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1220 S. St. Francis Dr., Santa Fe, NM
87505

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

HOBBS OCD JAN 08 2018 RECEIVED		WELL API NO. 30-025-40448
1. Type of Well: Oil Well ☐ Gas Well ☐ Other: Acid Gas Injection ☒		5. Indicate Type of Lease STATE ☐ FEE ☒ FED
2. Name of Operator LUCID ENERGY DELAWARE, LLC		6. State Oil & Gas Lease No. NMLC063798
3. Address of Operator 3100 MCKINNON STREET, SUITE 800, DALLAS, TX 75201		7. Lease Name or Unit Agreement Name Red Hills AGI
4. Well Location Unit Letter <u>I</u> : 1600 feet from the <u>South</u> line and 150 feet from the <u>East</u> line Section <u>13</u> Township <u>24S</u> Range <u>33E</u> NMPM County <u>LEA</u>		8. Well Number #1
11. Elevation (Show whether DR, RKB, RT, GR, etc.): 3580 GR		9. OGRID Number 372422
		10. Pool name or Wildcat EXPLORATION CHERRY CANYON

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

**PROVIDE S.R.T. RESULTS
TO SANTA FE OCD FOR
APPROVAL**

SUBSEQUENT REPORT OF:

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

OTHER: (Step Rate Test) ☒

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.

On December 27, 2017 from approximately 4:00 to 8:00 pm, a step rate test was conducted by Elite Well Services and Geolex Inc. The test included eight flow rate steps from 0.25 to 5.0 BPM. The surface pressures ranged from 48 to 2,099 psi and the formation pressures ranged from 2,960 to 3,687 psi. The analysis of the step rate test data indicate that the test included at least 5 steps below and 2-3 steps above the estimated formation fracture pressure of approximately 3550-3600 psig (see attached BLM Field Data Form).

A minor leak below the lubricator occurred during the last step (step 8) after the first 5 minutes. The leak was quickly and safely repaired within 5 minutes, and the test was extended to account for this down time.

Following the step rate test, the bottom hole wireline pressure and temperatures gauges were replaced with a Schlumberger Optical P/T gauge on slick line, the final stage injection rate and pressure was re-established, and the well was shut in for a seven-day fall-off test.

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

SIGNATURE Dale T. Littlejohn TITLE Consultant to Lucid Energy DATE 01/06/2018
Type or print name Dale Littlejohn E-mail address: dale@geolex.com PHONE: (505) 842-8000
For State Use Only

APPROVED BY: Accepted for Record Only DATE 1/8/2018
Conditions of Approval (if any): MB

STEP RATE TEST DATA for BLM

Operator: Lucid Energy Delaware, LLC

Well: Red Hills AGI #1

API#: 30-025-40448

Lease: NMLC063798

Date collected: 12/27/2017

Sfc Loc: T-24-S, R-33-E, Sec 13 1600FSL 150FWL

Tbg OD 2-7/8" Tbg Wt. 7.9

Grade P-110 PH6

Packer set at: **6190** (ft) Inj Pipe I.D.: **2.880** (in)
 Top Injection Depth: **6230** X 0.20psig/ft = Expected Surface Fracture psig: **1246**
 With Mud Wt Scale: lbs/gal Beginning Formation psig: **2960** at Depth: **6593**
 Injection fluid lbs/gal: **8.40** Hydrostatic Pressure of fluid at top depth of injection: **2719**
 Beginning Wellhead psig: **48** Target Maximum Rate - bpd(barrels per day): **7200**

1. Take a charted record of shut in psig for no less than 48 hours. If the shut in psig is above the expected fracture pressure, **the wellhead pressure will need to be bled off before beginning the Step Rate Test.**
2. Perform a minimum of seven steps, recording rate to ± 0.1 bpm and surface pressures to ± 10 psig in five minute intervals. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection.
4. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15psig. Record the average of those two readings as the Data Point for that Step #.

Step 1							
Target Test Rate (5% of maximum bpd/1440 =				0.31 bpm pmp'd for Step 1			
				0.2500 bpm (barrels per minute) for Step 1			
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 16:10
Surface (psig):	41.00	98.00	153.00	193.00	230.00	267.00	End Time: 16:40
Formation (psig):	3194.00	3214.00	3234.00	3245.00	3254.00	3262.00	Graph Data for Point #1
gpm:	14.28	13.86	12.18	12.60	12.18	12.60	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 163.67
Formation (psig):							F psig: 3233.83
gpm:							gpm: 12.95

Step 1 has a target bpd rate of: 360

Step 2							
Target Test Rate (10% of maximum bpd/1440 =				0.52 bpm pmp'd for Step 2			
				0.5000 bpm for Step 2			
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 16:40
Surface (psig):	333.00	379.00	430.00	471.00	472.00	482.00	End Time: 17:10
Formation (psig):	3287.00	3298.00	3305.00	3312.00	3317.00	3318.00	Graph Data for Point #2
gpm:	21.00	21.42	21.42	22.26	22.26	22.26	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 427.83
Formation (psig):							F psig: 3306.17
gpm:							gpm: 21.77

Step 2 has a target bpd rate of: 720

Step 3							
Target Test Rate (20% of maximum bpd/1440 =				1.02 bpm pmp'd for Step 3			
				1.0000 bpm for Step 3			
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 17:10
Surface (psig):	545.00	557.00	572.00	573.00	574.00	580.00	End Time: 17:40
Formation (psig):	3351.00	3360.00	3367.00	3373.00	3378.00	3382.00	Graph Data for Point #3
gpm:	42.42	42.42	42.84	42.84	42.84	42.84	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 566.83
Formation (psig):							F psig: 3368.50
gpm:							gpm: 42.70

Step 3 has a target bpd rate of: 1440

STEP RATE TEST DATA for BLM

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Well: Red Hills AGI #1

API#: 30-025-40448

Lease: NMLC063798

Date collected: 12/27/2017

Sfc Loc: T-24-S, R-33-E, Sec 13 1600FSL 150FWL

Step 4							1.50 bpm pmp'd for Step 4
Target Test Rate (30% of maximum bpd/1440 =							1.5000 bpm for Step 4
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 17:40
Surface (psig):	672.00	675.00	685.00	690.00	700.00	700.00	End Time: 18:10
Formation (psig):	3411.00	3422.00	3432.00	3439.00	3444.00	3450.00	Graph Data for Point #4
Rate gal/min:	65.10	64.68	65.10	64.68	65.10	65.10	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							
Formation (psig):							Sfc psig: 687.00
gpm:							F psig: 3433.00
							gpm: 64.96

Step 4 has a target bpd rate of: 2160

Step 5							2.06 bpm pmp'd for Step 5
Target Test Rate (40% of maximum bpd/1440 =							2.0000 bpm for Step 5
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 18:10
Surface (psig):	807.00	803.00	830.00	818.00	835.00	850.00	End Time: 18:40
Formation (psig):	3470.00	3481.00	3490.00	3497.00	3504.00	3510.00	Graph Data for Point #5
gpm:	86.52	86.52	86.94	86.94	86.52	86.52	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							
Formation (psig):							Sfc psig: 823.83
gpm:							F psig: 3492.00
							gpm: 86.66

Step 5 has a target bpd rate of: 2880

Step 6							2.99 bpm pmp'd for Step 6
Target Test Rate (60% of maximum bpd/1440 =							3.0000 bpm for Step 6
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 18:40
Surface (psig):	1072.00	1078.00	1089.00	1102.00	1111.00	1119.00	End Time: 19:10
Formation (psig):	3534.00	3546.00	3555.00	3562.00	3568.00	3574.00	Graph Data for Point #6
Rate gal/min:	126.00	125.58	126.00	125.58	125.58	124.32	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							
Formation (psig):							Sfc psig: 1095.17
gpm:							F psig: 3556.50
							gpm: 125.51

Step 6 has a target bpd rate of: 4320

Step 7							4.14 bpm pmp'd for Step 7
Target Test Rate (80% of maximum bpd/1440 =							4.0000 bpm for Step 7
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 19:10
Surface (psig):	1502.00	155.00	1540.00	1588.00	1551.00	1561.00	End Time: 19:40
Formation (psig):	3582.00	3605.00	3615.00	3625.00	3633.00	3641.00	Graph Data for Point #7
gpm:	173.88	173.46	173.46	173.88	173.88	173.88	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							
Formation (psig):							Sfc psig: 1316.17
gpm:							F psig: 3616.83
							gpm: 173.74

Step 7 has a target bpd rate of: 5760

STEP RATE TEST DATA for BLM

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API#: 30-025-40448

Lease: NMLC063798

Date collected: 12/27/2017

Sfc Loc: T-24-S, R-33-E, Sec 13 1600FSL 150FWL

Step 8						
5.18 bpm pmp'd for Step 8						
Target Test Rate (100% of maximum bpd/1440 = 5.0000 bpm for Step 8)						
Time:	5 min	10 min	15 min	20 min	25 min	30 min
Surface (psig):	2040.00	shutdown	2033.00	2017.00	2060.00	2099.00
Formation (psig):	3582.00	shutdown	3642.00	3662.00	3675.00	3687.00
Rate gal/min:	215.04	shutdown	219.66	217.98	223.40	215.04
Time:	35 min	40 min	45 min	50 min	55 min	60 min
Surface (psig):	2100.00	2090.00				
Formation (psig):	3696.00	3704.00				
gpm:	216.72	214.62				

**Graph Data
for
Point #8**

Sfc psig: 2062.71
F psig: 3664.00
gpm: 217.49

Step 8 has a target bpd rate of: 7200

Instant Shut In Pressure: 1990
5 minute Shut In Pressure: 800
10 minute Shut In Pressure: 783
15 minute Shut In Pressure: 767