

**HIP - \_\_\_136\_\_\_**

**GENERAL  
CORRESPONDENCE**

**YEAR(S):  
2017 to Present**

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

Ken McQueen  
Cabinet Secretary

Matthias Sayer  
Deputy Cabinet Secretary

David R. Catanach, Division Director  
Oil Conservation Division



September 5, 2017

Ms. Marcelle Fiedler  
New Mexico Gas Company  
P.O. Box 97500  
Albuquerque, New Mexico 87199-7500

**Re: Hydrostatic Test Discharge Permit HIP-136  
New Mexico Gas Company  
Taos Mainline (Pilar) Project  
Locations: Sections 22 and 23, Township 24 North, Range 11 West, NMPM,  
Taos County, New Mexico**

Dear Ms. Fiedler:

The Oil Conservation Division (OCD) has received New Mexico Gas Company's (NMGC) revised notice of intent, dated August 18, 2017 and received August 21, 2017, for authorization to discharge approximately 78,500 gallons of wastewater generated from a hydrostatic test of approximately 6.7 miles of a new 12-inch natural gas transmission pipeline and approximately 0.4 miles of new 8-inch natural gas transmission pipeline, approximately 3.5 miles north of Pilar, New Mexico. The proposed discharge location on private property located in Sections 22 and 23, Township 24 North, Range 11 West, NMPM, Taos County, New Mexico. The submittal provided the required information for OCD to deem the application "administratively" complete. OCD approves the Taos News as the newspaper of general circulation for the published notice and the BLM Visitor center in Pilar, New Mexico and within the Highway 68 right-of-way on the west side near the private property where the discharged is proposed, as proposed posting locations.

Therefore, the July 2006 New Mexico Water Quality Control Commission (WQCC) regulation; notice requirements (20.6.2.3108 NMAC) must be satisfied and demonstrated to the OCD. The hydrostatic test discharge event shall not be initiated until NMGC's and OCD's notice periods pass, the permit is issued, and the additional permit fee is paid.

If there are any questions regarding this matter, please do not hesitate to contact Brad Jones on my staff at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us).

Respectfully,

A handwritten signature in black ink, appearing to read "J. Griswold", is written over a horizontal line.

Jim Griswold  
Environmental Bureau Chief

JG/baj

cc All OCD District Offices

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**Ken McQueen**  
Cabinet Secretary

**Matthias Sayer**  
Deputy Cabinet Secretary

**David R. Catanach, Division Director**  
Oil Conservation Division



**CERTIFIED MAIL RECEIPT # 7012 0470 0001 5967 3673**

September 5, 2017

Ms. Marcelle Fiedler  
New Mexico Gas Company  
P.O. Box 97500  
Albuquerque, New Mexico 87199-7500

**Re: Hydrostatic Test Discharge Permit HIP-136  
New Mexico Gas Company  
Taos Mainline (Pilar) Project  
Locations: Sections 22 and 23, Township 24 North, Range 11 West, NMPM,  
Taos County, New Mexico**

Dear Ms. Fiedler:

Pursuant to the Water Quality Control Commission (WQCC) Regulations 20.6.2.3104 – 20.6.2.3114 NMAC, the Oil Conservation Division (OCD) hereby proposes to approve New Mexico Gas Company's hydrostatic test discharge permit for the above referenced event contingent upon the conditions specified in the attached draft discharge permit. Please review and provide comments to OCD on the draft discharge permit within 30 days of receipt of this letter.

If there are any questions regarding this matter, please do not hesitate to contact Brad Jones on my staff at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us).

Respectfully,

A handwritten signature in black ink, appearing to read "Jim Griswold", is written over a horizontal line.

Jim Griswold  
Environmental Bureau Chief

Attachment: Draft Permit HIP-136

BAJ/baj

State of New Mexico  
Energy, Minerals and Natural Resources Department

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Susana Martinez  
Governor

Ken McQueen  
Cabinet Secretary

Matthias Sayer  
Deputy Cabinet Secretary

David R. Catanach, Division Director  
Oil Conservation Division



DATE

Ms. Marcelle Fiedler  
New Mexico Gas Company  
P.O. Box 97500  
Albuquerque, New Mexico 87199-7500

**Re: Hydrostatic Test Discharge Permit HIP-136 (DRAFT)  
New Mexico Gas Company  
Taos Mainline (Pilar) Project  
Locations: Sections 22 and 23, Township 24 North, Range 11 East, NMPM,  
Taos County, New Mexico**

Dear Ms. Fiedler:

The Oil Conservation Division (OCD) has received New Mexico Gas Company's (NMGC) revised notice of intent, dated August 18, 2017 and received August 21, 2017, for authorization to discharge approximately 78,500 gallons of wastewater generated from a hydrostatic test of approximately 6.7 miles of a new 12-inch natural gas transmission pipeline and approximately 0.4 miles of a new 8-inch natural gas transmission pipeline, approximately 3.5 miles north of Pilar, New Mexico. The proposed discharge location on private property located in Sections 22 and 23, Township 24 North, Range 11 East, NMPM, Taos County, New Mexico. OCD acknowledges the receipt of the filing fee (\$100.00) from a submittal dated August 18, 2017.

Based on the information provided in the request, the hydrostatic test water discharge is hereby approved with the following understandings and conditions:

1. NMGC will be testing approximately 6.7 miles of a new 12-inch natural gas transmission pipeline and approximately 0.4 miles of a new 8-inch natural gas transmission pipeline, between Rinconada and Pilar, New Mexico;
2. NMGC will acquire the hydrostatic test water from the City of Espanola, New Mexico;
3. NMGC will generate approximately 78,500 gallons of hydrostatic test wastewater from the test event. NMGC will temporarily store approximately 72,000 gallons of hydrostatic test wastewater, generated from testing the first three (3) sections of the pipeline, in four 21,000-gallon closed top frac tanks at the Rinconada launcher station located within Section 15, Township 24 North, Range 10 East, NMPM, Taos County, New Mexico. NMGC will temporarily store the remaining 6,500 gallons of hydrostatic test wastewater, generated from testing the last section of the pipeline, in a single 10,000-gallon closed top frac tank at the

new Pilar Launcher/Receiver station located within Section 28, Township 24 North, Range 11 East, NMPM, Taos County, New Mexico.

4. NMGC will conduct daily inspections of each tank containing hydrostatic test wastewater;
5. NMGC will take a sample of the hydrostatic test wastewater after the completion of the last test section of pipeline and await test results from a certified laboratory prior to discharge;
6. NMGC shall analyze all samples of wastewater generated from the hydrostatic test to demonstrate the results do not exceed the standards as set forth in Subsections A, B, and C of the 20.6.2.3103 NMAC;
7. NMGC shall submit the test results via email or fax to the OCD for review and subsequent approval or disapproval for the test wastewater to be discharged;
8. If the final discharge of the wastewater is approved by the OCD, NMGC will discharge the wastewater onto 19 acres of private land, using a moving water trucks with a spray attachment in a controlled manner to control erosion and contain the discharge on the private property, within Sections 22 and 23, Township 24 North, Range 11 East, NMPM, Taos County, New Mexico. The discharge area is divided into the SW area (12 acres) and NE area (7 acres);
9. If final discharge of the wastewater is approved, no hydrostatic wastewater generated will be discharged directly into groundwater or surfacewater or be allowed to exit the easement right-of-way;
10. If final discharge of the wastewater is approved, no discharge shall occur:
  - a. where groundwater is less than 10 feet below ground surface.
  - b. within 200 feet of a watercourse, lakebed, sinkhole or playa lake;
    - i. NMGC will install secondary containment, which will contain a volume of at least one and one-third the total volume of the frac tank at the new Pilar Launcher/Receiver station, located within Section 28, Township 24 North, Range 11 East, NMPM, Taos County, New Mexico, since it will be placed within 80 feet and 120 feet of two separate arroyos and within 166 feet from an ephemeral stream. NMGC will conduct daily inspections of the tank.
  - c. within an existing wellhead protection area;
  - d. within, or within 500 feet of a wetland; or
  - e. within 500 feet from the nearest permanent residence, school, hospital, institution or church;
    - i. NMGC will maintain a 100-foot buffer from residence #2. The structure on the west side of the property (residence #1) is 300 feet from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100-foot buffer from residence #3. See Permit HIP-136. In addition, NMGC will only spray water in the NE area every

other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily.

11. NMGC will have personnel on-site to oversee and control the transfer and utilize collection pans placed below the collection points to prevent an unauthorized release;
12. If the final discharge of the wastewater is not approved by the OCD, NMGC will analyze the hydrostatic test wastewater to determine if it is a RCRA non-hazardous/non-exempt waste that Agua Moss LLC's Non-Hazardous Class I injection well (UICI-005) may accept for disposal. If the hydrostatic test wastewater does not meet the criteria for Agua Moss LLC's waste acceptance and is determined to be characteristically hazardous, the test wastewater shall be sent to a RCRA permitted TSDF for disposal;
13. NMGC will ensure the transfer of the hydrostatic test wastewater, via a system of flexible hoses and pump, from the frac tanks into water trucks and hauled by an OCD approved C-133 water hauler to Agua Moss LLC's Non-Hazardous Class I injection well (UICI-005) for injection and disposal;
14. NMGC shall remove all hydrostatic test wastewater from the collection/retention location within ten (10) calendar days of receiving the analytical results of the hydrostatic test wastewater;
15. NMGC shall restore any surface area impacted or disturb from the approved activities;
16. NMGC shall implement best management practices to prevent unauthorized releases during the transfer/collection activities;
17. NMGC shall ensure that the discharge/transfer/collection activities do not cause any fresh water supplies to be degraded or to exceed standards as set forth in Subsections A, B, and C of the 20.6.2.3103 NMAC (the New Mexico Water Quality Control Commission Regulations);
18. NMGC must properly notify the landowner(s) of the proposed discharge/collection location of the approved activities prior to the hydrostatic test event; and
19. NMGC shall report all unauthorized discharges, spills, leaks and releases of hydrostatic test water and conduct corrective action pursuant to WQCC Regulation 20.6.2.1203 NMAC and release notification pursuant to OCD Rule 29 (19.15.29 NMAC).

It is understood that the hydrostatic test discharge will begin in October 2017. This permit will expire within 120 calendar days of its issue date. This permit may be revoked or suspended for violation of any applicable provisions and/or conditions.

**This approval will not become effective until OCD receives the permit fee of \$600.00 pursuant to 20.6.2.3114 NMAC. Please make the check payable to the Water Quality Management Fund.**

Ms. Fiedler  
HIP - 136  
DATE  
Page 4 of 4

Please be advised that approval of this request does not relieve NMGC of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve NMGC of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Brad Jones on my staff at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us).

Respectfully,

David Catanach  
Director

DC/baj

Cc: OCD District IV Office, Santa Fe

State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**Ken McQueen**  
Cabinet Secretary

**Matthias Sayer**  
Deputy Cabinet Secretary

**David R. Catanach, Division Director**  
Oil Conservation Division



June 9, 2017

Ms. Marcelle Fiedler  
New Mexico Gas Company  
P.O. Box 97500  
Albuquerque, NM 87109-7500

**Re: Hydrostatic Test Wastewater Discharge Notice of Intent Review (HIP-136)  
New Mexico Gas Company  
Taos Mainline (Pilar) Project  
Location: Sections 22 and 23, Township 24 North, Range 11 East, NMPM,  
Taos County, New Mexico**

Dear Ms. Fiedler:

The Oil Conservation Division (OCD) has completed the review of New Mexico Gas Company's (NMGC) notice of intent (NOI), dated May 26, 2017 and received by OCD on June 1, 2017, for authorization to discharge approximately 78,500 gallons of wastewater generated from a hydrostatic test of approximately 4.4 miles of a new 12-inch natural gas transmission pipeline and 2.4 miles of an existing 8-inch natural gas transmission pipeline, approximately 3.5 miles northeast of Pilar, New Mexico. OCD has determined the request to **administratively incomplete**.

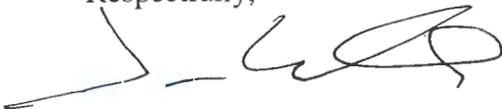
Pursuant to 20.6.2.3108.A NMAC, "Within 15 days of receipt of an application for a discharge permit, modification or renewal, the department shall review the application for administrative completeness. To be deemed administratively complete, an application shall provide all of the information required by Paragraphs (1) through (5) of Subsection F of 20.6.2.3108 NMAC and shall indicate, for department approval, the proposed locations and newspaper for providing notice required by Paragraphs (1) and (4) of Subsection B or Paragraph (2) of Subsection C of 20.6.2.3108 NMAC." In regards of NMGC demonstrating compliance to Paragraph (2) of Subsection F of 20.6.2.3108 NMAC, "the location of the discharge, including a street address, if available, and sufficient information to locate the facility with respect to surrounding landmarks," the NOI states "If approved by OCD, test water will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 2 miles north of the end of the project. A private landowner on the west side of US 68 would like to have the water sprayed onto his property." The information provided in the NOI does not include sufficient information to locate the facility with respect to surrounding landmarks, such as the nearest mile maker.

In regards of NMGC demonstrating compliance to Paragraph (5) of Subsection F of 20.6.2.3108 NMAC, "the depth to and total dissolved solids concentration of the ground water most likely to be affected by the discharge," the NOI states "*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water." The depth to ground water most likely to be affected by the discharge was not identified.

In regards of NMGC demonstrating compliance to Paragraph (1) of Subsection B of 20.6.2.3108 NMAC, "for each 640 contiguous acres or less of a discharge site, prominently posting a synopsis of the public notice at least 2 feet by 3 feet in size, in English and in Spanish, at a place conspicuous to the public, approved by the department, at or near the proposed facility for 30 days; one additional notice, in a form approved by and may be provided by the department, shall be posted at a place located off the discharge site, at a place conspicuous to the public and approved by the department; the department may require a second posting location for more than 640 contiguous acres or when the discharge site is not located on contiguous properties," the NOI states "In addition, a sign will be placed at the BLM visitor center in Pilar and the Embudo Valley Medical Center in Rinconada providing a synopsis of the public notice." The BLM visitor center in Pilar is approximately 3.5 miles from the proposed discharge area and the Embudo Valley Medical Center in Rinconada is approximately 9.4 miles away. The NOI does not propose to post a synopsis of the public notice on a sign at or near the discharge area in which four permanent residences are located and NMGC requests a waiver to discharge within 300 feet of Residence #1, within 100 feet of Residences #2 and #3, and less than 200 feet from Residence #4.

Please contact Brad Jones of my staff, at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us), to schedule a conference call to discuss the review and issues regarding the technical information of the proposed NOI application.

Respectfully,



Jim Griswold  
Environmental Bureau Chief

JG/baj



RECEIVED OCD

2017 AUG 21 P 2:47

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

August 18, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division (OCD) replied with a letter on June 9, 2017 saying the application was administratively incomplete. NMGC submitted corrections to the proposal on July 20<sup>th</sup>. In response to further comments made by Brad Jones at OCD on the July 20<sup>th</sup> and August 8<sup>th</sup> revision, NMGC is submitting the following revisions to the proposal. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back by an C-133 water hauler to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added (using a C-133 water hauler) for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from

the third section. A water sample will be taken after the completion of the last test section and sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3.5 miles north of Pilar NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total but water will be sprayed within the areas cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed.

D. Maps

The following maps are included with this permit application.

- Appendix A - Overview of project area
- Appendix B - Land Ownership maps (topo map)
- Appendix C - Water collection site (topo and aerial map)
- Appendix D - Discharge location site (topo and aerial map)
- Appendix E - Well map and POD's
- Appendix F - Geology of area
- Appendix G - Soils
- Appendix H - FEMA maps

#### E. Demonstration of Compliance with Siting Criteria

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station, the tank holding 6,500 gallons is 166 ft from an ephemeral stream located to the northeast. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Collection Location Topo maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (RG44010) associated with this well shows it is expired. The closest active well to the tanks on the south end at Rinconada station is 1900ft away. The well nearest to the Pilar Station is 2,500 ft away. The POD number is RG09961. There is a pending well (POD RG20336) more than 2000 ft from the Pilar location. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. *Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)
- iv. *Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using the USGS quad maps to search. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. (see attached maps)  
<http://www.enrnr.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*

7. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Discharge area maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. The landowner has told NMGC there are no active wells on the private property used for discharging water. Records from the State Engineers Office, show the nearest active well is more than 2500 ft to the east of the discharge area. The POD for this well is RG16717. The records for well POD RG11529 located on the private property, show it was never installed and POD RG07747 was cancelled. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. *Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using USGS quad maps. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. See attached maps.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  7. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. There are 3 residences (residents 1-3) within the property where water will be discharged and 1 resident (resident 4) on the property directly to the north that has an adjoining property line. No water will be discharged on the neighboring property, but residence #4 is 170 feet from the discharge area.

The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure (residence #2) in the SE part of the property when water is sprayed in the SW area. NMGC will maintain a 100ft buffer from residence #2. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge

area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NE area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily. (see Discharge area maps)

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. It will take approximately 5 days to discharge all the water. NMGC anticipates that the water will be off site by approximately December 1st.

#### G. Method & Location for Collection and Retention of Fluids

##### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon closed top frac tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon closed top frac tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

#### H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does

not occur. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. Water will not be sprayed on days when wind will carry the water off the ground. Boundaries of areas where water will not be discharged will be flagged or have signs.

I. Request for Alternate Treatment/Disposal

NMGC is not requesting an alternate discharge location.

J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the last test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

K. Method of Disposal of Fluids and Solids after Test Completion if the Water exceeds the WQCC standards

NMGC is a transmission and distribution company. Therefore, waste generated by NMGC is RCRA nonexempt. If the hydrostatic test water does not meet OCD conditions (WQCC standards) for discharge to the ROW and is not a RCRA characterized hazardous waste (40 CFR 261.21-24), NMGC will dispose of it at the class one injection well at Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a RCRA characterized hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDf for disposal.

L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

M. Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

*Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower

Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Q1) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

#### Geologic Reference:

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

#### Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (RG44010) associated with this well shows it is expired (print out of this and other PODs is attached). Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 130 feet. Given that the Rinconada collection location is 200 feet higher in elevation than those wells, the depth to ground water at the collection location is likely between 210 and 330 feet. The well nearest to the Pilar Station is 2,500 ft to the south and its depth to water is 22ft. The POD number is RG09961. The elevation at that well is 6340 feet and the elevation at the Pilar location is 6400 feet. Therefore, the

groundwater at the Pilar collection location is approximately 82 ft. There is a pending well (POD RG20336) more than 2000 ft from the Pilar location.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water and the depth to water is 400 ft. The POD for this well is RG16717. Since the elevation at the well is 100 feet higher than the discharge area, the depth to groundwater at the discharge area is likely approximately 300 ft. The records for well POD RG11529 located on the private property, show it was never installed and POD RG07747 was cancelled.

*Total dissolved solids (TDS) for the project area:* There are two springs 2.5 miles northeast of the discharge location. The springs have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

O. ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. NMGC has received a permit from BLM for this project. The BLM permit application included a discussion of the frac tanks that will collect water from the hydrostatic test. NMGC has received written confirmation from the private landowner giving approval to discharge the water on their property (see attached letter). The landowner adjacent to the private landowner (residence #4 - Mark and Ann Robertson) where water will be discharged has been notified by letter of the project. NMGC is researching the other private landowners within 1/3 of a mile of the discharge location and will notify them of the proposed hydrostatic test. BLM is the surrounding landowner at the Pilar collection location. There are 2 private landowners within 1/3 of a mile of the Rinconda collection location. They are Patricia Nielsen and Leslie Rogers – Peckman and they will be notified of the hydrostatic test.

Release

In the event of a release associated with project activities, NMGC will conduct corrective action pursuant to WQCC Regulation 20.6.2.1203 NMAC and release notification pursuant to OCD Rule 29 (19.15.29 NMAC).

Public Notice

Once OCD rules this application as administratively complete, NMGC will provide notice in Spanish and English of the permit application in the Taos News as a display ad (not in the legal or classified section) at least 3 inches by 4 inches following requirements in NMAC 20.6.2.3108. In addition, a 2ft by 3ft sign with a synopsis of the public notice in Spanish and English will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west side near the private property where water will be discharged as defined in 20.6.2.3108.B.1 for 30 days.

NMGC will also send a copy of the public notice by certified mail, return receipt to the owner of the discharge location and send a copy of the public notice by mail to all owners within 1/3 mile from the discharge site as listed in section O above.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

Thank you for your assistance. If additional information is required please notify me in writing. Please call me at (505) 697-3516 if you have any questions.

Sincerely,



Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on August 4, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

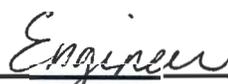
### A. Collection Areas

- Is not within an active wellhead protection area that supplies public or private water system (nearest active wells are between 1900 and 2500ft away and the nearest springs are 2.5 miles away) or within a 100 year floodplain.
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo (as shown on the National Wetland Inventory data) within 170 feet of the Pilar collection location. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

### B. Discharge Area

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system (nearest active well is 2500ft away and the nearest springs are 2.5 miles away) or within 100 year floodplain
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences: 300ft from residence #1, 100ft from residences #2 and 3, and 170ft from residence #4.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

 Signature	 Title	 Date
--------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------

# Photos



Rinconada collection location



Pilar collection location

1



SW discharge area private land



NE discharge area private land

# **Attachments**

**From:** [Tompson, Mike, EMNRD](#)  
**To:** [Fiedler, Marcelle F.](#)  
**Cc:** [Kretzmann, John, EMNRD](#)  
**Subject:** RE: recorded mines  
**Date:** Friday, April 28, 2017 8:06:14 AM

---

**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

Hello Marcelle,

The New Mexico Mining & Minerals Division has no knowledge of any abandoned mines in the four sections detailed in your email.

Please let us know if you have any other questions.

Mike Tompson  
New Mexico Mining & Minerals Division  
(505) 476-3427

**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Thursday, April 27, 2017 2:27 PM  
**To:** Tompson, Mike, EMNRD <[Mike.Tompson@state.nm.us](mailto:Mike.Tompson@state.nm.us)>  
**Subject:** recorded mines

Hi Mike

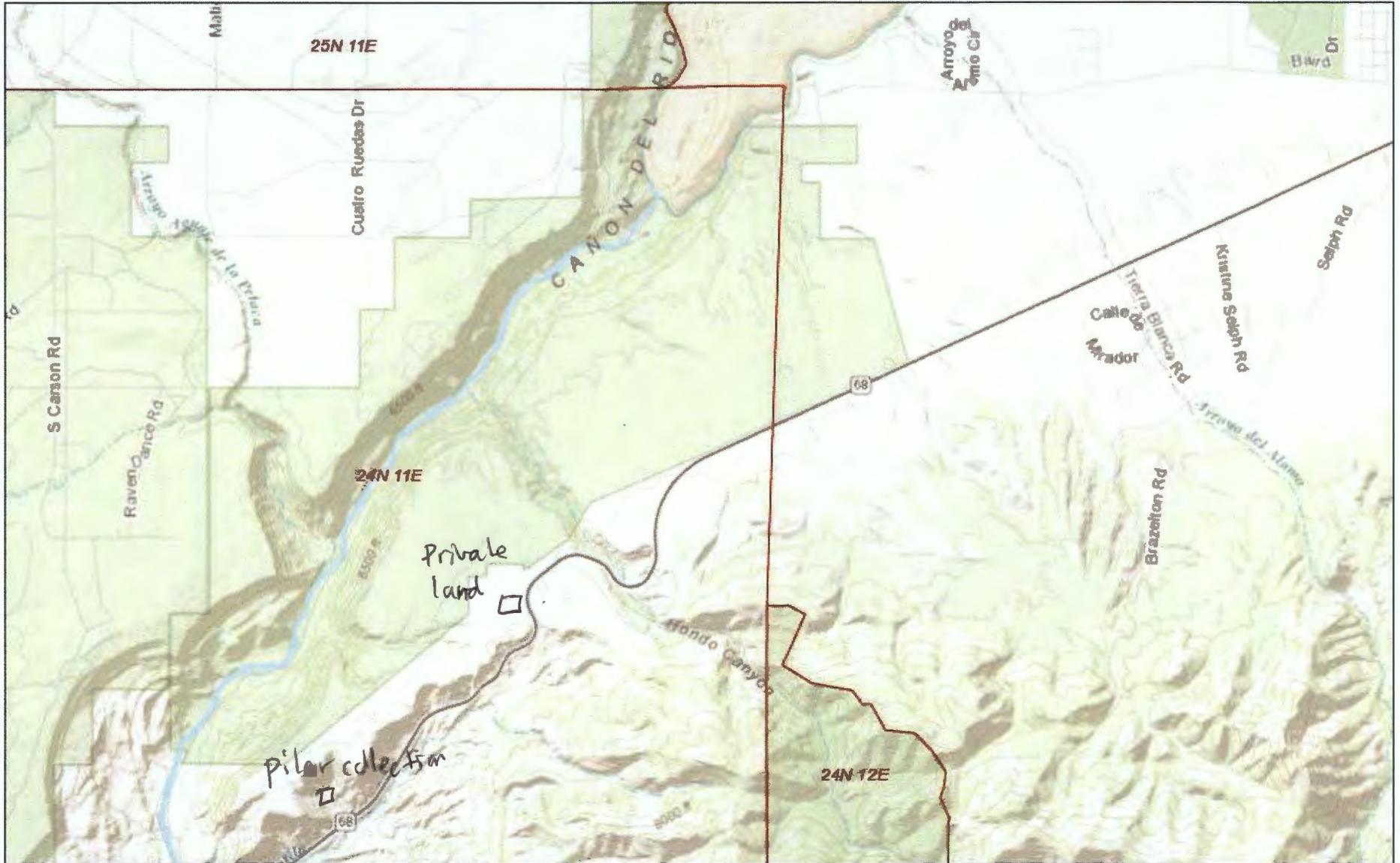
New Mexico Gas Company is planning to do a hydrostatic pressure test of a gas transmission line near Rinconada and Pilar, NM later this year. As part of the permit application process with the Oil Conservation Division, we need to obtain information on the location of active or abandoned mines in the area of our test. Can you please tell me if there are any active or abandoned mines within the following sections?

1. Section 15 T23N r10E
2. Section 22, 23, 28 T24N R11E

Thank you for your assistance. Please contact me if you have any questions.

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

# Active Mines in New Mexico

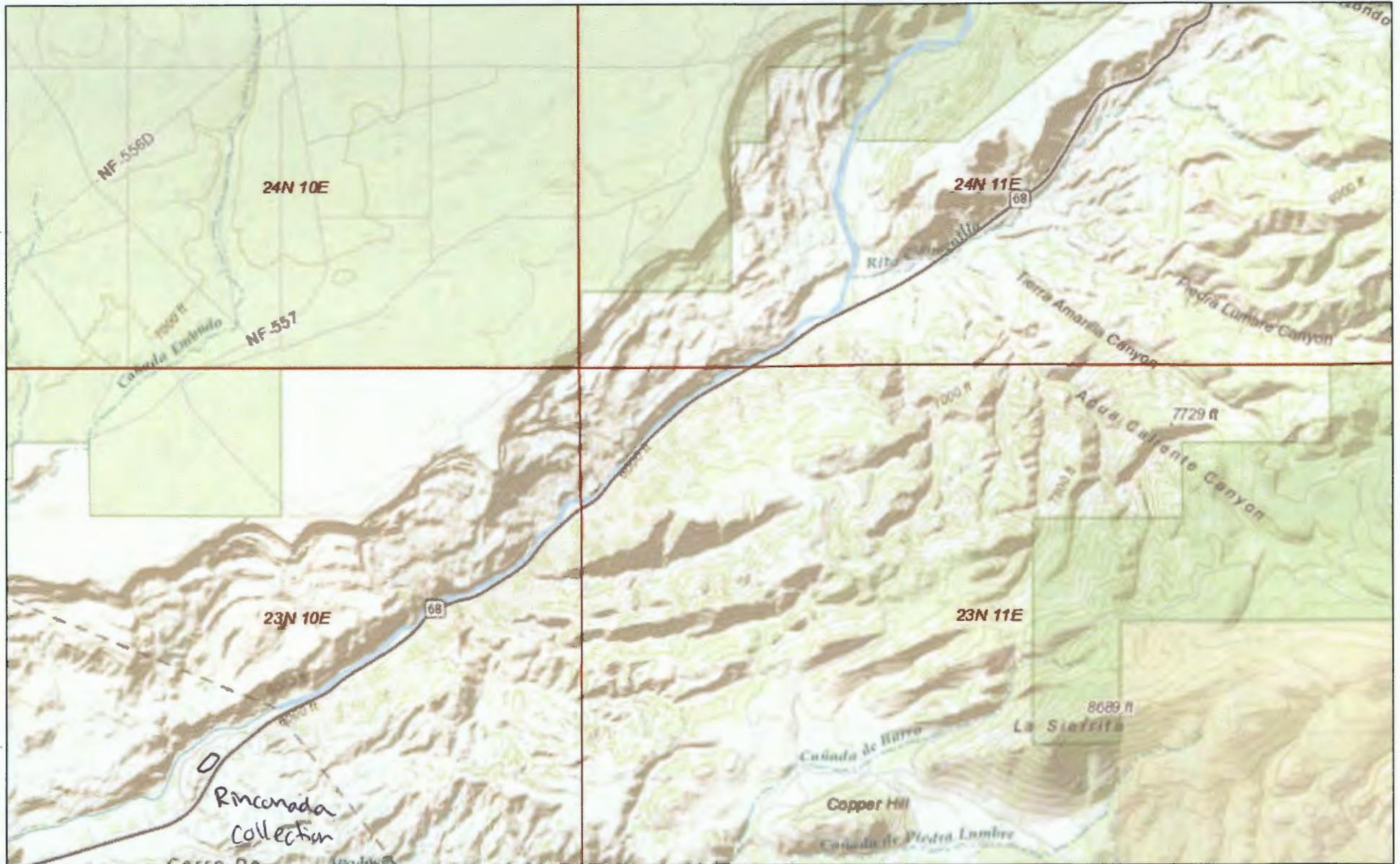


August 3, 2017

 CadNSDI PLSS Township

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

# Active Mines in New Mexico



August 3, 2017

□ CadNSDI PLSS Township



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

vertical upflow of deeply sourced thermal waters along faults or at fault intersections.

To further investigate groundwater sources and intermixing, we examine distribution maps of major ions and Piper diagrams that show cation and anion percentages and ion trends. Chemistry data from shallow wells between the mountain front and the Rio Pueblo, including Ponce de Leon and upper Arroyo del Alamo, are used to construct concentration maps of the dissolved solids content and the major ions Ca/Na, HCO<sub>3</sub>, SO<sub>4</sub>, and Cl for the shallow basin and bedrock aquifers (Figs. 29–33). Chemistry results from surface water and wells in the deep confined aquifer were not used to create the concentration maps, but are shown on the figures. Ion chemistry and summary statistics for each aquifer are presented in Table 9. The observed patterns and some hydrologic implications are discussed.

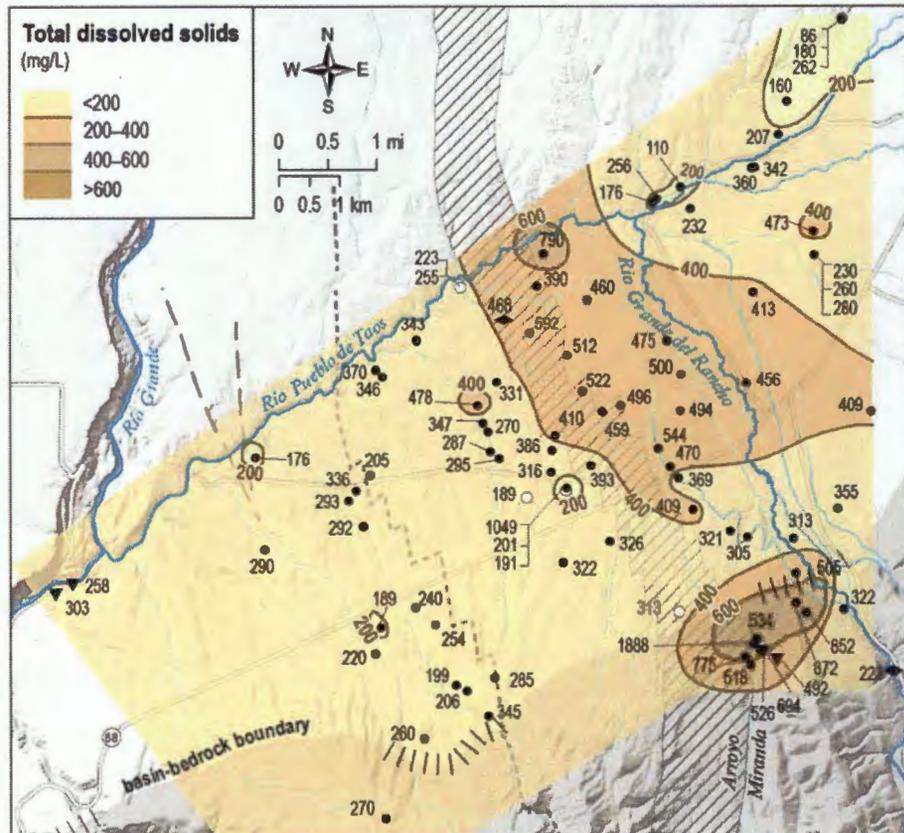
**Dissolved solid content**—Concentrations of dissolved solids, called TDS, range from 86–790 mg/L in the Picuris piedmont aquifer (Fig. 29, Table 9). High TDS values (400–600 mg/L) are clustered in the northern Rio Grande del Rancho valley and westward toward the Taos golf course, but both higher

and lower values are scattered throughout the area, for example: 790 mg/L TDS in a 122-foot deep well (TV-136) and 390 mg/L TDS in an adjacent 105-foot deep well (TV-238) (Fig. 29, Table 9). An intriguing and unusual trend in the distribution of TDS in the basin-fill aquifers is that TDS does not increase with depth, and concentrations in the deep confined aquifer (180–313 mg/L) are lower than or comparable to those in the shallow Picuris piedmont aquifer. Bedrock aquifers exhibit an extreme range in TDS, with the highest concentrations found in the hydrothermal waters at Ponce de Leon (492–1,888 mg/L) and the lowest from a well in quartzite bedrock in the upper Arroyo del Alamo watershed (48 mg/L, TV-230).

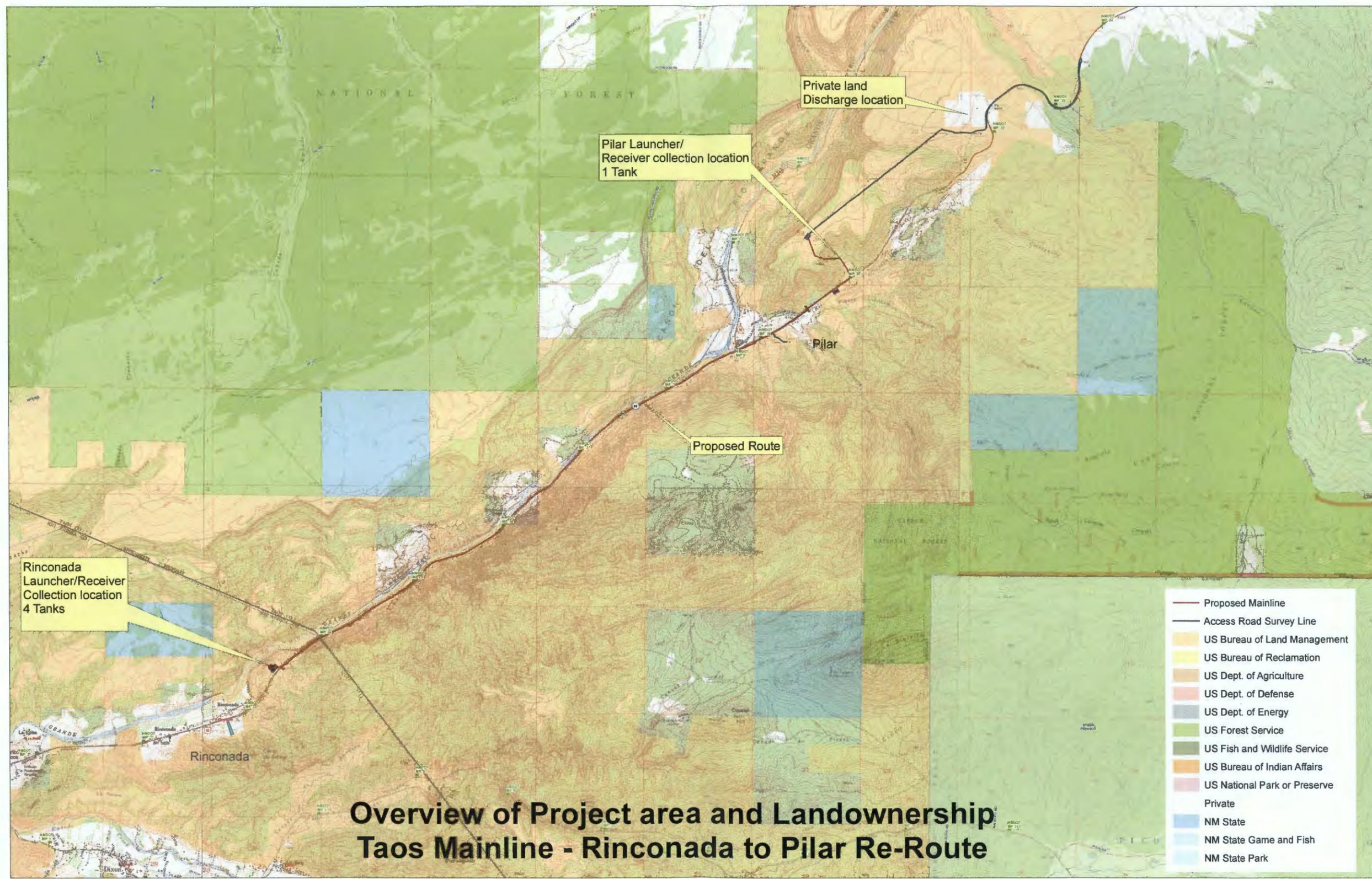
**Calcium and sodium**—Calcium concentrations range from 2.6 to 175 mg/L, and sodium ranges from 8.2 to 143 mg/L (Table 9). The distribution of calcium and sodium is illustrated as a calcium-to-sodium ratio (Fig. 30), where values greater than 1 indicate calcium dominance and values less than 1 indicate sodium dominance. Shallow groundwater in the Picuris piedmont aquifer is generally Ca-rich, as are stream waters from the Rio Grande del Rancho (TV-512), Rio Pueblo (TV-513) and Rio Lucero (TV-514). The

**Figure 29.** Map showing the dissolved solid content (TDS) in the Picuris piedmont aquifer. Values for the deep confined aquifer are also shown.

- Data**
- Well in Picuris piedmont aquifer
  - Well in deep confined aquifer
  - ▼ Spring
  - ◆ Surface water
- Depth specific samples**
- Contoured value
  - #
- Geologic features**
- Bedrock
  - Hydrogeologic window
  - Northern projection of Miranda graben
  - Picuris-Pecos fault
  - Geophysical fault



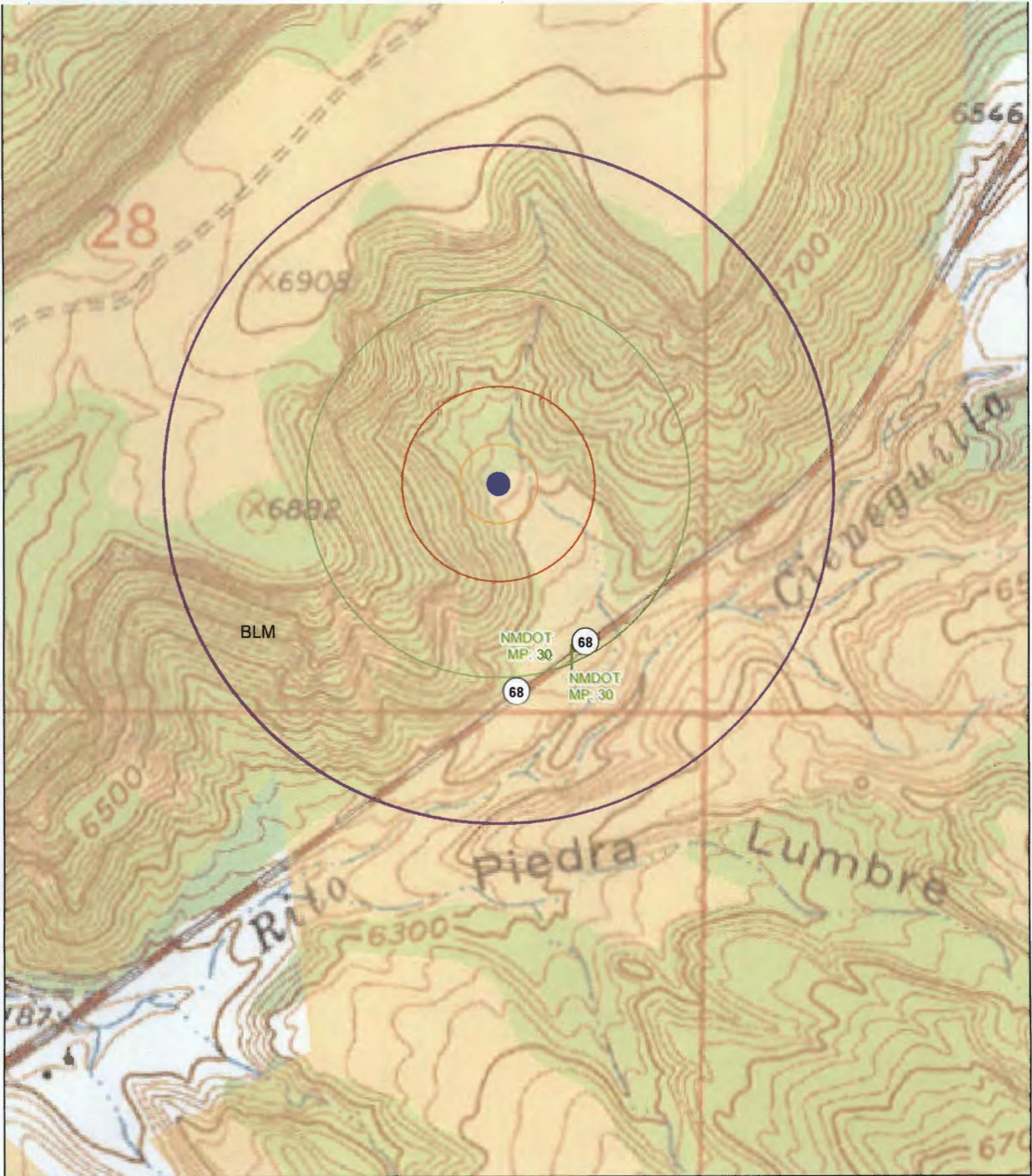
# Appendix A



**Overview of Project area and Landownership  
Taos Mainline - Rinconada to Pilar Re-Route**

# Appendix B



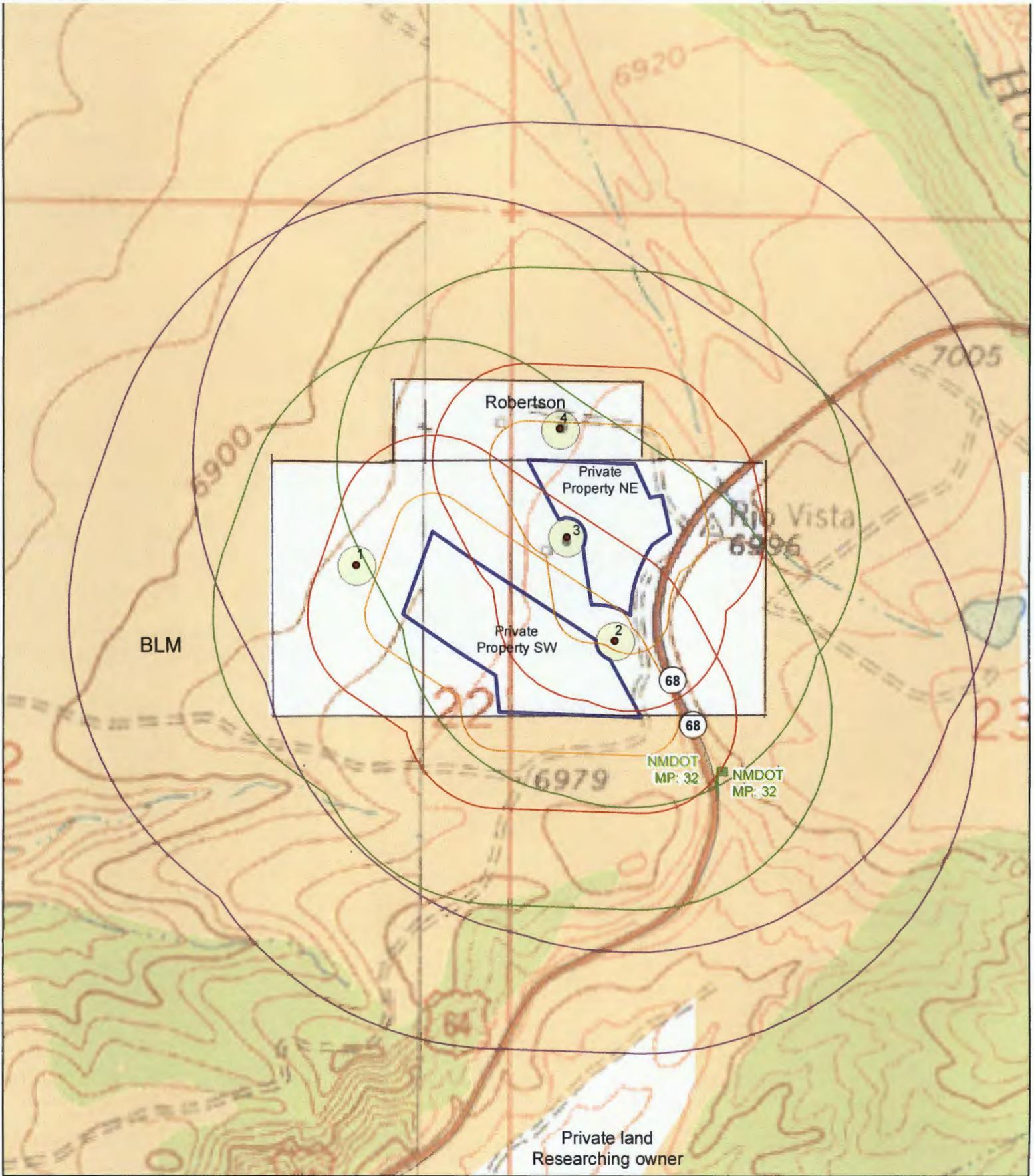


Collection Location- Pilar Launching Station  
Landowners within 1/3 mile



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Pilar Frac Tank
- Pilamew one third mile buffer

0 260 520 1,040 1,560 2,080 Feet



Discharge Location- Private land  
Landowners within 1/3 mile



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- one third mile buffer

- Residences
- Pillar\_collection\_and\_discharge\_sites

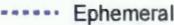
0 260 520 1,040 1,560 2,080

# Appendix C

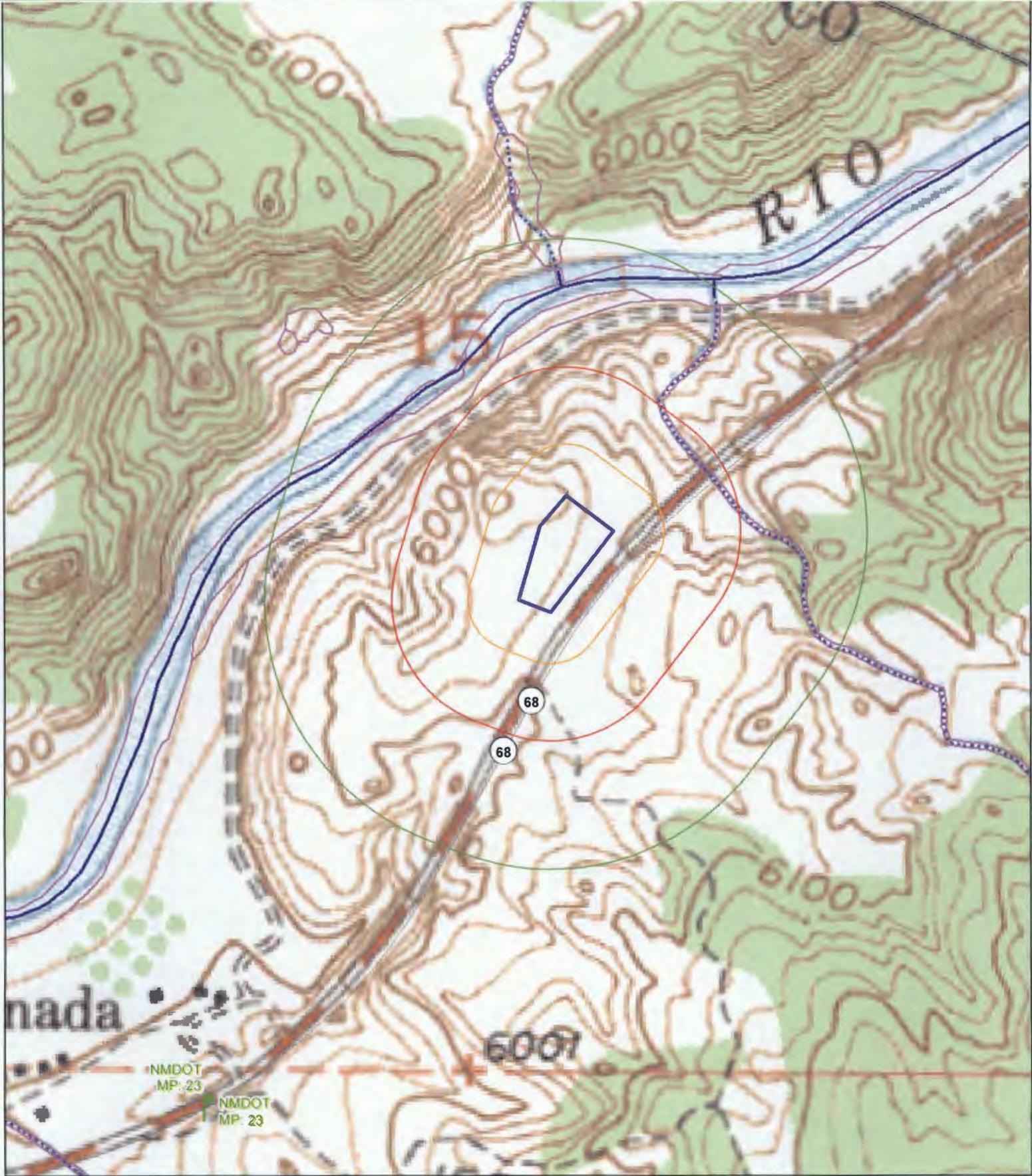


Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- |                                                                                                   |                                                                                                  |                                                                                                                           |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|  500ft buffer  |  Ephemeral    |  Pilar_collection_and_discharge_sites |
|  1000ft buffer |  Intermittent |                                                                                                                           |
|  200ft buffer  |  Perennial    |                                                                                                                           |
|                                                                                                   |  NM_Wetlands  |                                                                                                                           |

0 195 390 780 1,170 1,560 Feet

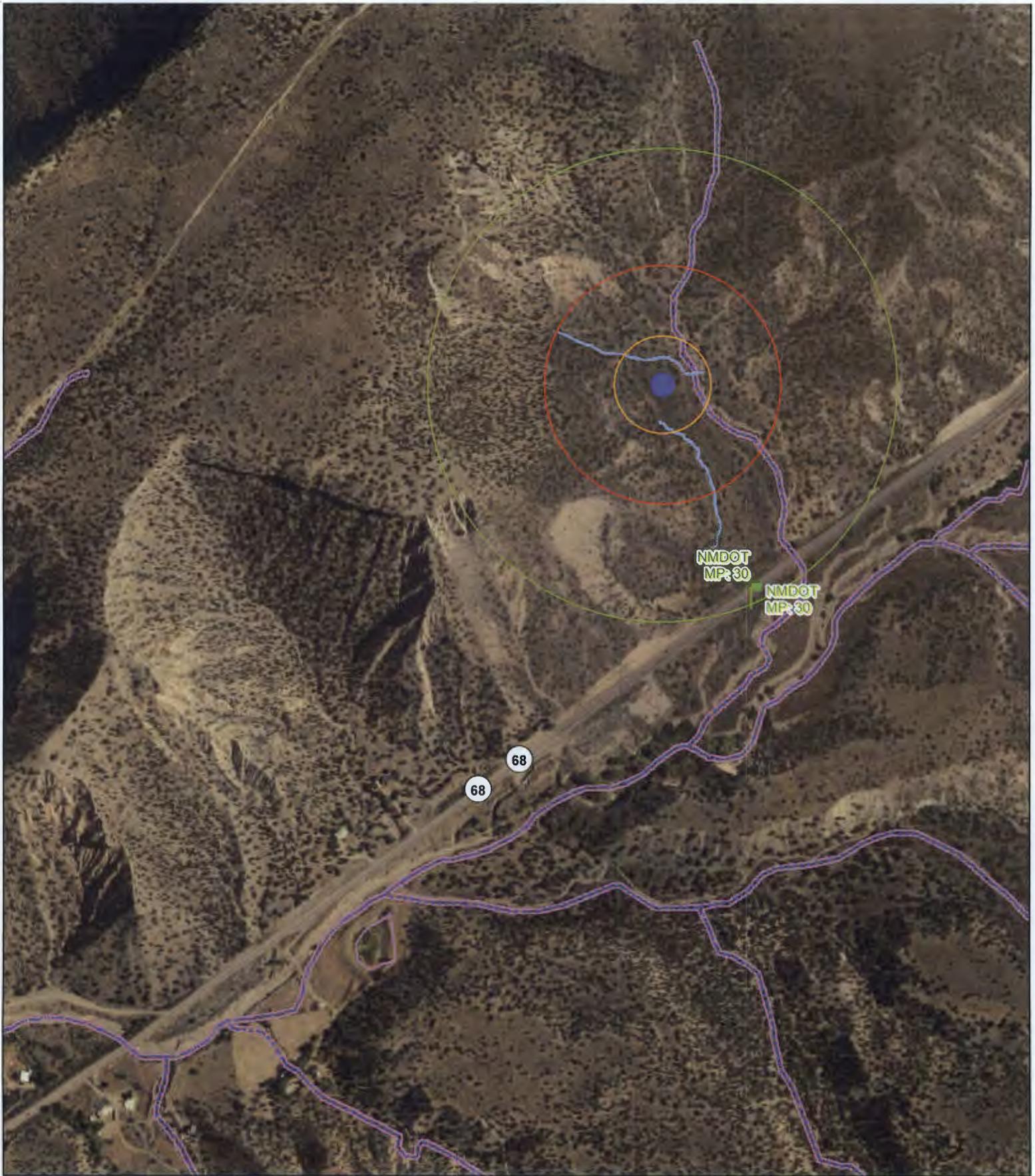


Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Pilar\_collection\_and\_discharge\_sites

0 195 390 780 1,170 1,560



### Collection Location- Pilar Launching Station Taos Mainline - Rinconada to Pilar Re-Route

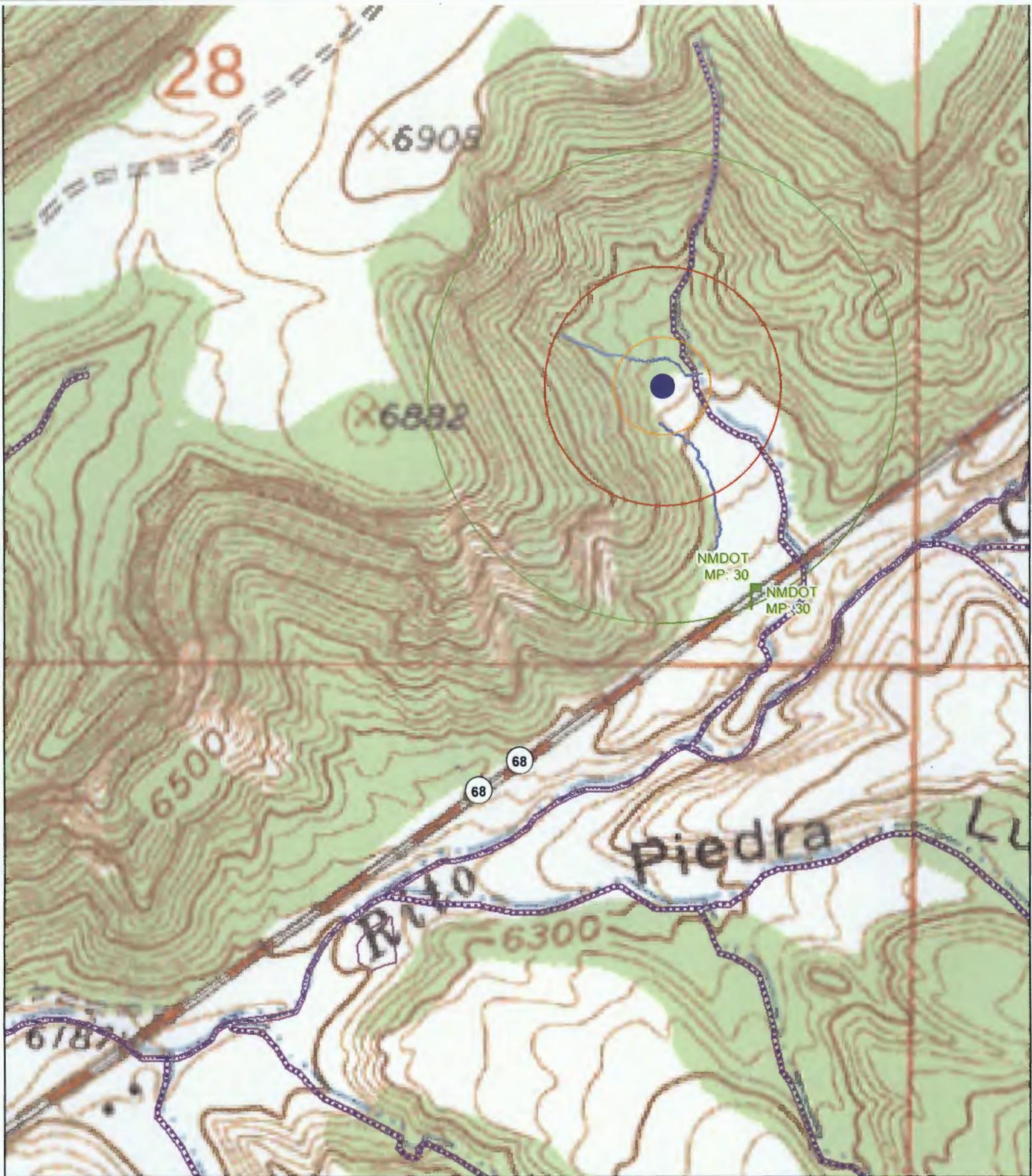


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Pilar Frac Tank
- GPS data of arroyos in the field





Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Pilar Frac Tank
- GPS data of arroyos in the field

0 210 420 840 1,260 1,680

# Appendix D



### Discharge Location- Private land Taos Mainline - Rinconada to Pilar Re-Route

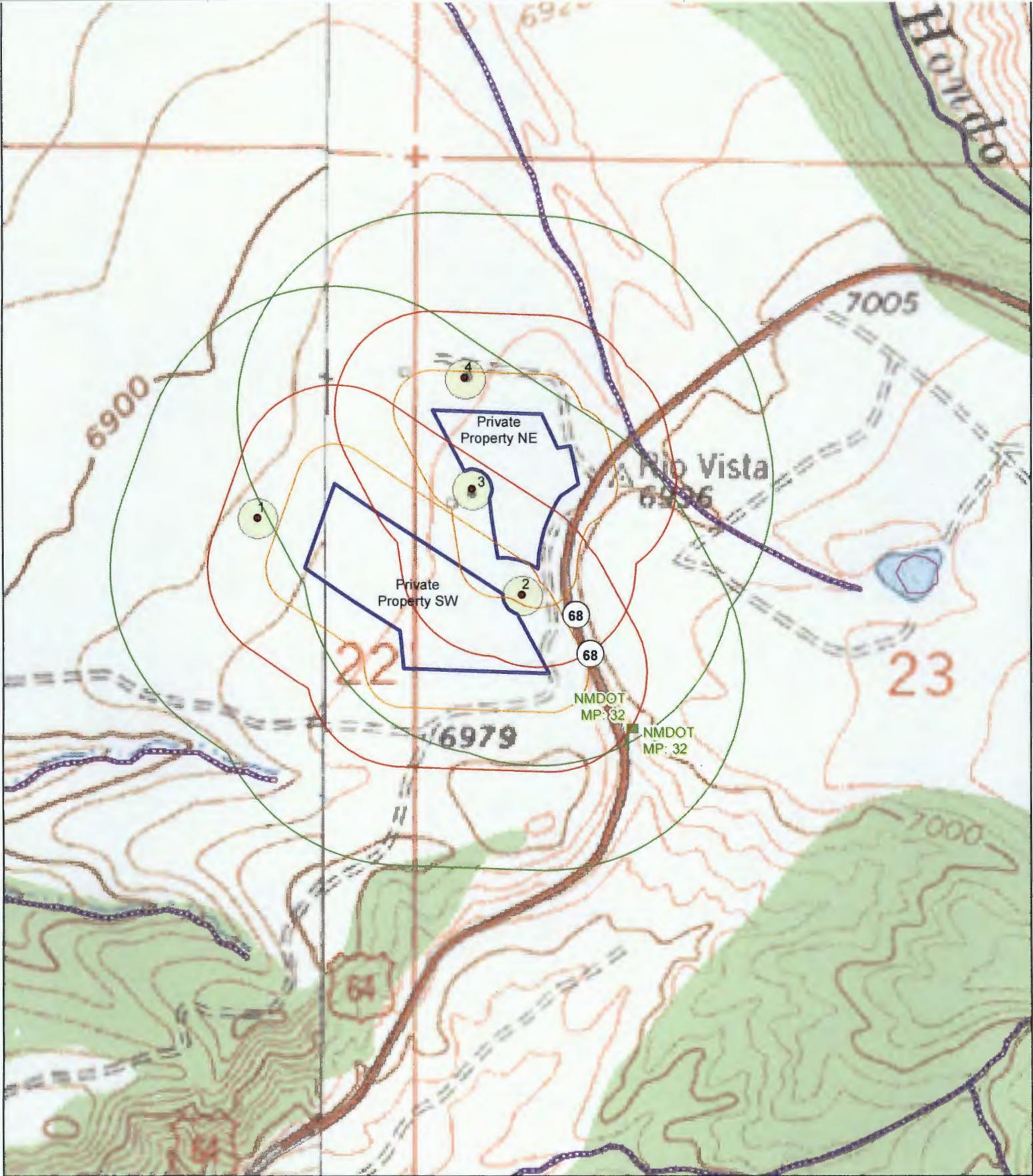


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites

0 250 500 1,000 1,500 2,000 Feet



Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites



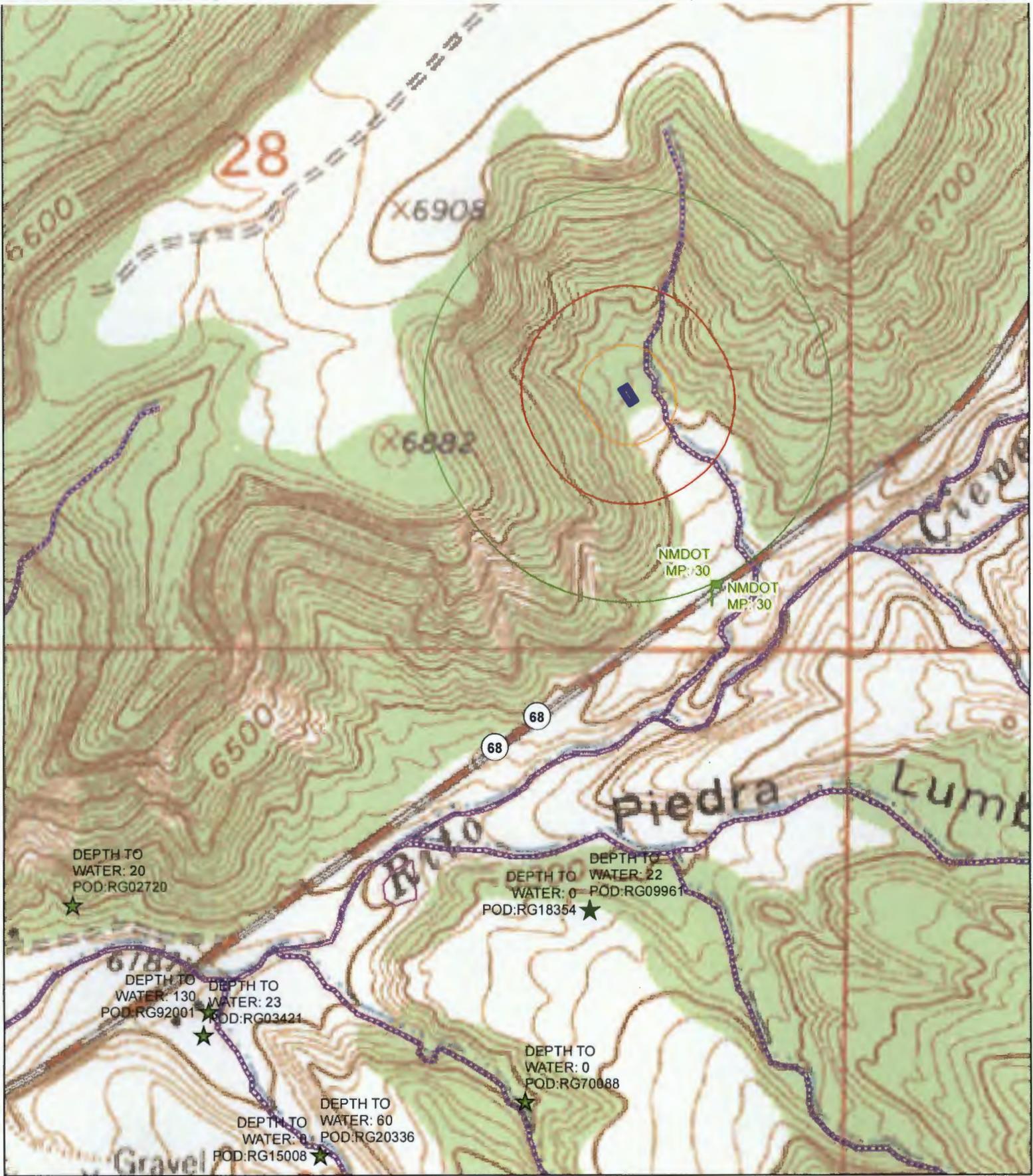
# Appendix E



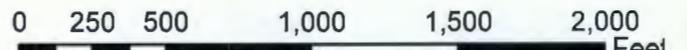
Collection Location- Rinconada Launching Station  
Well location and depth to water

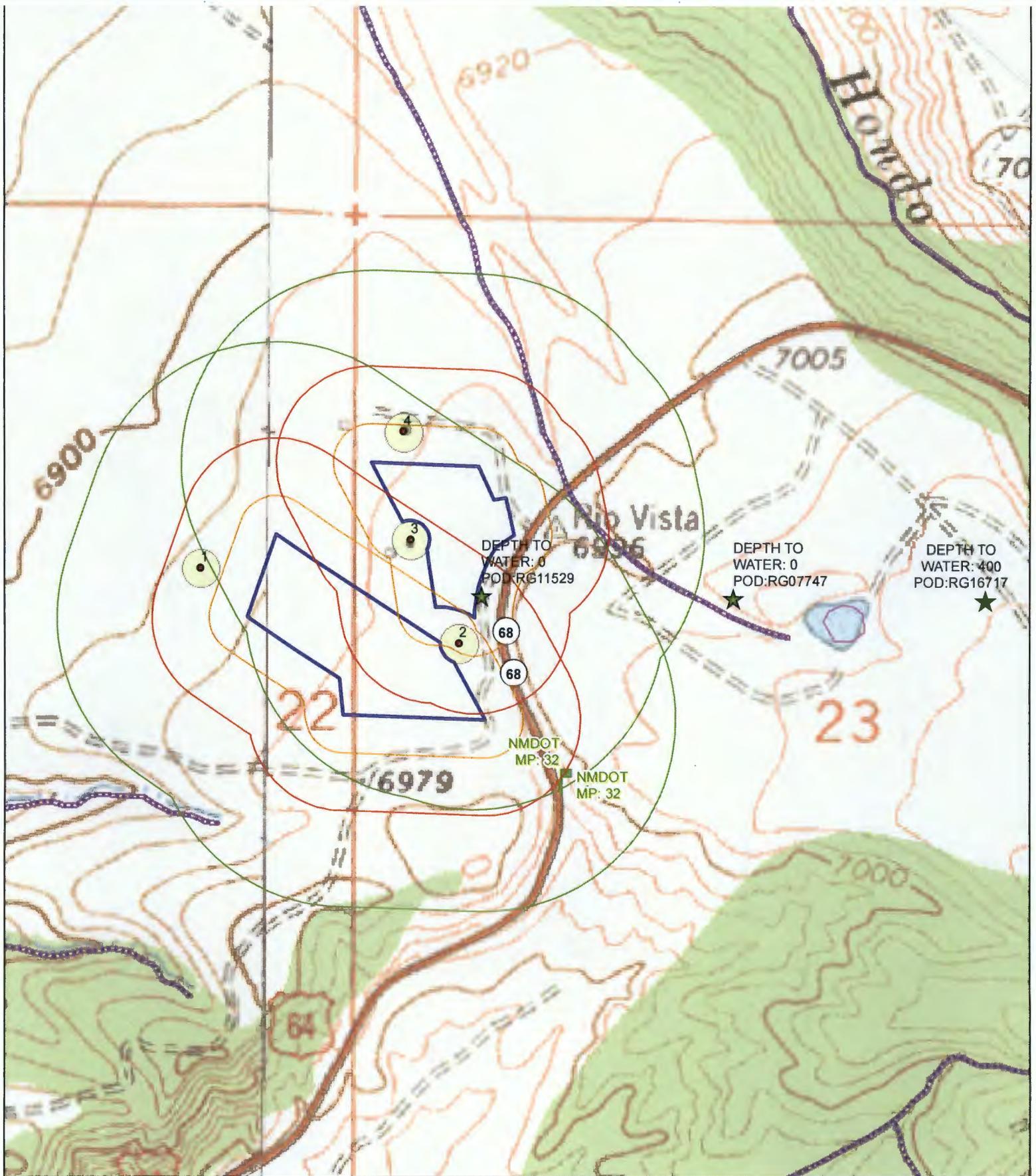


0 250 500 1,000 1,500 2,000 Feet



Collection Location- Pilar Launching Station  
Well Location and Depth to Water





Discharge Location- Private land  
Well Location and Depth to Water

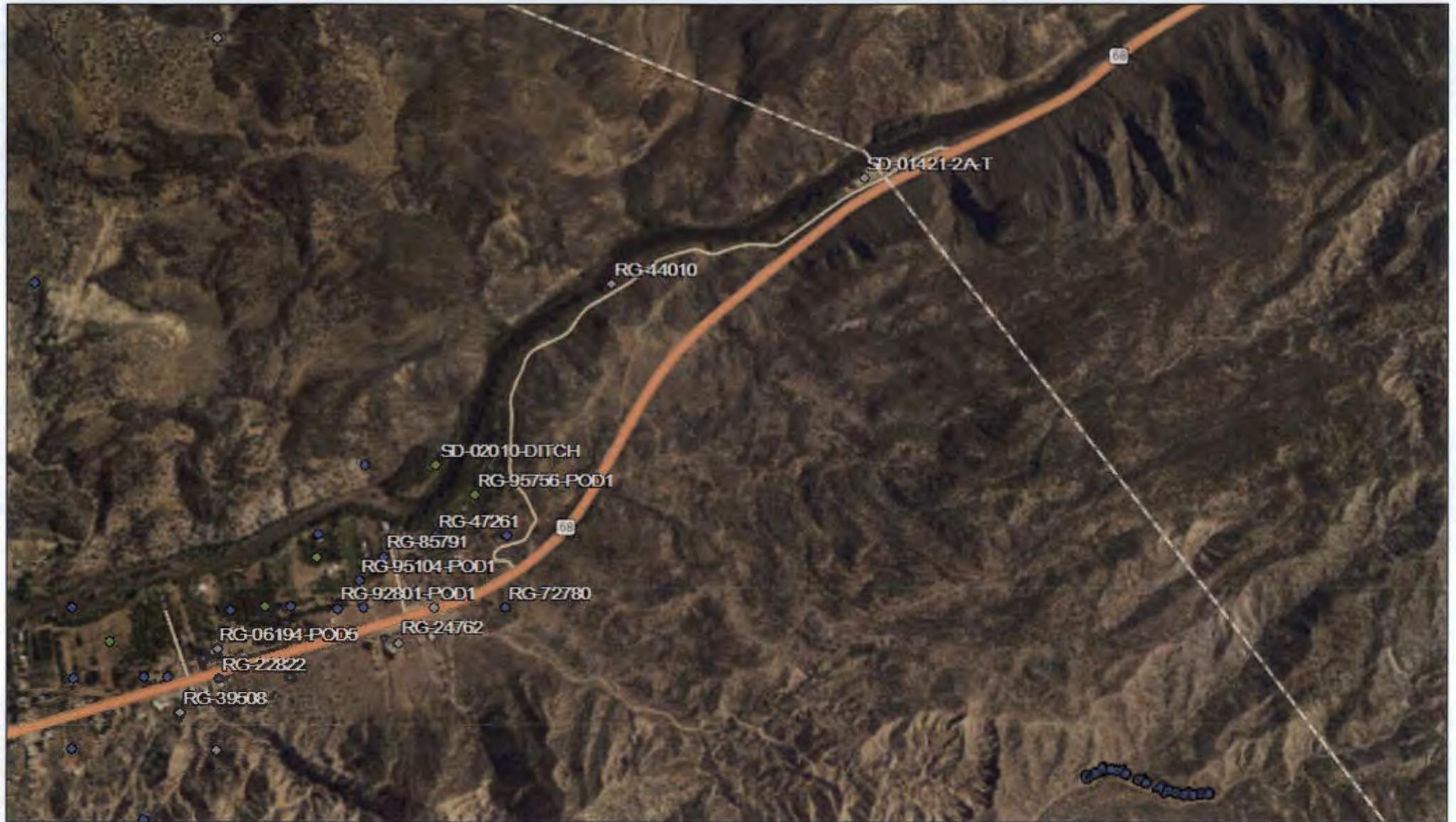


- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Sites
- Residences
- OSE\_Wells

0 260 520 1,040 1,560 2,080

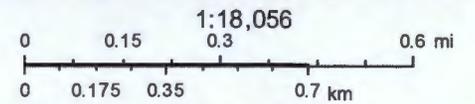
Feet

# Rinconada OSE Well Locations



August 3, 2017

- OSE Wells**
- PEN
  - Other
  - ACT
- OSE District Boundary



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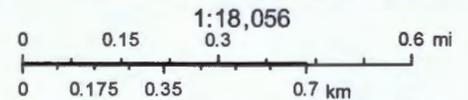
New Mexico Office of the State Engineer  
 These maps are distributed "as is" without warranty of any kind.

# Pilar OSE Well Locations



August 3, 2017

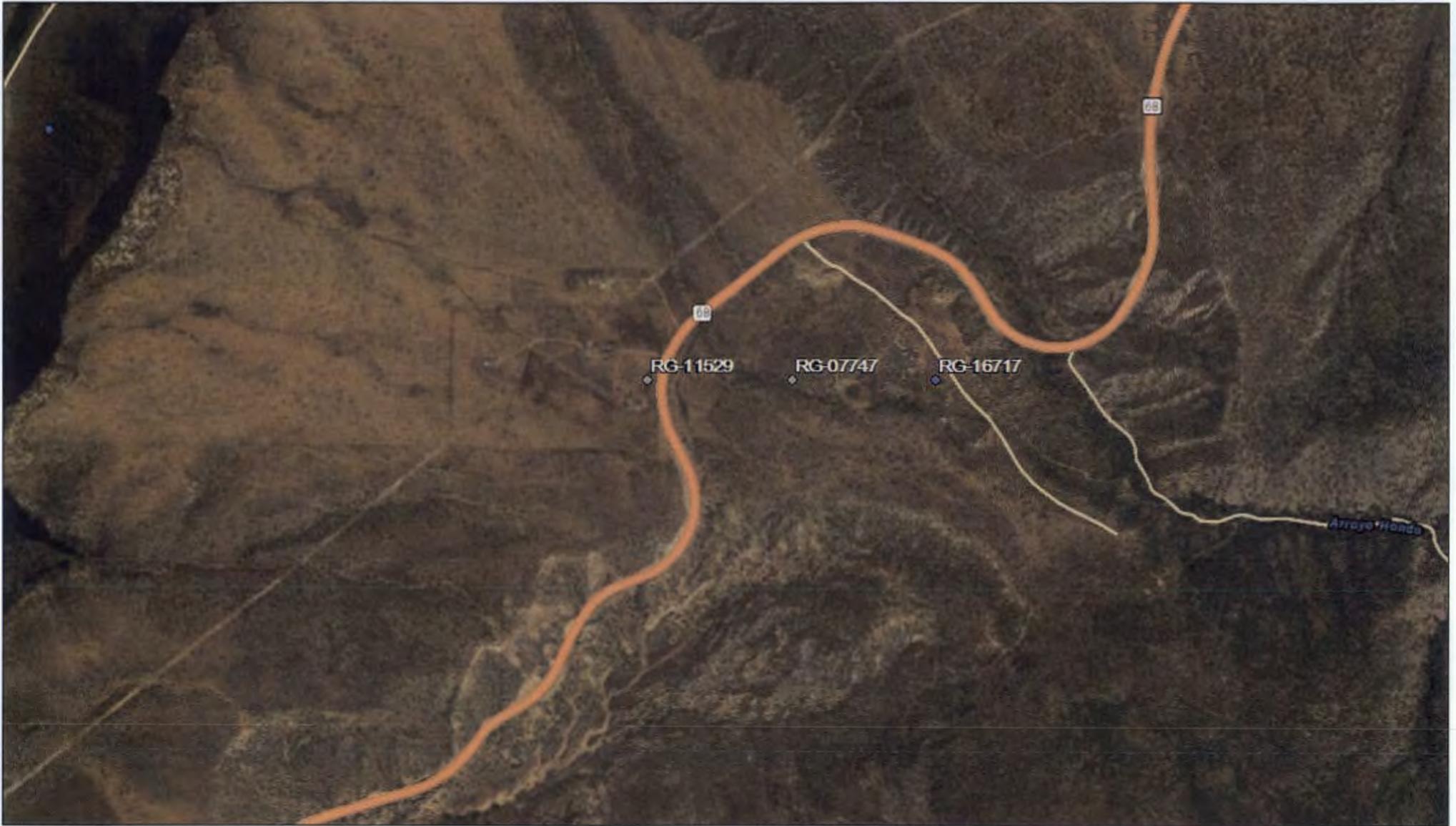
- OSE Wells**
- PEN
  - Other
  - ACT
- OSE District Boundary



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New Mexico Office of the State Engineer  
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# Private OSE Well Locations

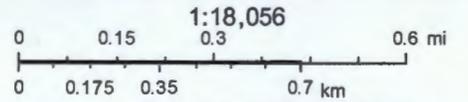


August 3, 2017

## OSE Wells

- Other
- ACT

OSE District Boundary



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## New Mexico Office of the State Engineer

# Water Right Summary

**WR File Number:** RG 44010      **Subbasin:** -      **Cross Reference:** -  
**Primary Purpose:** DOM 72-12-1 DOMESTIC ONE HOUSEHOLD  
**Primary Status:** EXP EXPIRED  
**Total Acres:**      **Subfile:** -  
**Total Diversion:**      **Cause/Case:** -  
**Owner:** PERCY E. GONZALES

**Documents on File**

Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
			1	2		To				
<a href="#">67023</a>	<a href="#">72121</a>	<a href="#">1986-07-15</a>	EXP	EXP	CONVERSION	RG 44010	T			

---For more information on Conversion Transactions, please see Help---

**Current Points of Diversion**

(NAD83 UTM in meters)

POD Number	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
<a href="#">RG 44010</a>				15	23N 10E	422267	4009465*	

\*An (\*) after northing value indicates 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

7/6/17 9:56 AM

WATER RIGHT  
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)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4 Sec Tws Rng</b>	<b>X</b>	<b>Y</b>
	RG 09961	2 33 24N 11E	430743	4014620*

**Driller License:** 227      **Driller Company:** ROYBAL WATERWELL DRILLING

**Driller Name:** ROYBAL, JAKE E.

**Drill Start Date:** 11/05/1963

**Drill Finish Date:** 11/11/1963

**Plug Date:**

**Log File Date:** 11/20/1963

**PCW Rcv Date:**

**Source:** Shallow

**Pump Type:**

**Pipe Discharge Size:**

**Estimated Yield:**

**Casing Size:** 6.63

**Depth Well:** 110 feet

**Depth Water:** 22 feet

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	65	78	Sandstone/Gravel/Conglomerate

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	90	110

\*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

## Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 608132

Transaction Desc: RG 20336 CLW

File Date: 06/06/2017

**Primary Status:** PMT Permit

**Secondary Status:** APR Approved

**Person Assigned:** \*\*\*\*\*

**Applicant:** KATHLEEN KNOTH

### Events

Date	Type	Description	Comment	Processed By
06/06/2017	APP	Application Received	*	*****
06/06/2017	FIN	Final Action on application		*****
06/06/2017	WAP	General Approval Letter		*****

### Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 20336		3		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

#### \*\*Point of Diversion

RG 20336 POD2		430423	4014803	
RG 20336	R	430320	4014237*	

\*An (\*) after northing value indicates UTM location was derived from PLSS - see Help

### Remarks

THIS PROCESS IS TO DRILL A NEW WELL THE CURRENT WELL IS NOT PRODUCING.

### Conditions

- 11 This permit authorizes the diversion of water for domestic use to serve a single household. The total diversion of water under this permit shall not exceed 3 acre-feet per year. The diversion of water for domestic use may include the watering of non-commercial trees, lawn and garden not to exceed one acre.
- 6D Well pod\_basin pod\_nbr pod\_suffix shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; 19.27.4.30.C unless an alternative plugging method is proposed by the well owner and approved by the State Engineer. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 20 days of completion of the plugging, but no later than log\_due

### Action of the State Engineer

\*\* See Image For Any Additional Conditions of Approval \*\*

**Approval Code:** A - Approved

**Action Date:** 06/06/2017

**Log Due Date:** 06/06/2018

**State Engineer:** Tom Blaine, P.E.

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 Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 420918      Transaction Desc: RG 16717      File Date: 05/19/1969

Primary Status: PMT Permit  
 Secondary Status: LOG Well Log Received  
 Person Assigned: \*\*\*\*\*  
 Applicant: CHRIS WEST

**Events**

Date	Type	Description	Comment	Processed By
 05/19/1969	APP	Application Received	*	*****
06/10/1969	FIN	Final Action on application		*****
06/10/1969	WAP	General Approval Letter		*****
 06/01/1970	LOG	Well Log Received	*	*****
07/23/2013	QAT	Quality Assurance Completed	IMAGE	*****

**Change To:**

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 16717		3		DOL 72-12-1 DOMESTIC AND LIVESTOCK WATERING
<b>**Point of Diversion</b>				
RG 16717		SW NE 23 24N	11E	in Taos County

**Remarks**

WELL LOCATION: ON PILAR HILL ABOVE THE MICA MILL 1/3 MILE NEAR HOUSE.

**Conditions**

- 4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

**Action of the State Engineer**

**\*\* See Image For Any Additional Conditions of Approval \*\***

Approval Code: A - Approved  
 Action Date: 06/10/1969  
 Log Due Date: 06/16/1970  
 State Engineer:

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

7/6/17 9:53 AM

TRANSACTION  
SUMMARY



## New Mexico Office of the State Engineer Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 307310      Transaction Desc: RG 11529      File Date: 07/22/1964

Primary Status: PMT Permit  
 Secondary Status: APR Approved  
 Person Assigned: \*\*\*\*\*  
 Applicant: HAROLD L. LAW

**Events**

Date	Type	Description	Comment	Processed By
 07/22/1964	APP	Application Received	*	*****
07/22/1964	FIN	Final Action on application		*****
07/22/1964	WAP	General Approval Letter		*****
06/18/2004	QAT	Quality Assurance Completed		*****
06/18/2004	QAT	Quality Assurance Completed		*****

**Change To:**

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 11529		3		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
<b>**Point of Diversion</b>				
RG 11529		SW NW 23 24N 11E		in Taos County

**Conditions**

- 4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

**Action of the State Engineer**

**\*\* See Image For Any Additional Conditions of Approval \*\***

Approval Code: A - Approved  
 Action Date: 07/22/1964  
 Log Due Date: 07/15/1965  
 State Engineer:

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.

7/6/17 9:57 AM

TRANSACTION  
SUMMARY



# New Mexico Office of the State Engineer Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 310137

Transaction Desc: RG 07747

File Date: 07/27/1962

Primary Status: CAN Cancelled Permit

Secondary Status: FIN Finalized

Person Assigned: \*\*\*\*\*

Applicant: HAROLD L. LAW

## Events

Date	Type	Description	Comment	Processed By
 07/27/1962	APP	Application Received	*	*****
07/27/1962	FIN	Final Action on application		*****
07/27/1962	WAP	General Approval Letter		*****
07/16/1963	FCN	Finalize Cancel of permit		*****

## Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 07747		3		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
<b>**Point of Diversion</b>				
RG 07747		SE NW 23 24N 11E		in Taos County

## Remarks

ALSO TO BE USED FOR LIVESTOCK WATERING.

APPROXIMATELY 3/4 MILES SOUTH OF HONDO CANYON TOWARDS PILAR.

## Conditions

- 4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

## Action of the State Engineer

**\*\* See Image For Any Additional Conditions of Approval \*\***

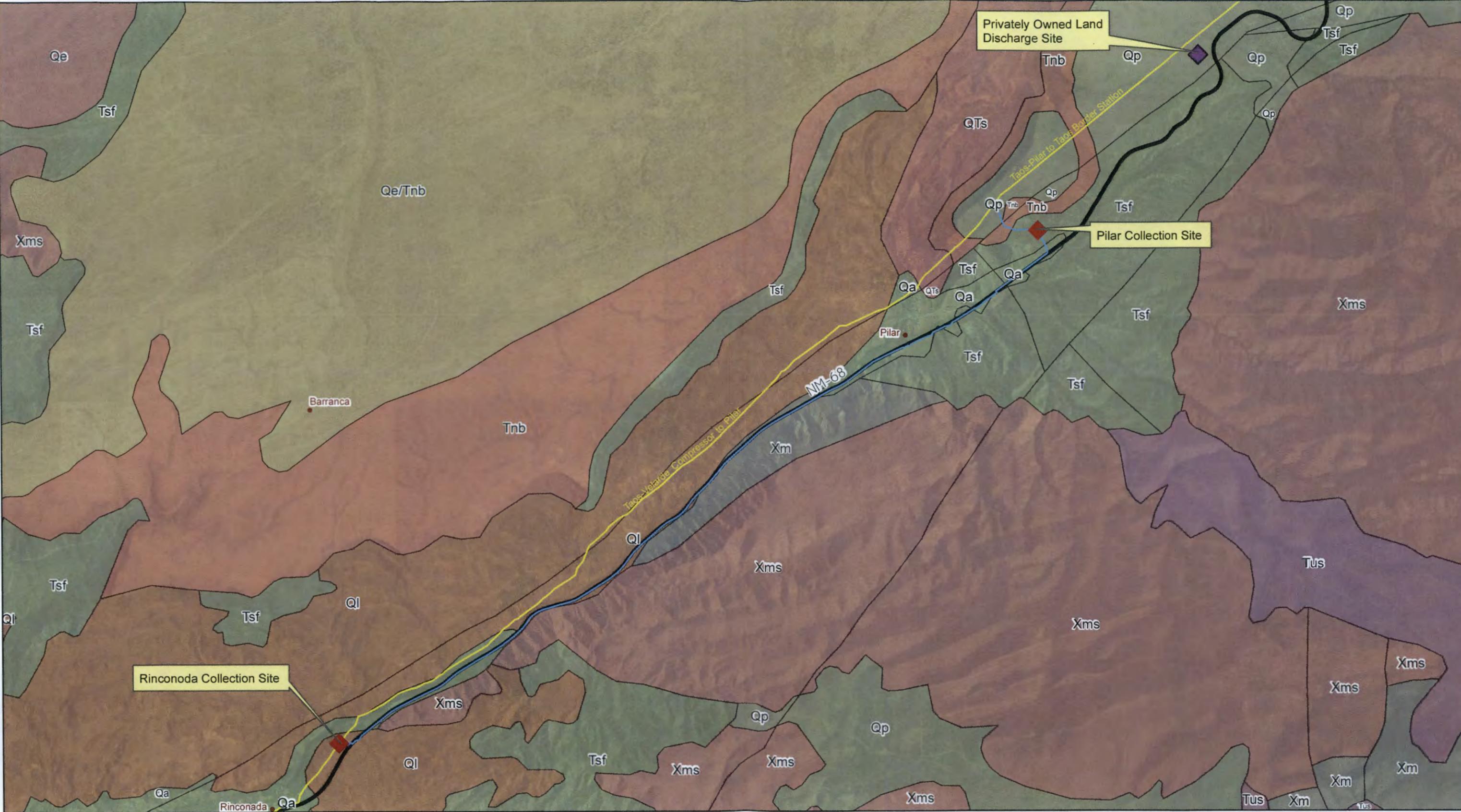
Approval Code: A - Approved

Action Date: 07/27/1962

Log Due Date: 07/15/1963

State Engineer:

# Appendix F

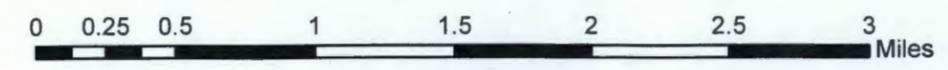


-  Major Streets
-  Collection Site
-  Discharge Site
-  Proposed Line
-  Transmission Line

- Ql** - Quaternary landslide deposits and colluvium (Holocene to Pleistocene)
- Tsf** - Tertiary alluvial deposits from the Santa Fe Group (Upper Miocene to Uppermost Oligocene)
- Qp** - Quaternary piedmont alluvial deposits, including deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. (Holocene to Pleistocene)

## Geology of Rinconoda and Pilar Area

1 inch = 3,500 feet



# Appendix G

Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)



Soil Map may not be valid at this scale.

Map Scale: 1:2,260 if printed on A portrait (8.5" x 11") sheet.

0 30 60 120 180 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84



Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)

### MAP LEGEND

<b>Area of Interest (AOI)</b>		 Spoil Area
	Area of Interest (AOI)	 Stony Spot
<b>Soils</b>		 Very Stony Spot
	Soil Map Unit Polygons	 Wet Spot
	Soil Map Unit Lines	 Other
	Soil Map Unit Points	 Special Line Features
<b>Special Point Features</b>		<b>Water Features</b>
 Blowout		 Streams and Canals
 Borrow Pit		<b>Transportation</b>
 Clay Spot		 Rails
 Closed Depression		 Interstate Highways
 Gravel Pit		 US Routes
 Gravelly Spot		 Major Roads
 Landfill		 Local Roads
 Lava Flow		<b>Background</b>
 Marsh or swamp		 Aerial Photography
 Mine or Quarry		
 Miscellaneous Water		
 Perennial Water		
 Rock Outcrop		
 Saline Spot		
 Sandy Spot		
 Severely Eroded Spot		
 Sinkhole		
 Slide or Slip		
 Sodic Spot		

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
Survey Area Date: Version 14, Sep 29, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties (NM650)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
148	Chita loam, 0 to 5 percent slopes	8.4	54.7%
242	Tinaja-Rock outcrop complex, 45 to 75 percent slopes	7.0	45.3%
<b>Totals for Area of Interest</b>		<b>15.4</b>	<b>100.0%</b>

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 148—Chita loam, 0 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wh4  
*Elevation:* 6,000 to 7,500 feet  
*Mean annual precipitation:* 10 to 16 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Chita and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Chita

##### Setting

*Landform:* Mesas  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Eolian deposits over slope alluvium derived from igneous and sedimentary rock

##### Typical profile

*A - 0 to 3 inches:* loam  
*BA and Bt - 3 to 10 inches:* loam  
*Btk and Bk - 10 to 38 inches:* silty clay loam  
*2Bk - 38 to 60 inches:* gravelly sandy clay loam

##### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 9.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6c

*Hydrologic Soil Group:* C

*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

### Minor Components

#### Dermla

*Percent of map unit:* 5 percent

*Landform:* Hills

*Landform position (two-dimensional):* Backslope, footslope, shoulder, toeslope

*Landform position (three-dimensional):* Crest, nose slope, side slope, head slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* Pinyon-Juniper/Skunkbush Sumac Shallow Sandy (F036XB133NM)

*Hydric soil rating:* No

#### Pinavetes

*Percent of map unit:* 5 percent

*Landform:* Dunes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Ecological site:* Sandy Slopes (R036XB111NM)

*Hydric soil rating:* No

#### Rock outcrop

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 242—Tinaja-Rock outcrop complex, 45 to 75 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wj2  
*Elevation:* 5,800 to 7,800 feet  
*Mean annual precipitation:* 13 to 16 inches  
*Mean annual air temperature:* 45 to 49 degrees F  
*Frost-free period:* 100 to 130 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Tinaja and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of  
the mapunit.*

#### Description of Tinaja

##### Setting

*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Colluvium derived from sandstone

##### Typical profile

*A - 0 to 4 inches:* extremely gravelly loam  
*Bk1 - 4 to 43 inches:* very cobbly sandy clay loam  
*2Bk2 - 43 to 60 inches:* sandy loam

##### Properties and qualities

*Slope:* 45 to 75 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0  
to 2.0 mmhos/cm)  
*Available water storage in profile:* Low (about 5.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated): 7e*  
*Hydrologic Soil Group: B*  
*Ecological site: Steep Gravelly - Woodland (F035XG135NM)*  
*Hydric soil rating: No*

### **Description of Rock Outcrop**

#### **Typical profile**

*R - 0 to 60 inches: bedrock*

#### **Properties and qualities**

*Depth to restrictive feature: 0 inches to lithic bedrock*  
*Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)*

### **Minor Components**

#### **Chita**

*Percent of map unit: 8 percent*  
*Landform: Mesas*  
*Landform position (two-dimensional): Shoulder*  
*Landform position (three-dimensional): Talf*  
*Down-slope shape: Convex*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*  
*Hydric soil rating: No*

#### **Menefee**

*Percent of map unit: 7 percent*  
*Landform: Hills*  
*Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope*  
*Landform position (three-dimensional): Crest, nose slope, side slope, head slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Ecological site: Gravelly - Woodland (F035XG134NM)*  
*Hydric soil rating: No*

#### **Teromote**

*Percent of map unit: 5 percent*  
*Landform: Alluvial fans*  
*Landform position (two-dimensional): Footslope*  
*Landform position (three-dimensional): Rise*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*

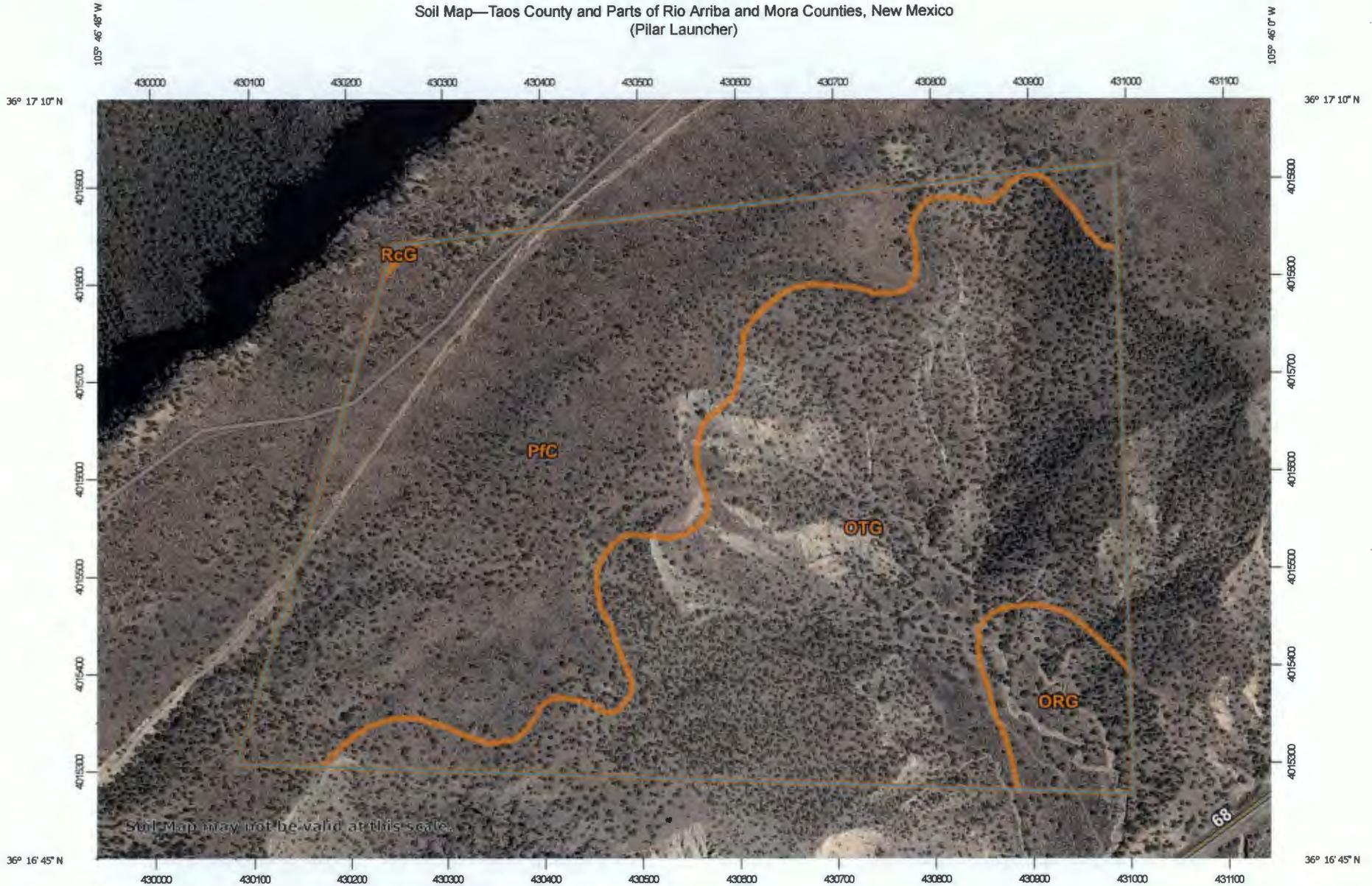
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and  
Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)



Map Scale: 1:5,500 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 250 500 1000 1500 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84



Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)

**MAP LEGEND**

- |                                                                                                          |                                                                                                          |                                                                                                         |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Area of Interest (AOI)</b>                                                                            |  Area of Interest (AOI) |  Spoil Area            |
| <b>Soils</b>                                                                                             |  Soil Map Unit Polygons |  Stony Spot            |
|                                                                                                          |  Soil Map Unit Lines    |  Very Stony Spot       |
|                                                                                                          |  Soil Map Unit Points   |  Wet Spot              |
| <b>Special Point Features</b>                                                                            |                                                                                                          |  Other                 |
|  Blowout                |                                                                                                          |  Special Line Features |
|  Borrow Pit             |                                                                                                          | <b>Water Features</b>                                                                                   |
|  Clay Spot              |                                                                                                          |  Streams and Canals    |
|  Closed Depression      |                                                                                                          | <b>Transportation</b>                                                                                   |
|  Gravel Pit             |                                                                                                          |  Rails                 |
|  Gravelly Spot          |                                                                                                          |  Interstate Highways   |
|  Landfill               |                                                                                                          |  US Routes             |
|  Lava Flow              |                                                                                                          |  Major Roads           |
|  Marsh or swamp         |                                                                                                          |  Local Roads           |
|  Mine or Quarry       |                                                                                                          | <b>Background</b>                                                                                       |
|  Miscellaneous Water  |                                                                                                          |  Aerial Photography    |
|  Perennial Water      |                                                                                                          |                                                                                                         |
|  Rock Outcrop         |                                                                                                          |                                                                                                         |
|  Saline Spot          |                                                                                                          |                                                                                                         |
|  Sandy Spot           |                                                                                                          |                                                                                                         |
|  Severely Eroded Spot |                                                                                                          |                                                                                                         |
|  Sinkhole             |                                                                                                          |                                                                                                         |
|  Slide or Slip        |                                                                                                          |                                                                                                         |
|  Sodic Spot           |                                                                                                          |                                                                                                         |

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ORG	Orthents-Badland association, very steep	6.0	5.0%
OTG	Orthents-Rock outcrop association, very steep	61.4	50.7%
PfC	Petaca-Prieta complex, 1 to 8 percent slopes	53.6	44.3%
RcG	Rock outcrop, very steep	0.1	0.1%
<b>Totals for Area of Interest</b>		<b>121.1</b>	<b>100.0%</b>

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### OTG—Orthents-Rock outcrop association, very steep

#### Map Unit Setting

*National map unit symbol:* k1gl  
*Elevation:* 6,400 to 10,000 feet  
*Mean annual precipitation:* 9 to 23 inches  
*Mean annual air temperature:* 44 to 54 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Orthents and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Orthents

##### Setting

*Landform:* Canyons  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Colluvium derived from basalt

##### Typical profile

*H1 - 0 to 10 inches:* very gravelly loam  
*H2 - 10 to 60 inches:* very gravelly clay loam

##### Properties and qualities

*Slope:* 40 to 80 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.21 to 0.71 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Moderate (about 6.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* C  
*Ecological site:* Breaks (R051XA006NM)  
*Hydric soil rating:* No

### **Description of Rock Outcrop**

#### **Typical profile**

*R - 0 to 60 inches:* bedrock

#### **Properties and qualities**

*Depth to restrictive feature:* 0 inches to lithic bedrock

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8

*Hydric soil rating:* Unranked

### **Minor Components**

#### **Montecito**

*Percent of map unit:* 10 percent

*Ecological site:* south of Gallup 13-16 (F036XA001NM)

*Hydric soil rating:* No

#### **Trampas**

*Percent of map unit:* 10 percent

*Ecological site:* Pine Grassland (R048AY010NM)

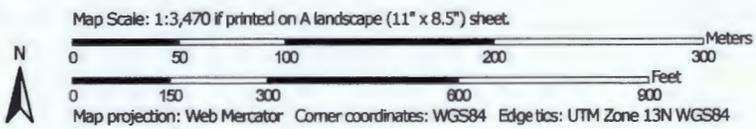
*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)



Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)

### MAP LEGEND

- |                                                                                                          |  |                                                                                                         |  |
|----------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|--|
| <b>Area of Interest (AOI)</b>                                                                            |  |  Spoil Area            |  |
|  Area of Interest (AOI) |  |  Stony Spot            |  |
| <b>Soils</b>                                                                                             |  |  Very Stony Spot       |  |
|  Soil Map Unit Polygons |  |  Wet Spot              |  |
|  Soil Map Unit Lines    |  |  Other                 |  |
|  Soil Map Unit Points   |  |  Special Line Features |  |
| <b>Special Point Features</b>                                                                            |  | <b>Water Features</b>                                                                                   |  |
|  Blowout                |  |  Streams and Canals    |  |
|  Borrow Pit             |  | <b>Transportation</b>                                                                                   |  |
|  Clay Spot              |  |  Rails                 |  |
|  Closed Depression      |  |  Interstate Highways   |  |
|  Gravel Pit             |  |  US Routes             |  |
|  Gravelly Spot          |  |  Major Roads           |  |
|  Landfill               |  |  Local Roads           |  |
|  Lava Flow              |  | <b>Background</b>                                                                                       |  |
|  Marsh or swamp         |  |  Aerial Photography    |  |
|  Mine or Quarry         |  |                                                                                                         |  |
|  Miscellaneous Water    |  |                                                                                                         |  |
|  Perennial Water        |  |                                                                                                         |  |
|  Rock Outcrop           |  |                                                                                                         |  |
|  Saline Spot            |  |                                                                                                         |  |
|  Sandy Spot             |  |                                                                                                         |  |
|  Severely Eroded Spot   |  |                                                                                                         |  |
|  Sinkhole              |  |                                                                                                         |  |
|  Slide or Slip        |  |                                                                                                         |  |
|  Sodic Spot           |  |                                                                                                         |  |

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other basemap on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SSC	Silva-Sedillo association, gently sloping	40.9	100.0%
<b>Totals for Area of Interest</b>		<b>40.9</b>	<b>100.0%</b>

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### SSC—Silva-Sedillo association, gently sloping

#### Map Unit Setting

*National map unit symbol:* k1hf  
*Elevation:* 6,500 to 8,000 feet  
*Mean annual precipitation:* 11 to 14 inches  
*Mean annual air temperature:* 46 to 54 degrees F  
*Frost-free period:* 115 to 135 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Silva and similar soils:* 65 percent  
*Sedillo and similar soils:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Silva

##### Setting

*Landform:* Ridges, divides  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale

##### Typical profile

*H1 - 0 to 3 inches:* loam  
*H2 - 3 to 31 inches:* clay loam  
*H3 - 31 to 60 inches:* clay loam

##### Properties and qualities

*Slope:* 1 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* High (about 10.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

### Description of Sedillo

#### Setting

*Landform:* Divides  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock

#### Typical profile

*H1 - 0 to 3 inches:* gravelly loam  
*H2 - 3 to 11 inches:* very gravelly clay loam  
*H3 - 11 to 60 inches:* very gravelly sandy loam

#### Properties and qualities

*Slope:* 5 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 3 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Low (about 4.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Ecological site:* Gravelly Slopes (R036XA004NM)  
*Hydric soil rating:* No

### Minor Components

#### Fernando

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

#### Manzano

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015

# Appendix H

# FEMA's National Flood Hazard Layer (Official) Rincondada collection location

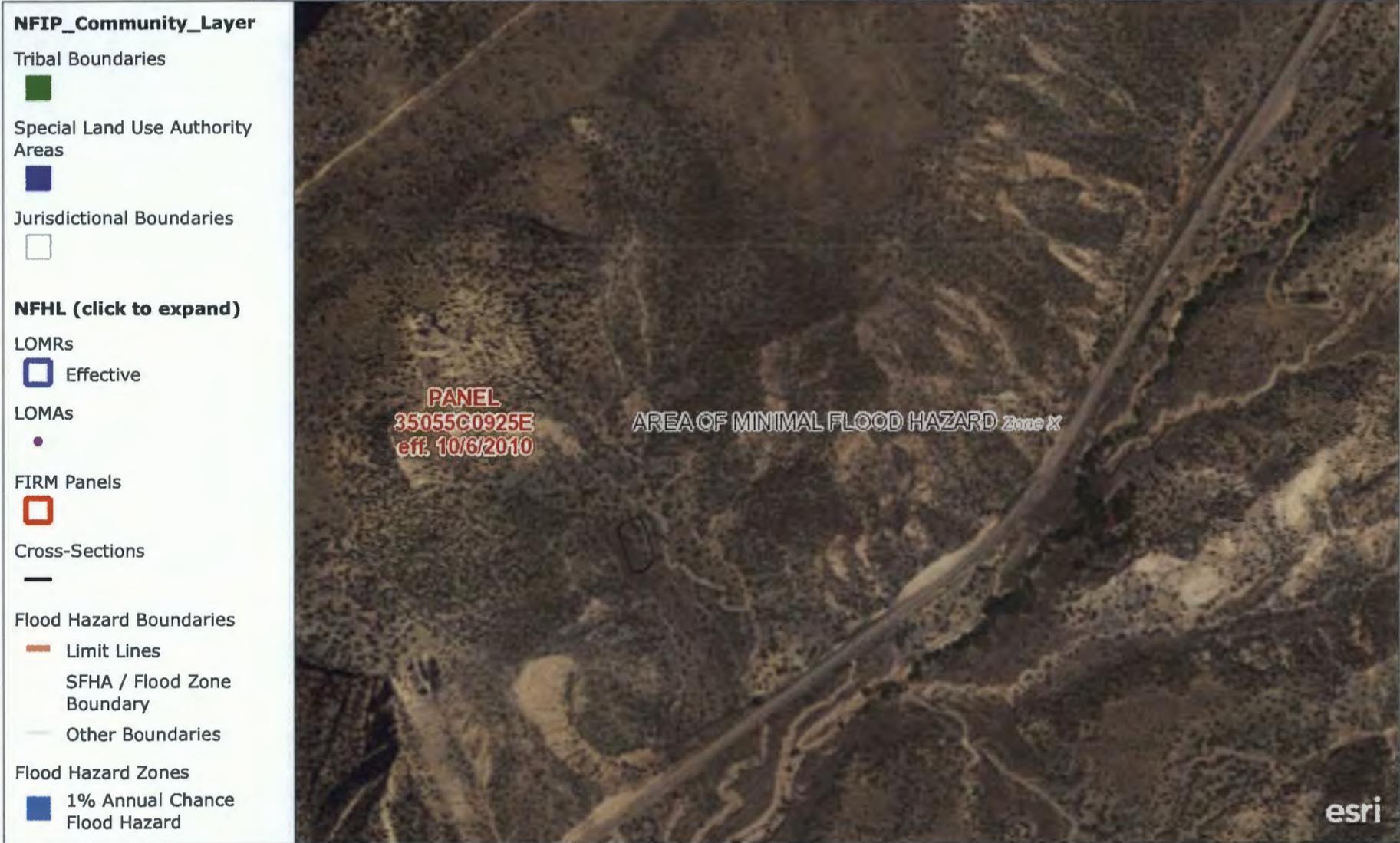


Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: FEMAMapSpecialist@riskmapcds.com | USDA FSA, Microsoft

# FEMA's National Flood Hazard Layer (Official) *Pillar collection location*

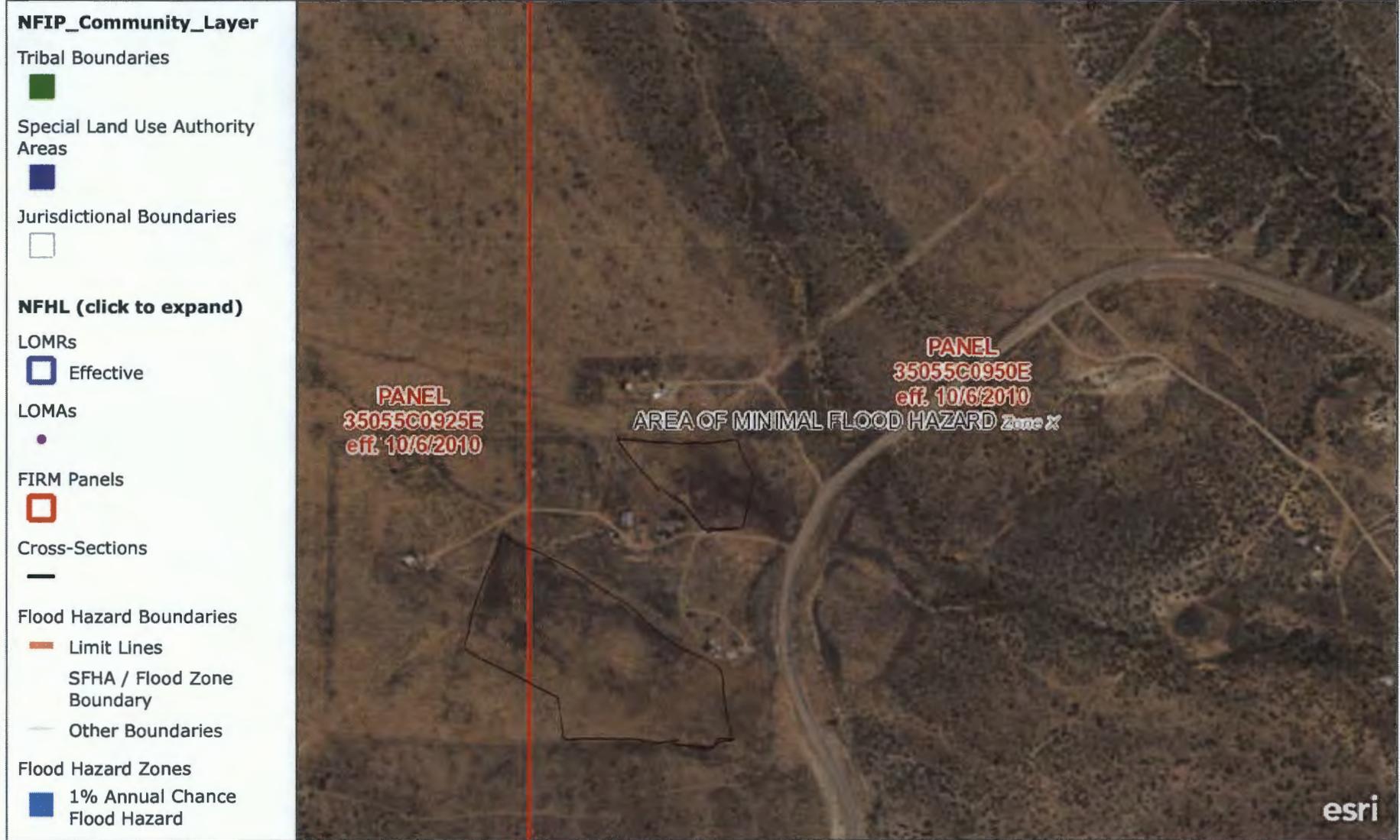


Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

# FEMA's National Flood Hazard Layer (Official)

Private land discharge location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: FEMAMapSpecialist@riskmapcds.com | USDA FSA, Microsoft

## NOTICE OF PUBLICATION

New Mexico Gas Company (NMGC), 7120 Wyoming Blvd NE, Albuquerque, NM 87109, has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for discharging the hydrostatic test water from the Taos Mainline, a newly constructed natural gas pipeline. Approximately 6.7 miles of new 12-inch pipe and 0.4 miles of new 8-inch pipe will be hydrostatically tested using water from the City of Espanola. NMGC will discharge the test water within T24N R11W Sections 22 and 23. This location is west of Highway 68 about a ¼ mile north of NMDOT milepost 32 (approximately 3.5 miles north of Pilar, NM). The hydrostatic test is scheduled for November 2017. Approximately 78,500 gallons of wastewater will be generated from the hydrostatic test of new pipe. Because NMGC is testing new pipe, the water is expected to meet Water Quality Control Commission (WQCC) water quality standards in NMAC 20.6.2.3103. If WQCC water quality standards are not met the test water will be hauled to an OCD approved facility for disposal. The depth of groundwater potentially affected by the discharge is about 300 feet below the surface. The total dissolved solids in the region range from 200-400 mg/l.

Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices by contacting Brad Jones at the New Mexico OCD at 1220 South St Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will provide future notices for this pipeline upon request.

**Jones, Brad A., EMNRD**

---

**From:** Jones, Brad A., EMNRD  
**Sent:** Thursday, August 17, 2017 5:22 PM  
**To:** 'Fiedler, Marcelle F.'  
**Subject:** RE: Pilar hydrostatic test NOI

Marcelle,

Thank you for making the appropriate revisions. Please mail OCD a hardcopy.

Brad

*Brad A. Jones*  
*Environmental Engineer*  
*EMNRD Oil Conservation Division*  
*1220 S. Saint Francis Drive*  
*Santa Fe, New Mexico 87505*  
*E-mail: [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)*  
*Office: (505) 476-3487*  
*Fax: (505) 476-3462*

---

**From:** Fiedler, Marcelle F. [mailto:Marcelle.Fiedler@nmgco.com]  
**Sent:** Thursday, August 17, 2017 2:59 PM  
**To:** Jones, Brad A., EMNRD <[brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)>  
**Subject:** RE: Pilar hydrostatic test NOI

Brad  
I believe I captured what we discussed today. Let me know if this looks alright and I will send it in the mail tomorrow.  
marcelle

---

**From:** Jones, Brad A., EMNRD [mailto:[brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)]  
**Sent:** Thursday, August 17, 2017 9:45 AM  
**To:** Fiedler, Marcelle F. <[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)>  
**Subject:** Pilar hydrostatic test NOI

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*Brad A. Jones*  
*Environmental Engineer*  
*EMNRD Oil Conservation Division*  
*1220 S. Saint Francis Drive*  
*Santa Fe, New Mexico 87505*  
*E-mail: [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)*

*Office: (505) 476-3487*

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**Jones, Brad A., EMNRD**

---

**From:** Fiedler, Marcelle F. <Marcelle.Fiedler@nmgco.com>  
**Sent:** Thursday, August 17, 2017 2:59 PM  
**To:** Jones, Brad A., EMNRD  
**Subject:** RE: Pilar hydrostatic test NOI  
**Attachments:** 2017 Pilar hydro test ver4 recover.doc; public notice Pilar 2017.doc

Brad  
I believe I captured what we discussed today. Let me know if this looks alright and I will send it in the mail tomorrow.  
marcelle

---

**From:** Jones, Brad A., EMNRD [mailto:brad.a.jones@state.nm.us]  
**Sent:** Thursday, August 17, 2017 9:45 AM  
**To:** Fiedler, Marcelle F. <Marcelle.Fiedler@nmgco.com>  
**Subject:** Pilar hydrostatic test NOI

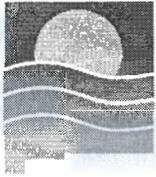
**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

*Brad A. Jones  
Environmental Engineer  
EMNRD Oil Conservation Division  
1220 S. Saint Francis Drive  
Santa Fe, New Mexico 87505  
E-mail: [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)  
Office: (505) 476-3487  
Fax: (505) 476-3462*

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New Mexico  
GAS COMPANY®  
AN EMERA COMPANY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

August 17, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division (OCD) replied with a letter on June 9, 2017 saying the application was administratively incomplete. NMGC submitted corrections to the proposal on July 20<sup>th</sup>. In response to further comments made by Brad Jones at OCD on the July 20<sup>th</sup> revision, NMGC is submitting the following revisions to the proposal. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back by an C-133 water hauler to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added (using a C-133 water hauler) for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. A water sample will be taken after the completion of the last test section and

sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3.5 miles north of Pilar NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total but water will be sprayed within the areas cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed.

D. Maps

The following maps are included with this permit application.

- Appendix A - Overview of project area
- Appendix B - Land Ownership maps (topo map)
- Appendix C - Water collection site (topo and aerial map)
- Appendix D - Discharge location site (topo and aerial map)
- Appendix E - Well map and POD's
- Appendix F - Geology of area
- Appendix G - Soils
- Appendix H - FEMA maps

E. Demonstration of Compliance with Siting Criteria

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*

1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station, the tank holding 6,500 gallons is 166 ft from an ephemeral stream located to the northeast. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Collection Location Topo maps)

ii. *Within an existing wellhead protection area or 100 year floodplain*

2. According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (RG44010) associated with this well shows it is expired. The closest active well to the tanks on the south end at Rinconada station is 1900ft away. The well nearest to the Pilar Station is 2,500 ft away. The POD number is RG09961. There is a pending well (POD RG20336) more than 2000 ft from the Pilar location. (see Well location maps, POD print outs, and section N below)
3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
4. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>

iii. *Within or within 500ft of a wetland*

5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)

iv. *Within the area overlying a subsurface mine*

6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using the USGS quad maps to search. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. (see attached maps)

<http://www.emnrd.state.nm.us/mmd/mmdonline.html>

v. *Within 500 feet from the nearest residence, school, hospital, institution or church*

7. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Discharge area maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. The landowner has told NMGC there are no active wells on the private property used for discharging water. Records from the State Engineers Office, show the nearest active well is more than 2500 ft to the east of the discharge area. The POD for this well is RG16717. The records for well POD RG11529 located on the private property, show it was never installed and POD RG07747 was cancelled. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. *Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using USGS quad maps. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. See attached maps.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  7. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. There are 3 residences (residents 1-3) within the property where water will be discharged and 1 resident (resident 4) on the property directly to the north that has an adjoining property line. No water will be discharged on the neighboring property, but residence #4 is 170 feet from the discharge area.

The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure (residence #2) in the SE part of the property when water is sprayed in the SW area. NMGC will maintain a 100ft buffer from residence #2. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge

area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NE area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily. (see Discharge area maps)

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. It will take approximately 5 days to discharge all the water. NMGC anticipates that the water will be off site by approximately December 1st.

#### G. Method & Location for Collection and Retention of Fluids

##### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon closed top frac tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon closed top frac tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

#### H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does not occur. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. Water will not be sprayed on days when wind will carry the water off the ground. Boundaries of areas where water will not be discharged will be flagged or have signs.

I. Request for Alternate Treatment/Disposal

NMGC is not requesting an alternate discharge location.

J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the last test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

K. Method of Disposal of Fluids and Solids after Test Completion if the Water exceeds the WQCC standards

NMGC is a transmission and distribution company. Therefore, waste generated by NMGC is RCRA nonexempt. If the hydrostatic test water does not meet OCD conditions (WQCC standards) for discharge to the ROW and is not a RCRA characterized hazardous waste (40 CFR 261.21-24), NMGC will dispose of it at the class one injection well at Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a RCRA characterized hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDF for disposal.

L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

M. Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

### *Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Ql) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

### Geologic Reference:

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

### Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (RG44010) associated with this well shows it is expired (print out of this and other PODs is attached). Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 130 feet. Given that the Rinconada collection location is 200 feet higher in elevation than those wells, the depth to ground water at the

collection location is likely between 210 and 330 feet. The well nearest to the Pilar Station is 2,500 ft to the south and its depth to water is 22ft. The POD number is RG09961. The elevation at that well is 6340 feet and the elevation at the Pilar location is 6400 feet. Therefore, the groundwater at the Pilar collection location is approximately 82 ft. There is a pending well (POD RG20336) more than 2000 ft from the Pilar location.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water and the depth to water is 400 ft. The POD for this well is RG16717. Since the elevation at the well is 100 feet higher than the discharge area, the depth to groundwater at the discharge area is likely approximately 300 ft. The records for well POD RG11529 located on the private property, show it was never installed and POD RG07747 was cancelled.

*Total dissolved solids (TDS) for the project area:* There are two springs 2.5 miles northeast of the discharge location. The springs have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

#### O. ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. NMGC has received a permit from BLM for this project. The BLM permit application included a discussion of the frac tanks that will collect water from the hydrostatic test. NMGC has received written confirmation from the private landowner giving approval to discharge the water on their property (see attached letter). The landowner adjacent to the private landowner (residence #4 - Mark and Ann Robertson) where water will be discharged has been notified by letter of the project. NMGC is researching the other private landowners within 1/3 of a mile of the discharge location and will notify them of the proposed hydrostatic test. BLM is the surrounding landowner at the Pilar collection location. There are 2 private landowners within 1/3 of a mile of the Rinconda collection location. They are Patricia Nielsen and Leslie Rogers – Peckman and they will be notified of the hydrostatic test.

#### Release

In the event of a release associated with project activities, NMGC will conduct corrective action pursuant to WQCC Regulation 20.6.2.1203 NMAC and release notification pursuant to OCD Rule 29 (19.15.29 NMAC).

#### Public Notice

Once OCD rules this application as administratively complete, NMGC will provide notice in Spanish and English of the permit application in the Taos News as a display ad (not in the legal or classified section) at least 3 inches by 4 inches following requirements in NMAC 20.6.2.3108. In addition, a 2ft by 3ft sign with a synopsis of the public notice in Spanish and English will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west

side near the private property where water will be discharged as defined in 20.6.2.3108.B.1 for 30 days.

NMGC will also send a copy of the public notice by certified mail, return receipt to the owner of the discharge location and send a copy of the public notice by mail to all owners within 1/3 mile from the discharge site as listed in section O above.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

Thank you for your assistance. If additional information is required please notify me in writing. Please call me at (505) 697-3516 if you have any questions.

Sincerely,

Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on August 4, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

### A. Collection Areas

- Is not within an active wellhead protection area that supplies public or private water system (nearest active wells are between 1900 and 2500ft away and the nearest springs are 2.5 miles away) or within a 100 year floodplain.
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo (as shown on the National Wetland Inventory data) within 170 feet of the Pilar collection location. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

### B. Discharge Area

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system (nearest active well is 2500ft away and the nearest springs are 2.5 miles away) or within 100 year floodplain
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences: 300ft from residence #1, 100ft from residences #2 and 3, and 170ft from residence #4.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

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Signature

Title

Date

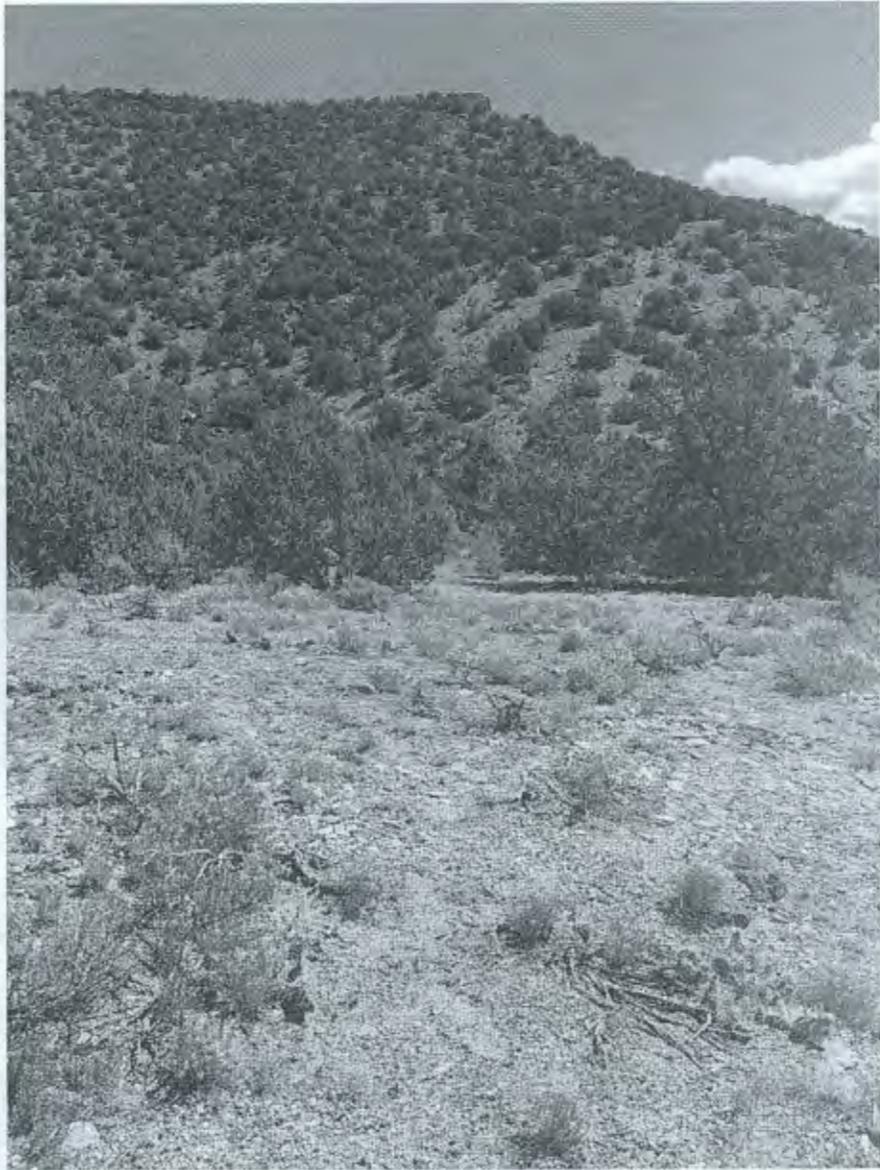
## Figure 1



# Photos



Rinconada collection location



Pilar collection location



SW discharge area private land



NE discharge area private land

# Attachments

## NOTICE OF PUBLICATION

New Mexico Gas Company (NMGC), 7120 Wyoming Blvd NE, Albuquerque, NM 87109, has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for discharging the hydrostatic test water from the Taos Mainline, a newly constructed natural gas pipeline. Approximately 6.7 miles of new 12-inch pipe and 0.4 miles of new 8-inch pipe will be hydrostatically tested using water from the City of Espanola. NMGC will discharge the test water within T24N R11W Sections 22 and 23. This location is west of Highway 68 about a ¼ mile north of NMDOT milepost 32 (approximately 3.5 miles north of Pilar, NM). The hydrostatic test is scheduled for November 2017. Approximately 78,500 gallons of wastewater will be generated from the hydrostatic test of new pipe. Because NMGC is testing new pipe, the water is expected to meet Water Quality Control Commission (WQCC) water quality standards in NMAC 20.6.2.3103. If WQCC water quality standards are not met the test water will be hauled to an OCD approved facility for disposal. The depth of groundwater potentially affected by the discharge is about 300 feet below the surface. The total dissolved solids in the region range from 200-400 mg/l.

Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices by contacting Brad Jones at the New Mexico OCD at 1220 South St Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will provide future notices for this pipeline upon request.

**Jones, Brad A., EMNRD**

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**From:** Jones, Brad A., EMNRD  
**Sent:** Thursday, August 17, 2017 9:45 AM  
**To:** 'Fiedler, Marcelle F.'  
**Subject:** Pilar hydrostatic test NOI  
**Attachments:** 2017 0815 OCD Pilar hydro test ver3.pdf; 2017 0816 OCD public notice Pilar 2017.pdf; Discharge FEMA's National Flood Hazard Layer (Official).pdf; Pilar FEMA's National Flood Hazard Layer (Official).pdf; Rinconada FEMA's National Flood Hazard Layer (Official).pdf

*Brad A. Jones*  
*Environmental Engineer*  
*EMNRD Oil Conservation Division*  
*1220 S. Saint Francis Drive*  
*Santa Fe, New Mexico 87505*  
*E-mail: [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)*  
*Office: (505) 476-3487*  
*Fax: (505) 476-3462*



New Mexico  
GAS COMPANY®  
AN EMERA COMPANY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

August 8, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division (OCD) replied with a letter on June 9, 2017 saying the application was administratively incomplete. NMGC submitted corrections to the proposal on July 20<sup>th</sup>. In response to further comments made by Brad Jones at OCD on the July 20<sup>th</sup> revision, NMGC is submitting the following revisions to the proposal. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back by an C-133 water hauler to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added (using a C-133 water hauler) for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. A water sample will be taken after the completion of the last test section and

sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3.5 miles north of Pilar NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total but water will be sprayed within the areas cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed.

D. Maps

The following maps are included with this permit application.

- Appendix A - Overview of project area
- Appendix B - Land Ownership maps (topo map)
- Appendix C - Water collection site (topo and aerial map)
- Appendix D - Discharge location site (topo and aerial map)
- Appendix E - Well map and POD's
- Appendix F - Geology of area
- Appendix G - Soils
- Appendix H - FEMA maps

E. Demonstration of Compliance with Siting Criteria

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station, the tank holding 6,500 gallons is 166 ft from an ephemeral stream located to the northeast. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Collection Location Topo maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (074010) associated with this well shows it is expired. The closest active well to the tanks on the south end at Rinconada station is 1900ft away. The well nearest to the Pilar Station is 2,500 ft away. The POD number is 09961. There is a pending well (POD 20336) more than 2000 ft from the Pilar location. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. *Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)
- iv. *Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using the USGS quad maps to search. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. (see attached maps)  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  7. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

# Summary of Comments on October 4, 2000

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Page: 3

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 8/16/2017 1:00:22 PM

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POD's are assigned a Basin... without the Basin identified they could be located anywhere within the state. Please provide the proper POD assignment.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Discharge area maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. The landowner has told NMGC there are no active wells on the private property used for discharging water. Records from the State Engineers Office, show the nearest active well is more than 2500 ft to the east of the discharge area. The POD for this well is 16717. The records for well POI 529 located on the private property, show it was never installed and POD 07747 was cancelled. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. *Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using USGS quad maps. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. See attached maps.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  7. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. There are 3 residences (residents 1-3) within the property where water will be discharged and 1 resident (resident 4) on the property directly to the north that has an adjoining property line. No water will be discharged on the neighboring property, but residence #4 is 170 feet from the discharge area.

The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure (residence #2) in the SE part of the property when water is sprayed in the SW area. NMGC will maintain a 100ft buffer from residence #2. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area.

POD's are assigned a Basin... without the Basin identified they could be located anywhere within the state. Please provide the proper POD assignment.

However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NE area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily. (see Discharge area maps)

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. It will take approximately 5 days to discharge all the water. NMGC anticipates that the water will be off site by approximately December 1st.

#### G. Method & Location for Collection and Retention of Fluids

##### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon closed top frac tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon closed top frac tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

#### H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does

not occur. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. Water will not be sprayed on days when wind will carry the water off the ground. Boundaries of areas where water will not be discharged will be flagged or have signs.

I. Request for Alternate Treatment/Disposal

NMGC is not requesting an alternate discharge location.

J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the last test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

K. Method of Disposal of Fluids and Solids after Test Completion if the Water exceeds the WQCC standards

If the hydrostatic test water does not meet OCD conditions (WQCC standards) for discharge to the ROW and is not a RCRA characterized hazardous waste (40 CFR 261.21-24), NMGC will dispose of it at the Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a RCRA characterized hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDF for disposal.

L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

M. Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

*Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower

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Number: 1 Author: bjones Subject: Sticky Note Date: 8/16/2017 1:02:15 PM  
What is the basis of the proposed testing? Is the wastewater RCRA exempt or non-exempt waste? and how is this determined? What type of pipeline is this?

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Number: 2 Author: bjones Subject: Sticky Note Date: 8/16/2017 1:04:26 PM  
what is the significance of having to take this wastewater to the Agua Mosa facility?

Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Ql) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

#### Geologic Reference:

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

#### Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (10) associated with this well shows it is expired (print out of this and other PODs is attached). Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 130 feet. Given that the Rinconada collection location is 200 feet higher in elevation than those wells, the depth to ground water at the collection location is likely between 210 and 330 feet. The well nearest to the Pilar Station is 2,500 ft to the south and its depth to water is 22ft. The POD number is 09961. The elevation at that well is 6340 feet and the elevation at the Pilar location is 6400 feet. Therefore, the

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Number: 1 Author: bjones Subject: Sticky Note Date: 8/16/2017 1:05:02 PM  
POD's are assigned a Basin... without the Basin identified they could be located anywhere within the state. Please provide the proper POD assignment.

groundwater at the Pilar collection location is approximately 82 ft. There is a pending well (POD 20336) more than 2000 ft from the Pilar location.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water and the depth to water is 400 ft. The POD for this well is 16717. Since the elevation at the well is 100 feet higher than the discharge area, the depth to groundwater at the discharge area is likely approximately 300 ft. The records for well POD 11529 located on the private property, show it was never installed and POD 07747 was cancelled.

*Total dissolved solids (TDS) for the project area:* There are two springs 2.5 miles northeast of the discharge location. The springs have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

O. ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. NMGC has received a permit from BLM for this project. The BLM permit application included a discussion of the frac tanks that will collect water from the hydrostatic test. NMGC has received written confirmation from the private landowner giving approval to discharge the water on their property (see attached letter). The landowner adjacent to the private landowner (residence #4 - Mark and Ann Robertson) where water will be discharged has been notified by letter of the project. NMGC is researching the other private landowners within 1/3 of a mile of the discharge location and will notify them of the proposed hydrostatic test. BLM is the surrounding landowner at the Pilar collection location. There are 2 private landowners within 1/3 of a mile of the Rinconda collection location. They are Patricia Nielsen and Leslie Rogers – Peckman and they will be notified of the hydrostatic test.

Closing

In the event of a release associated with project activities, NMGC will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.29 to remediate the spill as soon as possible.  1

Once OCD rules this application as administratively complete, and  required, NMGC will provide notice of the permit application in the Taos News as a display ad at least 3 inches by 4 inches following requirements in NMAC 20.6.2.3108. In addition, a 2ft by 3ft sign with a synopsis of the public notice will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west side near the private property where water will be discharged as defined in 20.6.2.3108.B.1.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 8/15/2017 12:15:49 PM  
conduct corrective action pursuant to WQCC Regulation 20.6.2.1203 NMAC and release notification pursuant to OCD Rule 29 (19.15.29 NMAC)

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Number: 2      Author: bjones      Subject: Sticky Note      Date: 8/16/2017 1:14:26 PM  
Public notice requirements are required... part of due process. No mention of all public (newspaper and signs) notices have to be in English and Spanish. No mention of compliance to 20.6.2.3108.(2) and (3) NMAC. Please ensure that the mailed notices satisfy the timeline sequence specified in 20.2.6.3108 NMAC. The notices discussed in Item O above do not satisfy the requirements of 20.6.2.3108 NMAC

Thank you for your assistance. If additional information is required please notify me in writing.  
Please call me at (505) 697-3516 if you have any questions.

Sincerely,

Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on August 17 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

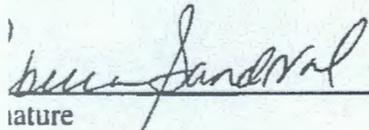
### 1. Collection Areas

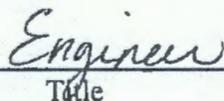
- Is not within an active wellhead protection area that supplies public or private water system (nearest active wells are between 1900 and 2500ft away and the nearest springs are 2.5 miles away) or within a 100 year floodplain.
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo (as shown on the National Wetland Inventory data) within 170 feet of the Pilar collection location. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

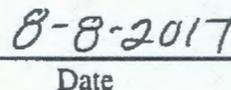
### 3. Discharge Area

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system (nearest active well is 2500ft away and the nearest springs are 2.5 miles away) or within 100 year floodplain
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences: 300ft from residence #1, 100ft from residences #2 and 3, and 170ft from residence #4.

observations in the field match the enclosed map showing where NMGC plans to collect the water.

  
Signature

  
Title

  
Date

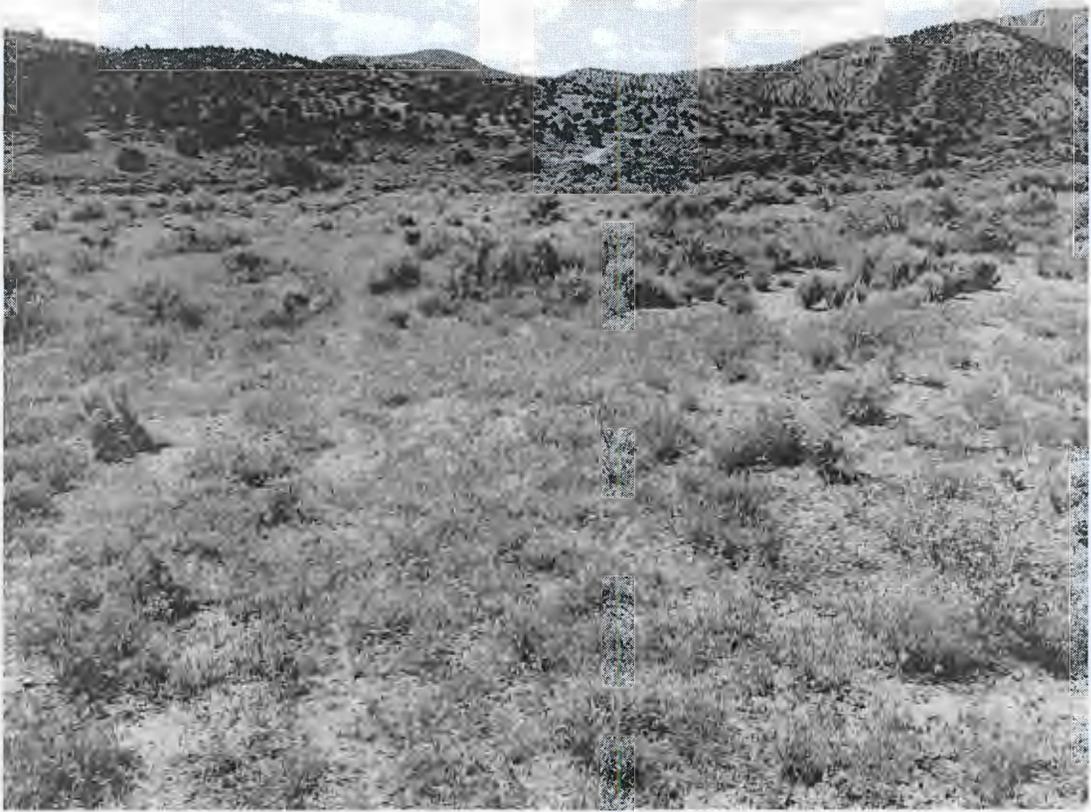
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Number: 1      Author: bjones      Subject: Sticky Note      Date: 8/15/2017 9:22:44 AM

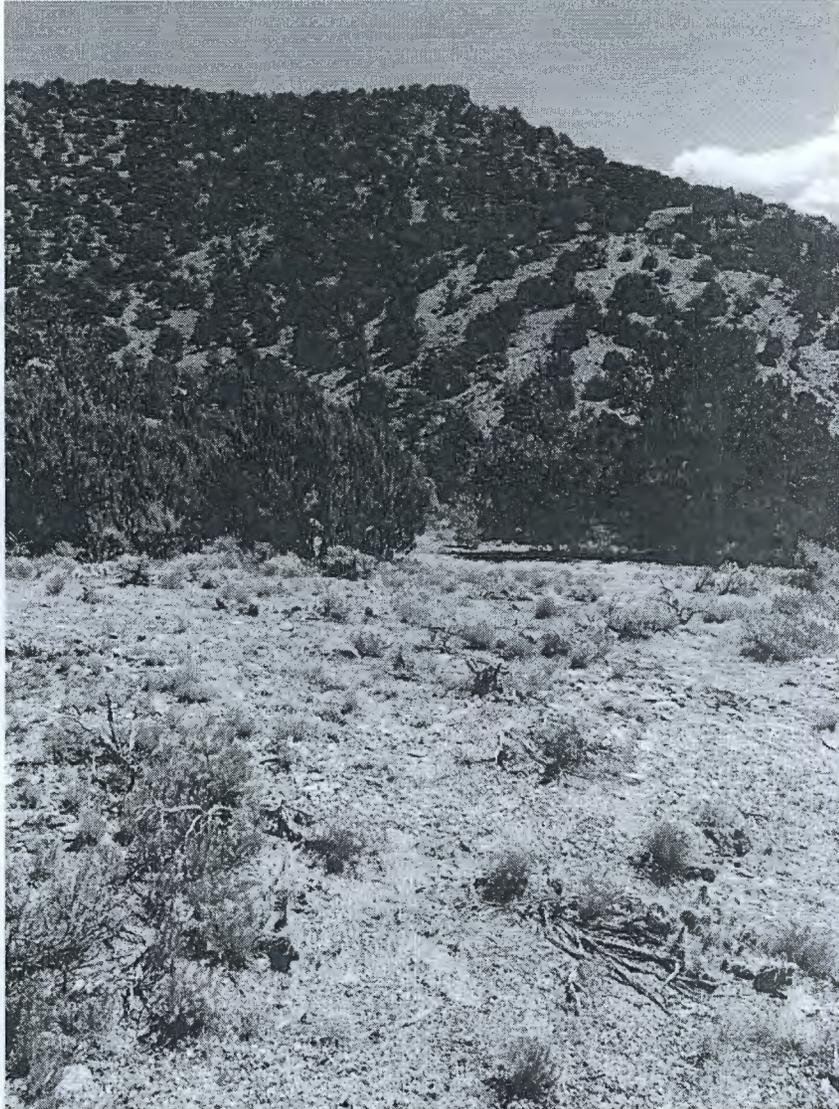
In the future do not use these terms since they are not applicable to the definition of a wellhead protection area pursuant to 19.15.2.7 NMAC



# Photos



Rinconada collection location



Pilar collection location



SW discharge area private land



NE discharge area private land



# Attachments

**From:** [Tompson, Mike, EMNRD](#)  
**To:** [Fiedler, Marcelle F.](#)  
**Cc:** [Kretzmann, John, EMNRD](#)  
**Subject:** RE: recorded mines  
**Date:** Friday, April 28, 2017 8:06:14 AM

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**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

Hello Marcelle,

The New Mexico Mining & Minerals Division has no knowledge of any abandoned mines in the four sections detailed in your email.

Please let us know if you have any other questions.

Mike Tompson  
New Mexico Mining & Minerals Division  
(505) 476-3427

**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Thursday, April 27, 2017 2:27 PM  
**To:** Tompson, Mike, EMNRD <[Mike.Tompson@state.nm.us](mailto:Mike.Tompson@state.nm.us)>  
**Subject:** recorded mines

Hi Mike

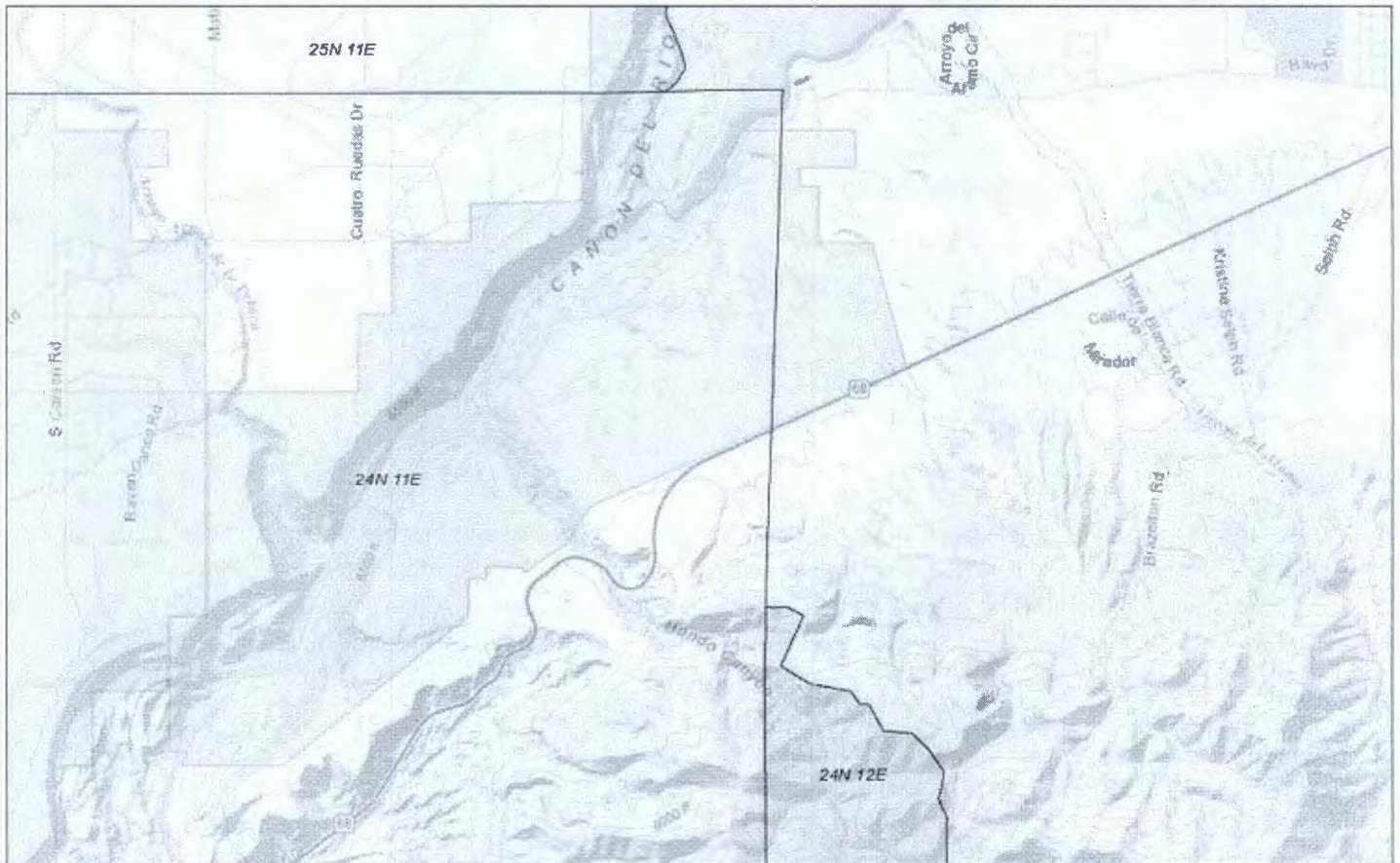
New Mexico Gas Company is planning to do a hydrostatic pressure test of a gas transmission line near Rinconada and Pilar, NM later this year. As part of the permit application process with the Oil Conservation Division, we need to obtain information on the location of active or abandoned mines in the area of our test. Can you please tell me if there are any active or abandoned mines within the following sections?

1. Section 15 T23N r10E
2. Section 22, 23, 28 T24N R11E

Thank you for your assistance. Please contact me if you have any questions.

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

# Active Mines in New Mexico



August 3, 2017

CadNSDI PLSS Township



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey,

NM EMNRD ITO GIS  
BLM and RGIS, of course | RGIS, CadNSDI, TRD, J R Jenks | Esri, HERE, Garmin, FAO, USGS, EPA, NPS |



vertical upflow of deeply sourced thermal waters along faults or at fault intersections.

To further investigate groundwater sources and intermixing, we examine distribution maps of major ions and Piper diagrams that show cation and anion percentages and ion trends. Chemistry data from shallow wells between the mountain front and the Rio Pueblo, including Ponce de Leon and upper Arroyo del Alamo, are used to construct concentration maps of the dissolved solids content and the major ions Ca/Na, HCO<sub>3</sub>, SO<sub>4</sub>, and Cl for the shallow basin and bedrock aquifers (Figs. 29–33). Chemistry results from surface water and wells in the deep confined aquifer were not used to create the concentration maps, but are shown on the figures. Ion chemistry and summary statistics for each aquifer are presented in Table 9. The observed patterns and some hydrologic implications are discussed.

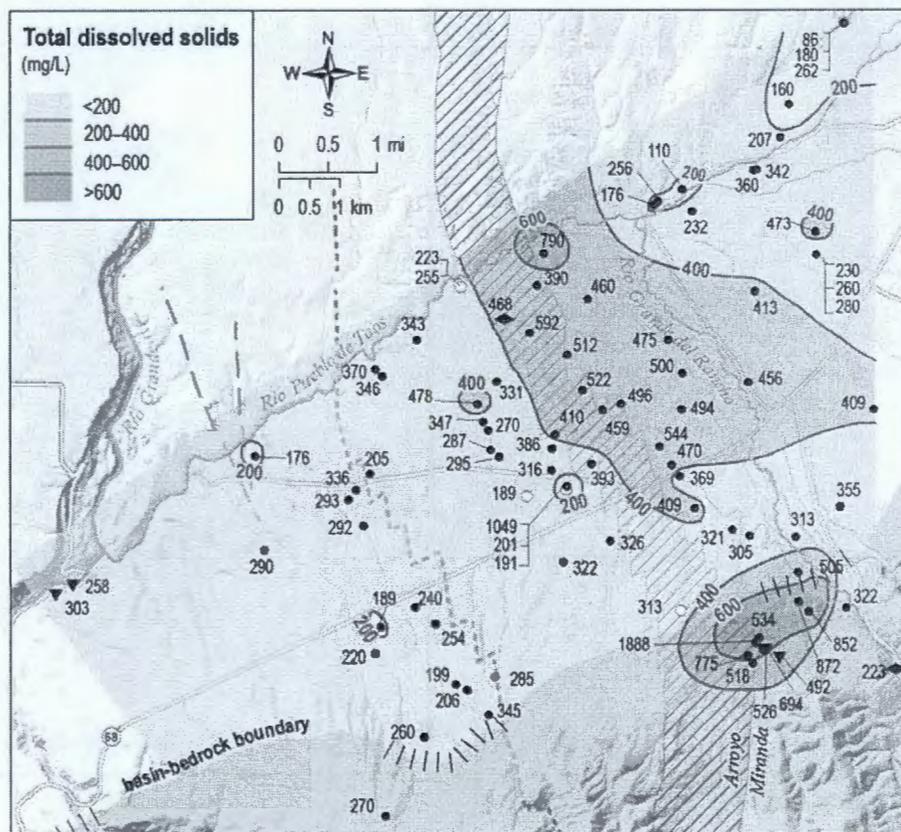
**Dissolved solid content**—Concentrations of dissolved solids, called TDS, range from 86–790 mg/L in the Picuris piedmont aquifer (Fig. 29, Table 9). High TDS values (400–600 mg/L) are clustered in the northern Rio Grande del Rancho valley and westward toward the Taos golf course, but both higher

and lower values are scattered throughout the area, for example: 790 mg/L TDS in a 122-foot deep well (TV-136) and 390 mg/L TDS in an adjacent 105-foot deep well (TV-238) (Fig. 29, Table 9). An intriguing and unusual trend in the distribution of TDS in the basin-fill aquifers is that TDS does not increase with depth, and concentrations in the deep confined aquifer (180–313 mg/L) are lower than or comparable to those in the shallow Picuris piedmont aquifer. Bedrock aquifers exhibit an extreme range in TDS, with the highest concentrations found in the hydrothermal waters at Ponce de Leon (492–1,888 mg/L) and the lowest from a well in quartzite bedrock in the upper Arroyo del Alamo watershed (48 mg/L, TV-230).

**Calcium and sodium**—Calcium concentrations range from 2.6 to 175 mg/L, and sodium ranges from 8.2 to 143 mg/L (Table 9). The distribution of calcium and sodium is illustrated as a calcium-to-sodium ratio (Fig. 30), where values greater than 1 indicate calcium dominance and values less than 1 indicate sodium dominance. Shallow groundwater in the Picuris piedmont aquifer is generally Ca-rich, as are stream waters from the Rio Grande del Rancho (TV-512), Rio Pueblo (TV-513) and Rio Lucero (TV-514). The

**Figure 29.** Map showing the dissolved solid content (TDS) in the Picuris piedmont aquifer. Values for the deep confined aquifer are also shown.

- Data**
- Well in Picuris piedmont aquifer
  - Well in deep confined aquifer
  - ▼ Spring
  - ◆ Surface water
- Depth specific samples**
- Contoured value
  - #
  - #
- Geologic features**
- Bedrock
  - ||| Hydrogeologic window
  - ▨ Northern projection of Miranda graben
  - - - Picuris-Pecos fault
  - Geophysical fault



## NOTICE OF PUBLICATION

New Mexico Gas Company (NMGC), 7120 Wyoming Blvd NE, Albuquerque, NM 87109, has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for hydrostatically testing the Taos Mainline, a newly constructed natural gas pipeline. Approximately 6.7 miles of new 12-inch pipe and 0.4 miles of new 8-inch pipe will be hydrostatically tested using water from the City of Espanola. NMGC will discharge the test water within T24N R11W Sections 22 and 23. This location is west of Highway 68 about a ¼ mile north of NMDOT milepost 32 (approximately 3.5 miles north of Pilar, NM). The hydrostatic test is scheduled for November 2017. Approximately 78,500 gallons of wastewater will be generated from the hydrostatic test of new pipe. Because NMGC is testing new pipe, the water is expected to meet Water Quality Control Commission (WQCC) water quality standards in NMAC 20.6.2.3103. If WQCC water quality standards are not met the test water will be hauled to an OCD approved facility for disposal. The depth of groundwater potentially affected by the discharge is about 300 feet below the surface. The total dissolved solids in the region range from 200-400 mg/l.

Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices by contacting Brad Jones at the New Mexico OCD at 1220 South St Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will provide future notices for this pipeline upon request.

# Summary of Comments on Microsoft Word - public notice Pilar 2017.doc

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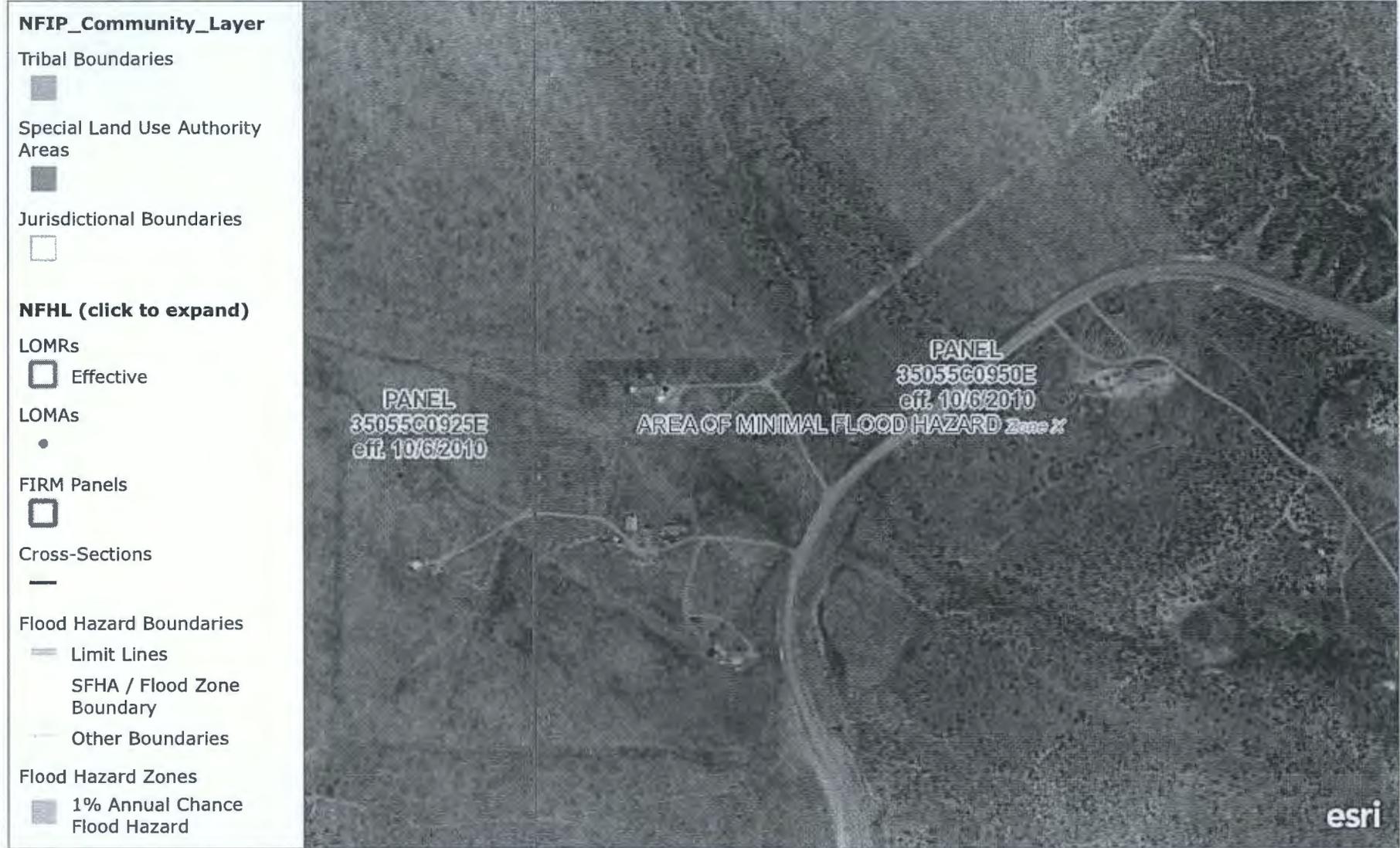
Page: 1

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 8/16/2017 1:22:29 PM

OCD is not permitting the hydrostatic test. OCD is permitting the surface discharge of the wastewater generated from the hydro test.  
Please clarify

# FEMA's National Flood Hazard Layer (Official)



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcde.com](mailto:FEMAMapSpecialist@riskmapcde.com) | USDA FSA, Microsoft

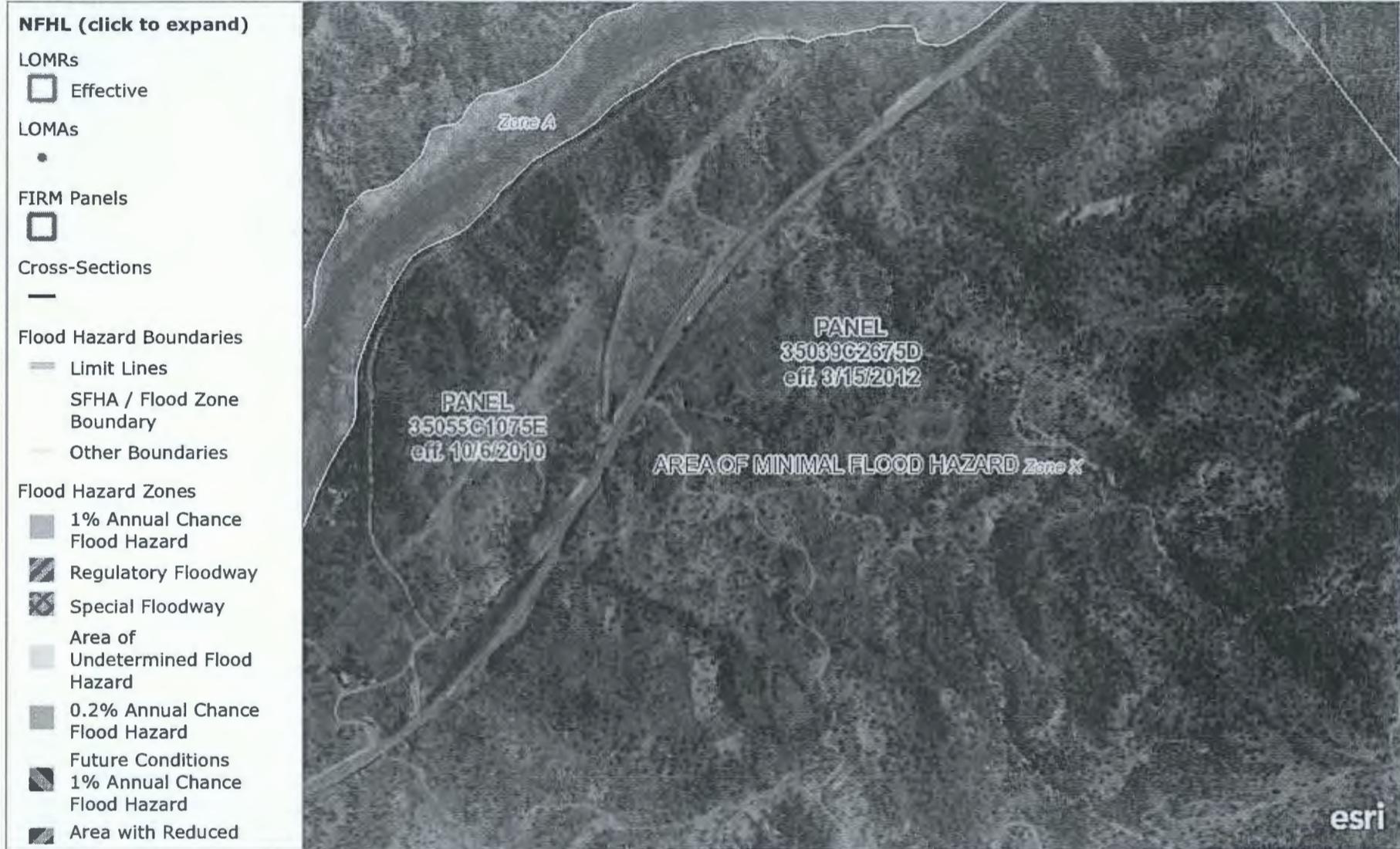
# FEMA's National Flood Hazard Layer (Official)



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

# FEMA's National Flood Hazard Layer (Official)



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
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0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcfs.com](mailto:FEMAMapSpecialist@riskmapcfs.com) | USDA FSA, Microsoft

## Jones, Brad A., EMNRD

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**From:** Fiedler, Marcelle F. <Marcelle.Fiedler@nmgco.com>  
**Sent:** Tuesday, August 8, 2017 3:50 PM  
**To:** Jones, Brad A., EMNRD  
**Cc:** Sandoval, Rebecca  
**Subject:** Pilar hydrostatic test NOI  
**Attachments:** 2017 Pilar hydro test ver3.pdf; OCD NOI maps 1-4.pdf; All LO notification.pdf; All mine data.pdf; All Pilar project well data.pdf; public notice Pilar 2017.doc; Pilar FEMA maps of locations.pdf

Brad

Attached are my revisions to the NOI for the Pilar Hydrostatic test which includes changes in response to your most recent comments from the end of July. Again the well maps are too large to email, but I added a label to the map showing the POD number associated with each well. I hope I have captured all the things we discussed.

Placement of sign - In your comments you asked for clarification about where we will place the 2ft by 3ft sign at the discharge location. NMAC 20.6.2.3108.B.1 says a sign will be placed at or near the proposed facility. NMGC plans to place a sign within Highway 68 ROW on the west side "at or near" the discharge location. Unfortunately I cannot find a definition of "near" in the NMAC. Since we do not know yet the exact location of the sign I hesitate to include a map proposing a location in case we need to change it. As I understand it NMGC must abide by what is written in the notice of intent submitted to OCD. We do intend to have the sign near the discharge location so that it will be visible to the residents living on the property who have also been notified by mail of the hydrostatic test.

Expired well – You ask for clarification about the expired well (POD 44010) near the Rinconada collection location. I do not know what the Office of State Engineers means by expired. The OSE maps show this well as no longer active as best as I can tell. I have enclosed a print out of the POD for your information.

C-133 hauler – When hauling water that has been inside the pipeline we are required to use a C-133 water hauler. The list of haulers is quite extensive and we do not yet know who our contractor will be using. I cannot at the this time specify which company we will use, but the NOI states we will use a C-133 hauler and I have forward the OCD list to the contractor.

FEMA maps – as you suggested on the phone I down loaded the FIRM panel maps to show the floodplain data. These files are too large for me to email and I feel the official FEMA FIRM maps I provided in the last revision adequately demonstrate our project is not within the 100 year floodplain.

Please review the revised NOI NMGC has prepared for this project and I hope it can be considered complete and we can begin the public notice process. In this email I did not include the geology or soil information as you have that from a previous submittal.

Sincerely,  
Marcelle Fiedler

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

Mailing address:  
PO Box 97500, BC 22  
Albuquerque, NM 87199-7500

Office: 505-697-3516  
Cell: 505-220-1056

New email address is: [Marcelle.fiedler@nmgco.com](mailto:Marcelle.fiedler@nmgco.com)

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**New Mexico**  
**GAS COMPANY®**  
AN EMERA COMPANY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

August 8, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division (OCD) replied with a letter on June 9, 2017 saying the application was administratively incomplete. NMGC submitted corrections to the proposal on July 20<sup>th</sup>. In response to further comments made by Brad Jones at OCD on the July 20<sup>th</sup> revision, NMGC is submitting the following revisions to the proposal. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back by an C-133 water hauler to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added (using a C-133 water hauler) for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. A water sample will be taken after the completion of the last test section and

sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3.5 miles north of Pilar NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total but water will be sprayed within the areas cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed.

D. Maps

The following maps are included with this permit application.

- Appendix A - Overview of project area
- Appendix B - Land Ownership maps (topo map)
- Appendix C - Water collection site (topo and aerial map)
- Appendix D - Discharge location site (topo and aerial map)
- Appendix E - Well map and POD's
- Appendix F - Geology of area
- Appendix G - Soils
- Appendix H - FEMA maps

**E. Demonstration of Compliance with Siting Criteria**

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

- i. Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station, the tank holding 6,500 gallons is 166 ft from an ephemeral stream located to the northeast. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Collection Location Topo maps)
- ii. Within an existing wellhead protection area or 100 year floodplain*
  2. According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (44010) associated with this well shows it is expired. The closest active well to the tanks on the south end at Rinconada station is 1900ft away. The well nearest to the Pilar Station is 2,500 ft away. The POD number is 09961. There is a pending well (POD 20336) more than 2000 ft from the Pilar location. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)
- iv. Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using the USGS quad maps to search. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. (see attached maps)  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. Within 500 feet from the nearest residence, school, hospital, institution or church*
  7. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. There are no lakebeds, sinkholes or playa lakes within 200ft. (see Discharge area maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. The landowner has told NMGC there are no active wells on the private property used for discharging water. Records from the State Engineers Office, show the nearest active well is more than 2500 ft to the east of the discharge area. The POD for this well is 16717. The records for well POD 11529 located on the private property, show it was never installed and POD 07747 was cancelled. (see Well location maps, POD print outs, and section N below)
  3. USGS quad maps show the nearest springs are more than 2.5 miles from the north end of the project.
  4. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).  
<http://fema.maps.arcgis.com/home/item.html?id=cbe088e7c8704464aa0fc34eb99e7f30>
- iii. *Within or within 500ft of a wetland*
  5. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
  6. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines using USGS quad maps. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property. See attached maps.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  7. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. There are 3 residences (residents 1-3) within the property where water will be discharged and 1 resident (resident 4) on the property directly to the north that has an adjoining property line. No water will be discharged on the neighboring property, but residence #4 is 170 feet from the discharge area.

The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure (residence #2) in the SE part of the property when water is sprayed in the SW area. NMGC will maintain a 100ft buffer from residence #2. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area.

However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NE area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily. (see Discharge area maps)

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. It will take approximately 5 days to discharge all the water. NMGC anticipates that the water will be off site by approximately December 1st.

#### G. Method & Location for Collection and Retention of Fluids

##### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon closed top frac tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon closed top frac tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

#### H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does

not occur. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. Water will not be sprayed on days when wind will carry the water off the ground. Boundaries of areas where water will not be discharged will be flagged or have signs.

I. Request for Alternate Treatment/Disposal

NMGC is not requesting an alternate discharge location.

J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the last test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

K. Method of Disposal of Fluids and Solids after Test Completion if the Water exceeds the WQCC standards

If the hydrostatic test water does not meet OCD conditions (WQCC standards) for discharge to the ROW and is not a RCRA characterized hazardous waste (40 CFR 261.21-24), NMGC will dispose of it at the Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a RCRA characterized hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSD for disposal.

L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

M. Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

*Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower

Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Ql) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

#### Geologic Reference:

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

#### Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet west from the Rinconada collection location. The POD (44010) associated with this well shows it is expired (print out of this and other PODs is attached). Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 130 feet. Given that the Rinconada collection location is 200 feet higher in elevation than those wells, the depth to ground water at the collection location is likely between 210 and 330 feet. The well nearest to the Pilar Station is 2,500 ft to the south and its depth to water is 22ft. The POD number is 09961. The elevation at that well is 6340 feet and the elevation at the Pilar location is 6400 feet. Therefore, the

groundwater at the Pilar collection location is approximately 82 ft. There is a pending well (POD 20336) more than 2000 ft from the Pilar location.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water and the depth to water is 400 ft. The POD for this well is 16717. Since the elevation at the well is 100 feet higher than the discharge area, the depth to groundwater at the discharge area is likely approximately 300 ft. The records for well POD 11529 located on the private property, show it was never installed and POD 07747 was cancelled.

*Total dissolved solids (TDS) for the project area:* There are two springs 2.5 miles northeast of the discharge location. The springs have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

O. ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. NMGC has received a permit from BLM for this project. The BLM permit application included a discussion of the frac tanks that will collect water from the hydrostatic test. NMGC has received written confirmation from the private landowner giving approval to discharge the water on their property (see attached letter). The landowner adjacent to the private landowner (residence #4 - Mark and Ann Robertson) where water will be discharged has been notified by letter of the project. NMGC is researching the other private landowners within 1/3 of a mile of the discharge location and will notify them of the proposed hydrostatic test. BLM is the surrounding landowner at the Pilar collection location. There are 2 private landowners within 1/3 of a mile of the Rinconda collection location. They are Patricia Nielsen and Leslie Rogers – Peckman and they will be notified of the hydrostatic test.

Closing

In the event of a release associated with project activities, NMGC will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.29 to remediate the spill as soon as possible.

Once OCD rules this application as administratively complete, and if required, NMGC will provide notice of the permit application in the Taos News as a display ad at least 3 inches by 4 inches following requirements in NMAC 20.6.2.3108. In addition, a 2ft by 3ft sign with a synopsis of the public notice will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west side near the private property where water will be discharged as defined in 20.6.2.3108.B.1.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

Thank you for your assistance. If additional information is required please notify me in writing.  
Please call me at (505) 697-3516 if you have any questions.

Sincerely,

Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on August 4, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

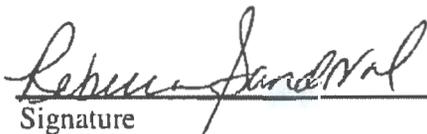
### A. Collection Areas

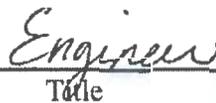
- Is not within an active wellhead protection area that supplies public or private water system (nearest active wells are between 1900 and 2500ft away and the nearest springs are 2.5 miles away) or within a 100 year floodplain.
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo (as shown on the National Wetland Inventory data) within 170 feet of the Pilar collection location. In addition, there are 2 small arroyos not shown on the USFWS maps to the north and west. The arroyo to the west is 80 feet away and the one to the north is 120 feet away. These arroyos were GPS'ed and are shown on the map provided.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

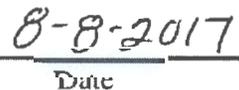
### B. Discharge Area

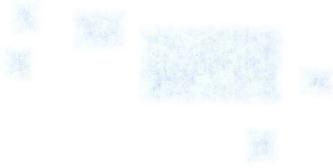
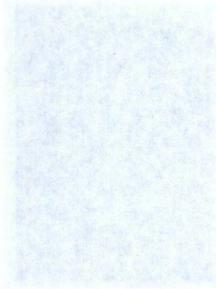
- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system (nearest active well is 2500ft away and the nearest springs are 2.5 miles away) or within 100 year floodplain
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences: 300ft from residence #1, 100ft from residences #2 and 3, and 170ft from residence #4.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

  
Signature

  
Title

  
Date



# Photos



Rinconada collection location



Pilar collection location



SW discharge area private land



NE discharge area private land

21

# **Attachments**

**From:** [Tompson, Mike, EMNRD](#)  
**To:** [Fiedler, Marcelle F.](#)  
**Cc:** [Kretzmann, John, EMNRD](#)  
**Subject:** RE: recorded mines  
**Date:** Friday, April 28, 2017 8:06:14 AM

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**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

Hello Marcelle,

The New Mexico Mining & Minerals Division has no knowledge of any abandoned mines in the four sections detailed in your email.

Please let us know if you have any other questions.

Mike Tompson  
New Mexico Mining & Minerals Division  
(505) 476-3427

**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Thursday, April 27, 2017 2:27 PM  
**To:** Tompson, Mike, EMNRD <[Mike.Tompson@state.nm.us](mailto:Mike.Tompson@state.nm.us)>  
**Subject:** recorded mines

Hi Mike

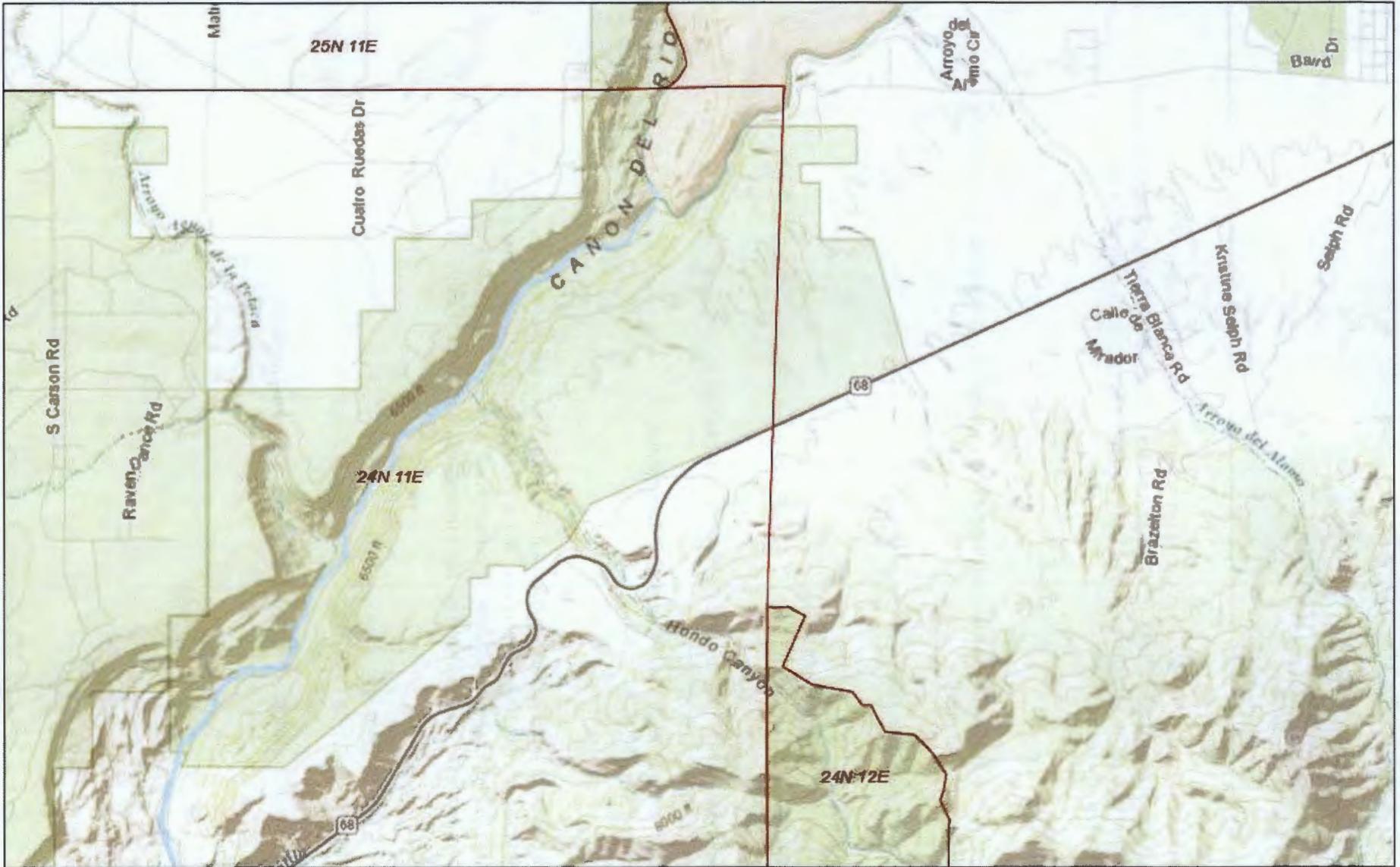
New Mexico Gas Company is planning to do a hydrostatic pressure test of a gas transmission line near Rinconada and Pilar, NM later this year. As part of the permit application process with the Oil Conservation Division, we need to obtain information on the location of active or abandoned mines in the area of our test. Can you please tell me if there are any active or abandoned mines within the following sections?

1. Section 15 T23N r10E
2. Section 22, 23, 28 T24N R11E

Thank you for your assistance. Please contact me if you have any questions.

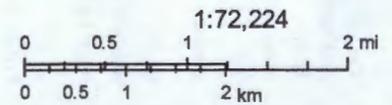
Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

# Active Mines in New Mexico



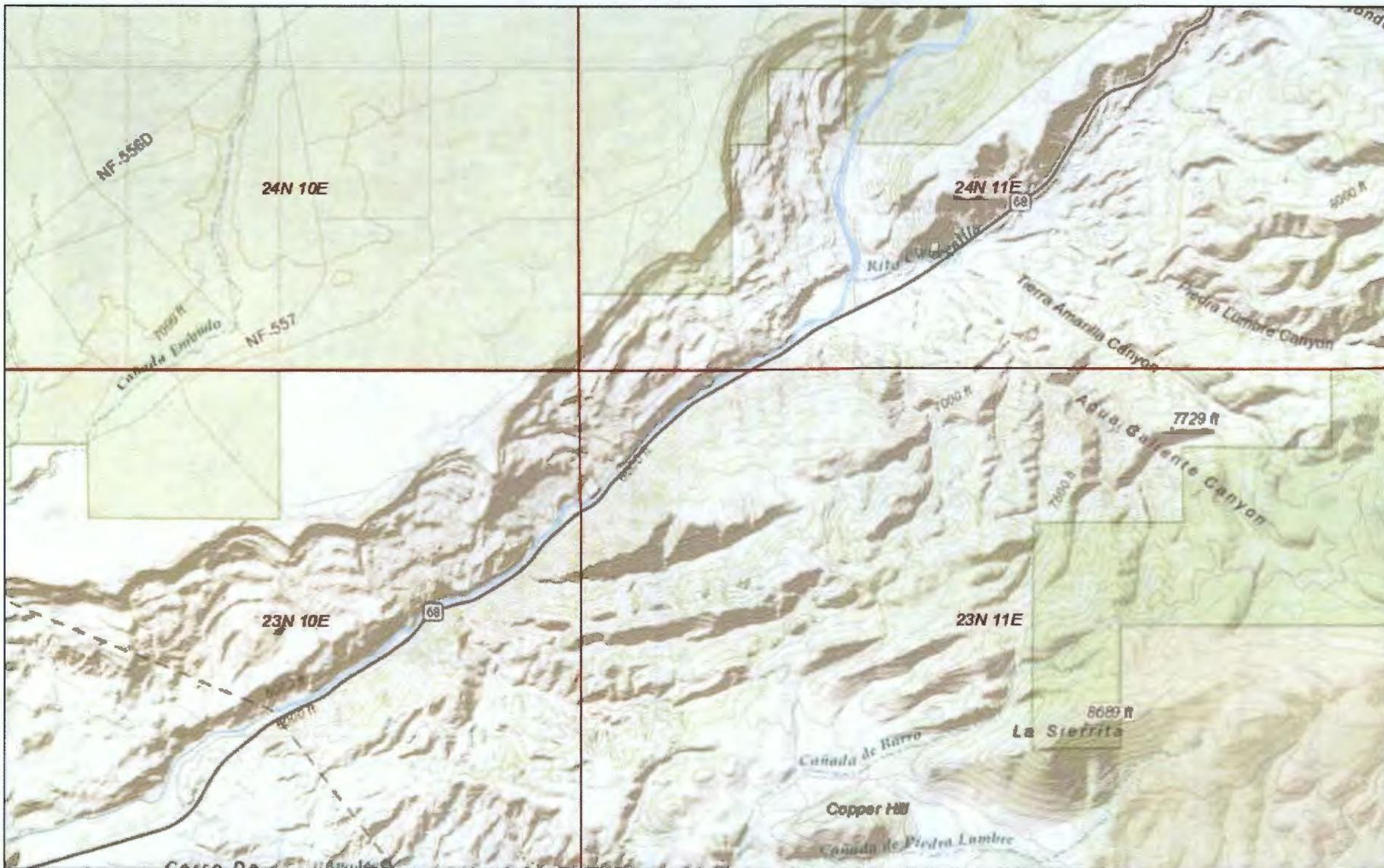
August 3, 2017

 CadNSDI PLSS Township



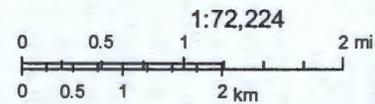
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeCBASE, IGN, Kadaster NL, Ordnance Survey,

# Active Mines in New Mexico



August 3, 2017

 CadNSDI PLSS Township



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

vertical upflow of deeply sourced thermal waters along faults or at fault intersections.

To further investigate groundwater sources and intermixing, we examine distribution maps of major ions and Piper diagrams that show cation and anion percentages and ion trends. Chemistry data from shallow wells between the mountain front and the Rio Pueblo, including Ponce de Leon and upper Arroyo del Alamo, are used to construct concentration maps of the dissolved solids content and the major ions Ca/Na, HCO<sub>3</sub>, SO<sub>4</sub>, and Cl for the shallow basin and bedrock aquifers (Figs. 29–33). Chemistry results from surface water and wells in the deep confined aquifer were not used to create the concentration maps, but are shown on the figures. Ion chemistry and summary statistics for each aquifer are presented in Table 9. The observed patterns and some hydrologic implications are discussed.

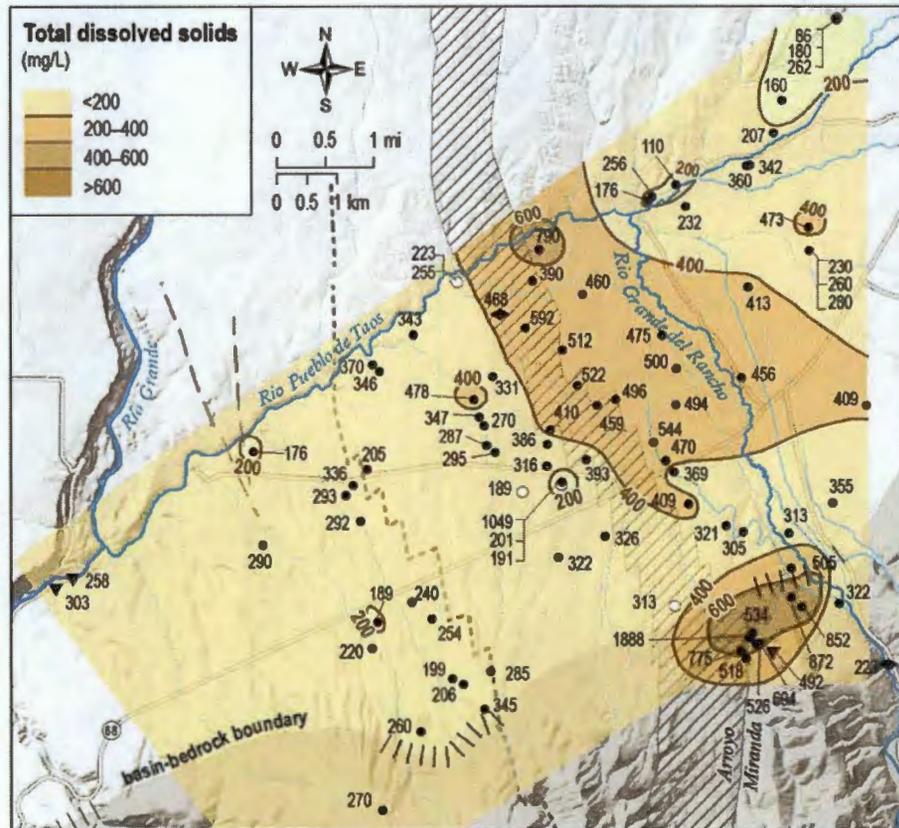
**Dissolved solid content**—Concentrations of dissolved solids, called TDS, range from 86–790 mg/L in the Picuris piedmont aquifer (Fig. 29, Table 9). High TDS values (400–600 mg/L) are clustered in the northern Rio Grande del Rancho valley and westward toward the Taos golf course, but both higher

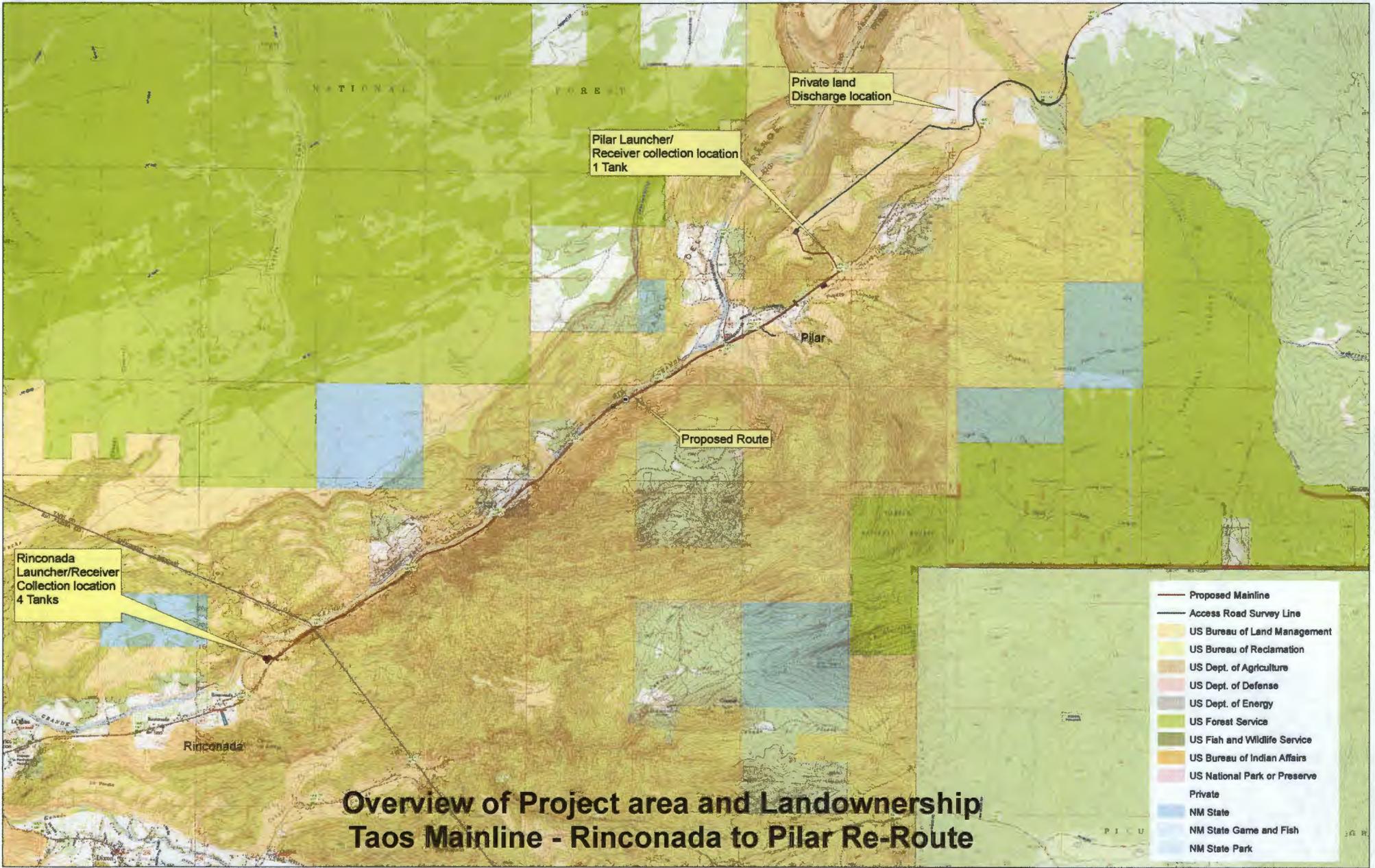
and lower values are scattered throughout the area, for example: 790 mg/L TDS in a 122-foot deep well (TV-136) and 390 mg/L TDS in an adjacent 105-foot deep well (TV-238) (Fig. 29, Table 9). An intriguing and unusual trend in the distribution of TDS in the basin-fill aquifers is that TDS does not increase with depth, and concentrations in the deep confined aquifer (180–313 mg/L) are lower than or comparable to those in the shallow Picuris piedmont aquifer. Bedrock aquifers exhibit an extreme range in TDS, with the highest concentrations found in the hydrothermal waters at Ponce de Leon (492–1,888 mg/L) and the lowest from a well in quartzite bedrock in the upper Arroyo del Alamo watershed (48 mg/L, TV-230).

**Calcium and sodium**—Calcium concentrations range from 2.6 to 175 mg/L, and sodium ranges from 8.2 to 143 mg/L (Table 9). The distribution of calcium and sodium is illustrated as a calcium-to-sodium ratio (Fig. 30), where values greater than 1 indicate calcium dominance and values less than 1 indicate sodium dominance. Shallow groundwater in the Picuris piedmont aquifer is generally Ca-rich, as are stream waters from the Rio Grande del Rancho (TV-512), Rio Pueblo (TV-513) and Rio Lucero (TV-514). The

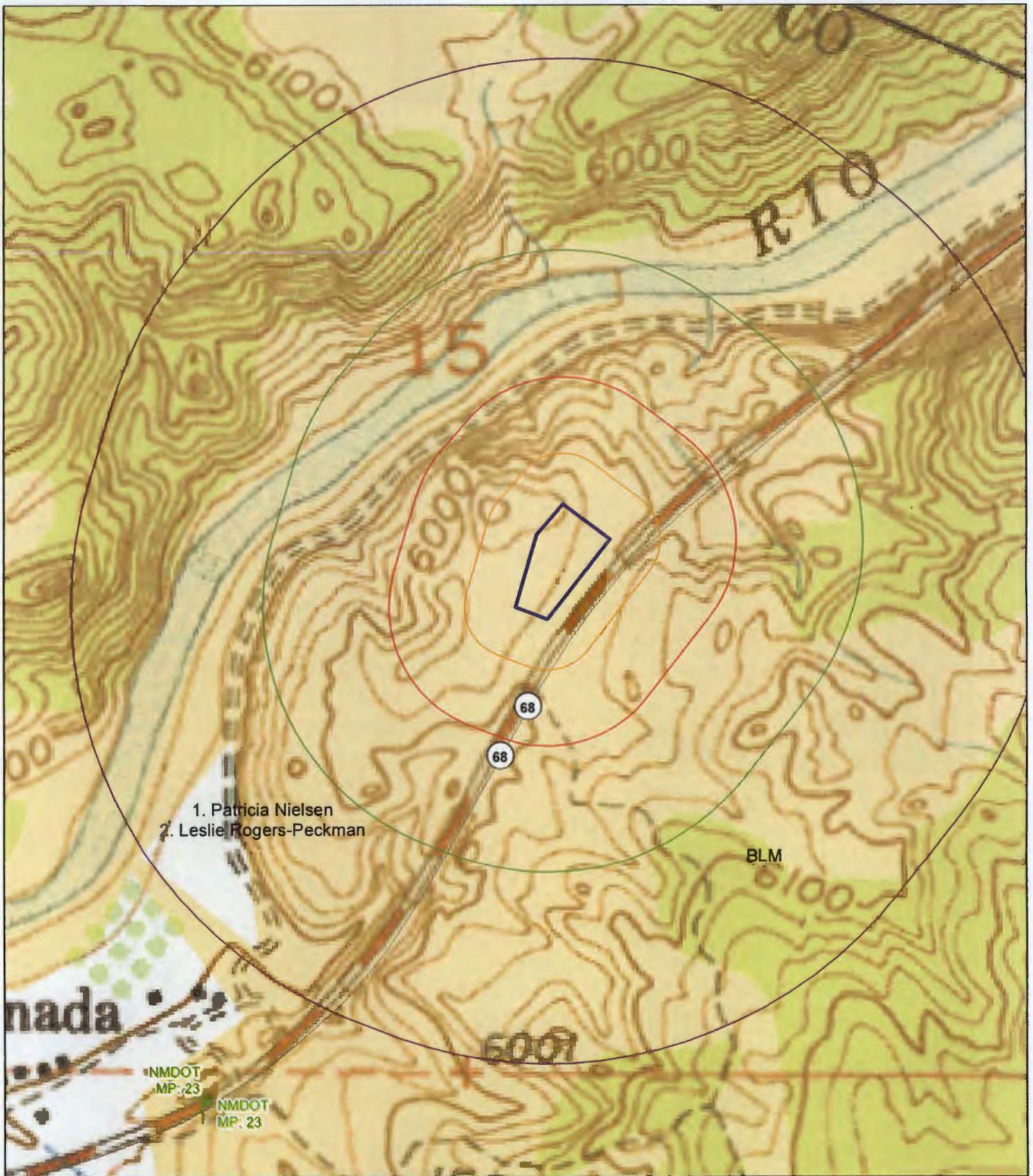
**Figure 29.** Map showing the dissolved solid content (TDS) in the Picuris piedmont aquifer. Values for the deep confined aquifer are also shown.

- Data**
- Well in Picuris piedmont aquifer
  - Well in deep confined aquifer
  - ▼ Spring
  - ◆ Surface water
- Depth specific samples**
- Contoured value
  - # #
- Geologic features**
- Bedrock
  - ||| Hydrogeologic window
  - ▨ Northern projection of Miranda graben
  - - - Picuris-Pecos fault
  - - - Geophysical fault



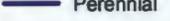
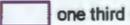


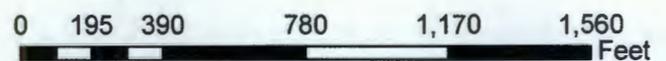
**Overview of Project area and Landownership  
Taos Mainline - Rinconada to Pilar Re-Route**

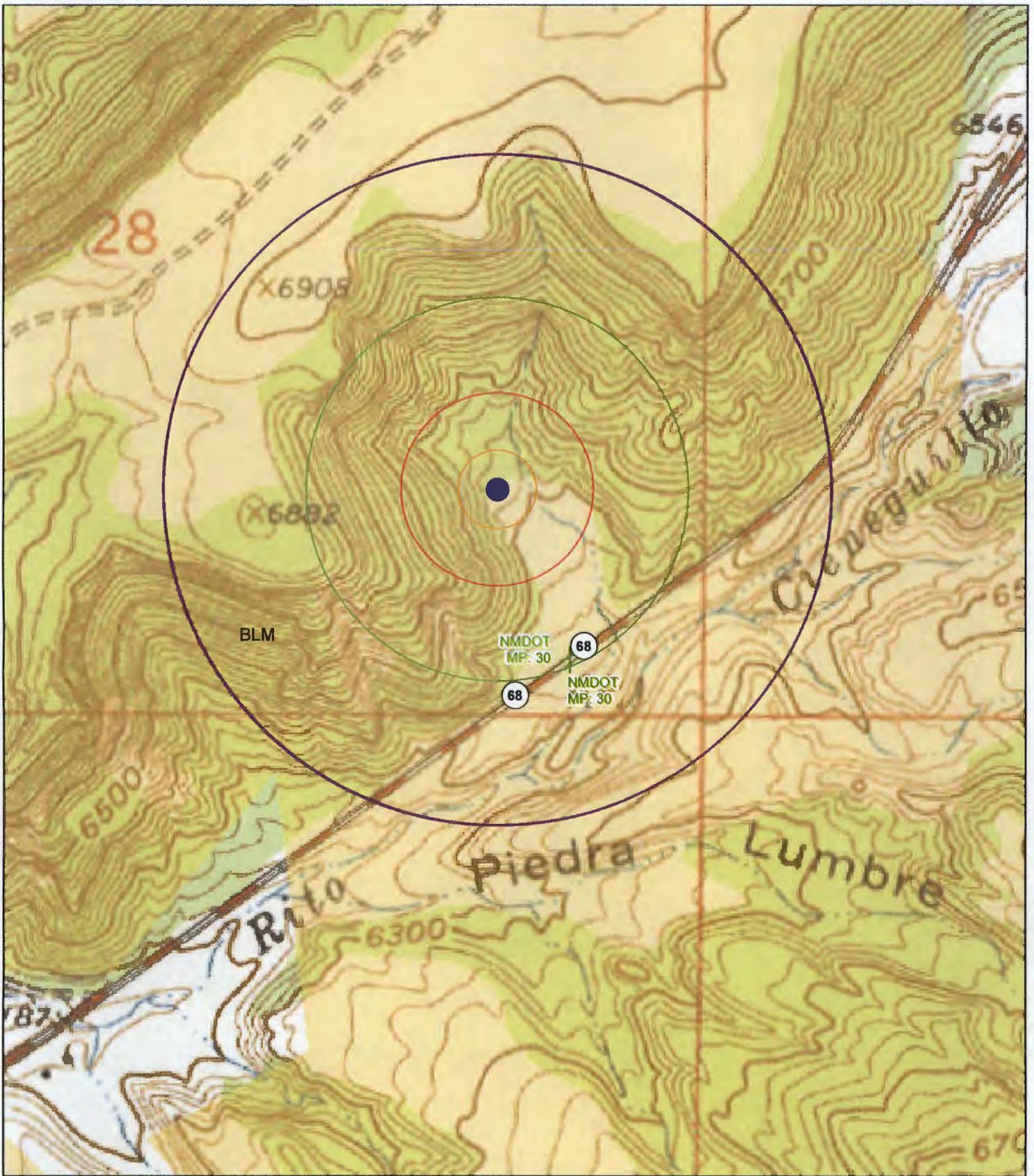


Collection Location- Rinconada Launching Station  
Landowners within 1/3 mile



- |                                                                                                           |                                                                                                  |                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  500ft buffer          |  Ephemeral    |  Pilar_collection_and_discharge_sites |
|  1000ft buffer         |  Intermittent |                                                                                                                          |
|  200ft buffer          |  Perennial    |                                                                                                                          |
|  one third mile buffer |  NM_Wetlands  |                                                                                                                          |

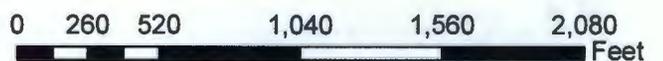


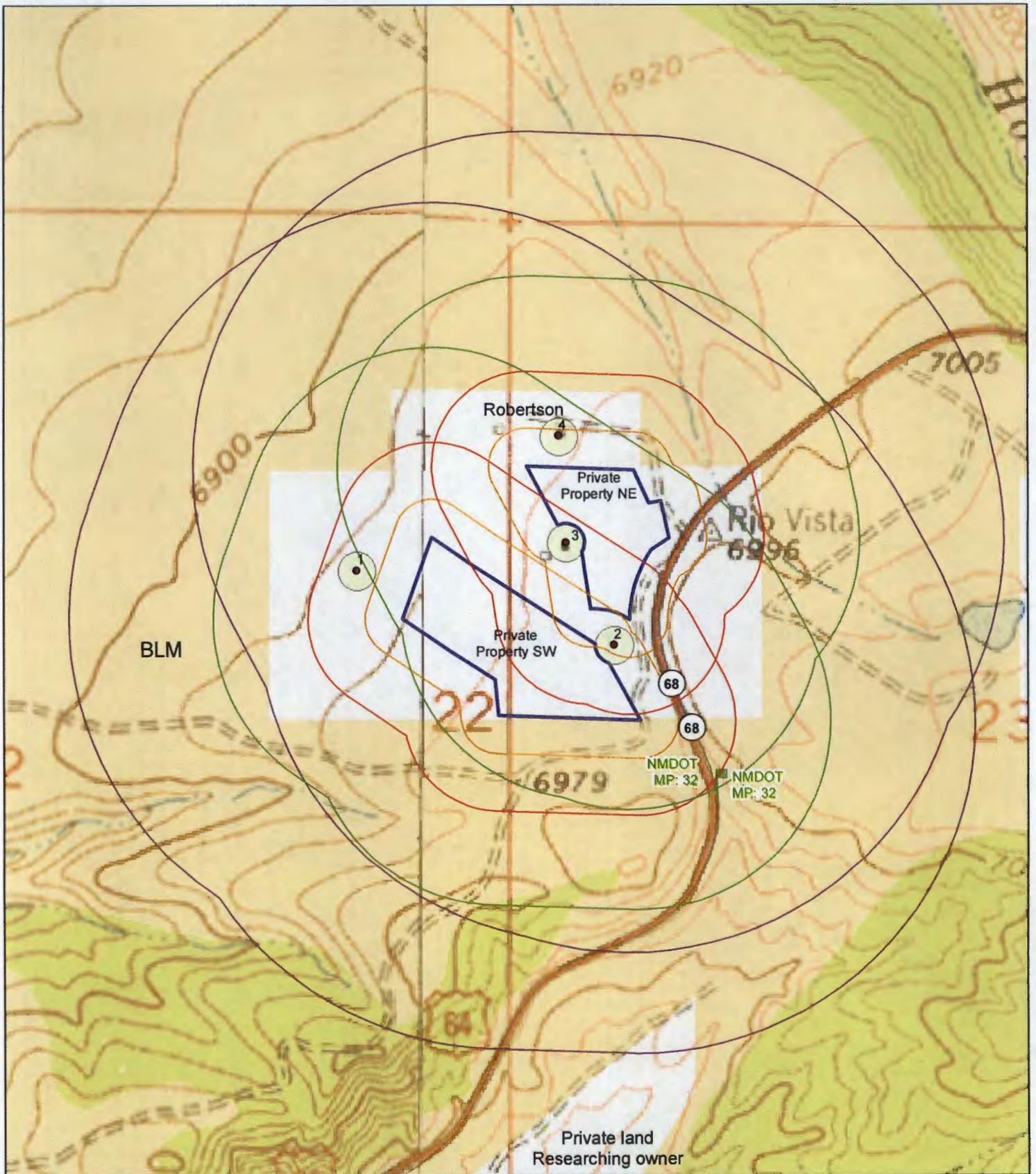


Collection Location- Pilar Launching Station  
Landowners within 1/3 mile



- 500ft buffer
- 1000ft buffer
- one third mile buffer
- Pilar Frac Tank



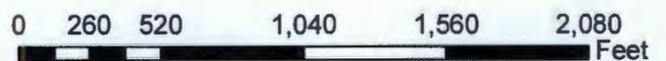


Discharge Location- Private land  
Landowners within 1/3 mile



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- one third mile buffer

- Residences
- Pilar\_collection\_and\_discharge\_sites





Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route

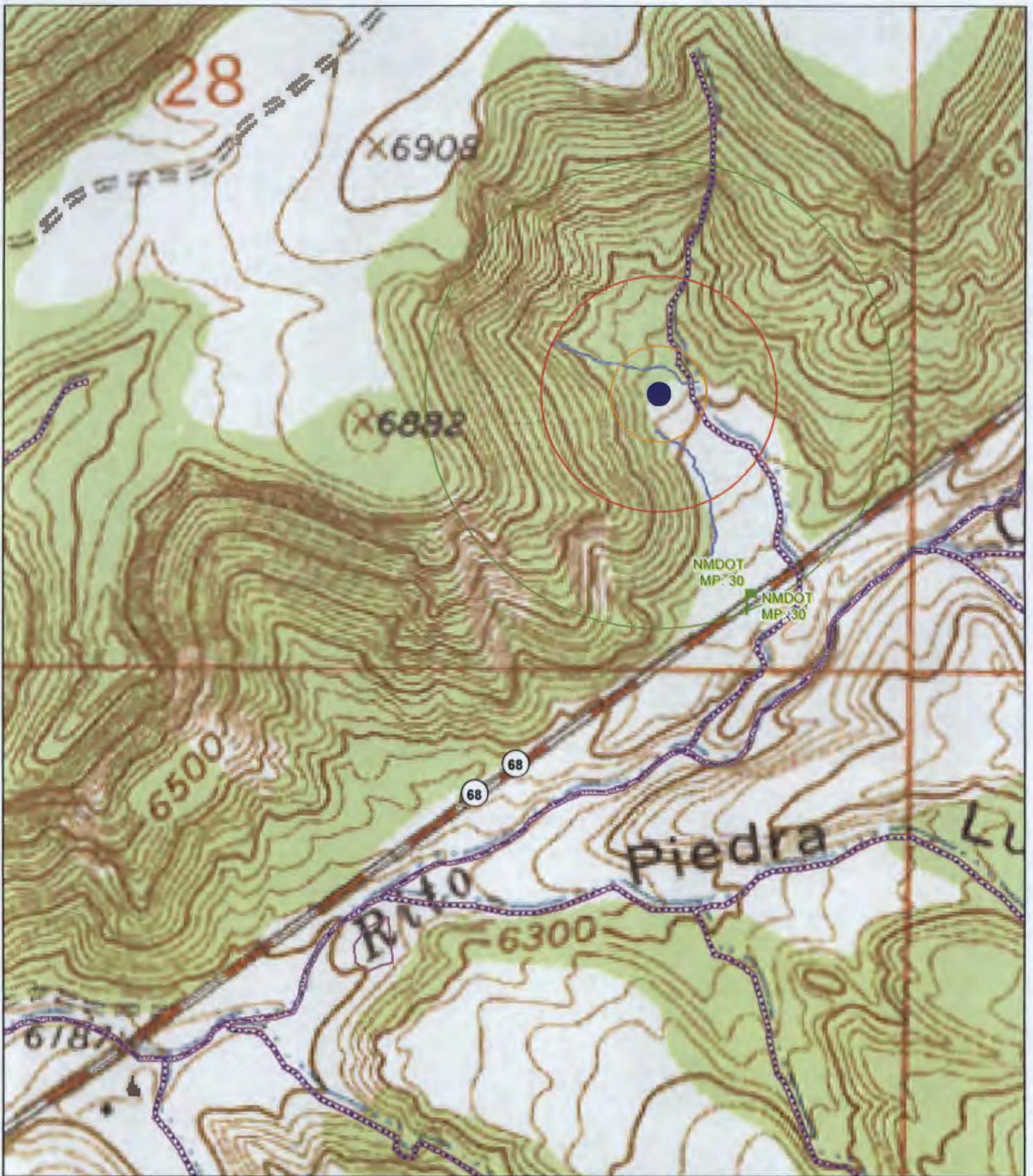


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Pilar Frac Tank
- GPS data of arroyos in the field





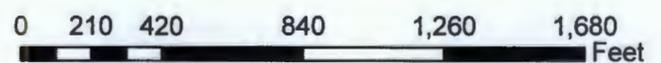
Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Pilar Frac Tank
- GPS data of arroyos in the field





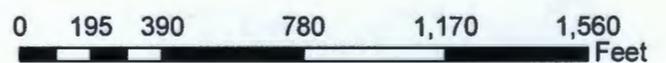
Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route

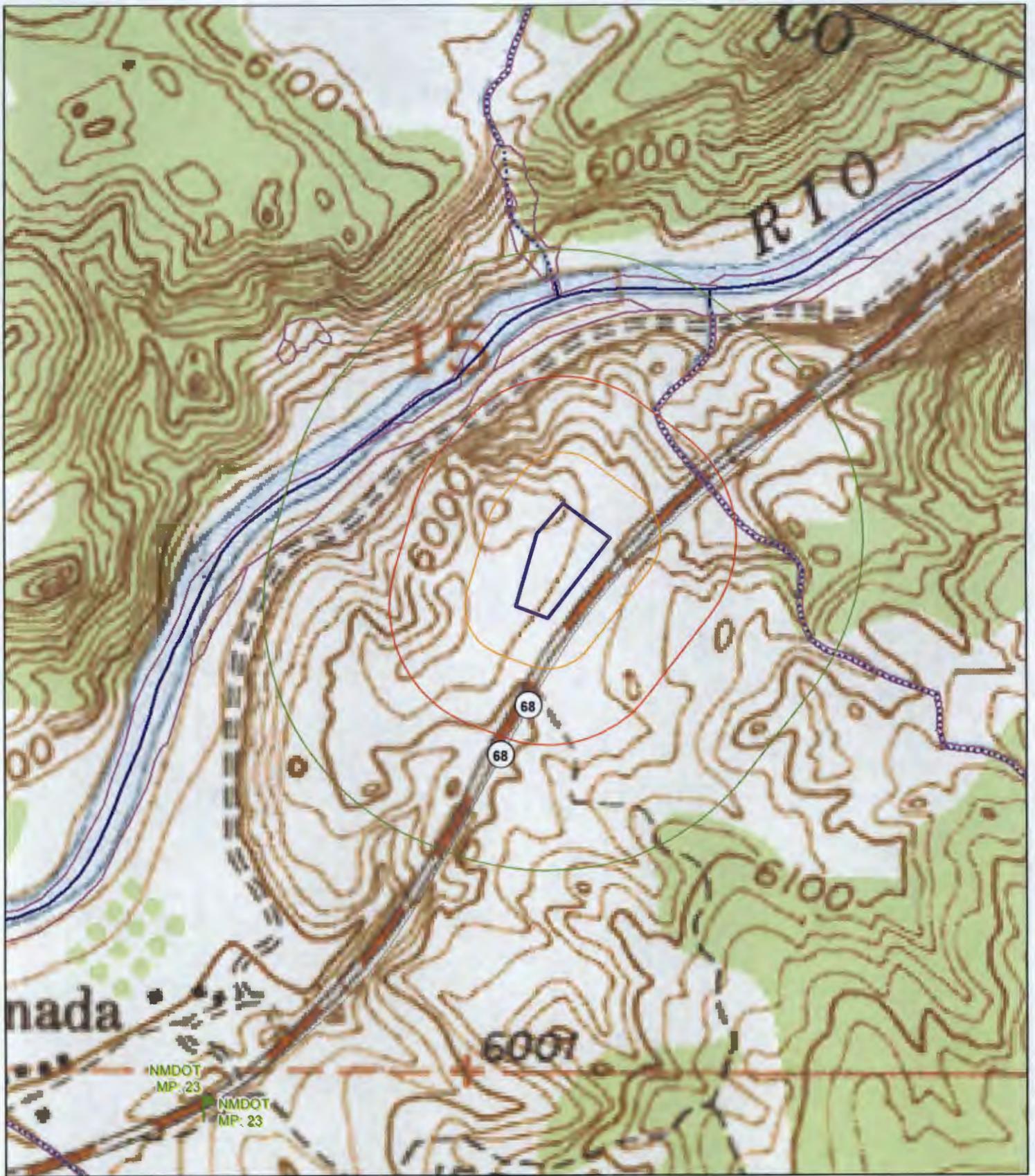


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

Pilar\_collection\_and\_discharge\_sites

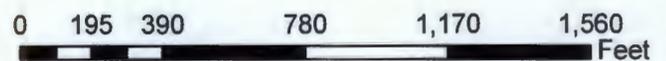




Collection Location- Rinconada Launching Station  
 Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Pilar\_collection\_and\_discharge\_sites





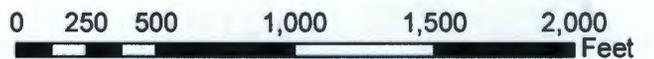
### Discharge Location- Private land Taos Mainline - Rinconada to Pilar Re-Route

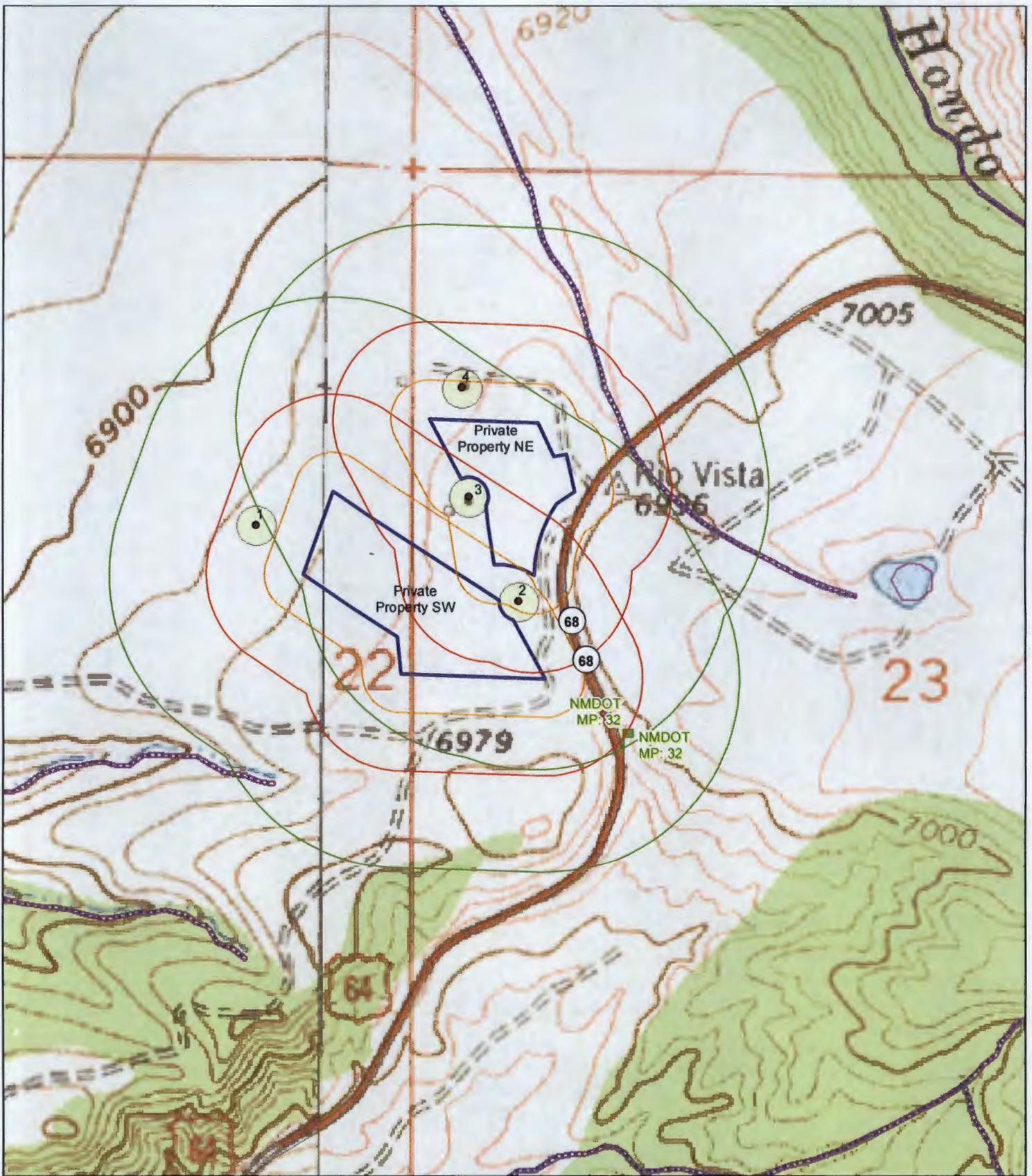


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites





Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- - - - Ephemeral
- - - - Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites



July 19, 2017

Mr. Chris Gallegos  
Right-of-Way Agent  
New Mexico Gas Company  
7120 Wyoming Blvd. NE  
Albuquerque, NM

Dear Mr. Gallegos,

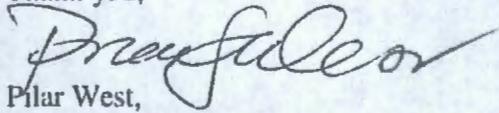
I am in receipt of your letter dated July 19, 2017, and have accepted your request to discharge approximately 78,500 gallons of hydrostatic test water onto the West Property discharge area (Exhibit A).

We understand that New Mexico Gas Company will provide all equipment necessary to perform the discharge.

This letter serves as permission to your request

If you have questions, please feel free to contact Pilar West, The West Family Limited Partnership representative at (505) 603-8735.

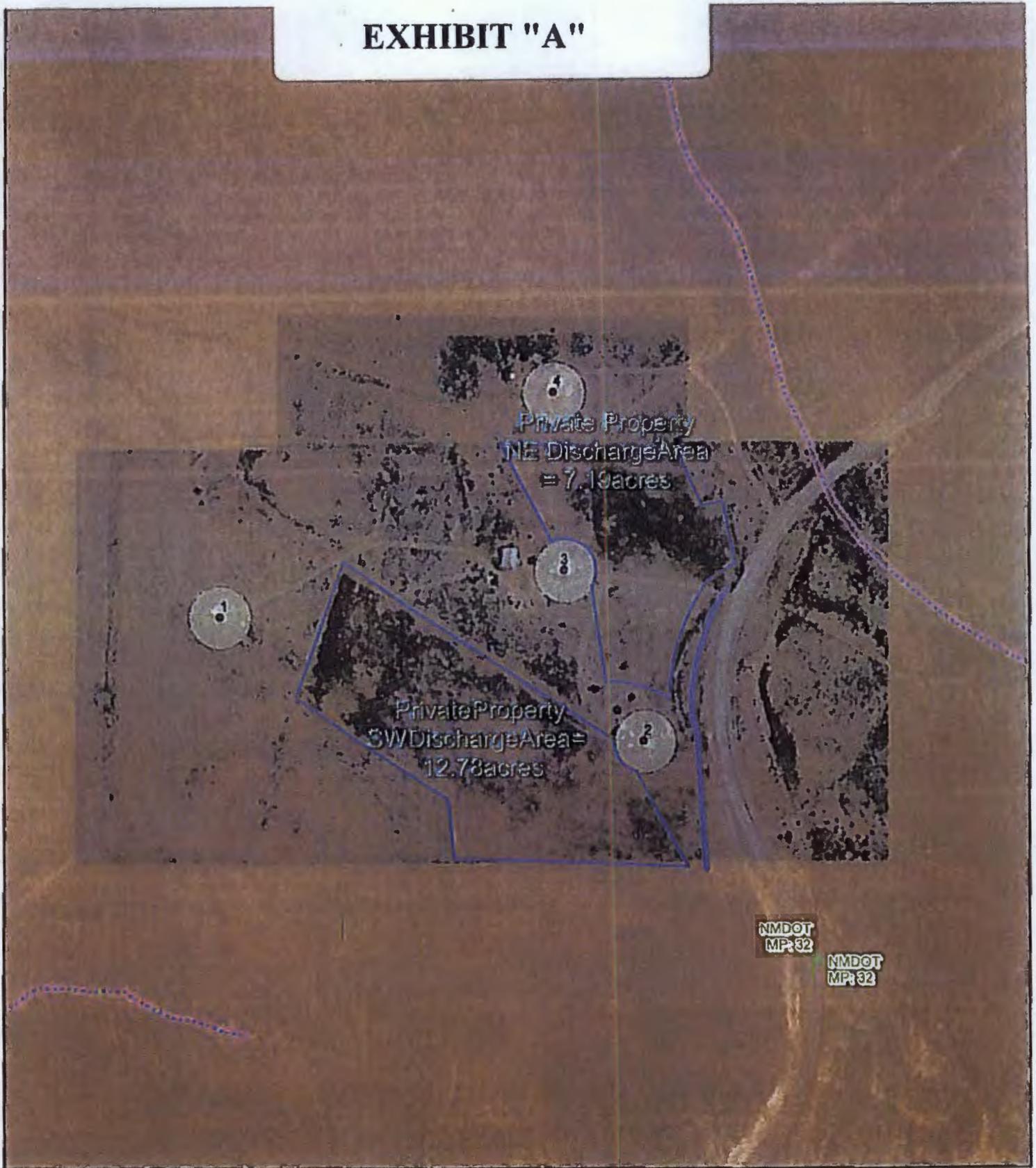
Thank you,

  
Pilar West,  
The West Family Limited Partnership

RECEIVED  
JUL 25 2017

BY: .....

# EXHIBIT "A"



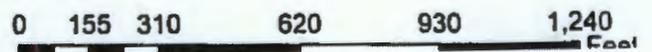
Discharge Location- Private land  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites





**New Mexico**  
**GAS COMPANY**  
AN EMERALD ENERGY COMPANY

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		<p>A. Signature  <input checked="" type="checkbox"/> Mailbox <input type="checkbox"/> Agent  <input checked="" type="checkbox"/> Addressee <input type="checkbox"/> Addressee</p> <p>B. Received by (Print Name) <i>MARK ROBERTSON</i> Date of Delivery <i>07/11/2017</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  <input checked="" type="checkbox"/> No          If YES, enter delivery address below</p>	
<p>1. Article Addressed to:   <i>Robertson            HC 69 Box 7B Pilar            Embudo, NM 87531</i></p>		<p>3. Service Type  <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express™  <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	
<p>2. Article Number          (Transfer from service label)          PS Form 3811, July 2013</p>		<p><b>7014 0510 0001 3864 2824</b>          Domestic Return Receipt</p>	

**CERTIFIED MAIL  
RETURN RECEIPT RECEIPT**

July 11, 2017

Mark and Ann Robertson  
 HC 69 Box 7B Pilar  
 Embudo, NM 87531

RE: New Mexico Gas Company Hydrostatic test water discharge

Dear Mark and Ann,

New Mexico Gas Company (NMGC) is writing to inform you of a hydrostatic test which will occur as part of the construction of a new pipeline along Highway 68. After the new pipe has been constructed, it must be tested to ensure the pipeline's integrity. The water used for the hydrostatic test will be sprayed onto property owned by the West's immediately to your south. NMGC will not be spraying water on your property. NMGC will be spraying approximately 78,500 gallons of water onto the ground. As part of our permit requirement with the New Mexico Oil Conservation District (OCD), the water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). These are drinking water standards. Upon receipt of the analytical results, NMGC will submit them to the OCD for approval to discharge. NMGC will only be spraying the water on the ground if it meets the New Mexico Water Quality Certification Commission's human health, domestic water supply, and irrigation standards. NMGC will provide all equipment necessary to perform the discharge and anticipates spraying water around November 2017. NMGC will be spraying water for about 5-10 days.

As part of our discharge permit application to the OCD, NMGC must notify all neighboring landowners to the location where we will be spraying water.

Thank you for your assistance. If additional information is required, please call me at (505) 697-3516.

Sincerely,

*Marcelle Fiedler*

Marcelle Fiedler  
 NMGC, Senior Environmental Scientist

U.S. Postal Service™  
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 (Domestic Mail Only - No Insurance Coverage Provided)

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**OFFICIAL USE**

Postage	\$	Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$	

Sent to *Robertson*  
 Street, Apt. No. or PO Box No. *HC 69 Box 7B Pilar*  
 City, State, ZIP+4 *Embudo, NM 87531*

PS Form 3800, August 2005

**From:** [Tompson, Mike, EMNRD](#)  
**To:** [Fiedler, Marcelle F.](#)  
**Cc:** [Kretzmann, John, EMNRD](#)  
**Subject:** RE: recorded mines  
**Date:** Friday, April 28, 2017 8:06:14 AM

---

**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

Hello Marcelle,

The New Mexico Mining & Minerals Division has no knowledge of any abandoned mines in the four sections detailed in your email.

Please let us know if you have any other questions.

Mike Tompson  
New Mexico Mining & Minerals Division  
(505) 476-3427

**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Thursday, April 27, 2017 2:27 PM  
**To:** Tompson, Mike, EMNRD <[Mike.Tompson@state.nm.us](mailto:Mike.Tompson@state.nm.us)>  
**Subject:** recorded mines

Hi Mike

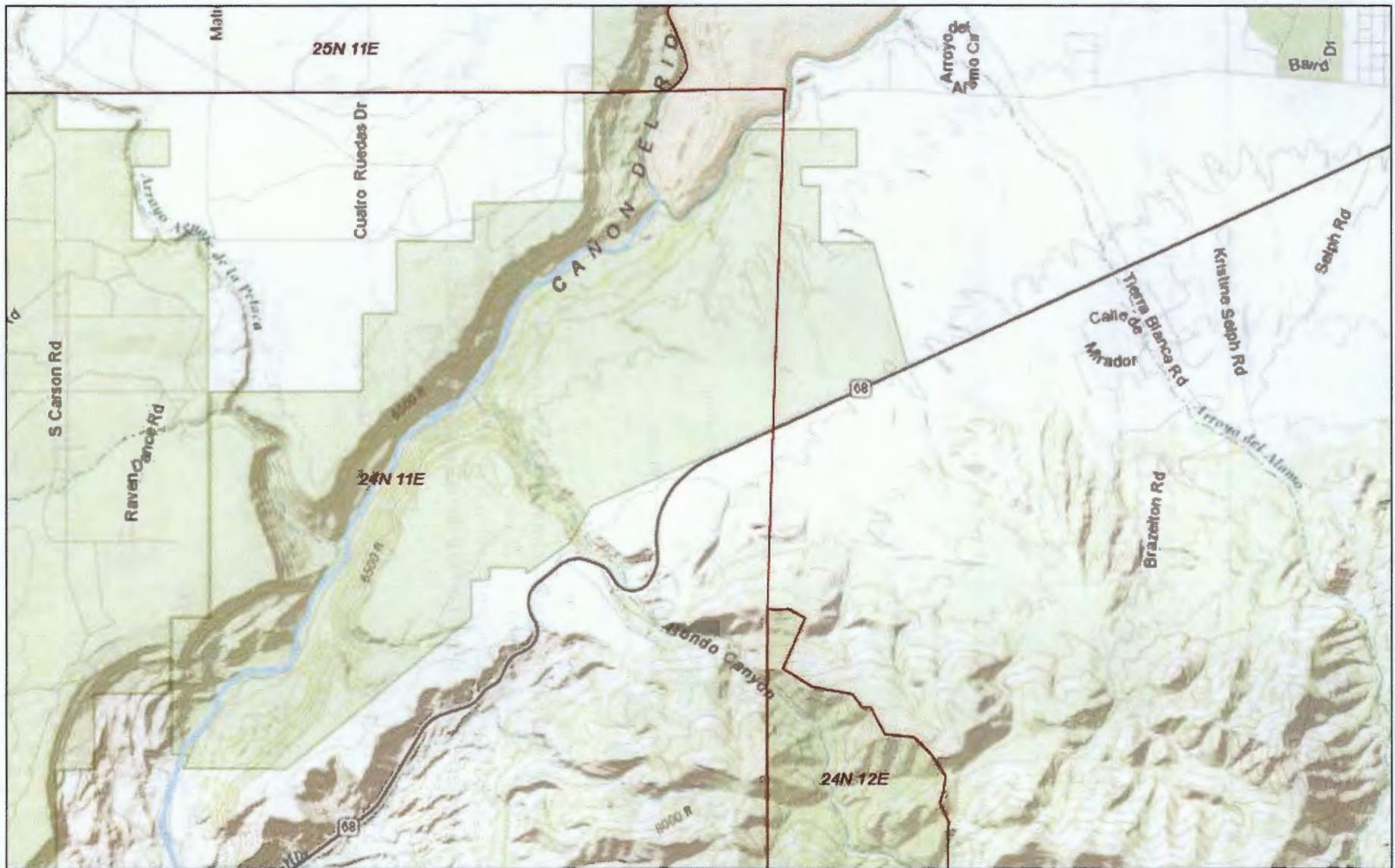
New Mexico Gas Company is planning to do a hydrostatic pressure test of a gas transmission line near Rinconada and Pilar, NM later this year. As part of the permit application process with the Oil Conservation Division, we need to obtain information on the location of active or abandoned mines in the area of our test. Can you please tell me if there are any active or abandoned mines within the following sections?

1. Section 15 T23N r10E
2. Section 22, 23, 28 T24N R11E

Thank you for your assistance. Please contact me if you have any questions.

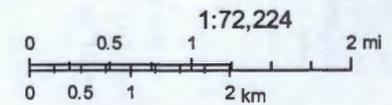
Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

# Active Mines in New Mexico



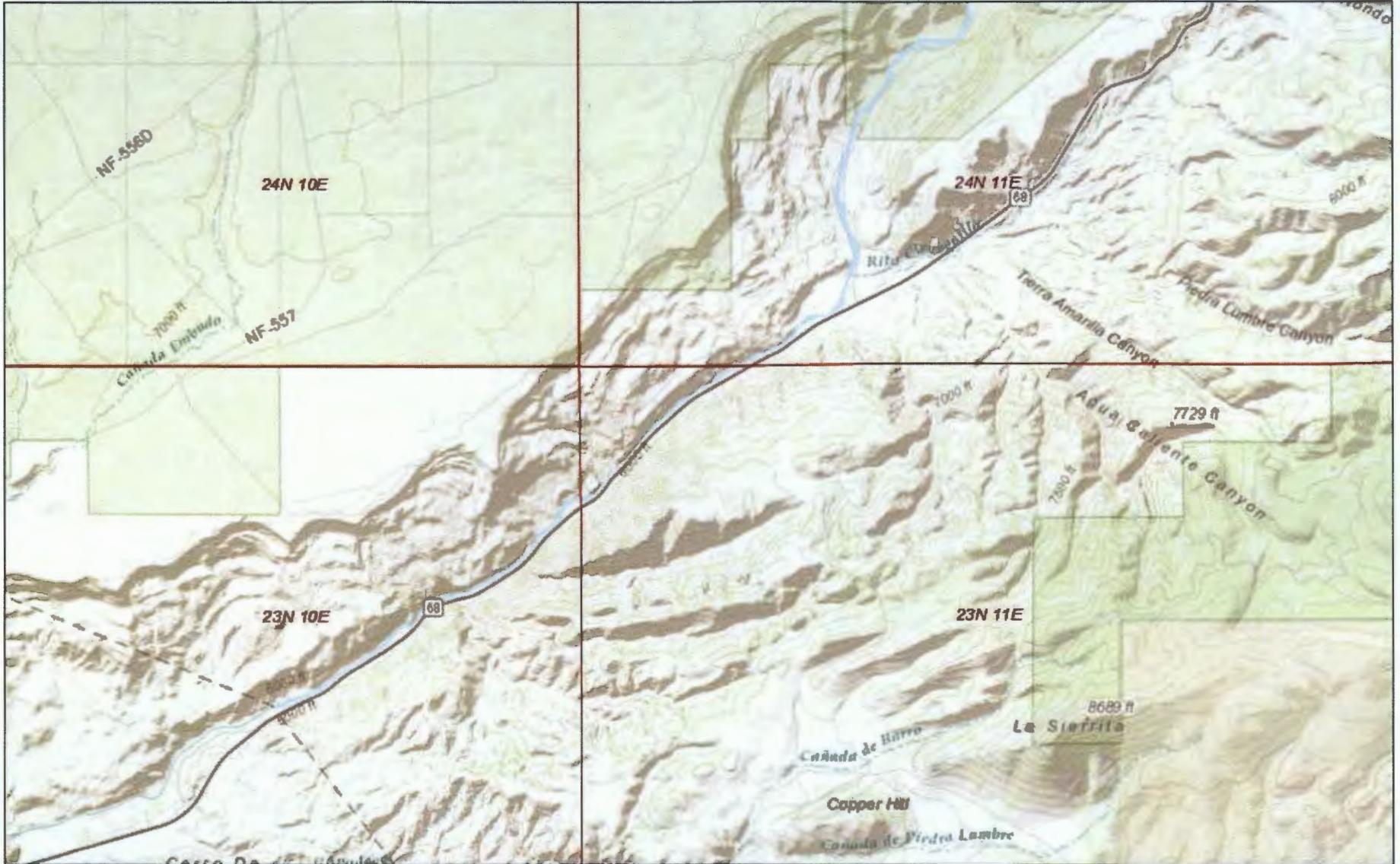
August 3, 2017

 CadNSDI PLSS Township



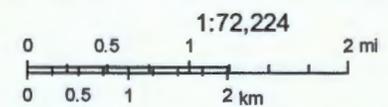
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBase, IGN, Kadaster NL, Ordnance Survey,

# Active Mines in New Mexico



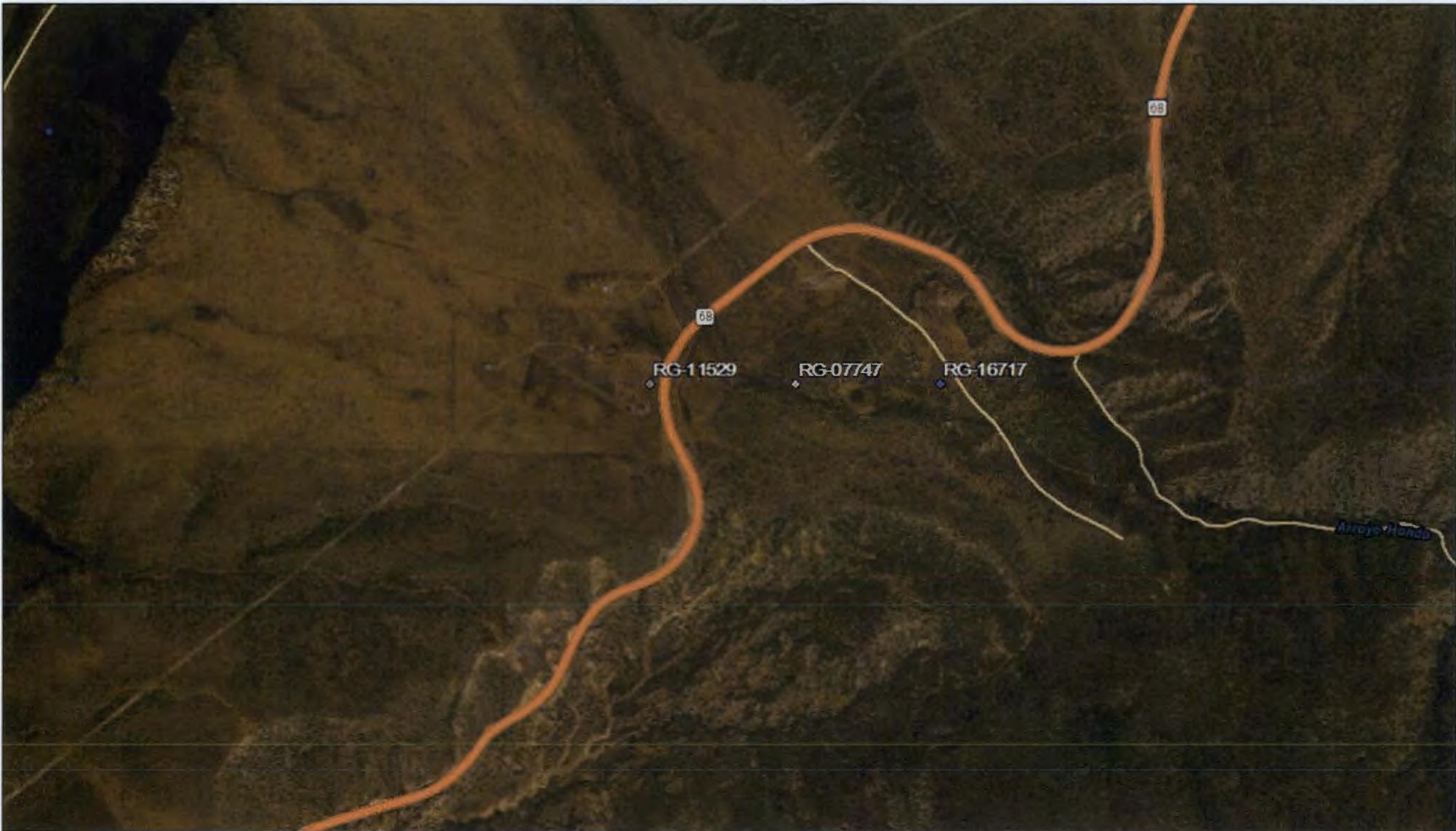
August 3, 2017

 CadNSDI PLSS Township



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

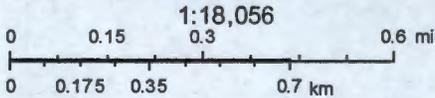
# Private OSE Well Locations



August 3, 2017

**OSE Wells**      OSE District Boundary

- Other
- ACT



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Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the  
GIS user community  
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS,

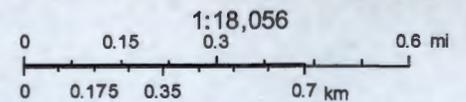
New Mexico Office of the State Engineer  
These maps are distributed "as is" without warranty of any kind.

# Pilar OSE Well Locations



August 3, 2017

- OSE Wells**
- PEN
  - Other
  - ACT
- OSE District Boundary



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 GIS user community  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS,

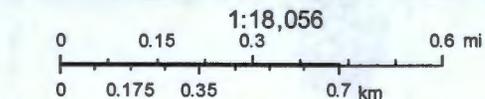
New Mexico Office of the State Engineer  
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# Rinconada OSE Well Locations



August 3, 2017

- OSE Wells**
- PEN
  - Other
  - ACT
- OSE District Boundary



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## New Mexico Office of the State Engineer Water Right Summary

**WR File Number:** RG 44010      **Subbasin:** -      **Cross Reference:** -  
**Primary Purpose:** DOM 72-12-1 DOMESTIC ONE HOUSEHOLD  
**Primary Status:** EXP EXPIRED  
**Total Acres:**      **Subfile:** -  
**Total Diversion:**      **Cause/Case:** -  
**Owner:** PERCY E. GONZALES

**Documents on File**

Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
			1	2		To				
<a href="#">67023</a>	<a href="#">72121</a>	<a href="#">1986-07-15</a>	EXP	EXP	CONVERSION RG 44010		T			

--For more information on Conversion Transactions, please see Help--

**Current Points of Diversion**

POD Number	Source	Q			(NAD83 UTM in meters)		Other Location Desc
		64Q16Q4Sec	Tws	Rng	X	Y	
<a href="#">RG 44010</a>			15	23N 10E	422267	4009465*	

\*An (\*) after northing value indicates 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.

7/6/17 9:56 AM

WATER RIGHT  
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)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
	RG 09961	2	33	24N	11E	430743	4014620*

---

<b>Driller License:</b> 227	<b>Driller Company:</b> ROYBAL WATERWELL DRILLING	
<b>Driller Name:</b> ROYBAL, JAKE E.		
<b>Drill Start Date:</b> 11/05/1963	<b>Drill Finish Date:</b> 11/11/1963	<b>Plug Date:</b>
<b>Log File Date:</b> 11/20/1963	<b>PCW Rcv Date:</b>	<b>Source:</b> Shallow
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b>
<b>Casing Size:</b> 6.63	<b>Depth Well:</b> 110 feet	<b>Depth Water:</b> 22 feet

---

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	65	78	Sandstone/Gravel/Conglomerate

---

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	90	110

---

\*UTM location was derived from PLSS - see Help

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# New Mexico Office of the State Engineer

## Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 608132

Transaction Desc: RG 20336 CLW

File Date: 06/06/2017

Primary Status: PMT Permit

Secondary Status: APR Approved

Person Assigned: \*\*\*\*\*

Applicant: KATHLEEN KNOTH

### Events

Date	Type	Description	Comment	Processed By
06/06/2017	APP	Application Received	*	*****
06/06/2017	FIN	Final Action on application		*****
06/06/2017	WAP	General Approval Letter		*****

### Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 20336		3		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
<b>**Point of Diversion</b>				
RG 20336 POD2		430423	4014803	
RG 20336	R	430320	4014237*	

\*An (\*) after northing value indicates UTM location was derived from PLSS - see Help

### Remarks

THIS PROCESS IS TO DRILL A NEW WELL THE CURRENT WELL IS NOT PRODUCING.

### Conditions

- 11 This permit authorizes the diversion of water for domestic use to serve a single household. The total diversion of water under this permit shall not exceed 3 acre-feet per year. The diversion of water for domestic use may include the watering of non-commercial trees, lawn and garden not to exceed one acre.
- 6D Well pod\_basin pod\_nbr pod\_suffix shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; 19.27.4.30.C unless an alternative plugging method is proposed by the well owner and approved by the State Engineer. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 20 days of completion of the plugging, but no later than log\_due

### Action of the State Engineer

**\*\* See Image For Any Additional Conditions of Approval \*\***

Approval Code: A - Approved

Action Date: 06/06/2017

Log Due Date: 06/06/2018

State Engineer: Tom Blaine, P.E.

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 Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 420918      Transaction Desc: RG 16717      File Date: 05/19/1969

Primary Status: PMT Permit  
 Secondary Status: LOG Well Log Received  
 Person Assigned: \*\*\*\*\*  
 Applicant: CHRIS WEST

**Events**

	Date	Type	Description	Comment	Processed By
	05/19/1969	APP	Application Received	*	*****
	06/10/1969	FIN	Final Action on application		*****
	06/10/1969	WAP	General Approval Letter		*****
	06/01/1970	LOG	Well Log Received	*	*****
	07/23/2013	QAT	Quality Assurance Completed	IMAGE	*****

**Change To:**

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 16717		3		DOL 72-12-1 DOMESTIC AND LIVESTOCK WATERING
<b>**Point of Diversion</b>				
RG 16717		SW NE 23 24N 11E		in Taos County

**Remarks**

WELL LOCATION: ON PILAR HILL ABOVE THE MICA MILL 1/3 MILE NEAR HOUSE.

**Conditions**

- 4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

**Action of the State Engineer**

\*\* See Image For Any Additional Conditions of Approval \*\*

Approval Code: A - Approved  
 Action Date: 06/10/1969  
 Log Due Date: 06/16/1970  
 State Engineer:

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.

7/6/17 9:53 AM

TRANSACTION  
SUMMARY



## New Mexico Office of the State Engineer Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 307310      Transaction Desc: RG 11529      File Date: 07/22/1964

Primary Status: PMT Permit  
 Secondary Status: APR Approved  
 Person Assigned: \*\*\*\*\*  
 Applicant: HAROLD L. LAW

**Events**

Date	Type	Description	Comment	Processed By
07/22/1964	APP	Application Received	*	*****
07/22/1964	FIN	Final Action on application		*****
07/22/1964	WAP	General Approval Letter		*****
06/18/2004	QAT	Quality Assurance Completed		*****
06/18/2004	QAT	Quality Assurance Completed		*****

**Change To:**

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 11529		3		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
<b>**Point of Diversion</b>				
RG 11529		SW NW 23 24N 11E		in Taos County

**Conditions**

- 4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

**Action of the State Engineer**

\*\* See Image For Any Additional Conditions of Approval \*\*

Approval Code: A - Approved  
 Action Date: 07/22/1964  
 Log Due Date: 07/15/1965  
 State Engineer:

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.

7/6/17 9:57 AM

TRANSACTION  
SUMMARY



# New Mexico Office of the State Engineer

## Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 310137

Transaction Desc: RG 07747

File Date: 07/27/1962

**Primary Status:** CAN Cancelled Permit  
**Secondary Status:** FIN Finalized  
**Person Assigned:** \*\*\*\*\*  
**Applicant:** HAROLD L. LAW

**Events**

Date	Type	Description	Comment	Processed By
 07/27/1962	APP	Application Received	*	*****
07/27/1962	FIN	Final Action on application		*****
07/27/1962	WAP	General Approval Letter		*****
07/16/1963	FCN	Finalize Cancel of permit		*****

**Change To:**

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RG 07747		3		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
<b>**Point of Diversion</b>				
RG 07747		SE NW 23 24N 11E		in Taos County

**Remarks**

ALSO TO BE USED FOR LIVESTOCK WATERING.

APPROXIMATELY 3/4 MILES SOUTH OF HONDO CANYON TOWARDS PILAR.

**Conditions**

- 4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

**Action of the State Engineer**

\*\* See Image For Any Additional Conditions of Approval \*\*

**Approval Code:** A - Approved  
**Action Date:** 07/27/1962  
**Log Due Date:** 07/15/1963  
**State Engineer:**

Rinconada collection

FEMA's National Flood Hazard Layer (Official)



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcgs.com](mailto:FEMAMapSpecialist@riskmapcgs.com) | USDA FSA, Microsoft

FEMA's National Flood Hazard Layer (Official)

Pilar Collection location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

FEMA's National Flood Hazard Layer (Official) Private land Aircharge location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

esri  
0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

## NOTICE OF PUBLICATION

New Mexico Gas Company (NMGC), 7120 Wyoming Blvd NE, Albuquerque, NM 87109, has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for hydrostatically testing the Taos Mainline, a newly constructed natural gas pipeline. Approximately 6.7 miles of new 12-inch pipe and 0.4 miles of new 8-inch pipe will be hydrostatically tested using water from the City of Espanola. NMGC will discharge the test water within T24N R11W Sections 22 and 23. This location is west of Highway 68 about a ¼ mile north of NMDOT milepost 32 (approximately 3.5 miles north of Pilar, NM). The hydrostatic test is scheduled for November 2017. Approximately 78,500 gallons of wastewater will be generated from the hydrostatic test of new pipe. Because NMGC is testing new pipe, the water is expected to meet Water Quality Control Commission (WQCC) water quality standards in NMAC 20.6.2.3103. If WQCC water quality standards are not met the test water will be hauled to an OCD approved facility for disposal. The depth of groundwater potentially affected by the discharge is about 300 feet below the surface. The total dissolved solids in the region range from 200-400 mg/l.

Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices by contacting Brad Jones at the New Mexico OCD at 1220 South St Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will provide future notices for this pipeline upon request.

## Jones, Brad A., EMNRD

---

**From:** Fiedler, Marcelle F. <Marcelle.Fiedler@nmgco.com>  
**Sent:** Wednesday, August 2, 2017 11:59 AM  
**To:** Jones, Brad A., EMNRD  
**Subject:** maps  
**Attachments:** 4 Discharge location aerial.pdf; 4a Discharge location topo.pdf

I compared the maps I emailed you with those I mailed you and I think one difference is on maps 4 and 4a. attached are the versions I printed and mailed to you.

The well maps were too large to email and so they are only in the mailed paper version.

Talk to you this afternoon.

marcelle

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

Mailing address:  
PO Box 97500, BC 22  
Albuquerque, NM 87199-7500

Office: 505-697-3516  
Cell: 505-220-1056

New email address is: [Marcelle.fiedler@nmgco.com](mailto:Marcelle.fiedler@nmgco.com)

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NOTICE: This email is intended only for the individual(s) to whom it is addressed and may contain confidential information. If you have received this email by mistake, please notify the sender immediately, delete this email from your system and do not copy or disclose it to anyone else. Although we take precautions to protect against viruses, we advise you to take your own precautions to protect against viruses as we accept no liability for any which remain.



### Discharge Location- Private land Taos Mainline - Rinconada to Pilar Re-Route

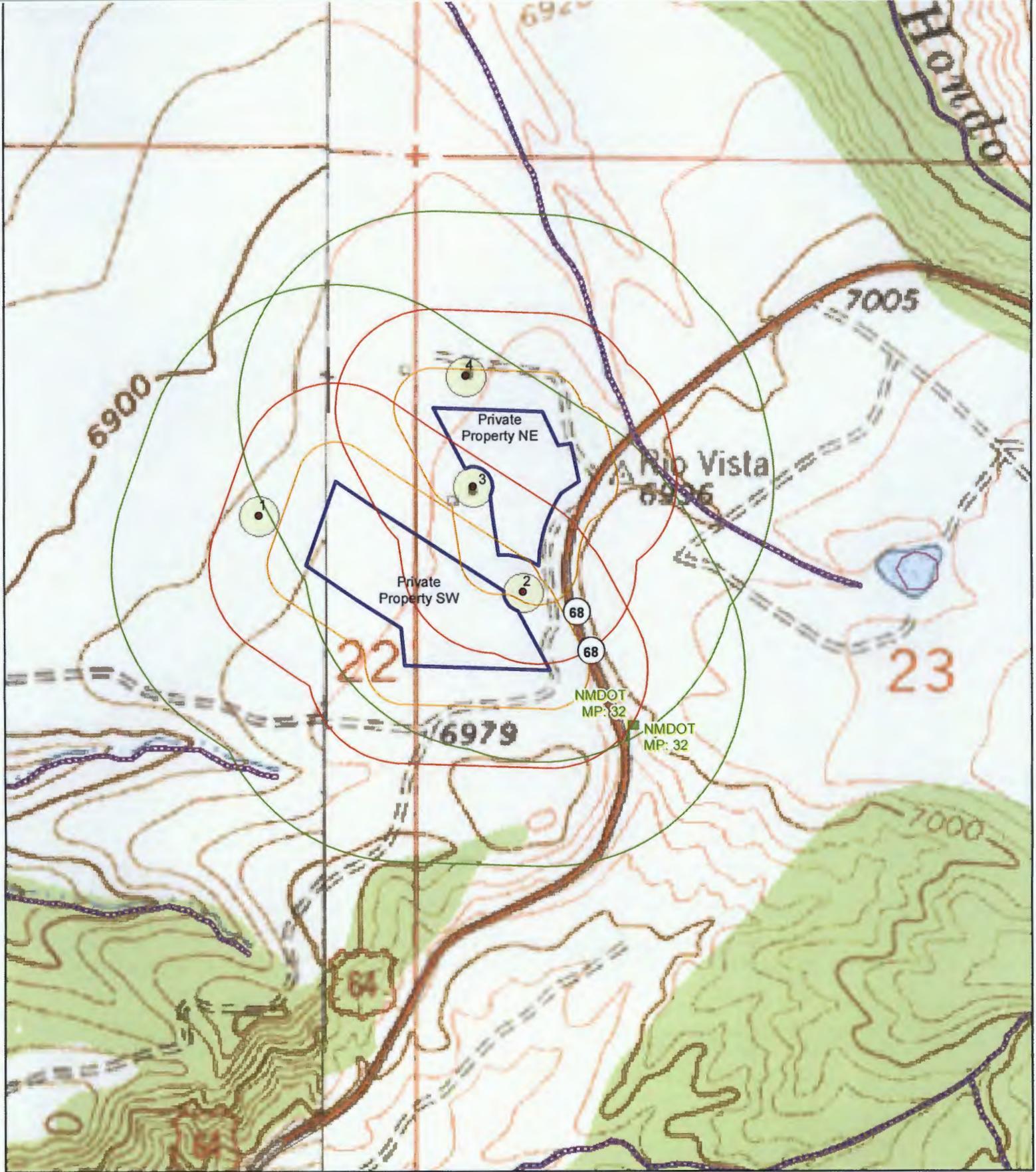


- 500ft buffer
- 1000ft buffer
- 200ft buffer

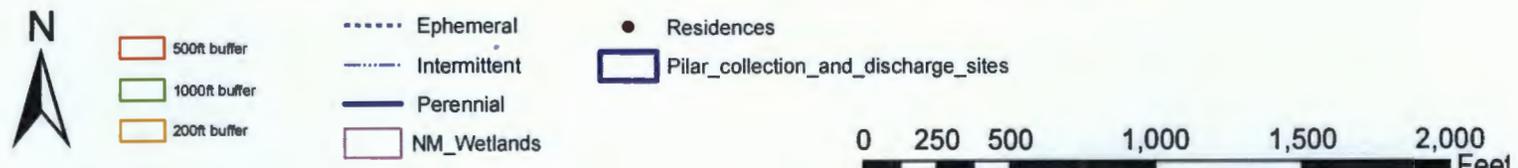
- - - - Ephemeral
- - - - Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites





Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route



**Jones, Brad A., EMNRD**

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**From:** Jones, Brad A., EMNRD  
**Sent:** Wednesday, August 2, 2017 2:51 PM  
**To:** 'Fiedler, Marcelle F.'  
**Subject:** RE: maps  
**Attachments:** 2017 0726 OCD 4 Discharge location aerial w arces 2.pdf; 2017 0726 OCD 4a Discharge location topo w acres 2.pdf; 2017 0726 OCD 2017 Pilar hydro test ver2.pdf; 2017 0726 OCD Pilar FEMA maps of locations.pdf; 2017 0727 OCD public notice Pilar 2017.pdf

*Brad A. Jones*  
*Environmental Engineer*  
*EMNRD Oil Conservation Division*  
*1220 S. Saint Francis Drive*  
*Santa Fe, New Mexico 87505*  
*E-mail: [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)*  
*Office: (505) 476-3487*  
*Fax: (505) 476-3462*

**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Wednesday, August 2, 2017 11:59 AM  
**To:** Jones, Brad A., EMNRD <[brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us)>  
**Subject:** maps

I compared the maps I emailed you with those I mailed you and I think one difference is on maps 4 and 4a. attached are the versions I printed and mailed to you.  
The well maps were too large to email and so they are only in the mailed paper version.  
Talk to you this afternoon.  
marcelle

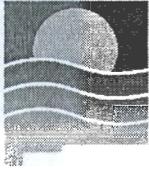
Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

Mailing address:  
PO Box 97500, BC 22  
Albuquerque, NM 87199-7500

Office: 505-697-3516  
Cell: 505-220-1056

New email address is: [Marcelle.fiedler@nmgco.com](mailto:Marcelle.fiedler@nmgco.com)

NOTICE: This email is intended only for the individual(s) to whom it is addressed and may contain confidential information. If you have received this email by mistake, please notify the sender immediately, delete this email from your system and do not copy or disclose it to anyone else. Although we take precautions to protect against viruses, we advise you to take your own precautions to protect against viruses as we accept no liability for any which remain.



New Mexico  
GAS COMPANY®  
AN EMERA COMPANY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

July 10, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division replied with a letter on June 9, 2017 saying the application was administratively incomplete. With this submittal NMGC has addressed the issues mentioned in the letter along with other details as discussed over the phone with Brad Jones. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back (by truck) to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. A water sample will be taken after the completion of the third test section and sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the

# Summary of Comments on October 4, 2000

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Page: 1

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 5:31:57 PM  
Will the wastewater be hauled by an approved c-133 hauler

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north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. The location is more than 500ft from the Rio Grande and 200 ft higher in elevation than the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3 miles north of NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total and has three structures within it. The neighboring landowner directly to the north has one residence. NMGC will maintain at least a 100 ft buffer from all existing structures and be 300 ft from one structure. Water will be sprayed within the area cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed. It will take approximately 5 days to discharge all the water.

D. Maps

The following maps are included with this permit application.

- Overview of project area and Land Ownership map (topo map)
- Water collection site (topo and aerial map)
- Discharge location site (topo and aerial map)
- Wells
- Geology of area
- Soils
- FEMA map

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Number: 1 Author: bjones Subject: Sticky Note Date: 7/26/2017 5:56:50 PM  
need this description in notice

---

Number: 2 Author: bjones Subject: Sticky Note Date: 7/26/2017 5:56:50 PM  
Based upon the proposed language, it seems that the discharge is proposed on 2 parcel owned by 2 different private owners. Please clarify and please illustrate the property lines.

---

Number: 3 Author: bjones Subject: Sticky Note Date: 7/26/2017 5:53:46 PM  
Please refer to the residences by the numbers provided on the maps to clarify which setback applies

E. Demonstration of Compliance with Siting Criteria

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas. Boundaries of areas where water will not be discharged will be flagged or have signs.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station the tank holding 6,500 gallons is within 200 feet of an ephemeral stream. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. (see Collection Location Topo maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. The closest private well to the tanks on the south end at Rinconada station is almost 200 feet away. Records from the State Engineers Office (SEO) show the nearest well is more than 2000 feet from the Pilar launcher where one tank will hold water. (see Well location map and section N below).
  3. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).
- iii. *Within or within 500ft of a wetland*
  4. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)
- iv. *Within the area overlying a subsurface mine*
  5. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  6. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. (see Discharge area maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*

- 
- Number: 1 Author: bjones Subject: Sticky Note Date: 7/26/2017 5:59:49 PM  
Please identify the approximate distance... is it 10 feet? "Within 200 ft" does not clarify
- 
- Number: 2 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:01:54 PM  
Please review the definition of wellhead protection area in the OCD regulations (19.15.2.7.W NMAC) and complete the assessment
- 
- Number: 3 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:18:08 PM  
The email version did not include a map illustrating the locations of the wells... the mailed version suggests a well is within 500 ft but does not identify the POD assigned to the well. Please address and demonstrate
- 
- Number: 4 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:18:56 PM  
The email version did not include a map illustrating the locations of the wells... the mailed version does not identify the POD assigned to the well. Please address and demonstrate
- 
- Number: 5 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:04:46 PM  
Please see comment on proposed maps
- 
- Number: 6 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:11:44 PM  
The email response is clear that it only addresses abandoned mines. OCD requested maps from the MMD website to demonstrate active mines. None were provided. The MMD database is limited in its search ability based upon the location data input. Most are entered by lat/long/ or legal address but not both.
- 
- Number: 7 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:15:42 PM  
Where are the maps discussed in the last two sentences? Please provide
- 
- Number: 8 Author: bjones Subject: Sticky Note Date: 7/31/2017 2:42:43 PM  
Please review the definition of wellhead protection area in the OCD regulations (19.15.2.7.W NMAC) and complete the assessment

2. Records from the State Engineers Office (SEO) show the nearest active well is more than 2000 ft from the private land where water will be sprayed. The landowner has told NMGC there are no active wells on the property. (see Discharge area maps and section N below)
3. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).
- iii. *Within or within 500ft of a wetland*
  4. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
  5. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has obtained verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  6. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. (see Discharge area maps) The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure in the SE part of the property (residence #2) when water is sprayed in the SW area. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NE area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily.

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. NMGC anticipates that the water will be off site by approximately December 1st.

- 
- Number: 1 Author: bjones Subject: Sticky Note Date: 7/31/2017 2:42:43 PM  
The email version did not include a map illustrating the locations of the wells... the mailed version illustrates a well abutting the proposed NW discharge area. The map illustrates 3 wells. Please address and demonstrate
- 
- Number: 2 Author: bjones Subject: Sticky Note Date: 7/31/2017 2:42:57 PM  
Please see comment on proposed maps
- 
- Number: 3 Author: bjones Subject: Sticky Note Date: 7/31/2017 2:43:21 PM  
The email response is clear that it only addresses abandoned mines. OCD requested maps from the MMD website to demonstrate active mines. None were provided. The MMD database is limited in its search ability based upon the location data input. Most are entered by lat/long/ or legal address but not both.
- 
- Number: 4 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:27:40 PM  
Where are the maps discussed in the last two sentences? Please provide
- 
- Number: 5 Author: bjones Subject: Sticky Note Date: 7/31/2017 2:46:46 PM  
Is this a different area from th NE area discussed above in this response? Please modify/clarify
- 
- Number: 6 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:31:02 PM  
This sentence should be provided in item H. Please provide

## G. Method & Location for Collection and Retention of Fluids

### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon mobile tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

## H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed to the ground in a controlled rate so that erosion does not occur. Water will not be sprayed on days when wind will carry the water off the ground.

## I. Request for Alternate Treatment/Disposal

If the hydrostatic test water does not meet OCD conditions for discharge to the ROW and is not a characteristic hazardous waste, NMGC will dispose of it at the Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a characteristic hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDF for disposal.

## J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the third section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

## K. Method of Disposal of Fluids and Solids after Test Completion

If approved by OCD, test waters will be sprayed onto private land at a controlled rate.

## L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

## M. Geological Characteristics of Subsurface at Discharge Site

- 
- Number: 1      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 6:34:16 PM  
Please clarify what is a "mobile tank." Are they closed top frac tanks?
- 
- Number: 2      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 6:35:42 PM  
Are they closed top frac tanks? Please clarify what type of tank.
- 
- Number: 3      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 6:38:13 PM  
What is the proposed method the wastewater will be "sprayed" and at what rate. What method is proposed to "contain" the discharge to the proposed discharge areas?
- 
- Number: 4      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 6:50:43 PM  
Why is testing proposed before all sections have been hydro tested. Worst case water is after the fourth section has been hydro tested.

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

*Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Q1) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

*Geologic Reference:*

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/inaps/geologic/state/home.html>

Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 ft from the Rinconada collection location. The POD (4210) associated with this well shows it is expired. Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 40 feet. The well nearest to the Pilar Station is 2,500 ft away and its depth to water is 22ft. The POD number is 09961.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC discharge water and the depth to water is 400 ft. The POD for this well is 16717. The records for well POD 11529 located on the private property, show it was never installed.

*Total dissolved solids (TDS) for the project area:* Two springs northeast of Pilar have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

O. IP Landowners at and Adjacent to Discharge Site and Collection/Retention Site  
A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if applied by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. BLM is the surrounding landowner for almost all of the locations. Any other landowners within 1/3 of a miles of the collection and discharge locations will be notified of the proposed hydrostatic test.

#### Closing

In the event of a release associated with project activities, NMGC will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.29 to remediate the spill as soon as possible.

Once OCD rules this application as administratively complete, and if required, NMGC will provide notice of the permit application in the Taos News following requirements in NMAC 20.6.2.3108. In addition, a sign with a synopsis of the public notice will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west side of the private property where water will be discharged.

- 
- Number: 1 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:59:59 PM  
in what direction?
- 
- Number: 2 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:54:48 PM  
OSE database assigns a Basin to each well number... Please provide the basin designation for each well and identify the wells by POD on the maps to support the discussion.
- 
- Number: 3 Author: bjones Subject: Sticky Note Date: 7/26/2017 6:55:58 PM  
How is this well expired? please clarify
- 
- Number: 4 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:07:19 AM  
Is the Riconada area and the area where the wells are located are all the same elevation or flat? Please identify the DTW at the Riconada area.
- 
- Number: 5 Author: bjones Subject: Sticky Note Date: 7/26/2017 7:01:53 PM  
in what direction? Is the Pilar station and the well located on the same elevation? If not please identify the DTW at the Pilar station
- 
- Number: 6 Author: bjones Subject: Sticky Note Date: 7/28/2017 5:12:54 PM  
No maps provided in the email version. The hardcopy submittal included a map illustrating 3 nearby wells, with 1 well abutting the NW discharge area. No PODs were provided on the map
- 
- Number: 7 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:14:46 AM  
Based upon this statement, the proposed discharge locations are at the same elevation of where the well is located more than 2000 ft away. Please identify the DTW at the proposed discharge locations
- 
- Number: 8 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:27:13 AM  
Based upon the proposed language provided in Item B, it seems that the discharge is proposed on 2 parcel owned by 2 different private owners. Please clarify and please illustrate the property lines.
- 
- Number: 9 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:18:00 AM  
The map does not provide the required information. Please identify
- 
- Number: 10 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:21:34 AM  
Please provide the required information. OCD will not be able to confirm or verify the public notice demonstration to determine compliance in order to issue the permit
- 
- Number: 11 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:29:06 AM  
These parties have not been identified in this submittal. Please provide
- Also, please clarify the method of notice required
- 
- Number: 12 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:28:29 AM  
Please identify the newspaper posting requirements and the requirement for the sign posting
- 
- Number: 13 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:23:07 AM  
Unsure what "near" means... please illustrate on a map or provide further clarification.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

Thank you for your assistance. If additional information is required please notify me in writing. Please call me at (505) 697-3516 if you have any questions.

Sincerely,

Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on May 16, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

### A. Collection Areas

- Is not within 1,000 ft of an active wellhead protection area that supplies public or private water system or within a 100 year floodplain
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo within 200 feet downhill of the Pilar collection location. NMGC will install 1 and 1/3 second containment for the tank to hold all the water if there is a failure.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

### B. Discharge Area

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system or within 100 year floodplain
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences and mitigate the potential for flooding by discharging water down topographic slope of residence #2 and #4 and only spray water in the discharge area upslope of residence #3 every other day. NMGC will spray water in a controlled manner so as not to cause erosion or flooding.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

---

Signature	Title	Date
-----------	-------	------

- 
- Number: 1 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:36:56 AM  
Assessment does not seem to be based upon OCD's definition of a wellhead protection area (19.15.2.7.W NMAC)
- 
- Number: 2 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:34:45 AM  
If there is a feature which does not satisfy the siting criteria setbacks, then a measurement should be taken and documented. "Within 200 ft" can mean 10 ft away
- 
- Number: 3 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:37:27 AM  
Assessment does not seem to be based upon OCD's definition of a wellhead protection area (19.15.2.7.W NMAC)
- 
- Number: 4 Author: bjones Subject: Sticky Note Date: 7/27/2017 7:40:27 AM  
Based upon the topographic maps, this comment does not seem appropriate for residence #4. This would the discharge would occur outside of the proposed NW discharge area. Please clarify.

[Faint blue rectangular mark]

# Photos



Rinconada collection location



Pilar collection location



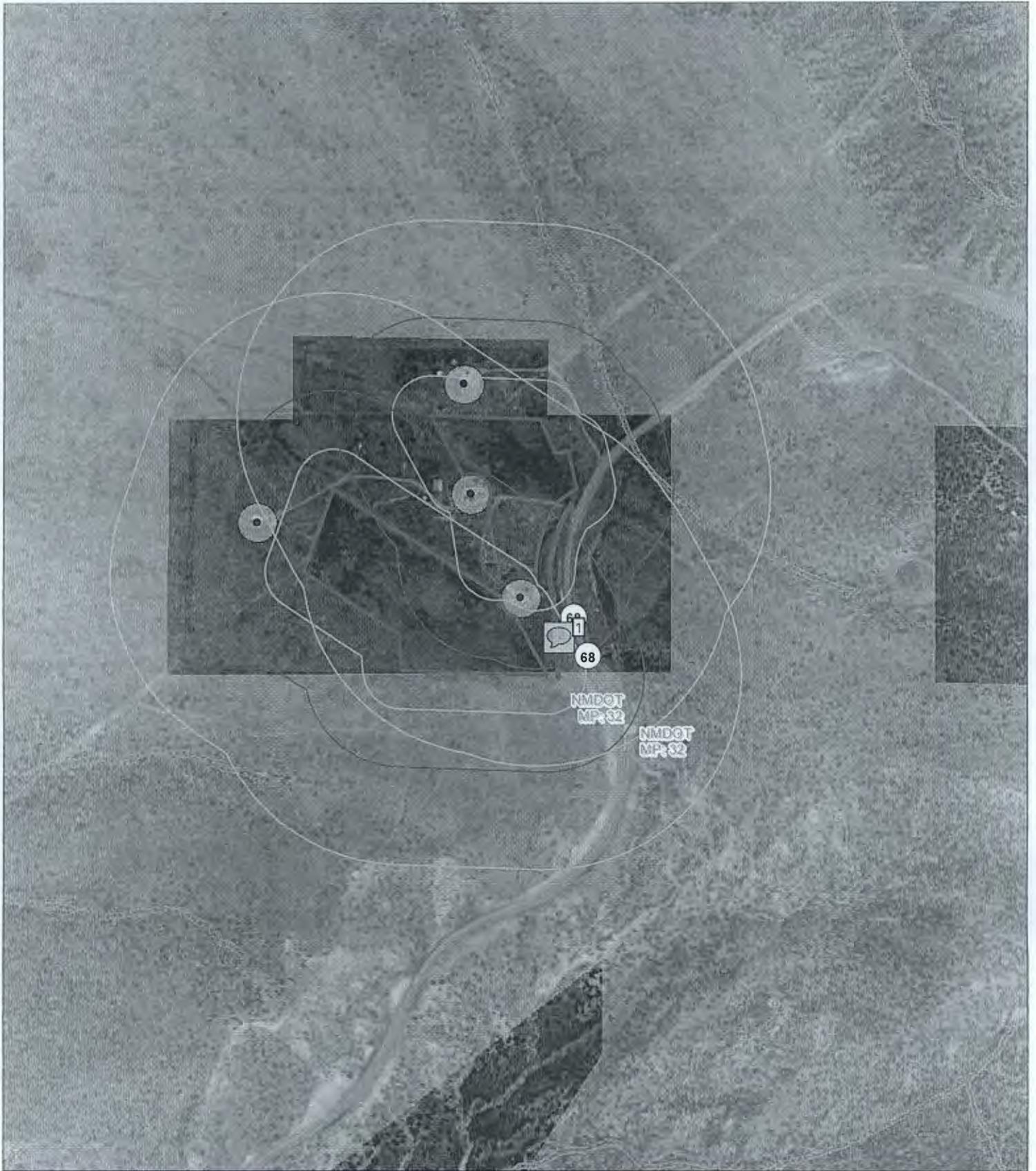
SW discharge area private land



NE discharge area private land



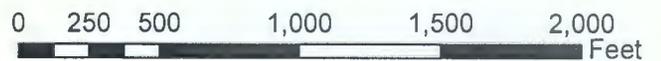
# Attachments



Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route



-  500ft buffer
-  1000ft buffer
-  200ft buffer
-  Ephemeral
-  Intermittent
-  Perennial
-  NM\_Wetlands
-  Sites
-  Residences



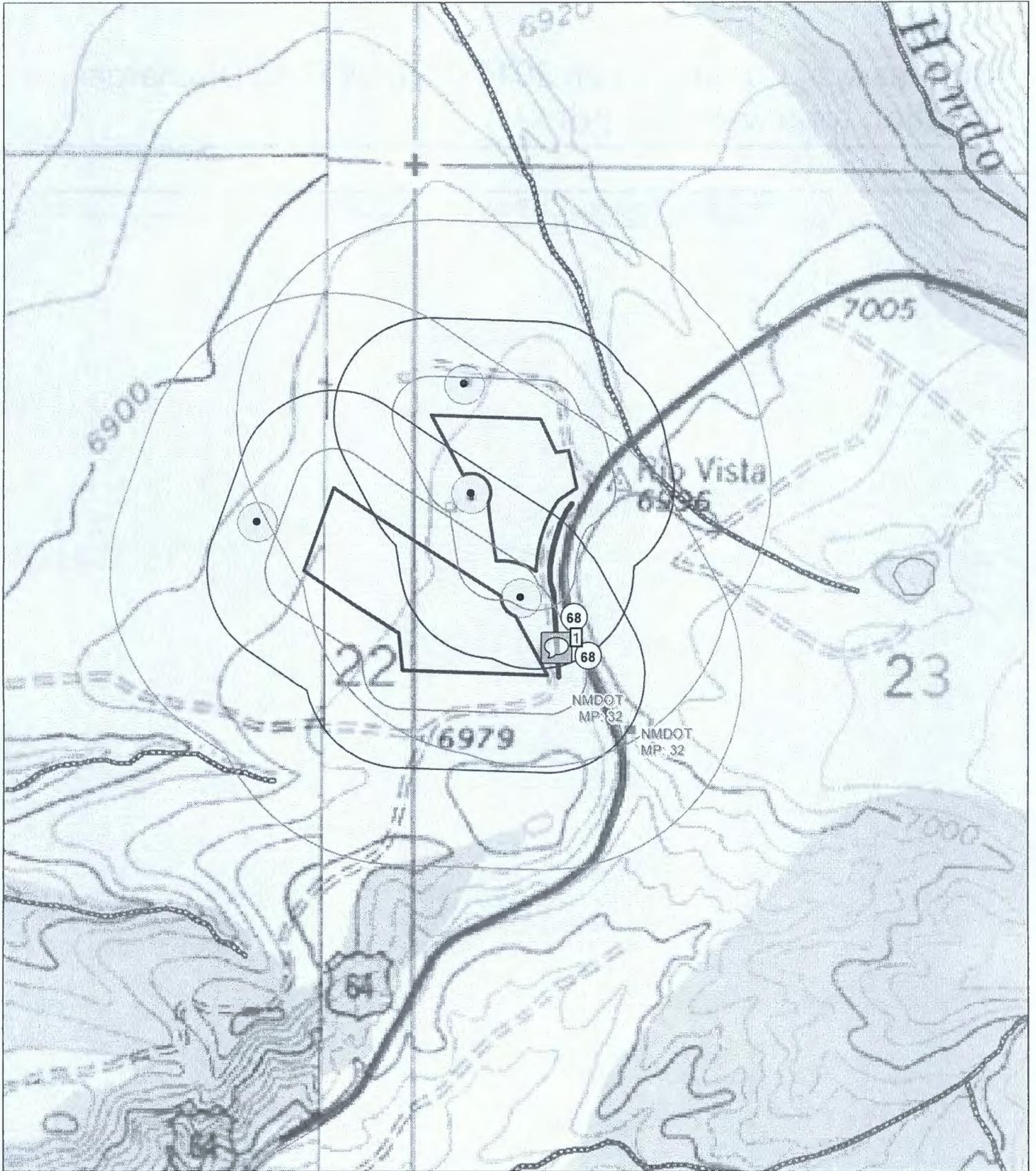
# Summary of Comments on 2017 0726 OCD 4 Discharge location aerial w arces 2.pdf

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Page: 1

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 7:03:30 PM  
based upon the key, there is a perennial stream within the setback area



Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route



-  500ft buffer
-  1000ft buffer
-  200ft buffer
-  Ephemeral
-  Intermittent
-  Perennial
-  NM\_Wetlands
-  Sites
-  Residences



# Summary of Comments on 2017 0726 OCD 4a Discharge location topo w acres 2.pdf

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Page: 1

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 7:04:17 PM  
based upon the key, there is a perennial stream within the setback area



# Summary of Comments on 2017 0726 OCD Pilar FEMA maps of locations.pdf

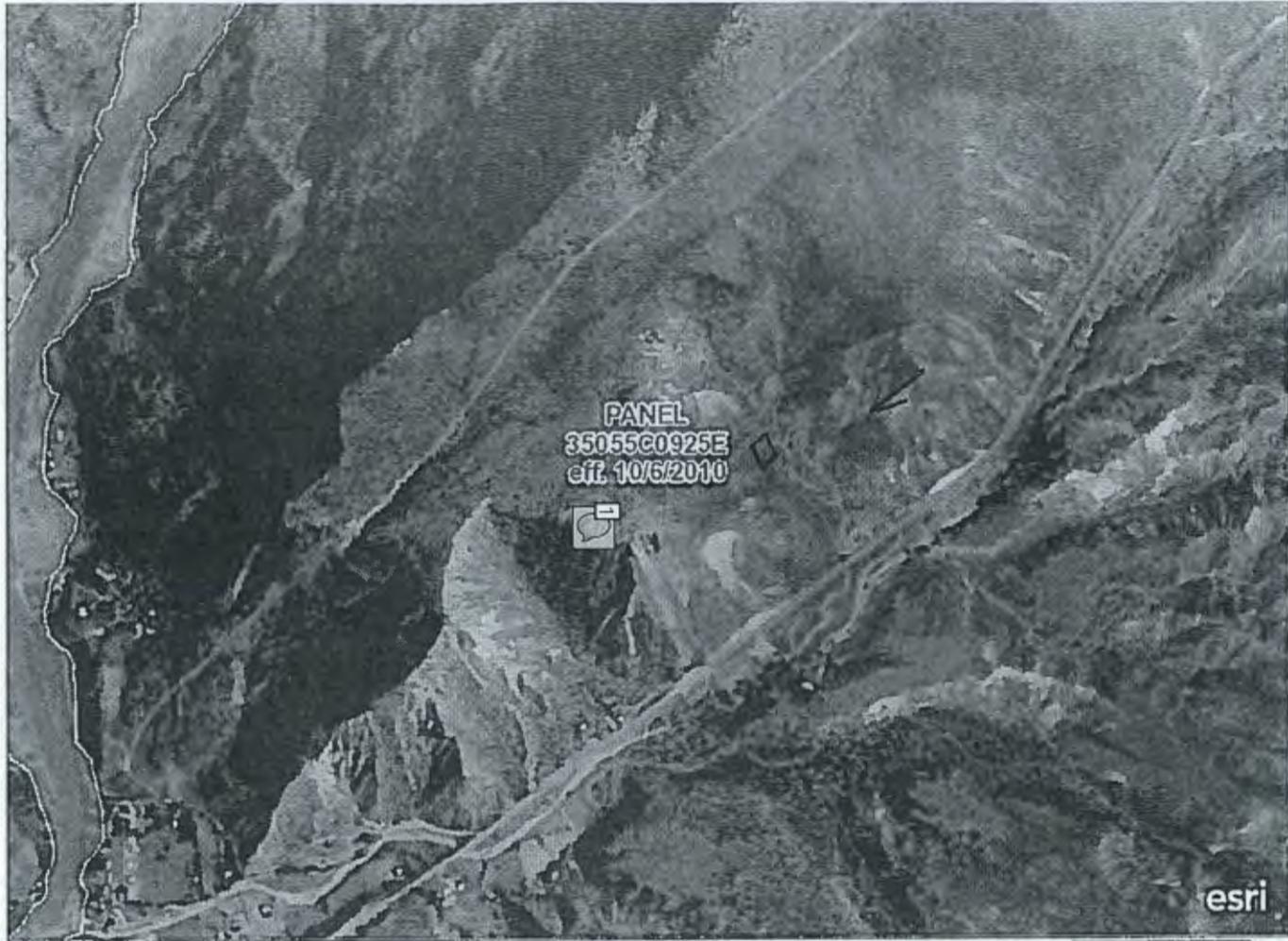
---

Page: 1

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Number: 1      Author: bjones      Subject: Sticky Note      Date: 7/26/2017 5:04:32 PM  
Seeking a map generated from this panel... should illustrate designated zones

- Effective LOMAs
- 
- FIRM Panels
- Cross-Sections
- Flood Hazard Boundaries
  - Limit Lines
  - SFHA / Flood Zone Boundary
  - Other Boundaries
- Flood Hazard Zones
  - 1% Annual Chance Flood Hazard
  - Regulatory Floodway
  - Special Floodway
  - Area of Undetermined Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Future Conditions 1% Annual Chance Flood Hazard
  - Area with Reduced Risk Due to Levee



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: FEMAMapSpecialist@riskmapcds.com | USDA FSA, Microsoft

<http://fema.maps.arcgis.com/home/webmap/print.html>

7/6/2017

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Number: 1 Author: bjones Subject: Sticky Note Date: 7/26/2017 5:04:47 PM  
Seeking a map generated from this panel... should illustrate designated zones

- LOMs
- Effective
- LOMAs
- 
- FIRM Panels
- 
- Cross-Sections
- 
- Flood Hazard Boundaries
- Limit Lines
- SFHA / Flood Zone Boundary
- Other Boundaries
- Flood Hazard Zones
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcdfs.com](mailto:FEMAMapSpecialist@riskmapcdfs.com) | USDA FSA, Microsoft

<http://fema.maps.arcgis.com/home/webmap/print.html>

7/6/2017

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Number: 1    Author: bjones    Subject: Sticky Note    Date: 7/26/2017 5:06:00 PM  
Seeking a map generated from this panel... should illustrate designated zones

## NOTICE OF PUBLICATION

New Mexico Gas Company (NMGC), 7120 Wyoming Blvd NE, Albuquerque, NM 87109, has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for hydrostatically testing the Taos Mainline, a newly constructed natural gas pipeline. Approximately 6.7 miles of new 12-inch pipe and 0.4 miles of new 8-inch pipe will be hydrostatically tested using water from the City of Espanola. NMGC will discharge the test water within T24N R11W Sections 22 and 23. This location is west of Highway 68 about a ¼ mile north of NMDOT milepost 12. Approximately 78,500 gallons of wastewater will be generated from the hydrostatic test of new pipe. Because NMGC is testing new pipe, the water is expected to meet Water Quality Control Commission (WQCC) water quality standards. If WQCC water quality standards are not met the test water will be hauled to an OCD approved facility for disposal. The depth of groundwater potentially affected by the discharge is about 400 feet below the surface. The total dissolved solids in the region range from 200-400 mg/l.

Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices by contacting Brad Jones at the New Mexico OCD at 1220 South St Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will provide future notices for this pipeline upon request.

# Summary of Comments on Microsoft Word - public notice Pilar 2017.doc

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Page: 1

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Number: 1 Author: bjones Subject: Sticky Note Date: 7/27/2017 4:48:06 PM

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Please identify how many miles north of Pilar.

Number: 2 Author: bjones Subject: Sticky Note Date: 7/27/2017 4:49:14 PM

---

Is the elevation of the discharge locations the same as where the well is located? If not, then GW is not 400 bgs at the proposed discharge locations. Please modify

**Jones, Brad A., EMNRD**

---

**From:** Fiedler, Marcelle F. <Marcelle.Fiedler@nmgco.com>  
**Sent:** Tuesday, July 18, 2017 11:19 AM  
**To:** Jones, Brad A., EMNRD  
**Subject:** draft of public notice  
**Attachments:** public notice Pilar 2017.doc

Brad  
Attached is a draft of the public notice for the Pilar hydrostatic test.  
marcelle

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

Mailing address:  
PO Box 97500, BC 22  
Albuquerque, NM 87199-7500

Office: 505-697-3516  
Cell: 505-220-1056

New email address is: [Marcelle.fiedler@nmgco.com](mailto:Marcelle.fiedler@nmgco.com)

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## NOTICE OF PUBLICATION

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## Jones, Brad A., EMNRD

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**From:** Fiedler, Marcelle F. <Marcelle.Fiedler@nmgco.com>  
**Sent:** Tuesday, July 11, 2017 2:29 PM  
**To:** Jones, Brad A., EMNRD  
**Cc:** Sandoval, Rebecca  
**Subject:** Pilar hydrostatic test  
**Attachments:** 3 Collection Rinconada aerial 2.pdf; 3a Collection Rinconada topo.pdf; 4 Discharge location aerial w arces 2.pdf; 4a Discharge location topo w acres 2.pdf; 1 Pilar overview and landown ver2.pdf; 2 Collection Pilar aerial 2.pdf; 2a Collection Pilar topo.pdf; Pilar FEMA maps of locations.pdf; 2017 Pilar hydro test ver2.pdf; 7 All soil maps and soil description.pdf

Brad  
Attached is a draft pdf of a revision to the permit application submitted in May for your review. I have addressed the issues we discussed on the phone and in your letter.  
Some of the maps are too large to send by email. They are the well location maps.

I do not see anywhere in the guidelines or the regs that a draft of the public notice must be submitted with the application. Can you show me where it says that is required to be submitted? thanks  
marcelle

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

Mailing address:  
PO Box 97500, BC 22  
Albuquerque, NM 87199-7500

Office: 505-697-3516  
Cell: 505-220-1056

New email address is: Marcelle.fiedler@nmgco.com

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**New Mexico**  
**GAS COMPANY®**  
AN EMERA COMPANY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

July 10, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division replied with a letter on June 9, 2017 saying the application was administratively incomplete. With this submittal NMGC has addressed the issues mentioned in the letter along with other details as discussed over the phone with Brad Jones. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back (by truck) to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. A water sample will be taken after the completion of the third test section and sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the

north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. The location is more than 500ft from the Rio Grande and 200 ft higher in elevation than the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3 miles north of Pilar NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total and has three structures within it. The neighboring landowner directly to the north has one residence. NMGC will maintain at least a 100 ft buffer from all existing structures and be 300 ft from one structure. Water will be sprayed within the area cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed. It will take approximately 5 days to discharge all the water.

D. Maps

The following maps are included with this permit application.

- Overview of project area and Land Ownership map (topo map)
- Water collection site (topo and aerial map)
- Discharge location site (topo and aerial map)
- Wells
- Geology of area
- Soils
- FEMA map

**E. Demonstration of Compliance with Siting Criteria**

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas. Boundaries of areas where water will not be discharged will be flagged or have signs.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

- i. Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station the tank holding 6,500 gallons is within 200 ft of an ephemeral stream. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. (see Collection Location Topo maps)
- ii. Within an existing wellhead protection area or 100 year floodplain*
  2. The closest private well to the tanks on the south end at Rinconada station is almost 2000ft away. Records from the State Engineers Office (SEO) show the nearest well is more than 2000ft from the Pilar launcher were one tank will hold water. (see Well location map and section N below).
  3. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).
- iii. Within or within 500ft of a wetland*
  4. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)
- iv. Within the area overlying a subsurface mine*
  5. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. Within 500 feet from the nearest residence, school, hospital, institution or church*
  6. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. (see Discharge area maps)
- ii. Within an existing wellhead protection area or 100 year floodplain*

2. Records from the State Engineers Office (SEO) show the nearest active well is more than 2000 ft from the private land where water will be sprayed. The landowner has told NMGC there are no active wells on the property. (see Discharge area maps and section N below)
  3. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).
- iii. *Within or within 500ft of a wetland*
4. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
5. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
6. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. (see Discharge area maps) The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure in the SE part of the property (residence #2) when water is sprayed in the SW area. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NW area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily.

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. NMGC anticipates that the water will be off site by approximately December 1st.

#### G. Method & Location for Collection and Retention of Fluids

##### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon mobile tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

#### H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does not occur. Water will not be sprayed on days when wind will carry the water off the ground.

#### I. Request for Alternate Treatment/Disposal

If the hydrostatic test water does not meet OCD conditions for discharge to the ROW and is not a characteristic hazardous waste, NMGC will dispose of it at the Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a characteristic hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDF for disposal.

#### J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the third test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

#### K. Method of Disposal of Fluids and Solids after Test Completion

If approved by OCD, test waters will be sprayed onto private land at a controlled rate.

#### L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

#### M. Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

*Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Ql) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

*Geologic Reference:*

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet from the Rinconada collection location. The POD (44010) associated with this well shows it is expired. Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 140 feet. The well nearest to the Pilar Station is 2,500 ft away and its depth to water is 22ft. The POD number is 09961.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water and the depth to water is 400 ft. The POD for this well is 16717. The records for well POD 11529 located on the private property, show it was never installed.

*Total dissolved solids (TDS) for the project area:* Two springs northeast of Pilar have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

#### O. ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. BLM is the surrounding landowner for almost all of the locations. Any other landowners within 1/3 of a miles of the collection and discharge locations will be notified of the proposed hydrostatic test.

#### Closing

In the event of a release associated with project activities, NMGC will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.29 to remediate the spill as soon as possible.

Once OCD rules this application as administratively complete, and if required, NMGC will provide notice of the permit application in the Taos News following requirements in NMAC 20.6.2.3108. In addition, a sign with a synopsis of the public notice will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west side near the private property where water will be discharged.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

Thank you for your assistance. If additional information is required please notify me in writing.  
Please call me at (505) 697-3516 if you have any questions.

Sincerely,

**Marcelle Fiedler**  
**Senior Environmental Scientist**  
**Attachment: Location maps**

### **Certification of Compliance with Siting Criteria**

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on May 16, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

#### **A. Collection Areas**

- Is not within 1,000 ft of an active wellhead protection area that supplies public or private water system or within a 100 year floodplain
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo within 200 feet downhill of the Pilar collection location. NMGC will install 1 and 1/3 secondary containment for the tank to hold all the water if there is a failure.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

#### **B. Discharge Area**

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system or within 100 year floodplain
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences and mitigate the potential for flooding by discharging water down topographic slope of residence #2 and #4 and only spray water in the discharge area upslope of residence #3 every other day. NMGC will spray water in a controlled manner so as not to cause erosion or flooding.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

---

Signature

Title

Date

- - T

# Photos



Rinconada collection location



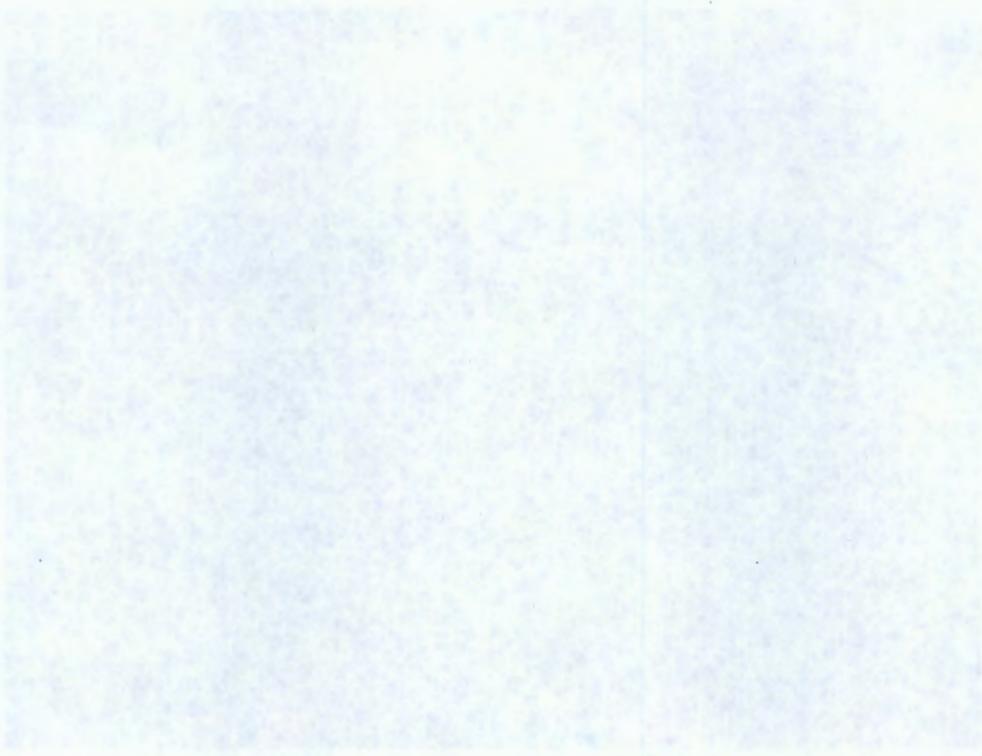
**Pilar collection location**



SW discharge area private land



NE discharge area private land



# **Attachments**



Collection Location- Rinconada Launching Station  
 Taos Mainline - Rinconada to Pilar Re-Route

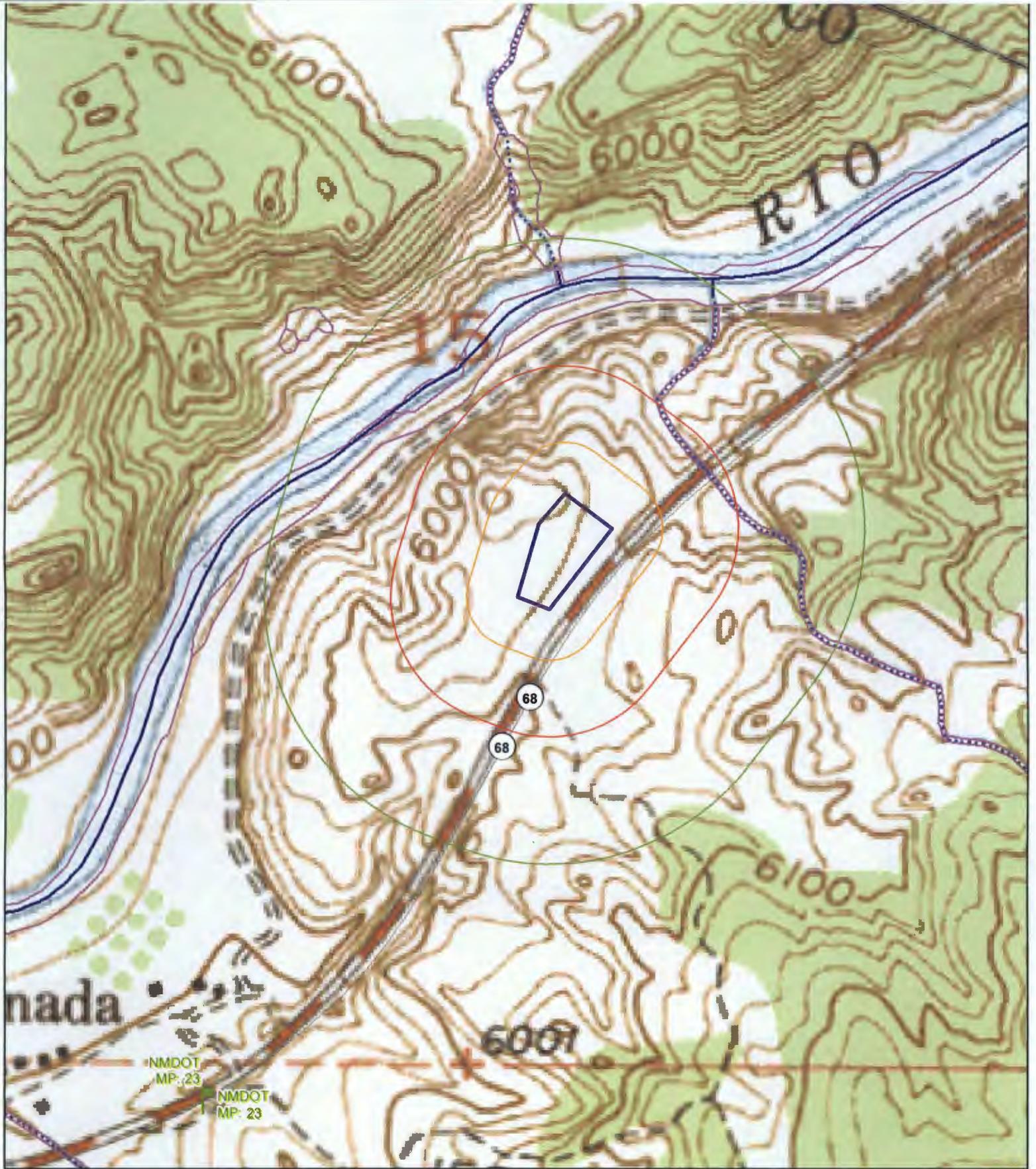


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

Pilar\_collection\_and\_discharge\_sites





Collection Location- Rinconada Launching Station  
 Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Pilar\_collection\_and\_discharge\_sites

0 195 390 780 1,170 1,560 Feet



Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route

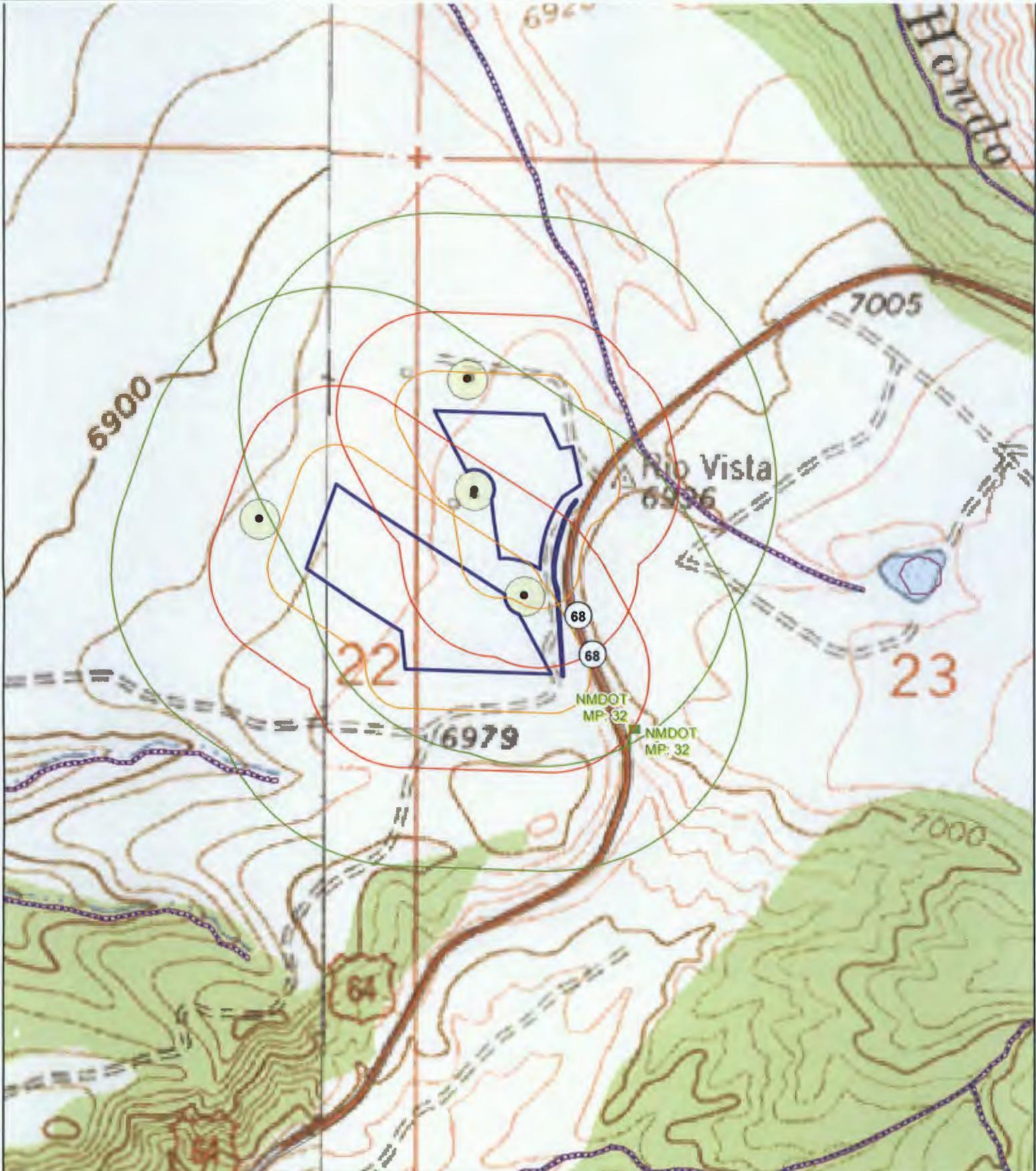


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Sites
- Residences



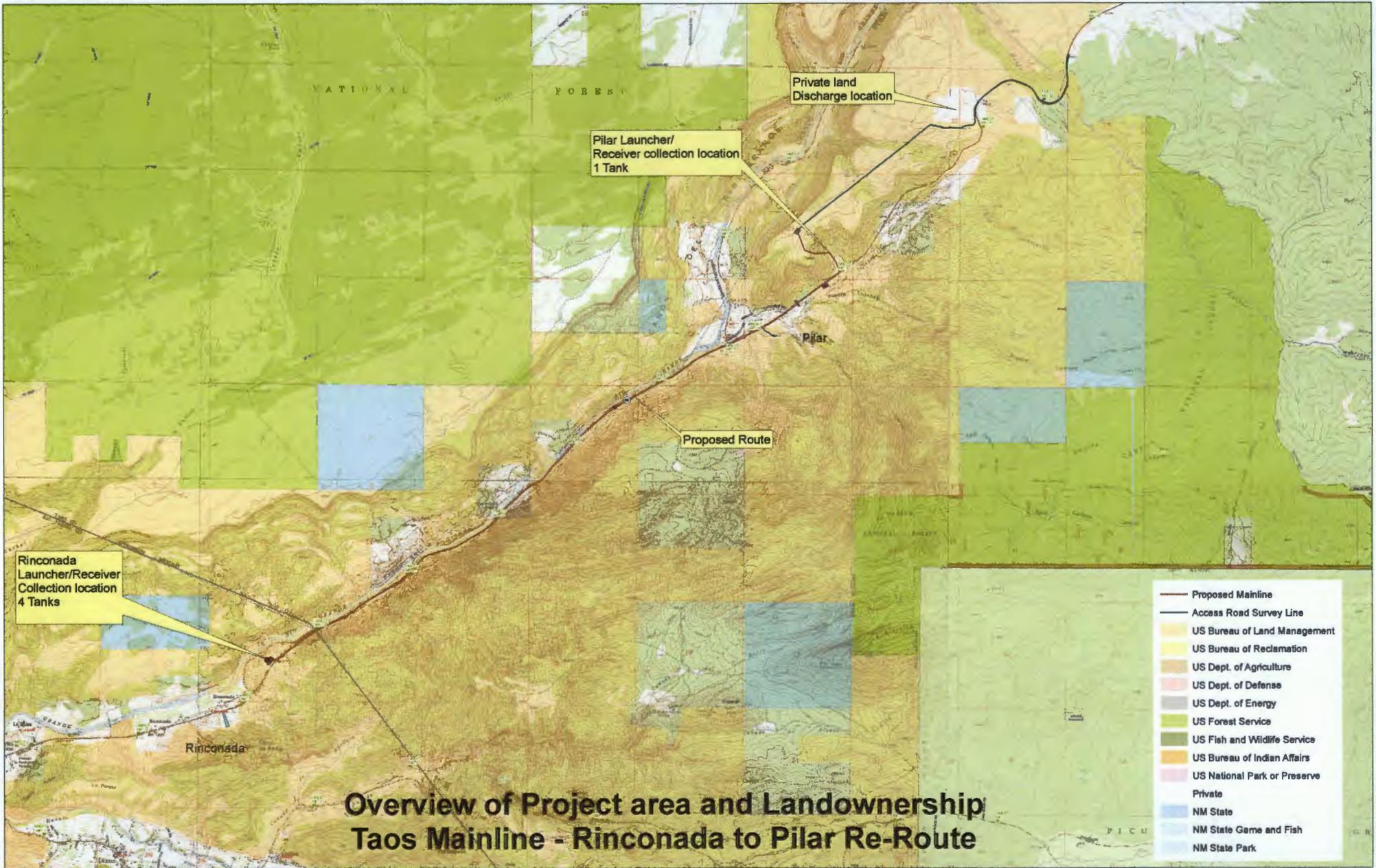


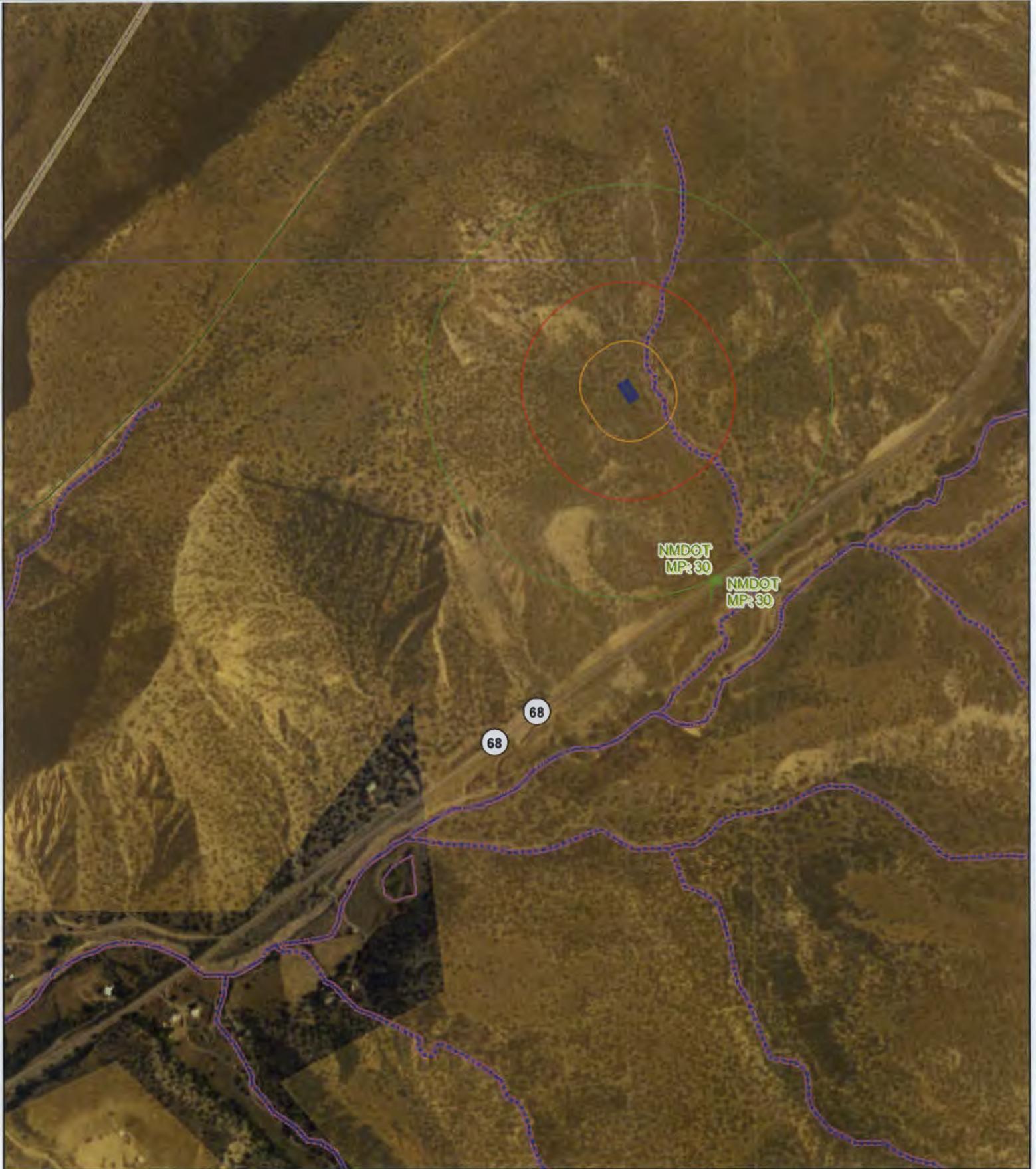
**Discharge Location- Private land  
Taos Mainline - Rinconada to Pilar Re-Route**



- |               |              |            |
|---------------|--------------|------------|
| 500ft buffer  | Ephemeral    | Sites      |
| 1000ft buffer | Intermittent | Residences |
| 200ft buffer  | Perennial    |            |
| NM_Wetlands   |              |            |







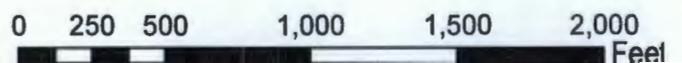
Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route

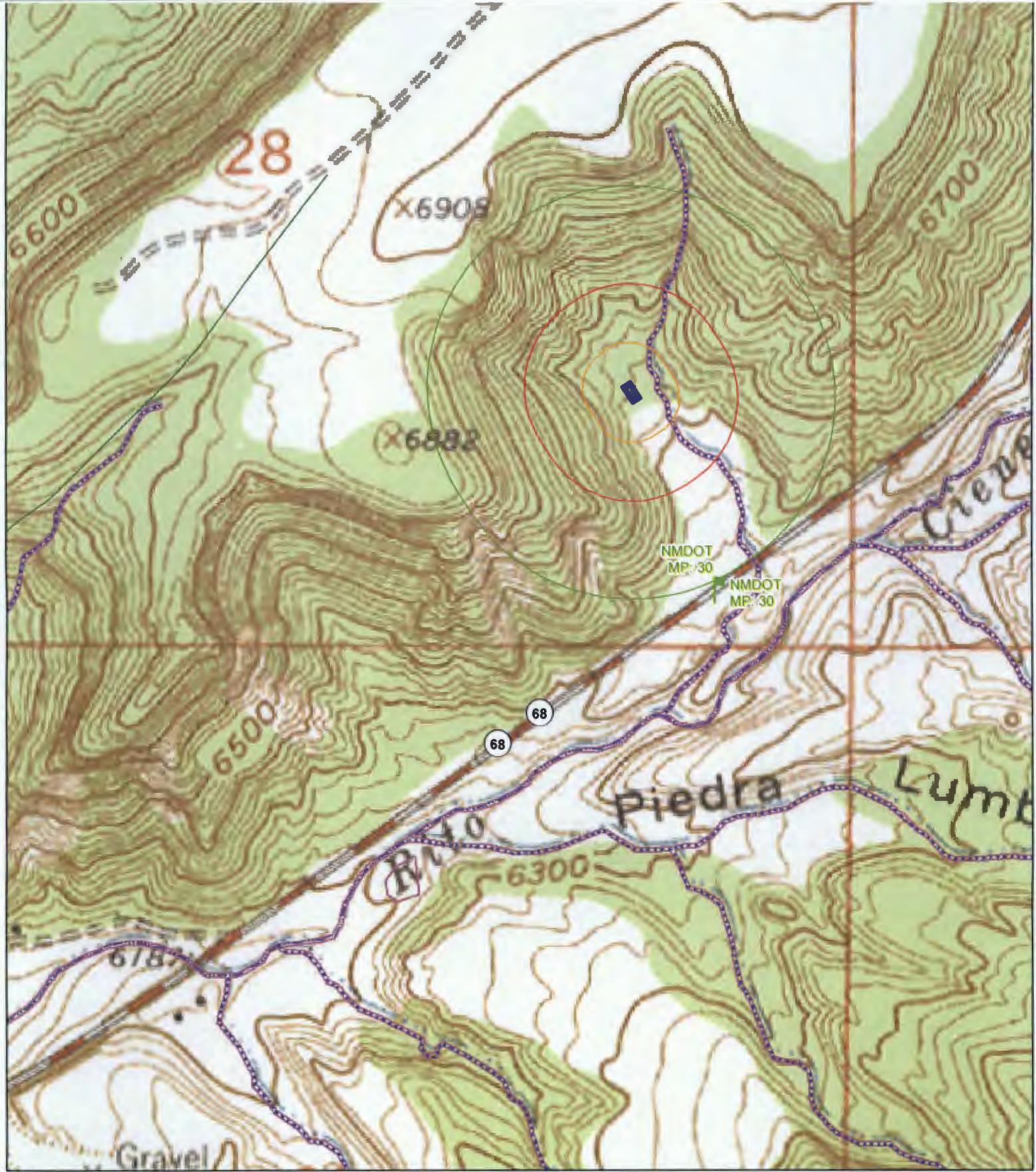


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

Pilar\_collection\_and\_discharge\_sites

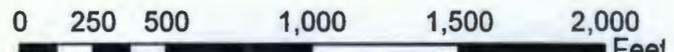




Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Pilar\_collection\_and\_discharge\_sites



Rinconada collection

FEMA's National Flood Hazard Layer (Official)



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcgs.com](mailto:FEMAMapSpecialist@riskmapcgs.com) | USDA FSA, Microsoft

FEMA's National Flood Hazard Layer (Official)

Pilar Collection location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

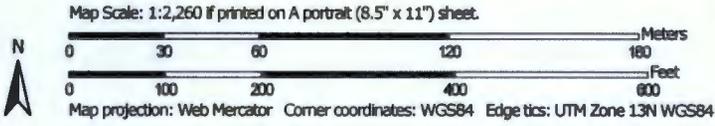
FEMA's National Flood Hazard Layer (Official) Private land Aircharge location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)



Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)

### MAP LEGEND

<b>Area of Interest (AOI)</b>		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
 Blowout		 Streams and Canals	
 Borrow Pit		<b>Transportation</b>	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		<b>Background</b>	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
Survey Area Data: Version 14, Sep 29, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties (NM650)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
148	Chita loam, 0 to 5 percent slopes	8.4	54.7%
242	Tinaja-Rock outcrop complex, 45 to 75 percent slopes	7.0	45.3%
<b>Totals for Area of Interest</b>		<b>15.4</b>	<b>100.0%</b>

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 148—Chita loam, 0 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wh4  
*Elevation:* 6,000 to 7,500 feet  
*Mean annual precipitation:* 10 to 16 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Faermland classification:* Not prime faermland

#### Map Unit Composition

*Chita and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Chita

##### Setting

*Landform:* Mesas  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Eolian deposits over slope alluvium derived from igneous and sedimentary rock

##### Typical profile

*A - 0 to 3 inches:* loam  
*BA and Bt - 3 to 10 inches:* loam  
*Btk and Bk - 10 to 38 inches:* silty clay loam  
*2Bk - 38 to 60 inches:* gravelly sandy clay loam

##### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 9.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6c

*Hydrologic Soil Group:* C

*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

### Minor Components

#### Dermala

*Percent of map unit:* 5 percent

*Landform:* Hills

*Landform position (two-dimensional):* Backslope, footslope, shoulder, toeslope

*Landform position (three-dimensional):* Crest, nose slope, side slope, head slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* Pinyon-Juniper/Skunkbush Sumac Shallow Sandy (F036XB133NM)

*Hydric soil rating:* No

#### Pinavetes

*Percent of map unit:* 5 percent

*Landform:* Dunes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Ecological site:* Sandy Slopes (R036XB111NM)

*Hydric soil rating:* No

#### Rock outcrop

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 242—Tinaja-Rock outcrop complex, 45 to 75 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wj2  
*Elevation:* 5,800 to 7,800 feet  
*Mean annual precipitation:* 13 to 16 inches  
*Mean annual air temperature:* 45 to 49 degrees F  
*Frost-free period:* 100 to 130 days  
*Faerland classification:* Not prime farmland

#### Map Unit Composition

*Tinaja and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of  
the mapunit.*

#### Description of Tinaja

##### Setting

*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Colluvium derived from sandstone

##### Typical profile

*A - 0 to 4 inches:* extremely gravelly loam  
*Bk1 - 4 to 43 inches:* very cobbly sandy clay loam  
*2Bk2 - 43 to 60 inches:* sandy loam

##### Properties and qualities

*Slope:* 45 to 75 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0  
to 2.0 mmhos/cm)  
*Available water storage in profile:* Low (about 5.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated): 7e*  
*Hydrologic Soil Group: B*  
*Ecological site: Steep Gravelly - Woodland (F035XG135NM)*  
*Hydric soil rating: No*

### **Description of Rock Outcrop**

#### **Typical profile**

*R - 0 to 60 inches: bedrock*

#### **Properties and qualities**

*Depth to restrictive feature: 0 inches to lithic bedrock*  
*Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)*

### **Minor Components**

#### **Chita**

*Percent of map unit: 8 percent*  
*Landform: Mesas*  
*Landform position (two-dimensional): Shoulder*  
*Landform position (three-dimensional): Talf*  
*Down-slope shape: Convex*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*  
*Hydric soil rating: No*

#### **Menefee**

*Percent of map unit: 7 percent*  
*Landform: Hills*  
*Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope*  
*Landform position (three-dimensional): Crest, nose slope, side slope, head slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Ecological site: Gravelly - Woodland (F035XG134NM)*  
*Hydric soil rating: No*

#### **Teromote**

*Percent of map unit: 5 percent*  
*Landform: Alluvial fans*  
*Landform position (two-dimensional): Footslope*  
*Landform position (three-dimensional): Rise*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*

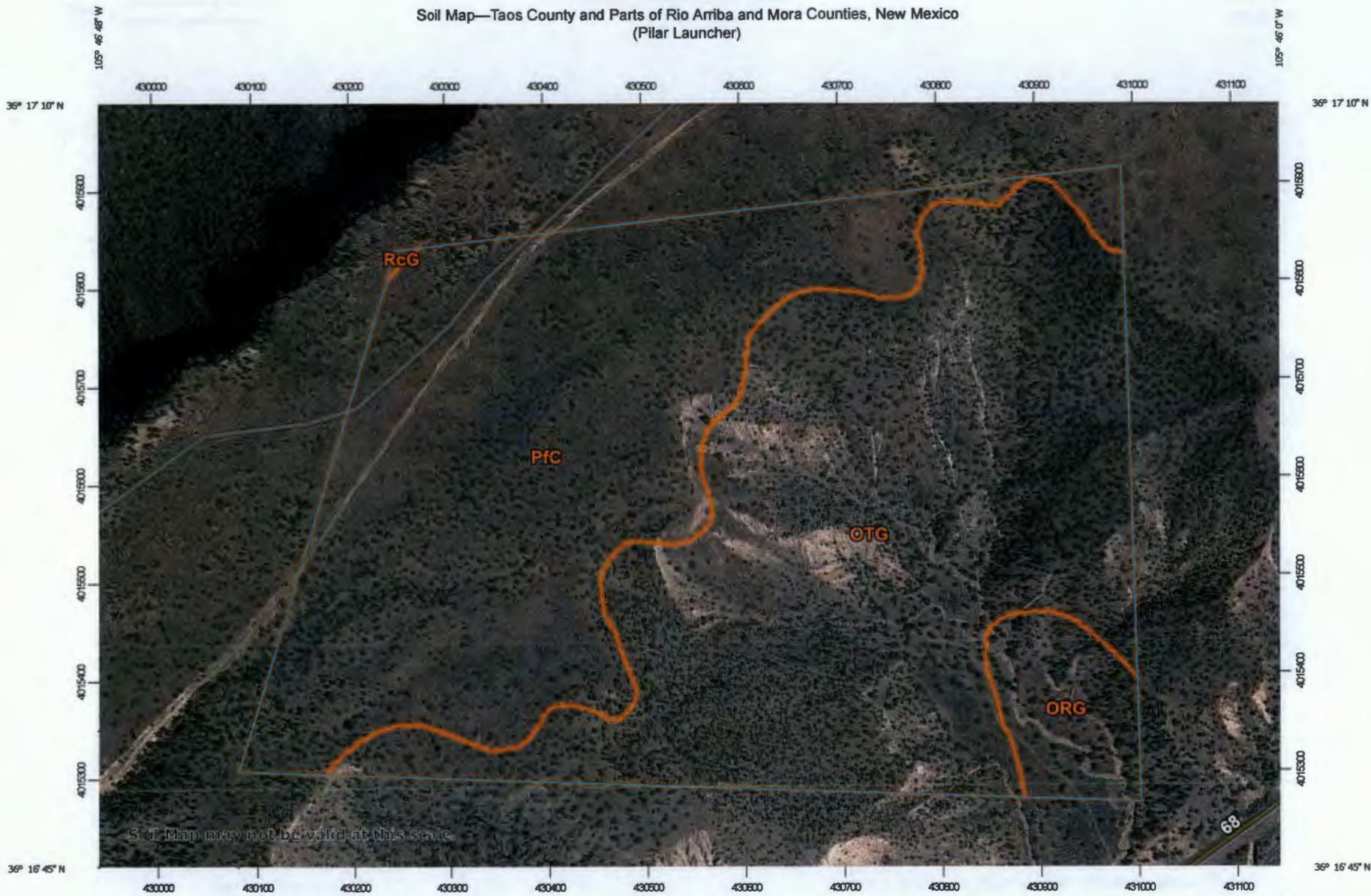
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and  
Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)



Map Scale: 1:5,500 if printed on A landscape (11" x 8.5") sheet.  
0 50 100 200 300 Meters  
0 250 500 1000 1500 Feet  
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)

**MAP LEGEND**

<b>Area of Interest (AOI)</b>		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
 Blowout		 Streams and Canals	
 Borrow Pit		<b>Transportation</b>	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		<b>Background</b>	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

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Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ORG	Orthents-Badland association, very steep	6.0	5.0%
OTG	Orthents-Rock outcrop association, very steep	61.4	50.7%
PfC	Petaca-Prieta complex, 1 to 8 percent slopes	53.6	44.3%
RcG	Rock outcrop, very steep	0.1	0.1%
<b>Totals for Area of Interest</b>		<b>121.1</b>	<b>100.0%</b>

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### OTG—Orthents-Rock outcrop association, very steep

#### Map Unit Setting

*National map unit symbol:* k1gl  
*Elevation:* 6,400 to 10,000 feet  
*Mean annual precipitation:* 9 to 23 inches  
*Mean annual air temperature:* 44 to 54 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Orthents and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Orthents

##### Setting

*Landform:* Canyons  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Colluvium derived from basalt

##### Typical profile

*H1 - 0 to 10 inches:* very gravelly loam  
*H2 - 10 to 60 inches:* very gravelly clay loam

##### Properties and qualities

*Slope:* 40 to 80 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.21 to 0.71 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Moderate (about 6.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group: C*  
*Ecological site: Breaks (R051XA006NM)*  
*Hydric soil rating: No*

#### **Description of Rock Outcrop**

##### **Typical profile**

*R - 0 to 60 inches: bedrock*

##### **Properties and qualities**

*Depth to restrictive feature: 0 inches to lithic bedrock*

*Runoff class: Very high*

*Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)*

##### **Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 8*

*Hydric soil rating: Unranked*

#### **Minor Components**

##### **Montecito**

*Percent of map unit: 10 percent*

*Ecological site: south of Gallup 13-16 (F036XA001NM)*

*Hydric soil rating: No*

##### **Trampas**

*Percent of map unit: 10 percent*

*Ecological site: Pine Grassland (R048AY010NM)*

*Hydric soil rating: No*

### **Data Source Information**

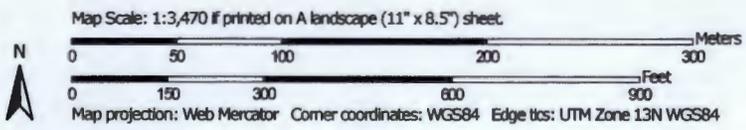
Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)



Soil Map may not be valid at this scale.



Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)

### MAP LEGEND

<b>Area of Interest (AOI)</b>		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
 Blowout		 Streams and Canals	
 Borrow Pit		<b>Transportation</b>	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		<b>Background</b>	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SSC	Silva-Sedillo association, gently sloping	40.9	100.0%
<b>Totals for Area of Interest</b>		<b>40.9</b>	<b>100.0%</b>

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### SSC—Silva-Sedillo association, gently sloping

#### Map Unit Setting

*National map unit symbol:* k1hf  
*Elevation:* 6,500 to 8,000 feet  
*Mean annual precipitation:* 11 to 14 inches  
*Mean annual air temperature:* 46 to 54 degrees F  
*Frost-free period:* 115 to 135 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Silva and similar soils:* 65 percent  
*Sedillo and similar soils:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Silva

##### Setting

*Landform:* Ridges, divides  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale

##### Typical profile

*H1 - 0 to 3 inches:* loam  
*H2 - 3 to 31 inches:* clay loam  
*H3 - 31 to 60 inches:* clay loam

##### Properties and qualities

*Slope:* 1 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* High (about 10.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

### Description of Sedillo

#### Setting

*Landform:* Divides  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock

#### Typical profile

*H1 - 0 to 3 inches:* gravelly loam  
*H2 - 3 to 11 inches:* very gravelly clay loam  
*H3 - 11 to 60 inches:* very gravelly sandy loam

#### Properties and qualities

*Slope:* 5 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 3 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Low (about 4.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Ecological site:* Gravelly Slopes (R036XA004NM)  
*Hydric soil rating:* No

### Minor Components

#### Fernando

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

#### Manzano

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015



State of New Mexico  
Energy, Minerals and Natural Resources Department

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**Susana Martinez**  
Governor

**Ken McQueen**  
Cabinet Secretary

**Matthias Sayer**  
Deputy Cabinet Secretary

**David R. Catanach**, Division Director  
Oil Conservation Division



June 9, 2017

Ms. Marcelle Fiedler  
New Mexico Gas Company  
P.O. Box 97500  
Albuquerque, NM 87109-7500

**Re: Hydrostatic Test Wastewater Discharge Notice of Intent Review (HIP-136)  
New Mexico Gas Company  
Taos Mainline (Pilar) Project  
Location: Sections 22 and 23, Township 24 North, Range 11 East, NMPM,  
Taos County, New Mexico**

Dear Ms. Fiedler:

The Oil Conservation Division (OCD) has completed the review of New Mexico Gas Company's (NMGC) notice of intent (NOI), dated May 26, 2017 and received by OCD on June 1, 2017, for authorization to discharge approximately 78,500 gallons of wastewater generated from a hydrostatic test of approximately 4.4 miles of a new 12-inch natural gas transmission pipeline and 2.4 miles of an existing 8-inch natural gas transmission pipeline, approximately 3.5 miles northeast of Pilar, New Mexico. OCD has determined the request to **administratively incomplete**.

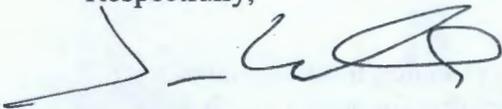
Pursuant to 20.6.2.3108.A NMAC, "Within 15 days of receipt of an application for a discharge permit, modification or renewal, the department shall review the application for administrative completeness. To be deemed administratively complete, an application shall provide all of the information required by Paragraphs (1) through (5) of Subsection F of 20.6.2.3108 NMAC and shall indicate, for department approval, the proposed locations and newspaper for providing notice required by Paragraphs (1) and (4) of Subsection B or Paragraph (2) of Subsection C of 20.6.2.3108 NMAC." In regards of NMGC demonstrating compliance to Paragraph (2) of Subsection F of 20.6.2.3108 NMAC, "the location of the discharge, including a street address, if available, and sufficient information to locate the facility with respect to surrounding landmarks," the NOI states "If approved by OCD, test water will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 2 miles north of the end of the project. A private landowner on the west side of US 68 would like to have the water sprayed onto his property." The information provided in the NOI does not include sufficient information to locate the facility with respect to surrounding landmarks, such as the nearest mile maker.

In regards of NMGC demonstrating compliance to Paragraph (5) of Subsection F of 20.6.2.3108 NMAC, "the depth to and total dissolved solids concentration of the ground water most likely to be affected by the discharge," the NOI states "*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water." The depth to ground water most likely to be affected by the discharge was not identified.

In regards of NMGC demonstrating compliance to Paragraph (1) of Subsection B of 20.6.2.3108 NMAC, "for each 640 contiguous acres or less of a discharge site, prominently posting a synopsis of the public notice at least 2 feet by 3 feet in size, in English and in Spanish, at a place conspicuous to the public, approved by the department, at or near the proposed facility for 30 days; one additional notice, in a form approved by and may be provided by the department, shall be posted at a place located off the discharge site, at a place conspicuous to the public and approved by the department; the department may require a second posting location for more than 640 contiguous acres or when the discharge site is not located on contiguous properties," the NOI states "In addition, a sign will be placed at the BLM visitor center in Pilar and the Embudo Valley Medical Center in Rinconada providing a synopsis of the public notice." The BLM visitor center in Pilar is approximately 3.5 miles from the proposed discharge area and the Embudo Valley Medical Center in Rinconada is approximately 9.4 miles away. The NOI does not propose to post a synopsis of the public notice on a sign at or near the discharge area in which four permanent residences are located and NMGC requests a waiver to discharge within 300 feet of Residence #1, within 100 feet of Residences #2 and #3, and less than 200 feet from Residence #4.

Please contact Brad Jones of my staff, at (505) 476-3487 or [brad.a.jones@state.nm.us](mailto:brad.a.jones@state.nm.us), to schedule a conference call to discuss the review and issues regarding the technical information of the proposed NOI application.

Respectfully,



Jim Griswold  
Environmental Bureau Chief

JG/baj



2017

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

May 26, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

New Mexico Gas Company (NMGC) is submitting this notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. This work is being performed on a new natural gas transmission pipeline that will be installed to replace 6 miles of the existing Taos mainline. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information.

Summary of Activities

NMGC will hydrostatically test 6.7 miles of 12- inch pipe and 0.4 miles of 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. A water sample will be taken after the completion of the first test section and sent to be analyzed for WQCC standards. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private

property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile to a location on the west side of US68 between the highway and the river. The location is more than 500ft from the Rio Grande and 200 ft higher in elevation than the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 2 miles north of the end of the project. A private landowner on the west side of US 68 would like to have the water sprayed onto his property. The property is 66 acres total and has three structures within it. The neighboring landowner directly to the north has one residence. NMGC will maintain at least a 100 ft buffer from all existing structures. Water will be sprayed within the area cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed. The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure in the SE part of the property (residence #2) when water is sprayed in the SW area. The structure on the west side of the property (residence #1) is 300 ft from the SW area where water will be discharged. Residence #3 is down slope from the NW discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NW area every other day to allow extra time for infiltration. A moving water truck with a spray attachment will be utilized to discharge the water. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. The landowner has told NMGC there are no active wells on the property. It will take approximately 5 days to discharge all the water.

Maps

The following maps are included with this permit application.

- Overview of project area and Land Ownership map (topo map)
- Water collection site (topo and aerial map)
- Discharge location site (topo and aerial map)
- Wells

- Geology of area
- Soils
- Wetland maps of collection and discharge areas

#### Demonstration of Compliance with Siting Criteria

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas. Boundaries of areas where water will not be discharged will be flagged or have signs.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

1. Hydrostatic test water collected in tanks will not be within 200 feet of any watercourse at the south end by Rinconada. At the Pilar launcher station the tank holding 6,500 gallons is within 200 ft of a dry arroyo. The tank at Pilar will have 1 and 1/3 containment (see Collection Location Topo maps)
2. Records from the State Engineers Office (SEO) show the nearest well is more than 2000ft from the Pilar launcher were one tank will hold water. The closest private well to the tanks on the south end at Rinconada station is almost 2000ft away. (see Well location map).
3. There are no wetlands within 500 ft.
4. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are none within the Township, Range and Sections of the Collection areas.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
5. NMGC water collection areas are not within 500 feet of any permanent residences.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

1. Discharge on the private land will not be within 200 feet of any watercourse (see Discharge area maps)
2. Records from the State Engineers Office (SEO) show the nearest well is more than 2000 ft from the private land where water will be sprayed. The landowner does not have any wells on the property. (see Discharge area maps)
3. There are no wetlands within 500 ft.
4. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are none within the Township, Range and Sections of the discharge area.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
5. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. (see Discharge area maps) The SW discharge location is down topographic slope of the structure in the SE part of the property (residence #2). The structure on the west side of the property (residence #1) is 300

ft from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NW area every other day to allow extra time for infiltration. Water will be sprayed in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily.

### Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. NMGC anticipates that the water will be off site by approximately December 1st.

### Method & Location for Collection and Retention of Fluids

#### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon mobile tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 miles north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an arroyo. NMGC will conduct daily inspections of the tank.

### BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does not occur. Water will not be sprayed on days when wind will carry the water off the ground.

### Request for Alternate Treatment/Disposal

If the hydrostatic test water does not meet OCD conditions for discharge to the ROW and is not a characteristic hazardous waste, NMGC will dispose of it at the Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a characteristic hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDf for disposal.

#### Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the first test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

#### Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests, NMGC anticipates that water quality will meet WQCC standards for discharge.

#### Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

#### *Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Ql) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits

of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly course grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also course grained unconsolidated clastic deposits.

#### Geologic Reference:

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

#### Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet from the Rinconada collection location. This well however, appears abandoned as the depth to water is 0. Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 140 feet. The well nearest to the Pilar Station is 2,500 ft away and its depth to water is 22ft.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water.

*Total dissolved solids (TDS) for the project area:* Two springs northeast of Pilar have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

#### ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project

planning. BLM is the surrounding landowner for almost all of the locations. Any other landowners within 1/3 of a miles of the collection and discharge locations will be notified of the proposed hydrostatic test.

Closing

In the event of a release associated with project activities, NMGC will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.29 to remediate the spill as soon as possible.

Once OCD rules this application as administratively complete, and if required, NMGC will provide notice of the permit application in the Taos News following requirements in NMAC 20.6.2.3108. In addition, a sign will be placed at the BLM visitor center in Pilar and the Embudo Valley Medical Center in Rinconada providing a synopsis of the public notice.

A check for \$100 is enclosed for the filing fee.

Thank you for your assistance. If additional information is required please notify me in writing. Please call me at (505) 697-3516 if you have any questions.

Sincerely,



Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on May 16, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

### A. Collection Areas

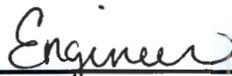
- Is not within 1,000 ft of an active wellhead protection area that supplies public or private water system
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo within 200 feet downhill of the Pilar collection location. NMGC will install 1 and 1/3 secondary containment for the tank to hold all the water if there is a failure.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

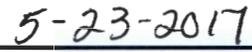
### B. Discharge Area

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system.
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences and mitigate the potential for flooding by discharging water down topographic slope of residence #2 and #4 and only spray water in the discharge area upslope of residence #3 every other day. NMGC will spray water in a controlled manner so as not to cause erosion or flooding.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

  
Signature

  
Title

  
Date

# Photos



Rinconada collection location



Pilar collection location



SW discharge area private land



NE discharge area private land



# **Attachments**



**From:** [Tompson, Mike, EMNRD](#)  
**To:** [Fiedler, Marcelle F.](#)  
**Cc:** [Kretzmann, John, EMNRD](#)  
**Subject:** RE: recorded mines  
**Date:** Friday, April 28, 2017 8:06:14 AM

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**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

Hello Marcelle,

The New Mexico Mining & Minerals Division has no knowledge of any abandoned mines in the four sections detailed in your email.

Please let us know if you have any other questions.

Mike Tompson  
New Mexico Mining & Minerals Division  
(505) 476-3427

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**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Thursday, April 27, 2017 2:27 PM  
**To:** Tompson, Mike, EMNRD <[Mike.Tompson@state.nm.us](mailto:Mike.Tompson@state.nm.us)>  
**Subject:** recorded mines

Hi Mike

New Mexico Gas Company is planning to do a hydrostatic pressure test of a gas transmission line near Rinconada and Pilar, NM later this year. As part of the permit application process with the Oil Conservation Division, we need to obtain information on the location of active or abandoned mines in the area of our test. Can you please tell me if there are any active or abandoned mines within the following sections?

1. Section 15 T23N r10E
2. Section 22, 23, 28 T24N R11E

Thank you for your assistance. Please contact me if you have any questions.

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

Mailing address:

PO Box 97500, BC 22

Albuquerque, NM 87199-7500

Office: 505-697-3516

Cell: 505-220-1056

New email address is: [Marcelle.fiedler@nmgco.com](mailto:Marcelle.fiedler@nmgco.com)

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NOTICE: This email is intended only for the individual(s) to whom it is addressed and may contain confidential information. If you have received this email by mistake, please notify the sender immediately, delete this email from your system and do not copy or disclose it to anyone else. Although we take precautions to protect against viruses, we advise you to take your own precautions to protect against viruses as we accept no liability for any which remain.

vertical upflow of deeply sourced thermal waters along faults or at fault intersections.

To further investigate groundwater sources and intermixing, we examine distribution maps of major ions and Piper diagrams that show cation and anion percentages and ion trends. Chemistry data from shallow wells between the mountain front and the Rio Pueblo, including Ponce de Leon and upper Arroyo del Alamo, are used to construct concentration maps of the dissolved solids content and the major ions Ca/Na, HCO<sub>3</sub>, SO<sub>4</sub>, and Cl for the shallow basin and bedrock aquifers (Figs. 29–33). Chemistry results from surface water and wells in the deep confined aquifer were not used to create the concentration maps, but are shown on the figures. Ion chemistry and summary statistics for each aquifer are presented in Table 9. The observed patterns and some hydrologic implications are discussed.

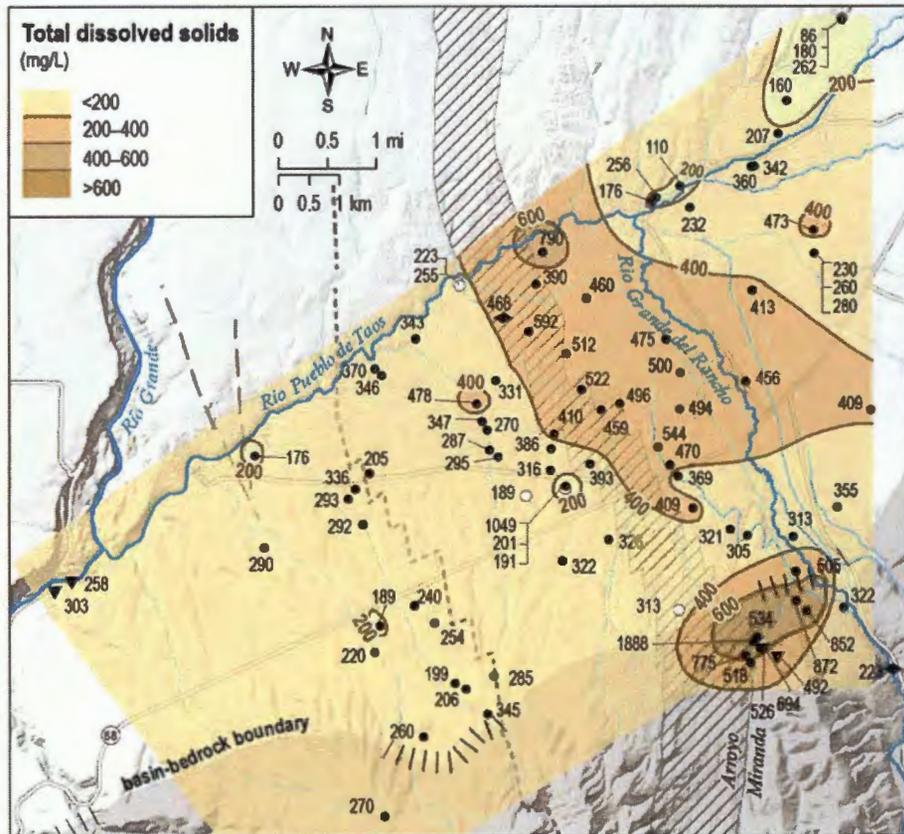
**Dissolved solid content**—Concentrations of dissolved solids, called TDS, range from 86–790 mg/L in the Picuris piedmont aquifer (Fig. 29, Table 9). High TDS values (400–600 mg/L) are clustered in the northern Rio Grande del Rancho valley and westward toward the Taos golf course, but both higher

and lower values are scattered throughout the area, for example: 790 mg/L TDS in a 122-foot deep well (TV-136) and 390 mg/L TDS in an adjacent 105-foot deep well (TV-238) (Fig. 29, Table 9). An intriguing and unusual trend in the distribution of TDS in the basin-fill aquifers is that TDS does not increase with depth, and concentrations in the deep confined aquifer (180–313 mg/L) are lower than or comparable to those in the shallow Picuris piedmont aquifer. Bedrock aquifers exhibit an extreme range in TDS, with the highest concentrations found in the hydrothermal waters at Ponce de Leon (492–1,888 mg/L) and the lowest from a well in quartzite bedrock in the upper Arroyo del Alamo watershed (48 mg/L, TV-230).

**Calcium and sodium**—Calcium concentrations range from 2.6 to 175 mg/L, and sodium ranges from 8.2 to 143 mg/L (Table 9). The distribution of calcium and sodium is illustrated as a calcium-to-sodium ratio (Fig. 30), where values greater than 1 indicate calcium dominance and values less than 1 indicate sodium dominance. Shallow groundwater in the Picuris piedmont aquifer is generally Ca-rich, as are stream waters from the Rio Grande del Rancho (TV-512), Rio Pueblo (TV-513) and Rio Lucero (TV-514). The

**Figure 29.** Map showing the dissolved solid content (TDS) in the Picuris piedmont aquifer. Values for the deep confined aquifer are also shown.

- Data**
- Well in Picuris piedmont aquifer
  - Well in deep confined aquifer
  - ▼ Spring
  - ◆ Surface water
- Depth specific samples**
- Contoured value
  - # #
- Geologic features**
- Bedrock
  - ||| Hydrogeologic window
  - ▨ Northern projection of Miranda graben
  - - - Picuris-Pecos fault
  - - - Geophysical fault





Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

**Wetlands**

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Forested/Shrub Wetland

Lake

Riverine

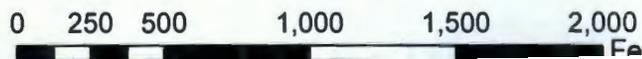
Freshwater Emergent Wetland

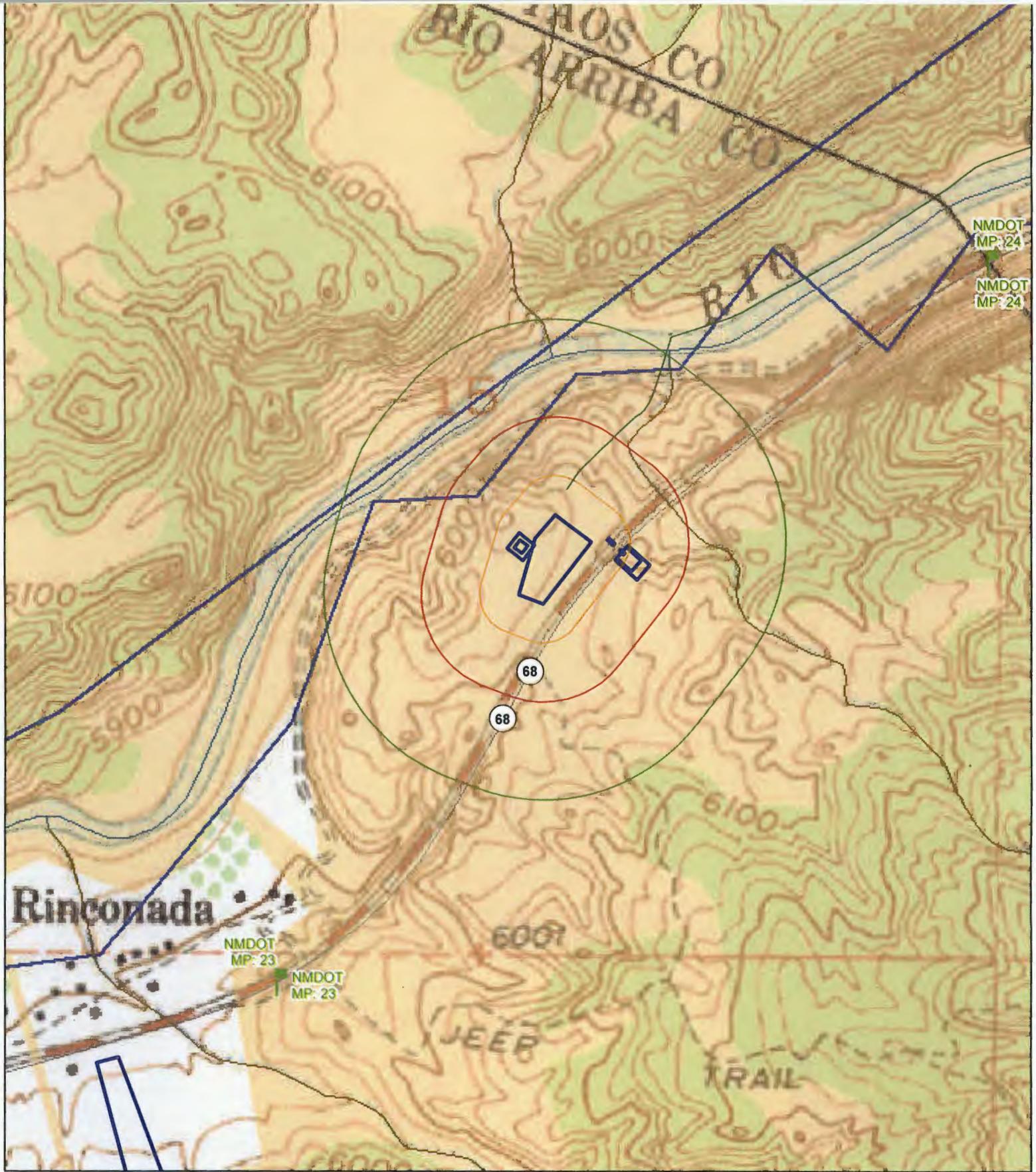
Freshwater Pond

Other

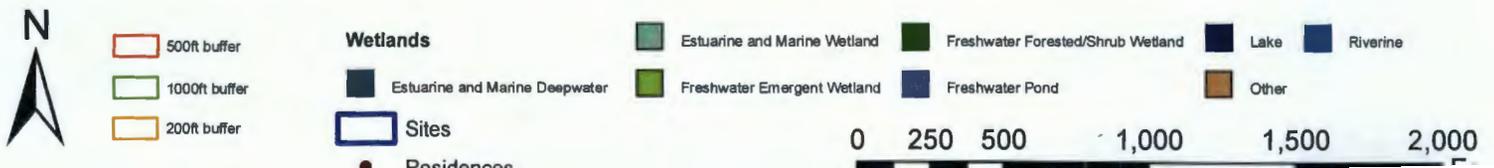
Sites

Residences



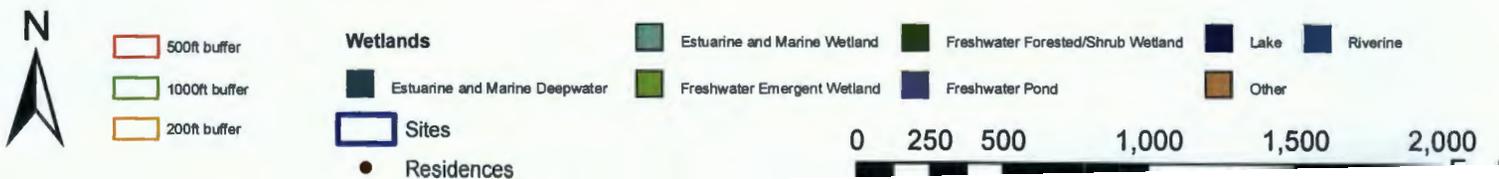


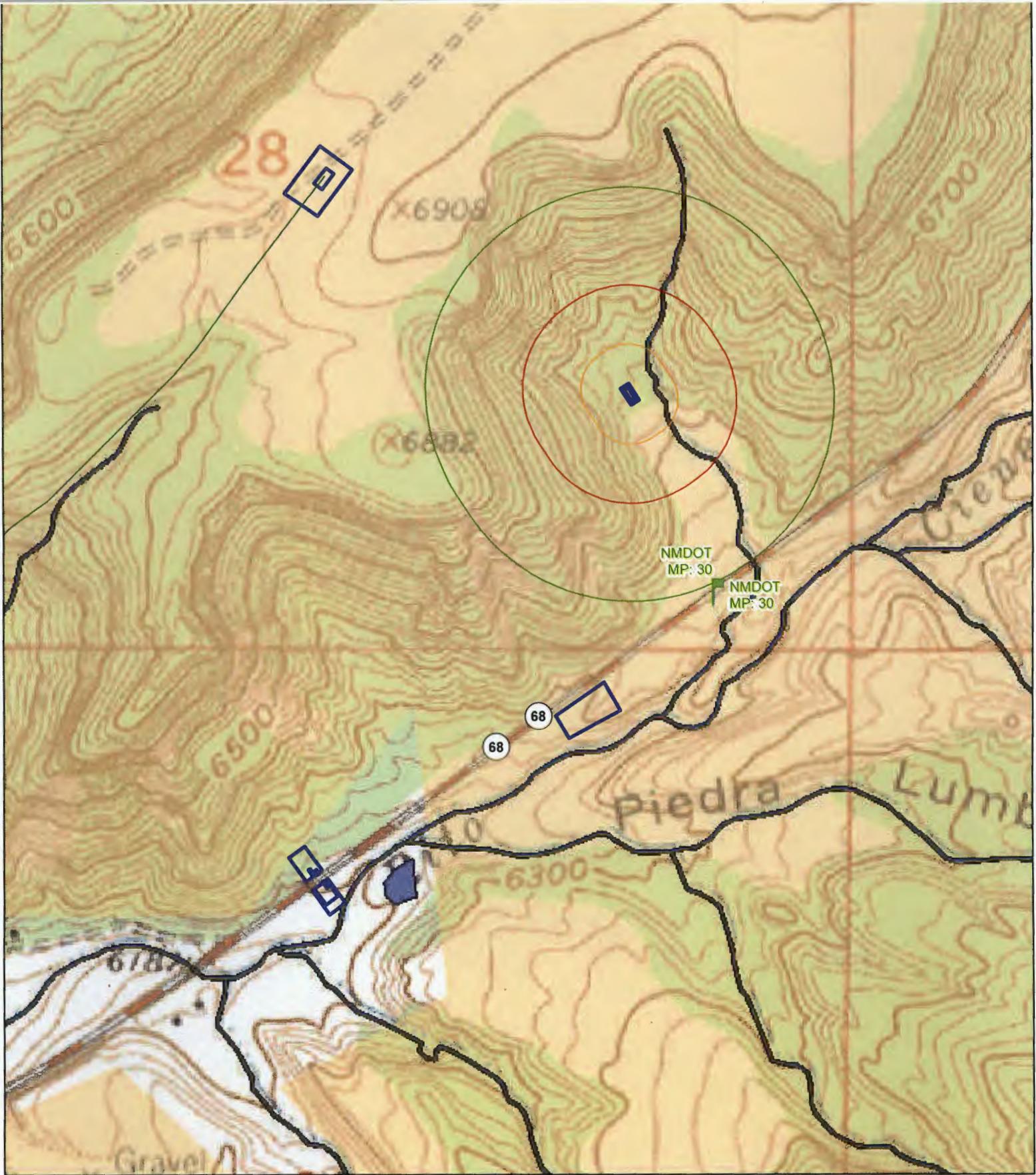
Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route





Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route





Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

**Wetlands**

Estuarine and Marine Deepwater

Sites

Residences

Estuarine and Marine Wetland

Freshwater Emergent Wetland

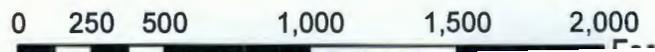
Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

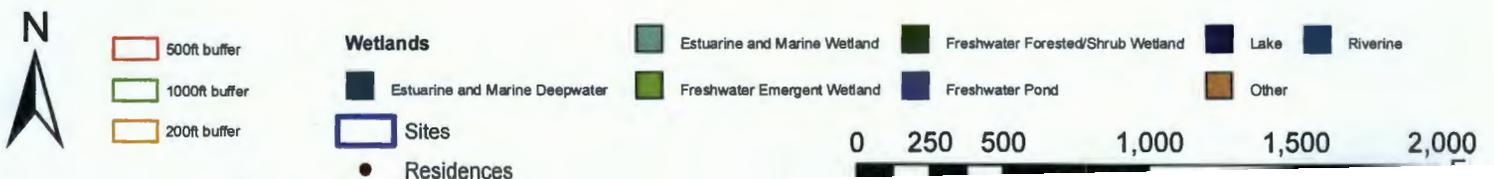
Other

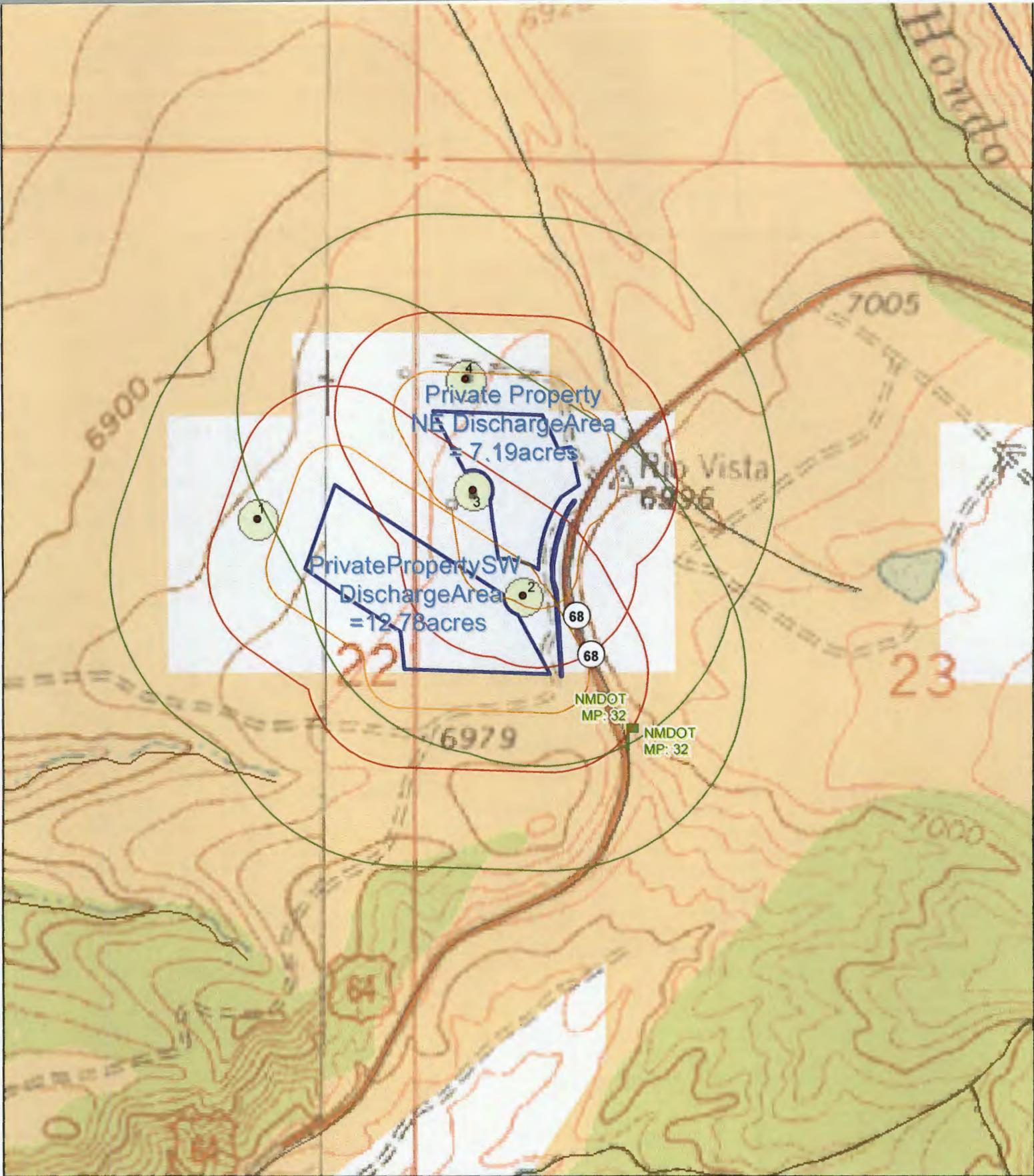
Riverine





Discharge Location- Private land  
Taos Mainline - Rinconada to Pilar Re-Route





Discharge Location- Private land  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

**Wetlands**

- Estuarine and Marine Deepwater
- Sites

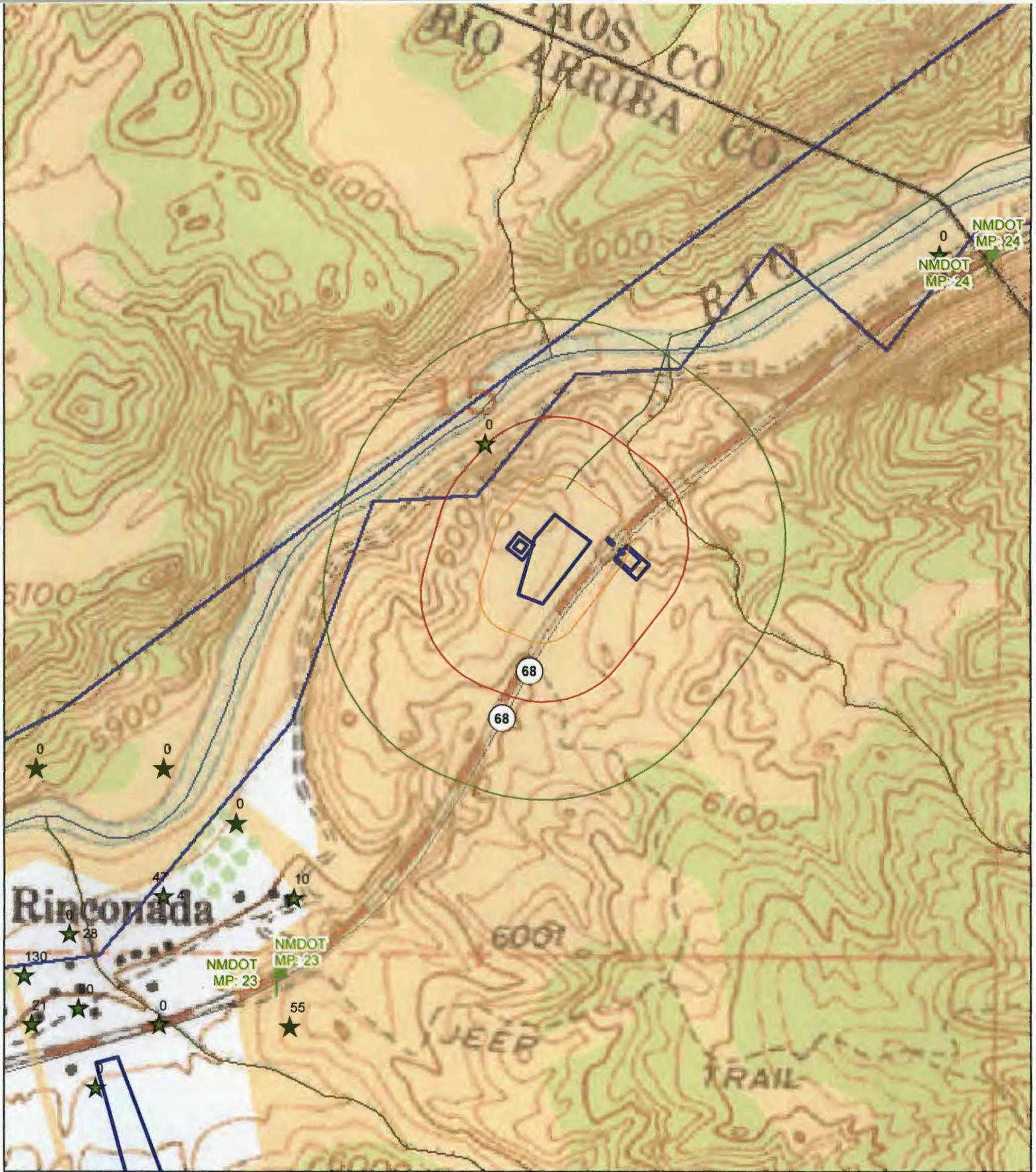
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland

- Freshwater Forested/Shrub Wetland
- Freshwater Pond

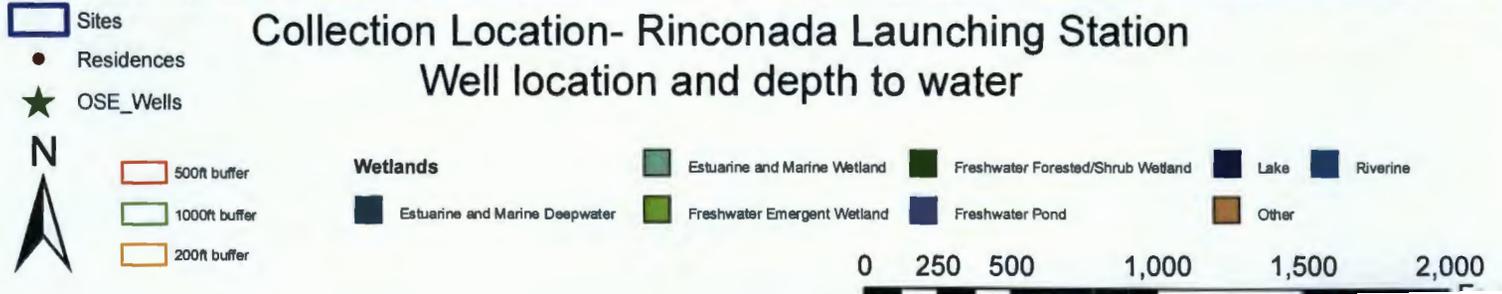
- Lake
- Riverine
- Other

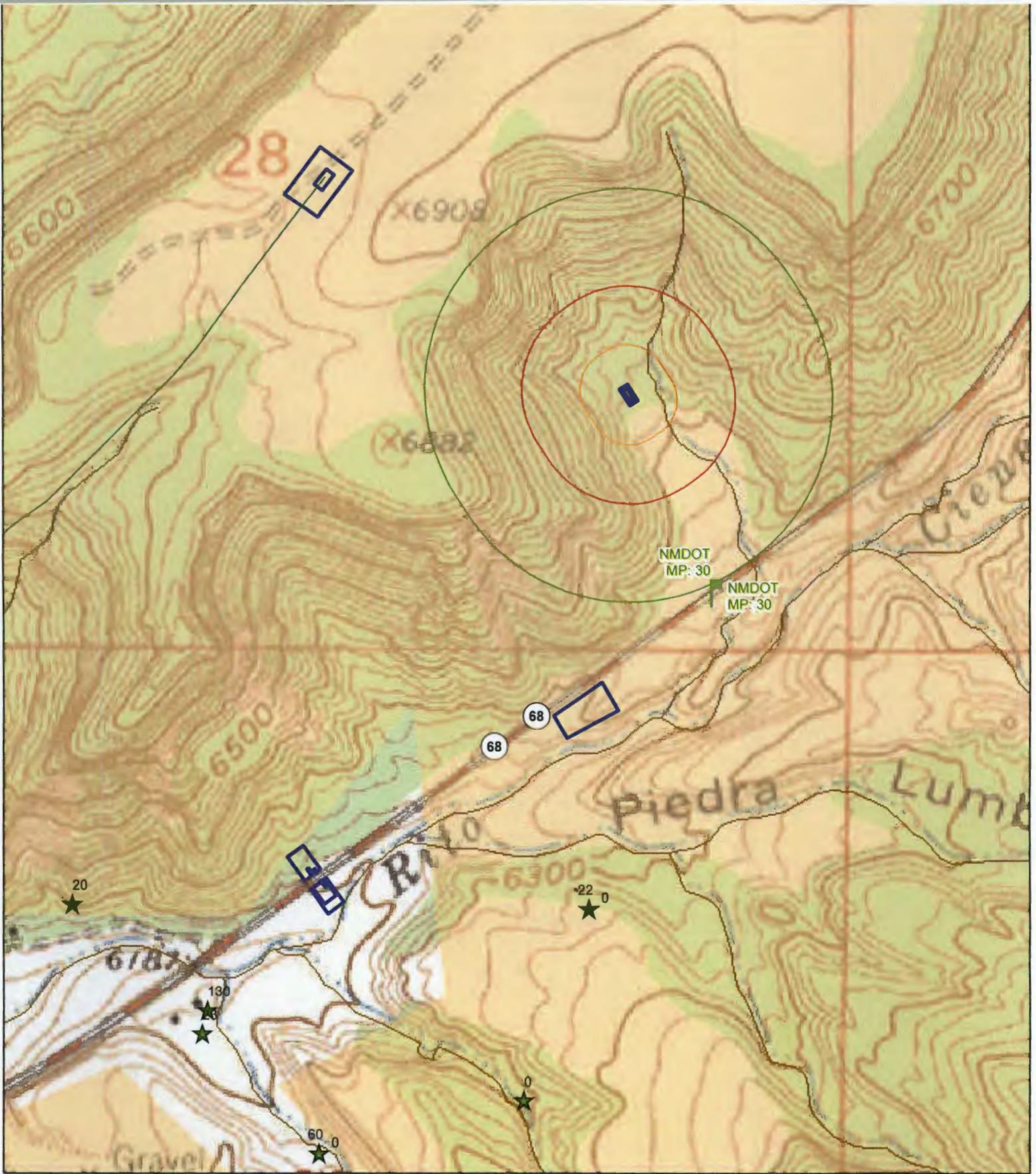
- Residences



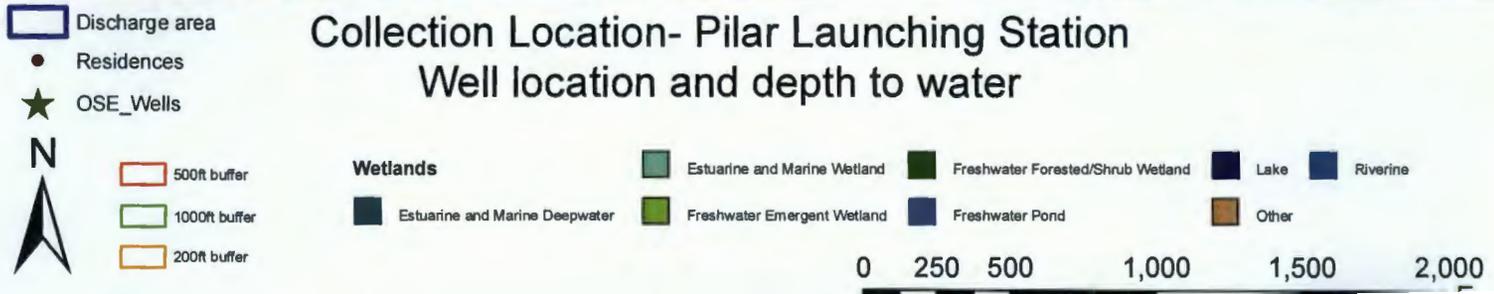


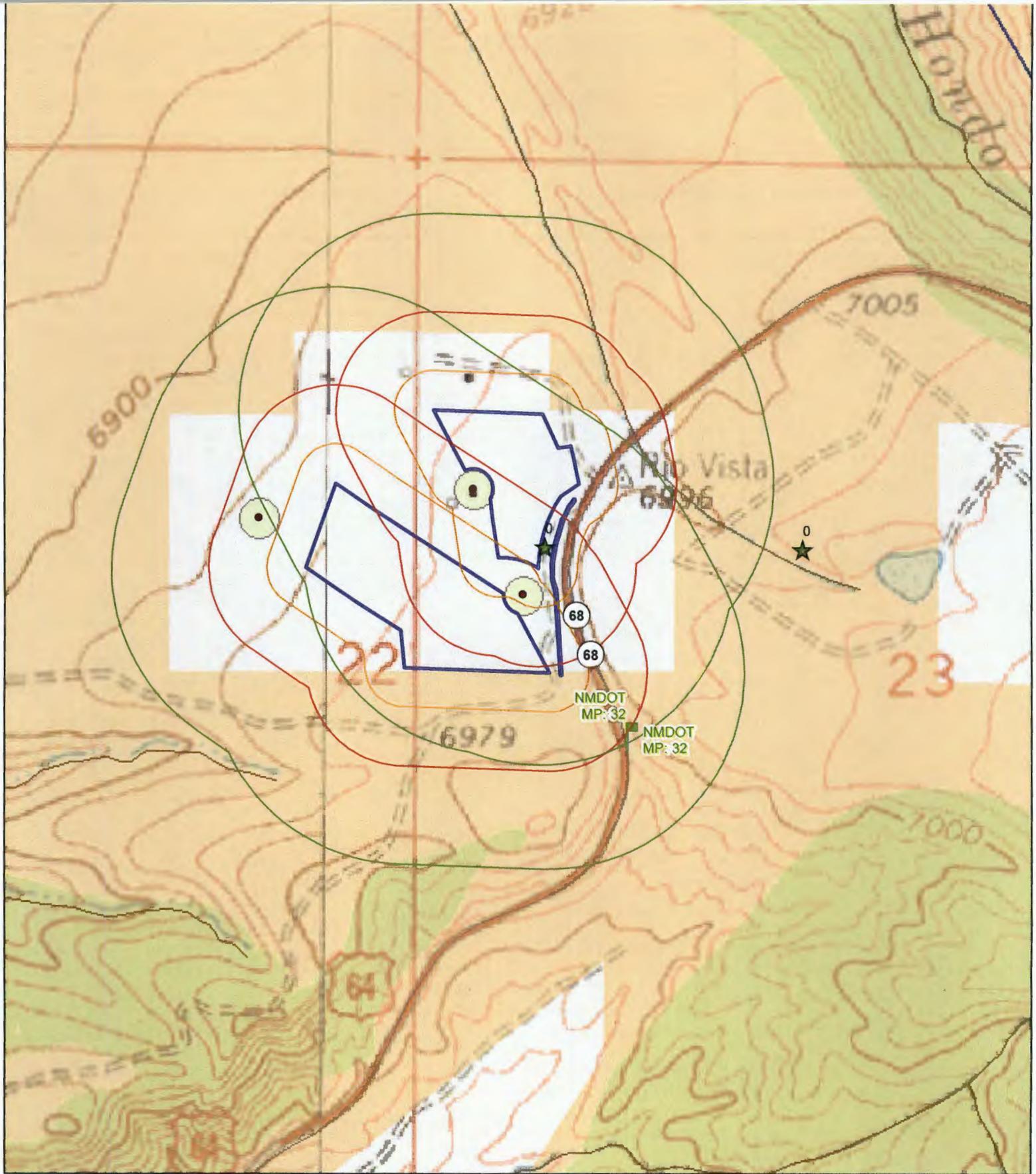
### Collection Location- Rinconada Launching Station Well location and depth to water





### Collection Location- Pilar Launching Station Well location and depth to water





□ Sites

● Residences

★ OSE\_Wells



□ 500ft buffer

□ 1000ft buffer

□ 200ft buffer

**Wetlands**

■ Estuarine and Marine Deepwater

■ Estuarine and Marine Wetland

■ Freshwater Emergent Wetland

■ Freshwater Forested/Shrub Wetland

■ Freshwater Pond

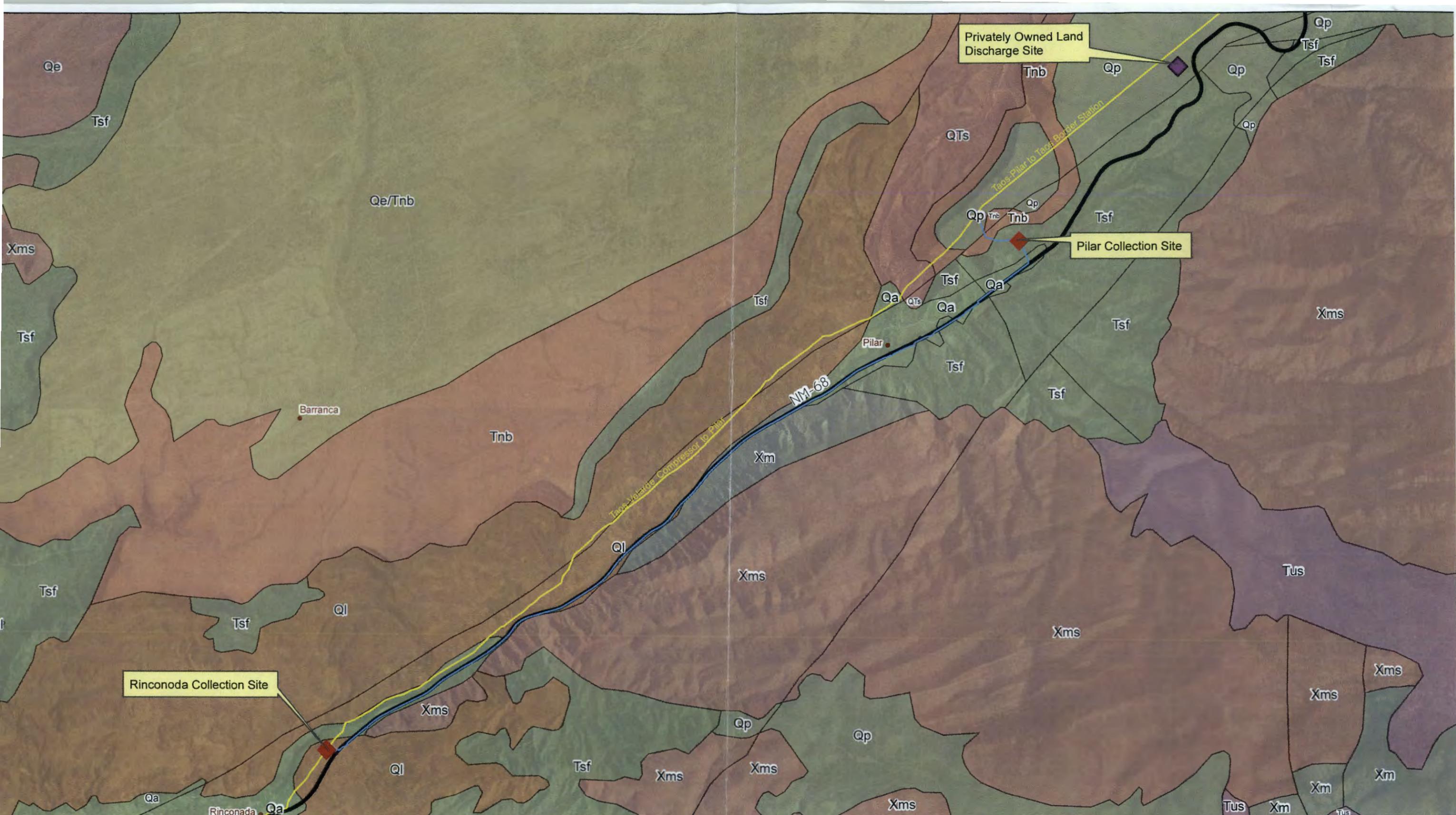
■ Lake

■ Riverine

■ Other

**Discharge Location- Private land**  
**Well location and depth to water**

0 250 500 1,000 1,500 2,000

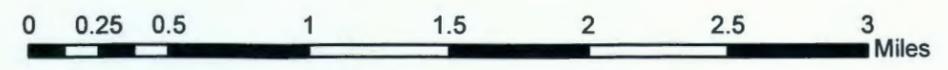


- Major Streets
- Collection Site
- Discharge Site
- Proposed Line
- Transmission Line

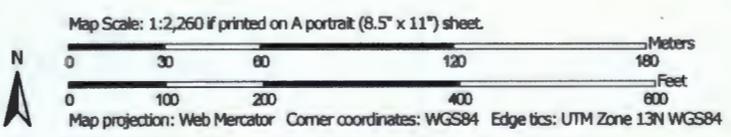
- Ql -** Quaternary landslide deposits and colluvium (Holocene to Pleistocene)
- Tsf -** Tertiary alluvial deposits from the Santa Fe Group (Upper Miocene to Uppermost Oligocene)
- Qp -** Quaternary piedmont alluvial deposits, including deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. (Holocene to Pleistocene)

## Geology of Rinconoda and Pilar Area

1 inch = 3,500 feet



Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)



Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)

**MAP LEGEND**

<b>Area of Interest (AOI)</b>		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
 Blowout		 Streams and Canals	
 Borrow Pit		<b>Transportation</b>	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		<b>Background</b>	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
Survey Area Data: Version 14, Sep 29, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties (NM650)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
148	Chita loam, 0 to 5 percent slopes	8.4	54.7%
242	Tinaja-Rock outcrop complex, 45 to 75 percent slopes	7.0	45.3%
<b>Totals for Area of Interest</b>		<b>15.4</b>	<b>100.0%</b>

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 148—Chita loam, 0 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wh4  
*Elevation:* 6,000 to 7,500 feet  
*Mean annual precipitation:* 10 to 16 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Chita and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Chita

##### Setting

*Landform:* Mesas  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Eolian deposits over slope alluvium derived from igneous and sedimentary rock

##### Typical profile

*A - 0 to 3 inches:* loam  
*BA and Bt - 3 to 10 inches:* loam  
*Btk and Bk - 10 to 38 inches:* silty clay loam  
*2Bk - 38 to 60 inches:* gravelly sandy clay loam

##### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 9.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6c

*Hydrologic Soil Group:* C

*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

### Minor Components

#### Dermala

*Percent of map unit:* 5 percent

*Landform:* Hills

*Landform position (two-dimensional):* Backslope, footslope, shoulder, toeslope

*Landform position (three-dimensional):* Crest, nose slope, side slope, head slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* Pinyon-Juniper/Skunkbush Sumac Shallow Sandy (F036XB133NM)

*Hydric soil rating:* No

#### Pinavetes

*Percent of map unit:* 5 percent

*Landform:* Dunes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Ecological site:* Sandy Slopes (R036XB111NM)

*Hydric soil rating:* No

#### Rock outcrop

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 242—Tinaja-Rock outcrop complex, 45 to 75 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wj2  
*Elevation:* 5,800 to 7,800 feet  
*Mean annual precipitation:* 13 to 16 inches  
*Mean annual air temperature:* 45 to 49 degrees F  
*Frost-free period:* 100 to 130 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Tinaja and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Tinaja

##### Setting

*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Colluvium derived from sandstone

##### Typical profile

*A - 0 to 4 inches:* extremely gravelly loam  
*Bk1 - 4 to 43 inches:* very cobbly sandy clay loam  
*2Bk2 - 43 to 60 inches:* sandy loam

##### Properties and qualities

*Slope:* 45 to 75 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* Low (about 5.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated): 7e*  
*Hydrologic Soil Group: B*  
*Ecological site: Steep Gravelly - Woodland (F035XG135NM)*  
*Hydric soil rating: No*

### **Description of Rock Outcrop**

#### **Typical profile**

*R - 0 to 60 inches: bedrock*

#### **Properties and qualities**

*Depth to restrictive feature: 0 inches to lithic bedrock*  
*Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)*

### **Minor Components**

#### **Chita**

*Percent of map unit: 8 percent*  
*Landform: Mesas*  
*Landform position (two-dimensional): Shoulder*  
*Landform position (three-dimensional): Talf*  
*Down-slope shape: Convex*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*  
*Hydric soil rating: No*

#### **Menefee**

*Percent of map unit: 7 percent*  
*Landform: Hills*  
*Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope*  
*Landform position (three-dimensional): Crest, nose slope, side slope, head slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Ecological site: Gravelly - Woodland (F035XG134NM)*  
*Hydric soil rating: No*

#### **Teromote**

*Percent of map unit: 5 percent*  
*Landform: Alluvial fans*  
*Landform position (two-dimensional): Footslope*  
*Landform position (three-dimensional): Rise*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*

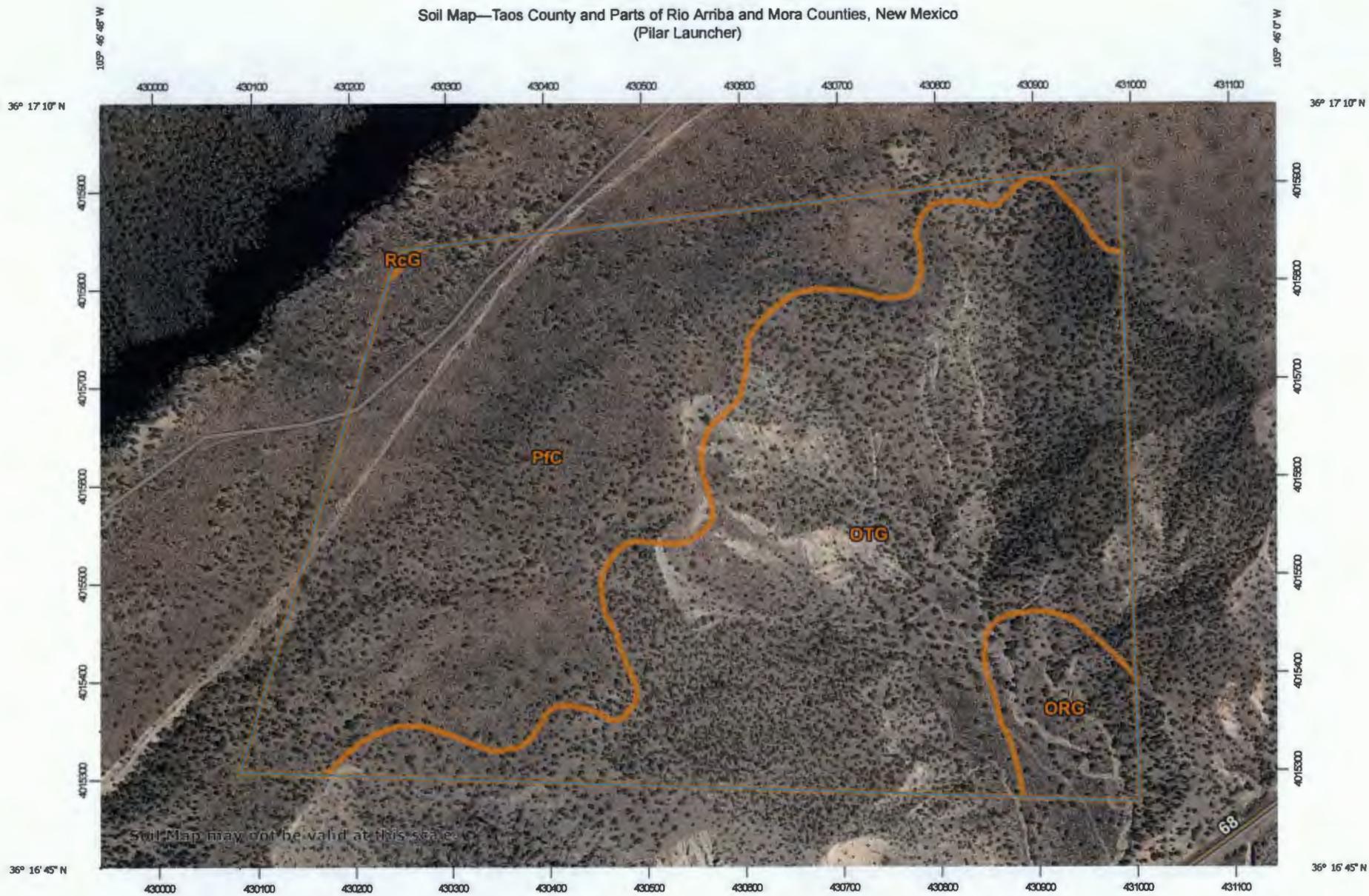
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and  
Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)



Map Scale: 1:5,500 if printed on A landscape (11" x 8.5") sheet.  
0 50 100 200 300 Meters  
0 250 500 1000 1500 Feet  
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pillar Launcher)

**MAP LEGEND**

- |                                                                                     |                        |                                                                                   |                       |
|-------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------|-----------------------|
|    | Area of Interest (AOI) |  | Spoil Area            |
|    | Soil Map Unit Polygons |  | Stony Spot            |
|    | Soil Map Unit Lines    |  | Very Stony Spot       |
|    | Soil Map Unit Points   |  | Wet Spot              |
|    | Special Point Features |  | Other                 |
|    | Blowout                |  | Special Line Features |
|    | Borrow Pit             |  | Water Features        |
|    | Clay Spot              |  | Streams and Canals    |
|    | Closed Depression      |  | Transportation        |
|    | Gravel Pit             |  | Rails                 |
|    | Gravelly Spot          |  | Interstate Highways   |
|    | Landfill               |  | US Routes             |
|    | Lava Flow              |  | Major Roads           |
|    | Marsh or swamp         |  | Local Roads           |
|    | Mine or Quarry         |  | Background            |
|    | Miscellaneous Water    |                                                                                   | Aerial Photography    |
|   | Perennial Water        |                                                                                   |                       |
|  | Rock Outcrop           |                                                                                   |                       |
|  | Saline Spot            |                                                                                   |                       |
|  | Sandy Spot             |                                                                                   |                       |
|  | Severely Eroded Spot   |                                                                                   |                       |
|  | Sinkhole               |                                                                                   |                       |
|  | Slide or Slip          |                                                                                   |                       |
|  | Sodic Spot             |                                                                                   |                       |

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ORG	Orthents-Badland association, very steep	6.0	5.0%
OTG	Orthents-Rock outcrop association, very steep	61.4	50.7%
PfC	Petaca-Prieta complex, 1 to 8 percent slopes	53.6	44.3%
RcG	Rock outcrop, very steep	0.1	0.1%
<b>Totals for Area of Interest</b>		<b>121.1</b>	<b>100.0%</b>

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### OTG—Orthents-Rock outcrop association, very steep

#### Map Unit Setting

*National map unit symbol:* k1gl  
*Elevation:* 6,400 to 10,000 feet  
*Mean annual precipitation:* 9 to 23 inches  
*Mean annual air temperature:* 44 to 54 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Orthents and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Orthents

##### Setting

*Landform:* Canyons  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Colluvium derived from basalt

##### Typical profile

*H1 - 0 to 10 inches:* very gravelly loam  
*H2 - 10 to 60 inches:* very gravelly clay loam

##### Properties and qualities

*Slope:* 40 to 80 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.21 to 0.71 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Moderate (about 6.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* C  
*Ecological site:* Breaks (R051XA006NM)  
*Hydric soil rating:* No

#### **Description of Rock Outcrop**

##### **Typical profile**

*R - 0 to 60 inches:* bedrock

##### **Properties and qualities**

*Depth to restrictive feature:* 0 inches to lithic bedrock

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8

*Hydric soil rating:* Unranked

#### **Minor Components**

##### **Montecito**

*Percent of map unit:* 10 percent

*Ecological site:* south of Gallup 13-16 (F036XA001NM)

*Hydric soil rating:* No

##### **Trampas**

*Percent of map unit:* 10 percent

*Ecological site:* Pine Grassland (R048AY010NM)

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)



Map Scale: 1:3,470 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 150 300 600 900 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)

### MAP LEGEND

<b>Area of Interest (AOI)</b>		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
 Blowout		 Streams and Canals	
 Borrow Pit		<b>Transportation</b>	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		<b>Background</b>	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SSC	Silva-Sedillo association, gently sloping	40.9	100.0%
<b>Totals for Area of Interest</b>		<b>40.9</b>	<b>100.0%</b>

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### SSC—Silva-Sedillo association, gently sloping

#### Map Unit Setting

*National map unit symbol:* k1hf  
*Elevation:* 6,500 to 8,000 feet  
*Mean annual precipitation:* 11 to 14 inches  
*Mean annual air temperature:* 46 to 54 degrees F  
*Frost-free period:* 115 to 135 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Silva and similar soils:* 65 percent  
*Sedillo and similar soils:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Silva

##### Setting

*Landform:* Ridges, divides  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale

##### Typical profile

*H1 - 0 to 3 inches:* loam  
*H2 - 3 to 31 inches:* clay loam  
*H3 - 31 to 60 inches:* clay loam

##### Properties and qualities

*Slope:* 1 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* High (about 10.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

### Description of Sedillo

#### Setting

*Landform:* Divides  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock

#### Typical profile

*H1 - 0 to 3 inches:* gravelly loam  
*H2 - 3 to 11 inches:* very gravelly clay loam  
*H3 - 11 to 60 inches:* very gravelly sandy loam

#### Properties and qualities

*Slope:* 5 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 3 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Low (about 4.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Ecological site:* Gravelly Slopes (R036XA004NM)  
*Hydric soil rating:* No

### Minor Components

#### Fernando

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

#### Manzano

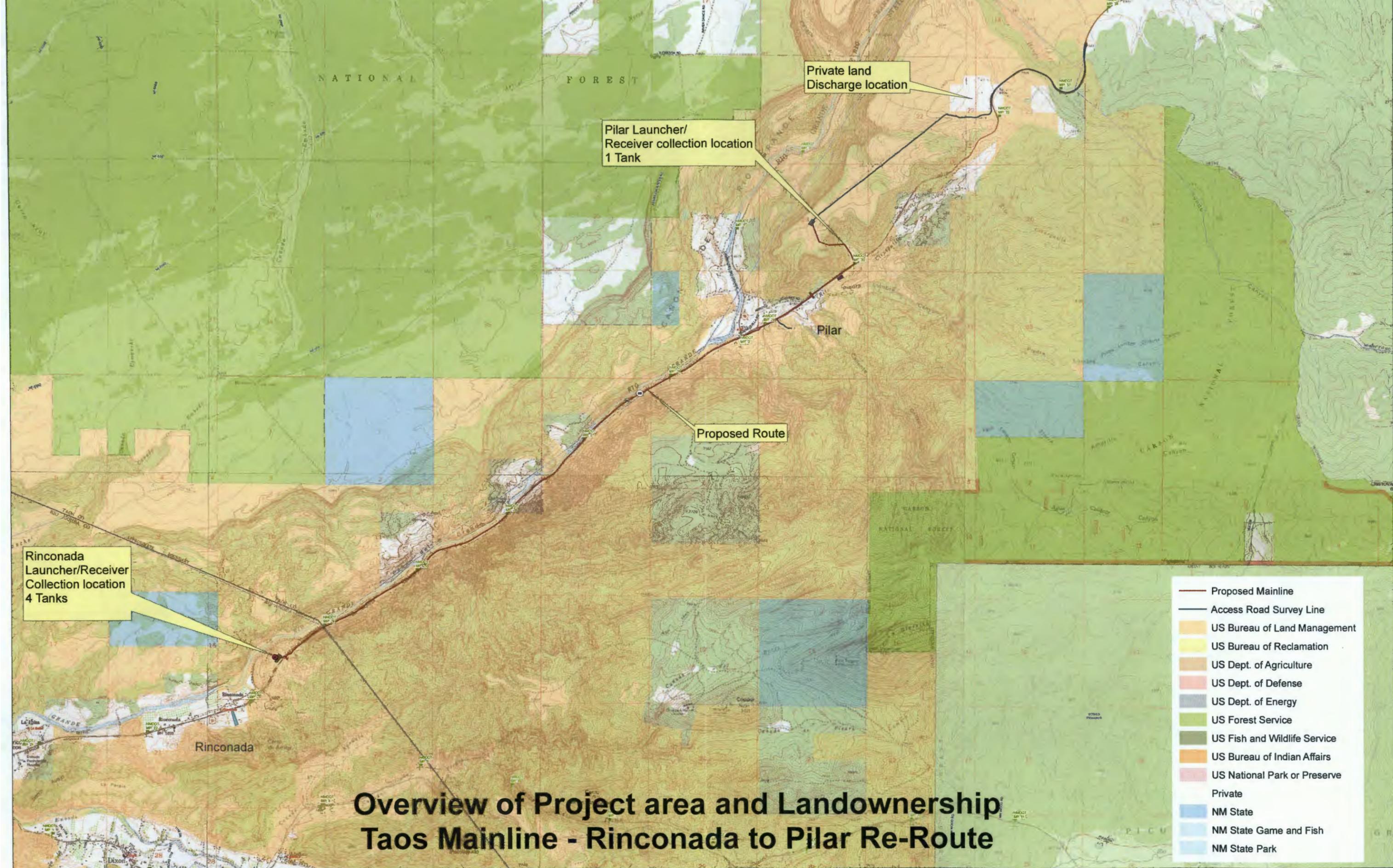
*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015





May 2, 2017

- |                                                                                     |                                |                                                                                     |                                   |                                                                                       |          |
|-------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Forested/Shrub Wetland |  | Other    |
|  | Estuarine and Marine Wetland   |  | Freshwater Pond                   |  | Riverine |
|  | Freshwater Emergent Wetland    |  | Lake                              |                                                                                       |          |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



U.S. Fish and Wildlife Service

# National Wetlands Inventory

pilar launcher



May 2, 2017

- |                                                                                                                    |                                                                                                                       |                                                                                                |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|  Estuarine and Marine Deepwater |  Freshwater Forested/Shrub Wetland |  Other    |
|  Estuarine and Marine Wetland   |  Freshwater Pond                   |  Riverine |
|  Freshwater Emergent Wetland    |  Lake                              |                                                                                                |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



U.S. Fish and Wildlife Service

# National Wetlands Inventory

discharge area private land



May 2, 2017

- |                                |                                   |          |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other    |
| Estuarine and Marine Wetland   | Freshwater Pond                   | Riverine |
| Freshwater Emergent Wetland    | Lake                              |          |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## NOTICE OF PUBLICATION

New Mexico Gas Company (NMGC), 7120 Wyoming Blvd NE, Albuquerque, NM 87109, has submitted an application for an Individual Hydrostatic Test Discharge Permit to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) for hydrostatically testing the Taos Mainline, a newly constructed natural gas pipeline. Approximately 6.7 miles of new 12-inch pipe and 0.4 miles of new 8-inch pipe will be hydrostatically tested using water from the City of Espanola. NMGC will discharge the test water within T24N R11W Sections 22 and 23. This location is west of Highway 68 about a ¼ mile north of NMDOT milepost 32. The hydrostatic test is scheduled for November 2017. Approximately 78,500 gallons of wastewater will be generated from the hydrostatic test of new pipe. Because NMGC is testing new pipe, the water is expected to meet Water Quality Control Commission (WQCC) water quality standards in NMAC 20.6.2.3103. If WQCC water quality standards are not met the test water will be hauled to an OCD approved facility for disposal. The depth of groundwater potentially affected by the discharge is about 400 feet below the surface. The total dissolved solids in the region range from 200-400 mg/l.

Any interested person may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices by contacting Brad Jones at the New Mexico OCD at 1220 South St Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3487. The OCD will accept comments and statements of interest regarding the permit application and will provide future notices for this pipeline upon request.



**New Mexico**  
**GAS COMPANY®**  
AN EMERA COMPANY

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

July 20, 2017

Mr. Brad Jones  
State of New Mexico - Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

RE: NMGC test of Taos Mainline (Pilar)  
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

On May 26, 2017 New Mexico Gas Company (NMGC) submitted a notice of intent to hydrostatically test and discharge water from the Taos Mainline, Taos County New Mexico. The Oil Conservation Division replied with a letter on June 9, 2017 saying the application was administratively incomplete. With this submittal NMGC has addressed the issues mentioned in the letter along with other details as discussed over the phone with Brad Jones. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, NMGC has provided the following information:

Summary of Activities

NMGC will hydrostatically test 6.7 miles of new 12- inch pipe and 0.4 miles of new 8- inch pipe that will be installed to replace the Taos mainline. To reduce water usage, the new pipe will be tested in four segments requiring a total of approximately 78,500 gallons of water from a municipal or domestic source. The City of Espanola public works department has been identified as a potential source for this project. Fresh water will be hauled and stored in tanks at the NMGC Rinconada launcher station in Rinconada, NM at the south end of the project. Approximately 76,200 gallons of water will be put into the new 12-inch pipe at the Rinconada station to test the first 2.3 miles. NMGC will then transfer 69,700 gallons into the second section which is 2.1 miles. The extra water (6,500 gallons) from the first section will be hauled back (by truck) to the Rinconada station at the south end. The water from the second section (69,700 gallons) will be transferred to the third section and 8,800 gallons from the tank at Rinconada will be added for a total of 78,500 gallons for the third 2.4 mile section. The last section of 8- inch pipe will use 6,500 gallons of water transferred from the third section. A water sample will be taken after the completion of the third test section and sent to be analyzed for WQCC standards. The remaining water from the first 3 sections will be pushed back (in the pipe) to the south end and stored in the tanks at the Rinconada station while the water from the 4<sup>th</sup> section will be stored in a tank on the

north end (at the new Pilar Launcher/Receiver station) until the results from the water analysis are received. The hydrostatic test water, upon receiving OCD approval, will be discharged on private property near the north end of the project in a manner that prevents erosion and entry into or near existing drainages or waterways and impact to adjacent properties.

A. Name and Address of Discharger

NMGC  
Marcelle Fiedler  
BC 22  
PO Box 97500  
Albuquerque, NM 87199

B. Location and Legal Description of Discharge

*Collection Points:* Most of test water (72,000 gallons) will be collected at the Rinconada launcher station which is at the south end of the new 7.2 miles of pipe. The Rinconada station is within Section 15, Township 23N, and Range 10E. The Rinconada station can be found by driving from Rinconada, NM on US68 about 0.5 mile north from NMDOT milepost (MP) 23 to a location on the west side of US68 between the highway and the river. The location is more than 500ft from the Rio Grande and 200 ft higher in elevation than the river. Approximately 6,500 gallons of water will be stored at the north end of the project at the new Pilar Launcher/Receiver station within Section 28, Township 24N, and Range 11E. The Pilar Launcher/receiver station is on the west side of Highway 68 at MP 30. Enclosed are maps showing the locations where the water will be collected.

*Discharge Point:* Before the water is discharged, the hydrostatic test water will be analyzed by an accredited analytical laboratory. If approved by OCD, test waters will be discharged on private land within Sections 22 and 23 of T24N and R11E approximately 3 miles north of Pilar NM. A private landowner on the west side of US 68 approximately a quarter mile north of MP 32 would like to have the water sprayed onto their property. The property is 66 acres total and has three structures within it. The neighboring landowner directly to the north has one residence. NMGC will maintain at least a 100 ft buffer from all existing structures and be 300 ft from one structure. Water will be sprayed within the area cleared of vegetation, other than grasses, totaling 19 acres. Enclosed is a map showing the locations where water will be sprayed. It will take approximately 5 days to discharge all the water.

D. Maps

The following maps are included with this permit application.

- Overview of project area and Land Ownership map (topo map)
- Water collection site (topo and aerial map)
- Discharge location site (topo and aerial map)
- Wells
- Geology of area
- Soils
- FEMA map

E. Demonstration of Compliance with Siting Criteria

See attached Maps and Certification of Compliance with Siting Criteria completed by the NMGC Project Engineer for demonstration of compliance with Siting Criteria for the water collection area and proposed discharge areas. Boundaries of areas where water will not be discharged will be flagged or have signs.

Compliance with the siting criteria for the Collection Areas is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, the hydrostatic test water collected in tanks will be more than 200 feet from any watercourse at the south end by Rinconada. At the Pilar launcher station the tank holding 6,500 gallons is within 200 ft of an ephemeral stream. The tank at Pilar will have 1 and 1/3 containment and it will be inspected daily when holding water to look for leaks. (see Collection Location Topo maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*
  2. The closest private well to the tanks on the south end at Rinconada station is almost 2000ft away. Records from the State Engineers Office (SEO) show the nearest well is more than 2000ft from the Pilar launcher where one tank will hold water. (see Well location map and section N below).
  3. The Rinconada and Pilar locations are not within a 100 year floodplain (see the attached FEMA maps for each location).
- iii. *Within or within 500ft of a wetland*
  4. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft of either the Rinconada or Pilar collection areas. (see Collection Location Topo maps)
- iv. *Within the area overlying a subsurface mine*
  5. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines and email verification was submitted to NMGC that there are no mines in the area. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are none within the Trampas USGS quad maps near Rinconada. There is a closed mine within the Carson quad map near Pilar but it is not within the Township, Range and Section of the collection location. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
  6. NMGC Rinconada and Pilar water collection areas are not within 500 feet of any permanent residences, school, hospital, institution, or church.

Compliance with the siting criteria for the Discharge Area is met for four of the five siting criteria because:

- i. *Within 200ft of a watercourse, lakebed, sinkhole or playa lake*
  1. Based on data from the USFWS National Wetlands Inventory, discharge on the private land will not be within 200 feet of any watercourse. The only hydrological feature on the property crosses the far northeast corner and NMGC will be more than 200 ft from it. (see Discharge area maps)
- ii. *Within an existing wellhead protection area or 100 year floodplain*

2. Records from the State Engineers Office (SEO) show the nearest active well is more than 2000 ft from the private land where water will be sprayed. The landowner has told NMGC there are no active wells on the property. (see Discharge area maps and section N below)
  3. The discharge area is not within a 100 year floodplain (see the attached FEMA maps for each location).
- iii. *Within or within 500ft of a wetland*
4. Based on data from the USFWS National Wetlands Inventory, there are no wetlands within 500 ft.
- iv. *Within the area overlying a subsurface mine*
5. NMGC contacted the NM Bureau of Mines and Minerals about subsurface mines. NMGC has email verification that there are no abandoned mines in the area of discharge. (see attached email from Bureau of Mines) In addition, NMGC searched the MMD online tool for active mines. There are 3 active mines within the Taos SW quad map but they are not in the same Township, Range and Section as the discharge area on private property.  
<http://www.emnrd.state.nm.us/mmd/mmdonline.html>
- v. *Within 500 feet from the nearest residence, school, hospital, institution or church*
6. There are four permanent residences within 500 feet of the areas where NMGC plans to discharge the water. (see Discharge area maps) The discharge area is divided into the SW area (12 acres) and NE area (7 acres). The topography slopes gently from east to west so water will drain away from the structure in the SE part of the property (residence #2) when water is sprayed in the SW area. The structure on the west side of the property (residence #1) is 300 ft from the SW discharge area and since the area is relatively flat there should be no impacts to residence #1. The NE residence (#3) is down topographic slope from the NE discharge area. However, the land is relatively flat and NMGC will maintain a 100 ft buffer from residence #3. In addition, NMGC will only spray water in the NW area every other day to allow extra time for infiltration. Water will be sprayed using a moving water truck with a spray attachment in a controlled manner so as not to cause erosion or flooding. NMGC will utilize the SW discharge area daily.

#### F. Description of Activities

The natural gas transmission pipeline will be hydrostatically tested in 4 sections using approximately 78,500 gallons of water. (City of Espanola has been identified as a source for water). The first section will use approximately 76,200 gallons of water, 69,700 gallons will be transferred into the second section, the third section will use 78,500 gallons and the last section will use 6,500 gallons. Each section will be tested for a minimum of 8 hours.

NMGC anticipates starting the hydrostatic test in October 2017. Once hydrostatic testing starts, it will take 3-5 days to test each section. After the tests are complete, the water will be stored in holding tanks for an additional 14 days while the water analysis is completed. When the results of the water analysis are received, and with OCD permission, the water will be sprayed onto private property approximately 6-8 weeks after hydrostatic testing starts. NMGC anticipates that the water will be off site by approximately December 1st.

#### G. Method & Location for Collection and Retention of Fluids

##### *Hydrostatic Test*

*Collection Area (Rinconada):* Four 21,000 gallon mobile tanks will be used to contain the test water after the tests are completed. The tanks will be placed within a temporary use area (TUA) on the west side of US 68 about 0.5 mile north of Rinconada. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. When filling, the tanks will be interconnected. When a tank has been filled, valves will be closed/disconnected to isolate the filled tank. NMGC will use plastic liner or drip trays under hoses and valves to collect drips and leaks when transferring water. NMGC will conduct daily inspections of each tank containing test water.

*Collection Area (Pilar):* A single 10,000-gallon tank will be placed where the new Pilar launching station will be constructed to store about 6,500 gallons from the hydro test of 8 inch section of pipe. The tank will be placed within TUA on the west side of US 68 about 1 mile north of Pilar. The test water from the pipeline will be transferred into the tanks by pumping it with a hose connected directly from the pipe to the tank. NMGC will install 1 and 1/3 secondary containment around the tank since it is within 200 feet of an ephemeral waterway. NMGC will conduct daily inspections of the tank.

#### H. BMPs to Contain Discharge On Site & Control Erosion

Plastic liner and drip trays will be placed under hoses and valves to collect drips and leaks when transferring water. Water will be sprayed onto the ground in a controlled rate so that erosion does not occur. Water will not be sprayed on days when wind will carry the water off the ground.

#### I. Request for Alternate Treatment/Disposal

If the hydrostatic test water does not meet OCD conditions for discharge to the ROW and is not a characteristic hazardous waste, NMGC will dispose of it at the Agua Moss LLC facility near Farmington, NM. Transportation of such water will only be performed by an OCD authorized C-133 water hauler. If the water is tested as a characteristic hazardous waste, test water will be shipped by a licensed transporter to a RCRA permitted TSDF for disposal.

#### J. Hydrostatic Test Water Sampling Plan

A sample of the hydrostatic test water will be collected from the pipe after the third test section is complete. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B)(C). Upon receipt of the analytical results, NMGC will submit them to the OCD for review and approval to discharge. NMGC will expedite the laboratory analyses to minimize the storage time of the test water.

#### K. Method of Disposal of Fluids and Solids after Test Completion

If approved by OCD, test waters will be sprayed onto private land at a controlled rate.

#### L. Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 78,500 gallons. Based on water analyzes from previous hydrostatic tests on new pipe, NMGC anticipates that water quality will meet WQCC standards for discharge.

#### M. Geological Characteristics of Subsurface at Discharge Site

*General Geology:* The geology of the region consists of a diverse mix of structural, volcanic and depositional terrains associated with Laramide-age uplift, Tertiary-age extensional tectonics and Quaternary-age depositions. The Rio Grande Gorge and Taos Plateau are some of the major structural elements of the area. These features are part of a larger structure, the Rio Grande rift. It is approximately 240 km long, and is bordered by the Sangre de Cristo Mountains on the east, and the Tusas and San Juan Mountains on the west. The southern part of the basin is a physiographically and geologically unique terrain known as the Taos Plateau. The plateau is composed mostly of 3-5 million-year-old basalts that were erupted locally. The basin fill is comprised of a wide variety of alluvial, colluvium, and eolian deposits of Tertiary and Quaternary age. The Rio Grande has cut through these sedimentary and igneous deposits to expose the layers known as the Rio Grande Gorge.

*Collection and Discharge Areas:*

The geology at the location where NMGC will discharge water (private property on the north end) is mapped as quaternary (Qp) with piedmont alluvial deposits (Holocene to lower Pleistocene). This includes deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans.

At the south end of the project, by the Rinconada launcher, the geology is quaternary (Q1) – landslide deposits and colluvium (Holocene to Pleistocene).

The geology in the middle at the Pilar launcher is Tertiary (Tsf), the lower Santa Fe group (upper Miocene to uppermost Oligocene).

The geology of the collection and discharge sites are similar in nature but the surface formation that they occur on are different. The first collection site at Rinconada is comprised of landslide deposits and colluvium from the Holocene and Pleistocene, the sediment material is not well sorted and is of a loose nature. The second discharge site at Pilar is comprised of alluvial deposits of the Santa Fe Group from the Miocene and Oligocene periods. The sediment material is moderately sorted and is comprised of mostly coarse grained mixed clastic and is unconsolidated. The discharge site is on privately owned land and is comprised of alluvial deposits from the Holocene and Pleistocene periods. The site is part of the Piedmont Alluvial deposits and are also coarse grained unconsolidated clastic deposits.

*Geologic Reference:*

- 1) New Mexico Bureau of Mines and Mineral Resources, 2003, Geologic Map of New Mexico, Peter A. Scholle, State Geologist, Published in cooperation with the US Geological Survey. Electronic access to the map may be found: <http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html>

Soils (see attached soil maps)

*Collection Area (Rinconada):* The Rinconada collection area consists of two soil types: 1) Chita loam and 2) Tinaja Rock outcrop complex. The Chita loam association consists of Eolian deposits over slope alluvium derived from igneous and sedimentary rock. The Tinaja Rock outcrop complex is derived from sandstone and is an extremely gravelly loam that is well drained.

*Collection Area (Pilar):* The Pilar collection area consists of Orthents-Rock outcrop association which is colluvium derived from basalt. It is well drained and very gravelly loam.

*Discharge Area:* Soils in the discharge area on private property is part of the Silva-Sedillo association. This soil is alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale.

#### N. Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

*Collection Areas:* According to State Engineer well records, the nearest well is 550 feet from the Rinconada collection location. The POD (44010) associated with this well shows it is expired. Other wells in the area (more than 2,000 ft away) have a depth to water from between 10 to 140 feet. The well nearest to the Pilar Station is 2,500 ft away and its depth to water is 22ft. The POD number is 09961.

*Discharge Area:* The landowner has told NMGC there are no active wells on the property. Records from the State Engineers Office, show the nearest active well is more than 2000 ft from the private land where NMGC will discharge water and the depth to water is 400 ft. The POD for this well is 16717. The records for well POD 11529 located on the private property, show it was never installed.

*Total dissolved solids (TDS) for the project area:* Two springs northeast of Pilar have a TDS of 258 and 303 mg/l. In the general area, TDS values from the Picuris piedmont aquifer ranges from 200 to 400 mg/l and it is reasonable to assume that the TDS range is 200-400 mg/L for the collection and discharge areas. (Source: Hydrogeologic Investigation of the Southern Taos Valley, Taos NM, NM Bureau of Geology and Mineral Resources, 2016). (page 74 from the report is attached)

#### O. ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

A map is provided showing the landownership of the underlying and adjacent property owners from the water collection location and the area where water will be sprayed if approved by OCD. The collection locations are on Bureau of Land Management property and the discharge location is on private land. Both have been notified of the project and have been involved in the project planning. BLM is the surrounding landowner for almost all of the locations. Any other landowners within 1/3 of a miles of the collection and discharge locations will be notified of the proposed hydrostatic test.

#### Closing

In the event of a release associated with project activities, NMGC will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.29 to remediate the spill as soon as possible.

Once OCD rules this application as administratively complete, and if required, NMGC will provide notice of the permit application in the Taos News following requirements in NMAC 20.6.2.3108. In addition, a sign with a synopsis of the public notice will be placed at the BLM visitor center in Pilar and within the Highway 68 right-of-way on the west side near the private property where water will be discharged.

A check for \$100 was enclosed with the original submittal on May 26, 2017.

Thank you for your assistance. If additional information is required please notify me in writing. Please call me at (505) 697-3516 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Marcelle Fiedler". The signature is fluid and cursive, with a long horizontal stroke at the end.

Marcelle Fiedler  
Senior Environmental Scientist  
Attachment: Location maps

## Certification of Compliance with Siting Criteria

I, Rebecca Sandoval, Project Engineer with NMGC visited the project site in the field on May 16, 2017 and verified that the location where NMGC will collect and discharge the hydrostatic test water from the pipe meets the following siting criteria:

### A. Collection Areas

- Is not within 1,000 ft of an active wellhead protection area that supplies public or private water system
- There are no watercourses within 200 ft of the Rinconada collection location. There is an arroyo within 200 feet downhill of the Pilar collection location. NMGC will install 1 and 1/3 secondary containment for the tank to hold all the water if there is a failure.
- There are no wetlands within 500 ft
- There are no schools, hospitals, institutions, or churches are within 500 ft
- There are no permanent residence, schools, hospitals, institutions, or churches are within 500 ft.

### B. Discharge Area

- Is not within 1,000 ft of a wellhead protection area that supplies public or private water system.
- There are no watercourses within 200 ft
- There are no wetlands within 500 ft
- There are four private residences within 500 ft of the discharge area. NMGC will maintain at least a 100 ft buffer from the residences and mitigate the potential for flooding by discharging water down topographic slope of residence #2 and #4 and only spray water in the discharge area upslope of residence #3 every other day. NMGC will spray water in a controlled manner so as not to cause erosion or flooding.

My observations in the field match the enclosed map showing where NMGC plans to collect the water.

*Rebecca Sandoval*  
Signature

*Engineer*  
Title

*5-23-2017*  
Date

# Photos



Rinconada collection location



Pilar collection location



SW discharge area private land



NE discharge area private land

**From:** [Tompson, Mike, EMNRD](#)  
**To:** [Fiedler, Marcelle F.](#)  
**Cc:** [Kretzmann, John, EMNRD](#)  
**Subject:** RE: recorded mines  
**Date:** Friday, April 28, 2017 8:06:14 AM

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**\*\*\*\*\* Don't be quick to click! We're counting on you! This email is from an external sender! Don't click links or open attachments from unknown sources. Forward suspicious emails as an attachment to [phishing@tecoenergy.com](mailto:phishing@tecoenergy.com) for analysis by our cyber security team. \*\*\*\*\***

Hello Marcelle,

The New Mexico Mining & Minerals Division has no knowledge of any abandoned mines in the four sections detailed in your email.

Please let us know if you have any other questions.

Mike Tompson  
New Mexico Mining & Minerals Division  
(505) 476-3427

**From:** Fiedler, Marcelle F. [mailto:[Marcelle.Fiedler@nmgco.com](mailto:Marcelle.Fiedler@nmgco.com)]  
**Sent:** Thursday, April 27, 2017 2:27 PM  
**To:** Tompson, Mike, EMNRD <[Mike.Tompson@state.nm.us](mailto:Mike.Tompson@state.nm.us)>  
**Subject:** recorded mines

Hi Mike

New Mexico Gas Company is planning to do a hydrostatic pressure test of a gas transmission line near Rinconada and Pilar, NM later this year. As part of the permit application process with the Oil Conservation Division, we need to obtain information on the location of active or abandoned mines in the area of our test. Can you please tell me if there are any active or abandoned mines within the following sections?

1. Section 15 T23N r10E
2. Section 22, 23, 28 T24N R11E

Thank you for your assistance. Please contact me if you have any questions.

Marcelle Fiedler  
New Mexico Gas Company  
A TECO Energy Company  
Senior Environmental Scientist  
7120 Wyoming Blvd. NE Ste 20  
Albuquerque, NM 87109

vertical upflow of deeply sourced thermal waters along faults or at fault intersections.

To further investigate groundwater sources and intermixing, we examine distribution maps of major ions and Piper diagrams that show cation and anion percentages and ion trends. Chemistry data from shallow wells between the mountain front and the Rio Pueblo, including Ponce de Leon and upper Arroyo del Alamo, are used to construct concentration maps of the dissolved solids content and the major ions Ca/Na, HCO<sub>3</sub>, SO<sub>4</sub>, and Cl for the shallow basin and bedrock aquifers (Figs. 29–33). Chemistry results from surface water and wells in the deep confined aquifer were not used to create the concentration maps, but are shown on the figures. Ion chemistry and summary statistics for each aquifer are presented in Table 9. The observed patterns and some hydrologic implications are discussed.

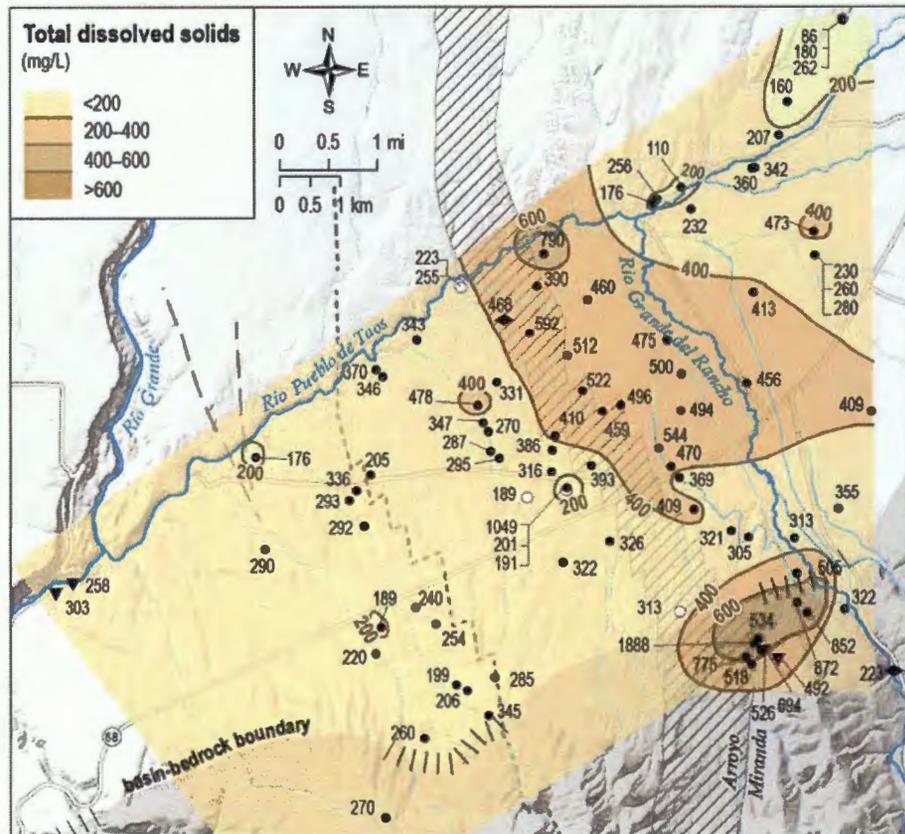
**Dissolved solid content**—Concentrations of dissolved solids, called TDS, range from 86–790 mg/L in the Picuris piedmont aquifer (Fig. 29, Table 9). High TDS values (400–600 mg/L) are clustered in the northern Rio Grande del Rancho valley and westward toward the Taos golf course, but both higher

and lower values are scattered throughout the area, for example: 790 mg/L TDS in a 122-foot deep well (TV-136) and 390 mg/L TDS in an adjacent 105-foot deep well (TV-238) (Fig. 29, Table 9). An intriguing and unusual trend in the distribution of TDS in the basin-fill aquifers is that TDS does not increase with depth, and concentrations in the deep confined aquifer (180–313 mg/L) are lower than or comparable to those in the shallow Picuris piedmont aquifer. Bedrock aquifers exhibit an extreme range in TDS, with the highest concentrations found in the hydrothermal waters at Ponce de Leon (492–1,888 mg/L) and the lowest from a well in quartzite bedrock in the upper Arroyo del Alamo watershed (48 mg/L, TV-230).

**Calcium and sodium**—Calcium concentrations range from 2.6 to 175 mg/L, and sodium ranges from 8.2 to 143 mg/L (Table 9). The distribution of calcium and sodium is illustrated as a calcium-to-sodium ratio (Fig. 30), where values greater than 1 indicate calcium dominance and values less than 1 indicate sodium dominance. Shallow groundwater in the Picuris piedmont aquifer is generally Ca-rich, as are stream waters from the Rio Grande del Rancho (TV-512), Rio Pueblo (TV-513) and Rio Lucero (TV-514). The

**Figure 29.** Map showing the dissolved solid content (TDS) in the Picuris piedmont aquifer. Values for the deep confined aquifer are also shown.

- Data**
- Well in Picuris piedmont aquifer
  - Well in deep confined aquifer
  - ▼ Spring
  - ◆ Surface water
- Depth specific samples**
- Contoured value
  - # #
- Geologic features**
- Bedrock
  - ||| Hydrogeologic window
  - ▨ Northern projection of Miranda graben
  - - - Picuris-Pecos fault
  - Geophysical fault

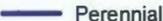


# **Attachments**



Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- |                                                                                                   |                                                                                                  |                                                                                                                          |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|  500ft buffer  |  Ephemeral    |  Pilar_collection_and_discharge_sites |
|  1000ft buffer |  Intermittent |                                                                                                                          |
|  200ft buffer  |  Perennial    |                                                                                                                          |
|                                                                                                   |  NM_Wetlands  |                                                                                                                          |



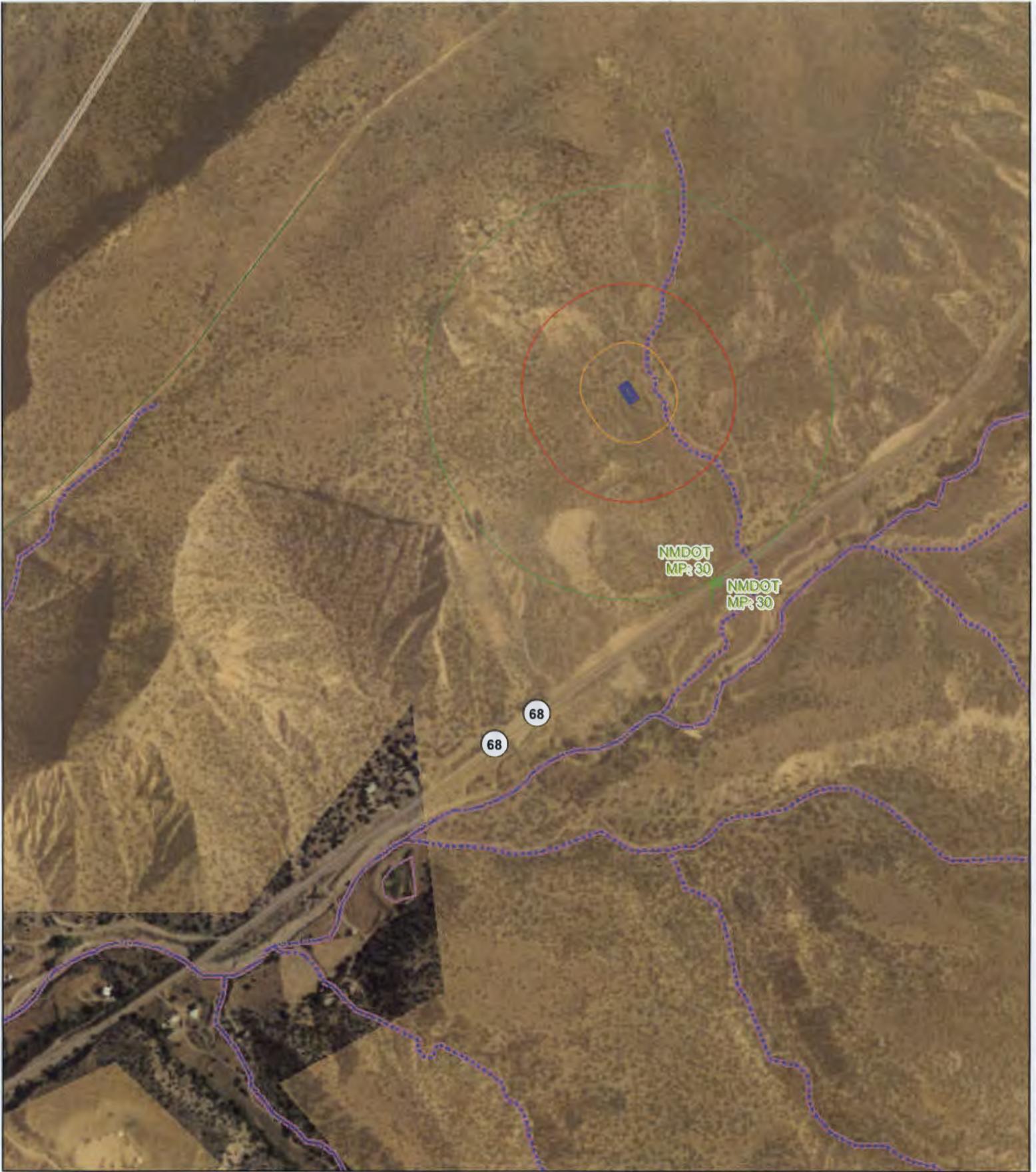


Collection Location- Rinconada Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Pilar\_collection\_and\_discharge\_sites





Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route

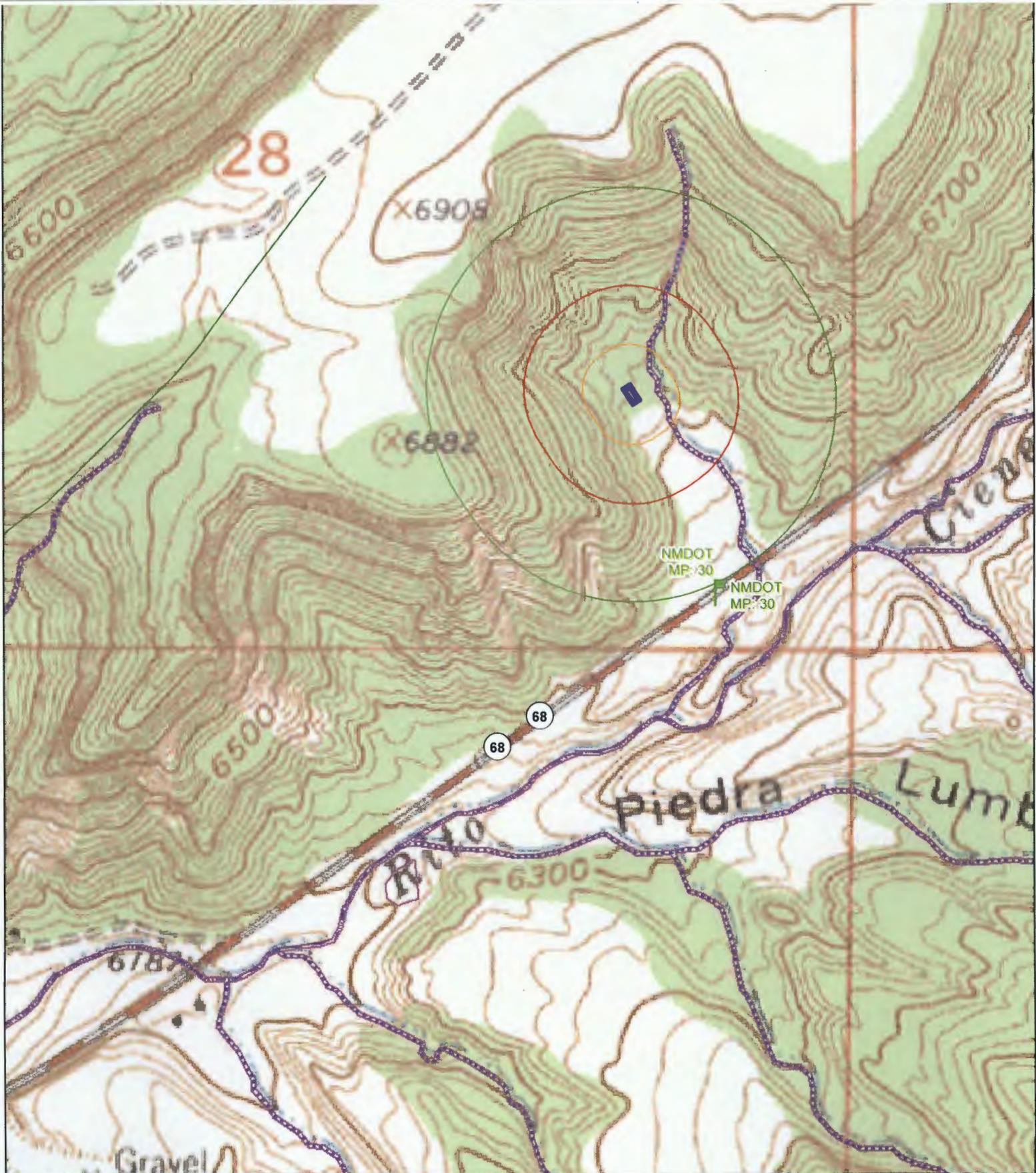


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

Pilar\_collection\_and\_discharge\_sites





Collection Location- Pilar Launching Station  
Taos Mainline - Rinconada to Pilar Re-Route

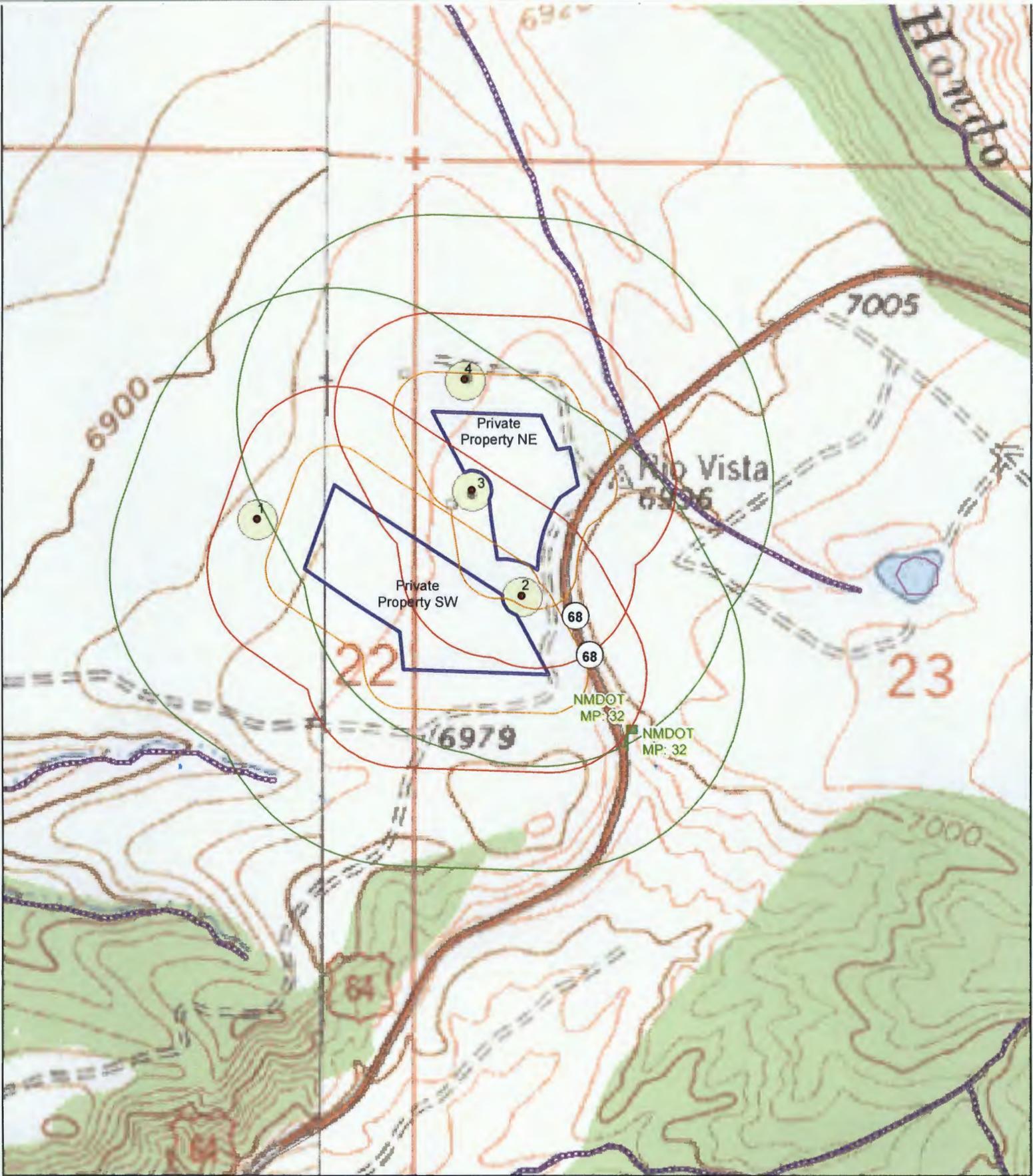


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

Pilar\_collection\_and\_discharge\_sites

0 250 500 1,000 1,500 2,000 Feet



Discharge Location- Private land  
 Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites



*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

### Description of Sedillo

#### Setting

*Landform:* Divides  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock

#### Typical profile

*H1 - 0 to 3 inches:* gravelly loam  
*H2 - 3 to 11 inches:* very gravelly clay loam  
*H3 - 11 to 60 inches:* very gravelly sandy loam

#### Properties and qualities

*Slope:* 5 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 3 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Low (about 4.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6s  
*Hydrologic Soil Group:* C  
*Ecological site:* Gravelly Slopes (R036XA004NM)  
*Hydric soil rating:* No

### Minor Components

#### Fernando

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)  
*Hydric soil rating:* No

#### Manzano

*Percent of map unit:*  
*Ecological site:* Loamy (R036XB006NM)

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### SSC—Silva-Sedillo association, gently sloping

#### Map Unit Setting

*National map unit symbol:* k1hf  
*Elevation:* 6,500 to 8,000 feet  
*Mean annual precipitation:* 11 to 14 inches  
*Mean annual air temperature:* 46 to 54 degrees F  
*Frost-free period:* 115 to 135 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Silva and similar soils:* 65 percent  
*Sedillo and similar soils:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Silva

##### Setting

*Landform:* Ridges, divides  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock and/or eolian deposits derived from sandstone and shale

##### Typical profile

*H1 - 0 to 3 inches:* loam  
*H2 - 3 to 31 inches:* clay loam  
*H3 - 31 to 60 inches:* clay loam

##### Properties and qualities

*Slope:* 1 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* High (about 10.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SSC	Silva-Sedillo association, gently sloping	40.9	100.0%
<b>Totals for Area of Interest</b>		<b>40.9</b>	<b>100.0%</b>

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)

**MAP LEGEND**

- |                               |                                                                                                          |                                                                                                         |
|-------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Area of Interest (AOI)</b> |  Area of Interest (AOI) |  Spoil Area            |
| <b>Soils</b>                  |  Soil Map Unit Polygons |  Stony Spot            |
|                               |  Soil Map Unit Lines    |  Very Stony Spot       |
|                               |  Soil Map Unit Points   |  Wet Spot              |
| <b>Special Point Features</b> |  Blowout                |  Other                 |
|                               |  Borrow Pit             |  Special Line Features |
|                               |  Clay Spot              | <b>Water Features</b>                                                                                   |
|                               |  Closed Depression     |  Streams and Canals    |
|                               |  Gravel Pit           | <b>Transportation</b>                                                                                   |
|                               |  Gravelly Spot        |  Rails                 |
|                               |  Landfill             |  Interstate Highways   |
|                               |  Lava Flow            |  US Routes           |
|                               |  Marsh or swamp       |  Major Roads         |
|                               |  Mine or Quarry       |  Local Roads         |
|                               |  Miscellaneous Water  | <b>Background</b>                                                                                       |
|                               |  Perennial Water      |  Aerial Photography  |
|                               |  Rock Outcrop         |                                                                                                         |
|                               |  Saline Spot          |                                                                                                         |
|                               |  Sandy Spot           |                                                                                                         |
|                               |  Severely Eroded Spot |                                                                                                         |
|                               |  Sinkhole             |                                                                                                         |
|                               |  Slide or Slip        |                                                                                                         |
|                               |  Sodic Spot           |                                                                                                         |

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(discharge private property)



*Hydrologic Soil Group:* C  
*Ecological site:* Breaks (R051XA006NM)  
*Hydric soil rating:* No

#### **Description of Rock Outcrop**

##### **Typical profile**

*R - 0 to 60 inches:* bedrock

##### **Properties and qualities**

*Depth to restrictive feature:* 0 inches to lithic bedrock

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8

*Hydric soil rating:* Unranked

#### **Minor Components**

##### **Montecito**

*Percent of map unit:* 10 percent

*Ecological site:* south of Gallup 13-16 (F036XA001NM)

*Hydric soil rating:* No

##### **Trampas**

*Percent of map unit:* 10 percent

*Ecological site:* Pine Grassland (R048AY010NM)

*Hydric soil rating:* No

### **Data Source Information**

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015

## Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

### OTG—Orthents-Rock outcrop association, very steep

#### Map Unit Setting

*National map unit symbol:* k1gl  
*Elevation:* 6,400 to 10,000 feet  
*Mean annual precipitation:* 9 to 23 inches  
*Mean annual air temperature:* 44 to 54 degrees F  
*Frost-free period:* 90 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Orthents and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Orthents

##### Setting

*Landform:* Canyons  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Colluvium derived from basalt

##### Typical profile

*H1 - 0 to 10 inches:* very gravelly loam  
*H2 - 10 to 60 inches:* very gravelly clay loam

##### Properties and qualities

*Slope:* 40 to 80 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.21 to 0.71 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 5 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 2.0  
*Available water storage in profile:* Moderate (about 6.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e

## Map Unit Legend

Taos County and Parts of Rio Arriba and Mora Counties, New Mexico (NM670)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ORG	Orthents-Badland association, very steep	6.0	5.0%
OTG	Orthents-Rock outcrop association, very steep	61.4	50.7%
PfC	Petaca-Prieta complex, 1 to 8 percent slopes	53.6	44.3%
RcG	Rock outcrop, very steep	0.1	0.1%
<b>Totals for Area of Interest</b>		<b>121.1</b>	<b>100.0%</b>

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)

**MAP LEGEND**

<b>Area of Interest (AOI)</b>		 Spoil Area	
	Area of Interest (AOI)	 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
	Soil Map Unit Polygons	 Wet Spot	
	Soil Map Unit Lines	 Other	
	Soil Map Unit Points	 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
	Blowout	 Streams and Canals	
	Borrow Pit	<b>Transportation</b>	
	Clay Spot	 Rails	
	Closed Depression	 Interstate Highways	
	Gravel Pit	 US Routes	
	Gravelly Spot	 Major Roads	
	Landfill	 Local Roads	
	Lava Flow	<b>Background</b>	
	Marsh or swamp	 Aerial Photography	
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.  
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

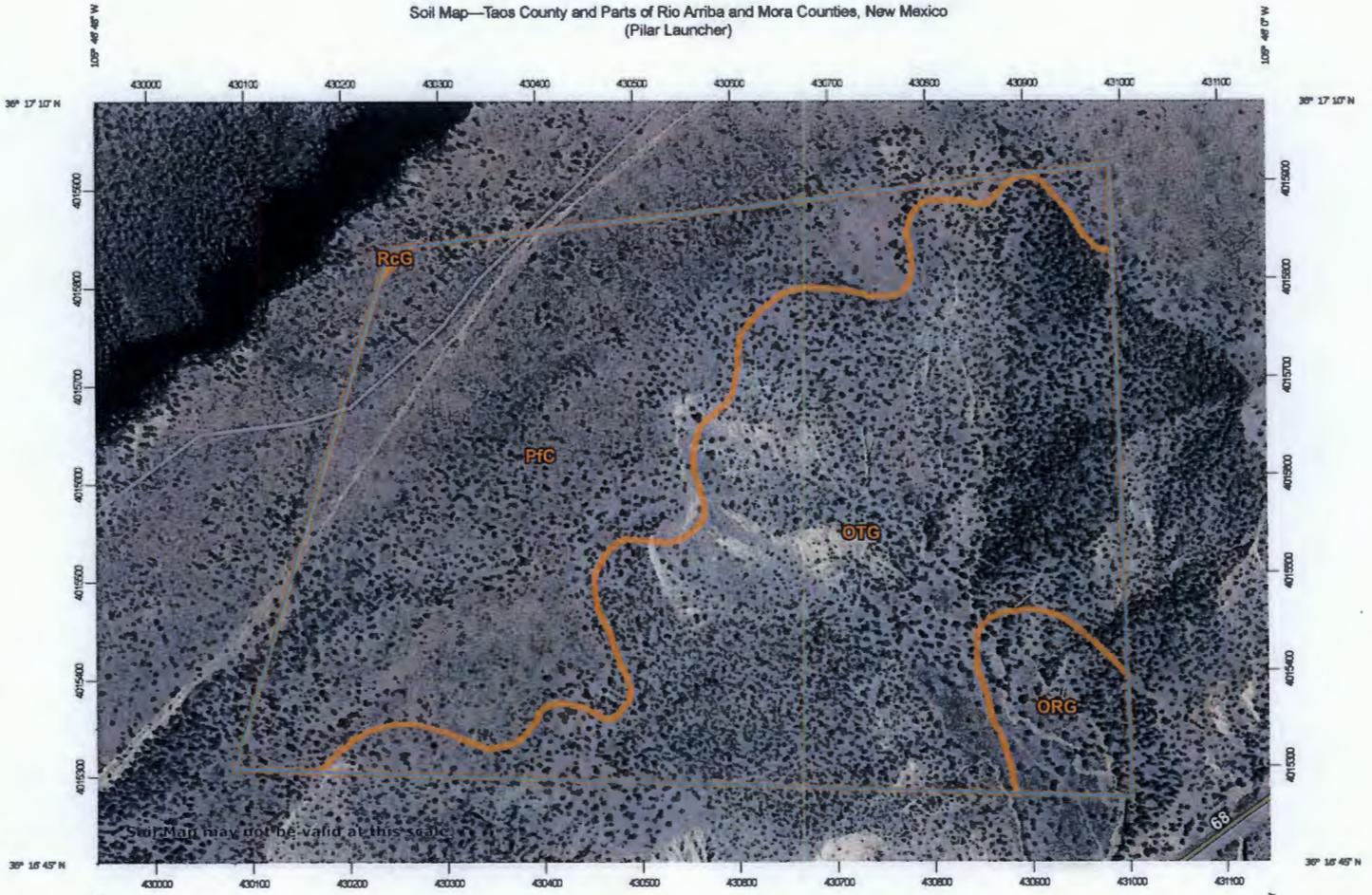
Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
Survey Area Data: Version 11, Nov 24, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Soil Map—Taos County and Parts of Rio Arriba and Mora Counties, New Mexico  
(Pilar Launcher)



Map Scale: 1:5,500 if printed on A landscape (11" x 8.5") sheet.  
0 50 100 200 300 Meters  
0 250 500 1000 1500 Feet  
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and  
Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

*Land capability classification (nonirrigated): 7e*  
*Hydrologic Soil Group: B*  
*Ecological site: Steep Gravelly - Woodland (F035XG135NM)*  
*Hydric soil rating: No*

#### **Description of Rock Outcrop**

##### **Typical profile**

*R - 0 to 60 inches: bedrock*

##### **Properties and qualities**

*Depth to restrictive feature: 0 inches to lithic bedrock*  
*Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)*

#### **Minor Components**

##### **Chita**

*Percent of map unit: 8 percent*  
*Landform: Mesas*  
*Landform position (two-dimensional): Shoulder*  
*Landform position (three-dimensional): Talf*  
*Down-slope shape: Convex*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*  
*Hydric soil rating: No*

##### **Menefee**

*Percent of map unit: 7 percent*  
*Landform: Hills*  
*Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope*  
*Landform position (three-dimensional): Crest, nose slope, side slope, head slope*  
*Down-slope shape: Convex*  
*Across-slope shape: Convex*  
*Ecological site: Gravelly - Woodland (F035XG134NM)*  
*Hydric soil rating: No*

##### **Teromote**

*Percent of map unit: 5 percent*  
*Landform: Alluvial fans*  
*Landform position (two-dimensional): Footslope*  
*Landform position (three-dimensional): Rise*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Ecological site: Loamy (R036XB006NM)*

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 242—Tinaja-Rock outcrop complex, 45 to 75 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wj2  
*Elevation:* 5,800 to 7,800 feet  
*Mean annual precipitation:* 13 to 16 inches  
*Mean annual air temperature:* 45 to 49 degrees F  
*Frost-free period:* 100 to 130 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Tinaja and similar soils:* 50 percent  
*Rock outcrop:* 30 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of  
the mapunit.*

#### Description of Tinaja

##### Setting

*Landform:* Escarpments  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Colluvium derived from sandstone

##### Typical profile

*A - 0 to 4 inches:* extremely gravelly loam  
*Bk1 - 4 to 43 inches:* very cobbly sandy clay loam  
*2Bk2 - 43 to 60 inches:* sandy loam

##### Properties and qualities

*Slope:* 45 to 75 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0  
to 2.0 mmhos/cm)  
*Available water storage in profile:* Low (about 5.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6c

*Hydrologic Soil Group:* C

*Ecological site:* Loamy (R036XB006NM)

*Hydric soil rating:* No

### Minor Components

#### Dermla

*Percent of map unit:* 5 percent

*Landform:* Hills

*Landform position (two-dimensional):* Backslope, footslope, shoulder, toeslope

*Landform position (three-dimensional):* Crest, nose slope, side slope, head slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Ecological site:* Pinyon-Juniper/Skunkbush Sumac Shallow Sandy (F036XB133NM)

*Hydric soil rating:* No

#### Pinavetes

*Percent of map unit:* 5 percent

*Landform:* Dunes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Ecological site:* Sandy Slopes (R036XB111NM)

*Hydric soil rating:* No

#### Rock outcrop

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

Survey Area Data: Version 14, Sep 29, 2016

## Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties

### 148—Chita loam, 0 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1wh4  
*Elevation:* 6,000 to 7,500 feet  
*Mean annual precipitation:* 10 to 16 inches  
*Mean annual air temperature:* 45 to 50 degrees F  
*Frost-free period:* 100 to 140 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Chita and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Chita

##### Setting

*Landform:* Mesas  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Eolian deposits over slope alluvium derived from igneous and sedimentary rock

##### Typical profile

*A - 0 to 3 inches:* loam  
*BA and Bt - 3 to 10 inches:* loam  
*Btk and Bk - 10 to 38 inches:* silty clay loam  
*2Bk - 38 to 60 inches:* gravelly sandy clay loam

##### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 35 percent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 9.7 inches)

### Map Unit Legend

Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties (NM650)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
148	Chita loam, 0 to 5 percent slopes	8.4	54.7%
242	Tinaja-Rock outcrop complex, 45 to 75 percent slopes	7.0	45.3%
<b>Totals for Area of Interest</b>		<b>15.4</b>	<b>100.0%</b>

Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)

**MAP LEGEND**

<b>Area of Interest (AOI)</b>		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
<b>Soils</b>		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
<b>Special Point Features</b>		<b>Water Features</b>	
 Blowout		 Streams and Canals	
 Borrow Pit		<b>Transportation</b>	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		<b>Background</b>	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

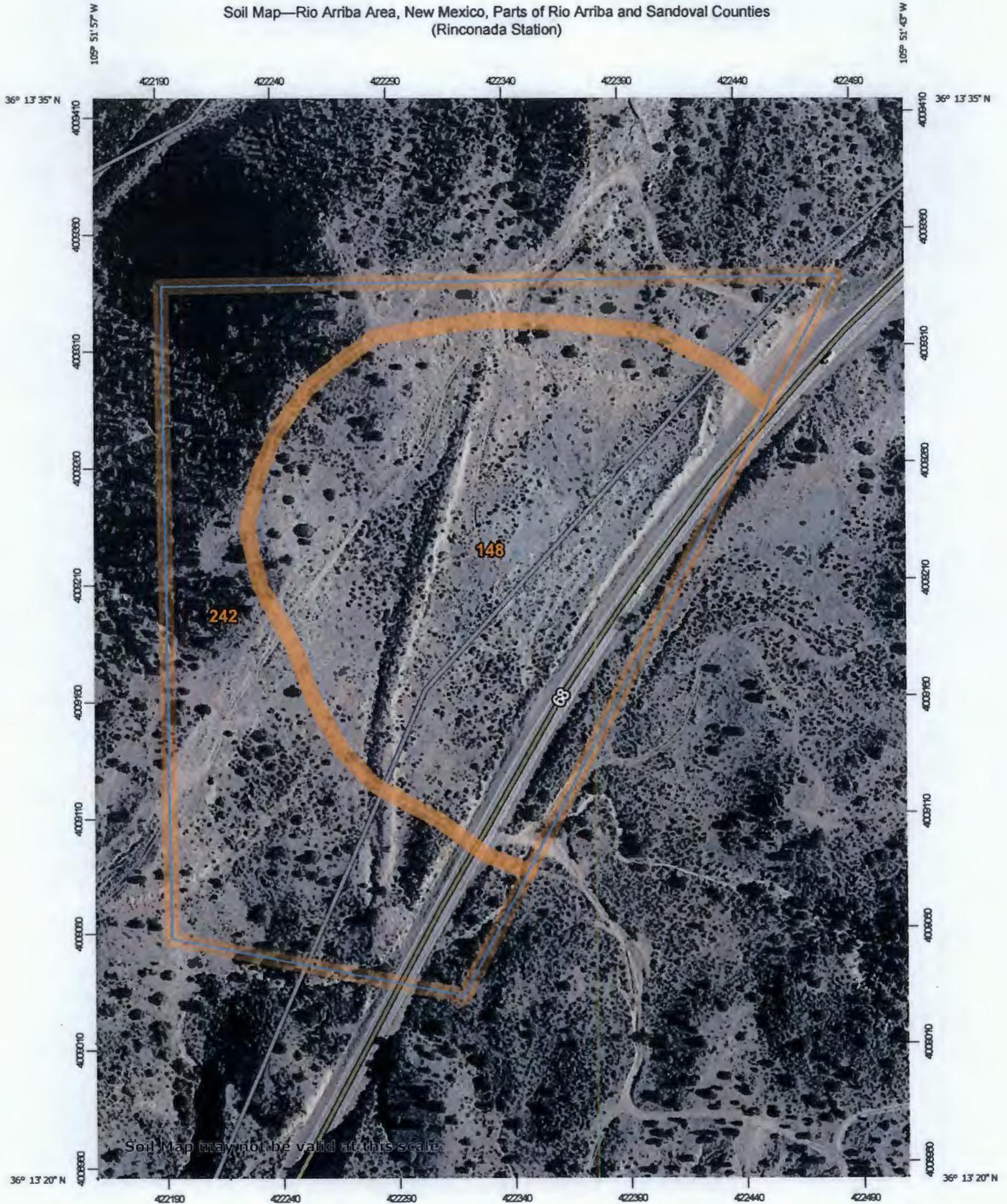
Soil Survey Area: Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
Survey Area Data: Version 14, Sep 29, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 22, 2011—Apr 25, 2012

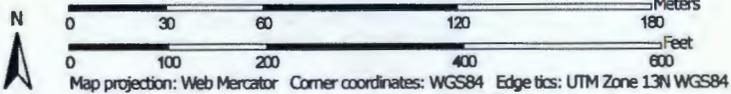
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Soil Map—Rio Arriba Area, New Mexico, Parts of Rio Arriba and Sandoval Counties  
(Rinconada Station)



Soil Map may not be valid at this scale.

Map Scale: 1:2,260 if printed on A portrait (8.5" x 11") sheet.

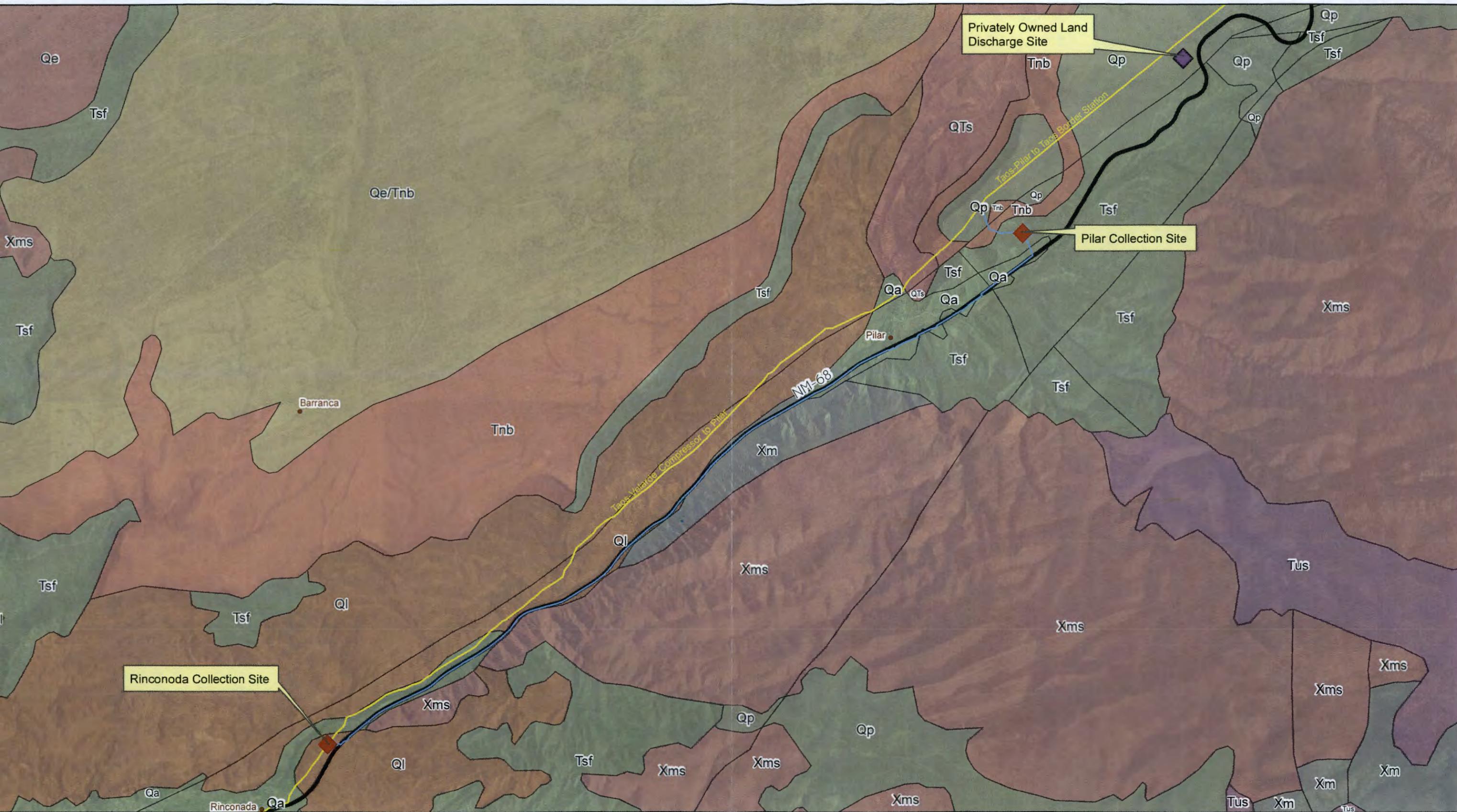


*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Taos County and Parts of Rio Arriba and Mora Counties, New Mexico

Survey Area Data: Version 11, Nov 24, 2015



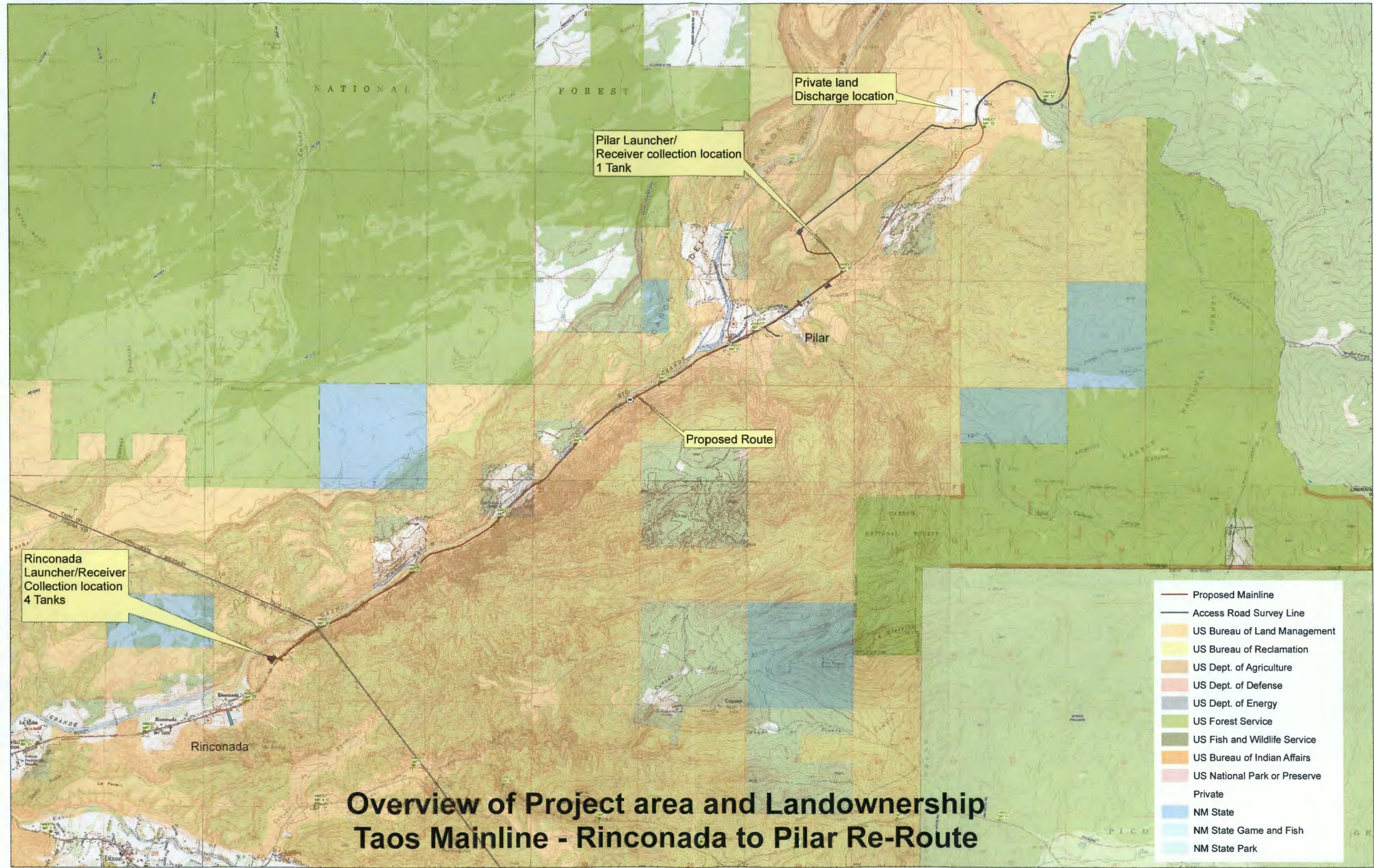
- Major Streets
- Collection Site
- Discharge Site
- Proposed Line
- Transmission Line

- Ql** - Quaternary landslide deposits and colluvium (Holocene to Pleistocene)
- Tsf** - Tertiary alluvial deposits from the Santa Fe Group (Upper Miocene to Uppermost Oligocene)
- Qp** - Quaternary piedmont alluvial deposits, including deposits of higher gradient, tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans. (Holocene to Pleistocene)

## Geology of Rinconoda and Pilar Area

1 inch = 3,500 feet





Rinconada Launcher/Receiver Collection location 4 Tanks

Pilar Launcher/Receiver collection location 1 Tank

Private land Discharge location

Proposed Route

Pilar

Rinconada

# Overview of Project area and Landownership Taos Mainline - Rinconada to Pilar Re-Route

- Proposed Mainline
- Access Road Survey Line
- US Bureau of Land Management
- US Bureau of Reclamation
- US Dept. of Agriculture
- US Dept. of Defense
- US Dept. of Energy
- US Forest Service
- US Fish and Wildlife Service
- US Bureau of Indian Affairs
- US National Park or Preserve
- Private
- NM State
- NM State Game and Fish
- NM State Park



### Discharge Location- Private land Taos Mainline - Rinconada to Pilar Re-Route



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites



Rinconada collection

FEMA's National Flood Hazard Layer (Official)

- NFHL (click to expand)**
- LOMRs
  - Effective
- LOMAs
  -
- FIRM Panels
  -
- Cross-Sections
  -
- Flood Hazard Boundaries
  - Limit Lines
  - SFHA / Flood Zone Boundary
  - Other Boundaries
- Flood Hazard Zones
  - 1% Annual Chance Flood Hazard
  - Regulatory Floodway
  - Special Floodway
  - Area of Undetermined Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Future Conditions 1% Annual Chance Flood Hazard
  - Area with Reduced Risk Due to Levee



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:  
<http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead:  
<http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

FEMA's National Flood Hazard Layer (Official)

Pilar Collection location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

0.3mi

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

FEMA's National Flood Hazard Layer (Official) Private land ABchange location



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available: <http://tinyurl.com/j4xwp5e>

USGS The National Map: Orthoimagery | National Geospatial-Intelligence Agency (NGA); Delta State University; Esri | Print here instead: <http://tinyurl.com/j4xwp5e> Support: [FEMAMapSpecialist@riskmapcds.com](mailto:FEMAMapSpecialist@riskmapcds.com) | USDA FSA, Microsoft

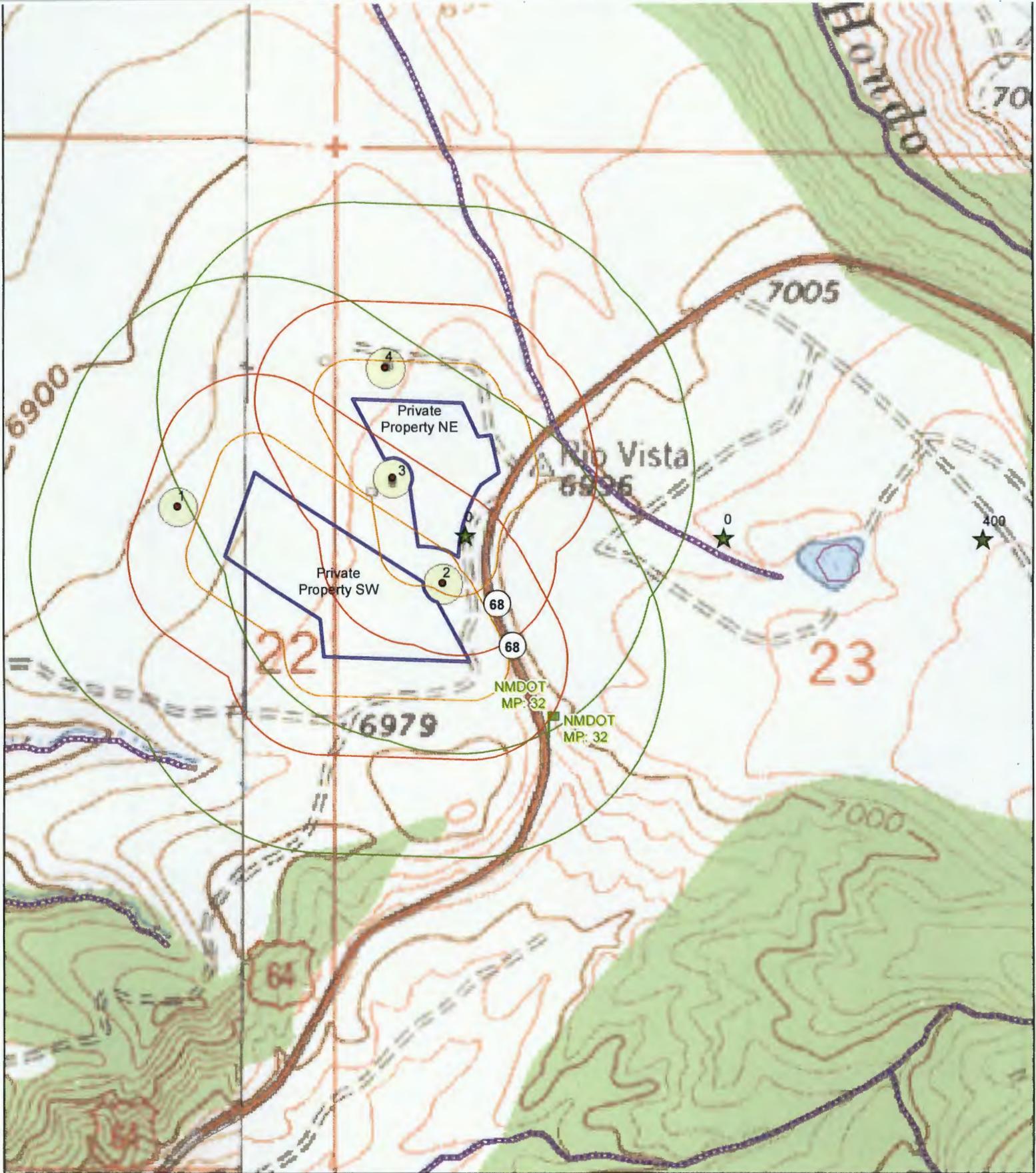


Collection Location- Rinconada Launching Station  
Well Location and Depth to Water



- 500ft buffer
- 1000ft buffer
- 200ft buffer
- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands
- Pilar\_collection\_and\_discharge\_sites
- OSE\_Wells

0 195 390 780 1,170 1,560 Feet



Discharge Location- Private land  
Well Location and Depth to Water

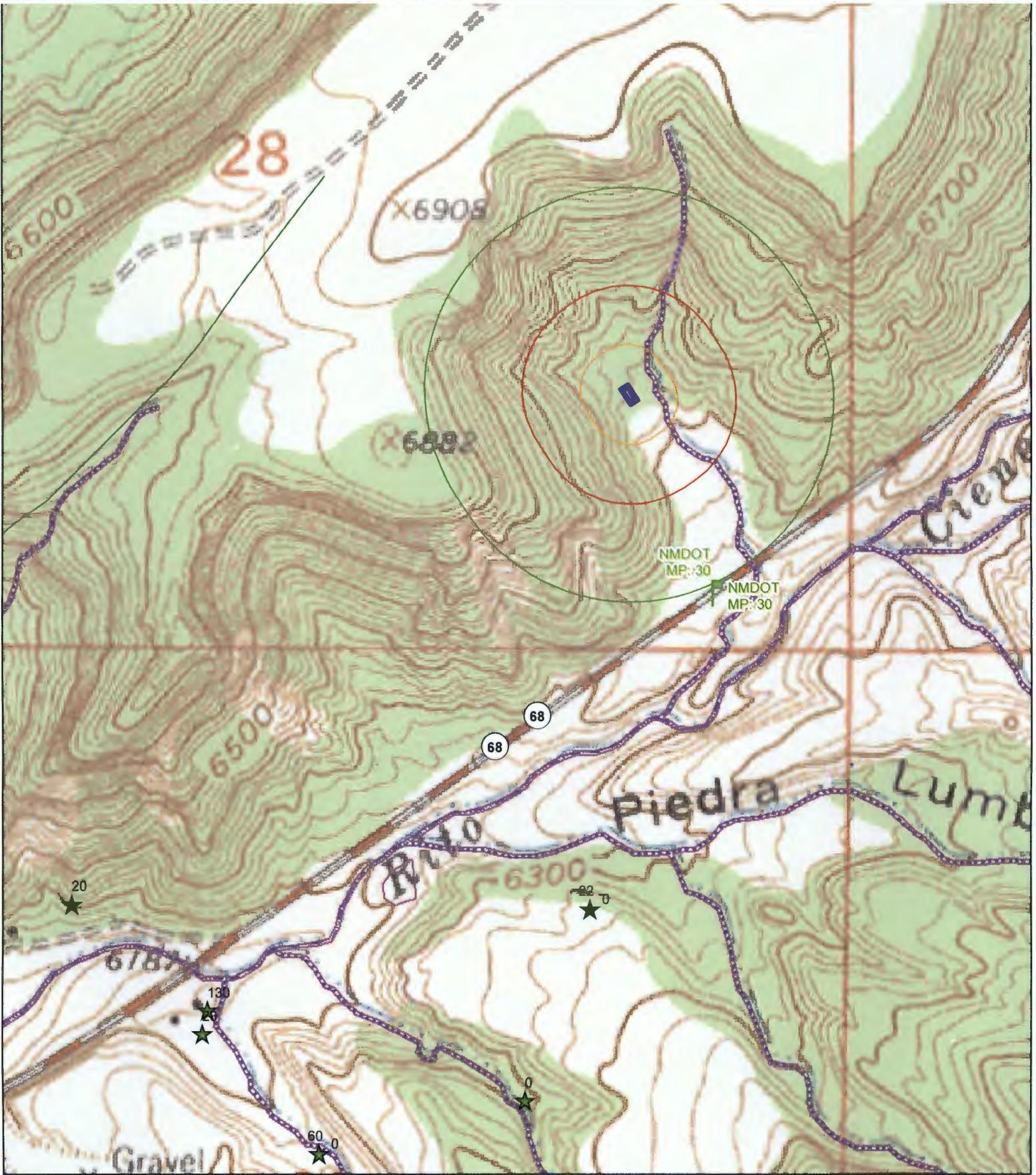


- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Residences
- Pilar\_collection\_and\_discharge\_sites
- OSE\_Wells





Collection Location- Pilar Launching Station  
Well Location and Depth to Water



- 500ft buffer
- 1000ft buffer
- 200ft buffer

- Ephemeral
- Intermittent
- Perennial
- NM\_Wetlands

- Pilar\_collection\_and\_discharge\_sites
- ★ OSE\_Wells

