

**PT Petroleum, LLC**  
**University Red 4251H, API #42-461-40189**  
**330' FNL and 1320' FEL**  
**Section 36, Block 4, ULS**  
**Upton County, Texas**

**11-3-15 – Initial Completion**

Arrived to location to find that Bison Drilling was still rigging down. Pushing rig up back one day due to drilling rig still rigging down on location. Will meet with Phoenix tank, Pro Petro, New Wave and Xtreme Coil Tubing tomorrow morning (11/3/15). Also Cameron will be rigging up the frac stack and SOC will be doing our testing for us as originally planned. Also Nitro will start moving in rentals.

**11-4-15 – Initial Completion**

Arrived on location. While rigging up the frac stack, a Cameron hand slipped and fell into the cellar, hurting his right shoulder. We pulled him out and it was decided that he needed to be taken to the emergency room to be looked at. Cameron will be sending an incident report within 24 hours. Waiting on man lift to arrive. Cameron to send replacement crew and finish torquing the frac stack. S.O.C to bring replacement needle valve for pressure monitoring unit. Pressure testing to 9,800. Psi held for 22 minutes and pressure dropped from 9,800 to 1,000 due to toe sleeve opening. Pressure was holding good prior to sleeve shifting. Pumped 50 bbls through sleeve @ 2bpm @ 2,700 psi. Shutdown pump and secured well. SDFN

**11-5-15 – Initial Completion**

Waiting on Pro Petro to bring out horsepower and centrifugal pump to location. Vacuum trucks to arrive on location to pump full casing volume after acid. Pro Petro rigging up while we are waiting on trucks. Opened well w/ 0 psi. Pumped 1,500 gallons of 15% HCL @ 7 bpm, followed by 390 bbls of fresh water @ 7 bpm. When acid hit formation pressure dropped from 3,700 psi to 2,880 psi. Closed in the well with 1,445 psi. Qavg: 7 bpm, Pavg: 3,500 psi, Qmax: 7 bpm, Pmax: 3,915 psi. Secured well, SDFN.

**11-6-15 – Initial Completion**

Water transfer rigging up lines from frac pond to location. Frac date has been changed from November 9th to November 11<sup>th</sup> due to frac fleet being held up on current job. Will continue to rig up all equipment as scheduled.

**11-7-15 – Initial Completion**

Water Transfer continued to rig up lines to location. Tomorrow they will begin building 21,000 bbl tank on the edge of location. Brought sample of PS-102 and water from frac pond to Pro Petro's lab to perform compatibility tests with all slickwater chemicals. Bench test looked good with no issues with any chemicals.

**11-8-15 – Initial Completion**

Assembled Poseidon tank and started filling with fresh water.

### **11-9-15 – Initial Completion**

Frac tanks delivered and set, frac stack, isolation valve, living quarters all on location. Pro Petro will be rigging up tomorrow along with WL and pump down pumps.

### **11-10-15 – Initial Completion**

MIRU Performance, Oil States isolation tool, and Arklatex Wireline. Rigged two 2" risers into Oil States 6 port goat head. Filled all 10 working tanks and 3 pump down tanks, and finished filling Poseidon tank.

### **11-11-15 – Initial Completion**

Waiting on frac fleet to arrive on location to start spotting equipment and start rigging up. Spotted sand kings and started off loading acid. Pro-Petro arrived on location. Began spotting equipment and rigging up. Bucket Tested LA pump, ok. Plan is to start frac'ing by noon on Wednesday the 12<sup>th</sup>.

### **11-12-15 – Initial Completion**

Ran flow loop test, ok. Pressure testing and repairing multiple leaks. Pressuring up backside with 500 psi. **Stage 1 Frac:** SICP: 521 psi, Formation broke at 3,029 psi, while pumping 10 bpm. Pumped: Total 15% HCL Acid: 60 bbls. Total Slickwater: 2,238 bbls. Load to recover for this stage: 2,298 bbls. Total load to recover: 2,298 bbls. Containing: Total 100 Mesh: 24,404 lbs, Total 40/70 White: 36,246 lbs, Total 40/70 Garnet: 14,604 lbs. Proppant pumped this stage: 75,254 lbs. Total proppant pumped: 75,254 lbs. ISIP 1,576 psi, with a Frac Gradient of 0.593 psi/ft. Qavg: 94.1 bpm, Pavg: 6,175 psi, Qmax: 100 bpm, Pmax: 8,433 psi. Stage pumped as designed. **Stage 2 perf:** Picking up lubricator and pressure testing. RIH w/ WL. On bottom with plug and guns. WL had mis-run (plug did not set). POOH to check fire. Notes: When wireline started pulling out of hole, noticed the ccl wasn't working and line weight was lower than normal. Once they got within 500 ft of surface the cable shot out of the hole. Appeared the tool string was pumped off WL. Wireline spooled all of the wire and all was accounted for. Left fish in hole (plug and guns). Pro Petro, Ark La Tx, Oil States and Performance were rigging down equipment to make room for Coil Tubing. Standing by waiting for CT to arrive on location. Coil tubing and fishing tools called and will be on location at first light.

### **11-13-15 – Initial Completion**

Waiting on Titan Coil tubing to arrive on location. Titan coil tubing and Viking thru tubing solutions on location and rigged up. NU BOP, 80' lubricator, and injector head. Pressure test to 8,000 psi. RIH to fish WL guns w/ 4.375" Series 150 Overshot 36' Extension 3.125" Grapple, X-Over, Fishing Index Tool, AV Sub w/ 3 - .125" Nozzles, Hydraulic Disconnect, NOV Bi-Directional Jars, Weight bar, NOV Bi-Directional Intensifier, Dual Flapper Valve and External Connector. Tagged fish @ 15,029'. Fired jars 5 times to get fish to come free. Started pooh. CT on surface. No fish on tool string. Grapple indications showed we did not get a solid bite on fish. Called for a slim hole overshot. Waiting on a 3.875" O.D Overshot to be brought out to location. 3.875" O.D Overshot arrived on location. Replacing 4.375" O.D Overshot with the 3.875" O.D Overshot. Nipple back up to frac stack. RIH w/CT, pump rolling over. Weight Check, Depth: 7000', Weight: 26000 lbs. Increase Rate: In: 1 bpm, Out: 1 bpm, CP: 1500 psi, Well: 500 psi. Increase Rate. In: 1.5 bpm, Out: 1.5 bpm, CP: 1500 psi, Well: 500 psi. Tagged up at 15018'. Shutdown pump. Increase Rate. In: 1.5 bpm, Out: 1.5 bpm, CP: 1200 psi, Well: 500 psi. Fired

jars 8 times. POOH w/CT. Pulling with drag. Cycled out the pipe. Shutdown pump. OOH with CT, fish on surface. Sheared off plug. Recovered 4 perforating guns, CCL, and weight bar. Plug is below toe sleeve. Performed injection test to ensure toe sleeve is free from obstruction. Pumped 100 bbls fresh water at 12 bpm, 3300 psi, ok. Rig down CT and MIRU frac pumps. Prep to continue with frac operations. Will RIH with Stage 2 plug and guns.

### **11-14-15 – Initial Completion**

Rigging back up Oil States isolation tool, frac pumps and risers. Wireline rigging up. Pressure Test Pump down: 9500 psi, ok. **Stage 2 perf:** RIH set stage 2 CBP at 15,017'. Perforated: 15,002'-15,004', 14,982'-14,984', 14,942'-14,944', 14,902'-14,904', all shots fired. 48 holes. Max Pressure: 4200 psi, Pumpdown: 350 bbls. **Stage 2 Frac:** SICP: 738 psi, Formation broke at 3,897 psi, while pumping 14 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,641 bbls. Load to recover for this stage: 7,690 bbls. Total load to recover: 10,338 bbls. Containing: Total 100 Mesh: 97,921 lbs, Total 40/70 White: 145,651 lbs, Total 40/70 Black Pearl: 57,705 lbs. Proppant pumped this stage: 301,277 lbs. Total proppant pumped: 376,531 lbs. ISIP 2,030 psi, with a Frac Gradient of 0.718 psi/ft. Qavg: 96.3 bpm, Pavg: 5,671 psi, Qmax: 100 bpm, Pmax: 6,058 psi. Stage pumped as designed. **Stage 3 perf:** RIH set stage 3 CBP at 14,887'. Perforated: 14,872'-14,874', 14,832'-14,834', 14,792'-14,794', 14,752'-14,754'. All shots fired. 48 holes. Max Pressure: 2650 psi, Pumpdown: 262 bbls. **Stage 3 Frac:** SICP: 877 psi, Formation broke at 4,363 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,611 bbls. Load to recover for this stage: 7,660 bbls. Total load to recover: 18,260 bbls. Containing: Total 100 Mesh: 96,396 lbs, Total 40/70 White: 147,907 lbs, Total 40/70 Black Pearl: 57,253 lbs. Proppant pumped this stage: 301,556 lbs. Total proppant pumped: 678,087 lbs. ISIP 2,249 psi, with a Frac Gradient of 0.749 psi/ft. Qavg: 101 bpm, Pavg: 6,113 psi, Qmax: 105 bpm, Pmax: 6,468 psi. Stage pumped as designed. **Stage 4 perf:** RIH set stage 4 CBP at 14,737'. Perforated: 14,722'-14,724', 14,682'-14,684', 14,642'-14,644', 14,602'-14,604'. All shots fired. 48 holes. Max Pressure: 2850 psi, Pumpdown: 253 bbls. Prep to pump stage 4.

### **11-15-15 – Initial Completion**

**Stage 4 Frac:** SICP: 981 psi, Formation broke at 4,385 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,601 bbls. Load to recover for this stage: 7,649 bbls. Total load to recover: 26,162 bbls. Containing: Total 100 Mesh: 96,331 lbs, Total 40/70 White: 149,542 lbs, Total 40/70 Black Ultra: 57,278 lbs. Proppant pumped this stage: 303,151 lbs. Total proppant pumped: 981,238 lbs. ISIP 2,347 psi, with a Frac Gradient of 0.763 psi/ft. Qavg: 98.2 bpm, Pavg: 6,544 psi, Qmax: 103 bpm, Pmax: 7,372 psi. Pumped as designed. **Stage 5 perf:** RIH set stage 5 CBP at 14,587'. Perforated: 14,572'-14,574', 14,532'-14,534', 14,492'-14,494', 14,455'-14,457'. All shots fired. 48 holes. Max Pressure: 2,900 psi, Pumpdown: 304 bbls. **Stage 5 Frac:** SICP: 1,079 psi, Formation broke at 4,852 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 52 bbls. Total Slickwater: 7,586 bbls. Load to recover for this stage: 7,638 bbls. Total load to recover: 34,104 bbls. Containing: Total 100 Mesh: 96,413 lbs, Total 40/70 White: 145,476 lbs, Total 40/70 Black Ultra: 58,453 lbs. Proppant pumped this stage: 300,342 lbs. Total proppant pumped: 1,281,580 lbs. ISIP 2,374 psi, with a Frac Gradient of 0.766 psi/ft. Qavg: 96.5 bpm, Pavg: 5,847 psi, Qmax: 101 bpm, Pmax: 6,154 psi. Pumped as designed. **Stage 6 perf:** RIH set stage 6 CBP at 14,437'. Perforated: 14,422'-14,424', 14,382'-14,384', 14,342'-14,344', 14,302'-14,304'. All shots fired. 48 holes. Max Pressure: 2,900 psi, Pumpdown: 279 bbls. **Stage 6 Frac:** SICP: 1,020 psi, Formation broke at 4,280 psi, while

pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,625 bbls. Load to recover for this stage: 7,674 bbls. Total load to recover: 42,057 bbls. Containing: Total 100 Mesh: 96,600 lbs, , Total 40/70 White: 146,524 lbs, Total 40/70 Black Ultra: 56,079 lbs. Proppant pumped this stage: 299,203 lbs. Total proppant pumped: 1,580,783 lbs. ISIP 2,073 psi, with a Frac Gradient of 0.724 psi/ft. Qavg: 96.3 bpm, Pavg: 5,868 psi, Qmax: 100 bpm, Pmax: 6,191 psi. Pumped as designed. **Stage 7 perf:** RIH set stage 7 CBP at 14,287'. Perforated: 14,272'-14,274', 14,232'-14,234', 14,192'-14,194', 14,152'-14,154'. All shots fired. 48 holes. Max Pressure: 2,300 psi, Pumpdown: 268 bbls. **Stage 7 Frac:** SICP: 957 psi, Formation broke at 4,720 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 50 bbls. Total Slickwater: 7,682 bbls. Load to recover for this stage: 7,732 bbls. Total load to recover: 50,057 bbls. Containing: Total 100 Mesh: 96,344 lbs, , Total 40/70 White: 147,272 lbs, Total 40/70 Black Ultra: 61,094 lbs. Proppant pumped this stage: 304,710 lbs. Total proppant pumped: 1,885,493 lbs. ISIP 2,323 psi, with a Frac Gradient of 0.759 psi/ft. Qavg: 98.3 bpm, Pavg: 6,453 psi, Qmax: 103 bpm, Pmax: 7,043 psi. Stage pumped as designed. Notes: Lost hopper during 2.25# 40/70 Black Ultra and pressure began coming up during 2.25# 40/70 Black Ultra so stage was held until all resin was pumped. **Stage 8 perf:** RIH set stage 8 CBP at 14,136'. Perforated: 14,122'-14,124', 14,082'-14,084', 14,042'-14,044', 14,002'-14,004'. All shots fired. 48 holes. Max Pressure: 3150 psi, Pumpdown: 229 bbls. **Stage 8 Frac:** SICP: 992 psi, Formation broke at 4,468 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,681 bbls. Load to recover for this stage: 7,728 bbls. Total load to recover: 58,014 bbls. Containing: Total 100 Mesh: 97,438 lbs, , Total 40/70 White: 147,511 lbs, Total 40/70 Black Ultra: 58,204 lbs. Proppant pumped this stage: 303,153 lbs. Total proppant pumped: 2,188,646 lbs. ISIP 2,637 psi, with a Frac Gradient of 0.803 psi/ft. Qavg: 96.4 bpm, Pavg: 6,336 psi, Qmax: 103 bpm, Pmax: 7,200 psi. Stage pumped as designed. Notes: Lost hopper during 1.75# 40/70 White. Held 2.25# 40/70 Black Ultra until all resin was pumped due to pressure increase. **Stage 9 perf:** RIH set stage 9 CBP at 13,987'. Perforated: 13,972'-13,974', 13,932'-13,934', 13,892'-13,894', 13,852'-13,854'. All shots fired. 48 holes. Max Pressure: 3000 psi, Pumpdown: 217 bbls.

**Stage 9 Frac:** SICP: 1,007 psi, Formation broke at 4,639 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 8,232 bbls. Load to recover for this stage: 8,281 bbls. Total load to recover: 66,512 bbls. Containing: Total 100 Mesh: 96,785 lbs, , Total 40/70 White: 149,896 lbs, Total 40/70 Black Ultra: 56,264 lbs. Proppant pumped this stage: 302,945 lbs. Total proppant pumped: 2,491,591 lbs. ISIP 2,358 psi, with a Frac Gradient of 0.764 psi/ft. Qavg: 99.1 bpm, Pavg: 6,561 psi, Qmax: 103 bpm, Pmax: 7,273 psi. Stage pumped as designed. Notes: Had a pressure increase during 1.25# 40/70 White and had to run a sweep, once off sweep we ramped back up the sand from 1.00 ppg to 2.00 ppg. On 2.00# 40/70 Black Ultra we got a steady increase in pressure and held the sand concentration until all resin was pumped. **Stage 10 perf:** RIH set stage 10 CBP at 13,837'. Perforated: 13,819'-13,821', 13,781'-13,783', 13,740'-13,742', 13,701'-13,703'. All shots fired. 48 holes. Max Pressure: 3450 psi, Pumpdown: 209 bbls. **Stage 10 Frac:** SICP: 969 psi, Formation broke at 4,027 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,964 bbls. Load to recover for this stage: 8,013 bbls. Total load to recover: 74,734 bbls. Containing: Total 100 Mesh: 97,290 lbs, , Total 40/70 White: 149,537 lbs, Total 40/70 Black Ultra: 59,621 lbs. Proppant pumped this stage: 306,448 lbs. Total proppant pumped: 2,798,039 lbs. ISIP 2,376 psi, with a Frac Gradient of 0.767 psi/ft. Qavg: 99 bpm, Pavg: 5,822 psi, Qmax: 103 bpm, Pmax: 6,130 psi. Stage pumped as designed.

Notes: Got a pressure increase during .25# 40/70 White, ran a sweep and went back to pump schedule. RIH to Perforate Stage 11.

### **11-16-15 – Initial Completion**

**Stage 11 perf:** RIH set stage 11 CBP at 13,687'. Perforated: 13,672'-13,674', 13,632'-13,634', 13,592'-13,594', 13,552'-13,554'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 296 bbls. **Stage 11 Frac:** SICP: 997 psi, Formation broke at 3,575 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,838 bbls. Load to recover for this stage: 7,885 bbls. Total load to recover: 82,915 bbls. Containing: Total 100 Mesh: 98,971 lbs, Total 40/70 White: 143,673 lbs, Total 40/70 Black Ultra: 59,627 lbs. Proppant pumped this stage: 302,271 lbs. Total proppant pumped: 3,100,310 lbs. ISIP 2,253 psi, with a Frac Gradient of 0.749 psi/ft. Qavg: 90.7 bpm, Pavg: 5,318 psi, Qmax: 100 bpm, Pmax: 5,804 psi. Pumped as designed. Shutdown after 100 mesh due to water transfers liner being sucked up into its intake hose. Resumed stage after repairs. **Stage 12 perf:** RIH set stage 12 CBP at 13,537'. Perforated: 13,522'-13,524', 13,482'-13,484', 13,442'-13,444', 13,402'-13,404'. All shots fired. 48 holes. Max Pressure: 2,400 psi, Pumpdown: 221 bbls.

**Stage 12 Frac:** SICP: 971 psi, Formation broke at 3,521 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 8,101 bbls. Load to recover for this stage: 8,148 bbls. Total load to recover: 91,284 bbls. Containing: Total 100 Mesh: 96,606 lbs, Total 40/70 White: 145,384 lbs, Total 40/70 Black Ultra: 56,488 lbs. Proppant pumped this stage: 298,478 lbs. Total proppant pumped: 3,398,788 lbs. ISIP 2,332 psi, with a Frac Gradient of 0.761 psi/ft. Qavg: 96.3 bpm, Pavg: 5,504 psi, Qmax: 100 bpm, Pmax: 5,991 psi. Had to shut down during the second pad due to lightning. Once the weather cleared the stage was completed. **Stage 13 perf:** RIH set stage 13 CBP at 13,387'. Perforated: 13,372'-13,374', 13,332'-13,334', 13,292'-13,294', 13,252'-13,254'. All shots fired. 48 holes. Max Pressure: 2,400 psi, Pumpdown: 204 bbls. **Stage 13 Frac:** SICP: 996 psi, Formation broke at 3,440 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 50 bbls. Total Slickwater: 7,640 bbls. Load to recover for this stage: 7,690 bbls. Total load to recover: 99,178 bbls. Containing: Total 100 Mesh: 96,403 lbs, , Total 40/70 White: 146,790 lbs, Total 40/70 Black Ultra: 60,245 lbs. Proppant pumped this stage: 303,438 lbs. Total proppant pumped: 3,702,226 lbs. ISIP 2,155 psi, with a Frac Gradient of 0.736 psi/ft. Qavg: 96.5 bpm, Pavg: 5,337 psi, Qmax: 101 bpm, Pmax: 6,305 psi. Stage pumped as designed. **Stage 14 perf:** RIH set stage 14 CBP at 13,237'. Perforated: 13,222'-13,224', 13,182'-13,184', 13,142'-13,144', 13,102'-13,104'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 183 bbls. **Stage 14 Frac:** SICP: 970 psi, Formation broke at 4144 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,631 bbls. Load to recover for this stage: 7,679 bbls. Total load to recover: 107,040 bbls. Containing: Total 100 Mesh: 96,230 lbs, , Total 40/70 White: 146,278 lbs, Total 40/70 Black Ultra: 59,095 lbs. Proppant pumped this stage: 301,603 lbs. Total proppant pumped: 4,003,829 lbs. ISIP 2,485 psi, with a Frac Gradient of 0.782 psi/ft. Qavg: 99.4 bpm, Pavg: 5,507 psi, Qmax: 104 bpm, Pmax: 5,779 psi. Stage pumped as designed. **Stage 15 perf:** RIH set stage 15 CBP at 13,087'. Perforated: 13,072'-13,074', 13,032'-13,034', 12,992'-12,994', 12,952'-12,954'. All shots fired. 48 holes. Max Pressure: 3,100 psi, Pumpdown: 174 bbls. **Stage 15 Frac:** SICP: 1,019 psi, Formation broke at 4,551 psi, while pumping 20 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,599 bbls. Load to recover for this stage: 7,648 bbls. Total load to recover: 114,862 bbls. Containing: Total 100 Mesh: 96,493 lbs, , Total 40/70 White: 147,248 lbs, Total 40/70 Black Ultra: 59,405 lbs. Proppant pumped this stage: 303,146 lbs.

Total proppant pumped: 4,306,975 lbs. ISIP 2,266 psi, with a Frac Gradient of 0.751 psi/ft. Qavg: 99.1 bpm, Pavg: 6,043 psi, Qmax: 104 bpm, Pmax: 6,777 psi. Stage pumped as designed. **Stage 16 perf:** RIH set stage 16 CBP at 12,937'. Perforated: 12,922'-12,924', 12,882'-12,884', 12,842'-12,844', 12,802'-12,804'. All shots fired. 48 holes. Max Pressure: 3,200 psi, Pumpdown: 172 bbls. **Stage 16 Frac:** SICP: 993 psi, Formation broke at 3,604 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 50 bbls. Total Slickwater: 7,704 bbls. Load to recover for this stage: 7,754 bbls. Total load to recover: 122,788 bbls. Containing: Total 100 Mesh: 94,793 lbs, , Total 40/70 White: 147,874 lbs, Total 40/70 Black Ultra: 58,670 lbs. Proppant pumped this stage: 301,337 lbs. Total proppant pumped: 4,608,312 lbs. ISIP 1,976 psi, with a Frac Gradient of 0.71 psi/ft. Qavg: 99.7 bpm, Pavg: 5,978 psi, Qmax: 104 bpm, Pmax: 6,590 psi. Stage pumped as designed. Notes: Lost hopper during 1.75# 40/70 White. Pressure began coming up during 2.00# 40/70 White, concentration was held during 40/70 Black Ultra sub stage. Once pressure broke back and we went to 2.25# 40/70 Black Ultra and finished the stage. **Stage 17 perf:** RIH set stage 17 CBP at 12,787'. Perforated: 12,772'-12,774', 12,732'-12,734', 12,692'-12,694', 12,652'-12,654'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 163 bbls.

### 11-17-15 – Initial Completion

**Stage 17 Frac:** SICP: 951 psi, Formation broke at 3,845 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,539 bbls. Load to recover for this stage: 7,587 bbls. Total load to recover: 130,538 bbls. Containing: Total 100 Mesh: 95,205 lbs, Total 40/70 White: 147,452 lbs, Total 40/70 Black Ultra: 54,916 lbs. Proppant pumped this stage: 297,573 lbs. Total proppant pumped: 4,905,885 lbs. ISIP 2,775 psi, with a Frac Gradient of 0.823 psi/ft. Qavg: 99.3 bpm, Pavg: 5,416 psi, Qmax: 103 bpm, Pmax: 5,833 psi. Pumped as designed. **Stage 18 perf:** RIH set stage 18 CBP at 12,637'. Perforated: 12,622'-12,624', 12,582'-12,584', 12,542'-12,544', 12,502'-12,504'. All shots fired. 48 holes. Max Pressure: 2,400 psi, Pumpdown: 195 bbls. **Stage 18 Frac:** SICP: 1,064 psi, Formation broke at 3,832 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,577 bbls. Load to recover for this stage: 7,624 bbls. Total load to recover: 138,357 bbls. Containing: Total 100 Mesh: 95,364 lbs, Total 40/70 White: 145,811 lbs, Total 40/70 Black Ultra: 55,553 lbs. Proppant pumped this stage: 296,728 lbs. Total proppant pumped: 5,202,613 lbs. ISIP 2,440 psi, with a Frac Gradient of 0.776 psi/ft. Qavg: 97.2 bpm, Pavg: 5,254 psi, Qmax: 101 bpm, Pmax: 5,680 psi. Pumped as designed. **Stage 19 perf:** RIH set stage 19 CBP at 12,487'. Perforated: 12,472'-12,474', 12,432'-12,434', 12,392'-12,394', 12,352'-12,354'. All shots fired. 48 holes. Max Pressure: 2,400 psi, Pumpdown: 187 bbls. **Stage 19 Frac:** SICP: 1,020 psi, Formation broke at 4,040 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,554 bbls. Load to recover for this stage: 7,601 bbls. Total load to recover: 146,145 bbls. Containing: Total 100 Mesh: 95,314 lbs, Total 40/70 White: 146,460 lbs, Total 40/70 Black Ultra: 56,712 lbs. Proppant pumped this stage: 298,486 lbs. Total proppant pumped: 5,501,099 lbs. ISIP 2,395 psi, with a Frac Gradient of 0.769 psi/ft. Qavg: 97.2 bpm, Pavg: 5,316 psi, Qmax: 101 bpm, Pmax: 5,642 psi. Pumped as designed. **Stage 20 perf:** RIH set stage 20 CBP at 12,337'. Perforated: 12,318'-12,320', 12,280'-12,282', 12,240'-12,242', 12,202'-12,204'. All shots fired. 48 holes. Max Pressure: 2,300 psi, Pumpdown: 166 bbls. **Stage 20 Frac:** SICP: 975 psi, Formation broke at 3,397 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,544 bbls. Load to recover for this stage: 7,591 bbls. Total load to recover: 153,902 bbls. Containing: Total 100 Mesh: 94,344 lbs, Total 40/70 White: 145,495 lbs, Total 40/70 Black

Ultra: 56,020 lbs. Proppant pumped this stage: 295,859 lbs. Total proppant pumped: 5,796,958 lbs. ISIP 2,501 psi, with a Frac Gradient of 0.784 psi/ft. Qavg: 97.3 bpm, Pavg: 5,105 psi, Qmax: 101 bpm, Pmax: 5,485 psi. Pumped as designed. **Stage 21 perf:** RIH set stage 21 CBP at 12,187'. Perforated: 12,172'-12,174', 12,132'-12,134', 12,092'-12,094', 12,052'-12,054'. All shots fired. 48 holes. Max Pressure: 2,700 psi, Pumpdown: 144 bbls. **Stage 21 Frac:** SICP: 1,076 psi, Formation broke at 4,049 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,548 bbls. Load to recover for this stage: 7,597 bbls. Total load to recover: 161,643 bbls. Containing: Total 100 Mesh: 94,519 lbs, , Total 40/70 White: 146,314 lbs, Total 40/70 Black Ultra: 54,401 lbs. Proppant pumped this stage: 295,234 lbs. Total proppant pumped: 6,092,192 lbs. ISIP 2,247 psi, with a Frac Gradient of 0.749 psi/ft. Qavg: 99.6 bpm, Pavg: 5,185 psi, Qmax: 104 bpm, Pmax: 5,615 psi. Stage pumped as designed. **Stage 22 perf:** RIH set stage 22 CBP at 12,037'. Perforated: 12,022'-12,024', 11,982'-11,984', 11,942'-11,944', 11,902'-11,904'. All shots fired. 48 holes. Max Pressure: 2,700 psi, Pumpdown: 137 bbls. Shutdown due to lightning and high wind. **Stage 22 Frac:** SICP: 928 psi, Formation broke at 3,716 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,531 bbls. Load to recover for this stage: 7,580 bbls. Total load to recover: 169,360 bbls. Containing: Total 100 Mesh: 94,680 lbs, , Total 40/70 White: 144,741 lbs, Total 40/70 Black Ultra: 56,687 lbs. Proppant pumped this stage: 296,108 lbs. Total proppant pumped: 6,388,300 lbs. ISIP 2,504 psi, with a Frac Gradient of 0.785 psi/ft. Qavg: 98.1 bpm, Pavg: 5,215 psi, Qmax: 103 bpm, Pmax: 5,577 psi. Stage pumped as designed. **Stage 23 perf:** RIH set stage 23 CBP at 11,887'. Perforated: 11,872'-11,874', 11,832'-11,834', 11,792'-11,794', 11,752'-11,754'. All shots fired. 48 holes. Max Pressure: 3,100 psi, Pumpdown: 138 bbls. **Stage 23 Frac:** SICP: 1,034 psi, Formation broke at 3,284 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,538 bbls. Load to recover for this stage: 7,587 bbls. Total load to recover: 177,085 bbls. Containing: Total 100 Mesh: 94,613 lbs, , Total 40/70 White: 145,054 lbs, Total 40/70 Black Ultra: 58,239 lbs. Proppant pumped this stage: 297,906 lbs. Total proppant pumped: 6,686,206 lbs. ISIP 2,633 psi, with a Frac Gradient of 0.803 psi/ft. Qavg: 97.5 bpm, Pavg: 5,216 psi, Qmax: 102 bpm, Pmax: 5,504 psi. Stage pumped as designed.

### 11-18-15 – Initial Completion

**Stage 24 perf:** RIH set stage 24 CBP at 11,737'. Perforated: 11,722'-11,724', 11,682'-11,684', 11,642'-11,644', 11,602'-11,604'. All shots fired. 48 holes. Max Pressure: 2,500 psi, Pumpdown: 145 bbls. **Stage 24 Frac:** SICP: 957 psi, Formation broke at 3,223 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,553 bbls. Load to recover for this stage: 7,600 bbls. Total load to recover: 184,830 bbls. Containing: Total 100 Mesh: 95,377 lbs, Total 40/70 White: 145,613 lbs, Total 40/70 Black Ultra: 55,869 lbs. Proppant pumped this stage: 296,859 lbs. Total proppant pumped: 6,983,065 lbs. ISIP 2,563 psi, with a Frac Gradient of 0.793 psi/ft. Qavg: 97.2 bpm, Pavg: 5,086 psi, Qmax: 101 bpm, Pmax: 5,440 psi. Pumped as designed. **Stage 25 perf:** RIH set stage 25 CBP at 11,587'. Perforated: 11,570'-11,572', 11,530'-11,532', 11,492'-11,494', 11,452'-11,454'. All shots fired. 48 holes. Max Pressure: 2,500 psi, Pumpdown: 140 bbls. **Stage 25 Frac:** SICP: 1,194 psi, Formation broke at 4,014 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,534 bbls. Load to recover for this stage: 7,581 bbls. Total load to recover: 192,551 bbls. Containing: Total 100 Mesh: 95,236 lbs, Total 40/70 White: 145,209 lbs, Total 40/70 Black Ultra: 56,306 lbs. Proppant pumped this stage: 296,751 lbs. Total proppant pumped: 7,279,816 lbs. ISIP 3,279 psi, with a Frac Gradient of 0.894 psi/ft. Qavg: 97.3 bpm, Pavg: 5,219 psi, Qmax: 101 bpm,

Pmax: 5,615 psi. Pumped as designed. **Stage 26 perf:** RIH set stage 26 CBP at 11,437'. Perforated: 11,422'-11,424', 11,382'-11,384', 11,342'-11,344', 11,303'-11,305'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 124 bbls. **Stage 26 Frac:** SICP: 1,087 psi, Formation broke at 4,143 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 50 bbls. Total Slickwater: 7,523 bbls. Load to recover for this stage: 7,573 bbls. Total load to recover: 200,248 bbls. Containing: Total 100 Mesh: 94,799 lbs, Total 40/70 White: 145,915 lbs, Total 40/70 Black Ultra: 55,835 lbs. Proppant pumped this stage: 296,549 lbs. Total proppant pumped: 7,576,365 lbs. ISIP 2,803 psi, with a Frac Gradient of 0.827 psi/ft. Qavg: 97.3 bpm, Pavg: 5,150 psi, Qmax: 101 bpm, Pmax: 5,493 psi. Pumped as designed. **Stage 27 perf:** RIH set stage 27 CBP at 11,287'. Perforated: 11,272'-11,274', 11,232'-11,234', 11,192'-11,194', 11,152'-11,154'. All shots fired. 48 holes. Max Pressure: 2,300 psi, Pumpdown: 125 bbls. **Stage 27 Frac:** SICP: 989 psi, Formation broke at 4,138 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,543 bbls. Load to recover for this stage: 7,590 bbls. Total load to recover: 207,963 bbls. Containing: Total 100 Mesh: 95,905 lbs, , Total 40/70 White: 145,969 lbs, Total 40/70 Black Ultra: 57,634 lbs. Proppant pumped this stage: 299,508 lbs. Total proppant pumped: 7,875,873 lbs. ISIP 2,364 psi, with a Frac Gradient of 0.765 psi/ft. Qavg: 97.1 bpm, Pavg: 5,175 psi, Qmax: 101 bpm, Pmax: 5,510 psi. Stage pumped as designed. **Stage 28 perf:** RIH set stage 28 CBP at 11,137'. Perforated: 11,122'-11,124', 11,082'-11,084', 11,042'-11,044', 11,002'-11,004'. All shots fired. 48 holes. Max Pressure: 3,200 psi, Pumpdown: 110 bbls. **Stage 28 Frac:** SICP: 1,052 psi, Formation broke at 3,560 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 50 bbls. Total Slickwater: 7,556 bbls. Load to recover for this stage: 7,606 bbls. Total load to recover: 215,679 bbls. Containing: Total 100 Mesh: 93,966 lbs, , Total 40/70 White: 146,810 lbs, Total 40/70 Black Ultra: 60,471 lbs. Proppant pumped this stage: 301,247 lbs. Total proppant pumped: 8,177,120 lbs. ISIP 2,547 psi, with a Frac Gradient of 0.791 psi/ft. Qavg: 102.1 bpm, Pavg: 5,341 psi, Qmax: 106 bpm, Pmax: 5,620 psi. Stage pumped as designed. **Stage 29 perf:** RIH set stage 29 CBP at 10,985'. Perforated: 10,972'-10,974', 10,932'-10,934', 10,892'-10,894', 10,852'-10,854'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 109 bbls. **Stage 29 Frac:** SICP: 1,131 psi, Formation broke at 3,497 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,531 bbls. Load to recover for this stage: 7,580 bbls. Total load to recover: 223,368 bbls. Containing: Total 100 Mesh: 95,289 lbs, , Total 40/70 White: 145,538 lbs, Total 40/70 Black Ultra: 59,498 lbs. Proppant pumped this stage: 300,325 lbs. Total proppant pumped: 8,477,445 lbs. ISIP 2,217 psi, with a Frac Gradient of 0.744 psi/ft. Qavg: 101.8 bpm, Pavg: 5,740 psi, Qmax: 106 bpm, Pmax: 6,267 psi. Stage pumped as designed. **Stage 30 perf:** RIH set stage 30 CBP at 10,837'. Perforated: 10,822'-10,824', 10,782'-10,784', 10,742'-10,744', 10,702'-10,704'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 104 bbls. **Stage 30 Frac:** SICP: 1,114 psi, Formation broke at 4,063 psi, while pumping 14 bpm. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,542 bbls. Load to recover for this stage: 7,590 bbls. Total load to recover: 231,062 bbls. Containing: Total 100 Mesh: 95,313 lbs, , Total 40/70 White: 145,797 lbs, Total 40/70 Black Ultra: 57,609 lbs. Proppant pumped this stage: 298,719 lbs. Total proppant pumped: 8,776,164 lbs. ISIP 2,414 psi, with a Frac Gradient of 0.772 psi/ft. Qavg: 101.8 bpm, Pavg: 5,721 psi, Qmax: 106 bpm, Pmax: 6,401 psi. Stage pumped as designed. **Stage 31 perf:** RIH set stage 31 CBP at 10,687'. Perforated: 10,672'-10,674', 10,634'-10,636', 10,594'-10,596', 10,554'-10,556'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 96 bbls.



### 11-19-15 – Initial Completion

**Stage 31 Frac:** SICP: 1,111 psi, Formation broke at 4,456 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,530 bbls. Load to recover for this stage: 7,579 bbls. Total load to recover: 238,737 bbls. Containing: Total 100 Mesh: 95,202 lbs, Total 40/70 White: 147,085 lbs, Total 40/70 Black Ultra: 57,144 lbs. Proppant pumped this stage: 299,431 lbs. Total proppant pumped: 9,075,595 lbs. ISIP 2,591 psi, with a Frac Gradient of 0.797 psi/ft. Qavg: 99.4 bpm, Pavg: 5,165 psi, Qmax: 104 bpm, Pmax: 5,490 psi. Pumped as designed. **Stage 32 perf:** RIH set stage 32 CBP at 10,537'. Perforated: 10,522'-10,524', 10,482'-10,484', 10,442'-10,444', 10,402'-10,404'. All shots fired. 48 holes. Max Pressure: 2,600 psi, Pumpdown: 97 bbls. **Stage 32 Frac:** SICP: 1,124 psi, Formation broke at 3,911 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,509 bbls. Load to recover for this stage: 7,556 bbls. Total load to recover: 246,293 bbls. Containing: Total 100 Mesh: 94,969 lbs, Total 40/70 White: 145,951 lbs, Total 40/70 Black Ultra: 54,894 lbs. Proppant pumped this stage: 295,814 lbs. Total proppant pumped: 9,371,409 lbs. ISIP 2,737 psi, with a Frac Gradient of 0.818 psi/ft. Qavg: 97.2 bpm, Pavg: 5,029 psi, Qmax: 101 bpm, Pmax: 5,394 psi. Pumped as designed. **Stage 33 perf:** RIH set stage 33 CBP at 10,387'. Perforated: 10,372'-10,374', 10,332'-10,334', 10,292'-10,294', 10,252'-10,254'. All shots fired. 48 holes. Max Pressure: 2,500 psi, Pumpdown: 95 bbls. **Stage 33 Frac:** SICP: 1,080 psi, Formation broke at 3,921 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,567 bbls. Load to recover for this stage: 7,614 bbls. Total load to recover: 254,004 bbls. Containing: Total 100 Mesh: 95,538 lbs, Total 40/70 White: 146,931 lbs, Total 40/70 Black Ultra: 54,183 lbs. Proppant pumped this stage: 296,652 lbs. Total proppant pumped: 9,668,061 lbs. ISIP 3,040 psi, with a Frac Gradient of 0.86 psi/ft. Qavg: 96.3 bpm, Pavg: 5,010 psi, Qmax: 100 bpm, Pmax: 5,350 psi. Pumped as designed. **Stage 34 perf:** RIH set stage 34 CBP at 10,247'. Perforated: 10,222'-10,224', 10,182'-10,184', 10,142'-10,144', 10,102'-10,104'. All shots fired. 48 holes. Max Pressure: 2,400 psi, Pumpdown: 87 bbls. **Stage 34 Frac:** SICP: 1,095 psi, Formation broke at 3,628 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,566 bbls. Load to recover for this stage: 7,613 bbls. Total load to recover: 261,799 bbls. Containing: Total 100 Mesh: 94,556 lbs, Total 40/70 White: 145,172 lbs, Total 40/70 Black Ultra: 57,453 lbs. Proppant pumped this stage: 297,181 lbs. Total proppant pumped: 9,965,242 lbs. ISIP 2,883 psi, with a Frac Gradient of 0.838 psi/ft. Qavg: 96.3 bpm, Pavg: 4,978 psi, Qmax: 100 bpm, Pmax: 5,393 psi. Pumped as designed. **Stage 35 perf:** RIH set stage 35 CBP at 10,087'. Perforated: 10,072'-10,074', 10,032'-10,034', 9,992'-9,994', 9,952'-9,954'. All shots fired. 48 holes. Max Pressure: 2,500 psi, Pumpdown: 80 bbls. **Stage 35 Frac:** SICP: 1,128 psi, Formation broke at 4,072 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,532 bbls. Load to recover for this stage: 7,579 bbls. Total load to recover: 269,458 bbls. Containing: Total 100 Mesh: 94,903 lbs, , Total 40/70 White: 146,606 lbs, Total 40/70 Black Ultra: 53,897 lbs. Proppant pumped this stage: 295,406 lbs. Total proppant pumped: 10,260,648 lbs. ISIP 2,581 psi, with a Frac Gradient of 0.796 psi/ft. Qavg: 101 bpm, Pavg: 5,435 psi, Qmax: 107 bpm, Pmax: 5,913 psi. Stage pumped as designed. **Stage 36 perf:** RIH set stage 36 CBP at 9,937'. Perforated: 9,920'-9,922', 9,880'-9,882', 9,840'-9,842', 9,800'-9,802'. All shots fired. 48 holes. Max Pressure: 2,700 psi, Pumpdown: 74 bbls. **Stage 36 Frac:** SICP: 1,070 psi, Formation broke at 3,608 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,622 bbls. Load to recover for this stage: 7,671 bbls. Total load to recover: 277,203 bbls. Containing: Total 100 Mesh: 94,418 lbs, , Total 40/70 White: 146,360 lbs, Total 40/70 Black Ultra: 59,341 lbs. Proppant pumped this stage: 300,119 lbs. Total proppant pumped: 10,560,767 lbs. ISIP 2,637

psi, with a Frac Gradient of 0.803 psi/ft. Qavg: 101.8 bpm, Pavg: 5,509 psi, Qmax: 106 bpm, Pmax: 5,967 psi. Stage pumped as designed. **Stage 37 perf:** RIH set stage 37 CBP at 9,787'. Perforated: 9,772'-9,774', 9,732'-9,734', 9,692'-9,694', 9,652'-9,654'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 70 bbls. **Stage 37 Frac:** SICP: 1,045 psi, Formation broke at 3,325 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,615 bbls. Load to recover for this stage: 7,664 bbls. Total load to recover: 284,937 bbls. Containing: Total 100 Mesh: 95,362 lbs, , Total 40/70 White: 146,759 lbs, Total 40/70 Black Ultra: 60,718 lbs. Proppant pumped this stage: 302,839 lbs. Total proppant pumped: 10,863,606 lbs. ISIP 2,722 psi, with a Frac Gradient of 0.815 psi/ft. Qavg: 101.9 bpm, Pavg: 5,385 psi, Qmax: 107 bpm, Pmax: 5,790 psi. Stage pumped as designed. **Stage 38 perf:** RIH set stage 38 CBP at 9,637'. Perforated: 9,622'-9,624', 9,582'-9,584', 9,542'-9,544', 9,502'-9,504'. All shots fired. 48 holes. Max Pressure: 2,900 psi, Pumpdown: 65 bbls. **Stage 38 Frac:** SICP: 1,094 psi, Formation broke at 2,778 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,602 bbls. Load to recover for this stage: 7,650 bbls. Total load to recover: 292,652 bbls. Containing: Total 100 Mesh: 94,825 lbs, Total 40/70 White: 147,328 lbs, Total 40/70 Black Ultra: 57,280 lbs. Proppant pumped this stage: 299,433 lbs. Total proppant pumped: 11,163,039 lbs. ISIP 2,418 psi, with a Frac Gradient of 0.773 psi/ft. Qavg: 100.7 bpm, Pavg: 5,247 psi, Qmax: 106 bpm, Pmax: 5,755 psi. Stage pumped as designed. **Stage 39 perf:** RIH set stage 39 CBP at 9,487'. Perforated: 9,472'-9,474', 9,432'-9,434', 9,392'-9,394', 9,352'-9,354'. All shots fired. 48 holes. Max Pressure: 2,800 psi, Pumpdown: 59 bbls. **Stage 39 Frac:** SICP: 1,109 psi, Formation broke at 3,234 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,597 bbls. Load to recover for this stage: 7,646 bbls. Total load to recover: 300,357 bbls. Containing: Total 100 Mesh: 94,964 lbs, Total 40/70 White: 146,773 lbs, Total 40/70 Black Ultra: 58,809 lbs. Proppant pumped this stage: 300,546 lbs. Total proppant pumped: 11,463,585 lbs. ISIP 2,785 psi, with a Frac Gradient of 0.824 psi/ft. Qavg: 102.6 bpm, Pavg: 5,334 psi, Qmax: 107 bpm, Pmax: 5,814 psi. Stage pumped as designed. Notes: During 1.75# 40/70 White Pro Petro sent a sand slug down hole causing a pressure spike on 2.00# 40/70 White.

### 11-20-15 – Initial Completion

**Stage 40 perf:** RIH set stage 40 CBP at 9,337'. Perforated: 9,322'-9,324', 9,282'-9,284', 9,242'-9,244', 9,202'-9,204'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 60 bbls. **Stage 40 Frac:** SICP: 1,105 psi, Formation broke at 4,282 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,597 bbls. Load to recover for this stage: 7,644 bbls. Total load to recover: 308,061 bbls. Containing: Total 100 Mesh: 94,278 lbs, Total 40/70 White: 145,627 lbs, Total 40/70 Black Ultra: 56,196 lbs. Proppant pumped this stage: 296,101 lbs. Total proppant pumped: 11,759,686 lbs. ISIP 2,592 psi, with a Frac Gradient of 0.797 psi/ft. Qavg: 99.1 bpm, Pavg: 5,374 psi, Qmax: 103 bpm, Pmax: 6,084 psi. Pumped as designed. **Stage 41 perf:** RIH set stage 41 CBP at 9,187'. Perforated: 9,170'-9,172', 9,130'-9,132', 9,090'-9,092', 9,050'-9,052'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 52 bbls. **Stage 41 Frac:** SICP: 1,060 psi, Formation broke at 3,810 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,551 bbls. Load to recover for this stage: 7,598 bbls. Total load to recover: 315,711 bbls. Containing: Total 100 Mesh: 93,221 lbs, Total 40/70 White: 145,236 lbs, Total 40/70 Black Ultra: 57,494 lbs. Proppant pumped this stage: 295,951 lbs. Total proppant pumped: 12,055,637 lbs. ISIP 2,613 psi, with a Frac Gradient of 0.8 psi/ft. Qavg: 99.1 bpm, Pavg: 5,208 psi, Qmax: 103 bpm, Pmax: 5,699 psi. Pumped as designed. **Stage 42 perf:**

RIH set stage 42 CBP at 9,037'. Perforated: 9,022'-9,024', 8,982'-8,984', 8,942'-8,944', 8,902'-8,904'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 46 bbls. **Stage 42 Frac:** SICP: 981 psi, Formation broke at 3,779 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,540 bbls. Load to recover for this stage: 7,587 bbls. Total load to recover: 323,344 bbls. Containing: Total 100 Mesh: 94,882 lbs, Total 40/70 White: 146,526 lbs, Total 40/70 Black Ultra: 54,676 lbs. Proppant pumped this stage: 296,084 lbs. Total proppant pumped: 12,351,721 lbs. ISIP 2,876 psi, with a Frac Gradient of 0.837 psi/ft. Qavg: 99.1 bpm, Pavg: 5,155 psi, Qmax: 103 bpm, Pmax: 5,827 psi. Pumped as designed. **Stage 43 perf:** RIH set stage 43 CBP at 8,887'. Perforated: 8,872'-8,874', 8,832'-8,834', 8,792'-8,794', 8,752'-8,754'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 43 bbls. **Stage 43 Frac:** SICP: 1,102 psi, Formation broke at 3,581 psi, while pumping 16 bpm. Pumped: Total 15% HCL Acid: 47 bbls. Total Slickwater: 7,552 bbls. Load to recover for this stage: 7,599 bbls. Total load to recover: 330,986 bbls. Containing: Total 100 Mesh: 96,915 lbs, Total 40/70 White: 143,073 lbs, Total 40/70 Black Ultra: 53,973 lbs. Proppant pumped this stage: 293,961 lbs. Total proppant pumped: 12,645,682 lbs. ISIP 2,730 psi, with a Frac Gradient of 0.817 psi/ft. Qavg: 101.9 bpm, Pavg: 5,431 psi, Qmax: 106 bpm, Pmax: 5,866 psi. Pumped as designed. **Stage 44 perf:** RIH set stage 44 CBP at 8,737'. Perforated: 8,722'-8,724', 8,682'-8,684', 8,642'-8,644', 8,602'-8,604'. All shots fired. 48 holes. Max Pressure: 2,100 psi, Pumpdown: 34 bbls. **Stage 44 Frac:** SICP: 1,137 psi, Formation broke at 3,581 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 50 bbls. Total Slickwater: 7,543 bbls. Load to recover for this stage: 7,593 bbls. Total load to recover: 338,613 bbls. Containing: Total 100 Mesh: 95,307 lbs, , Total 40/70 White: 143,146 lbs, Total 40/70 Black Ultra: 61,517 lbs. Proppant pumped this stage: 299,970 lbs. Total proppant pumped: 12,945,652 lbs. ISIP 2,968 psi, with a Frac Gradient of 0.85 psi/ft. Qavg: 102.1 bpm, Pavg: 5,433 psi, Qmax: 107 bpm, Pmax: 5,942 psi. Stage pumped as designed. Notes: Lost hopper during 2.00# 40/70 White. **Stage 45 perf:** RIH set stage 45 CBP at 8,588'. Perforated: 8,572'-8,574', 8,532'-8,534', 8,492'-8,494', 8,452'-8,454'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 31 bbls. **Stage 45 Frac:** SICP: 1,118 psi, Formation broke at 3,650 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,504 bbls. Load to recover for this stage: 7,553 bbls. Total load to recover: 346,197 bbls. Containing: Total 100 Mesh: 96,386 lbs, , Total 40/70 White: 145,274 lbs, Total 40/70 Black Ultra: 54,810 lbs. Proppant pumped this stage: 296,470 lbs. Total proppant pumped: 13,242,122 lbs. ISIP 2,896 psi, with a Frac Gradient of 0.84 psi/ft. Qavg: 102.3 bpm, Pavg: 5,304 psi, Qmax: 107 bpm, Pmax: 5,660 psi. Stage pumped as designed. **Stage 46 perf:** RIH set stage 46 CBP at 8,437'. Perforated: 8,422'-8,424', 8,382'-8,384', 8,342'-8,344', 8,302'-8,304'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 27 bbls. **Stage 46 Frac:** SICP: 984 psi, Formation broke at 4,255 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 49 bbls. Total Slickwater: 7,577 bbls. Load to recover for this stage: 7,626 bbls. Total load to recover: 353,850 bbls. Containing: Total 100 Mesh: 95,250 lbs, , Total 40/70 White: 146,756 lbs, Total 40/70 Black Ultra: 60,365 lbs. Proppant pumped this stage: 302,371 lbs. Total proppant pumped: 13,544,493 lbs. ISIP 2,503 psi, with a Frac Gradient of 0.785 psi/ft. Qavg: 102.4 bpm, Pavg: 5,255 psi, Qmax: 107 bpm, Pmax: 6,153 psi. Stage pumped as designed. **Stage 47 perf:** RIH set stage 47 CBP at 8,287'. Perforated: 8,272'-8,274', 8,232'-8,234', 8,192'-8,194', 8,152'-8,154'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 24 bbls. **Stage 47 Frac:** SICP: 1,025 psi, Formation broke at 3,901 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 48 bbls. Total Slickwater: 7,525 bbls. Load to recover for this stage: 7,573 bbls. Total load to recover: 361,447 bbls. Containing: Total 100 Mesh: 93,617 lbs, , Total 40/70 White:

147,06 lbs, Total 40/70 Black Ultra: 60,167 lbs. Proppant pumped this stage: 300,790 lbs. Total proppant pumped: 13,845,283 lbs. ISIP 2,862 psi, with a Frac Gradient of 0.835 psi/ft. Qavg: 102.2 bpm, Pavg: 5,142 psi, Qmax: 107 bpm, Pmax: 5,688 psi. Stage pumped as designed.

### **11-21-15 – Initial Completion**

Waiting on WL truck to be repaired. **Stage 48 perf:** RIH set stage 48 CBP at 8,137'. Perforated: 8,122'-8,124', 8,082'-8,084', 8,042'-8,044', 8,002'-8,004'. All shots fired. 48 holes. Max Pressure: 2,200 psi, Pumpdown: 30 bbls. WL laying down lubricator and B.O.P. **Stage 48 Frac:** SICP: 820 psi, Formation broke at 4,859 psi, while pumping 15 bpm. Pumped: Total 15% HCL Acid: 52 bbls. Total Slickwater: 7,472 bbls. Load to recover for this stage: 7,524 bbls. Total load to recover: 369,001 bbls. Containing: Total 100 Mesh: 94,572 lbs, Total 40/70 White: 141,772 lbs, Total 40/70 Black Ultra: 56,180 lbs. Proppant pumped this stage: 292,524 lbs. Total proppant pumped: 14,137,807 lbs. ISIP 2,327 psi, with a Frac Gradient of 0.76 psi/ft. Qavg: 102.1 bpm, Pavg: 4,786 psi, Qmax: 108 bpm, Pmax: 6,054 psi. Pumped as designed. RDMO Pro Petro and ArkLaTex WL. MIRU Xtreme Coil Tubing, Viking Thru Tubing and Ironman MIRU. Assemble Lubricator. Install weld-on connector Pull Test: 30000 lbs, ok. Load coil. Make up tool string consisting of: 3.125" O.D Jar, 3.125" O.D Agitator, 3.125" O.D Motor, and 4.625" O.D J-Z Bit. Tool Length: 31 ft. Nippling up to frac stack, pressure test: 4000 psi. RIH w/CT. Wellhead: 700 psi. Tagged up @716'. POOH w/ CT to check tool string. On surface w/CT, no issues. RBIH w/CT, pass 716' and did not tag again. Wellhead: 700 psi. Weight Check: 6900'. Increased rate. Flow In: 4 bpm, Flow Out: 4 bpm, CP: 4700 psi, Wellhead: 700 psi. Tagged Plug 1. Depth: 8099', Well: 700 psi, sent sweep, Plug gone 25 minutes. Well: 700 psi. Tagged Plug 2. Depth: 8251', Well: 700 psi, sent sweep, Plug gone 49 minutes. Well: 700 psi. Tagged Plug 3. Depth: 8400', Well: 700 psi, sent sweep, Plug gone 34 minutes. Well: 700 psi. Tagged Plug 4. Depth: 8551', Well: 700 psi, sent sweep, Plug gone 23 minutes. Well: 700 psi. Tagged Plug 5. Depth: 8099'.

### **11-22-15 – Initial Completion**

Tagged Plug 5. Depth: 8,099', Well: 700 psi, sent sweep, Plug gone 58 minutes. Well: 700 psi. Tagged Plug 6. Depth: 8,844', Well: 1100 psi, sent sweep, Plug gone 21 minutes. Well: 900 psi. Tagged Plug 7. Depth: 8,892', Well: 850 psi, sent sweep, Plug gone 20 minutes. Well: 900 psi. Tagged Plug 8. Depth: 9,141', Well: 1000 psi, sent sweep, Plug gone 35 minutes. Well: 900 psi. Tagged Plug 9. Depth: 9,289', Well: 900 psi, sent sweep, Plug gone 9 minutes. Well: 975 psi. Tagged Plug 10. Depth: 9,442', Well: 850 psi, sent sweep, Plug gone 8 minutes. Well: 800 psi. Tagged Plug 11. Depth: 9,591', made short trip, RBIH. Tagged Plug 11. Depth: 9,591', Well: 500 psi, sent sweep, Plug gone 9 minutes. Well: 500 psi. Tagged Plug 12. Depth: 9,737', Well: 500 psi, sent sweep, Plug gone 22 minutes. Well: 475 psi. Tagged Plug 13. Depth: 9,887', Well: 475 psi, sent sweep, Plug gone 19 minutes. Well: 550 psi. Tagged Plug 14. Depth: 10,033', Well: 575 psi, sent sweep, Plug gone 11 minutes. Well: 500 psi. Tagged Plug 15. Depth: 10,190', Well: 425 psi, sent sweep, Plug gone 15 minutes. Well: 475 psi. Tagged Plug 16. Depth: 10,331', Well: 475 psi, sent sweep, Plug gone 11 minutes. Well: 450 psi. Tagged Plug 17. Depth: 10,478', Well: 475 psi, sent sweep, Plug gone 15 minutes. Well: 470 psi. Tagged Plug 18. Depth: 10,633', Well: 440 psi, sent sweep, Plug gone 14 minutes. Well: 400 psi. Tagged Plug 19. Depth: 10,793', Well: 410 psi, sent sweep, Plug gone 10 minutes. Well: 400 psi. Tagged Plug 20. Depth: 10,941', Well: 440 psi, sent sweep, Plug gone 8 minutes. Well: 440 psi. Tagged Plug 21. Depth: 11,089', Well: 400 psi, sent sweep, Plug gone 10 minutes. Well: 400 psi. Tagged Plug 22. Depth: 11,238', Well: 440

psi, sent sweep, Plug gone 13 minutes. Well: 470 psi. Tagged Plug 23. Depth: 11,384', Well: 420 psi, sent sweep, Plug gone 8 minutes. Well: 380 psi. Tagged Plug 24. Depth: 11,519', Well: 400 psi, sent sweep, Plug gone 18 minutes. Well: 350 psi. Tagged Plug 25. Depth: 11,669', Well: 430 psi, sent sweep, Plug gone 13 minutes. Well: 460 psi. Tagged Plug 26. Depth: 11,826', Well: 460 psi, sent sweep. Picked up 1000'. Depth: 11,826', pump sweep. RBIH w/CT. Depth: 10,826'. Tagged Plug 26. Depth: 11,824', Well: 400 psi, sent sweep, Plug gone 26 minutes. Well: 400 psi. Tagged Plug 27. Depth: 11,973', Well: 480 psi, sent sweep, Plug gone 25 minutes. Well: 500 psi. Tagged Plug 28. Depth: 12,121', Well: 410 psi, sent sweep, Plug gone 19 minutes. Well: 430 psi. Tagged Plug 29. Depth: 12,264', Well: 420 psi, sent sweep, Plug gone 15 minutes. Well: 440 psi. Tagged Plug 30. Depth: 12,414', Well: 420 psi, sent sweep, Plug gone 13 minutes. Well: 420 psi. Circulating sweep out of coil. POOH for bit trip.

### **11-23-15 – Initial Completion**

Xtreme POOH for bit trip. Changing bit and function test motor. RBIH with coil . Tagged Plug 31. Depth: 12,562'. Hydraulic hose on pump is out. Down for 3 hrs to replace. RIH w/CT. Tagged Plug 31. Depth: 12,560', Well: 400 psi, sent sweep, Plug gone 17 minutes. Well: 440 psi. Tagged Plug 32. Depth: 12,718', Well: 460 psi, sent sweep, Plug gone 41 minutes. Well: 380 psi. Tagged Plug 33. Depth: 12,869', Well: 400 psi, sent sweep, Plug gone 17 minutes. Well: 430 psi. Tagged Plug 34. Depth: 13,015', Well: 450 psi, sent sweep, Plug gone 24 minutes. Well: 430 psi. Tagged Plug 35. Depth: 13,164', Well: 400 psi, sent sweep, Plug gone 16 minutes. Well: 400 psi. Tagged Plug 36. Depth: 13,308', Well: 430 psi, sent sweep, Plug gone 12 minutes. Well: 370 psi. Tagged Plug 37. Depth: 13,455', Well: 380 psi, sent sweep, Plug gone 29 minutes. Well: 400 psi. Tagged Plug 38. Depth: 13,605', Well: 320 psi, sent sweep, Plug gone 16 minutes. Well: 340 psi. Depth: 13,706'. Decision was made to make a short trip, pumped 2 sweeps and recovered good bit of slips material. RBIH and continue drilling.

### **11-24-15 – Initial Completion**

Tagged Plug 39. Depth: 13,754', Well: 380 psi, sent sweep, Plug gone 9 minutes. Well: 380 psi. Tagged Plug 40. Depth: 13,904', Well: 400 psi, sent sweep, Plug gone 46 minutes. Well: 350 psi. Started pumping N2 at 800 scfm/4.5 bpm, Tagged Plug 41. Depth: 14,047', Well: 515 psi, sent sweep, Plug gone 1hr 16 minutes. Well: 421 psi. Made 500' pick up. Tagged Plug 42. Depth: 14,191', Well: 450 psi, sent sweep, Plug gone 38 minutes. Well: 450 psi. Tagged Plug 43. Depth: 14,341'. Seeing very little plug parts on surface. Sent 20-10-20 and made short trip. RBIH w/CT. Tagged Plug 43. Depth: 14,332', Well: 495 psi, sent sweep, Plug gone 48 minutes. Well: 460 psi. Tagged Plug 44. Depth: 14,481', Well: 430 psi, sent sweep, Plug gone 58 minutes. Well: 450 psi. Tagged Plug 45. Depth: 14,640', Well: 450 psi, sent sweep, Plug gone 42 minutes. Well: 400 psi. Tagged Plug 46. Depth: 14,788', Well: 400 psi, sent sweep, Plug gone 104 minutes. Well: 840 psi. Tagged Plug 47. Depth: 14,912', Well: 842 psi, sent 20-10-20 sweep, Plug gone 100 minutes. Well: 715 psi. RIH to 14,927', pump (2) 20-10-20 sweeps. POOH while pumping sweeps. Will load vertical section with 10# brine.

### **11-25-15 – Initial Completion**

Ran down to 14,927 and circulated 20-10-20. Once second sweep left coil, started POOH at 30 fpm sending 10 bbl sweeps every 30 minutes. At 7,050' started pumping 10 lb brine while continuing to POOH. Pumped a total of 300 bbls of brine. Ending WHP was 5 psi. Coil Tubing on surface. Begin RDMO all services.

**11-26-15 – Initial Completion**

24 Hrs: 0 BO, 876 BW, 0 MCF/d, CP- 0 psi, TP – 210, Hz – 50, PIP – 3069 psi

Calculated Fluid level above pump – Surface (Pump Intake @ 6441')

Safety meeting, Csg had 50#, Kill truck pump 50 bbls 10# brine to kill, well dead. ND Cameron Master valve. NU Hydraulic 5000# BOP. Boret's deliver ESP pump and cable. NU pump components and begin TIH tbg while banding. Big D arrive and set up 400kw generator for ESP, 150kw generator for water trans pump. Sun Electric has all power panels and generators set and ready. Got all tbg in hole, ND BOP and 10k flange. NU Boret's tbg head and hang on tbg. Fisher Lse Serv, cut, thread and build wellhead connections, Connect power cable to ESP and start pump on 50Hz. Monitor well and battery. Continue production monitoring at Battery. Late hour SDFN. Released Basic rig for rig down in next AM. Turned ESP on at 8:45 PM

**Well off report. Turned over to Production.**