

DATE IN 01/28/14	SUSPENSE	ENGINEER [PPAG/RE]	LOGGED IN 01/24/14	TYPE SWD	APP NO PPAG 1402461764
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ABOVE THIS LINE FOR DIVISION USE ONLY

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



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 Amend SWD-1352 (8/27/2012)

Lime Rock Res II - ALP
Chate Davis 14 State #1
30-015-40629
Not In Compliance 5.9
1/28/2014 ✓
02/14/2014 ✓
Confirmed Compliance

- [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 Sibley Print or Type Name	<u>David Sibley</u> Signature	Production Engineer Title
	<u>12-30-13</u> Date	<u>dsibley@limerockresources.com</u> E-Mail Address

December 2, 2013

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

Attention: Mr. Richard Ezeanyim, P.E.
Chief Engineer

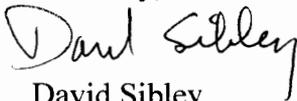
Re: Form C-108
Lime Rock Resources II-A, L.P.
Choate-Davis 14 State Com #1 SWD
API No. Not Yet Assigned
2310' FSL & 1650' FEL, Unit J
Section 14, T-18S, R-27E, NMPM,
Eddy County, New Mexico

Dear Mr. Ezeanyim,

Enclosed please find a Division Form C-108 (Application for Authorization to Inject) for the Lime Rock Resources II-A, L.P. ("LRR") Choate-Davis 14 State Com #1 SWD. LRR proposes to drill and utilize this well as a produced water disposal well, injection to occur into the Abo, Wolfcamp and Cisco formations through the perforated interval from 6,500 feet to 6,600 feet in the Abo formation and open hole from 6,650 feet to 9,000 feet through the Wolfcamp and Cisco formations. Produced water from the Glorieta, San Andres, Grayburg, Queen and Yeso formations originating from LRR 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 (713) 345-2134.

Sincerely,



David Sibley
Production Engineer
Lime Rock Resources II-A, L.P.
1111 Bagby Street, Suite 4600
Houston, Texas 77002

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: _____ Lime Rock Resources II-A, L.P. (OGRID-277558)
ADDRESS: _____ 1111 Bagby Street, Suite 4600 Houston, Texas 77002
CONTACT PARTY: _____ David Sibley, Production Engineer _____ PHONE: (713) 345-2134
- 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 Sibley _____ TITLE: _____ Production Engineer _____

SIGNATURE: _____ *David Sibley* _____ DATE: _____ 12-30-12 _____

E-MAIL ADDRESS: _____ dsibley@limerockresources.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.

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
Lime Rock Resources II-A, L.P.
Choate-Davis 14 State Com #1 SWD
2310' FSL & 1650' FEL (Unit J)
Section 14, T-18S, R-27E, NMPM
Eddy County, New Mexico

- I. The purpose of the application is to request approval to drill the Choate-Davis 14 State Com #1 SWD and complete it as a produced water disposal well in the Abo, Wolfcamp and Cisco formations.
- II. Lime Rock Resources II-A, L.P. (LRR)
1111 Bagby Street, Suite 4600
Houston, Texas 77002
Contact Party: David Sibley, Production Engineer-(713) 345-2134
- III. Injection well data sheet is attached. In addition, attached is a schematic well diagram showing the proposed wellbore configuration. LRR proposes to drill this well setting 13 3/8" casing at 300' cemented to surface, 9 5/8" casing at 2,800' cemented to surface, 7" casing at 6,675' cemented to 2,600', drill a 6 1/8" open into the Abo, Wolfcamp and Cisco formations through the perforated interval from 6,500 feet to 6,600 feet in the Abo formation and open hole from 6,650 feet to 9,000 feet through the Wolfcamp and Cisco formations.
- IV. This is not an expansion of an existing project.
- V. A map showing all wells/leases within a 2-mile radius of the Choate-Davis 14 State Com #1 SWD is attached. Also attached is a more detailed map showing the 1/2-mile Area of Review ("AOR") for the Choate-Davis 14 State Com #1 SWD.
- VI. Within the AOR, there is only one well that penetrates the proposed injection interval. This well is cased and cemented so as to preclude the migration of injected fluid from the proposed injection interval. There are also numerous active or plugged wells that produce or have produced from shallow horizons (i.e. Queen, Grayburg, San Andres, Gloreita, Yeso, ect.). The deepest of these penetrations is 2,575 feet. There are also no plugged wells within AOR that penetrate the proposed injection interval. The attached APR well table shows all AOR well data.
- VII.
 1. The average injection rate is anticipated to be approximately 10,000 BWPDP. The maximum rate will be approximately 20,000 BWPDP. If the average or maximum rates increase in the future, the Division will be notified.
 2. This will be a closed system.
 3. The injection pressure will initially be in conformance with the Division assigned gradient of 0.2 psi/ft. or 1300 psi. If a higher injection pressure is necessary, LRR will conduct a step rate injection test to determine the fracture pressure of the injection interval.

4. Produced water from the Glorieta, San Andres, Grayburg, Queen and Yeso formations originating from wells in the area of the disposal well will be injected into the Choate-Davis 14 State Com No.1 SWD. Attached are produced water analysis from the Glorieta-Yeso formation originating from LRR's Enron State, Kersey, Staley State A and Staley State wells, and a produced water analysis from the Queen-Grayburg-San Andres formation originating from LRR's Jeffery 1 and Jeffery 36 State wells.

5. Injection is to occur into the Abo, Wolfcamp and Cisco formations. Division records show that the Choate-Davis 14 State Com No. 1 SWD is located approximately: i) 1 mile from the outer boundary of the Empire-Abo Pool; ii) 1.25 miles from the outer boundary of the Chalk Bluff-Wolfcamp Pool; and iii) 0.75 miles from the outer boundary of the East Red Lake Upper Penn Gas Pool (**See attached pool maps**).

VIII. The proposed injection interval lies between depths of 6,500 feet and 9,000 feet and includes the Permian age lower Abo and Wolfcamp formations and the Pennsylvanian age Cisco formation. These formations serve as common disposal zones for this area of the Delaware Basin. Within the AOR, the interval consists of interbedded crystalline dolomites, limestones, and shales with the dolomites making up approximately 40 percent of the interval and generally providing for the better injection capacity. Their porosities range from 6% to 14% and average approximately 9%. The limestones are less porous but do offer some additional injection capacity with porosities ranging from 4% to 10%. In this area, fresh water occurs down to a depth of approximately 150 feet. No known fresh water sources underlie the injection interval.

IX. Proposed to acid stimulate the injection interval as needed.

X. Logs will be filed when the well is drilled.

XI. According to the State Engineer, there is one fresh water well located within one mile of the Choate-Davis 15 State Com No. 1 SWD. This well is located in the NW/4 SE/4 SE/4 of Section 14, and is reportedly 2,096' feet deep. The report does not indicate depth to fresh water in this well. LRR has conducted a field survey and was unable to locate this reported fresh water well. It is likely that the well has been plugged.

XII. Affirmative Statement is attached

XIII. Proof of notice is attached

INJECTION WELL DATA SHEET

Tubing Size: 4 1/2" Lining Material: Duoline Fiberglass Coated

Type of Packer: Arrowset IX or similar type injection packer

Packer Setting Depth: 6,425' or within 100' of the uppermost injection perforations

Other Type of Tubing/Casing Seal (if applicable): None

Additional Data

1. Is this a new well drilled for injection: Yes No

If no, for what purpose was the well originally drilled: _____

2. Name of the Injection Formation: Abo, Wolfcamp and Cisco Formations

3. Name of Field or Pool (if applicable): There are no Abo, Wolfcamp or Cisco pools in Section 14.

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

None. _____

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Within Section 14: Artesia Queen-Grayburg-San Andres Pool (1,478'-3,850'); Red Lake Atoka-Morrow Gas Pool. The subject well is located approximately 1 mile from the outer boundary of the Empire -Abo Pool, approximately 1.2 miles from the outer boundary of the Chalk Bluff Wolfcamp Pool, and approximately 0.75 miles from the outer boundary of the East Red Lake Upper-Penn Gas Pool (See Attached Maps).

LIME ROCK RESOURCES	County	Well Name		Field	Well Sketch	
	EDDY	Choate-Davis 14 State Com #1 SWD		East Artesia	ABO Wolfcamp Cisco SWD Lime Rock Resources II-A, L.P.	
Surface Lat	32.7467126° N (NAD 27)	BH Lat	Same	Survey	S14-T18S-R27E, NE/4 Unit J	API # New
Surface Long	104.2454330° W	BH Long	Same	SHL	2310' FSL & 1650' FEL	OGRID # 277558

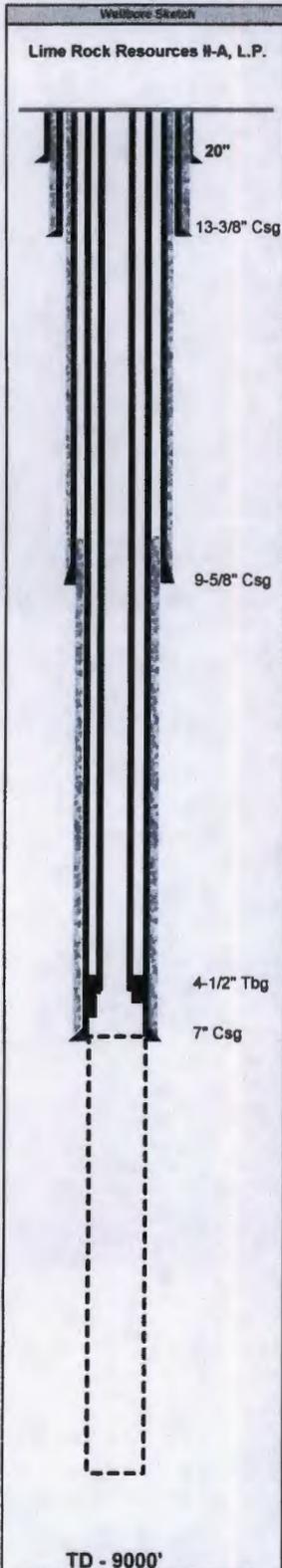
Directional Data:		Tubular Data							Wellhead Data	
KOP	NA	Tubulars	Size	Weight	Grade	Thread	TVD	MD	TOC	Type
Max Dev		Conductor	20"	91.5#	B	Weld	40'	40'	SURF	WP:
Diag sev	0	Surface	13-3/8"	48#	H-40	STC	300'	300'	SURF	Flange
Dev @ Perfs	0	Intermediate	9-5/8"	38#	J-55	LTC	2,800'	2,800'	SURF	Tree Cap
Ret to Vert	Straight Hole	Production	7"	26#	L-80	LTC	6,650'	6,650'	2600	Thread
		Liner								Tbg Hanger

Drilling / Completion Fluids			
Drilling Fluid:	10 PPG Brine / Salt Gel		
Drilling Fluid:	9.4 PPG Brine/Salt gel in 6-1/8"		
Completion Fluid:	2% KCL		
Completion Fluid:			
Packer Fluid:	2% KCL w/ Bacteriacide & O2 Sc		

CEMENT DATA			
Surface	L/sks	Yld	WT
Surface	280	1.34	14.8
Intermediate	320	1.903	12.8
Production	310	1.84	13.2
Liner			

Surface	L/sks	Yld	WT	T/sks	Yld	WT	XS
Surface	280	1.34	14.8	NA	NA	NA	200%
Intermediate	320	1.903	12.8	525	1.33	14.8	150%
Production	310	1.84	13.2	350	1.18	15.2	150%
Liner							

Wellhead Data	
8TM Flange:	
BPV Profiler:	NA
Elevations:	GR - RKB = 13.4'
RKB est	3524.7'
GL:	3511.3'

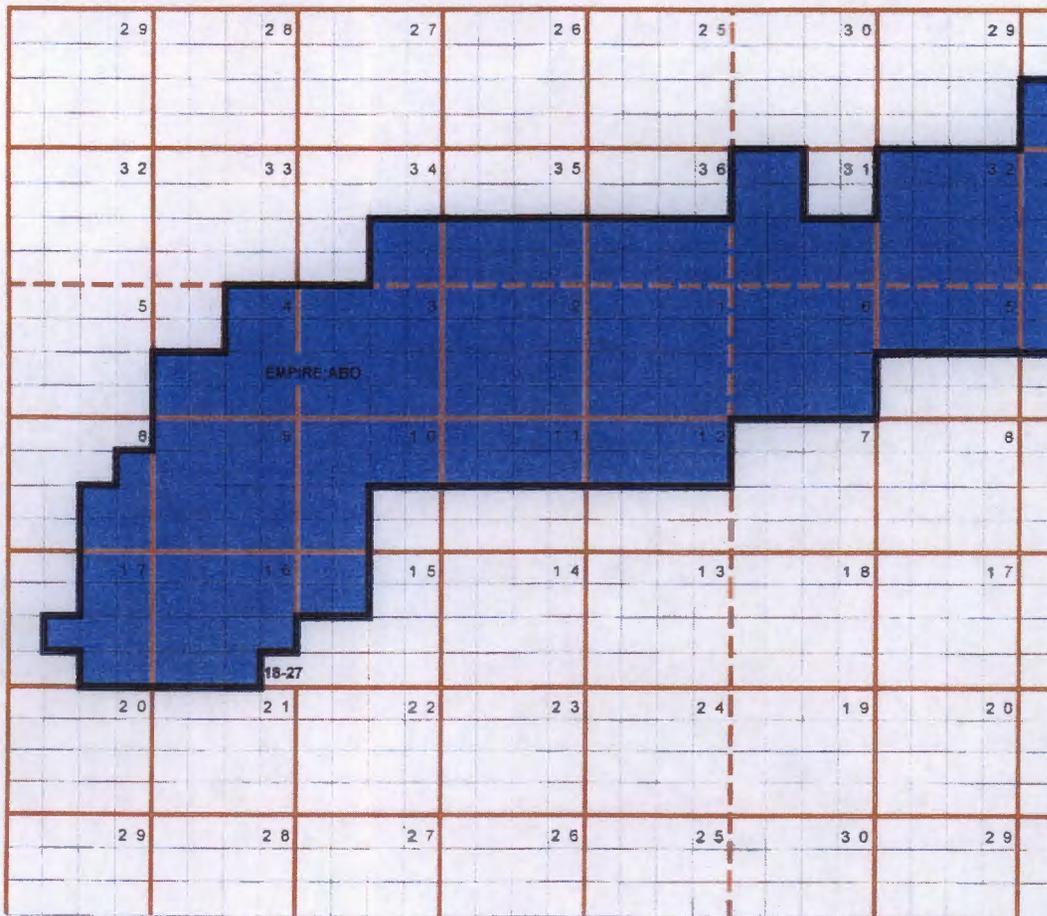


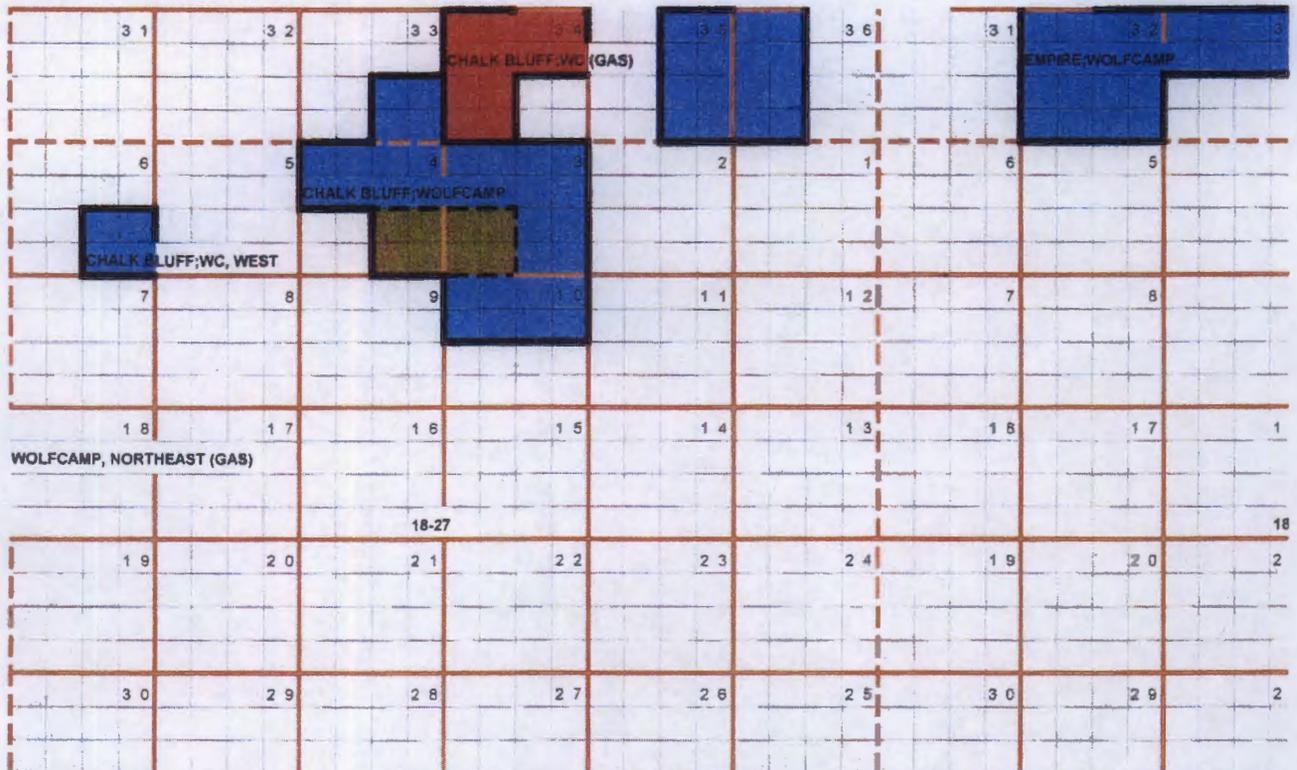
Completion Information					
DEPTHS (MD)	FORMATION TOPS /	PERFORATIONS		# of HOLES	DETAILS
		from	to		
40	26" Hole				20" Conductor Pipe Cmt'd to Surf w/ ready mix
	17-1/2" Hole				
300'	12-1/4" Hole				13-3/8" Casing set at 300' and cmt'd to surf
480'	Seven Rivers Sand				
1075'	Queen Sand				
1900'	San Andres Formation				
2600'					TOC behind 7", 26# Casing
2,800'	8-3/4" Hole				9-5/8" Casing set at 2800' and cmt'd to surf
3630'	Glorieta Top				
3780'	Yeso Formation				
5250'	Abo Formation				
6450'	Tubing				4-1/2", 11.6#, tbg, duolined @ 6450' with a packer
6500'	ABO Inj Zone	6,500'	6,600'		
6650'	Wolfcamp Formation				
	Wolfcamp Inj Zone	6,650'	7,685'		7", 26# Casing set at 6650' & cmt'd to 2600'
	6-1/2" hole				
7685'	Cisco Formation	7,685'	9,000'		
	and Injection Zone				
9000'	Cisco Formation				
9000'	Total Depth				

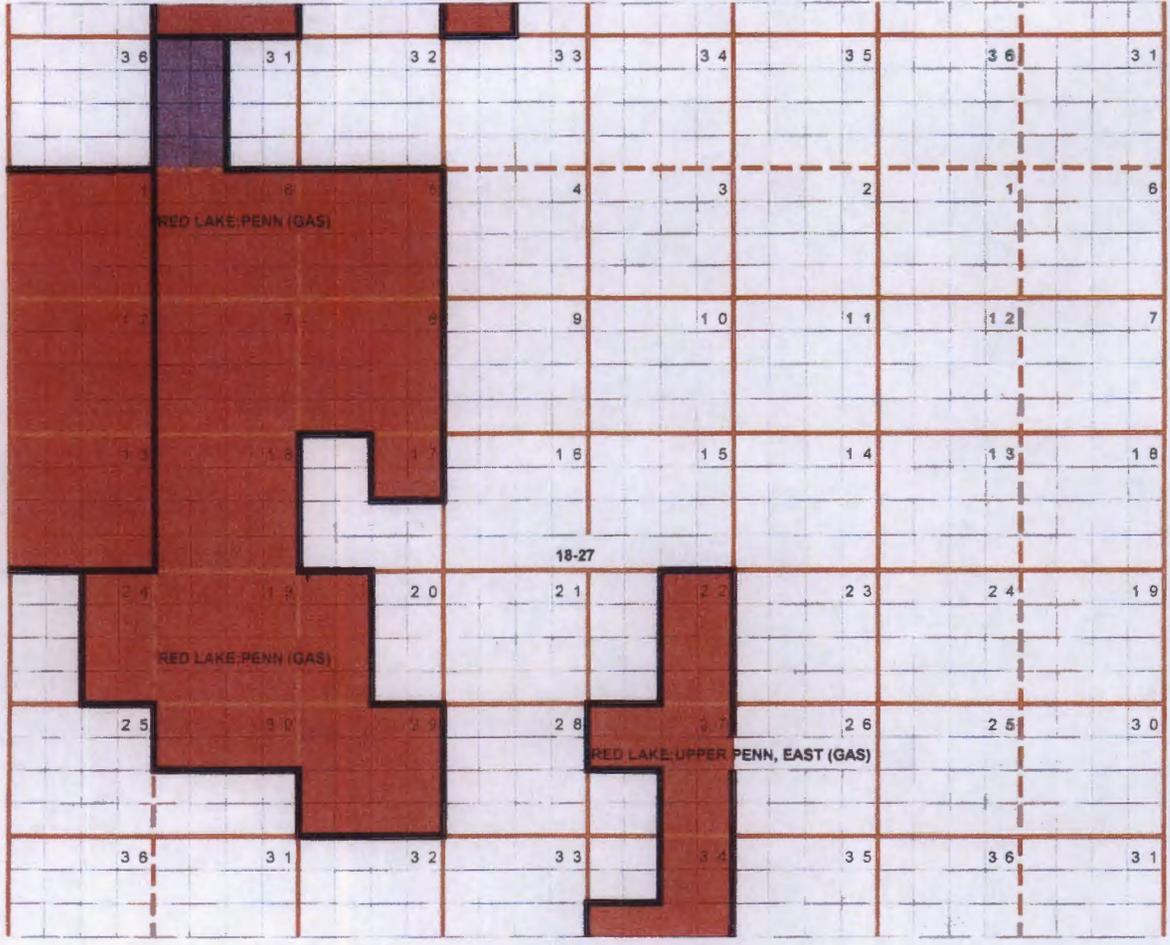
Cased Injection Zone
ABO Injection
6500' to 6600' MD (100 Holes)

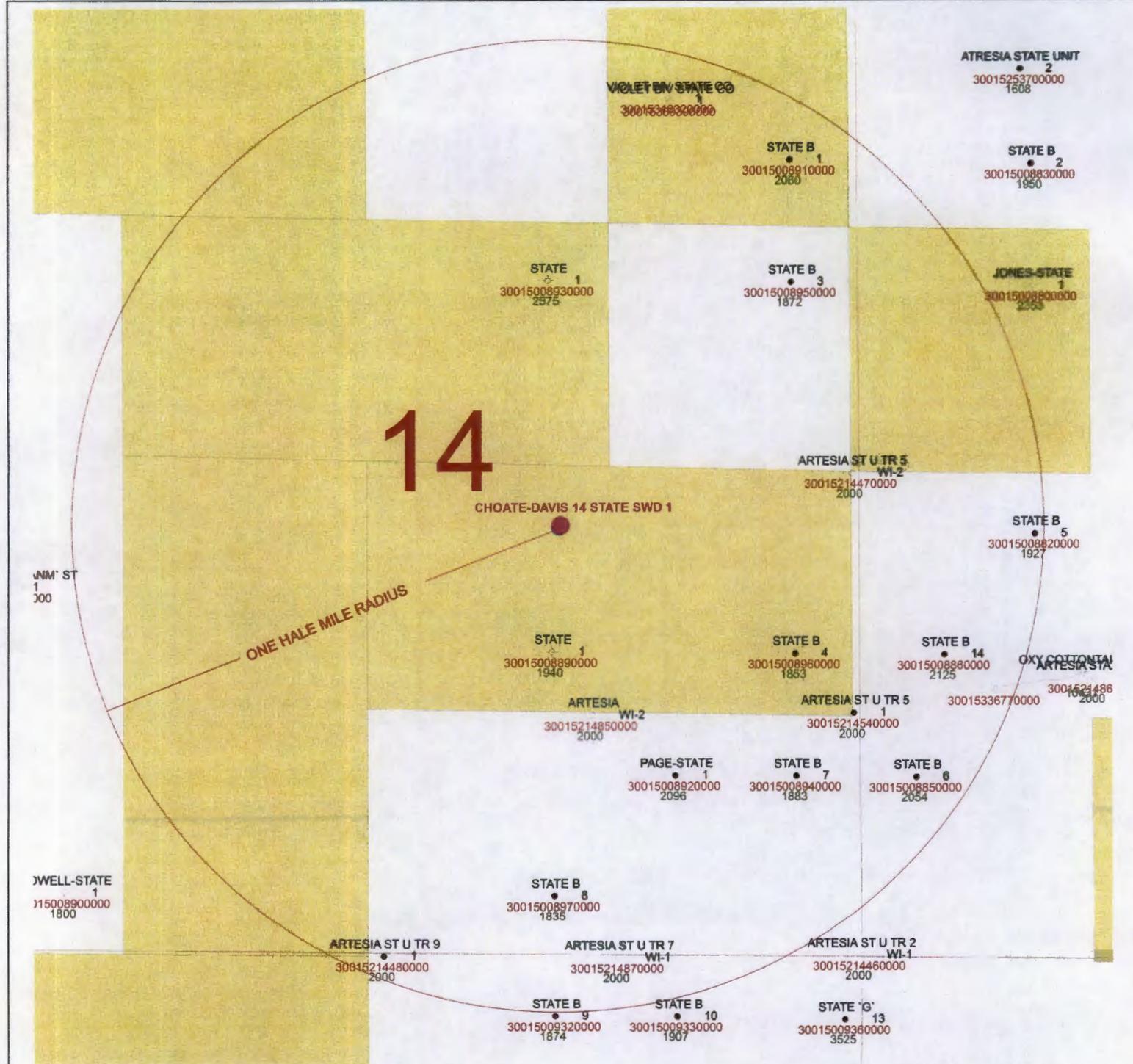
Open Hole Injection Zone
Wolfcamp Injection
6650' to 7685' MD
Cisco Injection
7685' to 9000' MD

Comments	Plug back Depth:	9,000'	MD
Packer will be set within 100' of the top perforation.	Total Well Depth:	9,000'	MD
	Prepared By:	Date	
	Spencer Cox	17-Jun-13	









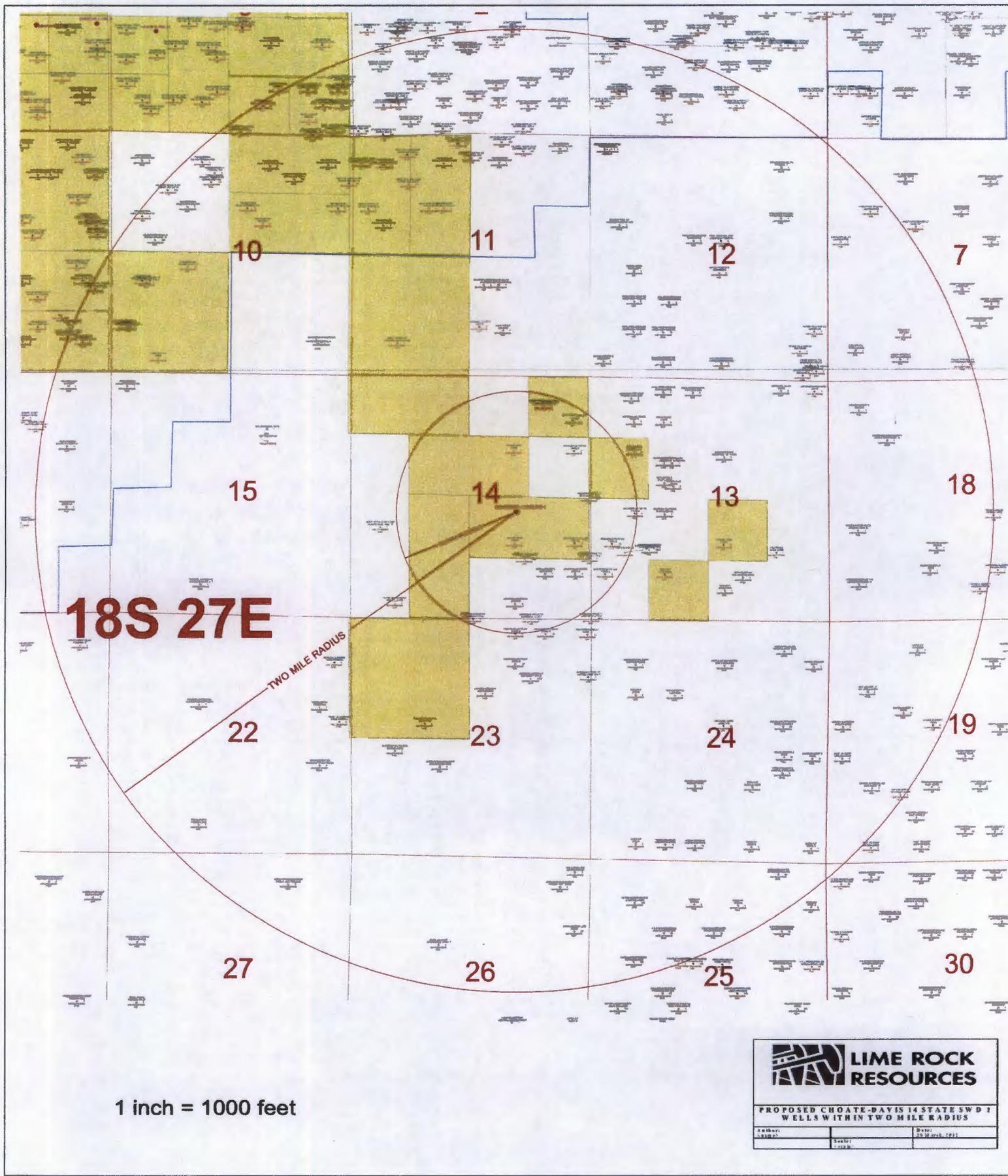
1 inch = 400 feet



LIME ROCK RESOURCES

PROPOSED CHOATE-DAVIS 14 STATE SWD 1 WELLS WITHIN ONE HALF MILE RADIUS

Author: []	Scale: []	Date: 29 March, 2012
Drawn by: []	Scale: []	



LIME ROCK RESOURCES

PROPOSED CHOATE-DAVIS 14 STATE SWD 1 WELLS WITHIN TWO MILE RADIUS

Author:	Scale:	Date:
LRRM:	1:2500	10 March 1991

CHOATE - DAVIS 14 STATE SWD #1 WELL
Section 13, 14, 23 - T18 - R27 - Eddy County, NM

Well Name	Well #	API	Operator	Sec	Lot	TWN	RGE	N/S Dir	E/W Dir	Well Type	Status	Spud Date	Sur Hole	Surf Cag Size	SK Cmt	CMT TOC	TOC / MTD	Prod Hole	Prod Cag Size	SK Cmt	CMT TOC	TOC / MTD	TD	Perf	Pool	COMMENTS	
PRE-ONGARD WELL #001		30-015-00880	Pre-Ongard Well Operator	13	E	18S	27E	1650 FNL	990 FWL	Oil	Plugged														NA		
ARTESIA STATE UNIT #602	602	30-015-21486	ALAMO PERMIAN RESOURCES, LLC	13	L	18S	27E	1530 FSL	1310 FWL	Injection	Active	3/11/75	12 1/4"	8 5/8" @ 322'	160	Surf	6 yds Redimix	7 7/8"	4 1/2" @ 2000'	270			Circ	2010'	1794' - 1980'	Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Dec 2011
OXY COTTONTAIL STATE #001	1	30-015-33677	OXY USA WTP LIMITED PARTNERSHIP	13	L	18S	27E	1470 FSL	750 FWL	Gas	Active	12/28/04	17 1/2"	13 3/8" @ 432'	460	Surf	Circ	8 3/4"	5 1/2" @ 10431'	1600	1680'	Temp. Survey	10431'	9936' - 9970'	UNDSG - Red Lake Atoka - Morrow	Production as per Go-Tech: Apr. 2005 - Jan 2012 Intermediate	
PRE-ONGARD WELL #001	1	30-015-00882	Pre-Ongard Well Operator	13	L	18S	27E	2310 FSL	990 FWL	Oil	Plugged														NA		
ARTESIA STATE UNIT #201	201	30-015-21446	ALAMO PERMIAN RESOURCES, LLC	13	M	18S	27E	10 FSL	10FWL	Injection	Active	2/15/75	12 1/4"	8 5/8" @ 289'	155	Surf	3 yds Redimix	7 7/8"	4 1/2" @ 2000'	370	surf		Circ	2010'	1771' - 1950'	Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Dec 2011
PRE-ONGARD WELL #002	2	30-015-00885	Pre-Ongard Well Operator	13	M	18S	27E	990 FSL	300 FEL	Oil	Plugged														1995'		
PRE-ONGARD WELL #001	1	30-015-00891	Pre-Ongard Well Operator	14	A	18S	27E	990 FNL	330 FEL	Oil	Plugged														NA		
VIOLET BIV STATE COM #001	1	30-015-36939	YATES PETROLEUM CORPORATION	14	A	18S	27E	660 FNL	990 FEL	Gas	Cancelled APD																
VIOLET BIV STATE COM #001	1	30-015-34632	YATES PETROLEUM CORPORATION	14	A	18S	27E	660 FNL	990 FEL	Gas	Cancelled APD																
NO WELL				14	B	18S	27E																				
NO WELL				14	C	18S	27E																				
NO WELL				14	E	18S	27E																				
NO WELL				14	F	18S	27E																				
PRE-ONGARD WELL #001	1	30-015-00893	Pre-Ongard Well Operator	14	G	18S	27E	1650 FNL	1650 FEL	Oil	Plugged														NA		
ARTESIA STATE UNITE #301	301	30-015-00895	ALAMO PERMIAN RESOURCES, LLC	14	H	18S	27E	1650 FNL	330 FEL	Oil	Active	2/8/45	12 1/4"	10" @ 320'				8"	7"	50	surf	w/ 1" pipe	1,888'		Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Jan 2012	
ARTESIA STATE UNITE #501	501	30-015-21454	ALAMO PERMIAN RESOURCES, LLC	14	I	18S	27E	1330 FSL	10 FEL	Oil	Active	2/5/75	12 1/4"	8 5/8" @ 285'	210	Surf	6 yds Redimix	7 7/8"	4 1/2" @ 2000'	300	surf		Circ	2,010'	1718' - 1902'	Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Dec 2012
ARTESIA STATE UNIT #502	502	30-0150-21447	ALAMO PERMIAN RESOURCES, LLC	14	I	18S	27E	2630 FSL	10 FEL	Injection	Active	2/25/57	12 1/4"	8 5/8" @ 288'	210		Circ	7 7/8"	4 1/2" @ 2000'	265	surf		Circ	2,010'	1709' - 1892'	Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Dec 2012
PRE-ONGARD WELL #004	4	30-015-00896	Pre-Ongard Well Operator	14	I	18S	27E	1650 FSL	330 FEL	Oil	Plugged	4/10/45													1,853'		
PRE-ONGARD WELL #001	1	30-015-00889	Pre-Ongard Well Operator	14	J	18S	27E	1650 FSL	1650 FEL	Oil	Plugged	8/15/45													1,946'		
NO WELL				14	K	18S	27E																				
NO WELL				14	L	18S	27E																				
NO WELL				14	M	18S	27E																				
NO WELL				14	N	18S	27E																				
ARTESIA STATE UNIT #102	102	30-015-21485	ALAMO PERMIAN RESOURCES, LLC	14	O	18S	27E	1310 FSL	1435 FEL	Injection	Active	3/15/75	12 1/4"	8 5/8" @ 329'	210	Surf	5 yds Redimix	7 7/8"	4 1/2" @ 1993'	260	surf		Circ	2,010'	1655' - 1835'	Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Nov 2011
PRE-ONGARD WELL #001	1	30-015-00897	Pre-Ongard Well Operator	14	O	18S	27E	330 FSL	1650 FEL	Oil	Plugged														1,835'		
PRE-ONGARD WELL #003	3	30-01500894	Pre-Ongard Well Operator	14	P	18S	27E	990 FNL	330 FEL	Oil	Plugged	4/21/45													1,883'		
Wells not in Circle				23	A	18S	27E																				
ARTESIA STATE UNIT #701	701	30-01521487	ALAMO PERMIAN RESOURCES, LLC	23	B	18S	27E	10 FNL	2580 FEL	Injection	Active	3/6/75	12 1/4"	8 5/8" @ 290'	160	surf	8 yds Redimix	7 7/8"	4 1/2" @ 1994'	270	surf		Circ	2010'	1633' - 1813'	Artesia QN-GB-SA	Production as per Go-Tech: Dec 1992 - Oct 2011
PRE-ONGARD WELL #002	2	30-015-00932	Pre-Ongard Well Operator	23	B	18S	27E	330 FNL	1650 FEL	Oil	Plugged	9/14/45													1,874'		
ARTESIA STATE UNIT #007	3	30-015-00935	ANADARKO PRODUCTION COMPANY	23	B	18	27E	990 FNL	1650 FEL	Oil	Plugged	6/27/49													1,921'		
NO WELL				23	C	18S	27E																				

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Co. : LimeRock Resources
 Lease : Enron
 Well No.: ST
 Location:
 Attention:

Date Sampled : 15-July-2010
 Date Analyzed: 28-July-2010
 Lab ID Number: Jul2810.001- 9
 Salesperson :
 File Name : Jul2810.001

ANALYSIS

1. Ph
2. Specific Gravity 60/60 F.
3. CaCO3 Saturation Index

5.600
1.138

@ 80F
@140F

-0.530 Negligible
0.410 Mild

Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

MG/L. EQ. WT. *MEQ/L

100

80

Not Determined

Cations

7. Calcium (Ca++)
8. Magnesium (Mg++)
9. Sodium (Na+)
10. Barium (Ba++)

(Calculated)

2,166 / 20.1 = 107.76

971 / 12.2 = 79.59

65,383 / 23.0 = 2,842.74

Not Determined

Anions

11. Hydroxyl (OH-)
12. Carbonate (CO3=)
13. Bicarbonate (HCO3-)
14. Sulfate (SO4=)
15. Chloride (Cl-)
16. Total Dissolved Solids
17. Total Iron (Fe)
18. Manganese (Mn++)
19. Total Hardness as CaCO3
20. Resistivity @ 75 F. (Calculated)

0 / 17.0 = 0.00

0 / 30.0 = 0.00

714 / 61.1 = 11.69

4,200 / 48.8 = 86.07

103,977 / 35.5 = 2,928.93

177,411

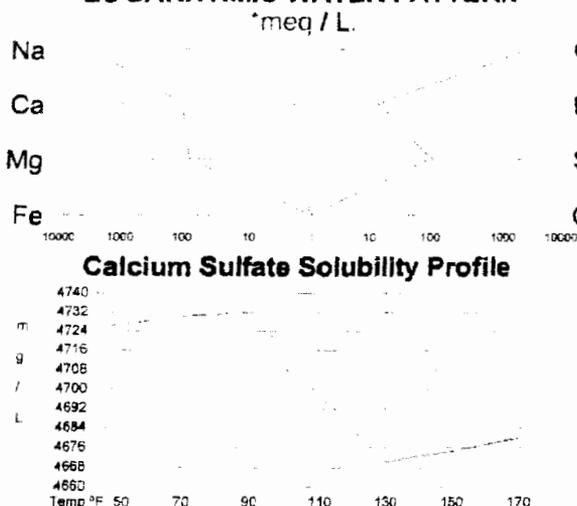
1.50 / 18.2 = 0.08

Not Determined

9,408

0.017 Ohm · meters

LOGARITHMIC WATER PATTERN



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	11.69		81.04		947
CaSO4	86.07		68.07		5,858
CaCl2	10.01		55.50		556
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	79.59		47.62		3,790
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	2,839.33		58.46		165,987

* milliequivalents per Liter

Tony Abernathy, Analyst

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Client Co.: **LimeRock Resources**
 Lease: **Kersey**
 Well No.: **ST**
 Location:
 Attention:

Date Sampled: **15-July-2010**
 Date Analyzed: **28-July-2010**
 Lab ID Number: **Jul2810.001- 6**
 Salesperson:
 File Name: **Jul2810.001**

ANALYSIS

1. Ph **5.600**
2. Specific Gravity 60/60 F. **1.143**
3. CaCO3 Saturation Index

80F
 @ 140F

-0.496 Negligible
 0.494 Mild

Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

MG/L. EQ. WT. *MEQ/L

30
 50
 Not Determined

Cations

7. Calcium (Ca++)
8. Magnesium (Mg++)
9. Sodium (Na+)
10. Barium (Ba++)

(Calculated)

2,072 / 20.1 = **103.08**
1,143 / 12.2 = **93.69**
69,836 / 23.0 = **3,036.35**
 Not Determined

Anions

11. Hydroxyl (OH-)
12. Carbonate (CO3=)
13. Bicarbonate (HCO3-)
14. Sulfate (SO4=)
15. Chloride (Cl-)
16. Total Dissolved Solids
17. Total Iron (Fe)
18. Manganese (Mn++)
19. Total Hardness as CaCO3
20. Resistivity @ 75 F. (Calculated)

0 / 17.0 = **0.00**
0 / 30.0 = **0.00**
686 / 61.1 = **11.23**
4,500 / 48.8 = **92.21**
110,975 / 35.5 = **3,126.06**
189,212
14.50 / 18.2 = **0.80**
 Not Determined
9,879
0.008 Ohm · meters

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	11.23		81.04		910
CaSO4	91.86		68.07		6,253
CaCl2	0.00		55.50		0
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.36		60.19		21
MgCl2	93.33		47.62		4,444
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,032.72		58.46		177,293

* milliequivalents per Liter

Tony Abernathy, Analyst

Pro-Kem WATER ANALYSIS REPORT

SAMPLE

Co.: Lime Rock Resources
 Lease : Staley ST A
 Well No.:
 Location:
 Attention:

Date Sampled : 15-July-2010
 Date Analyzed: 28-July-2010
 Lab ID Number: Jul2810.003- 5
 Salesperson :
 File Name : Jul2810.003

ANALYSIS

- 1. Ph 5.600
- 2. Specific Gravity 60/60 F. 1.118
- 3. CaCO3 Saturation Index

-0.204 Negligible
 0.716 Moderate

Dissolved Gasses

	MG/L.	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	80		
5. Carbon Dioxide	160		
6. Dissolved Oxygen	Not Determined		

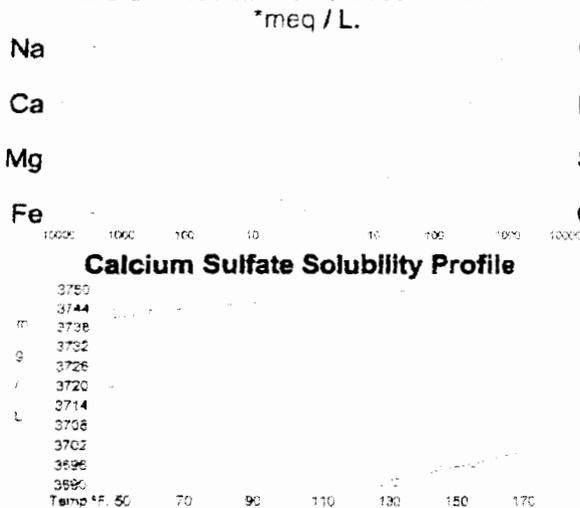
Cations

7. Calcium (Ca++)	3,391	/ 20.1 =	168.71
8. Magnesium (Mg++)	1,371	/ 12.2 =	112.38
9. Sodium (Na+) (Calculated)	58,430	/ 23.0 =	2,540.44
10. Barium (Ba++)	Not Determined		

Anions

11. Hydroxyl (OH-)	0	/ 17.0 =	0.00
12. Carbonate (CO3=)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO3-)	1,060	/ 61.1 =	17.35
14. Sulfate (SO4=)	3,400	/ 48.8 =	69.67
15. Chloride (Cl-)	96,978	/ 35.5 =	2,731.77
16. Total Dissolved Solids	164,630		
17. Total Iron (Fe)	18.00	/ 18.2 =	0.99
18. Manganese (Mn++)	Not Determined		
19. Total Hardness as CaCO3	14,113		
20. Resistivity @ 75 F. (Calculated)	0.027 Ohm · meters		

LOGARITHMIC WATER PATTERN



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X EQ. WT.	= mg/L.
Ca(HCO3)2	17.35	81.04	1,406
CaSO4	69.67	68.07	4,743
CaCl2	81.69	55.50	4,534
Mg(HCO3)2	0.00	73.17	0
MgSO4	0.00	60.19	0
MgCl2	112.38	47.62	5,351
NaHCO3	0.00	84.00	0
NaSO4	0.00	71.03	0
NaCl	2,537.71	58.46	148,355

* milliequivalents per Liter

Tony Abernathy, Analyst

Pro-Kem WATER ANALYSIS REPORT

SAMPLE

Co.: Lime Rock Resources
 Lease: Staley ST
 Well No.:
 Location:
 Attention:

Date Sampled: 15-July-2010
 Date Analyzed: 28-July-2010
 Lab ID Number: Jul2810.003- 4
 Salesperson:
 File Name: Jul2810.003

ANALYSIS

- 1. Ph 5.500
- 2. Specific Gravity 60/60 F. 1.178
- 3. CACO3 Saturation Index

-2.905 Negligible
 -1.145 Negligible

Dissolved Gasses

- 4. Hydrogen Sulfide 0
- 5. Carbon Dioxide 0
- 6. Dissolved Oxygen Not Determined

MG/L. EQ. WT. *MEQ/L

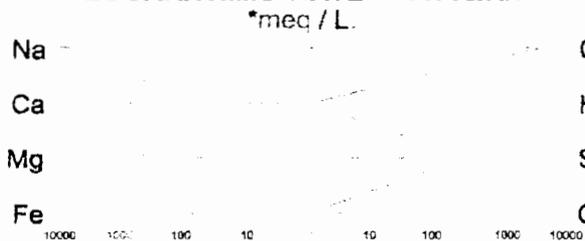
Cations

- 7. Calcium (Ca++) 1,884 / 20.1 = 93.73
- 8. Magnesium (Mg++) 5,371 / 12.2 = 440.25
- 9. Sodium (Na+) (Calculated) 80,438 / 23.0 = 3,497.30
- 10. Barium (Ba++) Not Determined

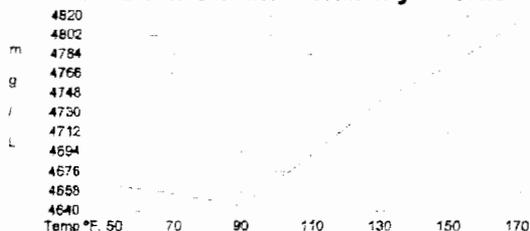
Anions

- 11. Hydroxyl (OH-) 0 / 17.0 = 0.00
- 12. Carbonate (CO3=) 0 / 30.0 = 0.00
- 13. Bicarbonate (HCO3-) 0 / 61.1 = 0.00
- 14. Sulfate (SO4=) 15,000 / 48.8 = 307.38
- Chloride (Cl-) 131,970 / 35.5 = 3,717.46
- 16. Total Dissolved Solids 234,663
- 17. Total Iron (Fe) 2,500.00 / 18.2 = 137.36
- 18. Manganese (Mn++) Not Determined
- 19. Total Hardness as CaCO3 26,814
- 20. Resistivity @ 75 F. (Calculated) 0.001 Ohm · meters

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	0.00		81.04		0
CaSO4	93.73		68.07		6,380
CaCl2	0.00		55.50		0
Mg(HCO3)2	0.00		73.17		0
MgSO4	213.65		60.19		12,859
MgCl2	226.60		47.62		10,791
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,490.86		58.46		204,076

* milliequivalents per Liter

Tony Abernathy, Analyst

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Co. : LimeRock Resources
 Lease : Jeffery 36
 Well No.: ST
 Location:
 Attention:

Date Sampled : 15-July-2010
 Date Analyzed: 28-July-2010
 Lab ID Number: Jul2810.001-7
 Salesperson :
 File Name : Jul2810.001

ANALYSIS

- 1. Ph 5.600
- 2. Specific Gravity 60/60 F. 1.143
- 3. CaCO3 Saturation Index @ 80F
@140F

Dissolved Gasses

- 4. Hydrogen Sulfide 30
- 5. Carbon Dioxide 100
- 6. Dissolved Oxygen Not Determined

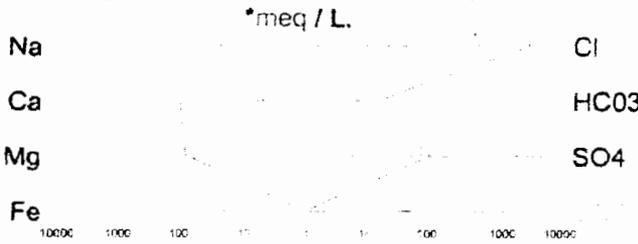
Cations

- | | | | | | | |
|-----|-----------|--------|--------------|----------------|----------|----------|
| 7. | Calcium | (Ca++) | | 2,072 | / 20.1 = | 103.08 |
| 8. | Magnesium | (Mg++) | | 971 | / 12.2 = | 79.59 |
| 9. | Sodium | (Na+) | (Calculated) | 69,530 | / 23.0 = | 3,023.04 |
| 10. | Barium | (Ba++) | | Not Determined | | |

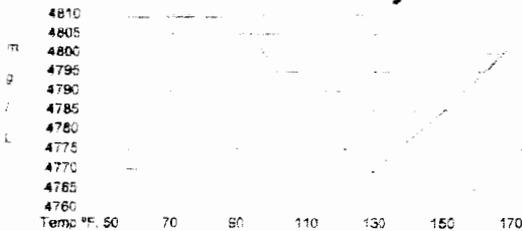
Anions

- | | | | | | | |
|-----|----------------------------------|---------|--|----------------|----------|--------------|
| 11. | Hydroxyl | (OH-) | | 0 | / 17.0 = | 0.00 |
| 12. | Carbonate | (CO3=) | | 0 | / 30.0 = | 0.00 |
| 13. | Bicarbonate | (HCO3-) | | 857 | / 61.1 = | 14.03 |
| 14. | Sulfate | (SO4=) | | 4,400 | / 48.8 = | 90.16 |
| 15. | Chloride | (Cl-) | | 109,975 | / 35.5 = | 3,097.89 |
| 16. | Total Dissolved Solids | | | 187,805 | | |
| 17. | Total Iron | (Fe) | | 1.00 | / 18.2 = | 0.05 |
| 18. | Manganese | (Mn++) | | Not Determined | | |
| 19. | Total Hardness as CaCO3 | | | 9,173 | | |
| 20. | Resistivity @ 75 F. (Calculated) | | | 0.009 | | Ohm · meters |

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	14.03		81.04		1,137
CaSO4	89.06		68.07		6,062
CaCl2	0.00		55.50		0
Mg(HCO3)2	0.00		73.17		0
MgSO4	1.11		60.19		67
MgCl2	78.48		47.62		3,737
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,019.40		58.46		176,514

* milliequivalents per Liter

Tony Abemathy, Analyst



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
 O=orphaned,
 C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
			LE	4	1	2	10	18S	27E	569019	3625660*	130	50	80
			LE	1	4	4	14	18S	27E	570841	3623030*	2096		
												Average Depth to Water:		50 feet
												Minimum Depth:		50 feet
												Maximum Depth:		50 feet

Record Count: 2

PLSS Search:

Section(s): 10-15 Township: 18S Range: 27E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



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

No records found.

PLSS Search:

Section(s). 22-24

Township: 18S

Range 27E

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.

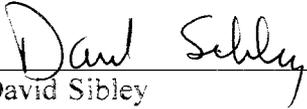
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Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Form C-108
Affirmative Statement
Lime Rock Resources II-A, L.P.
Choate-Davis 14 State Com No. 1 SWD
Section 14, T-18 South, R-27 East, NMPPM,
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 Sibley
Production Engineer
Lime Rock Resources II-A, L.P.

12-30-13

Date

Form C-108
Lime Rock Resources II-A, L.P.
Choate-Davis 14 State Com No. 1 SWD
Section 14, T-18 South, R-27 East, NMPM,
Eddy County, New Mexico

Legal notice will be published in the:

*Artesia Daily Press
P.O. Box 190
Artesia, New Mexico 88221-0190*

A copy of the legal advertisement will be forwarded to the Division upon publication.

Lime Rock Resources II-A, L.P., 1111 Bagby Street, Suite 4600, Houston, Texas 77002 has filed a Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to utilize as a produced water disposal well it's proposed Choate-Davis 14 State Com #1 SWD to be drilled 2310' FSL & 1650' FEL (Unit J) of Section 14, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico. The well will be utilized to dispose produced water from various producing formations in the area of the disposal well. Injection will occur into the Abo, Wolfcamp and Cisco formations through the perforated interval from 6,500 feet to 6,600 feet in the Abo formation and in an open hole section from 6,650 feet to 9,000 feet through the Wolfcamp and Cisco formations. The average and maximum injection rates will be 10,000 and 20,000 barrels of water per day, respectively, and the average and maximum surface injection pressure is anticipated to be 1,000 psi and 1,300 psi, respectively.

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 David Sibley, Production Engineer, Lime Rock Resources II-A at (713) 345-2134.

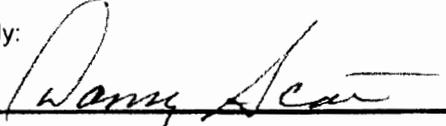
Affidavit of Publication

NO. 22799

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	<u>December 4, 2013</u>
Second Publication	_____
Third Publication	_____
Fourth Publication	_____
Fifth Publication	_____

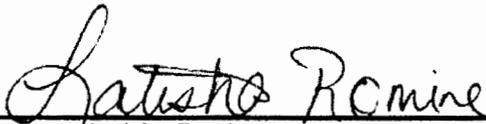
Subscribed and sworn to before me this

4th day of December 2013



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015



Latisha Romine
Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Lime Rock Resources II-A, L.P., 1111 Bagby Street, Suite 4600, Houston, Texas 77002 has filed a Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to utilize as a produced water disposal well it's proposed Choate-Davis 14 State Com #1 SWD to be drilled 2310' FSL & 1650' FEL (Unit J) of Section 14, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico. The well will be utilized to dispose produced water from various producing formations in the area of the disposal well. Injection will occur into the Abo, Wolfcamp and Cisco formations through the perforated interval from 6,500 feet to 6,600 feet in the Abo formation and in an open hole section from 6,850 feet to 9,000 feet through the Wolfcamp and Cisco formations. The average and maximum injection rates will be 10,000 and 20,000 barrels of water per day, respectively, and the average and maximum surface injection pressure is anticipated to be 1,000 psi and 1,300 psi, respectively.

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 David Sibley, Production Engineer, Lime Rock Resources II-A at (713) 345-2134.

Published in the Artesia Daily Press, Artesia, N.M., Dec. 4 2013. Legal No 22799.

December 2, 2013

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

TO: OFFSET OPERATORS/LEASEHOLD OWNERS/WORKING INTEREST OWNERS
& SURFACE OWNER

Re: Lime Rock Resources II-A, L.P.
Form C-108 (Application for Authorization to Inject)
Choate-Davis 14 State Com #1 SWD
API No. Not Yet Assigned
2310' FSL & 1650' FEL, Unit J, Section 14, T-18S, R-27E, NMPM,
Eddy County, New Mexico

Ladies & Gentlemen:

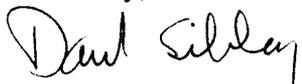
Enclosed please find a copy of Oil Conservation Division Form C-108 (Application for Authorization to Inject) for the Lime Rock Resources II-A, L.P. ("LRR") Choate-Davis 14 State Com #1 SWD. You are being provided a copy of the application as an offset operator, offset leaseholder, offset working interest owner or surface owner. LRR proposes to drill this well and complete it as a produced water disposal well, injection to occur into the Abo, Wolfcamp and Cisco formations through the perforated interval from 6,500 feet to 6,600 feet in the Abo formation and open hole from 6,650 feet to 9,000 feet through the Wolfcamp and Cisco formations.

This application is being filed administratively. If the application qualifies, LRR is seeking administrative approval of this application. Objections must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days.

If a hearing for this application is required, this application will be set for hearing before a Division Examiner at the next available hearing at the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico. You are not required to attend this hearing, should it take place, but as an owner of an interest that may be affected, you may appear and present testimony. Failure to appear at the time and become a party of record will preclude you from challenging this application at a later time. If you intend to attend the hearing and present testimony or evidence, you must enter your appearance and serve the Division, counsel for the Applicant, and other parties with a pre-hearing statement at least four business days before the scheduled hearing date in accordance with 19.15.4.13(B) NMAC.

If you should have any questions, please contact me at (713) 345-2134.

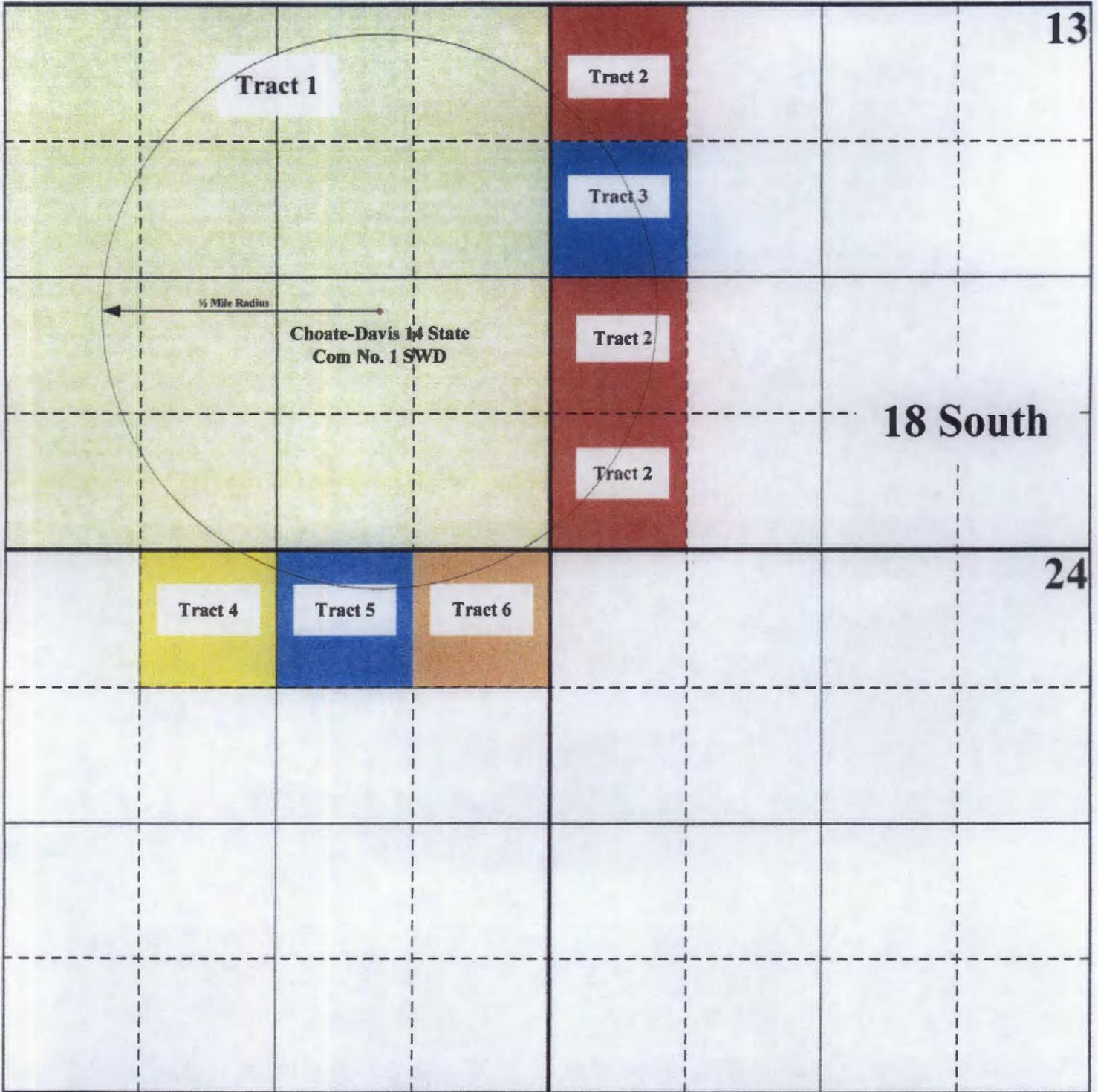
Sincerely,



David Sibley, Production Engineer
Lime Rock Resources II-A, L.P.
1111 Bagby Street, Suite 4600
Houston, Texas 77002

Enclosure

27 East



Form C-108

Choate-Davis 14 State Com No. 1 SWD

1/2 Mile Notice Area

Operator/Leasehold Owner Identification

TRACT 1
Operator & Working
Interest Ownership

ABO Petroleum Corp.
105 S. 4th Street
Artesia, NM 88210

Columbia II Limited Partnership
P.O. Box 22066
Denver, CO 80222

USX Corp.
1 Pennsylvania Ave.
Fairless Hills, PA 19030

Estate of Robert E. Bolins
305 S. 5th Street
Artesia, NM 88210

Rio Grande Energy Inc.
P.O. Box 7405
Midland, TX 79708

Geronimo Holding Corp.
P.O. Box 804
Midland, TX 79702

Duke Energy Field Services, LP
10 Destra Drive, Suite 400
Midland, TX 79705

Lobos Energy Partners, LLC
309 S. Halagueno Street
Carlsbad, NM 88220

Mark D. Wilson
4501 Greentree Blvd.
Midland, TX 79707

Anadarko Petroleum Corporation
1201 Lake Robbins Drive
The Woodlands, TX 77380

Chevron USA
1500 Louisiana Street
Houston, TX 77002

Mark A. Chapman
P.O. Box 450
Sealy, TX 77474

Devon Energy Corp.
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102

Nearburg Exploration Co.
3300 N. A Street #2-120
Midland, TX 79707

Mewbourne Oil
P.O. Box 5270
Hobbs, NM 88241

Caspen Oil Inc.
777 S. Wadsworth Blvd, Bldg 3 Ste 200
Lakewood, CO 80226

Xeric Oil & Gas Corp.
14781 Memorial Drive, Suite 1754
Houston, TX 77079

GPC Oil & Gas
P.O. Box 50982
Midland, TX 79710

Randy C. Hall
P.O. Box 10095
Midland, TX 79702

Michael G. Mooney
P.O. Box 7405
Midland, TX 79708

R.C. Barnett
2502 Auburn Place
Midland, TX 79705

Kenneth F. Albright
15 W. 6th Street, #2600
Tulsa, OK 74119

B & H Properties
2502 Auburn Place
Midland, TX 79705

Logan Royalties LTD
P.O. Box 804
Midland, TX 79702

Randall Capps d/b/a Logan Royalties, LTD
P.O. Box 6025
Midland, TX 79704

Karen Capps
2450 SW 53rd Street
Corvallis, OR 97333-1319

Carl Brininstool
P.O. Box 50982
Midland, TX 79710

**TRACT 1 (Cont.)
Operator & Working
Interest Ownership**

**Pogar Petroleum LTD
P.O. Box 10095
Midland, TX 79702**

**Square Lake Partners, LLC
607 S. Miller Avenue
Farmington, NM 87401-6591**

**Range Resources
100 Throckmorton Street, Suite 1200
Fort Worth, TX 76102**

**Barrie Hood Inc.
810 N. Main
Carlsbad, NM 88220**

**Victor J. Sirgo
3405 Choate Place
Midland, TX 79707-4711**

**GPII Energy Inc.
P.O. Box 50682
Midland, TX 79710**

**Mark L. Shidler Inc.
1313 Campbell Road, Bldg D
Houston, TX 77055**

**Royalties Investor Group
4003 Compton Drive
Midland, TX 79707**

**Richard E. Weinberg
P.O. Box 458
Bellaire, TX 77401**

**Ward N. Adkins, Jr.
5519 Tupper Lake
Houston, TX 77056**

**ZPZ Delaware, LLC.
303 Veterans Airpark Lane, Suite 300
Midland, TX 79705**

**Alamo Resources II LLC.
820 Gessner, Suite 1650
Houston, TX 77024**

**Marathon Oil Company
5555 San Felipe Street
Houston, TX 77056**

**Exxon Mobil Corporation
810 Houston Street
Fort Worth, TX 76102**

**Yates Petroleum Corp.
105 S. 4th Street
Artesia, NM 88210**

**BP America Production Company
501 Westlake Park Blvd.
Houston, TX 77079**

**Oxy USA, WTP, LP
5 Greenway Plaza, Suite 110
Houston, TX 77046**

**CBS Partners, LTD
P.O. Box 2236
Midland, TX 79702**

**Range Energy Finance Corp.
100 Throckmorton Street, Suite 1200
Fort Worth, TX 76102**

**Western Development Co.
3255 Grace Street Northwest
Washington, DC 20007**

**ConocoPhillips
550 Westlake Park Blvd.
Houston, TX 77079**

**APCO International Oil & Gas
One Williams Center
Mail Drop 35
Tulsa, OK 74172**

**Husky Oil Co.
P.O. Box 380
Cody, WY 82414**

**Mark D. Wilson & Wife
4501 Green Tree Blvd.
Midland, TX 79707**

**Continental Natural Gas Inc.
1412 S. Boston Avenue
Tulsa, OK 74119**

**Domain Energy Corp.
c/o Range Resources Corp.
100 Throckmorton Street, Suite 1200
Fort Worth, TX 76102**

**Khody Land & Minerals Company
3817 NW Expressway, Suite 950
Oklahoma City, OK 73112**

**TRACT 1 (Cont.)
Operator & Working
Interest Ownership**

**Apache Corporation
303 Veterans Airpark Lane, Suite 300
Midland, TX 79705**

**TRACT 2
Operator & Working
Interest Ownership**

**Anadarko Petroleum Corporation
1201 Lake Robbins Drive
The Woodlands, TX 77380**

**Alamo Permian Resources, LLC
415 W. Wall Street, #500
Midland, TX 79701**

**Oxy USA, WTP, LP
5 Greenway Plaza, Suite 110
Houston, TX 77046**

**TRACT 3
Operator & Working
Interest Ownership**

**ZPZ Delaware, LLC.
303 Veterans Airpark Lane, Suite 300
Midland, TX 79705**

**TRACT 4
Operator & Working
Interest Ownership**

**Khody Land & Minerals Company
3817 NW Expressway, Suite 950
Oklahoma City, OK 73112**

**Marathon Oil Company
5555 San Felipe Street
Houston, TX 77056**

**Yates Petroleum Corp.
105 S. 4th Street
Artesia, NM 88210**

**BP America Production Company
501 Westlake Park Blvd.
Houston, TX 77079**

TRACT 5
Operator & Working
Interest Ownership

Alamo Permian Resources, LLC
415 W. Wall Street, #500
Midland, TX 79701

TRACT 6
Operator & Working
Interest Ownership

Alamo Permian Resources, LLC
415 W. Wall Street, #500
Midland, TX 79701

Exxon Mobil Corporation
810 Houston Street
Fort Worth, TX 76102

Inactive Well List

Total Well Count: 479 Inactive Well Count: 5
Printed On: Friday, February 14 2014

District	API	Well	ULSTR	OCD Unit	OGRID	Operator	Lease Type	Well Type	Last Production	Formation/Notes	Status	TA Exp Date
2	30-015-00298	ATOKA SAN ANDRES UNIT #100	D-12-18S-26E	D	277558	LIME ROCK RESOURCES II-A, L.P.	P	I	08/2012	SA / RET TO INJ 1-10-14		
2	30-015-30104	COMPTON 6 FEDERAL #002	O-6 -18S-27E	O	277558	LIME ROCK RESOURCES II-A, L.P.	F	O	07/2011	SAN ANDRES		
1	30-025-25207	NORTH VACUUM ABO NORTH UNIT #003	E-12-17S-34E	E	277558	LIME ROCK RESOURCES II-A, L.P.	S	O	01/1997	ABO 08/27/08 TA; TA EXP 09/22/2013	T	9/22/2013
1	30-025-39662	NORTH VACUUM ABO NORTH UNIT #012	F-1 -17S-34E	F	277558	LIME ROCK RESOURCES II-A, L.P.	S	O	07/2012	ABO 05/09/12		
2	30-015-28942	WEST RED LAKE UNIT #073	B-8 -18S-27E	B	277558	LIME ROCK RESOURCES II-A, L.P.	F	O	03/2012	SAN ANDRES / RET TO PROD 1-15-14		

WHERE Ogrid:277558, County:All, District:All, Township:All, Range:All, Section:All, Production(months):15, Excludes Wells Under ACOI, Excludes Wells in Approved TA Period

District I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S St Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

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

RECEIVED
JUL 26 2012
NMOCD ARTESIA

Form C-101
Revised December 16, 2011
Permit

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Lime Rock Resources II-A, L.P. 1111 Bagby Street, Suite 4600 Houston, Texas 77002		GRID Number 277558
Property Code 39418		APL Number 30-018-70629
Property Name Choate-Davis 14 State		Well No #1 SWD

7 Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
J	14	18S	27E		2510	South	1650	East	Eddy

8 Pool Information

SWD; ABO / Wolfcamp / Cisco **SWD-1352** **97967**

Additional Well Information

Work Type N	Well Type S	Cable/Rotary Rotary	Lease Type Static	Ground Level Elevation 3511.6'
Multiple N	Proposed Depth 9000	Formation ABO/Wolfcamp / Cisco	Contractor United Drilling, Inc	Spud Date After 06/30/2012
Depth to Ground water 50'		Distance from nearest fresh water well 1.71 miles		Distance to nearest surface water 0.75 miles

19 Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Conductor	26"	20"	91.5	40'	Ready Mix	Surface
Surface	17.5"	13.375"	48	300'	350	Surface
Intermediate	12.25"	9.625"	36	2800'	845	surface
Production	8.75"	7"	26	6675'	600	2600'
liner	6.125"	4.5"	11.6	6400-9000'	350	6400'

Casing/Cement Program: Additional Comments

SWD-1352

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
XLT 11"	5000	5000	National Varco

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify that the drilling pit will be constructed according to NMOCD guidelines , a general permit , or an (attached) alternative OCD-approved plan .

Signature *Jerry Smith*

Printed name Jerry Smith

Title Assistant Production Supervisor

E-mail Address jsmith@limerockresources.com

Date **7-25-12** Phone 575-748-9724

OIL CONSERVATION DIVISION

Approved By *T. C. Shepard*

Title *Geologist*

Approved Date *8/27/2012* Expiration Date *8/27/2014*

Conditions of Approval Attached

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

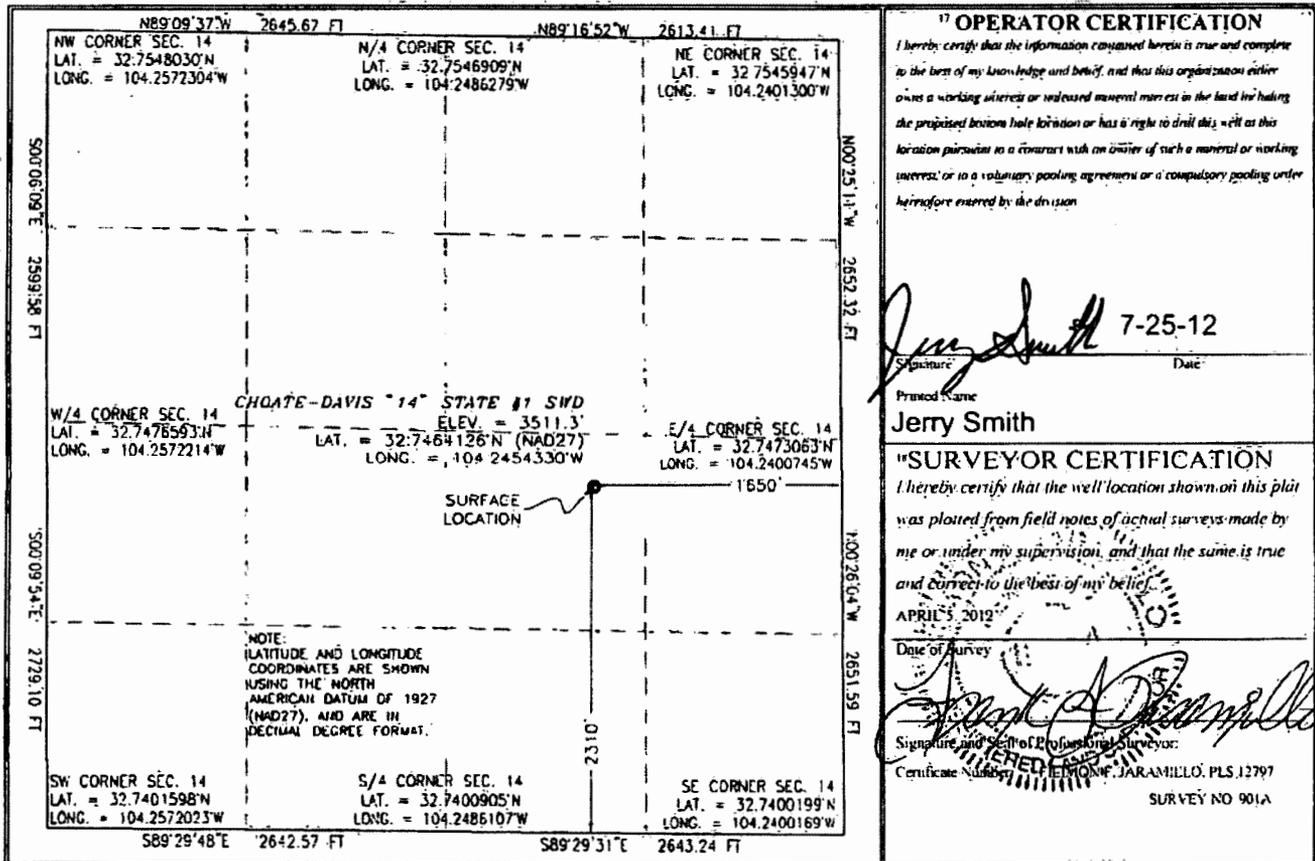
State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15, 2009
Submit one copy to appropriate
District Office
 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

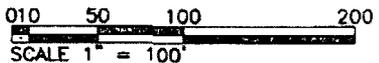
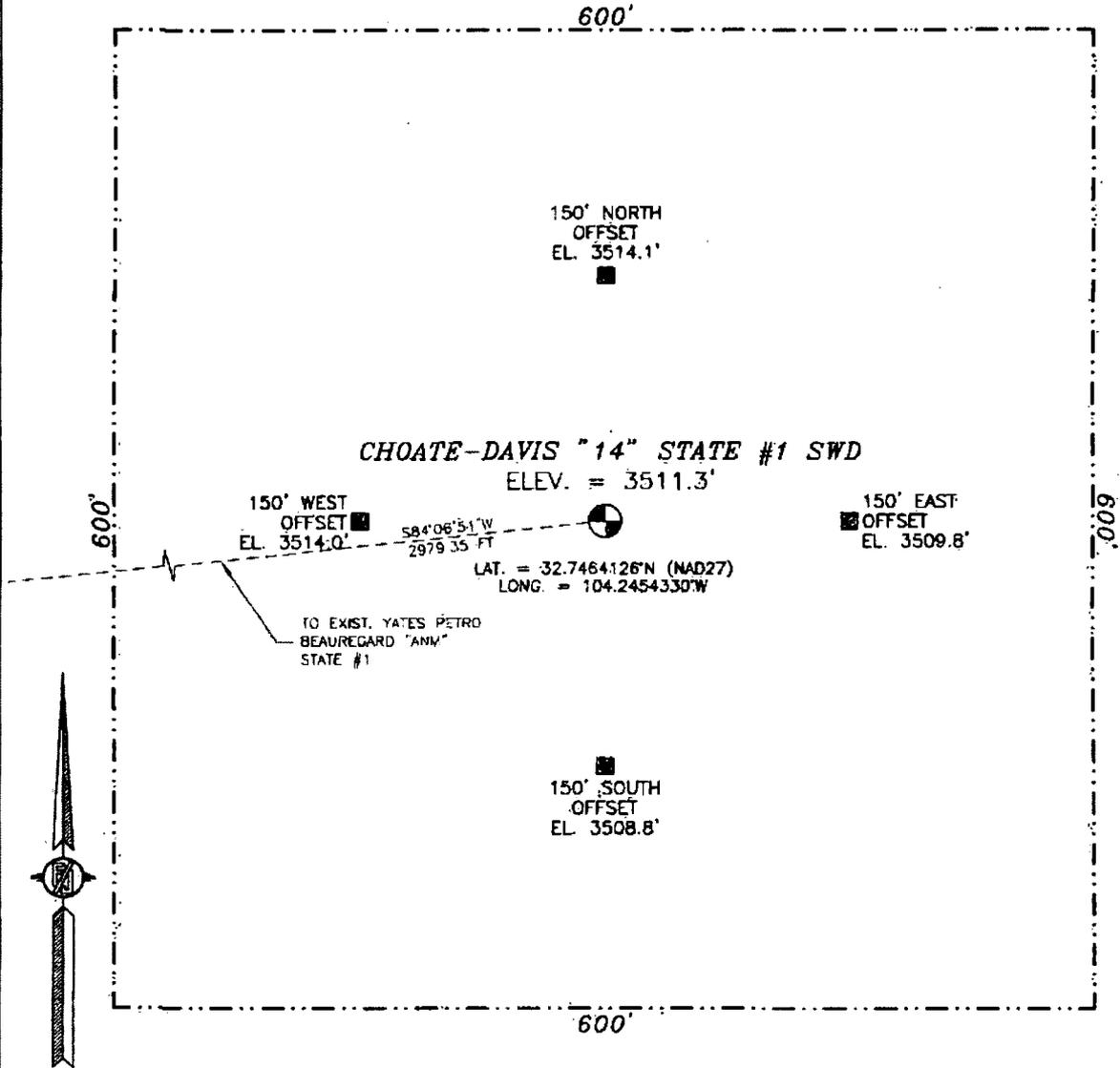
API Number 30-015-40629		Pool Code 97967		Pool Name SWD;ABOWolfcamp/Cisco					
Property Code 39418		Property Name CHOATE-DAVIS "14" STATE SWD			Well Number 1				
GRID No. 277558		Operator Name LIME ROCK RESOURCES II A, L.P.			Elevation 3511.3				
Surface Location									
UL or lot no. J	Section 14	Township 18 S	Range 27 E	Lot Idn	Feet from the 2310	North/South line SOUTH	Feet from the 1650	East/West line EAST	County EDDY
Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40		Joint or Infill		Consolidation Code		Order No. SWD-1352			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



SECTION 14, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

NOTE: THE LATITUDE AND LONGITUDE COORDINATES ARE SHOWN
 USING THE NORTH AMERICAN DATUM OF 1927 (NAD27), AND ARE IN
 DECIMAL DEGREE FORMAT.



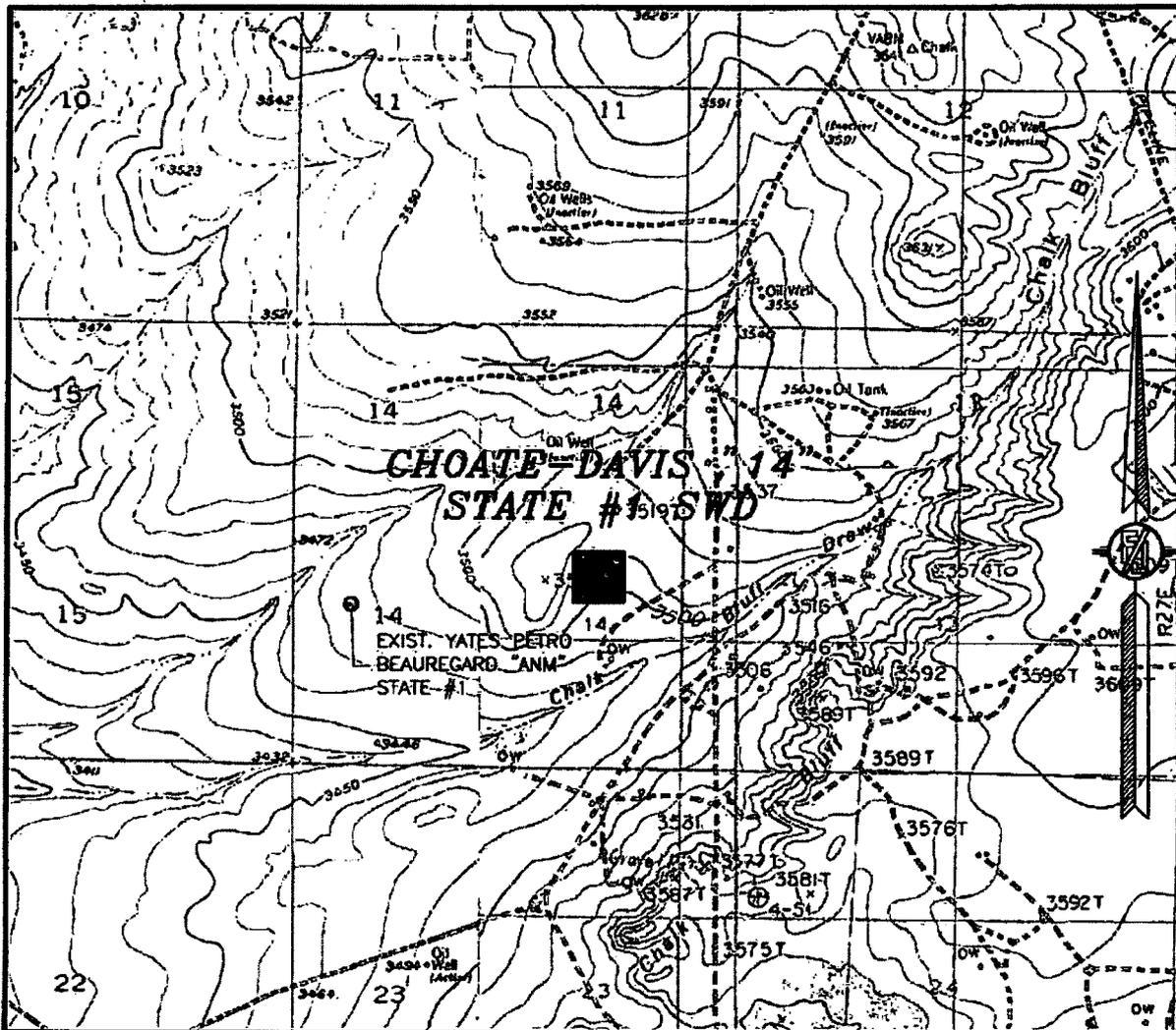
DIRECTIONS TO LOCATION
 FROM PAVED Cr 208 (ILLINOIS CAMP) AND CALICHE Cr 234 (OIL
 CENTER) GO SOUTHWEST ON Cr 234 0.7 MILES, TURN RIGHT ON
 CALICHE ROAD AND GO NORTH, THEN WEST AROUND RANCH HOUSE A
 TOTAL OF 1.7 MILES, TURN RIGHT AND GO NORTH 1.4 MILES, TURN
 RIGHT ON AGAVE P/L TWO TRACK ROAD AND GO EAST 0.3 MILES
 AND LOCATION IS ON THE LEFT (NORTH) 565 FT.

LIME ROCK RESOURCES II A, L.P.
CHOATE-DAVIS "14" STATE #1 SWD
 LOCATED 2310 FT. FROM THE SOUTH LINE
 AND 1650 FT. FROM THE EAST LINE OF
 SECTION 14, TOWNSHIP 18 SOUTH,
 RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

APRIL 5, 2012

SURVEY NO. 901A
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
 (575) 234-3341

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 LOCATION VERIFICATION MAP



USGS QUAD MAP:
 ILLINOIS CAMP, SPRING
 LAKE, LAKE McMillon
 NORTH, RED LAKE

NOT TO SCALE

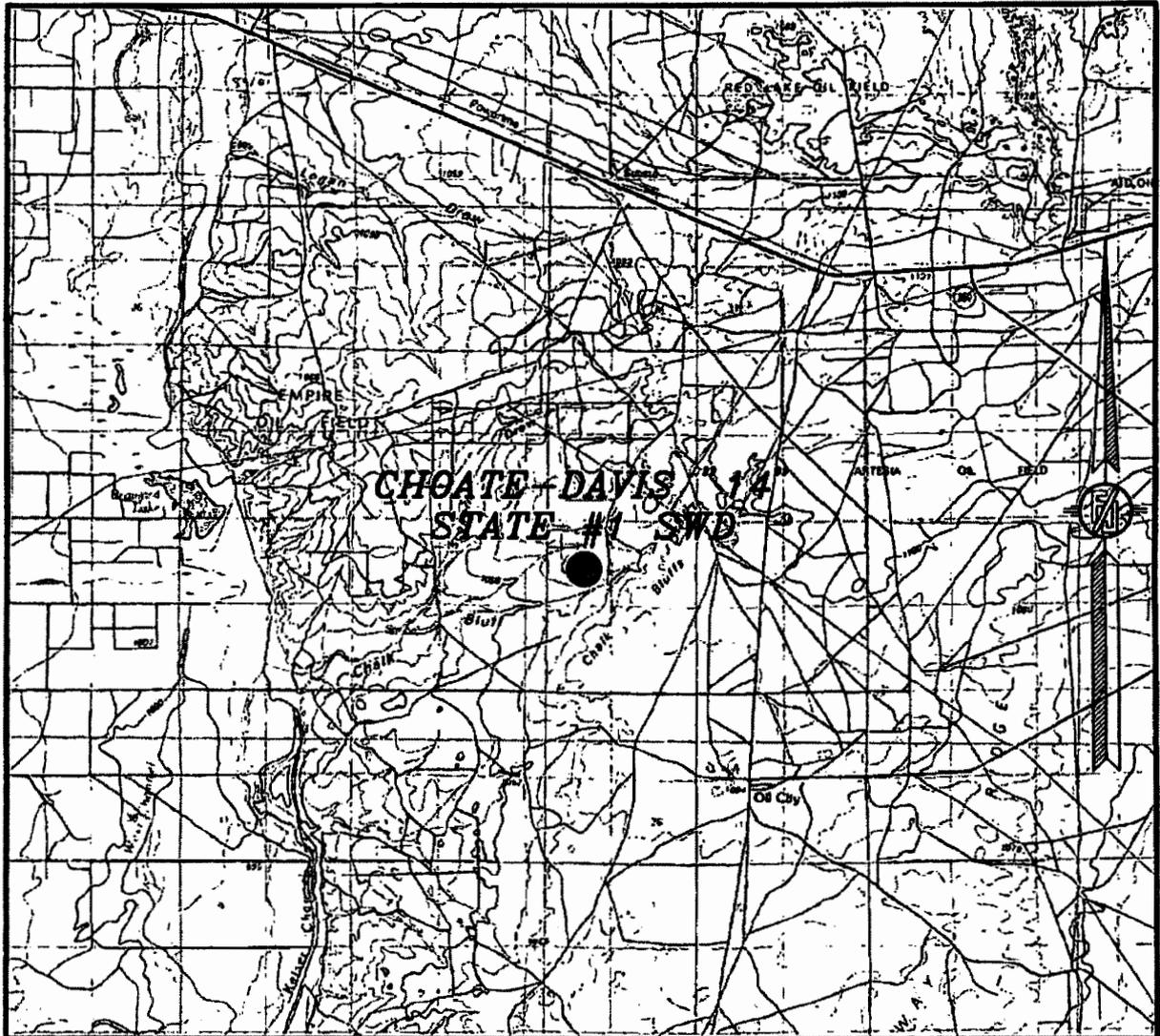
LIME ROCK RESOURCES II A, L.P.
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 SECTION 14, TOWNSHIP 18 SOUTH,
 RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

APRIL 5, 2012

SURVEY NO. 901A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

LIME ROCK RESOURCES II A, L.P.
CHOATE-DAVIS "14" STATE #1 SWD
LOCATED 2310 FT. FROM THE SOUTH LINE
AND 1650 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 18 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

APRIL 5, 2012

SURVEY NO. 901A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
JUNE, 2011

LIME ROCK RESOURCES II A, L.P.
CHOATE-DAVIS "14" STATE #1 SWD
LOCATED 2310 FT. FROM THE SOUTH LINE
AND 1650 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 18 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

APRIL 5, 2012

SURVEY NO. 901A

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
(375) 234-3341

**Lime Rock Resources II-A, L.P.
Drilling Plan**

**Choate-Davis 14 State #1 SWD
2310' FSL 1650' FEL
J-S14-T18S-R27E
Eddy County, NM**

- 1. The elevation of the unprepared ground is 3511.6' feet above sea level.**
- 2. The geologic name of the surface formation is Permian with Quaternary Alluvium.**
- 3. A rotary rig will be utilized to drill the well to 9000' and run four strings of casing to protect usable water, potential productive formations and injection equipment. The drilling rig will be rigged down and the well will be completed with a workover rig.**
- 4. Proposed total depth is 9000'. Please refer to the well bore diagram attached to this drilling plan.**
- 5. Estimated tops of geologic markers:**

Quaternary – Alluvium	Surface	
Conductor Pipe	40'	Setting Depth of 20" Casing
Surface Casing	300'	Setting Depth of 13-3/8" Casing
Seven Rivers	480'	
Queen	1075'	
San Andres	1900'	
Intermediate Casing	2800'	Setting Depth of 9-5/8" Casing
Glorieta	3630'	
Abo	5250'	
Top of Liner	6400'	Top of Liner hanger/packer/PBR
Top of Injection Zone	6500'	
Production Casing	6675'	Setting Depth of 7" Casing
Wolfcamp	6650'	
Cisco	7685'	
TD	9000'	

- 6. Estimated depths at which anticipated oil, gas, or other mineral bearing formations are expected to be encountered:**

Seven Rivers	480'
Queen	1075'
San Andres	1900'
TD	9000'

7. Proposed Casing and Cement program is as follows:

Type	Hole Size, in	Casing Size	Wt	Grade	Thread	Depth	Sx	Density	Yield	Components
Conductor	26	20	91.5	B	B	40				Ready Mix
Surface	17.5	13.375	48	H-40	ST&C	300	350	14.8	1.35	Cl C Cmt w/ 1/4 pps Cello Flake + 2% CaCl2
Intermediate	12.25	9.625	36	J-55	LT&C	2800	320	12.8	1.903	35/65/6 Poz/Cl C/Gel w/ 5% NaCl, 5 pps LCM-1, 0.3% R-3 and 1/4 pps Cello Flake
							525	14.8	1.33	Cl C w/ 1/4 pps Cello Flake and 0.6% R-3
Production	8.75	7	26	L-80	LT&C	6650	300	13.2	1.84	35:65 Poz/Cl H w/ 6% Gel, 0.125 lbs/sk Cello Flake, 5 pps LCM-1 and retarder
							300	15.2	1.18	Cl H w/ 0.6% R-3, 0.125% Cello Flake, 2% Gel
LINER	6.125	4.5	11.6	L-80	LT&C	6400-9000	340	13.8	1.32	Cl H/POZ Light Weight Cement w/ 2% gel

8. Proposed Mud Program is as follows

Depth	300	2800	2800-6675	6675-8800	8800-9000
Mud Type	Fresh Water Mud	Brine	Brine, Salt Gel & Starch	Brine, Salt Gel & Starch	Brine, Salt Gel & Starch
Properties					
MW	8.5-9.3	9.8-10.1	9.9-10.0	9.3-9.7	9.3-9.7
pH	10	10-11.5	11-12	11-12	11-12
WL	NC	NC	20-30	NC	<50
Vis	28-34	29-32	32-35	32-34	34-35
MC	NC	NC	<2	NC	<2
Solids	NC	<1	<3	<3	<3
Pump Rate	300-350	375-425	400-450	400-450	400-450
Special		Use Polymers sticks and MF-55 HI-Vis Sweeps as necessary	Hi Vis Sweeps, add acid and starch as req. Raise Vis to 35 for log	Hi Vis Sweeps, add acid and starch as req. Raise Vis to 35 for log	Hi Vis Sweeps, add acid and starch as req. Raise Vis to 35 for log

9. Pressure Control Equipment: See Attached Description and diagram of Pressure Control Equipment.

10. Testing, Logging and Coring Program

Testing Program:

Mud Logging Program:

Electric Logging Program:

Coring Program:

No drill stem tests are anticipated

Mud Log from Intermediate to total depth

SGR-DLL-CDL-CNL Quad Combo from 6650 to intermediate csg, then same log from 9000' up to production casing @ 6650'.

No full or sidewall cores are anticipated.

11. Potential Hazards:

No abnormal temperatures or pressures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of state regulations and BLM Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3960 psi based on 0.44 x TD. The estimated BHT is 148 degrees F.

12. Duration of Operations:

Anticipated spud date will be soon after approval and as soon as a rig will be available. Move in operations and drilling is expected to take 15 days. An additional 30 days will be needed it complete the well and to construct surface facilities.

13. Completion Operations:

- (a) Once a C-108 application to inject is approved, LRE intends to perforate the injection intervals in the ABO (6500 to 6600' or at depths found in the last 150' of the ABO open hole log), in the Wolfcamp from 6650' (or the top of the Wolfcamp found in the open hole log) to the top of the Cisco formation at approximately 7,685' (or as found on the open hole log), and the Cisco formation from the top to 9000' (as the depth of the Cisco top as found on the open hole log to 9000').
- (b) Once the well is perforated, a work string will be used with a packer to acidize the ABO / WOLFCAMP / CISCO injection interval with 10,000 gallons of 15% HCL, then the packer will be pulled and the work string laid down,
- (c) A string of 4-1/2", L-80, 11.6 ppf, LT&C tubing lined with Duoline (fiberglass) will be run with a seal assembly and stung into a PBR on top of the liner at 6400' MD. The annulus will be tested to 500 psig for 30 minutes,
- (d) Before injection, personnel will schedule an MIT test with the NM OCD, perform the MIT and then injection will start into the ABO / WOLFCAMP / CISCO formation when approved by the NM OCD.

Pressure Control Equipment

The blowout preventer equipment (BOP) will consist of a 5000 psi Triple ram type preventer, a bag-type (Hydril) preventer and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with Drill Pipe Rams on top, Blind Rams in the middle and drill pipe rams on bottom. A 5M BOP will be installed on the 8 5/8" surface casing and utilized continuously until the depth is reached. All casing strings will be tested as per Onshore Order #2.

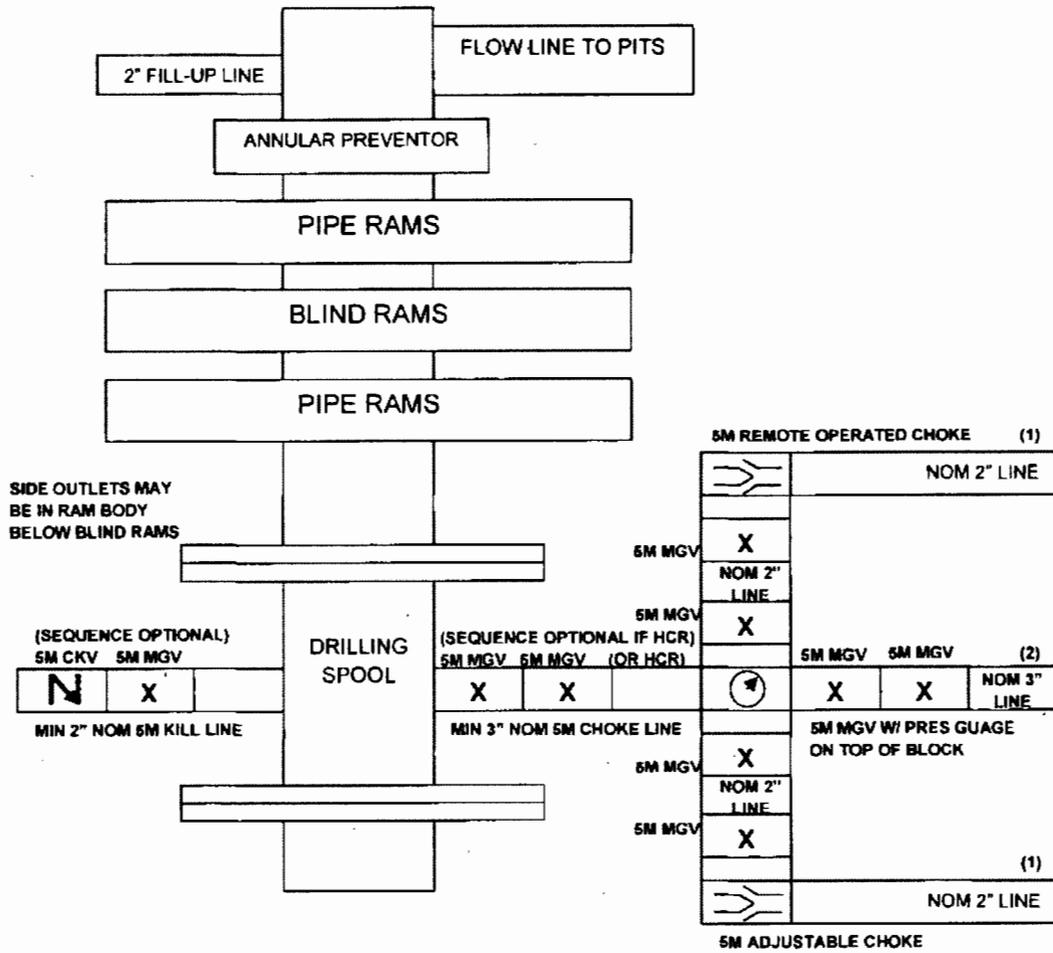
Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drilling logs.

The BOP equipment will consist of the following:

- Annular preventer*
- Pipe ram, blind ram, and, if conditions warrant, as specified by the authorized officer, another pipe ram shall also be required*
- A second pipe ram preventer shall be used with a tapered drill string
- Drilling spool, or blowout preventer with 2 side outlets (choke side shall be a 3-inch minimum diameter, kill side shall be at least 2-inch diameter)*
- 3 inch diameter choke line
- 2 choke line valves (3 inch minimum)*
- Kill line (2 inch minimum)
- 2 chokes with 1 remotely controlled from rig floor (refer to diagram in Attachment 1)
- 2 kill line valves and a check valve (2 inch minimum)*

- Upper kelly cock valve with handle available
- When the expected pressures approach working pressure of the system, 1 remote kill line tested to stack pressure (which shall run to the outer edge of the substructure and be unobstructed)
- Lower kelly cock valve with handle available
- Safety valve(s) and subs to fit all drill string connections in use
- Inside BOP or float sub available -Pressure gauge on choke manifold
- All BOPE connections subjected to well pressure shall be flanged, welded, or clamped*
- Fill-up line above the uppermost preventer.

5M BOP SCHEMATIC



- (1) Line to mud gas separator and/or pit
- (2) Bleed line to pit

MGV = Manual Gate Valve
 CKV = Check Valve
 HCR = Hydraulically Controlled Remote Valve

LIME ROCK RESOURCES II-A, L.P.

**Choate-Davis 14 State #1 SWD
HYDROGEN SULFIDE (H₂S) CONTINGENCY
DRILLING PLAN**

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

This is an open drilling site. H₂S monitoring equipment, along with a choke manifold, mud/gas separator, and flare will be rigged up and in use when the company drills out from under surface casing. H₂S monitors, warning signs, wind indicators and flags will be in use.

SUMMARY PLAN

1. All personnel shall receive proper H₂S training in accordance with Onshore Oil and Gas Order No. 6.III.C.3.a. A minimum of an initial training session and weekly H₂S and well control drills for all personnel in each working crew shall be conducted. The initial training session for each well shall include a review of the this Drilling Operations Plan and site specific measures and areas set up when the rig is moved onto location.
2. The company has caused the drilling contractor and other vendors to install 5000 psi well control systems including:
 - A. A choke manifold with:
 - i. One remotely operated choke,
 - ii. a flare line and flare that is 150' from the wellhead to be ignited, in the event the plan is put into effect, with an electronic ignition system or a back up flare gun,
 - iii. a mud/gas separator downstream of the of the choke and upstream of the flare,
 - iv. All BOP equipment required for a 5000 psi well control system will be in place and tested by a third party to 250 psi low pressure and 5000 psi high pressure. This test will include testing all lines and equipment associated with the choke manifold and kill line. Weekly BOP function and control drills will be performed with all applicable crews and personnel on location.
3. At rig move in, two perpendicular briefing areas readily accessible will be designated and marked with signage. A clear foot path for escape will be designated and marked.
4. The following protective equipment for essential personnel will be located on location at rig move in:
 - A. Breathing apparatus:
 - i. Rescue Packs (1 at each briefing area and 2 stored in the designated safety equipment storage area), shall be on location,
 - ii. 4 work/escape packs shall be stored on the rig floor with sufficient hose to allow work activity,
 - iii. 4 Emergency escape packs shall be stored in the rig doghouse for emergency evacuation,

H2S CONTINGENCY DRILLING PLAN

- B. Auxiliary Rescue Equipment will be available in the designated safety equipment storage area and will include:
- i. Stretcher,
 - ii. Two OSHA approved full body harnesses,
 - iii. 100 feet of 5/8 inch OSHA approved rope,
 - iv. 2-20# Class ABC fire extinguishers.
5. H₂S detection and monitoring equipment shall be in place before drilling out surface casing. There will be a stationary detector in the rig dog house and another with the mud log equipment on the end of the flow line. Three sensors will be placed on the rig floor, the wellhead/cellar, and on the closed loop equipment. The detection level for H₂S will be set at 10 ppm and the alarm will sound if any level of the gas is detected over 10 ppm.
6. Visual warning systems will be in place at rig move in and before the surface casing is drilled out. Color coded signage will be placed at the entrance to location indicating H₂S is possible, and furthermore, the color will be changed should the site condition dictate. If H₂S is detected, then a color coded condition flag will be displayed to indicate levels of detection. Wind socks will be placed at the location entrance and one other fully visible site to allow personnel to determine wind direction and safe escape/briefing routes.
7. The mud program utilized on this well is intended to provide sufficient density to exclude H₂S from the wellbore. Furthermore, Loss Circulation Material will be added before any known loss circulation (low pressure) zones are encountered. Corrosion inhibitors are included in the mud system to prevent failures in the event H₂S does enter the wellbore, and seal rings are used to prevent the use of elastomers on the wellhead equipment. In the event a rotating head is necessary, elastomers will be designed to operate in H₂S conditions. Drill collars and other bottom hole assembly components are to be inspected after each well, and in the event H₂S is encountered in the wellbore, drill pipe shall be inspected as well.
8. The location shall be equipped with one cell telephone in the rig doghouse, one cell telephone with the well site supervisor, two way communication devices to communicate between mud system personnel, rig floor personnel, mud log personnel, and safety personnel on location. In the event H₂S is detected, a company vehicle with two way radios shall be moved into a safe briefing area and manned for communication with all vendors, company personnel or agency personnel as required.

H2S CONTINGENCY DRILLING PLAN

EMERGENCY PROCEDURES

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas, or if monitors indicate H₂S is present. Escape will take place via the entry road away from the flare stack, or a foot path marked and designated before the well is spud by on site personnel. Once crews and other personnel are a safe distance, the crews will move to evacuate any persons in the Radius of Exposure, followed by blocking access to the Radius of Exposure.

There are no homes or buildings within the Radius of Exposure ("ROE"), so efforts will be concentrated on evacuating any third parties within the ROE. Immediate response will include evacuation of any persons potentially affected by toxic or flammable gasses. Once evacuation is under way, perimeter monitoring and control of access will be executed to ensure safe areas and stage areas.

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air= 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air= 1	2ppm	N/A	1000 ppm

H2S CONTINGENCY DRILLING PLAN

Contacting Authorities

Lime Rock Resources personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Lime Rock Resources response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER) and BLM Onshore Order #6.

H₂S OPERATIONS

Though no H₂S is anticipated during the drilling operation, this contingency plan will provide for methods to ensure the well is kept under control in the event an H₂S reading of 100 ppm or more are encountered.

Once personnel are safe and the proper protective gear is in place and on personnel, the operator and rig crew essential personnel will ensure the well is under control, suspend drilling operations and shut-in the well (unless pressure build up or other operational situations dictate suspending operations will prevent well control), increase the mud weight and circulate all gas from the hole utilizing the mud/gas separator downstream of the choke, the choke manifold and the emergency flare system located 150' from the well. Bring the mud system into compliance and the H₂S level below 10 ppm, and then notify all emergency officers that drilling ahead is practical and safe.

Proceed with drilling ahead only after all provisions of Onshore Order 6, Section III.C. have been satisfied.

H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

Company Offices - Lime Rock Houston Office 713-292-9510
 Answering Service (After Hours) 713-292-9555
 Artesia, NM Office 575-748-9724
 Roswell, NM 575-623-8424

KEY PERSONNEL					
Name	Title	Location	Office #	Cell #	Home #
SID ASHWORTH	PRODUCTION ENGINEER	HOUSTON	713-292-9526	713-906-7750	713-783-1959
JERRY SMITH	ASSISTANT PRODUCTION SUPERVISOR	ARTESIA	575-748-9724	505-918-0556	575-746-2478
MICHAEL BARRETT	PRODUCTION SUPERVISOR	ROSWELL	575-623-8424	505-353-2644	575-623-4707
GARY FATHEREE	WELL SITE SUPERVISOR	ROTATES ON SITE	NA	940-389-6044	NA
GARY MCELLEND	WELL SITE SUPERVISOR	ROTATES ON SITE	NA	903-503-8997	NA

Agency Call List		
City	Agency or Office	Telephone Number
Artesia	Ambulance	911
Artesia	State Police	575-746-2703
Artesia	Sheriff's Office	575-746-9888
Artesia	City Police	575-746-2703
Artesia	Fire Department	575-746-2701
Artesia	Local Emergency Planning Committee	575-746-2122
Artesia	New Mexico OCD District II	575-748-1283
Carlsbad	Ambulance	911
Carlsbad	State Police	575-885-3137
Carlsbad	Sheriff's Office	575-887-7551
Carlsbad	City Police	575-885-2111
Carlsbad	Fire Department	575-885-2111
Carlsbad	Local Emergency Planning Committee	575-887-3798
Carlsbad	US DOI Bureau of Land Management	575-887-6544
State Wide	New Mexico Emergency Response Commission ("NMERC")	505-476-9600
State Wide	NMERC 24 hour Number	505-827-9126
State Wide	New Mexico State Emergency Operations Center	505-476-9635
National	National Emergency Response Center (Washington, D.C.)	800-424-8802

H2S CONTINGENCY DRILLING PLAN EMERGENCY CONTACTS

Emergency Services				
Name	Service	Location	Telephone Number	Alternate Number
Boots & Coots International Well Control	Well Control	Houston / Odessa	1-800-256-9688	281-931-8884
Cudd Pressure Control	Well Control & Pumping	Odessa	915-699-0139	915-563-3356
Baker Hughes Inc.	Pumping Service	Artesia, Hobbs and Odessa	575-746-2757	SAME
Total Safety	Safety Equipment and Personnel	Artesia	575-746-2847	SAME
Cutter Oilfield Services	Drilling Systems Equipment	Midland	432-488-6707	SAME
Assurance Fire & Safety	Safety Equipment and Personnel	Artesia	575-396-9702	575-441-2224
Flight for Life	Emergency Helicopter Evacuation	Lubbock	806-743-9911	SAME
Aerocare	Emergency Helicopter Evacuation	Lubbock	806-747-8923	SAME
Med Flight Air Ambulance	Emergency Helicopter Evacuation	Albuquerque	505-842-4433	SAME
Artesia General Hospital	Emergency Medical Care	Artesia	575-748-3333	702 North 13 Street



County EDDY	Well Name Choate-Davis 14 State Com #1 SWD	Field East Artesia	Well Sketch ABO Wolfcamp Cisco SWD
Surface Lat 32 7467126° N (NAD 27)	BH Lat Same	Survey S14-118S-R27E, NE/4 Unit J	API # New
Surface Long 104 2454330° W	BH Long Same	SHL 2310' FSL & 1650' FEL	OGRID # 277558

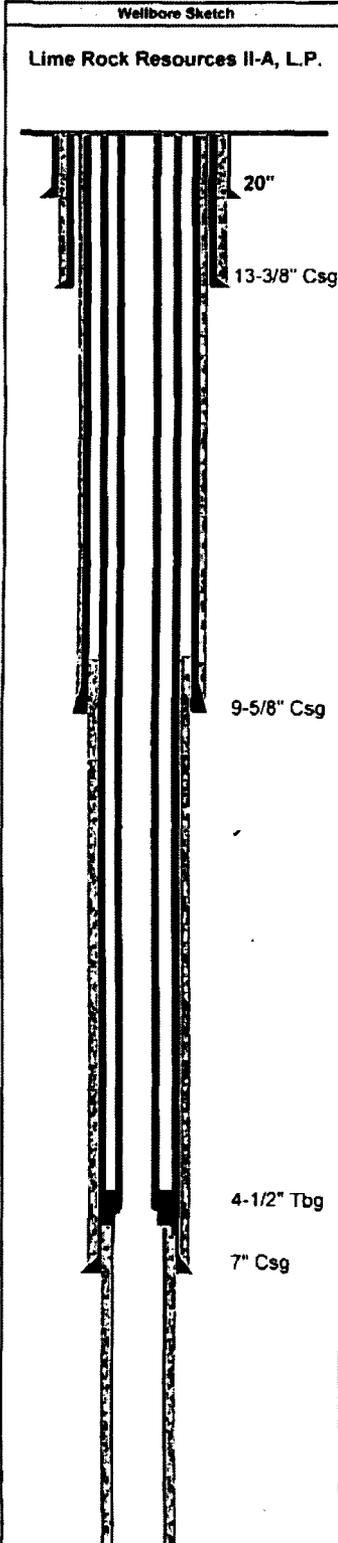
Directional Data:	
KOP	NA
Max Dev	
Dleg sev	0
Dev @ Parts	0
Rel to Vert	Straight Hole

Tubular Data:							
Tubulars	Size	Weight	Grade	Thread	TVD	MD	TOC
Conductor	20"	91.5#	B	Weld	40'	40'	SURF
Surface	13 3/8"	48#	H-40	STC	300'	300'	SURF
Intermediate	9-5/8"	36#	J-55	LTC	2,800'	2,800'	SURF
Production	7"	26#	L-80	LTC	6,650'	6,650'	2600
Liner	4-1/2"	11.6#	J-55	LTC	9,000'	9,000'	6400

Wellhead Data:	
Type	
WP	
Tree Cap	Flange
	Thread
Tbg Hanger	
BTM Flange	
BPV Profile	NA
Elevations	GR - RKB = 13.4'
RKB est	3524.7'
GL	3511.3'

Drilling / Completion Fluid	
Drilling Fluid	10 PPG Brine / Salt Gel
Drilling Fluid	9.4 PPG Brine/Salt gel in 6-1/8"
Completion Fluid	2% KCL
Completion Fluid	
Packer Fluid	2% KCL w/ Bactericide & O2 Sc

CEMENT DATA							
	L/sks	Yld	Wt	T/sks	Yld	Wt	XS
Surface	280	1.34	14.8	NA	NA	NA	200%
Intermediate	320	1.903	12.8	525	1.33	14.8	150%
Production	310	1.84	13.2	350	1.18	15.2	150%
Liner	340	1.32	13.8	NA	NA	NA	200%



Completion Information					
DEPTHS (MD)	WELL INFO	PERFORATIONS		# of HOLES	DETAILS
		from	to		
40	26" Hole				20" Conductor Pipe Cmf'd to Surf w/ ready mix
	17-1/2" Hole				
300					13-3/8" Casing set at 300' and cmf'd to surf
	12-1/4" Hole				
480	Seven Rivers Sand				
1075	Queen Sand				
1900	San Andres Formation				
2500					TOC behind 7", 26# Casing
2,800					9-5/8" Casing set at 2800' and cmf'd to surf
	8-3/4" Hole				
3630	Glorieta Top				
3780	Yeso Formation				
5250	Abo Formation				
6400	Tubing				4-1/2", 11.6# lbg ducklined @ 6500'
6500	ABO Inj Zone	6,500'	6,600'		PBR on top of ZXP Liner Top Packer
6675	Wolfcamp Formation				
	Wolfcamp Inj Zone	6,650'	7,685'		7", 26# Casing set at 6675' & cmf'd to 2600'
	6-1/8" hole				
7685	Cisco Formation	7,685'	9,000'		
	and Injection Zone				

Accepted for record
 NMOCD
 105
 7/27/2012

RECEIVED
 JUL 27 2012
 NMOCD ARTESIA

Cased Injection Zone
 ABO Injection
 6500' to 6600' MD (100 Holes)
 Wolfcamp Injection
 6650' to 7685' MD (150 Holes)

Spencer Cox

From: Spencer Cox
Sent: Tuesday, October 29, 2013 1:52 PM
To: 'Ezeanyim, Richard, EMNRD'; Goetze, Phillip, EMNRD
Subject: Choate Davis 14 State #14 SWD Sundry to Complete Open Hole
Attachments: LRRII-A_Choate-Davis_14_State_#1_SWD_Cased Hole.xlsx; Open Hole Sundry - LRRII-A_Choate-Davis_14_State_#1_SWD.xlsx; Choate-Davis 14 ST #1 SWD_NMOCD Approved APD_7-26-12.pdf; Choate-Davis 14 ST #1 SWD_NMOCD Approved C-108_8-27-12.pdf; Choate-Davis 14 ST #1 SWD_NMOCD Approved CLP_7-26-12.pdf

Good Afternoon Mr. Ezeanyim and Mr. Goetze, Lime Rock applied for and received a drilling permit and injection approval for the Choate Davis 14 State SWD #1 back in July 2012. We are approaching the drilling of this well and I have been looking into the design of this well. After review of the area and the injection interval I would like to Sundry to remove the proposed liner covering our Wolfcamp and Cisco injection zones (6,650' – 9,000) at the bottom of the well. After taking a close look at the area it is determined that the Lower Abo, Wolfcamp, and Cisco are non productive (these three zones are currently approved for behind pipe injection (Abo, Wolfcamp, and Cisco [6,500' – 9,000] by the NMOCD already). To further enhance injection into the Wolfcamp and Cisco disposal zones I would like to propose the removal of the 4 ½" liner that we had originally designed in the original permit across the Wolfcamp and Cisco Formations (6,400' – 9,000'). I think the removal of the liner would greatly increase our disposal capacity and also allow long term low pressure injection into both zones. I do not see any potential drawback to completing this injection well open hole in both the non-productive Wolfcamp and Cisco formations in this area. There is only one well that penetrates the Wolfcamp and Cisco and produces from a deeper horizon separated by 900', and casing and cement around all intervals up to 1,600'.

Please let me know what is the best way to proceed to get this Sundry approved. I would like to talk to either of you and learn your ideas or suggestions as well as address any questions or potential issues that the NMOCD may foresee. Please let me know what is best course of action.

Well Data

Choate Davis 14 State #1 SWD
API #: 30-015-40629 SWD-1352

Attachments

Current Approved NMOCD APD for Choate Davis 14 State #1 SWD
Current Approved NMOCD CLP for Choate Davis 14 State #1 SWD
Current Approved NMOCD order for injection for Choate Davis 14 State #1 SWD
Original cased hole WBD for Choate Davis 14 State #1 SWD
Newly proposed WBD with open hole section for Choate Davis 14 State #1 SWD

Thanks,

Spencer C. Cox
Production Engineer



t 713-292-9528
c 432-254-5140
f 713-292-9578
e scox@limerockresources.com

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division



Administrative Order SWD-1352
August 27, 2012

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of 19.15.26.8B NMAC, Lime Rock Resources II-A, L.P. seeks an administrative order to utilize its proposed Choate-Davis 14 State SWD Well No. 1 (API 30-015-NA) to be located 2310 feet from the South line and 1650 feet from the East line, Unit letter J of Section 14, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

IT IS THEREFORE ORDERED THAT:

The applicant, Lime Rock Resources II-A, L.P., is hereby authorized to utilize its proposed Choate-Davis 14 State SWD Well No. 1 (API 30-015-NA) to be located 2310 feet from the South line and 1650 feet from the East line, Unit letter J of Section 14, Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the Abo, Wolfcamp, and Cisco formations through a perforated interval from approximately 6500 feet to 9000 feet through internally coated tubing and a packer set within 100 feet of the permitted interval.

The operator of this well shall run an injection survey (tracer/temperature or equivalent) within 1 year after commencing disposal into this well and shall supply the Division with a copy of this log. If the Division does not receive this log as prescribed above within that time period, then this disposal permit shall terminate *ipso-facto*.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 1300 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.



JAMTBAILEY
Director

JB/wvjj

cc: Oil Conservation Division – Artesia
State Land Office – Oil, Gas, and Minerals Division

January 22, 2014

RECEIVED OGD

2014 JAN 23 AM 11:27

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

Attention: Richard Ezeanyim

Re: Form C-108
Lime Rock Resources II-A, L.P.
Choate-Davis 14 State Com #1 SWD
30-015-40629
2310' FSL & 1650' FEL, Unit J
Section 14, T-18S, R-27E, NMPM,
Eddy County, New Mexico

Dear Mr. Ezeanyim,

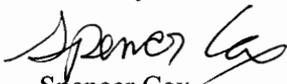
Enclosed please find a Division Form C-108 (Application for Authorization to Inject) for the Lime Rock Resources II-A, L.P. ("LRR") Choate-Davis 14 State Com #1 SWD. LRR proposes to drill and utilize this well as a produced water disposal well, injection to occur into the Abo, Wolfcamp and Cisco formations through the open hole interval from 6,500 feet to 9,000 feet. Produced water from the Glorieta, San Andres, Grayburg, Queen and Yeso formations originating from LRR operated wells in this area will be injected into the well.

This well was originally planned and permitted to be drilled vertically to a depth of 9,000' TVD. I 4 1/2" liner was supposed to be installed from 6,400' to 9,000'. The amended C-180 removes the liner and recommends open hole injection in the Cisco and Wolcamp formations. All parties have been notified (public and offset operators) and given an appropriate time to object. There have been no objections to the proposed changes for this well.

Included in package:

Email describing project scope originally sent 10-29-13
Approved original SWD permit - SWD-1352
New C-108 intended to amend SWD-1352
Approved APD for the Choate Davis 14 State #1 SWD
Approved CLP for the Choate Davis 14 State #1 SWD

Sincerely,



Spencer Cox
Production Engineer
Lime Rock Resources II-A, L.P.
1111 Bagby Street, Suite 4600
Houston, Texas 77002