



Apache Corporation

Crane County, TX

Sec 44, Blk 30 University Lands Survey, A-U44

University M #1H

Wellbore #1

Survey: MWD

DDC Survey Report

10 October, 2012





Date: 10/23/12

Railroad Commission of Texas
Oil and Gas Division
1701 North Congress Avenue
Austin, Texas 78711

Attention: Pam Johns

Re: Apache Corporation
University M #1H
RRC Lease / ID No.
UL
Abstract #U44
Crane County, Texas
API No. 42-103-36037

Enclosed, please find the original and one copy of the survey performed on the referenced well by The Directional Drilling Company (DDC). (P5#851499). Other information required by your office is as follows:

| <u>Name & Title of Surveyor</u> | <u>Drainhole Number</u> | <u>Surveyed Depths</u> | <u>Dates Performed</u> | <u>Type of Survey</u> |
|---|-------------------------|----------------------------|----------------------------|---------------------------|
| Daniel Longoria | Original Hole | 1869.9' – 6654' | 9/25/12 - 10/6/12 | MWD |

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Larry Wright

Enclosures

Cc: Apache Corporation

• 11390 FM 830 • Willis, Texas 77318 •
• PH 936-856-4332 • FAX 936-856-8678 •

| | | | |
|------------------|---|-------------------------------------|-------------------------------------|
| Company: | Apache Corporation | Local Co-ordinate Reference: | Well University M #1H |
| Project: | Crane County, TX | TVD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Site: | Sec 44, Blk 30 University Lands Survey, A-U44 | MD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Well: | University M #1H | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM 5000.1 Single User Db |

| | | | |
|--------------------|--------------------------------------|----------------------|----------------|
| Project | Crane County, TX | | |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | Texas Central 4203 | | |

| | | | |
|------------------------------|---|--------------------------|-------------------|
| Site | Sec 44, Blk 30 University Lands Survey, A-U44 | | |
| Site Position: | | Northing: | 652,652.90 usft |
| From: | Map | Easting: | 1,363,658.00 usft |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " |
| | | Latitude: | 31° 26' 42.551 N |
| | | Longitude: | 102° 22' 26.408 W |
| | | Grid Convergence: | -1.05 ° |

| | | | |
|-----------------------------|------------------|----------------------------|-----------------------------------|
| Well | University M #1H | | |
| Well Position | +N-S | 0.0 usft | Northing: 652,652.90 usft |
| | +E-W | 0.0 usft | Easting: 1,363,658.00 usft |
| Position Uncertainty | 0.0 usft | Wellhead Elevation: | usft |
| | | Latitude: | 31° 26' 42.551 N |
| | | Longitude: | 102° 22' 26.408 W |
| | | Ground Level: | 0.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 9/7/2012 | 6.82 | 59.63 | 48,172 |

| | | | | | |
|--------------------------|--------------------------------|--------------------|--------------------|----------------------|-----|
| Design | Wellbore #1 | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N-S (usft) | +E-W (usft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 165.39 | |

| | | | | | |
|-----------------------|------------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 10/10/2012 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 85.8 | 1,869.9 | GYRO (Wellbore #1) | Good_gyro | Good Gyro | |
| 1,906.0 | 6,654.0 | MWD (Wellbore #1) | MWD default | MWD - Standard | |

| | | | | | | | | | | |
|--------------------------------------|------------------------|--------------------|------------------------------|--------------------|--------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| Survey | | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | |
| TIE IN @ 1870' MD / 1869' TVD | | | | | | | | | | |
| 1,869.9 | 1.71 | 172.14 | 1,869.1 | -38.0 | 8.4 | 38.9 | 0.00 | 0.00 | 0.00 | |
| 1,906.0 | 2.20 | 171.00 | 1,905.2 | -39.2 | 8.6 | 40.1 | 1.36 | 1.36 | -3.16 | |
| 1,938.0 | 4.40 | 167.10 | 1,937.1 | -41.0 | 8.9 | 42.0 | 6.91 | 6.88 | -12.19 | |
| 1,969.0 | 6.60 | 164.10 | 1,968.0 | -43.9 | 9.7 | 44.9 | 7.15 | 7.10 | -9.68 | |
| 2,001.0 | 9.20 | 165.00 | 1,999.7 | -48.2 | 10.9 | 49.3 | 8.13 | 8.13 | 2.81 | |
| 2,033.0 | 11.60 | 165.50 | 2,031.1 | -53.7 | 12.3 | 55.1 | 7.51 | 7.50 | 1.56 | |
| 2,065.0 | 14.00 | 166.20 | 2,062.3 | -60.6 | 14.1 | 62.2 | 7.52 | 7.50 | 2.19 | |
| 2,097.0 | 16.50 | 166.40 | 2,093.2 | -68.8 | 16.0 | 70.6 | 7.81 | 7.81 | 0.63 | |
| 2,128.0 | 19.00 | 166.60 | 2,122.7 | -78.0 | 18.3 | 80.1 | 8.07 | 8.06 | 0.65 | |

| | | | |
|------------------|---|-------------------------------------|-------------------------------------|
| Company: | Apache Corporation | Local Co-ordinate Reference: | Well University M #1H |
| Project: | Crane County, TX | TVD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Site: | Sec 44, Blk 30 University Lands Survey, A-U44 | MD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Well: | University M #1H | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM 5000.1 Single User Db |

| Survey | | | | | | | | | | |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | |
| 2,160.0 | 21.50 | 167.50 | 2,152.8 | -88.8 | 20.7 | 91.1 | 7.87 | 7.81 | 2.81 | |
| 2,191.0 | 23.60 | 167.90 | 2,181.4 | -100.4 | 23.3 | 103.0 | 6.79 | 6.77 | 1.29 | |
| 2,223.0 | 25.60 | 167.90 | 2,210.5 | -113.4 | 26.1 | 116.3 | 6.25 | 6.25 | 0.00 | |
| 2,255.0 | 27.40 | 167.00 | 2,239.1 | -127.4 | 29.2 | 130.6 | 5.76 | 5.63 | -2.81 | |
| 2,287.0 | 29.10 | 165.50 | 2,267.3 | -142.1 | 32.8 | 145.7 | 5.76 | 5.31 | -4.69 | |
| 2,319.0 | 31.00 | 165.10 | 2,295.0 | -157.6 | 36.8 | 161.8 | 5.97 | 5.94 | -1.25 | |
| 2,351.0 | 32.70 | 164.10 | 2,322.2 | -173.8 | 41.3 | 178.6 | 5.56 | 5.31 | -3.13 | |
| 2,383.0 | 34.30 | 164.50 | 2,348.9 | -190.8 | 46.1 | 196.3 | 5.05 | 5.00 | 1.25 | |
| 2,414.0 | 35.70 | 165.50 | 2,374.3 | -208.0 | 50.7 | 214.1 | 4.88 | 4.52 | 3.23 | |
| 2,446.0 | 37.50 | 166.60 | 2,399.9 | -226.5 | 55.3 | 233.2 | 5.99 | 5.63 | 3.44 | |
| 2,478.0 | 39.20 | 166.70 | 2,425.0 | -245.8 | 59.9 | 253.0 | 5.32 | 5.31 | 0.31 | |
| 2,510.0 | 41.10 | 166.90 | 2,449.5 | -265.9 | 64.6 | 273.6 | 5.95 | 5.94 | 0.63 | |
| 2,542.0 | 42.30 | 166.70 | 2,473.4 | -286.7 | 69.4 | 294.9 | 3.77 | 3.75 | -0.63 | |
| 2,573.0 | 43.40 | 165.70 | 2,496.1 | -307.1 | 74.5 | 316.0 | 4.17 | 3.55 | -3.23 | |
| 2,605.0 | 44.70 | 165.40 | 2,519.1 | -328.7 | 80.0 | 338.2 | 4.11 | 4.06 | -0.94 | |
| 2,637.0 | 45.90 | 165.10 | 2,541.6 | -350.7 | 85.8 | 361.0 | 3.81 | 3.75 | -0.94 | |
| 2,669.0 | 47.60 | 164.60 | 2,563.5 | -373.2 | 91.9 | 384.3 | 5.43 | 5.31 | -1.56 | |
| 2,700.0 | 48.50 | 164.70 | 2,584.3 | -395.4 | 98.0 | 407.3 | 2.91 | 2.90 | 0.32 | |
| 2,732.0 | 48.40 | 164.80 | 2,605.5 | -418.5 | 104.3 | 431.3 | 0.39 | -0.31 | 0.31 | |
| 2,764.0 | 48.10 | 163.90 | 2,626.8 | -441.5 | 110.8 | 455.2 | 2.30 | -0.94 | -2.81 | |
| 2,828.0 | 47.60 | 161.40 | 2,669.8 | -486.8 | 124.9 | 502.5 | 3.00 | -0.78 | -3.91 | |
| 2,891.0 | 48.00 | 161.90 | 2,712.1 | -531.1 | 139.6 | 549.1 | 0.87 | 0.63 | 0.79 | |
| 2,954.0 | 48.30 | 163.90 | 2,754.1 | -575.9 | 153.4 | 596.0 | 2.41 | 0.48 | 3.17 | |
| CROSSED HARD LINE @ 2966' MD / 2762' TVD | | | | | | | | | | |
| 2,966.0 | 48.26 | 163.97 | 2,762.1 | -584.5 | 155.9 | 604.9 | 0.56 | -0.31 | 0.62 | |
| 2,986.0 | 48.20 | 164.10 | 2,775.4 | -598.9 | 160.0 | 619.9 | 0.56 | -0.31 | 0.63 | |
| 3,008.0 | 48.20 | 163.90 | 2,790.1 | -614.6 | 164.5 | 636.3 | 0.68 | 0.00 | -0.91 | |
| 3,039.0 | 49.00 | 164.10 | 2,810.6 | -637.0 | 170.9 | 659.5 | 2.63 | 2.58 | 0.65 | |
| 3,071.0 | 50.80 | 166.00 | 2,831.2 | -660.6 | 177.2 | 684.0 | 7.23 | 5.63 | 5.94 | |
| 3,103.0 | 53.30 | 167.20 | 2,850.9 | -685.2 | 183.0 | 709.2 | 8.35 | 7.81 | 3.75 | |
| 3,135.0 | 55.80 | 168.10 | 2,869.4 | -710.6 | 188.6 | 735.2 | 8.14 | 7.81 | 2.81 | |
| 3,167.0 | 58.10 | 168.60 | 2,886.9 | -736.9 | 194.0 | 762.0 | 7.31 | 7.19 | 1.56 | |
| 3,198.0 | 60.20 | 169.00 | 2,902.8 | -763.0 | 199.2 | 788.6 | 6.86 | 6.77 | 1.29 | |
| 3,234.0 | 62.40 | 168.00 | 2,920.1 | -794.0 | 205.5 | 820.1 | 6.58 | 6.11 | -2.78 | |
| 3,322.0 | 68.40 | 166.50 | 2,956.7 | -872.0 | 223.2 | 900.1 | 6.99 | 6.82 | -1.70 | |
| 3,354.0 | 71.20 | 166.10 | 2,967.7 | -901.1 | 230.3 | 930.1 | 8.83 | 8.75 | -1.25 | |
| CROSSED HARD LINE @ 3356' MD / 2968' TVD | | | | | | | | | | |
| 3,356.0 | 71.37 | 166.09 | 2,968.4 | -903.0 | 230.7 | 932.0 | 8.44 | 8.44 | -0.32 | |
| 3,386.0 | 73.90 | 166.00 | 2,977.3 | -930.8 | 237.6 | 960.6 | 8.44 | 8.44 | -0.31 | |
| 3,418.0 | 76.40 | 166.50 | 2,985.5 | -960.8 | 245.0 | 991.5 | 7.96 | 7.81 | 1.56 | |
| 3,449.0 | 78.90 | 166.60 | 2,992.2 | -990.2 | 252.0 | 1,021.8 | 8.07 | 8.06 | 0.32 | |
| 3,480.0 | 81.20 | 166.90 | 2,997.5 | -1,020.0 | 259.0 | 1,052.3 | 7.48 | 7.42 | 0.97 | |
| 3,512.0 | 83.30 | 166.90 | 3,001.8 | -1,050.8 | 266.2 | 1,084.0 | 6.56 | 6.56 | 0.00 | |

| | | | |
|------------------|---|-------------------------------------|-------------------------------------|
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| Site: | Sec 44, Blk 30 University Lands Survey, A-U44 | MD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Well: | University M #1H | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM 5000.1 Single User Db |

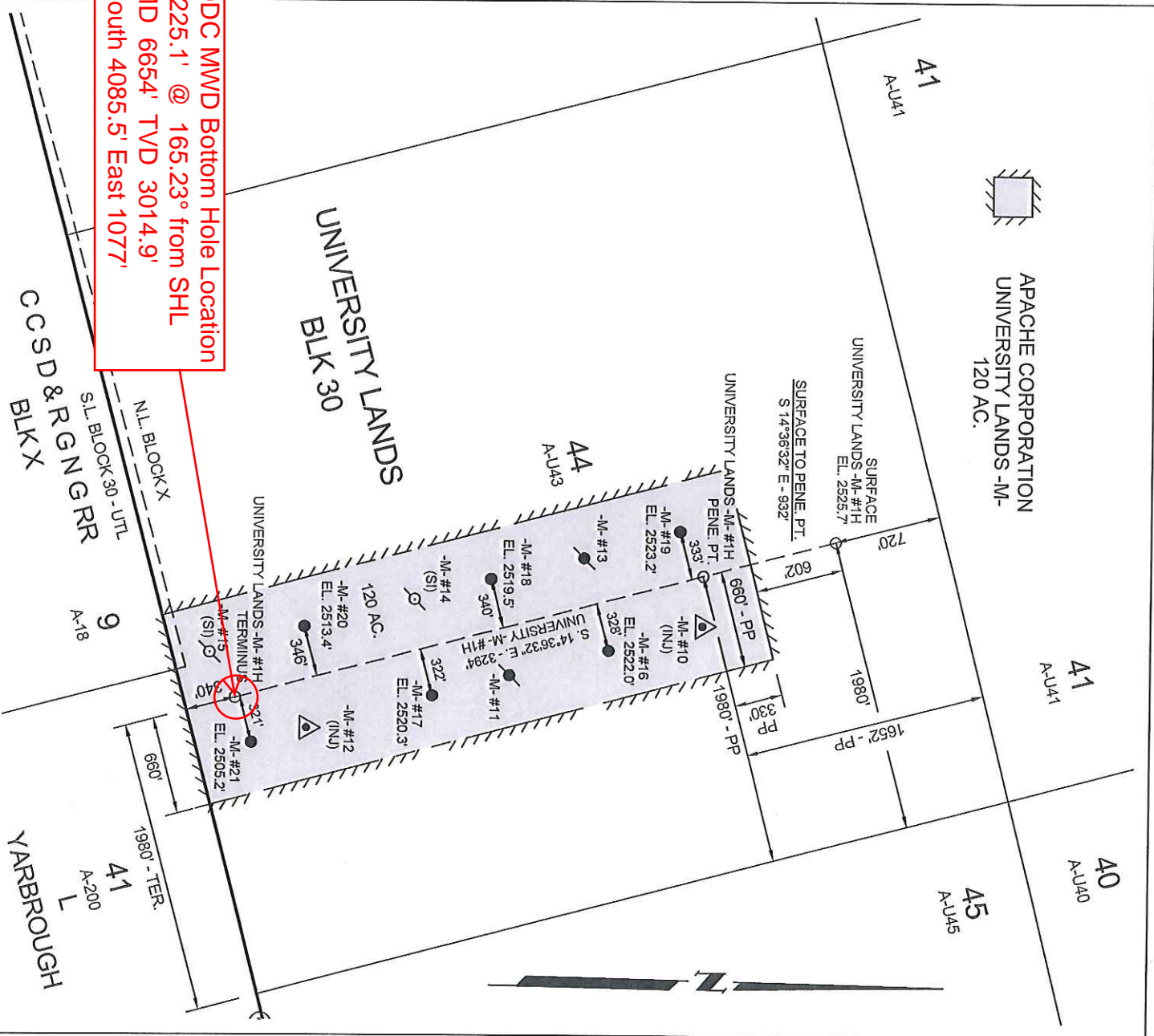
| Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 3,544.0 | 85.10 | 166.60 | 3,005.1 | -1,081.8 | 273.5 | 1,115.8 | 5.70 | 5.63 | -0.94 |
| 3,576.0 | 87.20 | 165.80 | 3,007.2 | -1,112.8 | 281.1 | 1,147.8 | 7.02 | 6.56 | -2.50 |
| 3,608.0 | 89.30 | 164.80 | 3,008.2 | -1,143.8 | 289.3 | 1,179.8 | 7.27 | 6.56 | -3.13 |
| 3,639.0 | 90.70 | 163.40 | 3,008.2 | -1,173.6 | 297.7 | 1,210.7 | 6.39 | 4.52 | -4.52 |
| 3,702.0 | 91.60 | 163.40 | 3,006.9 | -1,233.9 | 315.7 | 1,273.7 | 1.43 | 1.43 | 0.00 |
| 3,765.0 | 91.70 | 163.90 | 3,005.1 | -1,294.4 | 333.5 | 1,336.6 | 0.81 | 0.16 | 0.79 |
| 3,829.0 | 92.00 | 164.10 | 3,003.0 | -1,355.9 | 351.1 | 1,400.6 | 0.56 | 0.47 | 0.31 |
| 3,893.0 | 90.90 | 164.10 | 3,001.4 | -1,417.4 | 368.6 | 1,464.5 | 1.72 | -1.72 | 0.00 |
| 3,956.0 | 90.70 | 164.20 | 3,000.5 | -1,478.0 | 385.8 | 1,527.5 | 0.35 | -0.32 | 0.16 |
| 4,019.0 | 90.80 | 164.10 | 2,999.7 | -1,538.6 | 403.0 | 1,590.5 | 0.22 | 0.16 | -0.16 |
| 4,083.0 | 89.80 | 164.80 | 2,999.4 | -1,600.2 | 420.2 | 1,654.5 | 1.91 | -1.56 | 1.09 |
| 4,146.0 | 89.50 | 165.30 | 2,999.8 | -1,661.1 | 436.4 | 1,717.5 | 0.93 | -0.48 | 0.79 |
| 4,210.0 | 89.50 | 165.40 | 3,000.3 | -1,723.0 | 452.6 | 1,781.5 | 0.16 | 0.00 | 0.16 |
| 4,273.0 | 89.80 | 165.50 | 3,000.7 | -1,784.0 | 468.5 | 1,844.5 | 0.50 | 0.48 | 0.16 |
| 4,336.0 | 90.00 | 166.30 | 3,000.8 | -1,845.1 | 483.8 | 1,907.5 | 1.31 | 0.32 | 1.27 |
| 4,400.0 | 90.10 | 165.80 | 3,000.8 | -1,907.2 | 499.2 | 1,971.5 | 0.80 | 0.16 | -0.78 |
| 4,463.0 | 90.20 | 166.40 | 3,000.6 | -1,968.4 | 514.4 | 2,034.5 | 0.97 | 0.16 | 0.95 |
| 4,527.0 | 90.20 | 166.10 | 3,000.4 | -2,030.5 | 529.6 | 2,098.5 | 0.47 | 0.00 | -0.47 |
| 4,589.0 | 90.10 | 166.70 | 3,000.2 | -2,090.8 | 544.2 | 2,160.5 | 0.98 | -0.16 | 0.97 |
| 4,652.0 | 88.60 | 166.00 | 3,000.9 | -2,152.0 | 559.0 | 2,223.4 | 2.63 | -2.38 | -1.11 |
| 4,716.0 | 88.20 | 165.50 | 3,002.7 | -2,214.0 | 574.8 | 2,287.4 | 1.00 | -0.63 | -0.78 |
| 4,779.0 | 88.10 | 166.10 | 3,004.7 | -2,275.1 | 590.2 | 2,350.4 | 0.97 | -0.16 | 0.95 |
| 4,843.0 | 88.30 | 165.80 | 3,006.8 | -2,337.1 | 605.7 | 2,414.3 | 0.56 | 0.31 | -0.47 |
| 4,906.0 | 88.10 | 166.10 | 3,008.7 | -2,398.2 | 621.0 | 2,477.3 | 0.57 | -0.32 | 0.48 |
| 4,970.0 | 89.20 | 165.50 | 3,010.2 | -2,460.2 | 636.7 | 2,541.3 | 1.96 | 1.72 | -0.94 |
| 5,033.0 | 90.00 | 165.30 | 3,010.7 | -2,521.2 | 652.6 | 2,604.3 | 1.31 | 1.27 | -0.32 |
| 5,097.0 | 90.10 | 165.80 | 3,010.6 | -2,583.2 | 668.6 | 2,668.3 | 0.80 | 0.16 | 0.78 |
| 5,160.0 | 90.00 | 165.40 | 3,010.6 | -2,644.2 | 684.2 | 2,731.3 | 0.65 | -0.16 | -0.63 |
| 5,223.0 | 90.00 | 165.50 | 3,010.6 | -2,705.2 | 700.1 | 2,794.3 | 0.16 | 0.00 | 0.16 |
| 5,287.0 | 89.80 | 165.00 | 3,010.7 | -2,767.1 | 716.4 | 2,858.3 | 0.84 | -0.31 | -0.78 |
| 5,349.0 | 89.80 | 164.70 | 3,010.9 | -2,826.9 | 732.6 | 2,920.3 | 0.48 | 0.00 | -0.48 |
| 5,412.0 | 90.20 | 165.20 | 3,010.9 | -2,887.7 | 748.9 | 2,983.3 | 1.02 | 0.63 | 0.79 |
| 5,476.0 | 90.00 | 164.50 | 3,010.8 | -2,949.5 | 765.7 | 3,047.3 | 1.14 | -0.31 | -1.09 |
| 5,539.0 | 90.10 | 164.80 | 3,010.7 | -3,010.3 | 782.3 | 3,110.3 | 0.50 | 0.16 | 0.48 |
| 5,602.0 | 90.20 | 164.30 | 3,010.6 | -3,071.0 | 799.1 | 3,173.3 | 0.81 | 0.16 | -0.79 |
| 5,666.0 | 90.10 | 164.20 | 3,010.4 | -3,132.6 | 816.5 | 3,237.3 | 0.22 | -0.16 | -0.16 |
| 5,729.0 | 89.70 | 163.30 | 3,010.5 | -3,193.1 | 834.1 | 3,300.2 | 1.56 | -0.63 | -1.43 |
| 5,793.0 | 90.30 | 164.60 | 3,010.5 | -3,254.6 | 851.8 | 3,364.2 | 2.24 | 0.94 | 2.03 |
| 5,856.0 | 90.60 | 165.80 | 3,010.0 | -3,315.5 | 867.9 | 3,427.2 | 1.96 | 0.48 | 1.90 |
| 5,920.0 | 90.50 | 166.10 | 3,009.4 | -3,377.6 | 883.4 | 3,491.2 | 0.49 | -0.16 | 0.47 |
| 5,983.0 | 90.20 | 164.80 | 3,009.0 | -3,438.5 | 899.3 | 3,554.2 | 2.12 | -0.48 | -2.06 |
| 6,046.0 | 89.70 | 165.00 | 3,009.1 | -3,499.4 | 915.7 | 3,617.2 | 0.85 | -0.79 | 0.32 |
| 6,110.0 | 89.80 | 165.30 | 3,009.4 | -3,561.2 | 932.1 | 3,681.2 | 0.49 | 0.16 | 0.47 |
| 6,174.0 | 89.60 | 164.80 | 3,009.7 | -3,623.1 | 948.6 | 3,745.2 | 0.84 | -0.31 | -0.78 |

| | | | |
|------------------|---|-------------------------------------|-------------------------------------|
| Company: | Apache Corporation | Local Co-ordinate Reference: | Well University M #1H |
| Project: | Crane County, TX | TVD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Site: | Sec 44, Blk 30 University Lands Survey, A-U44 | MD Reference: | WELL @ 0.0usft (Original Well Elev) |
| Well: | University M #1H | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM 5000.1 Single User Db |

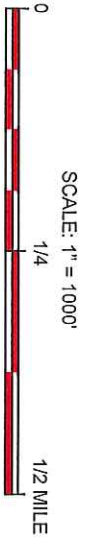
| Survey | | | | | | | | | | |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | |
| 6,237.0 | 89.70 | 164.50 | 3,010.1 | -3,683.8 | 965.3 | 3,808.2 | 0.50 | 0.16 | -0.48 | |
| 6,300.0 | 89.40 | 164.50 | 3,010.6 | -3,744.5 | 982.1 | 3,871.2 | 0.48 | -0.48 | 0.00 | |
| 6,364.0 | 89.40 | 164.10 | 3,011.2 | -3,806.1 | 999.4 | 3,935.2 | 0.62 | 0.00 | -0.63 | |
| 6,427.0 | 89.10 | 164.10 | 3,012.1 | -3,866.7 | 1,016.7 | 3,998.1 | 0.48 | -0.48 | 0.00 | |
| 6,491.0 | 89.20 | 164.40 | 3,013.0 | -3,928.3 | 1,034.0 | 4,062.1 | 0.49 | 0.16 | 0.47 | |
| 6,554.0 | 89.30 | 164.80 | 3,013.8 | -3,989.0 | 1,050.8 | 4,125.1 | 0.65 | 0.16 | 0.63 | |
| LAST MWD SURVEY @ 6602' MD / 3014' TVD | | | | | | | | | | |
| 6,602.0 | 89.40 | 164.80 | 3,014.4 | -4,035.4 | 1,063.4 | 4,173.1 | 0.21 | 0.21 | 0.00 | |
| TD @ 6654' MD / 3015' TVD | | | | | | | | | | |
| 6,654.0 | 89.40 | 164.80 | 3,014.9 | -4,085.5 | 1,077.0 | 4,225.1 | 0.00 | 0.00 | 0.00 | |

| Survey Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|--|----------------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | RANGE BEARING 4225.1' 165.23° |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 1,869.9 | 1,869.1 | -38.0 | 8.4 | TIE IN @ 1870' MD / 1869' TVD | |
| 2,966.0 | 2,762.1 | -584.5 | 155.9 | CROSSED HARD LINE @ 2966' MD / 2762' TVD | |
| 3,356.0 | 2,968.4 | -903.0 | 230.7 | CROSSED HARD LINE @ 3356' MD / 2968' TVD | |
| 6,602.0 | 3,014.4 | -4,035.4 | 1,063.4 | LAST MWD SURVEY @ 6602' MD / 3014' TVD | |
| 6,654.0 | 3,014.9 | -4,085.5 | 1,077.0 | TD @ 6654' MD / 3015' TVD | |

| | | |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|



| WELL COORDINATES | | | | | |
|------------------|-----------|----------|------------------|-------------------|---------|
| WELL | SPC 27 X | SPC 27 Y | NAD27 LAT | NAD27 LON | ELEV. |
| UNIVERSITY M #1H | 1363658.0 | 652652.9 | 31°26'42.551" N. | 102°22'26.408" W. | 2525.7' |
| PENETRATION | 1363893.0 | 651751.2 | 31°26'33.671" N. | 102°22'23.505" W. | |
| TERMINUS | 1364723.9 | 648563.4 | 31°26'02.275" N. | 102°22'13.241" W. | |



DATUM: NAD27 - TEXAS CENTRAL ZONE (FT.)
THIS PLAT IS PREPARED FOR TEXAS RAILROAD COMMISSION PERMITTING PURPOSES ONLY.
NO CLAIM IS HEREBY MADE REGARDING CURRENT OR ACTUAL SURFACE MINERAL FEE OWNERSHIP OR LESSOR.
I CERTIFY THAT THE ABOVE PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Albert E. Fuller

ALBERT E. FULLER
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Midland, TX 79703
Cell - (432) 559-6718
Email - al@aefuller.com

| APACHE CORPORATION | |
|---|----------------------|
| UNIVERSITY M #1H | |
| 720' FNL & 1980' FEL | |
| SECTION 44, BLOCK 30, | |
| UNIVERSITY LANDS SURVEY, ABSTRACT A-U44 | |
| CRANE COUNTY, TEXAS | |
| REV. 08/05/2012 | USGS QUAD: CRANE, TX |
| N 22° W - 3.6 MI. FROM CRANE, TX | |

REF NO.: APA - 100466