

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	10,510	SHALE	Oil	
Estimated Target TVD	-6981	10,475	18,480	SHALE	Oil	yes

WELLBORE LOCATIONS	SUB-SEA TVD	RKB TVD	MD
SHL	3494	-	
KOP	-6408	9,902	10,008
FTP	-6981	10,475	10,908
LTP	-6981	10,475	18,480

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'	18,480'	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:	18,480'	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 P external: Mud weight above TOC, PP below P internal: Test psi + next section heaviest mud in csg	X	X	X
Displace to Gas- Surf Csg P external: Mud weight above TOC, PP below P internal: Dry Gas from Next Csg Point	X		
Gas over mud (60/40) - Int Csg P external: Mud weight above TOC, PP below P internal: 60% gas over 40% mud from hole TD PP		X	
Stimulation (Frac) Pressures- Prod Csg P external: Mud weight above TOC, PP below P internal: Max inj pressure w/ heaviest injected fluid			X
Tubing leak- Prod Csg (packer at KOP) P external: Mud weight above TOC, PP below P internal: Leak just below surf, 8.45 ppg packer fluid			X
Collapse Design	Surf	Int	Prod
Full Evacuation P external: Mud weight gradient P internal: none	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: displacement fluid - water	X	X	X
Tension Design	Surf	Int	Prod
100k lb overpull	X	X	X

5. **CEMENTING PROGRAM**

Slurry Surface	Type	Top	Bottom	Sacks	Yield (cu ft/sk)	Density (ppg)	%Excess Open Hole	Water gal/sk	Volume cuft	Additives
Tail	Class C	0'	880'	1178	1.34	14.8	100	6.40	1579	Extender, Antifoam, Retarder
<u>Intermediate Csg</u>										
Lead	Class C	0'	7,750'	1233	2.56	11.9	30	14.66	3156	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	7,750'	8,750'	334	1.33	14.8	30	6.38	445	Extender, Antifoam, Retarder, Viscosifier
<u>Production</u>										
Lead 1	Class C	0'	10,000'	1028	2.46	11.9	10	14.05	2530	Extender, Antifoam, Retarder, Viscosifier
Lead 2	Class C	10,000'	17,480'	1019	1.85	13.2	10	9.87	1885	Extender, Antifoam, Retarder, Viscosifier
Tail	Acid Sol Class H	17,480'	18,480'	115	2.19	15	10	9.54	252	Extender, Antifoam, Retarder, 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'	18,480'	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 0055H Rev0 kFc 01May19 Proposal Geodetic Report (Def Plan)



Report Date: May 01, 2019 - 02:26 PM
 Client: Chevron
 Field: NM Lea County (NAD 27)
 Structure / Slot: Chevron CO Grizzly 3 Fed Pad 5 / 0055H
 Well: CO Grizzly 3 10 Fed 0055H
 Borehole: CO Grizzly 3 10 Fed 0055H
 UWI / API#: Unknown / Unknown
 Survey Name: Chevron CO Grizzly 3 10 Fed 0055H Rev0 kFc 01May19
 Survey Date: May 01, 2019
 Tort / AHD / DDI / ERD Ratio: 122,000' / 9210.451' R / 6.297 / 0.879
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 9' 33.85012" W 103° 39' 26.05287"
 Location Grid N/E Y/X: N 422373.000 NUS, E 709225.000 NUS
 CRS Grid Convergence Angle: 0.3599 °
 Grid Scale Factor: 0.99995923
 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: 998.4280mgm (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47847.864 nT
 Magnetic Dip Angle: 59.794 °
 Declination Date: May 01, 2019
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.3599 °
 Total Corr Mag North-Grid North: 6.3174 °
 Local Coord Reference To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	100.00	0.00	282.29	100.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	200.00	0.00	282.29	200.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	300.00	0.00	282.29	300.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	400.00	0.00	282.29	400.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	500.00	0.00	282.29	500.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	600.00	0.00	282.29	600.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	700.00	0.00	282.29	700.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
13 3/8" Casing	800.00	0.00	282.29	800.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	900.00	0.00	282.29	900.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	1000.00	0.00	282.29	1000.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
Build 1.5"/100ft	1100.00	0.00	282.29	1100.00	0.00	0.00	0.00	0.00	422373.00	709225.00	N 32° 9' 33.89"	W 103° 39' 26.05"
	1200.00	1.50	282.29	1199.99	-0.28	0.28	-1.28	1.50	422373.28	709223.72	N 32° 9' 33.89"	W 103° 39' 26.07"
	1300.00	3.50	282.29	1299.91	-1.13	1.11	-5.11	1.50	422374.11	709219.89	N 32° 9' 33.90"	W 103° 39' 26.11"
	1400.00	4.50	282.29	1399.69	-2.53	2.51	-11.51	1.50	422375.51	709213.50	N 32° 9' 33.92"	W 103° 39' 26.19"
	1500.00	6.00	282.29	1499.27	-4.50	4.45	-20.45	1.50	422377.45	709204.56	N 32° 9' 33.94"	W 103° 39' 26.29"
	1600.00	7.50	282.29	1598.57	-7.03	6.95	-31.93	1.50	422379.95	709193.07	N 32° 9' 33.96"	W 103° 39' 26.42"
	1700.00	9.00	282.29	1697.54	-10.12	10.01	-45.95	1.50	422383.01	709179.05	N 32° 9' 33.99"	W 103° 39' 26.59"
	1800.00	10.50	282.29	1796.09	-13.76	13.61	-62.50	1.50	422386.61	709162.51	N 32° 9' 34.03"	W 103° 39' 26.78"
Hold	1899.99	12.00	282.29	1894.16	-17.96	17.76	-81.56	1.50	422390.76	709143.45	N 32° 9' 34.07"	W 103° 39' 27.00"
	2000.00	12.00	282.29	1991.98	-22.43	22.19	-101.87	0.00	422395.19	709123.13	N 32° 9' 34.12"	W 103° 39' 27.24"
	2100.00	12.00	282.29	2089.79	-26.91	26.61	-122.19	0.00	422399.61	709102.82	N 32° 9' 34.16"	W 103° 39' 27.47"
	2200.00	12.00	282.29	2187.61	-31.38	31.03	-142.50	0.00	422404.03	709082.50	N 32° 9' 34.21"	W 103° 39' 27.71"
	2300.00	12.00	282.29	2285.42	-35.86	35.46	-162.82	0.00	422408.46	709062.19	N 32° 9' 34.25"	W 103° 39' 27.94"
	2400.00	12.00	282.29	2383.24	-40.33	39.88	-183.13	0.00	422412.88	709041.88	N 32° 9' 34.30"	W 103° 39' 28.18"
	2500.00	12.00	282.29	2481.05	-44.80	44.31	-203.45	0.00	422417.31	709021.56	N 32° 9' 34.34"	W 103° 39' 28.42"
	2600.00	12.00	282.29	2578.87	-49.28	48.73	-223.76	0.00	422421.73	709001.25	N 32° 9' 34.39"	W 103° 39' 28.65"
	2700.00	12.00	282.29	2676.68	-53.75	53.16	-244.08	0.00	422426.15	708980.93	N 32° 9' 34.43"	W 103° 39' 28.89"
	2800.00	12.00	282.29	2774.50	-58.23	57.58	-264.39	0.00	422430.58	708960.62	N 32° 9' 34.48"	W 103° 39' 29.12"
	2900.00	12.00	282.29	2872.31	-62.70	62.00	-284.71	0.00	422435.00	708940.31	N 32° 9' 34.52"	W 103° 39' 29.36"
	3000.00	12.00	282.29	2970.13	-67.17	66.43	-305.02	0.00	422439.43	708919.99	N 32° 9' 34.57"	W 103° 39' 29.60"
	3100.00	12.00	282.29	3067.94	-71.65	70.85	-325.34	0.00	422443.85	708899.68	N 32° 9' 34.61"	W 103° 39' 29.83"
	3200.00	12.00	282.29	3165.76	-76.12	75.28	-345.65	0.00	422448.27	708879.36	N 32° 9' 34.66"	W 103° 39' 30.07"
	3300.00	12.00	282.29	3263.57	-80.59	79.70	-365.97	0.00	422452.70	708859.05	N 32° 9' 34.70"	W 103° 39' 30.30"
	3400.00	12.00	282.29	3361.39	-85.07	84.12	-386.28	0.00	422457.12	708838.74	N 32° 9' 34.75"	W 103° 39' 30.54"
	3500.00	12.00	282.29	3459.20	-89.54	88.55	-406.60	0.00	422461.54	708818.42	N 32° 9' 34.79"	W 103° 39' 30.78"
	3600.00	12.00	282.29	3557.02	-94.02	92.97	-426.91	0.00	422465.97	708798.11	N 32° 9' 34.84"	W 103° 39' 31.01"
	3700.00	12.00	282.29	3654.83	-98.49	97.40	-447.23	0.00	422470.39	708777.79	N 32° 9' 34.88"	W 103° 39' 31.25"
	3800.00	12.00	282.29	3752.65	-102.96	101.82	-467.54	0.00	422474.82	708757.48	N 32° 9' 34.93"	W 103° 39' 31.48"
	3900.00	12.00	282.29	3850.46	-107.44	106.25	-487.85	0.00	422479.24	708737.17	N 32° 9' 34.97"	W 103° 39' 31.72"
	4000.00	12.00	282.29	3948.27	-111.91	110.67	-508.17	0.00	422483.66	708716.85	N 32° 9' 35.02"	W 103° 39' 31.96"
	4100.00	12.00	282.29	4046.09	-116.38	115.09	-528.48	0.00	422488.09	708696.54	N 32° 9' 35.06"	W 103° 39' 32.19"
	4200.00	12.00	282.29	4143.90	-120.86	119.52	-548.80	0.00	422492.51	708676.22	N 32° 9' 35.11"	W 103° 39' 32.43"
	4300.00	12.00	282.29	4241.72	-125.33	123.94	-569.11	0.00	422496.94	708655.91	N 32° 9' 35.15"	W 103° 39' 32.66"
	4400.00	12.00	282.29	4339.53	-129.81	128.37	-589.43	0.00	422501.36	708635.60	N 32° 9' 35.20"	W 103° 39' 32.90"
	4500.00	12.00	282.29	4437.35	-134.28	132.79	-609.74	0.00	422505.78	708615.28	N 32° 9' 35.24"	W 103° 39' 33.14"
	4600.00	12.00	282.29	4535.16	-138.75	137.21	-630.06	0.00	422510.21	708594.97	N 32° 9' 35.29"	W 103° 39' 33.37"
9 5/8" Casing	4688.28	12.00	282.29	4600.00	-141.72	140.15	-643.52	0.00	422513.14	708581.50	N 32° 9' 35.32"	W 103° 39' 33.53"
	4700.00	12.00	282.29	4632.98	-143.23	141.64	-650.37	0.00	422514.63	708574.65	N 32° 9' 35.33"	W 103° 39' 33.61"
	4800.00	12.00	282.29	4730.79	-147.70	146.06	-670.69	0.00	422519.06	708554.34	N 32° 9' 35.38"	W 103° 39' 33.84"
	4900.00	12.00	282.29	4828.61	-152.18	150.49	-691.00	0.00	422523.48	708534.03	N 32° 9' 35.42"	W 103° 39' 34.08"
	5000.00	12.00	282.29	4926.42	-156.65	154.91	-711.32	0.00	422527.90	708513.71	N 32° 9' 35.47"	W 103° 39' 34.32"
	5100.00	12.00	282.29	5024.24	-161.12	159.34	-731.63	0.00	422532.33	708493.40	N 32° 9' 35.51"	W 103° 39' 34.55"
	5200.00	12.00	282.29	5122.05	-165.60	163.76	-751.95	0.00	422536.75	708473.08	N 32° 9' 35.56"	W 103° 39' 34.79"
	5300.00	12.00	282.29	5219.87	-170.07	168.18	-772.26	0.00	422541.18	708452.77	N 32° 9' 35.60"	W 103° 39' 35.02"
	5400.00	12.00	282.29	5317.68	-174.54	172.61	-792.58	0.00	422545.60	708432.46	N 32° 9' 35.65"	W 103° 39' 35.26"
	5500.00	12.00	282.29	5415.50	-179.02	177.03	-812.89	0.00	422550.02	708412.14	N 32° 9' 35.69"	W 103° 39' 35.50"
	5600.00	12.00	282.29	5513.31	-183.49	181.46	-833.21	0.00	422554.45	708391.83	N 32° 9' 35.74"	W 103° 39' 35.73"
	5700.00	12.00	282.29	5611.13	-187.97	185.88	-853.52	0.00	422558.87	708371.51	N 32° 9' 35.78"	W 103° 39' 35.97"
	5800.00	12.00	282.29	5708.94	-192.44	190.30	-873.84	0.00	422563.30	708351.20	N 32° 9' 35.83"	W 103° 39' 36.20"
	5900.00	12.00	282.29	5806.76	-196.91	194.73	-894.15	0.00	422567.72	708330.89	N 32° 9' 35.87"	W 103° 39' 36.44"
	6000.00	12.00	282.29	5904.57	-201.39	199.15	-914.47	0.00	422572.14	708310.57	N 32° 9' 35.92"	W 103° 39' 36.68"
	6100.00	12.00	282.29	6002.39	-205.86	203.58	-934.78	0.00	422576.57	708290.26	N 32° 9' 35.96"	W 103° 39' 36.91"
	6200.00	12.00	282.29	6100.20	-210.33	208.00	-955.10	0.00	422580.99	708269.95	N 32° 9' 36.01"	W 103° 39' 37.15"
	6221.40	12.00	282.29	6121.13	-211.29	208.95	-959.44	0.00	422581.94	708265.60	N 32° 9' 36.02"	W 103° 39' 37.20"
	6300.00	10.82	282.29	6198.18	-214.64	212.26	-974.64	1.50	422585.25	708250.41	N 32° 9' 36.05"	W 103° 39' 37.37"
	6400.00	9.32	282.29	6296.63	-218.40	215.98	-991.72	1.50	422588.97	708233.32	N 32° 9' 36.09"	W 103° 39' 37.57"
	6500.00	7.82	282.29	6395.51	-221.61	219.15	-1006.28	1.50	422592.14	708218.76	N 32° 9' 36.12"	W 103° 39' 37.74"
	6600.00	6.32	282.29	6494.75	-224.26	221.77	-1018.31	1.50	422594.75			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100m)	Northing (MUS)	Easting (MUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	8300.00	0.00	282.29	8193.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	8400.00	0.00	282.29	8293.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	8500.00	0.00	282.29	8393.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	8600.00	0.00	282.29	8493.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	8700.00	0.00	282.29	8593.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	8800.00	0.00	282.29	8693.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	8900.00	0.00	282.29	8793.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9000.00	0.00	282.29	8893.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9100.00	0.00	282.29	8993.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9200.00	0.00	282.29	9093.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9300.00	0.00	282.29	9193.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9400.00	0.00	282.29	9293.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9500.00	0.00	282.29	9393.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9600.00	0.00	282.29	9493.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9700.00	0.00	282.29	9593.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9800.00	0.00	282.29	9693.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	9900.00	0.00	282.29	9793.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	10000.00	0.00	282.29	9893.90	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
KOP, Build 10°/100ft	10008.14	0.00	282.29	9902.04	-229.25	226.71	-1041.00	0.00	422599.70	708184.04	N 32 9 36.20	W 103 39 38.15
	10100.00	9.19	187.86	9993.50	-221.88	219.43	-1042.01	10.00	422592.42	708183.04	N 32 9 36.13	W 103 39 38.16
	10200.00	19.19	187.86	10090.33	-197.74	195.19	-1045.35	10.00	422568.18	708179.69	N 32 9 35.89	W 103 39 38.20
	10300.00	28.19	187.86	10181.44	-157.22	154.65	-1050.95	10.00	422527.65	708174.09	N 32 9 35.49	W 103 39 38.27
	10400.00	39.19	187.86	10264.06	-101.65	99.06	-1058.63	10.00	422472.06	708166.41	N 32 9 34.94	W 103 39 38.36
	10500.00	49.19	187.86	10335.67	-32.72	30.11	-1068.15	10.00	422403.11	708156.89	N 32 9 34.25	W 103 39 38.48
	10600.00	59.19	187.86	10394.11	47.48	-50.12	-1079.24	10.00	422322.88	708145.81	N 32 9 33.46	W 103 39 38.61
	10700.00	69.19	187.86	10437.60	136.51	-139.18	-1091.54	10.00	422233.83	708133.51	N 32 9 32.58	W 103 39 38.76
	10800.00	79.19	187.86	10464.82	231.67	-234.37	-1104.68	10.00	422138.64	708120.36	N 32 9 31.64	W 103 39 38.92
	10900.00	89.19	187.86	10474.94	330.06	-332.79	-1118.28	10.00	422040.22	708106.77	N 32 9 30.67	W 103 39 39.08
Landing Point	10908.14	90.00	187.86	10475.00	338.12	-340.86	-1119.39	10.00	422032.16	708105.65	N 32 9 30.59	W 103 39 39.10
FTP Cross	10908.18	90.00	187.86	10475.00	338.16	-340.90	-1119.40	0.00	422032.11	708105.65	N 32 9 30.59	W 103 39 39.10
	11000.00	90.00	187.86	10475.00	429.09	-431.85	-1131.96	0.00	421941.17	708093.09	N 32 9 29.69	W 103 39 39.25
	11100.00	90.00	187.86	10475.00	528.11	-530.91	-1145.64	0.00	421842.11	708079.41	N 32 9 28.71	W 103 39 39.42
	11200.00	90.00	187.86	10475.00	627.14	-629.97	-1159.33	0.00	421743.06	708065.72	N 32 9 27.73	W 103 39 39.58
Turn 2°/100ft	11255.53	90.00	187.86	10475.00	682.03	-684.89	-1168.29	0.00	421678.14	708056.76	N 32 9 27.08	W 103 39 39.69
	11300.00	90.00	187.17	10475.00	726.19	-729.06	-1172.80	2.00	421643.97	708052.25	N 32 9 26.75	W 103 39 39.75
	11400.00	90.00	185.17	10475.00	825.58	-828.47	-1183.56	2.00	421544.56	708041.49	N 32 9 25.77	W 103 39 39.88
	11500.00	90.00	183.17	10475.00	925.29	-928.20	-1190.84	2.00	421444.84	708034.21	N 32 9 24.78	W 103 39 39.97
Hold	11600.00	90.00	181.17	10475.00	1025.20	-1028.13	-1194.63	2.00	421344.92	708030.42	N 32 9 23.79	W 103 39 40.02
	11665.54	90.00	179.86	10475.00	1090.73	-1093.66	-1195.23	2.00	421279.39	708029.83	N 32 9 23.14	W 103 39 40.04
	11700.00	90.00	179.86	10475.00	1125.20	-1128.12	-1195.14	0.00	421244.93	708029.91	N 32 9 22.80	W 103 39 40.04
	11800.00	90.00	179.86	10475.00	1225.20	-1228.12	-1194.91	0.00	421144.93	708030.14	N 32 9 21.81	W 103 39 40.04
	11900.00	90.00	179.86	10475.00	1325.20	-1328.12	-1194.67	0.00	421044.94	708030.38	N 32 9 20.82	W 103 39 40.05
	12000.00	90.00	179.86	10475.00	1425.20	-1428.12	-1194.43	0.00	420944.94	708030.62	N 32 9 19.83	W 103 39 40.05
	12100.00	90.00	179.86	10475.00	1525.20	-1528.12	-1194.19	0.00	420844.94	708030.86	N 32 9 18.84	W 103 39 40.05
	12200.00	90.00	179.86	10475.00	1625.20	-1628.12	-1193.96	0.00	420744.95	708031.09	N 32 9 17.85	W 103 39 40.06
	12300.00	90.00	179.86	10475.00	1725.20	-1728.12	-1193.72	0.00	420644.95	708031.33	N 32 9 16.86	W 103 39 40.06
	12400.00	90.00	179.86	10475.00	1825.20	-1828.12	-1193.48	0.00	420544.96	708031.57	N 32 9 15.87	W 103 39 40.07
	12500.00	90.00	179.86	10475.00	1925.20	-1928.12	-1193.25	0.00	420444.96	708031.81	N 32 9 14.88	W 103 39 40.07
	12600.00	90.00	179.86	10475.00	2025.20	-2028.12	-1193.01	0.00	420344.97	708032.04	N 32 9 13.90	W 103 39 40.08
	12700.00	90.00	179.86	10475.00	2125.20	-2128.12	-1192.77	0.00	420244.97	708032.28	N 32 9 12.91	W 103 39 40.08
	12800.00	90.00	179.86	10475.00	2225.20	-2228.12	-1192.53	0.00	420144.98	708032.52	N 32 9 11.92	W 103 39 40.09
	12900.00	90.00	179.86	10475.00	2325.20	-2328.12	-1192.30	0.00	420044.98	708032.76	N 32 9 10.93	W 103 39 40.09
	13000.00	90.00	179.86	10475.00	2425.20	-2428.12	-1192.06	0.00	419944.99	708032.99	N 32 9 9.94	W 103 39 40.10
	13100.00	90.00	179.86	10475.00	2525.20	-2528.12	-1191.82	0.00	419844.99	708033.23	N 32 9 8.95	W 103 39 40.10
	13200.00	90.00	179.86	10475.00	2625.20	-2628.12	-1191.58	0.00	419744.99	708033.47	N 32 9 7.96	W 103 39 40.11
	13300.00	90.00	179.86	10475.00	2725.20	-2728.12	-1191.35	0.00	419645.00	708033.70	N 32 9 6.97	W 103 39 40.11
	13400.00	90.00	179.86	10475.00	2825.20	-2828.12	-1191.11	0.00	419545.00	708033.94	N 32 9 5.98	W 103 39 40.11
	13500.00	90.00	179.86	10475.00	2925.20	-2928.12	-1190.87	0.00	419445.01	708034.18	N 32 9 4.99	W 103 39 40.12
	13600.00	90.00	179.86	10475.00	3025.20	-3028.12	-1190.63	0.00	419345.01	708034.42	N 32 9 4.00	W 103 39 40.12
	13700.00	90.00	179.86	10475.00	3125.20	-3128.12	-1190.40	0.00	419245.02	708034.65	N 32 9 3.01	W 103 39 40.13
	13800.00	90.00	179.86	10475.00	3225.20	-3228.12	-1190.16	0.00	419145.02	708034.89	N 32 9 2.02	W 103 39 40.13
	13900.00	90.00	179.86	10475.00	3325.20	-3328.12	-1189.92	0.00	419045.03	708035.13	N 32 9 1.03	W 103 39 40.14
	14000.00	90.00	179.86	10475.00	3425.20	-3428.12	-1189.68	0.00	418945.03	708035.37	N 32 9 0.04	W 103 39 40.14
	14100.00	90.00	179.86	10475.00	3525.20	-3528.12	-1189.45	0.00	418845.04	708035.60	N 32 8 59.05	W 103 39 40.14
	14200.00	90.00	179.86	10475.00	3625.20	-3628.12	-1189.21	0.00	418745.04	708035.84	N 32 8 58.06	W 103 39 40.15
	14300.00	90.00	179.86	10475.00	3725.20	-3728.12	-1188.97	0.00	418645.04	708036.08	N 32 8 57.07	W 103 39 40.15
	14400.00	90.00	179.86	10475.00	3825.20	-3828.12	-1188.74	0.00	418545.05	708036.32	N 32 8 56.08	W 103 39 40.16
	14500.00	90.00	179.86	10475.00	3925.20	-3928.12	-1188.50	0.00	418445.05	708036.55	N 32 8 55.09	W 103 39 40.16
	14600.00	90.00	179.86	10475.00	4025.20	-4028.12	-1188.26	0.00	418345.06	708036.79	N 32 8 54.10	W 103 39 40.17
	14700.00	90.00	179.86	10475.00	4125.20	-4128.12	-1188.02	0.00	418245.06	708037.03	N 32 8 53.11	W 103 39 40.17
	14800.00	90.00	179.86	10475.00	4225.20	-4228.12	-1187.79	0.00	418145.07	708037.26	N 32 8 52.12	W 103 39 40.18
	14900.00	90.00	179.86	10475.00	4325.20	-4328.12	-1187.55	0.00	418045.07	708037.50	N 32 8 51.14	W 103 39 40.18
	15000.00	90.00	179.86	10475.00	4425.20	-4428.12	-1187.31	0.00	417945.08	708037.74	N 32 8 50.15	W 103 39 40.19
	15100.00	90.00	179.86	10475.00	4525.20	-4528.12	-1187.07	0.00	417845.08	708037.98	N 32 8 49.16	W 103 39 40.19
	15200.00	90.00	179.86	10475.00	4625.20	-4628.12	-1186.84	0.00	417745.09	708038.21	N 32 8 48.17	W 103 39 40.19
	15300											

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
Survey Program:												
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey			
	1	0.000	28.000	1/100.000	30.000	30.000		B001Ma_MWD+HDGM-Depth Only	CO Grizzly 3 10 Fed 0055H / Chevron CO Grizzly 3 10 Fed 0055H Rev0 kFc 01May19 CO Grizzly 3 10 Fed 0055H / Chevron CO Grizzly 3 10 Fed			
	1	28.000	18480.235	1/100.000	30.000	30.000		B001Ma_MWD+HDGM				