



# Wellbore Details

APR 05 2019

DISTRICT II-ARTESIA O.C.D.

|                                    |                                         |                                              |                                |
|------------------------------------|-----------------------------------------|----------------------------------------------|--------------------------------|
| Well Name<br>HH SO 10 P3 23H       | Lease<br>HH SO 10 P3                    | Field Name<br>Purple Sage                    | Business Unit<br>Mid-Continent |
| Ground Elevation (ft)<br>3,278.00  | Original RKB Elevation (ft)<br>3,307.00 | Current RKB Elevation<br>3,307.00, 3/24/2017 | Mud Line Elevation (ft)        |
| Current KB to Ground (ft)<br>29.00 | Current KB to Mud Line (ft)             | Current KB to Csg Flange (ft)                | Water Depth (ft)               |
|                                    |                                         |                                              | Current KB to Tubing Head (ft) |

|          |                 |                       |                     |        |
|----------|-----------------|-----------------------|---------------------|--------|
| Type     | Logging Company | Date                  | Planned?            | Cased? |
| Wellbore | Job             | Depth Top (MD) (ftKB) | Bottom Depth (ftKB) |        |
| Comment  |                 |                       |                     |        |

|                                |                                  |                                |                                          |
|--------------------------------|----------------------------------|--------------------------------|------------------------------------------|
| Wellbore Name<br>Original Hole | Parent Wellbore<br>Original Hole | Directional Type<br>Horizontal | Start Depth (MD) (ftKB)                  |
| Alt. Wellbore Identifier       | TAML Classification<br>N/A       | TAML Functionality             | Casing Configuration<br>Class 1          |
| Bottom Hole Legal Location     | Wellbore UWI<br>300154393200     | Wellbore ChevNo<br>PJ8433-00   | Vertical Section Direction (*)<br>178.60 |

| Hole Size (in) | Start Date      | End Date        | Act Top (ftKB) | Act Btm (ftKB) | Prop Top (ftKB) | Prop Btm (ftKB) |
|----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|
| 24             | 3/1/2017 07:00  | 3/1/2017 13:00  | 29.0           | 150.0          | 19,500.0        |                 |
| 17 1/2         | 3/25/2017 03:15 | 3/25/2017 06:00 | 150.0          | 457.0          | 0.0             | 450.0           |
| 12 1/4         | 3/28/2017 06:15 | 4/9/2017 09:00  | 457.0          | 9,325.0        | 450.0           | 9,300.0         |
| 8 1/2          | 7/3/2017 15:30  | 7/16/2017 12:00 | 9,325.0        | 19,465.0       | 9,300.0         | 19,500.0        |

|                  |                  |                            |                           |                                   |                     |
|------------------|------------------|----------------------------|---------------------------|-----------------------------------|---------------------|
| Date<br>4/7/2017 | Type<br>Kick Off | Point or Interval<br>Point | Top Depth (ftKB)<br>8,518 | Depth Top (TVD) (ftKB)<br>8,501.7 | Method<br>Open-hole |
|------------------|------------------|----------------------------|---------------------------|-----------------------------------|---------------------|

| Type | Date       | PBTD (ftKB) | Depth (TVD) (ftKB) | Method                      | Com |
|------|------------|-------------|--------------------|-----------------------------|-----|
|      | 11/22/2018 | 19,240      | 9,161.6            | Deepest depth reached w/ CT |     |

| Formation Name | Prog Top (TVD SS) Override (ft(elv)) | Prog Top (TVD) (ftKB) | Prog Btm (TVD SS) Override (ft(elv)) | Prog Btm (TVD) (ftKB) | Drill Top MD (ftKB) | Drill Btm MD (ftKB) |
|----------------|--------------------------------------|-----------------------|--------------------------------------|-----------------------|---------------------|---------------------|
|                |                                      |                       |                                      |                       |                     |                     |

|                    |                   |                        |               |                                           |
|--------------------|-------------------|------------------------|---------------|-------------------------------------------|
| Description<br>MWD | Date<br>7/12/2017 | Definitive?<br>N       | Planned?<br>N | Job<br>Drill and Suspend, 3/24/2017 20:00 |
| Azimuth Tie In (*) | MD Tie In (ftKB)  | Inclination Tie In (*) | NSTie In (ft) | EWtie In (ft)                             |
|                    |                   |                        |               | TVDtie In (ftKB)                          |
| Comment            |                   |                        |               |                                           |

| Date      | MD (ftKB) | Incl (*) | Azm (*) | TVD (ftKB) | VS (ft) | NS (ft) | EW (ft) | DLS (*/100ft) | Method   | Survey Company |
|-----------|-----------|----------|---------|------------|---------|---------|---------|---------------|----------|----------------|
| 3/26/2017 | 0         | 0.00     | 0.00    | 0.00       | 0.00    | 0.00    | 0.00    | 0.00          | Magn MWD |                |
| 3/26/2017 | 171       | 0.40     | 304.40  | 171.00     | -0.35   | 0.34    | -0.49   | 0.23          | Magn MWD |                |
| 3/26/2017 | 267       | 0.90     | 199.40  | 266.99     | 0.16    | -0.18   | -1.02   | 1.12          | Magn MWD |                |
| 3/26/2017 | 433       | 1.00     | 205.40  | 432.97     | 2.67    | -2.72   | -2.07   | 0.08          | Magn MWD |                |
| 3/26/2017 | 502       | 1.37     | 189.10  | 501.96     | 4.02    | -4.08   | -2.46   | 0.72          | Magn MWD |                |
| 3/26/2017 | 597       | 1.45     | 202.26  | 596.93     | 6.24    | -6.31   | -3.10   | 0.35          | Magn MWD |                |
| 3/26/2017 | 721       | 1.81     | 207.13  | 720.88     | 9.39    | -9.51   | -4.58   | 0.31          | Magn MWD |                |
| 3/26/2017 | 783       | 2.03     | 209.82  | 782.84     | 11.19   | -11.33  | -5.58   | 0.38          | Magn MWD |                |
| 3/26/2017 | 876       | 1.29     | 124.71  | 875.81     | 13.22   | -13.36  | -5.54   | 2.48          | Magn MWD |                |
| 3/26/2017 | 971       | 1.27     | 128.02  | 970.79     | 14.52   | -14.62  | -3.83   | 0.08          | Magn MWD |                |
| 3/26/2017 | 1,066     | 1.13     | 146.96  | 1,065.77   | 15.98   | -16.05  | -2.49   | 0.44          | Magn MWD |                |
| 3/26/2017 | 1,161     | 0.92     | 166.55  | 1,160.76   | 17.53   | -17.58  | -1.80   | 0.43          | Magn MWD |                |
| 3/26/2017 | 1,256     | 0.79     | 144.79  | 1,255.75   | 18.82   | -18.85  | -1.24   | 0.37          | Magn MWD |                |
| 3/26/2017 | 1,351     | 0.91     | 155.93  | 1,350.73   | 20.06   | -20.08  | -0.56   | 0.21          | Magn MWD |                |
| 3/26/2017 | 1,446     | 0.68     | 148.33  | 1,445.73   | 21.24   | -21.25  | 0.04    | 0.27          | Magn MWD |                |
| 3/26/2017 | 1,542     | 0.57     | 200.32  | 1,541.72   | 22.18   | -22.18  | 0.18    | 0.58          | Magn MWD |                |
| 3/26/2017 | 1,636     | 0.67     | 108.33  | 1,635.72   | 22.80   | -22.79  | 0.54    | 0.95          | Magn MWD |                |
| 3/26/2017 | 1,731     | 1.76     | 93.97   | 1,730.69   | 23.12   | -23.07  | 2.52    | 1.18          | Magn MWD |                |
| 3/26/2017 | 1,825     | 1.19     | 76.72   | 1,824.66   | 23.06   | -22.94  | 4.91    | 0.76          | Magn MWD |                |
| 3/26/2017 | 1,919     | 1.54     | 35.34   | 1,918.64   | 21.84   | -21.69  | 6.59    | 1.08          | Magn MWD |                |
| 3/26/2017 | 2,014     | 2.30     | 58.75   | 2,013.59   | 19.87   | -19.66  | 8.96    | 1.13          | Magn MWD |                |
| 3/26/2017 | 2,109     | 3.26     | 68.02   | 2,108.47   | 17.97   | -17.66  | 13.09   | 1.11          | Magn MWD |                |
| 3/26/2017 | 2,204     | 1.24     | 52.26   | 2,203.40   | 16.41   | -16.02  | 16.41   | 2.20          | Magn MWD |                |



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| Ground Elevation (ft)<br>3,278.00  | Original RKB Elevation (ft)<br>3,307.00 | Current RKB Elevation<br>3,307.00, 3/24/2017 | Mud Line Elevation (ft)        |
| Current KB to Ground (ft)<br>29.00 | Current KB to Mud Line (ft)             | Current KB to Csg Flange (ft)                | Water Depth (ft)               |
|                                    |                                         |                                              | Current KB to Tubing Head (ft) |

| Survey Data |           |          |         |            |         |         |         |               |          |                |
|-------------|-----------|----------|---------|------------|---------|---------|---------|---------------|----------|----------------|
| Date        | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | VS (ft) | NS (ft) | EW (ft) | DLS (°/100ft) | Method   | Survey Company |
| 3/26/2017   | 2,298     | 1.47     | 212.23  | 2,297.39   | 16.81   | -16.41  | 16.57   | 2.84          | Magn MWD |                |
| 3/26/2017   | 2,393     | 3.30     | 197.39  | 2,392.30   | 20.42   | -20.05  | 15.11   | 2.02          | Magn MWD |                |
| 3/26/2017   | 2,488     | 4.67     | 190.37  | 2,487.07   | 26.79   | -26.47  | 13.59   | 1.53          | Magn MWD |                |
| 3/26/2017   | 2,583     | 6.30     | 188.77  | 2,581.63   | 35.71   | -35.42  | 12.10   | 1.72          | Magn MWD |                |
| 3/26/2017   | 2,678     | 6.22     | 187.98  | 2,676.07   | 45.92   | -45.67  | 10.59   | 0.12          | Magn MWD |                |
| 3/26/2017   | 2,773     | 6.65     | 189.43  | 2,770.47   | 56.40   | -56.20  | 8.98    | 0.48          | Magn MWD |                |
| 3/26/2017   | 2,868     | 6.81     | 188.04  | 2,864.81   | 67.36   | -67.20  | 7.29    | 0.24          | Magn MWD |                |
| 3/26/2017   | 2,963     | 6.25     | 182.92  | 2,959.20   | 78.07   | -77.94  | 6.24    | 0.85          | Magn MWD |                |
| 3/26/2017   | 3,059     | 5.32     | 173.93  | 3,054.71   | 87.72   | -87.59  | 6.44    | 1.35          | Magn MWD |                |
| 3/26/2017   | 3,154     | 5.37     | 173.12  | 3,149.30   | 96.53   | -96.38  | 7.44    | 0.10          | Magn MWD |                |
| 3/26/2017   | 3,249     | 5.30     | 172.15  | 3,243.88   | 105.32  | -105.14 | 8.57    | 0.12          | Magn MWD |                |
| 3/26/2017   | 3,344     | 5.56     | 172.89  | 3,338.46   | 114.26  | -114.05 | 9.74    | 0.28          | Magn MWD |                |
| 3/26/2017   | 3,439     | 5.46     | 168.20  | 3,433.02   | 123.28  | -123.04 | 11.23   | 0.49          | Magn MWD |                |
| 3/26/2017   | 3,534     | 5.00     | 148.71  | 3,527.63   | 131.32  | -131.01 | 14.31   | 1.92          | Magn MWD |                |
| 3/26/2017   | 3,629     | 5.12     | 148.20  | 3,622.26   | 138.56  | -138.15 | 18.69   | 0.13          | Magn MWD |                |
| 3/26/2017   | 3,723     | 5.35     | 149.16  | 3,715.87   | 146.00  | -145.47 | 23.15   | 0.26          | Magn MWD |                |
| 3/26/2017   | 3,817     | 5.80     | 150.45  | 3,809.42   | 154.00  | -153.37 | 27.74   | 0.50          | Magn MWD |                |
| 3/26/2017   | 3,912     | 5.60     | 151.38  | 3,903.95   | 162.35  | -161.61 | 32.33   | 0.23          | Magn MWD |                |
| 3/26/2017   | 4,006     | 5.40     | 149.82  | 3,997.52   | 170.31  | -169.46 | 36.75   | 0.27          | Magn MWD |                |
| 3/26/2017   | 4,101     | 5.62     | 149.12  | 4,092.08   | 178.28  | -177.32 | 41.38   | 0.24          | Magn MWD |                |
| 3/26/2017   | 4,196     | 5.82     | 150.41  | 4,186.61   | 186.57  | -185.50 | 46.15   | 0.25          | Magn MWD |                |
| 3/26/2017   | 4,290     | 4.84     | 153.47  | 4,280.20   | 194.36  | -193.19 | 50.27   | 1.09          | Magn MWD |                |
| 3/26/2017   | 4,385     | 4.16     | 160.60  | 4,374.91   | 201.27  | -200.03 | 53.21   | 0.93          | Magn MWD |                |
| 3/26/2017   | 4,478     | 4.26     | 161.36  | 4,467.66   | 207.77  | -206.48 | 55.43   | 0.12          | Magn MWD |                |
| 3/26/2017   | 4,572     | 4.34     | 162.76  | 4,561.39   | 214.53  | -213.19 | 57.60   | 0.14          | Magn MWD |                |
| 3/26/2017   | 4,666     | 4.11     | 162.73  | 4,655.14   | 221.19  | -219.80 | 59.65   | 0.24          | Magn MWD |                |
| 3/26/2017   | 4,761     | 4.17     | 161.49  | 4,749.89   | 227.77  | -226.33 | 61.76   | 0.11          | Magn MWD |                |
| 3/26/2017   | 4,855     | 4.29     | 161.51  | 4,843.63   | 234.40  | -232.90 | 63.96   | 0.13          | Magn MWD |                |
| 3/26/2017   | 4,949     | 4.46     | 167.06  | 4,937.36   | 241.34  | -239.80 | 65.90   | 0.49          | Magn MWD |                |
| 3/26/2017   | 5,043     | 4.57     | 165.87  | 5,031.07   | 248.57  | -246.99 | 67.63   | 0.15          | Magn MWD |                |
| 3/26/2017   | 5,138     | 4.92     | 164.98  | 5,125.74   | 256.22  | -254.60 | 69.61   | 0.38          | Magn MWD |                |
| 3/26/2017   | 5,233     | 5.10     | 166.91  | 5,220.38   | 264.32  | -262.64 | 71.62   | 0.26          | Magn MWD |                |
| 3/26/2017   | 5,329     | 5.42     | 165.59  | 5,315.98   | 272.91  | -271.19 | 73.71   | 0.36          | Magn MWD |                |
| 3/26/2017   | 5,424     | 5.49     | 165.48  | 5,410.55   | 281.71  | -279.94 | 75.97   | 0.07          | Magn MWD |                |
| 3/26/2017   | 5,518     | 5.66     | 165.31  | 5,504.10   | 290.60  | -288.77 | 78.27   | 0.18          | Magn MWD |                |
| 3/26/2017   | 5,614     | 5.37     | 168.90  | 5,599.66   | 299.63  | -297.76 | 80.34   | 0.47          | Magn MWD |                |
| 3/26/2017   | 5,709     | 4.26     | 171.60  | 5,694.32   | 307.52  | -305.61 | 81.71   | 1.19          | Magn MWD |                |
| 3/26/2017   | 5,804     | 2.19     | 174.15  | 5,789.16   | 312.83  | -310.91 | 82.41   | 2.18          | Magn MWD |                |
| 3/26/2017   | 5,898     | 0.87     | 168.52  | 5,883.13   | 315.32  | -313.40 | 82.74   | 1.41          | Magn MWD |                |
| 3/26/2017   | 5,992     | 0.77     | 173.43  | 5,977.12   | 316.66  | -314.72 | 82.95   | 0.13          | Magn MWD |                |
| 3/26/2017   | 6,086     | 1.23     | 178.75  | 6,071.10   | 318.29  | -316.36 | 83.04   | 0.50          | Magn MWD |                |
| 3/26/2017   | 6,181     | 1.33     | 201.19  | 6,166.08   | 320.33  | -318.41 | 82.67   | 0.53          | Magn MWD |                |
| 3/26/2017   | 6,276     | 1.53     | 213.61  | 6,261.05   | 322.39  | -320.49 | 81.57   | 0.39          | Magn MWD |                |
| 3/26/2017   | 6,370     | 1.60     | 223.32  | 6,355.02   | 324.35  | -322.49 | 79.97   | 0.29          | Magn MWD |                |
| 3/26/2017   | 6,465     | 1.80     | 234.62  | 6,449.98   | 326.13  | -324.32 | 77.85   | 0.41          | Magn MWD |                |
| 4/3/2017    | 6,560     | 2.07     | 220.98  | 6,544.92   | 328.23  | -326.48 | 75.50   | 0.56          | Magn MWD |                |
| 4/3/2017    | 6,655     | 2.28     | 219.07  | 6,639.85   | 330.93  | -329.24 | 73.19   | 0.23          | Magn MWD |                |
| 4/3/2017    | 6,750     | 2.01     | 226.07  | 6,734.79   | 333.50  | -331.86 | 70.80   | 0.40          | Magn MWD |                |
| 4/4/2017    | 6,844     | 1.97     | 213.08  | 6,828.73   | 335.94  | -334.36 | 68.73   | 0.48          | Magn MWD |                |
| 4/4/2017    | 6,939     | 2.01     | 207.98  | 6,923.67   | 338.74  | -337.20 | 67.06   | 0.19          | Magn MWD |                |
| 4/4/2017    | 7,034     | 2.06     | 210.41  | 7,018.61   | 341.64  | -340.15 | 65.41   | 0.10          | Magn MWD |                |
| 4/4/2017    | 7,129     | 1.97     | 218.27  | 7,113.55   | 344.35  | -342.90 | 63.53   | 0.31          | Magn MWD |                |
| 4/4/2017    | 7,224     | 2.21     | 218.73  | 7,208.49   | 347.01  | -345.61 | 61.38   | 0.25          | Magn MWD |                |
| 4/4/2017    | 7,318     | 2.38     | 224.15  | 7,303.42   | 349.76  | -348.43 | 58.88   | 0.29          | Magn MWD |                |
| 4/4/2017    | 7,413     | 2.38     | 225.03  | 7,397.33   | 352.50  | -351.23 | 56.11   | 0.04          | Magn MWD |                |
| 4/4/2017    | 7,506     | 2.24     | 217.12  | 7,490.26   | 355.25  | -354.05 | 53.65   | 0.37          | Magn MWD |                |
| 4/5/2017    | 7,601     | 2.54     | 204.92  | 7,585.18   | 358.59  | -357.44 | 51.64   | 0.62          | Magn MWD |                |



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|                                    |                                         |                                              |                                |
|------------------------------------|-----------------------------------------|----------------------------------------------|--------------------------------|
| Well Name<br>HH SO 10 P3 23H       | Lease<br>HH SO 10 P3                    | Field Name<br>Purple Sage                    | Business Unit<br>Mid-Continent |
| Ground Elevation (ft)<br>3,278.00  | Original RKB Elevation (ft)<br>3,307.00 | Current RKB Elevation<br>3,307.00, 3/24/2017 | Mud Line Elevation (ft)        |
| Current KB to Ground (ft)<br>29.00 | Current KB to Mud Line (ft)             | Current KB to Csg Flange (ft)                | Water Depth (ft)               |
|                                    |                                         |                                              | Current KB to Tubing Head (ft) |

| Survey Data |           |          |         |            |          |           |         |               |          |                |
|-------------|-----------|----------|---------|------------|----------|-----------|---------|---------------|----------|----------------|
| Date        | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | -VS (ft) | NS (ft)   | EW (ft) | DLS (°/100ft) | Method   | Survey Company |
| 4/5/2017    | 7,696     | 2.34     | 208.30  | 7,680.09   | 362.16   | -361.05   | 49.84   | 0.26          | Magn MWD |                |
| 4/5/2017    | 7,791     | 2.04     | 199.38  | 7,775.02   | 365.43   | -364.36   | 48.36   | 0.48          | Magn MWD |                |
| 4/5/2017    | 7,886     | 2.47     | 187.48  | 7,869.95   | 369.03   | -367.98   | 47.53   | 0.67          | Magn MWD |                |
| 4/5/2017    | 7,981     | 2.39     | 186.84  | 7,964.86   | 373.02   | -371.98   | 47.03   | 0.09          | Magn MWD |                |
| 4/5/2017    | 8,076     | 1.73     | 178.54  | 8,059.80   | 376.41   | -375.38   | 46.83   | 0.76          | Magn MWD |                |
| 4/5/2017    | 8,171     | 1.39     | 173.09  | 8,154.77   | 378.99   | -377.96   | 47.00   | 0.39          | Magn MWD |                |
| 4/6/2017    | 8,266     | 0.84     | 179.40  | 8,249.75   | 380.83   | -379.80   | 47.15   | 0.59          | Magn MWD |                |
| 4/6/2017    | 8,361     | 0.22     | 197.31  | 8,344.74   | 381.70   | -380.67   | 47.10   | 0.67          | Magn MWD |                |
| 4/7/2017    | 8,465     | 0.37     | 213.13  | 8,448.74   | 382.17   | -381.14   | 46.86   | 0.16          | Magn MWD |                |
| 4/7/2017    | 8,560     | 2.18     | 170.96  | 8,543.72   | 384.21   | -383.18   | 46.97   | 2.02          | Magn MWD |                |
| 4/7/2017    | 8,655     | 8.12     | 178.53  | 8,638.29   | 392.72   | -391.68   | 47.43   | 6.28          | Magn MWD |                |
| 4/7/2017    | 8,702     | 12.43    | 181.80  | 8,684.53   | 401.09   | -400.06   | 47.36   | 9.25          | Magn MWD |                |
| 4/7/2017    | 8,749     | 16.25    | 182.62  | 8,730.05   | 412.71   | -411.69   | 46.90   | 8.14          | Magn MWD |                |
| 4/7/2017    | 8,844     | 27.70    | 178.39  | 8,818.01   | 448.17   | -447.16   | 46.91   | 12.16         | Magn MWD |                |
| 4/7/2017    | 8,889     | 34.05    | 177.67  | 8,856.61   | 471.25   | -470.22   | 47.72   | 14.13         | Magn MWD |                |
| 4/8/2017    | 8,939     | 40.21    | 178.18  | 8,896.46   | 501.41   | -500.37   | 48.80   | 12.34         | Magn MWD |                |
| 4/8/2017    | 8,987     | 47.13    | 179.59  | 8,931.16   | 534.53   | -533.49   | 49.42   | 14.56         | Magn MWD |                |
| 4/9/2017    | 9,033     | 53.18    | 180.76  | 8,960.62   | 569.82   | -568.79   | 49.29   | 13.30         | Magn MWD |                |
| 4/9/2017    | 9,081     | 57.07    | 180.94  | 8,988.06   | 609.16   | -608.15   | 48.71   | 8.11          | Magn MWD |                |
| 4/9/2017    | 9,128     | 59.98    | 180.38  | 9,012.59   | 649.22   | -648.23   | 48.25   | 6.27          | Magn MWD |                |
| 4/9/2017    | 9,175     | 62.67    | 178.48  | 9,035.15   | 690.44   | -689.46   | 48.67   | 6.73          | Magn MWD |                |
| 4/9/2017    | 9,222     | 64.29    | 177.91  | 9,056.13   | 732.49   | -731.49   | 50.00   | 3.61          | Magn MWD |                |
| 4/9/2017    | 9,272     | 65.22    | 177.61  | 9,077.46   | 777.71   | -776.68   | 51.76   | 1.94          | Magn MWD |                |
| 7/3/2017    | 9,359     | 66.04    | 176.49  | 9,113.36   | 856.93   | -855.82   | 55.84   | 1.50          | Magn MWD |                |
| 7/3/2017    | 9,454     | 66.76    | 176.22  | 9,151.39   | 943.92   | -942.70   | 61.38   | 0.80          | Magn MWD |                |
| 7/3/2017    | 9,549     | 73.54    | 176.80  | 9,183.63   | 1,033.16 | -1,031.84 | 66.81   | 7.16          | Magn MWD |                |
| 7/4/2017    | 9,644     | 72.60    | 176.93  | 9,211.29   | 1,124.00 | -1,122.58 | 71.78   | 1.00          | Magn MWD |                |
| 7/4/2017    | 9,739     | 75.86    | 177.60  | 9,237.11   | 1,215.39 | -1,213.89 | 76.13   | 3.50          | Magn MWD |                |
| 7/4/2017    | 9,834     | 79.64    | 178.53  | 9,257.26   | 1,308.20 | -1,306.66 | 79.26   | 4.09          | Magn MWD |                |
| 7/4/2017    | 9,928     | 82.72    | 178.87  | 9,271.67   | 1,401.08 | -1,399.51 | 81.37   | 3.30          | Magn MWD |                |
| 7/4/2017    | 10,023    | 84.08    | 178.69  | 9,282.59   | 1,495.45 | -1,493.86 | 83.38   | 1.44          | Magn MWD |                |
| 7/4/2017    | 10,118    | 87.08    | 179.29  | 9,289.91   | 1,590.15 | -1,588.55 | 85.05   | 3.22          | Magn MWD |                |
| 7/4/2017    | 10,213    | 88.83    | 180.01  | 9,293.30   | 1,685.07 | -1,683.48 | 85.63   | 1.99          | Magn MWD |                |
| 7/4/2017    | 10,308    | 88.27    | 179.09  | 9,295.71   | 1,780.02 | -1,778.45 | 86.37   | 1.13          | Magn MWD |                |
| 7/4/2017    | 10,403    | 87.83    | 179.10  | 9,298.94   | 1,874.97 | -1,873.38 | 87.87   | 0.46          | Magn MWD |                |
| 7/4/2017    | 10,498    | 87.77    | 179.98  | 9,302.59   | 1,969.88 | -1,968.30 | 88.63   | 0.93          | Magn MWD |                |
| 7/4/2017    | 10,593    | 87.26    | 178.67  | 9,306.70   | 2,064.78 | -2,063.21 | 89.75   | 1.48          | Magn MWD |                |
| 7/4/2017    | 10,688    | 87.10    | 179.24  | 9,311.38   | 2,159.67 | -2,158.07 | 91.48   | 0.62          | Magn MWD |                |
| 7/4/2017    | 10,783    | 86.61    | 179.01  | 9,316.59   | 2,254.52 | -2,252.92 | 92.93   | 0.57          | Magn MWD |                |
| 7/5/2017    | 10,877    | 86.44    | 179.30  | 9,322.29   | 2,348.34 | -2,346.74 | 94.31   | 0.36          | Magn MWD |                |
| 7/5/2017    | 10,972    | 88.87    | 177.05  | 9,326.18   | 2,443.25 | -2,441.60 | 97.34   | 3.48          | Magn MWD |                |
| 7/5/2017    | 11,065    | 88.92    | 176.14  | 9,327.97   | 2,536.17 | -2,534.41 | 102.86  | 0.98          | Magn MWD |                |
| 7/5/2017    | 11,157    | 88.73    | 176.73  | 9,329.86   | 2,628.08 | -2,626.22 | 108.58  | 0.67          | Magn MWD |                |
| 7/5/2017    | 11,250    | 88.77    | 176.90  | 9,331.88   | 2,721.02 | -2,719.05 | 113.75  | 0.19          | Magn MWD |                |
| 7/5/2017    | 11,342    | 88.24    | 175.56  | 9,334.28   | 2,812.91 | -2,810.82 | 119.79  | 1.57          | Magn MWD |                |
| 7/5/2017    | 11,435    | 87.92    | 175.81  | 9,337.40   | 2,905.73 | -2,903.50 | 126.79  | 0.44          | Magn MWD |                |
| 7/5/2017    | 11,528    | 87.45    | 175.24  | 9,341.16   | 2,998.52 | -2,996.14 | 134.04  | 0.79          | Magn MWD |                |
| 7/5/2017    | 11,620    | 87.76    | 176.11  | 9,345.00   | 3,090.32 | -3,087.80 | 140.97  | 1.00          | Magn MWD |                |
| 7/5/2017    | 11,715    | 86.27    | 175.35  | 9,349.95   | 3,185.07 | -3,182.40 | 148.03  | 1.76          | Magn MWD |                |
| 7/5/2017    | 11,809    | 87.83    | 174.45  | 9,354.79   | 3,278.75 | -3,275.90 | 156.38  | 1.92          | Magn MWD |                |
| 7/5/2017    | 11,904    | 90.00    | 175.00  | 9,356.59   | 3,373.51 | -3,370.48 | 165.11  | 2.36          | Magn MWD |                |
| 7/5/2017    | 11,999    | 89.71    | 174.74  | 9,356.83   | 3,468.30 | -3,465.10 | 173.60  | 0.41          | Magn MWD |                |
| 7/5/2017    | 12,093    | 89.85    | 176.27  | 9,357.19   | 3,562.16 | -3,558.80 | 180.97  | 1.63          | Magn MWD |                |
| 7/5/2017    | 12,188    | 92.47    | 178.90  | 9,355.26   | 3,657.11 | -3,653.68 | 184.97  | 3.91          | Magn MWD |                |
| 7/5/2017    | 12,283    | 89.91    | 177.48  | 9,353.29   | 3,752.08 | -3,748.61 | 187.97  | 3.08          | Magn MWD |                |
| 7/6/2017    | 12,378    | 88.24    | 174.90  | 9,354.82   | 3,846.97 | -3,843.37 | 194.28  | 3.23          | Magn MWD |                |
| 7/6/2017    | 12,473    | 88.34    | 176.38  | 9,357.66   | 3,941.80 | -3,938.05 | 201.50  | 1.56          | Magn MWD |                |



# Wellbore Details

APR 05 2019

DISTRICT LARTESIA O.C.D.

|                                    |                                         |                                              |                                |
|------------------------------------|-----------------------------------------|----------------------------------------------|--------------------------------|
| Well Name<br>HH SO 10 P3 23H       | Lease<br>HH SO 10 P3                    | Field Name<br>Purple Sage                    | Business Unit<br>Mid-Continent |
| Ground Elevation (ft)<br>3,278.00  | Original RKB Elevation (ft)<br>3,307.00 | Current RKB Elevation<br>3,307.00, 3/24/2017 | Mud Line Elevation (ft)        |
| Current KB to Ground (ft)<br>29.00 | Current KB to Mud Line (ft)             | Current KB to Csg Flange (ft)                | Water Depth (ft)               |
|                                    |                                         | Current KB to Tubing Head (ft)               |                                |

| Survey Data |           |          |         |            |          |           |         |               |          |                |
|-------------|-----------|----------|---------|------------|----------|-----------|---------|---------------|----------|----------------|
| Date        | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | VS (ft)  | NS (ft)   | EW (ft) | DLS (°/100ft) | Method   | Survey Company |
| 7/6/2017    | 12,567    | 90.00    | 178.99  | 9,359.02   | 4,035.77 | -4,031.95 | 205.30  | 3.29          | Magn MWD |                |
| 7/6/2017    | 12,661    | 89.24    | 178.18  | 9,359.64   | 4,129.76 | -4,125.92 | 207.62  | 1.18          | Magn MWD |                |
| 7/6/2017    | 12,756    | 90.51    | 179.32  | 9,359.85   | 4,224.76 | -4,220.90 | 209.69  | 1.80          | Magn MWD |                |
| 7/6/2017    | 12,852    | 90.74    | 179.76  | 9,358.80   | 4,320.74 | -4,316.89 | 210.46  | 0.52          | Magn MWD |                |
| 7/6/2017    | 12,946    | 89.91    | 179.41  | 9,358.27   | 4,414.72 | -4,410.88 | 211.14  | 0.96          | Magn MWD |                |
| 7/6/2017    | 13,041    | 90.00    | 179.46  | 9,358.35   | 4,509.71 | -4,505.88 | 212.08  | 0.11          | Magn MWD |                |
| 7/6/2017    | 13,136    | 90.29    | 180.09  | 9,358.11   | 4,604.69 | -4,600.87 | 212.45  | 0.73          | Magn MWD |                |
| 7/6/2017    | 13,231    | 88.55    | 178.30  | 9,359.07   | 4,699.67 | -4,695.85 | 213.79  | 2.63          | Magn MWD |                |
| 7/6/2017    | 13,326    | 90.82    | 179.75  | 9,359.59   | 4,794.66 | -4,790.83 | 215.40  | 2.84          | Magn MWD |                |
| 7/6/2017    | 13,420    | 92.84    | 179.68  | 9,356.59   | 4,888.59 | -4,884.78 | 215.87  | 2.15          | Magn MWD |                |
| 7/6/2017    | 13,515    | 92.69    | 180.21  | 9,352.00   | 4,983.45 | -4,979.66 | 215.96  | 0.58          | Magn MWD |                |
| 7/6/2017    | 13,609    | 93.56    | 180.71  | 9,346.88   | 5,077.26 | -5,073.52 | 215.21  | 1.07          | Magn MWD |                |
| 7/6/2017    | 13,704    | 92.11    | 179.36  | 9,342.18   | 5,172.11 | -5,168.40 | 215.15  | 2.08          | Magn MWD |                |
| 7/7/2017    | 13,799    | 90.52    | 180.25  | 9,340.00   | 5,267.06 | -5,263.37 | 215.47  | 1.92          | Magn MWD |                |
| 7/7/2017    | 13,894    | 90.14    | 180.27  | 9,339.45   | 5,362.02 | -5,358.37 | 215.04  | 0.40          | Magn MWD |                |
| 7/7/2017    | 13,989    | 89.54    | 178.92  | 9,339.72   | 5,457.00 | -5,453.36 | 215.71  | 1.56          | Magn MWD |                |
| 7/7/2017    | 14,084    | 88.76    | 179.53  | 9,341.13   | 5,551.99 | -5,548.34 | 217.00  | 1.04          | Magn MWD |                |
| 7/7/2017    | 14,179    | 87.61    | 178.21  | 9,344.14   | 5,646.93 | -5,643.27 | 218.87  | 1.84          | Magn MWD |                |
| 7/7/2017    | 14,275    | 86.29    | 178.65  | 9,349.25   | 5,742.80 | -5,739.10 | 221.50  | 1.45          | Magn MWD |                |
| 7/7/2017    | 14,370    | 85.80    | 179.11  | 9,355.80   | 5,837.57 | -5,833.85 | 223.35  | 0.71          | Magn MWD |                |
| 7/7/2017    | 14,465    | 88.15    | 178.70  | 9,360.81   | 5,932.43 | -5,928.70 | 225.16  | 2.51          | Magn MWD |                |
| 7/7/2017    | 14,560    | 88.33    | 178.15  | 9,363.73   | 6,027.38 | -6,023.61 | 227.77  | 0.61          | Magn MWD |                |
| 7/9/2017    | 14,648    | 91.57    | 178.06  | 9,363.81   | 6,115.37 | -6,111.55 | 230.68  | 3.68          | Magn MWD |                |
| 7/9/2017    | 14,743    | 92.99    | 177.20  | 9,360.03   | 6,210.27 | -6,206.39 | 234.61  | 1.75          | Magn MWD |                |
| 7/9/2017    | 14,838    | 93.32    | 176.35  | 9,354.80   | 6,305.08 | -6,301.10 | 239.94  | 0.96          | Magn MWD |                |
| 7/9/2017    | 14,933    | 94.40    | 176.55  | 9,348.40   | 6,399.80 | -6,395.70 | 245.81  | 1.16          | Magn MWD |                |
| 7/9/2017    | 15,027    | 95.50    | 176.84  | 9,340.29   | 6,493.39 | -6,489.19 | 251.21  | 1.21          | Magn MWD |                |
| 7/9/2017    | 15,121    | 96.54    | 177.97  | 9,330.43   | 6,586.85 | -6,582.58 | 255.44  | 1.63          | Magn MWD |                |
| 7/9/2017    | 15,216    | 93.06    | 177.94  | 9,322.49   | 6,681.50 | -6,677.17 | 258.82  | 3.66          | Magn MWD |                |
| 7/9/2017    | 15,311    | 93.94    | 177.62  | 9,316.69   | 6,776.31 | -6,771.92 | 262.50  | 0.99          | Magn MWD |                |
| 7/9/2017    | 15,406    | 91.62    | 178.26  | 9,312.08   | 6,871.19 | -6,866.74 | 265.91  | 2.53          | Magn MWD |                |
| 7/9/2017    | 15,501    | 94.40    | 178.41  | 9,307.09   | 6,966.04 | -6,961.56 | 268.66  | 2.93          | Magn MWD |                |
| 7/9/2017    | 15,596    | 93.13    | 178.30  | 9,300.85   | 7,060.84 | -7,056.31 | 271.38  | 1.34          | Magn MWD |                |
| 7/9/2017    | 15,691    | 91.85    | 179.98  | 9,296.72   | 7,155.74 | -7,151.21 | 272.81  | 2.22          | Magn MWD |                |
| 7/9/2017    | 15,786    | 91.88    | 180.45  | 9,293.63   | 7,250.65 | -7,246.15 | 272.45  | 0.50          | Magn MWD |                |
| 7/9/2017    | 15,880    | 91.62    | 179.37  | 9,290.76   | 7,344.58 | -7,340.11 | 272.60  | 1.18          | Magn MWD |                |
| 7/10/2017   | 15,974    | 90.80    | 178.43  | 9,288.78   | 7,438.55 | -7,434.07 | 274.40  | 1.33          | Magn MWD |                |
| 7/10/2017   | 16,069    | 92.73    | 179.70  | 9,285.85   | 7,533.50 | -7,529.01 | 275.95  | 2.43          | Magn MWD |                |
| 7/10/2017   | 16,164    | 93.82    | 178.40  | 9,280.42   | 7,628.34 | -7,623.83 | 277.52  | 1.78          | Magn MWD |                |
| 7/10/2017   | 16,259    | 92.71    | 180.34  | 9,275.01   | 7,723.17 | -7,718.67 | 278.57  | 2.35          | Magn MWD |                |
| 7/10/2017   | 16,354    | 92.52    | 179.88  | 9,270.68   | 7,818.04 | -7,813.57 | 278.38  | 0.52          | Magn MWD |                |
| 7/10/2017   | 16,449    | 92.82    | 180.27  | 9,266.25   | 7,912.90 | -7,908.46 | 278.26  | 0.52          | Magn MWD |                |
| 7/10/2017   | 16,544    | 92.74    | 178.51  | 9,261.65   | 8,007.78 | -8,003.34 | 279.27  | 1.85          | Magn MWD |                |
| 7/10/2017   | 16,639    | 93.95    | 178.69  | 9,256.10   | 8,102.61 | -8,098.15 | 281.59  | 1.29          | Magn MWD |                |
| 7/10/2017   | 16,734    | 92.97    | 179.78  | 9,250.37   | 8,197.43 | -8,192.97 | 282.85  | 1.54          | Magn MWD |                |
| 7/10/2017   | 16,829    | 91.55    | 179.71  | 9,246.62   | 8,292.34 | -8,287.89 | 283.27  | 1.50          | Magn MWD |                |
| 7/10/2017   | 16,924    | 90.54    | 178.03  | 9,244.89   | 8,387.32 | -8,382.85 | 285.15  | 2.06          | Magn MWD |                |
| 7/10/2017   | 17,018    | 90.27    | 177.86  | 9,244.23   | 8,481.31 | -8,476.79 | 288.52  | 0.34          | Magn MWD |                |
| 7/10/2017   | 17,113    | 89.29    | 179.09  | 9,244.59   | 8,576.30 | -8,571.75 | 291.05  | 1.66          | Magn MWD |                |
| 7/11/2017   | 17,208    | 89.70    | 179.05  | 9,245.43   | 8,671.30 | -8,666.73 | 292.59  | 0.43          | Magn MWD |                |
| 7/11/2017   | 17,303    | 92.08    | 180.93  | 9,243.95   | 8,766.25 | -8,761.71 | 292.61  | 3.19          | Magn MWD |                |
| 7/11/2017   | 17,398    | 92.39    | 181.34  | 9,240.25   | 8,861.08 | -8,856.62 | 290.73  | 0.54          | Magn MWD |                |
| 7/11/2017   | 17,493    | 91.00    | 180.18  | 9,237.44   | 8,955.97 | -8,951.57 | 289.47  | 1.91          | Magn MWD |                |
| 7/11/2017   | 17,588    | 91.36    | 179.56  | 9,235.48   | 9,050.92 | -9,046.55 | 289.68  | 0.75          | Magn MWD |                |
| 7/11/2017   | 17,682    | 94.13    | 182.22  | 9,230.98   | 9,144.72 | -9,140.41 | 288.23  | 4.08          | Magn MWD |                |
| 7/11/2017   | 17,776    | 94.46    | 180.71  | 9,223.94   | 9,238.34 | -9,234.11 | 285.83  | 1.64          | Magn MWD |                |
| 7/11/2017   | 17,871    | 92.25    | 179.49  | 9,218.38   | 9,333.14 | -9,328.94 | 285.67  | 2.66          | Magn MWD |                |



# Wellbore Details

|                                    |                                         |                                              |                                |                  |
|------------------------------------|-----------------------------------------|----------------------------------------------|--------------------------------|------------------|
| Well Name<br>HH SO 10 P3 23H       | Lease<br>HH SO 10 P3                    | Field Name<br>Purple Sage                    | Business Unit<br>Mid-Continent |                  |
| Ground Elevation (ft)<br>3,278.00  | Original RKB Elevation (ft)<br>3,307.00 | Current RKB Elevation<br>3,307.00, 3/24/2017 | Mud Line Elevation (ft)        | Water Depth (ft) |
| Current KB to Ground (ft)<br>29.00 | Current KB to Mud Line (ft)             | Current KB to Csg Flange (ft)                | Current KB to Tubing Head (ft) |                  |

| Survey Data |           |          |         |            |           |            |         |               |          |                |
|-------------|-----------|----------|---------|------------|-----------|------------|---------|---------------|----------|----------------|
| Date        | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | VS (ft)   | NS (ft)    | EW (ft) | DLS (°/100ft) | Method   | Survey Company |
| 7/11/2017   | 17,966    | 92.59    | 178.00  | 9,214.37   | 9,428.05  | -9,423.83  | 287.74  | 1.61          | Magn MWD |                |
| 7/11/2017   | 18,061    | 94.75    | 177.76  | 9,208.29   | 9,522.84  | -9,518.57  | 291.25  | 2.29          | Magn MWD |                |
| 7/11/2017   | 18,156    | 92.89    | 179.27  | 9,201.96   | 9,617.62  | -9,613.32  | 293.71  | 2.52          | Magn MWD |                |
| 7/11/2017   | 18,251    | 92.68    | 180.74  | 9,197.34   | 9,712.48  | -9,708.20  | 293.70  | 1.56          | Magn MWD |                |
| 7/12/2017   | 18,347    | 90.08    | 180.61  | 9,195.03   | 9,808.38  | -9,804.16  | 292.57  | 2.71          | Magn MWD |                |
| 7/12/2017   | 18,441    | 91.13    | 182.26  | 9,194.04   | 9,902.25  | -9,898.12  | 290.21  | 2.08          | Magn MWD |                |
| 7/12/2017   | 18,536    | 92.55    | 181.22  | 9,190.99   | 9,997.06  | -9,993.02  | 287.33  | 1.85          | Magn MWD |                |
| 7/12/2017   | 18,631    | 93.48    | 180.12  | 9,185.99   | 10,091.86 | -10,087.88 | 286.22  | 1.52          | Magn MWD |                |
| 7/12/2017   | 18,726    | 93.36    | 178.89  | 9,180.32   | 10,186.68 | -10,182.71 | 287.04  | 1.30          | Magn MWD |                |
| 7/12/2017   | 18,821    | 93.17    | 178.21  | 9,174.91   | 10,281.53 | -10,277.52 | 289.44  | 0.74          | Magn MWD |                |
| 7/12/2017   | 18,917    | 92.09    | 177.48  | 9,170.51   | 10,377.41 | -10,373.35 | 293.05  | 1.36          | Magn MWD |                |
| 7/12/2017   | 19,012    | 92.25    | 177.86  | 9,166.91   | 10,472.33 | -10,468.20 | 296.91  | 0.43          | Magn MWD |                |
| 7/12/2017   | 19,107    | 91.85    | 176.66  | 9,163.51   | 10,567.24 | -10,563.03 | 301.44  | 1.33          | Magn MWD |                |
| 7/12/2017   | 19,202    | 90.27    | 176.37  | 9,161.75   | 10,662.16 | -10,657.84 | 307.22  | 1.69          | Magn MWD |                |
| 7/12/2017   | 19,297    | 89.87    | 175.61  | 9,161.64   | 10,757.06 | -10,752.60 | 313.86  | 0.90          | Magn MWD |                |
| 7/12/2017   | 19,393    | 89.49    | 174.19  | 9,162.17   | 10,852.86 | -10,848.22 | 322.39  | 1.53          | Magn MWD |                |
| 7/12/2017   | 19,414    | 89.75    | 174.22  | 9,162.31   | 10,873.80 | -10,869.11 | 324.51  | 1.25          | Magn MWD |                |
| 7/12/2017   | 19,465    | 89.75    | 174.22  | 9,162.54   | 10,924.65 | -10,919.85 | 329.65  | 0.00          | Extrap.  |                |

| Zones      |            |            |                  |                   |                |                       |
|------------|------------|------------|------------------|-------------------|----------------|-----------------------|
| Zone Name  | Top (ftKB) | Btm (ftKB) | Zone Comp Method | Completion ChevNo | Completion UWI | Completion License No |
| Wolfcamp A | 9,554.0    | 19,291.0   | Proppant Frac    | PJ8433-00-01      | 30015439320001 |                       |