

Legacy Reserves
DAILY OPERATIONS REPORT - (All Days)
1/1/2017 thru 6/5/2017
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UNIVERSITY C # 4

ANDREWS Co., TX

BOLO ID: 421495.04.03

Zone: CLEARFORK Field: SHAFTER LAKE

AFE # 217014

Fracture Stimulate Lower and Middle Clearfork

Mar 22, 2017 Wednesday (Day 1)

SIP- 000#.

Move in rig up pulling unit and reverse unit. Set pipe racks and 2 7/8" L-80 workstring. Nipple down wellhead, nipple up blow out preventer. Pull out of hole and lay down 109jts 2 7/8" tubing.

Secure well.

Shut down for night.

Daily Cost: \$10,322

Cum. Cost: \$10,322 AFE Cum. Cost: \$10,322

AFE Amount: \$420,000

Mar 23, 2017 Thursday (Day 2)

SIP- 000#.

Pull out of hole and lay down remainder of 2 7/8" production tubing(46jts) for a total 155jts. Pick up run in hole with 1- 6" tri-cone bit, 1- bit sub, 6- 3 1/2" drill collars and 116 joints 2 7/8" L-80 work string.

Shut down due to high winds(cross threading tubing & blocks swinging in derrick)

Secured well.

Shut down for night.

Daily Cost: \$6,050

Cum. Cost: \$16,372 AFE Cum. Cost: \$16,372

AFE Amount: \$420,000

Mar 24, 2017 Friday (Day 3)

SIP- 000#.

Continue running in hole with bottom hole assembly and tag at 5165' on joint #154. Changed out both wheel valves on casing due to leaking during pressure test and installed new xxheavy nipples and 5k ball valves. Pressure test casing to 500# for thirty(30) minutes with less than 10# loss in pressure.

Pick up power swivel and begin drilling out Cast Iron Cement Retainer. Returns showing scale for about two(2) feet then cement for about two(2) more feet. Started getting metal back after four(4) feet of drilling. Drilled on retainer for one(1) hour and made less than one(1) foot. Bit at 5170'. Pulled up hole one(1) joint, circulated bottoms up twice.

Secured well.

Shut down for night.

Daily Cost: \$10,400

Cum. Cost: \$26,772 AFE Cum. Cost: \$26,772

AFE Amount: \$420,000

Mar 25, 2017 Saturday (Day 4)

SIP- 000#.

Continued drilling cast iron retainer and cement at 5170'. Through retainer after 7hrs drilling. Drilled cement out to 5184'(14' for the day).

Secured well.

Shut down for weekend.

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Zone: CLEARFORK Field: SHAFTER LAKE

Daily Cost:	\$8,000		
Cum. Cost:	\$34,772	AFE Cum. Cost:	\$34,772
AFE Amount:	\$420,000		

Mar 27, 2017 Monday (Day 5)

SIP- 000#.

Continued drilling cement at 5184', fell through cement at 5210'. Tag cement again at 6241' and fell through at 6338'. Tag cast iron bridge plug at 6455', test/chart casing 520# for thrity(30) minutes, test good with < 10# loss in pressure. Start drilling out plug making only a few inches.

Secured well.

Shut down for night.

Daily Cost:	\$8,350		
Cum. Cost:	\$43,122	AFE Cum. Cost:	\$43,122
AFE Amount:	\$420,000		

Mar 28, 2017 Tuesday (Day 6)

SIP- 000#.

Drilled through cast iron bridge plug. Flowed back 50bbls mud mixed with some oil and gas. Tried to circulate well with brine, annulas on vacuum at 90bbls. Pumped 20bbls brine down tubing to kill well, well went on slight vacuum. Continued cleaning out casing to 6758'.

Pull ouot of hole and laid down drill collars and bit. Pick up 7" Crest packer and T.S. Retrieveable Bridge Plug run in hole to 4500'.

Cleaned out reverse pit and released reverse unit.

Secured well.

Shut down for night.

Daily Cost:	\$11,750		
Cum. Cost:	\$54,872	AFE Cum. Cost:	\$54,872
AFE Amount:	\$420,000		

Mar 29, 2017 Wednesday (Day 7)

SICP- 090#. SITP- 270#.

Ordered gas buster to flow down tubing and casing. Truck broke down while delivering gas buster and had to order one from another company. Gas buster on location and hooked up with a four(4) hour delay. Circulated brine down annulas and up tubing(170bbls) to gas buster.

Ran in hole with retrieveable bridge plug and packer and set 7" T.S. Bridge Plug at 6610', pulled up hole ten(100 feet and set packer. Tested tools and pulled 7" Crest Packer up hole to 6498'. Test casing to 500# with no loss of pressure. Test perfs 6539' - 6565' to 500# with no loss of pressure.

Secured well.

Shut down for night.

Daily Cost:	\$10,600		
Cum. Cost:	\$65,472	AFE Cum. Cost:	\$65,472
AFE Amount:	\$420,000		

Mar 30, 2017 Thursday (Day 8)

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Zone: CLEARFORK Field: SHAFTER LAKE

SIP- <50#.

Release, pull out of hole and lay down packer and plug. Pick up run in hole with 7" Cast Cement Retainer. Retainer on depth at 6710', pump 45bbls through retainer and set retainer. Pump into perforations below retainer at the following rates and pressures:

0.5bpm 20bbls @ 1,100#

1.0bpm 20bbls @ 1,450#

2.0bpm 20bbls @ 1,800#

Had no communication, annulus open to surface. Sting out of retainer and pull out of hole laying down 2 7/8" L-80 work string. Left 20 joints in hole for kill string. Secured well.

Shut down for night.

Daily Cost: \$9,300

Cum. Cost: \$74,772 AFE Cum. Cost: \$74,772

AFE Amount: \$420,000

Mar 31, 2017 Friday (Day 9)

SIP- 000#.

Pull out of hole and lay down 20 joints 2 7/8" L-80 workstring. Move in rig up wireline, correlated to Capitan Log and perforate from 6,644' - 6,674', 4SPF-120 holes. Rig down move out wireline.

Move out 2 7/8" L-80 workstring and move in 6700' 3 1/2" 9.3# L-80 workstring. Move in rig up tubing testers to test tubing in hole 10,000# below slips. Pick up 7" Arrowset Frac Packer on 3 1/2" L-80 tubing, run in hole to 6,575' top of packer and 6,603' end of tubing. Set packer 15pts in compression and instal Frac Valve. Test 7' x 3 1/2" annulus to 400#, tested good with no loss of pressure. 9 5/8" x 7" annulus loaded prior to strting job.

Secured well.

Shut down for weekend.

Daily Cost: \$20,700

Cum. Cost: \$95,472 AFE Cum. Cost: \$95,472

AFE Amount: \$420,000

Apr 3, 2017 Monday (Day 10)

SIP- 000#.

Acid scheduled for 1100hrs, did not show until 1530hrs.

Move in rig up acid crew. Test lines to 5,500psi and start off on water. Casing pressure showing 40psi, tubing 000psi. Pumped 20bbls, tubing pressure at 1,200psi and casing pressure started climbing quickly. Tubing at 1,500psi and casing at 1,200psi, shut down and bled off casing pressure.

Nipple down frac valve, lay down 3 joints 3 1/2" L-80 workstring, reset packer at 6,499'. Nipple up frac valve and test annulus to 500# with no loss of pressure. Start acid job. Treating vans computer not working, called for another treating van, down one(1) hour waiting for van.

Van on location start acid job. Start off on water pumping 30bbls brine, pressure staying at 2000psi 8bpm, start on acid. Pumped 24bbls acid at 8bpm 2100psi, dropped 1000# salt block in brine, 24bbls acid at 8bpm 2100psi, dropped 1000# salt block in brine, 24bbls acid at 8bpm 2100psi and 62bbls flush.

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Zone: CLEARFORK Field: SHAFTER LAKE

Did not see any pressure change when first salt block hit perfs. 15bbls into flush surface line developed a connection leak that quickly became worse. Shut down to tighten swedge. Picked back up on flush and tubing pressure climbed to 4,436psi and casing pressure began climbing. Casing pressure up to 650psi, slowed pump rate to 4bpm at 1200psi, opened casing to gas buster and finished pumping flush. Casing open to gas buster with a slight flow. Total fluid from casing < 5bbls. Did not see a pressure change when second block hit perfs.

Max pressure 4436psi, average pressure 2100psi. Max rate 8.0bpm, average rate 7.7bpm.

ISIP- 1144psi

5min- 1041psi

10min- 1007psi

15min- 987psi

When tubing pressure dropped to 100psi casing stopped flowing. Shut well in with 900psi on tubing and 000psi on casing.

Secured well.

Shut down for night.

Daily Cost: \$17,500

Cum. Cost: \$112,972 AFE Cum. Cost: \$112,972

AFE Amount: \$420,000

Apr 4, 2017 Tuesday (Day 11)

SICP- <50#. SITP- 500#.

Bled down tubing to gas buster. Released 7" Arrowset Frac Packer and circulated 200bbls brine down annulus and up tubing to gas buster. Gained 80bbls fluid while circulating. Reset packer and rigged up swab equipment. Loaded and tested annulus to 500# for 15 minutes with no loss of pressure.

Made 11 swab runs, about two(2) per hour for a total of 70bbls load water.

0- fluid at surface

1st hour- fluid at 600'

2nd hour- fluid at 1200'

3rd hour- fluid at 1800'

4th hour- fluid at 2400'

5th hour- fluid at 3000'

Secured well.

Shut down for night.

Total fluid recovered for day 150bbls.

Daily Cost: \$11,300

Cum. Cost: \$124,272 AFE Cum. Cost: \$124,272

AFE Amount: \$420,000

Apr 5, 2017 Wednesday (Day 12)

SICP- 000#. SITP- 300#.

Made two(2) swab runs, fluid level at 600', samples showed 75% oil. Swabbed back about 15bbls.

Release packer and pull out of hole with 3 1/2" L-80 tubing and laid down 7" AS-1X Frac Packer. Picked up 7" Crest compression packer and run in hole on 3 1/2" Tubing. Set packer at 6,498' and load/test annulus to 500# with no loss of pressure in 15 minutes. Pumped 20bbls brine down tubing at 3.5bpm @ 1,800# with no communication to annulus.

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Zone: CLEARFORK Field: SHAFTER LAKE

Release and move packer down to 6,610' and load/test annulas to 500# with 150# loss in pressure. Pressure dropped to 350# and stopped falling. Pumped 35bbls brine down tubing at 4bpm @ 2,200# with no communication to annulas.

Prepared swab for tomorrow morning.

Secured well.

Shut down for night.

Daily Cost: \$9,900

Cum. Cost: \$134,172 AFE Cum. Cost: \$134,172

AFE Amount: \$420,000

Apr 6, 2017 Thursday (Day 13)

Open well with zero psi on tbg and csg, swabbed tbg from 7 a.m. to 11 a.m. IFL at surface, made 12 total runs recovered 91 bbls water getting 1% oil cut on last 2 runs, EFL at 4,000' released packer, POH 186 jnts 3 1/2" work string, left 20 jnts for kill string, secured well, SDFN.

Daily Cost: \$10,800

Cum. Cost: \$144,972 AFE Cum. Cost: \$144,972

AFE Amount: \$420,000

Apr 7, 2017 Friday (Day 14)

Open tbg and csg with zero psi, POH with kill string, RU hydrotester, RIH with 7" A.S 1x 10K frac packer on 3 1/2" L80 work string, hydrotested 3 1/2" L80 tbg to 10,000#, all tested good, ran 206 jnts, RD tester, install frac valve on 3 1/2" tbg, set packer at 6597', ru pump truck on annulus, pumped 13 bbls brine water, csg loaded, pressured to 500#, lost 120 psi in 30 min, ru pump truck on tbg, pumped 19 bbls down tbg established rate of 2 1/2 bbls/min at 1600#, no communication with backside, RU pump truck back on annulus, 1/2 bbl to load, pressured to 470#, lost down to 300# in 55 minutes started slowing, left pressure on csg, secured well, SD.

Daily Cost: \$39,862

Cum. Cost: \$184,834 AFE Cum. Cost: \$184,834

AFE Amount: \$420,000

Apr 10, 2017 Monday (Day 15)

Open tbg and csg with zero psi, installed 4 way frac head on frac valve, prepared to frac on Tuesday

Daily Cost: \$6,075

Cum. Cost: \$190,909 AFE Cum. Cost: \$190,909

AFE Amount: \$420,000

Apr 11, 2017 Tuesday (Day 16)

Open well with zero psi tbg and csg, RU Cudd Pumping service, tested frac lines to 10,000#, started on pad, communication with annulus at approximately 200 bbls put away at 6200 psi, SD RDMO Cudd, POH with 3 1/2" work string and A.S 1x 10K frac packer, RU RTX W.L. RIH with 10' slick gun, Perforate 6,540' to 6,550' 4 SPF 60 deg phasing total 40 holes (correlated to Capitan Depth Control Log Dated 5/16/90) RD W.L. PU RIH with A.S. 1x packer on 20 jnts 3 1/2" work string, secured well, SD. Prepare for 1st and 2nd stage combined frac at noon tomorrow.

Daily Cost: \$27,984

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Zone: CLEARFORK Field: SHAFTER LAKE

Cum. Cost:	\$218,893	AFE Cum. Cost:	\$218,893
AFE Amount:	\$420,000		

Apr 12, 2017 Wednesday (Day 17)

Open well with zero psi on tbg and csg, finished RIH with 7" x 2 7/8" A.S. 1x 10k packer on 202 jnts 3 1/2" work string, PU frac valve install on 3 1/2" work string, set packer at 6,464' set 16,000# compression, install 4 way frac head, load/test backside to 500# held pressure for 30 minutes, MIRU Cudd Pumping Service at 1:00 pm, tested lines at 3:00 pm, started frac at 3:30 pm, open well with zero psi on tbg, pressured backside to 200 psi, Acidize Clearfork perf 6,540'-6,697' with 2,000 gals 15% HLC acid, Frac with 20# gel, Bfrac 12 and 20, 1#,2#,3#,4# 20/40 Brady Sand, 4# 20/40 Coolset, Avg Rate 28.2 BPM, Avg PSI 3,413# Max Rate 32.1 Max PSI 6,467# ISIP 1765# Pumped 230,020 lbs 20/40 Brady and 34,880 lbs of 20/40 Coolset Total, Sand 264,900lbs Load to Recover 3,423 bbls, Shut well in, RDMO Cudd equipment.

Daily Cost:	\$168,949		
Cum. Cost:	\$387,842	AFE Cum. Cost:	\$387,842
AFE Amount:	\$420,000		

Apr 13, 2017 Thursday (Day 18)

Open well with 1250# on tbg and 1000# on csg, csg blew down within 1 minute, open tbg to gas buster, flowed down to 1000# in first hr, 40 bbls all water to pit, 3/4" choke on 18/64, pressure down to 900 in second hr. flowed 55 bbls all water, third hr. open choke to 20/64 at 800-850 psi, flowed 65 bbls water, started seeing signs of frac sand in sample, 4th hr 700 psi choke started washing out more sand in sample flowed 50 bbls water, replaced choke open well with 850 psi, flowed down to 650-700 flowed 48 bbls water to pit, 5th hour pressure dropped from 600 to 400 still flowing back all water and less sand, shut well in SD.

Daily Cost:	\$17,213		
Cum. Cost:	\$405,055	AFE Cum. Cost:	\$405,055
AFE Amount:	\$420,000		

Apr 17, 2017 Monday (Day 19)

Open Tbg 700#, Csg 100, flowing to gas buster for 8 hrs, recovered 426 bbls water, removed frac valve, released AS 1x frac packer, started POH with 3 1/2" work string, laid down total 71 jnts, secured well, SDFN.
Total fluid recovered 739 out of 3,423 bbls

Daily Cost:	\$14,611		
Cum. Cost:	\$419,666	AFE Cum. Cost:	\$419,666
AFE Amount:	\$420,000		

Apr 18, 2017 Tuesday (Day 20)

Open well with 300# on tbg and csg zero psi, finished POH with 3 1/2" work string laid down and released, 220 jnts 2 7/8" J55 prod tbg delivered/racked and tallied, PU RIH with 2 7/8" notched collar on 2 7/8" prod tbg ran 213 jnts and tagged fill with 6' of jnt 214 out at 6,653' found 57' of fill and 44' of perfs covered, RU pump truck circulated hole cleaning out to PBDT at 6,610, circulated hole with 263 bbls water, started POH left 20 jnts for kill string, secured well, SDFN.

Daily Cost:	\$10,945		
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UNIVERSITY C # 4

ANDREWS Co., TX

BOLO ID: 421495.04.03

Zone: CLEARFORK Field: SHAFTER LAKE

Cum. Cost:	\$430,611	AFE Cum. Cost:	\$430,611
AFE Amount:	\$420,000		

Apr 19, 2017 Wednesday (Day 21)

open tbg with 150 psi, csg zero psi, POH with kill string, PU and MU Borets ESP, RU spooler and hydrotester, RIH testing tbg to 5000#, ran total 204 jnts 2 7/8" J55 tbg, 4' x 2 7/8" L80 tbg sub, 2 7/8" SN, ESP, desander, 4 jnts BPMJ EOT at 6532.72', RD tester and spooler, ND BOP, NUWH, land tbg, released to prod, RD in the a.m.

Daily Cost:	\$66,494		
Cum. Cost:	\$497,105	AFE Cum. Cost:	\$497,105
AFE Amount:	\$420,000		

Apr 20, 2017 Thursday (Day 22)

RDMO Swabco WSU

Daily Cost:	\$18,395		
Cum. Cost:	\$515,500	AFE Cum. Cost:	\$515,500
AFE Amount:	\$420,000		

Apr 21, 2017 Friday (Day 23)

Daily Cost:	\$4,151		
Cum. Cost:	\$519,651	AFE Cum. Cost:	\$519,651
AFE Amount:	\$420,000		

Apr 22, 2017 Saturday (Day 24)

Daily Cost:	\$68,219		
Cum. Cost:	\$587,870	AFE Cum. Cost:	\$587,870
AFE Amount:	\$420,000		