District I^m-1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office. For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application
Type of action: Below grade tank registration Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method Modification to an existing permit/or registration Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
1. Operator: ENERVEST DPERATING, LLC OGRID#: 143199 Address: 1001 FANNIN ST., STE. 800, HOUSTON, 72 77002 Facility or well name: JICARILLA CONTRACT 155 #12E API Number: 3D-039-22090 OCD Permit Number: H3
API Number: SUPPOST: SUPPOST: ATS U/L or Qtr/Qtr Section Suppose Township County: PID ARMIBH Center of Proposed Design: Latitude Suppose County: Longitude -/07.37946 NAD: 1927 1983 Surface Owner: Federal State Private Tribal Trust or Indian Allotment
 2. Pit: Subsection F, G or J of 19.15.17.11 NMAC Temporary: Drilling Workover Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drilling Fluid yes no Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other String-Reinforced Liner Seams: Welded Factory Other Other Volume: bbl Dimensions: L x W x D
3. Image: Subsection I of 19.15.17.11 NMAC Volume: 95 bbl Type of fluid: <i>PRODUCED WATER</i> Tank Construction material: STEEL (BLOW PIT) <i>f</i> Secondary containment with leak detection □ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off <i>f</i> Visible sidewalls and liner Visible sidewalls only Other <i>SEE CLOSURE PLAN</i> Liner type: Thickness
 <u>Alternative Method</u>: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
 5. Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify 4' HOB WINE

6. t				
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)				
X Screen Netting Other				
Monthly inspections (If netting or screening is not physically feasible)				
7.				
Signs: Subsection C of 19.15.17.11 NMAC				
12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers				
Signed in compliance with 19.15.16.8 NMAC				
8. Variances and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.				
Please check a box if one or more of the following is requested, if not leave blank:				
 Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. 				
Exception(s). Requests must be submitted to the Santa Pe Environmental Bureau office for consideration of approval,				
^{9.} <u>Siting Criteria (regarding permitting)</u> : 19.15.17.10 NMAC <i>Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptate acceptate are provided below.</i> Siting criteria does not apply to drying pads or above-grade tanks.	ptable source			
General siting				
 Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. ► NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells 	☐ Yes ☐ No ✔ NA			
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes 📈 No □ NA			
 Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) Written confirmation or verification from the municipality; Written approval obtained from the municipality 	🗌 Yes 🗌 No			
 Within the area overlying a subsurface mine. (Does not apply to below grade tanks) Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division 	🗌 Yes 🗌 No			
 Within an unstable area. (Does not apply to below grade tanks) Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	🗌 Yes 🛄 No			
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	🗌 Yes 🗌 No			
Below Grade Tanks				
 Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🔀 No			
 Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	🗌 Yes 🔀 No			
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)				
 Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No			
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	🗌 Yes 🗌 No			
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image				
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	🗋 Yes 🗌 No			

 Within ±00 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No				
Temporary Pit Non-low chloride drilling fluid					
 Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 					
 Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	🗌 Yes 🗌 No				
 Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 					
 Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No				
Permanent Pit or Multi-Well Fluid Management Pit					
 Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No				
 Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	🗌 Yes 🗌 No				
 Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No				
 Within 500 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	🗌 Yes 🗌 No				
 10. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N. <i>Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc attached.</i> Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.1 and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number: or Permit Number: 	NMAC 5.17.9 NMAC				
 Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC A List of wells with approved application for permit to drill associated with the pit. Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC 					
Previously Approved Design (attach copy of design) API Number: or Permit Number:					

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Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the	e documents are			
attached.				
13. Proposed Closure: 19.15.17.13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-well F Alternative Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial	Fluid Management Pit			
 ^{14.} <u>Waste Excavation and Removal Closure Plan Checklist</u>: (19.15.17.13 NMAC) <i>Instructions: Each of the following items must be closure plan. Please indicate, by a check mark in the box, that the documents are attached.</i> Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC 				
15. <u>Siting Criteria (regarding on-site closure methods only)</u> : 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sou provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. 19.15.17.10 NMAC for guidance.				
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No □ NA			
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	$\square Yes \square No$ $\square NA$			
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells				
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa ake (measured from the ordinary high-water mark) Topographic map; Visual inspection (certification) of the proposed site				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	🗌 Yes 🗌 No			
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	🗋 Yes 🗌 No			
Written confirmation or verification from the municipality; Written approval obtained from the municipality	Yes 🗌 No			
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	 Yes No			
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance				

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adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	🗌 Yes 🗌 No					
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division						
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological						
Society; Topographic map	🗌 Yes 🗌 No					
Within a 100-year floodplain. : 1 - FEMA map : 1	🗋 Yes 🗌 No					
16. On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.						
 17. Operator Application Certification: I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and beli 	ef.					
Name (Print): BART THEVINO Title: REGULATORY ANAL Signature: Date: 8/23/13						
e-mail address: BTREVING CENCRVEST, NET Telephone: 713-659-3500						
e-mail address: <u>BTREVING CENCRIVEST DET</u> Telephone: <u>713-659-350 d</u> 18. <u>OCD Approval</u> : Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: <u>Approval Date</u> <u>724/5</u> Title: <u>OCD Permit Number</u> :						
18. OCD Approval: Permit Application (including closure plan), I Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Ocd Approval Date: 1/21/2	20[3					
18. OCD Approval: Permit Application (including closure plan), I Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	20[3 the closure report. complete this					

Proc	of c	of Clo	osure	Notic	ce (surfac	e owner	and	divisi	on)
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- Proof of Deed Notice (required for on-site closure for private land only)
 Plot Plan (for on-site closures and temporary pits)
- Confirmation Sampling Analytical Results (if applicable)
- Waste Material Sampling Analytical Results (required for on-site closure)
- Disposal Facility Name and Permit Number
- Soil Backfilling and Cover Installation
- Re-vegetation Application Rates and Seeding Technique
 Site Reclamation (Photo Documentation)
 - On-site Closure Location: Latitude

___Longitude

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NAD: 1927 1983

22. Operator Closure Certification:

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	ed with this closure report is true, accurate and complete to the best of able closure requirements and conditions specified in the approved clo	
Name (Print):	Title:	
Signature:	Date:	;;;
e-mail address:	Telephone:	: 1

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New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 32

Township: 26N

Range: 05W

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.

EnerVest Operating, LLC (EV)

BELOW-GRADE TANK CLOSURE PLAN

Rule 19.15.17.13

Before June 15, 2013, EV shall close, retrofit, or replace an existing below-grade tank that has not demonstrated integrity.

EV shall close a below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.

A. EV shall close an existing below-grade tank that does not meet the requirements of Subsection I, paragraphs (1) through (4), of 19.15.17.11 NMAC if not retrofitted to comply with said requirements prior to any sale or change of operator to 19.15.9.9 NMAC.

Any below-grade tank installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible shall equip or retrofit the below-grade tank to comply with paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within 5 years after June 16, 2008.

Within 60 days of cessation of the permitted below-grade tanks operation or as required by Subsection B of 19.15.17.17 NMAC, EV shall close the below-grade tank in accordance with a closure plan that the appropriate division district office approves.

E. Prior to implementing any closure operations EV shall research county tax records to determine the name and address of the surface owner of the properties involved. EV shall notify this surface owner via Certified U.S. Mail, return receipt requested, of their intent to close said below-grade tank.

Upon determination, EV will notify the appropriate district office verbally and in writing at least 72 hours but not more than one week prior to beginning work. Such notice shall contain at a minimum the following:

Operators Name Unit letter, Section, Township, & Range of well Well name and well number API Number of well

F. Within 60 days of completion of closure operations, EV will file Form C-144, with attachments, outlining the detailed operations of the closing operations. Such attachments shall include, but not limited to, proof of surface owner and division notifications, confirmation of sampling analysis, disposal facility names and permit numbers, soil backfilling and cover installation, re-vegetation application rates and seeding techniques, and photo documentations.

All free standing liquids and sludge will be removed at the start of the belowgrade tank closure process from the below-grade tank and disposed of in one of the below division-approved facility as indicated below:

TNT Land Farm	Permit # NM-01-0008	Liquids & Sludge
Environtech Land Farm	Permit # NM-01-0011	Solids
AguaMoss	Permit # 247130	Liquids

EV will obtain prior approval from the division to dispose, recycle, reuse, or reclaim the below-grade tanks and provide documentation of the final disposition of the below-grade tank in the closure report.

Existing liners that are removed as a result of closure will be wiped cleaned and disposed of at a solid waste facility listed below in compliance with Subparagraph (M) of Paragraph (I) of Subsection C 19.15.35.8 NMAC..

San Juan Regional Landfill	Permit # SWM 052426 or
٠٠	Special Waster Permit # SWM052433 "sp"

If there is any on-site equipment associated with a below-grade tank, EV shall remove the equipment, unless the equipment is required for some other purpose.

Upon removal of the below-grade tank, EV will take, at a minimum, a five point composite sample from where the tank was sitting. EV shall collect individual grab samples will be taken from any area that is wet, discolored or showing other evidence of a release. All samples will be analyzed for the following:

Constituent	Method	Groundwater 51-100 FT	Old Standard
		10,000	
Chloride	EPA 300.0	mg/kg	250 Mg/kg
	EPA SW-846		
ТРН	Method 418.1	2,500 mg/kg	100 mg/kg
	EPA SW-846		
	Method 8021B		
BTEX	or8260B	50 mg/kg	50 mg/kg
	EPA -SW-846		
	Method 8021B or		
Benzene	8015M	10 mg/kg	0.2 mg/kg
	EPA SW-846		
GRO/DRO	Method 8015B	1,000 mg/kg	500 mg/kg

EV will insure that the results of all sampling shall be reported to the division on approved form C-141. EV understands that the division may require additional delineation upon review of the results.

If sampling demonstrates that concentrations specified above have NOT been exceeded, or that a release has NOT occurred, EV will backfill the excavation with compacted, non-waste containing, earthen material, construct a division prescribed soil cover, and recontour and re-vegetate the site. The division

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prescribed soil cover, recontouring, and re-vegetation shall comply with 19.15.17.13.

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If EV or the division determines that a release has occurred, EV shall fully comply with 19.15.29 NMAC and 19.15.30 NMAC as appropriate.

H. Once EV has closed a below-grade tank, we shall reclaim the site to a safe and stable condition that blends with the surrounding undisturbed area. When possible, EV will restore the impacted surface area to the condition that existed prior to oil and gas operations by the placement of soil cover.

If the closed area is within the confines of the pad location EV will blend the site to match the pad location as much as possible. Such activities shall prevent erosion, protect fresh water, human health and the environment. EV will obtain written agreement from the surface owner for any alternate re-vegetation proposals and submit to the division for final approval.

The soil cover design will be consistent with the requirements of 19.15.17.13(H)(2) and (4). If necessary, EV will remediate the soil beneath the below-grade tank to chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0. The soil cover will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and prevent ponding of water and erosion of the cover material.

EV will seed the disturbed areas the first growing season after closing the below grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will be established to reflect a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, not including noxious weeds. The disturbed area will be reseeded in the first favorable growing season following closure.

EV shall notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

Site Specific Hydro Geologic Analysis

Jicarilla Contract 155 #12E API 30-039-22090

OIL CONS. DIV DIST. 3

SEP 17 2013

The above referenced well is located at UL J, Sec 32, 26N, 05W at an elevation of 6,514. Surface casing is to be set to a depth of 341' or at a depth of 6,173'.

According to the Office of State Engineer, the closest water well drilled was SJ 00201 about 4.5 miles SW of our location. Drilled to 1,346 feet at an unknown elevation, it shows water encountered at 500 feet.

In 1981, the Jicarilla Contract 155 #27 (30-039-22568) was drilled about 100 feet West of our location. It was at an elevation of 6,513 with no indication of water being encountered. Surface casing was set at 295 feet which would be at 6,218, which would be 45 feet below our well. We believe that the sandstone and shale formation would prevent any migration of any water present.

In 1954, the Jicarilla Contract 155 #4 (30-039-06219) was drilled about 700 feet South of our location. It was at an elevation of 6,502 with no indication of water being encountered. Surface casing was set at 318 feet which would be at 6,184, which would be 9 feet below our well. We believe that the sandstone and shale formation would prevent any migration of any water present.

We believe that the fact that all of these wells being drilled close together with no indications of water being present in any of them indicates that the presence of water within 54 feet of the surface does not exist.