Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

NM OIL CONSERVATION
ARTESIA DISTRICT
MAY 17 2016
RECEIVED

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised July 18, 2013

WELL API NO.
30-015-43116

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

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.)

7. Lease Name or Unit Agreement Name
HIGGINS CAHOON 12D

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

8. Well Number #3

2. Name of Operator
LIME ROCK RESOURCES II-A, L.P.

9. OGRID Number 277558

3. Address of Operator
c/o Mike Pippin LLC, 3104 N. Sullivan, Farmington, NM 87401

10. Pool name or Wildcat
Atoka, Glorieta-Yeso (3250)

4. Well Location
Unit Letter D : 990 feet from the North line and 990 feet from the West line
Section 12 Township 18-S Range 26-E NMPM Eddy County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3288' GL

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☒	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☒						
OTHER: Change Approved APD to 3 Strings of Casing	☒			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 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

In order to comply with the anticipated new rules for wells in Exhibit "A" area of E-42 and not release our contracted drilling rig, Lime Rock Resources II-A, L.P. recommends the following csg & cmt changes to our approved APD:

HOLE SIZE	CSG SIZE	DEPTH	CMT
26"	20"	80'	100
17-1/2"	13-3/8"	400'	400 sx
~~11"~~ 12-1/4	8-5/8"	1000'	500 sx
7-7/8"	5-1/2"	4603'	200 sx lead & 750 sx tail

Our Geology dept. has estimated that the top oil show will be ~1050' as per mud logs & the top of the San Andres. If the highest oil show is above 1050', the csg will be raised accordingly so as to stay 50' above the highest oil show.
See the attached details & new drilling plan.

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 5/16/16

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): "Denied"

ICS
5/24/16

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

Higgins Cahoon 12D #3
990' FNL 990' FWL
(D) 12-18S-26E
Eddy County, NM

1. The elevation of the unprepared ground is 3288 feet above sea level.
2. The geologic name of the surface formation is Quaternary – Alluvium.
3. A rotary rig will be utilized to drill the well to 4603' and run casing. This equipment will be rigged down and the well will be completed with a workover rig.
4. Well will be drilled to a total proposed depth of 4603' MD.

5. Estimated tops of geologic markers:

	MD	TVD
Quaternary – Alluvium	Surface	Surface
Yates	NA	NA
7 Rivers	NA	NA
Queen	349	349
Grayburg	763	763
Premier	969	969
San Andres	1053	1053
Glorieta	2322	2322
Yeso	2442	2442
Tubb	3903	3903
TD	4603	4603

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

	MD	TVD
Yates	NA	NA
7 Rivers	NA	NA
Queen	349	349
Grayburg	763	763
Premier	969	969
San Andres	1053	1053
Glorieta	2322	2322
Yeso	2442	2442
Tubb	3903	3903
TD	4603	4603

7. Proposed Casing and Cement program is as follows:

Type	Hole	Casing	Wt	Grade	Thread	Depth	Sx	Density	Yield	Components
Conductor	26"	20"	91.5	B	Welded	80	100			Ready Mix
Surface	17-1/2"	13-3/8"	54.5	J-55	ST&C	400	400	14.8	1.35	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
Intermediate	11" / 12¼"	8-5/8"	24	J-55	ST&C	1000	500		1.4	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
Production	7-7/8"	5-1/2"	17	J-55	LT&C	4603	200	12.8	1.903	(35:65) Poz/Cl C Cmt + 5% NaCl + 0.25 lbs/sk Cello Flake + 5 lbs/sk LCM-1 +0.2% R-3 + 6% Gel
							750	14.8	1.33	*Cl H w/ 0.6% R-3, 0.125% Cello Flake, 2% Gel*

8. Proposed Mud Program is as follows

FRESH WATER ZONE 400-1000

Depth	0-400	400-4453	4453-4603
Mud Type	Fresh Water Mud	Brine	Brine, Salt Gel, & Starch
Properties			
MW	8.4-9.2	9.8-10.1	9.9-10.1
pH	9.0-10.5	10.0-12.0	10.0-12.0
WL	NC	NC	20-30
Vis	28-34	28-29	32-34
MC	NC	NC	<2
Solids	NC	<2%	<3%
Pump Rate	300-500 gpm	375-425 gpm	400-425 gpm
Special		Use Poymers sticks and MF-55 Hi-Vis Sweeps as necessary	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: No drill stem tests are anticipated
Electric Logging Program: SGR-DLL-CDL-CNL Quad Combo from 4603 to surf. Csg. SGR-CNL to Surf.
Coring Program: 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 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 2025.32 psi based on 0.44 x TD. The estimated BHT is 125 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 10 days. An additional 14 days will be needed it complete the well and to construct surface facilities.

Well Name	Higgins Cahoon 12D #3	Operator:	Surface Location :	990' FNL and 990' FWL	GL Elevation:	3288.0
S-T-R & Unit()	(D) 12-18S-26E	Lime Rock Resources II-A, L.P.	BH Location :	990' FNL and 990' FWL	RKB:	3300.8
Well Type	Vertical		Productive Targets:	Atoka; Glorieta-Yeso	Frac:	
	KOP	NA	Target for Vertical	TVD: 4603		

Geology

	7 Rivers	Queen	Grayburg	Premier	San Andres	Glorieta	Yeso	Tubb	Abo	TD
TVD	NA	349	753	969	1053	2322	2442	3903	4503	4603
MD										

Casing Program

							Design Factors		
Type	Hole Size	Casing Size	Weight	Grade	Thread	Depth	Collapse	Burst	Tension
Conductor	26"	20"	91.5	B	Weld	80	NA	NA	NA
Surface	17-1/2"	13 -3/8"	54.5	J-55	ST&C	400	1.2	1.18	2
Intermediate	~~11~~ 12 1/4	8-5/8"	24	J-55	ST&C	1000	1.2	1.18	2
Liner									
Production	7-7/8"	5-1/2"	17	J-55	LT&C	4603	1.18	1.2	2

Cement Program

Casing	Depth	Slurry Vol, sx	Sacks	Density	Yield	System or Slurry Components
13 -3/8"	400	1 Slurry	400	14.80	1.35	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
8-5/8"	1000	Lead	500	14.8	1.4	Cl C Cmt + 0.25 lbs/sk Cello Flake + 2% CaCl2
		Tail				
		Lead				
		Tail				
5-1/2"	4603	Lead	200	12.8	1.903	(35:65) Poz/Cl C Cmt + 5% NaCl + 0.25 lbs/sk Cello Flake + 5 lbs/sk LCM-1 +0.2% R-
		Tail	750	14.8	1.33	Cl H w/ 0.6% R-3, 0.125% Cello Flake, 2% Gel

Mud Program

Depth		0-400	400-4453	4453-4603	
Mud Type		Fresh Water	Brine	Brine w/ Gel & Starch	
Properties					
	MW	8.5-9.2	9.9-10.2	9.9-10.2	
	pH	10	10-11.5	10-11.5	
	WL	NC	NC	15-20	
	Vis	28-34	30-32	32-35	
	MC	NC	NC	1	
	Solids	NC	<2%	<3%	
Pump Rate		300-350 gpm	350-400 gpm	400-450 GPM	
Special		LCM as Req	Salt Gel & MF as Req'd Pmp Hi Vis sweeps to control solids	Salt gel, Acid & MF as req. Pmp Hi Vis sweeps to control solids	