

Submit 1 Copy To Appropriate District

Office

District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM
 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-045-38406
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Calloway
8. Well Number 2M
9. OGRID Number 372171
10. Pool name or Wildcat Blanco Mesaverde / Basin Dakota

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well ☒ Other	
2. Name of Operator Hilcorp Energy Company	
3. Address of Operator 382 Road 3100, Aztec, NM 87410	
4. Well Location Unit Letter <u>H</u> : <u>2470</u> feet from the <u>North</u> line and <u>948</u> feet from the <u>East</u> line Section <u>34</u> Township <u>031N</u> Range <u>011W</u> NMPM County <u>SAN JUAN</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5659' GL	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐ SIDETRACK		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Hilcorp Energy requests permission to update the previously approved Drilling Tech Plans with updated coordinates and depths to match. Please see the attached revised technical plans.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Cherylene Weston TITLE Operations/Regulatory Tech-Sr. DATE 1/29/2025

Type or print name Cherylene Weston E-mail address: cweston@hilcorp.com PHONE: 713-289-2615

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any)

San Juan County, NM

Calloway 2M

Hilcorp Energy Company

Technical Drilling Plan (Rev. 5)

Hilcorp Energy Company proposes to drill and complete the referenced well targeting the Mesa Verde and Dakota formations.

Note: This technical drilling plan will be adjusted based upon actual conditions.

1. Location

Date:	January 24, 2024	Pool:	Mesa Verde / Dakota
Well Name:	Calloway 2M	Ground Elevation (ft. MSL):	5,659'
Surface Hole Location:	36.855745° N, 107.972065° W	Total Depth (ft. TMD/TVD)	7,178' / 6,908'
Bottom Hole Location:	36.853992° N, 107.975469° W	County, State:	San Juan County, NM

Note: All geographic coordinates on the drilling tech plan and the directional drilling plan refer to NAD 27 geodetic coordinate system. All depths on the drilling tech plan and the directional drilling plan are referenced from an estimated RKB datum of 17' above ground level.

2. Geological Markers

Anticipated formation tops with comments of any possible water, gas or oil shows are indicated below:

Formation	Depth (ft. TVD)	Remarks
Ojo Alamo	769'	Water (fresh/useable)
Kirtland	862'	None
Fruitland Coal	1,802'	Gas, Water
Pictured Cliffs	2,234'	Gas
Lewis Shale	2,340'	None
Huerfanito Bentonite	2,967'	None
Chacra	3,301'	Gas
Mesa Verde / Cliff House	3,774'	Gas / Water
Menefee	4,039'	Gas
Point Lookout	4,511'	Gas
Mancos	4,853'	Gas
Upper Gallup	5,781'	Gas
Niobrara	6,004'	None
Juana Lopez	6,186'	Gas
Greenhorn	6,517'	Gas
Graneros	6,573'	Gas
Two Wells	6,627'	Gas
Paugate	6,708'	Gas
Cubero	6,747'	Gas
Encinal	6,808'	Gas



San Juan County, NM

Calloway 2M

Hilcorp Energy Company

3. Pressure Control Equipment

A. BOP Equipment

See Appendix A for BOP equipment and choke manifold diagram.

- BOP equipment will be nipped up on top of the wellhead after surface casing is set and cemented.
- Pressure control configurations will be designed to meet the minimum 3M standards.
- All equipment will have 3M pressure rating at a minimum.
- A rotating head will be installed on top of the annular as seen in the attached diagram.

B. BOP Pressure Testing

- For all BOP pressure testing, a test unit with a chart recorder and a BOP test plug will be utilized.
- All tests and inspections will be recorded and logged with time and results.
- A full BOP pressure test will be conducted when initially installed for the first well on the pad or if a seal subject to test pressure is broken, following related repairs, and at a minimum in 30-day intervals.
- A BOPE shell pressure test only will be conducted for subsequent wells on the pad when seals subject to pressure have not been broken, repaired, and fall within the 30-day interval of the first full test.
- The New Mexico Oil & Gas Conservation Division and the BLM will be notified 24 hours in advance of pressure testing BOPE.
- The BOPE will be tested to 250 psi (Low) for 5 minutes and 3,000 psi (High) for 10 minutes.

C. BOP Function Testing

- Annular preventors will be functionally tested at least once per week.
- Pipe and blind rams will be function tested each trip.

D. Casing Pressure Testing

- For all casing pressure testing, a test unit with a chart recorder will be utilized.
- Surface casing will be pressure tested to 600 psi for 30 minutes.
- Intermediate casing will be pressure tested to 1,500 psi for 30 minutes.



San Juan County, NM

Calloway 2M

Hilcorp Energy Company

4. Casing Program

A. Proposed Casing Program:

Proposed Casing Design							
Casing String	Hole Size	Casing (size/weight/grade)	Top Depth (MD/TVD)	Shoe Depth (MD/TVD)	Collapse	Burst	Tensile
Surface	12-1/4"	9-5/8"-32.3#-H40 (or equiv.)-LTC/BTC	0'	250'/250'	1,370 psi	2,270 psi	254 klbs
Intermediate	8-3/4"	7"-23#-J55 (or equiv.)-LTC/BTC	0'	4,409'/4,139'	3,270 psi	4,360 psi	366 klbs
Production	6-1/4"	4-1/2"-11.6#-J55 (or equiv.)-LTC/BTC	0'	7,178'/6,908'	4,960 psi	5,350 psi	184 klbs

Proposed Casing Design Safety Factors				
Casing String	Burst Design SF	Collapse Design SF	Joint Tensile Design SF	Connection Tensile Design SF
Surface	19.4	14.9	52.4	36.5
Intermediate	2.1	2.0	4.2	5.0
Production	1.5	1.7	2.6	3.2

B. Casing Design Parameters & Calculations:

- Designed for full wellbore evacuation.
- Mud Weights used for calculations:
 - Surface = 9.0 ppg
 - Intermediate = 9.5 ppg
 - Production = 10.0 ppg
- Minimum Acceptable Safety Factors:
 - Burst: 1.15
 - Collapse: 1.15
 - Tensile: 1.50
- Casing Safety Factor Calculations:

$$\text{Casing Burst Safety Factor} = \frac{\text{Casing Burst Rating (psi)}}{\text{Maximum Mud Weight (ppg)} \times \text{TVD (ft)} \times 0.052}$$

$$\text{Casing Collapse Safety Factor} = \frac{\text{Hydrostatic of Mud Weight in Annulus (psi)}}{\left[\text{TVD of Casing Shoe (ft)} \times 0.10 \frac{\text{psi}}{\text{ft}} \right]}$$

$$\text{Tensile Safety Factor} = \frac{\text{Tensile Rating of Casing String (lbs)}}{\text{Measured Depth of Casing (ft)} \times \text{Casing Weight } \frac{\text{lb}}{\text{ft}} \times \text{Drilling Fluid Bouyancy Factor}}$$

Production Casing Notes:

- Production casing will be run from surface to TD.
- The 6-1/4" hole will be drilled to the top of the Encinal formation and TD will be determined onsite by the mud logger.



San Juan County, NM

Calloway 2M

Hilcorp Energy Company

5. Proposed Centralizer Program:

Proposed Centralizer Program	
Casing String	Centralizers & Placement
Surface Casing	1 centralizer per joint on bottom 3 joints.
Intermediate Casing	1 centralizer per joint in shoe track. 1 centralizer every 3 rd joint from float collar to base of Ojo Alamo. 1 centralizer per joint from base of Ojo Alamo to the top of the Ojo Alamo. 1 centralizer every 3 rd joint from top of Ojo Alamo to surface.
Production Casing	1 centralizer per joint in shoe track. 1 centralizer every other joint for bottom 1,000' of casing.

6. Proposed Cement Program:

Proposed Cement Design								
Interval	Depth (ft. MD)	Lead/Tail	Volume (ft ³)	Sacks	Excess (%)	Slurry	Density (ppg)	Planned TOC
Surface	250'	Lead	157 ft ³	114	100%	Class G Cement Yield: 1.38 ft ³ /sk	14.6	Surface
Slurry Additives: CaCl ₂ (1%), Cello Flake (0.25 lb/sk), CD-2 (0.2%)								
Intermediate	4,409'	Lead	869 ft ³	408	50%	ASTM Type IL Yield: 2.13 ft ³ /sk	12.0	Surface
		Slurry Additives: CaCl ₂ (3.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.4%), bentonite (8.0%), SMS (0.4%)						
		Tail	113 ft ³	82	50%	ASTM Type IL Yield: 1.38 ft ³ /sk	14.5	3,909'
		Slurry Additives: CaCl ₂ (1.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.2%)						
Production	7,178'	Lead	439 ft ³	222	35%	ASTM Type IL Yield: 1.98 ft ³ /sk	12.5	3,909'
		Slurry Additives: Celloflake (0.25 lb/sk), LCM-1 (6.25 lb/sk), CD-32 (0.3%), FL-52 (1.0%)						

Cement Program Notes:

- The cement slurry additives may be adjusted to accommodate required pump and compressive test times.
- Actual cement volumes will be determined and may be adjusted onsite based on well conditions.
- For the intermediate hole section, a 2-stage or 3-stage cement job may be performed if hole conditions dictate. If needed, the stage tool(s) will be placed appropriately.
- Cement will be circulated to surface on surface and intermediate casing sections to protect water bearing zones.
- A minimum of 8 hours of wait on cement time will be observed on each hole section to allow adequate time for cement to achieve a minimum of 500 psi of compressive strength. The BOP will not be nipped down, the wellhead will not be installed, the casing will not be tested and the prior casing shoe will not be drilled out until adequate wait on cement time has been observed (8 hours or time to reach 500 psi compressive strength).



San Juan County, NM

Calloway 2M

Hilcorp Energy Company

7. Drilling Fluids Program

A. Proposed Drilling Fluids Program:

Proposed Drilling Fluids Program					
Interval	Fluid Type	Density (ppg)	Fluid Loss (mL/30 min)	Maximum Chlorides (ppm)	Depth (ft. MD)
Surface	Water/Gel	8.4 – 9.2	NC	1,000	0' – 250'
Intermediate	LSND / Gel	8.4 – 9.2	6-16	5,000	250' – 4,409'
Production	LSND / Gel / Air	8.4 – 9.2	6-16	5,000	4,409' – 7,178'

Drilling Fluids Notes:

- Lost circulation material may be added to the mud systems to manage fluid losses as hole conditions dictate.
- Depending on the area and losses encountered, the production section may be drilled on air instead of fluid.
- The well will be drilled utilizing a closed-loop circulating system. Drill cuttings for all hole sections will be transported to an approved disposal site.
- Estimated total volume of drill cuttings for disposal: 451 bbls (2,531 ft³).

8. Estimated Pressures & Drilling Hazards

A. Estimated Pressures

- Fruitland Coal: 400 psi
- Pictured Cliffs: 460 psi
- Mesa Verde: 900 psi
- Dakota: 1,400 psi
- No abnormal temperatures or drilling hazards are anticipated.
- The Mesa Verde and Dakota formations will be completed and comingled if both formations are completed.

B. Water Flows

- Water flows are possible in the intermediate section. Water flows will be mitigated with increased mud weight.

C. Lost Circulation

- Lost circulation is possible in the intermediate and production sections. Losses will be mitigated by utilizing LCM in the mud system.

D. Hydrogen Sulfide

- No hydrogen sulfide is expected to be encountered based on nearby well production.



San Juan County, NM

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Hilcorp Energy Company

9. Pilot Hole

- No pilot hole is planned for this wellbore.

10. Testing, Logging, Coring

A. Mud Logging

- Mud loggers will collect formation samples every 60' from intermediate casing shoe to TD of the well.

B. MWD

- Measurement while drilling tools will be utilized from the surface casing shoe to TD of the production hole to measure and record inclination and azimuth.

C. LWD

- There are no plans for logging while drilling.

D. Open Hole Logging

- There are no plans to open hole log the well.

E. Coring & Formation Testing

- There are no plans for coring or formation testing.

F. Cased Hole Logging

- The 7" intermediate casing will be cemented to surface to protect water bearing zones. If cement is not circulated to surface on the intermediate cement job, a cement bod log will be run to verify top of cement.

11. Directional Drilling Plan

- The well is planned as a directional wellbore. Surveys will be monitored to ensure adherence to the planned wellpath.
- The directional plan is attached in the APD application.



San Juan County, NM

Calloway 2M

Hilcorp Energy Company

12. Completion

A. Pressure Testing

- A pressure test of the 4-1/2" production casing will be conducted to the maximum anticipated frac pressure for 30 minutes.

B. Stimulation

- The well will be stimulated with sand and water. The number of stages and amount of proppant used will be adjusted based on actual reservoir thickness and real-time pumping conditions during the stimulation.

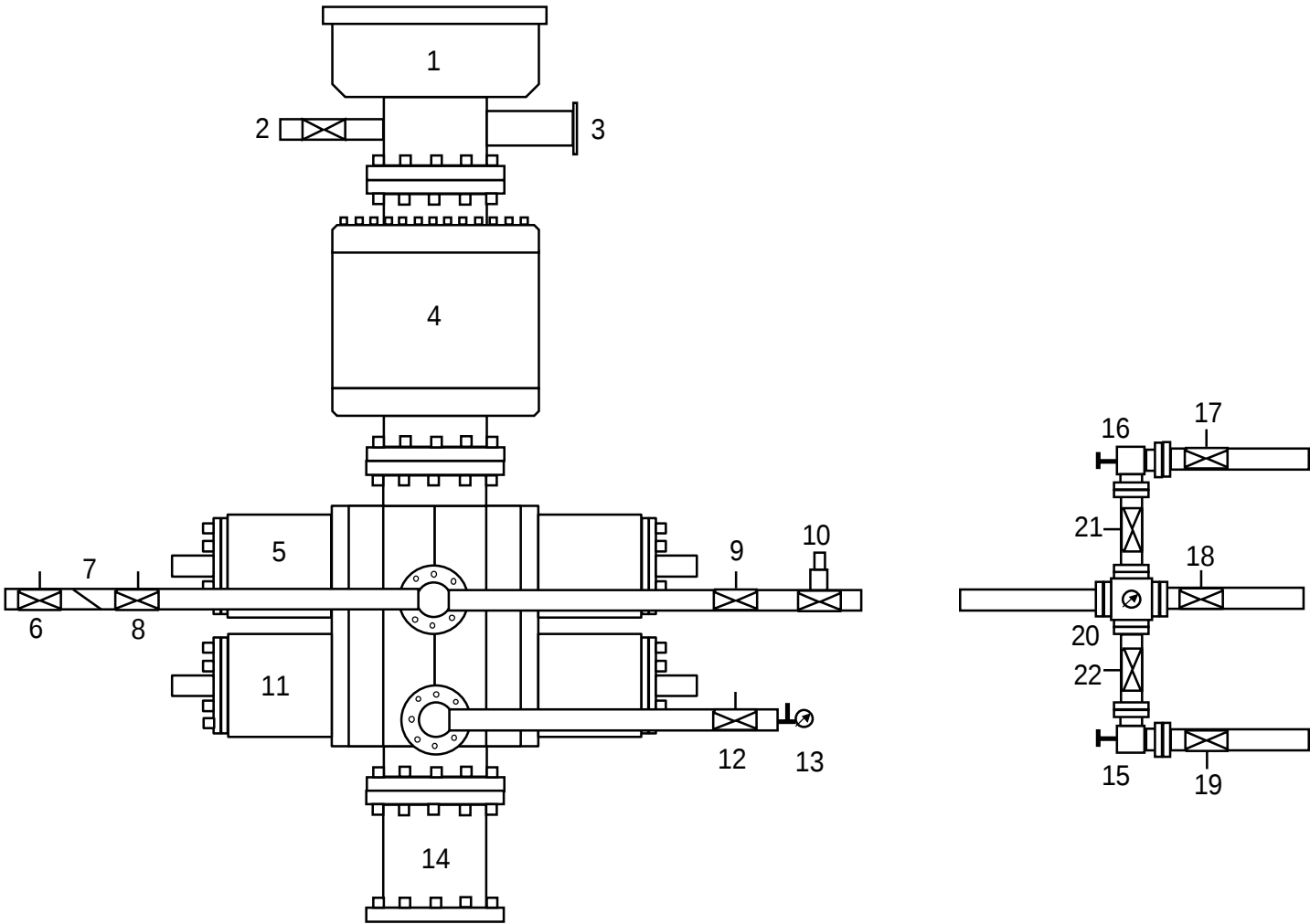
San Juan County, NM

Calloway 2M



Appendix A

11" 3M BOP & 3M Choke Manifold Configuration



1	Rotating Head	12	Manual Isolation Valve
2	Fill-Up Line	13	Needle Valve & Pressure Gauge
3	Flow Line	14	Spacer Spool (if needed)
4	3M Annular Preventer	15	Manual Choke
5	3M Pipe Rams	16	Hydraulically Operated Choke
6	Manual Isolation Valve	17	Manual Isolation Valve
7	Check Valve	18	Manual Isolation Valve
8	Manual Isolation Valve	19	Manual Isolation Valve
9	Manual Isolation Valve	20	Valve Block & Pressure Gauge
10	High Closing Ratio Valve	21	Manual Isolation Valve
11	3M Blind Rams	22	Manual Isolation Valve



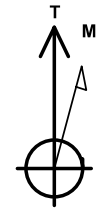
Company: Hilcorp Energy - San Juan Basin
 Project: San Juan, NM NAD27
 Site: Calloway Pad
 Well: Calloway 2M
 Wellbore: OH
 Design: Plan #3



Well Details: Calloway 2M

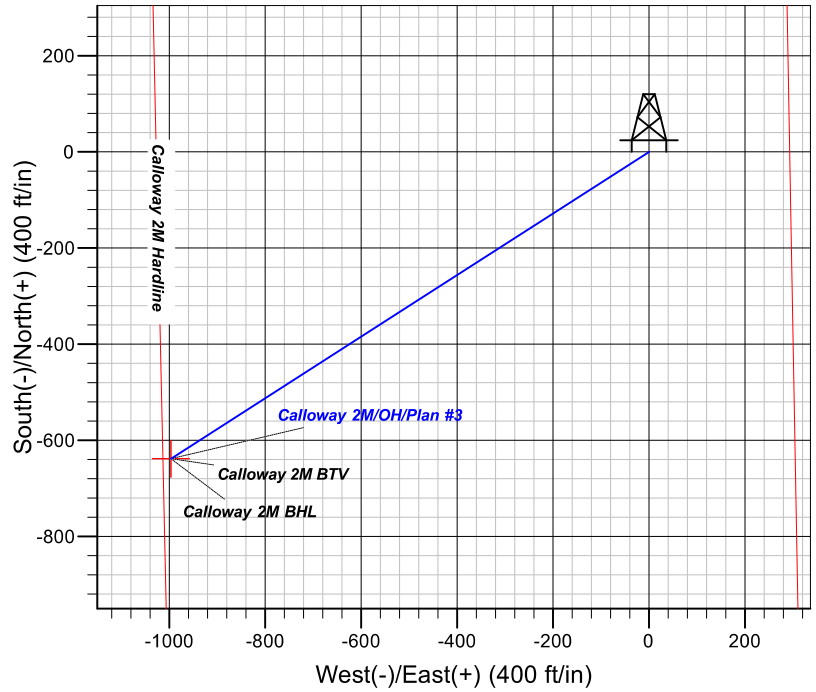
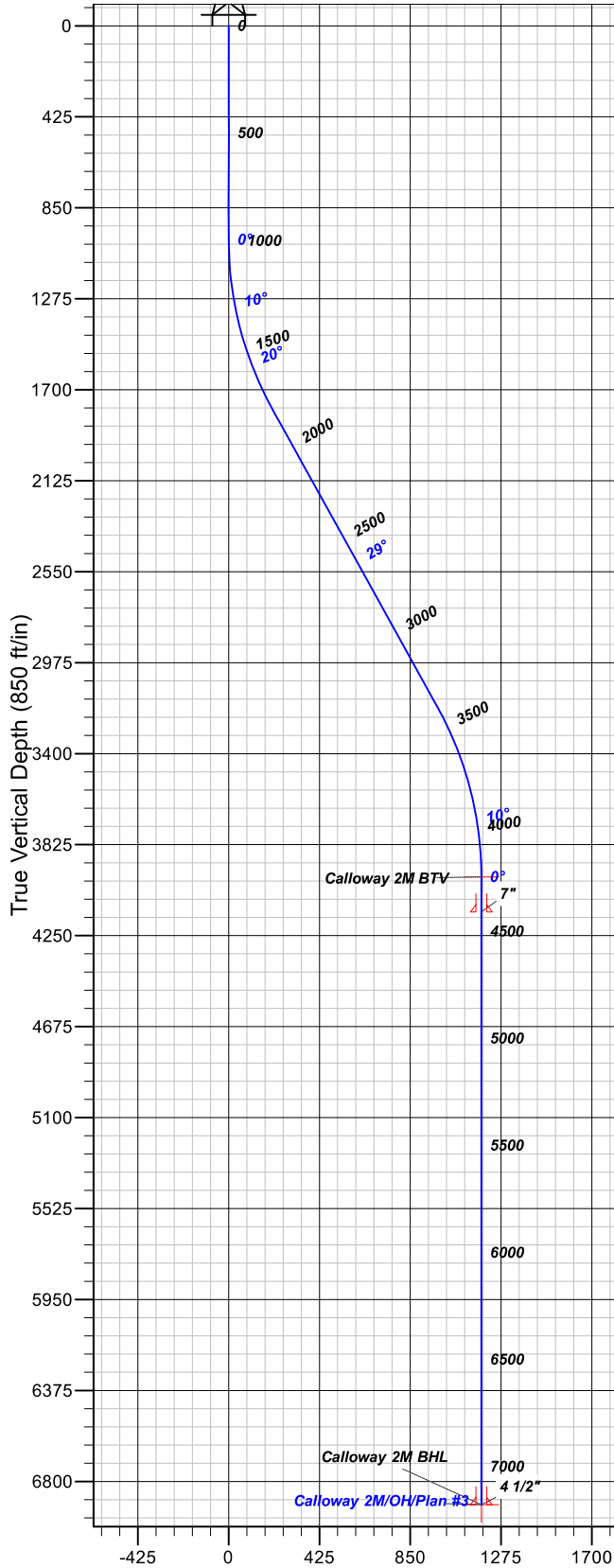
GL 5659' & RKB 17' @ 5676.00ft (Drake 3)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2130782.28	459411.83	36.855745	-107.972065	



Azimuths to True North
 Magnetic North: 8.48°

Magnetic Field
 Strength: 49171.2nT
 Dip Angle: 63.17°
 Date: 9/25/2024
 Model: HDGM2024



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
780.00	780.00	Ojo Alamo
898.00	898.00	Kirtland
1809.00	1846.42	Fruitland Coal
2237.00	2336.00	Pictured Cliffs
2351.00	2466.41	Lewis
2972.00	3176.76	Huerfano Bentonite
3307.00	3556.77	Chacra
3791.00	4060.55	Mesaverde Cliffhouse
4042.00	4311.95	Menefee
4523.00	4792.95	Point Lookout
4859.00	5128.95	Mancos
5782.00	6051.95	Gallup
6026.00	6295.95	Basal Niobrara
6190.00	6459.95	Juana Lopez
6514.00	6783.95	Greenhorn
6569.00	6838.95	Graneros
6622.00	6891.95	Two Wells
6698.00	6967.95	Paugate
6738.00	7007.95	Cubero
6797.00	7066.95	Encinal Canyon

Plan: Plan #3

17:26, January 23 2025
 Created By: Janie Collins

PROJECT DETAILS: San Juan, NM NAD27

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico West 3003

System Datum: Mean Sea Level

CASING DETAILS

TVD	MD	Name	Size
4139.00	4408.95	7"	7.00
6908.00	7177.95	4 1/2"	4.50

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
998.00	0.00	0.000	998.00	0.00	0.00	0.00	0.00	0.00
1827.93	29.05	237.353	1792.83	-111.08	-173.38	3.50	237.35	205.91
3416.02	29.05	237.353	3181.17	-527.04	-822.63	0.00	0.00	976.98
4245.95	0.00	0.000	3976.00	-638.12	-996.01	3.50	180.00	1182.89
7177.95	0.00	0.000	6908.00	-638.12	-996.01	0.00	0.00	1182.89

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Calloway 2M BTV	3976.00	-638.12	-996.01	2130145.60	458414.90	36.853992	-107.975469
Calloway 2M BHL	6908.00	-638.12	-996.01	2130145.60	458414.90	36.853992	-107.975469

Vertical Section at 237.353° (850 ft/in)



Hilcorp Energy - San Juan Basin

San Juan, NM NAD27

Calloway Pad

Calloway 2M

OH

Plan: Plan #3

Standard Planning Report

23 January, 2025



www.scientificdrilling.com





Scientific Drilling Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Calloway 2M
Company:	Hilcorp Energy - San Juan Basin	TVD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Project:	San Juan, NM NAD27	MD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Site:	Calloway Pad	North Reference:	True
Well:	Calloway 2M	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Project	San Juan, NM NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		

Site	Calloway Pad			
Site Position:		Northing:	2,130,782.27 usft	Latitude: 36.855745
From:	Lat/Long	Easting:	459,411.83 usft	Longitude: -107.972065
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence: -0.08 °

Well	Calloway 2M			
Well Position	+N/-S	0.00 ft	Northing:	2,130,782.27 usft
	+E/-W	0.00 ft	Easting:	459,411.83 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 5,659.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2024	9/25/2024	8.48	63.17	49,171.20000000

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	237.353

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
998.00	0.00	0.000	998.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,827.93	29.05	237.353	1,792.83	-111.08	-173.38	3.50	3.50	0.00	237.35	
3,416.02	29.05	237.353	3,181.17	-527.04	-822.63	0.00	0.00	0.00	0.00	
4,245.95	0.00	0.000	3,976.00	-638.12	-996.01	3.50	-3.50	0.00	180.00	Calloway 2M BTV
7,177.95	0.00	0.000	6,908.00	-638.12	-996.01	0.00	0.00	0.00	0.00	Calloway 2M BHL



Scientific Drilling Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Calloway 2M
Company:	Hilcorp Energy - San Juan Basin	TVD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Project:	San Juan, NM NAD27	MD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Site:	Calloway Pad	North Reference:	True
Well:	Calloway 2M	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
998.00	0.00	0.000	998.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.07	237.353	1,000.00	0.00	0.00	0.00	3.50	3.50	0.00
1,100.00	3.57	237.353	1,099.93	-1.71	-2.67	3.18	3.50	3.50	0.00
1,200.00	7.07	237.353	1,199.49	-6.71	-10.48	12.45	3.50	3.50	0.00
1,300.00	10.57	237.353	1,298.29	-14.99	-23.39	27.78	3.50	3.50	0.00
1,400.00	14.07	237.353	1,395.97	-26.49	-41.35	49.11	3.50	3.50	0.00
1,500.00	17.57	237.353	1,492.17	-41.20	-64.30	76.37	3.50	3.50	0.00
1,600.00	21.07	237.353	1,586.52	-59.04	-92.16	109.45	3.50	3.50	0.00
1,700.00	24.57	237.353	1,678.68	-79.96	-124.81	148.23	3.50	3.50	0.00
1,800.00	28.07	237.353	1,768.30	-103.88	-162.13	192.56	3.50	3.50	0.00
1,827.93	29.05	237.353	1,792.83	-111.08	-173.38	205.91	3.50	3.50	0.00
1,900.00	29.05	237.353	1,855.84	-129.96	-202.84	240.90	0.00	0.00	0.00
2,000.00	29.05	237.353	1,943.26	-156.15	-243.72	289.45	0.00	0.00	0.00
2,100.00	29.05	237.353	2,030.68	-182.34	-284.61	338.01	0.00	0.00	0.00
2,200.00	29.05	237.353	2,118.10	-208.54	-325.49	386.56	0.00	0.00	0.00
2,300.00	29.05	237.353	2,205.52	-234.73	-366.37	435.12	0.00	0.00	0.00
2,400.00	29.05	237.353	2,292.95	-260.92	-407.25	483.67	0.00	0.00	0.00
2,500.00	29.05	237.353	2,380.37	-287.11	-448.14	532.22	0.00	0.00	0.00
2,600.00	29.05	237.353	2,467.79	-313.31	-489.02	580.78	0.00	0.00	0.00
2,700.00	29.05	237.353	2,555.21	-339.50	-529.90	629.33	0.00	0.00	0.00
2,800.00	29.05	237.353	2,642.63	-365.69	-570.78	677.88	0.00	0.00	0.00
2,900.00	29.05	237.353	2,730.05	-391.88	-611.67	726.44	0.00	0.00	0.00
3,000.00	29.05	237.353	2,817.48	-418.08	-652.55	774.99	0.00	0.00	0.00
3,100.00	29.05	237.353	2,904.90	-444.27	-693.43	823.54	0.00	0.00	0.00
3,200.00	29.05	237.353	2,992.32	-470.46	-734.31	872.10	0.00	0.00	0.00
3,300.00	29.05	237.353	3,079.74	-496.66	-775.20	920.65	0.00	0.00	0.00
3,400.00	29.05	237.353	3,167.16	-522.85	-816.08	969.20	0.00	0.00	0.00
3,416.02	29.05	237.353	3,181.17	-527.04	-822.63	976.98	0.00	0.00	0.00
3,500.00	26.11	237.353	3,255.60	-548.02	-855.36	1,015.86	3.50	-3.50	0.00
3,600.00	22.61	237.353	3,346.68	-570.26	-890.08	1,057.09	3.50	-3.50	0.00
3,700.00	19.11	237.353	3,440.12	-589.47	-920.06	1,092.69	3.50	-3.50	0.00
3,800.00	15.61	237.353	3,535.55	-605.56	-945.18	1,122.52	3.50	-3.50	0.00
3,900.00	12.11	237.353	3,632.62	-618.48	-965.34	1,146.47	3.50	-3.50	0.00
4,000.00	8.61	237.353	3,730.98	-628.18	-980.48	1,164.45	3.50	-3.50	0.00
4,100.00	5.11	237.353	3,830.24	-634.62	-990.53	1,176.39	3.50	-3.50	0.00
4,200.00	1.61	237.353	3,930.06	-637.78	-995.46	1,182.25	3.50	-3.50	0.00
4,245.95	0.00	0.000	3,976.00	-638.12	-996.01	1,182.89	3.50	-3.50	0.00
4,300.00	0.00	0.000	4,030.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00
4,400.00	0.00	0.000	4,130.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00
4,500.00	0.00	0.000	4,230.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00
4,600.00	0.00	0.000	4,330.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00
4,700.00	0.00	0.000	4,430.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00
4,800.00	0.00	0.000	4,530.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00
4,900.00	0.00	0.000	4,630.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00



Scientific Drilling Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Calloway 2M
Company:	Hilcorp Energy - San Juan Basin	TVD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Project:	San Juan, NM NAD27	MD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Site:	Calloway Pad	North Reference:	True
Well:	Calloway 2M	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,000.00	0.00	0.000	4,730.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,100.00	0.00	0.000	4,830.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,200.00	0.00	0.000	4,930.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,300.00	0.00	0.000	5,030.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,400.00	0.00	0.000	5,130.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,500.00	0.00	0.000	5,230.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,600.00	0.00	0.000	5,330.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,700.00	0.00	0.000	5,430.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,800.00	0.00	0.000	5,530.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
5,900.00	0.00	0.000	5,630.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,000.00	0.00	0.000	5,730.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,100.00	0.00	0.000	5,830.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,200.00	0.00	0.000	5,930.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,300.00	0.00	0.000	6,030.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,400.00	0.00	0.000	6,130.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,500.00	0.00	0.000	6,230.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,600.00	0.00	0.000	6,330.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,700.00	0.00	0.000	6,430.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,800.00	0.00	0.000	6,530.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
6,900.00	0.00	0.000	6,630.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
7,000.00	0.00	0.000	6,730.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
7,100.00	0.00	0.000	6,830.05	-638.12	-996.01	1,182.89	0.00	0.00	0.00	
7,177.95	0.00	0.000	6,908.00	-638.12	-996.01	1,182.89	0.00	0.00	0.00	

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Calloway 2M BTV	0.00	0.000	3,976.00	-638.12	-996.01	2,130,145.60	458,414.90	36.853992	-107.975470
- plan hits target center									
- Point									
Calloway 2M BHL	0.00	0.000	6,908.00	-638.12	-996.01	2,130,145.60	458,414.90	36.853992	-107.975470
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
4,408.95	4,139.00	7"	7.00	8.75	
7,177.95	6,908.00	4 1/2"	4.50	6.25	



Scientific Drilling

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well Calloway 2M
Company:	Hilcorp Energy - San Juan Basin	TVD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Project:	San Juan, NM NAD27	MD Reference:	GL 5659' & RKB 17' @ 5676.00ft (Drake 3)
Site:	Calloway Pad	North Reference:	True
Well:	Calloway 2M	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
780.00	780.00	Ojo Alamo		0.00	0.000	
898.00	898.00	Kirtland		0.00	0.000	
1,846.42	1,809.00	Fruitland Coal		0.00	0.000	
2,336.00	2,237.00	Pictured Cliffs		0.00	0.000	
2,466.41	2,351.00	Lewis		0.00	0.000	
3,176.76	2,972.00	Huerfano Bentonite		0.00	0.000	
3,556.77	3,307.00	Chacra		0.00	0.000	
4,060.55	3,791.00	Mesaverde Cliffhouse		0.00	0.000	
4,311.95	4,042.00	Menefee		0.00	0.000	
4,792.95	4,523.00	Point Lookout		0.00	0.000	
5,128.95	4,859.00	Mancos		0.00	0.000	
6,051.95	5,782.00	Gallup		0.00	0.000	
6,295.95	6,026.00	Basal Niobrara		0.00	0.000	
6,459.95	6,190.00	Juana Lopez		0.00	0.000	
6,783.95	6,514.00	Greenhorn		0.00	0.000	
6,838.95	6,569.00	Graneros		0.00	0.000	
6,891.95	6,622.00	Two Wells		0.00	0.000	
6,967.95	6,698.00	Paugate		0.00	0.000	
7,007.95	6,738.00	Cubero		0.00	0.000	
7,066.95	6,797.00	Encinal Canyon		0.00	0.000	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 426079

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 426079
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Cement is required to circulate on both surface and production strings of casing.	2/3/2025
ward.rikala	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	2/3/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	2/3/2025