# EP WELLS DAILY OPERATIONS REPORT

Report 17 09/26/2017

| | |
|---|---|
| Company | PERMIAN |
| Well Type | Development |
| Well | UNIVERSITY 19 PW UNIT 1804H |
| Wellbore | UNIVERSITY 19 PW UNIT 1804H ST01 |
| WBS No/API No | 30269397 / 4230133264.01 |

## Event Summary

| | | | | | |
|---|---|---|---|---|---|
| Event Type | Drilling only | Event Start Date | 08/09/2017 | Days on Location | 16.88 |
| Objective | Drill - Wolfcamp | Original Spud Date | 08/10/2017 | Days Since Spud | 15.13 |
| Est. Days | 23.00 | Contractor | PRECISION | | |
| Work Unit | PRECISION 563 | Days To Release | | | |
| | | Rig Phone/FAX No. | | | |

## Well Status

| | | | |
|---|---|---|---|
| Supervisor | THOMAS DOWNES | Measured Depth(ft) | 11,313.00 |
| Engineer | ROBERT HAHN | TVD(ft) | 11,232.29 |
| Other Supervisor | ROSS GRAHAM | 24 Hr Progress(ft) | 12.00 |
| Depth Ref/Grd Elev/Water Depth(ft) | DFE: 2,788.55 / 2,762.90 | Hole size(in) | 6.125 |
| THF Datum | | | |
| Daily NPT(hr/%) | 0/0 | Last Casing MD | 7.000in@11,261.00ft |
| Days Ahd(-) Bhnd(+)(50/50) | | Next Casing MD | 4.500in@20,210.00ft |
| Actual cost to date/AFE | 1,551,164/3,161,561.00 | Current MW / BH EMW(ppg) | 13.20/ |
| Actual divided by AFE | 0.49 | LOT/FIT EMW(ppg) | |
| Daily Cost | 42,490 | Lithology | |
| | | Formation/MD Top | |

## HSE Summary

| Last Incident | Date | Days | Last Incident | Date | Days | KPI's | |
|---|---|---|---|---|---|---|---|
| LWC | | | PSI | | | TRCF | |
| RWC | | | NII | | | LWCF | |
| MTC | | | HPI | | | Safety Cards - Safe | |
| FAC | | | **GOAL ZERO DAYS** | 10/31/2016 | 330 | Safety Card - Unsafe | |
| Last casing pressure test | | | **PS BARRIER EVENT** | | | SSE% | |
| | | | **PS barrier bowtie review** | | | Last casing pressure(psi) | |

Safety Comments:

## HSE Drills

| Drills/Tests | Date | Days Since Last | | |
|---|---|---|---|---|
| Last Derrick Inspection | | | | |
| Last BOP function test | 09/15/2017 | 11 | JSA's/Toolbox Talks | |
| Last BOP Test | 09/25/2017 | 1 | Days Since Last Drill | 16 |
| Next BOP Test | 10/16/2017 | | | |

## Operations Summary

24 Hour Summary

TIH, DISPLACE TO OBM, DRILL SHOE TRACK, BUILD TROUGH FROM 11278' TO 11301'. TIME DRILL FROM 11301' TO 11310', TOOL FACE FLIPPED AND CAME OUT OF TROUGH. REBUILD TROUGH FROM 11301' TO 11310'. TIME DRILL FROM 11310' TO 11313'.

Update Since Report Time

@ 04:30 - TIME DRILLING AT 11316'.

24 Hour Forecast

CONTINUE SIDETRACKING WELL.

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## Time Summary

| Start | Hours | PH | OPN | Detail | Drilled Depth (ft) | NPT level | Rig Rate | Description |
|---|---|---|---|---|---|---|---|---|
| 0:00 | 1.00 | MNH1 | LDS | | 12,010.00 | 0 | | P/U 4" DP FROM 10180' TO 11115'. |
| 1:00 | 0.50 | MNH1 | DCM | | 12,010.00 | 0 | | TAG CEMENT AT 11115', DRILL CEMENT TO 11166'. |
| 1:30 | 1.00 | MNH1 | CDM | | 12,010.00 | 0 | | DISPLACE WELL TO OBM. |
| 2:30 | 0.50 | MNH1 | TIH | | 12,010.00 | 0 | | INSTALL ROTATING HEAD. |
| 3:00 | 0.50 | MNH1 | DCM | | 12,010.00 | 0 | | DRILL SHOE TRACK FROM 11166' TO 11251'. |
| 3:30 | 0.50 | MNH1 | TDLU | | 12,010.00 | 0 | | DRILL RATHOLE FROM 11251' TO 11301'. DIDNT TAKE MUCH WEIGHT TO DRILL. |
| 4:00 | 4.00 | MNH1 | TDLU | | 12,010.00 | 0 | | BUILD TROUGH FROM 11278' TO 11301'. TF @ 150°L. |
| 8:00 | 11.50 | MNH1 | TDLU | | 11,310.00 | 0 | | TIME DRILL AT 1 FPH FROM 11301' TO 11310'. TF @ 150°L. |
| 19:30 | 2.00 | MNH1 | TDLU | | 11,310.00 | 0 | | TOOL FACE FLIPPED ON US, JUMPED OUT OF TROUGH. RE-BUILD TROUGH FROM 11301' TO 11310'. TF @ 150°L. |
| 21:30 | 2.50 | MNH1 | TDLU | | 11,313.00 | 0 | | TIME DRILL AT 1 FPH FROM 11310' TO 11313'. TF @ 150°L. |
| **Total** | **24.00** | | | | | | | |

## Deepest 5 Surveys

| MD (ft) | Inc. (°) | Azi. (°) | TVD (ft) | N/S (ft) | E/W (ft) | V.Sec (ft) | DLeg (°/100ft) | Tool |
|---|---|---|---|---|---|---|---|---|
| 11,271.00 | 18.79 | 148.29 | 11,192.66 | 809.46 | 170.17 | 674.88 | 0.00 | PTW MWD_2016 |
| 11,301.00 | 20.00 | 150.00 | 11,220.96 | 800.91 | 175.27 | 672.81 | 4.44 | PTW MWD_2016 |

## Fluid Details

| | | | | | |
|---|---|---|---|---|---|
| Mud type | Invermul | Oil/Water (%) | 53.80/21.30 | POM (cc) | |
| MD (ft) | 11,305.00 | TS/HGS/LGS (%) | 22.80/16.10/6.70 | CaCl2 (%) | |
| Mud Density (ppg) | 13.20 | Sand (%) | 0.00 | Caom/Clom (ppm) | |
| Vis (s/qt) | 110.00 | Oil/Water Ratio (%) | 71.70/28.30 | ACT | |
| PV/YP (cp/lbf/100ft²) | 35.00/11.000 | | | XS Lime(lbm/bbl) | 2.07 |
| Gels 10 s/m (lbf/100ft²) | 12.000/15.000 | LCM (lbm/bbl) | | ES (Volts) | 233.0 |
| API/HTHP WL (cc/30min) | /9.0 | ECD (ppg) | 13.240 | R600/300 (°) | |
| FC/HTHP FC (32nd") | /1.0 | H2S (gas unit) | | R200/100 (°) | |
| WPS (ppm) | 241,911 | KCl (%) | | R6/3 (°) | |
| FL temp. (°F) | | Ditch Magnet in Last 24hrs/Cum. (gm) | | | |

## Bit Details

| Bit no. | Size (in) | Manufacturer | Model no. | Class | IADC code | Serial no. | Size (32nd") | MD in (ft) | MD out (ft) | IADC Dull Grade |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 6.125 | BAKER HUGHES | STX-30 | | | 5274949 | 3x16 | 11,301.00 | | - - - - - - |

## Bit Operations

| MD (ft) | WOB Min/Max (kip) | Current RPM (rpm) | Flow rate (gpm) | SPP (psi) | P bit (psi) | % @ Bit | HHP (hp) | Hours (hr) | Footage (ft) | ROP (ft/hr) | Hours cum (hr) | Footage cum. (ft) | ROP cum. (ft/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |

## Drillstring Components

| Item description | # Jts | Length (ft) | OD (in) | Max OD (in) | ID (in) | Connection Name | Weight (ppf) | Grade | Serial no. |
|---|---|---|---|---|---|---|---|---|---|
| 4" DRILL PIPE | 290 | 9,126.28 | 4.000 | | 3.340 | XT-39 | | | RIG |
| SHOCK SUB/AGITATOR | 1 | 22.35 | 5.000 | | 2.875 | XT-39 | | | W1885763-8 |
| (46 JTS) 4" DRILL PIPE | 46 | 2,057.63 | 4.812 | | 2.687 | XT-39 | | | RIG |
| CROSSOVER | 1 | 2.94 | 4.937 | | 2.687 | 3-1/2 IF | | | SD112640 |
| FILTER SUB | 1 | 5.95 | 4.750 | | 2.250 | 3-1/2 IF | | | SD117021 |

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**Drillstring Components**

| Item description | # Jts | Length (ft) | OD (in) | Max OD (in) | ID (in) | Connection Name | Weight (ppf) | Grade | Serial no. |
|---|---|---|---|---|---|---|---|---|---|
| NM FC | 1 | 30.29 | 4.875 | | 2.750 | 3-1/2 IF | | | SD53930 |
| ACCUMP | 1 | 27.91 | 4.750 | | 2.687 | 3-1/2 IF | | | C4003 |
| NM PC | 1 | 15.04 | 4.750 | | 2.312 | 3-1/2 IF | | | SD3855 |
| NDS 4.75" MUD MOTOR, LOBES: 7/8. STAGE: 3.8. SET @ | 1 | 23.86 | 4.750 | | | 3-1/2 IF | | | RY37824 |
| BIT #6 RUN #1 6.125" BAKER STX-30 (3X16) SN: 5274949 | 1 | 0.75 | 6.125 | 6.125 | | 3 -1/2 REG | | | 5274949 |

**Drillstring Details**

| Date/Time in | Date/Time out | BHA no. | BHA Length (ft) | Min. ID (in) | Purpose |
|---|---|---|---|---|---|
| 09/26/2017 08:00 | | 6 | 129.09 | | DRILL 6.125" PRODUCTION SECTION |

**PUMP/HYDRAULIC DATA**

| Pump No. | Type | Make/Model | Stroke (in) | Liner size (in) | Efficiency (%) | Pressure (psi) | SPM (spm) | Output (gpm) | Kill SPM/Pressure/Depth (spm/psi/ft) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | JJMMC / F-1600 | 12.00 | | | | | | |
| 2 | | JJMMC / F-1600 | 12.00 | | | | | | |

**Remarks**

FUEL ON HAND: 13657 GALS
FUEL USED: 1743 GALS