hoses with smooth ends will be used to loading liquid into or removing liquid from the temporary pit so as to not compromise the liner integrity.
- f. BMG will monitor the condition of the installed pit liner from the date it is installed until the pit is closed. Visual inspection will be daily while the rig is on site and weekly from the rig release date to pit closure date. BMG will take the appropriate measures to repair and report to NMOCD any breach of the liner integrity within 48 hours of detection. If there is reason to suspect that leak is 25 barrels or greater, the NMOCD is to be notified as soon as possible within 24 hours.
- g. Two feet of freeboard will be maintained in the pit at all times until closure.
- h. The edges of the pit will be raised to prevent the run-on of surface water. During drilling operations the pit will not be required to have run-on protection on the side adjacent to the rig if the temporary pit is used to collect liquids from the drilling rig and there is no breach of the temporary pit in doing so.
- i. BMG will remove all free liquid from the temporary pit and haul it to the TNT Environmental facility (Permit # NM-01-0008) within 30 days of cessation of the drilling operations. All fluids associated with the drilling or work over operations that are accumulated and stored in the flow back tank will be removed within 30 days of the cessation of these operations and hauled to the TNT facility for disposal.
- j. The temporary pit will be maintained free of any solid refuse. Garbage and other refuse will be stored in a trash basket and will be properly disposed of as needed.
- k. A header system or hoses with smooth ends will be used to loading liquid into or removing liquid from the temporary pit so as to not compromise the liner integrity.
- l. The temporary pit will be maintained free of any oil accumulation. BMG will keep an oil-absorbent boom on location for the time that the pit is open. Any oil from the formation that collects in the pit shall be skimmed periodically from the pit surface.

3. Closure

- a. BMG will close the temporary pit within six months of the drilling rig release. BMG will provide a 1 week (and no less than) 72 hour notice to the NMOCD District 3 office prior to commencing closure operations. Verbal communications are to be followed by an email notification.

Benson-Montin-Greer Drilling Corporation (BMG)

COU # 47

574' FSL, 1809' FWL

Unit N Sec. 4, T25N R01W

Rio Arriba County, NM

- b. The Santa Fe National Forest (SFNF) is the landowner of the proposed site has been notified of BMG's intent to use a temporary lined pit and to close the pit by in place burial on this well site. The acknowledgement of this intent has been received from the SFNF.
- c. BMG will initiate sampling and testing of the residue left in the pit after the completion of the removal of the liquid portion of the pit contents. Any liquid accumulation after the cessation of drilling operations will be removed prior to the initiation of sampling, testing or closure. The sampling and testing will be conducted in accordance with the requirements outlined in 19.15.17.13 subsection F for in place burial.
- (i) BMG will collect a 5 point composite sample of the material in the pit prior to stabilization. The following table lists the tests to be run on the composite sample.

Components	Test methods	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
GRO + DRO	EPA SW-846 8015M	500
TPH	EPA SW-846 418.1	2500
Chlorides	EPA 300.1	500

- (ii) If the test results indicate that the material is above the limits listed in this table, the material will be stabilized in place and removed to the BMG landfarm (NM permit # 020004). After the material has been removed BMG will initiate testing and sampling of the temporary pit area as outlined in the Waste Evacuation and Haul section of the pit regulations. Results of the tests will be reported to the NMOCD District 3 office and applicable closure method will be initiated.
- d. BMG will mix stockpiled pit soil with the pit residue at no more than a 3: 1 ratio to stabilize the residue.
- e. BMG will cut and remove the section of the liner above the residue level in the temporary pit after residue stabilization. The portion of the liner that has been removed will be disposed of at an approved waste facility.
- f. BMG will use the remaining pit dirt stockpile to provide a compacted fill at least four feet thick over the stabilized residue. The top 1 foot of cover material will be top soil.
- g. BMG will file the applicable closure report with the NMOCD District 3 office within 60 days of the completion of the closure.
- h. BMG will use the stockpiled topsoil to cover the re-contoured pit area and the area will be seeded with a seed mix as required by the Santa Fe National Forest and/or the BLM. Seeding will be done as per requirements outlined in the Santa Fe National Forest Conditions of Approval, as per BLM/OCD MOU.
- i. BMG will install a 4" diameter steel marker at the center of the buried temporary pit. The marker is to shall extend at least 4 feet above the mean ground level and at least 3 feet below the ground level. The marker is to be labelled with the following information: operator name, lease name, well number, unit letter, section, township, range and the words "on-site buried reserve pit".

Benson-Montin-Greer Drilling Corporation (BMG)

COU # 47

574' FSL, 1809' FWL

Unit N Sec. 4, T25N R01W

Rio Arriba County, NM

5. Hydrogeologic Data

- a. Surface formation is San Jose formation.
- b. Geographic setting; The proposed COU # 47 location is located on the north side Lleguas Canyon at the base of the sandstone cliffs that make up the northern boundary of the Lleguas Canyon.
- c. The proposed well site is located on the canyon alluvium.
- d. The COU # 47 location lies on the east side of the continental divide in southeast Rio Arriba County, NM. The drainage is generally towards the south and southwest. The drainage is toward the wash in the bottom of the Lleguas Canyon. The Canada Ojitos joins the Lleguas Canyon in section 11, T 25N, R1W and continues on to join the Rio Gallina.

Benson-Montin-Greer Drilling Corporation
4900 College Blvd.
Farmington, NM 87402

(505) 325-8874



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 Q Q 64 16 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RG 34345	STK	RA	3 2 2	09	25N	01W	325867	4031951*		304	
RG 83113	DOL	RA	1 1 4	05	25N	01W	323879	4033000*	186	68	118
RG 86745	DOM	RA	4 2 3	05	25N	01W	323678	4032808*	50		
RG 86747	STK	RA	1 1 1	08	25N	01W	323059	4032212*	240	180	60

Average Depth to Water: **184 feet**

Minimum Depth: **68 feet**

Maximum Depth: **304 feet**

Record Count: 4

Basin/County Search:

Basin: Rio Grande

County: Rio Arriba

PLSS Search:

Section(s): 4, 5, 8, 9, 10

Township: 25N

Range: 01W

*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.



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

RG 34345

Q64 Q16 Q4 Sec Tws Rng

3 2 2 09 25N 01W

X

Y

325867 4031951*

Driller License:

Driller Name:

Drill Start Date:

Log File Date: 05/19/1980

Pump Type:

Casing Size:

Drill Finish Date:

01/01/1974

PCW Rcv Date:

Pipe Discharge Size:

Depth Well:

Plug Date:

Source: Shallow

Estimated Yield:

Depth Water: 304 feet

*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.



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

Q64 Q16 Q4 Sec Tws Rng

X

Y

RG 83113

1 1 4 05 25N 01W

323879 4033000*

Driller License: STEVENSON, STEVE L.

Driller Name:

Drill Start Date: 07/29/2004

Drill Finish Date: 07/29/2004

Plug Date:

Log File Date: 08/05/2004

PCW Rcv Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield: 10

Casing Size: 5.00

Depth Well: 186 feet

Depth Water: 68 feet

Water Bearing Stratifications:

Top Bottom Description

154 173 Other/Unknown

Casing Perforations:

Top Bottom

155 175

*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.

7/12/10 5:03 PM

Page 1 of 1

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

RG 86745

Q64 Q16 Q4 Sec Tws Rng

4 2 3 05 25N 01W

X

Y

323678 4032808*

Driller License:

Driller Name: LOREN T. RUCKER

Drill Start Date:

Drill Finish Date:

12/31/1914

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield: 3

Casing Size: 36.00

Depth Well: 50 feet

Depth Water:

*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.

7/12/10 5:04 PM

Page 1 of 1

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

Q64 Q16 Q4 Sec Tws Rng

X

Y

RG 86747

1 1 1 08 25N 01W

323059 4032212*

Driller License:

Driller Name: LJ INGRAM

Drill Start Date:

Drill Finish Date:

12/31/1948

Plug Date:

Log File Date:

PCW Rcv Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 6.00

Depth Well:

240 feet

Depth Water: 180 feet

*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.

7/14/10 10:28 AM

Page 1 of 1

POINT OF DIVERSION SUMMARY



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	Q	Q	64	16	4	Sec	Tws	Rng	X	Depth	Depth	Water
															Y	Well	WaterColumn

RG 34344 STK RA 1 1 3 32 26N 01W

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

Basin/County Search:

Basin: Rio Grande

County: Rio Arriba

PLSS Search:

Section(s): 32, 33, 34

Township: 26N

Range: 01W

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.



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

RG 34344

Q64 Q16 Q4 Sec Tws Rng

1 1 3 32 26N 01W

X

Y

Driller License:

Driller Name:

Drill Start Date:

Log File Date: 05/19/1980

Pump Type:

Casing Size:

Drill Finish Date:

01/01/1975

PCW Rcv Date:

Pipe Discharge Size:

Depth Well:

Plug Date:

Source: Shallow

Estimated Yield:

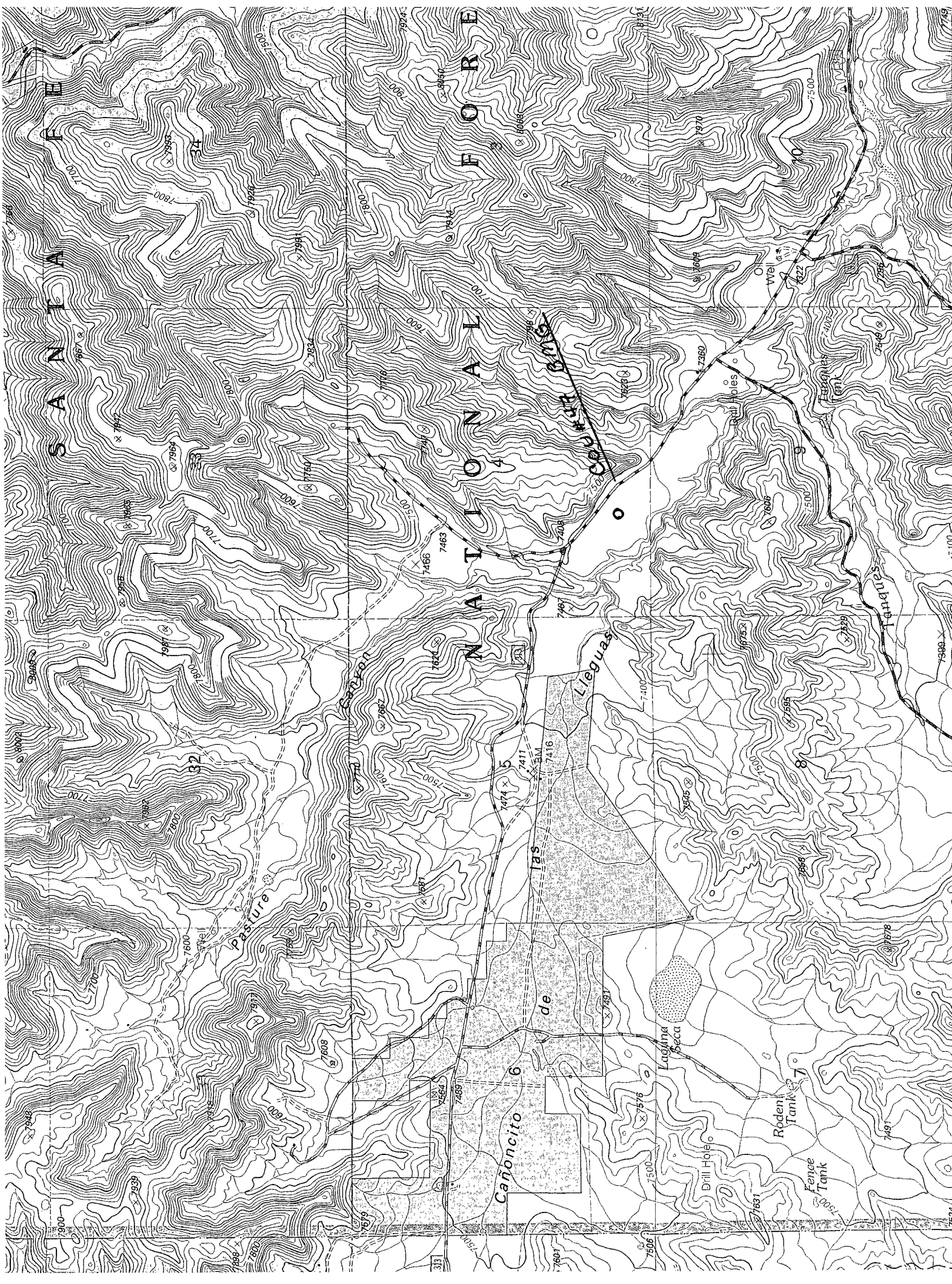
Depth Water:

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.

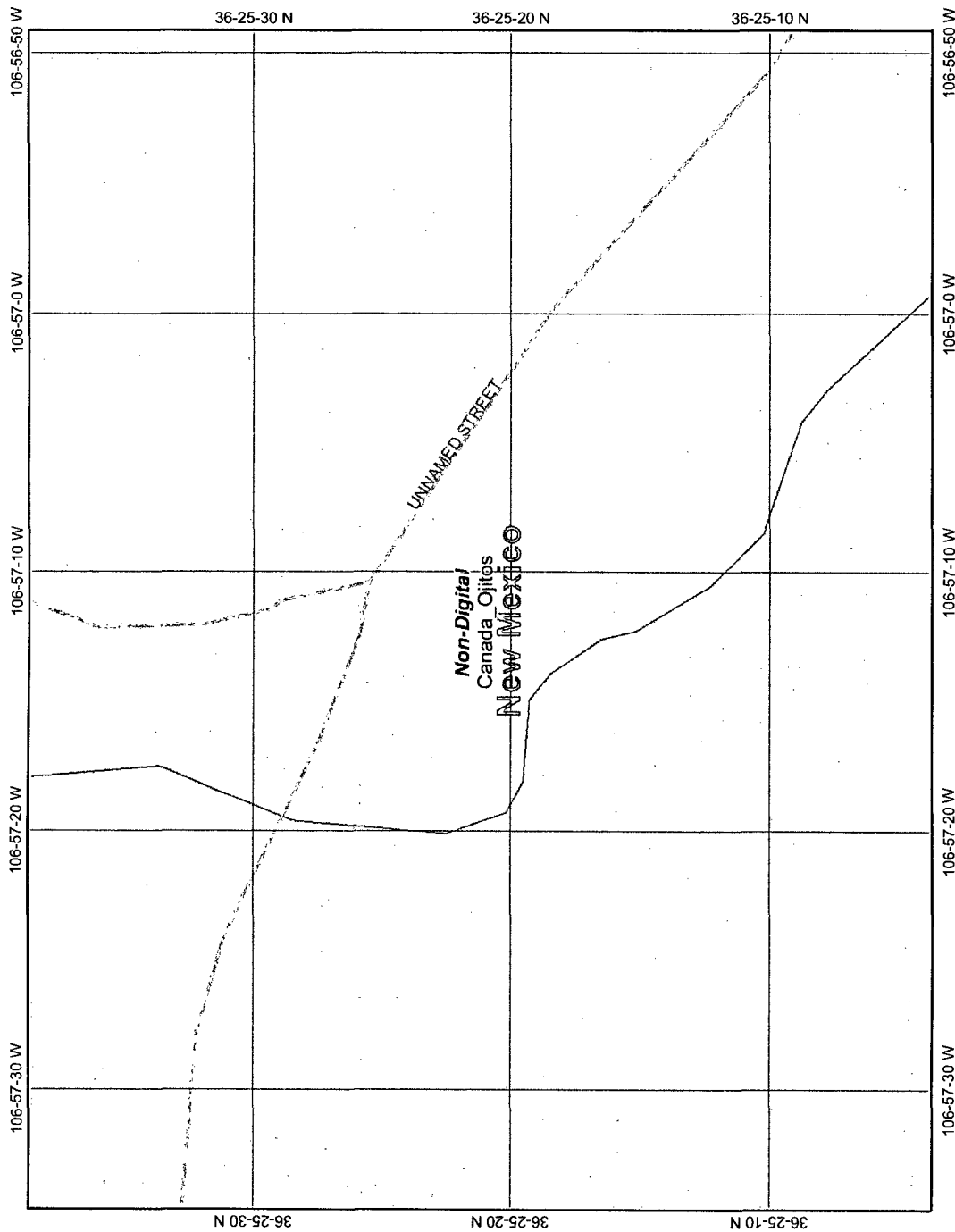
7/14/10 10:30 AM

Page 1 of 1

POINT OF DIVERSION SUMMARY



Canada Ojitos Unit # 47



Map center: 36° 25' 21.1" N, 106° 57' 11.8" W

Notes: Center of proposed pit is at LAT 36 25 16.50 and LONG 106 57 2.044

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



Legend

- Ohio_wet_scan
 - 0
 - 1
 - Out of range
- 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



Scale: 1:7,572

MMQonline Public Version

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

Mines, Mills & Quarries Status

- × Active Mining
- △ Active Mining, Active Reclamation
- ◆ Permanent Closure, Active Reclamation
- ⊕ Permanent Closure, Reclaimed Awaiting B...
- ☐ Temporary Suspension
- Under Development

Population

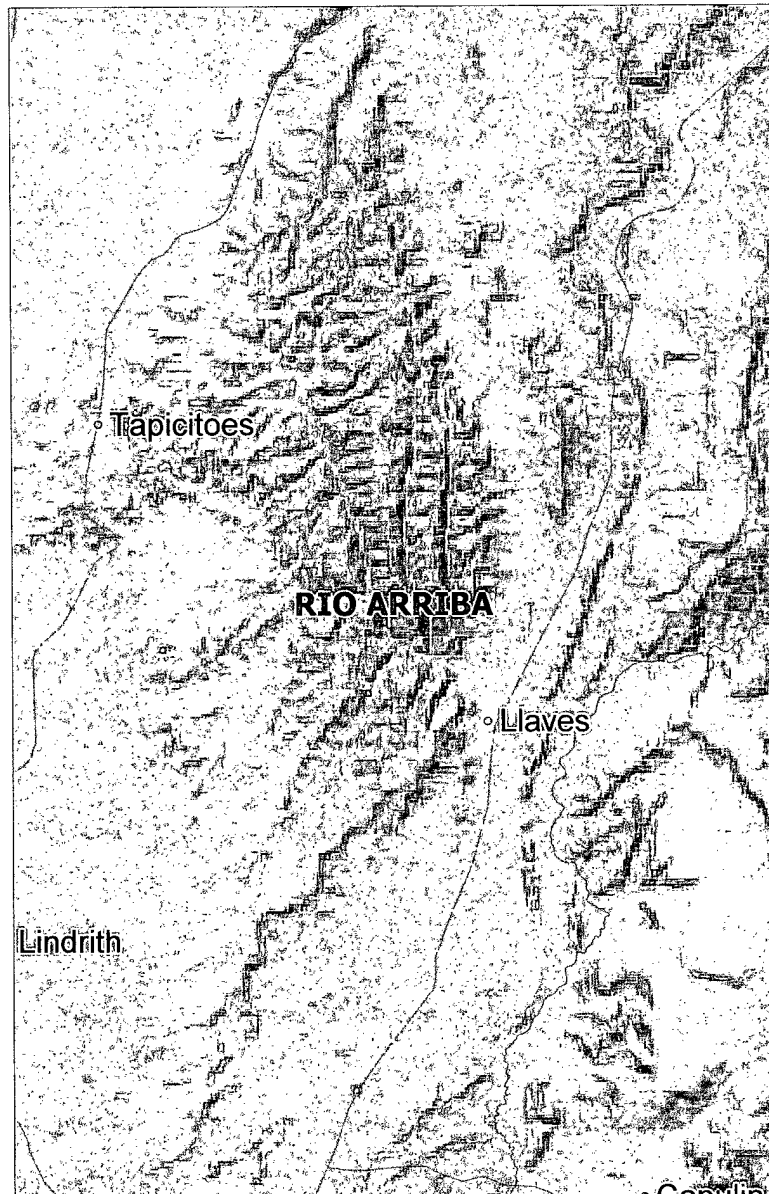
- Cities (2000 Census)

Transportation

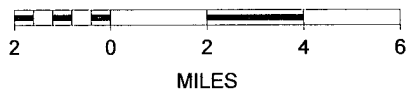
- +—+— Railways
- Interstate Highways
- Major Roads

Hydrology

- ☐ Water Bodies (Selected)



SCALE 1 : 250,000



* BMG COU# 47

Image © 2010 DigitalGlobe

Google

© 2010 Google

36°25'16.54"N 106°57'02.06"W elev 7396 ft

Eye alt 16257 ft

BMG COU #47

Image © 2010 DigitalGlobe

© 2010 Google

2010 Google