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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. 30-045-38407
5. Indicate Type of Lease STATE [ ] FEE [X]
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Titt
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 [X] Other
2. Name of Operator Hilcorp Energy Company
3. Address of Operator 382 Road 3100, Aztec, NM 87410
4. Well Location
Unit Letter K: 1855 feet from the South line and 2630 feet from the West line
Section 35 Township 030N Range 011W NMPM County SAN JUAN
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5790' GL

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

NOTICE OF INTENTION TO:
PERFORM REMEDIAL WORK [ ] PLUG AND ABANDON [ ]
TEMPORARILY ABANDON [ ] CHANGE PLANS [X]
PULL OR ALTER CASING [ ] MULTIPLE COMPL [ ]
DOWNHOLE COMMINGLE [ ]
CLOSED-LOOP SYSTEM [ ]
OTHER: [ ] SIDETRACK
SUBSEQUENT REPORT OF:
REMEDIAL WORK [ ] ALTERING CASING [ ]
COMMENCE DRILLING OPNS. [ ] P AND A [ ]
CASING/CEMENT JOB [ ]
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 Technical Plan with the attached revised plan. The coordinates were updated to match the plat coordinates.

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 2/7/2025

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

Titt 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 27, 2025	Pool:	Mesa Verde / Dakota
Well Name:	Titt 2M	Ground Elevation (ft. MSL):	5,790'
Surface Hole Location:	36.853199° N, 107.960404° W	Total Depth (ft. TMD/TVD)	7,085' / 7,084'
Bottom Hole Location:	36.853199° N, 107.960404° 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	939'	Water (fresh/useable)
Kirtland	967'	None
Fruitland Coal	1,959'	Gas, Water
Pictured Cliffs	2,382'	Gas
Lewis Shale	2,530'	None
Huerfanito Bentonite	3,112'	None
Chacra	3,441'	Gas
Mesa Verde / Cliff House	3,929'	Gas / Water
Menefee	4,185'	Gas
Point Lookout	4,653'	Gas
Mancos	5,013'	Gas
Upper Gallup	5,923'	Gas
Niobrara	6,108'	None
Juana Lopez	6,324'	Gas
Greenhorn	6,663'	Gas
Graneros	6,712'	Gas
Two Wells	6,766'	Gas
Paugate	6,849'	Gas
Cubero	6,885'	Gas
Encinal	6,945'	Gas

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### 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.

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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'	4,285'/4,285'	3,270 psi	4,360 psi	366 klbs
Production	6-1/4"	4-1/2"-11.6#-J55 (or equiv.)-LTC/BTC	0'	7,045'/7,045'	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	1.9	4.3	5.1
Production	1.5	1.7	2.7	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:

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

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

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

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.

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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 <sup>rd</sup> 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 <sup>rd</sup> 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 <sup>3</sup> )	Sacks	Excess (%)	Slurry	Density (ppg)	Planned TOC
Surface	250'	Lead	157 ft <sup>3</sup>	114	100%	Class G Cement Yield: 1.38 ft <sup>3</sup> /sk	14.6	Surface
		Slurry Additives: CaCl <sub>2</sub> (1%), Cello Flake (0.25 lb/sk), CD-2 (0.2%)						
Intermediate	4,285'	Lead	841 ft <sup>3</sup>	395	50%	ASTM Type II Yield: 2.13 ft <sup>3</sup> /sk	12.0	Surface
		Slurry Additives: CaCl <sub>2</sub> (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 <sup>3</sup>	82	50%	ASTM Type II Yield: 1.38 ft <sup>3</sup> /sk	14.5	3,785'
		Slurry Additives: CaCl <sub>2</sub> (1.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.2%)						
Production	7,045'	Lead	438 ft <sup>3</sup>	221	35%	ASTM Type II Yield: 1.98 ft <sup>3</sup> /sk	12.5	3,785'
		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).

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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' – 4,285'
Production	LSND / Gel / Air	8.4 – 9.2	6-16	5,000	4,285' – 7,045'

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: 441 bbls (2,477 ft<sup>3</sup>).

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.

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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.

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 vertical wellbore. Surveys will be monitored to ensure vertical wellpath.

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## 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.

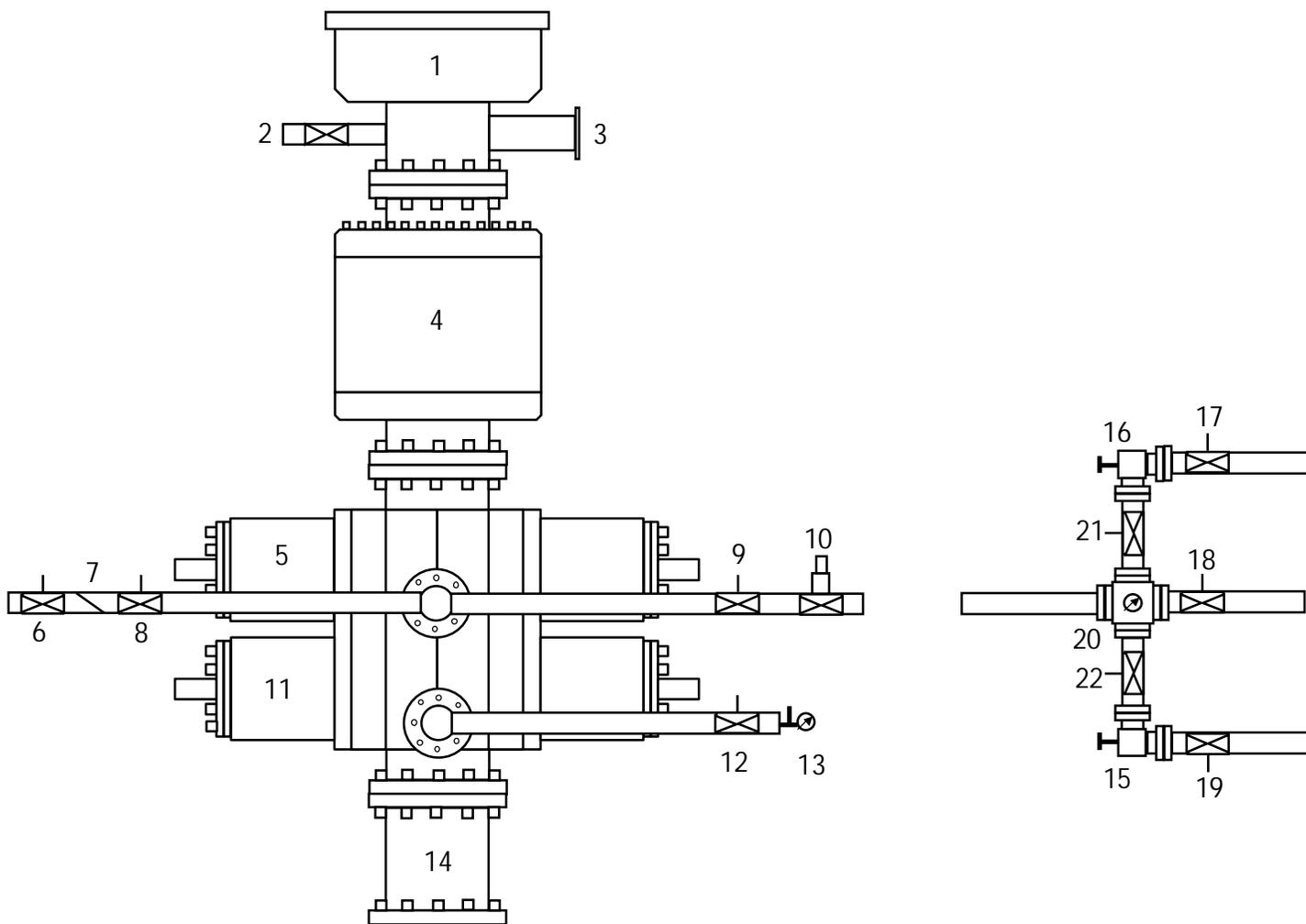
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# Appendix A

## 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

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 466659

**CONDITIONS**

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 466659
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	5/23/2025