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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

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

1. Operator Name and Address	2. OGRID Number
Longfellow Energy, LP 16803 Dallas Parkway, Addison, TX 75001	372210 3. API Number 30-015-33215

4. Property Code	5. Property Name	6. Well No.
318043	State "20 B"	19

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
B	20	17S	29E		1010	N	2310	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name	Pool Code
GRAYBURG JACKSON-SR-Q-G-SA	28509

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
P	O	R	S	3617'
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	2,700'	San Andres	Unknown	Upon Approval

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water

☐ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	12 1/4"	8 5/8"	24#	335'	350	Surface
Production	7 7/8"	5 1/2"	17#	4,337'	1060	Surface

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Manual	3000	3000	Senital

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.
Signature: David Cain

Printed name: David Cain
Title: Engineering Technologist
E-mail Address: david.cain@longfellowenergy.com
Date: 7/1/2020 Phone: 214-265-4715

OIL CONSERVATION DIVISION

Approved By: Raymond V. Dabney
Title: Geologist
Approved Date: 7/16/2020 Expiration Date: 7/16/2021
Conditions of Approval Attached

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
811 South First, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-33215	28509	GRAYBURG JACKSON-SR-Q-G-SA

Property Code	Property Name	Well Number
318043	STATE "20 B"	19

OGRID No.	Operator Name	Elevation
372210	Longfellow Energy, LP	3617'

Surface Location

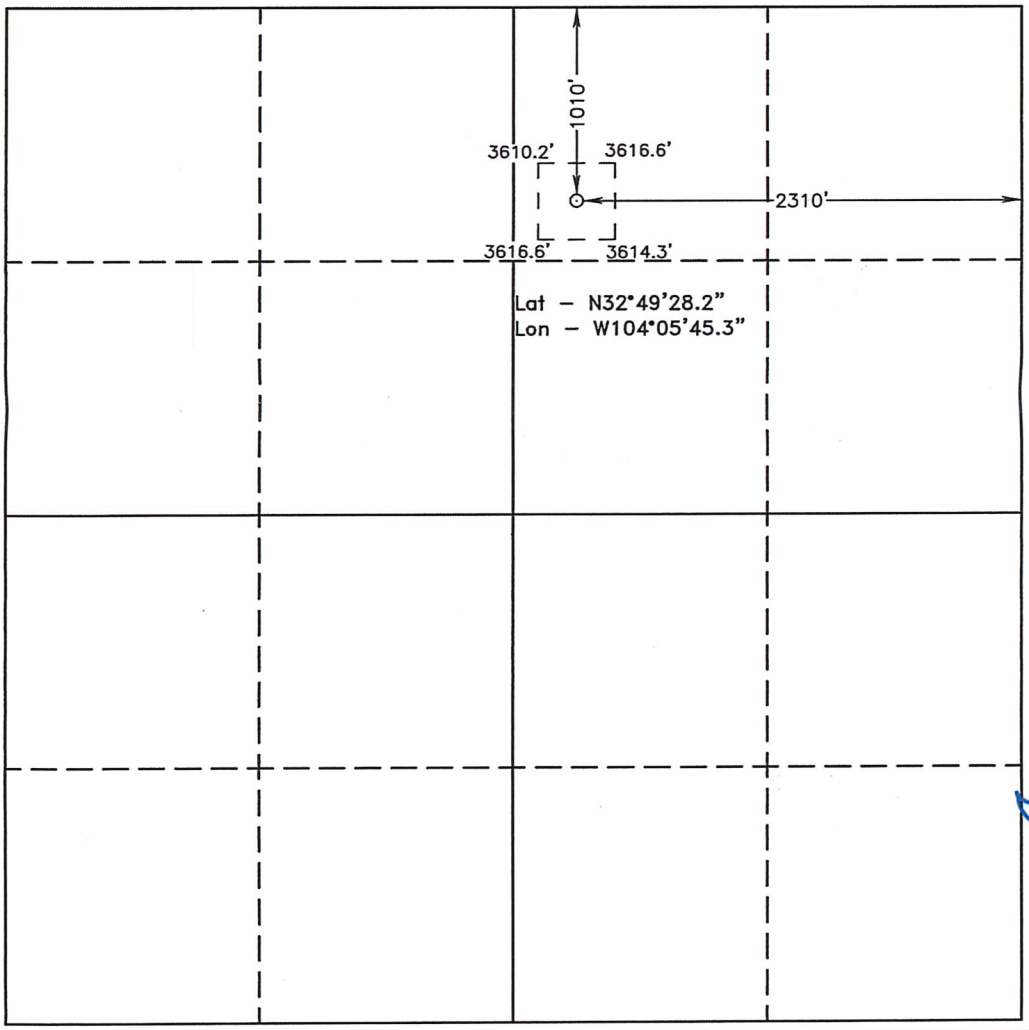
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	20	17 S	29 E		1010	NORTH	2310	EAST	EDDY

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	Joint or Infill	Consolidation Code	Order No.

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



OPERATOR CERTIFICATION

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

Signature
David Cain
Printed Name
Engineering Technologist
Title
7/1/2020
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

JANUARY 22, 2004
Date Surveyed
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 3947
Certificate No. Gary L. Jones 7977
BASIN SURVEYS

RWP 7/16/2020

LONGFELLOW ENERGY, LP

LONGFELLOW ENERGY, LP.

Loco Hills Operations
Recompletion Procedure

Well Name: State 20 B#19

Loco Hills
Recompletion Program
Version 1; 6/22/2020

Well Name	**State 20 B#19**
Well Type	Shut-in
Field	Grayburg Jackson
Operator	Longfellow Energy LP.
County	Eddy
State	NM

Engineer In Charge
Steven Buckler
Steven.buckler@longfellowenergy.com
432-741-5355

Objective of Workover:

Objective: Stimulate Upper San Andres with produced water and heat and return well to production.

Potential Hazards

1. Vacuum due to depleted Yeso
2. Corroded casing and equipment
3. Weather

Pre-Spud Activity

1. Check rig anchors
2. Move frac tanks from Aid State #6 to B#19 location
3. Fill tanks with treated produced water
4. Mix produced water with salt to achieve 225,000 TDS

Program Objective

1. Remove Downhole Equipment in Well
2. Set Plug and Perforate
3. Fracture Stimulate the Upper San Andres
4. Flowback
5. Put well on ALS

LONGFELLOW ENERGY, LP.

LONGFELLOW ENERGY LP.
16803 North Dallas Parkway
PO Box 1989
Dallas, TX 75001
(972) 590-9900

MAILING LIST
james.follis@longfellowenergy
philip.pope@longfellowenergy.com
Mike.milliken@longfellowenergy.com
david.mitchell@tapcor.com

CONTACTS	CELL	EMAIL
James S. Follis – LFE Drilling Engineer	(405) 306-6169	james.follis@longfellowenergy.com
Philip Pope – LFE HSSE	(432) 638-3612	philip.pope@longfellowenergy.com
Ryan Culpepper – LFE Land Representative	(405) 833-8967	ryan.culpepper@longfellowenergy.com
Mike Milliken – LFE Geologist	(405) 306-7321	mike.milliken@longfellownenergy.com
Steven Buckler –LFE Ops Engineer	(432) 741-5355	steven.buckler@longfellowenergy.com
David Mitchell – LFE Engineer	(214) 577-5600	david.mitchell@longfellowenergy.com

LONGFELLOW ENERGY, LP

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RECOMPLETION PROCEDURE

PAD SITE PREPARATION

1. Inspect or prepare rig anchors prior to mobilizing workover rig.
2. Have railroad ties or old tubing jts to lay-down rods and tubing
3. Move 10 x frac tanks from Aid State #6 to location. Begin pumping water from State 20 B&E battery. Contact chemical company and treat accordingly.

WELL PREP

4. MIRU Workover Rig, Crew & Ancillary Equipment
5. Conduct safety meeting. Discuss job scope of work for the day, associated hazards
6. Record Tubing and Casing Pressure
7. L/D PR and Horseshead. Unseat pump. If any paraffin on rods, inform EIC.
8. POOH L/D 3/4" rods on tubing. Careful not to bend rods during the laydown process. Hang the 7/8" and 1" rods. Send pump in for inspection to Garner Pump.
9. N/D Rod table and Pumping T. N/U Adapter Flange to 7 1/16" Larkin Head. N/U 5K Manual BOPE
10. POOH w/ tubing. Sent TAC in for repair. Note solids in mud anchor or any notables.
11. M/U Plug and setting tool on tbg. TIH and set CIBP @ 3850'. Tag plug to confirm.
12. SI 5k BOPE pipe rams on tbg. Load casing with ~60 BW and test casing to 4000#.
13. Bleed off pressure to truck. Open pipe rams. POOH w/ tbg. L/D ~1150 of 2 7/8" tbg to ~2700'.
14. R/U a flowline going from wing valve on casing to truck. SI pipe rams on tbg. Spot 500 gal of acid by circulating water to truck. Leave 2 bbl of acid inside tbg.
15. Open pipe rams and continue to L/D ~550 of 2 7/8" tbg for a total of 1700. Stand back rest of tbg in derrick.
16. N/D BOPE and adapter flange.
17. Release workover crew.
18. With well dead, dig around 7 1/16" Larkin head ~1- 2' deep. Cut 7 1/16" Larkin head off with welder. Weld on ~6" above 8 5/8" wellhead. Weld on a 5 ½" SOW 7 1 1/16" Flange. Weld needs to be API certified.
19. N/U 5k 7 1/16" NOPE. SI Blind Rams. R/U 5k kill truck on wing valve. Pressure up to 4000# to test weld.
20. Bleed off pressure and R/D kill truck
21. SI Blind Rams and secure well

Prepared By: Steven Buckler

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R/U W/L & DUMP BAIL & PERFORATE.

22. MIRU W/L Unit w/ 1K pack-off and M/U to BOPE
23. RIH and dump bail 20' of cement on top of CIBP
24. M/U Perforation guns as follows:

Cluster	Perf Top	Perf Btm	SPF	# of Holes	Phasing	Hole size
1	2699	2700	2	2	180	0.31
2	2689	2690	2	2	180	0.31
3	2679	2680	2	2	180	0.31
4	2669	2670	2	2	180	0.31
5	2659	2660	2	2	180	0.31
6	2649	2650	2	2	180	0.31
7	2639	2640	2	2	180	0.31
8	2629	2630	2	2	180	0.31
9	2619	2620	2	2	180	0.31
10	2609	2610	2	2	180	0.31
11	2599	2600	2	2	180	0.31
12	2589	2590	2	2	180	0.31
13	2579	2580	2	2	180	0.31
14	2569	2570	2	2	180	0.31
15	2559	2560	2	2	180	0.31

25. Confirm shots were fired and POOH w/ W/L.
26. SI Blind Rams and breakdown perforations. Establish injection rate between 2 – 5 bpm if possible.
27. R/D W/L
28. SI Blind Rams and secure well.

FRACTURE STIMULATE UPPER SAN ANDRES

29. MIRU Isolation Tool. M/U Isolation tool to BOPE.
30. MIRU Frac Company.
31. Stimulate the Baker as per pump schedule with regards to maximum treating pressures.
    a. Maximum pressure 4000#
    b. 90 bpm treating rate
    c. Ensure ball launcher is in line. Dropping 45 ball sealers with 3000 gal 15% HCL
    d. Test lines to 5000#
    e. Record ISIP/Pressures/Breakdown pressure/etc
32. SI well and R/D services. Prep for flowback operations.
33. R/U flowback iron to frac tanks from casing wing valves. Open choke and flowback well to frac tanks @ 60 bph rate.
34. After well dies. SI Blind Rams and prep to run tubing and rods.

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RUN ARTIFICAL LIFT

35. M/U Tbg BHA and RIH w/ tbg as follows: (From bottom to top). Depths could vary depending on PBTD. **Depths include KB.**
    i. 2 7/8" 8rd Bull Plug (~2570')
    ii. 3 x 2 7/8" 8rd J-55 EUE Jt [Trash Jts]
    iii. 2 7/8" Desander
    iv. New Cup Type SN (~2450')
    v. 78 Jts of 2 7/8" J-55 8rd EUE (Surf)
    b. Make sure to properly torque 2 7/8" connections between 1650 – 2000 ft/lbs.
36. N/D 5k BOPE and N/U 7 1/16" Tubing Wellhead.
37. Run R&R'd 1 1/2" pump & rods out of derrick (1" x 7/8" x K-bars).
    a. Use rod cards for makeup torque on rods.
    b. Replace used rod boxes if necessary.
    c. Space well out where pump is 24" off bottom.
38. Confirm pump action and load and test well to 500#.
39. R/D P/U and release Rig.

Prepared By: Steven Buckler