

**EP WELLS DAILY OPERATIONS REPORT**

Report 11

05/29/2017

Company PERMIAN  
 Well Type Development  
 Well UNIVERSITY 19 PW UNIT 1504H  
 Wellbore UNIVERSITY 19 PW UNIT 1504H ST01  
 WBS No/API No 30265014 / 4230133171.01

**Event Summary**

|            |                     |                    |                  |                  |       |
|------------|---------------------|--------------------|------------------|------------------|-------|
| Event Type | Completion only     | Event Start Date   | 04/28/2017       | Days on Location | 10.00 |
| Objective  | Install Completion  | Original Spud Date | 02/02/2017       |                  |       |
| Est. Days  | 25.00               | Contractor         | PERMIAN WELL SVC |                  |       |
| Work Unit  | PERMIAN COMPLETIONS | Days To Release    |                  |                  |       |
|            |                     | Rig Phone/FAX No.  |                  |                  |       |

**Well Status**

|                                    |                               |                          |   |
|------------------------------------|-------------------------------|--------------------------|---|
| Supervisor                         | Nick Morrison / Scott Wallace | Measured Depth(ft)       |   |
| Engineer                           | Justin Midgley                | TVD(ft)                  |   |
| Other Supervisor                   | Tommy Hurdle                  | 24 Hr Progress(ft)       |   |
| Depth Ref/Grd Elev/Water Depth(ft) | DFE: 2,761.75 / 2,736.10      | Hole size(in)            |   |
| THF Datum                          |                               |                          |   |
| Daily NPT(hr/%)                    | 0/0                           | Last Casing MD           |   |
| Days Ahd(-) Bhnd(+)(50/50)         |                               | Next Casing MD           |   |
| Actual cost to date/AFE            | 290,827/4,757,442.00          | Current MW / BH EMW(ppg) | / |
| Actual divided by AFE              | 0.06                          | LOT/FIT EMW(ppg)         |   |
| Daily Cost                         | 44,965                        | Lithology                |   |
|                                    |                               | Formation/MD Top         |   |

**HSE Summary**

| Last Incident   | Date | Days | Last Incident  | Date | Days | KPI's  |   |
|---|------|------|--|------|------|--|---|
| LWC<br>RWC<br>MTC<br>FAC<br>Last casing pressure test |      |      | PSI<br>NII<br>HPI<br><b>GOAL ZERO DAYS</b><br><b>PS BARRIER EVENT</b><br><b>PS barrier bowtie review</b> |      |      | TRCF<br>LWCF<br>Safety Cards - Safe<br>Safety Card - Unsafe<br>SSE%<br>Last casing pressure(psi) | 6 |

**Safety Comments:**

Total People - 197  
 Total Hours Worked - 1174  
 Total Hours driven - 190

Gaol Zero Day 4

**HSE Drills**

| Drills/Tests  | Date | Days Since Last | JSA's/Toolbox Talks<br>Days Since Last Drill |   |
|---|------|-----------------|--|---|
| Last Derrick Inspection<br>Last BOP function test<br>Last BOP Test<br>Next BOP Test |      |                 |  | 9 |

**Operations Summary**

|                          |
|--------------------------|
| 24 Hour Summary          |
| Frac Stg 1. Perf Stg 2   |
| Update Since Report Time |
| 24 Hour Forecast         |
| Continue frac ops        |

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Time Summary

| Start | Hours | PH   | OPN | Detail | Drilled Depth (ft) | NPT level | Rig Rate | Description   |
|-------|-------|------|-----|--------|--------------------|-----------|----------|---|
| 0:00  | 2.33  | FRAC | FRT |        |                    | 0         |          | Verified valve alignment. Broke circulation with each pump to gas buster. Tested each pump. Pressure tested frac iron. Found small leak in the iron. Bled off pressure changed out o-ring in the chicksan. Hammered back up and installed restraint.  |
| 2:20  | 0.33  | FRAC | FRT |        |                    | 0         |          | Walked pressure up to 9600 psi to verify no leaks. Confirmed no leaks were present. Bled off pressure to zero.  |
| 2:40  | 0.42  | FRAC | FRT |        |                    | 0         |          | Pressure test low 1000 psi for 5 minutes. While holding the 9800 high a small drip was noticed on the 1505H on the flowcross flange to 3" flowback iron. Also, a small drip was discovered on a riser on the 1503H. Bled off pressure to zero.  |
| 3:05  | 1.42  | FRAC | FRT |        |                    | 0         |          | Changed out o-ring on a 1503H riser. Checked and torqued up the the outside flanges on the flow cross onthe 1505H and 1504H.  |
| 4:30  | 2.00  | FRAC | FRT |        |                    | 0         |          | Pressured up to 9500 psi. Noticed that the 1503H riser was still leaking after changing the o-ring. Bled off pressure and changed the 10' joint on the 1503H riser.   |
| 6:30  | 0.50  | FRAC | FRT |        |                    | 0         |          | Break circulation to gas buster. Pressured up to 9800 psi and looked for leaks. Bled off pressure to start pressure test. Pressure test low 1000 psi for 5 min and high 9800 psi for 5 minutes and discovered leak between two riser joints. Bled off pressure. Meanwhile: Held Pre-tower safety meeeting.  |
| 7:00  | 2.50  | FRAC | RIF |        |                    | 0         |          | Changed o-ring between the riser iron on the 1505H well. Pressure test frac iron to 9,800 psi for 10 min.   |
| 9:30  | 5.32  | FRAC | OPO |        |                    | 0         |          | Wait on other pad operations  |
| 14:49 | 1.43  | FRAC | FRT |        |                    | 0         |          | Stage 1 Summary University 19 PW Unit 1504H<br>Interval 20355 - 20358<br>Open Well Pressure 4,158 psi<br>Max Treating Pressure 9,230 psi<br>Max Slurry Rate 56.1 bpm<br>Average Treating Pressure 8,741 psi<br>Average Slurry Rate 46.5 bpm<br>Breakdown Pressure 6,996 psi<br>Breakdown Rate 10.0 bpm<br>Breakdown Volume 126 gal<br>Avg HHP 9,962 hp<br>Final ISIP 5,265 psi<br>Frac Gradient 0.889 psi/ft<br>Pad Volume 4,536 gal<br>Main Body Volume 120,498 gal<br>Flush Volume 32,928 gal<br>30/50 AZ Sand Pumped 0 lbs<br>100 Mesh Sand Pumped 105,580 lbs<br>Proppant in Formation 105,580 lbs<br>Avg Proppant Concentration 1.32 lb/gal<br>Max Proppant Concentration 3.00 lb/gal<br>Load to Recover 2,869 bbls<br>Load to Recover w/o Acid 2,845 bbls<br>15% HCL Spearhead 1,008 gal<br>Slickwater Fluid Pumped 2,805 bbls<br>20# Linear Fluid Pumped 40 bbls<br>20# Crosslink Fluid Pumped 0 bbls<br>Pump down volume 0 bbls<br>pump down rate 0.0 bpm<br>Max pump down pressure 0 psi<br>Fluid Temp 72.0 ?F<br>Total Pump Time 1:25 hr:min<br>Pumps Lost During Job 1<br>Treatment Start Time 14:48 15:26 0:00<br>Treatment End Time 15:24 16:15 0:00<br>Diverter Slurry bbls<br>During the 0.5 PPA sand stage, a leak was noticed on the back of a pump. Sand was cut, the pump was isolated, and the stage was resumed. |
| 16:15 | 2.75  | FRAC | OPO |        |                    | 0         |          | Wait on other pad operations  |

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**Time Summary**

| Start        | Hours        | PH   | OPN | Detail | Drilled Depth (ft) | NPT level | Rig Rate | Description  |
|--------------|--------------|------|-----|--------|--------------------|-----------|----------|--|
| 19:00        | 1.75         | FRAC | WLT |        |                    | 0         |          | Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. Attempted to pressure test and had issues holding a test. Bumped up several time. Grease UMV and cycled. Pressure tested low 500 psi for 5 min and high 8500 psi for 10 min. Test Good   |
| 20:45        | 1.50         | FRAC | WLT |        |                    | 0         |          | "Stage #2 Plug and Perf<br>RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite frac plug. Tie into liner top @10881. Bring on pumps at 11200'. Pump down as follows:<br>3bpm @ 4300psi @11200<br>6bpm @ 4650psi @11400<br>9bpm @ 5500psi @11500<br>12bpm w/ 5900psi @11600<br>Max Rate 12bpm w/ 8240psi<br><br>Set plug @ 20315ft<br>Perforate as follows:<br>20305' - 20306'<br>20261' - 20262'<br>20216' - 20217'<br>20172' - 20173'<br>Stabilized pressure after perf: 4900psi<br>Pump down volume: 305bbbl" |
| 22:15        | 1.50         | FRAC | WLT |        |                    | 0         |          | POOH w/ WL logging the well @ 100 ft/min   |
| 23:45        | 0.25         | FRAC | WLT |        |                    | 0         |          | Bump up and SIW @ 4200. Bled off pressure and break lubricator. Lowered Perf guns out of lubricator and confirmed all shots fired. Drop ball, N/U nightcap and close crown valve. L/D perf guns and P/U next set of guns for next run. Move WL BOP's to next well. Greased UMV and LMV - grease time 10 min.   |
| <b>Total</b> | <b>24.00</b> |      |     |        |                    |           |          |  |

**06.00 Update**

| Start | Hours | PH   | OPN | Detail | Drilled Depth (ft) | NPT level | Description    |
|-------|-------|------|-----|--------|--------------------|-----------|----------------|
| 0:00  | 1.42  | FRAC | WLF |        |                    | 0         | Other Well ops |
| 1:25  |       | FRAC | FRT |        |                    | 0         |                |