

Submit 1 Copy To Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

District I - (575) 393-6161

1625 N. French Dr., Hobbs, NM 88240

District II - (575) 748-1283

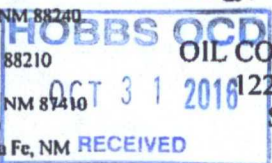
811 S. First St., Artesia, NM 88210

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



OIL CONSERVATION DIVISION

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

WELL API NO.

30-025-39785

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

HALE STATE

8. Well Number 004

9. OGRID Number 269324

10. Pool name or Wildcat
SWD; SAN ANDRES

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.)

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

2. Name of Operator

LINN OPERATING, INC.

3. Address of Operator

600 TRAVIS, SUITE 5100, HOUSTON, TEXAS 77002

4. Well Location

Unit Letter D : 330 feet from the N line and 990 feet from the W line
Section 31 Township 17S Range 34E NMPM LEA County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
4096' GL

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 ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

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 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

LINN Operating, Inc. is respectfully submitting a revised procedure to convert the Hale State #004 well to an SWD well per Administrative Order SWD-1590 dated October 16, 2015 and subsequent approval from the OCD Santa Fe office on September 27, 2016. The variance to Administrative Order SWD-1590 will allow for the installation of a 4" production liner from +/- 4170' - 4934' (PBTD). The liner will be cemented in place and re-perforated in the permitted disposal interval of 4820' - 4902'. The variance includes running 2-7/8" to 2-3/8" tapered IPC tubing with an injection packer set within the 4" production liner. A detailed procedure, current and proposed wellbore schematics are attached.

Condition of Approval: notify

Spud Date: **OCD Hobbs office 24 hours**
prior of running MIT Test & Chart

Per Underground Injection Control Program Manual

Rig Release Date: **11.6 C Packer shall be set within or less than 100 feet of the uppermost injection perfs or open hole.**

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

SIGNATURE Debra Gordon TITLE Regulatory Manager DATE 10/28/2016

Type or print name Debra Gordon E-mail address: dgordon@linnenergy.com PHONE: 281.840.4010

For State Use Only

APPROVED BY: Maley Shown TITLE Dist. Supervisor DATE 11/1/2016

Conditions of Approval (if any):

**The Oil Conservation Division
MUST BE NOTIFIED 24 Hours
Prior to the beginning of operations**

SWD CONVERSION PROCEDURE

Hale State #4

Lea County, NM
API: 30-025-39785
LINN Operating

CURRENT:

TD: 4,938'
PBTD: 4,934'
Casing: 8 5/8", 23# J-55 set at 1,556' 12-1/4" Hole
Cemented with 393 sks. TOC at the Surface
5 1/2", 15.5# J-55 set at 4,936' 7-7/8" Hole
Cemented with 975 sks. TOC at 585' (CBL)
Tubing: 2 3/8" 4.7# N-80 tubing set at 4,777'
Perforations: 4,270' - 4,754' (Perfs squeezed May 2016, unable to hold pressure)
4,820' - 4,902'

PROPOSED:

TD: 4,938'
PBTD: 4,934'
Casing: 8 5/8", 23# J-55 set at 1,556' 12-1/4" Hole
Cemented with 393 sks. TOC at the Surface
5 1/2", 15.5# J-55 set at 4,936' 7-7/8" Hole
Cemented with 975 sks. TOC at 585' (CBL)
4", 11# flush-joint L-80 liner set at ± 4,170' to 4,934' (PBTD)
Cemented in place from ± 4,170' to 4,934'
Tubing: 2 7/8" 6.5# J-55 IPC tubing set at ± 4,100'
2 3/8" 6.5# J-55 IPC tubing set ± 4,100 to ± 4,770'
Perforations: 4,820' - 4,902' (Permitted disposal interval)

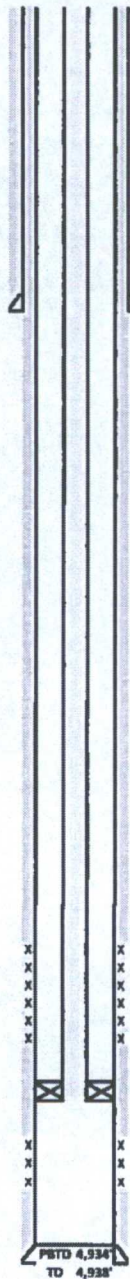
PROCEDURE:

- 1) Notify OCD of work prior to rig up.
- 2) Move in rig up workover rig.
- 3) PU junk basket, gauge ring to PBTD.
- 4) Run 764' of 4" flush-joint casing liner on 2-3/8" workstring.
 - Liner top at ± 4,170'. Liner bottom at PBTD of 4,934'.
- 5) Cement liner in place.
- 6) Cleanout liner.
- 7) Perforate 4" liner from 4,820' to 4,902'.
 - Permitted disposal interval.
- 8) Acidize new perfs down tubing with packer set within 4" liner.
- 9) Lay down workstring.
- 10) PU and RIH with packer and IPC injection tubing. Set packer at ± 4,770'.
- 11) Notify OCD of casing pressure test.

Well Name:	Hale St #4
AFE #	PC-W16147995
	Location:
Footage:	330' FHL, 900' FWL
Section:	31
Township:	17S
Range:	34E
County:	Lea
Lat:	N 32° 47' 51.26"
Long:	W 103° 36' 17.424"
	Elevations:
GL:	
KB:	4107'

Date	Work History
11/20/2008 - 11/30/2008	Spudded well. Set surf csg @1556'. Cmt'd w/393 sks cmt circ to surf. Drilled to TD @4938'. Set prod csg @4936'. Cmt'd w/975 tss.
12/15/2008 - 2/3/2009	Perf 4898-4902, 4882-4890, 4820-4824, 4744-4754, (2 SPF). Acidize perfs w/3200 gals acid. Perf 4720-4726, 4714-4716, 4666-4674, 4658-4660, 4640-4650, 4609-4611, 4588-4590, 4578-4585, 4570-4574, 4556-4560, 4549-4551, 4524-4534. Acidize perfs w/7000 gals acid. Set SN @4879', set TAC @4501', set 155 lbs 2-7/8" tbg @4900'. PU pump RIH w/10-7/8" rod, B6 3/4" rods, and 95 7/8" rods. Hung well on 2/5/09.
11/9/2009 - 11/17/2009	Treat existing perfs (4524-4890; 196 perfs) w/6300 gal acid. Set RBP @4500'. Shot perfs 4370-4400' (30); 4406-4412' (6) w/1 SPF. Treat new perfs w/2000 gals HCl. Frac new perfs 24,150 gals. Retrieve RBP, test and RWTP.
9/17/2010 - 9/20/2010	Frac San Andres perfs 4370-4412' with 55.5k# sand. RIH w/4-3/4 bit, bit sub, 4-3 1/2" DC on 2-7/8 tbg to 4435'. Tag fill, break circ., clean out fill to 4459'.
3/15/2013	Passed Bradenhead test.
3/24/2014	Passed Bradenhead test.
3/6/2015	Passed Bradenhead test.
10/16/2015	Administrative Order SWD-1590 approved by NM-OCDF for recompletion of the Hale St #4 for the purpose of produced water disposal. Injection permitted to occur through lower San Andres perforations from 4820'-4902' with a MASIP of 964 psi.
3/4/2016 - 3/14/2016	Convert to disposal. Attempt to squeeze off Grayburg - San Andres perfs 4370'-4754'. Establish injection rate of 200 psi. Pump 209 sks class C (49 bbls) 14.8# mud. Release pkr, reverse 23.9 bbls cmt out. Pkr cemented in hole.
3/14/2016 - 4/17/2016	Mill out and retrieve cemented packer.
4/13/2016 - 5/12/2016	Pressure test csg, lost 170 psi in 15 min. Isolate pressure loss - bottom of leak 4740', top of leak 4365'. Unable to isolate leak. Unable to establish injection rate in interval. RDMQ.

CURRENT Wellbore Diagram



Well Name:	Hale St #4
API No:	30-025-39785
Spud Date:	11/20/2008
Location area:	Caprock Majamar

SURFACE CASING

Hole Size: 12 - 1/4"
Surf Csg: 8 - 5/8" OD, 8.097" ID, 2.3 lb/ft, J-55 @ 1,556'
Cement: 393 sks class C 2% CaCl2 cmt
TOC: Circulated to Surface

PRODUCTION CASING

Hole Size: 7 - 7/8"
Prod Csg: 5 - 1/2" OD, 4.95" ID, 15.5 lb/ft, J-55 @ 4,936'
Cement: 975 sks class C 2% CaCl2 cmt
TOC: Circulated to Surface

TUBING

2 - 7/8"
Packer set at 4,777'

PERFORATIONS: Grayburg / San Andres
4370'-4400', 4406'-4412' (1 SPF)
4524'-4534', 4549'-4551', 4556'-4560', 4570'-4574'
4578'-4585', 4588'-4590', 4609'-4611', 4640'-4650'
4658'-4660', 4666'-4674', 4714'-4716', 4720'-4726'
4744'-4754' (2 SPF 90' phasing)
Perforations squeezed 5/12/15. Unable to hold pressure.

Injection Pkr: Set at 4,777'

PERFORATIONS: San Andres
4820'-4824', 4882'-4890', 4898'-4902'
2 SPF 90' phasing

Updated:
8/23/2016 / Haines

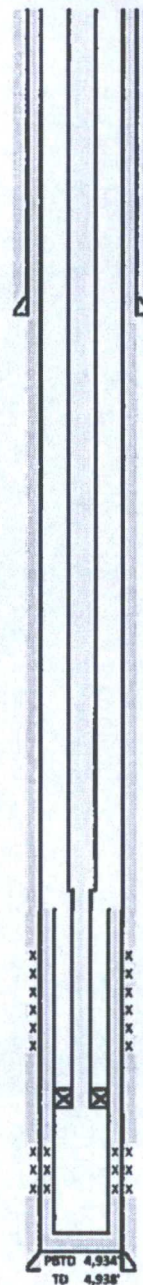
Well Name:	Hale St #4
AFE #	PC-W16147995
Location:	
Footage:	330' FNL, 900' FWL
Section:	31
Township:	17S
Range:	34E
County:	Lea
Lat:	N 32° 47' 51.26"
Long:	W 103° 36' 17.424"
Elevations:	
GL:	
KB:	4107'

Date	Work History
11/20/2008 - 11/30/2008	Spudded well. Set surf csg @1556'. Cmt'd w/393 sks cmt circ to surf. Drilled to TD @4938'. Set prod csg @4936' Cmt'd w/975 sks.
12/15/2008 - 2/3/2009	Perf 4898-4902, 4882-4890, 4820-4824, 4744-4754, (2 SPF). Acidize perfs w/3200 gals acid. Perf 4720-4726, 4714-4716, 4666-4674, 4658-4660, 4640-4650, 4609-4611, 4588-4590, 4578-4585, 4570-4574, 4556-4560, 4549-4551, 4524-4534. Acidize perfs w/7000 gals acid. Set SN @4879', set TAC @4501', set 155 jts 2-7/8" tbg @4900'. PU pump RIH w/10-7/8" rod, 86 3/4" rods, and 95 7/8" rods. Hung well on 2/5/09.
11/9/2009 - 11/17/2009	Treat existing perfs (4524-4890; 196 perfs) w/6300 gal acid. Set RBP @4500'. Shot perfs 4370-4400' (30); 4406-4412' (6) w/1 SPF. Treat new perfs w/2000 gals HCL. Frac new perfs 24,150 gals. Retrieve RBP, test and RWTP.
9/17/2010 - 9/20/2010	Frac San Andres perfs 4370-4412' with 55.5klb sand. RIH w/4-3/4 bit, bit sub, 4-3 1/2" DC on 2-7/8 tbg to 4435'. Tag fill, break circ., clean out fill to 4459'.
3/15/2013	Passed Bradenhead test.
3/24/2014	Passed Bradenhead test.
3/6/2015	Passed Bradenhead test.
10/16/2015	Administrative Order SWD-1890 approved by NNM-OCD for recompletion of the Hale St #4 for the purpose of produced water disposal. Injection permitted to occur through lower San Andres perforations from 4820'-4902' with a MASIP of 966 psi.
3/4/2016 - 3/14/2016	Convert to disposal. Attempt to squeeze off Grayburg - San Andres perfs 4370'-4754'. Establish injection rate of 200 psi. Pump 209 sks class C (49 bbls) 14.8# mud. Release pkr, reverse 23.9 bbls cmt out. Pkr cemented in hole.
3/14/2016 - 4/12/2016	Mill out and retrieve cemented packer.
4/13/2016 - 5/12/2016	Pressure test csg, lost 170 psi in 15 min. Isolate pressure loss - bottom of leak 4740', top of leak 4365'. Unable to isolate leak. Unable to establish injection rate in interval. RDMD.

PRODUCTION LINER

Prod Liner: 4" OD, 3.476" ID, 11 lb/ft ultra-FIL-80 liner @ 4,170'
Cement: Cemented in place from PBTD to TD
TOC: Top of Liner at 4,170'

PROPOSED Wellbore Diagram



Well Name:	Hale St #4
API No:	30-025-39785
Spud Date:	11/20/2008
Location area:	Caprock Mallamar

SURFACE CASING

Hole Size: 12 - 1/4"
Surf Csg: 8 - 5/8" OD, 8.097" ID, 23 lb/ft, J-55 @ 1,556'
Cement: 393 sks class C 2% CaCl2 cmt
TOC: Circulated to Surface

PRODUCTION CASING

Hole Size: 7 - 7/8"
Prod Csg: 5 - 1/2" OD, 4.95" ID, 15.5 lb/ft, J-55 @ 4,936'
Cement: 975 sks class C 2% CaCl2 cmt
TOC: Circulated to Surface

INJECTION TUBING

2 - 7/8", 6.5 lb/ft, J-55 IPC Tbg @ 4,100' (125 jts)
2 - 3/8", 6.5 lb/ft, J-55 IPC Tbg @ 4,770'
Packer set at 4,770'

Top of Liner: 4,170'

PERFORATIONS: Grayburg / San Andres
4370'-4400', 4406'-4412' (1 SPF)
4524'-4534', 4549'-4551', 4556'-4560', 4570'-4574'
4578'-4585', 4588'-4590', 4609'-4611', 4640'-4650'
4658'-4660', 4666'-4674', 4714'-4716', 4720'-4726'
4744'-4754' (2 SPF 90° phasing)
Perforations sealed off behind 4" cemented liner

Injection Pkr: Set at 4,770'

PERFORATIONS: San Andres (Disposal Interval)
4820'-4824', 4882'-4890', 4898'-4902'
2 SPF 90° phasing
Perforate proposed disposal interval through liner

Updated:
8/23/2016 J Haines