

**HOBBS OCD**

**OCT 18 2018**

**RECEIVED**

# **KAISER-FRANCIS OIL COMPANY**

**Lea County, NM (NAD27) NMEZ**

**Bell Lake Unit South**

**#319H**

**OH**

**Design: OH**

## **Standard Survey Report**

**28 February, 2018**

## Survey Report

|                  |                             |                                     |                                         |
|------------------|-----------------------------|-------------------------------------|-----------------------------------------|
| <b>Company:</b>  | KAISER-FRANCIS OIL COMPANY  | <b>Local Co-ordinate Reference:</b> | Well #319H                              |
| <b>Project:</b>  | Lea County, NM (NAD27) NMEZ | <b>TVD Reference:</b>               | RKB @ 3655.00usft (Cactus 171 - KB=23') |
| <b>Site:</b>     | Bell Lake Unit South        | <b>MD Reference:</b>                | RKB @ 3655.00usft (Cactus 171 - KB=23') |
| <b>Well:</b>     | #319H                       | <b>North Reference:</b>             | Grid                                    |
| <b>Wellbore:</b> | OH                          | <b>Survey Calculation Method:</b>   | Minimum Curvature                       |
| <b>Design:</b>   | OH                          | <b>Database:</b>                    | EDM 5000.14 Single User Db              |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD27) NMEZ          |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |                                        |                          |                   |
|------------------------------|----------------------------------------|--------------------------|-------------------|
| <b>Site</b>                  | Bell Lake Unit South, Centered on 402H |                          |                   |
| <b>Site Position:</b>        |                                        | <b>Northing:</b>         | 454,918.69 usft   |
| <b>From:</b>                 | Map                                    | <b>Easting:</b>          | 747,375.70 usft   |
| <b>Position Uncertainty:</b> | 0.00 usft                              | <b>Slot Radius:</b>      | 13-3/16 "         |
|                              |                                        | <b>Latitude:</b>         | 32° 14' 53.357 N  |
|                              |                                        | <b>Longitude:</b>        | 103° 31' 59.456 W |
|                              |                                        | <b>Grid Convergence:</b> | 0.43 °            |

|                             |              |                            |                   |
|-----------------------------|--------------|----------------------------|-------------------|
| <b>Well</b>                 | #319H        |                            |                   |
| <b>Well Position</b>        | <b>+N/-S</b> | 0.00 usft                  | <b>Northing:</b>  |
|                             | <b>+E/-W</b> | 0.00 usft                  | <b>Easting:</b>   |
| <b>Position Uncertainty</b> | 0.00 usft    | <b>Wellhead Elevation:</b> | usft              |
|                             |              | <b>Latitude:</b>           | 32° 14' 43.248 N  |
|                             |              | <b>Longitude:</b>          | 103° 31' 56.716 W |
|                             |              | <b>Ground Level:</b>       | 3,632.00 usft     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2015          | 12/26/17           | 6.88                   | 60.08                | 47,899.36962630            |

|                          |                                |                     |                     |                      |      |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| <b>Design</b>            | OH                             |                     |                     |                      |      |
| <b>Audit Notes:</b>      |                                |                     |                     |                      |      |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |      |
|                          | 0.00                           | 0.00                | 0.00                | 359.62               |      |

|                       |                      |                          |                  |                     |  |
|-----------------------|----------------------|--------------------------|------------------|---------------------|--|
| <b>Survey Program</b> | <b>Date</b> 02/28/18 |                          |                  |                     |  |
| <b>From (usft)</b>    | <b>To (usft)</b>     | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b>  |  |
| 176.00                | 19,773.00            | Survey #1 - VON MWD (OH) | MWD              | OWSG MWD - Standard |  |
| 19,863.00             | 19,863.00            | Survey #2 - PTB (OH)     | BLIND            | OWSG BLIND          |  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                           | 0.00                          | 0.00                         |
| 176.00                       | 0.17                   | 349.97             | 176.00                       | 0.26                | -0.05               | 0.26                           | 0.10                           | 0.10                          | 0.00                         |
| 237.00                       | 0.20                   | 342.15             | 237.00                       | 0.45                | -0.09               | 0.45                           | 0.06                           | 0.05                          | -12.82                       |
| 329.00                       | 0.10                   | 318.81             | 329.00                       | 0.66                | -0.20               | 0.66                           | 0.13                           | -0.11                         | -25.37                       |
| 423.00                       | 0.20                   | 179.57             | 423.00                       | 0.56                | -0.25               | 0.56                           | 0.30                           | 0.11                          | -148.13                      |
| 516.00                       | 0.28                   | 200.51             | 516.00                       | 0.18                | -0.33               | 0.19                           | 0.13                           | 0.09                          | 22.52                        |
| 610.00                       | 0.38                   | 186.95             | 610.00                       | -0.34               | -0.45               | -0.34                          | 0.13                           | 0.11                          | -14.43                       |
| 703.00                       | 0.32                   | 177.71             | 702.99                       | -0.91               | -0.47               | -0.90                          | 0.09                           | -0.06                         | -9.94                        |
| 797.00                       | 0.39                   | 191.39             | 796.99                       | -1.48               | -0.52               | -1.48                          | 0.12                           | 0.07                          | 14.55                        |
| 891.00                       | 0.47                   | 181.02             | 890.99                       | -2.18               | -0.60               | -2.18                          | 0.12                           | 0.09                          | -11.03                       |

## Survey Report

**Company:** KAISER-FRANCIS OIL COMPANY  
**Project:** Lea County, NM (NAD27) NMEZ  
**Site:** Bell Lake Unit South  
**Well:** #319H  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well #319H  
**TVD Reference:** RKB @ 3655.00usft (Cactus 171 - KB=23')  
**MD Reference:** RKB @ 3655.00usft (Cactus 171 - KB=23')  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.14 Single User Db

### Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 984.00                      | 0.44               | 172.97         | 983.99                      | -2.92           | -0.56           | -2.91                         | 0.08                          | -0.03                        | -8.66                       |
| 1,078.00                    | 0.60               | 190.63         | 1,077.98                    | -3.76           | -0.60           | -3.76                         | 0.24                          | 0.17                         | 18.79                       |
| 1,172.00                    | 0.64               | 180.48         | 1,171.98                    | -4.77           | -0.70           | -4.76                         | 0.12                          | 0.04                         | -10.80                      |
| 1,259.00                    | 0.58               | 183.18         | 1,258.97                    | -5.69           | -0.73           | -5.69                         | 0.08                          | -0.07                        | 3.10                        |
| 1,391.00                    | 0.66               | 177.00         | 1,390.97                    | -7.12           | -0.73           | -7.12                         | 0.08                          | 0.06                         | -4.68                       |
| 1,454.00                    | 0.74               | 202.92         | 1,453.96                    | -7.86           | -0.87           | -7.85                         | 0.51                          | 0.13                         | 41.14                       |
| 1,548.00                    | 1.52               | 210.96         | 1,547.94                    | -9.49           | -1.74           | -9.47                         | 0.84                          | 0.83                         | 8.55                        |
| 1,642.00                    | 2.44               | 206.30         | 1,641.88                    | -12.35          | -3.27           | -12.33                        | 0.99                          | 0.98                         | -4.96                       |
| 1,736.00                    | 3.16               | 207.47         | 1,735.77                    | -16.44          | -5.35           | -16.41                        | 0.77                          | 0.77                         | 1.24                        |
| 1,830.00                    | 3.77               | 202.79         | 1,829.60                    | -21.59          | -7.74           | -21.54                        | 0.71                          | 0.65                         | -4.98                       |
| 1,923.00                    | 3.69               | 207.44         | 1,922.40                    | -27.06          | -10.31          | -26.99                        | 0.34                          | -0.09                        | 5.00                        |
| 2,017.00                    | 3.69               | 204.86         | 2,016.21                    | -32.49          | -12.97          | -32.41                        | 0.18                          | 0.00                         | -2.74                       |
| 2,112.00                    | 3.56               | 206.39         | 2,111.02                    | -37.91          | -15.57          | -37.80                        | 0.17                          | -0.14                        | 1.61                        |
| 2,206.00                    | 3.38               | 207.33         | 2,204.85                    | -42.98          | -18.14          | -42.86                        | 0.20                          | -0.19                        | 1.00                        |
| 2,300.00                    | 3.39               | 207.90         | 2,298.68                    | -47.90          | -20.71          | -47.76                        | 0.04                          | 0.01                         | 0.61                        |
| 2,394.00                    | 3.26               | 209.41         | 2,392.52                    | -52.69          | -23.32          | -52.53                        | 0.17                          | -0.14                        | 1.61                        |
| 2,488.00                    | 3.05               | 213.45         | 2,486.38                    | -57.10          | -26.02          | -56.93                        | 0.33                          | -0.22                        | 4.30                        |
| 2,583.00                    | 2.92               | 209.92         | 2,581.25                    | -61.31          | -28.62          | -61.12                        | 0.24                          | -0.14                        | -3.72                       |
| 2,676.00                    | 2.84               | 202.92         | 2,674.14                    | -65.48          | -30.69          | -65.28                        | 0.39                          | -0.09                        | -7.53                       |
| 2,770.00                    | 3.40               | 195.86         | 2,768.00                    | -70.31          | -32.36          | -70.09                        | 0.72                          | 0.60                         | -7.51                       |
| 2,865.00                    | 3.20               | 196.29         | 2,862.84                    | -75.56          | -33.88          | -75.34                        | 0.21                          | -0.21                        | 0.45                        |
| 2,959.00                    | 3.12               | 195.26         | 2,956.70                    | -80.55          | -35.29          | -80.31                        | 0.10                          | -0.09                        | -1.10                       |
| 3,053.00                    | 3.17               | 197.69         | 3,050.55                    | -85.49          | -36.75          | -85.25                        | 0.15                          | 0.05                         | 2.59                        |
| 3,146.00                    | 2.94               | 195.34         | 3,143.42                    | -90.24          | -38.16          | -89.99                        | 0.28                          | -0.25                        | -2.53                       |
| 3,240.00                    | 3.06               | 194.41         | 3,237.29                    | -95.00          | -39.42          | -94.74                        | 0.14                          | 0.13                         | -0.99                       |
| 3,334.00                    | 2.85               | 198.62         | 3,331.17                    | -99.64          | -40.79          | -99.37                        | 0.32                          | -0.22                        | 4.48                        |
| 3,429.00                    | 3.00               | 197.54         | 3,426.04                    | -104.25         | -42.30          | -103.97                       | 0.17                          | 0.16                         | -1.14                       |
| 3,523.00                    | 2.88               | 202.31         | 3,519.92                    | -108.78         | -43.94          | -108.49                       | 0.29                          | -0.13                        | 5.07                        |
| 3,617.00                    | 2.79               | 204.10         | 3,613.81                    | -113.05         | -45.77          | -112.75                       | 0.13                          | -0.10                        | 1.90                        |
| 3,711.00                    | 2.67               | 196.07         | 3,707.70                    | -117.25         | -47.31          | -116.93                       | 0.43                          | -0.13                        | -8.54                       |
| 3,806.00                    | 1.67               | 201.68         | 3,802.63                    | -120.66         | -48.43          | -120.34                       | 1.07                          | -1.05                        | 5.91                        |
| 3,900.00                    | 1.28               | 207.01         | 3,896.60                    | -122.87         | -49.41          | -122.54                       | 0.44                          | -0.41                        | 5.67                        |
| 3,994.00                    | 1.21               | 214.77         | 3,990.58                    | -124.62         | -50.46          | -124.28                       | 0.19                          | -0.07                        | 8.26                        |
| 4,089.00                    | 1.26               | 204.47         | 4,085.55                    | -126.39         | -51.46          | -126.05                       | 0.24                          | 0.05                         | -10.84                      |
| 4,184.00                    | 1.17               | 199.07         | 4,180.53                    | -128.26         | -52.21          | -127.91                       | 0.15                          | -0.09                        | -5.68                       |
| 4,278.00                    | 1.00               | 194.86         | 4,274.52                    | -129.96         | -52.73          | -129.61                       | 0.20                          | -0.18                        | -4.48                       |
| 4,373.00                    | 1.14               | 184.23         | 4,369.50                    | -131.70         | -53.02          | -131.35                       | 0.26                          | 0.15                         | -11.19                      |
| 4,468.00                    | 1.22               | 153.65         | 4,464.48                    | -133.55         | -52.64          | -133.20                       | 0.66                          | 0.08                         | -32.19                      |
| 4,563.00                    | 1.28               | 143.21         | 4,559.46                    | -135.31         | -51.55          | -134.96                       | 0.25                          | 0.06                         | -10.99                      |
| 4,658.00                    | 0.55               | 172.40         | 4,654.45                    | -136.61         | -50.86          | -136.27                       | 0.89                          | -0.77                        | 30.73                       |
| 4,752.00                    | 0.61               | 167.62         | 4,748.44                    | -137.55         | -50.69          | -137.21                       | 0.08                          | 0.06                         | -5.09                       |
| 4,846.00                    | 0.89               | 136.71         | 4,842.43                    | -138.57         | -50.08          | -138.23                       | 0.51                          | 0.30                         | -32.88                      |
| 4,940.00                    | 1.23               | 122.38         | 4,936.42                    | -139.64         | -48.73          | -139.31                       | 0.46                          | 0.36                         | -15.24                      |

## Survey Report

**Company:** KAISER-FRANCIS OIL COMPANY  
**Project:** Lea County, NM (NAD27) NMEZ  
**Site:** Bell Lake Unit South  
**Well:** #319H  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well #319H  
**TVD Reference:** RKB @ 3655.00usft (Cactus 171 - KB=23')  
**MD Reference:** RKB @ 3655.00usft (Cactus 171 - KB=23')  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.14 Single User Db

### Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 5,034.00                    | 1.42               | 123.16         | 5,030.39                    | -140.82         | -46.90          | -140.50                       | 0.20                          | 0.20                         | 0.83                        |
| 5,128.00                    | 1.40               | 112.73         | 5,124.36                    | -141.90         | -44.87          | -141.60                       | 0.27                          | -0.02                        | -11.10                      |
| 5,188.00                    | 1.07               | 120.10         | 5,184.35                    | -142.46         | -43.71          | -142.17                       | 0.61                          | -0.55                        | 12.28                       |
| 5,317.00                    | 1.14               | 107.55         | 5,313.33                    | -143.45         | -41.44          | -143.17                       | 0.19                          | 0.05                         | -9.73                       |
| 5,411.00                    | 1.18               | 108.11         | 5,407.31                    | -144.03         | -39.63          | -143.77                       | 0.04                          | 0.04                         | 0.60                        |
| 5,505.00                    | 1.16               | 110.87         | 5,501.29                    | -144.67         | -37.82          | -144.42                       | 0.06                          | -0.02                        | 2.94                        |
| 5,600.00                    | 1.17               | 114.59         | 5,596.27                    | -145.42         | -36.04          | -145.18                       | 0.08                          | 0.01                         | 3.92                        |
| 5,695.00                    | 1.22               | 114.84         | 5,691.25                    | -146.25         | -34.24          | -146.02                       | 0.05                          | 0.05                         | 0.26                        |
| 5,790.00                    | 1.03               | 117.94         | 5,786.23                    | -147.07         | -32.57          | -146.85                       | 0.21                          | -0.20                        | 3.26                        |
| 5,885.00                    | 1.07               | 118.93         | 5,881.21                    | -147.90         | -31.04          | -147.69                       | 0.05                          | 0.04                         | 1.04                        |
| 5,980.00                    | 0.99               | 118.13         | 5,976.20                    | -148.72         | -29.54          | -148.52                       | 0.09                          | -0.08                        | -0.84                       |
| 6,073.00                    | 1.04               | 115.22         | 6,069.18                    | -149.46         | -28.07          | -149.27                       | 0.08                          | 0.05                         | -3.13                       |
| 6,168.00                    | 0.97               | 126.30         | 6,164.17                    | -150.30         | -26.64          | -150.12                       | 0.22                          | -0.07                        | 11.66                       |
| 6,263.00                    | 1.01               | 124.41         | 6,259.15                    | -151.25         | -25.30          | -151.08                       | 0.05                          | 0.04                         | -1.99                       |
| 6,358.00                    | 1.07               | 124.23         | 6,354.14                    | -152.22         | -23.88          | -152.06                       | 0.06                          | 0.06                         | -0.19                       |
| 6,452.00                    | 1.09               | 131.32         | 6,448.12                    | -153.31         | -22.48          | -153.15                       | 0.14                          | 0.02                         | 7.54                        |
| 6,547.00                    | 1.05               | 122.50         | 6,543.11                    | -154.37         | -21.07          | -154.23                       | 0.18                          | -0.04                        | -9.28                       |
| 6,642.00                    | 1.08               | 122.06         | 6,638.09                    | -155.31         | -19.57          | -155.18                       | 0.03                          | 0.03                         | -0.46                       |
| 6,737.00                    | 0.94               | 123.81         | 6,733.07                    | -156.22         | -18.17          | -156.10                       | 0.15                          | -0.15                        | 1.84                        |
| 6,832.00                    | 1.10               | 128.05         | 6,828.06                    | -157.22         | -16.80          | -157.10                       | 0.19                          | 0.17                         | 4.46                        |
| 6,927.00                    | 1.09               | 121.58         | 6,923.04                    | -158.25         | -15.31          | -158.15                       | 0.13                          | -0.01                        | -6.81                       |
| 7,022.00                    | 0.98               | 131.65         | 7,018.03                    | -159.27         | -13.94          | -159.17                       | 0.22                          | -0.12                        | 10.60                       |
| 7,117.00                    | 1.03               | 136.95         | 7,113.01                    | -160.43         | -12.75          | -160.34                       | 0.11                          | 0.05                         | 5.58                        |
| 7,212.00                    | 1.00               | 142.30         | 7,208.00                    | -161.71         | -11.66          | -161.63                       | 0.10                          | -0.03                        | 5.63                        |
| 7,307.00                    | 1.22               | 140.15         | 7,302.98                    | -163.14         | -10.50          | -163.07                       | 0.24                          | 0.23                         | -2.26                       |
| 7,402.00                    | 1.40               | 146.08         | 7,397.95                    | -164.88         | -9.21           | -164.82                       | 0.24                          | 0.19                         | 6.24                        |
| 7,498.00                    | 1.43               | 149.51         | 7,493.92                    | -166.89         | -7.94           | -166.83                       | 0.09                          | 0.03                         | 3.57                        |
| 7,592.00                    | 1.42               | 153.86         | 7,587.90                    | -168.94         | -6.84           | -168.89                       | 0.12                          | -0.01                        | 4.63                        |
| 7,687.00                    | 1.86               | 139.54         | 7,682.86                    | -171.17         | -5.32           | -171.13                       | 0.63                          | 0.46                         | -15.07                      |
| 7,782.00                    | 1.99               | 135.43         | 7,777.80                    | -173.52         | -3.16           | -173.50                       | 0.20                          | 0.14                         | -4.33                       |
| 7,877.00                    | 1.28               | 153.08         | 7,872.76                    | -175.64         | -1.52           | -175.63                       | 0.91                          | -0.75                        | 18.58                       |
| 7,973.00                    | 0.81               | 216.84         | 7,968.75                    | -177.14         | -1.44           | -177.13                       | 1.22                          | -0.49                        | 66.42                       |
| 8,068.00                    | 0.86               | 234.14         | 8,063.74                    | -178.10         | -2.42           | -178.08                       | 0.27                          | 0.05                         | 18.21                       |
| 8,163.00                    | 0.83               | 206.74         | 8,158.73                    | -179.13         | -3.31           | -179.10                       | 0.42                          | -0.03                        | -28.84                      |
| 8,258.00                    | 0.60               | 261.05         | 8,253.72                    | -179.82         | -4.11           | -179.79                       | 0.72                          | -0.24                        | 57.17                       |
| 8,353.00                    | 0.16               | 281.53         | 8,348.72                    | -179.87         | -4.73           | -179.84                       | 0.48                          | -0.46                        | 21.56                       |
| 8,447.00                    | 0.19               | 173.69         | 8,442.72                    | -180.00         | -4.84           | -179.96                       | 0.30                          | 0.03                         | -114.72                     |
| 8,542.00                    | 0.46               | 338.03         | 8,537.72                    | -179.80         | -4.97           | -179.77                       | 0.68                          | 0.28                         | 172.99                      |
| 8,637.00                    | 0.46               | 319.12         | 8,632.72                    | -179.16         | -5.36           | -179.12                       | 0.16                          | 0.00                         | -19.91                      |
| 8,731.00                    | 0.40               | 313.79         | 8,726.72                    | -178.65         | -5.84           | -178.61                       | 0.08                          | -0.06                        | -5.67                       |
| 8,825.00                    | 0.26               | 1.68           | 8,820.71                    | -178.21         | -6.07           | -178.16                       | 0.32                          | -0.15                        | 50.95                       |
| 8,919.00                    | 0.59               | 310.08         | 8,914.71                    | -177.68         | -6.44           | -177.64                       | 0.50                          | 0.35                         | -54.89                      |
| 9,013.00                    | 0.73               | 301.76         | 9,008.71                    | -177.06         | -7.32           | -177.00                       | 0.18                          | 0.15                         | -8.85                       |

# Survey Report

Company: KAISER-FRANCIS OIL COMPANY  
 Project: Lea County, NM (NAD27) NMEZ  
 Site: Bell Lake Unit South  
 Well: #319H  
 Wellbore: OH  
 Design: OH

Local Co-ordinate Reference: Well #319H  
 TVD Reference: RKB @ 3655.00usft (Cactus 171 - KB=23')  
 MD Reference: RKB @ 3655.00usft (Cactus 171 - KB=23')  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000.14 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) |
|----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,107.00                         | 0.65            | 303.89      | 9,102.70              | -176.44      | -8.27        | -176.39                 | 0.09                    | -0.09                  | 2.27                  |
| 9,200.00                         | 0.68            | 296.09      | 9,195.69              | -175.91      | -9.20        | -175.84                 | 0.10                    | 0.03                   | -8.39                 |
| 9,295.00                         | 0.62            | 267.32      | 9,290.69              | -175.68      | -10.22       | -175.61                 | 0.35                    | -0.06                  | -30.28                |
| 9,389.00                         | 0.30            | 190.82      | 9,384.68              | -175.95      | -10.78       | -175.87                 | 0.66                    | -0.34                  | -81.38                |
| 9,483.00                         | 0.12            | 212.81      | 9,478.68              | -176.27      | -10.88       | -176.20                 | 0.21                    | -0.19                  | 23.39                 |
| 9,577.00                         | 1.17            | 296.09      | 9,572.68              | -175.93      | -11.79       | -175.85                 | 1.24                    | 1.12                   | 88.60                 |
| 9,671.00                         | 0.65            | 326.58      | 9,666.67              | -175.07      | -12.95       | -174.98                 | 0.74                    | -0.55                  | 32.44                 |
| 9,766.00                         | 0.72            | 300.34      | 9,761.66              | -174.32      | -13.76       | -174.22                 | 0.34                    | 0.07                   | -27.62                |
| 9,860.00                         | 0.25            | 83.05       | 9,855.66              | -173.99      | -14.07       | -173.90                 | 0.99                    | -0.50                  | 151.82                |
| 9,954.00                         | 1.44            | 104.37      | 9,949.64              | -174.26      | -12.72       | -174.17                 | 1.29                    | 1.27                   | 22.68                 |
| 10,048.00                        | 0.31            | 140.89      | 10,043.63             | -174.75      | -11.41       | -174.67                 | 1.28                    | -1.20                  | 38.85                 |
| 10,142.00                        | 0.37            | 173.08      | 10,137.63             | -175.25      | -11.22       | -175.17                 | 0.21                    | 0.06                   | 34.24                 |
| 10,235.00                        | 0.72            | 245.28      | 10,230.63             | -175.79      | -11.71       | -175.71                 | 0.75                    | 0.38                   | 77.63                 |
| 10,329.00                        | 0.65            | 211.80      | 10,324.62             | -176.49      | -12.53       | -176.41                 | 0.43                    | -0.07                  | -35.62                |
| 10,424.00                        | 0.76            | 198.75      | 10,419.61             | -177.55      | -13.02       | -177.46                 | 0.20                    | 0.12                   | -13.74                |
| 10,518.00                        | 1.46            | 227.15      | 10,513.60             | -178.95      | -14.09       | -178.86                 | 0.93                    | 0.74                   | 30.21                 |
| 10,613.00                        | 1.70            | 224.24      | 10,608.56             | -180.79      | -15.96       | -180.68                 | 0.27                    | 0.25                   | -3.06                 |
| 10,708.00                        | 0.54            | 296.97      | 10,703.54             | -181.59      | -17.35       | -181.47                 | 1.71                    | -1.22                  | 76.56                 |
| 10,802.00                        | 0.40            | 199.38      | 10,797.54             | -181.70      | -17.85       | -181.58                 | 0.76                    | -0.15                  | -103.82               |
| 10,897.00                        | 1.08            | 195.93      | 10,892.53             | -182.87      | -18.21       | -182.75                 | 0.72                    | 0.72                   | -3.63                 |
| 10,991.00                        | 0.47            | 290.92      | 10,986.53             | -183.59      | -18.81       | -183.46                 | 1.29                    | -0.65                  | 101.05                |
| 11,086.00                        | 0.89            | 293.09      | 11,081.52             | -183.16      | -19.85       | -183.02                 | 0.44                    | 0.44                   | 2.28                  |
| 11,182.00                        | 0.44            | 259.89      | 11,177.51             | -182.93      | -20.90       | -182.79                 | 0.60                    | -0.47                  | -34.58                |
| 11,245.00                        | 0.31            | 168.93      | 11,240.51             | -183.14      | -21.11       | -183.00                 | 0.86                    | -0.21                  | -144.38               |
| 11,380.00                        | 8.09            | 328.83      | 11,375.08             | -175.36      | -25.96       | -175.18                 | 6.21                    | 5.76                   | 118.44                |
| KOP: 11380.00' MD, 11375.08' TVD |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,434.00                        | 13.32           | 331.21      | 11,428.12             | -166.65      | -30.93       | -166.44                 | 9.72                    | 9.69                   | 4.41                  |
| 11,475.00                        | 16.59           | 334.46      | 11,467.73             | -157.23      | -35.73       | -156.99                 | 8.23                    | 7.98                   | 7.93                  |
| 11,515.00                        | 19.67           | 337.18      | 11,505.74             | -145.87      | -40.80       | -145.59                 | 7.98                    | 7.70                   | 6.80                  |
| 11,569.00                        | 23.65           | 339.38      | 11,555.92             | -127.34      | -48.14       | -127.02                 | 7.52                    | 7.37                   | 4.07                  |
| 11,664.00                        | 30.59           | 346.67      | 11,640.44             | -85.93       | -60.44       | -85.52                  | 8.09                    | 7.31                   | 7.67                  |
| 11,759.00                        | 40.48           | 345.27      | 11,717.66             | -32.45       | -73.89       | -31.96                  | 10.45                   | 10.41                  | -1.47                 |
| 11,854.00                        | 50.06           | 342.63      | 11,784.44             | 32.29        | -92.65       | 32.90                   | 10.27                   | 10.08                  | -2.78                 |
| 11,949.00                        | 61.11           | 342.89      | 11,838.05             | 107.03       | -115.83      | 107.79                  | 11.63                   | 11.63                  | 0.27                  |
| 11,980.00                        | 65.44           | 343.69      | 11,851.99             | 133.54       | -123.79      | 134.36                  | 14.16                   | 13.97                  | 2.58                  |
| 12,044.00                        | 70.01           | 347.03      | 11,876.25             | 190.82       | -138.72      | 191.74                  | 8.62                    | 7.14                   | 5.22                  |
| 12,139.00                        | 72.65           | 350.54      | 11,906.67             | 279.08       | -156.20      | 280.11                  | 4.47                    | 2.78                   | 3.69                  |
| 12,162.00                        | 74.65           | 352.04      | 11,913.14             | 300.90       | -159.54      | 301.95                  | 10.71                   | 8.70                   | 6.52                  |
| 12,194.00                        | 78.23           | 354.41      | 11,920.64             | 331.78       | -163.20      | 332.86                  | 13.30                   | 11.19                  | 7.41                  |
| 12,225.00                        | 80.03           | 354.85      | 11,926.49             | 362.09       | -166.05      | 363.18                  | 5.97                    | 5.81                   | 1.42                  |
| 12,256.00                        | 81.48           | 354.94      | 11,931.47             | 392.57       | -168.78      | 393.68                  | 4.69                    | 4.68                   | 0.29                  |
| 12,288.00                        | 84.21           | 354.50      | 11,935.45             | 424.18       | -171.70      | 425.31                  | 8.64                    | 8.53                   | -1.38                 |
| 12,317.17                        | 87.07           | 354.10      | 11,937.67             | 453.12       | -174.59      | 454.27                  | 9.91                    | 9.81                   | -1.38                 |
| FTP(BLS#319)                     |                 |             |                       |              |              |                         |                         |                        |                       |

# Survey Report

Company: KAISER-FRANCIS OIL COMPANY  
 Project: Lea County, NM (NAD27) NMEZ  
 Site: Bell Lake Unit South  
 Well: #319H  
 Wellbore: OH  
 Design: OH

Local Co-ordinate Reference: Well #319H  
 TVD Reference: RKB @ 3655.00usft (Cactus 171 - KB=23')  
 MD Reference: RKB @ 3655.00usft (Cactus 171 - KB=23')  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000.14 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) |
|----------------------------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,320.00                                                            | 87.35           | 354.06      | 11,937.81             | 455.93       | -174.88      | 457.08                  | 9.91                    | 9.81                   | -1.37                 |
| 12,351.00                                                            | 89.90           | 353.97      | 11,938.55             | 486.75       | -178.11      | 487.92                  | 8.23                    | 8.23                   | -0.29                 |
| EOC: 12351.00' MD, 11938.55' TVD, 89.90° INC, 353.97° AZ, 487.92' VS |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,383.00                                                            | 91.83           | 356.17      | 11,938.07             | 518.62       | -180.86      | 519.81                  | 9.14                    | 6.03                   | 6.88                  |
| 12,447.00                                                            | 93.46           | 358.01      | 11,935.12             | 582.47       | -184.10      | 583.68                  | 3.84                    | 2.55                   | 2.88                  |
| 12,510.00                                                            | 93.07           | 1.18        | 11,931.53             | 645.36       | -184.55      | 646.57                  | 5.06                    | -0.62                  | 5.03                  |
| 12,541.00                                                            | 93.53           | 1.70        | 11,929.74             | 676.29       | -183.77      | 677.50                  | 2.24                    | 1.48                   | 1.68                  |
| 12,635.00                                                            | 90.76           | 2.23        | 11,926.22             | 770.16       | -180.55      | 771.34                  | 3.00                    | -2.95                  | 0.56                  |
| 12,730.00                                                            | 89.79           | 2.06        | 11,925.77             | 865.09       | -176.99      | 866.25                  | 1.04                    | -1.02                  | -0.18                 |
| 12,824.00                                                            | 89.20           | 2.76        | 11,926.60             | 959.01       | -173.04      | 960.13                  | 0.97                    | -0.63                  | 0.74                  |
| 12,918.00                                                            | 89.62           | 2.58        | 11,927.56             | 1,052.90     | -168.66      | 1,054.00                | 0.49                    | 0.45                   | -0.19                 |
| 13,013.00                                                            | 90.16           | 1.97        | 11,927.75             | 1,147.82     | -164.89      | 1,148.89                | 0.86                    | 0.57                   | -0.64                 |
| 13,107.00                                                            | 90.52           | 1.26        | 11,927.19             | 1,241.78     | -162.24      | 1,242.83                | 0.85                    | 0.38                   | -0.76                 |
| 13,201.00                                                            | 90.16           | 359.68      | 11,926.63             | 1,335.78     | -161.47      | 1,336.82                | 1.72                    | -0.38                  | -1.68                 |
| 13,295.00                                                            | 90.08           | 357.92      | 11,926.43             | 1,429.75     | -163.44      | 1,430.80                | 1.87                    | -0.09                  | -1.87                 |
| 13,390.00                                                            | 90.87           | 358.19      | 11,925.65             | 1,524.69     | -166.66      | 1,525.76                | 0.88                    | 0.83                   | 0.28                  |
| 13,485.00                                                            | 91.26           | 357.92      | 11,923.88             | 1,619.62     | -169.89      | 1,620.71                | 0.50                    | 0.41                   | -0.28                 |
| 13,580.00                                                            | 91.92           | 358.28      | 11,921.24             | 1,714.53     | -173.04      | 1,715.64                | 0.79                    | 0.69                   | 0.38                  |
| 13,674.00                                                            | 91.22           | 358.19      | 11,918.67             | 1,808.45     | -175.93      | 1,809.58                | 0.75                    | -0.74                  | -0.10                 |
| 13,769.00                                                            | 91.29           | 358.63      | 11,916.59             | 1,903.39     | -178.57      | 1,904.53                | 0.47                    | 0.07                   | 0.46                  |
| 13,864.00                                                            | 90.60           | 358.63      | 11,915.02             | 1,998.35     | -180.84      | 1,999.51                | 0.73                    | -0.73                  | 0.00                  |
| 13,959.00                                                            | 89.11           | 358.19      | 11,915.26             | 2,093.31     | -183.47      | 2,094.48                | 1.64                    | -1.57                  | -0.46                 |
| 14,054.00                                                            | 90.08           | 358.36      | 11,915.93             | 2,188.27     | -186.33      | 2,189.45                | 1.04                    | 1.02                   | 0.18                  |
| 14,148.00                                                            | 87.97           | 359.51      | 11,917.53             | 2,282.23     | -188.08      | 2,283.43                | 2.56                    | -2.24                  | 1.22                  |
| 14,243.00                                                            | 87.48           | 359.51      | 11,921.30             | 2,377.15     | -188.89      | 2,378.35                | 0.52                    | -0.52                  | 0.00                  |
| 14,337.00                                                            | 87.46           | 359.42      | 11,925.45             | 2,471.05     | -189.77      | 2,472.26                | 0.10                    | -0.02                  | -0.10                 |
| 14,430.00                                                            | 88.58           | 359.77      | 11,928.67             | 2,563.99     | -190.43      | 2,565.20                | 1.26                    | 1.20                   | 0.38                  |
| 14,524.00                                                            | 88.91           | 359.77      | 11,930.73             | 2,657.97     | -190.80      | 2,659.18                | 0.35                    | 0.35                   | 0.00                  |
| 14,618.00                                                            | 88.63           | 0.03        | 11,932.74             | 2,751.95     | -190.97      | 2,753.16                | 0.41                    | -0.30                  | 0.28                  |
| 14,712.00                                                            | 87.09           | 0.56        | 11,936.25             | 2,845.88     | -190.48      | 2,847.08                | 1.73                    | -1.64                  | 0.56                  |
| 14,806.00                                                            | 87.70           | 1.18        | 11,940.53             | 2,939.77     | -189.06      | 2,940.96                | 0.92                    | 0.65                   | 0.66                  |
| 14,900.00                                                            | 88.10           | 0.91        | 11,943.97             | 3,033.69     | -187.34      | 3,034.87                | 0.51                    | 0.43                   | -0.29                 |
| 14,995.00                                                            | 86.28           | 0.47        | 11,948.63             | 3,128.57     | -186.20      | 3,129.73                | 1.97                    | -1.92                  | -0.46                 |
| 15,090.00                                                            | 87.15           | 0.65        | 11,954.07             | 3,223.40     | -185.27      | 3,224.56                | 0.94                    | 0.92                   | 0.19                  |
| 15,184.00                                                            | 87.40           | 1.26        | 11,958.54             | 3,317.28     | -183.71      | 3,318.43                | 0.70                    | 0.27                   | 0.65                  |
| 15,278.00                                                            | 87.86           | 0.91        | 11,962.43             | 3,411.19     | -181.93      | 3,412.32                | 0.61                    | 0.49                   | -0.37                 |
| 15,374.00                                                            | 84.78           | 0.21        | 11,968.59             | 3,506.97     | -180.99      | 3,508.10                | 3.29                    | -3.21                  | -0.73                 |
| 15,468.00                                                            | 85.48           | 0.65        | 11,976.57             | 3,600.63     | -180.29      | 3,601.75                | 0.88                    | 0.74                   | 0.47                  |
| 15,563.00                                                            | 85.42           | 358.89      | 11,984.11             | 3,695.33     | -180.67      | 3,696.44                | 1.85                    | -0.06                  | -1.85                 |
| 15,658.00                                                            | 86.52           | 358.36      | 11,990.78             | 3,790.06     | -182.95      | 3,791.19                | 1.28                    | 1.16                   | -0.56                 |
| 15,753.00                                                            | 88.56           | 358.19      | 11,994.86             | 3,884.93     | -185.80      | 3,886.07                | 2.15                    | 2.15                   | -0.18                 |
| 15,848.00                                                            | 89.22           | 358.01      | 11,996.70             | 3,979.86     | -188.95      | 3,981.02                | 0.72                    | 0.69                   | -0.19                 |
| 15,943.00                                                            | 89.37           | 358.19      | 11,997.87             | 4,074.80     | -192.10      | 4,075.98                | 0.25                    | 0.16                   | 0.19                  |

## Survey Report

**Company:** KAISER-FRANCIS OIL COMPANY  
**Project:** Lea County, NM (NAD27) NMEZ  
**Site:** Bell Lake Unit South  
**Well:** #319H  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well #319H  
**TVD Reference:** RKB @ 3655.00usft (Cactus 171 - KB=23')  
**MD Reference:** RKB @ 3655.00usft (Cactus 171 - KB=23')  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.14 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) |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 16,038.00                                                                                                                                      | 89.79           | 358.54      | 11,998.56             | 4,169.75     | -194.81      | 4,170.95                | 0.58                    | 0.44                   | 0.37                  |
| 16,133.00                                                                                                                                      | 88.36           | 358.98      | 12,000.10             | 4,264.72     | -196.87      | 4,265.93                | 1.57                    | -1.51                  | 0.46                  |
| 16,227.00                                                                                                                                      | 89.22           | 358.98      | 12,002.08             | 4,358.68     | -198.54      | 4,359.90                | 0.91                    | 0.91                   | 0.00                  |
| 16,322.00                                                                                                                                      | 88.10           | 0.03        | 12,004.30             | 4,453.65     | -199.36      | 4,454.87                | 1.62                    | -1.18                  | 1.11                  |
| 16,416.00                                                                                                                                      | 88.43           | 359.77      | 12,007.15             | 4,547.60     | -199.52      | 4,548.83                | 0.45                    | 0.35                   | -0.28                 |
| 16,510.00                                                                                                                                      | 88.27           | 0.30        | 12,009.86             | 4,641.56     | -199.47      | 4,642.79                | 0.59                    | -0.17                  | 0.56                  |
| 16,604.00                                                                                                                                      | 88.67           | 0.47        | 12,012.37             | 4,735.53     | -198.84      | 4,736.74                | 0.46                    | 0.43                   | 0.18                  |
| 16,698.00                                                                                                                                      | 89.22           | 0.56        | 12,014.10             | 4,829.51     | -197.99      | 4,830.72                | 0.59                    | 0.59                   | 0.10                  |
| 16,792.00                                                                                                                                      | 89.55           | 1.26        | 12,015.11             | 4,923.49     | -196.50      | 4,924.69                | 0.82                    | 0.35                   | 0.74                  |
| 16,886.00                                                                                                                                      | 89.24           | 359.51      | 12,016.10             | 5,017.48     | -195.87      | 5,018.67                | 1.89                    | -0.33                  | -1.86                 |
| 16,980.00                                                                                                                                      | 89.04           | 359.68      | 12,017.51             | 5,111.47     | -196.53      | 5,112.66                | 0.28                    | -0.21                  | 0.18                  |
| 17,075.00                                                                                                                                      | 89.40           | 0.12        | 12,018.80             | 5,206.46     | -196.70      | 5,207.65                | 0.60                    | 0.38                   | 0.46                  |
| 17,168.00                                                                                                                                      | 91.15           | 359.95      | 12,018.36             | 5,299.45     | -196.64      | 5,300.64                | 1.89                    | 1.88                   | -0.18                 |
| 17,263.00                                                                                                                                      | 90.76           | 357.57      | 12,016.77             | 5,394.41     | -198.70      | 5,395.61                | 2.54                    | -0.41                  | -2.51                 |
| 17,357.00                                                                                                                                      | 88.69           | 357.49      | 12,017.23             | 5,488.32     | -202.75      | 5,489.54                | 2.20                    | -2.20                  | -0.09                 |
| 17,451.00                                                                                                                                      | 89.29           | 357.49      | 12,018.88             | 5,582.21     | -206.86      | 5,583.46                | 0.64                    | 0.64                   | 0.00                  |
| 17,545.00                                                                                                                                      | 90.34           | 357.57      | 12,019.19             | 5,676.12     | -210.91      | 5,677.40                | 1.12                    | 1.12                   | 0.09                  |
| 17,639.00                                                                                                                                      | 91.33           | 357.57      | 12,017.82             | 5,770.03     | -214.90      | 5,771.33                | 1.05                    | 1.05                   | 0.00                  |
| 17,733.00                                                                                                                                      | 90.67           | 359.68      | 12,016.18             | 5,863.98     | -217.15      | 5,865.29                | 2.35                    | -0.70                  | 2.24                  |
| 17,828.00                                                                                                                                      | 90.56           | 358.72      | 12,015.16             | 5,958.96     | -218.48      | 5,960.28                | 1.02                    | -0.12                  | -1.01                 |
| 17,922.00                                                                                                                                      | 88.74           | 1.00        | 12,015.73             | 6,052.95     | -218.71      | 6,054.27                | 3.10                    | -1.94                  | 2.43                  |
| 18,017.00                                                                                                                                      | 89.31           | 1.18        | 12,017.35             | 6,147.92     | -216.90      | 6,149.22                | 0.63                    | 0.60                   | 0.19                  |
| 18,112.00                                                                                                                                      | 88.54           | 2.23        | 12,019.13             | 6,242.86     | -214.08      | 6,244.14                | 1.37                    | -0.81                  | 1.11                  |
| 18,207.00                                                                                                                                      | 89.13           | 2.49        | 12,021.06             | 6,337.76     | -210.17      | 6,339.01                | 0.68                    | 0.62                   | 0.27                  |
| 18,301.00                                                                                                                                      | 88.85           | 1.18        | 12,022.72             | 6,431.69     | -207.16      | 6,432.93                | 1.42                    | -0.30                  | -1.39                 |
| 18,396.00                                                                                                                                      | 88.25           | 359.42      | 12,025.12             | 6,526.66     | -206.66      | 6,527.88                | 1.96                    | -0.63                  | -1.85                 |
| 18,491.00                                                                                                                                      | 89.59           | 359.77      | 12,026.91             | 6,621.64     | -207.33      | 6,622.87                | 1.46                    | 1.41                   | 0.37                  |
| 18,586.00                                                                                                                                      | 90.05           | 359.07      | 12,027.21             | 6,716.63     | -208.29      | 6,717.86                | 0.88                    | 0.48                   | -0.74                 |
| 18,680.00                                                                                                                                      | 90.80           | 359.24      | 12,026.51             | 6,810.62     | -209.68      | 6,811.86                | 0.82                    | 0.80                   | 0.18                  |
| 18,776.00                                                                                                                                      | 88.49           | 358.98      | 12,027.11             | 6,906.60     | -211.17      | 6,907.85                | 2.42                    | -2.41                  | -0.27                 |
| 18,870.00                                                                                                                                      | 89.13           | 359.24      | 12,029.06             | 7,000.56     | -212.63      | 7,001.82                | 0.73                    | 0.68                   | 0.28                  |
| 18,965.00                                                                                                                                      | 89.04           | 358.80      | 12,030.58             | 7,095.54     | -214.25      | 7,096.80                | 0.47                    | -0.09                  | -0.46                 |
| 19,060.00                                                                                                                                      | 89.62           | 358.98      | 12,031.69             | 7,190.51     | -216.09      | 7,191.79                | 0.64                    | 0.61                   | 0.19                  |
| 19,155.00                                                                                                                                      | 90.36           | 359.42      | 12,031.70             | 7,285.50     | -217.42      | 7,286.78                | 0.91                    | 0.78                   | 0.46                  |
| 19,250.00                                                                                                                                      | 91.15           | 358.80      | 12,030.45             | 7,380.48     | -218.89      | 7,381.77                | 1.06                    | 0.83                   | -0.65                 |
| 19,345.00                                                                                                                                      | 91.37           | 358.45      | 12,028.36             | 7,475.43     | -221.17      | 7,476.73                | 0.44                    | 0.23                   | -0.37                 |
| 19,440.00                                                                                                                                      | 91.92           | 358.36      | 12,025.64             | 7,570.36     | -223.82      | 7,571.67                | 0.59                    | 0.58                   | -0.09                 |
| 19,535.00                                                                                                                                      | 92.23           | 358.19      | 12,022.20             | 7,665.25     | -226.67      | 7,666.58                | 0.37                    | 0.33                   | -0.18                 |
| 19,630.00                                                                                                                                      | 92.10           | 358.80      | 12,018.61             | 7,760.15     | -229.17      | 7,761.50                | 0.66                    | -0.14                  | 0.64                  |
| 19,724.00                                                                                                                                      | 91.48           | 359.77      | 12,015.67             | 7,854.09     | -230.34      | 7,855.45                | 1.22                    | -0.66                  | 1.03                  |
| 19,773.00                                                                                                                                      | 91.35           | 359.33      | 12,014.46             | 7,903.08     | -230.73      | 7,904.43                | 0.94                    | -0.27                  | -0.90                 |
| <b>Final MWD Survey: 19773.00' MD, 12014.46' TVD</b>                                                                                           |                 |             |                       |              |              |                         |                         |                        |                       |
| 19,863.00                                                                                                                                      | 91.35           | 359.33      | 12,012.34             | 7,993.05     | -231.78      | 7,994.41                | 0.00                    | 0.00                   | 0.00                  |
| <b>BHL: 19863.00' MD, 12012.34' TVD, 91.35° INC, 359.33° AZ, 7993.05' +N/-S, -231.78° +E/-W, 7994.41' VS - 330' FNL / 355' FWL - BHL(BLS#3</b> |                 |             |                       |              |              |                         |                         |                        |                       |

## Survey Report

|                                             |                                                               |
|---------------------------------------------|---------------------------------------------------------------|
| <b>Company:</b> KAISER-FRANCIS OIL COMPANY  | <b>Local Co-ordinate Reference:</b> Well #319H                |
| <b>Project:</b> Lea County, NM (NAD27) NMEZ | <b>TVD Reference:</b> RKB @ 3655.00usft (Cactus 171 - KB=23') |
| <b>Site:</b> Bell Lake Unit South           | <b>MD Reference:</b> RKB @ 3655.00usft (Cactus 171 - KB=23')  |
| <b>Well:</b> #319H                          | <b>North Reference:</b> Grid                                  |
| <b>Wellbore:</b> OH                         | <b>Survey Calculation Method:</b> Minimum Curvature           |
| <b>Design:</b> OH                           | <b>Database:</b> EDM 5000.14 Single User Db                   |

### Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|

### Design Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                                                                      |
|-----------------------------|-----------------------------|-------------------|-----------------|------------------------------------------------------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                                                              |
| 11,380.00                   | 11,375.08                   | -175.36           | -25.96          | KOP: 11380.00' MD, 11375.08' TVD                                             |
| 12,351.00                   | 11,938.55                   | 486.75            | -178.11         | EOC: 12351.00' MD, 11938.55' TVD, 89.90° INC, 353.97° AZ, 487.92' VS         |
| 19,773.00                   | 12,014.46                   | 7,903.08          | -230.73         | Final MWD Survey: 19773.00' MD, 12014.46' TVD                                |
| 19,863.00                   | 12,012.34                   | 7,993.05          | -231.78         | BHL: 19863.00' MD, 12012.34' TVD, 91.35° INC, 359.33° AZ, 7993.05' +N/-S, -: |
| 19,863.00                   | 12,012.34                   | 7,993.05          | -231.78         | 330' FNL / 355' FWL                                                          |

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