

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



June 5, 2017

Mr. Mike Pippin
Lime Rock Resources II-A, L.P.
3104 N. Sullivan
Farmington, NM 87401

RE: Packer Setting Depth Exception

Injection Authority: Administrative Order SWD-1646 (dated August 12, 2016)
Permitted Interval: Cisco formation; approximately 7530 feet to approximately 8700 feet
Choate Davis 14 State SWD Well No. 2 (API 30-015-43628)
Unit E, Sec 14, T18S, R27E, NMPM, Eddy County, New Mexico

Mr. Pippin:

Reference is made to your request on behalf of Lime Rock Resources II-A, L.P. (OGRID 277558; "Lime Rock") received by the Division on May 17, 2017, for the above named well. Lime Rock applied for exception for setting the upper packer within 100 feet of the top perforation in the injection interval.

It is our understanding that Lime Rock has requested a packer setting depth of 7350 feet below surface or approximately 200 feet above the top of the open hole of the injection well. Following the drilling of the open-hole interval, Lime Rock identified a casing integrity problem for the section above the shoe of the 7-inch production casing. Lime Rock stated that the original attempts to obtain a proper seal for the tubing packer was not successful until a depth above 7365 feet.


To address this situation and provide for mechanical integrity of the well, Lime Rock proposed the installation of a two-packer system with a packer at of depth of 7465 feet and a second packer at a depth of 7350 feet. The Division accepted this installation with the condition that the Division may require an increase in the frequency of mechanical integrity testing for this well.

As a result, Lime Rock requests an exception for the current depth of the upper packer for the two-packer system at 7350 feet below surface. This location of the packer is approximately 200 feet above the top of the open hole and casing shoe for the 7-inch production casing at 7550 feet. This places both packers above the injection interval from 5816 feet to 6512 feet and above the approved injection formation top at 7530 feet.

For the reasons stated in the application and because it appears that correlative rights are protected, waste will not occur and this modification will not endanger any fresh water aquifer or the environment, the exception is granted. The upper packer location within this well shall not be set higher than 200 feet above the top of the open-hole interval unless the operator receives written approval from the Division Director. This exception is applicable only with the use of the two-packer system as detailed in the Lime Rock correspondence dated May 17, 2017. **The Division also stipulates that future repositioning of the upper packer above the current will not be considered and that the operator will be required to remediate the 7-inch production casing to resolve the casing integrity issue.**

The Division Director may rescind this exception if it becomes apparent that the injected fluid is not being confined to the permitted interval or is endangering any fresh water aquifer.

Sincerely,



DAVID R. CATANACH
Director

DRC/prg

cc: Oil Conservation Division – Artesia District Office
New Mexico State Land Office – Oil, Gas and Minerals Division
Administrative Order SWD-1646
Well File API 30-015-43628

LIME ROCK RESOURCES II-A, L.P.
Mike Pippin
3104 N. Sullivan
Farmington, NM 87401
505-327-4573 (phone) mike@pippinllc.com

May 17, 2017

NMOCD
Dave Catanach
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Request Variance to 100' SWD Packer Rule
Choate Davis 14 State #2 - API#: 30-015-43628
State SWD order: SWD-1646
Unit Letter "E" Section 14 T18S R27E
Eddy County, New Mexico

Dear Mr. Catanach,

Lime Rock is requesting a variance to the rule that a SWD packer should be within 100 feet of the top perf of the injection interval or in this case the open hole.

On 4/27/17, Lime Rock set a 7" x 3-1/2" nickle plated AS1-X injection PKR at 7465' with on/off tool and pump out plug, and tail pipe below the 7" shoe at 7550'. See the attached wellbore diagram. Lime Rock then spent 2 weeks attempting to locate why the 7" csg would not hold a pressure test. The leak was so small that the results were indeterminate. A csg inspection log run on 5/9/17 was also indeterminate. However, it was determined that the 7" casing would hold a pressure test above 7365'.

Therefore, in an effort to insure the isolation of high pressure water and possibly H2S coming from the open hole injection interval, 7550'-8700', Lime Rock would like to complete this SWD well with the additional safety features as follows:

Run the seal assembly for the AS1-X injection pkr and a DLH 7" x 3-1/2" hydraulic PKR on 4-1/2" 11.6# duolined tbg. Sting into AS1-X pkr at 7465' & set hydraulic PKR at 7350' with 4-1/2" duolined tbg between PKRs and landed at surface. Release rig. Schedule MIT test and step rate test.

Along with the current wellbore diagram, attached is the notice of intent sundry notice for this work. Please contact me at 505-327-4573 should you have any questions.

Very truly yours,



Mike Pippin
Petroleum Engineer

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-43628
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other SWD <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator LIME ROCK RESOURCES II-A,L.P.		6. State Oil & Gas Lease No.
3. Address of Operator c/o Mike Pippin LLC, 3104 N. Sullivan, Farmington, NM 87401		7. Lease Name or Unit Agreement Name CHOATE DAVIS 14 STATE SWD
4. Well Location Unit Letter <u>E</u> : <u>1760</u> feet from the <u>NORTH</u> line and <u>880</u> feet from the <u>WEST</u> line Section <u>14</u> Township <u>18-S</u> Range <u>27-E</u> NMPM <u>Eddy</u> County		8. Well Number <u>#2</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3495' GL		9. OGRID Number <u>277558</u>
10. Pool name or Wildcat SWD, Cisco (96099)		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

OTHER: ☒ Change Completion Plans

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS ☐ P AND A ☐
 CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

On 4/27/17, set a 7" x 3-1/2" nickle plated AS1-X injection PKR @ 7465' w/on/off tool & pump out plug, & tail pipe below 7550'. Lime Rock then spent 2 weeks attempting to locate why the 7" csg. would not hold a PT. The leak was so small that the results were indeterminate. A csg inspection log run on 5/9/17 was also indeterminate. However, it was determined that the 7" would hold a PT above 7365'.

Therefore, in an effort to insure the isolation of high pressure water & possibly H2S coming from the open hole injection interval, 7550'-8700', Lime Rock would like to complete this SWD well w/the additional safety features as follows:

Run the seal assembly for the AS1-X injection pkr & 7" x 3-1/2" hydraulic PKR on 4-1/2" 11.6# duolined tbg. Sting into AS1-X pkr @ 7465' & set hydraulic PKR @ 7350' w/4-1/2" duolined tbg between PKRs & landed @ surface. Release rig. Schedule MIT test & step rate test.

Spud Date: 3/5/17

Drilling Rig Release Date: 4/21/17

I hereby certify that the information above is true and complete to the best of my knowledge and belief.


SIGNATURE Mike Pippin TITLE Petroleum Engineer - Agent DATE 5/15/17

Type or print name Mike Pippin E-mail address: mike@pippinllc.com PHONE: 505-327-4573

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

 LIME ROCK RESOURCES	County EDDY	Well Name Choate-Davis 14 State #2 SWD	Field East Artesia	Well Sketch: Cisco SWD AFE D16002
	Surface Lat: 32.7500298° N (NAD 83)	BH Lat: 32.7500298° N (NAD 83)	Survey: S14-T18S-R27E; NE/4 Unit E	API # New
Surface Long: 104.2549815° W	BH Long: 104.2549815° W	SHL 1760' FNL & 880' FWL	OGRID # 277558	

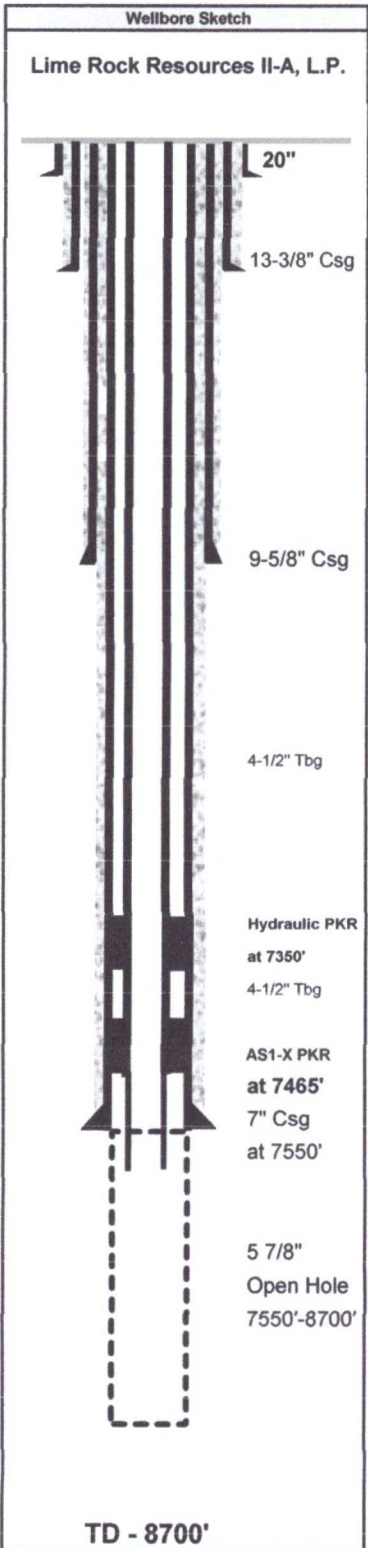
Directional Data:	
KOP	NA
Max Dev.:	
Dleg sev:	0
Dev @ Perfs	0
Ret to Vert:	Straight Hole

Drilling / Completion Fluid	
Drilling Fluid:	10 PPG Brine / Salt Gel
Drilling Fluid:	9.4 PPG Brine/Salt gel
Completion Fluid:	2% KCL
Completion Fluid:	
Packer Fluid:	2% KCL w/ Bactericide & O2 Sc

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	7,528'	7,528'	SURF
Liner							

CEMENT DATA							
	L/sks	Yld	Wt	T/sks	Yld	Wt	XS
Surface	350	1.34	14.8	NA	NA	NA	200%
Intermediate	320	1.903	12.8	525	1.33	14.8	150%
Production	480	2.06	12.6	770	1.18	15.6	150%
Liner							

Wellhead Data	
Type:	
WP:	
Tree Cap	Flange:
	Thread:
Tbg Hanger:	
8TM Flange:	
BPV Profile:	NA
Elevations:	GR - RKB = 13.4'
RKB: est	3,508.8'
GL:	3495.4



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'					13-3/8" Casing set at 300' and cmt'd to surf
405'	Seven Rivers Sand				
1000'	Queen Sand				
1810'	San Andres Formation				
2600'					
2,800'					9-5/8" Casing set at 2800' and cmt'd to surf
	8-3/4" Hole				
3425'	Glorieta Top				
3,620'	Yeso Formation				
5,055'	Abo Formation				
6,450'	Tubing				
6,500'	Wolfcamp Formation				
7,530'	Cisco Formation	7,530'	8,700'		7"x3.5" NP, IPC, AS1-X, 10K Carbide w On/off tool pump out plug, & tail pipe below 7550' on PKR
	and Injection Zone				7", 26# Casing set at 7,550'
CBL run 4/13/17					
TOC requires to be at a minimum of 2000' from surface					
Circulated 178 sks					
8,700'	Total Depth				Open Hole Injection Zone Cisco Injection 7530' to 8700' MD 7530' to 8700' MD
Comments:		Plug back Depth:		8,700'	MD
		Total Well Depth:		8,700'	MD
		Prepared By:		Date:	
		Eric McClusky		15-May-17	