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**

Form C-101 August 1, 2011

Permit 399303

APPLICATION FOR PERMIT TO DRILL RE-ENTER DEEPEN PLUGBACK OR ADD A ZONE

AFFEIGATION FOR FERWIN TO BRIEF, RE-ENTER, BEEFEN, FEOGBACK, OR ADD A ZONE									
1. Operator Name and Address							2. OGRID Number		
HILCORP ENERGY COMPANY						372171			
1111 Travis Street					3	. API Number			
Houston, TX 77002 30-045-						30-045-3	38489		
4. Property Code 5. Property Name					6	6. Well No.			
319371	319371 ZACHRY COM					001M			
	7. Surface Location								
UL - Lot Section Township	Range Lot Idn Feet From N/S Line Feet From				Feet From	E/W Line	County		
E 2 30N	12W	E	1585	N	267	W	San Juan		

1585 267 W San Juan

8. Proposed Bottom Hole Location UL - Lot E/W Line County Section Township Range Lot Idn Feet From Feet From 30N 12W

9. Pool Information

BASIN DAKOTA (PRORATED GAS)	71599
BLANCO-MESAVERDE (PRORATED GAS)	72319

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	71	15. Ground Level Elevation
New Well	GAS		State	5890
16. Multiple	17. Proposed Depth	18. Formation	19. Contractor	20. Spud Date
Υ	6979	Dakota Formation		3/15/2026
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	32.3	320	145	0
Int1	8.75	7	23	4164	462	0
Prod	6.25	4.5	11.6	6979	190	3664

Casing/Cement Program: Additional Comments

22 Proposed Blowout Prevention Program

ZZ: 1 Toposca Biomout 1 Togram								
Туре	Working Pressure	Test Pressure	Manufacturer					
Annular	250	3000						

knowledge and be I hereby certify that or recompletion of	at no additives containing PFAS che f this well.	rrue and complete to the best of my micals will be added to the completion MAC ⊠ and/or 19.15.14.9 (B) NMAC		OIL CONSERVATION	ON DIVISION
Printed Name:	Electronically filed by Jamie L Oliv	arez	Approved By:	Jeffrey Harrison	
Title: L48W Regulatory Advisor			Title:	Petroleum Specialist III	
Email Address: jolivarez@hilcorp.com			Approved Date:	10/20/2025	Expiration Date: 10/20/2027
Date:	10/17/2025	Conditions of Appro	oval Attached		

<u>C-10</u>	•	10/17/2025 8		State of New Mexico Energy, Minerals & Natural Resources Department					Revis	<i>Page</i> sed July 9, 2024
	Submit Electronically			OIL	CONSERVA		☐ Initial Submit	tal		
Via OC	CD Permitting							Submittal	_	
								Type:	☐ Amended Kep ☐ As Drilled	OIT
			1		WELL LOCA	TION INFORMATION	J		L As Dillica	
	Tumber -045-384	400	Pool Code	7159		Pool Name		N DAKOT	'Δ	
	-043-362 rty Code 319371	+09	Property N			CHRY COM	D/151	TV DAILO I	Well Number	1
OGRI		1	Operator N	ame		ENERGY COMPANY			Ground Level El	evation
Surfac		State □ Fee □	_] Tribal □ Fee	deral	THEORI E	Mineral Owner:	Nate □ Fee I	☐ Tribal ☐	5,89	0.2
Bullac	e o wher.		, 1110ui <u>—</u> 100			William C Wiler.			1 cuciui	
						face Location				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	′	Longitude (NAD 83)	
Е	2	30N	12W		1,585 NORTI	H 267 WEST	36.8441	151°	-108.075961°	SAN JUAN
		1				n Hole Location				<u> </u>
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	AD 83) L	ongitude (NAD 83)	County
Dadia	ated Acres	Infill or Def	ining Wall	Definie	a Wall ADI	Overdenning Speci	no Unit (V/N)	Consolidat	tion Codo	
	318.20	Defining	ining wen	Delinii	ng Well API	Overlapping Spaci	ng Omt (1/N)	Consondar	C	
Order	Numbers.					Well setbacks are u	ınder Common (Ownership:	□Yes □No	
					Kick (Off Point (KOP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	AD 83) L	ongitude (NAD 83)	County
					First T	ake Point (FTP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	AD 83) L	ongitude (NAD 83)	County
										·
	T	T =	T_	1.		ake Point (LTP)	1			
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	AD 83) L	ongitude (NAD 83)	County
			- I		- I	'		I		
Unitiz	ed Area or A	rea of Uniform	Interest	Spacing	g Unit Type □ Hori	zontal 🛚 Vertical	Groui	nd Floor Ele	vation: 5890'	
ODED	ATOR CERT	CIFIC A TIONS				CLIDATENOD CEDEN	FIG A TIONIC			
I hereb my kno organiz includio location interess	y certify that the wledge and bel- zation either ow ng the proposed n pursuant to a	ief, and, if the we was a working inte d bottom hole loca contract with an ary pooling agree	ll is a vertical or rest or unleased ation or has a rig owner of a work	r directiona mineral int ght to drill to ing interest	terest in the land	SURVEYOR CERTII I hereby certify that the v surveys made by me or u my belief.	vell location showi			
If this v consent in each interva	well is a horizon t of at least one tract (in the tai l will be located	ntal well, I further lessee or owner o	of a working inte ation) in which a ampulsory poolin	rest or unle my part of t g order fro	on has received the cased mineral interest he well's completed m the division.			S	7, 10-03-	25/24/ SUP

Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

23782

Certificate Number

Signature and Seal of Professional Surveyor

September 7, 2025

Date of Survey

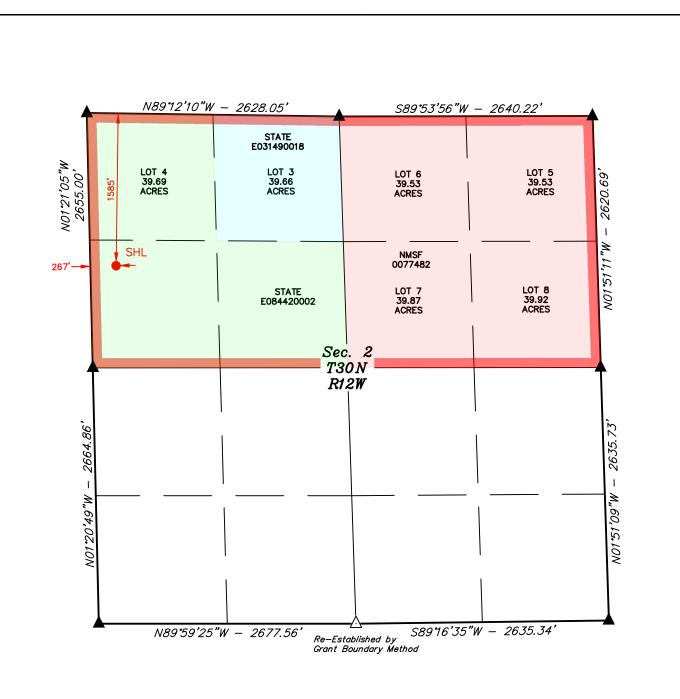
cweston@hilcorp.com

Printed Name

Email Address

Cherylene Weston, Operations/Regulatory Tech-Sr.

Well Number Property Name Drawn By Revised By ZACHRY COM 1M H.S.S. 09-26-25 REV. 1 H.S.S. 10-03-25 (UPDATE ACREAGE)



= SURFACE HOLE LOCATION

= SECTION CORNER LOCATED

 \triangle = SECTION CORNER RE-ESTABLISHED.

(Not Set on Ground.)

== DESIGNATED SPACING UNIT

1000' 500' SCALE

- NOTE:

 Distances referenced on plat to section lines are perpendicular.
- Bearings, Distances, Coordinates and Areas are based on the New Mexico Coordinate System of 1983, West Zone, in U.S. Feet.
- Colored areas within section lines represent oil & gas leases.
- Section breakdown information for this plat may be obtained from Uintah Engineering & Land Surveying.

NAD 83 (SURFACE HOLE LOCATION)

LATITUDE = 36°50'38.94" (36.844151°)

LONGITUDE = -108°04'33.46" (-108.075961°) NAD 27 (SURFACE HOLE LOCATION)

LATITUDE = 36°50'38.93" (36.844148°)

LONGITUDE = -108°04'31.20" (-108.075334°)

STATE PLANE NAD 83 (N.M. WEST)

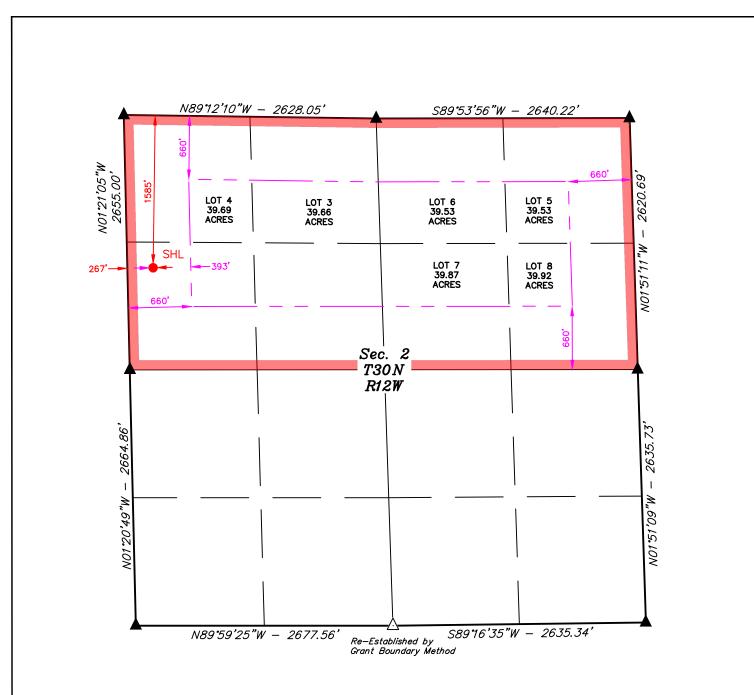
N: 2126684.07' E: 2652098.14'

STATE PLANE NAD 27 (N.M. WEST) N: 2126620.71' E: 429188.02'

Sheet 2 of 3

Released to Imaging: 10/20/2025 3:58:21 PM

Well Number Property Name Drawn By Revised By ZACHRY COM 1M H.S.S. 09-26-25 REV. 1 H.S.S. 10-03-25 (UPDATE ACREAGE)



= SURFACE HOLE LOCATION

= SECTION CORNER LOCATED

SECTION CORNER RE-ESTABLISHED.

(Not Set on Ground.)

== DESIGNATED SPACING UNIT = SETBACK BOUNDARY

1000' 1000' 500' SCALE

- NOTE:

 Distances referenced on plat to section lines are perpendicular.
- Bearings, Distances, Coordinates and Areas are based on the New Mexico Coordinate System of 1983, West Zone, in U.S. Feet.
- Section breakdown information for this plat may be obtained from Uintah Engineering & Land Surveying.

NAD 83 (SURFACE HOLE LOCATION)

LATITUDE = 36°50'38.94" (36.844151°)

LONGITUDE = -108°04'33.46" (-108.075961°)

NAD 27 (SURFACE HOLE LOCATION)

LATITUDE = 36°50'38.93" (36.844148°)

LONGITUDE = -108°04'31.20" (-108.075334°)

STATE PLANE NAD 83 (N.M. WEST)

N: 2126684.07' E: 2652098.14'

STATE PLANE NAD 27 (N.M. WEST)

N: 2126620.71' E: 429188.02'

<u>C-10</u>	•	0/17/2025 8	State of New Mexico Energy, Minerals & Natural Resources Department						Revis	sed July 9, 2024
	Submit Electronically Via OCD Permitting			OIL	CONSERVA	TION DIVISION	V			tal
Via OC	D I CITITUTE							Submitta	al ☐ Amended Rep	oort
								Type:	☐ As Drilled	
			1		WELL LOCA	TION INFORMATIO)N			
API N	umber)-045-3 8	3489	Pool Code	7231	9	Pool Name	BLANC	O MESAV	'ERDE	
Proper 3	ty Code 19371		Property N	ame	ZA	ACHRY COM			Well Number	1
OGRII	D No. 372171		Operator N	lame	HILCORP	ENERGY COMPANY	•		Ground Level Ele 5,89	
Surfac	e Owner: 🛛	State □ Fee □	Tribal 🗆 Fe	deral		Mineral Owner:	State □ Fee	□ Tribal □	☐ Federal	
					Ç.,,	face Location				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	(AD 83)	Longitude (NAD 83)	County
E	2	30N	12W	201	1,585 NORT		36.844	′	-108.075961°	SAN JUAN
					Botto	 m Hole Location				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	(AD 83)	Longitude (NAD 83)	County
Dedica	ated Acres	Infill or Defi	ining Well		ng Well API 045-23311	Overlapping Space	cing Unit (Y/N)	Consolid	ation Code C	
		"""		30-0	743-23311		1.0	0 1:		
Order .	Numbers.					Well setbacks are	under Common	Ownership	: Ll Yes LlNo	
					Kick	Off Point (KOP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	(AD 83)	Longitude (NAD 83)	County
		ı	1		First	Γake Point (FTP)		<u> </u>		
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	(AD 83)	Longitude (NAD 83)	County
					Last 7	Take Point (LTP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (N	(AD 83)	Longitude (NAD 83)	County
Unitiza	ed Area or A	rea of Uniform	Interest	Spacine	g Unit Type 🖂 Ho	rizontal 🕅 Vertical	Grow	nd Floor El	levation:	
Omtize	ed / Hea of / H	ca or Chilorin	micrest	Spacing	g Clift Type 🔲 Hoi	izontai [A] Verticai	Grou	11001 121	5890'	
OPER.	ATOR CERT	TIFICATIONS				SURVEYOR CERT	TIFICATIONS			
I hereby my knov organiz includin location interest, entered	v certify that th wledge and beli ation either ow ig the proposea i pursuant to a , or to a volunta by the division	e information con ief, and, if the we ns a working inte l bottom hole loca contract with an wary pooling agree	ll is a vertical or rest or unleased tion or has a rig owner of a work ment or a comp	r directiona mineral int ght to drill to ing interest ulsory pooli	terest in the land	I hereby certify that the	well location show		t was plotted from the fiel the same is whe and corn MEX	
consent in each interval	of at least one tract (in the tar will be located	lessee or owner o	of a working inte ation) in which a mpulsory poolin	rest or unle iny part of t ig order froi	eased mineral interest he well's completed				10-03- 10-03-	25 Ju

Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

23782

Certificate Number

Signature and Seal of Professional Surveyor

September 7, 2025

Date of Survey

cweston@hilcorp.com

Date

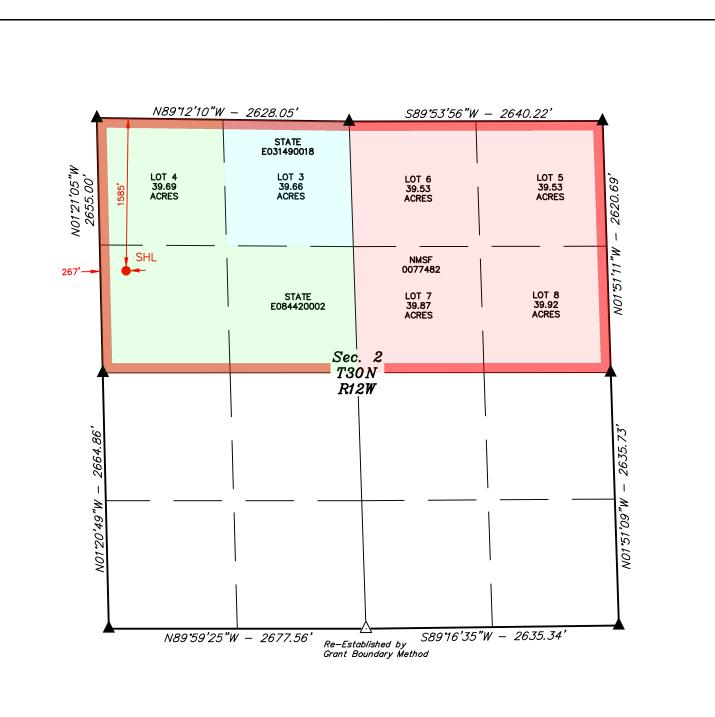
Cherylene Weston, Operations/Regulatory Tech-Sr.

Signature

Printed Name

Email Address

Well Number Property Name Drawn By Revised By ZACHRY COM 1M H.S.S. 09-26-25 REV. 1 H.S.S. 10-03-25 (UPDATE ACREAGE)



= SURFACE HOLE LOCATION

= SECTION CORNER LOCATED

 \triangle = SECTION CORNER RE-ESTABLISHED.

(Not Set on Ground.)

== DESIGNATED SPACING UNIT

1000' 500' SCALE

- NOTE:

 Distances referenced on plat to section lines are perpendicular.
- Bearings, Distances, Coordinates and Areas are based on the New Mexico Coordinate System of 1983, West Zone, in U.S. Feet.
- Colored areas within section lines represent oil & gas leases.
- Section breakdown information for this plat may be obtained from Uintah Engineering & Land Surveying.

NAD 83 (SURFACE HOLE LOCATION)

LATITUDE = 36°50'38.94" (36.844151°)

LONGITUDE = -108°04'33.46" (-108.075961°)

NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 36°50'38.93" (36.844148°)

LONGITUDE = -108°04'31.20" (-108.075334°)

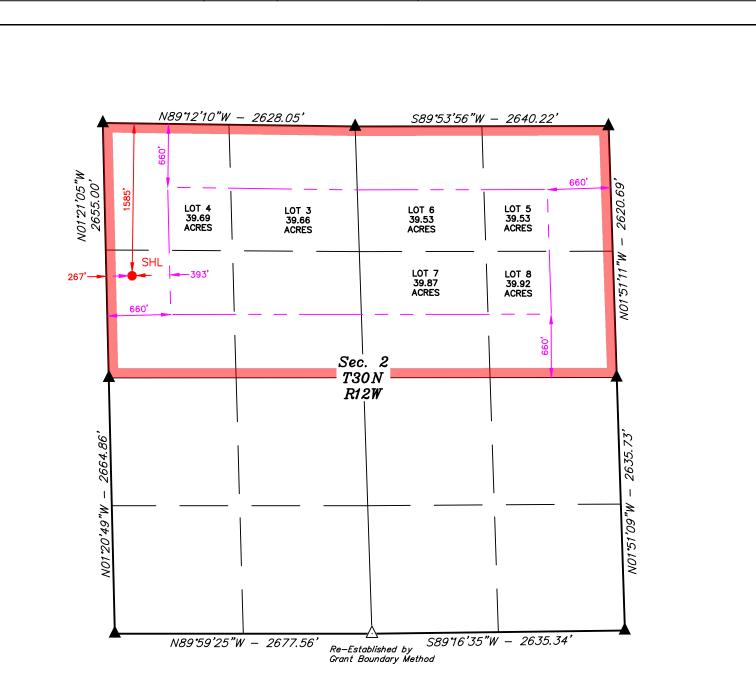
STATE PLANE NAD 83 (N.M. WEST)

N: 2126684.07' E: 2652098.14'

STATE PLANE NAD 27 (N.M. WEST)

N: 2126620.71' E: 429188.02'

Well Number Property Name Drawn By Revised By ZACHRY COM 1M H.S.S. 09-26-25 REV. 1 H.S.S. 10-03-25 (UPDATE ACREAGE)



= SURFACE HOLE LOCATION = SECTION CORNER LOCATED

SECTION CORNER

RE-ESTABLISHED. (Not Set on Ground.)

== DESIGNATED SPACING UNIT

= SETBACK BOUNDARY

1000' 1000' 500' SCALE

- NOTE:

 Distances referenced on plat to section lines are perpendicular.
- Bearings, Distances, Coordinates and Areas are based on the New Mexico Coordinate System of 1983, West Zone, in U.S. Feet.
- Section breakdown information for this plat may be obtained from Uintah Engineering & Land Surveying.

NAD 83 (SURFACE HOLE LOCATION)

LATITUDE = 36°50'38.94" (36.844151°)

LONGITUDE = -108°04'33.46" (-108.075961°)

NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 36°50'38.93" (36.844148°)

LONGITUDE = -108°04'31.20" (-108.075334°)

STATE PLANE NAD 83 (N.M. WEST) N: 2126684.07' E: 2652098.14'

STATE PLANE NAD 27 (N.M. WEST)

N: 2126620.71' E: 429188.02'

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

Form APD Comments

Permit 399303

PERMIT COMMENTS

Operator Name and Address:	API Number:
HILCORP ENERGY COMPANY [372171]	30-045-38489
1111 Travis Street	Well:
Houston, TX 77002	ZACHRY COM #001M

Created By	Comment	Comment Date
cweston	MV/DK NSL filed 10/15/25; Action IDs 515315, 515317	10/17/2025

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

Form APD Conditions

Permit 399303

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
HILCORP ENERGY COMPANY [372171]	30-045-38489
1111 Travis Street	Well:
Houston, TX 77002	ZACHRY COM #001M

OCD Reviewer	Condition
jeffrey.harrison	Prior to production of this well a down hole co-mingle must be approved.
jeffrey.harrison	Administrative order required for non-standard location prior to production.
jeffrey.harrison	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.
jeffrey.harrison	All logs run on the well must be submitted to NMOCD.
jeffrey.harrison	Cement is required to circulate on both surface and intermediate1 strings of casing.
jeffrey.harrison	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.

San Juan County, NM

Zachry Com #1M



Technical Drilling Plan (Rev. 0)

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:	October 16, 2025	Pool:	Mesa Verde / Dakota
Well Name:	Zachry Com #1M	Ground Elevation (ft. MSL):	5,890'
Surface Hole Location:	36.844148° N, 108.075334° W	Total Depth (ft. TMD/TVD)	6,979' / 6,979'
Bottom Hole Location:	36.844148° N, 108.075334° 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	683	Water (fresh/useable)
Kirtland	727	None
Fruitland Coal	1,728	Gas, Water, depleted
Pictured Cliffs	2,248	Gas, depleted
Lewis Shale	2,347	None
Chacra	3,308	None, Gas
Cliff House	3,823	Gas, Water, possible depletion
Menefee	3,964	Gas, possible water & depletion
Point Lookout	4,582	Gas, likely depletion
Mancos	4,880	Gas, possible condensate
Gallup	5,844	Gas, possible condensate
Juana Lopez	6,258	None, Gas
Greenhorn	6,595	None, Gas
Graneros	6,652	None, Gas
Two Wells	6,712	Gas
Paugate	6,768	Gas, possible depletion
Cubero	6,811	Gas, possible depletion
Encinal Canyon	6,870	Gas, Water
Burro Canyon	6,929	Likely water, possibly gas

Zachry Com #1M



3. Pressure Control Equipment

A. BOP Equipment

See Appendix A for BOP equipment and choke manifold diagram.

- BOP equipment will be nippled 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.

Zachry Com #1M



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'	320′/320′	1,370 psi	2,270 psi	254 klbs
Intermediate	8-3/4"	7"-23#-J55 (or equiv.)- LTC/BTC	0'	4,164′/4,164′	3,270 psi	4,360 psi	366 klbs
Production	6-1/4"	4-1/2"-11.6#-J55 (or equiv.)-LTC/BTC	0'	6,979′/6,979′	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						
Surface	15.2	11.6	40.9	28.5		
Intermediate	2.1	2.0	4.5	5.3		
Production	1.5	1.7	2.7	3.3		

B. Casing Design Parameters & Calculations:

- Designed for full wellbore evacuation.
- Mud Weights used for calculations:
 - o Surface = 9.0 ppg
 - o Intermediate = 9.5 ppg
 - o Production = 10.0 ppg
- Minimum Acceptable Safety Factors:

o Burst: 1.15 o Collapse: 1.15 o Tensile: 1.50

Casing Safety Factor Calculations:

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

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

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

Production Casing Notes:

- Production casing will be run from surface to TD.
- The 6-1/4" production hole section will be drilled 50' into the Burro Canyon formation and exact TD will be determined onsite by the mud logger.

San Juan County, NM

Zachry Com #1M



5. Proposed Centralizer Program:

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

6. Proposed Cement Program:

Proposed Cement Design								
Interval	Depth	Lead/Tail	Volume	Sacks	Excess	Slurry	Density	Planned
	(ft. MD)		(ft ³)		(%)	-	(ppg)	TOC
Surface	320′	Lead	200 ft ³	145	100%	Class G Cement Yield: 1.38 ft ³ /sk	14.6	Surface
Slurry Additives: CaCl (1%), Cello Flake (0.25 lb/sk), CD-2 (0.2%)								
			380		ASTM Type IL	12.0	Surface	
						Yield: 2.13 ft ³ /sk	_	
Intermediate	4,164′	Slurry Additives	s: CaCl ₂ (3.0%),	Celloflake (0.25 lb/sk), LC	CM-1 (5.0 lb/sk), FL-52 (0.4%), bentonite (8.0%), SMS (0.4	l%)
intermediate	4,104	Tail 113 ft ³ 82 50%	113 ft ³	82	50%	ASTM Type IL	14.5	3,664′
			3070	Yield: 1.38 ft ³ /sk	14.5	3,004		
Slurry Additives: CaCl ₂ (1.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.2%)								
		Load	416 ft ³	100	250/	ASTM Type IL	12.5	2 44 11
Production	6,979′	Lead	41011	190	190 25%	Yield: 2.19 ft ³ /sk	12.5	3,664'
	=,-,,	Slurry Additives PhenoSeal (0.2	•	•	• •	1 (0.5%), D-R 1 (0.2%), Bentonite (4.0%),	Plexfiber (0.25	lb/sx),

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 nippled 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

Zachry Com #1M



7. Drilling Fluids Program

A. Proposed Drilling Fluids Program:

Proposed Drilling Fluids Program					
Interval	Fluid Type Density Fluid Loss Maximum Chlorides Depth				Depth
		(ppg)	(mL/30 min)	(ppm)	(ft. MD)
Surface	Water/Gel	8.4 - 9.2	NC	1,000	0' – 320'
Intermediate	LSND / Gel	8.4 – 9.2	6-16	5,000	320′ – 4,164′
Production	LSND / Gel / Air	8.4 – 9.2	6-16	5,000	4,164′ – 6,979′

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: 439 bbls (2,467 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.

Zachry Com #1M



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 intermediate hole section to measure and record inclination and azimuth.
- The single-shot inclination survey will be run in the production hole section after the production hole has been cased and cemented. The single-shot survey will be run to plug back TD (depth of float collar in the production casing). If deemed necessary, a gyro survey will be substituted for the single-shot inclination survey.
- 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 intermediate section of this wellbore is directional and surveys will be recorded and monitored to ensure adherence to the planned wellpath.
- The production section of this wellbore is planned to be vertical.
- If the production section of this wellbore is drilled on air, the wellbore will be assumed to be vertical that point forward.
- The directional plan is attached in the APD application.

San Juan County, NM

Zachry Com #1M



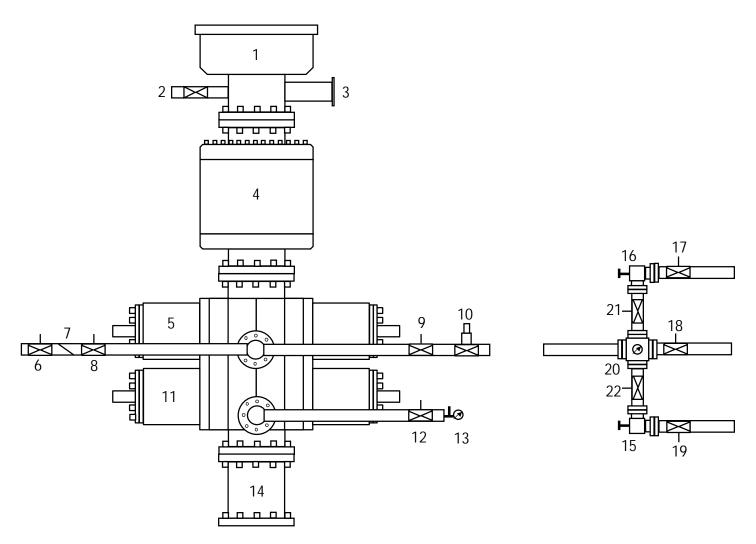
12. Completion

- 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.



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	Hydraulicly 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

State of New Mexico Energy, Minerals and Natural Resources Department

Submit Electronically Via E-permitting

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Hilcorp Energy Company OGRID: 372171 Date: 10/02/2025					<u>25</u>			
II. Type: ⊠ Original □ Amenda	ment due	to 🗆 19.15	5.27.9.D(6)	(a) NMAC □ 19.1	15.27.9	9.D(6)(b) NM	AC □ Other.	
If Other, please describe:								
III. Well(s): Provide the followin be recompleted from a single well					or set	of wells prop	osed to be drille	ed or proposed to
Well Name	API	ULSTR				Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Zachry Com 1M		E-2-30N-	12W	1585' FNL & 267' I	FWL	8	700	6
IV. Central Delivery Point Name: Chaco-Blanco Processing Plant [See 19.15.27.9(D)(1) NMAC] V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.								
Well Name	AF	I	Spud Date	TD Reached Date		Completion mmencement Date	Initial Flow Back Date	First Production Date
Zachry Com 1M			<u>2026</u>					<u>2026</u>
VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture. VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC. VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.								

Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☑ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering	Available Maximum Daily Capacity
	-		Start Date	of System Segment Tie-in

XI. Map. \square Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the
production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of
the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system \square will \square will not have capacity to gather 100% of the anticipated	natural gas
production volume from the well prior to the date of first production.	

XIII. Line Pressure. Operator \Box does \Box does not anticipate that its existing well(s) connected to the same segment, or po	ortion, of the
natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the r	iew well(s).

Attach (Operator'	e nlan t	o managa	production	in response	to the	increased	line proces	112
 Attach	Oberator	s bian i	o manage	production	in response	e io ine	increased	line bressi	are

XIV. Confidentiality: Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in
Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information
for which confidentiality is asserted and the basis for such assertion.

(h) (i)

Section 3 - Certifications <u>Effective May 25, 2021</u>

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal: 🖂 Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or ☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. If Operator checks this box, Operator will select one of the following: Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or Venting and Flaring Plan. \Box Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including: power generation on lease; (a) **(b)** power generation for grid; compression on lease; (c) (d) liquids removal on lease; reinjection for underground storage; (e) **(f)** reinjection for temporary storage; **(g)** reinjection for enhanced oil recovery;

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

other alternative beneficial uses approved by the division.

fuel cell production; and

- (a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or
- (b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- 2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: Cherylene Weston
Printed Name: Cherylene Weston
Title: Operations/Regulatory Tech-Sr.
E-mail Address: cweston@hilcorp.com
Date: 10/02/2025
Phone: 713-289-2615
OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

Hilcorp Energy Natural Gas Management Plan Attachments

VI. Separation Equipment

The operator will select separation equipment for the maximum anticipated throughput and pressure to optimize gas capture. Separation equipment is sized according to manufacturer's design specifications. Separation vessels are built following the A.S.M.E. section VII division 1 codes for pressure vessel design, fabrication, inspection, testing and certification. Anticipated well pressures and production rates are evaluated to select separation equipment according to the equipment's designed operating pressure and throughput.

After completion, the operator utilizes flowback equipment, including separators, to manage wellbore fluids and solids during the initial separation period. After the initial flowback period is complete the operator utilizes iterative facility separation equipment to ensure that optimal separation is achieved.

VII. Operational Practices 19.15.27.8 NMAC A through F

- A. The operator will maximize the recovery of natural gas and minimize the amount of gas vented or flared when technically and safely feasible as further described and detailed within the following subsections (B-F of 19.15.27.8). In all cases where natural gas venting and flaring requires regulatory reporting, reporting will be submitted accurately and within the required time frames.
- B. Venting and flaring during drilling operations:
 - a. New Drill HZ Gas Wells: The operator drills wells in the area by utilizing a balanced mud to safely drill the wellbore. This technique prevents gas from coming to surface during the drilling process. If there is an emergency or malfunction and natural gas does come to surface the natural gas will be captured and routed to sales if technically and safely feasible.
- C. Venting and flaring during completion or recompletion operations:
 - a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from the newly drilled and completed wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible. During initial flowback and initial separation flowback the operator will utilize contracted flowback equipment, including separators, to manage wellbore fluids and solids. The initial flowback period will be minimized and flow will be sent to separation equipment as soon as possible to reduce the amount of gas that is vented to atmosphere. The natural gas will be utilized on site as needed for fuel gas and natural gas will be sold.
- D. Venting and flaring during production operations:
 - a. New Drill HZ Gas Wells: The operator's facilities are designed to handle the maximum throughput and pressures from producing wellbores. The amount of gas vented and flared will be minimized when technically and safely feasible.
 - Operations will effectively manage the following scenarios to minimize the quantity of natural gas that is vented or flared:

- (a) If there is an emergency or malfunction vented or flared natural gas will be reported, if required, and the emergency or malfunction will be resolved as soon as technically and safely feasible.
- (b) If the wellbore needs to be unloaded to atmosphere the operator will not vent the well after the well has achieved a stabilized rate and pressure. The operator will remain on site during unloading. Plunger lift systems will be optimized to reduce the amount of natural gas venting. Downhole maintenance, such as workovers, swabbing, etc. will only be conducted as needed and best management practices will be utilized to reduce venting of natural gas.
- (c) The operator will minimize the amount of time that natural gas is vented to atmosphere from gauging and sampling a storage tank or low pressure vessel. The formation is only anticipated to produce water and therefore tank emissions are anticipated to be negligible.
- (d) The operator will reduce the amount of time needed for loading out liquids from a storage tanks or other low-pressure vessels whenever feasible. Operations will always utilize the water transfer systems when available. Water loading emissions are anticipated to be negligible.
- (e) Equipment will be repaired and maintained routinely to minimize the venting or flaring of natural gas. Repairs and maintenance will be conducted in a manner that minimizes the amount of natural gas vented to atmosphere through the isolation of the equipment that is being repaired or maintained.
- (f) Electric controllers and pumps will be installed to replace pneumatic controllers whenever feasible. Pneumatic controllers and pumps will be inspected frequently to ensure that no excess gas is vented to atmosphere.
- (g) No dehydration or amine units are anticipated to be set on location.
- (h) Compressors, compressor engines, turbines, flanges, connectors, valves, storage tanks, and other low-pressure vessels and flanges will be routinely inspected to ensure that no excess venting occurs outside of normal operations.
- (i) Regulatory required testing, such as bradenhead and packer testing will be performed in a manner that minimizes the amount of natural gas vented to atmosphere.
- (j) If natural gas does not meet gathering pipeline specifications gas samples will be collected twice per week to determine when pipeline specification gas content has been achieved. During this time frame gas will be flared and not vented to atmosphere. Natural gas that meets pipeline specifications will be sold via pipeline and natural gas that can be utilized for fuel gas will be used during this time.
- (k) If pipeline, equipment, or facilities need purged of impurities gas losses will be minimized as much as technically and safely feasible.

E. Performance standards:

- a. The production facilities are designed to handle the maximum throughput and pressures from producing wellbores and will be designed to minimize waste. The amount of gas vented and flared will be minimized when technically and safely feasible.
- b. All tanks that are routed to a control device that is installed after 5/25/2021 will have an automatic gauging system to minimize the amount of vented natural gas.
- c. If a flare stack is installed or replaced after 5/25/2021 it will be equipped with an automatic ignitor or continuous pilot. The flare stack will be properly sized and designed to ensure proper combustion efficiency. The flare stack will be located 100 feet away from the nearest wellhead or storage tank.
- d. AVO inspections will be conducted weekly for the year after completion and for all wells producing greater than 60,000 cubic feet of natural gas daily. The AVO inspection will include all components, including flare stacks, thief hatches, closed vent systems, pumps, compressors, pressure relief devices, valves, lines, flanges, connectors, and associated pipeline to identify any leaks and releases by comprehensive auditory, visual, and olfactory inspection. The AVO inspection records will be maintained for 5 years which will be available at the department's request. Identified leaks will be repaired as soon as feasible to minimize the amount of vented natural gas. F. Measurement or estimation of vented and flared natural gas.
- The volume of natural gas that is vented, flared or consumed for beneficial use will be measured when possible, or estimated, during drilling, completions, or production operations.
- b. Equipment will be installed to measure the volume of natural gas flared for all APD's issued after 5/25/2021 on facilities that will have an average daily gas rate greater than 60,000 cubic feet of natural gas. Measurement equipment will conform to API MPMS Chapter 14.10 regulations. The measurement equipment will not have a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment. If metering is not practical then the volume of gas will be estimated.