

DRILLING REPORT

| | | | | | | | | | | | | | | | |
|------------|---------------------------|--------|----------------|-------------|------|----------------|--|--------|-----------|----|----|------|----------|-----|--|
| WELL: | UL Cathedral 1516-17 A 1H | | | CONTRACTOR: | | | | | Unit | | | RIG: | Unit 412 | | |
| RPT DATE: | December 16, 2019 | | | SPUD DATE: | | | | CASING | | OD | WT | GRD | MD | TVD | |
| | | API #: | 42475380300000 | | DFS: | | | | Conductor | 20 | 74 | J55 | 101 | 101 | |
| | | | | REPORT NO: | | 1 | | | | | | | | | |
| FIELD: | Phantom (Wolfcamp) | | | DOL: | | 1 | | | | | | | | | |
| ELEV: | 2,697 | | RKB: | 21 | | LAST BOP TEST: | | | | | | | | | |
| MD: | 675 | | TVD: | 675 | | | | | | | | | | | |
| 24 HR FTG: | 675 | | HRS DRLG: | 3 | | CSGHD: | | | | | | | | | |

| DRILLING FLUID | | | | | | | | | | | | | | | SHOE TEST: | | | | | |
|----------------|-----|------|----|------|------|-----|------|--------------------|---|---|----|--------------------|-------|-----|------------|-------|-------|-------|------|------|
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP |
| 18:00 | 9.1 | 28.0 | | 1 | 1 | 8.5 | 0 | 1 | 1 | 2 | 1 | 3 | 2,000 | | 0.20 | 0.40 | 1,520 | | 2.70 | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | |
| | | | | | | | | | | | | #1 | | | | | | | | |
| | | | | | | | | | | | | #2 | | | | | | | | |

| BIT DATA | | | | | | | | | | | | | | | | | | | | | | |
|----------|---|-------|---|-------|---|--------|----|---------|-----|---------|---|--------|---|-------|-----|------|-----|-----|-----|--------|--|--|
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | OUT | FEET | HRS | WOB | RPM | ROP | | |
| 1 | | 17.50 | | Smith | | SDI616 | | JP9741 | | 9X15 | | Y | | 101 | 675 | 574 | 3.0 | 20 | 112 | 191.33 | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| BIT NO. | 1 | INNER | 1 | OUTER | 2 | DULL | CT | LOC | ALL | SEAL | I | GAUGE | I | OTHER | NO | RP | TD | | | | | |

[illegible]

| BHA | | | | | | | |
|--------------|---------|--------------|------------|-------------|--|--------------|--|
| DESCRIPTION: | Surface | | | | | | |
| LENGTH | 670.00 | BHA WT. AIR | | BHA WT. MUD | | HRS. ON JARS | |
| ROT. WT. | | P.U. WT. | | S.O. WT. | | TORQUE | |
| TIME MADE UP | 20:30 | DATE MADE UP | 12/15/2019 | TIME PULLED | | DATE PULLED | |

| SURVEY DATA | | | | | | | | |
|-------------|-------|---------|-----|------|-------------|-----|------------|-----|
| MD | ANGLE | AZIMUTH | TVD | N/S | COORDINATES | E/W | V. SECTION | DLS |
| 433 | 0.88 | 261.89 | 433 | -1.8 | -3.9 | | 1.3 | 0.3 |
| 528 | 0.89 | 245.38 | 528 | -2.2 | -5.3 | | 1.6 | 0.3 |
| 612 | 1.15 | 258.55 | 612 | -2.6 | -6.8 | | 1.9 | 0.4 |
| 675 | 1.15 | 258.55 | 675 | -2.9 | -8.0 | | 2.0 | |

| | | |
|--------------------|--------------------------------------|------------------------------------|
| CONSUMABLES | DIESEL FUEL (gal) Rcvd/Used/On Hand: | DRILL H2O (gal) Rcvd/Used/On Hand: |
|--------------------|--------------------------------------|------------------------------------|

OPERATIONS TIME LOG

| FROM | TO | HRS | CODE | | Start MD | End MD |
|------------------|-----------|-------------|--------------------|---|-----------------|---------------|
| 18:00 | 19:30 | 1.5 | Rig Up & Tear Down | Walk rig from UL Cathedral 2H to 1H, Center rig, Hook up mud line, miscellaneous rig up. Test stand pipe to 2500 psi, | 101 | 101 |
| 19:30 | 20:30 | 1.0 | Trips | Picked up MWD, handle BHA, Test MWD Note: Called TRRC for spud. | 101 | 101 |
| 20:30 | 23:30 | 3.0 | Drill - Rotate | Drill from 101' to 675' WOB 20k, PSI 2150, DIFF: 850 psi, RPM:70. GPM: 700 | 101 | 675 |
| 23:30 | 00:00 | 0.5 | Cond Mud & Circ | Circ, pump high vis sweep | 675 | 675 |
| 00:00 | 02:00 | 2.0 | Trips | Trip out to run casing, Stand back drill collars, laid down BHA. | 675 | 675 |
| 02:00 | 04:30 | 2.5 | Run Csg & Cement | Rig up casing specialties, Run 15 jts of 13 3/8", 54.5#, J55, stc, set @ 663' Float collar @ 618' | 675 | 675 |
| 04:30 | 05:00 | 0.5 | Cond Mud & Circ | Circulate 1.5 casing volumes | 675 | 675 |
| 05:00 | 06:00 | 1.0 | Run Csg & Cement | Cement Casing , on going at report time. | 675 | 675 |
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| TOTAL HRS | | 12.0 | | | | |

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|---|--|-------------|----|-----------------|-----|-------|----|
| WEATHER | | | | | | | |
| GEN. CONDITIONS: | Clear | WIND SPEED: | 16 | WIND DIRECTION: | ENE | TEMP: | 40 |
| COMMENTS: | Natural Gas Usage Daily: 0 Total: 0 DGE <input type="checkbox"/> Mud fuel received: 0 gals; Used 0 gals; Mud Fuel on hand 0 gals | | | | | | |
| www.wellez.net WellEz Information Management LLC ver 080419br | | | | | | | |

DRILLING REPORT

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|---------------------------------|-------|------------------|------------------|--|-------|------------|------|--------------------|-------------|------------------|-----|------------------------------------|---------|-------|-------|-------|----------|------------|------|---------------|--|--------|----|-----|-----|-----|
| WELL: UL Cathedral 1516-17 A 1H | | | | | | | | | | CONTRACTOR: Unit | | | | | | | | | | RIG: Unit 412 | | | | | | |
| RPT DATE: December 17, 2019 | | | | | | | | | | SPUD DATE: | | | | | | | | | | CASING | | OD | WT | GRD | MD | TVD |
| API #: 42475380300000 | | | | | | | | | | DFS: | | | | | | | | | | Conductor | | 20 | 74 | J55 | 101 | 101 |
| | | | | | | | | | | REPORT NO: 2 | | | | | | | | | | Surface | | 13-3/8 | 55 | J55 | 663 | 663 |
| FIELD: Phantom (Wolfcamp) | | | | | | | | | | DOL: 2 | | | | | | | | | | | | | | | | |
| ELEV: | | 2,697 | | RKB: | | 21 | | LAST BOP TEST: | | 12/16/19 | | | | | | | | | | | | | | | | |
| MD: | | 1,264 | | TVD: | | 1,232 | | | | | | | | | | | | | | | | | | | | |
| 24 HR FTG: | | 589 | | HRS DRLG: | | 4.25 | | CSGHD: | | | | | | | | | | | | | | | | | | |
| DRILLING FLUID | | | | | | | | | | | | | | | | | | SHOE TEST: | | | | | | | | |
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP | | | | | | |
| 19:30 | 10.1 | 27.0 | | 1 | 1 | 8.5 | 0 | 1 | 1 | 2 | 1 | 3 | 165,000 | | 0.10 | 0.20 | 2,800 | | 8.25 | | | | | | | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | | | | | | | |
| | | | | | | | | | | | | #1 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | #2 | | | | | | | | | | | | | | |
| BIT DATA | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | OUT | FEET | HRS | WOB | RPM | ROP | | | | | | |
| 2 | | 12.25 | | Smith | | SDSI616 | | JP9127 | | 6X15 | | N | | 675 | 1,264 | 589 | 4.3 | 25 | 119 | 138.59 | | | | | | |
| 1 | | 17.50 | | Smith | | SDI616 | | JP9741 | | 9X15 | | Y | | 101 | 675 | 574 | 3.0 | 20 | 112 | 191.33 | | | | | | |
| BIT NO. | 1 | INNER | | 1 | OUTER | | 2 | DULL | CT | LOC | ALL | SEAL | I | GAUGE | I | OTHER | NO | RP | TD | | | | | | | |
| HYDRAULICS DATA | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUMP | | MAKE | | MODEL | | LINER | | STK | SPM | PSI | GPM | GPS | EFF % | ECD | AV DP | AV DC | BIT HHP | PUMP HHP | | | | | | | | |
| 1 | | Weatherford | | EQ2200 | | 4.500 | | 12,000 | 95 | 3000 | 373 | .0934 | 97 | 10.08 | 141 | 213 | 208 | 1257 | | | | | | | | |
| 2 | | Weatherford | | EQ2200 | | 4.500 | | 12,000 | 95 | 3000 | 373 | .0934 | 97 | 10.08 | 141 | 213 | 208 | 1257 | | | | | | | | |
| BHA | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESCRIPTION: | | 1st Intermediate | | | | | | | | | | | | | | | | | | | | | | | | |
| LENGTH | | 865.40 | | BHA WT. AIR | | | | BHA WT. MUD | | | | HRS. ON JARS | | | | 10 | | | | | | | | | | |
| ROT. WT. | | | | P.U. WT. | | | | S.O. WT. | | | | TORQUE | | | | | | | | | | | | | | |
| TIME MADE UP | | 23:00 | | DATE MADE UP | | 12/16/2019 | | TIME PULLED | | | | DATE PULLED | | | | | | | | | | | | | | |
| SURVEY DATA | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MD | | ANGLE | | AZIMUTH | | TVD | | N/S | COORDINATES | | E/W | V. SECTION | DLS | | | | | | | | | | | | | |
| 794 | | 1.50 | | 241.18 | | 794 | | -4.0 | | -10.5 | | 2.9 | | 0.4 | | | | | | | | | | | | |
| 884 | | 2.34 | | 233.72 | | 884 | | -5.7 | | -13.0 | | 4.3 | | 1.0 | | | | | | | | | | | | |
| 977 | | 2.89 | | 238.90 | | 977 | | -8.0 | | -16.5 | | 6.2 | | 0.6 | | | | | | | | | | | | |
| 1,069 | | 3.09 | | 245.49 | | 1,069 | | -10.2 | | -20.8 | | 8.0 | | 0.4 | | | | | | | | | | | | |
| CONSUMABLES | | | | DIESEL FUEL (gal) Rvcd/Used/On Hand: | | | | | | | | DRILL H2O (gal) Rvcd/Used/On Hand: | | | | | | | | | | | | | | |
| OPERATIONS TIME LOG | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM | TO | HRS | CODE | | | | | | | | | | | | | | Start MD | End MD | | | | | | | | |
| 06:00 | 07:00 | 1.0 | Run Csg & Cement | HPJSM, Test lines to 1200 psi, pump 20 bbls of 8.4 ppg FW gel spacer, pump 178 bbls (745 sacks) of 14.8 ppg lead cment, Drop plug, Displace with 96 bbls of FW, Bumped plug with 500 psi over, Final circulating pressure of 240 psi, Floats held bled back 0.5bbls, Had full returns through out job, received 90 bbls of cement to surface. No fall back. Rig down cements | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 07:00 | 08:30 | 1.5 | Other | Lay down landing joint, Installed well head | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 08:30 | 15:00 | 6.5 | Nipple Up B.O.P. | Nipple up BOP | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 15:00 | 21:00 | 6.0 | Test B.O.P. | Test choke manifold, pipe rams, drilling choke, HCR, manual valves, floor valves and blind rams 5000 psi high / 250 psi low, Test annular 3500 psi high / 250 psi low, Test casing to 750 psi for 30 mins and install wear bushing. Note: attempted to test Orbit valve, found weld on flow line flange broken. | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 21:00 | 21:30 | 0.5 | Other | Install wear bushing | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 21:30 | 23:00 | 1.5 | Trips | Pick up BHA, install MWD and test | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 23:00 | 23:30 | 0.5 | Other | Made repairs to flow line, repair broken weld. | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 23:30 | 00:30 | 1.0 | Trips | TIH, Handle Drill Collars, HWDP, and installed rotating rubber. Tested Orbit valve to 300 psi/5 min | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 00:30 | 01:00 | 0.5 | Other | Drill out shoe track. | | | | | | | | | | | | | 675 | 675 | | | | | | | | |
| 01:00 | 04:15 | 3.3 | Drill - Rotate | Drill 1st Intermediate f/675'- T/1161' RPM 30-60 GPM 400 - 700 PSI 2500 psi, WOB 15-25K Tq 9-10k | | | | | | | | | | | | | 675 | 1161 | | | | | | | | |
| 04:15 | 05:00 | 0.8 | Repair Rig | Work on mud pumps | | | | | | | | | | | | | 1161 | 1161 | | | | | | | | |
| 05:00 | 06:00 | 1.0 | Drill - Rotate | Drill 1st Intermediate f/1161'- T/1264' RPM 30-60 GPM 400 - 700 PSI 2800 psi, WOB 15-25K Tq 9-10k | | | | | | | | | | | | | 1161 | 1264 | | | | | | | | |
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DRILLING REPORT

[illegible]

DRILLING REPORT

| | | | | | | | | | | | | |
|--|--|------------------------------|--|--------------------------------|--|------------------|--|---------------|-----------|-----------------|------------|------------|
| WELL: <u>UL Cathedral 1516-17 A 1H</u> | | | | CONTRACTOR: <u>Unit</u> | | | | | RIG: | <u>Unit 412</u> | | |
| RPT DATE: <u>December 19, 2019</u> | | | | SPUD DATE: <u>12/15/19</u> | | CASING | | OD | WT | GRD | MD | TVD |
| | | API #: <u>42475380300000</u> | | DFS: <u>4</u> | | <u>Conductor</u> | | <u>20</u> | <u>74</u> | <u>J55</u> | <u>101</u> | <u>101</u> |
| | | | | REPORT NO: <u>4</u> | | <u>Surface</u> | | <u>13-3/8</u> | <u>55</u> | <u>J55</u> | <u>663</u> | <u>663</u> |
| FIELD: <u>Phantom (Wolfcamp)</u> | | | | DOL: <u>4</u> | | | | | | | | |
| ELEV: <u>2,697</u> | | RKB: <u>21</u> | | LAST BOP TEST: <u>12/16/19</u> | | | | | | | | |
| MD: <u>5,305</u> | | TVD: <u>5,135</u> | | | | | | | | | | |
| 24 HR FTG: <u>1,323</u> | | HRS DRLG: <u>12.5</u> | | CSGHD: <u></u> | | | | | | | | |

| DRILLING FLUID | | | | | | | | | | | | | | | SHOE TEST: | | | | | |
|----------------|------|------|----|------|------|-----|------|--------------------|---|---|----|--------------------|---------|-----|------------|-------|-------|-------|------|------|
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP |
| 18:00 | 10.4 | 29.0 | | | | 9.0 | 0 | 2 | 3 | 3 | 2 | 3 | 162,000 | | 0.10 | 0.20 | 2,000 | | 2.00 | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | |
| | | | | | | | | | | | | #1 | | | | | | | | |
| | | | | | | | | | | | | #2 | | | | | | | | |

| BIT DATA | | | | | | | | | | | | | | | | | | | | | | |
|----------|---|-------|---|-------|---|---------|----|---------|---|---------|---|--------|----|-------|-------|-------|------|-----|--|-----|--------|--|
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | OUT | FEET | HRS | WOB | | RPM | ROP | |
| 2 | | 12.25 | | Smith | | SDSI616 | | JP9127 | | 6X15 | | N | | 3,982 | 5,305 | 1,323 | 12.5 | 45 | | 119 | 105.84 | |
| 1 | | 17.50 | | Smith | | SDI616 | | JP9741 | | 9X15 | | Y | | 101 | 675 | 574 | 3.0 | 20 | | 112 | 191.33 | |
| BIT NO. | 2 | INNER | 0 | OUTER | 1 | DULL | wt | LOC | s | SEAL | x | GAUGE | in | OTHER | no | RP | TD | | | | | |

| HYDRAULICS DATA | | | | | | | | | | | | | | |
|-----------------|-------------|--------|-------|--------|-----|------|-----|-------|-------|-------|-------|-------|---------|----------|
| PUMP | MAKE | MODEL | LINER | STK | SPM | PSI | GPM | GPS | EFF % | ECD | AV DP | AV DC | BIT HHP | PUMP HHP |
| 1 | Weatherford | EQ2200 | 4.500 | 12.000 | 95 | 3002 | 745 | 0.934 | 97 | 10.37 | 141 | 213 | 208 | 1257 |
| 2 | Weatherford | EQ2200 | 4.500 | 12.000 | 95 | 3002 | 745 | 0.934 | 97 | 10.37 | 141 | 213 | 208 | 1257 |

| BHA | | | | | | | |
|--------------|--------|------------------|------------|-------------|----------|--------------|--------|
| DESCRIPTION: | | 1st Intermediate | | | | | |
| LENGTH | 865.40 | BHA WT. AIR | | BHA WT. MUD | | HRS. ON JARS | |
| ROT. WT. | 155 | P.U. WT. | | 160 | S.O. WT. | 135 | TORQUE |
| TIME MADE UP | 23:00 | DATE MADE UP | 12/16/2019 | TIME PULLED | | DATE PULLED | 10 |

| SURVEY DATA | | | | | | | | |
|-------------|-------|---------|-------|--------|-------------|-----|------------|-----|
| MD | ANGLE | AZIMUTH | TVD | N/S | COORDINATES | E/W | V. SECTION | DLS |
| 4,960 | 18.30 | 242.20 | 4,805 | -499.4 | -925.6 | | 398.6 | 0.5 |
| 5,053 | 18.63 | 241.77 | 4,893 | -513.3 | -951.6 | | 409.6 | 0.4 |
| 5,146 | 18.92 | 240.63 | 4,981 | -527.7 | -977.9 | | 421.1 | 0.5 |
| 5,234 | 18.80 | 240.11 | 5,064 | -541.7 | -1,002.6 | | 432.5 | 0.2 |

| | | | | |
|--------------------|--------------------------------------|--|------------------------------------|--|
| CONSUMABLES | DIESEL FUEL (gal) Rcvd/Used/On Hand: | | DRILL H2O (gal) Rcvd/Used/On Hand: | |
|--------------------|--------------------------------------|--|------------------------------------|--|

OPERATIONS TIME LOG

[illegible]

| | |
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| WEATHER | |
| GEN. CONDITIONS: | Clear WIND SPEED: 4 WIND DIRECTION: NE TEMP: 36 |

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|-----------|---|
| COMMENTS: | Natural Gas Usage Daily: 2178.88 Total: 2277 DGE <input type="checkbox"/> Mud fuel received: 0 gals; Used 0 gals; Mud Fuel on hand 0 gals |
|-----------|---|



DRILLING REPORT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------|--|------------------|--|---------|------------|---------|--------------------|---------|---------------------|--------|--------------|-------|------------|-------------------------|----------|--------------|------------|------------------------------------|---------------|------|-------|-------|-------|--------|---------|--|----------|--|----|--|----|--|----|--|
| WELL: UL Cathedral 1516-17 A 1H | | | | | | | | | | CONTRACTOR: Unit | | | | | | | | | | RIG: Unit 412 | | | | | | | | | | | | | | | |
| RPT DATE: December 20, 2019 | | | | | | | | | | SPUD DATE: 12/15/19 | | | | | CASING | | OD | WT | GRD | MD | TVD | | | | | | | | | | | | | | |
| API #: 42475380300000 | | | | | | | | | | DFS: 5 | | | | | Conductor | | 20 | 74 | J55 | 101 | 101 | | | | | | | | | | | | | | |
| FIELD: Phantom (Wolfcamp) | | | | | | | | | | REPORT NO: 5 | | | | | Surface | | 13-3/8 | 55 | J55 | 663 | 663 | | | | | | | | | | | | | | |
| ELEV: 2,697 | | | | | | | | | | RKB: 21 | | | | | DOL: 5 | | Intermediate | | 10-3/4 | 46 | J-55 | 5,290 | 5,290 | | | | | | | | | | | | |
| MD: 5,955 | | | | | | | | | | TVD: 5,722 | | | | | LAST BOP TEST: 12/16/19 | | | | | | | | | | | | | | | | | | | | |
| 24 HR FTG: 650 | | | | | | | | | | HRS DRLG: 5 | | | | | CSGHD: | | | | | | | | | | | | | | | | | | | | |
| DRILLING FLUID | | | | | | | | | | | | | | | | | | SHOE TEST: | | | | | | | | | | | | | | | | | |
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP | | | | | | | | | | | | | | | | | |
| 18:00 | 9.4 | 28.0 | | | | 10.0 | 0 | 1 | 1 | 1 | 2 | 101,000 | 0.20 | 0.20 | 1,840 | | 0.50 | | | | | | | | | | | | | | | | | | |
| REDUCED PUMP RATES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUMP | | | | | | | | | | | | | | | | | | SPM | | PRESS | | DEPTH | | | | | | | | | | | | | |
| #1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| #2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BIT DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | | OUT | | FEET | | HRS | | WOB | | RPM | | ROP | | | | | | | | | | |
| 3 | 9.88 | | Smith | | XS616 | | JP3579 | | 6x14 | | N | | 5,305 | | 5,955 | | 650 | | 4.0 | | 40 | | 119 | | 162.5 | | | | | | | | | | |
| 2 | 12.25 | | Smith | | SDSI616 | | JP9127 | | 6X15 | | N | | 3,982 | | 5,305 | | 1,323 | | 12.5 | | 45 | | 119 | | 105.84 | | | | | | | | | | |
| BIT NO. | | 2 | | INNER | | 0 | | OUTER | | 1 | | DULL | | wt | | LOC | | s | | SEAL | | x | | GAUGE | | in | | OTHER | | no | | RP | | TD | |
| HYDRAULICS DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUMP | | MAKE | | MODEL | | LINER | | STK | | SPM | | PSI | | GPM | | GPS | | EFF % | | ECD | | AV DP | | AV DC | | BIT HHP | | PUMP HHP | | | | | | | |
| 1 | | Weatherford | | EQ2200 | | 4.500 | | 12.000 | | 89 | | 2920 | | 698 | | 0.934 | | 97 | | 10.24 | | 141 | | 213 | | 208 | | 1257 | | | | | | | |
| 2 | | Weatherford | | EQ2200 | | 4.500 | | 12.000 | | 89 | | 2920 | | 698 | | 0.934 | | 97 | | 10.24 | | 141 | | 213 | | 208 | | 1257 | | | | | | | |
| BHA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESCRIPTION: | | 2nd Intermediate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LENGTH | | 863.48 | | BHA WT. AIR | | | | BHA WT. MUD | | | | HRS. ON JARS | | | | | | | | | | | | | | | | | | | | | | | |
| ROT. WT. | | 155 | | P.U. WT. | | 160 | | S.O. WT. | | 135 | | TORQUE | | 10 | | | | | | | | | | | | | | | | | | | | | |
| TIME MADE UP | | 18:00 | | DATE MADE UP | | 12/19/2019 | | TIME PULLED | | | | DATE PULLED | | | | | | | | | | | | | | | | | | | | | | | |
| SURVEY DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MD | | ANGLE | | AZIMUTH | | TVD | | N/S | | COORDINATES | | E/W | | V. SECTION | | DLS | | | | | | | | | | | | | | | | | | | |
| 5,330 | | 19.28 | | 241.14 | | 5,155 | | -557.1 | | -1,029.9 | | 44.9 | | 0.6 | | | | | | | | | | | | | | | | | | | | | |
| 5,422 | | 19.60 | | 239.46 | | 5,242 | | -572.3 | | -1,056.5 | | 457.2 | | 0.7 | | | | | | | | | | | | | | | | | | | | | |
| 5,515 | | 19.75 | | 239.08 | | 5,329 | | -588.3 | | -1,038.4 | | 470.2 | | 0.2 | | | | | | | | | | | | | | | | | | | | | |
| CONSUMABLES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIESEL FUEL (gal) Rcvd/Used/On Hand: | | | | | | | | | | | | | | | | | | | DRILL H2O (gal) Rcvd/Used/On Hand: | | | | | | | | | | | | | | | | |
| OPERATIONS TIME LOG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM | TO | HRS | CODE | | | | | | | | | | | | | Start MD | End MD | | | | | | | | | | | | | | | | | | |
| 06:00 | 07:00 | 1.0 | Run Csg & Cement | Run 125 jts of 10 3/4", 45.5#, J-55, BTC, set @ 5290, float collar @ 5243' | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 07:00 | 09:00 | 2.0 | Cond Mud & Circ | Circ | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 09:00 | 15:00 | 6.0 | Run Csg & Cement | Hpjrm, test lines to 3000 psi, pumped 20 bbls gel spacer, ahead of 11.9 ppg lead cement; Pumped 1090 sks (373 bbls, 2.27 yield), followed by 14.8 ppg Tail cement, pumped 195 sks (47 bbls, 1.34 yield), displace w/20 water, 486 bbls brine, FCP 1000 psi at 2 bbls/min plug bumped with 1500 psi, floats held, bleed back 2 bbls. 125 bbls cement to surface. Rig down cementers | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 15:00 | 16:30 | 1.5 | Other | Lay down landing jt and install and test pack off | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 16:30 | 17:00 | 0.5 | Other | Install Wear Bushing | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 17:00 | 18:30 | 1.5 | Dir Work | Make up Bit & Motor, Pick up BHA Orient and test MWD Tool | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 18:30 | 19:30 | 1.0 | Trips | Trip in Hole to 954' | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 19:30 | 20:30 | 1.0 | Other | Pressure Test 10 3/4" Casing to 1500 psi/30 min, Pressure test Rot. Head to 500 psi 10/min | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 20:30 | 21:00 | 0.5 | Lubricate Rig | Loosen Rotary Hose on Top Drive to the correct position | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 21:00 | 22:30 | 1.5 | Trips | Continue to Trip in Hole to Drill out Shoe Track | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 22:30 | 23:30 | 1.0 | Other | Drill Cement & 10 3/4" Intermediate Casing Shoe Track/ Float Collar @ 5278.05', Shoe @ 5243.69' | | | | | | | | | | | | 5305 | 5305 | | | | | | | | | | | | | | | | | | |
| 23:30 | 01:30 | 2.0 | Drill - Rotate | Drill 2nd Intermediate From 5305' to 5505' RPM 50-60 GPM 740 PSI 2950 psi, WOB 25-35K Tq 16k | | | | | | | | | | | | 5305 | 5505 | | | | | | | | | | | | | | | | | | |
| 01:30 | 03:00 | 1.5 | Repair Rig | Trip Back to Casing Shoe, Change out 4" high pressure Valve on Mudline from #2 Pump due to washed Bonnet Cap, & Trip Back to Bottom | | | | | | | | | | | | 5505 | 5505 | | | | | | | | | | | | | | | | | | |
| 03:00 | 06:00 | 3.0 | Drill - Rotate | Drill 2nd Intermediate From 5505' to 5955' RPM 50-60 GPM 745 PSI 3125 psi, WOB 30-40K Tq 16k | | | | | | | | | | | | 5505 | 5955 | | | | | | | | | | | | | | | | | | |
| TOTAL HRS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 24.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEATHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GEN. CONDITIONS: | | Clear | | WIND SPEED: | | 6 | | WIND DIRECTION: | | SE | | TEMP: | | 37 | | | | | | | | | | | | | | | | | | | | | |
| COMMENTS: | | Natural Gas Usage Daily: 2178.88 Total: 2277 DGE □ Mud fuel received: 0 gals; Used 0 gals; Mud Fuel on hand 0 gals | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| www.wellez.net Wellez Information Management LLC ver_080419br | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DRILLING REPORT

| | | | | | | | | | | | | |
|--|--|------------------------------|--|--------------------------------|--|---------------------|--|---------------|-----------|-------------|-----------------|--------------|
| WELL: <u>UL Cathedral 1516-17 A 1H</u> | | | | CONTRACTOR: <u>Unit</u> | | | | | RIG: | | <u>Unit 412</u> | |
| RPT DATE: <u>December 21, 2019</u> | | | | SPUD DATE: <u>12/15/19</u> | | CASING | | OD | WT | GRD | MD | TVD |
| | | API #: <u>42475380300000</u> | | DFS: <u>6</u> | | <u>Conductor</u> | | <u>20</u> | <u>74</u> | <u>J55</u> | <u>101</u> | <u>101</u> |
| | | | | REPORT NO: <u>6</u> | | <u>Surface</u> | | <u>13-3/8</u> | <u>55</u> | <u>J55</u> | <u>663</u> | <u>663</u> |
| FIELD: <u>Phantom (Wolfcamp)</u> | | | | DOL: <u>6</u> | | <u>Intermediate</u> | | <u>10-3/4</u> | <u>46</u> | <u>J-55</u> | <u>5,290</u> | <u>5,290</u> |
| ELEV: <u>2,697</u> | | RKB: <u>21</u> | | LAST BOP TEST: <u>12/16/19</u> | | | | | | | | |
| MD: <u>8,147</u> | | TVD: <u>7,863</u> | | | | | | | | | | |
| 24 HR FTG: <u>2,192</u> | | HRS DRLG: <u>23.5</u> | | CSGHD: | | | | | | | | |

| DRILLING FLUID | | | | | | | | | | | | | | | SHOE TEST: | | | | | |
|----------------|-----|------|----|------|------|------|------|--------------------|---|---|----|--------------------|---------|-----|------------|-------|-------|-------|------|------|
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP |
| 18:00 | 9.7 | 27.0 | | | | 10.5 | 0 | 1 | 1 | 1 | 1 | 3 | 120,000 | | 0.20 | 0.30 | 1,840 | | 1.80 | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | |
| | | | | | | | | | | | | #1 | | 50 | | 390 | | 7,988 | | |
| | | | | | | | | | | | | #2 | | 50 | | 385 | | 7,988 | | |

| BIT DATA | | | | | | | | | | | | | | | | | | | | | | |
|----------|---|-------|---|-------|---|---------|----|---------|---|---------|---|--------|----|-------|-------|-------|------|-----|--|-----|--------|--|
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | OUT | FEET | HRS | WOB | | RPM | ROP | |
| 3 | | 9.88 | | Smith | | XS616 | | JP3579 | | 6x14 | | N | | 5,955 | 8,147 | 2,192 | 23.5 | 31 | | 119 | 93.277 | |
| 2 | | 12.25 | | Smith | | SDSI616 | | JP9127 | | 6X15 | | N | | 3,982 | 5,305 | 1,323 | 12.5 | 45 | | 119 | 105.84 | |
| BIT NO. | 2 | INNER | 0 | OUTER | 1 | DULL | wt | LOC | s | SEAL | x | GAUGE | in | OTHER | no | RP | TD | | | | | |

| HYDRAULICS DATA | | | | | | | | | | | | | | |
|-----------------|-------------|--------|-------|--------|-----|------|-----|-------|-------|------|-------|-------|---------|----------|
| PUMP | MAKE | MODEL | LINER | STK | SPM | PSI | GPM | GPS | EFF % | ECD | AV DP | AV DC | BIT HHP | PUMP HHP |
| 1 | Weatherford | EQ2200 | 4.500 | 12.000 | 95 | 3591 | 745 | 0.934 | 97 | 9.79 | | 213 | 208 | 1257 |
| 2 | Weatherford | EQ2200 | 4.500 | 12.000 | 95 | 3591 | 745 | 0.934 | 97 | 9.79 | | 213 | 208 | 1257 |

| BHA | | | | | | | |
|--------------|------------------|--------------|------------|-------------|-----|--------------|----|
| DESCRIPTION: | 2nd Intermediate | | | | | | |
| LENGTH | 863.48 | BHA WT. AIR | | BHA WT. MUD | | HRS. ON JARS | |
| ROT. WT. | 235 | P.U. WT. | 280 | S.O. WT. | 200 | TORQUE | 17 |
| TIME MADE UP | 18:00 | DATE MADE UP | 12/19/2019 | TIME PULLED | | DATE PULLED | |

| SURVEY DATA | | | | | | | | |
|-------------|-------|---------|-------|----------|-------------|-----|------------|-----|
| MD | ANGLE | AZIMUTH | TVD | N/S | COORDINATES | E/W | V. SECTION | DLS |
| 7,553 | 11.65 | 242.74 | 7,275 | -1,607.1 | 705.5 | | -880.7 | 0.7 |
| 7,645 | 10.30 | 237.08 | 7,365 | -1,622.3 | 712.6 | | -889.4 | 1.9 |
| 7,738 | 8.31 | 232.33 | 7,457 | -1,634.6 | 719.8 | | -898.0 | 2.3 |
| 7,830 | 8.28 | 232.42 | 7,548 | -1,645.1 | 726.8 | | -906.1 | 0.0 |

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| CONSUMABLES | DIESEL FUEL (gal) Rcvd/Used/On Hand: | DRILL H2O (gal) Rcvd/Used/On Hand: |
|--------------------|--------------------------------------|------------------------------------|

OPERATIONS TIME LOG

| FROM | TO | HRS | CODE | | Start MD | End MD |
|-----------|-------|------|----------------|---|----------|--------|
| 06:00 | 15:30 | 9.5 | Drill - Rotate | Drill 2nd Intermediate From 5955' to 6975' RPM 50-60 GPM 745 PSI 3125 psi, WOB 30-40K Tq 16k | 5955 | 6975 |
| 15:30 | 16:00 | 0.5 | Lubricate Rig | Routine Rig and Top Drive Service | 6975 | 6975 |
| 16:00 | 06:00 | 14.0 | Drill - Rotate | Drill 2nd Intermediate From 6975' to 8147' RPM 35-60 GPM 745 PSI 3125 psi, WOB 30-40K Tq 16k | 6975 | 8147 |
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| TOTAL HRS | | 24.0 | | | | |

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| WEATHER | |
| GEN. CONDITIONS: | Clear WIND SPEED: 5 WIND DIRECTION: se TEMP: 38 |

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|-----------|--|
| COMMENTS: | Natural Gas Usage Daily: 2520.3 Total: 4797.3 DGE <input type="checkbox"/> Mud fuel received: 0 gals; Used 0 gals; Mud Fuel on hand 0 gals |
|-----------|--|

DRILLING REPORT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|-----|---------------------------|----|--------------------------------------|------|----------------|------|---|---|---------|----|--------------------|---------|----------------|------|--------------|-------|----------|------|------------------------------------|------|------------|-------|--------------|--|---------|--|------------|--|----|--|----|--|----|--|
| WELL: | | UL Cathedral 1516-17 A 1H | | | | | | | | | | CONTRACTOR: | | Unit | | RIG: | | Unit 412 | | | | | | | | | | | | | | | | | |
| RPT DATE: | | December 22, 2019 | | | | | | | | | | SPUD DATE: | | 12/15/19 | | CASING | | OD | WT | GRD | MD | TVD | | | | | | | | | | | | | |
| | | API #: | | 42475380300000 | | | | | | | | DFS: | | 7 | | Conductor | | 20 | 74 | J55 | 101 | 101 | | | | | | | | | | | | | |
| | | | | | | | | | | | | REPORT NO: | | 7 | | Surface | | 13-3/8 | | 55 | J55 | 663 | 663 | | | | | | | | | | | | |
| FIELD: | | Phantom (Wolfcamp) | | | | | | | | | | DOL: | | 7 | | Intermediate | | 10-3/4 | | 46 | J-55 | 5,290 | 5,290 | | | | | | | | | | | | |
| ELEV: | | 2,697 | | RKB: | | 21 | | | | | | | | LAST BOP TEST: | | 12/16/19 | | | | | | | | | | | | | | | | | | | |
| MD: | | 8,922 | | TVD: | | 8,634 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 HR FTG: | | 775 | | HRS DRLG: | | 17.5 | | | | | | | | CSGHD: | | | | | | | | | | | | | | | | | | | | | |
| DRILLING FLUID | | | | | | | | | | | | | | | | | | | | SHOE TEST: | | | | | | | | | | | | | | | |
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP | | | | | | | | | | | | | | | |
| 18:00 | 9.8 | 27.0 | | | | 10.0 | 0 | 1 | 1 | 1 | 1 | 3 | 122,000 | | 0.20 | 0.40 | 1,840 | | 2.10 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | #1 | | 50 | | 390 | | 7,988 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | #2 | | 50 | | 385 | | 7,988 | | | | | | | | | | | | | | | | | |
| BIT DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | | OUT | | FEET | | HRS | | WOB | | RPM | | ROP | | | | | | | | | |
| 3 | | 9.88 | | Smith | | XS616 | | JP3579 | | 6x14 | | N | | 8,147 | | 8,922 | | 775 | | 16.0 | | 40 | | | | 48.4375 | | | | | | | | | |
| 2 | | 12.25 | | Smith | | SDSI616 | | JP9127 | | 6X15 | | N | | 3,982 | | 5,305 | | 1,323 | | 12.5 | | 45 | | 119 | | 105.84 | | | | | | | | | |
| BIT NO. | | 2 | | INNER | | 0 | | OUTER | | 1 | | DULL | | wt | | LOC | | s | | SEAL | | x | | GAUGE | | in | | OTHER | | no | | RP | | TD | |
| HYDRAULICS DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUMP | | MAKE | | MODEL | | LINER | | STK | | SPM | | PSI | | GPM | | GPS | | EFF % | | ECD | | AV DP | | AV DC | | BIT HHP | | PUMP HHP | | | | | | | |
| 1 | | Weatherford | | EQ2200 | | 4.500 | | 12,000 | | 77 | | 2546 | | 604 | | | | 97 | | 9.81 | | | | | | | | | | | | | | | |
| 2 | | Weatherford | | EQ2200 | | 4.500 | | 12,000 | | 77 | | 2546 | | 604 | | | | | | 9.81 | | | | | | | | | | | | | | | |
| BHA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESCRIPTION: | | | | 2nd Intermediate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LENGTH | | | | 863.48 | | | | BHA WT. AIR | | | | | | | | BHA WT. MUD | | | | | | | | HRS. ON JARS | | | | | | | | | | | |
| ROT. WT. | | | | 250 | | | | P.U. WT. | | | | 300 | | | | S.O. WT. | | | | 220 | | | | TORQUE | | | | 18 | | | | | | | |
| TIME MADE UP | | | | 18:00 | | | | DATE MADE UP | | | | 12/19/2019 | | | | TIME PULLED | | | | 06:30 | | | | DATE PULLED | | | | 12/22/2019 | | | | | | | |
| SURVEY DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MD | | ANGLE | | | | AZIMUTH | | | | TVD | | | | N/S | | COORDINATES | | | | E/W | | V. SECTION | | | | DLS | | | | | | | | | |
| 8,570 | | 2.81 | | | | 220.29 | | | | 8,283 | | | | -1,717.7 | | 749.2 | | | | | | -936.4 | | | | 2.2 | | | | | | | | | |
| 8,663 | | 2.88 | | | | 210.37 | | | | 8,376 | | | | -1,720.3 | | 752.6 | | | | | | -940.1 | | | | 0.5 | | | | | | | | | |
| 8,756 | | 2.28 | | | | 194.67 | | | | 8,469 | | | | -1,722.0 | | 756.2 | | | | | | -943.9 | | | | 1.0 | | | | | | | | | |
| 8,848 | | 2.30 | | | | 192.29 | | | | 8,561 | | | | -1,722.8 | | 759.7 | | | | | | -947.5 | | | | 0.1 | | | | | | | | | |
| CONSUMABLES | | | | DIESEL FUEL (gal) Rvcd/Used/On Hand: | | | | | | | | | | | | | | | | DRILL H2O (gal) Rcvd/Used/On Hand: | | | | | | | | | | | | | | | |
| OPERATIONS TIME LOG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM | | TO | | HRS | | CODE | | | | | | | | | | | | | | Start MD | | End MD | | | | | | | | | | | | | |
| 06:00 | | 11:15 | | 5.3 | | Drill - Rotate | | Drill 2nd Intermediate From 8147' to 8384 RPM 35-60 GPM 745 PSI 3125 psi, WOB 30-40K Tq 16k | | | | | | | | | | | | 8147 | | 8384 | | | | | | | | | | | | | |
| 11:15 | | 12:45 | | 1.5 | | Drill - Rotate | | Trouble Shoot VFD on # 1Mud Pump | | | | | | | | | | | | 8384 | | 8384 | | | | | | | | | | | | | |
| 12:45 | | 23:30 | | 10.8 | | Drill - Rotate | | Drill 2nd Intermediate From 8384 to 8922 RPM 35-60 GPM 604 PSI 2520 psi, WOB 30-40K Tq 17.5k | | | | | | | | | | | | 8384 | | 8922 | | | | | | | | | | | | | |
| 23:30 | | 01:30 | | 2.0 | | Trips | | Circulate hole clean for bit trip | | | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | |
| 01:30 | | 06:00 | | 4.5 | | Trips | | shut in well obtain shut in casing pressure of 75 psi pump slug trip out under manage pressure holding 130 psi hole taking proper fill to inside 10 3/4" shoe check SICP pump remainder of calculated kill mud monitor flow no/flow trip out conventional filling hole from trip tank | | | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | |
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DRILLING REPORT

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|---------------------------------|-----|-------------|----|------------------|------|----------------|------|--|----|--------------------------------------|--------------------|------------|------|-------|-------------------------|-------------|-------|--------------|----|------------------------------------|--------|-------|------|--------------|-------|---------|--|------------|--|---------|--|----------|--|----|--|
| WELL: UL Cathedral 1516-17 A 1H | | | | | | | | | | CONTRACTOR: Unit | | | | | | | | | | RIG: Unit 412 | | | | | | | | | | | | | | | |
| RPT DATE: December 23, 2019 | | | | | | | | | | SPUD DATE: 12/15/19 | | | | | CASING | | | OD | WT | GRD | MD | TVD | | | | | | | | | | | | | |
| API #: 42475380300000 | | | | | | | | | | DFS: 8 | | | | | Conductor | | | 20 | 74 | J55 | 101 | 101 | | | | | | | | | | | | | |
| FIELD: Phantom (Wolfcamp) | | | | | | | | | | REPORT NO: 8 | | | | | Surface | | | 13-3/8 | 55 | J55 | 663 | 663 | | | | | | | | | | | | | |
| ELEV: 2,697 | | | | | | | | | | RKB: 21 | | | | | DOL: 8 | | | Intermediate | | | 10-3/4 | 46 | J-55 | 5,290 | 5,290 | | | | | | | | | | |
| MD: 9,774 | | | | | | | | | | TVD: 9,485 | | | | | LAST BOP TEST: 12/16/19 | | | | | | | | | | | | | | | | | | | | |
| 24 HR FTG: 852 | | | | | | | | | | HRS DRLG: 16.5 | | | | | CSGHD: | | | | | | | | | | | | | | | | | | | | |
| DRILLING FLUID | | | | | | | | | | | | | | | | | | | | SHOE TEST: | | | | | | | | | | | | | | | |
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP | | | | | | | | | | | | | | | | | |
| 18:00 | 9.8 | 27.0 | | | | 10.5 | 0 | 1 | 1 | 1 | 3 | 119,000 | 0.20 | 0.40 | 2,000 | | 2.00 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | #1 | | 50 | | 390 | | 7,988 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | #2 | | 50 | | 385 | | 7,988 | | | | | | | | | | | | | | | | | | |
| BIT DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | | OUT | | FEET | | HRS | | WOB | | RPM | | ROP | | | | | | | | | |
| 4 | | 9.88 | | SECURITY | | GT64DMO | | 13384414 | | 6X14 | | N | | 8,922 | | 9,774 | | 852 | | 16.5 | | 42 | | 67 | | 51.636 | | | | | | | | | |
| 3 | | 9.88 | | Smith | | XS616 | | JP3579 | | 6x14 | | N | | 8,147 | | 8,922 | | 775 | | 16.0 | | 40 | | 119 | | 48.4375 | | | | | | | | | |
| BIT NO. | | 3 | | INNER | | 1 | | OUTER | | 5 | | DULL | | CT | | LOC | | S | | SEAL | | no | | GAUGE | | I | | OTHER | | WT | | RP | | PR | |
| HYDRAULICS DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUMP | | MAKE | | | | MODEL | | | | LINER | | STK | | SPM | | PSI | | GPM | | GPS | | EFF % | | ECD | | AV DP | | AV DC | | BIT HHP | | PUMP HHP | | | |
| 1 | | Weatherford | | | | EQ2200 | | | | 4.500 | | 12.000 | | 90 | | 3166 | | 706 | | 0.934 | | 97 | | 9.88 | | | | | | | | 1430 | | | |
| 2 | | Weatherford | | | | EQ2200 | | | | 4.500 | | 12.000 | | 90 | | 3166 | | 706 | | 0.934 | | 97 | | 9.88 | | 1430 | | | | | | 1430 | | | |
| BHA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESCRIPTION: | | | | 2nd Intermediate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LENGTH | | | | 863.48 | | | | BHA WT. AIR | | | | | | | | BHA WT. MUD | | | | | | | | HRS. ON JARS | | | | | | | | | | | |
| ROT. WT. | | | | 250 | | | | P.U. WT. | | | | 300 | | | | S.O. WT. | | | | 220 | | | | TORQUE | | | | 18 | | | | | | | |
| TIME MADE UP | | | | 18:00 | | | | DATE MADE UP | | | | 12/19/2019 | | | | TIME PULLED | | | | | | | | DATE PULLED | | | | | | | | | | | |
| SURVEY DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MD | | | | ANGLE | | | | AZIMUTH | | | | TVD | | | | N/S | | | | COORDINATES | | | | E/W | | | | V. SECTION | | | | DLS | | | |
| 9,311 | | | | 4.03 | | | | 187.84 | | | | 9,023 | | | | -969.3 | | | | -1,725.3 | | | | 781.2 | | | | 1.0 | | | | | | | |
| 9,403 | | | | 5.33 | | | | 189.19 | | | | 9,115 | | | | -976.8 | | | | -1,726.4 | | | | 788.4 | | | | 1.4 | | | | | | | |
| 9,496 | | | | 6.24 | | | | 188.93 | | | | 9,208 | | | | -986.0 | | | | -1,727.8 | | | | 797.5 | | | | 1.0 | | | | | | | |
| 9,590 | | | | 4.66 | | | | 185.72 | | | | 9,301 | | | | -994.9 | | | | -1,729.0 | | | | 806.1 | | | | 1.7 | | | | | | | |
| CONSUMABLES | | | | | | | | | | DIESEL FUEL (gal) Rvcd/Used/On Hand: | | | | | | | | | | DRILL H2O (gal) Rvcd/Used/On Hand: | | | | | | | | | | | | | | | |
| OPERATIONS TIME LOG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM | | TO | | HRS | | CODE | | | | | | | | | | | | Start MD | | End MD | | | | | | | | | | | | | | | |
| 06:00 | | 07:30 | | 1.5 | | Trips | | Trip out of hole with Bit #3 | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | | | |
| 07:30 | | 08:45 | | 1.3 | | Dir Work | | Change out Bit & Motor program and orient MWD | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | | | |
| 08:45 | | 11:30 | | 2.8 | | Trips | | Trip in hole filling every 30 stands | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | | | |
| 11:30 | | 12:00 | | 0.5 | | Lubricate Rig | | Routine Rig and Topdrive Service | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | | | |
| 12:00 | | 13:30 | | 1.5 | | Trips | | Trip in hole to bottom, safety wash land stand to bottom | | | | | | | | | | 8922 | | 8922 | | | | | | | | | | | | | | | |
| 13:30 | | 06:00 | | 16.5 | | Drill - Rotate | | Drill 2nd Intermediate From 8922 to 9774 RPM 35-60 GPM 745 PSI 3,310 psi, WOB 30-40K Tq 17.5k | | | | | | | | | | 8922 | | 9774 | | | | | | | | | | | | | | | |
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DRILLING REPORT

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|--|---------------|----------------------------|--------------|--------------------------------|--|---------------|-----------|-------------|--------------|-----------------|--|
| WELL: <u>UL Cathedral 1516-17 A 1H</u> | | | | CONTRACTOR: <u>Unit</u> | | | | RIG: | | <u>Unit 412</u> | |
| RPT DATE: <u>December 24, 2019</u> | | SPUD DATE: <u>12/15/19</u> | | CASING | | OD | WT | GRD | MD | TVD | |
| API #: <u>42475380300000</u> | | DFS: <u>9</u> | | <u>Conductor</u> | | <u>20</u> | <u>74</u> | <u>J55</u> | <u>101</u> | <u>101</u> | |
| | | REPORT NO: <u>9</u> | | <u>Surface</u> | | <u>13-3/8</u> | <u>55</u> | <u>J55</u> | <u>663</u> | <u>663</u> | |
| FIELD: <u>Phantom (Wolfcamp)</u> | | DOL: <u>9</u> | | <u>Intermediate</u> | | <u>10-3/4</u> | <u>46</u> | <u>J-55</u> | <u>5,290</u> | <u>5,290</u> | |
| ELEV: | <u>2,697</u> | RKB: | <u>21</u> | LAST BOP TEST: <u>12/16/19</u> | | | | | | | |
| MD: | <u>10,283</u> | TVD: | <u>9,993</u> | | | | | | | | |
| 24 HR FTG: | <u>509</u> | HRS DRLG: | <u>11</u> | CSGHD: | | | | | | | |

| DRILLING FLUID | | | | | | | | | | | | | | | SHOE TEST: | | | | | |
|----------------|-----|------|----|------|------|-----|------|--------------------|---|---|----|--------------------|---------|-----|------------|-------|-------|--------|------|------|
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP |
| 18:00 | 9.7 | 27.0 | | | | 9.7 | 0 | 1 | 1 | 1 | 1 | 3 | 113,000 | | 0.10 | 0.40 | 2,000 | | 2.40 | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | |
| | | | | | | | | | | | | #1 | | 50 | | 465 | | 10,023 | | |
| | | | | | | | | | | | | #2 | | 50 | | 460 | | 10,023 | | |

| BIT DATA | | | | | | | | | | | | | | | | | | | | |
|----------|--|------|-------|----------|-------|---------|------|----------|-----|---------|------|--------|-------|-------|--------|------|-----|-----|-----|--------|
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | OUT | FEET | HRS | WOB | RPM | ROP |
| 5 | | 9.88 | | SMITH | | XS616 | | JP9326 | | 6X14 | | N | | 9,892 | 10,283 | 391 | 7.0 | 35 | 96 | 55.857 |
| 4 | | 9.88 | | SECURITY | | GT64DMO | | 13384414 | | 6X14 | | N | | 9,774 | 9,892 | 118 | 4.0 | 40 | | 29.5 |
| BIT NO. | | 4 | INNER | 8 | OUTER | 3 | DULL | RO | LOC | N | SEAL | NO | GAUGE | IN | OTHER | WT | RP | PR | | |

| HYDRAULICS DATA | | | | | | | | | | | | | | |
|-----------------|-------------|--------|-------|--------|-----|------|-----|-------|-------|------|-------|-------|---------|----------|
| PUMP | MAKE | MODEL | LINER | STK | SPM | PSI | GPM | GPS | EFF % | ECD | AV DP | AV DC | BIT HHP | PUMP HHP |
| 1 | Weatherford | EQ2200 | 4.500 | 12.000 | 89 | 3154 | 700 | 0.934 | 97 | 9.82 | | | | |
| 2 | Weatherford | EQ2200 | 4.500 | 12.000 | 89 | 3154 | 700 | 0.934 | 97 | 9.82 | | | | |

| | | | | | | | |
|--------------|------------------|--------------|------------|-------------|-------|--------------|----|
| BHA | | | | | | | |
| DESCRIPTION: | 2nd Intermediate | | | | | | |
| LENGTH | 862.12 | BHA WT. AIR | | BHA WT. MUD | | HRS. ON JARS | |
| ROT. WT. | 273 | P.U. WT. | 330 | S.O. WT. | 2,240 | TORQUE | 18 |
| TIME MADE UP | 16:15 | DATE MADE UP | 12/23/2019 | TIME PULLED | | DATE PULLED | |

| SURVEY DATA | | | | | | | | |
|-------------|-------|---------|-------|----------|-------------|-----|------------|-----|
| MD | ANGLE | AZIMUTH | TVD | N/S | COORDINATES | E/W | V. SECTION | DLS |
| 9,821 | 1.48 | 237.85 | 9,532 | -1,004.1 | -1,729.8 | | 815.2 | 2.1 |
| 9,867 | 1.06 | 242.71 | 9,578 | -1,004.6 | -1,730.7 | | 815.7 | 0.9 |
| 9,960 | 2.05 | 330.55 | 9,671 | -1,003.6 | -1,732.3 | | 814.4 | 2.4 |
| 10,052 | 2.27 | 318.21 | 9,763 | -1,000.8 | -1,734.3 | | 811.5 | 0.6 |

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|--------------------|--------------------------------------|------------------------------------|
| CONSUMABLES | DIESEL FUEL (gal) Rcvd/Used/On Hand: | DRILL H2O (gal) Rcvd/Used/On Hand: |
|--------------------|--------------------------------------|------------------------------------|

OPERATIONS TIME LOG

| FROM | TO | HRS | CODE | | Start MD | End MD |
|------------------|-----------|-------------|--------------------|--|-----------------|---------------|
| 06:00 | 10:00 | 4.0 | Drill - Rotate | Drill 2nd Intermediate From 9774 to 9892 RPM 35-60 GPM 745 PSI 3,310 psi, WOB 30-40K Tq 17.5k | 9774 | 9892 |
| 10:00 | 11:00 | 1.0 | Cond Mud & Circ | Circulate Hole clean for Trip, build Trip Slug | 9892 | 9892 |
| 11:00 | 13:15 | 2.3 | Trips | Trip out to shoe | 9892 | 9892 |
| 13:15 | 13:45 | 0.5 | Lubricate Rig | Rig service | 9892 | 9892 |
| 13:45 | 16:15 | 2.5 | Trips | Trip out to Surface with Bit #4 | 9892 | 9892 |
| 16:15 | 17:30 | 1.3 | Dir Work | Change out Motor and Bit, Test new Motor, Orient MWD | 9892 | 9892 |
| 17:30 | 20:00 | 2.5 | Trips | Trip in hole filling every 30 stands to Shoe | 9892 | 9892 |
| 20:00 | 21:00 | 1.0 | Cut off Drill Line | Cut and slip Drill Line | 9892 | 9892 |
| 21:00 | 23:00 | 2.0 | Trips | Trip in Hole Safety wash last Stand to bottom | 9892 | 9892 |
| 23:00 | 06:00 | 7.0 | Drill - Rotate | Drill 2nd Intermediate From 9892 to 10283' RPM 35-60 GPM 700 PSI 3,310 psi, WOB 30-40K Tq 17.5k | 9892 | 10283 |
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| TOTAL HRS | | 24.0 | | | | |

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|------------------|--|--|-------------|--|---|-----------------|--|
| TOTAL HRS | | 240 | | | | | |
| WEATHER | | | | | | | |
| GEN. CONDITIONS: | | CLEAR | WIND SPEED: | | 2 | WIND DIRECTION: | |
| | | | | | | NE | |
| | | | | | | TEMP: | |
| | | | | | | 30 | |
| COMMENTS: | | Natural Gas Usage Daily: 1500.69 Total: 8555.21 DGE <input type="checkbox"/> Mud fuel received: 0 gals; Used 0 gals; Mud Fuel on hand 0 gals | | | | | |

DRILLING REPORT

| | | | | | | | | | | | | | |
|---|--|-----------|--------------------------------|-------------------------------------|---|------------------------------|------------------------------|------------------------|--------------------|------------------------|--------------------------|------------------------|--|
| WELL: UL Cathedral 1516-17 A 1H | | | | CONTRACTOR: Unit | | | | | RIG: | | Unit 412 | | |
| RPT DATE: December 25, 2019 | | | | SPUD DATE: 12/15/19 | | CASING | | OD | WT | GRD | MD | TVD | |
| | | API #: | 42475380300000 | | DFS: 10 | | Conductor | 20 | 74 | J55 | 101 | 101 | |
| | | | | REPORT NO: 10 | | Surface | | 13-3/8 | 55 | J55 | 663 | 663 | |
| FIELD: Phantom (Wolfcamp) | | | | DOL: 10 | | Intermediate | | 10-3/4 | 46 | J-55 | 5,290 | 5,290 | |
| ELEV: 2,697 | | RKB: | 21 | | LAST BOP TEST: 12/16/19 | | Intermediate | 7-5/8 | 30 | HCL-80 | 11,025 | 11,025 | |
| MD: 11,040 | | TVD: | 10,749 | | | | | | | | | | |
| 24 HR FTG: 757 | | HRS DRLG: | 7.5 | | CSGHD: | | | | | | | | |

| DRILLING FLUID | | | | | | | | | | | | | | | | SHOE TEST: | | | | |
|----------------|-----|------|----|------|------|-----|------|--------------------|---|---|----|--------------------|---------|-----|------|------------|-------|--------|------|------|
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHR |
| 18:00 | 9.7 | 27.0 | | | | 9.7 | 0 | 1 | 1 | 1 | 1 | 3 | 124,000 | | 0.10 | 0.40 | 2,000 | | 2.40 | |
| | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | |
| | | | | | | | | | | | | PUMP | | SPM | | PRESS | | DEPTH | | |
| | | | | | | | | | | | | #1 | | 50 | | 465 | | 10,023 | | |
| | | | | | | | | | | | | #2 | | 50 | | 460 | | 10,023 | | |

| BIT DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|---|-------|---|----------|---|---------|----|----------|---|---------|---|--------|----|--------|----|--------|----|------|--|-----|--|-----|--|-----|--|--------|--|
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | | OUT | | FEET | | HRS | | WOB | | RPM | | ROP | |
| 5 | | 9.88 | | SMITH | | XS616 | | JP9326 | | 6X14 | | N | | 10,283 | | 11,040 | | 757 | | 7.5 | | 34 | | 112 | | 100.93 | |
| 4 | | 9.88 | | SECURITY | | GT64DMO | | 13384414 | | 6X14 | | N | | 9,774 | | 9,892 | | 118 | | 4.0 | | 40 | | | | 29.5 | |
| BIT NO. | 5 | INNER | 1 | OUTER | 2 | DULL | WT | LOC | S | SEAL | X | GAUGE | IN | OTHER | NO | RP | TD | | | | | | | | | | |

| HYDRAULICS DATA | | | | | | | | | | | | | | |
|-----------------|-------------|--------|-------|--------|-----|------|-----|-------|-------|------|-------|-------|---------|----------|
| PUMP | MAKE | MODEL | LINER | STK | SPM | PSI | GPM | GPS | EFF % | ECD | AV DP | AV DC | BIT HHP | PUMP HHP |
| 1 | Weatherford | EQ2200 | 4.500 | 12.000 | 70 | 3225 | 700 | 0.938 | 97 | 9.82 | | | | |
| 2 | Weatherford | EQ2200 | 4.500 | 12.000 | 70 | 3225 | 700 | 0.938 | 97 | 9.82 | | | | |

| BHA | | | | | | | |
|--------------|------------------|--------------|------------|-------------|-------|--------------|------------|
| DESCRIPTION: | 2nd Intermediate | | | | | | |
| LENGTH | 862.12 | BHA WT. AIR | | BHA WT. MUD | | HRS. ON JARS | |
| ROT. WT. | 290 | P.U. WT. | 360 | S.O. WT. | 245 | TORQUE | 17 |
| TIME MADE UP | 16:15 | DATE MADE UP | 12/23/2019 | TIME PULLED | 23:00 | DATE PULLED | 12/24/2019 |

| SURVEY DATA | | ANGLE | | AZIMUTH | | TVD | | N/S | | COORDINATES | | E/W | | V. SECTION | | DLS | |
|-------------|--|-------|--|---------|--|--------|--|--------|--|-------------|--|-------|--|------------|--|-----|--|
| MD | | ANGLE | | AZIMUTH | | TVD | | N/S | | COORDINATES | | E/W | | V. SECTION | | DLS | |
| 10,747 | | 1.12 | | 347.82 | | 10,457 | | -972.7 | | -1,752.5 | | 781.6 | | 2.2 | | | |
| 10,793 | | 0.59 | | 21.26 | | 10,503 | | -972.1 | | -1,752.5 | | 781.0 | | 1.5 | | | |
| 10,886 | | 1.06 | | 185.21 | | 10,596 | | -972.5 | | -1,752.4 | | 781.4 | | 1.8 | | | |
| 10,971 | | 3.43 | | 183.03 | | 10,681 | | -975.8 | | -1,752.6 | | 784.7 | | 2.8 | | | |

| | | |
|--------------------|--------------------------------------|------------------------------------|
| CONSUMABLES | DIESEL FUEL (gal) Rcvd/Used/On Hand: | DRILL H2O (gal) Rcvd/Used/On Hand: |
|--------------------|--------------------------------------|------------------------------------|

OPERATIONS TIME LOG

[illegible]

| | | | | | | | | |
|------------------|--|---|-------------|---|-----------------|----|-------|----|
| TOTAL HRS | | 24.0 | | | | | | |
| WEATHER | | | | | | | | |
| GEN. CONDITIONS: | | Partly Cloudy | WIND SPEED: | 2 | WIND DIRECTION: | SE | TEMP: | 31 |
| COMMENTS: | | Natural Gas Usage Daily: 1716.91 Total: 10272.17 DGE <input type="checkbox"/> Mud fuel received: 0 gals; Used 0 gals; Mud Fuel on hand 0 gals | | | | | | |

DRILLING REPORT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|-----|---|----|--------------|------|------------------|------|--|--------------------|-------------|----|--------------|---------|------------|-----------|-------|-------|--------------------|------|--------|----------|----------|-------|--------------|----------|--|--------|----|--------|--------|--------|--|
| WELL: | | | | | | | | UL Cathedral 1516-17 A 1 H | | | | | | | | | | | | | | | | | | | | | | | | |
| CONTRACTOR: | | | | | | | | | Unit | | | | | | | | | | | | | | | | | | | | | | | |
| RPT DATE: | | | | | | | | | December 26, 2019 | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | SPUD DATE: | | | 12/15/19 | | | CASING | | | OD | WT | GRD | MD | TVD | | | | | | | | | | |
| | | | | | | | | | DFS: | | | 11 | | | Conductor | | | 20 | 74 | J55 | 101 | 101 | | | | | | | | | | |
| | | | | | | | | | REPORT NO: | | | 11 | | | Surface | | | 13-3/8 | 55 | J55 | 663 | 663 | | | | | | | | | | |
| FIELD: | | | | | | | | | Phantom (Wolfcamp) | | | DOL: | | | 11 | | | Intermediate | | | 10-3/4 | 46 | J-55 | 5,290 | 5,290 | | | | | | | |
| ELEV: | | | | | | | | | 2,697 | | | RKB: | | | 21 | | | LAST BOP TEST: | | | 12/16/19 | | | Intermediate | | | 7-5/8 | 30 | HCL-80 | 11,025 | 11,025 | |
| MD: | | | | | | | | | 11,040 | | | TVD: | | | 10,749 | | | | | | | | | | | | | | | | | |
| 24 HR FTG: | | | | | | | | | | | | HRS DRLG: | | | | | | CSGH: | | | | | | | | | | | | | | |
| DRILLING FLUID | | | | | | | | | | | | | | | | | | SHOE TEST: | | | | | | | | | | | | | | |
| TIME | MW | FV | WL | 3RPM | 6RPM | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP | | | | | | | | | | | | |
| 18:00 | 9.7 | 27.0 | | | | 9.7 | 0 | 1 | 1 | 1 | 1 | 3 | 124,000 | | 0.10 | 0.40 | 2,000 | | 2.40 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | REDUCED PUMP RATES | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | PUMP | | | SPM | | | PRESS | | | DEPTH | | | | | |
| | | | | | | | | | | | | | | | | | | #1 | | | 50 | | | 465 | | | 10,023 | | | | | |
| | | | | | | | | | | | | | | | | | | #2 | | | 50 | | | 460 | | | 10,023 | | | | | |
| BIT DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NO. | | SIZE | | MAKE | | TYPE | | SER NO. | | NOZZLES | | RE-RUN | | IN | OUT | FEET | HRS | WOB | RPM | ROP | | | | | | | | | | | | |
| 5 | | 9.88 | | SMITH | | XS616 | | JP9326 | | 6X14 | | N | | 10,283 | 11,040 | 757 | 7.5 | 34 | 112 | 100.93 | | | | | | | | | | | | |
| 4 | | 9.88 | | SECURITY | | GT64DMO | | 13384414 | | 6X14 | | N | | 9,774 | 9,892 | 118 | 4.0 | 40 | | 29.5 | | | | | | | | | | | | |
| BIT NO. | 5 | INNER | 1 | OUTER | 2 | DULL | WT | LOC | S | SEAL | X | GAUGE | IN | OTHER | NO | RP | TD | | | | | | | | | | | | | | | |
| HYDRAULICS DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUMP | | MAKE | | MODEL | | LINER | | STK | | SPM | | PSI | | GPM | | GPS | | EFF % | | ECD | | AV DP | AV DC | BIT HHP | PUMP HHP | | | | | | | |
| 1 | | Weatherford | | EQ2200 | | 4.500 | | 12.000 | | 80 | | 2400 | | 75 | | 0.938 | | 97 | | 9.82 | | | | | | | | | | | | |
| 2 | | Weatherford | | EQ2200 | | 4.500 | | 12.000 | | | | | | | | | | | | | | | | | | | | | | | | |
| BHA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DESCRIPTION: | | 2nd Intermediate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LENGTH | | 862.12 | | BHA WT. AIR | | | | BHA WT. MUD | | | | HRS. ON JARS | | | | | | | | | | | | | | | | | | | | |
| ROT. WT. | | 290 | | P.U. WT. | | 360 | | S.O. WT. | | 245 | | TORQUE | | 17 | | | | | | | | | | | | | | | | | | |
| TIME MADE UP | | 16:15 | | DATE MADE UP | | 12/23/2019 | | TIME PULLED | | | | DATE PULLED | | | | | | | | | | | | | | | | | | | | |
| SURVEY DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MD | | ANGLE | | AZIMUTH | | TVD | | N/S | | COORDINATES | | E/W | | V. SECTION | | DLS | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CONSUMABLES | | DIESEL FUEL (gal) Rcvd/Used/On Hand: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | DRILL H ₂ O (gal) Rcvd/Used/On Hand: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPERATIONS TIME LOG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM | | TO | | HRS | | CODE | | | | | | | | | | | | | | | | Start MD | | End MD | | | | | | | | |
| 06:00 | | 11:30 | | 5.5 | | Run Csg & Cement | | Finish running 260 jts of 7 5/8", 29.7#, HCL-80, BTC, set @ 11025' Float collar @ 10938 | | | | | | | | | | | | | | 11040 | | 11040 | | | | | | | | |
| 11:30 | | 13:30 | | 2.0 | | Cond Mud & Circ | | Circ | | | | | | | | | | | | | | 11040 | | 11040 | | | | | | | | |
| 13:30 | | 15:00 | | 1.5 | | Cond Mud & Circ | | Wait on Nextier truck with cement | | | | | | | | | | | | | | 11040 | | 11040 | | | | | | | | |
| 15:00 | | 19:30 | | 4.5 | | Run Csg & Cement | | Hpjsm, test lines to 4000 psi, pumped 20 bbls gel spacer, ahead of 11.8 ppg lead cement; Pumped 1535 sks (511 bbls, 1.87 yield), followed by 15.6 ppg Tail cement , pumped 140 sks (30 bbls, 1.20 yield), displace w/ 502 H ₂ O , FCP 2500 psi at 2 bbls/min plug bumped with 3000 psi, floats held, bleed back 5 bbls. 50 bbls cement to surface. Rig down cements | | | | | | | | | | | | | | 11040 | | 11040 | | | | | | | | |
| 19:30 | | 20:00 | | 0.5 | | Other | | Flush out Surface Lines with Fresh Water | | | | | | | | | | | | | | 11040 | | 11040 | | | | | | | | |
| 20:00 | | 20: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |