

Santa Fe Main Office Phone: (505) 476-3441 Fax: (55) 476-3462 General Information Phone: (505) 629-6116 Online Phone Directory Visit: https://www.emnrd.nm.gov/ocd/contact-us/	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	C-104 Revised July 9, 2024 Submit Electronically Via OCD Permitting
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REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Section 1 - Operator and Well Information

Submittal Type: ☒ Test Allowable (C-104RT) ☐ New Well (C-104NW) ☐ Recomplete (C-104RC) ☐ Pay Add (C-104RC) ☐ Amended	
Operator Name: Hilcorp Energy Company	OGRID: 372171
Property Name and Well Number: SAN JUAN 29-7 UNIT NP 512	Property Code: 318714
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	API Number: 30-039-24342
Pool Name: BLANCO MESAVERDE	Pool Code: 72319

Section 2 – Surface Location

UL G	Section 19	Township 029N	Range 007W	Lot	Ft. from N/S 1448' North	Ft. from E/W 2370' East	Latitude 36. 714789	Longitude -107.611409	County RIO ARRIBA
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Section 3 – Completion Information

Producing Method	Ready Date ~9/29/2024	Perforations MD ~5,080' – 6,066'	Perforations TVD ~5,008' – 5,938'
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Section 4 – Action IDs for Submissions and Order Numbers

List Action IDs for Drilling Sundries	Was an Order required / needed (Y/N), if yes list Order number:
C-104 RT Action ID (if C-104NW): N/A	Communitization Agreement ☐ Yes ☒ No, Order No.
Surface Casing Action ID: Previous to system	Unit: ☒ Yes ☐ No, Order No.
Intermediate 1 Casing Action ID: Previous to system	Compulsory Pooling: ☐ Yes ☒ No, Order No.
Intermediate 2 Casing Action ID: Previous to system	Down Hole Commingling: ☒ Yes ☐ No, Order No. Pending
Production Casing Action ID: 387417	Surface Commingling: ☐ Yes ☒ No, Order No.
All casing was pressure tested in accordance with NMAC ☒ Yes ☐ No	Non-standard Location: ☐ Yes ☒ No ☐ Common ownership Order No.
Liner 1 Action ID: N/A	Non-standard Proration: ☐ Yes ☒ No, Order No.
Casing was installed prior to OCD's Action ID system (Y/N): N	Simultaneous Dedication: ☐ Yes ☒ No, Order No.

Section 5 - Operator Signature and Certification

☒ I hereby certify that the required Water Use Report has been, or will be, submitted for this well's completion.	
☒ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well's completion.	
☒ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Cherylene Weston	
Title: Operations Regulatory Tech Sr.	Date: 9/13/2024

Cheryl Weston

From: Rennick, Kenneth G <krennick@blm.gov>
Sent: Wednesday, September 11, 2024 3:32 PM
To: Rikala, Ward, EMNRD; Matthew Esz; Kuehling, Monica, EMNRD
Cc: Farmington Regulatory Techs
Subject: Re: [EXTERNAL] San Juan 29-7 Unit NP 512, API # 3003924342

CAUTION: External sender. DO NOT open links or attachments from UNKNOWN senders.

The BLM finds the proposed MV perforations appropriate.

Kenneth (Kenny) Rennick

Petroleum Engineer

Bureau of Land Management
Farmington Field Office
6251 College Blvd
Farmington, NM 87402

Email: krennick@blm.gov
Mobile & Text: 505.497.0019

From: Rikala, Ward, EMNRD <Ward.Rikala@emnrd.nm.gov>
Sent: Wednesday, September 11, 2024 2:09 PM
To: Matthew Esz <Matthew.Esz@hilcorp.com>; Kuehling, Monica, EMNRD <monica.kuehling@emnrd.nm.gov>
Cc: Rennick, Kenneth G <krennick@blm.gov>; Farmington Regulatory Techs <FarmingtonRegulatoryTechs@hilcorp.com>
Subject: RE: [EXTERNAL] San Juan 29-7 Unit NP 512, API # 3003924342

CBL looks good. Good to proceed with MV completion.

Ward

From: Matthew Esz <Matthew.Esz@hilcorp.com>
Sent: Wednesday, September 11, 2024 1:54 PM
To: Rikala, Ward, EMNRD <Ward.Rikala@emnrd.nm.gov>; Kuehling, Monica, EMNRD <monica.kuehling@emnrd.nm.gov>
Cc: Rennick, Kenneth G <krennick@blm.gov>; Farmington Regulatory Techs <FarmingtonRegulatoryTechs@hilcorp.com>
Subject: RE: [EXTERNAL] San Juan 29-7 Unit NP 512, API # 3003924342

Good afternoon,

Attached is the CBL pulled today, 9/11 on the San Juan 29-7 Unit NP 512 after completing the required cement remediation work to satisfy the following COA:

TOC is required to be 100' above the top perforation in the Fruitland formation.

The MIT was witnessed and passed today. We would like approval to continue with the MV completion prep within the following interval: **5,080'- 6,066'**. Let me know if you have any questions or concerns, thank you.

Matthew Esz

From: Rikala, Ward, EMNRD <Ward.Rikala@emnrd.nm.gov>
Sent: Thursday, September 5, 2024 1:55 PM
To: Matthew Esz <Matthew.Esz@hilcorp.com>; Kuehling, Monica, EMNRD <monica.kuehling@emnrd.nm.gov>
Cc: Rennick, Kenneth G <krennick@blm.gov>; Farmington Regulatory Techs <FarmingtonRegulatoryTechs@hilcorp.com>
Subject: RE: [EXTERNAL] San Juan 29-7 Unit NP 512, API # 3003924342

CAUTION: External sender. DO NOT open links or attachments from UNKNOWN senders.

Matthew-

I approve of this procedure.

Ward

From: Matthew Esz <Matthew.Esz@hilcorp.com>
Sent: Thursday, September 5, 2024 12:52 PM
To: Kuehling, Monica, EMNRD <monica.kuehling@emnrd.nm.gov>; Rikala, Ward, EMNRD <Ward.Rikala@emnrd.nm.gov>
Cc: Rennick, Kenneth G <krennick@blm.gov>; Farmington Regulatory Techs <FarmingtonRegulatoryTechs@hilcorp.com>
Subject: RE: [EXTERNAL] San Juan 29-7 Unit NP 512, API # 3003924342

Monica & Ward,

Attached is the updated cmt remediation procedure after previous conversations. Please verify this satisfies all the requirements and respond with written verification/approval. The rig is moving there this afternoon and will begin the work shortly.

Thanks!

From: Kuehling, Monica, EMNRD <monica.kuehling@emnrd.nm.gov>
Sent: Thursday, September 5, 2024 12:29 PM
To: Matthew Esz <Matthew.Esz@hilcorp.com>; Rikala, Ward, EMNRD <Ward.Rikala@emnrd.nm.gov>
Cc: Rennick, Kenneth G <krennick@blm.gov>
Subject: RE: [EXTERNAL] San Juan 29-7 Unit NP 512, API # 3003924342

CAUTION: External sender. DO NOT open links or attachments from UNKNOWN senders.

Matthew

In answer to below

NMOCD requires cement from top of cement on 4 ½ by log ran 8/27/2024 – (toc looks to be around 3700 feet). Through shoe of intermediate at 3416 to 100 feet above fruitland coal perforations which is the top of fruitland coal formation (stated on Hilcorp schematic at 3115) -

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	☐ Initial Submittal		
		☐ Amended Report		
		☒ As Drilled		

Submit Electronically
Via OCD Permitting

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal
Type

☐ Initial Submittal
☐ Amended Report
☒ As Drilled

WELL LOCATION INFORMATION

API Number 30-039-24342	Pool Code 72319	Pool Name BLANCO MESAVERDE
Property Code 318714	Property Name SAN JUAN 29-7 UNIT NP	Well Number 512
OGRID No. 372171	Operator Name HILCORP ENERGY COMPANY	Ground Level Elevation 6674'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL G	Section 19	Township 29N	Range 7W	Lot	Feet from N/S Line 1448' NORTH	Feet from E/W Line 2370' EAST	Latitude 36.714789 °N	Longitude -107.611409 °W	County RIO ARRIBA
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Bottom Hole Location

UL B	Section 19	Township 29N	Range 7W	Lot	Feet from N/S Line 687' NORTH	Feet from E/W Line 2572' EAST	Latitude 36.716881 °N	Longitude -107.612103 °W	County RIO ARRIBA
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Dedicated Acres 320.00	Penetrated Spacing Unit: E/2 - Section 19	Infill or Defining Well Infill	Defining Well API 30-039-30245	Overlapping Spacing Unit ☐ Yes ☒ No	Consolidation Code Unitization
Order Numbers DHC Pending		Well setbacks are under Common Ownership: ☐ Yes ☒ No			

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet from N/S Line	Feet from E/W Line	Latitude	Longitude	County
G	19	29N	7W		1515' NORTH	2426' EAST	36.714604 °N	-107.611598 °W	RIO ARriba

First Take Point (FTP)

UL B	Section 19	Township 29N	Range 7W	Lot	Feet from N/S Line 1090' NORTH	Feet from E/W Line 2483' EAST	Latitude 36.715772 °N	Longitude -107.611859 °W	County RIO ARRIBA
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Last Take Point (LTP)

UL B	Section 19	Township 29N	Range 7W	Lot	Feet from N/S Line 686' NORTH	Feet from E/W Line 2570' EAST	Latitude 36.716883 °N	Longitude -107.612097 °W	County RIO ARRIBA
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Unutilized Area or Area of Uniform Interest SAN JUAN 29-7 UNIT	Spacing Unit Type ☐ Horizontal ☐ Vertical ☒ Directional	Ground Floor Elevation 6674'
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OPERATOR CERTIFICATION

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.

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.

Cherylene Weston

9/4/2024

Signature _____

Date _____

Cherylene Weston, Operations/Regulatory Tech-Sr.

Printed Name _____

cweston@hilcorp.com

E-mail Address

SURVEYOR CERTIFICATION

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.



JASON C. EDWARDS

Signature and Seal of Professional Surveyor

Certificate Number	15269
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Date of Survey MAY 1, 2024

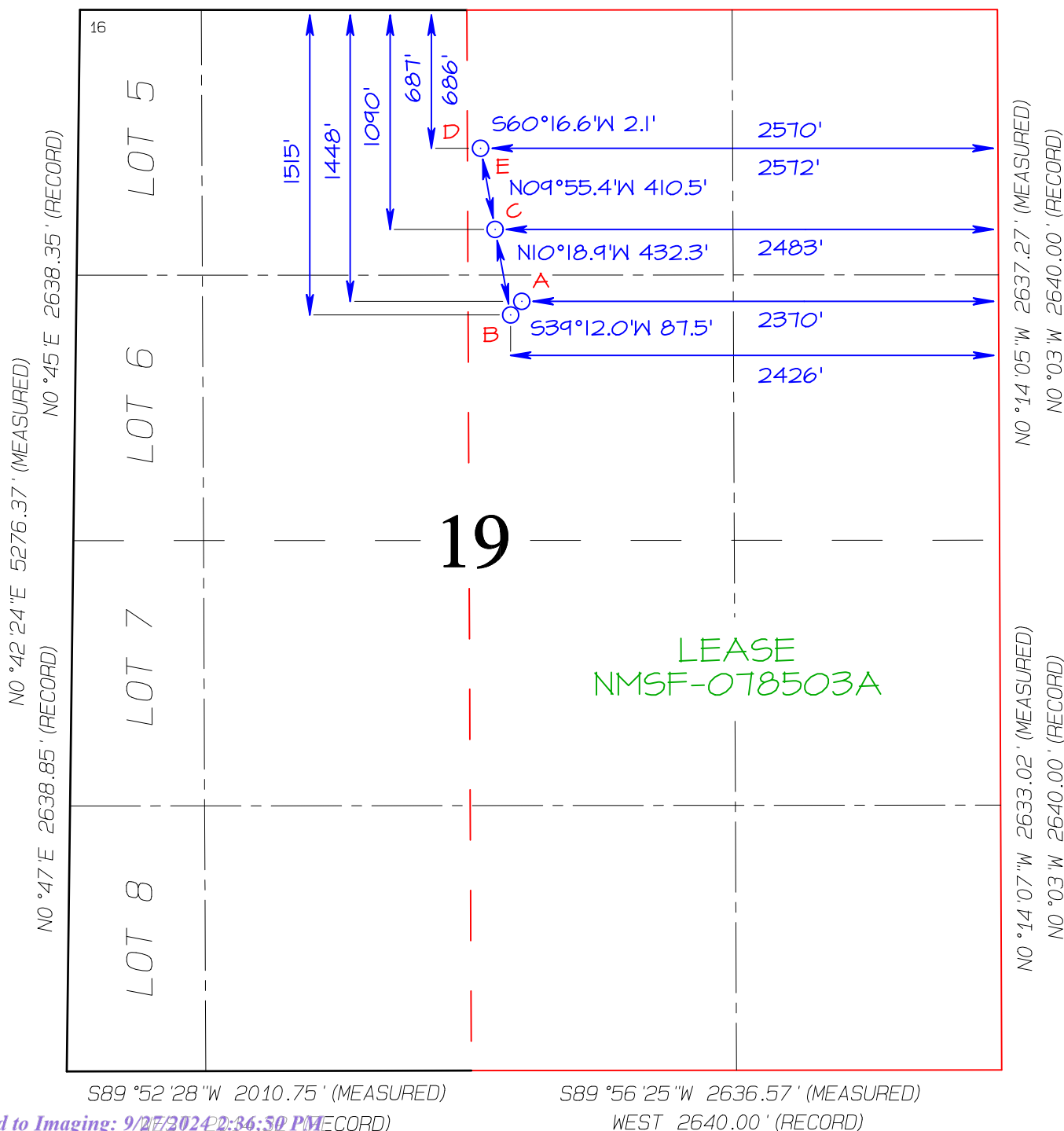
FIRST TAKE POINT (C)
1090' FNL 2483' FEL
LAT 36.715766 °N
LONG -107.611250 °W
DATUM: NAD1927

LAT 36.715772 °N
LONG -107.611859 °W
DATUM: NAD1983

BOTTOM-HOLE (E)
687' FNL 2572' FEL
LAT 36.716874°N
LONG -107.611494°W
DATUM: NAD1927

LAT 36.716881°N
LONG -107.612103°W
DATUM: NAD1983

WEST 2640.00' (RECORD)
S89°56'24"W 2637.36' (MEASURED)





Survey Certification

7327 West Barton Road
Casper, WY 82604
(307)-472-6621

Operator	HilCorp Energy
Well Name & No.	San Juan 29-7 Unit NP 512
API #	30-039-24342
County & State	Rio Arriba County, NM
SDI Job #	OP.045668
Rig	Drake 3
Survey Date	8/15/2024 to 8/19/2024
GL & KB Elevation	GL 6673' & KB 17' = 6690'

I, Janie Collins, having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 98.56 feet to a measured depth of 8,165 feet is true and correct as determined from all available records.

A handwritten signature in blue ink, appearing to read 'Janie Collins', written over a horizontal line.

Signature

29-Aug-2024

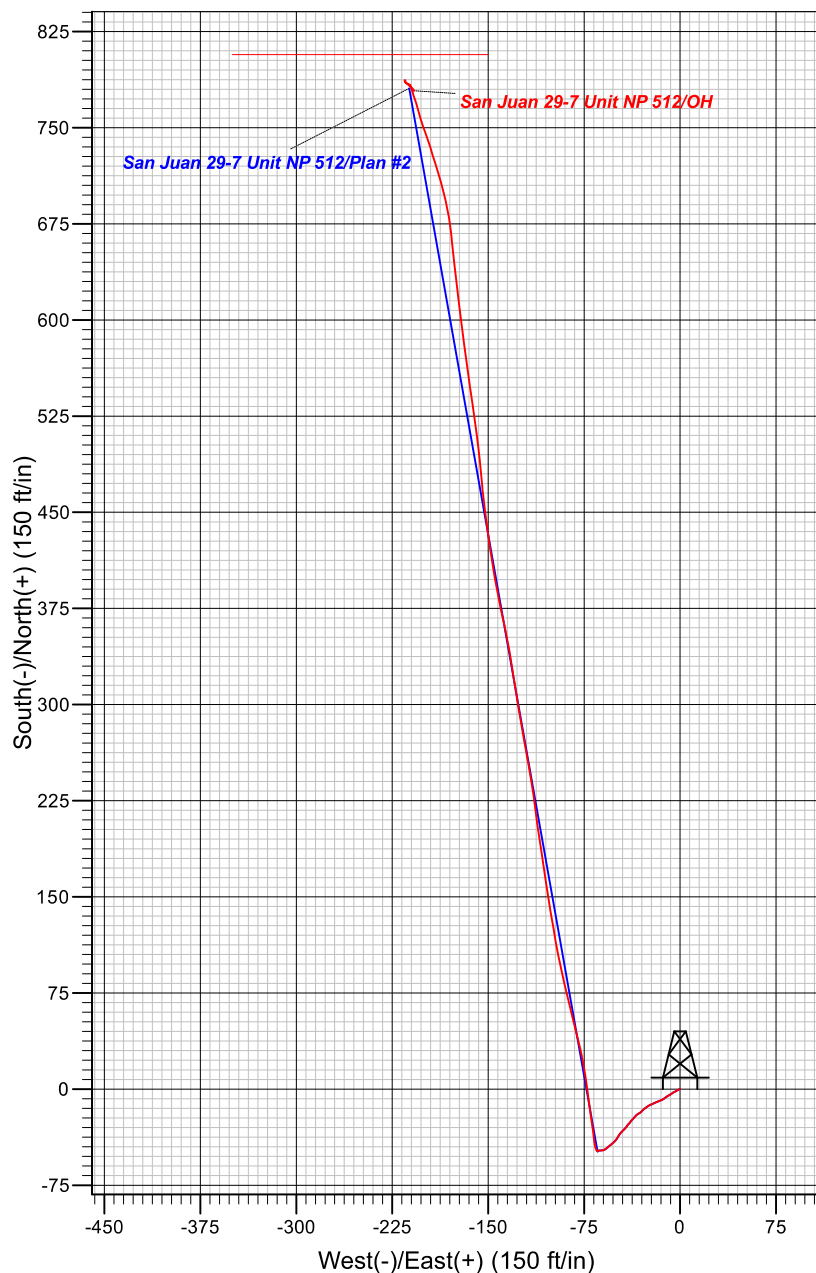
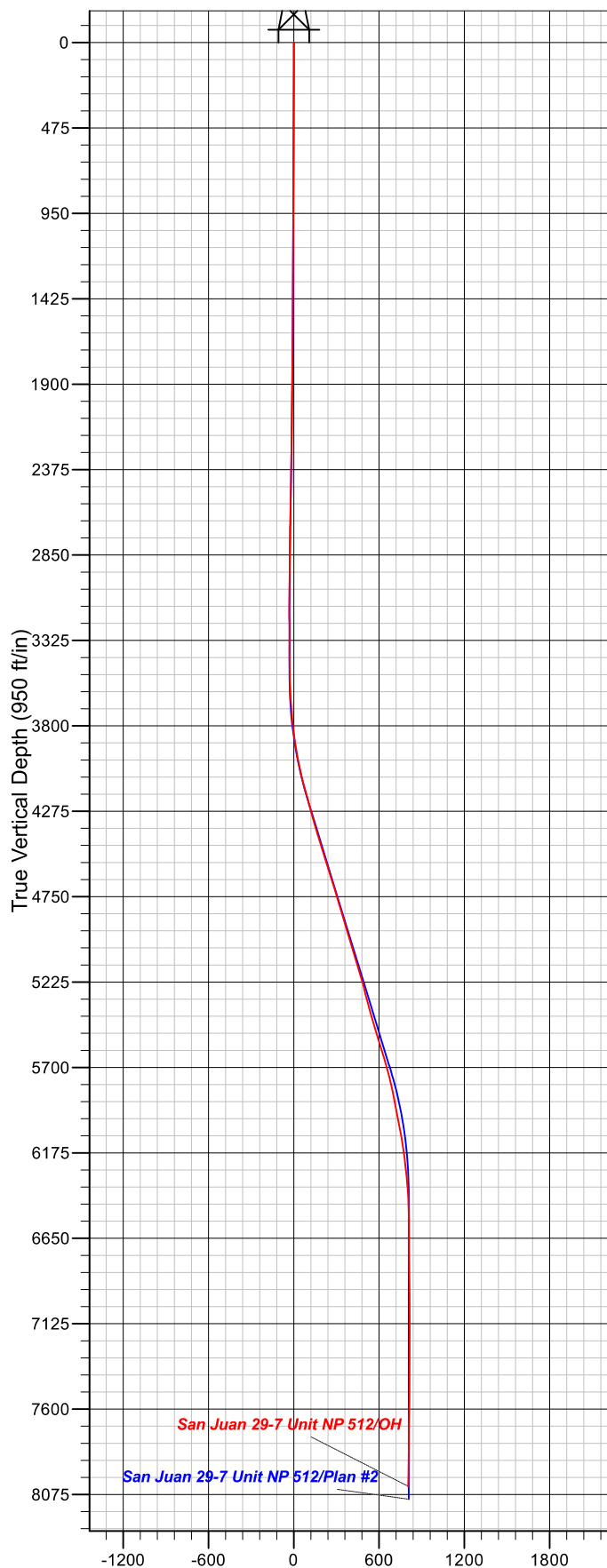
Date

Janie Collins

Rockies Region Well Planner
Scientific Drilling - Rocky Mountain District



Company: Hilcorp Energy - San Juan Basin
 Project: Rio Arriba, NM NAD27
 Site: San Juan 29-7 Unit NP 512 Pad
 Well: San Juan 29-7 Unit NP 512
 Wellbore: OH
 Design: OH



Well Details: San Juan 29-7 Unit NP 512

		TVD Reference: GL 6673' & RKB 17' @ 6690.00ft (Drake 3)				Slot
+N/-S	+E/-W	Northings	Easting	Latitude	Longitude	
0.00	0.00	2079492.47	565233.91	36.7147300	-107.6107700	

PROJECT DETAILS: Rio Arriba, 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

Plan: OH

10:52, August 29 2024
 Created By: Janie Collins



Hilcorp Energy - San Juan Basin

Rio Arriba, NM NAD27

San Juan 29-7 Unit NP 512 Pad

San Juan 29-7 Unit NP 512

OH

Design: OH

Standard Survey Report

29 August, 2024



Scientific Drilling

www.scientificdrilling.com





Scientific Drilling Survey Report



Company:	Hilcorp Energy - San Juan Basin	Local Co-ordinate Reference:	Well San Juan 29-7 Unit NP 512
Project:	Rio Arriba, NM NAD27	TVD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Site:	San Juan 29-7 Unit NP 512 Pad	MD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Well:	San Juan 29-7 Unit NP 512	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction

Project	Rio Arriba, 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 29-7 Unit NP 512 Pad				
Site Position:		Northing:	2,079,492.46 usft	Latitude:	36.7147300
From:	Lat/Long	Easting:	565,233.91 usft	Longitude:	-107.6107700
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	0.13 °

Well		San Juan 29-7 Unit NP 512				
Well Position	+N/-S	0.00 ft	Northing:	2,079,492.46 usft	Latitude:	36.7147300
	+E/-W	0.00 ft	Easting:	565,233.91 usft	Longitude:	-107.6107700
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,673.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2024	8/12/2024	8.47	63.08	49,162.00000000

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	344.820	

Survey Program	Date	8/21/2024			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
98.56	3,401.85	Survey #2 - Gyro Survey (OH)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
3,467.00	8,165.00	Survey #3 - MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	

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	
98.56	0.27	259.540	98.56	-0.04	-0.23	0.02	0.27	0.27	0.00	
124.83	0.33	267.520	124.83	-0.06	-0.36	0.04	0.28	0.23	30.38	
148.82	0.41	260.970	148.82	-0.07	-0.52	0.07	0.38	0.33	-27.30	
174.25	0.50	248.250	174.25	-0.13	-0.71	0.06	0.53	0.35	-50.02	
200.25	0.46	239.430	200.25	-0.22	-0.91	0.02	0.32	-0.15	-33.92	
223.48	0.49	231.730	223.48	-0.33	-1.07	-0.04	0.30	0.13	-33.15	
250.05	0.44	221.810	250.05	-0.48	-1.22	-0.14	0.36	-0.19	-37.34	
273.76	0.43	235.370	273.75	-0.60	-1.36	-0.22	0.44	-0.04	57.19	
297.75	0.37	239.450	297.74	-0.69	-1.50	-0.27	0.28	-0.25	17.01	



Scientific Drilling

Survey Report



Company:	Hilcorp Energy - San Juan Basin	Local Co-ordinate Reference:	Well San Juan 29-7 Unit NP 512
Project:	Rio Arriba, NM NAD27	TVD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Site:	San Juan 29-7 Unit NP 512 Pad	MD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Well:	San Juan 29-7 Unit NP 512	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction

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)
324.55	0.43	248.670	324.54	-0.77	-1.67	-0.31	0.33	0.22	34.40
348.60	0.62	252.450	348.59	-0.84	-1.87	-0.32	0.80	0.79	15.72
375.57	0.68	247.760	375.56	-0.95	-2.16	-0.35	0.30	0.22	-17.39
400.09	0.80	241.650	400.08	-1.08	-2.45	-0.40	0.59	0.49	-24.92
424.81	0.83	239.250	424.80	-1.25	-2.75	-0.49	0.18	0.12	-9.71
449.41	0.72	233.050	449.39	-1.44	-3.03	-0.60	0.56	-0.45	-25.20
473.34	0.72	235.380	473.32	-1.61	-3.27	-0.70	0.12	0.00	9.74
500.04	0.72	243.010	500.02	-1.79	-3.56	-0.79	0.36	0.00	28.58
524.15	0.85	243.670	524.13	-1.93	-3.85	-0.86	0.54	0.54	2.74
547.85	0.97	247.050	547.82	-2.09	-4.20	-0.92	0.55	0.51	14.26
572.50	1.01	244.130	572.47	-2.27	-4.58	-0.99	0.26	0.16	-11.85
597.24	1.13	240.090	597.21	-2.48	-4.99	-1.09	0.57	0.49	-16.33
625.02	1.09	233.910	624.98	-2.78	-5.44	-1.25	0.45	-0.14	-22.25
649.49	1.00	232.170	649.45	-3.04	-5.80	-1.42	0.39	-0.37	-7.11
674.20	1.04	232.050	674.15	-3.31	-6.15	-1.59	0.16	0.16	-0.49
698.05	0.98	239.610	698.00	-3.55	-6.49	-1.73	0.61	-0.25	31.70
722.47	1.03	243.290	722.42	-3.75	-6.87	-1.82	0.33	0.20	15.07
747.30	1.09	244.960	747.24	-3.95	-7.28	-1.91	0.27	0.24	6.73
775.74	1.29	242.430	775.68	-4.22	-7.81	-2.02	0.73	0.70	-8.90
799.60	1.32	239.160	799.53	-4.48	-8.29	-2.16	0.34	0.13	-13.70
824.18	1.43	236.760	824.10	-4.80	-8.79	-2.33	0.51	0.45	-9.76
848.71	1.36	235.330	848.63	-5.13	-9.28	-2.52	0.32	-0.29	-5.83
872.67	1.27	231.290	872.58	-5.46	-9.72	-2.72	0.54	-0.38	-16.86
897.04	1.18	231.210	896.94	-5.78	-10.13	-2.93	0.37	-0.37	-0.33
925.57	1.24	236.650	925.47	-6.14	-10.62	-3.14	0.45	0.21	19.07
949.48	1.35	237.740	949.37	-6.43	-11.07	-3.31	0.47	0.46	4.56
975.74	1.46	239.570	975.62	-6.76	-11.62	-3.49	0.45	0.42	6.97
997.24	1.55	235.870	997.12	-7.07	-12.10	-3.65	0.62	0.42	-17.21
1,022.79	1.58	235.260	1,022.66	-7.46	-12.67	-3.88	0.13	0.12	-2.39
1,050.91	1.51	234.200	1,050.77	-7.90	-13.29	-4.14	0.27	-0.25	-3.77
1,075.59	1.42	238.410	1,075.44	-8.25	-13.82	-4.34	0.57	-0.36	17.06
1,096.74	1.53	242.400	1,096.58	-8.52	-14.29	-4.48	0.71	0.52	18.87
1,121.53	1.49	247.460	1,121.36	-8.79	-14.88	-4.59	0.56	-0.16	20.41
1,150.42	1.56	252.280	1,150.24	-9.06	-15.60	-4.66	0.51	0.24	16.68
1,175.58	1.66	250.480	1,175.39	-9.28	-16.27	-4.70	0.45	0.40	-7.15
1,200.61	1.74	250.670	1,200.41	-9.53	-16.97	-4.75	0.32	0.32	0.76
1,224.58	1.74	248.130	1,224.37	-9.79	-17.65	-4.82	0.32	0.00	-10.60
1,249.63	1.69	244.420	1,249.41	-10.09	-18.34	-4.93	0.49	-0.20	-14.81
1,274.46	1.63	242.610	1,274.23	-10.41	-18.98	-5.07	0.32	-0.24	-7.29
1,298.79	1.56	242.410	1,298.55	-10.72	-19.58	-5.22	0.29	-0.29	-0.82
1,323.74	1.57	243.310	1,323.49	-11.03	-20.19	-5.36	0.11	0.04	3.61
1,348.66	1.62	247.380	1,348.40	-11.32	-20.82	-5.47	0.50	0.20	16.33
1,372.77	1.61	248.270	1,372.50	-11.58	-21.45	-5.56	0.11	-0.04	3.69



Scientific Drilling

Survey Report



Company:	Hilcorp Energy - San Juan Basin	Local Co-ordinate Reference:	Well San Juan 29-7 Unit NP 512
Project:	Rio Arriba, NM NAD27	TVD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Site:	San Juan 29-7 Unit NP 512 Pad	MD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Well:	San Juan 29-7 Unit NP 512	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction

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)
1,397.99	1.70	249.610	1,397.71	-11.84	-22.13	-5.63	0.39	0.36	5.31
1,422.99	1.85	248.560	1,422.70	-12.11	-22.85	-5.71	0.61	0.60	-4.20
1,447.11	1.72	245.190	1,446.81	-12.41	-23.54	-5.81	0.69	-0.54	-13.97
1,471.97	1.66	242.130	1,471.66	-12.73	-24.20	-5.95	0.44	-0.24	-12.31
1,497.88	1.54	238.640	1,497.56	-13.09	-24.83	-6.13	0.60	-0.46	-13.47
1,522.04	1.43	233.080	1,521.71	-13.44	-25.35	-6.33	0.75	-0.46	-23.01
1,546.97	1.37	231.700	1,546.63	-13.81	-25.83	-6.57	0.28	-0.24	-5.54
1,572.03	1.49	232.600	1,571.68	-14.20	-26.32	-6.81	0.49	0.48	3.59
1,596.14	1.37	237.020	1,595.78	-14.54	-26.81	-7.01	0.68	-0.50	18.33
1,625.17	1.55	235.540	1,624.80	-14.95	-27.43	-7.25	0.63	0.62	-5.10
1,650.21	1.55	232.130	1,649.84	-15.35	-27.98	-7.49	0.37	0.00	-13.62
1,675.13	1.48	229.630	1,674.75	-15.77	-28.49	-7.76	0.39	-0.28	-10.03
1,699.15	1.54	226.100	1,698.76	-16.19	-28.96	-8.05	0.46	0.25	-14.70
1,723.53	1.48	221.320	1,723.13	-16.66	-29.40	-8.38	0.57	-0.25	-19.61
1,748.07	1.35	223.230	1,747.66	-17.11	-29.81	-8.70	0.56	-0.53	7.78
1,775.41	1.25	224.180	1,775.00	-17.55	-30.24	-9.02	0.37	-0.37	3.47
1,799.95	1.30	229.460	1,799.53	-17.93	-30.63	-9.28	0.52	0.20	21.52
1,824.46	1.36	232.780	1,824.03	-18.28	-31.08	-9.51	0.40	0.24	13.55
1,848.10	1.53	236.130	1,847.67	-18.63	-31.56	-9.71	0.80	0.72	14.17
1,872.60	1.62	240.420	1,872.16	-18.98	-32.13	-9.91	0.61	0.37	17.51
1,900.91	1.83	240.810	1,900.45	-19.40	-32.88	-10.11	0.74	0.74	1.38
1,925.46	1.90	235.110	1,924.99	-19.82	-33.55	-10.35	0.81	0.29	-23.22
1,949.20	1.88	229.250	1,948.72	-20.30	-34.17	-10.65	0.82	-0.08	-24.68
1,973.59	1.68	221.910	1,973.10	-20.83	-34.71	-11.01	1.24	-0.82	-30.09
1,998.15	1.67	220.350	1,997.65	-21.37	-35.19	-11.41	0.19	-0.04	-6.35
2,022.44	1.61	218.310	2,021.93	-21.91	-35.63	-11.82	0.34	-0.25	-8.40
2,050.73	1.56	221.560	2,050.20	-22.51	-36.13	-12.26	0.36	-0.18	11.49
2,075.15	1.59	224.250	2,074.62	-23.00	-36.58	-12.62	0.33	0.12	11.02
2,099.67	1.54	224.480	2,099.13	-23.48	-37.05	-12.96	0.21	-0.20	0.94
2,123.39	1.75	221.720	2,122.84	-23.98	-37.52	-13.32	0.95	0.89	-11.64
2,147.70	1.90	222.540	2,147.13	-24.55	-38.04	-13.73	0.63	0.62	3.37
2,172.24	2.07	222.260	2,171.66	-25.18	-38.61	-14.19	0.69	0.69	-1.14
2,196.54	2.07	218.340	2,195.94	-25.85	-39.18	-14.69	0.58	0.00	-16.13
2,224.98	2.09	217.190	2,224.36	-26.66	-39.81	-15.31	0.16	0.07	-4.04
2,249.55	2.07	217.320	2,248.92	-27.37	-40.35	-15.85	0.08	-0.08	0.53
2,274.77	2.09	219.240	2,274.12	-28.09	-40.92	-16.40	0.29	0.08	7.61
2,299.13	2.12	219.930	2,298.47	-28.78	-41.49	-16.91	0.16	0.12	2.83
2,324.09	2.07	221.250	2,323.41	-29.47	-42.08	-17.43	0.28	-0.20	5.29
2,348.52	1.85	219.030	2,347.82	-30.11	-42.62	-17.90	0.95	-0.90	-9.09
2,373.59	1.87	220.620	2,372.88	-30.74	-43.14	-18.37	0.22	0.08	6.34
2,399.12	2.03	223.480	2,398.40	-31.38	-43.72	-18.84	0.73	0.63	11.20
2,424.30	2.00	224.460	2,423.56	-32.02	-44.34	-19.29	0.18	-0.12	3.89
2,448.67	2.04	224.220	2,447.92	-32.63	-44.94	-19.73	0.17	0.16	-0.98



Scientific Drilling Survey Report



Company:	Hilcorp Energy - San Juan Basin	Local Co-ordinate Reference:	Well San Juan 29-7 Unit NP 512
Project:	Rio Arriba, NM NAD27	TVD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Site:	San Juan 29-7 Unit NP 512 Pad	MD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Well:	San Juan 29-7 Unit NP 512	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction

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)	
2,474.01	2.09	223.890	2,473.24	-33.29	-45.57	-20.19	0.20	0.20	-1.30	
2,499.36	2.05	222.700	2,498.57	-33.96	-46.20	-20.67	0.23	-0.16	-4.69	
2,523.74	1.95	219.990	2,522.94	-34.59	-46.76	-21.14	0.56	-0.41	-11.12	
2,548.97	1.85	214.560	2,548.15	-35.26	-47.27	-21.65	0.82	-0.40	-21.52	
2,574.34	1.92	211.900	2,573.51	-35.96	-47.73	-22.20	0.44	0.28	-10.48	
2,598.84	1.72	207.970	2,598.00	-36.63	-48.12	-22.75	0.96	-0.82	-16.04	
2,624.10	1.70	211.660	2,623.25	-37.28	-48.49	-23.29	0.44	-0.08	14.61	
2,649.37	1.55	211.310	2,648.51	-37.89	-48.86	-23.78	0.59	-0.59	-1.39	
2,673.86	1.55	214.940	2,672.99	-38.45	-49.23	-24.22	0.40	0.00	14.82	
2,698.99	1.50	217.270	2,698.11	-38.99	-49.62	-24.64	0.32	-0.20	9.27	
2,724.37	1.48	220.020	2,723.48	-39.50	-50.03	-25.03	0.29	-0.08	10.84	
2,748.86	1.54	220.620	2,747.96	-40.00	-50.45	-25.39	0.25	0.24	2.45	
2,774.12	1.84	222.960	2,773.21	-40.55	-50.95	-25.80	1.22	1.19	9.26	
2,800.12	1.96	222.680	2,799.20	-41.18	-51.53	-26.25	0.46	0.46	-1.08	
2,824.03	1.98	226.790	2,823.09	-41.77	-52.11	-26.66	0.60	0.08	17.19	
2,849.22	1.97	230.010	2,848.27	-42.34	-52.76	-27.05	0.44	-0.04	12.78	
2,874.51	2.05	234.180	2,873.54	-42.89	-53.46	-27.39	0.66	0.32	16.49	
2,899.09	2.01	233.890	2,898.11	-43.40	-54.16	-27.70	0.17	-0.16	-1.18	
2,924.43	1.88	229.550	2,923.43	-43.93	-54.84	-28.04	0.77	-0.51	-17.13	
2,949.89	1.91	228.600	2,948.88	-44.48	-55.48	-28.40	0.17	0.12	-3.73	
2,974.52	1.78	227.850	2,973.49	-45.01	-56.07	-28.76	0.54	-0.53	-3.05	
2,999.95	1.54	227.870	2,998.91	-45.50	-56.61	-29.09	0.94	-0.94	0.08	
3,025.43	1.55	232.450	3,024.39	-45.94	-57.14	-29.38	0.49	0.04	17.97	
3,050.35	1.43	231.920	3,049.30	-46.34	-57.65	-29.63	0.48	-0.48	-2.13	
3,075.72	1.48	235.380	3,074.66	-46.72	-58.17	-29.86	0.40	0.20	13.64	
3,100.73	1.41	237.770	3,099.66	-47.07	-58.70	-30.06	0.37	-0.28	9.56	
3,123.57	1.30	241.520	3,122.49	-47.34	-59.16	-30.20	0.62	-0.48	16.42	
3,150.21	1.39	250.280	3,149.13	-47.60	-59.73	-30.29	0.84	0.34	32.88	
3,175.43	1.47	256.370	3,174.34	-47.78	-60.34	-30.31	0.68	0.32	24.15	
3,200.00	1.53	263.220	3,198.90	-47.89	-60.97	-30.25	0.77	0.24	27.88	
3,225.26	1.55	268.460	3,224.15	-47.94	-61.64	-30.12	0.56	0.08	20.74	
3,250.27	1.26	268.800	3,249.15	-47.95	-62.26	-29.98	1.16	-1.16	1.36	
3,275.26	1.09	273.980	3,274.14	-47.94	-62.77	-29.83	0.80	-0.68	20.73	
3,299.87	0.78	264.440	3,298.75	-47.94	-63.17	-29.73	1.41	-1.26	-38.76	
3,325.02	0.72	258.200	3,323.89	-47.99	-63.49	-29.69	0.40	-0.24	-24.81	
3,349.47	0.44	263.750	3,348.34	-48.03	-63.74	-29.67	1.17	-1.15	22.70	
3,375.20	0.51	221.950	3,374.07	-48.13	-63.91	-29.71	1.34	0.27	-162.46	
3,400.57	0.43	220.550	3,399.44	-48.28	-64.05	-29.83	0.32	-0.32	-5.52	
3,401.85	0.43	220.630	3,400.72	-48.29	-64.06	-29.83	0.05	0.00	6.25	
3,467.00	0.61	239.320	3,465.87	-48.65	-64.51	-30.06	0.38	0.28	28.69	
3,530.00	2.09	328.760	3,528.85	-47.84	-65.40	-29.05	3.45	2.35	141.97	
3,592.00	3.63	347.610	3,590.77	-44.96	-66.41	-26.00	2.88	2.48	30.40	
3,655.00	4.92	353.120	3,653.60	-40.33	-67.16	-21.34	2.15	2.05	8.75	
3,717.00	6.07	353.880	3,715.31	-34.43	-67.83	-15.47	1.86	1.85	1.23	



Scientific Drilling Survey Report



Company:	Hilcorp Energy - San Juan Basin	Local Co-ordinate Reference:	Well San Juan 29-7 Unit NP 512
Project:	Rio Arriba, NM NAD27	TVD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Site:	San Juan 29-7 Unit NP 512 Pad	MD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Well:	San Juan 29-7 Unit NP 512	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction

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)
3,780.00	7.29	351.730	3,777.88	-27.16	-68.76	-8.21	1.98	1.94	-3.41
3,844.00	8.98	349.800	3,841.24	-18.23	-70.22	0.80	2.67	2.64	-3.02
3,908.00	10.71	353.700	3,904.29	-7.40	-71.76	11.65	2.90	2.70	6.09
3,971.00	12.80	352.170	3,965.97	5.33	-73.35	24.36	3.35	3.32	-2.43
4,033.00	15.49	349.700	4,026.08	20.29	-75.77	39.42	4.45	4.34	-3.98
4,096.00	17.15	345.690	4,086.55	37.57	-79.57	57.09	3.18	2.63	-6.37
4,159.00	19.26	346.520	4,146.39	56.67	-84.29	76.77	3.37	3.35	1.32
4,221.00	19.02	346.360	4,204.96	76.43	-89.06	97.09	0.40	-0.39	-0.26
4,282.00	18.07	348.100	4,262.79	95.35	-93.35	116.47	1.80	-1.56	2.85
4,345.00	19.97	349.510	4,322.35	115.49	-97.32	136.95	3.10	3.02	2.24
4,408.00	21.38	350.970	4,381.29	137.41	-101.09	159.09	2.38	2.24	2.32
4,471.00	22.13	351.300	4,439.81	160.48	-104.68	182.30	1.21	1.19	0.52
4,534.00	20.66	351.070	4,498.46	183.19	-108.20	205.14	2.34	-2.33	-0.37
4,597.00	21.21	352.580	4,557.30	205.48	-111.40	227.48	1.22	0.87	2.40
4,659.00	22.95	351.960	4,614.75	228.57	-114.54	250.58	2.83	2.81	-1.00
4,722.00	21.82	349.680	4,673.01	252.25	-118.36	274.44	2.26	-1.79	-3.62
4,785.00	20.13	349.590	4,731.83	274.43	-122.41	296.91	2.68	-2.68	-0.14
4,848.00	21.33	350.570	4,790.75	296.40	-126.25	319.11	1.98	1.90	1.56
4,911.00	20.76	351.480	4,849.55	318.74	-129.78	341.61	1.04	-0.90	1.44
4,974.00	20.58	350.320	4,908.49	340.70	-133.30	363.72	0.71	-0.29	-1.84
5,036.00	20.62	348.150	4,966.53	362.13	-137.37	385.46	1.23	0.06	-3.50
5,099.00	20.14	347.700	5,025.59	383.58	-141.96	407.37	0.80	-0.76	-0.71
5,163.00	21.49	351.040	5,085.41	405.93	-146.13	430.03	2.81	2.11	5.22
5,226.00	21.69	352.070	5,143.99	428.86	-149.54	453.05	0.68	0.32	1.63
5,289.00	20.34	352.710	5,202.80	451.25	-152.53	475.45	2.17	-2.14	1.02
5,352.00	17.33	354.800	5,262.42	471.46	-154.77	495.54	4.90	-4.78	3.32
5,415.00	18.77	353.940	5,322.32	490.88	-156.69	514.79	2.32	2.29	-1.37
5,476.00	19.68	352.600	5,379.92	510.83	-159.05	534.65	1.66	1.49	-2.20
5,539.00	21.16	351.860	5,438.95	532.61	-162.03	556.45	2.38	2.35	-1.17
5,602.00	20.28	351.980	5,497.88	554.68	-165.16	578.57	1.40	-1.40	0.19
5,664.00	20.51	352.020	5,555.99	576.07	-168.17	600.01	0.37	0.37	0.06
5,727.00	21.73	353.050	5,614.76	598.58	-171.11	622.50	2.02	1.94	1.63
5,790.00	21.11	353.130	5,673.41	621.42	-173.88	645.27	0.99	-0.98	0.13
5,853.00	18.85	353.990	5,732.61	642.81	-176.30	666.54	3.62	-3.59	1.37
5,915.00	15.99	353.440	5,791.76	661.26	-178.33	684.88	4.62	-4.61	-0.89
5,980.00	13.66	351.710	5,854.60	677.75	-180.46	701.35	3.65	-3.58	-2.66
6,043.00	13.03	347.250	5,915.90	692.04	-183.10	715.83	1.92	-1.00	-7.08
6,106.00	14.68	344.250	5,977.06	706.65	-186.83	730.91	2.86	2.62	-4.76
6,169.00	13.77	343.060	6,038.13	721.50	-191.18	746.39	1.52	-1.44	-1.89
6,232.00	11.89	341.890	6,099.55	734.84	-195.39	760.37	3.01	-2.98	-1.86
6,294.00	10.20	340.320	6,160.40	746.09	-199.22	772.22	2.77	-2.73	-2.53
6,357.00	8.53	342.970	6,222.56	755.81	-202.47	782.45	2.74	-2.65	4.21
6,419.00	7.41	344.510	6,283.96	764.06	-204.88	791.04	1.84	-1.81	2.48



Scientific Drilling Survey Report



Company:	Hilcorp Energy - San Juan Basin	Local Co-ordinate Reference:	Well San Juan 29-7 Unit NP 512
Project:	Rio Arriba, NM NAD27	TVD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Site:	San Juan 29-7 Unit NP 512 Pad	MD Reference:	GL 6673' & RKB 17' @ 6690.00ft (Drake 3)
Well:	San Juan 29-7 Unit NP 512	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Grand Junction

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)
6,482.00	6.36	341.540	6,346.51	771.28	-207.07	798.59	1.76	-1.67	-4.71
6,544.00	4.31	343.160	6,408.23	776.77	-208.83	804.35	3.32	-3.31	2.61
6,607.00	2.93	343.480	6,471.11	780.58	-209.98	808.32	2.19	-2.19	0.51
6,668.00	1.41	336.770	6,532.06	782.76	-210.72	810.63	2.52	-2.49	-11.00
6,731.00	0.35	286.940	6,595.05	783.53	-211.21	811.50	1.93	-1.68	-79.10
6,793.00	0.56	293.280	6,657.05	783.71	-211.67	811.79	0.35	0.34	10.23
6,855.00	0.68	285.060	6,719.05	783.92	-212.30	812.16	0.24	0.19	-13.26
6,918.00	0.83	289.910	6,782.04	784.17	-213.09	812.61	0.26	0.24	7.70
6,981.00	1.01	305.320	6,845.04	784.65	-213.97	813.30	0.48	0.29	24.46
7,044.00	0.79	317.170	6,908.03	785.29	-214.72	814.11	0.46	-0.35	18.81
7,108.00	0.57	336.660	6,972.02	785.91	-215.15	814.82	0.49	-0.34	30.45
7,171.00	0.62	355.370	7,035.02	786.53	-215.30	815.47	0.32	0.08	29.70
7,234.00	0.24	44.680	7,098.02	786.97	-215.23	815.87	0.79	-0.60	78.27
7,297.00	0.26	119.880	7,161.02	786.99	-215.02	815.83	0.48	0.03	119.37
7,360.00	0.30	152.180	7,224.02	786.77	-214.81	815.57	0.25	0.06	51.27
7,423.00	0.34	193.480	7,287.02	786.44	-214.78	815.24	0.36	0.06	65.56
7,486.00	0.23	267.060	7,350.02	786.26	-214.95	815.11	0.56	-0.17	116.79
7,549.00	0.48	159.990	7,413.01	786.00	-214.99	814.87	0.94	0.40	-169.95
7,612.00	0.76	137.850	7,476.01	785.44	-214.62	814.24	0.58	0.44	-35.14
7,675.00	0.91	127.370	7,539.00	784.83	-213.94	813.47	0.34	0.24	-16.63
7,737.00	0.99	133.170	7,601.00	784.17	-213.16	812.62	0.20	0.13	9.35
7,800.00	0.92	131.910	7,663.99	783.45	-212.38	811.73	0.12	-0.11	-2.00
7,863.00	0.97	137.580	7,726.98	782.72	-211.65	810.83	0.17	0.08	9.00
7,926.00	0.88	129.750	7,789.97	782.02	-210.92	809.96	0.25	-0.14	-12.43
7,989.00	1.00	126.310	7,852.96	781.39	-210.10	809.14	0.21	0.19	-5.46
8,052.00	1.03	134.280	7,915.95	780.66	-209.25	808.22	0.23	0.05	12.65
8,112.00	1.21	149.490	7,975.94	779.74	-208.54	807.14	0.58	0.30	25.35
8,165.00	1.21	149.490	8,028.93	778.78	-207.98	806.06	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

ACKNOWLEDGMENTS

Action 387939

ACKNOWLEDGMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 387939
	Action Type: [C-104] Completion Packet - Test Allowable (C-104RT)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.
☒	I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

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CONDITIONS

Action 387939

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 387939
	Action Type: [C-104] Completion Packet - Test Allowable (C-104RT)

CONDITIONS

Created By	Condition	Condition Date
smcgrath	RT approved for Blanco-Mesaverde Pool (72319), DHC may not take place until DHC approved. RT Expires 12/28/2024.	9/27/2024