

**PT Petroleum, LLC  
University Red 5101B  
“Wolfcamp B”  
API 42-461-40587  
355’ FEL and 2035’ FSL  
Section 10, Block 5, ULS  
Upton County, Texas**

**11-21-17 – Initial Completion**

Rigged up wireline, crane, and pumpdown. Wait on flange from the University Nicole 5291B. Install wireline flange. **Stage 1 Perf:** RIH set CBP at 17,930'. Perforated: 17,918'-17,919', 17,895'-17,896', 17,872'-17,873', 17,849'-17,850', 17,826'-17,827', 17,803'-17,804', 17,780'-17,781', 17,757'-17,758'. All shots fired. MIRU sand Silo's. Stand by for frac rig up.

**11-22-17 – Initial Completion**

Pro Petro moving equipment on location. Rig up equipment and test all LA pumps, prime up and pressure test surface lines to 9800 psi, pop-off set at 9600 psi. **Stage 1 Frac:** SICP: 1,430 psi. Formation broke at 4,642 psi while pumping 15 bpm. Pumpdown 551 bbls. Pumped: Total 10% HCL Acid: 60 bbls, Total Slickwater: 12,174 bbls. Load to recover for this stage: 12,234 bbls. Total load to recover: 12,785 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 370,700 lbs. ISIP: 3,788 psi with a Frac Gradient of .91 psi/ft. Qavg: 97 bpm, Pavg: 6,662 psi, Qmax: 100 bpm, Pmax: 8,319 psi. \*\*\*Notes\*\*\* Stage pumped to design. **Stage 2 Perf:** RIH set stage 2 CBP at 17,745'. Perforated: 17,733'-17,734', 17,710'-17,711', 17,687'-17,688', 17,664'-17,665', 17,641'-17,642', 17,618'-17,619', 17,595'-17,596', 17,572'-17,573'. All shots fired. POOH.

**11-23-17 – Initial Completion**

As wireline was POOH on stage 2, tools got stuck 11,466'. Pumped guns down 200' and pulled back up and got stuck at 11,589'. All indications are that a port plug came lose on guns and is the reason to tools getting stuck. Decision was made to pump guns down to the Stage 2 plug and engage the A.R.T. (automatic release tool) to leave gun string on top of Stage 2 plug and fish out with coil. Basin WL had trouble getting the A.R.T. to communicate with the firing panel. When they did get communication, the sequence of releasing the tool string was unsuccessful. District manager and Field Supervisor on location for Basin WL. No success with releasing tool. Decision made to cut wire with Kinley cutter. Called for Kinley cutter. Install Kenley cutter with 3.9" od pump down ring. Run cutter in while pumping 18 bpm. Pumped 1063 bbls of fluid and shut pumps down at 85 minutes, cutter set to cut at 95 min. Had indication that cutter went off after 97 minutes. Pull 2700 lbs line tension to free line. Wire free, POOH. All wire was accounted for on surface minus the Kinley cutter. Cutter was not recovered. Sent all BHA's for Kinley cutter and WL guns to fishing tool hand. Discussed fishing ops and detailed procedures with fishing tool hand. Was made aware that it would be a minimum of 2 runs to fish cutter and guns. Furthermore, if after a successful run to fish cutter was realized, there would be a high probability of shearing the A.R.T if jarring would commence on the WL guns (shear rate of 12K lbs), which would require another coil run; totaling 3 runs. Decision at that time was to forego fishing ops and abandon Stage 1. Will continue frac operations with Stage 2, leaving WL fish

(43' total length) on top of Stage 1. Stage 2 will proceed as normal with fish stacked out on first plug. Basin WL has been relieved by Reliance Wireline Services due to poor performance and equipment issues. Shut down until Sunday afternoon for Thanksgiving Holiday.

#### **11-24-17 – Initial Completion**

Shut down for Thanksgiving Holiday.

#### **11-25-17 – Initial Completion**

Shut down for Thanksgiving Holiday.

#### **11-26-17 – Initial Completion**

Shut down for Thanksgiving Holiday.

#### **11-27-17 – Initial Completion**

**Stage 2 Frac:** SICP: 1,602 psi. Formation broke at 4,493 psi while pumping 20 bpm. Pumpdown 1,420 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,327 bbls. Load to recover for this stage: 12,375 bbls. Total load to recover: 26,579 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 741,400 lbs. ISIP: 3,582 psi with a Frac Gradient of .88 psi/ft. Qavg: 97 bpm, Pavg: 6,500 psi, Qmax: 100 bpm, Pmax: 8,583 psi. \*\*\*Notes\*\*\* Stage pumped as designed. **Stage 3 Perf:** RIH set stage 3 CBP at 17,560'. Perforated: 17,548'-17,549', 17,525'-17,526', 17,502'-17,503', 17,479'-17,480', 17,456'-17,457', 17,433'-17,434', 17,410'-17,411', 17,387'-17,388'. All shots fired. **Stage 3 Frac:** SICP: 2,331 psi. Formation broke at 4,106 psi while pumping 15 bpm. Pumpdown 524 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,125 bbls. Load to recover for this stage: 12,172 bbls. Total load to recover: 39,276 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 1,112,100 lbs. ISIP: 4,044 psi with a Frac Gradient of .94 psi/ft. Qavg: 100 bpm, Pavg: 6,534 psi, Qmax: 100 bpm, Pmax: 7,370 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 4 Perf:** RIH set stage 4 CBP at 17,375'. Perforated: 17,363'-17,364', 17,340'-17,341', 17,317'-17,318', 17,294'-17,295', 17,271'-17,272', 17,248'-17,249', 17,225'-17,226', 17,202'-17,203'. All shots fired. **Stage 4 Frac:** SICP: 2,313 psi. Formation broke at 4,082 psi. While pumping 15 bpm. Pumpdown 489 bbls. Pumped: Total 10% HCL Acid: 50 bbls, Total Slickwater: 12,157 bbls. Load to recover for this stage: 12,207 bbls. Total load to recover: 51,972 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 1,482,800 lbs. ISIP: 3,954 psi with a Frac Gradient of .93 psi/ft. Qavg: 100 bpm, Pavg: 6,550 psi, Qmax: 100 bpm, Pmax: 7,707 psi. \*\*\*Notes\*\*\* Pumped stage as design.

#### **11-28-17 – Initial Completion**

**Stage 5 Perf:** RIH set stage 5 CBP at 17,190'. Perforated: 17,178'-17,179', 17,155'-17,156', 17,132'-17,133', 17,109'-17,110', 17,086'-17,087', 17,063'-17,064', 17,040'-17,041', 17,017'-17,018'. All shots fired. **Stage 5 Frac:** SICP: 2,428 psi. Formation broke at 4,341 psi while pumping 15 bpm. Pumpdown 511 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,187 bbls. Load to recover for this stage: 12,235 bbls. Total load to recover: 64,718 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant

pumped this stage: 370,700 lbs. Total proppant pumped: 1,853,500 lbs. ISIP: 4,138 psi with a Frac Gradient of .95 psi/ft. Qavg: 100 bpm, Pavg: 6,733 psi, Qmax: 101 bpm, Pmax: 8,395 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 6 Perf:** RIH set stage 6 CBP at 17,005'. Perforated: 16,993'-16,994', 16,970'-16,971', 16,947'-16,948', 16,924'-16,925', 16,901'-16,902', 16,878'-16,879', 16,855'-16,856', 16,832'-16,833'. All shots fired. **Stage 6 Frac:** SICP: 2,342 psi. Formation broke at 4,118 psi while pumping 15 bpm. Pumpdown 489 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,230 bbls. Load to recover for this stage: 12,277 bbls. Total load to recover: 77,484 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 2,224,200 lbs. ISIP: 4,003 psi with a Frac Gradient of .94 psi/ft. Qavg: 100 bpm, Pavg: 6,495 psi, Qmax: 100 bpm, Pmax: 7,986 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 7 Perf:** RIH set stage 7 CBP at 16,820'. Perforated: 16,808'-16,809', 16,785'-16,786', 16,762'-16,763', 16,739'-16,740', 16,716'-16,717', 16,693'-16,694', 16,670'-16,671', 16,647'-16,648'. All shots fired. Down waiting on sand, 6 hrs. Sand arrived and unloaded into silo's. **Stage 7 Frac:** SICP: 2,168 psi. Formation broke at 4,068 psi while pumping 15 bpm. Pumpdown 549 bbls. Pumped: Total 10% HCL Acid: 44 bbls, Total Slickwater: 12,158 bbls. Load to recover for this stage: 12,202 bbls. Total load to recover: 90,236 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 2,594,900 lbs. ISIP: 4,012 psi with a Frac Gradient of .94 psi/ft. Qavg: 92 bpm, Pavg: 6,340 psi, Qmax: 99 bpm, Pmax: 7,532 psi. \*\*\*Notes\*\*\* Pumped stage as design.

### 11-29-17 – Initial Completion

**Stage 8 Perf:** RIH set stage 8 CBP at 16,635'. Perforated: 16,623'-16,624', 16,600'-16,601', 16,577'-16,578', 16,556'-16,557', 16,531'-16,531', 16,508'-16,509', 16,485'-16,486', 16,462'-16,463'. All shots fired. **Stage 8 Frac:** SICP: 2,452 psi. Formation broke at 3,908 psi while pumping 15 bpm. Pumpdown 507 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,274 bbls. Load to recover for this stage: 12,321 bbls. Total load to recover: 103,064 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 2,965,600 lbs. ISIP: 3,994 psi with a Frac Gradient of .94 psi/ft. Qavg: 99 bpm, Pavg: 6,361 psi, Qmax: 100 bpm, Pmax: 6,945 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 9 Perf:** RIH set stage 9 CBP at 16,450'. Perforated: 16,438'-16,439', 16,415'-16,416', 16,392'-16,393', 16,369'-16,370', 16,346'-16,347', 16,323'-16,324', 16,300'-16,301', 16,277'-16,278'. All shots fired. **Stage 9 Frac:** SICP: 2,582 psi. Formation broke at 4,430 psi while pumping 15 bpm. Pumpdown 494 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,105 bbls. Load to recover for this stage: 12,152 bbls. Total load to recover: 115,710 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 3,336,300 lbs. ISIP: 3,894 psi with a Frac Gradient of .92 psi/ft. Qavg: 100 bpm, Pavg: 6,317 psi, Qmax: 100 bpm, Pmax: 8,903 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 10 Perf:** RIH set stage 10 CBP at 16,265'. Perforated: 16,253'-16,254', 16,230'-16,231', 16,207'-16,208', 16,184'-16,185', 16,161'-16,162', 16,138'-16,139', 16,115'-16,116', 16,092'-16,093'. All shots fired. **Stage 10 Frac:** SICP: 2,486 psi. Formation broke at 4,189 psi while pumping 15 bpm. Pumpdown 474 bbls. Pumped: Total 10% HCL Acid: 46 bbls, Total Slickwater: 12,151 bbls. Load to recover for this stage: 12,197 bbls. Total load to recover: 128,381 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 3,707,000 lbs. ISIP: 3,936 psi with a Frac Gradient of .93 psi/ft. Qavg: 99 bpm, Pavg:

6,302 psi, Qmax: 99 bpm, Pmax: 7,811 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 11 Perf:** RIH set stage 11 CBP at 16,080'. Perforated: 16,068'-16,069', 16,045'-16,046', 16,022'-16,023', 15,999'-16,000', 15,976'-15,977', 15,953'-15,954', 15,930'-15,931', 15,907'-15,908'. All shots fired. **Stage 11 Frac:** SICP: 2,612 psi. Formation broke at 4,346 psi while pumping 15 bpm. Pumpdown 483 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,994 bbls. Load to recover for this stage: 12,041 bbls. Total load to recover: 140,906 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 4,077,700 lbs. ISIP: 4,172 psi with a Frac Gradient of .96 psi/ft. Qavg: 99 bpm, Pavg: 6,489 psi, Qmax: 99 bpm, Pmax: 8,597 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 12 Perf:** RIH set stage 12 CBP at 15,895'. Perforated: 15,883'-15,884', 15,860'-15,861', 15,837'-15,838', 15,814'-15,815', 15,791'-15,792', 15,768'-15,769', 15,745'-15,746', 15,722'-15,723'. All shots fired. **Stage 12 Frac:** SICP: 2,869 psi. Formation broke at 4,789 psi while pumping 15 bpm. Pumpdown 458 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,123 bbls. Load to recover for this stage: 12,171 bbls. Total load to recover: 153,535 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 4,448,400 lbs. ISIP: 4,396 psi with a Frac Gradient of .99 psi/ft. Qavg: 99 bpm, Pavg: 6,714 psi, Qmax: 99 bpm, Pmax: 7,922 psi. \*\*\*Notes\*\*\* All proppant pumped to design.

### 11-30-17 – Initial Completion

**Stage 13 Perf:** RIH set stage 13 CBP at 15,710'. Perforated: 15,698'-15,699', 15,675'-15,676', 15,652'-15,653', 15,629'-15,630', 15,606'-15,607', 15,583'-15,584', 15,560'-15,561', 15,537'-15,538'. All shots fired. **Stage 13 Frac:** SICP: 2,925 psi. Formation broke at 5,058 psi while pumping 15 bpm. Pumpdown 498 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,970 bbls. Load to recover for this stage: 12,017 bbls. Total load to recover: 166,050 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 4,819,100 lbs. ISIP: 3,984 psi with a Frac Gradient of .93 psi/ft. Qavg: 99 bpm, Pavg: 6,853 psi, Qmax: 100 bpm, Pmax: 8,398 psi. \*\*\*Notes\*\*\* Pumped stage as design. Grease well head. **Stage 14 Perf:** RIH set stage 14 CBP at 15,525'. Perforated: 15,513'-15,514', 15,490'-15,491', 15,464'-15,465', 15,444'-15,445', 15,421'-15,422', 15,398'-15,399', 15,375'-15,376', 15,352'-15,353'. All shots fired. **Stage 14 Frac:** SICP: 2,745 psi. Formation broke at 5,361 psi while pumping 15 bpm. Pumpdown 360 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,991 bbls. Load to recover for this stage: 12,039 bbls. Total load to recover: 178,448 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 5,189,800 lbs. ISIP: 4,249 psi with a Frac Gradient of .97 psi/ft. Qavg: 99 bpm, Pavg: 6,667 psi, Qmax: 100 bpm, Pmax: 8,518 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 15 Perf:** RIH set stage 15 CBP at 15,340'. Perforated: 15,328'-15,329', 15,305'-15,306', 15,282'-15,283', 15,259'-15,260', 15,236'-15,237', 15,213'-15,214', 15,190'-15,191', 15,167'-15,168'. All shots fired. **Stage 15 Frac:** SICP: 2,930 psi. Formation broke at 5,517 psi while pumping 15 bpm. Pumpdown 360 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,937 bbls. Load to recover for this stage: 11,984 bbls. Total load to recover: 190,793 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 5,560,500 lbs. ISIP: 4,556 psi with a Frac Gradient of 1.01 psi/ft. Qavg: 100 bpm, Pavg: 6,781 psi, Qmax: 101 bpm, Pmax: 8,250 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 16 Perf:** RIH set stage 16 CBP at 15,155'. Perforated:

15,143'-15,144', 15,120'-15,121', 15,097'-15,098', 15,074'-15,075', 15,051'-15,052', 15,028'-15,029', 15,005'-15,006', 14,982'-14,983'. All shots fired. **Stage 16 Frac:** SICP: 2,671 psi. Formation broke at 5,125 psi while pumping 15 bpm. Pumpdown 311 bbls. Pumped: Total 10% HCL Acid: 49 bbls, Total Slickwater: 11,951 bbls. Load to recover for this stage: 12,000 bbls. Total load to recover: 203,103 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 5,931,200 lbs. ISIP: 4,123 psi with a Frac Gradient of .95 psi/ft. Qavg: 99 bpm, Pavg: 6,627 psi, Qmax: 100 bpm, Pmax: 7,619 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 17 Perf:** RIH set stage 17 CBP at 14,970'. Perforated: 14,958'-14,959', 14,935'-14,936', 14,912'-14,913', 14,889'-14,890', 14,866'-14,867', 14,843'-14,844', 14,820'-14,821', 14,797'-14,798'. All shots fired.

### 12-1-17 – Initial Completion

**Stage 17 Frac:** SICP: 2,651 psi. Formation broke at 4,684 psi while pumping 15 bpm. Pumpdown 342 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,026 bbls. Load to recover for this stage: 12,074 bbls. Total load to recover: 215,519 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 6,301,900 lbs. ISIP: 4,283 psi with a Frac Gradient of .97 psi/ft. Qavg: 99 bpm, Pavg: 6,476 psi, Qmax: 100 bpm, Pmax: 8,170 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 18 Perf:** RIH set stage 18 CBP at 14,785'. Perforated: 14,773'-14,774', 14,750'-14,751', 14,727'-14,728', 14,704'-14,705', 14,681'-14,682', 14,658'-14,659', 14,635'-14,636', 14,612'-14,613'. All shots fired. Down for pump maintenance, 1 hr. **Stage 18 Frac:** SICP: 2,616 psi. Formation broke at 4,633 psi while pumping 16 bpm. Pumpdown 297 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,929 bbls. Load to recover for this stage: 11,976 bbls. Total load to recover: 227,792 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 6,672,600 lbs. ISIP: 4,119 psi with a Frac Gradient of .95 psi/ft. Qavg: 100 bpm, Pavg: 6,453 psi, Qmax: 100 bpm, Pmax: 8,610 psi. \*\*\*Notes\*\*\* Pumped stage as design. Grease wellhead. **Stage 19 Perf:** RIH set stage 19 CBP at 14,600'. Perforated: 14,588'-14,589', 14,565'-14,566', 14,542'-14,543', 14,519'-14,520', 14,496'-14,497', 14,473'-14,474', 14,450'-14,451', 14,427'-14,428'. All shots fired. **Stage 19 Frac:** SICP: 2,651 psi. Formation broke at 4,060 psi while pumping 15 bpm. Pumpdown 298 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,930 bbls. Load to recover for this stage: 11,978 bbls. Total load to recover: 240,068 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 7,043,300 lbs. ISIP: 4,700 psi with a Frac Gradient of 1.02 psi/ft. Qavg: 100 bpm, Pavg: 6,462 psi, Qmax: 100 bpm, Pmax: 7,833 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 20 Perf:** RIH set stage 20 CBP at 14,415'. Perforated: 14,403'-14,404', 14,380'-14,381', 14,357'-14,358', 14,334'-14,335', 14,311'-14,312', 14,288'-14,289', 14,265'-14,266', 14,242'-14,243'. All shots fired. **Stage 20 Frac:** SICP: 2,616 psi. Formation broke at 5,004 psi while pumping 15 bpm. Pumpdown 290 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,968 bbls. Load to recover for this stage: 12,015 bbls. Total load to recover: 252,373 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 7,414,000 lbs. ISIP: 4,544 psi with a Frac Gradient of 1.0 psi/ft. Qavg: 100 bpm, Pavg: 6,715 psi, Qmax: 100 bpm, Pmax: 8,064 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 21 Perf:** RIH set stage 21 CBP at 14,230'. Perforated: 14,218'-14,219', 14,195'-14,196', 14,172'-

14,173', 14,149'-14,150', 14,126'-14,127', 14,103'-14,104', 14,080'-14,081', 14,057'-14,058'. All shots fired. Stage 21 in progress at report time.

### **12-2-17 – Initial Completion**

**Stage 21 Frac:** SICP: 2,649 psi. Formation broke at 4,832 psi while pumping 15 bpm. Pumpdown 292 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,885 bbls. Load to recover for this stage: 11,933 bbls. Total load to recover: 264,598 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 7,784,700 lbs. ISIP: 4,034 psi with a Frac Gradient of .94 psi/ft. Qavg: 99 bpm, Pavg: 6,398 psi, Qmax: 100 bpm, Pmax: 8,889 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 22 Perf:** RIH set stage 22 CBP at 14,045'. Perforated: 14,033'-14,034', 14,010'-14,011', 13,987'-13,988', 13,964'-13,965', 13,941'-13,942', 13,918'-13,919', 13,895'-13,896', 13,872'-13,873'. All shots fired. **Stage 22 Frac:** SICP: 2,741 psi. Formation broke at 4,462 psi while pumping 16 bpm. Pumpdown 277 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,979 bbls. Load to recover for this stage: 12,027 bbls. Total load to recover: 276,902 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 8,155,400 lbs. ISIP: 4,097 psi with a Frac Gradient of .95 psi/ft. Qavg: 100 bpm, Pavg: 6,235 psi, Qmax: 100 bpm, Pmax: 8,009 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 23 Perf:** RIH set stage 23 CBP at 13,860'. Perforated: 13,848'-13,849', 13,825'-13,826', 13,802'-13,803', 13,779'-13,780', 13,756'-13,757', 13,733'-13,734', 13,710'-13,711', 13,687'-13,688'. All shots fired. Greasing Wellhead **Stage 23 Frac:** SICP: 2,714 psi. Formation broke at 4,382 psi while pumping 16 bpm. Pumpdown 296 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,015 bbls. Load to recover for this stage: 12,063 bbls. Total load to recover: 289,261 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 8,526,100 lbs. ISIP: 3,869 psi with a Frac Gradient of .92 psi/ft. Qavg: 100 bpm, Pavg: 6,171 psi, Qmax: 100 bpm, Pmax: 8,445 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 24 Perf:** RIH set stage 24 CBP at 13,675'. Perforated: 13,663'-13,664', 13,640'-13,641', 13,617'-13,618', 13,594'-13,595', 13,571'-13,572', 13,548'-13,549', 13,525'-13,526', 13,502'-13,503'. All shots fired. **Stage 24 Frac:** SICP: 2,775 psi. Formation broke at 4,505 psi while pumping 15 bpm. Pumpdown 272 bbls. Pumped: Total 10% HCL Acid: 45 bbls, Total Slickwater: 11,905 bbls. Load to recover for this stage: 11,950 bbls. Total load to recover: 301,483 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 8,896,800 lbs. ISIP: 4,418 psi with a Frac Gradient of .99 psi/ft. Qavg: 100 bpm, Pavg: 6,405 psi, Qmax: 100 bpm, Pmax: 6,836 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 25 Perf:** RIH set stage 25 CBP at 13,490'. Perforated: 13,478'-13,479', 13,455'-13,456', 13,432'-13,433', 13,409'-13,410', 13,386'-13,387', 13,363'-13,364', 13,340'-13,341', 13,317'-13,318'. All shots fired. **Stage 25 Frac:** SICP: 2,905 psi. Formation broke at 4,535 psi while pumping 15 bpm. Pumpdown 298 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,918 bbls. Load to recover for this stage: 11,965 bbls. Total load to recover: 313,746 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 9,267,500 lbs. ISIP: 4,643 psi with a Frac Gradient of 1.02 psi/ft. Qavg: 100 bpm, Pavg: 6,346 psi, Qmax: 100 bpm, Pmax: 7,806 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 26 Perf:** RIH set stage 26 CBP at 13,305'. Perforated: 13,293'-13,294', 13,270'-13,271', 13,247'-13,248', 13,224'-13,225', 13,201'-13,202', 13,178'-13,179', 13,155'-13,156', 13,132'-13,133'. All

shots fired. **Stage 26 Frac:** SICP: 2,874 psi. Formation broke at 4,382 psi while pumping 15 bpm. Pumpdown 307 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,503 bbls. Load to recover for this stage: 11,551 bbls. Total load to recover: 325,287 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 248,760 lbs. Proppant pumped this stage: 341,050 lbs. Total proppant pumped: 9,608,550 lbs. ISIP: 4,297 psi with a Frac Gradient of .97 psi/ft. Qavg: 99 bpm, Pavg: 6,687 psi, Qmax: 99 bpm, Pmax: 8,052 psi. \*\*\*Notes\*\*\* We cut this stage short due to pressure increase, we were able to pump 92% of the sand volume in this stage.

### **12-3-17 – Initial Completion**

**Stage 27 Perf:** RIH set stage 27 CBP at 13,120'. Perforated: 13,108'-13,109', 13,085'-13,086', 13,062'-13,063', 13,039'-13,040', 13,016'-13,017', 12,993'-12,994', 12,970'-12,971', 12,947'-12,948'. All shots fired. **Stage 27 Frac:** SICP: 2,910 psi. Formation broke at 4,658 psi while pumping 15 bpm. Pumpdown 244 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,102 bbls. Load to recover for this stage: 12,149 bbls. Total load to recover: 337,680 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 9,987,582 lbs. ISIP: 4,453 psi with a Frac Gradient of .99 psi/ft. Qavg: 99 bpm, Pavg: 6,532 psi, Qmax: 99 bpm, Pmax: 7,530 psi.

\*\*\*Notes\*\*\* Pumped to Completion plus an extra 10k 40/70 from previous stage. **Stage 28 Perf:** RIH set stage 28 CBP at 12,935'. Perforated: 12,923'-12,924', 12,900'-12,901', 12,877'-12,878', 12,854'-12,855', 12,831'-12,832', 12,808'-12,809', 12,785'-12,786', 12,762'-12,763'. All shots fired. **Stage 28 Frac:** SICP: 2,874 psi. Formation broke at 4,675 psi while pumping 15 bpm. Pumpdown 228 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,991 bbls. Load to recover for this stage: 12,038 bbls. Total load to recover: 349,946 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 10,358,282 lbs. ISIP: 4,181 psi with a Frac Gradient of .96 psi/ft. Qavg: 99 bpm, Pavg: 6,611 psi, Qmax: 100 bpm, Pmax: 8,466 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 29 Perf:** RIH set stage 29 CBP at 12,750'. Perforated: 12,738'-12,739', 12,715'-12,716', 12,692'-12,693', 12,669'-12,670', 12,646'-12,647', 12,623'-12,624', 12,600'-12,601', 12,577'-12,578'. All shots fired.

**Stage 29 Frac:** SICP: 2,808 psi. Formation broke at 4,333 psi while pumping 15 bpm. Pumpdown 182 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,877 bbls. Load to recover for this stage: 11,924 bbls. Total load to recover: 362,053 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 10,728,982 lbs. ISIP: 4,239 psi with a Frac Gradient of .97 psi/ft. Qavg: 99 bpm, Pavg: 6,162 psi, Qmax: 99 bpm, Pmax: 7,850 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 30 Perf:** RIH set stage 30 CBP at 12,565'. Perforated: 12,553'-12,554', 12,530'-12,531', 12,507'-12,508', 12,484'-12,485', 12,461'-12,462', 12,438'-12,439', 12,415'-12,416', 12,392'-12,393'. All shots fired. Greased the well. **Stage 30 Frac:** SICP: 2,722 psi. Formation broke at 4,467 psi while pumping 15 bpm. Pumpdown 201 bbls. Pumped: Total 10% HCL Acid: 47 bbls, Total Slickwater: 11,884 bbls. Load to recover for this stage: 11,931 bbls. Total load to recover: 374,185 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 11,099,682 lbs. ISIP: 4,662 psi with a Frac Gradient of 1.02 psi/ft. Qavg: 99 bpm, Pavg: 6,308 psi, Qmax: 99 bpm, Pmax: 7,655 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 31 Perf:** RIH set stage 31 CBP at 12,195'. Perforated: 12,183'-12,184', 12,160'-12,161',

12,137'-12,138', 12,114'-12,115', 12,091'-12,092', 12,068'-12,069', 12,045'-12,046', 12,022'-12,023'. All shots fired. **Stage 31 Frac:** SICP: 2,874 psi. Formation broke at 5,039 psi while pumping 15 bpm. Pumpdown 201 bbls. Pumped: Total 10% HCL Acid: 55 bbls, Total Slickwater: 11,907 bbls. Load to recover for this stage: 11,962 bbls. Total load to recover: 386,348 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 11,470,382 lbs. ISIP: 4,505 psi with a Frac Gradient of 1. psi/ft. Qavg: 101 bpm, Pavg: 6,554 psi, Qmax: 101 bpm, Pmax: 7,954 psi. \*\*\*Notes\*\*\* All proppant pumped to design. Wireline RIH for stage 32.

#### **12-4-17 – Initial Completion**

**Stage 32 Perf:** RIH set stage 32 CBP at 12,195'. Perforated: 12,183'-12,184', 12,160'-12,161', 12,137'-12,138', 12,114'-12,115', 12,091'-12,092', 12,068'-12,069', 12,045'-12,046', 12,022'-12,023'. All shots fired. **Stage 32 Frac:** SICP: 2,962 psi. Formation broke at 4,876 psi while pumping 15 bpm. Pumpdown 187 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 12,657 bbls. Load to recover for this stage: 12,705 bbls. Total load to recover: 399,239 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 11,841,082 lbs. ISIP: 4,536 psi with a Frac Gradient of 1.0 psi/ft. Qavg: 99 bpm, Pavg: 6,239 psi, Qmax: 100 bpm, Pmax: 8,753 psi. \*\*\*Notes\*\*\* Pumping 1.0 ppg concentration all screens on data van froze and all chemicals stopped pumping. Pressure started climbing and immediately cut screws, and flushed wellbore. Shut down to reset data van. Got back into stage, extending pad to get the remaining 100 mesh pumped. Pumped job to completion. **Stage 33 Perf:** RIH set stage 33 CBP at 12,010'. Perforated: 11,998'-11,999', 11,975'-11,976', 11,952'-11,953', 11,929'-11,930', 11,906'-11,907', 11,883'-11,884', 11,860'-11,861', 11,837'-11,838'. All shots fired. **Stage 33 Frac:** SICP: 2,817 psi. Formation broke at 4,380 ps. while pumping 15 bpm. Pumpdown 178 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 111,803 bbls. Load to recover for this stage: 11,851 bbls. Total load to recover: 410,613 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 12,211,782 lbs. ISIP: 4,368 psi with a Frac Gradient of .98 psi/ft. Qavg: 99 bpm, Pavg: 6,184 psi, Qmax: 99 bpm, Pmax: 7,450 psi. \*\*\*Notes\*\*\* Pumped stage as design. Greased well head.

**Stage 34 Perf:** RIH set stage 34 CBP at 11,825'. Perforated: 11,813'-11,814', 11,790'-11,791', 11,767'-11,768', 11,744'-11,745', 11,721'-11,722', 11,698'-11,699', 11,675'-11,676', 11,652'-11,653'. All shots fired. **Stage 34 Frac:** SICP: 2,805 psi. Formation broke at 4,825 psi while pumping 15 bpm. Pumpdown 192 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,858 bbls. Load to recover for this stage: 11,905 bbls. Total load to recover: 422,710 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 12,582,482 lbs. ISIP: 4,453 psi with a Frac Gradient of .99 psi/ft. Qavg: 99 bpm, Pavg: 6,001 psi, Qmax: 99 bpm, Pmax: 6,789 psi.

\*\*\*Notes\*\*\* All proppant pumped to design. **Stage 35 Perf:** RIH set stage 35 CBP at 11,640'. Perforated: 11,628'-11,629', 11,605'-11,606', 11,582'-11,583', 11,559'-11,560', 11,536'-11,537', 11,513'-11,514', 11,490'-11,491', 11,467'-11,468'. All shots fired. **Stage 35 Frac:** SICP: 2,737 psi. Formation broke at 4,399 psi. While pumping 15 bpm. Pumpdown 174 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,874 bbls. Load to recover for this stage: 11,922 bbls. Total load to recover: 434,806 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 12,953,182 lbs. ISIP: 4,102 psi with a Frac Gradient of .95 psi/ft. Qavg: 99 bpm, Pavg: 5,855 psi,



Qmax: 100 bpm, Pmax: 7,060 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 36 Perf:** RIH set stage 36 CBP at 11,455'. Perforated: 11,443'-11,444', 11,420'-11,421', 11,397'-11,398', 11,374'-11,375', 11,351'-11,352', 11,328'-11,329', 11,305'-11,306', 11,282'-11,283'. All shots fired. **Stage 36 Frac:** SICP: 2,688 psi. Formation broke at 4,608 psi while pumping 15 bpm. Pumpdown 172 bbls. Pumped: Total 10% HCL Acid: 51 bbls, Total Slickwater: 11,855 bbls. Load to recover for this stage: 11,906 bbls. Total load to recover: 446,884 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 13,323,882 lbs. ISIP: 4,340 psi with a Frac Gradient of .98 psi/ft. Qavg: 99 bpm, Pavg: 5,959 psi, Qmax: 99 bpm, Pmax: 7,987 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 37 Perf:** RIH set stage 37 CBP at 9,872'. Perforated: 9,857'-9,858', 9,817'-9,818', 9,777'-9,778', 9,737'-9,738'. All shots fired.

### 12-5-17 – Initial Completion

**Stage 37 Frac:** SICP: 2,687 psi. Formation broke at 4,873 psi while pumping 15 bpm. Pumpdown 146 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,873 bbls. Load to recover for this stage: 11,921 bbls. Total load to recover: 458,951 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 13,694,582 lbs. ISIP: 4,055 psi with a Frac Gradient of .94 psi/ft. Qavg: 92 bpm, Pavg: 5,965 psi, Qmax: 99 bpm, Pmax: 8,395 psi. \*\*\*Notes\*\*\* Stage pumped to completion. Max sand concentration 1.5 ppg due to pressure increase. **Stage 38 Perf:** RIH set stage 38 CBP at 11,085'. Perforated: 11,073'-11,074', 11,050'-11,051', 11,027'-11,028', 11,004'-11,005', 10,981'-10,982', 10,958'-10,959', 10,935'-10,936', 10,912'-10,913'. All shots fired. **Stage 38 Frac:** SICP: 2,682 psi. Formation broke at 4,664 psi while pumping 15 bpm. Pumpdown 143 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,846 bbls. Load to recover for this stage: 11,893 bbls. Total load to recover: 470,988 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 14,065,282 lbs. ISIP: 3,802 psi with a Frac Gradient of .91 psi/ft. Qavg: 99 bpm, Pavg: 5,612 psi, Qmax: 99 bpm, Pmax: 8,037 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 39 Perf:** RIH set stage 39 CBP at 10,900'. RIH set stage 39 CBP at 10,900'. Perforated: 10,888'-10,889', 10,865'-10,866', 10,842'-10,843', 10,819'-10,820', 10,796'-10,797', 10,773'-10,774', 10,750'-10,751', 10,727'-10,728'. All shots fired. Notes\*\*\* did not see a kick on CCL or tension decrease after firing cap for plug. Picked up 200' and pumped down to see if plug was set. Witnessed slight pressure increase and loss of line tension, decided plug was set and shot the perforations. Once on surface, plug was attached on the gun string. Re-head and installed new plug, RIH to set new plug, ok. Greased well head. **Stage 39 Frac:** SICP: 2,343 psi. Formation broke at 3,799 psi while pumping 15 bpm. Pumpdown 388 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,804 bbls. Load to recover for this stage: 11,852 bbls. Total load to recover: 483,227 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 14,435,982 lbs. ISIP: 4,225 psi with a Frac Gradient of .96 psi/ft. Qavg: 99 bpm, Pavg: 5,521 psi, Qmax: 100 bpm, Pmax: 6,039 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 40 Perf:** RIH set stage 40 CBP at 10,715'. Perforated: 10,703'-10,704', 10,680'-10,681', 10,657'-10,658', 10,634'-10,635', 10,611'-10,612', 10,588'-10,589', 10,565'-10,566', 10,542'-10,543'. All shots fired. **Stage 40 Frac:** SICP: 2,740 psi. Formation broke at 4,490 psi while pumping 15 bpm. Pumpdown 119 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,841 bbls. Load to recover for this stage: 11,888 bbls. Total load to recover: 495,235 bbls. Containing:

Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 14,806,682 lbs. ISIP: 4,063 psi with a Frac Gradient of .94 psi/ft. Qavg: 100 bpm, Pavg: 5,783 psi, Qmax: 100 bpm, Pmax: 7,326 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 41 Perf:** RIH set stage 41 CBP at 10,530'. Perforated: 10,518'-10,519', 10,495'-10,496', 10,472'-10,473', 10,449'-10,450', 10,426'-10,427', 10,403'-10,404', 10,380'-10,381', 10,357'-10,358'. All shots fired. Stage 41 still in progress at report time

## **12-6-17 – Initial Completion**

**Stage 41 Frac:** SICP: 2,625 psi. Formation broke at 4,297 psi while pumping 15 bpm. Pumpdown 117 bbls. Pumped: Total 10% HCL Acid: 47 bbls, Total Slickwater: 12,837 bbls. Load to recover for this stage: 12,884 bbls. Total load to recover: 508,236 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 15,177,382 lbs. ISIP: 4,206 psi with a Frac Gradient of .96 psi/ft. Qavg: 99 bpm, Pavg: 5,464 psi, Qmax: 100 bpm, Pmax: 8,466 psi. \*\*\*Notes\*\*\* During .25 ppg 100 mesh, lost communication to blender, had to flush and shut down to reset data van. Ran an extended pad and continued stage where we left off. Pumped 1300 bbls extra on pad to flush well and to continue stage. Pumped to completion. **Stage 42 Perf:** RIH set stage 42 CBP at 10,345'. Perforated: 10,333'-10,334', 10,310'-10,311', 10,287'-10,288', 10,264'-10,265', 10,241'-10,242', 10,218'-10,219', 10,195'-10,196', 10,172'-10,173'. All shots fired. **Stage 42 Frac:** SICP: 2,635 psi. Formation broke at 3,995 psi while pumping 15 bpm. Pumpdown 108 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,849 bbls. Load to recover for this stage: 11,897 bbls. Total load to recover: 520,241 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 15,548,082 lbs. ISIP: 4,287 psi with a Frac Gradient of .97 psi/ft. Qavg: 99 bpm, Pavg: 5,728 psi, Qmax: 100 bpm, Pmax: 7,404 psi. \*\*\*Notes\*\*\* Stage pumped with all sand away. Held the Max concentration was 1.75 ppg due to steady pressure increase. **Stage 43 Perf:** RIH set stage 43 CBP at 10,160'. Perforated: 10,148'-10,149', 10,125'-10,126', 10,100'-10,101', 10,079'-10,080', 10,056'-10,057', 10,033'-10,034', 10,010'-10,011', 9,987'-9,988'. All shots fired. Prime up and attempt to pressure test. Could not get a good pressure test due to leak on flange between goat-head and top master valve. Standby for J&W torque crew. J&W on location but could not put anymore torque on the leaking flange. Frac had to RD risers and J&W replaced the flange gasket. Frac RU risers, primed up, and pressure tested stack to 9400 psi, ok. **Stage 43 Frac:** SICP: 2,286 psi. Formation broke at 4,652 psi while pumping 15 bpm. Pumpdown 132 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,787 bbls. Load to recover for this stage: 11,835 bbls. Total load to recover: 532,207 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 15,918,782 lbs. ISIP: 4,255 psi with a Frac Gradient of .97 psi/ft. Qavg: 99 bpm, Pavg: 5,776 psi, Qmax: 100 bpm, Pmax: 7,789 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 44 Perf:** RIH set stage 44 CBP at 9,975'. Perforated: 9,963'-9,964', 9,940'-9,941', 9,917'-9,918', 9,894'-9,895', 9,871'-9,872', 9,848'-9,849', 9,825'-9,826', 9,802'-9,803'. All shots fired. **Stage 44 Frac:** SICP: 2,551 psi. Formation broke at 4,118 psi while pumping 15 bpm. Pumpdown 121 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,780 bbls. Load to recover for this stage: 11,828 bbls. Total load to recover: 544,156 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 16,289,482 lbs. ISIP: 4,257 psi with a Frac Gradient of .97 psi/ft. Qavg: 100 bpm, Pavg: 6,015 psi, Qmax: 101 bpm, Pmax: 6,301 psi. \*\*\*Notes\*\*\* All proppant pumped to design.

**Stage 45 Perf:** RIH set stage 45 CBP at 9,790'. Perforated: 9,778'-9,779', 9,755'-9,756', 9,732'-9,733', 9,709'-9,710', 9,686'-9,687', 9,663'-9,664', 9,640'-9,641', 9,617'-9,618'. All shots fired. **Stage 45 Frac:** SICP: 2,537 psi. Formation broke at 4,011 psi while pumping 15 bpm. Pumpdown 119 bbls. Pumped: Total 10% HCL Acid: 50 bbls, Total Slickwater: 11,948 bbls. Load to recover for this stage: 11,998 bbls. Total load to recover: 556,273 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 16,660,182 lbs. ISIP: 4,335 psi with a Frac Gradient of .98 psi/ft. Qavg: 100 bpm, Pavg: 6,156 psi, Qmax: 101 bpm, Pmax: 7,726 psi. \*\*\*Notes\*\*\* Stage pumped to design. Wireline RIH for stage 46.

### **12-7-17 – Initial Completion**

**Stage 46 Perf:** RIH set stage 46 CBP at 9,605'. Perforated: 9,593'-9,594', 9,570'-9,571', 9,547'-9,548', 9,524'-9,525', 9,501'-9,502', 9,478'-9,479', 9,455'-9,456', 9,432'-9,433'. All shots fired. **Stage 46 Frac:** SICP: 2,516 psi. Formation broke at 4,584 psi while pumping 15 bpm. Pumpdown 113 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,732 bbls. Load to recover for this stage: 11,780 bbls. Total load to recover: 568,165 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 17,030,882 lbs. ISIP: 4,121 psi with a Frac Gradient of .95 psi/ft. Qavg: 99 bpm, Pavg: 5,933 psi, Qmax: 100 bpm, Pmax: 8,490 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 47 Perf:** RIH set stage 47 CBP at 9,420'. Perforated: 9,408'-9,409', 9,385'-9,386', 9,362'-9,363', 9,339'-9,340', 9,316'-9,317', 9,293'-9,294', 9,270'-9,271', 9,247'-9,248'. All shots fired. **Stage 47 Frac:** SICP: 2,632 psi. Formation broke at 5,125 psi while pumping 15 bpm. Pumpdown 79 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,723 bbls. Load to recover for this stage: 11,771 bbls. Total load to recover: 580,015 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 17,401,582 lbs. ISIP: 4,000 psi with a Frac Gradient of .93 psi/ft. Qavg: 99 bpm, Pavg: 6,049 psi, Qmax: 100 bpm, Pmax: 8,496 psi. \*\*\*Notes\*\*\* Pumped stage as design. **Stage 48 Perf:** RIH set stage 48 CBP at 9,235'. Perforated: 9,223'-9,224', 9,200'-9,201', 9,177'-9,178', 9,154'-9,155', 9,131'-9,132', 9,108'-9,109', 9,085'-9,086', 9,062'-9,063'. All shots fired. Greasing Wellhead. **Stage 48 Frac:** SICP: 2,470 psi. Formation broke at 4,640 psi while pumping 15 bpm. Pumpdown 60 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,713 bbls. Load to recover for this stage: 11,761 bbls. Total load to recover: 591,836 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 17,772,282 lbs. ISIP: 4,218 psi with a Frac Gradient of .96 psi/ft. Qavg: 99 bpm, Pavg: 6,092 psi, Qmax: 100 bpm, Pmax: 6,951 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 49 Perf:** RIH set stage 49 CBP at 9,050'. Perforated: 9,038'-9,039', 9,015'-9,016', 8,992'-8,993', 8,969'-8,970', 8,946'-8,947', 8,923'-8,924', 8,900'-8,901', 8,877'-8,878'. All shots fired. **Stage 49 Frac:** SICP: 2,425 psi. Formation broke at 4,994 psi while pumping 15 bpm. Pumpdown 57 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,766 bbls. Load to recover for this stage: 11,814 bbls. Total load to recover: 603,707 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 18,142,982 lbs. ISIP: 4,332 psi with a Frac Gradient of .98 psi/ft. Qavg: 99 bpm, Pavg: 5,982 psi, Qmax: 99 bpm, Pmax: 6,253 psi. \*\*\*Notes\*\*\* All proppant pumped to design. **Stage 50 Perf:** RIH set stage 50 CBP at 8,865'. Perforated: 8,853'-8,854', 8,830'-8,831', 8,807'-8,808',

8,784'-8,785', 8,761'-8,762', 8,738'-8,739', 8,715'-8,716', 8,692'-8,693'. All shots fired. Stage 50 still in progress.

### **12-8-17 – Initial Completion**

**Stage 50 Frac:** SICP: 2,533 psi. Formation broke at 5,096 psi. While pumping 15 bpm. Pumpdown 62 bbls. Pumped: Total 10% HCL Acid: 45 bbls, Total Slickwater: 11,778 bbls. Load to recover for this stage: 11,823 bbls. Total load to recover: 615,592 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 18,513,682 lbs. ISIP: 3,629 psi with a Frac Gradient of .89 psi/ft. Qavg: 99 bpm, Pavg: 5,587 psi, Qmax: 99 bpm, Pmax: 7,659 psi. \*\*\*Notes\*\*\* Stage pumped as design.

**Stage 51 Perf:** RIH set stage 51 CBP at 8,680'. Perforated: 8,668'-8,669', 8,645'-8,646', 8,622'-8,623', 8,599'-8,600', 8,576'-8,577', 8,553'-8,554', 8,530'-8,531', 8,507'-8,508'. All shots fired.

**Stage 51 Frac:** SICP: 2,382 psi. Formation broke at 4,128 psi. While pumping 15 bpm. Pumpdown 39 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 11,727 bbls. Load to recover for this stage: 11,775 bbls. Total load to recover: 627,406 bbls. Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 277,750 lbs. Proppant pumped this stage: 370,700 lbs. Total proppant pumped: 18,884,382 lbs. ISIP: 3,949 psi with a Frac Gradient of .93 psi/ft. Qavg: 98 bpm, Pavg: 5,817 psi, Qmax: 99 bpm, Pmax: 8,440 psi. \*\*\*Notes\*\*\* Stage pumped as design.

**Stage 52 Perf:** RIH set stage 52 CBP at 8,495'. Perforated: 8,483'-8,484', 8,460'-8,461', 8,437'-8,438', 8,414'-8,415', 8,391'-8,392', 8,368'-8,369', 8,345'-8,346', 8,322'-8,323'. All shots fired.

**Stage 52 Frac:** SICP: 2,438 psi. Formation broke at 5,365 psi. While pumping 15 bpm. Pumpdown 44 bbls. Pumped: Total 10% HCL Acid: 48 bbls, Total Slickwater: 13,636 bbls. Load to recover for this stage: 12,542 bbls. **Total load to recover: 639,992 bbls.** Containing: Total 100 Mesh: 92,950 lbs, Total 40/70 White: 209,585 lbs. Proppant pumped this stage: 370,700 lbs. **Total proppant pumped: 19,186,917 lbs.** ISIP: 3,783 psi with a Frac Gradient of .91 psi/ft. Qavg: 98 bpm, Pavg: 6,206 psi, Qmax: 99 bpm, Pmax: 8,607 psi. \*\*\*Notes\*\*\* Cut stage short 61,000ppa 40/70 White due to sharp pressure increase during 1.25ppg 40/70 hitting formation, ran a clean sweep, followed it with .50ppa dirty sweep, when hitting formation again pressure continues to increase, cut screws and run a clean sweep, after clean sweep Kicked on screws and started sand at .25ppa and walked up in increments of .25ppa up to 1.25ppa 40/70 hits formation pressure begin to rise again, cut screws and run another clean sweep, try get back on it at .25ppa pressure rises cut screw, stage Flush. RIH set kill plug set at 7100 ft with 2700psi on the well. Bled pressure down to zero and POOH. RDMO Propetro, Reliance Wireline, S3 pump service, and LSE Crane services.

*At time of report, preparing location for drillout.*

### **12-9-17 – Initial Completion**

Blackhawk Energy Services arrive with pulling unit, laydown trailer, pipe racks and pumps. Versatile deliver 5k BOP and 5k Hydrill. Midland Pipe arrive with 18,000' 2-7/8" PH 6 rental tbg. R&H Trucking empty pump down tanks, Phoenix Services reposition tanks on location. Well Foam Services deliver and set SandX tank and generator. RU pulling unit, set pipe racks, unload tbg and set on racks. NU BOP, Hydrill and Washington head. Lone Star Wrench Services torque all bolts on control equipment. EPS rig up chemical pumps and lines for water recirculation, Well Foam Services NU Plug catcher, flowback manifold and Panic line to tanks. Well is ready for tbg TIH next AM, Late hour SDFN

### **12-10-17 – Initial Completion**

Continue to RU all the equipment. Set tubing on racks and tally tubing. MU BHA as follows: 4-5/8" Varel Slip Stream Bit, 3.32" X-over (2-3/8" PAC Pin X 2-7/8" Reg Box), 2-7/8" Peak Mud Motor, 2.88" AV Sub, 2.82" Dual Back Pressure Valve, 2.88" X-over (2-3/8" PH-6 Box X 2-3/8" PAC Pin), 3.46" X-over (2-7/8" PH-6 Box X 2-3/8" PH-6 Pin), 2-7/8" PH-6 Pup Joint. Surface test motor. Start Picking up tubing and RIH w/ BHA and tbg. Tag top of Kill plug @ 7,120'. PU & RU power swivel. Circulate and build pressure 2000 psi of pressure. The Washington head started leaking. Tighten down Washington head. Circulate and build pressure 2000 psi of pressure. Cap Plug @ (7,120') JT# 227. Drilled out plug. 1K WOB, 4 BPM in 4 BPM return, 1800 psi WH pressure, 24000 psi circ. pressure, drilled plug in 15 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug.

### **12-11-17 – Initial Completion**

Continue to RIH to first frac plug. Heavy sand. Plug #1 @ (8,495') JT# 271. Drilled out plug. 1K WOB, 3 BPM in 3 BPM return, 1500 psi WH pressure, 2500 psi circ. pressure, drilled plug in 20 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #2 @ (8,675') JT# 277. Drilled out plug. 1K WOB, 3.5 BPM in 3.3 BPM return, 1500 psi WH pressure, 2600 psi circ. pressure, drilled plug in 15 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #3 @ (8,865') JT# 282. Drilled out plug. 1K WOB, 3.5 BPM in 3.3 BPM return, 1500 psi WH pressure, 2600 psi circ. pressure, drilled plug in 5 min, continue RIH to next plug. Light sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #4 @ (9,050') JT# 288. Drilled out plug. 1K WOB, 3.5 BPM in 3.3 BPM return, 1300 psi WH pressure, 2700 psi circ. pressure, drilled plug in 10 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Light sand. Plug #5 @ (9,235') JT# 294. Drilled out plug. 1K WOB, 3.5 BPM in 3.3 BPM return, 1350 psi WH pressure, 2700 psi circ. pressure, drilled plug in 10 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Light sand. Plug #6 @ (9,420') JT# 300. Drilled out plug. 1K WOB, 3.5 BPM in 3.3 BPM return, 1150 psi WH pressure, 2800 psi circ. pressure, drilled plug in 5 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #7 @ (9,605') JT# 306. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 13 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Medium sand. Plug #8 @ (9,790') JT# 312. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1100 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #9 @ (9,975') JT# 318. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 10 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #10 @ (10,160') JT# 324. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Light sand. Plug #11 @ (10,345') JT# 330. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 11 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Light sand. Plug #12 @ (10,530') JT# 336. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, continue RIH to next plug. Medium sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #13 @ (10,715') JT# 342. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, send a 10 bbl. 80 visc. sweep, continue

RIH to next plug. Heavy sand. Plug #14 @ (10,900') JT# 348. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #15 @ (11,080') JT# 353. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1150 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #16 @ (11,260') JT# 359. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 10 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Medium sand. Plug #17 @ (11,445') JT# 365. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2600 psi circ. pressure, drilled plug in 20 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Medium sand. Plug #18 @ (11,635') JT# 371. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1250 psi WH pressure, 2900 psi circ. pressure, drilled plug in 15 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #19 @ (11,820') JT# 377. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1300 psi WH pressure, 3100 psi circ. pressure, drilled plug in 5 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #20 @ (12,010') JT# 383. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1300 psi WH pressure, 3100 psi circ. pressure, drilled plug in 7 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand.

### **12-12-17 – Initial Completion**

Continue to RIH to next plug plug. Plug #21 @ (12,195') JT# 389. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 vis. sweep. Tag plug and circulate bottoms up. \*\*\*SAND X went down @ 06:30, stop recirculating fluid. Using fresh water from frac tanks and circ to pits. \*\*\* Plug #22 @ (12,380') JT# 395. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 7 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #23 @ (12,570') JT# 401. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Heavy sand. Plug #24 @ (12,750') JT# 407. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl 80 visc sweep. Tag plug and circulate bottoms up. Having pump issue. Continued to circulate while pumps were being repaired. Plug #25 @ (12,935') JT# 413. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1100 psi WH pressure, 2900 psi circ. pressure, drilled plug in 7 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Medium sand. Plug #26 @ (13,120') JT# 419. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Medium sand. Plug #27 @ (13,305') JT# 424. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, continue RIH to next plug. Medium sand. Send 10/20/10 bbl 80 visc sweep. Tag plug and circulate bottoms up. \*\*\* SAND X repaired @ 15:00. Back to recirculating water. \*\*\* Plug #28 @ (13,490') JT# 430. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Medium sand. Plug #29 @ (13,675') JT# 436. Drilled out plug. 1K WOB, 4 BPM in 3.5 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 8 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Medium sand. Plug #30 @

(13,865') JT# 442. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, continue RIH to next plug. Medium sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #31 @ (14,045') JT# 448. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 3200 psi circ. pressure, drilled plug in 7 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Medium sand. Plug #32 @ (14,230') JT# 454. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 3200 psi circ. pressure, drilled plug in 6 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Medium sand. Plug #33 @ (14,415') JT# 460. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 6 min, continue RIH to next plug. Medium sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #34 @ (14,600') JT# 466. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 3200 psi circ. pressure, drilled plug in 7 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Heavy sand. Plug #35 @ (14,785') JT# 472. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 25 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Heavy sand. Plug #36 @ (14,965') JT# 477. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 7 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up. Plug #37 @ (15,155') JT# 484. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 5 min, send a 10 bbl. 80 visc. sweep, continue RIH to next plug. Heavy sand. Plug #38 @ (15,340') JT# 488. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 12 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Heavy sand. Plug #39 @ (15,525') JT# 501. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 9 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl. 80 visc. Sweep. Tag plug and circulate bottoms up.

### **12-13-17 – Initial Completion**

Continue to RIH to next plug. Plug #40 @ (15,710') JT# 501. Drilled out plug. 1K WOB, 4 BPM in 3.8 BPM return, 1200 psi WH pressure, 2900 psi circ. pressure, drilled plug in 5 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Light sand. Plug #41 @ (15,895') JT# 507. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 5 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Heavy sand. Plug #42 @ (16,080') JT# 513. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 6 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl 80 visc Sweep. Tag plug and circulate bottoms up. Plug #43 @ (16,265') JT# 519. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 10 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Light sand. \*\*Started to fight friction\*\* Plug #44 @ (16,450') JT# 525. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1200 psi WH pressure, 2700 psi circ. pressure, drilled plug in 10 min, continue RIH to next plug. Light sand. Send 10/20/10 bbl 80 visc sweep. Tag plug and circulate bottoms up. Fighting friction. Plug #45 @ (16,635') JT# 531. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1100 psi WH pressure, 2700 psi circ. pressure, drilled plug in 7 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Light sand. Fighting friction. Plug #46 @ (16,820') JT# 537. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1100 psi WH pressure, 2700 psi circ. pressure, drilled plug in 7 min, send a 10 bbl 80 visc sweep,

continue RIH to next plug. Light sand. Fighting friction. Plug #47 @ (17,005') JT# 543. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1100 psi WH pressure, 2700 psi circ. pressure, drilled plug in 4 min, continue RIH to next plug. Heavy sand. Send 10/20/10 bbl 80 visc Sweep. Tag plug and circulate bottoms up. Fighting friction. Plug #48 @ (17,190') JT# 548. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1100 psi WH pressure, 2700 psi circ. pressure, drilled plug in 7 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Light sand. Fighting friction. Plug #49 @ (17,380') JT# 554. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1100 psi WH pressure, 2700 psi circ. pressure, drilled plug in 10 min, send a 10 bbl 80 visc sweep, continue RIH to next plug. Light sand. Fighting friction. Plug #50 @ (17,560') JT# 560. Drilled out plug. 1K WOB, 4 BPM in 3.6 BPM return, 1100 psi WH pressure, 2700 psi circ. pressure, drilled plug in 10 min, continue RIH to 17,601' JT# 561. Did not go further due to fish on top of next plug. Light sand. Send 10/20/10 bbl. 80 visc. Sweep. 30 min spacer send another 10/20/10 bbl 80 visc Sweep. Circulate 2 bottoms up. LD power swivel. POOH LD tubing to 12,868 JT# 410'. Pump 10/20/10 sweep and circulate bottoms up. Currently circ bottoms up at 12,868' at report time.

#### **12-14-17 – Initial Completion**

Continue to POOH LD workstring to 8,804' JT #280. Pump 10/20/10 sweep and circulate bottoms up. Continue to LD workstring. 80 JTs left in the well. RU Rogue snubbing unit. Continue POOH LD last 2-7/8" PH-6 workstring. Snubbed out the last 48 JTs. LD BHA, bit looked good. Shut frac valve. SICP 1100 psi. Unload production tubing on racks and tally. Prep equipment to RIH. Snub and RIH w/ 1 pump out collar and 60 JTs 2-7/8" L-80 8rd EUE tubing. EOT at report time 1985'.