

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. 30-039-31482
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. EO-289-57
7. Lease Name or Unit Agreement Name San Juan 29-6 Unit
8. Well Number 109N
9. OGRID Number 372171
10. Pool name or Wildcat Blanco Mesaverde/Basin Mancos/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 <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	7. Lease Name or Unit Agreement Name San Juan 29-6 Unit
2. Name of Operator Hilcorp Energy Company	8. Well Number 109N
3. Address of Operator 382 Road 3100, Aztec, NM 87410	9. OGRID Number 372171
4. Well Location Unit Letter <u>D</u> : <u>1022'</u> feet from the <u>North</u> line and <u>933'</u> feet from the <u>West</u> line Section <u>32</u> Township <u>029N</u> Range <u>005W</u> NMPM County <u>RIO ARRIBA</u>	10. Pool name or Wildcat Blanco Mesaverde/Basin Mancos/Basin Dakota
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6385' GL	

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

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

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 add the Mancos formation to the previously approved APD. The revised plats and directional plans are attached. The bottom hole location has been revised.

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 Dawn Nash Deal TITLE Operations/Regulatory Tech DATE 5/2/2025

Type or print name Dawn Nash-Deal E-mail address: dnash@hilcorp.com PHONE: 505-324-5132

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any)

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type	<input type="checkbox"/> Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION

API Number 30-039-31482	Pool Code 72319	Pool Name BLANCO MESAVERDE
Property Code 318838	Property Name SAN JUAN 29-6 UNIT	Well Number 109N
OGRID No. 372171	Operator Name HILCORP ENERGY COMPANY	Ground Level Elevation 6385'
Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

Surface Location

UL D	Section 32	Township 29N	Range 6W	Lot	Feet from N/S Line 1022' NORTH	Feet from E/W Line 933' WEST	Latitude 36.686654 °N	Longitude -107.492175 °W	County RIO ARRIBA
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Bottom Hole Location

UL C	Section 32	Township 29N	Range 6W	Lot	Feet from N/S Line 710' NORTH	Feet from E/W Line 1930' WEST	Latitude 36.687504 °N	Longitude -107.488776 °W	County RIO ARRIBA
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Dedicated Acres 320.00	Penetrated Spacing Unit: W/2 - SECTION 32, T29N, R6W	Infill or Defining Well INFILL	Defining Well API 3003921090	Overlapping Spacing Unit <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consolidation Code U
Order Numbers			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
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First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
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Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
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Unitized Area or Area of Uniform Interest	Spacing Unit Type <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Directional	Ground Floor Elevation 6385'
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<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</p> <p><u>Dawnash Deal</u> Signature</p> <p>5/2/2025 Date</p> <p>DAWN NASH-DEAL Printed Name</p> <p>DNASH@HILCORP.COM E-mail Address</p>	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <div></div> <p>JASON C. EDWARDS</p> <p>Signature and Seal of Professional Surveyor</p> <p>Certificate Number 15269 Date of Survey JUNE 6, 2024</p>
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SURFACE LOCATION (A)
1022' FNL 933' FWL
LAT 36.686647°N
LONG -107.491570°W
DATUM: NAD1927

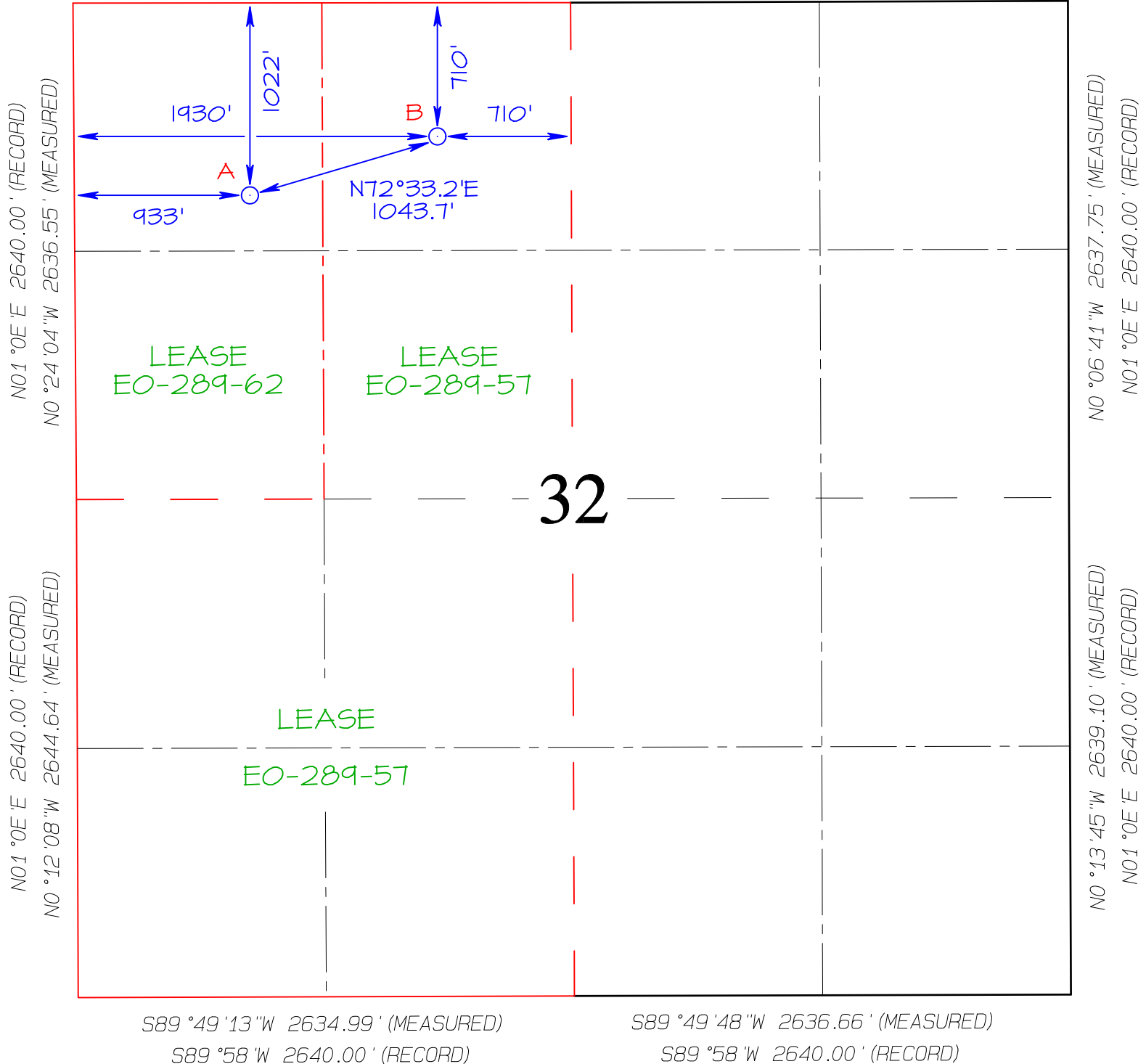
LAT 36.686654°N
LONG -107.492175°W
DATUM: NAD1983

BOTTOM-HOLE LOCATION (B)
710' FNL 1930' FWL
LAT 36.687497°N
LONG -107.488171°W
DATUM: NAD1927

LAT 36.687504°N
LONG -107.488776°W
DATUM: NAD1983

N89°59'E 2641.32' (RECORD)
N89°56'41"E 2642.69' (MEASURED)

N89°59'E 2641.32' (RECORD)
N89°47'58"E 2641.07' (MEASURED)



C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type	<input type="checkbox"/> Initial Submittal
			<input checked="" type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

WELL LOCATION INFORMATION

API Number 30-039-31482	Pool Code 71599	Pool Name BASIN DAKOTA
Property Code 318838	Property Name SAN JUAN 29-6 UNIT	Well Number 109N
OGRID No. 372171	Operator Name HILCORP ENERGY COMPANY	Ground Level Elevation 6385'
Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

Surface Location

UL D	Section 32	Township 29N	Range 6W	Lot	Feet from N/S Line 1022' NORTH	Feet from E/W Line 933' WEST	Latitude 36.686654 °N	Longitude -107.492175 °W	County RIO ARRIBA
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Dedicated Acres 320.00	Penetrated Spacing Unit: W/2 - SECTION 32, T29N, R6W	Infill or Defining Well INFILL	Defining Well API 3003930233	Overlapping Spacing Unit <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consolidation Code U
Order Numbers			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
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Unitized Area or Area of Uniform Interest	Spacing Unit Type <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Directional	Ground Floor Elevation 6385'
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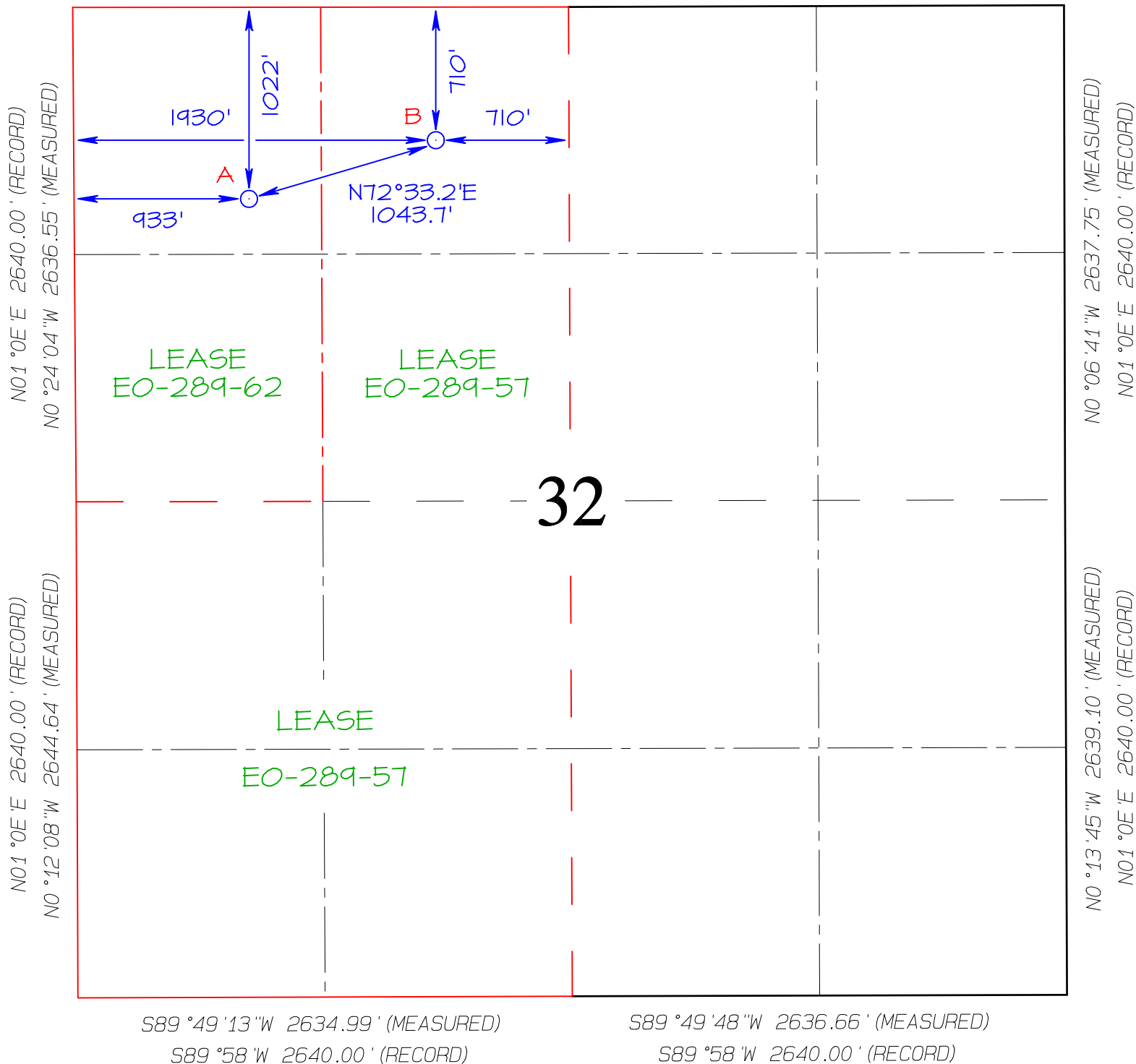
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DATUM: NAD1983

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WELL LOCATION INFORMATION

API Number 30-039-31482	Pool Code 97232	Pool Name BASIN MANCOS
Property Code 318838	Property Name SAN JUAN 29-6 UNIT	Well Number 109N
OGRID No. 372171	Operator Name HILCORP ENERGY COMPANY	Ground Level Elevation 6385'
Surface Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input checked="" type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

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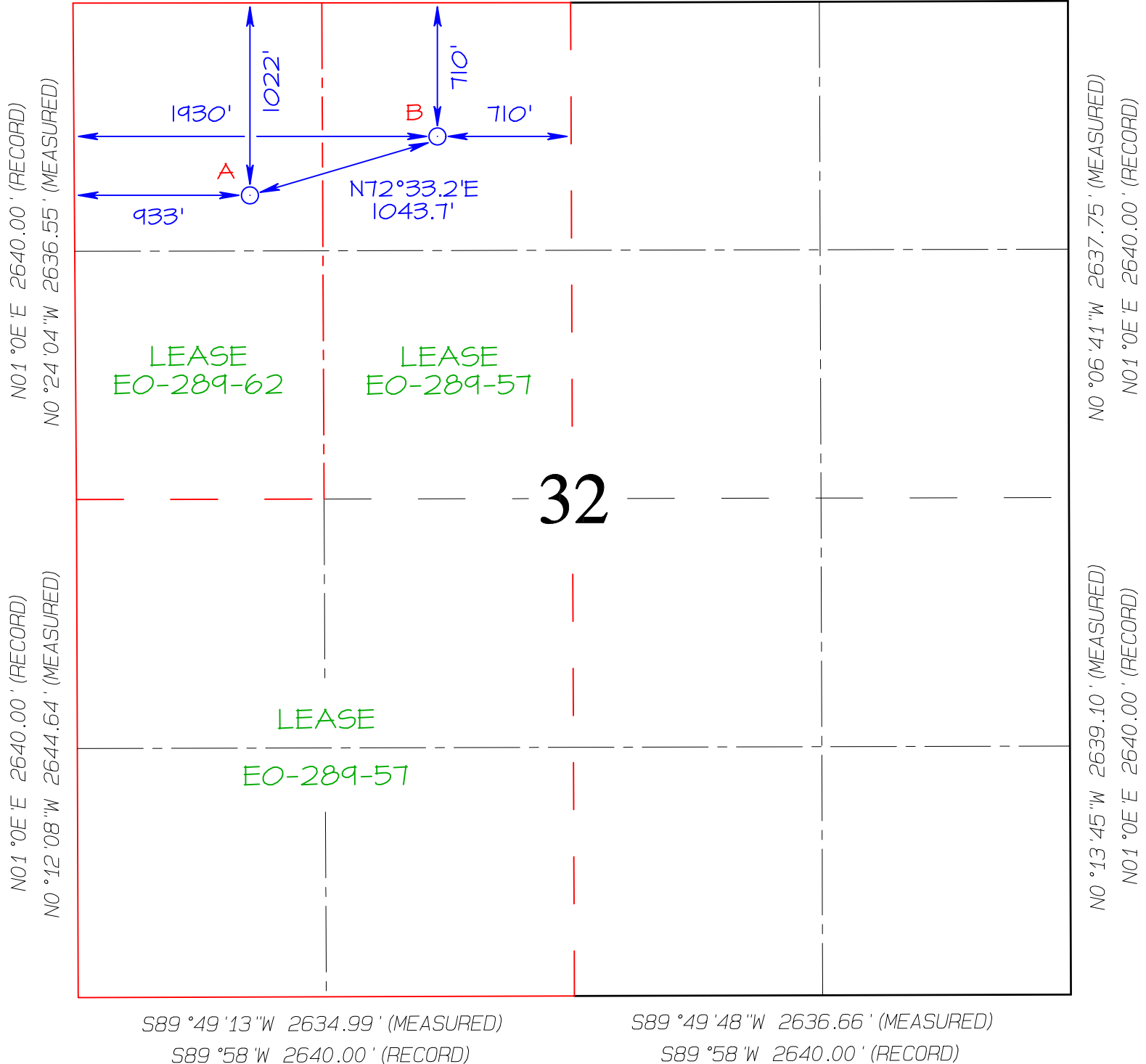
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N89°56'41"E 2642.69' (MEASURED)

N89°59'E 2641.32' (RECORD)
N89°47'58"E 2641.07' (MEASURED)





Company: Hilcorp Energy - San Juan Basin
 Project: San Juan, NM NAD27
 Site: San Juan 29-6 Pad
 Well: San Juan 29-6 Unit 109N
 Wellbore: OH
 Design: Plan #5



Well Details: San Juan 29-6 Unit 109N

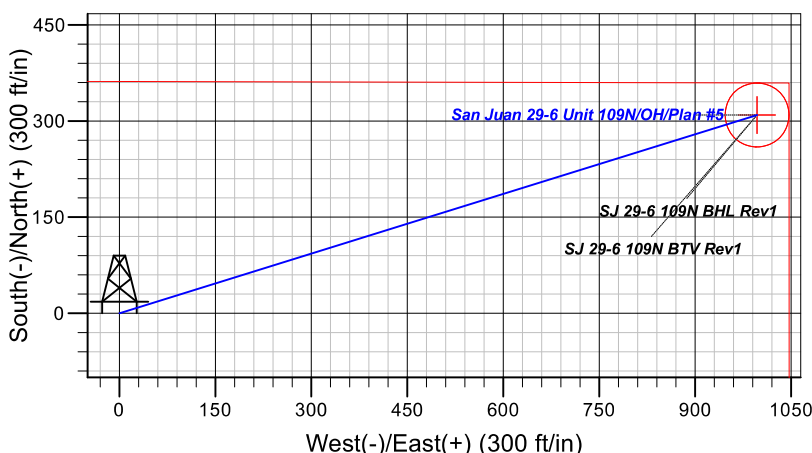
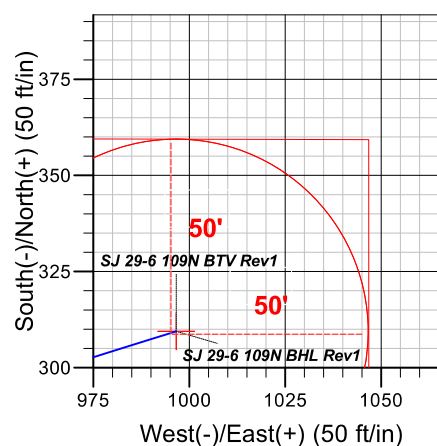
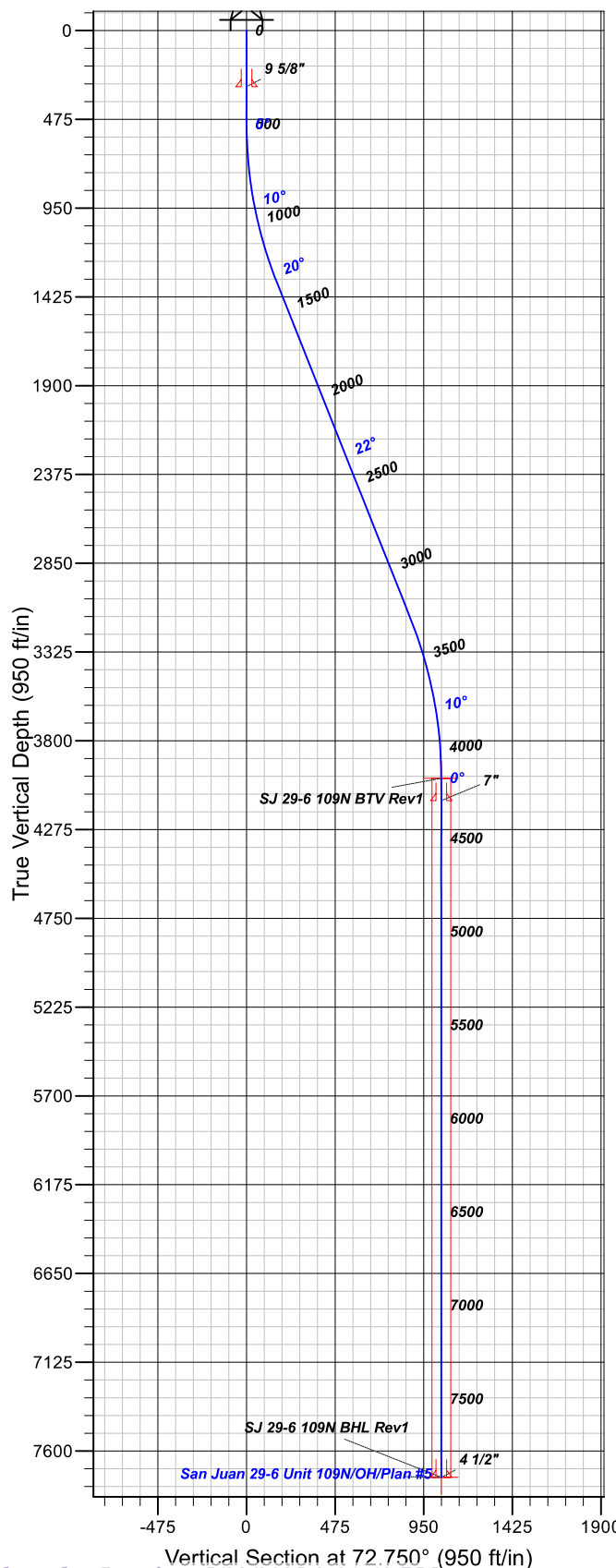
GL 6380' & RKB 17' @ 6397.00ft (Drake 3)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	2069371.90	600208.29	36.686647	-107.491570	



Azimuths to True North
 Magnetic North: 8.40°

Magnetic Field
 Strength: 49191.2nT
 Dip Angle: 63.07°
 Date: 6/19/2024
 Model: HDGM2024



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
17.00	17.00	San Jose
1423.00	1449.37	Nacimiento
2430.00	2533.25	Ojo Alamo
2581.00	2695.78	Kirtland
2907.00	3046.67	Fruitland Coal
3295.00	3462.40	Pictured Cliffs
3393.00	3564.69	Lewis Shale
3920.00	4099.01	Huerfano Bentonite
4277.00	4456.02	Chacra
5046.00	5225.02	Cliff House
5167.00	5346.02	Menefee
5457.00	5636.02	Point Lookout
6166.00	6345.02	Mancos Shale
6732.00	6911.02	El Vado
7002.00	7181.02	Niobrara
7082.00	7261.02	Gallup
7137.00	7316.02	Juana Lopez
7452.00	7631.02	Greenhorn
7511.00	7690.02	Graneros
7559.00	7738.02	Two Wells
7640.00	7819.02	Paugate
7668.00	7847.02	Cubero
7704.00	7883.02	Lower Cubero
7740.00	7919.02	Proposed TD

Plan: Plan #5

8:56, May 07 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
300.00	300.00	9 5/8"	9.62
4120.00	4299.02	7"	7.00
7740.00	7919.02	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
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00
1368.38	21.71	72.750	1347.75	48.20	155.25	2.50	72.75	162.56
3310.64	21.71	72.750	3152.25	261.25	841.37	0.00	0.00	881.00
4179.02	0.00	0.000	4000.00	309.46	996.62	2.50	180.00	1043.56
7919.02	0.00	0.000	7740.00	309.46	996.62	0.00	0.00	1043.56

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SJ 29-6 109N BTV Rev1	4000.00	309.46	996.62	2069684.90	601203.80	36.687497	-107.488171
SJ 29-6 109N BHL Rev1	7740.00	309.46	996.62	2069684.90	601203.80	36.687497	-107.488171

Vertical Section at 72.750° (950 ft/in)



Rio Arriba County, NM

San Juan 29-6 Unit 109N

Hilcorp Energy Company

Technical Drilling Plan (Rev. 3)

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

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

1. Location

Date:	May 13, 2025	Pool:	Mesa Verde / Dakota
Well Name:	San Juan 29-6 Unit #109N	Ground Elevation (ft. MSL):	6,380'
Surface Hole Location:	36.686647° N, 107.491570° W	Total Depth (ft. TMD/TVD):	7,919' MD / 7,740' TVD
Bottom Hole Location:	36.687497° N, 107.488171° W	County, State:	Rio Arriba, 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	2367'	Water (fresh/useable)
Kirtland	2545'	None
Fruitland	2852'	Gas, Water
Pictured Cliffs	3241'	Gas
Lewis	3365'	None
Huerfano Bentonite	3868'	None
Chacra	4224'	None
Cliff House	4977'	Gas
Menefee	5105'	None
Pt. Lookout	5423'	Gas
Mancos	6120'	Gas
Gallup	6705	Gas
El Vado	6716	Gas
Basal Niobrara	6956'	None
Juana Lopez	7093'	None
Greenhorn	7403'	None
Graneros	7464'	Gas
Dakota	7620'	Gas

Rio Arriba County, NM

San Juan 29-6 Unit 109N



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.**

Rio Arriba County, NM

San Juan 29-6 Unit 109N



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'	4,299'/4,120'	3,270 psi	4,360 psi	366 klbs
Production	6-1/4"	4-1/2"-11.6#-J55 (or equiv.)-LTC/BTC	0'	7,919'/7,740'	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	4.3	5.1
Production	1.3	1.5	2.4	2.9

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.

Rio Arriba County, NM

San Juan 29-6 Unit 109N

**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	4,299'	Lead	844 ft ³	396	50%	ASTM Type II 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 II Yield: 1.38 ft ³ /sk	14.5	3,799'
		Slurry Additives: CaCl ₂ (1.0%), Celloflake (0.25 lb/sk), LCM-1 (5.0 lb/sk), FL-52 (0.2%)						
Production	7,919'	Lead	557 ft ³	109	35%	ASTM Type II Yield: 1.98 ft ³ /sk	12.5	3,799'
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).

Rio Arriba County, NM

San Juan 29-6 Unit 109N

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' – 4,299'
Production	Air / LSND / Gel	8.4 – 9.2	6-16	5,000	4,299' – 7,919'

Drilling Fluids Notes:

- Primary drilling fluid for production section will be air/N₂. If well begins making water, will mud up with LSND.
- The following equipment will be operational when drilling with air/N₂/mist:
 - Anchored bloopie line to discharge cuttings & fluid to blow pit at least 100' away from well center.
 - The bloopie line will be equipped with an automatic igniter or pilot light.
 - Deduster equipment.
 - Properly lubricated and maintained rotating head.
 - Float valve in the drill string above the bit.
 - Sufficient mud and circulating equipment to kill the well if necessary.
- Lost circulation material may be added to the mud systems to manage fluid losses as hole conditions dictate.
- Depending on the area and water production, the production section may be drilled with mud instead of air.
- 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: 475 bbls (2,666 ft³).

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San Juan 29-6 Unit 109N



8. Estimated Pressures & Drilling Hazards

A. Estimated Pressures

- The Mesa Verde and/or Dakota formations will be completed and commingled if both formations are completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:
 - Fruitland Coal: 400 psi
 - Pictured Cliffs: 850 psi
 - Mesa Verde: 650 psi
 - Dakota: 2,200 psi

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 coal section. Losses will be mitigated by adding LCM to the mud system.
- Sufficient LCM will be added to the mud system to maintain well control if lost circulation is encountered.

D. Hydrogen Sulfide

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

9. Pilot Hole

- No pilot hole is planned for this wellbore.

Rio Arriba County, NM

San Juan 29-6 Unit 109N



10. Testing, Logging, Coring

A. Mud Logging

- Will collect formation samples every 60' from the intermediate casing shoe to the TD of production hole section.

B. MWD

- Will use measurement while drilling tool from the surface casing point to intermediate casing point to record inclination. A wireline survey will be run after cementing the production casing to verify bottom hole position.

C. LWD

- No logging while drilling tools will be utilized.

D. Open Hole Logging

- There are no planned open hole logs post drilling.

E. Coring

- There is no coring or formation testing planned.

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 temperature survey or a cement bod log will be run to verify top of cement.

11. Directional Drilling Plan

- The directional drilling plans and plots are attached.
- The directional plan is built from geologic targets from offset wells and lease boundaries. On-site adjustments to the directional plans will be made as formation and wellbore dictate.

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.

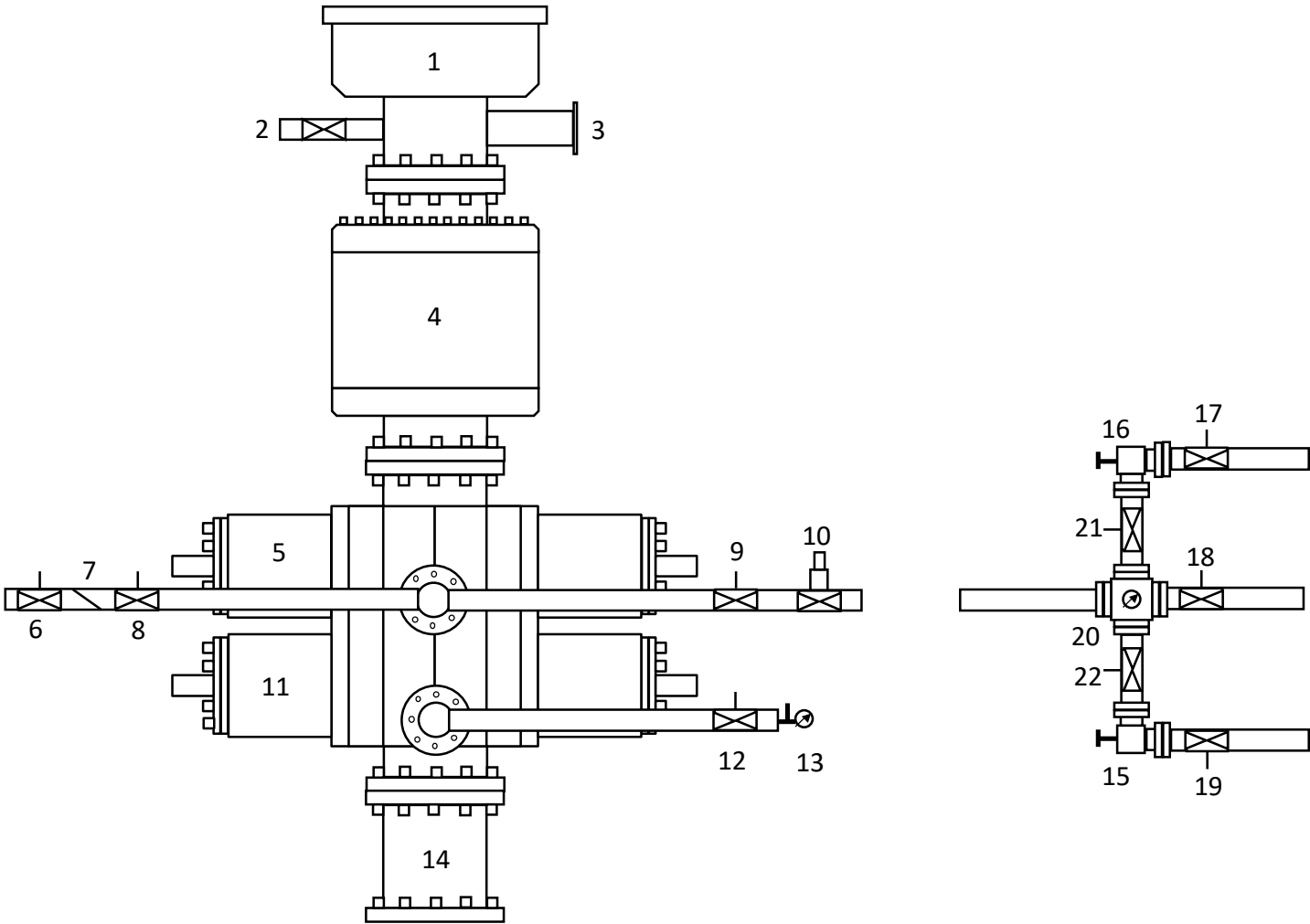
Rio Arriba County, NM

San Juan 29-6 Unit 109N



Appendix A

Pressure Control Equipment 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	Manual 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



Hilcorp Energy - San Juan Basin

San Juan, NM NAD27

San Juan 29-6 Pad

San Juan 29-6 Unit 109N

OH

Plan: Plan #5

Standard Planning Report

07 May, 2025



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Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well San Juan 29-6 Unit 109N
Company:	Hilcorp Energy - San Juan Basin	TVD Reference:	GL 6380' & RKB 17' @ 6397.00ft (Drake 3)
Project:	San Juan, NM NAD27	MD Reference:	GL 6380' & RKB 17' @ 6397.00ft (Drake 3)
Site:	San Juan 29-6 Pad	North Reference:	True
Well:	San Juan 29-6 Unit 109N	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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		San Juan 29-6 Pad			
Site Position:		Northing:	2,066,320.67 usft	Latitude:	36.678236
From:	Lat/Long	Easting:	603,188.29 usft	Longitude:	-107.481445
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	0.21

Well	San Juan 29-6 Unit 109N					
Well Position	+N/-S	3,062.14 ft	Northing:	2,069,371.89 usft	Latitude:	36.686647
	+E/-W	-2,968.78 ft	Easting:	600,208.30 usft	Longitude:	-107.491570
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	6,380.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2024	6/19/2024	8.40	63.07	49,191.20000000

Design	Plan #5			
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	72.750

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	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,368.38	21.71	72.750	1,347.75	48.20	155.25	2.50	2.50	0.00	72.75	
3,310.64	21.71	72.750	3,152.25	261.25	841.37	0.00	0.00	0.00	0.00	
4,179.02	0.00	0.000	4,000.00	309.46	996.62	2.50	-2.50	0.00	180.00	SJ 29-6 109N BTV R€
7,919.02	0.00	0.000	7,740.00	309.46	996.62	0.00	0.00	0.00	0.00	SJ 29-6 109N BHL R€



Scientific Drilling Planning Report



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Project:	San Juan, NM NAD27	MD Reference:	GL 6380' & RKB 17' @ 6397.00ft (Drake 3)
Site:	San Juan 29-6 Pad	North Reference:	True
Well:	San Juan 29-6 Unit 109N	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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	2.50	72.750	599.97	0.65	2.08	2.18	2.50	2.50	0.00
700.00	5.00	72.750	699.75	2.59	8.33	8.72	2.50	2.50	0.00
800.00	7.50	72.750	799.14	5.81	18.72	19.61	2.50	2.50	0.00
900.00	10.00	72.750	897.97	10.32	33.25	34.82	2.50	2.50	0.00
1,000.00	12.50	72.750	996.04	16.11	51.88	54.33	2.50	2.50	0.00
1,100.00	15.00	72.750	1,093.17	23.16	74.58	78.09	2.50	2.50	0.00
1,200.00	17.50	72.750	1,189.17	31.45	101.30	106.07	2.50	2.50	0.00
1,300.00	20.00	72.750	1,283.85	40.99	132.00	138.21	2.50	2.50	0.00
1,368.38	21.71	72.750	1,347.75	48.20	155.25	162.56	2.50	2.50	0.00
1,400.00	21.71	72.750	1,377.13	51.67	166.41	174.25	0.00	0.00	0.00
1,500.00	21.71	72.750	1,470.03	62.64	201.74	211.24	0.00	0.00	0.00
1,600.00	21.71	72.750	1,562.94	73.61	237.07	248.23	0.00	0.00	0.00
1,700.00	21.71	72.750	1,655.85	84.58	272.39	285.22	0.00	0.00	0.00
1,800.00	21.71	72.750	1,748.76	95.55	307.72	322.21	0.00	0.00	0.00
1,900.00	21.71	72.750	1,841.66	106.52	343.05	359.20	0.00	0.00	0.00
2,000.00	21.71	72.750	1,934.57	117.49	378.37	396.19	0.00	0.00	0.00
2,100.00	21.71	72.750	2,027.48	128.46	413.70	433.18	0.00	0.00	0.00
2,200.00	21.71	72.750	2,120.38	139.43	449.03	470.17	0.00	0.00	0.00
2,300.00	21.71	72.750	2,213.29	150.39	484.35	507.16	0.00	0.00	0.00
2,400.00	21.71	72.750	2,306.20	161.36	519.68	544.15	0.00	0.00	0.00
2,500.00	21.71	72.750	2,399.11	172.33	555.01	581.14	0.00	0.00	0.00
2,600.00	21.71	72.750	2,492.01	183.30	590.33	618.13	0.00	0.00	0.00
2,700.00	21.71	72.750	2,584.92	194.27	625.66	655.12	0.00	0.00	0.00
2,800.00	21.71	72.750	2,677.83	205.24	660.98	692.12	0.00	0.00	0.00
2,900.00	21.71	72.750	2,770.73	216.21	696.31	729.11	0.00	0.00	0.00
3,000.00	21.71	72.750	2,863.64	227.18	731.64	766.10	0.00	0.00	0.00
3,100.00	21.71	72.750	2,956.55	238.15	766.96	803.09	0.00	0.00	0.00
3,200.00	21.71	72.750	3,049.46	249.12	802.29	840.08	0.00	0.00	0.00
3,300.00	21.71	72.750	3,142.36	260.08	837.62	877.07	0.00	0.00	0.00
3,310.64	21.71	72.750	3,152.25	261.25	841.37	881.00	0.00	0.00	0.00
3,400.00	19.48	72.750	3,235.89	270.57	871.39	912.43	2.50	-2.50	0.00
3,500.00	16.98	72.750	3,330.87	279.85	901.26	943.70	2.50	-2.50	0.00
3,600.00	14.48	72.750	3,427.12	287.88	927.14	970.80	2.50	-2.50	0.00
3,700.00	11.98	72.750	3,524.46	294.67	948.99	993.68	2.50	-2.50	0.00
3,800.00	9.48	72.750	3,622.70	300.18	966.76	1,012.29	2.50	-2.50	0.00
3,900.00	6.98	72.750	3,721.67	304.43	980.42	1,026.60	2.50	-2.50	0.00
4,000.00	4.48	72.750	3,821.16	307.38	989.95	1,036.57	2.50	-2.50	0.00
4,100.00	1.98	72.750	3,920.99	309.05	995.32	1,042.20	2.50	-2.50	0.00
4,179.02	0.00	0.000	4,000.00	309.46	996.62	1,043.56	2.50	-2.50	0.00
4,200.00	0.00	0.000	4,020.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,300.00	0.00	0.000	4,120.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,400.00	0.00	0.000	4,220.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,500.00	0.00	0.000	4,320.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,600.00	0.00	0.000	4,420.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,700.00	0.00	0.000	4,520.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,800.00	0.00	0.000	4,620.98	309.46	996.62	1,043.56	0.00	0.00	0.00
4,900.00	0.00	0.000	4,720.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,000.00	0.00	0.000	4,820.98	309.46	996.62	1,043.56	0.00	0.00	0.00



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Site:	San Juan 29-6 Pad	North Reference:	True
Well:	San Juan 29-6 Unit 109N	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

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)
5,100.00	0.00	0.000	4,920.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,200.00	0.00	0.000	5,020.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,300.00	0.00	0.000	5,120.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,400.00	0.00	0.000	5,220.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,500.00	0.00	0.000	5,320.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,600.00	0.00	0.000	5,420.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,700.00	0.00	0.000	5,520.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,800.00	0.00	0.000	5,620.98	309.46	996.62	1,043.56	0.00	0.00	0.00
5,900.00	0.00	0.000	5,720.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,000.00	0.00	0.000	5,820.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,100.00	0.00	0.000	5,920.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,200.00	0.00	0.000	6,020.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,300.00	0.00	0.000	6,120.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,400.00	0.00	0.000	6,220.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,500.00	0.00	0.000	6,320.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,600.00	0.00	0.000	6,420.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,700.00	0.00	0.000	6,520.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,800.00	0.00	0.000	6,620.98	309.46	996.62	1,043.56	0.00	0.00	0.00
6,900.00	0.00	0.000	6,720.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,000.00	0.00	0.000	6,820.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,100.00	0.00	0.000	6,920.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,200.00	0.00	0.000	7,020.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,300.00	0.00	0.000	7,120.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,400.00	0.00	0.000	7,220.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,500.00	0.00	0.000	7,320.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,600.00	0.00	0.000	7,420.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,700.00	0.00	0.000	7,520.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,800.00	0.00	0.000	7,620.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,900.00	0.00	0.000	7,720.98	309.46	996.62	1,043.56	0.00	0.00	0.00
7,919.02	0.00	0.000	7,740.00	309.46	996.62	1,043.56	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SJ 29-6 109N BTV Rev1 - plan hits target center - Circle (radius 50.00)	0.00	0.000	4,000.00	309.46	996.62	2,069,684.90	601,203.80	36.687497	-107.488171
SJ 29-6 109N BHL Rev1 - plan hits target center - Point	0.00	0.000	7,740.00	309.46	996.62	2,069,684.90	601,203.80	36.687497	-107.488171

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
300.00	300.00	9 5/8"	9.62	12.25
4,299.02	4,120.00	7"	7.00	8.75
7,919.02	7,740.00	4 1/2"	4.50	6.25



Scientific Drilling

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well San Juan 29-6 Unit 109N
Company:	Hilcorp Energy - San Juan Basin	TVD Reference:	GL 6380' & RKB 17' @ 6397.00ft (Drake 3)
Project:	San Juan, NM NAD27	MD Reference:	GL 6380' & RKB 17' @ 6397.00ft (Drake 3)
Site:	San Juan 29-6 Pad	North Reference:	True
Well:	San Juan 29-6 Unit 109N	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #5		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
17.00	17.00	San Jose		0.00	0.000	
1,449.37	1,423.00	Nacimiento		0.00	0.000	
2,533.25	2,430.00	Ojo Alamo		0.00	0.000	
2,695.78	2,581.00	Kirtland		0.00	0.000	
3,046.67	2,907.00	Fruitland Coal		0.00	0.000	
3,462.40	3,295.00	Pictured Cliffs		0.00	0.000	
3,564.69	3,393.00	Lewis Shale		0.00	0.000	
4,099.01	3,920.00	Huerfano Bentonite		0.00	0.000	
4,456.02	4,277.00	Chacra		0.00	0.000	
5,225.02	5,046.00	Cliff House		0.00	0.000	
5,346.02	5,167.00	Menefee		0.00	0.000	
5,636.02	5,457.00	Point Lookout		0.00	0.000	
6,345.02	6,166.00	Mancos Shale		0.00	0.000	
6,911.02	6,732.00	El Vado		0.00	0.000	
7,181.02	7,002.00	Niobrara		0.00	0.000	
7,261.02	7,082.00	Gallup		0.00	0.000	
7,316.02	7,137.00	Juana Lopez		0.00	0.000	
7,631.02	7,452.00	Greenhorn		0.00	0.000	
7,690.02	7,511.00	Graneros		0.00	0.000	
7,738.02	7,559.00	Two Wells		0.00	0.000	
7,819.02	7,640.00	Paugate		0.00	0.000	
7,847.02	7,668.00	Cubero		0.00	0.000	
7,883.02	7,704.00	Lower Cubero		0.00	0.000	
7,919.02	7,740.00	Proposed TD		0.00	0.000	

Sante Fe Main Office
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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 466620

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 466620
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	None	5/22/2025