

EP WELLS DAILY OPERATIONS REPORT

Report 23

10/08/2017

| | |
|---------------|-----------------------------|
| Company | PERMIAN |
| Well Type | Development |
| Well | UNIVERSITY 19 PW UNIT 1407H |
| Wellbore | UNIVERSITY 19 PW UNIT 1407H |
| WBS No/API No | 30266571 / 4230133203 |

Event Summary

| | | | | | |
|------------|---------------------|--------------------|------------------|------------------|-------|
| Event Type | Completion only | Event Start Date | 09/03/2017 | Days on Location | 23.00 |
| Objective | Install Completion | Original Spud Date | 05/11/2017 | | |
| Est. Days | 31.00 | Contractor | PERMIAN WELL SVC | | |
| Work Unit | PERMIAN COMPLETIONS | Days To Release | | | |
| | | Rig Phone/FAX No. | | | |

Well Status

| | | | |
|------------------------------------|--------------------------|--------------------------|---|
| Supervisor | Tina | Measured Depth(ft) | |
| Engineer | Alex Villegas | TVD(ft) | |
| Other Supervisor | Morgan, Brett.O | 24 Hr Progress(ft) | |
| Depth Ref/Grd Elev/Water Depth(ft) | DFE: 2,792.70 / 2,766.70 | 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 | 1,609,546/4,701,640.00 | Current MW / BH EMW(ppg) | / |
| Actual divided by AFE | 0.34 | LOT/FIT EMW(ppg) | |
| Daily Cost | 149,244 | Lithology | |
| | | Formation/MD Top | |

HSE Summary

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

HSE Drills

| Drills/Tests | Date | Days Since Last | | |
|---|------|-----------------|--|----|
| Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test | | | JSA's/Toolbox Talks Days Since Last Drill | 22 |

Operations Summary

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|-------------------------------|
| 24 Hour Summary |
| FRAC STG 18,19 PERF STG 19 |
| Update Since Report Time |
| 24 Hour Forecast |
| CONTINUE FRAC OPERATIONS |

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Wellbore UNIVERSITY 19 PW UNIT 1407H

Time Summary

| Start | Hours | PH | OPN | Detail | Drilled Depth (ft) | NPT level | Rig Rate | Description |
|-------|-------|------|-----|--------|-----------------------|--------------|-------------|---|
| 0:00 | 3.42 | FRAC | WLF | | | 0 | | WAIT ON OTHER PAD OPERATIONS |
| 3:25 | 0.08 | FRAC | WLF | | | 0 | | Handover from frac to WL. Pick up lubricator. Remove night cap. PU tools. Stab lubricator. Fill lubricator. PT lubricator to 8000psi. Open well with 4500psi. |
| 3:30 | 2.40 | FRAC | WLF | | | 0 | | <p>Stage 18 Summary University 19 PW Unit 1407H</p> <p>Interval 17220 - 17354</p> <p>Open Well Pressure 7,455 psi</p> <p>Max Treating Pressure 9,656 psi</p> <p>Max Slurry Rate 55.9 bpm</p> <p>Average Treating Pressure 9,135 psi</p> <p>Average Slurry Rate 44.9 bpm</p> <p>Breakdown Pressure 7,455 psi</p> <p>Breakdown Rate 8.4 bpm</p> <p>Breakdown Volume 210 gal</p> <p>Avg HHP 10,053 hp</p> <p>Final ISIP 5,604 psi</p> <p>Frac Gradient 0.959 psi/ft</p> <p>Pad Volume 1,722 gal</p> <p>Main Body Volume 242,228 gal</p> <p>Flush Volume 27,720 gal</p> <p>100 M AZ Sand Pumped #N/A lbs</p> <p>100 M Brown Sand Pumped #N/A lbs</p> <p>100 M Sand Pumped #N/A lbs</p> <p>Proppant in Formation #N/A lbs</p> <p>Avg Proppant Concentration 2.19 lb/gal</p> <p>Max Proppant Concentration 3.00 lb/gal</p> <p>Load to Recover 5,883 bbls</p> <p>Load to Recover w/o Acid 5,875 bbls</p> <p>15% HCL Spearhead 350 gal</p> <p>Slickwater Fluid Pumped 5,679 bbls</p> <p>20# Linear Fluid Pumped 80 bbls</p> <p>20# Crosslink Fluid Pumped 0 bbls</p> <p>Pump down volume 116 bbls</p> <p>pump down rate 10.0 bpm</p> <p>Max pump down pressure 6,091 psi</p> <p>Fluid Temp 72.0 ?F</p> <p>Total Pump Time 2:24 hr:min</p> <p>Pumps Lost During Job 1</p> <p>Treatment Start Time 3:30 0:00 0:00</p> <p>Treatment End Time 5:54 0:00 2:24</p> <p>Diverter Slurry bbls</p> <p>-Pumped sand in a 0.50 PPA -3.00 PPA ramp, 3.00 PPA hold. During 3.0 PPA, the pressure spiked and we cut sand. We brought the sand back in at 0.50, 1.00, 2.00, 2.50 and 3.00 PPA steps.</p> <p>-Two 20# gel sweeps 40 bbls each were pumped prior to flush.</p> <p>- Pumped one 350 gal shot of acid.</p> <p>- Ran a ball in place plug.</p> |
| 5:54 | 1.48 | FRAC | WLF | | | 0 | | Wait on other pad operations. |
| 7:23 | 0.92 | FRAC | WLF | | | 0 | | <p>"Stage #19 Plug and Perf</p> <p>RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite ball-drop frac plug. Tie into liner top @11122". Pump down as follows:</p> <p>3bpm @ 4800psi11380</p> <p>6bpm @ 4800psi11600</p> <p>9bpm @ 5000psi11730</p> <p>10bpm @ 6100 psi</p> <p>10bpm @ 6350psi</p> <p>Set plug @ 17200ft</p> <p>Perforate as follows:</p> <p>17174' - 17175'</p> |

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Time Summary

| Start | Hours | PH | OPN | Detail | Drilled Depth (ft) | NPT level | Rig Rate | Description |
|--------------|--------------|------|-----|--------|--------------------|-----------|----------|--|
| | | | | | | | | 17131' - 17132' 17086' - 17087 17042' - 17043' Stabilized pressure after perf: 5250psi Pump down volume: 106bbl" POOH |
| 8:18 | 1.45 | FRAC | WLF | | | 0 | | shut in well and break lubricator |
| 9:45 | 12.67 | FRAC | WLF | | | 0 | | HAND WELL OVER TO FRAC WL 200' WAIT ON SAND & FULLERS |
| 22:25 | 0.25 | FRAC | WLF | | | 0 | | EQUALIZE PRESSURE |
| 22:40 | 0.02 | FRAC | WLF | | | 0 | | OPEN WELL 4541 PSI |
| 22:41 | 1.32 | FRAC | FRT | | | 0 | | Stage 19 Summary University 19 PW Unit 1407H Interval 17042 - 17176 Open Well Pressure 4,541 psi Max Treating Pressure 9,838 psi Max Slurry Rate 57.7 bpm Average Treating Pressure 9,304 psi Average Slurry Rate 48.1 bpm Breakdown Pressure 9,838 psi Breakdown Rate 9.2 bpm Breakdown Volume 336 gal Avg HHP 10,969 hp Final ISIP 5,413 psi Frac Gradient 0.941 psi/ft Pad Volume 1,386 gal Main Body Volume 179,984 gal Flush Volume 27,426 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 92,380 lbs 100 M Sand Pumped 332,460 lbs Proppant in Formation 424,840 lbs Avg Proppant Concentration 2.94 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,391 bbls Load to Recover w/o Acid 4,383 bbls 15% HCL Spearhead 350 gal Slickwater Fluid Pumped 4,197 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 106 bbls pump down rate 10.0 bpm Max pump down pressure 6,332 psi Fluid Temp 72.0 ?F Total Pump Time 1:42 hr:min Pumps Lost During Job 0 Treatment Start Time 22:41 0:00 0:00 Treatment End Time 0:23 0:00 1:42 Diverter Slurry bbls -Pumped sand in a 0.50 PPA -3.00 PPA ramp,3.00 PPA hold,3.50 and 4.00 PPA step. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Pumped one 350 gal shot of acid. - Ran a ball in place plug. Time for Prop on Perfs 21.0 minutes |
| Total | 24.00 | | | | | | | |

06.00 Update

| Start | Hours | PH | OPN | Detail | Drilled Depth (ft) | NPT level | Description |
|-------|-------|------|-----|--------|--------------------|-----------|--|
| 0:00 | 0.38 | FRAC | FRT | | | 0 | Stage 19 Summary University 19 PW Unit 1407H Interval 17042 - 17176 |

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06.00 Update

| Start | Hours | PH | OPN | Detail | Drilled Depth (ft) | NPT level | Description |
|-------|-------|------|-----|--------|--------------------|-----------|---|
| | | | | | | | FINISH FRAC |
| 0:23 | 0.62 | FRAC | FWL | | | 0 | 23 Handover from frac to WL. 48 Pick up lubricator. Remove night cap. PU tools. 52 Stab lubricator. Fill lubricator. 52 PT lubricator to 8000psi 100 Open well with 4825psi. |
| 1:00 | | FRAC | FWL | | | 0 | 152 "Stage #20 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite ball-drop frac plug. Tie into liner top @11122". Pump down as follows: 3bpm @ 4800psi11535 6bpm @ 5000psi11650 9bpm @ 5300psi11700 bpm @ psi bpm @ psi 9bpm @ 6497psi Set plug @ 17022ft Perforate as follows: 16997' - 16998' 16953' - 16954' 16908' - 16909' 16864' - 16865' Stabilized pressure after perf: 5844psi Pump down volume: 111bbl" 157 POOH |