

File No. **CP-01916-POD1**



**NEW MEXICO OFFICE OF THE STATE ENGINEER**



**WR-07 APPLICATION FOR PERMIT TO DRILL**

**A WELL WITH NO WATER RIGHT**

(check applicable box):

For fees, see State Engineer website: <http://www.ose.state.nm.us/>

Purpose:	<input checked="" type="checkbox"/> Pollution Control And/Or Recovery	<input type="checkbox"/> Ground Source Heat Pump
<input type="checkbox"/> Exploratory Well (Pump test)	<input type="checkbox"/> Construction Site/Public Works Dewatering	<input type="checkbox"/> Other(Describe):
<input type="checkbox"/> Monitoring Well	<input type="checkbox"/> Mine Dewatering	
A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.		
<input checked="" type="checkbox"/> Temporary Request - Requested Start Date: July 11, 2022	Requested End Date: July 11, 2027	
Plugging Plan of Operations Submitted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

**1. APPLICANT(S)**

Name: Apache Corporation	Name:
Contact or Agent: Larry Baker <input type="checkbox"/> check here if Agent	Contact or Agent: <input type="checkbox"/> check here if Agent
Mailing Address: 303 Veterans Airpark Lane	Mailing Address:
City: Midland	City:
State: Texas Zip Code: 79705	State: Zip Code:
Phone: (432) 215-2284 <input type="checkbox"/> Home <input checked="" type="checkbox"/> Cell Phone (Work): (432) 818-1654	Phone: <input type="checkbox"/> Home <input type="checkbox"/> Cell Phone (Work):
E-mail (optional): larry.baker@apachecorp.com	E-mail (optional):

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FOR OSE INTERNAL USE

Application for Permit, Form WR-07, Rev 11/17/16

File No.: <b>CP-01916</b>	Trn. No.: <b>732472</b>	Receipt No.: <b>2-44932</b>
Trans Description (optional):		
Sub-Basin: <b>CP</b>	PCW/LOG Due Date: <b>8/22/23</b>	

2. WELL(S) Describe the well(s) applicable to this application.

**Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).**  
**District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.**

NM State Plane (NAD83) (Feet)       UTM (NAD83) (Meters)       Lat/Long (WGS84) (to the nearest 1/10<sup>th</sup> of second)  
 NM West Zone       Zone 12N  
 NM East Zone       Zone 13N  
 NM Central Zone

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
RW-1 CP-01916-POD1	32.438110	-103.121103	SW/4, NW/4, Section 36, Township 21 South, Range 37 E

**NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)**  
**Additional well descriptions are attached:**  Yes  No      If yes, how many \_\_\_\_\_

Other description relating well to common landmarks, streets, or other:

Well is on land owned by: Wallach Ranch, LLC

**Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached?**  Yes  No  
 If yes, how many \_\_\_\_\_

Approximate depth of well (feet): 70 feet	Outside diameter of well casing (inches): 5 inches
Driller Name: Scarborough Drilling, Inc.	Driller License Number: WD-1188

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Please see attached groundwater recovery and treatment summary

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FOR OSE INTERNAL USE Application for Permit, Form WR-07

File No.: CP-01916	Trn No.: 732472
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**4. SPECIFIC REQUIREMENTS:** The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

<p><b>Exploratory:</b>  <input type="checkbox"/> Include a description of any proposed pump test, if applicable.</p>	<p><b>Pollution Control and/or Recovery:</b>  <input checked="" type="checkbox"/> Include a plan for pollution control/recovery, that includes the following:  <input checked="" type="checkbox"/> A description of the need for the pollution control or recovery operation.  <input checked="" type="checkbox"/> The estimated maximum period of time for completion of the operation.  <input checked="" type="checkbox"/> The annual diversion amount.  <input checked="" type="checkbox"/> The annual consumptive use amount.  <input checked="" type="checkbox"/> The maximum amount of water to be diverted and injected for the duration of the operation.  <input checked="" type="checkbox"/> The method and place of discharge.</p>	<p><b>Construction De-Watering:</b>  <input type="checkbox"/> Include a description of the proposed dewatering operation,  <input type="checkbox"/> The estimated duration of the operation,  <input type="checkbox"/> The maximum amount of water to be diverted,  <input type="checkbox"/> A description of the need for the dewatering operation, and,  <input type="checkbox"/> A description of how the diverted water will be disposed of.</p>	<p><b>Mine De-Watering:</b>  <input type="checkbox"/> Include a plan for pollution control/recovery, that includes the following:  <input type="checkbox"/> A description of the need for mine dewatering.  <input type="checkbox"/> The estimated maximum period of time for completion of the operation.  <input type="checkbox"/> The source(s) of the water to be diverted.  <input type="checkbox"/> The geohydrologic characteristics of the aquifer(s).  <input type="checkbox"/> The maximum amount of water to be diverted per annum.  <input type="checkbox"/> The maximum amount of water to be diverted for the duration of the operation.  <input type="checkbox"/> The quality of the water.  <input type="checkbox"/> The method of measurement of water diverted.</p>
<p><b>Monitoring:</b>  <input checked="" type="checkbox"/> Include the reason for the monitoring well, and,  <input checked="" type="checkbox"/> The duration of the planned monitoring.</p>	<p><input checked="" type="checkbox"/> The method of measurement of water produced and discharged.  <input checked="" type="checkbox"/> The source of water to be injected.  <input checked="" type="checkbox"/> The method of measurement of water injected.  <input checked="" type="checkbox"/> The characteristics of the aquifer.  <input checked="" type="checkbox"/> The method of determining the resulting annual consumptive use of water and depletion from any related stream system.  <input checked="" type="checkbox"/> Proof of any permit required from the New Mexico Environment Department.  <input checked="" type="checkbox"/> An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.</p>	<p><b>Ground Source Heat Pump:</b>  <input type="checkbox"/> Include a description of the geothermal heat exchange project,  <input type="checkbox"/> The number of boreholes for the completed project and required depths.  <input type="checkbox"/> The time frame for constructing the geothermal heat exchange project, and,  <input type="checkbox"/> The duration of the project.  <input type="checkbox"/> Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.</p>	<p><input type="checkbox"/> The recharge of water to the aquifer.  <input type="checkbox"/> Description of the estimated area of hydrologic effect of the project.  <input type="checkbox"/> The method and place of discharge.  <input type="checkbox"/> An estimation of the effects on surface water rights and underground water rights from the mine dewatering project.  <input type="checkbox"/> A description of the methods employed to estimate effects on surface water rights and underground water rights.  <input type="checkbox"/> Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.</p>

**ACKNOWLEDGEMENT**

I, We (name of applicant(s)), Larry Baker

Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Larry Baker

Applicant Signature

Applicant Signature

**ACTION OF THE STATE ENGINEER**

This application is:

approved     partially approved     denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 22<sup>nd</sup> day of August 20 22, for the State Engineer,

Mike A. Hamman, P.E.

State Engineer

By: K. Parekh  
Signature

Kashyap Parekh  
Print

Title: Water Resource Manager I  
Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: <u>CP-01916</u>	Trn No.: <u>732472</u>
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**Water Extraction and Treatment Summary**  
**Apache Corporation, State C Tract 13 Groundwater Remediation**

**Summary**

Groundwater will be recovered from well (RW-1) at approximately 10 gallons per minute (gpm) and processed with reverse osmosis (RO) treatment. Treated groundwater will be injected back into the aquifer at a rate between approximately 4.6 and 6.7 gpm, depending on RO filtration. Treated groundwater will be monitored weekly for chloride and total dissolved solids to confirm concentrations below the New Mexico Water Quality Control Commission (WQCC) domestic water quality limits of 250 milligrams per liter a(mg/L) and 1,000 mg/L, respectively. Rejected water estimated between approximately 3.3 and 5.4 gpm will be contained in a portable tank for injection into a NMOCD permitted Class 2 saltwater disposal (SWD) well.

<i>Duration</i>	<i>Extracted Water (Total)</i>	<i>Reject Water (Minimum)</i>	<i>Reject Water (Maximum)</i>	<i>Injected Water (Minimum)</i>	<i>Injected Water (Maximum)</i>
<b>gallons per minute</b>	10	3.3	5.4	4.6	6.7
<b>gallons per day</b>	14,400	4,752	7,776	6,624	9,648
<b>gallons per week</b>	100,800	33,264	54,432	46,368	67,536
<b>gallons per month</b>	438,000	144,540	236,520	201,480	293,460
<b>gallons per year</b>	5,256,000	1,734,480	2,838,240	2,417,760	3,521,520
<b>gallons project life (3 yrs)</b>	15,768,000	5,203,440	8,514,720	7,253,280	10,564,560

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NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

- 17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.
- 17-1A Depth of the well shall not exceed the thickness of the valley fill.
- 17-4 No water shall be appropriated and beneficially used under this permit.
- 17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

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**NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE**

**SPECIFIC CONDITIONS OF APPROVAL (Continued)**

- 17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- 17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.
- 17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.  
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.
- 17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.
- 17-Q The State Engineer retains jurisdiction over this permit.
- 17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

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NEW MEXICO STATE ENGINEER OFFICE  
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion CP 01916 must be completed and the Well Log filed on or before 08/22/2023.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

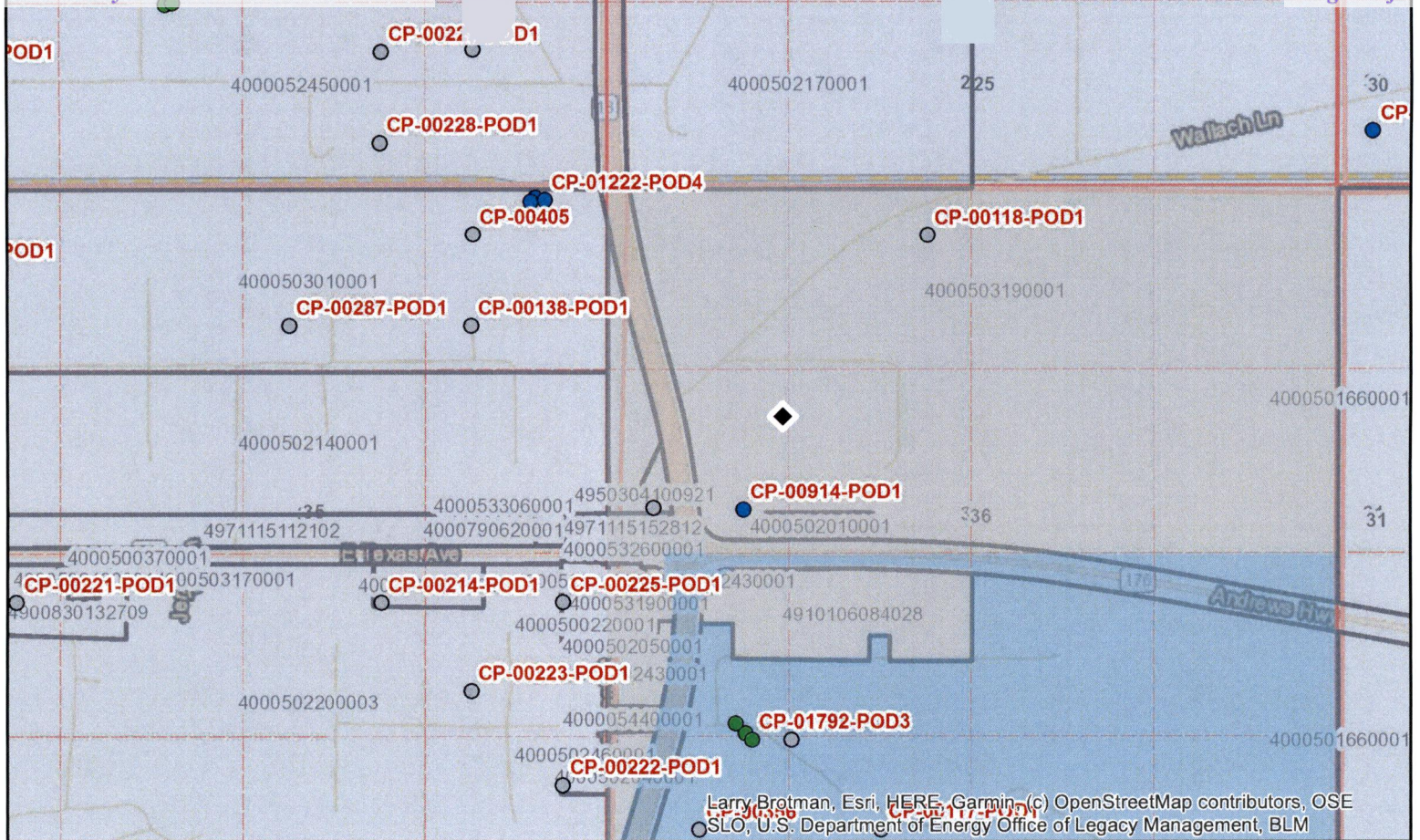
Notice of Intention Rcvd: Date Rcvd. Corrected:  
Formal Application Rcvd: 08/12/2022 Pub. of Notice Ordered:  
Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 22 day of Aug A.D., 2022

Mike A. Hamman, P.E., State Engineer

By: K. Parekh  
KASHYAP PAREKH

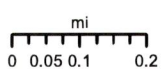


Larry Brotman, Esri, HERE, Garmin, (c) OpenStreetMap contributors, OSE SLO, U.S. Department of Energy Office of Legacy Management, BLM

**Coordinates**  
**UTM - NAD 83 (m) - Zone 13**  
 Easting **676637.221**  
 Northing **3590551.838**  
**State Plane - NAD 83 (f) - Zone E**  
 Easting **915331.436**  
 Northing **525235.951**  
**Degrees Minutes Seconds**  
 Latitude **32 : 26 : 17.196700**  
 Longitude **-103 : 7 : 15.970300**  
 Location pulled from Coordinate Search

**NEW MEXICO OFFICE OF THE STATE ENGINEER**

1:18,056



8/18/2022



Reasonable efforts have been made by the New Mexico Office of the State Engineer (OSE) to verify that these maps accurately interpret the source data used in their preparation; however, a degree of error is inherent in all maps, and these maps may contain omissions and errors in scale, resolution, rectification, positional accuracy, development methodology, interpretation of source data, and other circumstances. These maps are distributed "as is" without warranty of any kind.

**Spatial Information**  
**County:** Lea  
**Groundwater Basin:** Capitan  
**Abstract Area:** Capitan  
  
**Land Grant:**  
 Not in Land Grant  
**Restrictions:**  
  
**PLSS Description**  
 SENESWNW Qtr of Sec 36 of 021S 037E  
  
 Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

**Parcel Information**  
**UPC/DocNum:** 4000503190001  
**Parcel Owner:** Wallach Ranch Llc  
**Address:** 42 Sundance Ln null 79710  
  
**Legal:** Township 21 S Range 37 E Section 25 320.00 Ac Being E2 8/21/03-House, Patricia Et Al | Township 21 S Range 37 E Section 36 298.74 Ac Being N2 \*Less 3.49 Ac To H/W\* Less .47 Ac Nw Of H/W

**POD Information**  
**Owner:**  
**File Number:**  
**POD Status:** NoData  
**Permit Status:** NoData  
**Permit Use:** NoData  
**Purpose:**

- Coord Search Location
- Colfax County Parcels 2022
- Harding County Parcels 2022
- Luna County Parcels 2022
- Roosevelt County Parcels 2022
- Sierra County Parcels 2022
- GIS WATERS PODs**
- Curry County Parcels 2022
- Hidalgo County Parcels 2022
- McKinley County Parcels 2022
- Socorro County Parcels 2022
- Unknown
- De Baca County Parcels 2022
- Guadalupe County Parcels 2022
- Mora County Parcels 2022
- Sandoval County Parcels 2022
- Taos County Parcels 2022
- Active
- Doña Ana County Parcels 2022
- Lea County Parcels 2022
- Otero County Parcels 2022
- San Juan County Parcels 2022
- Torrance County Parcels 2022
- Pending
- Eddy County Parcels 2022
- Lincoln County Parcels 2022
- Quay County Parcels 2022
- San Miguel County Parcels 2022
- Union County Parcels 2022
- Water Right Regulations**
- Grant County Parcels 2022
- Los Alamos County Parcels 2022
- Rio Arriba County Parcels 2022
- Santa Fe County Parcels 2022
- Bernalillo County Parcels 2022
- Catron County Parcels 2022
- Chaves County Parcels 2022
- Cibola County Parcels 2022
- Grant County Parcels 2022
- Luna County Parcels 2022
- Mora County Parcels 2022
- Otero County Parcels 2022
- Quay County Parcels 2022
- Santa Fe County Parcels 2022
- Subsurface Estate
- Both Estates
- Bernalillo County Parcels 2022
- Catron County Parcels 2022
- Chaves County Parcels 2022
- Cibola County Parcels 2022
- Colfax County Parcels 2022
- Curry County Parcels 2022
- De Baca County Parcels 2022
- Doña Ana County Parcels 2022
- Eddy County Parcels 2022
- Grant County Parcels 2022
- Harding County Parcels 2022
- Hidalgo County Parcels 2022
- Lincoln County Parcels 2022
- Los Alamos County Parcels 2022
- Luna County Parcels 2022
- McKinley County Parcels 2022
- Mora County Parcels 2022
- Otero County Parcels 2022
- Quay County Parcels 2022
- Rio Arriba County Parcels 2022
- Santa Fe County Parcels 2022
- Sandoval County Parcels 2022
- San Juan County Parcels 2022
- San Miguel County Parcels 2022
- Santa Fe County Parcels 2022
- Sierra County Parcels 2022
- Socorro County Parcels 2022
- Taos County Parcels 2022
- Torrance County Parcels 2022
- Union County Parcels 2022

**Daniel St. Germain**

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**From:** Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>  
**Sent:** Monday, December 23, 2019 3:18 PM  
**To:** Mark Larson  
**Cc:** Baker, Larry; Rachel Owen  
**Subject:** [EXTERNAL] RE: 1RP-389 State C Tract #13 Addendum to Remediation Plan

12/23/2019

Apache Corp. – Larry Baker  
Larson Environmental

As per your request on 1RO-389/State C Tract #13. The following:

As per outline below in associated/stringed email, the work plan/addendum to offered work plan is approved by the Oil Conservation Division (OCD). Please note, it make take some days for this to be uploaded into OCD data base. Please keep a copy of this communication for your records, as NO paper copy will follow.

OCD appreciates your efforts.

Sincerely,

Bradford Billings  
EMNRD/OCD  
Santa Fe, NM

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations

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**From:** Mark Larson <Mark@laenvironmental.com>  
**Sent:** Monday, December 23, 2019 12:56 PM  
**To:** Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>  
**Cc:** Baker, Larry <Larry.Baker@apachecorp.com>; Rachel Owen <rowen@laenvironmental.com>; Mark Larson <Mark@laenvironmental.com>  
**Subject:** [EXT] FW: 1RP-389 State C Tract #13 Addendum to Remediation Plan  
**Importance:** High

Dear Bradford,

This email will confirm our phone conversation on December 20, 2019 for the State Tract C #13 produced water release:

- Install a recovery well near the southeast corner of the pit, down gradient (Southeast) of MW-3, to top of the Dockum Group (redbed) or about 70 feet bgs, whichever occurs first;
- Construct well with 5 inch schedule 40 PVC casing and screen with glued joints as no organic compounds (i.e., BTEX) were detected in the groundwater;

- Twenty (20) feet of screen will be placed from approximately 38 feet bgs to 58 feet bgs allowing for 5 feet of screen to extend above the water table;
- Screen well with approximately 25 feet of 0.020 inch factory slotted screen placed near the bottom of the well;
- Surround screen with graded silica sand from the bottom of the well to about 2 feet above the screen;
- Seal remaining annulus with bentonite chips to approximately 1 foot bgs and complete surface with above grade riser pipe;
- Install electric submersible pump appropriately sized for the aquifer plumb to an above ground tank with a flow meter and controls to monitor flow rate and volume produced and level controls to shut off the pump to prevent overtopping and will be set inside lined secondary containment;
- Apache will work with the surface owner (State of New Mexico) and the Office of the New Mexico State Engineer (OSE) for authorization to produce water for the remediation project:
- Apache will extract groundwater from the recovery well to reduce the chloride concentration to the background level reported in monitoring well MW-1;
- Apache will conduct quarterly (four times yearly) monitoring of groundwater in the monitoring wells (MW-1 through MW-6 and recovery well (RW-1)) and laboratory analysis for chloride, LNAPL, sulfate and TDS;
- Apache will submit the remediation program results to the OCD in annual (once per year) reports to include the laboratory results of groundwater samples and d volume of water recovered;
- Apache will provide notification to OCD at least 7 days in advance of each event, excluding weekends.

Your approval to this addendum remediation plan is requested. Please contact Bruce Baker with Apache or me if you have questions.,

Respectfully,

Rachel Owen  
Sr. Geoscientist  
Larson & Associates  
Phone: 432.664.5357  
Email: [rowen@laenvironmental.com](mailto:rowen@laenvironmental.com)

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WARNING EXTERNAL EMAIL: This email is from an external source. Do not click links or open attachments without positive sender verification of purpose. Never enter Username, Password or sensitive information on linked pages from this email. If you are unsure about the message, please contact the Apache IT ServiceDesk for assistance.

July 29, 2021

Office of the State Engineer, District II  
Water Resources Manager I  
1900 West Second Street; Roswell, NM 88201-1712

ATT: Andy Morley

Re: State C Tract #13 - Landowner Approval to Install Monitoring Wells, Unit E (SW/4 of NW/4)  
Section 36, Township 21 South, Range 37 East, Lea County, New Mexico

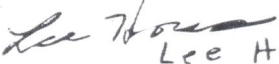
Dear Mr. Morley:

As required by the State of New Mexico Office of the State Engineer (NMOSE), Wallach, Ranch LLC grants approval to Apache Corporation to install one (1) monitoring well on the above captioned property in Lea County, New Mexico.

Sincerely,



Wallach Ranch, LLC

Name:   
Lee House

Title: Manager

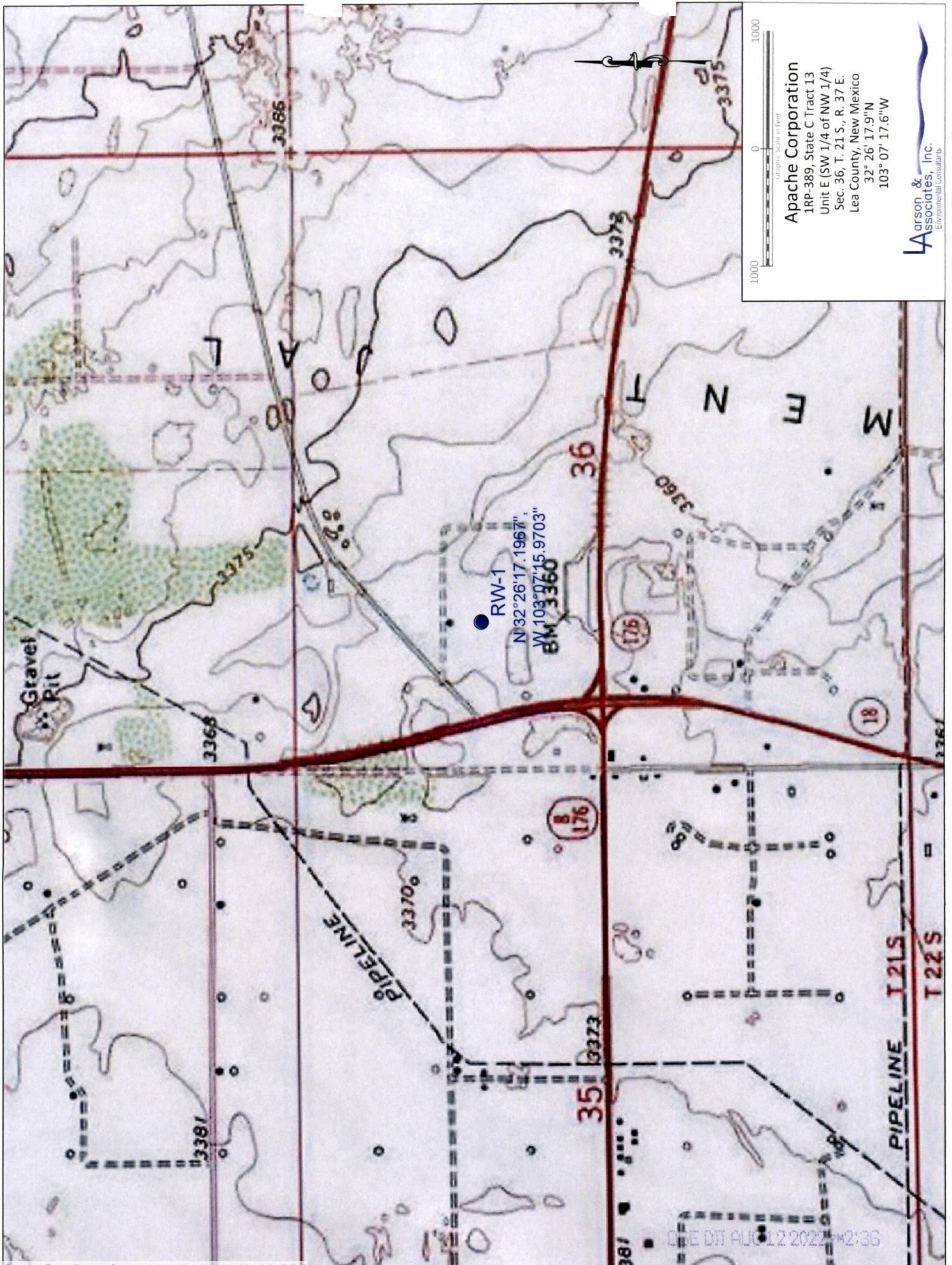
cc: Apache Corporation

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RECEIVED  
Apache Corp

JAN 25 2022

Permian-Midland  
Land T. I.



Apache Corporation

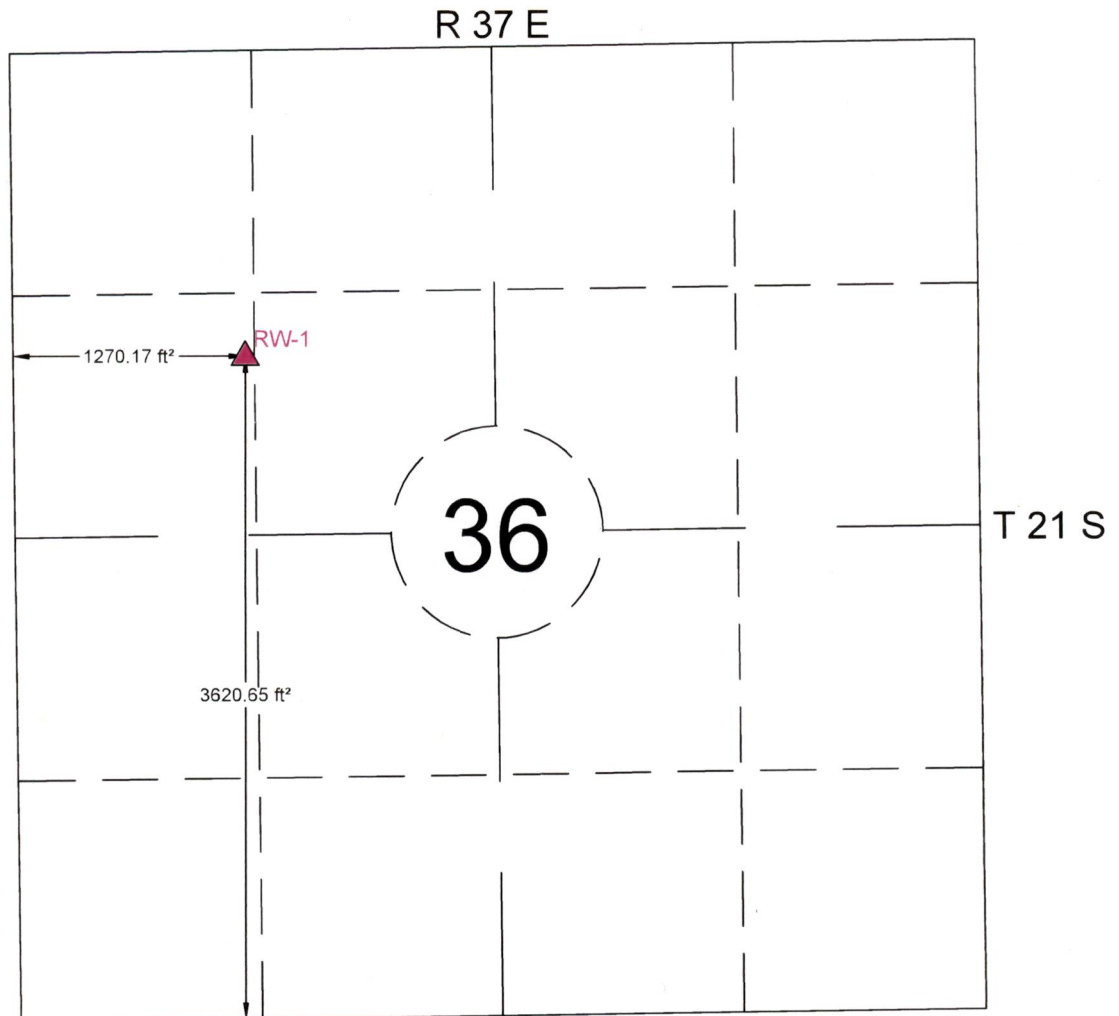
1RP-389, State C Tract 13  
Unit E (SW 1/4 of NW 1/4)  
Sec. 36, T. 21 S., R. 37 E.  
Lea County, New Mexico  
32° 26' 17.9"N  
103° 07' 17.6"W



Figure 1 - Topographic Map



Figure 2 - Aerial Map



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**Legend**

 RW-1 - Proposed Monitoring Well Location

100 0 100  
Graphic Scale in Feet

**Apache Corporation**  
 1RP-389, State C Tract 13  
 Unit E (SW 1/4 of NW 1/4)  
 Sec. 36, T. 21 S., R. 37 E.  
 Lea County, New Mexico  
 32° 26' 17.9"N  
 103° 07' 17.6"W

**L**arson &  
**associates, Inc.**  
 Environmental Consultants

Figure 2a - Proposed Monitoring Well Location RW-1  
Released to Imaging: 4/13/2026 3:12:38 PM

Mike A. Hamman, P.E.  
State Engineer



Roswell Office  
1900 WEST SECOND STREET  
ROSWELL, NM 88201

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

Trn Nbr: 732472  
File Nbr: CP 01916

Aug. 22, 2022

LARRY BAKER  
APACHE CORPORATION  
303 VETERANS AIRPARK LANE  
MIDLAND, TX 79705

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

- \* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.
- \* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.
- \* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.
- \* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website [www.ose.state.nm.us](http://www.ose.state.nm.us).

Sincerely,

A handwritten signature in blue ink that reads "Rodolfo Chavez".

Rodolfo Chavez  
(575) 622-6521

Enclosure

explore



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

**Mike A. Hamman, P.E.**  
State Engineer

**DISTRICT II**  
1900 West Second St.  
Roswell, New Mexico 88201  
Phone: (575) 622-6521  
Fax: (575) 623-8559

August 17, 2022

Apache Corporation  
303 Veterans Airpark Lane  
Midland, TX 79705

RE: Well Plugging Plan of Operations for well No. **CP-1916-POD1**


Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer. subject to the attached Conditions of Approval.

Well Plugging Plan of Operations form (WD-08) has been updated. Current form can be found on the OSE website at the following link <https://www.ose.state.nm.us/Statewide/wdForms.php>.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

  
\_\_\_\_\_  
Kashyap Parekh  
Water Resources Manager I



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

1900 West Second St.  
 Roswell, New Mexico 88201  
 Phone: (575) 622-6521  
 Fax: (575) 623- 8559

Applicant has identified a well, listed below, to be plugged. Scarborough Drilling Inc. (WD-1188) will perform the plugging.

Permittee: Apache Corporation  
 NMOSE Permit Number: CP-1916-POD1

<b>NMOSE File</b>	<b>Casing diameter (inches)</b>	<b>Well depth (feet bgl)</b>	<b>Approximate static water level (feet bgl)</b>	<b>Latitude</b>	<b>Longitude</b>
CP-1916-POD1	5.0	70.0	39.0	32° 26' 41.0"	104° 13' 30"

**Specific Plugging Conditions of Approval for Well located in Lea County.**

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.
2. Theoretical volume of sealant required for abandonment of the 2.0 inch diameter (I.D.) casing is approximately 50.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 30 feet below ground surface (b.g.s.).
3. The cement-bentonite slurry (bentonite powder) shall be mixed using a maximum of 5.2 gallons water per 94-lb sack of Type I/II Portland cement **PLUS** 0.65 gallons per 1% increase in bentonite up to a maximum 6% bentonite by dry weight ratio.
4. The bentonite shall be hydrated separately with its required increments of water prior to being mixed into the cement slurry.
5. Placement of the sealant within the wells shall be by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces the standing water column.

6. Should cement “shrinks-back” occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. of these Specific Conditions of Approval.
7. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.
8. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.
9. NMOSE witnessing of the plugging of the non-artesian well will not be required.
10. Any deviation from this plan must obtain an approved variance from this office prior to implementation.
11. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 17<sup>th</sup> day of August 2022

Mike A. Hamman, P.E. State Engineer

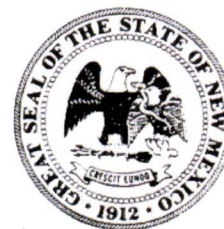
By: K. Parekh

Kashyap Parekh  
Water Resources Manager I





# WELL PLUGGING PLAN OF OPERATIONS



NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

**Alert!** Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology [geoinfo.nmt.edu/resources/water/cgmn/](http://geoinfo.nmt.edu/resources/water/cgmn/) if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email [nmbg-waterlevels@nmt.edu](mailto:nmbg-waterlevels@nmt.edu), prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

**I. FILING FEE:** There is no filing fee for this form.

**II. GENERAL / WELL OWNERSHIP:**  Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: CP-1916-POP1

Name of well owner: Apache Corporation

Mailing address: 303 Veterans Airpark Lane County: Midland

City: Midland State: Texas Zip code: 79705

Phone number: (432) 818-1654 E-mail: larry.baker@apachecorp.com

**III. WELL DRILLER INFORMATION:**

Well Driller contracted to provide plugging services: Scarborough Drilling, Inc.

New Mexico Well Driller License No.: WD-1188 Expiration Date: 3/31/2024

**IV. WELL INFORMATION:**  Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 32 deg, 26 min, 17.1967 sec  
Longitude: 103 deg, 07 min, 15.9703 sec, NAD 83

2) Reason(s) for plugging well(s):

Remediation complete

3) Was well used for any type of monitoring program? Yes If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? No If yes, provide additional detail, including analytical results and/or laboratory report(s):

5) Static water level: ~39 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 70 feet

- 7) Inside diameter of innermost casing: 5 inches.
- 8) Casing material: PVC
- 9) The well was constructed with:
  - an open-hole production interval, state the open interval: \_\_\_\_\_
  - a well screen or perforated pipe, state the screened interval(s): 47-66 feet bgs
- 10) What annular interval surrounding the artesian casing of this well is cement-grouted? unconfined aquifer
- 11) Was the well built with surface casing? No If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? \_\_\_\_\_ If yes, please describe:
- 12) Has all pumping equipment and associated piping been removed from the well? Yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

**V. DESCRIPTION OF PLANNED WELL PLUGGING:**  If plugging method differs between multiple wells on same site, a separate form must be completed for each method.

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

- 1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:
 

The PVC casing will be removed from the borehole, if possible, and a tremie pipe will be placed near the bottom of the hole and cement slurry will be injected until it is flowing out of the borehole. Additional cement will be added to correct for settling.
- 2) Will well head be cut-off below land surface after plugging? 2 feet below ground surface, and covered with topsoil

**VI. PLUGGING AND SEALING MATERIALS:**

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

- 1) For plugging intervals that employ cement grout, complete and attach Table A.
- 2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.
- 3) Theoretical volume of grout required to plug the well to land surface: 20.94 cubic feet, 156.6 gallons
- 4) Type of Cement proposed: Portland
- 5) Proposed cement grout mix: 6.5 gallons of water per 94 pound sack of Portland cement.
- 6) Will the grout be: \_\_\_\_\_ batch-mixed and delivered to the site  
x mixed on site

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7) Grout additives requested, and percent by dry weight relative to cement:

Bentonite clay, 5% dry weight, 4.2 pounds per 94 pound sack of Portland Cement

8) Additional notes and calculations:

**VII. ADDITIONAL INFORMATION:** List additional information below, or on separate sheet(s):

Various above ground equipment will be removed.  
Tremmie pipe will be used to inject cement down hole.  
Well data will be submitted prior to well being plugged.  
Electric submersible pump will be removed from well by licensed pump installer, prior to well being plugged.

**VIII. SIGNATURE:**

I, Larry Baker, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Larry Baker

08/03/2022

Signature of Applicant

Date

**IX. ACTION OF THE STATE ENGINEER:**

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This Well Plugging Plan of Operations is:

- Approved subject to the attached conditions.
- Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 17<sup>th</sup> day of August, 2022

Mike A. Hamman  
John R. D'Antonio Jr. P.E., New Mexico State Engineer

By: K. Parekh  
KASHYAP PAREKH  
W.R.M.I



**TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.**

	<b>Interval 1 – deepest</b>	<b>Interval 2</b>	<b>Interval 3 – most shallow</b>
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			0 ft bgl
Bottom of proposed interval of grout placement (ft bgl)			60 ft bgl
Theoretical volume of grout required per interval (gallons)			156.6 gallons
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			6.5 gallons
Mixed on-site or batch-mixed and delivered?			Mixed on-site
Grout additive 1 requested			Bentonite clay
Additive 1 percent by dry weight relative to cement			5% dry weight
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

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**TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.**

	<b>Interval 1 – deepest</b>	<b>Interval 2</b>	<b>Interval 3 – most shallow</b>
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant or grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

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Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 574813

**CONDITIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 574813
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

**CONDITIONS**

Created By	Condition	Condition Date
bhall	Historical document upload	4/13/2026