

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



F 1

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

- [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR

[D] Other: Specify \_\_\_\_\_

*APACHE CORP*  
*Gerome 28 State Swd #2*  
*F/28/12/28 E/EDDY*  
*11404-12500 Perf.*  
*DEV/ELL*

[2] **NOTIFICATION REQUIRED TO: - Check Those Which Apply, or  Does Not Apply**

- [A]  Working, Royalty or Overriding Royalty Interest Owners
- [B]  Offset Operators, Leaseholders or Surface Owner
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

David Catanach  
 Print or Type Name

*David Catanach*  
 Signature

Agent-Apache Corporation  
 Title

12/3/12  
 Date

drccatanach@netscape.com  
 E-Mail Address

December 3, 2012

Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Attention: Ms. Jami Bailey, CPG  
Division Director

Re: Form C-108  
Apache Corporation  
Geronimo 28 State SWD No. 2  
API No. (Not Yet Assigned)  
1655' FSL & 800' FEL, Unit I  
Section 28, T-17S, R-28E, NMPM,  
Eddy County, New Mexico

Dear Ms. Bailey,

Enclosed please find a Division Form C-108 (Application for Authorization to Inject) for the Apache Corporation Geronimo 28 State SWD No. 2. Apache Corporation proposes to drill and utilize this well as a produced water disposal well, injection to occur into the Devonian and Ellenburger formations through the perforated interval from approximately 11,404 feet to 12,500 feet. Produced water from the Glorieta and Yeso formations originating from Apache Corporation operated wells in this area will be injected into the well.

I believe that all the information necessary to approve the application is enclosed. If additional information is needed, please contact me at (505) 690-9453.

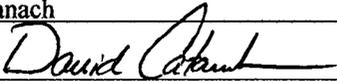
Sincerely,



David Catanach-Agent  
Apache Corporation  
303 Veterans Airpark Lane, Suite 3000  
Midland, Texas 79705

Xc: OCD-Artesia

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval?  Yes \_\_\_\_\_ No
- II. OPERATOR: Apache Corporation (OGRID-873)  
ADDRESS: 303 Veterans Airpark Lane, Suite 3000 Midland, Texas 79705  
CONTACT PARTY: David Catanach-Agent PHONE: (505) 690-9453
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes  No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at, or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: David Catanach TITLE: Agent-Apache Corporation  
SIGNATURE:  DATE: 12/3/12  
E-MAIL ADDRESS: drccatanach@netscape.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

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**NOTICE:** Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

C-108 Application  
Apache Corporation  
Geronimo 28 State SWD No. 2  
1655' FSL & 800' FEL (Unit I)  
Section 28, T-17S, R-28E, NMPM  
Eddy County, New Mexico

- I. The purpose of the application is to request approval to utilize the proposed Geronimo 28 State SWD No. 2 as a produced water disposal well. This is a new well to be drilled for injection.
- II. Apache Corporation  
303 Veterans Airpark Lane  
Suite 3000  
Midland, Texas 79705  
Contact Party: David Catanach (505) 690-9453
- III. Injection well data sheet and wellbore schematic diagram showing the proposed wellbore configuration are attached.
- IV. This is not an expansion of an existing project.
- V. Attached is a map that identifies all wells/leases within a 2-mile radius of the proposed water disposal well and a map that identifies the ½ mile "Area of Review" ("AOR").
- VI. A listing of all wells within the AOR, including API No., operator, well name & number, well type and status, well location, and total depth is attached. An examination of the AOR well listing shows that no well within the AOR penetrates the proposed injection interval.
- VII.
  1. The average injection rate is anticipated to be approximately 4,000 BWPD. The maximum rate will be approximately 15,000 BWPD. If the average or maximum rates increase in the future, the Division will be notified.
  2. This will be a closed system.
  3. Apache Corporation will initially inject water into the subject well at or below a surface injection pressure that is in compliance with the Division's limit of 0.2 psi/ft., or approximately 2,280 psi. If a surface injection pressure above 2,280 psi is necessary, Apache will conduct a step rate injection test to determine the fracture pressure of the Devonian and Ellenburger formations in this area.

4. Produced water from the Glorieta and Yeso formations originating from Apache Corporation operated wells in this area will be injected into the subject well. Attached is a water analysis from Apache's Barnsdall Federal Well No. 9 which produces from the East Empire Glorieta-Yeso Pool, and a water analysis from Apache's Barnsdall Federal Well No. 17 which produces from the Bear Grass Draw Glorieta-Yeso Pool.
5. The Devonian and Ellenburger formations are not productive within one mile of the Geronimo 28 State SWD No. 2, and consequently, formation water samples are not available. The Devonian and Ellenburger formations are productive in numerous locations in Eddy and Lea Counties, and literature indicates that the water present in these formations is highly saline.

VIII. Geologic Formation: Devonian  
Estimated Top: 11,404'  
Thickness: 1,000'  
Lithology: Dolomitic Limestone/Limestone

Geologic Formation: Ellenburger  
Estimated Top: 12,404'  
Thickness: 96'  
Lithology: Dolomitic Limestone/Limestone

USDW's: According to data obtained from the New Mexico State Engineer, there are no fresh water wells within one mile of the proposed injection well. Fresh water in this area is generally sparse and occurs at depths of less than 300'.

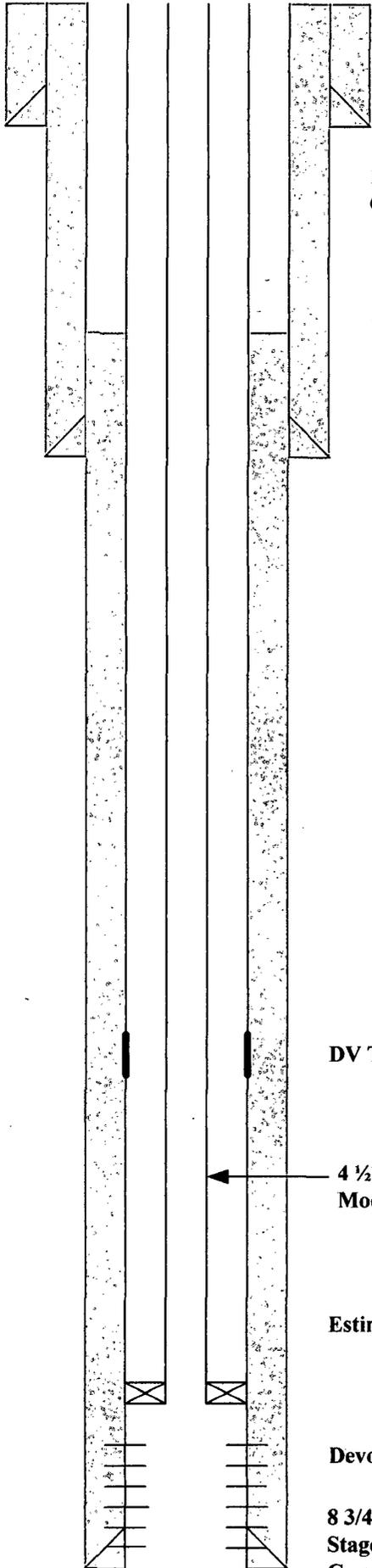
- IX. If necessary, the well will be stimulated with a mild acid job.
- X. Logs will be filed subsequent to the completion of drilling operations.
- XI. There are no fresh water wells located within one-mile of the proposed injection well.
- XII. Affirmative statement is enclosed.
- XIII. Proof of Notice is enclosed.





# Proposed Wellbore Configuration

Apache Corporation  
Geronimo 28 State SWD No. 2  
API No. N/A  
1655' FSL & 800' FEL (Unit I)  
Section 28, T-17 South, R-28 East, NMPM



17 1/2" Hole; Set 13 3/8" 48# H-40 Csg @ 500'  
Cement w/580 Sx. Circulate cement to surface.

TOC @ 3,000' (Proposed)

12 1/4" Hole; Set 9 5/8" 40# J-55 Csg @ 4,500'  
Cement w/1400 Sx. Circulate cement to surface.

DV Tool @ 10,900'

4 1/2" Duo-Lined Injection Tubing set in a  
Model A Lockset Packer @ 11,304'

Estimated Formation Tops: Devonian: 11,404'  
Ellenburger: 12,404'

Devonian & Ellenburger Perforations: 11,404'-12,500'

8 3/4" Hole; Set 7" 26# L-80 & HCL-80 Csg. @ 12,500'  
Stage Cement: 1<sup>st</sup>-270 Sx. 2<sup>nd</sup>-810 Sx. DV Tool @ 10,900'  
Cement to a depth of 3,000'

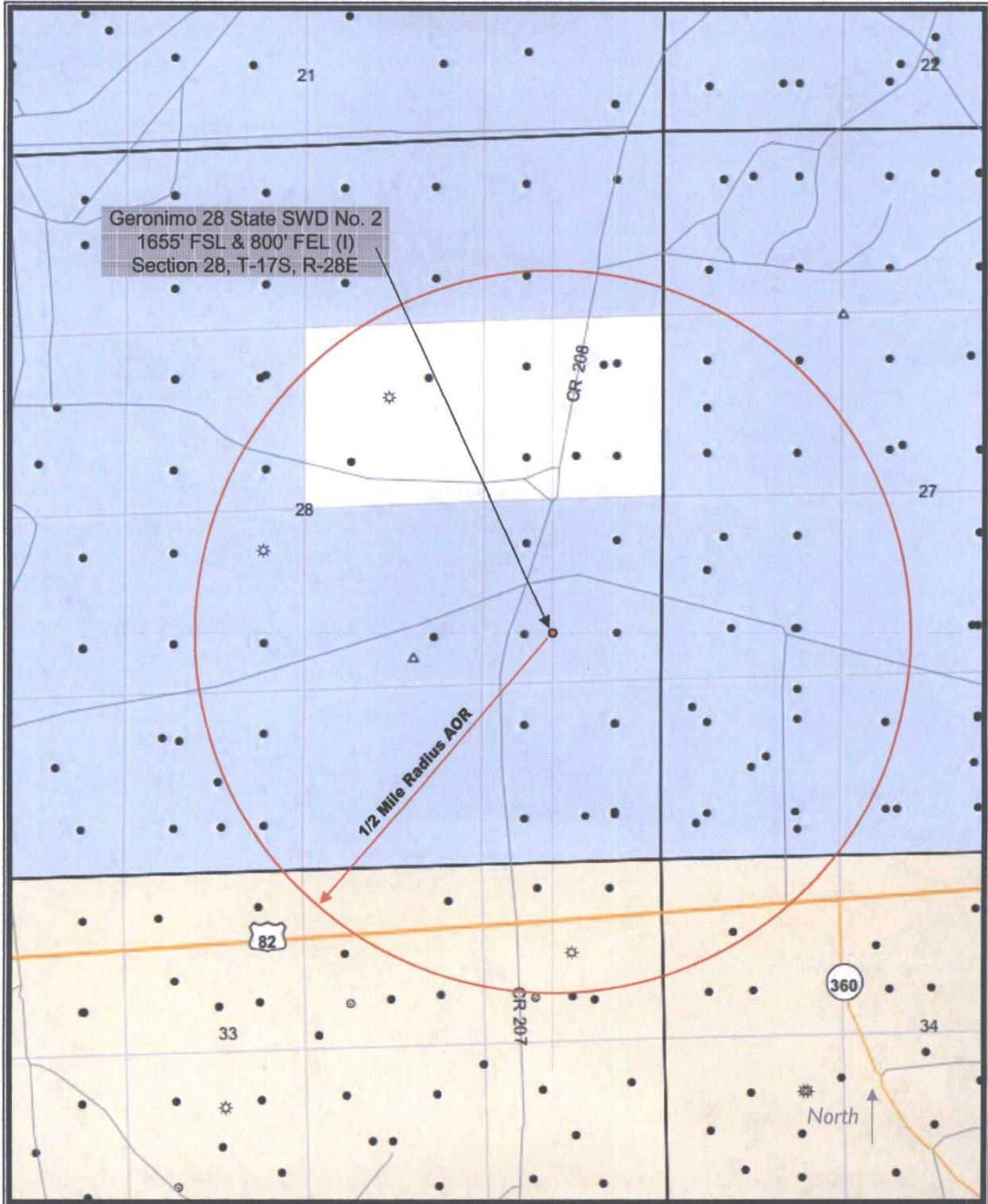
T.D. 12,500'



C-108 - Item V  
Area of Review Map

*1/2 mi*

Geronimo 28 State SWD No. 2



**APACHE CORPORATION**  
**FORM C-108: GERONIMO 28 STATE SWD NO. 2**  
**AREA OF REVIEW WELL LIST**

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	TOTAL DEPTH
30-015-01568	COG Operating, LLC	TJ State	2	P	Active	660'	S	660'	W	M	27	17S	28E	2,200'
30-015-01576	COG Operating, LLC	N G Phillips State	8	P	Active	2310'	N	990'	W	E	27	17S	28E	1,995'
30-015-01577	Marbob Energy Corp.	Abo	1	P	PA	990'	S	2310'	W	N	27	17S	28E	2,060'
30-015-01578		Pre-Ongard	1	P	PA	1650'	S	990'	W	L	27	17S	28E	2,018'
30-015-01593		Pre-Ongard	1	P	PA	250'	S	250'	W	M	27	17S	28E	2,512'
30-015-10330	COG Operating, LLC	Sunray State	1	P	Active	1650'	S	978'	W	L	27	17S	28E	6,200'
30-015-21260	COG Operating, LLC	N G Phillips State	11	P	Active	2310'	N	330'	W	E	27	17S	28E	813'
30-015-21272	Mack Energy Corp.	Collier State	2	P	PA	1650'	S	500'	W	L	27	17S	28E	814'
30-015-21441	Mack Energy Corp.	Collier State	3	P	PA	2310'	S	450'	W	L	27	17S	28E	842'
30-015-21567	COG Operating, LLC	N G Phillips State	14	P	Active	1650'	N	330'	W	E	27	17S	28E	839'
30-015-21712	Mack Energy Corp.	Collier State	4	P	PA	2310'	S	990'	W	L	27	17S	28E	7,200'
30-015-22072	COG Operating, LLC	TJ State	3	P	Active	990'	S	330'	W	M	27	17S	28E	2,010'
30-015-23088	COG Operating, LLC	Abo	2	P	Active	965'	S	1639'	W	N	27	17S	28E	1,000'
30-015-24259	COG Operating, LLC	N G Phillips State	31	P	Active	1980'	N	330'	W	E	27	17S	28E	3,704'
30-015-24521	COG Operating, LLC	TJ State	1	P	Active	990'	S	990'	W	M	27	17S	28E	2,200'
30-015-24569	COG Operating, LLC	Sunray State	2	P	Active	2075'	S	330'	W	L	27	17S	28E	2,900'
30-015-25845	COG Operating, LLC	Elk State	1	P	Active	719'	S	760'	W	M	27	17S	28E	3,065'
30-015-31716	Judah Oil, LLC	Geronimo 27 St.	2C		Never Drilled	990'	S	660'	W	M	27	17S	28E	N/A
30-015-40364	COG Operating, LLC	Mina State	3	P	NYD	330'	S	330'	W	M	27	17S	28E	5,600'
30-015-40365	COG Operating, LLC	Mina State	1	P	NYD	1100'	S	220'	W	M	27	17S	28E	5,600'
30-015-40366	COG Operating, LLC	Mina State	4	P	NYD	200'	S	990'	W	M	27	17S	28E	5,600'
30-015-40444	COG Operating, LLC	Mina State	2	P	NYD	1200'	S	990'	W	M	27	17S	28E	5,600'
30-015-01595	COG Operating, LLC	Hanover State	3	P	Active	330'	S	330'	E	P	28	17S	28E	6,173'
30-015-10102	COG Operating, LLC	Pan Am State	1	P	Active	2310'	S	330'	E	I	28	17S	28E	1,999'
30-015-10230	LRE Operating, LLC	Kersey WM A Fed	3	P	Active	2310'	N	330'	E	H	28	17S	28E	1,985'
30-015-20355	COG Operating, LLC	Hanover State	2	P	Active	360'	S	330'	E	O	28	17S	28E	6,158'
30-015-20811	COG Operating, LLC	Pan Am State	2	P	Active	1650'	S	330'	E	I	28	17S	28E	810'
30-015-21147	COG Operating, LLC	State	2	P	Active	990'	S	330'	E	P	28	17S	28E	800'
30-015-21383	COG Operating, LLC	Pan Am State	3	P	Active	2310'	S	990'	E	I	28	17S	28E	810'
30-015-21392	COG Operating, LLC	State	3	P	Active	330'	S	990'	E	P	28	17S	28E	800'
30-015-21463	COG Operating, LLC	Delhi State	3	P	Active	330'	S	2310'	W	N	28	17S	28E	796'
30-015-21527	COG Operating, LLC	State	4	P	Active	990'	S	990'	E	P	28	17S	28E	832'
30-015-21969	LRE Operating, LLC	Kersey WM A Fed	4	P	Active	2310'	N	990'	E	H	28	17S	28E	775'
30-015-22969	COG Operating, LLC	State	5	P	Active	330'	S	550'	E	P	28	17S	28E	825'
30-015-23055	COG Operating, LLC	Pan Am State	4	P	Active	1650'	S	990'	E	I	28	17S	28E	800'

**APACHE CORPORATION**  
**FORM C-108: GERONIMO 28 STATE SWD NO. 2**  
**AREA OF REVIEW WELL LIST (PAGE 2)**

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	TOTAL DEPTH
30-015-23987	LRE Operating, LLC	Kersey WM A Fed	5	P	Active	1650'	N	330'	E	H	28	17S	28E	794'
30-015-25703	Judah Oil, LLC	Welch State	1	P	Active	1650'	S	1650'	E	J	28	17S	28E	850'
30-015-31829	Apache Corp.	Geronimo 28 St.	1	SWD	Active	1500'	S	1800'	E	J	28	17S	28E	10,488'
30-015-32074	Oxy USA WTP Ltd.	Oxy Sparky Fed	1	P	Active	1830'	N	1980'	E	G	28	17S	28E	10,305'
30-015-33689	LRE Operating, LLC	Kersey WM A Fed	7	P	Active	2310'	N	620'	E	H	28	17S	28E	3,570'
30-015-33872	LRE Operating, LLC	Kersey WM A Fed	6	P	Active	1700'	N	1700'	E	G	28	17S	28E	3,503'
30-015-34005	Apache Corp.	Red Lake 28 K St.	2	P	Active	2310'	S	2310'	W	K	28	17S	28E	3,760'
30-015-34673	LRE Operating, LLC	Kersey WM A Fed	8		Never Drilled	1650'	N	430'	E	H	28	17S	28E	N/A
30-015-35540	Apache Corp.	Red Lake 28 N St.	4	P	Active	990'	S	2310'	W	N	28	17S	28E	3,950'
30-015-35541	Apache Corp.	Red Lake 28 K St.	4	P	Active	1650'	S	2310'	W	K	28	17S	28E	3,950'
30-015-36829	LRE Operating, LLC	Kersey WM A Fed	9	P	Active	2282'	N	2267'	E	G	28	17S	28E	3,655'
30-015-37428	LRE Operating, LLC	Kersey WM A Fed	10	P	Active	1650'	N	990'	E	H	28	17S	28E	3,605'
30-015-40068	LRE Operating, LLC	Welch RL State	14	P	NYD	2310'	N	2310'	W	F	28	17S	28E	3,650'
30-015-30299	Apache Corp.	Washington 33 St.	1	P	Active	200'	N	380'	E	A	33	17S	28E	3,000'
30-015-31373	RKI Exp. & Prod., LLC	Geronimo 33 St.	2	P	Active	660'	N	660'	E	A	33	17S	28E	10,600'
30-015-40087	Apache Corp.	Washington 33 St.	47	P	NYD	190'	N	895'	E	A	33	17S	28E	5,100'
30-015-30276	Apache Corp.	Washington 33 St.	3	P	Active	260'	N	1550'	E	B	33	17S	28E	2,950'
30-015-34396	Apache Corp.	A State	2	P	Active	552'	N	508'	W	D	34	17S	28E	4,194'
<b>NYD-Not Yet Drilled; ND-Never Drilled</b>														

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	APACHE CORPORATION	Sales RDT:	33514
Region:	PERMIAN BASIN	Account Manager:	REGGIE GUY (575) 513-9135
Area:	ARTESIA, NM	Sample #:	580738
Lease/Platform:	BARNSDALL FED	Analysis ID #:	119642
Entity (or well #):	9	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

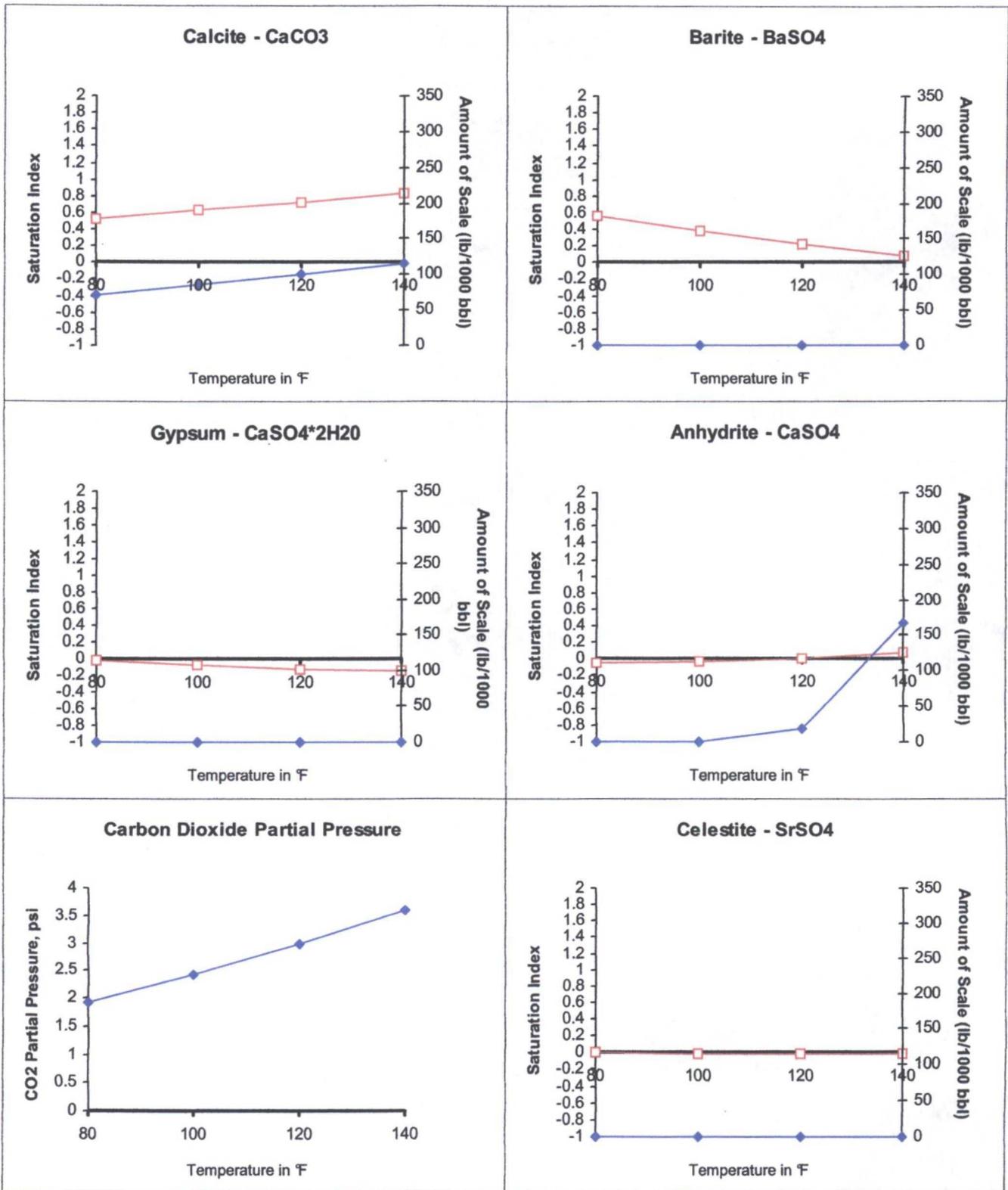
Summary		Analysis of Sample 580738 @ 75 °F					
Sampling Date:	04/13/12	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
Analysis Date:	04/26/12	Chloride:	56172.0	1584.41	Sodium:	35903.6	1561.72
Analyst:	STACEY SMITH	Bicarbonate:	939.4	15.4	Magnesium:	226.0	18.59
TDS (mg/l or g/m3):	99816	Carbonate:	0.0	0.0	Calcium:	1973.0	98.45
Density (g/cm3, tonne/m3):	1.065	Sulfate:	4237.0	88.21	Strontium:	36.0	0.82
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.1	0.0
Carbon Dioxide:	200 PPM	Borate:			Iron:	1.5	0.05
Oxygen:		Silicate:			Potassium:	327.0	8.36
Comments:		Hydrogen Sulfide:		221 PPM	Aluminum:		
RESISTIVITY: .075 OHM-M @ 75°F		pH at time of sampling:		6.6	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.6	Lead:		
					Manganese:	0.400	0.01
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.53	71.15	-0.02	0.00	-0.05	0.00	0.00	0.00	0.57	0.00	1.91
100	0	0.63	85.77	-0.08	0.00	-0.03	0.00	-0.02	0.00	0.38	0.00	2.43
120	0	0.73	100.70	-0.12	0.00	0.01	18.74	-0.02	0.00	0.22	0.00	3
140	0	0.84	115.94	-0.15	0.00	0.07	167.09	-0.02	0.00	0.08	0.00	3.61

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.  
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.  
Note 3: The reported CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

# Scale Predictions from Baker Petrolite

Analysis of Sample 580738 @ 75 °F for APACHE CORPORATION, 04/26/12



North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	APACHE CORPORATION	Sales RDT:	33512
Region:	PERMIAN BASIN	Account Manager:	WAYNE PETERSON (575) 910-9389
Area:	LOCO HILL, NM	Sample #:	580725
Lease/Platform:	BARNSDALL FED	Analysis ID #:	118869
Entity (or well #):	17	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

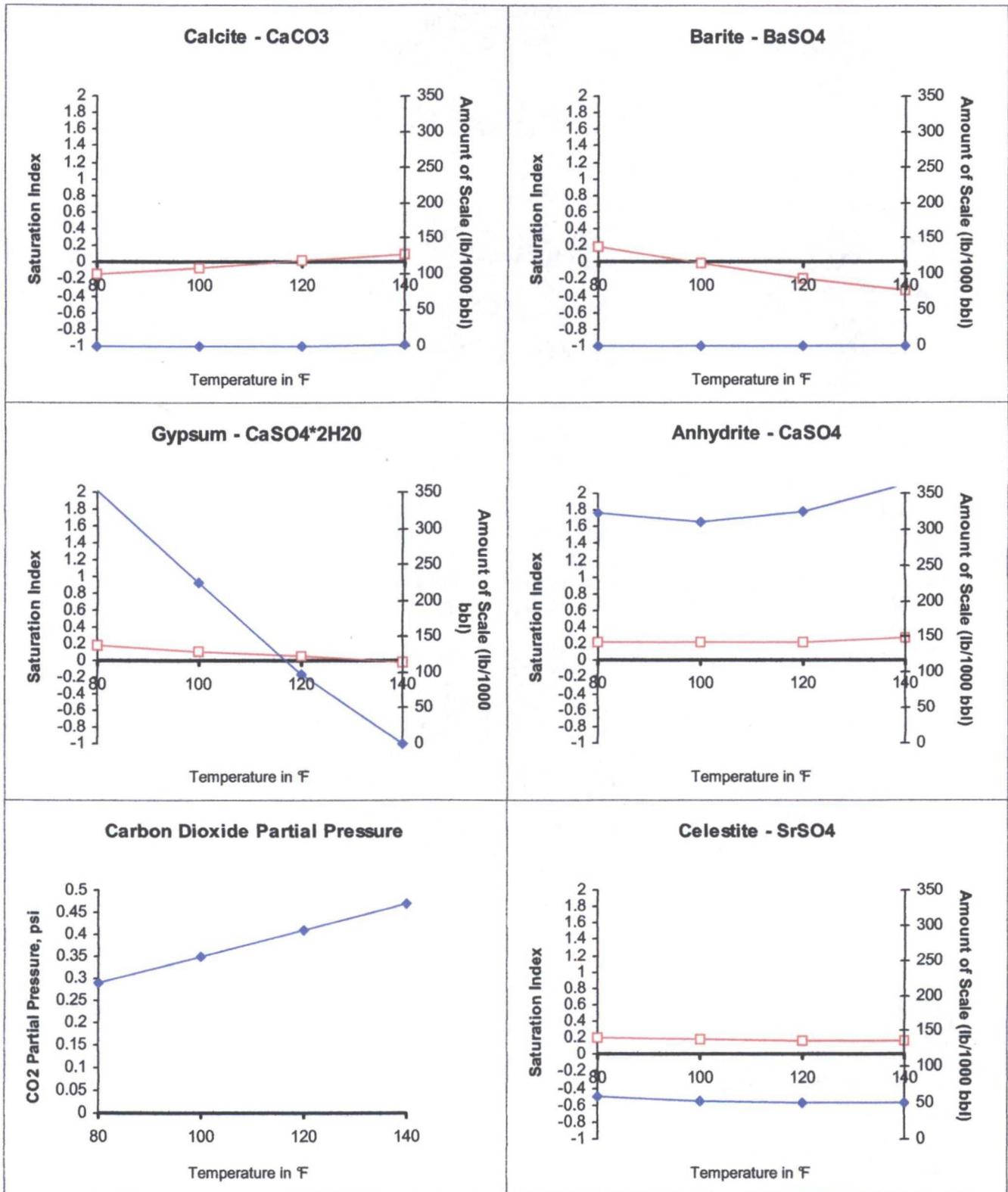
Summary		Analysis of Sample 580725 @ 75 F					
		Anions		Cations			
		mg/l	meq/l	mg/l	meq/l		
Sampling Date:	03/28/12	Chloride:	141028.0	3977.89	Sodium:	72252.0	3142.78
Analysis Date:	04/05/12	Bicarbonate:	73.2	1.2	Magnesium:	3784.0	311.29
Analyst:	LEAH DURAN	Carbonate:	0.0	0.0	Calcium:	10305.0	514.22
TDS (mg/l or g/m3):	231342	Sulfate:	1906.0	39.68	Strontium:	267.0	6.09
Density (g/cm3, tonne/m3):	1.155	Phosphate:			Barium:	0.2	0.0
Anion/Cation Ratio:	1	Borate:			Iron:	21.0	0.76
		Silicate:			Potassium:	1705.0	43.6
Carbon Dioxide:	200 PPM	Hydrogen Sulfide:		0	Aluminum:		
Oxygen:		pH at time of sampling:		6.2	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.2	Lead:		
					Manganese:	0.600	0.02
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	-0.14	0.00	0.19	352.34	0.23	323.47	0.21	59.14	0.19	0.00	0.29
100	0	-0.06	0.00	0.11	224.52	0.22	310.29	0.18	53.26	-0.01	0.00	0.35
120	0	0.02	0.28	0.05	98.11	0.23	325.43	0.17	50.17	-0.19	0.00	0.41
140	0	0.10	1.12	-0.01	0.00	0.27	363.55	0.17	49.61	-0.34	0.00	0.47

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.  
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.  
Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

# Scale Predictions from Baker Petrolite

Analysis of Sample 580725 @ 75 °F for APACHE CORPORATION, 04/05/12





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

---

No records found.

**PLSS Search:**

**Section(s): 32-34**

**Township: 17S**

**Range: 28E**

---

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.

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10/25/12 11:03 AM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



---

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

---

No records found.

**PLSS Search:**

**Section(s): 21-22**

**Township: 17S**

**Range: 28E**

---

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---



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

---

No records found.

**PLSS Search:**

**Section(s): 27-29**

**Township: 17S**

**Range: 28E**

---

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Form C-108  
Affirmative Statement  
Apache Corporation  
Geronimo 28 State SWD No. 2  
Section 28, T-17 South, R-28 East, NMPM,  
Eddy County, New Mexico

Available geologic and engineering data has been examined and no evidence of open faults or hydrological connection between the injection zone and any underground sources of drinking water has been found.



David Catanach  
Agent for Apache Corporation

12/3/12

Date

December 3, 2012

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

TO: OFFSET LEASEHOLD OWNERS & SURFACE OWNER

Re: Apache Corporation  
Form C-108 (Application for Authorization to Inject)  
Geronimo 28 State SWD No. 2  
API No. N/A  
1655' FSL & 800' FEL, Unit I, Section 28, T-17S, R-28E, NMPM,  
Eddy County, New Mexico

Ladies & Gentlemen:

Enclosed please find a copy of Oil Conservation Division Form C-108 (Application for Authorization to Inject) for the Apache Corporation Geronimo 28 State SWD No. 2. You are being provided a copy of the application as an offset leaseholder or the surface owner of the land on which the well is located. Apache Corporation proposes to drill the Geronimo 28 State SWD No. 2 and utilize the well as a produced water disposal well, injection to occur into the Devonian and Ellenburger formations through the perforated interval from approximately 11,404 feet to 12,500 feet.

Objections must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days.

If you should have any questions, please contact me at (505) 690-9453.

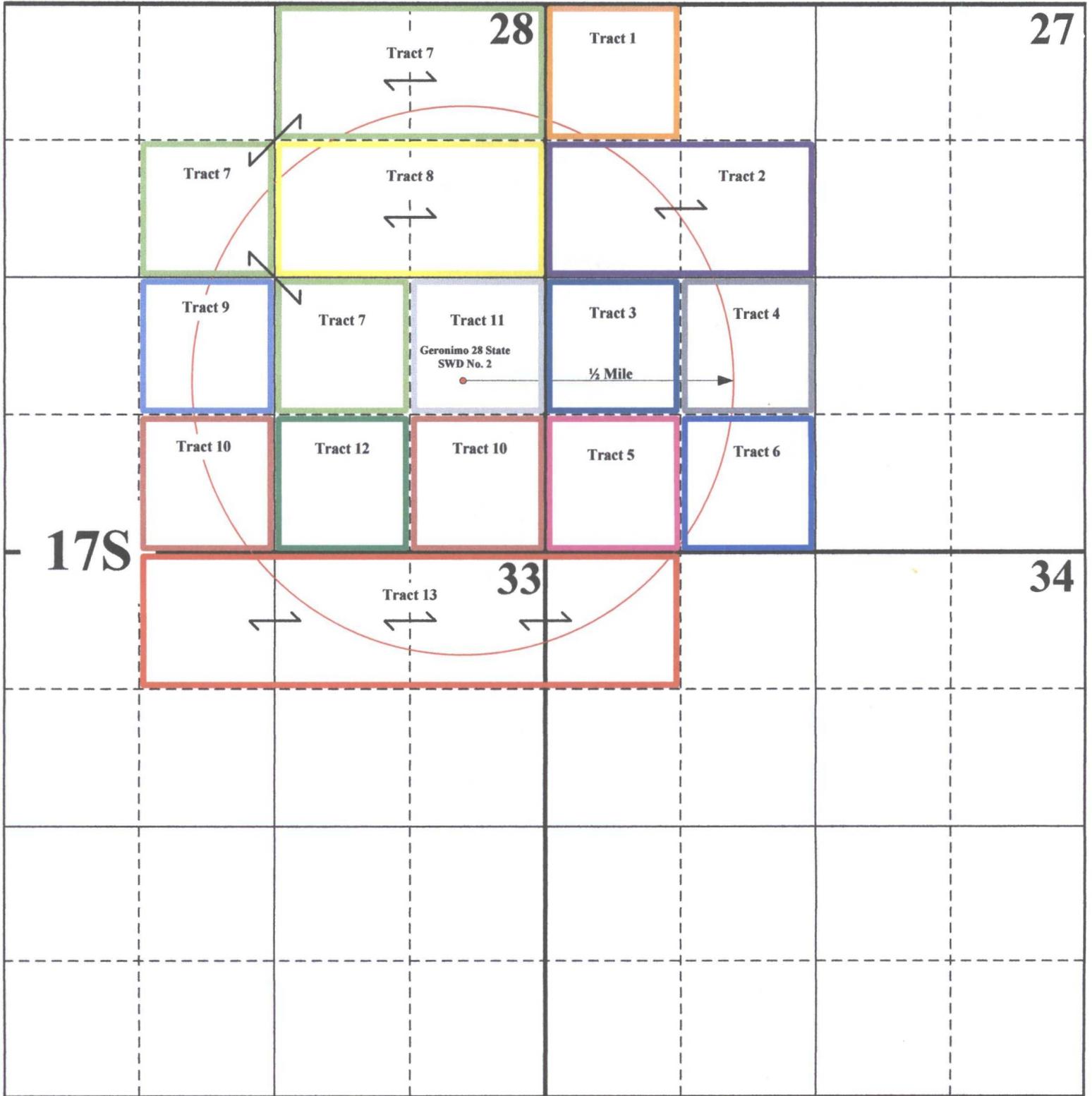
Sincerely,



David Catanach-Agent  
Apache Corporation  
303 Veterans Airpark Lane, Suite 3000  
Midland, Texas 79705

Enclosure

# 28E



**Apache Corporation**  
**Form C-108: Geronimo 28 State SWD No. 2**  
**Offset Leasehold Owner Tract Identification**

**Apache Corporation**  
**Form C-108: Geronimo 28 State SWD No. 2**  
**Section 28, T-17 South, R-28 East, NMPM**  
**Eddy County, New Mexico**

**Offset Leasehold Owner Notification List (See Attached Map)**

**Tracts No. 1, 7 & 8**

Leasehold Owners (All Depths below 3,500' **Less & Except** the Morrow Formation):

ConocoPhillips Company P.O. Box 7500 Bartlesville, Oklahoma 74005	RSE Partners I L.P. 3141 Hood Street, #350 Dallas, Texas 75219	Khody Land & Minerals Co. 210 Park Avenue, Suite 900 Oklahoma City, Oklahoma 73102
Marathon Oil Company P.O. Box 552 Midland, Texas 79702	Yates Petroleum Corporation 105 S. Fourth Street Artesia, New Mexico 88210	John A Yates, MSU 207 S. Fourth Street Artesia, New Mexico 88210
Trust Q U/W/O Peggy A. Yates, deceased 207 South 4 <sup>th</sup> Street Artesia, NM 88210	Sharbro Energy, LLC P.O. Box 840 Artesia, New Mexico 88211-0840	Yates Industries, LLC P.O. Box 1091 Artesia, New Mexico 88211-1091
Spiral, Inc. P.O. Box 1933 Roswell, New Mexico 88202-1933	Santo Legado, LLP P.O. Box 1020 Artesia, New Mexico 88211-1020	Tulipan, LLC P.O. Box 1020 Artesia, New Mexico 88211-1020
Marigold, LLLP P.O. Box 1290 Artesia, NM 88211-1290		

**Tract No. 2**

Leasehold Owner (All depths below 4,000'):

OXY USA WTP, Ltd. Partnership  
P.O. Box 50250  
Midland, TX 79710

**Tract No. 3**

Leasehold Owner (All depths below the base of the Abo Formation):

Khody Land & Minerals Company  
210 Park Avenue, Suite 900  
Oklahoma City, Oklahoma 73102

**Apache Corporation**  
**Form C-108: Geronimo 28 State SWD No. 2**  
**Section 28, T-17 South, R-28 East, NMPM**  
**Eddy County, New Mexico**

**Offset Leasehold Owner Notification List (Page 2)**

**Tract No. 4**

Leasehold Owner: (All depths)

Yates Petroleum Corporation  
105 S. Fourth Street  
Artesia, New Mexico 88210

John A Yates, MSU  
207 S. Fourth Street  
Artesia, New Mexico 88210

Marigold, LLLP  
P.O. Box 1290  
Artesia, New Mexico 88211-1290

Trust Q  
U/W/O Peggy A. Yates, deceased  
207 South 4<sup>th</sup> Street  
Artesia, NM 88210

Sharbro Energy, LLC  
P.O. Box 840  
Artesia, New Mexico 88211-0840

Yates Industries, LLC  
P.O. Box 1091  
Artesia, New Mexico 88211-1091

Spiral, Inc.  
P.O. Box 1933  
Roswell, NM 88202-1933

Santo Legado, LLP  
P.O. Box 1020  
Artesia, New Mexico 88211-1020

Tulipan, LLC  
P.O. Box 1020  
Artesia, New Mexico 88211-1020

**Tract No. 5**

Leasehold Owners (All depths below the base of the Abo Formation):

COG Operating, LLC  
600 W. Illinois Ave.  
One Concho Center  
Midland, Texas 79701

Concho Oil & Gas Company  
600 W. Illinois Ave.  
One Concho Center  
Midland, Texas 79701

**Tracts No. 6 & 9**

Leasehold Owner (All depths below the base of the Yeso Formation):

ConocoPhillips Company  
P.O. Box 7500  
Bartlesville, Oklahoma 74005

Chisos Ltd.  
670 Donna Ana Road  
Deming, New Mexico 88030

Roca Exploration, Ltd.  
P.O. Box 1981  
Midland, Texas 79702

**Tract No. 10**

Leasehold Owners: (All depths):

ConocoPhillips Company  
P.O. Box 7500  
Bartlesville, Oklahoma 74005

Chisos Ltd.  
670 Donna Ana Road  
Deming, New Mexico 88030

Roca Exploration, Ltd.  
P.O. Box 1981  
Midland, Texas 79702

**Apache Corporation**  
**Form C-108: Geronimo 28 State SWD No. 2**  
**Section 28, T-17 South, R-28 East, NMPM**  
**Eddy County, New Mexico**

**Offset Leasehold Owner Notification List (Page 3)**

**Tract No. 11**

Leasehold Owners (All depths below 3,500’):

Oxy USA WTP, Ltd. Partnership P.O. Box 50250 Midland, Texas 79710	McCombs Energy, LLC 5599 San Felipe, Suite 1200 Houston, Texas 77056-2794
---	---

**Tract No. 12**

Leasehold Owners (All depths below the base of the Morrow Formation):

Yates Petroleum Corporation 105 S. Fourth Street Artesia, New Mexico 88210	Khody Land & Minerals Company 210 Park Avenue, Suite 900 Oklahoma City, Oklahoma 73102	Marathon Oil Company P.O. Box 552 Midland, Texas 79702
ZPZ Delaware I, LLC (Wholly owned subsidiary of Apache Corporation)		

**Tract No. 13**

Leasehold Owners (All depths):

ZPZ Delaware I, LLC  
(Wholly owned subsidiary of  
Apache Corporation)

**Surface Owner**

Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, New Mexico 87504-1148

**Additional Notice**

Oil Conservation Division  
811 S. First Street  
Artesia, New Mexico 88210

7012 0470 0001 5936 1468

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Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>



Sent To **ConocoPhillips Company**  
**P.O. Box 7500**  
 Street, Apt. No., or PO Box No.  
**Bartlesville, Oklahoma 74005**  
 City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

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<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>



Sent To **RSE Partners I, L.P.**  
**3141 Hood, Street, #350**  
 Street, Apt. No., or PO Box No.  
**Dallas, Texas 75219**  
 City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

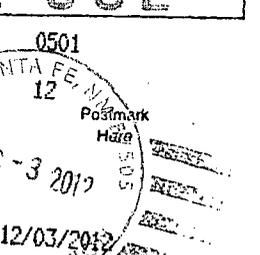
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Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>



Sent To **Khody Land & Minerals Co.**  
**210 Park Avenue, Suite 900**  
 Street, Apt. No., or PO Box No.  
**Oklahoma City, Oklahoma 73102**  
 City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

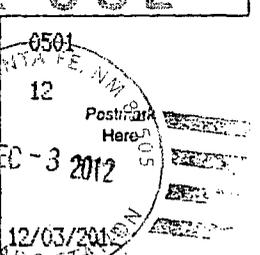
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Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>



Sent To **Marathon Oil Company**  
**P.O. Box 552**  
 Street, Apt. No., or PO Box No.  
**Midland, Texas 79702**  
 City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

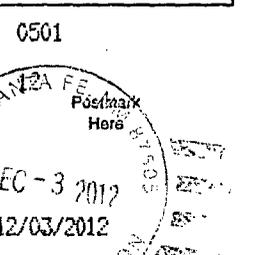
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Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>



Sent To **Yates Petroleum Corporation**  
**105 S. Fourth Street**  
 Street, Apt. No., or PO Box No.  
**Artesia, New Mexico 88210**  
 City, State, ZIP+4

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Return Receipt Fee (Endorsement Required)	\$ 2.35
Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>



Sent To **John A Yates, MSU**  
**Trust Q, U/W/O Peggy A. Yates**  
 Street, Apt. No., or PO Box No.  
**107 South Fourth Street**  
**Artesia, New Mexico 88210**  
 City, State, ZIP+4

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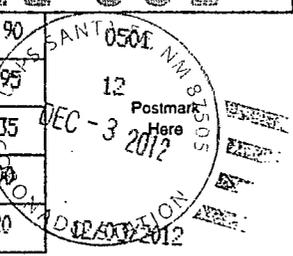
ARTESIA, NM 88211

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Certified Fee		\$2.95
Return Receipt Fee (Endorsement Required)		\$2.35
Restricted Delivery Fee (Endorsement Required)		\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>\$7.20</b>

Sent To **Sharbro Energy, LLC**  
**P.O. Box 840**  
 Street, Apt. No., or PO Box No. \_\_\_\_\_  
**Artesia, New Mexico 88211-0840**  
 City, State, ZIP+4 \_\_\_\_\_

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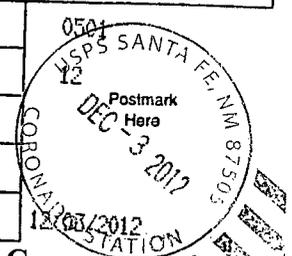
ARTESIA, NM 88211

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Postage	\$	\$1.90
Certified Fee		\$2.95
Return Receipt Fee (Endorsement Required)		\$2.35
Restricted Delivery Fee (Endorsement Required)		\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>\$7.20</b>

Sent To **Yates Industries, LLC**  
**P.O. Box 1091**  
 Street, Apt. No., or PO Box No. \_\_\_\_\_  
**Artesia, New Mexico 88211-1091**  
 City, State, ZIP+4 \_\_\_\_\_

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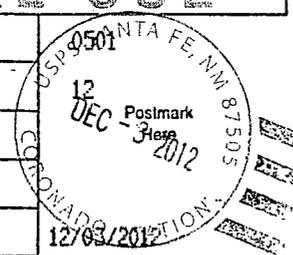
SANTA FE, NM 87504

**OFFICIAL USE**

Postage	\$	\$1.90
Certified Fee		\$2.95
Return Receipt Fee (Endorsement Required)		\$2.35
Restricted Delivery Fee (Endorsement Required)		\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>\$7.20</b>

Sent To **Commissioner of Public Lands**  
**P.O. Box 1148**  
 Street, Apt. No., or PO Box No. \_\_\_\_\_  
**Santa Fe, N.M. 87504-1148**  
 City, State, ZIP+4 \_\_\_\_\_

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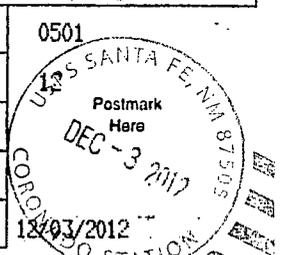
HOUSTON, TX 77056

**OFFICIAL USE**

Postage	\$	\$1.90
Certified Fee		\$2.95
Return Receipt Fee (Endorsement Required)		\$2.35
Restricted Delivery Fee (Endorsement Required)		\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>\$7.20</b>

Sent To **McCombs Energy, LLC**  
**5599 San Felipe, Suite 1200**  
 Street, Apt. No., or PO Box No. \_\_\_\_\_  
**Houston, Texas 77056-2794**  
 City, State, ZIP+4 \_\_\_\_\_

PS Form 3800, August 2006 See Reverse for Instructions



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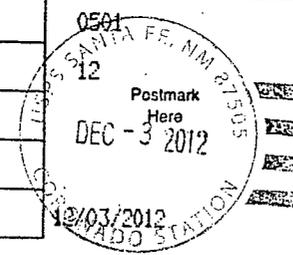
MIDLAND, TX 79702

**OFFICIAL USE**

Postage	\$	\$1.90
Certified Fee		\$2.95
Return Receipt Fee (Endorsement Required)		\$2.35
Restricted Delivery Fee (Endorsement Required)		\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>\$7.20</b>

Sent To **Roca Exploration, Ltd.**  
**P.O. Box 1981**  
 Street, Apt. No., or PO Box No. \_\_\_\_\_  
**Midland, Texas 79702**  
 City, State, ZIP+4 \_\_\_\_\_

PS Form 3800, August 2006 See Reverse for Instructions



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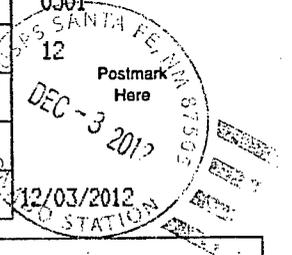
DEMING, NM 88030

**OFFICIAL USE**

Postage	\$	\$1.90
Certified Fee		\$2.95
Return Receipt Fee (Endorsement Required)		\$2.35
Restricted Delivery Fee (Endorsement Required)		\$0.00
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>\$7.20</b>

Sent To **Chisos, Ltd.**  
**670 Donna Ana Road**  
 Street, Apt. No., or PO Box No. \_\_\_\_\_  
**Deming, New Mexico 88030**  
 City, State, ZIP+4 \_\_\_\_\_

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Sent To **COG Operating, LLC**  
 Concho Oil & Gas Company  
 600 W. Illinois Ave.  
 One Concho Center  
 Midland, Texas 79701

PS Form 3800, August 2006 See Reverse for Instructions

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Sent To **Oxy USA WTP Ltd. Partnership**  
 P.O. Box 50250  
 Midland, Texas 79710

PS Form 3800, August 2006 See Reverse for Instructions

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Restricted Delivery Fee (Endorsement Required)	\$ 0.00
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Sent To **Marigold, LLP**  
 P.O. Box 1290  
 Artesia, New Mexico 88211-1290

PS Form 3800, August 2006 See Reverse for Instructions

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Certified Fee	\$ 2.95
Return Receipt Fee (Endorsement Required)	\$ 2.35
Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>

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Sent To **Tulipan, LLC**  
 P.O. Box 1020  
 Artesia, New Mexico 88211-1020

PS Form 3800, August 2006 See Reverse for Instructions

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Certified Fee	\$ 2.95
Return Receipt Fee (Endorsement Required)	\$ 2.35
Restricted Delivery Fee (Endorsement Required)	\$ 0.00
<b>Total Postage &amp; Fees</b>	<b>\$ 7.20</b>

Postmark Here  
 DEC - 3 2012

Sent To **Spiral, Inc.**  
 P.O. Box 1933  
 Roswell, New Mexico 88202-1933

PS Form 3800, August 2006 See Reverse for Instructions

Form C-108  
Apache Corporation  
Geronimo 28 State SWD No. 2  
Section 28, T-17 South, R-28 East, NMPM,  
Eddy County, New Mexico

The following-described legal notice will be published in the:

Artesia Daily Press  
503 W. Main Street  
Artesia, New Mexico 88210-2067

The Affidavit of Publication will be forwarded to the Division upon receipt by Apache Corporation.

**LEGAL NOTICE**

**Apache Corporation, 303 Veterans Airpark Lane, Suite 3000, Midland, Texas 79705 has filed a Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division (“Division”) seeking administrative approval to drill its proposed Geronimo 28 State SWD No. 2 (API No. N/A) located 1655 feet from the South line and 800 feet from the East line (Unit I) of Section 28, Township 17 South, Range 28 East, NMPM, Eddy County, New Mexico and complete the well as a produced water disposal well in the Devonian and Ellenburger formations. Injection is to occur through the perforated interval from approximately 11,404 feet to 12,500 feet.**

**Produced water from the Glorieta & Yeso formations originating from Apache Corporation operated wells in this area will be injected into the Geronimo 28 State SWD No. 2 at average and maximum rates of 4,000 and 15,000 barrels of water per day, respectively. The initial surface injection pressure for the well is anticipated to be at or below 2,280 psi., which is in compliance with Division regulations. The maximum surface injection pressure will be determined by step rate injection test.**

**Interested parties must file objections with the New Mexico Oil Conservation Division, 1220 S. St Francis Drive, Santa Fe, New Mexico 87505, within 15 days of the date of this publication.**

**Additional information can be obtained by contacting Mr. David Catanach Agent- Apache Corporation at (505) 690-9453.**

**Jones, William V., EMNRD**

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**From:** David Catanach <drcatanach@netscape.com>  
**Sent:** Saturday, December 08, 2012 6:57 AM  
**To:** Jones, William V., EMNRD  
**Subject:** Affidavit of Publication  
**Attachments:** Publication Notice.pdf

Mr. Jones,

Attached is the publication notice for the Apache Geronimo 28 State SWD No. 2 (SWD application).

If you need anything else, let me know.

Thanks,

David

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Netscape. Just the Net You Need.

# Affidavit of Publication

NO. 22390

STATE OF NEW MEXICO

County of Eddy:

Danny Scott

being duly sworn, says that he is the Publisher of the Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached

### Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for 1 Consecutive weeks/days on the same day as follows:

- First Publication December 2, 2012
- Second Publication \_\_\_\_\_
- Third Publication \_\_\_\_\_
- Fourth Publication \_\_\_\_\_
- Fifth Publication \_\_\_\_\_

Subscribed and sworn to before me this 3rd day of December 2012



OFFICIAL SEAL  
Latisha Romine  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015

Latisha Romine

Latisha Romine  
Notary Public, Eddy County, New Mexico

# Copy of Publication:

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Published in the Artesia Daily Press, Artesia, N.M., Dec. 2, 2012. Legal No 22390.

**Injection Permit Checklist**

First Email Date: \_\_\_\_\_ Final Reply Date: \_\_\_\_\_ Final Notice Date: 12/3/12

Issued Permit: WFX \_\_\_\_\_ PMX \_\_\_\_\_ SWD 1318 Permit Date 1/3/13

# Wells 1 Well Name(s): GERONIMO 28 STATE SWD #2

API Num: 30-015-40876 Spud Date: \_\_\_\_\_ New/Old: \_\_\_\_\_ (UIC Cl II Primacy March 7, 1982)

Footages 1655 FSL/800 FEL Lot \_\_\_\_\_ Unit I Sec 28 Tsp 17S Rge 28E County EDDY

General Location or Pool Area: RED LAKE/ARTESIAN UMT area

Operator: APACHE CORP. Contact DAVID CATANACH

OGRID: 873 RULE 5.9 Compliance (Wells) 2/2123 (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed  Current Status: Permitted NOT DRILLED

Planned Work to Well: DRILL/EQUIP/DISPOSE

Diagrams: Before Conversion  After Conversion  Are Elogs in Imaging?: Will Be Filed

Well Details:	Sizes Hole.....Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Surface	<u>17 1/2 - 13 3/8</u>	<u>500'</u>	<u>-</u>	<u>580 SX</u>	<u>CIRC</u>
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> Interm	<u>12 1/4 - 9 5/8</u>	<u>4500'</u>	<u>-</u>	<u>1400 SX</u>	<u>CIRC</u>
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/> LongSt	<u>8 3/4 - 7"</u>	<u>12,500' TR 10900</u>	<u>-</u>	<u>270/810</u>	<u>3000' CALC</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner					
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> OpenHole					

Depths/Formations:	Depths, Ft.	Formation	Tops?
Above			
Above	<u>11404</u>	<u>DEV</u>	<input checked="" type="checkbox"/>
Proposed Interval TOP	<u>11404</u>	<u>Dar</u>	
Proposed Interval BOTTOM	<u>12500</u>	<u>Blank</u>	
Below	<u>12404</u>	<u>EU.</u>	<input checked="" type="checkbox"/>
Below			

Max. PSI 2281 Open Hole  Perfs   
Tubing Size 4 1/2 Packer Depth 11304

Capitan Reef? (in / thru) \_\_\_\_\_ Potash? \_\_\_\_\_ Noticed? \_\_\_\_\_ (WIPP? \_\_\_\_\_ Noticed? \_\_\_\_\_) Salado Top \_\_\_\_\_ Bot \_\_\_\_\_ Cliff House? \_\_\_\_\_

Fresh Water: MaxDepth: 300' FW Formation \_\_\_\_\_ Wells? None Analysis? \_\_\_\_\_ Affirmative Statement

Disposal Fluid: Formation Source (Analysis) GWR/Yaso (APACHE operated wells)

Disposal Interval: Protectable Waters? NO H/C Potential: Log \_\_\_\_\_ /Mudlog \_\_\_\_\_ /DST \_\_\_\_\_ /Tested \_\_\_\_\_ /Depleted \_\_\_\_\_ Other NO PROD w/E 1 mi

Notice: Newspaper Post Date 12/2/12 Surface Owner S. LO. N. Date 12/3/12

RULE 26.7(A) Affected Persons See LIST N. Date 12/3/12

AOR: Maps?  Well List?  Producing in Interval? NO Wellbore Diagrams? \_\_\_\_\_

Penetrating \_\_\_\_\_ Active Wells  Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

\_\_\_\_\_ P&A Wells  Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

Permit Conditions: None (Normal Logging) MUD LOG

Issues: Barratt Gas JUST TO NORTH MISS OIL TO NW

Issues: \_\_\_\_\_