

### 1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

Elevation: 3494 ft

| FORMATION             | SUB-SEA TVD | TVD    | MD     | LITHOLOGIES | MIN. RESOURCES | PROD. FORMATION |
|-----------------------|-------------|--------|--------|-------------|----------------|-----------------|
| Rustler               | 2634        | 860    | 860    | ANHYD       | N/A            |                 |
| Castile               | -26         | 3,520  | 3,520  | SALT        | N/A            |                 |
| Lamar                 | -1253       | 4,747  | 4,747  | LIMESTONE   | N/A            |                 |
| Bell Canyon           | -1326       | 4,820  | 4,820  | SAND STONE  | N/A            |                 |
| Cherry Canyon         | -2216       | 5,710  | 5,710  | SAND STONE  | N/A            |                 |
| Brushy Canyon         | -3606       | 7,100  | 7,100  | SAND STONE  | N/A            |                 |
| Bone Spring Limestone | -5216       | 8,710  | 8,710  | SHALE       | Oil            |                 |
| Upr. Avalon           | -5336       | 8,830  | 8,830  | SHALE       | Oil            |                 |
| Top Bone Spring 1     | -6216       | 9,710  | 9,710  | SHALE       | Oil            |                 |
| Top Bone Spring 2     | -6853       | 10,347 | 10,427 | SHALE       | Oil            |                 |
| Estimated Target TVD  | -6981       | 10,475 | 18,401 | SHALE       | Oil            | yes             |
|                       |             |        |        |             |                |                 |
|                       |             |        |        |             |                |                 |
|                       |             |        |        |             |                |                 |
|                       |             |        |        |             |                |                 |

| WELLBORE LOCATIONS | SUB-SEA TVD | RKB TVD | MD     |
|--------------------|-------------|---------|--------|
| SHL                | 3494        | -       |        |
| KOP                | -6408       | 9,902   | 9,931  |
| FTP                | -6981       | 10,475  | 10,831 |
| LTP                | -6981       | 10,475  | 18,401 |

### 2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

| Substance                            | Formation             | Depth  |
|--------------------------------------|-----------------------|--------|
| Deepest Expected Base of Fresh Water |                       | 750    |
| Water                                | Rustler               | 860    |
| Water                                | Bell Canyon           | 4820   |
| Water                                | Cherry Canyon         | 5710   |
| Oil/Gas                              | Brushy Canyon         | 7100   |
| Oil/Gas                              | Bone Spring Limestone | 8710   |
| Oil/Gas                              | Upr. Avalon           | 8830   |
| Oil/Gas                              | Top Bone Spring 1     | 9710   |
| Oil/Gas                              | Top Bone Spring 2     | 10347  |
| Oil/Gas                              | Estimated Target TVD  | 10,475 |
|                                      |                       |        |
|                                      |                       |        |
|                                      |                       |        |
|                                      |                       |        |

All shows of fresh water and minerals will be reported and protected.

### 3. BOP EQUIPMENT

Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) for drill out below surface casing. The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test will be conducted by a third party.

Chevron requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nipped up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC Technologies and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal. All tests performed by third party.

#### 4. CASING PROGRAM

a. The proposed casing program will be as follows:

| Purpose      | From | To      | Hole Size | Csg Size | Weight | Grade | Thread  | Condition |
|--------------|------|---------|-----------|----------|--------|-------|---------|-----------|
| Surface      | 0'   | 880'    | 17-1/2"   | 13-3/8"  | 54.5 # | J-55  | STC     | New       |
| Intermediate | 0'   | 8,750'  | 12-1/4"   | 9-5/8"   | 43.5 # | L-80  | LTC     | New       |
| Production   | 0'   | 18,667' | 8-1/2"    | 5-1/2"   | 20.0 # | P-110 | TXP BTC | New       |

| Proposed     | Hole Size | Casing Size | Top (MD) | Btm (MD) | Top (TVD) | Btm (TVD) | Top (SSTVD) | Btm (SSTVD) | Grade | Weight | Joint type |
|--------------|-----------|-------------|----------|----------|-----------|-----------|-------------|-------------|-------|--------|------------|
| Surface      | 17-1/2"   | 13-3/8"     | 0'       | 880'     | 0'        | 880'      | 3,494'      | 2,614'      | J-55  | 54.5 # | STC        |
| Intermediate | 12-1/4"   | 9-5/8"      | 0'       | 8,750'   | 0'        | 8,750'    | 3,494'      | -5,256'     | L-80  | 43.5 # | LTC        |
| Production   | 8-1/2"    | 5-1/2"      | 0'       | 18,401'  | 0'        | 10,475'   | 3,494'      | -6,981'     | P110  | 20.0 # | TXP-BTC    |

b. Casing design subject to revision based on geologic conditions encountered.

A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing

c. design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalculated & sent to the BLM prior to drilling.

d. Chevron will fill casing at a minimum of every 20 jts (~840') while running for intermediate and production casing in order to maintain collapse SF.

**SF Calculations based on the following "Worst Case" casing design:**

|                      |         |       |
|----------------------|---------|-------|
| Surface Casing:      | 880'    | ftTVD |
| Intermediate Casing: | 8,750'  | ftTVD |
| Production Casing:   | 18,401' | ftMD  |

| Casing String | Min SF Burst | Min SF Collapse | Min SF Tension | Min SF Tri-Axial |
|---------------|--------------|-----------------|----------------|------------------|
| Surface       | 1.41         | 2.06            | 2.80           | 1.77             |
| Intermediate  | 1.28         | 3.01            | 1.84           | 1.58             |
| Production    | 1.29         | 2.00            | 2.18           | 1.54             |

The following worst case load cases were considered for calculation of the above Min. Safety Factors:

| Burst Design                                                                                                                                    | Surf | Int | Prod |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|
| Pressure Test- Surface, Int, Prod Csg<br>P external: Mud weight above TOC, PP below<br>P internal: Test psi + next section heaviest mud in csg  | X    | X   | X    |
| Displace to Gas- Surf Csg<br>P external: Mud weight above TOC, PP below<br>P internal: Dry Gas from Next Csg Point                              | X    |     |      |
| Gas over mud (60/40) - Int Csg<br>P external: Mud weight above TOC, PP below<br>P internal: 60% gas over 40% mud from hole TD PP                |      | X   |      |
| Stimulation (Frac) Pressures- Prod Csg<br>P external: Mud weight above TOC, PP below<br>P internal: Max inj pressure w/ heaviest injected fluid |      |     | X    |
| Tubing leak- Prod Csg (packer at KOP)<br>P external: Mud weight above TOC, PP below<br>P internal: Leak just below surf, 8.45 ppg packer fluid  |      |     | X    |
| Collapse Design                                                                                                                                 | Surf | Int | Prod |
| Full Evacuation<br>P external: Mud weight gradient<br>P internal: none                                                                          | X    | X   | X    |
| Cementing- Surf, Int, Prod Csg<br>P external: Wet cement<br>P internal: displacement fluid - water                                              | X    | X   | X    |
| Tension Design                                                                                                                                  | Surf | Int | Prod |
| 100k lb overpull                                                                                                                                | X    | X   | X    |

5. **CEMENTING PROGRAM**

| <b>Slurry</b>           | <b>Type</b>      | <b>Top</b> | <b>Bottom</b> | <b>Sacks</b> | <b>Yield</b> | <b>Density</b> | <b>%Excess</b> | <b>Water</b> | <b>Volume</b> | <b>Additives</b>                                   |
|-------------------------|------------------|------------|---------------|--------------|--------------|----------------|----------------|--------------|---------------|----------------------------------------------------|
| <b>Surface</b>          |                  |            |               |              | (cu ft/sk)   | (ppg)          | Open Hole      | gal/sk       | cuft          |                                                    |
| Tail                    | Class C          | 0'         | 880'          | 1178         | 1.34         | 14.8           | 100            | 6.40         | 1579          | Extender,<br>Antifoam,<br>Retarder                 |
| <b>Intermediate Csg</b> |                  |            |               |              |              |                |                |              |               |                                                    |
| Lead                    | Class C          | 0'         | 7,750'        | 1233         | 2.56         | 11.9           | 30             | 14.66        | 3156          | Extender,<br>Antifoam,<br>Retarder,<br>Viscosifier |
| Tail                    | Class C          | 7,750'     | 8,750'        | 334          | 1.33         | 14.8           | 30             | 6.38         | 445           | Extender,<br>Antifoam,<br>Retarder,<br>Viscosifier |
| <b>Production</b>       |                  |            |               |              |              |                |                |              |               |                                                    |
| Lead 1                  | Class C          | 0'         | 9,000'        | 926          | 2.46         | 11.9           | 10             | 14.05        | 2278          | Extender,<br>Antifoam,<br>Retarder,<br>Viscosifier |
| Lead 2                  | Class C          | 9,000'     | 17,401'       | 1144         | 1.85         | 13.2           | 10             | 9.87         | 2117          | Extender,<br>Antifoam,<br>Retarder,<br>Viscosifier |
| Tail                    | Acid Sol Class H | 17,401'    | 18,401'       | 115          | 2.19         | 15             | 10             | 9.54         | 252           | Extender,<br>Antifoam,<br>Retarder,<br>Viscosifier |

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. Production casing will have one solid body type centralizer on every joint in the lateral, then every other joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing and surface.

## 6. MUD PROGRAM

| From   | To      | Type            | Weight     | Viscosity | Filtrate |
|--------|---------|-----------------|------------|-----------|----------|
| 0'     | 880'    | Fresh water mud | 8.3 - 8.7  | 28-30     | N/C      |
| 880'   | 8,750'  | Brine/OBM       | 8.7 - 9.6  | 28-70     | 15-25    |
| 8,750' | 18,401' | OBM             | 8.7 - 12.0 | 50-70     | 10 - 25  |

A closed system will be used consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations. And transporting of E&P waste will follow EPA regulations and accompanying manifests.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

## 7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

- Drill stem tests are not planned.
- The logging program will be as follows:

| TYPE    | Logs         | Interval                                 | Timing                        |
|---------|--------------|------------------------------------------|-------------------------------|
| Mudlogs | 2 man mudlog | Surface casing shoe through prod hole TD | While drilling or circulating |
| LWD     | MWD Gamma    | Int. and Prod. Hole                      | While Drilling                |

- Conventional whole core samples are not planned.
- A directional survey will be run.

## 8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- No abnormal pressure or temperatures are expected. Estimated BHP is: **4,362** psi
- Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered

# Chevron CO Grizzly 3 10 Fed 0051H Rev0 kFc 01May19 Proposal Geodetic Report (Def Plan)



Report Date: May 01, 2019 - 02:44 PM  
 Client: Chevron  
 Field: NM Lea County (NAD 27)  
 Structure / Slot: Chevron CO Grizzly 3 Fed Pad 5 / 0051H  
 Well: CO Grizzly 3 10 Fed 0051H  
 Borehole: CO Grizzly 3 10 Fed 0051H  
 UWI / API#: Unknown / Unknown  
 Survey Name: Chevron CO Grizzly 3 10 Fed 0051H Rev0 kFc 01May19  
 Survey Date: May 01, 2019  
 Tort / AHD / DDI / ERD Ratio: 114.999 \* / 8563.453 ft / 6.238 / 0.818  
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet  
 Location Lat / Long: N 32° 9' 33.89535", W 103° 39' 25.18036"  
 Location Grid N/E Y/X: N 422374.000 RUS, E 709300.000 RUS  
 CRS Grid Convergence Angle: 0.3600 \*  
 Grid Scale Factor: 0.99995926  
 Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski  
 Vertical Section Azimuth: 179.860 \* (Grid North)  
 Vertical Section Origin: 0.000 ft, 0.000 ft  
 TVD Reference Datum: RKB = 28ft  
 TVD Reference Elevation: 3522.000 ft above  
 Seabed / Ground Elevation: 3494.000 ft above  
 Magnetic Declination: 6.677 \*  
 Total Gravity Field Strength: 998.4260mgm (9.80665 Based)  
 Gravity Model: GARM  
 Total Magnetic Field Strength: 47847.846 nT  
 Magnetic Dip Angle: 59.794 \*  
 Declination Date: May 01, 2019  
 Magnetic Declination Model: HDGM 2019  
 North Reference: Grid North  
 Grid Convergence Used: 0.3600 \*

Total Corr Mag North-Grid North: 6.3172 \*

Local Coord Referenced To: Well Head

| Comments         | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ")           | Longitude<br>(E/W ° ' ") |
|------------------|------------|-------------|------------------|-------------|--------------|------------|------------|-------------------|--------------------|-------------------|-----------------------------------|--------------------------|
| Surface          | 0.00       | 0.00        | 0.00             | 0.00        | 0.00         | 0.00       | 0.00       | N/A               | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 100.00     | 0.00        | 55.02            | 100.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 200.00     | 0.00        | 55.02            | 200.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 300.00     | 0.00        | 55.02            | 300.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 400.00     | 0.00        | 55.02            | 400.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 500.00     | 0.00        | 55.02            | 500.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 600.00     | 0.00        | 55.02            | 600.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 700.00     | 0.00        | 55.02            | 700.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
| 13 3/8" Casing   | 800.00     | 0.00        | 55.02            | 800.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 900.00     | 0.00        | 55.02            | 900.00      | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 1000.00    | 0.00        | 55.02            | 1000.00     | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
| Build 1.5"/100ft | 1100.00    | 0.00        | 55.02            | 1100.00     | 0.00         | 0.00       | 0.00       | 0.00              | 422374.00          | 709300.00         | N 32° 9' 33.80 W 103° 39' 25.18   |                          |
|                  | 1200.00    | 1.50        | 55.02            | 1199.99     | -0.75        | 0.75       | 1.07       | 1.50              | 422374.75          | 709301.07         | N 32° 9' 33.80 W 103° 39' 25.17   |                          |
|                  | 1300.00    | 3.00        | 55.02            | 1299.91     | -2.99        | 3.00       | 4.29       | 1.50              | 422377.00          | 709304.29         | N 32° 9' 33.82 W 103° 39' 25.13   |                          |
|                  | 1400.00    | 4.50        | 55.02            | 1399.69     | -8.73        | 6.75       | 9.65       | 1.50              | 422380.75          | 709309.65         | N 32° 9' 33.86 W 103° 39' 25.07   |                          |
|                  | 1500.00    | 6.00        | 55.02            | 1499.27     | -11.95       | 12.00      | 17.15      | 1.50              | 422385.99          | 709317.14         | N 32° 9' 34.01 W 103° 39' 24.98   |                          |
|                  | 1600.00    | 7.50        | 55.02            | 1598.57     | -18.67       | 18.73      | 26.78      | 1.50              | 422392.73          | 709326.77         | N 32° 9' 34.08 W 103° 39' 24.87   |                          |
| Hold             | 1668.64    | 8.50        | 55.02            | 1664.57     | -23.97       | 24.05      | 34.38      | 1.50              | 422398.05          | 709334.37         | N 32° 9' 34.13 W 103° 39' 24.78   |                          |
|                  | 1700.00    | 8.50        | 55.02            | 1697.56     | -26.78       | 26.88      | 38.41      | 0.00              | 422400.87          | 709338.41         | N 32° 9' 34.16 W 103° 39' 24.73   |                          |
|                  | 1800.00    | 8.50        | 55.02            | 1796.46     | -35.23       | 35.35      | 50.53      | 0.00              | 422409.35          | 709350.52         | N 32° 9' 34.24 W 103° 39' 24.59   |                          |
|                  | 1900.00    | 8.50        | 55.02            | 1895.36     | -43.67       | 43.82      | 62.64      | 0.00              | 422417.82          | 709362.63         | N 32° 9' 34.33 W 103° 39' 24.45   |                          |
|                  | 2000.00    | 8.50        | 55.02            | 1994.26     | -52.11       | 52.29      | 74.75      | 0.00              | 422426.29          | 709374.74         | N 32° 9' 34.41 W 103° 39' 24.31   |                          |
|                  | 2100.00    | 8.50        | 55.02            | 2093.16     | -60.56       | 60.77      | 86.86      | 0.00              | 422434.76          | 709386.85         | N 32° 9' 34.49 W 103° 39' 24.17   |                          |
|                  | 2200.00    | 8.50        | 55.02            | 2192.07     | -69.00       | 69.24      | 98.97      | 0.00              | 422443.24          | 709398.96         | N 32° 9' 34.57 W 103° 39' 24.02   |                          |
|                  | 2300.00    | 8.50        | 55.02            | 2290.97     | -77.44       | 77.71      | 111.08     | 0.00              | 422451.71          | 709411.07         | N 32° 9' 34.66 W 103° 39' 23.88   |                          |
|                  | 2400.00    | 8.50        | 55.02            | 2389.87     | -85.89       | 86.19      | 123.19     | 0.00              | 422460.18          | 709423.18         | N 32° 9' 34.74 W 103° 39' 23.74   |                          |
|                  | 2500.00    | 8.50        | 55.02            | 2488.77     | -94.33       | 94.66      | 135.30     | 0.00              | 422468.66          | 709435.29         | N 32° 9' 34.82 W 103° 39' 23.60   |                          |
|                  | 2600.00    | 8.50        | 55.02            | 2587.67     | -102.77      | 103.13     | 147.41     | 0.00              | 422477.13          | 709447.39         | N 32° 9' 34.91 W 103° 39' 23.46   |                          |
|                  | 2700.00    | 8.50        | 55.02            | 2686.57     | -111.21      | 111.60     | 159.52     | 0.00              | 422485.60          | 709459.51         | N 32° 9' 34.99 W 103° 39' 23.32   |                          |
|                  | 2800.00    | 8.50        | 55.02            | 2785.48     | -119.66      | 120.08     | 171.63     | 0.00              | 422494.07          | 709471.63         | N 32° 9' 35.07 W 103° 39' 23.18   |                          |
|                  | 2900.00    | 8.50        | 55.02            | 2884.38     | -128.10      | 128.55     | 183.74     | 0.00              | 422502.55          | 709483.74         | N 32° 9' 35.16 W 103° 39' 23.03   |                          |
|                  | 3000.00    | 8.50        | 55.02            | 2983.28     | -136.54      | 137.02     | 195.85     | 0.00              | 422511.02          | 709495.85         | N 32° 9' 35.24 W 103° 39' 22.89   |                          |
|                  | 3100.00    | 8.50        | 55.02            | 3082.18     | -144.99      | 145.50     | 207.96     | 0.00              | 422519.49          | 709507.96         | N 32° 9' 35.32 W 103° 39' 22.75   |                          |
|                  | 3200.00    | 8.50        | 55.02            | 3181.08     | -153.43      | 153.97     | 220.08     | 0.00              | 422527.96          | 709520.07         | N 32° 9' 35.41 W 103° 39' 22.61   |                          |
|                  | 3300.00    | 8.50        | 55.02            | 3279.98     | -161.87      | 162.44     | 232.19     | 0.00              | 422536.44          | 709532.18         | N 32° 9' 35.49 W 103° 39' 22.47   |                          |
|                  | 3400.00    | 8.50        | 55.02            | 3378.89     | -170.32      | 170.92     | 244.30     | 0.00              | 422544.91          | 709544.29         | N 32° 9' 35.57 W 103° 39' 22.33   |                          |
|                  | 3500.00    | 8.50        | 55.02            | 3477.79     | -178.76      | 179.39     | 256.41     | 0.00              | 422553.38          | 709556.40         | N 32° 9' 35.65 W 103° 39' 22.18   |                          |
|                  | 3600.00    | 8.50        | 55.02            | 3576.69     | -187.20      | 187.86     | 268.52     | 0.00              | 422561.85          | 709568.51         | N 32° 9' 35.74 W 103° 39' 22.04   |                          |
|                  | 3700.00    | 8.50        | 55.02            | 3675.59     | -195.65      | 196.33     | 280.63     | 0.00              | 422570.33          | 709580.62         | N 32° 9' 35.82 W 103° 39' 21.90   |                          |
|                  | 3800.00    | 8.50        | 55.02            | 3774.49     | -204.09      | 204.81     | 292.74     | 0.00              | 422578.80          | 709592.73         | N 32° 9' 35.90 W 103° 39' 21.76   |                          |
|                  | 3900.00    | 8.50        | 55.02            | 3873.39     | -212.53      | 213.28     | 304.85     | 0.00              | 422587.27          | 709604.84         | N 32° 9' 35.99 W 103° 39' 21.62   |                          |
| Drop 1.5"/100ft  | 3943.56    | 8.50        | 55.02            | 3916.47     | -216.21      | 216.97     | 310.12     | 0.00              | 422595.96          | 709616.95         | N 32° 9' 36.02 W 103° 39' 21.56   |                          |
|                  | 4000.00    | 7.65        | 55.02            | 3972.36     | -220.74      | 221.52     | 316.62     | 1.50              | 422595.01          | 709616.61         | N 32° 9' 36.07 W 103° 39' 21.48   |                          |
|                  | 4100.00    | 6.15        | 55.02            | 4071.63     | -227.61      | 228.41     | 326.47     | 1.50              | 422602.40          | 709626.46         | N 32° 9' 36.14 W 103° 39' 21.37   |                          |
|                  | 4200.00    | 4.65        | 55.02            | 4171.18     | -232.99      | 233.80     | 334.19     | 1.50              | 422607.79          | 709634.17         | N 32° 9' 36.19 W 103° 39' 21.28   |                          |
|                  | 4300.00    | 3.15        | 55.02            | 4270.95     | -236.87      | 237.71     | 339.76     | 1.50              | 422611.70          | 709639.75         | N 32° 9' 36.23 W 103° 39' 21.21   |                          |
|                  | 4400.00    | 1.65        | 55.02            | 4370.86     | -239.27      | 240.11     | 343.20     | 1.50              | 422614.10          | 709643.18         | N 32° 9' 36.25 W 103° 39' 21.17   |                          |
|                  | 4500.00    | 0.15        | 55.02            | 4470.84     | -240.17      | 241.01     | 344.49     | 1.50              | 422615.00          | 709644.47         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
| Hold Vertical    | 4510.20    | 0.00        | 55.02            | 4481.04     | -240.18      | 241.02     | 344.50     | 1.50              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 4600.00    | 0.00        | 55.02            | 4570.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
| 9 5/8" Casing    | 4629.18    | 0.00        | 55.02            | 4600.00     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 4700.00    | 0.00        | 55.02            | 4670.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 4800.00    | 0.00        | 55.02            | 4770.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 4900.00    | 0.00        | 55.02            | 4870.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5000.00    | 0.00        | 55.02            | 4970.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5100.00    | 0.00        | 55.02            | 5070.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5200.00    | 0.00        | 55.02            | 5170.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5300.00    | 0.00        | 55.02            | 5270.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5400.00    | 0.00        | 55.02            | 5370.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5500.00    | 0.00        | 55.02            | 5470.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5600.00    | 0.00        | 55.02            | 5570.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5700.00    | 0.00        | 55.02            | 5670.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5800.00    | 0.00        | 55.02            | 5770.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 5900.00    | 0.00        | 55.02            | 5870.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 6000.00    | 0.00        | 55.02            | 5970.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 6100.00    | 0.00        | 55.02            | 6070.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 6200.00    | 0.00        | 55.02            | 6170.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 6300.00    | 0.00        | 55.02            | 6270.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 6400.00    | 0.00        | 55.02            | 6370.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16   |                          |
|                  | 6500.00    | 0.00        | 55.02            | 6470.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32° 9' 36.26 W 103° 39' 21.16</ |                          |

| Comments             | MD<br>(ft) | Incl<br>(°) | Azim Grid<br>(°) | TVD<br>(ft) | VSEC<br>(ft) | NS<br>(ft) | EW<br>(ft) | DLS<br>(ft/100ft) | Northing<br>(ftUS) | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|----------------------|------------|-------------|------------------|-------------|--------------|------------|------------|-------------------|--------------------|-------------------|-------------------------|--------------------------|
|                      | 8200.00    | 0.00        | 55.02            | 8170.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8300.00    | 0.00        | 55.02            | 8270.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8400.00    | 0.00        | 55.02            | 8370.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8500.00    | 0.00        | 55.02            | 8470.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8600.00    | 0.00        | 55.02            | 8570.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8700.00    | 0.00        | 55.02            | 8670.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8800.00    | 0.00        | 55.02            | 8770.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 8900.00    | 0.00        | 55.02            | 8870.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9000.00    | 0.00        | 55.02            | 8970.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9100.00    | 0.00        | 55.02            | 9070.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9200.00    | 0.00        | 55.02            | 9170.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9300.00    | 0.00        | 55.02            | 9270.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9400.00    | 0.00        | 55.02            | 9370.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9500.00    | 0.00        | 55.02            | 9470.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9600.00    | 0.00        | 55.02            | 9570.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9700.00    | 0.00        | 55.02            | 9670.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9800.00    | 0.00        | 55.02            | 9770.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 9900.00    | 0.00        | 55.02            | 9870.84     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
| KOP, Build 10"/100ft | 9931.20    | 0.00        | 55.02            | 9902.04     | -240.18      | 241.02     | 344.50     | 0.00              | 422615.01          | 709644.49         | N 32 9 36.26 W          | 103 39 21.16             |
|                      | 10000.00   | 6.88        | 171.86           | 9970.67     | -236.09      | 236.94     | 345.08     | 10.00             | 422610.93          | 709645.07         | N 32 9 36.22 W          | 103 39 21.15             |
|                      | 10100.00   | 16.88       | 171.86           | 10068.41    | -215.73      | 216.58     | 347.99     | 10.00             | 422590.57          | 709647.98         | N 32 9 36.02 W          | 103 39 21.12             |
|                      | 10200.00   | 26.88       | 171.86           | 10161.09    | -178.77      | 179.74     | 353.26     | 10.00             | 422553.73          | 709653.25         | N 32 9 36.55 W          | 103 39 21.06             |
|                      | 10300.00   | 36.88       | 171.86           | 10245.90    | -126.64      | 127.52     | 360.73     | 10.00             | 422501.52          | 709660.71         | N 32 9 35.13 W          | 103 39 20.98             |
|                      | 10400.00   | 46.88       | 171.86           | 10320.26    | -60.62       | 61.52      | 370.16     | 10.00             | 422435.52          | 709670.15         | N 32 9 34.48 W          | 103 39 20.87             |
|                      | 10500.00   | 56.88       | 171.86           | 10381.91    | 17.19        | -16.26     | 381.28     | 10.00             | 422357.74          | 709681.27         | N 32 9 33.71 W          | 103 39 20.75             |
|                      | 10600.00   | 66.88       | 171.86           | 10428.98    | 104.42       | -103.46    | 393.75     | 10.00             | 422270.55          | 709693.73         | N 32 9 32.85 W          | 103 39 20.61             |
|                      | 10700.00   | 76.88       | 171.86           | 10460.04    | 198.42       | -197.42    | 407.18     | 10.00             | 422176.59          | 709707.17         | N 32 9 31.92 W          | 103 39 20.46             |
|                      | 10800.00   | 86.88       | 171.86           | 10474.15    | 296.33       | -295.30    | 421.18     | 10.00             | 422078.71          | 709721.16         | N 32 9 30.95 W          | 103 39 20.30             |
| Landing Point        | 10831.20   | 90.00       | 171.86           | 10475.00    | 327.21       | -326.17    | 425.59     | 10.00             | 422047.85          | 709725.57         | N 32 9 30.64 W          | 103 39 20.25             |
| FTP Cross            | 10831.23   | 90.00       | 171.86           | 10475.00    | 327.24       | -326.20    | 425.59     | 0.00              | 422047.81          | 709725.58         | N 32 9 30.64 W          | 103 39 20.25             |
|                      | 10900.00   | 90.00       | 171.86           | 10475.00    | 395.34       | -394.28    | 435.33     | 0.00              | 421976.74          | 709735.31         | N 32 9 29.97 W          | 103 39 20.15             |
| Turn 2"/100ft        | 11000.00   | 90.00       | 171.86           | 10475.00    | 494.37       | -493.27    | 449.48     | 0.00              | 421880.75          | 709749.46         | N 32 9 28.99 W          | 103 39 19.99             |
|                      | 11079.74   | 90.00       | 171.86           | 10475.00    | 573.34       | -572.21    | 460.76     | 0.00              | 421801.81          | 709760.74         | N 32 9 28.20 W          | 103 39 19.86             |
|                      | 11100.00   | 90.00       | 172.27           | 10475.00    | 593.41       | -592.27    | 463.56     | 2.00              | 421781.75          | 709763.54         | N 32 9 28.01 W          | 103 39 19.83             |
|                      | 11200.00   | 90.00       | 174.27           | 10475.00    | 692.74       | -691.58    | 475.28     | 2.00              | 421682.45          | 709775.26         | N 32 9 27.02 W          | 103 39 19.70             |
|                      | 11300.00   | 90.00       | 176.27           | 10475.00    | 792.41       | -791.23    | 483.53     | 2.00              | 421582.80          | 709783.51         | N 32 9 26.04 W          | 103 39 19.61             |
|                      | 11400.00   | 90.00       | 178.27           | 10475.00    | 892.31       | -891.12    | 488.29     | 2.00              | 421482.92          | 709788.27         | N 32 9 25.05 W          | 103 39 19.57             |
| Hold                 | 11479.75   | 90.00       | 179.86           | 10475.00    | 972.05       | -970.86    | 489.59     | 2.00              | 421403.18          | 709789.57         | N 32 9 24.26 W          | 103 39 19.56             |
|                      | 11500.00   | 90.00       | 179.86           | 10475.00    | 992.30       | -991.10    | 489.64     | 0.00              | 421382.94          | 709789.62         | N 32 9 24.06 W          | 103 39 19.56             |
|                      | 11600.00   | 90.00       | 179.86           | 10475.00    | 1092.30      | -1091.10   | 489.88     | 0.00              | 421282.94          | 709789.86         | N 32 9 23.07 W          | 103 39 19.56             |
|                      | 11700.00   | 90.00       | 179.86           | 10475.00    | 1192.30      | -1191.10   | 490.12     | 0.00              | 421182.95          | 709790.09         | N 32 9 22.08 W          | 103 39 19.57             |
|                      | 11800.00   | 90.00       | 179.86           | 10475.00    | 1292.30      | -1291.10   | 490.35     | 0.00              | 421082.95          | 709790.33         | N 32 9 21.09 W          | 103 39 19.57             |
|                      | 11900.00   | 90.00       | 179.86           | 10475.00    | 1392.30      | -1391.10   | 490.59     | 0.00              | 420982.96          | 709790.57         | N 32 9 20.10 W          | 103 39 19.58             |
|                      | 12000.00   | 90.00       | 179.86           | 10475.00    | 1492.30      | -1491.10   | 490.83     | 0.00              | 420882.96          | 709790.81         | N 32 9 19.11 W          | 103 39 19.58             |
|                      | 12100.00   | 90.00       | 179.86           | 10475.00    | 1592.30      | -1591.10   | 491.06     | 0.00              | 420782.97          | 709791.04         | N 32 9 18.12 W          | 103 39 19.58             |
|                      | 12200.00   | 90.00       | 179.86           | 10475.00    | 1692.30      | -1691.10   | 491.30     | 0.00              | 420682.97          | 709791.28         | N 32 9 17.13 W          | 103 39 19.59             |
|                      | 12300.00   | 90.00       | 179.86           | 10475.00    | 1792.30      | -1791.10   | 491.54     | 0.00              | 420582.98          | 709791.52         | N 32 9 16.14 W          | 103 39 19.59             |
|                      | 12400.00   | 90.00       | 179.86           | 10475.00    | 1892.30      | -1891.10   | 491.78     | 0.00              | 420482.98          | 709791.76         | N 32 9 15.15 W          | 103 39 19.60             |
|                      | 12500.00   | 90.00       | 179.86           | 10475.00    | 1992.30      | -1991.10   | 492.01     | 0.00              | 420382.98          | 709791.99         | N 32 9 14.16 W          | 103 39 19.60             |
|                      | 12600.00   | 90.00       | 179.86           | 10475.00    | 2092.30      | -2091.10   | 492.25     | 0.00              | 420282.99          | 709792.23         | N 32 9 13.17 W          | 103 39 19.61             |
|                      | 12700.00   | 90.00       | 179.86           | 10475.00    | 2192.30      | -2191.10   | 492.49     | 0.00              | 420182.99          | 709792.47         | N 32 9 12.18 W          | 103 39 19.61             |
|                      | 12800.00   | 90.00       | 179.86           | 10475.00    | 2292.30      | -2291.10   | 492.73     | 0.00              | 420083.00          | 709792.71         | N 32 9 11.19 W          | 103 39 19.62             |
|                      | 12900.00   | 90.00       | 179.86           | 10475.00    | 2392.30      | -2391.10   | 492.96     | 0.00              | 419983.00          | 709792.94         | N 32 9 10.20 W          | 103 39 19.62             |
|                      | 13000.00   | 90.00       | 179.86           | 10475.00    | 2492.30      | -2491.10   | 493.20     | 0.00              | 419883.01          | 709793.18         | N 32 9 9.21 W           | 103 39 19.63             |
|                      | 13100.00   | 90.00       | 179.86           | 10475.00    | 2592.30      | -2591.10   | 493.44     | 0.00              | 419783.01          | 709793.42         | N 32 9 8.22 W           | 103 39 19.63             |
|                      | 13200.00   | 90.00       | 179.86           | 10475.00    | 2692.30      | -2691.10   | 493.68     | 0.00              | 419683.02          | 709793.65         | N 32 9 7.24 W           | 103 39 19.64             |
|                      | 13300.00   | 90.00       | 179.86           | 10475.00    | 2792.30      | -2791.10   | 493.91     | 0.00              | 419583.02          | 709793.89         | N 32 9 6.25 W           | 103 39 19.64             |
|                      | 13400.00   | 90.00       | 179.86           | 10475.00    | 2892.30      | -2891.10   | 494.15     | 0.00              | 419483.03          | 709794.13         | N 32 9 5.26 W           | 103 39 19.64             |
|                      | 13500.00   | 90.00       | 179.86           | 10475.00    | 2992.30      | -2991.10   | 494.39     | 0.00              | 419383.03          | 709794.37         | N 32 9 4.27 W           | 103 39 19.65             |
|                      | 13600.00   | 90.00       | 179.86           | 10475.00    | 3092.30      | -3091.10   | 494.63     | 0.00              | 419283.04          | 709794.60         | N 32 9 3.28 W           | 103 39 19.65             |
|                      | 13700.00   | 90.00       | 179.86           | 10475.00    | 3192.30      | -3191.10   | 494.86     | 0.00              | 419183.04          | 709794.84         | N 32 9 2.29 W           | 103 39 19.66             |
|                      | 13800.00   | 90.00       | 179.86           | 10475.00    | 3292.30      | -3291.10   | 495.10     | 0.00              | 419083.04          | 709795.08         | N 32 9 1.30 W           | 103 39 19.66             |
|                      | 13900.00   | 90.00       | 179.86           | 10475.00    | 3392.30      | -3391.10   | 495.34     | 0.00              | 418983.05          | 709795.32         | N 32 9 0.31 W           | 103 39 19.67             |
|                      | 14000.00   | 90.00       | 179.86           | 10475.00    | 3492.30      | -3491.10   | 495.57     | 0.00              | 418883.05          | 709795.55         | N 32 8 59.32 W          | 103 39 19.67             |
|                      | 14100.00   | 90.00       | 179.86           | 10475.00    | 3592.30      | -3591.10   | 495.81     | 0.00              | 418783.06          | 709795.79         | N 32 8 58.33 W          | 103 39 19.68             |
|                      | 14200.00   | 90.00       | 179.86           | 10475.00    | 3692.30      | -3691.10   | 496.05     | 0.00              | 418683.06          | 709796.03         | N 32 8 57.34 W          | 103 39 19.68             |
|                      | 14300.00   | 90.00       | 179.86           | 10475.00    | 3792.30      | -3791.10   | 496.29     | 0.00              | 418583.07          | 709796.27         | N 32 8 56.35 W          | 103 39 19.69             |
|                      | 14400.00   | 90.00       | 179.86           | 10475.00    | 3892.30      | -3891.09   | 496.52     | 0.00              | 418483.07          | 709796.50         | N 32 8 55.36 W          | 103 39 19.69             |
|                      | 14500.00   | 90.00       | 179.86           | 10475.00    | 3992.30      | -3991.09   | 496.76     | 0.00              | 418383.08          | 709796.74         | N 32 8 54.37 W          | 103 39 19.69             |
|                      | 14600.00   | 90.00       | 179.86           | 10475.00    | 4092.30      | -4091.09   | 497.00     | 0.00              | 418283.08          | 709796.98         | N 32 8 53.38 W          | 103 39 19.70             |
|                      | 14700.00   | 90.00       | 179.86           | 10475.00    | 4192.30      | -4191.09   | 497.24     | 0.00              | 418183.09          | 709797.21         | N 32 8 52.39 W          | 103 39 19.70             |
|                      | 14800.00   | 90.00       | 179.86           | 10475.00    | 4292.30      | -4291.09   | 497.47     | 0.00              | 418083.09          | 709797.45         | N 32 8 51.40 W          | 103 39 19.71             |
|                      | 14900.00   | 90.00       | 179.86           | 10475.00    | 4392.30      | -4391.09   | 497.71     | 0.00              | 417983.09          | 709797.69         | N 32 8 50.41 W          | 103 39 19.71             |
|                      | 15000.00   | 90.00       | 179.86           | 10475.00    | 4492.30      | -4491.09   | 497.95     | 0.00              | 417883.10          | 709797.93         | N 32 8 49.42 W          | 103 39 19.72             |
|                      | 15100.00   | 90.00       | 179.86           | 10475.00    | 4592.30      | -4591.09   | 498.19     | 0.00              | 417783.10          | 709798.16         | N 32 8 48.43 W          | 103 39 19.72             |
|                      | 15200.00   | 90.00       | 179.86           | 10475.00    | 4692.30      | -4691.09   | 498.42     | 0.00              | 417683.11          | 709798.40         | N 32 8 47.44 W          | 103 39 19.73             |
|                      | 15300.00   | 90.00       |                  |             |              |            |            |                   |                    |                   |                         |                          |

| Comments                               | MD<br>(ft)                                           | Incl<br>(°)     | Azim Grid<br>(°) | TVD<br>(ft)      | VSEC<br>(ft)      | NS<br>(ft)              | EW<br>(ft)                           | DLS<br>(°/100ft)              | Northing<br>(ftUS)                                                                   | Easting<br>(ftUS) | Latitude<br>(N/S ° ' ") | Longitude<br>(E/W ° ' ") |
|----------------------------------------|------------------------------------------------------|-----------------|------------------|------------------|-------------------|-------------------------|--------------------------------------|-------------------------------|--------------------------------------------------------------------------------------|-------------------|-------------------------|--------------------------|
| Survey Error Model:<br>Survey Program: | ISCWSA Rev 3 *** 3-D 97.071% Confidence 3.0000 sigma |                 |                  |                  |                   |                         |                                      |                               |                                                                                      |                   |                         |                          |
| Description                            | Part                                                 | MD From<br>(ft) | MD To<br>(ft)    | EOU Freq<br>(ft) | Hole Size<br>(in) | Casing Diameter<br>(in) | Expected Max<br>Inclination<br>(deg) | Survey Tool Type              | Borehole / Survey                                                                    |                   |                         |                          |
|                                        | 1                                                    | 0.000           | 28.000           | 1/100.000        | 30.000            | 30.000                  |                                      | B001Ma_MWD+HDGM-Depth<br>Only | CO Grizzly 3 10 Fed 0051H /<br>Chevron CO Grizzly 3 10 Fed<br>0051H Rev0 kFc 01May19 |                   |                         |                          |
|                                        | 1                                                    | 28.000          | 18401.254        | 1/100.000        | 30.000            | 30.000                  |                                      | B001Ma_MWD+HDGM               | CO Grizzly 3 10 Fed 0051H /<br>Chevron CO Grizzly 3 10 Fed                           |                   |                         |                          |