

January 30, 2026

Mr. Mark Fleri
ENTACT, LLC
101 Old Underwood Rd Bldg. J
La Porte, TX 77571

**RE: Red Bluff No. 1 and Roundy Abandoned Uranium Mines Geology and Hydrogeology
Desktop Study, McKinley County, New Mexico**

Dear Mr. Fleri:

EA Engineering, Science, and Technology, Inc., PBC (EA) is pleased to summarize the findings of the geology and hydrogeology desktop study at Red Bluff No. 1 and Roundy Abandoned Uranium Mines (Site). Figure 1 shows the Site boundary and features referenced in this technical memorandum.

This study summarizes the local geology and hydrogeology at the Site to assess using the existing strip mines as repositories for the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) 1 materials. This technical memorandum also assesses if a mound of rock with elevated radiological levels identified at the base of the Red Bluff cliff adjacent to the Site was associated with historical mining operations or is naturally occurring. Based on the information discussed in this technical memorandum, EA recommends the following:

- Using the existing strip mines as a repository for MARSSIM 1 materials is unlikely to impact groundwater. This is based on the depth of water-bearing units and the presence of a finer-grained confining unit that underlies the strip mines. The finer grained lithologic unit acts as a liner underlying the strip mines and minimizes or prevents the infiltration of contaminants from impacting the deeper groundwater. A representative number of test borings should be advanced near the existing strip mine pits to a depth of 100-130 feet below ground surface (bgs) to verify geological contacts, the absence of perched shallow aquifers, and confirm this desktop assessment.
- The identified mound of rock with elevated radiological levels appears to be a result of erosion unrelated to historical mining activities, and therefore not subject to remedial action as part of the Site.

Surface Geology

Figure 2 shows the local geology at the Site, taken from the *Geologic Map of the Dos Lomas Quadrangle, Cibola and McKinley Counties, New Mexico* (Cather, 2011). The uranium ore bearing rock of interest at the Site is the Todilto Formation, a light gray to tan Jurassic age limestone. At the Site the Todilto Formation appears to be laterally continuous, and less than 10 feet thick with bedding up to about 6 inches thick, based on observations of local outcrops. Small scale local folding (up to an amplitude of approximately 5 feet) was observed in most excavations indicating a generally planer surface with small scale variations in expected depth. Based on measurements (strike and dip) and GPS coordinates collected at surface exposures of the Todilto Formation, conservative calculations conclude a formation attitude (dip and dip direction) of between 3° and 6°, N32°E. Strike and dip measurements were taken at seven

location, shown as SD1 through SD7 on Figure 1.

Further upslope, erosion of the Todilto Formation left the Jurassic age Entrada Formation exposed. The red cliff on the southwestern boundary of the Site is composed of the Entrada Formation (Figure 2). Regionally, two members are noted in the Entrada Formation, the Upper Sandstone Member and the Medial Silty Member (Figure 3). The upper sandy member forms prominent cliffs and is composed mainly of medium- to fine-grained sand with prominent cross-bedding. The Medial Silty Member is described as a silty, very fine-grained sandstone with fairly flat bedding and well cemented with a predominantly calcium carbonate cement (Harshbarger et al., 1957).

Where the Todilto Formation dips below ground surface, the bedrock is covered by a layer of Quaternary age eolian and alluvial deposits (Figure 1).

Subsurface Geology

Subsurface geology at the Site can be reasonably expected to follow the regionally observed stratigraphic sequence (Figure 3). In the down-dip direction, the Summerville Formation can be found stratigraphically above the Todilto Formation and below the Bluff Sandstone that outcrops approximately 1600 feet to the NE of the Site boundary (Figure 2). Locally, the Summerville Formation, a siltstone, is covered by Quaternary age eolian and alluvial deposits.

The stratigraphically lowest formation observed at the Site is the Entrada Formation. The Wingate Sandstone is located stratigraphically below the Medial Silty Member of the Entrada Sandstone locally (Figure 3).

Regional Hydrogeology

The Site is located in the San Mateo Creek Basin, which is part of the larger San Juan Basin. Aquifers within the San Juan Basin are primarily artesian based on the regional geologic structure. The major component of groundwater flow is through sandstone of relatively higher permeability than adjacent units. Finer grained units, including mudstones, shales, and silts, act as confining units (Stone et al., 1983). Groundwater in the region generally flows with the dip of the lithology to the northeast in the San Mateo Creek Basin (U.S. Environmental Protection Agency, 2018).

Identified Mound of Rock with Elevated Radiological Levels

Located at the base of the Red Bluff cliff just northwest of the southwest point, ENTACT identified a mound containing fractured Todilto Formation limestone with radiological levels above background (Figure 1, Photographs 1 through 4 of Attachment 1). EA was unable to find evidence of any mining related activity at the base of Red Bluff cliff in the vicinity of the mound of rock. However, there is ample evidence of cliff erosion (Photographs 3 and 4 of Attachment 1). Mining activities on top of the bluff end at SD5 (Figure 1, Photograph 1 of Attachment 1). To the southwest of SD5 the ridge is absent of limestone, narrows and drops in elevation. The northwest slope coming off the ridge between SD5 and the mound of rock with elevated readings is oriented such that any rock fall would be directed to the northwest, well north of the identified mound of rock. Therefore, it is likely that the mound of rock with elevated radiological levels was formed from natural erosion and gravity fall from the cliff. During erosion, some of the

Todilto Formation limestone that naturally sits on top of the Entrada Formation sloughed off and fell to the base of the cliff and ended up on top of the mound of rock.

Historical Drilling Records

Water rights permits were found for three nearby domestic wells. Domestic wells are noted as water well (WW)-1, WW-2, and WW-3 in Figure 1. The closest domestic well, WW-1, is 1700 feet southeast of the northeastern point of the Site (Figure 1). Driller's well logs were obtained for WW-1 and WW-2, while the boring for WW-3 was noted as dry and no log was available (Attachment 2). The domestic well designations correlate to New Mexico Office of the State Engineer (OSE) permits as follows:

- WW-1 correlates to Permit B-01485
- WW-2 correlates to Permit B-01486
- WW-3 correlates to Permit B-01480

WW-1 Summary

The driller's log for WW-1 is the most detailed and can be reasonably correlated with regional stratigraphy.

Table 1 – Correlation Between WW-1 Driller's Log and Regional Stratigraphy

Depth (feet bgs)	Thickness (feet)	Driller's Log	Stratigraphic Correlation
0-80	80	blow sand	Quaternary alluvial and eolian deposits
80-160	80	red shale	Possibly mudstone strata within Summerville Formation Siltstone ^a
160-200	40	red sandstone	Possibly silty sandstone beds within Summerville Formation Siltstone ^a
200-250	50	limestone	Todilto Formation Limestone
250-400	150	pink sand	Entrada Formation Upper Sandstone and Medial Silty members
400	550	red coarse sand	Wingate Formation Sandstone
550	580	red sandstone	Possibly Rock Point Formation Siltstone ^b

Notes:

bgs = below ground surface

^a The Summerville Formation Siltstone is described as moderate reddish brown fine-grained silty sandstone beds interbedded with dark reddish brown mudstone strata (Harshbarger et al., 1957).

^b The Rock Point Formation Siltstone is described as a reddish silty sandstone unit with a high percentage of sand in some locations (Harshbarger et al., 1957).

WW-1 was screened from 500 to 560 feet bgs, and the well record noted principal water-bearing formations from 510 to 560 feet bgs with an estimated yield of 4 gallons per minute. Upon completion, the potentiometric surface was 280 feet bgs, indicating artesian conditions. Based on this log, the Wingate Formation Sandstone is the most likely water bearing unit, with the Medial Silty Member of the Entrada Formation acting as a confining bed for the aquifer.

WW-2 Summary

The driller's log for WW-2 contains more generic descriptions and cannot be as directly correlated to regional stratigraphy. However, a 40-foot thick "red clay" was noted from 340-380 feet bgs, overlaying "white sand" from 380-460 feet bgs (Attachment 2). The principal water-

bearing formation was noted from 380 to 420 feet bgs, and the screen was set from 380-460 feet bgs with an estimated yield of 3 gallons per minute. Upon completion, the potentiometric surface was 280 feet bgs, indicating artesian conditions. It is therefore likely that the “white sand” is the Wingate Formation Sandstone and the “red clay” is the Medial Silty Member of the Entrada Formation, acting as a confining bed for the aquifer.

WW-3 Summary

The New Mexico OSE records for WW-3 indicate that the attempt to drill under Permit B-01489 resulted in a dry borehole (Attachment 2). No well log was included with the OSE records. This location is west of the Site boundary, stratigraphically higher than where the Todilto Limestone dips below ground surface. Using regional stratigraphy and nearby boring logs, the Wingate Formation Sandstone is estimated to be located approximately 150 feet bgs at WW-3.

The Wingate Formation is likely dry at this location due to the following:

- Water bearing units were initially encountered at depths of 380 and 510 feet bgs (based on the above discussed drilling logs); it is therefore unlikely that drilling at WW-3 would have terminated above 150 feet bgs unless refusal was encountered, which was not indicated on the New Mexico OSE records.
- The potentiometric surface was measured at approximately 280 feet bgs after well completion in both WW-1 and WW-2. Given the proximity of the three domestic well locations, it can be reasonably assumed that local saturation in the Wingate Formation does not begin until it dips to approximately 280 feet bgs (Figure 2).

Summary and Conclusions

Based on field observations at the Site, the mound of rock with elevated radiological readings was most likely formed due to erosion and gravity fall unrelated to mining activities and therefore not subject to remedial action associated with the Site.

Site-specific geologic observations and nearby domestic well records indicated that the site-specific geology and hydrogeology follow regionally observed patterns. The shallowest aquifer in the vicinity of the Site is the Wingate Formation, which is stratigraphically beneath the cliff-forming Entrada Formation. Based on nearby domestic wells, local saturation of the Wingate Formation likely begins at a depth of approximately 280 feet bgs.

The top of the Wingate Formation is approximately 200 feet bgs next to the “boomerang” pit at the Site (Figure 2). The Wingate Formation is therefore expected to be dry under most of the Site. Additionally, the Entrada Formation, Medial Silty Member, likely acts as the confining unit locally and is located at a depth of approximately 150-200 feet bgs next to the “boomerang” pit (Figure 2).

No perched shallow aquifers were noted in the drilling logs or New Mexico OSE records for the three nearby domestic wells.

It is unlikely that water bearing units or perched shallow aquifers would be encountered within 100 feet below the “boomerang” pit and other two mining pits at the Site, indicating that the existing strip mines could be used repositories for the MARSSIM 1 materials without impacting groundwater. A representative number of test borings to a depth of 100-130 feet below ground

surface (bgs) below the existing mining pits (total depth of approximately 130 feet bgs), are recommended to verify geological contacts, absence of perched shallow aquifers, and this desktop conclusion.

Please do not hesitate to contact me at crust@eaest.com or 505-321-4515 if you have any questions about the summarized observations and conclusions above.

Sincerely,



Colleen Rust, PMP, PG, CPG
Project Manager/Senior Hydrogeologist
P: 505-234-1068 M: 505-321-4515
Email: crust@eaest.com

References

- Cather, Steven, 2011. *Geologic Map of the Dos Lomas Quadrangle, Cibola and McKinley Counties, New Mexico*. New Mexico Bureau of Geology and Mineral Resources. June.
- Harshbarger, J.W., C.A. Repenning, and J.H. Irwin, 1957. Stratigraphy of the Uppermost Triassic and the Jurassic Rocks of the Navajo Country. Geological Survey Professional Paper 291, U.S. Geological Survey.
- Stone, W.J., F.P. Lyford, P.F. Frenzel, N.H. Mizell, and E.T. Padgett, 1983. Hydrogeology and water resources of the San Juan Basin, New Mexico. New Mexico Bureau of Mines and Mineral Resources, a Division of New Mexico Institute of Mining and Technology. Hydrologic Report 6.
- U.S. Environmental Protection Agency, 2018. Phase 2 Ground-Water Investigation Report for the San Mateo Creek Basin Legacy Uranium Mines Site, Cibola and McKinley Counties, New Mexico, Revision 1. Prepared by Weston Solutions, Inc. for U.S. Environmental Protection Agency Region 6 under Contract No. EP-S5-17-02. October.

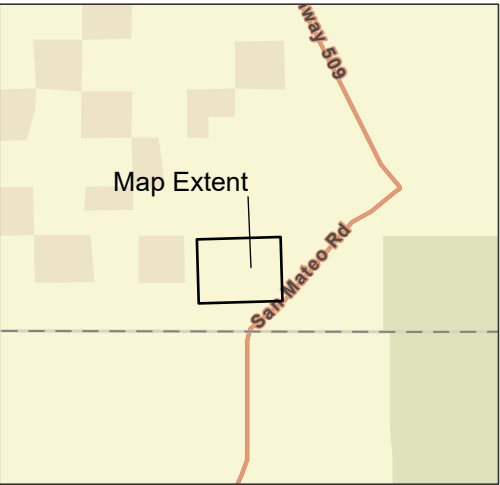
FIGURES

- Figure 1 – Site Features Map
Figure 2 – Site Geology
Figure 3 – Regional Stratigraphic Column

ATTACHMENTS

- Attachment 1 – Photographic Log
Attachment 2 – New Mexico Office of the State Engineer Well Records

FIGURES



Legend

- Domestic Well
- Strike and Dip Measurement Taken on Todilto Limestone
- Mound with Elevated Readings
- 1 meter Elevation Contours
- Todilto Limestone Dips Below Valley Alluvium
- Site Boundary

5°

Strike and Dip

Date Saved: 1/29/2026
Projection: WGS 1984 UTM Zone 13N

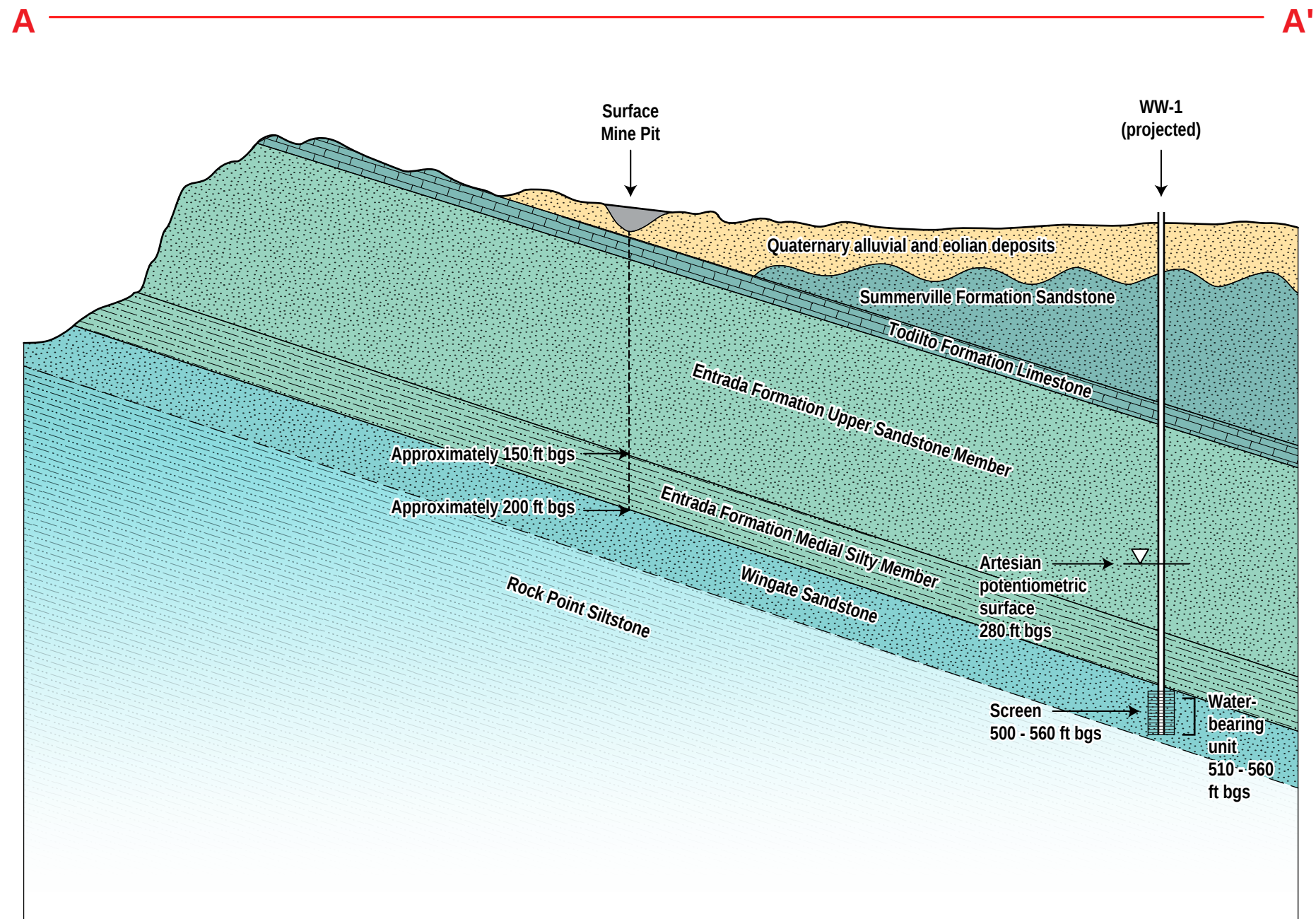
Scale: 1:7,800

0 650 1,300
US Feet

Data Sources: ESRI

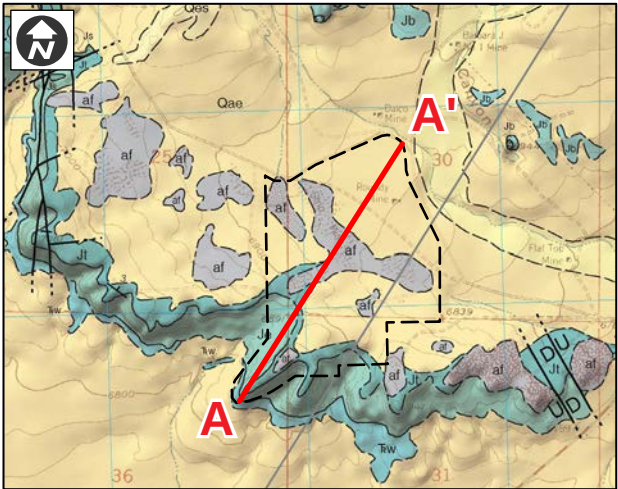
**Red Bluff No. 1 and Roundy
Abandoned Uranium Mines
McKinley County, New Mexico**

Site Features Map



NOT TO SCALE

Note:
ft bgs = feet below ground surface



Unit Descriptions

- af** Disturbed and/or artificial fill – Areas affected by human disturbances, mapped where deposits or extractions are really extensive.
- Qae** Eolian and alluvial deposits (Upper Pleistocene-Holocene) - Reddish-brown eolian sand and loessic silt locally reworked by alluvial processes. Deposits are stabilized by vegetation in most areas. Includes discontinuous eolian veneers on stable upland surfaces. 0-10 m thick
- Jt** Todilto Formation, Luciano Mesa Member (Callovian) – Olive-gray to pale-yellow, thin- to thick-bedded limestone deposited in a lacustrine or saline environment. About 10 m thick. Gypsum of the Tonque Arroyo Member is not present in the quadrangle.
- Je** Entrada Sandstone (Callovian) – Light-brown, cross-bedded eolian sandstone and reddish brown, tabular-bedded siltstone. About 50 m thick. Includes units Jem and Jeu of Thaden et al. (1967).
- TW** Wingate Sandstone (Rhaetian?) – Reddish-brown, cross-bedded eolian sandstone. About 30 m thick.

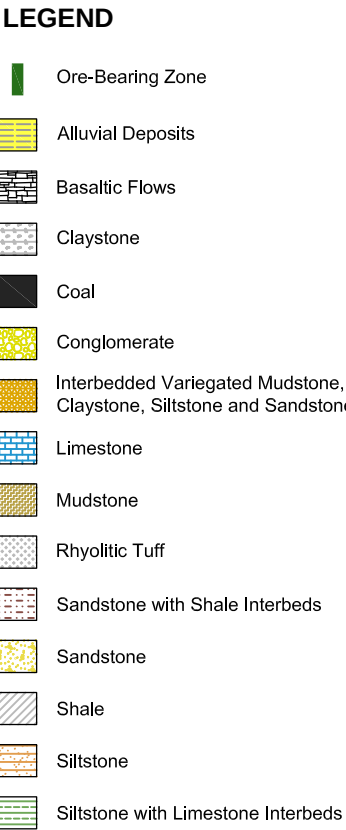
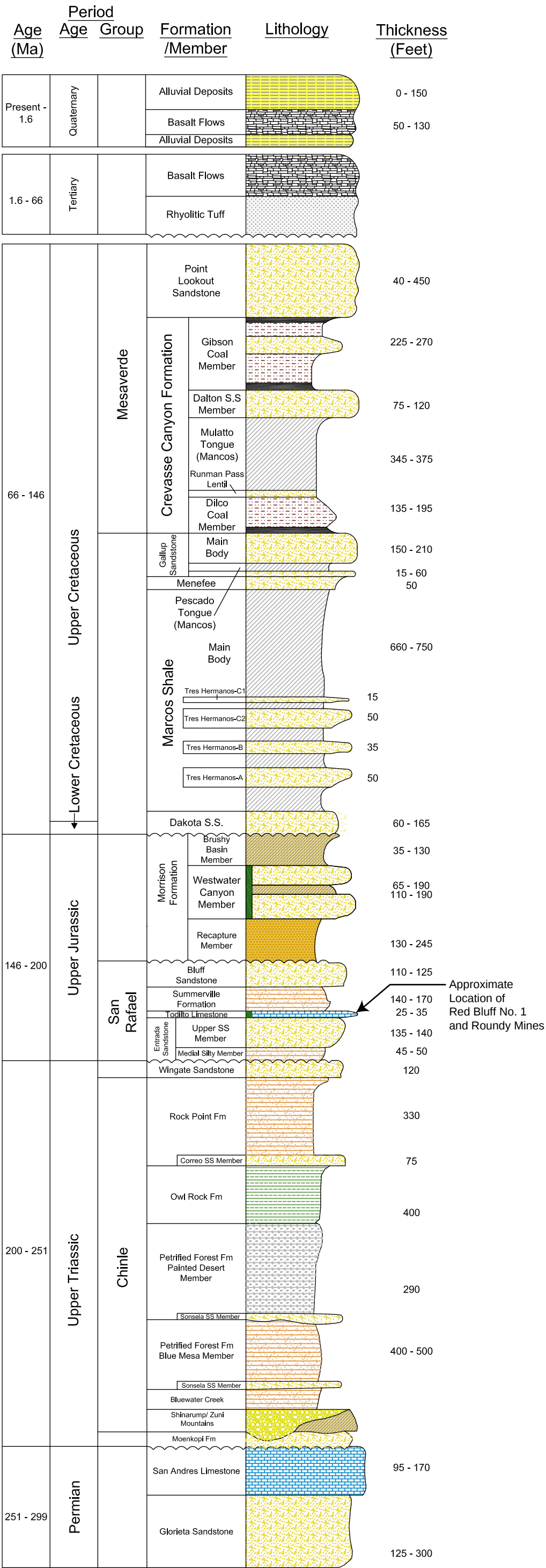
Data Sources: USGS

Red Bluff No. 1 and Roundy Abandoned Uranium Mines McKinley County, New Mexico

Geology of Red Bluff No. 1 Mine Site

Figure 2





Reference:
Phase 2 Ground-Water
Investigation Report for the
San Mateo Creek Basin
Legacy Uranium Mines Site,
Cibola and McKinley Counties,
New Mexico (EPA 2018)

**Red Bluff No. 1 and Roundy
Abandoned Uranium Mines**
McKinley County, New Mexico

Stratigraphic Column

Figure 3



ATTACHMENT 1

Photographic Log



1. Looking southwest from point SD5 (Figure 1), the southwest extent of Red Bluff No. 1 mining activities. The high relief topography continues to the southwest as a narrow sandstone ridge, absent of Todilto Formation (limestone). The mound of rock with elevated readings lies west-northwest of this location and the ridgeline cliff slope direction is due northwest from this point.



2. Looking west from the base of the cliff at the mound of rock with elevated readings.



3. Looking east from on top of the mound of rock with elevated readings. Scattered pieces of the Todilto Formation (limestone) are visible on the surface of the mound of rock. Evidence of erosion is visible as blocks of sandstone at the base of the cliff.



4. Looking north at the southwest end of the Red Bluff cliff. Evidence of erosion is visible as blocks of sandstone at the base of the cliff.

ATTACHMENT 2

New Mexico Office of the State Engineer Well Records

HC - 26648
\$5.00
SF

Kew

File Number: B 01485

**NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES**

1. APPLICANT

Name: MELVIN R. & ROBERTA MARQUEZ Work Phone: _____
Contact: _____ Home Phone: 5052877251
Address: BOX 4064 SAN MATEO RD.
City: GRANTS State: NM Zip: 87020

2. LOCATION OF WELL (E thru H optional)

- A. NE 1/4 NW 1/4 SE 1/4 Section: 30 Township: 13N Range: 09W N.M.P.M.
in McKinley County
- B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
Zone in the _____ Grant.
U.S.G.S Quad Map 39 1 4
- C. Latitude _____ Longitude _____
- D. East _____ meters, North _____ meters, UTM_Zone __, Datum _____
- E. Give State Engineer File Number if existing well _____
- F. On land owned by _____ APPLICANT
- G. Tract No. _____ Map No. _____ of the _____
- H. Lot No. _____ Block No. _____ of Unit/tract _____ of the
_____ Subdivision recorded in County.
- I. Other _____

3. USE OF WATER

DOM: One household, non-commercial trees, lawn and garden not to exceed a
total of one acre.

02 JUN 17 11:05:26

Trn Desc: B 01485
Log Due Date: 01/17/2003
Form: wr-01

File Number: B 01485
Trn Number: 222410

**NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES**

4. WELL INFORMATION (Change, Repair, Drill, Test, Supplement)

Name of well driller and driller license number:

1451 BOHANNON, WESTON

Approximate depth 300 feet, Outside diameter of casing 6.00 inches.

☐ Change Location of existing well or replacement well

☐ Repair or Deepen:

☐ Clean out well to original depth

☐ Deepen well from _____ to _____ feet

☐ Other _____

☐ Drill and test a well for _____ use.

☐ Supplemental well

5. ADDITIONAL STATEMENTS OR EXPLANATIONS

ACKNOWLEDGEMENT FOR NATURAL PERSONS

I, Melvin R. Marque affirm that the foregoing statements are true to
(Please Print)

the best of my knowledge and belief, By: _____

Melvin R. Marque _____
Signature Signature

**NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES**

GENERAL CONDITIONS OF APPROVAL (A thru I)

- A The maximum amount of water that may be appropriated under this permit is 3 acre-feet in any year.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).
- C Driller's well record must be filed with the State Engineer within 10 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- D The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.
- E If the well under this permit is used at any time to serve more than one household or livestock in a commercial feed lot operation, or for drinking and sanitation purposes in conjunction with a commercial operation, the permittee shall notify the State Engineer Office in writing.
- F In the event this well is combined with other wells permitted under Section 72-12-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre-feet in any year.
- G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.
- H The amount and uses of water permitted under this Application are subject to such limitations as may be imposed by the courts or by lawful municipal and county ordinances which are more restrictive than applicable State Engineer Regulations and the conditions of this permit.

Trn Desc: B 01485
Log Due Date: 01/17/2003
Form: wr-01

File Number: B 01485
Trn Number: 222410

**NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES**

GENERAL CONDITIONS OF APPROVAL (Continued)

- I The permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

SPECIFIC CONDITIONS OF APPROVAL

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

LOG This permit will automatically expire unless the well B 01485 is completed and the well record filed on or before 01/17/2003.

SEE GENERAL CONDITIONS OF APPROVAL.

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to specific conditions listed above.

Witness my hand and seal this 17 day of Jan A.D., 2002

Thomas C. Turney State Engineer

By: Charles Wohlenberg
CHARLES WOHLBERG

Trn Desc: B 01485
Log Due Date: 01/17/2003
Form: wr-01

File Number: B 01485
Trn Number: 222410

STATE ENGINEER OFFICE

WELL RECORD

222 410

Section 1. GENERAL INFORMATION

(A) Owner of well Melvin R. & Roberta Marquez Owner's Well No. _____
 Street or Post Office Address Box 4064 San Mateo Rd.
 City and State Grants, NM 87020

Well was drilled under Permit No. B-01485 and is located in the:

a. 1/4 NE 1/4 NW 1/4 SE 1/4 of Section 30 Township 13N Range 09W N.M.P.M.

b. Tract No. _____ of Map No. 39 1 4 of the _____

c. Lot No. _____ of Block No. _____ of the _____
 Subdivision, recorded in McKinley County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ UTM _____ Zone In
 the _____ Grant.

(B) Drilling Contractor Horace V. Bohannon dba Coyote Drilling Inc. License No. WD-1417

Address _____

Drilling Began 1-24-02 Completed 1-28-02 Type tools milltooth bit Size of hole 6 1/4" in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well 580 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 280 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			
510	520	10	Red course sand	4 GPM
550	560	10	Red sandstone	

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4"	PVC	none	+2	580	582	PVC	500	560

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

Section 5. PLUGGING RECORD

Plugging Contractor _____

Address _____

Plugging Method _____

Date Well Plugged _____

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

Date Received 7-15-02

FOR USE OF STATE ENGINEER ONLY

Quad _____ FWL _____ FSL _____

File No. B 1485 Use Dom Location No. 13N, 09W, 30, 412

02 JUL 15 PM 3:45

FIDE
MEXCO

8
#21
35104
362500

Car

File Number: B 01486

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

1. APPLICANT

Name: JACK ELKINS Work Phone: 5053311978
Contact: _____ Home Phone: 5052872235
Address: PO BOX 2807
City: MILAN State: NM Zip: 87021

2. LOCATION OF WELL (E thru H optional)

- A. SW 1/4 NE 1/4 NE 1/4 Section: 25 Township: 13N Range: 10W N.M.P.M.
in McKinley County
- B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S Quad Map 39 1 4
- C. Latitude 35 19 49.18 Longitude 107 50 36.48
- D. East 241634.0 meters, North 3913288.0 meters, UTM Zone 13, Datum NAD27
- E. Give State Engineer File Number if existing well B 01486
- F. On land owned by APPLICANT
- G. Tract No. _____ Map No. _____ of the _____
- H. Lot No. _____ Block No. _____ of Unit/tract _____ of the
_____ Subdivision recorded in County.
- I. Other _____

3. USE OF WATER

STK: Livestock watering.

2006 APR 14 PM 4:11

Trn Desc: B 01486
Log Due Date: 04/14/2006
Form: wr-01 page: 1

File Number: B 01486
Trn Number: 330674

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

4. WELL INFORMATION (Change, Repair, Drill, Test, Supplement)

Name of well driller and driller license number:

769 H2O INC

Approximate depth 700 feet, Outside diameter of casing 5.00 inches.

☐ Change Location of existing well or replacement well

☐ Repair or Deepen:

☐ Clean out well to original depth

☐ Deepen well from _____ to _____ feet

☐ Other _____

☐ Drill and test a well for _____ use.

☐ Supplemental well

5. ADDITIONAL STATEMENTS OR EXPLANATIONS

REPERMIT.

ACKNOWLEDGEMENT FOR NATURAL PERSONS

I, Jack Elkens affirm that the foregoing statements are true to
(Please Print)

the best of my knowledge and belief, By: _____

Jack Elkens
Signature

Signature

Trn Desc: B 01486

Log Due Date: 04/14/2006

Form: wr-01

File Number: B 01486

Trn Number: 330674

**NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES**

GENERAL CONDITIONS OF APPROVAL (A thru I)

- A The maximum amount of water that may be appropriated under this permit is 3.000 acre-feet in any year.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).
- C Driller's well record must be filed with the State Engineer within 10 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- D The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.
- E If the well under this permit is used at any time to serve more than one household or livestock in a commercial feed lot operation, or for drinking and sanitation purposes in conjunction with a commercial operation, the permittee shall notify the State Engineer Office in writing.
- F In the event this well is combined with other wells permitted under Section 72-12-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3.000 acre-feet in any year.
- G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.
- H The amount and uses of water permitted under this Application are subject to such limitations as may be imposed by the courts or by lawful municipal and county ordinances which are more restrictive than applicable State Engineer Regulations and the conditions of this permit.

Trn Desc: B 01486
Log Due Date: 04/14/2006
Form: wr-01

File Number: B 01486
Trn Number: 330674

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

GENERAL CONDITIONS OF APPROVAL (Continued)

- I The permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

SPECIFIC CONDITIONS OF APPROVAL

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

LOG This permit will automatically expire unless the well B 01486 is completed and the well record filed on or before 04/14/2006.

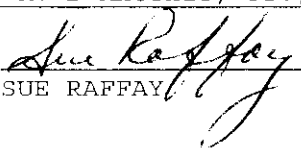
SEE GENERAL CONDITIONS OF APPROVAL

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to specific conditions listed above.

Witness my hand and seal this 14 day of Apr A.D., 2005

John R. D Antonio, Jr., P.E., State Engineer

By: 
SUE RAFFAY

Trn Desc: B 01486
Log Due Date: 04/14/2006
Form: wr-01

File Number: B 01486
Trn Number: 330674

File Number: 001486

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: JACK ELKINS Work Phone: 287 2235
Contact: _____ Home Phone: _____
Address: PO Box 2807
City: Milan NM State: NM Zip: 87021

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. SW 1/4 NE 1/4 NE 1/4 Section: 25 Township: 13N Range: 10W N.M.P.M.
in MCKINLEY County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
Zone in the _____ Grant.
U.S.G.S. Quad Map 39 14

C. Latitude: 35 d 19 m 49.18 s Longitude: 107 d 50 m 36.48 s

D. East 241634.0 (m), North 391388.0 (m), UTM Zone 13, NAD (2) or 83

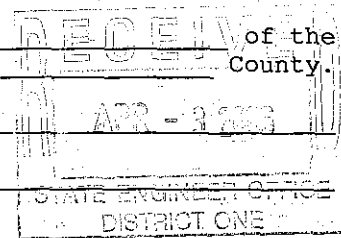
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Applicant



3. DRILLING CONTRACTOR

License Number: 769 Work Phone: 290 1010
Name: ST20 Home Phone: _____
Agent: JACK ELKINS
Mailing Address: PO Box 2807
City: Milan NM State: NM Zip: 87021

4. DRILLING RECORD

Drilling began: 12-15-05 Completed: 12-20-05 Type tools: rotary
Size of hole: 7 in.; Total depth of well: 460 ft.;
Completed well is: 460 (shallow, artesian);
Depth to water upon completion of well: 280 ft.

File Number: 001486
Form: wr-20

Trn Number: 330674

File Number: B01486

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
<u>380</u>	<u>420</u>	<u>30</u>	<u>white sand</u>	<u>3 GPM</u>

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>5" 80</u>			<u>0</u>	<u>460</u>	<u>460</u>		<u>380</u>	<u>460</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet	Cubic Feet of Cement
	Top Bottom	
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____

File Number: B01486
Form: wr-20

Trn Number: 330674

File Number:

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet		Thickness	Color and Type of Material Encountered
From	To	in feet	
0	160	160	Top Soil
160	340	180	Red sand stone
340	380	40	Red Clay
380	460	80	White Sand

File Number:

Form: wr-20

page 3 of 4

Trn Number:

3306 74

File Number: 301486

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

J. Chin
Driller

12-20-00
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use STOCK; Location No. 13N. 10W. 2S. 223

File Number: 301486
Form: wr-20

Trn Number: 330674
page 4 of 4

Renumbered B 1480 *ag* *gnt*

File Number: G 01106

EXPIRED

\$5.00

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

HC22329

1. APPLICANT

Name: WALLACE BERRYHILL Work Phone: 5058762597
Contact: _____ Home Phone: 5058762597
Address: P.O. BOX 3557
City: MILAN State: NM Zip: 87021

2. LOCATION OF WELL (E thru H optional)

- A. SE 1/4 NE 1/4 SW 1/4 Section: 25 Township: 13N Range: 10W N.M.P.M.
in McKinley County
- B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S Quad Map _____
- C. Give State Engineer File Number if existing well _____
- D. On land owned by APPLICANT
- E. Tract No. _____ Map No. _____ of the _____
- F. Lot No. _____ Block No. _____ of Unit/tract _____ of the
_____ Subdivision recorded in County.
- G. Latitude _____ Longitude _____
- H. Other _____

3. USE OF WATER

DOM: One household, non-commercial trees, lawn and garden not to exceed a
total of one acre.

00 APR - 5 AM 11:59
STATE ENGINEER OFFICE
ALBUQUERQUE, NEW MEXICO

Trn Desc: B 1480
Log Due Date: 04/05/2001
Form: wr-01
page: 1

File Number: B 1480
Trn Number: 176996
219335

B 1480
File Number: G-01106

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

4. WELL INFORMATION (Change, Repair, Drill, Test, Supplement)

Name of well driller and driller license number:

1417 COYOTE DRILLING

Approximate depth _____ feet, Outside diameter of casing ^{NTE} 7 inches.

___ Change Location of existing well or replacement well

___ Repair or Deepen:

___ Clean out well to original depth

___ Deepen well from _____ to _____ feet

___ Other _____

___ Drill and test a well for _____ use.

___ Supplemental well

5. ADDITIONAL STATEMENTS OR EXPLANATIONS

ACKNOWLEDGEMENT FOR NATURAL PERSONS

I, Wallace Berryhill affirm that the foregoing statements are true to
(Please Print)

the best of my knowledge and belief, By: _____.

Wallace Berryhill _____
Signature Signature

B 1480
Trn Desc: G-01106
Log Due Date: 04/05/2001
Form: wr-01

page: 2

B 1480
File Number: G-01106
Trn Number: 176996
219335

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

GENERAL CONDITIONS OF APPROVAL (A thru I)

- A The maximum amount of water that may be appropriated under this permit is 3 acre-feet in any year.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).
- C Driller's well record must be filed with the State Engineer within 10 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- D The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.
- E If the well under this permit is used at any time to serve more than one household or livestock in a commercial feed lot operation, or for drinking and sanitation purposes in conjunction with a commercial operation, the permittee shall notify the State Engineer Office in writing.
- F In the event this well is combined with other wells permitted under Section 72-12-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre-feet in any year.
- G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.
- H The amount and uses of water permitted under this Application are subject to such limitations as may be imposed by the courts or by lawful municipal and county ordinances which are more restrictive than applicable State Engineer Regulations and the conditions of this permit.

STATE ENGINEER OFFICE
ALBUQUERQUE, NEW MEXICO

00 APR -5 AM 11:57

Trn Desc: B 1480
Log Due Date: 04/05/2001
Form: wr-01

File Number: B 1480
Trn Number: ~~G-01106~~
176996
219335

NEW MEXICO STATE ENGINEER OFFICE
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

GENERAL CONDITIONS OF APPROVAL (Continued)

- I The permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

SPECIFIC CONDITIONS OF APPROVAL

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

LOG This permit will automatically expire unless the well G 01106 is completed and the well record filed on or before 04/05/2001.

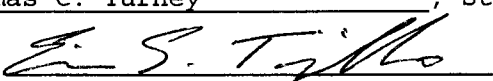
SEE GENERAL CONDITIONS OF APPROVAL D, E, F, H AND I.

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to specific conditions listed above.

Witness my hand and seal this 05 day of Apr A.D., 2000

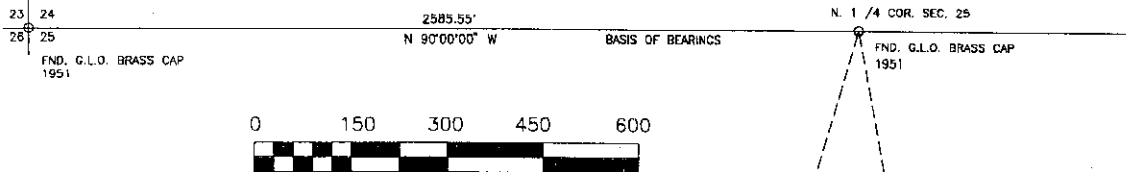
Thomas C. Turney, State Engineer

By: 
ERIN S. TRUJILLO

Trn Desc: B1480
Log Due Date: 04/05/2001
Form: wr-01
page: 2

File Number: B1480
Trn Number: G 01106
176996
219335

PLAT OF SURVEY
6.8904 Ac. Tract Within
SECTION 25, T.13N., R.10W., N.M.P.M.
McKINLEY COUNTY, NEW MEXICO
December, 1999



NOTES:

- 1) BASIS OF BEARINGS: N.M.S.P. WEST ZONE
- 2) Error of Closure of supplied Description: 1 part in N/A
- 3) Subject Property is NOT within a 100 Year Flood Zone
- 4) SET = #4 Rebar/Cap stamped "PS 6256"
- 5) Date of Field Survey, December 20, 1999

SCALE: 1" = 600'

SE NE SW

POW JC

4/4/2000

Jerry Carr

LANDS OF BERRYHILL FAMILY TRUST

TANGENT TABLE		
NUMBER	DISTANCE	BEARING
T1	539.55'	S 42°00'00" W
T2	350.00'	S 32°00'00" W
T3	413.52'	S 37°11'12" W
T4	315.00'	S 03°00'00" W
T5	149.06'	S 11°17'46" E
T6	250.00'	S 25°00'00" W
T7	156.58'	S 10°00'00" W
T8	273.89'	S 45°00'00" W
T9	225.53'	S 31°28'42" W

LANDS OF BERRYHILL FAMILY TRUST

LANDS OF BERRYHILL FAMILY TRUST

LEGAL DESCRIPTION

A CERTAIN TRACT OF LAND SITUATE WITHIN THE SOUTHWEST QUARTER OF SECTION 25, T.13N., R.10W., N.M.P.M., McKINLEY COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT, WHENCE THE NORTH ONE FOURTH CORNER OF SAID SECTION 25, BEING A BRASS CAP IN PLACE, BEARS N.17°04'33"E AND IS 3711.90 FEET DISTANT;
THENCE FROM THE ABOVE SAID POINT OF BEGINNING, S51°09'56"E A DISTANCE OF 466.23 FEET TO THE NORTHEAST CORNER;
THENCE S43°42'21"W A DISTANCE OF 572.86 FEET TO THE SOUTHEAST CORNER;
THENCE N68°59'32"W A DISTANCE OF 432.63 FEET TO AN ANGLE POINT;
THENCE N19°41'20"W A DISTANCE OF 73.38 FEET TO THE SOUTHWEST CORNER;
THENCE N43°43'20"E A DISTANCE OF 667.35 FEET TO THE POINT AND PLACE OF BEGINNING, AND CONTAINING AN AREA OF 6.8904 ACRES, MORE OR LESS.

SURVEYOR'S CERTIFICATE

I, Jerry Nickels, licensed under the laws of the State of New Mexico, do hereby certify that this plat was prepared by me from field notes of an actual field survey performed by me showing the proper ties to location monuments, location of the improvements on the premises, easement or rights of way over or under the property, together with all encroachments or projections, fences or any other matters affecting the use and occupancy of the premises, and that there are no other easements or rights-of-way in use or in evidence, over or under the subject property, nor any encroachments of improvements from adjoining property onto the subject property, and that the same are true and correct to the best of my knowledge and belief.

Jerry Nickels, New Mexico Professional Land Surveyor Certificate No. 6256
ConSurve Surveying Company, P.O. Box 9, San Fidel, NM 87049 (505) 552-9898

ConSurve Surveying Co.	
P.O. Box 9 San Fidel, New Mexico 87049 (505) 552-9898	
December 20, 1999	6.8 Ac. Tr.
Berryhill Ranch	Family Split

Thomas C. Turney
State Engineer



Albuquerque Office
121 TIJERAS NE, SUITE 2000
ALBUQUERQUE, NM 87102

STATE OF NEW MEXICO

Trn Nbr: 219335
File Nbr: B 01480
Well File Nbr: B 01480

OFFICE OF THE STATE ENGINEER

Nov. 30, 2001

WALLACE BERRYHILL
P. O. BOX 3557
MILAN, NM 87021

Greetings:

The above numbered permit was issued in your name on 04/05/2000.

The Well Record was received in this office on 02/07/2001, stating that it had been completed on 04/06/2000, and was a dry well. The well is to be plugged or capped or otherwise maintained in a manner satisfactory to the State Engineer.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 04/05/2001. We did not receive the Well Record for a second drilling.

If you have any questions, please feel free to contact us.

Sincerely,

A handwritten signature in cursive script, reading "Shirley Chavez".

Shirley F. Chavez
(505) 841-9480

cc: Santa Fe Office
SFC:sc
drywell



**STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ALBUQUERQUE**

THOMAS C. TURNEY
STATE ENGINEER

Nov. 21, 2001

DISTRICT 1
121 TIJERAS, NE, STE. 2000
ALBUQUERQUE, NM 87102-3400
(505) 841-9480

File: P-0142 (formerly G-01106)

Wallace Berryhill
P. O. Box 3557
Milan, NM 87021

Greetings:

Enclosed is a copy of the permit issued on April 5, 2000. Please be advised that the file number has been changed as shown above for administrative purposes only. Please advise your driller also.

Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Shirley Chavez".

Shirley F. Chavez
Secretary III

Enclosure
SFC:sc
Cc:Santa Fe

Thomas C. Turney
State Engineer



Albuquerque Office
121 TIJERAS NE, SUITE 2000
ALBUQUERQUE, NM 87102

STATE OF NEW MEXICO

Trn Nbr: 176996
File Nbr: ~~8-01100~~ E-1480
Well File Nbr: ~~8-01100~~ E-1480

OFFICE OF THE STATE ENGINEER

Mar. 06, 2001

WALLACE BERRYHILL
P.O. BOX 3557
MILAN, NM 87021

Greetings:

This office has not received a well driller's record for the permit issued to you on 04/05/2000. A domestic well permit expires a year after issuance if the well has not been drilled and the well driller's log is not filed.

If a SECOND well has been drilled under this permit, please contact your driller and request a well log be submitted. If you have not drilled the well but plan to in the near future, please contact our office and we will forward forms to reapply. Filing fee is \$5.00 for each permit. Please include your file number on all communications.

Your permit automatically expired on 04/05/2001 and you do not have a permit to use water. Enclosed is a blank application.

Sincerely,

A handwritten signature in cursive script that reads "Shirley Chavez".

Shirley F. Chavez
Secretary III
(505) 841-9480

cc: Santa Fe Office
SFC:sc
wellrem

Thomas C. Turney
State Engineer



Albuquerque Office
121 TIJERAS NE, SUITE 2000
ALBUQUERQUE, NM 87102

**STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 176996
File Nbr: G 01106
Well File Nbr: G 01106

Mar. 06, 2001

WALLACE BERRYHILL
P.O. BOX 3557
MILAN, NM 87021

Greetings:

The above numbered permit was issued in your name on 04/05/2000.

The Well Record was received in this office on 02/07/2001, stating that it had been completed on 04/06/2000, and was a dry well. The well is to be plugged or capped or otherwise maintained in a manner satisfactory to the State Engineer.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 04/05/2001.

If you have any questions, please feel free to contact us.

Sincerely,

A handwritten signature in cursive script, reading "Shirley Chavez".

Shirley F. Chavez
Secretary III
(505) 841-9480

cc: Santa Fe Office
SFC:sc
drywell

Thomas C. Turney
State Engineer



Albuquerque Office
121 TIJERAS NE, SUITE 2000
ALBUQUERQUE, NM 87102

**STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER**

Trn Nbr: 176996
File Nbr: G 01106
Well File Nbr: G 01106

Mar. 06, 2001

WALLACE BERRYHILL
P.O. BOX 3557
MILAN, NM 87021

Greetings:

This office has not received a well driller's record for the permit issued to you on 04/05/2000. A domestic well permit expires a year after issuance if the well has not been drilled and the well driller's log is not filed.

If a well has been drilled under this permit, please contact your driller and request a well log be submitted. If you have not drilled the well but plan to in the near future, please contact our office and we will forward forms to reapply. Filing fee is \$5.00 for each permit. Please include your file number on all communications.

Your permit will automatically expire on 04/05/2001.

Sincerely,

A handwritten signature in cursive script that reads "Shirley Chavez".

Shirley F. Chavez
Secretary III
(505) 841-9480

cc: Santa Fe Office
SFC:sc
wellrem