

JAN 30 2020

District Office

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

☒ AMENDED REPORT

|                              |  |                                         |  |                                                 |                       |
|------------------------------|--|-----------------------------------------|--|-------------------------------------------------|-----------------------|
| 1 API Number<br>30-015-45380 |  | 2 Pool Code<br>96413                    |  | 3 Pool Name<br>Palmillo; Bone Spring; Southwest |                       |
| 4 Property Code<br>317303    |  | 5 Property Name<br>PALMILLO 14-15 STATE |  |                                                 | 6 Well Number<br>303H |
| 7 OGRID NO.<br>873           |  | 8 Operator Name<br>APACHE CORPORATION   |  |                                                 | 9 Elevation<br>3475'  |

| 10 Surface Location |         |          |       |         |               |                  |               |                |        |
|---------------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no.       | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet From the | East/West line | County |
| L                   | 15      | 19S      | 28E   |         | 1796          | SOUTH            | 321           | WEST           | EDDY   |

|                                             |                               |                                  |                     |                         |                              |                                  |                            |                               |                       |
|---------------------------------------------|-------------------------------|----------------------------------|---------------------|-------------------------|------------------------------|----------------------------------|----------------------------|-------------------------------|-----------------------|
| UL or lot no.<br><b>I</b>                   | Section<br><b>14</b>          | Township<br><b>19S</b>           | Range<br><b>28E</b> | Lot Idn                 | Feet from the<br><b>2263</b> | North/South line<br><b>SOUTH</b> | Feet from the<br><b>52</b> | East/West line<br><b>EAST</b> | County<br><b>EDDY</b> |
| <sup>12</sup> Dedicated Acres<br><b>320</b> | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code |                     | <sup>15</sup> Order No. |                              |                                  |                            |                               |                       |

16

GEODETIC DATA  
NAD 83 GRID - NM EAST

SURFACE LOCATION (SL)  
N 603286.4 - E 591114.7  
LAT: 32.6583769° N  
LONG: 104.1715891° W

KICK OFF POINT (KOP)  
2342°FSL & 31°FWL (SEC.15)  
N 603829.4 - E 590828.5  
LAT: 32.6598705° N  
LONG: 104.1725184° W  
MD: 7952.0 - TVD: 7912.4

FIRST TAKE POINT (FTP)  
2329°FSL & 518°FWL (SEC.15)  
N 603821.0 - E 591313.4  
LAT: 32.6598454° N  
LONG: 104.1709409° W  
MD: 8709.0 - TVD: 8438.4

LAST TAKE POINT (LTP)  
2262°FSL & 186°FWL (SEC.14)  
N 603837.8 - E 600994.3  
LAT: 32.6598470° N  
LONG: 104.1394835° W  
MD: 18398.0 - TVD: 8706.9

BOTTOM HOLE (B.H.)  
N 603839.9 - E 601128.2  
LAT: 32.6598520° N  
LONG: 104.1390484° W  
MD: 18532.0 - TVD: 8711.6

CORNER DATA  
NAD 83 GRID - NM EAST

A: FOUND BRASS CAP "1941"  
N 601487.4 - E 590787.6

B: FOUND BRASS CAP "1941"  
N 604120.4 - E 590796.6

C: FOUND BRASS CAP "1941"  
N 606757.2 - E 590806.5

D: FOUND BRASS CAP "1941"  
N 606785.9 - E 593400.0

E: FOUND BRASS CAP "1941"  
N 606815.2 - E 595993.1

F: FOUND BRASS CAP "1941"  
N 606837.6 - E 598598.9

G: FOUND BRASS CAP "1941"  
N 608860.6 - E 601187.3

H: FOUND BRASS CAP "1941"  
N 604227.7 - E 601181.4

I: FOUND BRASS CAP "1941"  
N 601577.6 - E 601175.4

J: FOUND BRASS CAP "1941"  
N 601556.9 - E 598579.0

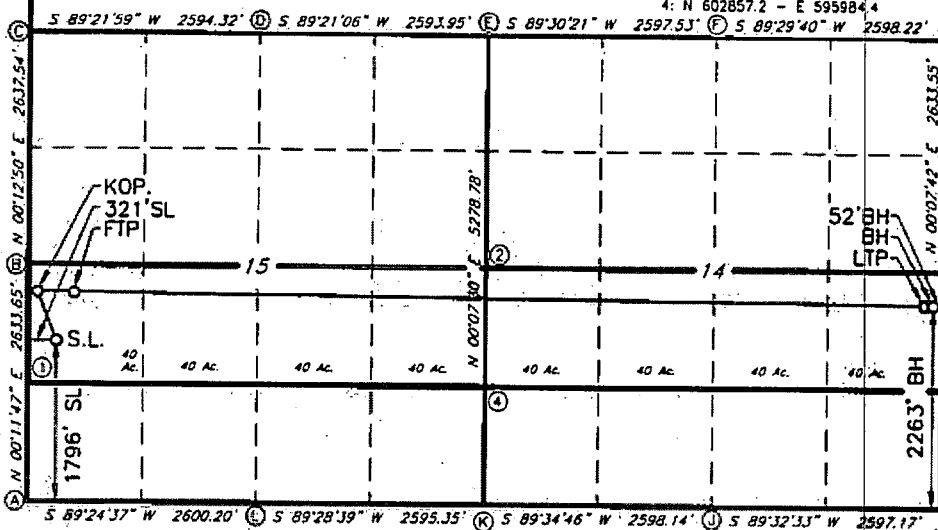
K: FOUND BRASS CAP "1941"  
N 601537.8 - E 595981.6

L: FOUND BRASS CAP "1941"  
N 601514.2 - E 593387.0

CALCULATED POINTS  
1: N 602803.9 - E 590792.1  
2: N 604176.5 - E 595987.3  
3: N 602902.7 - E 601178.4

## E-mail Address

① AS DRILLED REVISED - 12/09/19



Job No.: LS18091069ADR

RS 2-6-2020



# Weatherford

Drilling Services  
10000 West County Rd. 116  
P.O. Box 61028  
Midland, TX USA 79711  
Tel. (432) 561-8892 Fax (432) 561-8895

Date: December 18, 2018

Apache Corporation  
303 Veterans Airpark Lane  
Midland, TX, 79705

Attention: John Vacek

Re: Apache Corporation  
Well: Palmillo 14-15 State Com 303H  
Eddy County, New Mexico

**RECEIVED**

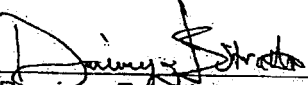
JAN 30 2020

**EMNRD-OCD ARTESIA**

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

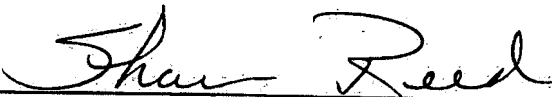
| Name & Title<br>Of Surveyor             | Well<br>Number | Surveyed<br>Depths    | Dates<br>Performed      | Type of<br>Survey             |
|-----------------------------------------|----------------|-----------------------|-------------------------|-------------------------------|
| Domingo Estrada<br>MWD Ops. Coordinator | 303H           | 7,895 MD<br>18,459 MD | 12/1/2018<br>12/18/2018 | Measurement<br>While Drilling |

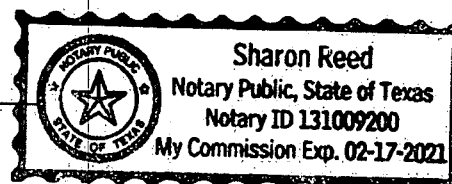
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

  
Domingo Estrada  
MWD Ops. Coordinator

On this, the 20<sup>th</sup> day of December 2018, before me a notary public, the undersigned officer, personally appeared Domingo Estrada, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

  
Notary Public





**5D Survey Report**

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**Apache Corporation**

**Field Name:** *Apache NM (Nad 83 NMEZ)*

**Site Name:** *Palmillo 14-15 State Com (302H,303H)*

**Well Name:** *Palmillo 14-15 State Com 303H*

**File number:** *13501599*

**Survey:** *Definitive survey*

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18 December 2018



**Weatherford®**



Weatherford

## Palmillo 14-15 State Com 303H

### Field Name:

Apache NM (Nad  
83 NMEZ)

Map Units: US ft

Vertical Reference Datum (VRD): Mean Sea Level

Projected Coordinate System: NAD83 / New Mexico East (ftUS)

Comment:

Company Name: Apache Corporation

### Site:

Palmillo 14-15  
State Com  
(302H,303H)

Units: US ft

North Reference: Grid

Convergence Angle: 0.09

Position:

Northing: 603265.20 US ft

Latitude: 32.658318637

Easting: 591093.60 US ft

Longitude: -104.171657871

Elevation above MSL: 3474.00 US ft

Comment: Eddy County, New Mexico

### Slot:

Palmillo 14-15  
State Com 303H

### Position (Relative to Site Centre)

+N/-S: 21.20 US ft

Northing: 603286.40 US ft

Latitude: 32.658376821

+E/-W: 21.10 US ft

Easting: 591114.70 US ft

Longitude: -104.171589205

Slot TVD Reference: Ground Elevation

Elevation above MSL: 3475.00 US ft

Comment:

### Well:

Palmillo 14-15  
State Com 303H

Type: Main well

UWI:

File Number:

Comment: H&P 482

13501599

Closure Distance: 10028.8 US ft

Closure Azimuth: 86.84°

Vertical Section: Position of Origin (Relative to Slot centre)

+N/-S: -0.00 US ft

+E/-W: 0.00 US ft

Az: 86.83°

Drill floor: Survey Name: Definitive Survey

Rig Height (Drill Floor): 26.00 US ft Elevation above MSL: 3501.00 US ft Inclination: 0.00° Azimuth: 0.00°

### Survey Name: Definitive Survey

Date: 29/Oct/2018

Survey Tool: See Survey  
Tool Ranges below.

Comment:

Company:

### Magnetic Model:

Model Name: Surcon Date: 20/Nov/2018

Field Strength:  
48038.0 nT

Declination: 7.34° Dip: 60.43°

MVHD

### Tie Point:

MD: 0.00 US ft

Inclination:  
0.00°

Azimuth: 0.00°

TVD: -0.00  
US ft

North Offset: -0.00  
US ft

East Offset: 0.00  
US ft

### Survey Tool Ranges:

| Name            | Start MD(USFt) | End MD(USFt) | Source Survey |
|-----------------|----------------|--------------|---------------|
| VES GyroFlex V3 | 0.00           | 7781.62      | VES Gyro      |

| Survey Tool Ranges:           |                |              |               |
|-------------------------------|----------------|--------------|---------------|
| Name                          | Start MD(USFt) | End MD(USFt) | Source Survey |
| MWD + HDGM + MS               | 7781.62        | 8862.00      | MWD 5         |
| MWD + HDGM + Sag Corr + MS_OW | 8862.00        | 9933.00      | MWD 6         |
| MWD + HDGM + Sag Corr + MS_OW | 9933.00        | 12907.00     | MWD 7         |
| MWD + HDGM + Sag Corr + MS_OW | 12907.00       | 17360.00     | MWD 9         |
| MWD + HDGM + Sag Corr + MS_OW | 17360.00       | 18532.00     | MWD 10        |

Wellpath created using minimum curvature.

| Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) |            |           |                |               |                      |                      |                     |                     |                    |            |
|-----------------------------------------------------------------------|------------|-----------|----------------|---------------|----------------------|----------------------|---------------------|---------------------|--------------------|------------|
| MD<br>(US ft)                                                         | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | VS<br>(US ft) | N. Offset<br>(US ft) | E. Offset<br>(US ft) | DLS<br>(°/100US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment    |
| 7781.62                                                               | 1.61       | 266.28    | 7742.19        | -258.22       | 544.82               | -288.79              | 1.02                | 603831.22           | 590825.91          | Tie on VES |
| 7895.00                                                               | 1.14       | 172.31    | 7855.55        | -259.73       | 543.60               | -290.23              | 1.80                | 603830.00           | 590824.47          | Gyro       |
| 7990.00                                                               | 8.00       | 90.78     | 7950.23        | -253.05       | 542.57               | -283.49              | 8.33                | 603828.97           | 590831.21          | First WFT  |
| 8037.00                                                               | 16.06      | 93.71     | 7996.16        | -243.32       | 542.10               | -273.71              | 17.19               | 603828.50           | 590840.99          | MWD Sv     |
| 8085.00                                                               | 22.58      | 97.03     | 8041.43        | -227.64       | 540.54               | -257.92              | 13.77               | 603826.94           | 590856.78          |            |
| 8132.00                                                               | 28.30      | 94.93     | 8083.86        | -207.71       | 538.48               | -237.85              | 12.32               | 603824.88           | 590876.85          |            |
| 8179.00                                                               | 35.00      | 92.34     | 8123.85        | -183.23       | 536.97               | -213.25              | 14.54               | 603823.37           | 590901.45          |            |
| 8226.00                                                               | 39.02      | 92.22     | 8161.37        | -155.07       | 535.85               | -184.99              | 8.55                | 603822.25           | 590929.71          |            |
| 8274.00                                                               | 39.62      | 91.12     | 8198.50        | -124.77       | 534.96               | -154.59              | 1.92                | 603821.36           | 590960.11          |            |
| 8321.00                                                               | 41.21      | 91.26     | 8234.29        | -94.39        | 534.33               | -124.12              | 3.39                | 603820.73           | 590990.58          |            |
| 8368.00                                                               | 44.90      | 90.78     | 8268.62        | -62.39        | 533.76               | -92.05               | 7.88                | 603820.16           | 591022.65          |            |
| 8415.00                                                               | 48.84      | 89.90     | 8300.75        | -28.16        | 533.57               | -57.76               | 8.49                | 603819.97           | 591056.94          |            |
| 8463.00                                                               | 52.32      | 88.81     | 8331.23        | 8.88          | 533.99               | -20.68               | 7.46                | 603820.39           | 591094.02          |            |
| 8507.00                                                               | 55.15      | 89.28     | 8357.25        | 44.32         | 534.58               | 14.78                | 6.49                | 603820.98           | 591129.48          |            |
| 8556.00                                                               | 61.71      | 89.60     | 8382.89        | 86.00         | 534.98               | 56.51                | 13.40               | 603821.38           | 591171.21          |            |
| 8603.00                                                               | 66.69      | 90.20     | 8403.34        | 128.25        | 535.05               | 98.81                | 10.66               | 603821.45           | 591213.51          |            |
| 8652.00                                                               | 69.78      | 90.15     | 8421.51        | 173.67        | 534.92               | 144.31               | 6.31                | 603821.32           | 591259.01          |            |
| 8699.00                                                               | 74.34      | 90.56     | 8435.98        | 218.29        | 534.64               | 189.01               | 9.74                | 603821.04           | 591303.71          |            |
| 8747.00                                                               | 77.08      | 90.13     | 8447.83        | 264.71        | 534.36               | 235.52               | 5.77                | 603820.76           | 591350.22          |            |
| 8794.00                                                               | 82.56      | 89.11     | 8456.13        | 310.90        | 534.67               | 281.76               | 11.85               | 603821.07           | 591396.46          |            |
| 8842.00                                                               | 86.15      | 89.21     | 8460.85        | 358.62        | 535.37               | 329.52               | 7.48                | 603821.77           | 591444.22          |            |
| 8862.00                                                               | 86.71      | 88.91     | 8462.10        | 378.56        | 535.69               | 349.47               | 3.18                | 603822.09           | 591464.17          |            |
| 8987.00                                                               | 87.09      | 88.76     | 8468.86        | 503.30        | 538.23               | 474.27               | 0.33                | 603824.63           | 591588.97          |            |
| 9082.00                                                               | 86.95      | 88.83     | 8473.79        | 598.12        | 540.23               | 569.12               | 0.16                | 603826.63           | 591683.82          |            |
| 9176.00                                                               | 86.95      | 88.79     | 8478.80        | 691.93        | 542.18               | 662.96               | 0.04                | 603828.58           | 591777.66          |            |
| 9271.00                                                               | 86.88      | 88.74     | 8483.91        | 786.74        | 544.22               | 757.80               | 0.09                | 603830.62           | 591872.50          |            |
| 9366.00                                                               | 87.23      | 89.81     | 8488.79        | 881.52        | 545.42               | 852.67               | 1.18                | 603831.82           | 591967.37          |            |
| 9460.00                                                               | 85.97      | 89.48     | 8494.36        | 975.24        | 546.00               | 946.50               | 1.39                | 603832.40           | 592061.20          |            |
| 9555.00                                                               | 86.11      | 90.08     | 8500.93        | 1069.89       | 546.37               | 1041.27              | 0.65                | 603832.77           | 592155.97          |            |
| 9650.00                                                               | 87.37      | 89.72     | 8506.33        | 1164.60       | 546.53               | 1136.12              | 1.38                | 603832.93           | 592250.82          |            |
| 9744.00                                                               | 89.61      | 89.66     | 8508.80        | 1258.44       | 547.04               | 1230.08              | 2.38                | 603833.44           | 592344.78          |            |
| 9839.00                                                               | 89.74      | 89.75     | 8509.34        | 1353.32       | 547.53               | 1325.07              | 0.17                | 603833.93           | 592439.77          |            |
| 9933.00                                                               | 90.17      | 89.85     | 8509.42        | 1447.20       | 547.86               | 1419.07              | 0.47                | 603834.26           | 592533.77          |            |
| 9974.00                                                               | 90.03      | 90.37     | 8509.35        | 1488.13       | 547.78               | 1460.07              | 1.31                | 603834.18           | 592574.77          |            |
| 10068.00                                                              | 90.45      | 90.00     | 8508.95        | 1581.97       | 547.48               | 1554.07              | 0.60                | 603833.88           | 592668.77          |            |
| 10163.00                                                              | 91.36      | 89.90     | 8507.45        | 1676.81       | 547.56               | 1649.06              | 0.96                | 603833.96           | 592763.76          |            |
| 10257.00                                                              | 90.24      | 90.19     | 8506.14        | 1770.65       | 547.49               | 1743.05              | 1.23                | 603833.89           | 592857.75          |            |
| 10352.00                                                              | 90.73      | 90.16     | 8505.33        | 1865.49       | 547.20               | 1838.04              | 0.52                | 603833.60           | 592952.74          |            |
| 10447.00                                                              | 88.77      | 90.43     | 8505.75        | 1960.31       | 546.71               | 1933.03              | 2.08                | 603833.11           | 593047.73          |            |
| 10541.00                                                              | 89.33      | 90.76     | 8507.31        | 2054.09       | 545.73               | 2027.02              | 0.69                | 603832.13           | 593141.72          |            |
| 10636.00                                                              | 89.19      | 90.83     | 8508.53        | 2148.86       | 544.41               | 2122.00              | 0.16                | 603830.81           | 593236.70          |            |
| 10730.00                                                              | 89.05      | 91.08     | 8509.98        | 2242.60       | 542.85               | 2215.98              | 0.30                | 603829.25           | 593330.68          |            |
| 10825.00                                                              | 89.40      | 91.12     | 8511.26        | 2337.33       | 541.02               | 2310.95              | 0.37                | 603827.42           | 593425.65          |            |
| 10920.00                                                              | 88.91      | 89.97     | 8512.66        | 2432.12       | 540.12               | 2405.93              | 1.32                | 603826.52           | 593520.63          |            |
| 11014.00                                                              | 88.84      | 89.57     | 8514.51        | 2525.98       | 540.50               | 2499.91              | 0.43                | 603826.90           | 593614.61          |            |
| 11109.00                                                              | 88.77      | 89.71     | 8516.49        | 2620.84       | 541.09               | 2594.89              | 0.16                | 603827.49           | 593709.59          |            |
| 11203.00                                                              | 88.77      | 89.71     | 8518.51        | 2714.70       | 541.57               | 2688.87              | 0.00                | 603827.97           | 593803.57          |            |

| Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) |            |           |                |               |                     |                     |                     |                     |                    |         |
|-----------------------------------------------------------------------|------------|-----------|----------------|---------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------|
| MD<br>(US ft)                                                         | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | VS<br>(US ft) | N.Offset<br>(US ft) | E.Offset<br>(US ft) | DLS<br>(°/100US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment |
| 11298.00                                                              | 89.26      | 89.84     | 8520.14        | 2809.56       | 541.94              | 2783.85             | 0.53                | 603828.34           | 593898.55          |         |
| 11393.00                                                              | 90.10      | 89.71     | 8520.67        | 2904.43       | 542.31              | 2878.85             | 0.89                | 603828.71           | 593993.55          |         |
| 11488.00                                                              | 90.38      | 90.06     | 8520.27        | 2999.30       | 542.50              | 2973.85             | 0.47                | 603828.90           | 594088.55          |         |
| 11582.00                                                              | 89.40      | 89.40     | 8520.45        | 3093.18       | 542.95              | 3067.85             | 1.26                | 603829.35           | 594182.55          |         |
| 11677.00                                                              | 88.42      | 89.26     | 8522.26        | 3188.07       | 544.06              | 3162.82             | 1.04                | 603830.46           | 594277.52          |         |
| 11771.00                                                              | 89.12      | 89.22     | 8524.28        | 3281.96       | 545.30              | 3256.79             | 0.75                | 603831.70           | 594371.49          |         |
| 11866.00                                                              | 90.10      | 89.34     | 8524.93        | 3376.87       | 546.50              | 3351.78             | 1.04                | 603832.90           | 594466.48          |         |
| 11960.00                                                              | 88.35      | 89.20     | 8526.20        | 3470.77       | 547.70              | 3445.76             | 1.87                | 603834.10           | 594560.46          |         |
| 12055.00                                                              | 88.35      | 88.88     | 8528.93        | 3565.66       | 549.29              | 3540.71             | 0.34                | 603835.69           | 594655.41          |         |
| 12149.00                                                              | 88.56      | 88.53     | 8531.47        | 3659.58       | 551.41              | 3634.65             | 0.43                | 603837.81           | 594749.35          |         |
| 12244.00                                                              | 88.77      | 89.86     | 8533.68        | 3754.47       | 552.74              | 3729.61             | 1.42                | 603839.14           | 594844.31          |         |
| 12339.00                                                              | 88.56      | 89.86     | 8535.89        | 3849.31       | 552.98              | 3824.58             | 0.22                | 603839.38           | 594939.28          |         |
| 12433.00                                                              | 88.84      | 90.04     | 8538.03        | 3943.15       | 553.06              | 3918.56             | 0.35                | 603839.46           | 595033.26          |         |
| 12528.00                                                              | 87.65      | 89.95     | 8540.94        | 4037.96       | 553.07              | 4013.51             | 1.26                | 603839.47           | 595128.21          |         |
| 12623.00                                                              | 87.93      | 89.95     | 8544.60        | 4132.75       | 553.15              | 4108.44             | 0.29                | 603839.55           | 595223.14          |         |
| 12717.00                                                              | 88.42      | 89.79     | 8547.59        | 4226.56       | 553.36              | 4202.39             | 0.55                | 603839.76           | 595317.09          |         |
| 12812.00                                                              | 88.35      | 89.56     | 8550.27        | 4321.41       | 553.90              | 4297.36             | 0.25                | 603840.30           | 595412.06          |         |
| 12907.00                                                              | 88.85      | 89.22     | 8552.59        | 4416.29       | 554.91              | 4392.32             | 0.64                | 603841.31           | 595507.02          |         |
| 13009.00                                                              | 88.55      | 89.28     | 8554.91        | 4518.17       | 556.25              | 4494.29             | 0.30                | 603842.65           | 595608.99          |         |
| 13104.00                                                              | 87.85      | 90.06     | 8557.89        | 4613.00       | 556.79              | 4589.24             | 1.10                | 603843.19           | 595703.94          |         |
| 13198.00                                                              | 87.29      | 90.05     | 8561.88        | 4706.77       | 556.70              | 4683.15             | 0.60                | 603843.10           | 595797.85          |         |
| 13293.00                                                              | 86.66      | 89.66     | 8566.89        | 4801.51       | 556.94              | 4778.02             | 0.78                | 603843.34           | 595892.72          |         |
| 13387.00                                                              | 87.08      | 89.31     | 8572.02        | 4895.26       | 557.79              | 4871.87             | 0.58                | 603844.19           | 595986.57          |         |
| 13482.00                                                              | 87.22      | 89.72     | 8576.75        | 4990.04       | 558.59              | 4966.75             | 0.46                | 603844.99           | 596081.45          |         |
| 13577.00                                                              | 86.80      | 89.46     | 8581.70        | 5084.80       | 559.27              | 5061.62             | 0.52                | 603845.67           | 596176.32          |         |
| 13671.00                                                              | 87.57      | 89.66     | 8586.32        | 5178.58       | 559.99              | 5155.50             | 0.85                | 603846.39           | 596270.20          |         |
| 13765.00                                                              | 87.57      | 89.61     | 8590.30        | 5272.38       | 560.59              | 5249.42             | 0.05                | 603846.99           | 596364.12          |         |
| 13860.00                                                              | 88.48      | 89.73     | 8593.58        | 5367.21       | 561.14              | 5344.36             | 0.97                | 603847.54           | 596459.06          |         |
| 13954.00                                                              | 87.29      | 89.45     | 8597.05        | 5461.04       | 561.81              | 5438.29             | 1.30                | 603848.21           | 596552.99          |         |
| 14049.00                                                              | 87.29      | 89.47     | 8601.54        | 5555.83       | 562.70              | 5533.18             | 0.02                | 603849.10           | 596647.88          |         |
| 14144.00                                                              | 87.22      | 88.60     | 8606.09        | 5650.65       | 564.30              | 5628.06             | 0.92                | 603850.70           | 596742.76          |         |
| 14238.00                                                              | 88.27      | 89.43     | 8609.79        | 5744.51       | 565.92              | 5721.97             | 1.42                | 603852.32           | 596836.67          |         |
| 14333.00                                                              | 88.06      | 89.64     | 8612.83        | 5839.35       | 566.69              | 5816.92             | 0.31                | 603853.09           | 596931.62          |         |
| 14428.00                                                              | 87.64      | 89.19     | 8616.39        | 5934.19       | 567.65              | 5911.84             | 0.65                | 603854.05           | 597026.54          |         |
| 14522.00                                                              | 87.15      | 88.89     | 8620.66        | 6028.02       | 569.23              | 6005.73             | 0.61                | 603855.63           | 597120.43          |         |
| 14617.00                                                              | 86.17      | 89.58     | 8626.20        | 6122.77       | 570.49              | 6100.56             | 1.26                | 603856.89           | 597215.26          |         |
| 14711.00                                                              | 85.75      | 89.48     | 8632.82        | 6216.44       | 571.26              | 6194.32             | 0.46                | 603857.66           | 597309.02          |         |
| 14806.00                                                              | 85.33      | 89.36     | 8640.21        | 6311.05       | 572.22              | 6289.03             | 0.46                | 603858.62           | 597403.73          |         |
| 14901.00                                                              | 85.75      | 89.47     | 8647.60        | 6405.67       | 573.19              | 6383.74             | 0.46                | 603859.59           | 597498.44          |         |
| 14995.00                                                              | 87.57      | 90.66     | 8653.07        | 6499.35       | 573.08              | 6477.57             | 2.31                | 603859.48           | 597592.27          |         |
| 15090.00                                                              | 89.67      | 90.65     | 8655.36        | 6594.11       | 572.00              | 6572.53             | 2.21                | 603858.40           | 597687.23          |         |
| 15185.00                                                              | 89.53      | 90.23     | 8656.02        | 6688.92       | 571.27              | 6667.53             | 0.47                | 603857.67           | 597782.23          |         |
| 15279.00                                                              | 89.04      | 89.75     | 8657.20        | 6782.77       | 571.28              | 6761.52             | 0.73                | 603857.68           | 597876.22          |         |
| 15374.00                                                              | 88.62      | 89.13     | 8659.14        | 6877.65       | 572.21              | 6856.50             | 0.79                | 603858.61           | 597971.20          |         |
| 15468.00                                                              | 89.18      | 90.33     | 8660.94        | 6971.51       | 572.65              | 6950.48             | 1.41                | 603859.05           | 598065.18          |         |
| 15563.00                                                              | 89.74      | 90.71     | 8661.84        | 7066.31       | 571.79              | 7045.47             | 0.71                | 603858.19           | 598160.17          |         |
| 15658.00                                                              | 89.39      | 89.62     | 8662.56        | 7161.14       | 571.52              | 7140.46             | 1.21                | 603857.92           | 598255.16          |         |
| 15752.00                                                              | 89.67      | 89.81     | 8663.33        | 7255.02       | 571.99              | 7234.46             | 0.36                | 603858.39           | 598349.16          |         |
| 15847.00                                                              | 89.53      | 90.38     | 8663.99        | 7349.86       | 571.83              | 7329.45             | 0.62                | 603858.23           | 598444.15          |         |
| 15941.00                                                              | 90.65      | 91.62     | 8663.84        | 7443.61       | 570.19              | 7423.44             | 1.78                | 603856.59           | 598538.14          |         |
| 16036.00                                                              | 89.74      | 91.55     | 8663.52        | 7538.28       | 567.56              | 7518.40             | 0.96                | 603853.96           | 598633.10          |         |
| 16131.00                                                              | 89.74      | 91.19     | 8663.95        | 7632.98       | 565.29              | 7613.37             | 0.38                | 603851.69           | 598728.07          |         |
| 16225.00                                                              | 88.97      | 91.72     | 8665.01        | 7726.67       | 562.90              | 7707.33             | 0.99                | 603849.30           | 598822.03          |         |
| 16320.00                                                              | 89.32      | 91.25     | 8666.43        | 7821.34       | 560.44              | 7802.29             | 0.62                | 603846.84           | 598916.99          |         |
| 16414.00                                                              | 89.60      | 90.59     | 8667.31        | 7915.10       | 558.93              | 7896.27             | 0.76                | 603845.33           | 599010.97          |         |
| 16509.00                                                              | 89.46      | 90.51     | 8668.09        | 8009.90       | 558.02              | 7991.27             | 0.17                | 603844.42           | 599105.97          |         |
| 16604.00                                                              | 89.74      | 90.69     | 8668.76        | 8104.69       | 557.03              | 8086.26             | 0.35                | 603843.43           | 599200.96          |         |
| 16698.00                                                              | 89.32      | 90.75     | 8669.53        | 8198.47       | 555.84              | 8180.25             | 0.45                | 603842.24           | 599294.95          |         |
| 16793.00                                                              | 88.76      | 91.11     | 8671.12        | 8293.21       | 554.30              | 8275.22             | 0.70                | 603840.70           | 599389.92          |         |

| Survey Points: (Relative to Slot centre)(TVD relative to Drill Floor) |            |           |                |               |                     |                     |                     |                     |                    |                       |
|-----------------------------------------------------------------------|------------|-----------|----------------|---------------|---------------------|---------------------|---------------------|---------------------|--------------------|-----------------------|
| MD<br>(US ft)                                                         | Inc<br>(°) | Az<br>(°) | TVD<br>(US ft) | VS<br>(US ft) | N.Offset<br>(US ft) | E.Offset<br>(US ft) | DLS<br>(%/100US ft) | Northing<br>(US ft) | Easting<br>(US ft) | Comment               |
| 16887.00                                                              | 89.18      | 91.34     | 8672.81        | 8386.92       | 552.29              | 8369.18             | 0.51                | 603838.69           | 599483.88          |                       |
| 16982.00                                                              | 88.41      | 90.66     | 8674.81        | 8481.65       | 550.64              | 8464.15             | 1.08                | 603837.04           | 599578.85          |                       |
| 17076.00                                                              | 88.90      | 90.62     | 8677.01        | 8575.41       | 549.59              | 8558.12             | 0.52                | 603835.99           | 599672.82          |                       |
| 17171.00                                                              | 87.71      | 90.85     | 8679.82        | 8670.15       | 548.37              | 8653.06             | 1.28                | 603834.77           | 599767.76          |                       |
| 17265.00                                                              | 89.25      | 90.35     | 8682.32        | 8763.91       | 547.38              | 8747.02             | 1.72                | 603833.78           | 599861.72          |                       |
| 17360.00                                                              | 89.81      | 90.00     | 8683.10        | 8858.74       | 547.09              | 8842.02             | 0.70                | 603833.49           | 599956.72          |                       |
| 17446.00                                                              | 88.49      | 90.31     | 8684.37        | 8944.59       | 546.86              | 8928.01             | 1.58                | 603833.26           | 600042.71          |                       |
| 17540.00                                                              | 88.77      | 90.46     | 8686.62        | 9038.38       | 546.23              | 9021.98             | 0.34                | 603832.63           | 600136.68          |                       |
| 17635.00                                                              | 89.12      | 90.32     | 8688.37        | 9133.18       | 545.58              | 9116.96             | 0.40                | 603831.98           | 600231.66          |                       |
| 17730.00                                                              | 88.21      | 90.02     | 8690.58        | 9227.99       | 545.30              | 9211.93             | 1.01                | 603831.70           | 600326.63          |                       |
| 17824.00                                                              | 87.51      | 89.19     | 8694.09        | 9321.81       | 545.95              | 9305.86             | 1.15                | 603832.35           | 600420.56          |                       |
| 17919.00                                                              | 89.47      | 89.88     | 8696.59        | 9416.67       | 546.72              | 9400.82             | 2.19                | 603833.12           | 600515.52          |                       |
| 18013.00                                                              | 89.82      | 89.17     | 8697.18        | 9510.56       | 547.50              | 9494.82             | 0.84                | 603833.90           | 600609.52          |                       |
| 18108.00                                                              | 86.95      | 88.96     | 8699.85        | 9605.44       | 549.05              | 9589.76             | 3.03                | 603835.45           | 600704.46          |                       |
| 18202.00                                                              | 89.19      | 90.13     | 8703.02        | 9699.28       | 549.79              | 9683.69             | 2.69                | 603836.19           | 600798.39          |                       |
| 18297.00                                                              | 88.84      | 89.37     | 8704.65        | 9794.14       | 550.21              | 9778.68             | 0.88                | 603836.61           | 600893.38          |                       |
| 18392.00                                                              | 88.70      | 89.30     | 8706.69        | 9889.03       | 551.31              | 9873.65             | 0.16                | 603837.71           | 600988.35          |                       |
| 18459.00                                                              | 87.79      | 89.06     | 8708.74        | 9955.94       | 552.27              | 9940.61             | 1.40                | 603838.67           | 601055.31          | Last WFT<br>MWD Svy   |
| 18532.00                                                              | 87.79      | 89.06     | 8711.56        | 10028.83      | 553.46              | 10013.54            | 0.00                | 603839.86           | 601128.24          | TD@18532'M<br>D / PTB |