

**PT Petroleum, LLC  
University Orange 1041A  
“Wolfcamp A”  
API 42-383-39858  
2344’ FWL and 100’ FSL  
Section 4, Block 1, ULS  
Reagan County, Texas**

**7-10-17 – Initial Completion**

Arrived on location. MK transfer arrived and began driving out route to lay water transfer line. Phoenix Tanks arrived on location with Pro-Petro to mark where tanks and frac fleet will be spotted.

**7-11-17 – Initial Completion**

Arrived on location. 4 porta john, 1 trash trailer, 6 light towers, and 2 manlifts arrived on location. Remaining frac tanks begin arriving on location. A&P Services arrived on location w/ 3 trailers. MK transfer continue to rig up water transfer lines. J&W arrived on location with both frac stacks. SDFN

**7-12-17 – Initial Completion**

Spartan arrived on location and started rigging up flow back to both wells. Zipper manifold on location ready for rig up. Water transfer continue to rig up transfer lines.

**7-13-17 – Initial Completion**

All frac tanks on location, spotted pump down tanks and pumps. Water transfer continue to rig up lines.

**7-14-17 – Initial Completion**

Water transfer complete, begin to fill frac tanks.

**7-15-17 – Initial Completion**

Pro Petro moved frac equip to location and begin rig up.

**7-16-17 – Initial Completion**

Perform bucket tests on chem pumps with fluid tech while frac rig up continues. Verified water in tanks. Prime and test transfer lines. Run flow loop test. Ran sand sieve analysis/ verified sand tickets. Continue RU frac lines and equipment. WL line moved in and rigged up.

**7-17-17 – Initial Completion**

Rig up complete. Pressure tested casing to 9500 psi for 30 min. Opened toe sleeve, pumped 1500 gallons of acid. 585 bbls total. RIH with guns for stage 1, no plug. Had to come out due to ccl malfunction at 1500'. POOH to rehead and pick up new CCL. RIH with guns for stage 1, no plug. Perforated 17,541'-17,543', 17,518' - 17,520', 17,495'- 17,497', 17,472'- 17,474' , 17,449'- 17,451', 17,426'- 17,428' , 17,403'- 17,405', 17,380'- 17,382'. All shots fired POOH. **Stage 1 Frac:** Total pumped, HCL 15% 48bbls. Total slickwater pumped 9388bbl. Total 100 Mesh

244,124 lbs. Proppant pumped this stage 244,124lbs. Total proppant pumped 244,124lbs. ISIP 2021 psi, F.G. 1.00 psi/ft. Qavg: 94bpm, Pavg: 8529psi, Qmax: 101, Pavg: 9403psi. Notes: Cut stage short 126K lbs due to high treating pressure. **Stage 2 Perf:** RIH with guns for stage 2, CPB at 17,368'. Perforated: 17,356'- 17,358', 17,333'- 17,335', 17,310'- 17,312', 17,287'- 17,289', 17,264'- 17,266', 17,241'- 17,243', 17,218'- 17,220', 17,195'- 17,197'. All shots fired POOH.

### **7-18-17 – Initial Completion**

**Stage 2 Frac:** SICP: 1,973 psi, Formation broke at 5,063 psi, while pumping 15 bpm. Pumpdown 600 bbls. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 10,117 bbls. Total 100 Mesh: 277,645 lbs, Total 40/70: 92,441 lbs. Total proppant pumped: 370,086 lbs. ISIP: 2,007 psi, with a Frac Gradient of 0.70 psi/ft. Qavg: 92 bpm, Pavg: 7,766 psi, Qmax: 97 bpm, Pmax: 9,181 psi. \*\*\*Notes\*\*\* 2.00 ppa 100 mesh Stage was cut short due to pressure response. Pumped a clean sweep of 430 BBLs. Resumed 0.50 ppa 100 mesh increased to 1.50 ppa 100 mesh. Started 40/70 at a 1.50 ppa increased to a 2.25 ppa reached total sand volume. **Stage 3 Perf:** RIH with guns for stage 3, plug set @ 17,183'. Perforated 17,171' - 17,173', 17,148' - 17,151', 17,122' - 17,124', 17,102' - 17,104', 17,079' - 17,081', 17,056' - 17,058', 17,033' - 17,035', 17,010' - 17,012. All shots fired POOH. **Stage 3 Frac:** SICP: 1,161 psi, Formation broke at 3831 psi, while pumping 15 bpm. Pumpdown 524 bbls. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 11,708 bbls. Total 100 Mesh: 275,519 lbs, Total 40/70: 93,308 lbs. Total proppant pumped: 368,827 lbs. ISIP: 2,163 psi, with a Frac Gradient of 0.72 psi/ft. Qavg: 98 bpm, Pavg: 6,874 psi, Qmax: 101 bpm, Pmax: 9,177 psi. \*\*\*Notes\*\*\* Extended pad 881 bbls due to pressure. 1.25 ppa 100 mesh Stage was cut short due to pressure response. Pumped a clean sweep of 150 BBLs. Resumed 0.50 ppa 100 mesh increased to 2.25 ppa 100 mesh. Pumped a clean Sweep of 250 Bbls Started 40/70 at a .50 ppa increased to a 2.50 ppa reached total sand volume. **Stage 4 Perf:** RIH with guns for stage 4, plug 17,001'. Perforated 16,986' - 16,988', 16,963' - 16,965', 16,940' - 16,942', 16,917' - 16,919', 16,894' - 16,896', 16,871' - 16,873', 16,848' - 16,850', 16,825' - 16,827. All shots fired POOH. **Stage 4 Frac:** SICP: 1,232 psi, Formation broke at 3748 psi, while pumping 15 bpm. Pumpdown 514 bbls. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 10,766 bbls. Total 100 Mesh: 276,836 lbs, Total 40/70: 94,439 lbs. Total proppant pumped: 371,275 lbs. ISIP: 2,323 psi, with a Frac Gradient of 0.74 psi/ft. Qavg: 98 bpm, Pavg: 6,900 psi, Qmax: 102 bpm, Pmax: 8,939 psi. **Stage 5 Perf:** RIH with guns for stage 5, plug 16,809'. Perforated 16,798' - 16,800', 16,778' - 16,780', 16,755' - 16,777', 16,732' - 16,734', 16,709' - 16,711', 16,686' - 16,688', 16,663' - 16,685', 16,640' - 16,642'. All shots fired POOH. **Stage 5 Frac:** SICP: 1036 psi, pumped acid @ 15 bpm, Formation breakdown--3809 psi. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 10,307 bbls. Pumpdown--491 bbls. Total 100 Mesh: 282,249 lbs, Total 40/70: 84,512 lbs. Total proppant pumped: 366,761 lbs. ISIP: 2,316 psi, with a Frac Gradient of .74 psi/ft. Qavg: 99 bpm, Pavg: 6,836 psi, Qmax: 102 bpm, Pmax: 9,049 psi. \*\*\*Notes\*\*\*-reached total sand Volume per schedule, Flushed well. **Stage 6 perf:** RIH with guns for stage 6, plug 16628'. Perforated 16616' - 16618', 16593' - 16595', 16570' - 16572', 16547' - 16549', 16524' - 16526', 16501' - 16503', 16478' - 16480', 16455' - 16457'. All shots fired POOH. **Stage 6 Frac:** SICP: 1065 psi, pumped acid @ 15 bpm, Formation breakdown--4603 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 10,090 bbls. Pumpdown--456 bbls. Total 100 Mesh: 284,626 lbs, Total 40/70: 87,420 lbs. Total proppant pumped: 372,047 lbs. ISIP: 2367 psi, with a Frac Gradient of .75

psi/ft. Qavg: 98 bpm, Pavg: 6960 psi, Qmax: 102 bpm, Pmax: 8761 psi. \*\*\*Notes\*\*\* Dropped FR loading to .75 Reached total sand Volume per schedule.

### **7-19-17 – Initial Completion**

**Stage 7 Perf:** RIH with guns for stage 7, plug 16,443'. Perforated 16431' - 16433', 16,408' - 16,410', 16,385' - 16,387', 16,362' - 16,364', 16,339' - 16,341', 16,316' - 16,318', 16,293' - 16,295', 16,270' - 16,272'. All shots fired POOH. **Stage 7 Frac:** SICP: 933 psi, pumped acid @ 15 bpm, Formation breakdown--4236 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 10,074 bbls. Pumpdown--384 bbls. Total 100 Mesh: 283,787 lbs, Total 40/70: 88,142 lbs. Total proppant pumped: 371,929 lbs. ISIP: 2108 psi, with a Frac Gradient of .72 psi/ft. Qavg: 98 bpm, Pavg: 6,659 psi, Qmax: 101 bpm, Pmax: 8,965 psi. \*\*\*Notes\*\*\*- Dropped FR loading to .75 Reached total sand Volume per schedule, Flushed well. **Stage 8 Perf:** RIH with guns for stage 8, plug 16,258'. Perforated 16,246' - 16,248', 16,223' - 16,225', 16,200' - 16,202', 16,178' - 16,180', 16,154' - 16,156', 16,131' - 16,133', 16,108' - 16,110', 16,086' - 16,088'. All shots fired POOH. **Stage 8 Frac:** SICP: 1,119 psi, pumped acid @ 15 bpm, Formation breakdown--4,185 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 10,303 bbls. Pumpdown--340 bbls. Total 100 Mesh: 281,942 lbs, Total 40/70: 87,938 lbs. Total proppant pumped: 369,880. ISIP: 2,085 psi, with a Frac Gradient of .71 psi/ft. Qavg 100 bpm, Pavg: 6,325 psi, Qmax: 101 bpm, Pmax 9,003 psi. \*\*\*Notes\*\*\*- Reached total sand volume per schedule, flushed well. **Stage 9 Perf:** RIH with guns for stage 9, Reached plug depth at 16,073' shot plug showed two kicks on CCL but no weight loss. Tried to pull up hole but tools were stuck, line tension increased to 4,000. Pumped on guns up to 9 BPM. Dropped weight, POOH with no tools. Tool Stuck at Plug Depth, was a clean pull out. Standby for Coil tubing to fish guns. Rig down WL, Crane, pump trucks and frac iron to make room for Coil unit.

### **7-20-17 – Initial Completion**

Prep location for Coil tubing. Coil reel trailer broke down 16 miles from location (drive train on tractor damaged). Coil on location. Begin RU, spot in and build 190T crane. NU BOP and 70' of lubricator. Welder on location, weld connector on coil, ok. Pull / function test connector, ok. Standby for shift change. As of report time, current coil depth – 10,600'. Est top of fish 16,073'.

### **7-21-17 – Initial Completion**

Held safety meeting prior to coil tubing fishing operations. Pressure test CTU to 7500 psi. Open well, RIH w/coil to retrieve fish. Perform weight check at 15,900', 44k lbs, circ pressure – 2200 psi. Continue RIH to top of fish. Tagged Fish @ 16,102'. Latch fish, circ pressure increase to 3500 psi. PU with 25k lbs drag, plug is not 100% set. RIH to 16,136'. Cock jars and fired twice. Sheared from plug at 16,136'. POOH slow with guns. BHA and fish on surface all accounted for. Shut well in. RD BHA and fish. RD CTU and move off location. Wait on crane to arrive on location. Spot in pump down pumps, crane & NU goathead. MIRU WL, frac pumps (4), hang risers, lay bleed off lines. Pressure test and repair leaks. Pressure test to 9500 psi, good test. Open well @ 548 psi & pump 415 bbls @ 55 BPM @ 5700 psi (with frac) to ensure clean wellbore, resume normal plug/perf ops. **Stage 9 Perf:** RIH with guns for stage 9, plug 16,066'. Perforated 16053' - 16055', 16035' - 16037', 16015' - 16017', 15990' - 15992', 15969' - 15971', 15942' - 15944', 15923' - 15925', 15905' - 15907'. All shots fired POOH. **Stage 9 Frac:** SICP: 1010 psi, pumped acid @ 15 bpm, Formation breakdown--4503 psi, Pumped: Total 15% HCL

Acid: 48 bbls. Total Slickwater: 10,176 bbls. Pumpdown--378 bbls. Total 100 Mesh: 281,551 lbs, Total 40/70: 87,760 lbs. Total proppant pumped: 369,311 lbs. ISIP: 2145 psi, with a Frac Gradient of .72 psi/ft. Qavg: 102 bpm, Pavg: 6400 psi, Qmax: 104 bpm, Pmax: 8897 psi. \*\*\*Notes\*\*\*-reached total sand Volume per schedule, Flushed well.

### **7-22-17 – Initial Completion**

**Stage 10 Perf:** RIH with guns for stage 10, plug 15,888'. Perforated 15,876' - 15,878', 15,853'- 15,855', 15,830'- 15,832', 15,807'- 15,809', 15,784'- 15,786', 15,761'- 15,763', 15,738'- 15,740', 15,715' - 15,717'. All shots fired POOH. Leaks on frac iron repaired and pressure tested, re-set N2 POP off to 9550 PSI, before resuming operations. **Stage 10 Frac:** SICP: 1835 psi, pumped acid @ 15 bpm, Formation breakdown--4503 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,325 bbls. Pumpdown--375 bbls. Total 100 Mesh: 273,554 lbs, Total 40/70: 93,310 lbs. Total proppant pumped: 366,863 lbs. ISIP: 2066 psi, with a Frac Gradient of .71 psi/ft. Qavg: 96 bpm, Pavg: 6668 psi, Qmax: 99 bpm, Pmax: 8970 psi. \*\*\*Notes\*\*\*-reached total sand volume per schedule, Flushed well. **Stage 11 Perf:** RIH with guns for stage 11, plug 15,703'. Perforated 15,691' - 15,693', 15,668'- 15,670', 15,645'- 15,647', 15,622'- 15,624', 15,599'- 15,601', 15,576'- 15,578', 15,553'- 15,555', 15,530' - 15,532'. All shots fired POOH. **Stage 11 Frac:** SICP: 1963 psi, pumped acid @ 15 bpm, Formation breakdown--4630 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 9,990 bbls. Pumpdown--365 bbls. Total 100 Mesh: 277,052 lbs, Total 40/70: 90,487 lbs. Total proppant pumped: 367,538 lbs. ISIP: 1,638 psi, with a Frac Gradient of .70 psi/ft. Qavg: 93 bpm, Pavg: 6,351 psi, Qmax: 102 bpm, Pmax: 8,636 psi. \*\*\*Notes\*\*\*-Lost Augers on .75 100 mesh due to fuse blowing on blender causing them to turn off. Pumped clean sweep of 645 bbls. Shut down to replace fuse, resumed on schedule and finished stage as designed. All sand put away. **Stage 12 Perf:** RIH with guns for stage 12, plug 15,518'. Perforated 15,506' - 15,508', 15,483'- 15,485', 15,460'- 15,462', 15,437'- 15,439', 15,414'- 15,416', 15,391'- 15,392', 15,368'- 15,370', 15,345' - 15,347'. All shots fired POOH. **Stage 12 Frac:** SICP: 963 psi, pumped acid @ 15 bpm, Formation breakdown--4561 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,568 bbls. Pumpdown--328 bbls. Total 100 Mesh: 276,356 lbs, Total 40/70: 94,051 lbs. Total proppant pumped: 370,408 lbs. ISIP: 2127 psi, with a Frac Gradient of .72 psi/ft. Qavg: 100 bpm, Pavg: 6367 psi, Qmax: 100 bpm, Pmax: 8813 psi. \*\*\*Notes\*\*\*-reached total sand volume per schedule, Flushed well. **Stage 13 Perf:** RIH with guns for stage 13, plug 15,333'. Perforated 15,321' - 15,323', 15,298'- 15,300', 15,275'- 15,277', 15,252'- 15,254', 15,229'- 15,231', 15,206'- 15,208', 15,183'- 15,185', 15,160' - 15,162'. All shots fired POOH. **Stage 13 Frac:** SICP: 1093 psi, pumped acid @ 15 bpm, Formation breakdown--4280 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,371 bbls. Pumpdown--391 bbls. Total 100 Mesh: 274,914 lbs, Total 40/70: 94,259 lbs. Total proppant pumped: 369,173 lbs. ISIP: 2540 psi, with a Frac Gradient of .77 psi/ft. Qavg: 101 bpm, Pavg: 6321 psi, Qmax: 102 bpm, Pmax: 8956 psi. \*\*\*Notes\*\*\*-reached total sand volume per schedule, Flushed well. **Stage 14 Perf:** RIH with guns for stage 14, plug 15,148'. Perforated 15,136' - 15,138', 15,113'- 15,115', 15,090'- 15,092', 15,067'- 15,069', 15,044'- 15,046', 15,021'- 15,023', 14,998'- 15,000', 14,975' - 14,977'. All shots fired POOH. **Stage 14 Frac:** SICP: 1115 psi, pumped acid @ 15 bpm, Formation breakdown--3886 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,566 bbls. Pumpdown--418 bbls. Total 100 Mesh: 277,466 lbs, Total 40/70: 92,553 lbs. Total proppant pumped: 370,019 lbs. ISIP: 2133 psi, with a Frac Gradient of .72 psi/ft. Qavg: 100 bpm, Pavg: 6095 psi, Qmax: 102 bpm, Pmax: 8836 psi. \*\*\*Notes\*\*\*-reached total sand volume per schedule, Flushed well.

### 7-23-17 – Initial Completion

**Stage 15 Perf:** RIH with guns for stage 15, plug 14,958'. Perforated 14,946' - 14,948', 14,930'- 14,932', 14,900'- 14,902', 14,882'- 14,884', 14,859'- 14,861', 14,836'- 14,838', 14,816'- 14,818', 14,790' - 14,792'. All shots fired POOH. **Stage 15 Frac:** SICP: 1060 psi, pumped acid @ 15 bpm, Formation breakdown--4159 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8471 bbls. Pumpdown--345 bbls. Total 100 Mesh: 277,246 lbs, Total 40/70: 92,452 lbs. Total proppant pumped: 369,697 lbs. ISIP: 2195 psi, with a Frac Gradient of .73 psi/ft. Qavg: 94 bpm, Pavg: 6062 psi, Qmax: 96 bpm, Pmax: 8001 psi. \*\*\*Notes\*\*\*-Had to shut down during pad due to blender losing the tub. Resumed stage, reached total sand volume per schedule, Flushed well. Replace packing in valve on flow cross on 1042A. Replaced vent tube on wireline lubricator. **Stage 16 Perf:** RIH with guns for stage 16, plug 14,778'. Perforated 14,764' - 14,766', 14,743'- 14,745', 14,720'- 14,722', 14,697'- 14,699', 14,674'- 14,676', 14,651'- 14,653', 14,628'- 14,630', 14,605' - 14,607'. All shots fired POOH. Shut down for lightning. **Stage 16 Frac:** SICP: 953 psi, pumped acid @ 15 bpm, Formation breakdown--3840 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,471 bbls. Pumpdown--320 bbls. Total 100 Mesh: 276,844 lbs, Total 40/70: 93,846 lbs. Total proppant pumped: 370,690 lbs. ISIP: 2,082 psi, with a Frac Gradient of .71 psi/ft. Qavg: 95 bpm, Pavg: 5,726 psi, Qmax: 96 bpm, Pmax: 8,383 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 17 Perf:** RIH with guns for stage 17, plug 14,593'. Perforated 14,579' - 14,581', 14,558'- 14,560', 14,535'- 14,537', 14,512'- 14,514', 14,489'- 14,491', 14,466'- 14,468', 14,443'- 14,445', 14,420' - 14,422'. All shots fired POOH. **Stage 17 Frac:** SICP: 987 psi, pumped acid @ 15 bpm, Formation breakdown--3,802 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,490 bbls. Pumpdown--309 bbls. Total 100 Mesh: 276,371 lbs, Total 40/70: 94,165 lbs. Total proppant pumped: 370,536 lbs. ISIP: 2,141 psi, with a Frac Gradient of .72 psi/ft. Qavg: 101 bpm, Pavg: 6,110 psi, Qmax: 103 bpm, Pmax: 8,392 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 18 Perf:** RIH with guns for stage 18 plug 14,408'. Perforated 14,394' - 14,396', 14,373'- 14,375', 14,350'- 14,352', 14,327'- 14,329', 14,304'- 14,306', 14,281'- 14,283', 14,258'- 14,260', 14,235' - 14,237'. All shots fired POOH.--re-head after this run

### 7-24-17 – Initial Completion

**Stage 18 Frac:** SICP: 1726 psi, pumped acid @ 20 bpm, Formation breakdown--4057 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8273 bbls. Pumpdown--326 bbls. Total 100 Mesh: 277,000 lbs, Total 40/70: 91,838 lbs. Total proppant pumped: 368,837 lbs. ISIP: 2019 psi, with a Frac Gradient of .70 psi/ft. Qavg: 98 bpm, Pavg: 6,328 psi, Qmax: 101 bpm, Pmax: 8026 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 19 Perf:** RIH with guns for stage 19 plug 14,223'. Perforated 14,209' - 14,211', 14,186'- 14,188', 14,163'- 14,165', 14,140'- 14,142', 14,117'- 14,119', 14,094'- 14,096', 14,071'- 14,073', 14,048' - 14,050'. All shots fired POOH. **Stage 19 Frac:** SICP: 1726 psi, pumped acid @ 20 bpm, Formation breakdown--4,424 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8345 bbls. Pumpdown--348 bbls. Total 100 Mesh: 277,450 lbs, Total 40/70: 92,347 lbs. Total proppant pumped: 36,797 lbs. ISIP: 2,093 psi, with a Frac Gradient of .71 psi/ft. Qavg: 98 bpm, Pavg: 6,852 psi, Qmax: 101 bpm, Pmax: 8538 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 20 Perf:** RIH with guns for stage 20 plug 14,038'. Perforated 14,024' - 14,026', 14,001'- 14,003', 13,978'- 13,980', 13,955'- 13,957', 13,932'- 13,934', 13,909'- 13,911', 13,886'- 13,888', 13,863' - 13,865'. All shots fired POOH.

**Stage 20 Frac:** SICP: 1740 psi, pumped acid @ 20 bpm, Formation breakdown--4,977 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7869 bbls. Pumpdown--319 bbls. Total 100 Mesh: 279,152 lbs, Total 40/70: 85,577 lbs. Total proppant pumped: 364,729 lbs. ISIP: 2137 psi, with a Frac Gradient of .72 psi/ft. Qavg: 97 bpm, Pavg: 7,079 psi, Qmax: 101 bpm, Pmax: 9602 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, Flushed well.

**Stage 21 Perf:** RIH with guns for stage 21 plug 13,853'. Perforated 13,839' - 13,841', 13,816'- 13,818', 13,793'- 13,795', 13,770'- 13,772', 13,747'- 13,749', 13,724'- 13,726', 13,701'- 13,703', 13,678' - 13,680'. All shots fired POOH. Replaced flow through tubes on lubricator, Re-head, grease zipper manifold.

**Stage 21 Frac:** SICP: 919 psi, pumped acid @ 20 bpm, Formation breakdown--3,958 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,168 bbls. Pumpdown--333 bbls. Total 100 Mesh: 276,346 lbs, Total 40/70: 94,115 lbs. Total proppant pumped: 370,461 lbs. ISIP: 2085 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 6,331 psi, Qmax: 101 bpm, Pmax: 8,997 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well.

**Stage 22 Perf:** RIH with guns for stage 22, plug 13,668'. Perforated 13,656' - 13,658', 13,633'- 13,635', 13,610'- 13,612', 13,587'- 13,589', 13,564'- 13,566', 13,541'- 13,543', 13,518'- 13,520', 13,495' - 13,497'. All shots fired POOH.

**Stage 22 Frac:** SICP: 1088 psi, pumped acid @ 20 bpm, Formation breakdown--4,114 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,072 bbls. Pumpdown--272 bbls. Total 100 Mesh: 276,622 lbs, Total 40/70: 92,093 lbs. Total proppant pumped: 369,515 lbs. ISIP: 2072 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 6,385 psi, Qmax: 102 bpm, Pmax: 8,497 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well.

**Stage 23 Perf:** RIH with guns for stage 23, plug 13,483'. Perforated 13,471' - 13,473', 13,448'- 13,450', 13,425'- 13,427', 13,402'- 13,404', 13,379'- 13,381', 13,356'- 13,358', 13,333'- 13,335', 13,310' - 13,312'. All shots fired POOH.

**Stage 23 Frac:** SICP: 1006 psi, pumped acid @ 20 bpm, Formation breakdown--4,050 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,810 bbls. Pumpdown--242 bbls. Total 100 Mesh: 277,179 lbs, Total 40/70: 93,046 lbs. Total proppant pumped: 370,225 lbs. ISIP: 2094 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 6,581 psi, Qmax: 101 bpm, Pmax: 8945 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well.

**Stage 24 Perf:** RIH with guns for stage 24, plug 13,298'. Perforated 13,286' - 13,288', 13,263'- 13,265', 13,240'- 13,242', 13,217'- 13,219', 13,194'- 13,196', 13,171'- 13,173', 13,148'- 13,150', 13,125' - 13,127'. All shots fired POOH.

### 7-25-17 – Initial Completion

**Stage 24 Frac:** SICP: 941 psi, pumped acid @ 20 bpm, Formation breakdown--3783 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7760 bbls. Pumpdown--251 bbls. Total 100 Mesh: 277,900 lbs, Total 40/70: 85,126 lbs. Total proppant pumped: 363,026 lbs. ISIP: 2051 psi, with a Frac Gradient of .71 psi/ft. Qavg: 98 bpm, Pavg: 6653 psi, Qmax: 101 bpm, Pmax: 8546 psi. \*\*\*Notes\*\*\* Cut the stage short by 7,000 lbs of 40/70 due to pressure.

**Stage 25 Perf:** RIH with guns for stage 25, plug 13,113'. Perforated 13,101' - 13,103', 13,078'- 13,080', 13,055'- 13,057', 13,032'- 13,034', 13,009'- 13,011', 12,986'- 12,988', 12,963'- 12,965', 12,940' - 12,942'. All shots fired POOH.

**Stage 25 Frac:** SICP: 915 psi, pumped acid @ 20 bpm, Formation breakdown--4171 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8408 bbls. Pumpdown--277 bbls. Total 100 Mesh: 277,930 lbs, Total 40/70: 93,304 lbs. Total proppant pumped: 371,234 lbs. ISIP: 1992 psi, with a Frac Gradient of .70 psi/ft. Qavg: 99 bpm, Pavg: 6314 psi, Qmax: 101 bpm, Pmax: 7880 psi. \*\*\*Notes\*\*\* Had to run 200 bbl sweep on 2.25 40/70 due to pressure. Reached total sand volume. Flushed well.

**Stage 26 Perf:** RIH

with guns for stage 26, plug 12,928'. Perforated 12,915' - 12,917', 12,893' - 12,895', 12,870' - 12,872', 12,847' - 12,849', 12,824' - 12,826', 12,801' - 12,803', 12,778' - 12,780', 12,755' - 12,757'. All shots fired POOH. Repair leaks and taking a pump off line. Replaced seal in nightcap. Replaced bleed off valves. Replaced pressure cap seal in frac pump. **Stage 26 Frac:** SICP: 950 psi, pumped acid @ 20 bpm, Formation breakdown--4,277 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,346 bbls. Pumpdown--254 bbls. Total 100 Mesh: 278,548 lbs, Total 40/70: 94,432 lbs. Total proppant pumped: 372,980 lbs. ISIP: 2,197 psi, with a Frac Gradient of .73 psi/ft. Qavg: 100 bpm, Pavg: 6,237 psi, Qmax: 102 bpm, Pmax: 9,363 psi. \*\*\*Notes\*\*\* Reached total sand volume, flushed well. \*\*\*Frac down for weather (lightning) 2.5 hrs. **Stage 27 Perf:** RIH with guns for stage 27, plug 12,743'. Perforated 12,730' - 12,732', 12,708' - 12,710', 12,685' - 12,687', 12,662' - 12,664', 12,639' - 12,641', 12,616' - 12,618', 12,594' - 12,596', 12,570' - 12,572'. All shots fired POOH. **Stage 27 Frac:** SICP: 930 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,157 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,534 bbls. Pumpdown-- 250 bbls. Total 100 Mesh: 279,484 lbs, Total 40/70: 94,155 lbs. Total proppant pumped: 373,638 lbs. ISIP: 2,163 psi, with a Frac Gradient of .72 psi/ft. Qavg: 100 bpm, Pavg: 6,484 psi, Qmax: 101 bpm, Pmax: 8,757 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. Replaced flowcross valves on WH, had to grease stacks. **Stage 28 Perf:** RIH with guns for stage 28, plug 12,558'. Perforated 12,540' - 12,542', 12,523' - 12,525', 12,503' - 12,505', 12,477' - 12,479', 12,455' - 12,457', 12,431' - 12,433', 12,411' - 12,413', 12,385' - 12,387'. All shots fired POOH. **Stage 28 Frac:** SICP: 905 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,390 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,270 bbls. Pumpdown-- 243 bbls. Total 100 Mesh: 278,329 lbs, Total 40/70: 92,431 lbs. Total proppant pumped: 370,760 lbs. ISIP: 2,179 psi, with a Frac Gradient of .73 psi/ft. Qavg: 99 bpm, Pavg: 6,413 psi, Qmax: 100 bpm, Pmax: 8,923 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well.

## 7-26-17 – Initial Completion

**Stage 29 Perf:** RIH with guns for stage 29, plug 12,373'. Perforated 12,359' - 12,361', 12,336' - 12,338', 12,313' - 12,315', 12,290' - 12,292', 12,267' - 12,269', 12,244' - 12,246', 12,221' - 12,223', 12,198' - 12,200'. All shots fired POOH. Repair two pumps and prime and PSI before resuming operations. **Stage 29 Frac:** SICP: 1,871 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,168 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,781 bbls. Pumpdown-- 268 bbls. Total 100 Mesh: 275,218 lbs, Total 40/70: 92,232 lbs. Total proppant pumped: 367,449 lbs. ISIP: 2,144 psi, with a Frac Gradient of .72 psi/ft. Qavg: 99 bpm, Pavg: 6,466 psi, Qmax: 101 bpm, Pmax: 8,083 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, Flushed well". **Stage 30 Perf:** RIH with guns for stage 30, plug 12,188'. Perforated 12,174' - 12,176', 12,151' - 12,153', 12,128' - 12,130', 12,105' - 12,107', 12,082' - 12,084', 12,059' - 12,061', 12,036' - 12,038', 12,013' - 12,015'. All shots fired POOH. **Stage 30 Frac:** SICP: 1,422 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,197 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,196 bbls. Pumpdown-- 167 bbls. Total 100 Mesh: 276,914 lbs, Total 40/70: 93,116 lbs. Total proppant pumped: 370,030 lbs. ISIP: 2,260 psi, with a Frac Gradient of .74 psi/ft. Qavg: 99 bpm, Pavg: 6,610 psi, Qmax: 101 bpm, Pmax: 7,062 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, Flushed well. **Stage 31 Perf:** RIH with guns for stage 31, plug 12,003'. Perforated 11,989' - 11,991', 11,966' - 11,968', 11,943' - 11,945', 11,920' - 11,922', 11,897' - 11,899', 11,874' - 11,876', 11,851' - 11,853', 11,828' - 11,830'. All shots fired POOH.

**Stage 31 Frac:** SICP: 1002 psi, pumped acid @ 20 bpm, Formation breakdown-- 4391 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6920 bbls. Pumpdown-- 178 bbls. Total 100 Mesh: 278,874 lbs, Total 40/70: 91,604 lbs. Total proppant pumped: 370,478 lbs. ISIP: 2,154 psi, with a Frac Gradient of .72 psi/ft. Qavg: 101 bpm, Pavg: 5996 psi, Qmax: 102 bpm, Pmax: 8,770 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, Flushed well.

**Stage 32 Perf:** RIH with guns for stage 32, plug 11,818'. Perforated 11,804' - 11,806', 11,781'- 11,783', 11,758'- 11,760', 11,735'- 11,737', Misfire-- plug and first four guns shot ok, POOH. Repair WL BHA wiring. RBIH with guns for stage 32, 11,737', 11,712'- 11,714', 11,689'- 11,691', 11,666'- 11,668', 11,643' - 11,645'. All shots fired POOH. Repair pump, prime and pressure test. **Stage 32 Frac:** SICP: 951 psi, pumped acid @ 20 bpm, Formation breakdown-- 4112 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,722 bbls. Pumpdown-- 352 bbls. Total 100 Mesh: 275,883 lbs, Total 40/70: 94,486 lbs. Total proppant pumped: 370,369 lbs. ISIP: 2,113 psi, with a Frac Gradient of .72 psi/ft. Qavg: 100 bpm, Pavg: 5,780 psi, Qmax: 101 bpm, Pmax: 8,427 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. Change flow tubes in wireline lubricator and re-head. **Stage 33 Perf:** RIH with guns for stage 33, plug 11,633'. Perforated 11,621' - 11,623', 11,598'- 11,600', 11,575'- 11,577', 11,552'- 11,554', 11,529'- 11,531', 11,506'- 11,508', 11,483'- 11,485', 11,460' - 11,462'. All shots fired POOH. **Stage 33 Frac:** SICP: 1019 psi, pumped acid @ 20 bpm, Formation breakdown-- 3,588 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,766 bbls. Pumpdown-- 209 bbls. Total 100 Mesh: 278,006 lbs, Total 40/70: 92,294 lbs. Total proppant pumped: 370,300 lbs. ISIP: 2026 psi, with a Frac Gradient of .71 psi/ft. Qavg: 101 bpm, Pavg: 5,567 psi, Qmax: 101 bpm, Pmax: 7,909 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well".

### 7-27-17 – Initial Completion

**Stage 34 Perf:** RIH with guns for stage 34, plug 11,448'. Perforated 11,436' - 11,438', 11,413'- 11,415', 11,390'- 11,392', 11,367'- 11,369', 11,344'- 11,346', 11,321'- 11,323', 11,298'- 11,300', 11,275' - 11,277'. All shots fired POOH. **Stage 34 Frac:** SICP: 998 psi, pumped acid @ 20 bpm, Formation breakdown-- 4734 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7010 bbls. Pumpdown-- 196 bbls. Total 100 Mesh: 277,866 lbs, Total 40/70: 92,911 lbs. Total proppant pumped: 370,777 lbs. ISIP: 2071 psi, with a Frac Gradient of .71 psi/ft. Qavg: 99 bpm, Pavg: 5545 psi, Qmax: 101 bpm, Pmax: 7763 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 35 Perf:** RIH with guns for stage 35, plug 11,263'. Perforated 11,249' - 11,251', 11,228'- 11,230', 11,205'- 11,207', 11,182'- 11,184', 11,159'- 11,161', 11,136'- 11,138', 11,113'- 11,115', 11,090' - 11,092'. All shots fired POOH. **Stage 35 Frac:** SICP: 1016 psi, pumped acid @ 20 bpm, Formation breakdown-- 4509 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7081 bbls. Pumpdown-- 187 bbls. Total 100 Mesh: 278,835 lbs, Total 40/70: 91,712 lbs. Total proppant pumped: 370,547 lbs. ISIP: 2121 psi, with a Frac Gradient of .72 psi/ft. Qavg: 100 bpm, Pavg: 5533 psi, Qmax: 101 bpm, Pmax: 7764 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 36 Perf:** RIH with guns for stage 36, plug 11,070'. Perforated 11,057' - 11,059', 11,043'- 11,045', 11,020'- 11,022', 10,997'- 10,999', 10,974'- 10,976', 10,951'- 10,953', 10,928'- 10,930', 10,905' - 10,907'. All shots fired POOH. **Stage 36 Frac:** SICP: 944 psi, pumped acid @ 20 bpm, Formation breakdown-- 5089 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7283 bbls. Pumpdown-- 178 bbls. Total 100 Mesh: 280,242 lbs, Total 40/70: 90,510 lbs. Total proppant pumped: 370,753 lbs. ISIP: 1972 psi, with a Frac Gradient of .70 psi/ft. Qavg: 100 bpm, Pavg: 5484 psi, Qmax: 102 bpm, Pmax: 8553 psi. \*\*\*Notes\*\*\* Reached total sand volume per



schedule, flushed well. **Stage 37 Perf:** RIH with guns for stage 37, plug 10,893'. Perforated 10,881' - 10,883', 10,858' - 10,860', 10,835' - 10,837', 10,812' - 10,814', 10,789' - 10,791', 10,766' - 10,768', 10,743' - 10,745', 10,720' - 10,722'. All shots fired POOH. Down waiting on sand 6 hrs. Maintenance zipper manifold, frac pumps, and WL equip during downtime.

### **7-28-17 – Initial Completion**

**Stage 37 Frac:** SICP: 1,760 psi, pumped acid @ 20 bpm, Formation breakdown-- 3748 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 8,067 bbls. Pumpdown-- 159 bbls. Total 100 Mesh: 277,695 lbs, Total 40/70: 93,947 lbs. Total proppant pumped: 370,947 lbs. ISIP: 2140 psi, with a Frac Gradient of .72 psi/ft. Qavg: 99 bpm, Pavg: 5,163 psi, Qmax: 102 bpm, Pmax: 7,545 psi. \*\*\*Notes\*\*\* Blender Loss Discharge Pressure on 2.00 ppg 100 Mesh. Regained Discharge pressure flushed well, got back up to rate of 100 BPM, let pressure line out resumed sand at a .50 ppg ramped up to a 2.50 ppg 100 mesh. Reached total sand volume per 100 mesh schedule, pumped 40/70 to sand volume per schedule, flushed well. **Stage 38 Perf:** RIH with guns for stage 38, plug 10,708'. Perforated 10,694' - 10,696', 10,671' - 10,673', 10,648' - 10,650', 10,625' - 10,627', 10,602' - 10,604', 10,579' - 10,581', 10,556' - 10,558', 10,533' - 10,535'. All shots fired POOH. **Stage 38 Frac:** SICP: 1,926 psi, pumped acid @ 20 bpm, Formation breakdown-- xxxx psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,678 bbls. Pumpdown-- 131 bbls. Total 100 Mesh: 277,318 lbs, Total 40/70: 93,050 lbs. Total proppant pumped: 370,368 lbs. ISIP: 2,027 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 5,752 psi, Qmax: 103 bpm, Pmax: 7,236 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 39 Perf:** RIH with guns for stage 39, plug 10,523'. Perforated 10,509' - 10,511', 10,486' - 10,488', 10,463' - 10,465', 10,440' - 10,442', 10,417' - 10,419', 10,394' - 10,396', 10,371' - 10,373', 10,348' - 10,350'. All shots fired POOH. **Stage 39 Frac:** SICP: 1668 psi, pumped acid @ 20 bpm, Formation breakdown-- 3995 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,729 bbls. Pumpdown-- 127 bbls. Total 100 Mesh: 277,707 lbs, Total 40/70: 92,856 lbs. Total proppant pumped: xxxx lbs. ISIP: 2073 psi, with a Frac Gradient of .71 psi/ft. Qavg: 99 bpm, Pavg: 5,702 psi, Qmax: 103 bpm, Pmax: 8,092 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 40 Perf:** RIH with guns for stage 40, plug 10,338'. Perforated 10,324' - 10,326', 10,301' - 10,303', 10,278' - 10,280', 10,255' - 10,257', 10,232' - 10,234', 10,209' - 10,211', 10,186' - 10,188', 10,163' - 10,165'. All shots fired POOH. Waitng on decision on what rate to pump stage at. **Stage 40 Frac:** SICP: 960 psi, pumped acid @ 20 bpm, Formation breakdown-- 3789 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,510 bbls. Pumpdown-- 126 bbls. Total 100 Mesh: 277,419 lbs, Total 40/70: 71,473 lbs. Total proppant pumped: 348,892 lbs. ISIP: 2,073 psi, with a Frac Gradient of .71 psi/ft. Qavg: 82 bpm, Pavg: 4,751 psi, Qmax: 82 bpm, Pmax: 8,899 psi. \*\*\*Notes\*\*\* Cut sand early due to pressure, Flushed well. Stage short by 22K lbs. **Stage 41 Perf:** RIH with guns for stage 41, plug 10,153'. Perforated 10,139' - 10,141', 10,116' - 10,118', 10,093' - 10,095', 10,070' - 10,072', 10,047' - 10,049', 10,024' - 10,026', 10,001' - 10,003', 9,978' - 9,980'. All shots fired POOH. **Stage 41 Frac:** SICP: 945 psi, pumped acid @ 20 bpm, Formation breakdown-- 3,559 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,727 bbls. Pumpdown-- 116 bbls. Total 100 Mesh: 277,773 lbs, Total 40/70: 92,677 lbs. Total proppant pumped: 370,450 lbs. ISIP: 2,010 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 5,487 psi, Qmax: 102 bpm, Pmax: 7,514 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 42 Perf:** RIH with guns for stage 42, plug 9,968'. Perforated 9,956' - 9,958', 9,933' - 9,935', 9,910' - 9,912', 9,887' - 9,889', 9,864' - 9,866', 9,841' - 9,843', 9,818' -

9,820', 9,795' - 9,797'. All shots fired POOH. **Stage 42 Frac:** SICP: 968 psi, pumped acid @ 20 bpm, Formation breakdown-- 3,710 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,572 bbls. Pumpdown-- 112 bbls. Total 100 Mesh: 277,533 lbs, Total 40/70: 92,093 lbs. Total proppant pumped: 369,626 lbs. ISIP: 1,969 psi, with a Frac Gradient of .70 psi/ft. Qavg: 100 bpm, Pavg: 5,687 psi, Qmax: 100 bpm, Pmax: 8,237 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 43 Perf:** RIH with guns for stage 43, plug 9,783'. Perforated 9,771' - 9,773', 9,748' - 9,750', 9,725' - 9,727', 9,702' - 9,704', 9,679' - 9,681', 9,656' - 9,658', 9,633' - 9,635', 9,610' - 9,612'. All shots fired POOH. Waiting on 100 mesh to be unloaded.

### **7-29-17 – Initial Completion**

**Stage 43 Frac:** SICP: 1029 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,758 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6665 bbls. Pumpdown-- 108 bbls. Total 100 Mesh: 276,285 lbs, Total 40/70: 93,065 lbs. Total proppant pumped: 369,350 lbs. ISIP: 2088 psi, with a Frac Gradient of .72 psi/ft. Qavg: 99 bpm, Pavg: 5675 psi, Qmax: 100 bpm, Pmax: 8025 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 44 Perf:** RIH with guns for stage 44, plug 9,598'. Perforated 9,586' - 9,588', 9,563' - 9,565', 9,540' - 9,542', 9,517' - 9,519', 9,494' - 9,496', 9,471' - 9,473', 9,448' - 9,450', 9,425' - 9,427'. All shots fired POOH. **Stage 44 Frac:** SICP: 903 psi, pumped acid @ 20 bpm, Formation breakdown-- 4629 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7244 bbls. Pumpdown-- 88 bbls. Total 100 Mesh: 277,026 lbs, Total 40/70: 92,053 lbs. Total proppant pumped: 369,079 lbs. ISIP: 2192 psi, with a Frac Gradient of .73 psi/ft. Qavg: 101 bpm, Pavg: 5672 psi, Qmax: 102 bpm, Pmax: 7717 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 45 Perf:** RIH with guns for stage 45, plug 9,416'. Perforated 9,401' - 9,403', 9,378' - 9,380', 9,355' - 9,357', 9,332' - 9,334', 9,309' - 9,311', 9,286' - 9,288', 9,263' - 9,265', 9,240' - 9,242'. All shots fired POOH. Waiting on sand 2 hrs. **Stage 45 Frac:** SICP: 924 psi, pumped acid @ 20 bpm, Formation breakdown-- 3810 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6967 bbls. Pumpdown--80 bbls. Total 100 Mesh: 277,734 lbs, Total 40/70: 91,933 lbs. Total proppant pumped: 369,667 lbs. ISIP: 1974 psi, with a Frac Gradient of .70 psi/ft. Qavg: 99 bpm, Pavg: 5631 psi, Qmax: 101 bpm, Pmax: 7219 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, Flushed well. **Stage 46 Perf:** RIH with guns for stage 46, plug 9,228'. Perforated 9,216' - 9,218', 9,193' - 9,195', 9,170' - 9,172', 9,147' - 9,149', 9,124' - 9,126', 9,101' - 9,103', 9,078' - 9,080', 9,055' - 9,057'. All shots fired POOH. Down waiting on sand to off-load. **Stage 46 Frac:** SICP: 1,296 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,491 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,818 bbls. Pumpdown--73 bbls. Total 100 Mesh: 277,549 lbs, Total 40/70: 92,574 lbs. Total proppant pumped: 370,123 lbs. ISIP: 2,039 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 5,691 psi, Qmax: 102 bpm, Pmax: 8,390 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 47 Perf:** RIH with guns for stage 47, plug 9,043'. Perforated 9,029' - 9,031', 9,008' - 9,010', 8,985' - 8,987', 8,962' - 8,964', 8,939' - 8,941', 8,916' - 8,918', 8,893' - 8,895', 8,870' - 8,872'. All shots fired POOH. **Stage 47 Frac:** SICP: 893 psi, pumped acid @ 20 bpm, Formation breakdown-- 5,468 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,858 bbls. Pumpdown--83 bbls. Total 100 Mesh: 277,496 lbs, Total 40/70: 92,528 lbs. Total proppant pumped: 370,024 lbs. ISIP: 1,918 psi, with a Frac Gradient of .69 psi/ft. Qavg: 5,486 bpm, Pavg: 100 psi, Qmax: 100 bpm, Pmax: 8,204 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 48 Perf:** RIH with guns for stage 48, plug 8,858'.

Perforated 8,844' - 8,846', 8,823' - 8,825', 8,800' - 8,802', 8,777' - 8,779', 8,756' - 8,758', 8,731' - 8,733', Misfire on gun #7—POOH and rewire guns 7 & 8. RBIH with guns 7 & 8 for stage 48, Perforated 8,704'-8,706', 8,685' - 8,687'. All shots fired POOH. Down waiting on sand to off-load. **Stage 48 Frac:** SICP: 821 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,115 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6860 bbls. Pumpdown--144 bbls-- (1st run, 74 bbls & 2nd run, 70 bbls) Total 100 Mesh: 277,517 lbs, Total 40/70: 92,647 lbs. Total proppant pumped: 370,164 lbs. ISIP: 2,191 psi, with a Frac Gradient of .73 psi/ft. Qavg: 99 bpm, Pavg: 5,455 psi, Qmax: 100 bpm, Pmax: 8,071 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 49 Perf:** RIH with guns for stage 49, plug 8,673'. Perforated 8,657' - 8,659', 8,638' - 8,640', 8,612' - 8,614', 8,592' - 8,594', 8,568' - 8,570', 8,546' - 8,548', 8,522' - 8,524', 8,500' - 8,502'. All shots fired, POOH.

### 7-30-17 – Initial Completion

Down waiting on sand to arrive on location and off-load. **Stage 49 Frac:** SICP: 1658 psi, pumped acid @ 20 bpm, Formation breakdown-- 3129 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7126 bbls. Pumpdown-- 236 bbls. Total 100 Mesh: 277517 lbs, Total 40/70: 92953 lbs. Total proppant pumped: 370,470 lbs. ISIP: 1,927 psi, with a Frac Gradient of .69 psi/ft. Qavg: 100 bpm, Pavg: 5,660 psi, Qmax: 101 bpm, Pmax: 8,836 psi. \*\*\*Notes\*\*\* Reached total sand Volume per schedule, Flushed well. **Stage 50 Perf:** RIH with guns for stage 50, plug 8,476'. Perforated 8,474' - 8,476', 8,451' - 8,453', 8,428' - 8,430', 8,405' - 8,407', 8,382' - 8,384', 8,359' - 8,361', 8,336' - 8,338', 8,313' - 8,315'. All shots fired POOH. **Stage 50 Frac:** SICP: 1,718 psi, pumped acid @ 20 bpm, Formation breakdown-- 3,632 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,267 bbls. Pumpdown-- 51 bbls. Total 100 Mesh: 277,478 lbs, Total 40/70: 92,756 lbs. Total proppant pumped: 370,234 lbs. ISIP: 1,963 psi, with a Frac Gradient of .70 psi/ft. Qavg: 101 bpm, Pavg: 5,524 psi, Qmax: 102 bpm, Pmax: 7,008 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 51 Perf:** RIH with guns for stage 51, plug 8,303'. Perforated 8,289' - 8,291', 8,266' - 8,268', 8,243' - 8,245', 8,220' - 8,222', 8,197' - 8,199', 8,174' - 8,176', 8,151' - 8,153', 8,128' - 8,130'. All shots fired POOH. **Stage 51 Frac:** SICP: 871 psi, pumped acid @ 20 bpm, Formation breakdown-- 5,075 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,677 bbls. Pumpdown-- 45 bbls. Total 100 Mesh: 277,594 lbs, Total 40/70: 92,466 lbs. Total proppant pumped: 370,060 lbs. ISIP: 2,008 psi, with a Frac Gradient of .71 psi/ft. Qavg: 100 bpm, Pavg: 5,532 psi, Qmax: 101 bpm, Pmax: 7,529 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 52 Perf:** RIH with guns for stage 52, plug 8,118'. Perforated 8,104' - 8,106', 8,081' - 8,083', 8,058' - 8,060', 8,035' - 8,037', 8,012' - 8,014', 7,989' - 7,991', 7,966' - 7,968', 7,943' - 7,945'. All shots fired POOH. **Stage 52 Frac:** SICP: 895 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,278 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,522 bbls. Pumpdown-- 31 bbls. Total 100 Mesh: 277,525 lbs, Total 40/70: 92,584 lbs. Total proppant pumped: 370,109 lbs. ISIP: 1,941 psi, with a Frac Gradient of .70 psi/ft. Qavg: 100 bpm, Pavg: 5,229 psi, Qmax: 102 bpm, Pmax: 7,817 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. **Stage 53 Perf:** RIH with guns for stage 53, plug 7,933'. Perforated 7,919' - 7,921', 7,896' - 7,898', 7,873' - 7,875', 7,850' - 7,852', 7,827' - 7,829', 7,804' - 7,806', 7,781' - 7,783', 7,758' - 7,760'. All shots fired POOH. **Stage 53 Frac:** SICP: 871 psi, pumped acid @ 20 bpm, Formation breakdown-- 4,802 psi, Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 6,491 bbls. Pumpdown-- 23 bbls. Total 100 Mesh: 277,496 lbs, Total 40/70: 92,498 lbs. Total proppant pumped: 369,994 lbs. ISIP: 1,701 psi, with a Frac Gradient of .66 psi/ft. Qavg: 100

bpm, Pavg: 5,140 psi, Qmax: 101 bpm, Pmax: 8,170 psi. \*\*\*Notes\*\*\* Reached total sand volume per schedule, flushed well. RIH set Kill Plug @ 6440. Negative test for 30 min. Good test. RDMO all frac services, standby for coil tubing unit.

### **7-31-17 – Initial Completion**

All frac services are moved out. Standby for coil tubing unit.

### **8-1-17 – Initial Completion**

Standby for coil tubing. CTU is scheduled to arrive today pending weather and road conditions.

### **8-2-17 – Initial Completion**

Rigged up flowback equipment with plug catcher to reserve pit. Drill out chems delivered. Coil tubing crane, pumps, and N2 spotted on location. Coil reel trailer held up due to rain and wet road conditions. DOT regulations forbid over size loads to road in rainy conditions.

*Note: As of report time, coil reel is on the ranch and will be on location shortly.*

### **8-3-17 – Initial Completion**

Coil tubing arrived on location, held safety meeting start spotting equipment and begin rig up. Begin rig up. Hydraulics would not work and had to go to Midland to get parts to repair. Repair hydraulics on reel trailer. Pull tested coil connector to 35k, ok. MU motor / mill BHA as follows: weld on coil connector, 3.13" Dual flapper valve, 3.13" Bowen drilling jars, 3.13" hydraulic disconnect, 3.13" hydra shock, 3.13" Toe Tapper agitator, 3.13" sealed bearing motor, 3.75" bit sub with Kutrite, 4.625" Varel Sealed Bearing bit. Function tested motor on surface at 3 bpm, with 2900 psi on circ pressure. Pressure tested lubricator to 7500 psi, good test. Open well: 750 psi. RIH at 100 ft/min, pumping 1 bpm wh: 700 psi. Stopped @ 6200', performed weight check, weight: 27.5k. Brought rate up to 4.5 bpm, wh: 775 psi, and continued to RIH. Tagged plug #1 @ 6442', wh: 700 psi, pumping 4.5 bpm in 4 bpm out, through plug in 6 minutes, wh: 600 psi. Sent 10 bbl sweep. RIH for plug #2. Tagged plug #2 @ 7930', wh: 600 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 13 minutes, wh: 550 psi. Sent 10 bbl sweep. RIH for plug #3. Tagged plug #3 @ 8121', wh: 620 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 7 minutes, wh: 500 psi. Sent 10 bbl sweep. RIH for plug #4. Tagged plug #4 @ 8309', wh: 600 psi, pumping 4.5 bpm in 4.6 bpm out, through plug in 10 minutes, wh: 550 psi. Sent 10 bbl sweep. RIH for plug #5. Tagged plug #5 @ 8422', wh: 600 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 8 minutes, wh: 600 psi. Sent 10 bbl sweep. RIH for plug #6. Tagged plug #6 @ 8677', wh: 600 psi, pumping 4.5 bpm in 4.7 bpm out, through plug in 11 minutes, wh: 600 psi. Sent 10 bbl sweep. RIH for plug #7. Tagged plug #7 @ 8858', wh: 530 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 16 minutes, wh: 550 psi. Sent 10 bbl sweep. RIH for plug #8. Tagged plug #8 @ 9046', wh: 500 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 7 minutes, wh: 550 psi. Sent 10 bbl sweep. RIH for plug #9. Tagged plug #9 @ 9221', wh: 575 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 17 minutes, wh: 575 psi. Sent 10 bbl sweep. RIH for plug #10. Tagged plug #10 @ 9413', wh: 600 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 8 minutes, wh: 550 psi. Sent 10 bbl sweep. RIH for plug #11. Tagged plug #11 @ 9592', wh: 550 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 7 minutes, wh: 500 psi. Sent 10 bbl sweep. RIH for plug #12. Tagged plug #12 @ 9783', wh: 435 psi, pumping 4.5 bpm in 4.3 bpm out, through plug in 14 minutes, wh: 430 psi. Sent 10 bbl sweep. RIH for plug #13. Tagged plug #13 @ 9971', wh: 500 psi, pumping 4.5 bpm in 4.3 bpm out, through plug in

10 minutes, wh: 370 psi. Sent 10 bbl sweep. RIH for plug #14. Tagged plug #14 @ 10156', wh: 350 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 10 minutes, wh: 320 psi. Sent 10 bbl sweep. RIH for plug #14. Tagged plug #15 @ 10342', wh: 400 psi, pumping 4.5 bpm in 4.3 bpm out, through plug in 9 minutes, wh: 320 psi. Sent 10 bbl sweep. RIH for plug #16. Tagged plug #16 @ 10523', wh: 300 psi, pumping 4.5 bpm in 4.4 bpm out, through plug in 5 minutes, wh: 350 psi. Sent 10 bbl sweep. RIH for plug #17.

#### **8-4-17 – Initial Completion**

Tagged plug #17 @ 10700, wh: 450 psi, pumping 4.5 bpm in 4.4 bpm out, through plug in 5 minutes, wh: 500 psi. Sent 10 bbl sweep. RIH for plug #18. Tagged plug #18 at 10890, ran a 20 bbls sweep and waited for sweep to exit the coil then start pulling up for short trip. Ran 20 bbls sweep and head back in to plug #18. Tagged plug #18 @ 10881, wh: 400 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 6 minutes, wh: 400 psi. Sent 10 bbl sweep. RIH for plug #19. Tagged plug #19 @ 11060, wh: 350 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 5 minutes, wh: 350 psi. Sent 10 bbl sweep. RIH for plug #20. Increased the viscosity 10 100 cp. Tagged plug #20 @ 11244, wh: 350 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 10 minutes, wh: 350 psi. Sent 10 bbl sweep. RIH for plug #21. Tagged plug #21 @ 11443, wh: 400 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 14 minutes, wh: 300 psi. Sent 10 bbl sweep. RIH for plug #22. Tagged plug #22 @ 11625, wh: 350 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 8 minutes, wh: 350 psi. Sent 10 bbl sweep. RIH for plug #23. Started N2 at 500 scf. Tagged plug #23 @ 11807, wh: 300 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 26 minutes, wh: 300 psi. Sent 10 bbl sweep. RIH for plug #24. Shut off N2. Tagged plug #24 @ 11992, wh: 500 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 4 minutes, wh: 500 psi. Sent 10 bbl sweep. RIH for plug #25. Tagged plug #25 @ 12180, wh: 450 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 11 minutes, wh: 400 psi. Sent 10 bbl sweep. RIH for plug #26. Tagged plug #26 @ 12362, wh: 450 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 5 minutes, wh: 300 psi. Sent 10 bbl sweep. RIH for plug #27. Tagged plug #27 @ 12552, wh: 400 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 5 minutes, wh: 320 psi. Sent 10 bbl sweep. RIH for plug #28. Tagged plug #28 @ 12738, wh: 330 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 5 minutes, wh: 340 psi. Sent 10 bbl sweep. RIH for plug #29. Tagged plug #29 @ 1919, wh: 100 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 4 minutes, wh: 100 psi. Sent 10 bbl sweep. RIH for plug #30. Tagged plug #30 @ 13105, wh: 100 psi, pumping 4.5 bpm in 4.5 bpm out, through plug in 5 minutes, wh: 100 psi. Sent 10 bbl sweep. RIH for plug #31. Tagged plug #31 @ 13298 sent 20-10-20 sweep and started N2 at 1000 scf. Sent another 20-10-20 @ 10800 feet and continued to pump N2 at 1000 scf. Cut N2 @ 6500. Lost alternator belt on primary pump truck during short trip and cut seat on curb side fluid end on secondary pump truck. Waited 6.5 hrs for parts to arrive and repair pump. Coil pump fixed RIH for plug 31.