

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☒ AMENDED REPORT

AS-DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                                |                                                          |                                                              |
|------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------|
| <sup>1</sup> API Number<br><b>30-015-45120</b> | <sup>2</sup> Pool Code<br><b>98220</b>                   | <sup>3</sup> Pool Name<br><b>PURPLE SAGE; WOLFCAMP (GAS)</b> |
| <sup>4</sup> Property Code                     | <sup>5</sup> Property Name<br><b>HH SO 8 5 FED 003</b>   | <sup>6</sup> Well Number<br><b>6H</b>                        |
| <sup>7</sup> OGRID No.<br><b>4323</b>          | <sup>8</sup> Operator Name<br><b>CHEVRON U.S.A. INC.</b> | <sup>9</sup> Elevation<br><b>3264'</b>                       |

<sup>10</sup> Surface Location

| UL or lot no. | Section | Township | Range             | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------------------|---------|---------------|------------------|---------------|----------------|--------|
| C             | 17      | 26 SOUTH | 27 EAST, N.M.P.M. |         | 504'          | NORTH            | 2310'         | WEST           | EDDY   |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range             | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------------------|---------|---------------|------------------|---------------|----------------|--------|
| B             | 5       | 26 SOUTH | 27 EAST, N.M.P.M. |         | 185'          | NORTH            | 2437'         | EAST           | EDDY   |

|                                             |                               |                                  |                         |
|---------------------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br><b>640</b> | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|---------------------------------------------|-------------------------------|----------------------------------|-------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <p><b>16</b></p> <p><b>FINAL LAST TAKE POINT</b></p> <p>X= 537,821'<br/>Y= 392,110' NAD 27<br/>LAT. 32.077966° N<br/>LONG. 104.211226° W</p> <p>X= 579,004'<br/>Y= 392,167' NAD83/86<br/>LAT. 32.078088° N<br/>LONG. 104.211720° W</p> <p><b>MID POINT</b></p> <p>X= 537,789'<br/>Y= 387,134' NAD 27<br/>LAT. 32.064288° N<br/>LONG. 104.211346° W</p> <p>X= 578,973'<br/>Y= 387,191' NAD83/86<br/>LAT. 32.064409° N<br/>LONG. 104.211840° W</p> <p><b>KICK OFF POINT</b></p> <p>X= 537,869'<br/>Y= 381,520' NAD 27<br/>LAT. 32.048855° N<br/>LONG. 104.211107° W</p> <p>X= 579,053'<br/>Y= 381,577' NAD83/86<br/>LAT. 32.048977° N<br/>LONG. 104.211601° W</p> <p><b>FINAL FIRST TAKE POINT</b></p> <p>X= 537,874'<br/>Y= 382,145' NAD 27<br/>LAT. 32.050572° N<br/>LONG. 104.211090° W</p> <p>X= 579,058'<br/>Y= 382,202' NAD83/86<br/>LAT. 32.050694° N<br/>LONG. 104.211583° W</p> | <p><b>ACTUAL BOTTOM HOLE LOCATION</b></p> <p>X= 537,820'<br/>Y= 392,262' NAD 27<br/>LAT. 32.078384° N<br/>LONG. 104.211228° W</p> <p>X= 579,003'<br/>Y= 392,319' NAD83/86<br/>LAT. 32.078505° N<br/>LONG. 104.211723° W</p> <p><b>CORNER COORDINATES TABLE (NAD 27)</b></p> <p>A - Y=392446.14, X=537606.87<br/>B - Y=392449.96, X=540258.92<br/>C - Y=387132.57, X=537574.14<br/>D - Y=387122.04, X=540212.94<br/>E - Y=381810.94, X=534988.20<br/>F - Y=381805.09, X=537646.07<br/>G - Y=381799.23, X=540303.95<br/>H - Y=376480.27, X=535066.16<br/>I - Y=376477.58, X=537710.13</p> <p><b>HH SO 8 5 FED 003 6H WELL</b></p> <p>X= 537,306'<br/>Y= 381,302' NAD 27<br/>LAT. 32.048256° N<br/>LONG. 104.212926° W</p> <p>X= 578,490'<br/>Y= 381,359' NAD83/86<br/>LAT. 32.048378° N<br/>LONG. 104.213420° W</p> <p>ELEVATION +3264' NAVD 88</p> | <p><b>Final Last Take Point</b><br/>@ 20,268' MD<br/>336.84' FNL,<br/>2435.34' FEL<br/>215.75' FWL Lease</p> <p>Sec. 5</p> <p>Mid Point<br/>@ 15,285.85' MD</p> <p>Sec. 8</p> <p><b>Final First Take Point</b><br/>@ 10,296' MD<br/>340.15' FSL,<br/>2423.56' FEL<br/>232.62' FWL Lease</p> <p>Kick Off Point<br/>@ 9,334' MD<br/>284.41' FNL,<br/>2437.18' FEL</p> <p>Sec. 17</p> | <p><b>17 OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Kayla McConnell</i> 3/17/2020<br/>Signature Date</p> <p>KAYLA MCCONNELL<br/>Printed Name</p> <p>GNCV@CHEVRON.COM<br/>E-mail Address</p> <p><b>18 SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>04/07/2017<br/>Date of Survey</p> <p><i>Robert L. Lastrapes</i><br/>Signature and Seal of Professional Surveyor: 23006</p> <p>12/13/2019<br/>Certificate Number</p> |
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Intent ☐ As Drilled ☐

|                |                |             |
|----------------|----------------|-------------|
| API #          |                |             |
| Operator Name: | Property Name: | Well Number |

Kick Off Point (KOP)

|          |         |          |       |     |           |          |      |          |        |
|----------|---------|----------|-------|-----|-----------|----------|------|----------|--------|
| UL       | Section | Township | Range | Lot | Feet      | From N/S | Feet | From E/W | County |
| Latitude |         |          |       |     | Longitude |          |      |          | NAD    |

First Take Point (FTP)

|          |         |          |       |     |           |          |      |          |        |
|----------|---------|----------|-------|-----|-----------|----------|------|----------|--------|
| UL       | Section | Township | Range | Lot | Feet      | From N/S | Feet | From E/W | County |
| Latitude |         |          |       |     | Longitude |          |      |          | NAD    |

Last Take Point (LTP)

|          |         |          |       |     |           |          |      |          |        |
|----------|---------|----------|-------|-----|-----------|----------|------|----------|--------|
| UL       | Section | Township | Range | Lot | Feet      | From N/S | Feet | From E/W | County |
| Latitude |         |          |       |     | Longitude |          |      |          | NAD    |

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

|                |                |             |
|----------------|----------------|-------------|
| API #          |                |             |
| Operator Name: | Property Name: | Well Number |

Oilfield Services, Central U.S. Land  
**Schlumberger Drilling and Measurements**  
Drilling Group  
Geo Market Area: South West Texas Basin  
7220 W I-H 20  
Midland, Texas 79706  
Phone : (432) 742-5400 (Main)  
Fax : (432) 742-5606 (Shared)

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**Schlumberger**

April 8, 2019

CHEVRON USA INC.  
6301 DEAUVILLE BLVD  
MIDLAND, TX, 79706

17, 26S, 27E, Eddy NM  
N 32.04838 W 104.21342

Re:

CLIENT: CHEVRON USA INC.  
WELL: HO SO 8 5 FED 003 6H  
FIELD: PURPLE SAGE / WOLFCAMP

RIG: Patterson 815  
COUNTY: EDDY  
API NO: 30-015-45120  
JOB NO: 18MLD2169

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).  
Other information required by your office is as follows.

| <u>Name &amp; Title of<br/>Surveyor</u> | <u>Drainhole Number</u>                  | <u>Surveyed Depths</u>      | <u>Dates Performed</u>                | <u>Type of Survey</u> |
|-----------------------------------------|------------------------------------------|-----------------------------|---------------------------------------|-----------------------|
| John Macmurrough<br>FS                  | HO SO 8 5 FED 003<br>6H<br>Original Hole | 501.00 Ft to<br>20386.00 Ft | October 30, 2018 to<br>March 24, 2019 | TelePacer             |

If any other information is required, please contact the undersigned at the above letterhead and phone number.  
Sincerely,

DANA LASHER  
Field Service Manager

Oilfield Services, Central U.S. Land  
Schlumberger Drilling and Measurements  
Drilling Group  
Geo Market Area: South West Texas Basin  
7220 W I-H 20  
Midland, Texas 79706  
Phone : (432) 742-5400 (Main)  
Fax : (432) 742-5606 (Shared)

**Schlumberger**

Well Reference:  
17, 26S, 27E, Eddy NM  
N 32.04838 W 104.21342

I, John Macmurrough certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of October 30, 2018 through March 24, 2019, conduct or supervise the taking of the TelePacer surveys from a depth of 501.00 feet to a depth of 20386.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of CHEVRON USA INC. for the HO SO 8 5 FED 003 6H Well (Original Hole) API No. 30-015-45120 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By  
John Macmurrough  
FS

*John MacMurrough*

Subscribed and Sworn to before me this 8<sup>th</sup> day of April (month) 2019 (yr)

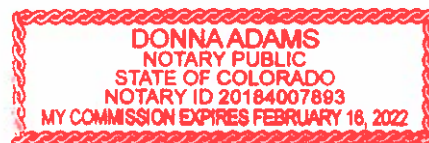
My Commission expires:

2-16-2022

D. Adams  
Notary Public

Adams County Colorado  
(County State)

(signature)





# Chevron HH SO 8 5 FED 003 No. 6H MWD to 20420ft Survey Geodetic Report (Def Survey)

|                                      |                                                                     |                                             |                              |
|--------------------------------------|---------------------------------------------------------------------|---------------------------------------------|------------------------------|
| <b>Report Date:</b>                  | March 24, 2019 - 11:51 AM                                           | <b>Survey / DLS Computation:</b>            | Minimum Curvature / Lubinski |
| <b>Client:</b>                       | Chevron                                                             | <b>Vertical Section Azimuth:</b>            | 359.760 ° (Grid North)       |
| <b>Field:</b>                        | NM Eddy County (NAD 27)                                             | <b>Vertical Section Origin:</b>             | 0.000 ft, 0.000 ft           |
| <b>Structure / Slot:</b>             | Chevron HH SO 8 5 FED 003 No. 6H / Chevron HH SO 8 5 FED 003 No. 6H | <b>TVD Reference Datum:</b>                 | RKB = 28ft                   |
| <b>Well:</b>                         | Chevron HH SO 8 5 FED 003 No. 6H                                    | <b>TVD Reference Elevation:</b>             | 3292.000 ft above MSL        |
| <b>Borehole:</b>                     | HH SO 8 5 Fed 003 No. 6H                                            | <b>Seabed / Ground Elevation:</b>           | 3264.000 ft above MSL        |
| <b>UWI / API#:</b>                   | Unknown / Unknown                                                   | <b>Magnetic Declination:</b>                | 7.244 °                      |
| <b>Survey Name:</b>                  | Chevron HH SO 8 5 FED 003 No. 6H MWD to 20420ft                     | <b>Total Gravity Field Strength:</b>        | 998.4292mgn (9.80665 Based)  |
| <b>Survey Date:</b>                  | March 24, 2019                                                      | <b>Gravity Model:</b>                       | GARM                         |
| <b>Tort / AHD / DDI / ERD Ratio:</b> | 259.711 ° / 11424.090 ft / 6.788 / 1.158                            | <b>Total Magnetic Field Strength:</b>       | 47791.787 nT                 |
| <b>Coordinate Reference System:</b>  | NAD27 New Mexico State Plane, Eastern Zone, US Feet                 | <b>Magnetic Dip Angle:</b>                  | 59.664 °                     |
| <b>Location Lat / Long:</b>          | N 32° 2' 53.72495", W 104° 12' 46.53456"                            | <b>Declination Date:</b>                    | March 24, 2019               |
| <b>Location Grid N/E Y/X:</b>        | N 381302.000 ftUS, E 537306.000 ftUS                                | <b>Magnetic Declination Model:</b>          | HDGM 2019                    |
| <b>CRS Scale Convergence Angle:</b>  | 0.0639 °                                                            | <b>North Reference:</b>                     | Grid North                   |
| <b>Grid Grid Factor:</b>             | 0.99991068                                                          | <b>Grid Convergence Used:</b>               | 0.0639 °                     |
| <b>Version / Patch:</b>              | 2.10.753.0                                                          | <b>Total Corr Mag North-&gt;Grid North:</b> | 7.1803 °                     |
|                                      |                                                                     | <b>Local Coord Referenced To:</b>           | Well Head                    |

| Comments                | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|-------------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
| Surface                 | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A              | 381302.00          | 537306.00         | N 32 2 53.72            | W 104 12 46.53           |
| First 3rd Party Surveys | 148.00     | 0.60        | 82.97            | 148.00      | 0.09         | 0.09       | 0.77       | 0.41             | 381302.09          | 537306.77         | N 32 2 53.73            | W 104 12 46.53           |
|                         | 192.00     | 0.30        | 168.05           | 192.00      | 0.01         | 0.01       | 1.02       | 1.47             | 381302.01          | 537307.02         | N 32 2 53.73            | W 104 12 46.52           |
|                         | 281.00     | 0.70        | 146.80           | 280.99      | -0.68        | -0.67      | 1.37       | 0.49             | 381301.33          | 537307.37         | N 32 2 53.72            | W 104 12 46.52           |
|                         | 371.00     | 0.90        | 82.79            | 370.99      | -1.05        | -1.04      | 2.37       | 0.96             | 381300.96          | 537308.37         | N 32 2 53.71            | W 104 12 46.51           |
| Last 3rd Party Survey   | 452.00     | 0.40        | 75.94            | 451.98      | -0.91        | -0.90      | 3.28       | 0.62             | 381301.10          | 537309.27         | N 32 2 53.72            | W 104 12 46.50           |
| First SLB MWD Survey    | 501.00     | 0.29        | 58.66            | 500.98      | -0.80        | -0.79      | 3.55       | 0.31             | 381301.21          | 537309.55         | N 32 2 53.72            | W 104 12 46.49           |
|                         | 594.00     | 1.48        | 68.18            | 593.97      | -0.24        | -0.22      | 4.86       | 1.28             | 381301.78          | 537310.86         | N 32 2 53.72            | W 104 12 46.48           |
|                         | 686.00     | 3.38        | 65.65            | 685.88      | 1.30         | 1.34       | 8.44       | 2.07             | 381303.34          | 537314.44         | N 32 2 53.74            | W 104 12 46.44           |
|                         | 777.00     | 4.68        | 67.17            | 776.65      | 3.83         | 3.89       | 14.30      | 1.43             | 381305.89          | 537320.30         | N 32 2 53.76            | W 104 12 46.37           |
|                         | 869.00     | 5.81        | 64.95            | 868.27      | 7.22         | 7.31       | 21.98      | 1.25             | 381309.31          | 537327.98         | N 32 2 53.80            | W 104 12 46.28           |
|                         | 964.00     | 7.43        | 68.07            | 962.63      | 11.51        | 11.64      | 32.04      | 1.75             | 381313.64          | 537338.03         | N 32 2 53.84            | W 104 12 46.16           |
|                         | 1059.00    | 8.64        | 67.60            | 1056.70     | 16.47        | 16.66      | 44.33      | 1.28             | 381318.66          | 537350.33         | N 32 2 53.89            | W 104 12 46.02           |
|                         | 1153.00    | 9.24        | 68.77            | 1149.55     | 21.84        | 22.08      | 57.89      | 0.67             | 381324.08          | 537363.89         | N 32 2 53.94            | W 104 12 45.86           |
|                         | 1247.00    | 10.46       | 66.51            | 1242.17     | 27.91        | 28.22      | 72.76      | 1.36             | 381330.21          | 537378.75         | N 32 2 54.00            | W 104 12 45.69           |
|                         | 1342.00    | 11.72       | 68.22            | 1335.39     | 34.86        | 35.23      | 89.62      | 1.37             | 381337.23          | 537395.62         | N 32 2 54.07            | W 104 12 45.49           |
|                         | 1436.00    | 13.99       | 68.79            | 1427.03     | 42.43        | 42.89      | 109.09     | 2.42             | 381344.88          | 537415.08         | N 32 2 54.15            | W 104 12 45.27           |
|                         | 1531.00    | 14.37       | 69.30            | 1519.13     | 50.66        | 51.21      | 130.82     | 0.42             | 381353.20          | 537436.81         | N 32 2 54.23            | W 104 12 45.01           |
|                         | 1625.00    | 13.72       | 68.92            | 1610.32     | 58.70        | 59.34      | 152.13     | 0.70             | 381361.34          | 537458.12         | N 32 2 54.31            | W 104 12 44.77           |
|                         | 1720.00    | 15.48       | 69.04            | 1702.25     | 67.20        | 67.93      | 174.48     | 1.85             | 381369.92          | 537480.47         | N 32 2 54.40            | W 104 12 44.51           |
|                         | 1814.00    | 16.25       | 67.67            | 1792.67     | 76.58        | 77.41      | 198.36     | 0.91             | 381379.41          | 537504.35         | N 32 2 54.49            | W 104 12 44.23           |
|                         | 1908.00    | 16.26       | 65.22            | 1882.91     | 86.99        | 87.93      | 222.48     | 0.73             | 381389.92          | 537528.46         | N 32 2 54.59            | W 104 12 43.95           |
|                         | 2003.00    | 15.68       | 65.40            | 1974.25     | 97.81        | 98.84      | 246.23     | 0.61             | 381400.84          | 537552.20         | N 32 2 54.70            | W 104 12 43.67           |
|                         | 2097.00    | 14.89       | 66.56            | 2064.92     | 107.81       | 108.94     | 268.86     | 0.90             | 381410.93          | 537574.83         | N 32 2 54.80            | W 104 12 43.41           |
|                         | 2192.00    | 13.75       | 67.75            | 2156.97     | 116.85       | 118.07     | 290.51     | 1.24             | 381420.06          | 537596.48         | N 32 2 54.89            | W 104 12 43.16           |
|                         | 2286.00    | 15.13       | 66.61            | 2248.00     | 125.86       | 127.17     | 312.11     | 1.50             | 381429.16          | 537618.08         | N 32 2 54.98            | W 104 12 42.91           |
|                         | 2381.00    | 16.11       | 63.22            | 2339.49     | 136.62       | 138.03     | 335.25     | 1.41             | 381440.02          | 537641.22         | N 32 2 55.09            | W 104 12 42.64           |
|                         | 2476.00    | 15.54       | 62.89            | 2430.89     | 148.26       | 149.77     | 358.35     | 0.61             | 381451.75          | 537664.31         | N 32 2 55.20            | W 104 12 42.37           |
|                         | 2570.00    | 15.17       | 62.71            | 2521.53     | 159.55       | 161.14     | 380.49     | 0.40             | 381463.13          | 537686.45         | N 32 2 55.32            | W 104 12 42.11           |
|                         | 2664.00    | 14.72       | 62.49            | 2612.35     | 170.61       | 172.30     | 402.01     | 0.48             | 381474.28          | 537707.97         | N 32 2 55.43            | W 104 12 41.86           |
|                         | 2759.00    | 14.67       | 61.95            | 2704.25     | 181.76       | 183.53     | 423.33     | 0.15             | 381485.51          | 537729.29         | N 32 2 55.54            | W 104 12 41.61           |
|                         | 2853.00    | 13.91       | 61.78            | 2795.34     | 192.61       | 194.47     | 443.79     | 0.81             | 381496.45          | 537749.75         | N 32 2 55.64            | W 104 12 41.38           |
|                         | 2948.00    | 13.63       | 61.96            | 2887.61     | 203.19       | 205.13     | 463.73     | 0.30             | 381507.11          | 537769.69         | N 32 2 55.75            | W 104 12 41.14           |
|                         | 3042.00    | 11.90       | 62.25            | 2979.28     | 212.83       | 214.85     | 482.09     | 1.84             | 381516.83          | 537788.04         | N 32 2 55.85            | W 104 12 40.93           |
|                         | 3137.00    | 10.62       | 61.80            | 3072.45     | 221.46       | 223.55     | 498.47     | 1.35             | 381525.53          | 537804.42         | N 32 2 55.93            | W 104 12 40.74           |
|                         | 3232.00    | 9.54        | 62.60            | 3165.98     | 229.16       | 231.31     | 513.17     | 1.15             | 381533.29          | 537819.13         | N 32 2 56.01            | W 104 12 40.57           |
|                         | 3326.00    | 8.31        | 63.15            | 3258.84     | 235.76       | 237.96     | 526.15     | 1.31             | 381539.94          | 537832.10         | N 32 2 56.07            | W 104 12 40.42           |
|                         | 3420.00    | 7.02        | 62.81            | 3352.00     | 241.40       | 243.66     | 537.32     | 1.37             | 381545.63          | 537843.27         | N 32 2 56.13            | W 104 12 40.29           |
|                         | 3515.00    | 5.34        | 63.90            | 3446.44     | 245.96       | 248.25     | 546.46     | 1.77             | 381550.23          | 537852.41         | N 32 2 56.18            | W 104 12 40.18           |
|                         | 3609.00    | 4.02        | 66.82            | 3540.13     | 249.16       | 251.48     | 553.41     | 1.43             | 381553.45          | 537859.36         | N 32 2 56.21            | W 104 12 40.10           |
|                         | 3704.00    | 3.09        | 67.02            | 3634.94     | 251.44       | 253.79     | 558.83     | 0.98             | 381555.76          | 537864.78         | N 32 2 56.23            | W 104 12 40.04           |
|                         | 3798.00    | 1.95        | 79.61            | 3728.85     | 252.70       | 255.06     | 562.74     | 1.34             | 381557.04          | 537868.69         | N 32 2 56.24            | W 104 12 39.99           |
|                         | 3893.00    | 0.98        | 81.01            | 3823.62     | 253.11       | 255.48     | 565.13     | 1.02             | 381557.46          | 537871.08         | N 32 2 56.25            | W 104 12 39.97           |
|                         | 3987.00    | 0.90        | 95.10            | 3917.81     | 253.17       | 255.54     | 566.66     | 0.26             | 381557.52          | 537872.61         | N 32 2 56.25            | W 104 12 39.95           |
|                         | 4081.00    | 0.33        | 78.89            | 4011.80     | 253.15       | 255.53     | 567.66     | 0.63             | 381557.51          | 537873.61         | N 32 2 56.25            | W 104 12 39.94           |
|                         | 4176.00    | 0.23        | 46.98            | 4106.80     | 253.33       | 255.71     | 568.07     | 0.19             | 381557.69          | 537874.02         | N 32 2 56.25            | W 104 12 39.93           |
|                         | 4270.00    | 0.25        | 134.89           | 4200.80     | 253.31       | 255.70     | 568.35     | 0.35             | 381557.67          | 537874.30         | N 32 2 56.25            | W 104 12 39.93           |
|                         | 4365.00    | 0.23        | 192.50           | 4295.80     | 252.98       | 255.36     | 568.46     | 0.24             | 381557.34          | 537874.40         | N 32 2 56.25            | W 104 12 39.93           |
|                         | 4459.00    | 0.18        | 152.27           | 4389.80     | 252.66       | 255.05     | 568.48     | 0.16             | 381557.02          | 537874.43         | N 32 2 56.24            | W 104 12 39.93           |
|                         | 4554.00    | 0.25        | 229.89           | 4484.80     | 252.40       | 254.78     | 568.40     | 0.29             | 381556.76          | 537874.34         | N 32 2 56.24            | W 104 12 39.93           |
|                         | 4648.00    | 0.29        | 179.43           | 4578.80     | 252.03       | 254.41     | 568.24     | 0.25             | 381556.39          | 537874.19         | N 32 2 56.24            | W 104 12 39.93           |
|                         | 4743.00    | 0.28        | 205.44           | 4673.80     | 251.58       | 253.96     | 568.14     | 0.14             | 381555.94          | 537874.09         | N 32 2 56.23            | W 104 12 39.93           |
|                         | 4838.00    | 0.38        | 210.99           | 4768.80     | 251.10       | 253.48     | 567.88     | 0.11             | 381555.46          | 537873.83         | N 32 2 56.23            | W 104 12 39.93           |
|                         | 4932.00    | 0.60        | 208.99           | 4862.79     | 250.41       | 252.78     | 567.48     | 0.23             | 381554.76          | 537873.43         | N 32 2 56.22            | W 104 12 39.94           |
|                         | 5027.00    | 0.64        | 218.10           | 4957.79     | 249.56       | 251.93     | 566.91     | 0.11             | 381553.91          | 537872.86         | N 32 2 56.21            | W 104 12 39.94           |
|                         | 5122.00    | 0.60        | 205.24           | 5052.78     | 248.69       | 251.06     | 566.37     | 0.15             | 381553.04          | 537872.32         | N 32 2 56.20            | W 104 12 39.95           |
|                         | 5216.00    | 0.68        | 203.87           | 5146.78     | 247.74       | 250.11     | 565.94     | 0.09             | 381552.09          | 537871.89         | N 32 2 56.19            | W 104 12 39.96           |
|                         | 5310.00    | 0.56        | 196.65           | 5240.77     | 246.79       | 249.16     | 565.58     | 0.15             | 381551.14          | 537871.53         | N 32 2 56.18            | W 104 12 39.96           |
|                         | 5405.00    | 0.75        | 210.77           | 5335.76     | 245.81       | 248.18     | 565.13     | 0.26             | 381550.16          | 537871.08         | N 32 2 56.17            | W 104 12 39.97           |
|                         | 5499.00    | 0.98        | 194.93           | 5429.75     | 244.51       | 246.87     | 564.61     | 0.35             | 381548.85          | 537870.56         | N 32 2 56.16            | W 104 12 39.97           |
|                         | 5594.00    | 1.03        | 210.95           | 5524.74     | 242.99       | 245.36     | 563.96     | 0.30             | 381547.34          | 537869.91         | N 32 2 56.15            | W 104 12 39.98           |
|                         | 5689.00    | 1.01        | 215.15           | 5619.72     | 241.58       | 243.94     | 563.04     | 0.08             | 381545.92          | 537868.99         | N 32 2 56.13            | W 104 12 39.99           |
|                         | 5784.00    | 0.56        | 198.57           | 5808.71     | 239.34       | 241.69     | 561.82     | 0.27             | 381543.67          | 537867.77         | N 32 2 56.11            | W 104 12 40.00           |
|                         | 5972.00    | 0.28        | 226.04           | 5902.70     | 238.74       | 241.09     | 561.52     | 0.37             | 381543.07          | 537867.47         | N 32 2 56.10            | W 104 12 40.01           |
|                         | 6067.00    | 0.56        | 223.52           | 5997.70     | 238.24       | 240.60     | 561.03     | 0.30             | 381542.57          | 537866.98         | N 32 2 56.10            | W 104 12 40.01           |
|                         | 6161.00    | 0.70        | 233.37           | 6091.69     | 237.57       | 239.92     | 560.26     | 0.19             | 381541.90          | 537866.21         | N 32 2 56.09            | W 104 12 40.02           |
|                         | 6350.00    | 1.12        | 241.09           | 6280.67     | 236.00       | 238.34     | 557.71     | 0.23             | 381540.32          | 537863.66         | N 32 2 56.08            | W 104 12 40.05           |
|                         | 6444.00    | 0.69        | 246.36           | 6374.66     | 235.33       | 237.67     | 556.39     | 0.47             | 381539.65          | 537862.34         | N 32 2 56.07            | W 104 12 40.07           |
|                         | 6634.00    | 0.75        | 215.08           | 6564.64     | 233.87       | 236.19     | 554.63     | 0.21             | 381538.17          | 537860.58         | N 32 2 56.06            | W 104 12 40.09</         |

| Comments      | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|---------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|               | 7202.00    | 0.45        | 124.24           | 7132.61     | 228.41       | 230.73     | 553.30     | 0.34             | 381532.70          | 537859.25         | N 32 2 56.00            | W 104 12 40.10           |
|               | 7297.00    | 0.48        | 93.17            | 7227.61     | 228.17       | 230.49     | 554.00     | 0.26             | 381532.47          | 537859.95         | N 32 2 56.00            | W 104 12 40.10           |
|               | 7391.00    | 0.59        | 68.54            | 7321.60     | 228.32       | 230.65     | 554.85     | 0.27             | 381532.63          | 537860.80         | N 32 2 56.00            | W 104 12 40.09           |
|               | 7486.00    | 0.62        | 74.32            | 7416.60     | 228.84       | 230.97     | 555.80     | 0.07             | 381532.95          | 537861.75         | N 32 2 56.00            | W 104 12 40.07           |
|               | 7675.00    | 1.01        | 115.38           | 7605.58     | 228.19       | 230.53     | 558.29     | 0.36             | 381532.51          | 537864.23         | N 32 2 56.00            | W 104 12 40.05           |
|               | 7769.00    | 1.18        | 124.94           | 7699.56     | 227.27       | 229.62     | 559.83     | 0.26             | 381531.60          | 537865.78         | N 32 2 55.99            | W 104 12 40.03           |
|               | 7864.00    | 0.83        | 138.63           | 7794.55     | 226.19       | 228.54     | 561.08     | 0.44             | 381530.52          | 537867.03         | N 32 2 55.98            | W 104 12 40.01           |
|               | 7959.00    | 0.75        | 165.04           | 7889.54     | 225.07       | 227.43     | 561.70     | 0.39             | 381529.40          | 537867.65         | N 32 2 55.97            | W 104 12 40.01           |
|               | 8148.00    | 0.39        | 133.25           | 8078.53     | 223.43       | 225.79     | 562.49     | 0.25             | 381527.77          | 537868.44         | N 32 2 55.95            | W 104 12 40.00           |
|               | 8242.00    | 0.23        | 130.23           | 8172.53     | 223.09       | 225.45     | 562.86     | 0.17             | 381527.43          | 537868.81         | N 32 2 55.95            | W 104 12 39.99           |
|               | 8337.00    | 0.38        | 130.40           | 8267.53     | 222.76       | 225.12     | 563.25     | 0.16             | 381527.10          | 537869.20         | N 32 2 55.95            | W 104 12 39.99           |
|               | 8431.00    | 0.48        | 136.38           | 8361.53     | 222.27       | 224.63     | 563.76     | 0.12             | 381526.61          | 537869.71         | N 32 2 55.94            | W 104 12 39.98           |
|               | 8526.00    | 0.58        | 146.78           | 8456.52     | 221.58       | 223.94     | 564.30     | 0.15             | 381525.92          | 537870.25         | N 32 2 55.93            | W 104 12 39.98           |
|               | 8620.00    | 0.51        | 163.70           | 8550.52     | 220.78       | 223.14     | 564.67     | 0.19             | 381525.12          | 537870.62         | N 32 2 55.93            | W 104 12 39.97           |
|               | 8715.00    | 0.45        | 175.08           | 8645.51     | 220.00       | 222.37     | 564.83     | 0.12             | 381524.35          | 537870.77         | N 32 2 55.92            | W 104 12 39.97           |
|               | 8810.00    | 0.52        | 167.40           | 8740.51     | 219.21       | 221.57     | 564.95     | 0.10             | 381523.55          | 537870.90         | N 32 2 55.91            | W 104 12 39.97           |
|               | 8905.00    | 0.52        | 169.85           | 8835.51     | 218.36       | 220.73     | 565.12     | 0.02             | 381522.71          | 537871.07         | N 32 2 55.90            | W 104 12 39.97           |
|               | 8999.00    | 0.51        | 174.36           | 8929.50     | 217.52       | 219.89     | 565.24     | 0.04             | 381521.87          | 537871.19         | N 32 2 55.89            | W 104 12 39.96           |
|               | 9094.00    | 0.43        | 201.98           | 9024.50     | 216.77       | 219.14     | 565.15     | 0.25             | 381521.12          | 537871.09         | N 32 2 55.89            | W 104 12 39.97           |
|               | 9189.00    | 0.48        | 227.10           | 9119.50     | 216.17       | 218.54     | 564.72     | 0.21             | 381520.52          | 537870.67         | N 32 2 55.88            | W 104 12 39.97           |
|               | 9275.00    | 0.73        | 249.55           | 9205.49     | 215.74       | 218.10     | 563.94     | 0.40             | 381520.08          | 537869.89         | N 32 2 55.88            | W 104 12 39.98           |
|               | 9322.00    | 0.76        | 256.14           | 9252.49     | 215.56       | 217.92     | 563.36     | 0.19             | 381519.90          | 537869.31         | N 32 2 55.88            | W 104 12 39.99           |
|               | 9370.00    | 5.36        | 2.61             | 9300.42     | 217.73       | 220.09     | 563.15     | 11.71            | 381522.07          | 537869.10         | N 32 2 55.90            | W 104 12 39.99           |
|               | 9417.00    | 6.88        | 8.39             | 9347.15     | 222.70       | 225.07     | 563.66     | 3.49             | 381527.05          | 537869.61         | N 32 2 55.95            | W 104 12 39.98           |
|               | 9464.00    | 10.72       | 1.27             | 9393.59     | 229.86       | 232.23     | 564.17     | 8.48             | 381534.20          | 537870.12         | N 32 2 56.02            | W 104 12 39.98           |
|               | 9511.00    | 18.00       | 357.39           | 9439.09     | 241.50       | 243.87     | 563.94     | 15.62            | 381545.84          | 537869.89         | N 32 2 56.13            | W 104 12 39.98           |
|               | 9559.00    | 24.35       | 356.05           | 9483.83     | 258.80       | 261.16     | 562.92     | 13.27            | 381563.14          | 537868.87         | N 32 2 56.30            | W 104 12 39.99           |
|               | 9605.00    | 26.71       | 356.12           | 9525.33     | 278.59       | 280.94     | 561.56     | 5.13             | 381582.92          | 537867.51         | N 32 2 56.50            | W 104 12 40.01           |
|               | 9654.00    | 29.39       | 355.62           | 9568.58     | 301.57       | 303.92     | 559.90     | 5.49             | 381605.89          | 537865.85         | N 32 2 56.73            | W 104 12 40.03           |
|               | 9701.00    | 34.21       | 355.56           | 9608.51     | 326.27       | 328.61     | 558.00     | 10.26            | 381630.58          | 537863.95         | N 32 2 56.97            | W 104 12 40.05           |
|               | 9749.00    | 38.27       | 356.53           | 9647.21     | 354.58       | 356.91     | 556.05     | 8.54             | 381658.88          | 537862.00         | N 32 2 57.25            | W 104 12 40.07           |
|               | 9796.00    | 44.35       | 359.65           | 9682.51     | 385.57       | 387.90     | 555.07     | 13.65            | 381689.86          | 537861.02         | N 32 2 57.56            | W 104 12 40.08           |
|               | 9844.00    | 51.36       | 3.08             | 9714.70     | 421.11       | 423.44     | 555.97     | 15.53            | 381725.41          | 537861.92         | N 32 2 57.91            | W 104 12 40.07           |
|               | 9891.00    | 56.26       | 3.17             | 9742.44     | 458.97       | 461.31     | 558.04     | 10.43            | 381763.27          | 537863.99         | N 32 2 58.28            | W 104 12 40.05           |
|               | 9936.00    | 60.87       | 0.96             | 9765.91     | 497.32       | 499.67     | 559.41     | 11.07            | 381801.62          | 537865.36         | N 32 2 58.66            | W 104 12 40.03           |
|               | 9985.00    | 64.87       | 0.11             | 9788.25     | 540.91       | 543.26     | 559.81     | 8.31             | 381845.21          | 537865.76         | N 32 2 59.09            | W 104 12 40.02           |
|               | 10031.00   | 69.03       | 1.34             | 9806.26     | 583.22       | 585.58     | 560.35     | 9.37             | 381887.52          | 537866.30         | N 32 2 59.51            | W 104 12 40.02           |
|               | 10078.00   | 71.93       | 1.65             | 9821.96     | 627.50       | 629.86     | 561.51     | 6.20             | 381931.80          | 537867.46         | N 32 2 59.95            | W 104 12 40.00           |
|               | 10125.00   | 73.47       | 2.51             | 9835.93     | 672.33       | 674.70     | 563.14     | 3.71             | 381976.64          | 537869.09         | N 32 3 0.40             | W 104 12 39.98           |
|               | 10172.00   | 77.80       | 2.10             | 9847.59     | 717.81       | 720.18     | 564.97     | 9.25             | 382022.11          | 537870.92         | N 32 3 0.85             | W 104 12 39.96           |
|               | 10220.00   | 81.79       | 1.42             | 9856.09     | 765.01       | 767.39     | 566.42     | 8.43             | 382069.32          | 537872.36         | N 32 3 1.31             | W 104 12 39.94           |
|               | 10267.00   | 85.45       | 1.63             | 9861.32     | 811.69       | 814.07     | 567.66     | 7.80             | 382116.00          | 537873.61         | N 32 3 1.77             | W 104 12 39.93           |
| Heel HL Cross | 10286.00   | 86.30       | 0.93             | 9862.68     | 830.63       | 833.02     | 568.08     | 5.78             | 382134.94          | 537874.03         | N 32 3 1.96             | W 104 12 39.92           |
|               | 10315.00   | 87.59       | 359.86           | 9864.23     | 859.59       | 861.98     | 568.28     | 5.78             | 382163.90          | 537874.23         | N 32 3 2.25             | W 104 12 39.92           |
|               | 10364.00   | 88.71       | 359.43           | 9865.81     | 908.56       | 910.95     | 567.98     | 2.45             | 382212.87          | 537873.93         | N 32 3 2.73             | W 104 12 39.92           |
|               | 10469.00   | 89.50       | 358.52           | 9867.45     | 1013.54      | 1015.92    | 566.10     | 1.15             | 382317.82          | 537872.05         | N 32 3 3.77             | W 104 12 39.94           |
|               | 10561.00   | 90.22       | 357.19           | 9867.68     | 1105.48      | 1107.85    | 562.66     | 1.64             | 382409.75          | 537868.60         | N 32 3 4.68             | W 104 12 39.98           |
|               | 10656.00   | 90.73       | 357.23           | 9866.89     | 1200.39      | 1202.73    | 558.03     | 0.54             | 382504.62          | 537863.98         | N 32 3 5.62             | W 104 12 40.04           |
|               | 10751.00   | 90.78       | 356.01           | 9865.64     | 1295.23      | 1297.56    | 552.43     | 1.29             | 382599.44          | 537858.38         | N 32 3 6.56             | W 104 12 40.10           |
|               | 10846.00   | 90.73       | 357.23           | 9864.39     | 1390.08      | 1392.38    | 546.83     | 1.29             | 382694.26          | 537852.78         | N 32 3 7.50             | W 104 12 40.16           |
|               | 10939.00   | 90.73       | 358.50           | 9863.20     | 1483.02      | 1485.31    | 543.37     | 1.37             | 382787.17          | 537849.32         | N 32 3 8.42             | W 104 12 40.20           |
|               | 11034.00   | 90.67       | 359.27           | 9862.04     | 1578.00      | 1580.28    | 541.52     | 0.81             | 382882.14          | 537847.47         | N 32 3 9.36             | W 104 12 40.22           |
|               | 11223.00   | 90.34       | 359.06           | 9860.37     | 1766.98      | 1769.26    | 538.76     | 0.21             | 383071.09          | 537844.72         | N 32 3 11.23            | W 104 12 40.25           |
|               | 11317.00   | 90.34       | 359.15           | 9859.82     | 1860.98      | 1863.24    | 537.30     | 0.10             | 383165.07          | 537843.25         | N 32 3 12.16            | W 104 12 40.27           |
|               | 11506.00   | 90.28       | 359.07           | 9858.79     | 2049.96      | 2052.22    | 534.36     | 0.05             | 383354.03          | 537840.31         | N 32 3 14.03            | W 104 12 40.30           |
|               | 11601.00   | 90.28       | 358.84           | 9858.33     | 2144.95      | 2147.20    | 532.63     | 0.24             | 383449.00          | 537838.58         | N 32 3 14.97            | W 104 12 40.32           |
|               | 11695.00   | 90.11       | 358.76           | 9858.01     | 2238.94      | 2241.18    | 530.66     | 0.20             | 383542.97          | 537836.61         | N 32 3 15.90            | W 104 12 40.34           |
|               | 11884.00   | 89.50       | 357.48           | 9858.65     | 2427.85      | 2430.07    | 524.46     | 0.75             | 383731.85          | 537830.41         | N 32 3 17.77            | W 104 12 40.41           |
|               | 11979.00   | 90.67       | 358.79           | 9858.51     | 2522.81      | 2525.02    | 521.37     | 1.85             | 383826.79          | 537827.32         | N 32 3 18.71            | W 104 12 40.44           |
|               | 12074.00   | 90.73       | 359.32           | 9857.35     | 2617.80      | 2620.00    | 519.80     | 0.56             | 383921.76          | 537825.75         | N 32 3 19.65            | W 104 12 40.46           |
|               | 12168.00   | 91.18       | 359.70           | 9855.78     | 2711.78      | 2713.98    | 519.00     | 0.63             | 384015.73          | 537824.95         | N 32 3 20.58            | W 104 12 40.47           |
|               | 12263.00   | 91.34       | 0.61             | 9853.70     | 2806.76      | 2808.96    | 519.25     | 0.97             | 384110.70          | 537825.21         | N 32 3 21.52            | W 104 12 40.46           |
|               | 12357.00   | 91.63       | 0.83             | 9851.26     | 2900.71      | 2902.92    | 520.43     | 0.39             | 384204.65          | 537826.39         | N 32 3 22.45            | W 104 12 40.45           |
|               | 12452.00   | 92.19       | 0.77             | 9848.09     | 2995.84      | 2997.85    | 521.76     | 0.59             | 384299.58          | 537827.71         | N 32 3 23.39            | W 104 12 40.43           |
|               | 12546.00   | 92.58       | 359.58           | 9844.18     | 3089.56      | 3091.77    | 522.05     | 1.33             | 384393.49          | 537828.00         | N 32 3 24.31            | W 104 12 40.43           |
|               | 12641.00   | 92.30       | 359.27           | 9840.14     | 3184.47      | 3186.68    | 521.10     | 0.44             | 384488.39          | 537827.05         | N 32 3 25.25            | W 104 12 40.44           |
|               | 12735.00   | 92.02       | 359.74           | 9836.59     | 3278.40      | 3280.61    | 520.28     | 0.58             | 384582.31          | 537826.24         | N 32 3 26.18            | W 104 12 40.45           |
|               | 12830.00   | 91.96       | 359.71           | 9833.30     | 3373.34      | 3375.55    | 519.83     | 0.07             | 384677.24          | 537825.78         | N 32 3 27.12            | W 104 12 40.45           |
|               | 13020.00   | 91.29       | 0.14             | 9827.91     | 3563.26      | 3565.47    | 519.58     | 0.42             | 384867.15          | 537825.53         | N 32 3 29.00            | W 104 12 40.45           |
|               | 13114.00   | 91.51       | 359.56           | 9825.61     | 3657.24      | 3659.44    | 519.33     | 0.66             | 384961.11          | 537825.29         | N 32 3 29.93            | W 104 12 40.45           |
|               | 13209.00   | 91.40       | 359.78           | 9823.20     | 3752.20      | 3754.41    | 518.79     | 0.26             | 385056.07          | 537824.74         | N 32 3 30.87            | W 104 12 40.46           |
|               | 13303.00   | 91.74       | 359.76           | 9820.62     | 3846.17      | 3848.37    | 518.41     | 0.36             | 385150.02          | 537824.36         | N 32 3 31.80            | W 104 12 40.46           |
|               | 13397.00   | 92.13       | 359.26           | 9817.45     | 3940.11      | 3942.32    | 517.61     | 0.67             | 385243.96          | 537823.56         | N 32 3 32.73            | W 104 12 40.47           |
|               | 13492.00   | 92.36       | 359.82           | 9813.73     | 4035.04      | 4037.24    | 516.84     | 0.64             | 385338.87          | 537822.80         | N 32 3 33.67            | W 104 12 40.48           |
|               | 13681.00   | 92.80       | 359.50           | 9805.22     | 4223.85      | 4226.04    | 515.72     | 0.29             | 385527.66          | 537821.68         | N 32 3 35.54            | W 104 12 40.49           |
|               | 13776.00   | 92.80       | 358.23           | 9800.58     | 4318.72      | 4320.91    | 513.84     | 1.34             | 385622.52          | 537819.80         | N 32 3 36.48            | W 104 12 40.51           |
|               | 13870.00   | 91.85       | 357.87           | 9796.77     | 4412.60      | 4414.78    | 510.65</   |                  |                    |                   |                         |                          |

| Comments            | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(°/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|---------------------|------------|-------------|------------------|-------------|--------------|------------|------------|------------------|--------------------|-------------------|-------------------------|--------------------------|
|                     | 16329.00   | 88.71       | 0.97             | 9822.47     | 6870.42      | 6872.51    | 485.32     | 1.16             | 388173.88          | 537791.28         | N 32 4 1.73             | W 104 12 40.81           |
|                     | 16424.00   | 88.66       | 0.06             | 9824.65     | 6965.38      | 6967.48    | 486.18     | 0.96             | 388268.84          | 537792.13         | N 32 4 2.67             | W 104 12 40.79           |
|                     | 16518.00   | 88.66       | 358.99           | 9826.85     | 7059.35      | 7061.45    | 485.40     | 1.14             | 388362.80          | 537791.35         | N 32 4 3.60             | W 104 12 40.80           |
|                     | 16613.00   | 89.55       | 358.33           | 9828.33     | 7154.32      | 7156.41    | 483.18     | 1.17             | 388457.76          | 537789.13         | N 32 4 4.54             | W 104 12 40.83           |
|                     | 16708.00   | 87.14       | 357.93           | 9831.08     | 7249.24      | 7251.31    | 480.08     | 2.57             | 388552.65          | 537786.03         | N 32 4 5.48             | W 104 12 40.86           |
|                     | 16802.00   | 91.18       | 358.63           | 9832.45     | 7343.18      | 7345.24    | 477.26     | 4.36             | 388646.57          | 537783.21         | N 32 4 6.41             | W 104 12 40.89           |
|                     | 16896.00   | 88.88       | 358.32           | 9832.41     | 7437.15      | 7439.20    | 474.76     | 2.47             | 388740.52          | 537780.71         | N 32 4 7.34             | W 104 12 40.92           |
|                     | 16991.00   | 89.22       | 359.25           | 9833.98     | 7532.12      | 7534.16    | 472.74     | 1.04             | 388835.48          | 537778.70         | N 32 4 8.28             | W 104 12 40.94           |
|                     | 17085.00   | 89.27       | 359.43           | 9835.22     | 7626.11      | 7628.15    | 471.66     | 0.20             | 388929.45          | 537777.62         | N 32 4 9.21             | W 104 12 40.95           |
|                     | 17180.00   | 89.16       | 0.32             | 9836.52     | 7721.10      | 7723.14    | 471.45     | 0.94             | 389024.44          | 537777.41         | N 32 4 10.15            | W 104 12 40.96           |
|                     | 17275.00   | 87.65       | 358.99           | 9839.16     | 7816.06      | 7818.10    | 470.88     | 2.12             | 389119.38          | 537776.84         | N 32 4 11.09            | W 104 12 40.96           |
|                     | 17369.00   | 89.55       | 1.48             | 9841.46     | 7910.01      | 7912.06    | 471.27     | 3.33             | 389213.33          | 537777.22         | N 32 4 12.02            | W 104 12 40.96           |
|                     | 17464.00   | 90.90       | 2.86             | 9841.09     | 8004.92      | 8006.98    | 474.86     | 2.03             | 389308.25          | 537780.82         | N 32 4 12.95            | W 104 12 40.91           |
|                     | 17559.00   | 88.43       | 1.26             | 9841.64     | 8099.84      | 8101.91    | 478.28     | 3.10             | 389403.17          | 537784.23         | N 32 4 13.89            | W 104 12 40.87           |
|                     | 17653.00   | 86.42       | 1.77             | 9845.87     | 8193.69      | 8195.78    | 480.76     | 2.21             | 389497.03          | 537786.72         | N 32 4 14.82            | W 104 12 40.84           |
|                     | 17748.00   | 88.32       | 3.02             | 9850.23     | 8288.48      | 8290.59    | 484.73     | 2.39             | 389591.83          | 537790.68         | N 32 4 15.76            | W 104 12 40.79           |
|                     | 17842.00   | 90.17       | 4.04             | 9851.46     | 8382.27      | 8384.40    | 490.51     | 2.25             | 389685.63          | 537796.47         | N 32 4 16.69            | W 104 12 40.73           |
|                     | 17937.00   | 90.56       | 3.70             | 9850.86     | 8477.02      | 8479.18    | 496.93     | 0.54             | 389780.40          | 537802.88         | N 32 4 17.63            | W 104 12 40.65           |
|                     | 18032.00   | 91.01       | 3.77             | 9849.56     | 8571.78      | 8573.97    | 503.11     | 0.48             | 389875.18          | 537809.07         | N 32 4 18.56            | W 104 12 40.58           |
|                     | 18126.00   | 97.41       | 4.65             | 9842.66     | 8665.20      | 8667.41    | 509.99     | 6.87             | 389968.62          | 537815.94         | N 32 4 19.49            | W 104 12 40.50           |
|                     | 18221.00   | 95.95       | 2.00             | 9831.61     | 8759.36      | 8761.60    | 515.46     | 3.17             | 390062.80          | 537821.41         | N 32 4 20.42            | W 104 12 40.43           |
|                     | 18315.00   | 93.31       | 359.53           | 9824.02     | 8853.02      | 8855.26    | 516.70     | 3.84             | 390156.46          | 537822.66         | N 32 4 21.35            | W 104 12 40.42           |
|                     | 18415.00   | 90.34       | 356.98           | 9820.84     | 8952.92      | 8955.15    | 513.66     | 3.91             | 390256.33          | 537819.61         | N 32 4 22.34            | W 104 12 40.45           |
|                     | 18510.00   | 90.50       | 359.03           | 9820.14     | 9047.87      | 9050.08    | 510.35     | 2.16             | 390351.26          | 537816.31         | N 32 4 23.28            | W 104 12 40.49           |
|                     | 18606.00   | 89.83       | 0.15             | 9819.86     | 9143.86      | 9146.08    | 509.67     | 1.36             | 390447.24          | 537815.62         | N 32 4 24.23            | W 104 12 40.49           |
|                     | 18699.00   | 89.83       | 0.03             | 9820.14     | 9236.86      | 9239.08    | 509.81     | 0.13             | 390540.23          | 537815.76         | N 32 4 25.15            | W 104 12 40.49           |
|                     | 18794.00   | 89.83       | 359.75           | 9820.42     | 9331.86      | 9334.08    | 509.63     | 0.29             | 390635.22          | 537815.58         | N 32 4 26.09            | W 104 12 40.49           |
|                     | 18889.00   | 89.83       | 0.55             | 9820.70     | 9426.86      | 9429.07    | 509.88     | 0.84             | 390730.21          | 537815.83         | N 32 4 27.03            | W 104 12 40.49           |
|                     | 18984.00   | 90.90       | 0.54             | 9820.10     | 9521.84      | 9524.07    | 510.78     | 1.13             | 390825.20          | 537816.73         | N 32 4 27.97            | W 104 12 40.48           |
|                     | 19078.00   | 90.90       | 0.43             | 9818.62     | 9615.83      | 9618.05    | 511.58     | 0.12             | 390919.17          | 537817.53         | N 32 4 28.90            | W 104 12 40.46           |
|                     | 19172.00   | 91.01       | 0.31             | 9817.05     | 9709.81      | 9712.04    | 512.18     | 0.17             | 391013.15          | 537818.14         | N 32 4 29.83            | W 104 12 40.46           |
|                     | 19266.00   | 91.18       | 1.08             | 9815.26     | 9803.78      | 9806.01    | 513.32     | 0.84             | 391107.12          | 537819.28         | N 32 4 30.76            | W 104 12 40.44           |
|                     | 19361.00   | 90.90       | 359.76           | 9813.53     | 9898.75      | 9900.99    | 514.02     | 1.42             | 391202.09          | 537819.97         | N 32 4 31.70            | W 104 12 40.43           |
|                     | 19550.00   | 90.84       | 359.89           | 9810.66     | 10087.73     | 10089.97   | 513.44     | 0.08             | 391391.05          | 537819.40         | N 32 4 33.57            | W 104 12 40.44           |
|                     | 19741.00   | 90.90       | 359.67           | 9807.76     | 10278.71     | 10280.95   | 512.71     | 0.12             | 391582.01          | 537818.66         | N 32 4 35.46            | W 104 12 40.44           |
|                     | 19930.00   | 90.84       | 0.85             | 9804.89     | 10467.68     | 10469.92   | 513.57     | 0.63             | 391770.96          | 537819.52         | N 32 4 37.33            | W 104 12 40.43           |
|                     | 20025.00   | 90.84       | 0.26             | 9803.50     | 10562.66     | 10564.90   | 514.49     | 0.62             | 391865.94          | 537820.44         | N 32 4 38.27            | W 104 12 40.42           |
|                     | 20119.00   | 90.78       | 359.83           | 9802.17     | 10656.65     | 10658.89   | 514.56     | 0.46             | 391959.92          | 537820.51         | N 32 4 39.20            | W 104 12 40.42           |
|                     | 20214.00   | 90.84       | 0.18             | 9800.83     | 10751.63     | 10753.88   | 514.57     | 0.37             | 392054.90          | 537820.52         | N 32 4 40.14            | W 104 12 40.41           |
| Toe HL Cross        | 20275.00   | 90.88       | 359.83           | 9799.91     | 10812.63     | 10814.88   | 514.57     | 0.58             | 392115.89          | 537820.53         | N 32 4 40.74            | W 104 12 40.41           |
|                     | 20308.00   | 90.90       | 359.64           | 9799.40     | 10845.62     | 10847.87   | 514.42     | 0.58             | 392148.88          | 537820.37         | N 32 4 41.07            | W 104 12 40.42           |
| Last SLB MWD Survey | 20386.00   | 90.84       | 359.66           | 9798.22     | 10923.61     | 10925.86   | 513.95     | 0.08             | 392226.86          | 537819.90         | N 32 4 41.84            | W 104 12 40.42           |
| Projection to Bit   | 20420.00   | 90.84       | 359.66           | 9797.72     | 10957.61     | 10959.86   | 513.74     | 0.00             | 392260.86          | 537819.70         | N 32 4 42.17            | W 104 12 40.42           |

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 \*\*\* 3-D 97.071% Confidence 3.0000 sigma  
Survey Program:

| Description | Part | MD From<br>(ft) | MD To<br>(ft) | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Survey Tool Type      | Borehole / Survey                                           |
|-------------|------|-----------------|---------------|------------------|-------------------|-------------------------|-----------------------|-------------------------------------------------------------|
|             | 1    | 0.000           | 28.000        | 1/98.425         | 30.000            | 30.000                  | A001Ma_MWD-Depth Only | HH SO 8 5 Fed 003 No. 6H /<br>Chevron HH SO 8 5 FED 003 No. |
|             | 1    | 28.000          | 28.000        | Act Stns         | 30.000            | 30.000                  | A001Ma_MWD-Depth Only | HH SO 8 5 Fed 003 No. 6H /<br>Chevron HH SO 8 5 FED 003 No. |
|             | 1    | 28.000          | 452.000       | Act Stns         | 30.000            | 30.000                  | A001Ma_MWD            | HH SO 8 5 Fed 003 No. 6H /<br>Chevron HH SO 8 5 FED 003 No. |
|             | 1    | 452.000         | 20420.000     | Act Stns         | 30.000            | 30.000                  | B001Ma_MWD+HDGM       | HH SO 8 5 Fed 003 No. 6H /<br>Chevron HH SO 8 5 FED 003 No. |