

Well Name: RINCON UNIT	Well Location: T27N / R6W / SEC 21 / NENE / 36.564026 / -107.467723	County or Parish/State: RIO ARRIBA / NM
Well Number: 613H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name: EASTERN NAVAJO
Lease Number: NMSF0079052, NMSF079366	Unit or CA Name: RINCON UNIT--STATE	Unit or CA Number: NMNM78406X
US Well Number: 3003931371	Well Status: Approved Application for Permit to Drill	Operator: ENDURING RESOURCES LLC

Notice of Intent

Sundry ID: 2668538

Type of Submission: Notice of Intent

Date Sundry Submitted: 04/25/2022

Date proposed operation will begin: 08/01/2022

Type of Action: Drilling Operations

Time Sundry Submitted: 04:57

Procedure Description: Enduring Resources requests to change the BHL of the RINCON UNIT 613H well per the attached updated C-102 Plat, Directional Plan, Drill Prog, and Wellbore Diagram.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- Rincon_Unit_613H_Revised_C_102_Plat_Signed_04192022_20220425165655.pdf
- Rincon_Unit_613H_Directional_Plan_04202022_20220425165655.pdf
- RINU_613H_Drill_Prog_updated_04222022_20220425165655.pdf
- RINU_613H_WBD_updated_04222022_20220425165655.pdf

Well Name: RINCON UNIT	Well Location: T27N / R6W / SEC 21 / NENE / 36.564026 / -107.467723	County or Parish/State: RIO ARRIBA / NM
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US Well Number: 3003931371	Well Status: Approved Application for Permit to Drill	Operator: ENDURING RESOURCES LLC

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: KHEM SUTHIWAN	Signed on: APR 25, 2022 04:57 PM
Name: ENDURING RESOURCES LLC	
Title: Regulatory Manager	
Street Address: 6300 S WAY SUITE 525	
City: DENVER	State: CO
Phone: (303) 350-5721	
Email address: KSUTHIWAN@ENDURINGRESOURCES.COM	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

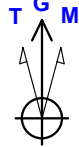
BLM Point of Contact

BLM POC Name: KENNETH G RENNICK	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5055647742	BLM POC Email Address: krennick@blm.gov
Disposition: Approved	Disposition Date: 04/26/2022
Signature: Kenneth Rennick	





Well: Rincon Unit 613H
Site: Rincon pad (613, 615, 713 & 715)
Project: Rio Arriba County, New Mexico NAD83 NM W
Design: rev0
Rig:



Azimuths to Grid North
True North: -0.22°
Magnetic North: 8.42°

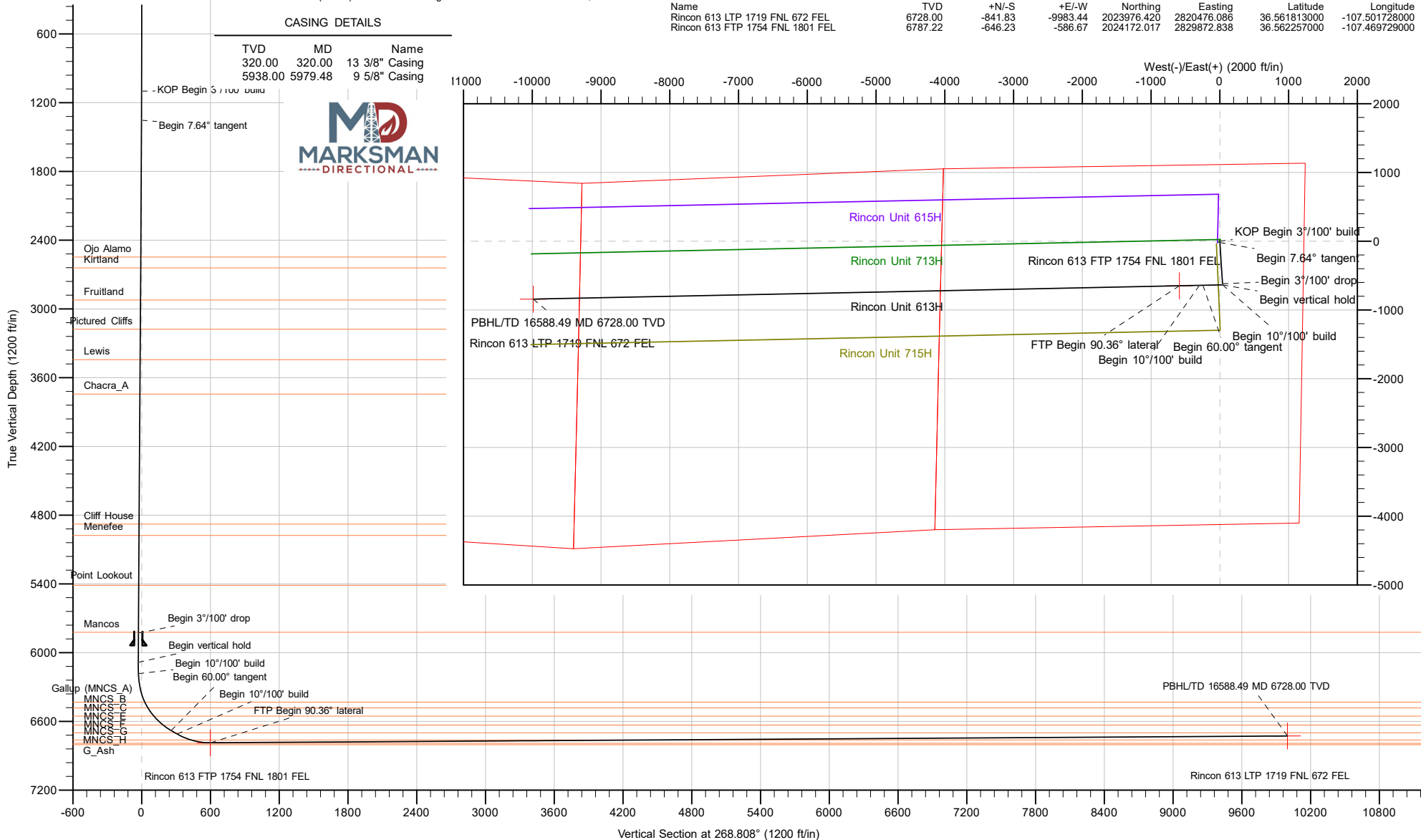
Magnetic Field
Strength: 49449.2nT
Dip Angle: 63.07°
Date: 4/19/2022
Model: IGRF2020

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6538+25 @ 6563.00ft
Surface location:
Northing: 2024818.245
Easting: 2830459.503
Latitude: 36.564026000
Longitude: -107.467723000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.42°

CASING DETAILS

TVD	MD	Name
320.00	320.00	13 3/8" Casing
5938.00	5979.48	9 5/8" Casing



Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	1100.00	0.00	0.000	1100.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1354.73	7.64	176.230	1353.97	-16.93	1.12	3.00	176.23	-0.76	Begin 7.64° tangent
4	5871.16	7.64	176.230	5830.30	-616.22	40.60	0.00	0.00	-27.77	Begin 3°/100' drop
5	6125.89	0.00	359.057	6084.27	-633.15	41.72	3.00	180.00	-28.54	Begin vertical hold
6	6225.89	0.00	359.057	6184.27	-633.15	41.72	0.00	359.06	-28.54	Begin 10°/100' build
7	6825.89	60.00	268.808	6680.47	-639.11	-244.70	10.00	268.81	257.94	Begin 60.00° tangent
8	6885.89	60.00	268.808	6710.47	-640.19	-296.65	0.00	0.00	309.90	Begin 10°/100' build
9	7189.50	90.36	268.808	6787.22	-646.23	-586.67	10.00	0.00	599.99	FTP Begin 90.36° lateral
10	16588.49	90.36	268.808	6728.00	-841.83	-9983.44	0.00	0.00	9998.79	PBHL/TD 16588.49 MD 6728.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Rincon 613 LTP 1719 FNL 672 FEL	6728.00	-841.83	-9983.44	2023976.420	2820476.086	36.561813000	-107.501728000
Rincon 613 FTP 1754 FNL 1801 FEL	6787.22	-646.23	-586.67	2024172.017	2829872.838	36.562257000	-107.469729000

Vertical Section at 268.808° (1200 ft/in)



Planning Report

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	Rio Arriba County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Rincon pad (613, 615, 713 & 715)				
Site Position:		Northing:	2,024,818.244 usft	Latitude:	36.564026000
From:	Lat/Long	Easting:	2,830,459.503 usft	Longitude:	-107.467723000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Rincon Unit 613H, Surf loc: 1117 FNL 1225 FEL Section 21-T27N-R06W					
Well Position	+N/-S	0.00 ft	Northing:	2,024,818.244 usft	Latitude:	36.564026000
	+E/-W	0.00 ft	Easting:	2,830,459.503 usft	Longitude:	-107.467723000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,538.00 ft
Grid Convergence:		0.22 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/19/2022	8.64	63.07	49,449.18279502

Design	rev0				
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	268.808	

Plan Survey Tool Program	Date	4/20/2022			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,588.49	rev0 (Original Hole)	MWD	
				OWSG MWD - Standard	



Planning Report

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Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,354.73	7.64	176.230	1,353.97	-16.93	1.12	3.00	3.00	0.00	176.23	
5,871.16	7.64	176.230	5,830.30	-616.22	40.60	0.00	0.00	0.00	0.00	
6,125.89	0.00	359.057	6,084.27	-633.15	41.72	3.00	-3.00	0.00	180.00	
6,225.89	0.00	359.057	6,184.27	-633.15	41.72	0.00	0.00	0.00	359.06	
6,825.89	60.00	268.808	6,680.47	-639.11	-244.70	10.00	10.00	0.00	268.81	
6,885.89	60.00	268.808	6,710.47	-640.19	-296.65	0.00	0.00	0.00	0.00	
7,189.50	90.36	268.808	6,787.22	-646.23	-586.67	10.00	10.00	0.00	0.00	
16,588.49	90.36	268.808	6,728.00	-841.83	-9,983.44	0.00	0.00	0.00	0.00	Rincon 613 LTP 1719



Planning Report

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Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
1,200.00	3.00	176.230	1,199.95	-2.61	0.17	-0.12	3.00	3.00	0.00
1,300.00	6.00	176.230	1,299.63	-10.44	0.69	-0.47	3.00	3.00	0.00
1,354.73	7.64	176.230	1,353.97	-16.93	1.12	-0.76	3.00	3.00	0.00
Begin 7.64° tangent									
1,400.00	7.64	176.230	1,398.84	-22.93	1.51	-1.03	0.00	0.00	0.00
1,500.00	7.64	176.230	1,497.96	-36.20	2.39	-1.63	0.00	0.00	0.00
1,600.00	7.64	176.230	1,597.07	-49.47	3.26	-2.23	0.00	0.00	0.00
1,700.00	7.64	176.230	1,696.18	-62.74	4.13	-2.83	0.00	0.00	0.00
1,800.00	7.64	176.230	1,795.29	-76.01	5.01	-3.43	0.00	0.00	0.00
1,900.00	7.64	176.230	1,894.40	-89.28	5.88	-4.02	0.00	0.00	0.00
2,000.00	7.64	176.230	1,993.51	-102.55	6.76	-4.62	0.00	0.00	0.00
2,100.00	7.64	176.230	2,092.63	-115.82	7.63	-5.22	0.00	0.00	0.00
2,200.00	7.64	176.230	2,191.74	-129.09	8.51	-5.82	0.00	0.00	0.00
2,300.00	7.64	176.230	2,290.85	-142.36	9.38	-6.42	0.00	0.00	0.00
2,400.00	7.64	176.230	2,389.96	-155.63	10.25	-7.01	0.00	0.00	0.00
2,500.00	7.64	176.230	2,489.07	-168.89	11.13	-7.61	0.00	0.00	0.00
2,559.45	7.64	176.230	2,548.00	-176.78	11.65	-7.97	0.00	0.00	0.00
Ojo Alamo									
2,600.00	7.64	176.230	2,588.19	-182.16	12.00	-8.21	0.00	0.00	0.00
2,655.31	7.64	176.230	2,643.00	-189.50	12.49	-8.54	0.00	0.00	0.00
Kirtland									
2,700.00	7.64	176.230	2,687.30	-195.43	12.88	-8.81	0.00	0.00	0.00
2,800.00	7.64	176.230	2,786.41	-208.70	13.75	-9.41	0.00	0.00	0.00
2,900.00	7.64	176.230	2,885.52	-221.97	14.63	-10.00	0.00	0.00	0.00
2,937.81	7.64	176.230	2,923.00	-226.99	14.96	-10.23	0.00	0.00	0.00
Fruitland									
3,000.00	7.64	176.230	2,984.63	-235.24	15.50	-10.60	0.00	0.00	0.00
3,100.00	7.64	176.230	3,083.75	-248.51	16.38	-11.20	0.00	0.00	0.00
3,195.10	7.64	176.230	3,178.00	-261.13	17.21	-11.77	0.00	0.00	0.00
Pictured Cliffs									
3,200.00	7.64	176.230	3,182.86	-261.78	17.25	-11.80	0.00	0.00	0.00
3,300.00	7.64	176.230	3,281.97	-275.05	18.12	-12.40	0.00	0.00	0.00
3,400.00	7.64	176.230	3,381.08	-288.32	19.00	-12.99	0.00	0.00	0.00
3,462.47	7.64	176.230	3,443.00	-296.61	19.54	-13.37	0.00	0.00	0.00
Lewis									
3,500.00	7.64	176.230	3,480.19	-301.59	19.87	-13.59	0.00	0.00	0.00
3,600.00	7.64	176.230	3,579.30	-314.86	20.75	-14.19	0.00	0.00	0.00
3,700.00	7.64	176.230	3,678.42	-328.13	21.62	-14.79	0.00	0.00	0.00
3,765.16	7.64	176.230	3,743.00	-336.77	22.19	-15.18	0.00	0.00	0.00
Chacra_A									



Planning Report

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Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00	7.64	176.230	3,777.53	-341.40	22.50	-15.39	0.00	0.00	0.00
3,900.00	7.64	176.230	3,876.64	-354.67	23.37	-15.98	0.00	0.00	0.00
4,000.00	7.64	176.230	3,975.75	-367.93	24.24	-16.58	0.00	0.00	0.00
4,100.00	7.64	176.230	4,074.86	-381.20	25.12	-17.18	0.00	0.00	0.00
4,200.00	7.64	176.230	4,173.98	-394.47	25.99	-17.78	0.00	0.00	0.00
4,300.00	7.64	176.230	4,273.09	-407.74	26.87	-18.38	0.00	0.00	0.00
4,400.00	7.64	176.230	4,372.20	-421.01	27.74	-18.97	0.00	0.00	0.00
4,500.00	7.64	176.230	4,471.31	-434.28	28.62	-19.57	0.00	0.00	0.00
4,600.00	7.64	176.230	4,570.42	-447.55	29.49	-20.17	0.00	0.00	0.00
4,700.00	7.64	176.230	4,669.53	-460.82	30.36	-20.77	0.00	0.00	0.00
4,800.00	7.64	176.230	4,768.65	-474.09	31.24	-21.37	0.00	0.00	0.00
4,900.00	7.64	176.230	4,867.76	-487.36	32.11	-21.96	0.00	0.00	0.00
4,910.33	7.64	176.230	4,878.00	-488.73	32.20	-22.03	0.00	0.00	0.00
Cliff House									
5,000.00	7.64	176.230	4,966.87	-500.63	32.99	-22.56	0.00	0.00	0.00
5,011.23	7.64	176.230	4,978.00	-502.12	33.09	-22.63	0.00	0.00	0.00
Menefee									
5,100.00	7.64	176.230	5,065.98	-513.90	33.86	-23.16	0.00	0.00	0.00
5,200.00	7.64	176.230	5,165.09	-527.17	34.74	-23.76	0.00	0.00	0.00
5,300.00	7.64	176.230	5,264.21	-540.44	35.61	-24.36	0.00	0.00	0.00
5,400.00	7.64	176.230	5,363.32	-553.70	36.49	-24.96	0.00	0.00	0.00
5,450.13	7.64	176.230	5,413.00	-560.36	36.92	-25.25	0.00	0.00	0.00
Point Lookout									
5,500.00	7.64	176.230	5,462.43	-566.97	37.36	-25.55	0.00	0.00	0.00
5,600.00	7.64	176.230	5,561.54	-580.24	38.23	-26.15	0.00	0.00	0.00
5,700.00	7.64	176.230	5,660.65	-593.51	39.11	-26.75	0.00	0.00	0.00
5,800.00	7.64	176.230	5,759.77	-606.78	39.98	-27.35	0.00	0.00	0.00
5,863.80	7.64	176.230	5,823.00	-615.25	40.54	-27.73	0.00	0.00	0.00
Mancos									
5,871.16	7.64	176.230	5,830.30	-616.22	40.60	-27.77	0.00	0.00	0.00
Begin 3°/100' drop									
5,900.00	6.78	176.230	5,858.91	-619.84	40.84	-27.94	3.00	-3.00	0.00
6,000.00	3.78	176.230	5,958.47	-629.01	41.45	-28.35	3.00	-3.00	0.00
6,100.00	0.78	176.230	6,058.38	-632.97	41.71	-28.53	3.00	-3.00	0.00
6,125.89	0.00	359.057	6,084.27	-633.15	41.72	-28.54	3.00	-3.00	0.00
Begin vertical hold									
6,200.00	0.00	0.000	6,158.38	-633.15	41.72	-28.54	0.00	0.00	0.00
6,225.89	0.00	0.000	6,184.27	-633.15	41.72	-28.54	0.00	0.00	0.00
Begin 10°/100' build									
6,250.00	2.41	268.808	6,208.37	-633.16	41.21	-28.03	10.00	10.00	0.00
6,300.00	7.41	268.808	6,258.17	-633.25	36.93	-23.75	10.00	10.00	0.00
6,350.00	12.41	268.808	6,307.41	-633.43	28.33	-15.15	10.00	10.00	0.00
6,400.00	17.41	268.808	6,355.71	-633.70	15.47	-2.28	10.00	10.00	0.00
6,450.00	22.41	268.808	6,402.71	-634.05	-1.54	14.74	10.00	10.00	0.00
6,483.18	25.73	268.808	6,433.00	-634.33	-15.07	28.27	10.00	10.00	0.00
Gallup (MNCS_A)									
6,500.00	27.41	268.808	6,448.04	-634.49	-22.59	35.79	10.00	10.00	0.00
6,540.14	31.43	268.808	6,483.00	-634.90	-42.30	55.50	10.00	10.00	0.00
MNCS_B									
6,550.00	32.41	268.808	6,491.37	-635.01	-47.51	60.72	10.00	10.00	0.00
6,600.00	37.41	268.808	6,532.36	-635.60	-76.11	89.32	10.00	10.00	0.00
6,629.08	40.32	268.808	6,555.00	-635.98	-94.36	107.57	10.00	10.00	0.00
MNCS_C									



Planning Report

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,650.00	42.41	268.808	6,570.70	-636.27	-108.17	121.39	10.00	10.00	0.00
6,700.00	47.41	268.808	6,606.10	-637.00	-143.46	156.68	10.00	10.00	0.00
6,741.42	51.55	268.808	6,633.00	-637.66	-174.93	188.16	10.00	10.00	0.00
MNCS_E									
6,750.00	52.41	268.808	6,638.28	-637.80	-181.69	194.92	10.00	10.00	0.00
6,800.00	57.41	268.808	6,667.02	-638.65	-222.58	235.82	10.00	10.00	0.00
6,825.89	60.00	268.808	6,680.47	-639.11	-244.70	257.94	10.00	10.00	0.00
Begin 60.00° tangent									
6,864.96	60.00	268.808	6,700.00	-639.82	-278.52	291.78	0.00	0.00	0.00
MNCS_F									
6,885.89	60.00	268.808	6,710.47	-640.19	-296.65	309.90	0.00	0.00	0.00
Begin 10°/100' build									
6,900.00	61.41	268.808	6,717.37	-640.45	-308.95	322.21	10.00	10.00	0.00
6,950.00	66.41	268.808	6,739.35	-641.38	-353.83	367.10	10.00	10.00	0.00
7,000.00	71.41	268.808	6,757.34	-642.35	-400.46	413.74	10.00	10.00	0.00
7,018.68	73.28	268.808	6,763.00	-642.72	-418.25	431.53	10.00	10.00	0.00
MNCS_G									
7,050.00	76.41	268.808	6,771.19	-643.35	-448.47	461.76	10.00	10.00	0.00
7,100.00	81.41	268.808	6,780.80	-644.37	-497.51	510.81	10.00	10.00	0.00
7,150.00	86.41	268.808	6,786.10	-645.41	-547.20	560.52	10.00	10.00	0.00
7,189.50	90.36	268.808	6,787.22	-646.23	-586.67	599.99	10.00	10.00	0.00
FTP Begin 90.36° lateral									
7,200.00	90.36	268.808	6,787.15	-646.45	-597.17	610.49	0.00	0.00	0.00
7,300.00	90.36	268.808	6,786.52	-648.53	-697.15	710.49	0.00	0.00	0.00
7,400.00	90.36	268.808	6,785.89	-650.61	-797.12	810.49	0.00	0.00	0.00
7,500.00	90.36	268.808	6,785.26	-652.69	-897.10	910.49	0.00	0.00	0.00
7,600.00	90.36	268.808	6,784.63	-654.77	-997.07	1,010.48	0.00	0.00	0.00
7,700.00	90.36	268.808	6,784.00	-656.85	-1,097.05	1,110.48	0.00	0.00	0.00
7,800.00	90.36	268.808	6,783.37	-658.93	-1,197.03	1,210.48	0.00	0.00	0.00
7,900.00	90.36	268.808	6,782.74	-661.02	-1,297.00	1,310.48	0.00	0.00	0.00
8,000.00	90.36	268.808	6,782.11	-663.10	-1,396.98	1,410.48	0.00	0.00	0.00
8,100.00	90.36	268.808	6,781.48	-665.18	-1,496.96	1,510.47	0.00	0.00	0.00
8,200.00	90.36	268.808	6,780.85	-667.26	-1,596.93	1,610.47	0.00	0.00	0.00
8,300.00	90.36	268.808	6,780.22	-669.34	-1,696.91	1,710.47	0.00	0.00	0.00
8,400.00	90.36	268.808	6,779.59	-671.42	-1,796.89	1,810.47	0.00	0.00	0.00
8,500.00	90.36	268.808	6,778.96	-673.50	-1,896.86	1,910.47	0.00	0.00	0.00
8,600.00	90.36	268.808	6,778.33	-675.58	-1,996.84	2,010.46	0.00	0.00	0.00
8,700.00	90.36	268.808	6,777.70	-677.66	-2,096.81	2,110.46	0.00	0.00	0.00
8,800.00	90.36	268.808	6,777.07	-679.74	-2,196.79	2,210.46	0.00	0.00	0.00
8,900.00	90.36	268.808	6,776.44	-681.83	-2,296.77	2,310.46	0.00	0.00	0.00
9,000.00	90.36	268.808	6,775.81	-683.91	-2,396.74	2,410.46	0.00	0.00	0.00
9,100.00	90.36	268.808	6,775.18	-685.99	-2,496.72	2,510.45	0.00	0.00	0.00
9,200.00	90.36	268.808	6,774.55	-688.07	-2,596.70	2,610.45	0.00	0.00	0.00
9,300.00	90.36	268.808	6,773.92	-690.15	-2,696.67	2,710.45	0.00	0.00	0.00
9,400.00	90.36	268.808	6,773.29	-692.23	-2,796.65	2,810.45	0.00	0.00	0.00
9,500.00	90.36	268.808	6,772.66	-694.31	-2,896.63	2,910.45	0.00	0.00	0.00
9,600.00	90.36	268.808	6,772.03	-696.39	-2,996.60	3,010.44	0.00	0.00	0.00
9,700.00	90.36	268.808	6,771.40	-698.47	-3,096.58	3,110.44	0.00	0.00	0.00
9,800.00	90.36	268.808	6,770.77	-700.56	-3,196.55	3,210.44	0.00	0.00	0.00
9,900.00	90.36	268.808	6,770.14	-702.64	-3,296.53	3,310.44	0.00	0.00	0.00
10,000.00	90.36	268.808	6,769.51	-704.72	-3,396.51	3,410.44	0.00	0.00	0.00
10,100.00	90.36	268.808	6,768.88	-706.80	-3,496.48	3,510.43	0.00	0.00	0.00
10,200.00	90.36	268.808	6,768.25	-708.88	-3,596.46	3,610.43	0.00	0.00	0.00



Planning Report

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,300.00	90.36	268.808	6,767.62	-710.96	-3,696.44	3,710.43	0.00	0.00	0.00
10,400.00	90.36	268.808	6,766.99	-713.04	-3,796.41	3,810.43	0.00	0.00	0.00
10,500.00	90.36	268.808	6,766.36	-715.12	-3,896.39	3,910.43	0.00	0.00	0.00
10,600.00	90.36	268.808	6,765.73	-717.20	-3,996.37	4,010.42	0.00	0.00	0.00
10,700.00	90.36	268.808	6,765.10	-719.28	-4,096.34	4,110.42	0.00	0.00	0.00
10,800.00	90.36	268.808	6,764.47	-721.37	-4,196.32	4,210.42	0.00	0.00	0.00
10,900.00	90.36	268.808	6,763.84	-723.45	-4,296.29	4,310.42	0.00	0.00	0.00
11,000.00	90.36	268.808	6,763.21	-725.53	-4,396.27	4,410.42	0.00	0.00	0.00
11,100.00	90.36	268.808	6,762.58	-727.61	-4,496.25	4,510.41	0.00	0.00	0.00
11,200.00	90.36	268.808	6,761.95	-729.69	-4,596.22	4,610.41	0.00	0.00	0.00
11,300.00	90.36	268.808	6,761.32	-731.77	-4,696.20	4,710.41	0.00	0.00	0.00
11,400.00	90.36	268.808	6,760.69	-733.85	-4,796.18	4,810.41	0.00	0.00	0.00
11,500.00	90.36	268.808	6,760.06	-735.93	-4,896.15	4,910.41	0.00	0.00	0.00
11,600.00	90.36	268.808	6,759.43	-738.01	-4,996.13	5,010.40	0.00	0.00	0.00
11,700.00	90.36	268.808	6,758.80	-740.10	-5,096.11	5,110.40	0.00	0.00	0.00
11,800.00	90.36	268.808	6,758.17	-742.18	-5,196.08	5,210.40	0.00	0.00	0.00
11,900.00	90.36	268.808	6,757.54	-744.26	-5,296.06	5,310.40	0.00	0.00	0.00
12,000.00	90.36	268.808	6,756.91	-746.34	-5,396.03	5,410.40	0.00	0.00	0.00
12,100.00	90.36	268.808	6,756.28	-748.42	-5,496.01	5,510.39	0.00	0.00	0.00
12,200.00	90.36	268.808	6,755.65	-750.50	-5,595.99	5,610.39	0.00	0.00	0.00
12,300.00	90.36	268.808	6,755.02	-752.58	-5,695.96	5,710.39	0.00	0.00	0.00
12,400.00	90.36	268.808	6,754.39	-754.66	-5,795.94	5,810.39	0.00	0.00	0.00
12,500.00	90.36	268.808	6,753.76	-756.74	-5,895.92	5,910.39	0.00	0.00	0.00
12,600.00	90.36	268.808	6,753.13	-758.82	-5,995.89	6,010.39	0.00	0.00	0.00
12,700.00	90.36	268.808	6,752.50	-760.91	-6,095.87	6,110.38	0.00	0.00	0.00
12,800.00	90.36	268.808	6,751.87	-762.99	-6,195.85	6,210.38	0.00	0.00	0.00
12,900.00	90.36	268.808	6,751.24	-765.07	-6,295.82	6,310.38	0.00	0.00	0.00
13,000.00	90.36	268.808	6,750.61	-767.15	-6,395.80	6,410.38	0.00	0.00	0.00
13,100.00	90.36	268.808	6,749.98	-769.23	-6,495.77	6,510.38	0.00	0.00	0.00
13,200.00	90.36	268.808	6,749.35	-771.31	-6,595.75	6,610.37	0.00	0.00	0.00
13,300.00	90.36	268.808	6,748.72	-773.39	-6,695.73	6,710.37	0.00	0.00	0.00
13,400.00	90.36	268.808	6,748.09	-775.47	-6,795.70	6,810.37	0.00	0.00	0.00
13,500.00	90.36	268.808	6,747.46	-777.55	-6,895.68	6,910.37	0.00	0.00	0.00
13,600.00	90.36	268.808	6,746.83	-779.63	-6,995.66	7,010.37	0.00	0.00	0.00
13,700.00	90.36	268.808	6,746.20	-781.72	-7,095.63	7,110.36	0.00	0.00	0.00
13,800.00	90.36	268.808	6,745.57	-783.80	-7,195.61	7,210.36	0.00	0.00	0.00
13,900.00	90.36	268.808	6,744.94	-785.88	-7,295.59	7,310.36	0.00	0.00	0.00
14,000.00	90.36	268.808	6,744.31	-787.96	-7,395.56	7,410.36	0.00	0.00	0.00
14,100.00	90.36	268.808	6,743.68	-790.04	-7,495.54	7,510.36	0.00	0.00	0.00
14,200.00	90.36	268.808	6,743.05	-792.12	-7,595.51	7,610.35	0.00	0.00	0.00
14,300.00	90.36	268.808	6,742.42	-794.20	-7,695.49	7,710.35	0.00	0.00	0.00
14,400.00	90.36	268.808	6,741.79	-796.28	-7,795.47	7,810.35	0.00	0.00	0.00
14,500.00	90.36	268.808	6,741.16	-798.36	-7,895.44	7,910.35	0.00	0.00	0.00
14,600.00	90.36	268.808	6,740.53	-800.45	-7,995.42	8,010.35	0.00	0.00	0.00
14,700.00	90.36	268.808	6,739.90	-802.53	-8,095.40	8,110.34	0.00	0.00	0.00
14,800.00	90.36	268.808	6,739.27	-804.61	-8,195.37	8,210.34	0.00	0.00	0.00
14,900.00	90.36	268.808	6,738.64	-806.69	-8,295.35	8,310.34	0.00	0.00	0.00
15,000.00	90.36	268.808	6,738.01	-808.77	-8,395.33	8,410.34	0.00	0.00	0.00
15,100.00	90.36	268.808	6,737.38	-810.85	-8,495.30	8,510.34	0.00	0.00	0.00
15,200.00	90.36	268.808	6,736.75	-812.93	-8,595.28	8,610.33	0.00	0.00	0.00
15,300.00	90.36	268.808	6,736.12	-815.01	-8,695.25	8,710.33	0.00	0.00	0.00
15,400.00	90.36	268.808	6,735.49	-817.09	-8,795.23	8,810.33	0.00	0.00	0.00
15,500.00	90.36	268.808	6,734.86	-819.17	-8,895.21	8,910.33	0.00	0.00	0.00
15,600.00	90.36	268.808	6,734.23	-821.26	-8,995.18	9,010.33	0.00	0.00	0.00



Planning Report

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Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
15,700.00	90.36	268.808	6,733.60	-823.34	-9,095.16	9,110.32	0.00	0.00	0.00	
15,800.00	90.36	268.808	6,732.97	-825.42	-9,195.14	9,210.32	0.00	0.00	0.00	
15,900.00	90.36	268.808	6,732.34	-827.50	-9,295.11	9,310.32	0.00	0.00	0.00	
16,000.00	90.36	268.808	6,731.71	-829.58	-9,395.09	9,410.32	0.00	0.00	0.00	
16,100.00	90.36	268.808	6,731.08	-831.66	-9,495.07	9,510.32	0.00	0.00	0.00	
16,200.00	90.36	268.808	6,730.45	-833.74	-9,595.04	9,610.31	0.00	0.00	0.00	
16,300.00	90.36	268.808	6,729.82	-835.82	-9,695.02	9,710.31	0.00	0.00	0.00	
16,400.00	90.36	268.808	6,729.19	-837.90	-9,794.99	9,810.31	0.00	0.00	0.00	
16,500.00	90.36	268.808	6,728.56	-839.99	-9,894.97	9,910.31	0.00	0.00	0.00	
16,588.49	90.36	268.808	6,728.00	-841.83	-9,983.44	9,998.79	0.00	0.00	0.00	
PBHL/TD 16588.49 MD 6728.00 TVD										

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	
Rincon 613 LTP 1719 F1 - plan hits target center - Point	0.00	2.190	6,728.00	-841.83	-9,983.44	2,023,976.419	2,820,476.086	36.561813000	-107.501728000	
Rincon 613 FTP 1754 F1 - plan hits target center - Point	0.00	2.190	6,787.22	-646.23	-586.67	2,024,172.017	2,829,872.838	36.562257000	-107.469729000	

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name				Casing Diameter (")	Hole Diameter (")			
320.00	320.00	13 3/8" Casing				13-5/8	17-1/2			
5,979.48	5,938.00	9 5/8" Casing				9-5/8	12-1/4			



Planning Report

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Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,559.45	2,548.00	Ojo Alamo				
2,655.31	2,643.00	Kirtland				
2,937.81	2,923.00	Fruitland				
3,195.10	3,178.00	Pictured Cliffs				
3,462.47	3,443.00	Lewis				
3,765.16	3,743.00	Chacra_A				
4,910.33	4,878.00	Cliff House				
5,011.23	4,978.00	Menefee				
5,450.13	5,413.00	Point Lookout				
5,863.80	5,823.00	Mancos				
6,483.18	6,433.00	Gallup (MNCS_A)				
6,540.14	6,483.00	MNCS_B				
6,629.08	6,555.00	MNCS_C				
6,741.42	6,633.00	MNCS_E				
6,864.96	6,700.00	MNCS_F				
7,018.68	6,763.00	MNCS_G				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,100.00	1,100.00	0.00	0.00	KOP Begin 3°/100' build	
1,354.73	1,353.97	-16.93	1.12	Begin 7.64° tangent	
5,871.16	5,830.30	-616.22	40.60	Begin 3°/100' drop	
6,125.89	6,084.27	-633.15	41.72	Begin vertical hold	
6,225.89	6,184.27	-633.15	41.72	Begin 10°/100' build	
6,825.89	6,680.47	-639.11	-244.70	Begin 60.00° tangent	
6,885.89	6,710.47	-640.19	-296.65	Begin 10°/100' build	
7,189.50	6,787.22	-646.23	-586.67	FTP Begin 90.36° lateral	
16,588.49	6,728.00	-841.83	-9,983.44	PBHL/TD 16588.49 MD 6728.00 TVD	



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	Rio Arriba County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Rincon pad (613, 615, 713 & 715)				
Site Position:		Northing:	2,024,818.244 usft	Latitude:	36.564026000
From:	Lat/Long	Easting:	2,830,459.503 usft	Longitude:	-107.467723000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	Rincon Unit 613H, Surf loc: 1117 FNL 1225 FEL Section 21-T27N-R06W						
Well Position	+N/-S	0.00 ft	Northing:	2,024,818.244	usft	Latitude:	36.564026000
	+E/-W	0.00 ft	Easting:	2,830,459.503	usft	Longitude:	-107.467723000
Position Uncertainty		0.00 ft	Wellhead Elevation:		ft	Ground Level:	6,538.00 ft
Grid Convergence:		0.22 °					

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/19/2022	8.64	63.07	49,449.18279502

Design	rev0			
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	268.808

Plan Survey Tool Program	Date	4/20/2022		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,588.49 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.000	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,354.73	7.64	176.230	1,353.97	-16.93	1.12	3.00	3.00	0.00	176.23	
5,871.16	7.64	176.230	5,830.30	-616.22	40.60	0.00	0.00	0.00	0.00	
6,125.89	0.00	359.057	6,084.27	-633.15	41.72	3.00	-3.00	0.00	180.00	
6,225.89	0.00	359.057	6,184.27	-633.15	41.72	0.00	0.00	0.00	359.06	
6,825.89	60.00	268.808	6,680.47	-639.11	-244.70	10.00	10.00	0.00	268.81	
6,885.89	60.00	268.808	6,710.47	-640.19	-296.65	0.00	0.00	0.00	0.00	
7,189.50	90.36	268.808	6,787.22	-646.23	-586.67	10.00	10.00	0.00	0.00	
16,588.49	90.36	268.808	6,728.00	-841.83	-9,983.44	0.00	0.00	0.00	0.00	Rincon 613 LTP 1719



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
100.00	0.00	0.000	100.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
200.00	0.00	0.000	200.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
300.00	0.00	0.000	300.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
400.00	0.00	0.000	400.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
500.00	0.00	0.000	500.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
600.00	0.00	0.000	600.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
700.00	0.00	0.000	700.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
800.00	0.00	0.000	800.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
900.00	0.00	0.000	900.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
1,000.00	0.00	0.000	1,000.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
1,100.00	0.00	0.000	1,100.00	0.00	0.00	2,024,818.244	2,830,459.503	36.564026000	-107.467723000
KOP Begin 3°/100' build									
1,200.00	3.00	176.230	1,199.95	-2.61	0.17	2,024,815.633	2,830,459.675	36.564018824	-107.467722448
1,300.00	6.00	176.230	1,299.63	-10.44	0.69	2,024,807.805	2,830,460.190	36.563997316	-107.467720793
1,354.73	7.64	176.230	1,353.97	-16.93	1.12	2,024,801.319	2,830,460.618	36.563979496	-107.467719422
Begin 7.64° tangent									
1,400.00	7.64	176.230	1,398.84	-22.93	1.51	2,024,795.312	2,830,461.014	36.563962991	-107.467718152
1,500.00	7.64	176.230	1,497.96	-36.20	2.39	2,024,782.043	2,830,461.888	36.563926533	-107.467715346
1,600.00	7.64	176.230	1,597.07	-49.47	3.26	2,024,768.773	2,830,462.762	36.563890075	-107.467712541
1,700.00	7.64	176.230	1,696.18	-62.74	4.13	2,024,755.504	2,830,463.637	36.563853617	-107.467709735
1,800.00	7.64	176.230	1,795.29	-76.01	5.01	2,024,742.235	2,830,464.511	36.563817158	-107.467706930
1,900.00	7.64	176.230	1,894.40	-89.28	5.88	2,024,728.965	2,830,465.385	36.563780700	-107.467704124
2,000.00	7.64	176.230	1,993.51	-102.55	6.76	2,024,715.696	2,830,466.260	36.563744242	-107.467701319
2,100.00	7.64	176.230	2,092.63	-115.82	7.63	2,024,702.427	2,830,467.134	36.563707784	-107.467698513
2,200.00	7.64	176.230	2,191.74	-129.09	8.51	2,024,689.158	2,830,468.008	36.563671326	-107.467695708
2,300.00	7.64	176.230	2,290.85	-142.36	9.38	2,024,675.888	2,830,468.883	36.563634867	-107.467692902
2,400.00	7.64	176.230	2,389.96	-155.63	10.25	2,024,662.619	2,830,469.757	36.563598409	-107.467690097
2,500.00	7.64	176.230	2,489.07	-168.89	11.13	2,024,649.350	2,830,470.631	36.563561951	-107.467687291
2,559.45	7.64	176.230	2,548.00	-176.78	11.65	2,024,641.461	2,830,471.151	36.563540275	-107.467685623
Ojo Alamo									
2,600.00	7.64	176.230	2,588.19	-182.16	12.00	2,024,636.081	2,830,471.506	36.563525493	-107.467684486
2,655.31	7.64	176.230	2,643.00	-189.50	12.49	2,024,628.742	2,830,471.989	36.563505329	-107.467682934
Kirtland									
2,700.00	7.64	176.230	2,687.30	-195.43	12.88	2,024,622.811	2,830,472.380	36.563489034	-107.467681680
2,800.00	7.64	176.230	2,786.41	-208.70	13.75	2,024,609.542	2,830,473.255	36.563452576	-107.467678875
2,900.00	7.64	176.230	2,885.52	-221.97	14.63	2,024,596.273	2,830,474.129	36.563416118	-107.467676069
2,937.81	7.64	176.230	2,923.00	-226.99	14.96	2,024,591.255	2,830,474.459	36.563402331	-107.467675008
Fruitland									
3,000.00	7.64	176.230	2,984.63	-235.24	15.50	2,024,583.003	2,830,475.003	36.563379660	-107.467673264
3,100.00	7.64	176.230	3,083.75	-248.51	16.38	2,024,569.734	2,830,475.878	36.563343202	-107.467670458
3,195.10	7.64	176.230	3,178.00	-261.13	17.21	2,024,557.115	2,830,476.709	36.563308530	-107.467667790
Pictured Cliffs									
3,200.00	7.64	176.230	3,182.86	-261.78	17.25	2,024,556.465	2,830,476.752	36.563306743	-107.467667653
3,300.00	7.64	176.230	3,281.97	-275.05	18.12	2,024,543.196	2,830,477.626	36.563270285	-107.467664847
3,400.00	7.64	176.230	3,381.08	-288.32	19.00	2,024,529.926	2,830,478.501	36.563233827	-107.467662042
3,462.47	7.64	176.230	3,443.00	-296.61	19.54	2,024,521.637	2,830,479.047	36.563211050	-107.467660289
Lewis									
3,500.00	7.64	176.230	3,480.19	-301.59	19.87	2,024,516.657	2,830,479.375	36.563197369	-107.467659236
3,600.00	7.64	176.230	3,579.30	-314.86	20.75	2,024,503.388	2,830,480.249	36.563160910	-107.467656431
3,700.00	7.64	176.230	3,678.42	-328.13	21.62	2,024,490.119	2,830,481.124	36.563124452	-107.467653625
3,765.16	7.64	176.230	3,743.00	-336.77	22.19	2,024,481.472	2,830,481.693	36.563100695	-107.467651797
Chacra_A									
3,800.00	7.64	176.230	3,777.53	-341.40	22.50	2,024,476.849	2,830,481.998	36.563087994	-107.467650820



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,900.00	7.64	176.230	3,876.64	-354.67	23.37	2,024,463.580	2,830,482.872	36.563051536	-107.467648014
4,000.00	7.64	176.230	3,975.75	-367.93	24.24	2,024,450.311	2,830,483.747	36.563015077	-107.467645209
4,100.00	7.64	176.230	4,074.86	-381.20	25.12	2,024,437.041	2,830,484.621	36.562978619	-107.467642404
4,200.00	7.64	176.230	4,173.98	-394.47	25.99	2,024,423.772	2,830,485.495	36.562942161	-107.467639598
4,300.00	7.64	176.230	4,273.09	-407.74	26.87	2,024,410.503	2,830,486.370	36.562905703	-107.467636793
4,400.00	7.64	176.230	4,372.20	-421.01	27.74	2,024,397.234	2,830,487.244	36.562869245	-107.467633987
4,500.00	7.64	176.230	4,471.31	-434.28	28.62	2,024,383.964	2,830,488.118	36.562832786	-107.467631182
4,600.00	7.64	176.230	4,570.42	-447.55	29.49	2,024,370.695	2,830,488.993	36.562796328	-107.467628376
4,700.00	7.64	176.230	4,669.53	-460.82	30.36	2,024,357.426	2,830,489.867	36.562759870	-107.467625571
4,800.00	7.64	176.230	4,768.65	-474.09	31.24	2,024,344.157	2,830,490.741	36.562723412	-107.467622765
4,900.00	7.64	176.230	4,867.76	-487.36	32.11	2,024,330.887	2,830,491.616	36.562686953	-107.467619960
4,910.33	7.64	176.230	4,878.00	-488.73	32.20	2,024,329.516	2,830,491.706	36.562683186	-107.467619670
Cliff House									
5,000.00	7.64	176.230	4,966.87	-500.63	32.99	2,024,317.618	2,830,492.490	36.562650495	-107.467617155
5,011.23	7.64	176.230	4,978.00	-502.12	33.09	2,024,316.128	2,830,492.588	36.562646401	-107.467616840
Menefee									
5,100.00	7.64	176.230	5,065.98	-513.90	33.86	2,024,304.349	2,830,493.365	36.562614037	-107.467614349
5,200.00	7.64	176.230	5,165.09	-527.17	34.74	2,024,291.079	2,830,494.239	36.562577579	-107.467611544
5,300.00	7.64	176.230	5,264.21	-540.44	35.61	2,024,277.810	2,830,495.113	36.562541120	-107.467608738
5,400.00	7.64	176.230	5,363.32	-553.70	36.49	2,024,264.541	2,830,495.988	36.562504662	-107.467605933
5,450.13	7.64	176.230	5,413.00	-560.36	36.92	2,024,257.889	2,830,496.426	36.562486387	-107.467604527
Point Lookout									
5,500.00	7.64	176.230	5,462.43	-566.97	37.36	2,024,251.272	2,830,496.862	36.562468204	-107.467603127
5,600.00	7.64	176.230	5,561.54	-580.24	38.23	2,024,238.002	2,830,497.736	36.562431746	-107.467600322
5,700.00	7.64	176.230	5,660.65	-593.51	39.11	2,024,224.733	2,830,498.611	36.562395288	-107.467597517
5,800.00	7.64	176.230	5,759.77	-606.78	39.98	2,024,211.464	2,830,499.485	36.562358829	-107.467594711
5,863.80	7.64	176.230	5,823.00	-615.25	40.54	2,024,202.998	2,830,500.043	36.562335568	-107.467592921
Mancos									
5,871.16	7.64	176.230	5,830.30	-616.22	40.60	2,024,202.021	2,830,500.107	36.562332885	-107.467592715
Begin 3°/100' drop									
5,900.00	6.78	176.230	5,858.91	-619.84	40.84	2,024,198.410	2,830,500.345	36.562322963	-107.467591951
6,000.00	3.78	176.230	5,958.47	-629.01	41.45	2,024,189.234	2,830,500.950	36.562297752	-107.467590011
6,100.00	0.78	176.230	6,058.38	-632.97	41.71	2,024,185.271	2,830,501.211	36.562286862	-107.467589173
6,125.89	0.00	359.057	6,084.27	-633.15	41.72	2,024,185.096	2,830,501.222	36.562286381	-107.467589136
Begin vertical hold									
6,200.00	0.00	0.000	6,158.38	-633.15	41.72	2,024,185.096	2,830,501.222	36.562286381	-107.467589136
6,225.89	0.00	0.000	6,184.27	-633.15	41.72	2,024,185.096	2,830,501.222	36.562286381	-107.467589136
Begin 10°/100' build									
6,250.00	2.41	268.808	6,208.37	-633.16	41.21	2,024,185.085	2,830,500.715	36.562286357	-107.467590863
6,300.00	7.41	268.808	6,258.17	-633.25	36.93	2,024,184.996	2,830,496.437	36.562286157	-107.467605431
6,350.00	12.41	268.808	6,307.41	-633.43	28.33	2,024,184.817	2,830,487.836	36.562285755	-107.467634721
6,400.00	17.41	268.808	6,355.71	-633.70	15.47	2,024,184.549	2,830,474.977	36.562285155	-107.467678510
6,450.00	22.41	268.808	6,402.71	-634.05	-1.54	2,024,184.195	2,830,457.959	36.562284359	-107.467736465
6,483.18	25.73	268.808	6,433.00	-634.33	-15.07	2,024,183.914	2,830,444.430	36.562283727	-107.467782534
Gallup (MNCS_A)									
6,500.00	27.41	268.808	6,448.04	-634.49	-22.59	2,024,183.757	2,830,436.909	36.562283376	-107.467808144
6,540.14	31.43	268.808	6,483.00	-634.90	-42.30	2,024,183.347	2,830,417.201	36.562282455	-107.467875257
MNCS_B									
6,550.00	32.41	268.808	6,491.37	-635.01	-47.51	2,024,183.238	2,830,411.990	36.562282211	-107.467893003
6,600.00	37.41	268.808	6,532.36	-635.60	-76.11	2,024,182.643	2,830,383.390	36.562280874	-107.467990395
6,629.08	40.32	268.808	6,555.00	-635.98	-94.36	2,024,182.263	2,830,365.147	36.562280022	-107.468052521
MNCS_C									
6,650.00	42.41	268.808	6,570.70	-636.27	-108.17	2,024,181.976	2,830,351.328	36.562279376	-107.468099579



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,700.00	47.41	268.808	6,606.10	-637.00	-143.46	2,024,181.242	2,830,316.047	36.562277727	-107.468219724
6,741.42	51.55	268.808	6,633.00	-637.66	-174.93	2,024,180.586	2,830,284.573	36.562276255	-107.468326901
MNCS_E									
6,750.00	52.41	268.808	6,638.28	-637.80	-181.69	2,024,180.446	2,830,277.815	36.562275939	-107.468349916
6,800.00	57.41	268.808	6,667.02	-638.65	-222.58	2,024,179.595	2,830,236.924	36.562274028	-107.468489164
6,825.89	60.00	268.808	6,680.47	-639.11	-244.70	2,024,179.134	2,830,214.806	36.562272994	-107.468564482
Begin 60.00° tangent									
6,864.96	60.00	268.808	6,700.00	-639.82	-278.52	2,024,178.430	2,830,180.980	36.562271412	-107.468679673
MNCS_F									
6,885.89	60.00	268.808	6,710.47	-640.19	-296.65	2,024,178.053	2,830,162.856	36.562270565	-107.468741390
Begin 10°/100' build									
6,900.00	61.41	268.808	6,717.37	-640.45	-308.95	2,024,177.797	2,830,150.555	36.562269989	-107.468783280
6,950.00	66.41	268.808	6,739.35	-641.38	-353.83	2,024,176.863	2,830,105.673	36.562267890	-107.468936117
7,000.00	71.41	268.808	6,757.34	-642.35	-400.46	2,024,175.892	2,830,059.047	36.562265710	-107.469094895
7,018.68	73.28	268.808	6,763.00	-642.72	-418.25	2,024,175.522	2,830,041.255	36.562264878	-107.469155482
MNCS_G									
7,050.00	76.41	268.808	6,771.19	-643.35	-448.47	2,024,174.893	2,830,011.031	36.562263464	-107.469258405
7,100.00	81.41	268.808	6,780.80	-644.37	-497.51	2,024,173.872	2,829,961.991	36.562261170	-107.469425404
7,150.00	86.41	268.808	6,786.10	-645.41	-547.20	2,024,172.838	2,829,912.300	36.562258845	-107.469594620
7,189.50	90.36	268.808	6,787.22	-646.23	-586.67	2,024,172.016	2,829,872.831	36.562256998	-107.469729025
FTP Begin 90.36° lateral									
7,200.00	90.36	268.808	6,787.15	-646.45	-597.17	2,024,171.798	2,829,862.334	36.562256507	-107.469764769
7,300.00	90.36	268.808	6,786.52	-648.53	-697.15	2,024,169.717	2,829,762.358	36.562251828	-107.470105222
7,400.00	90.36	268.808	6,785.89	-650.61	-797.12	2,024,167.636	2,829,662.382	36.562247148	-107.470445675
7,500.00	90.36	268.808	6,785.26	-652.69	-897.10	2,024,165.555	2,829,562.406	36.562242468	-107.470786127
7,600.00	90.36	268.808	6,784.63	-654.77	-997.07	2,024,163.474	2,829,462.430	36.562237786	-107.471126580
7,700.00	90.36	268.808	6,784.00	-656.85	-1,097.05	2,024,161.393	2,829,362.454	36.562233103	-107.471467032
7,800.00	90.36	268.808	6,783.37	-658.93	-1,197.03	2,024,159.312	2,829,262.477	36.562228420	-107.471807485
7,900.00	90.36	268.808	6,782.74	-661.02	-1,297.00	2,024,157.231	2,829,162.501	36.562223735	-107.472147938
8,000.00	90.36	268.808	6,782.11	-663.10	-1,396.98	2,024,155.149	2,829,062.525	36.562219049	-107.472488390
8,100.00	90.36	268.808	6,781.48	-665.18	-1,496.96	2,024,153.068	2,828,962.549	36.562214363	-107.472828843
8,200.00	90.36	268.808	6,780.85	-667.26	-1,596.93	2,024,150.987	2,828,862.573	36.562209675	-107.473169296
8,300.00	90.36	268.808	6,780.22	-669.34	-1,696.91	2,024,148.906	2,828,762.597	36.562204987	-107.473509748
8,400.00	90.36	268.808	6,779.59	-671.42	-1,796.89	2,024,146.825	2,828,662.621	36.562200297	-107.473850201
8,500.00	90.36	268.808	6,778.96	-673.50	-1,896.86	2,024,144.744	2,828,562.644	36.562195607	-107.474190653
8,600.00	90.36	268.808	6,778.33	-675.58	-1,996.84	2,024,142.663	2,828,462.668	36.562190915	-107.474531106
8,700.00	90.36	268.808	6,777.70	-677.66	-2,096.81	2,024,140.582	2,828,362.692	36.562186223	-107.474871558
8,800.00	90.36	268.808	6,777.07	-679.74	-2,196.79	2,024,138.501	2,828,262.716	36.562181530	-107.475212011
8,900.00	90.36	268.808	6,776.44	-681.83	-2,296.77	2,024,136.420	2,828,162.740	36.562176835	-107.475552463
9,000.00	90.36	268.808	6,775.81	-683.91	-2,396.74	2,024,134.339	2,828,062.764	36.562172140	-107.475892915
9,100.00	90.36	268.808	6,775.18	-685.99	-2,496.72	2,024,132.258	2,827,962.787	36.562167444	-107.476233368
9,200.00	90.36	268.808	6,774.55	-688.07	-2,596.70	2,024,130.177	2,827,862.811	36.562162746	-107.476573820
9,300.00	90.36	268.808	6,773.92	-690.15	-2,696.67	2,024,128.096	2,827,762.835	36.562158048	-107.476914272
9,400.00	90.36	268.808	6,773.29	-692.23	-2,796.65	2,024,126.015	2,827,662.859	36.562153349	-107.477254724
9,500.00	90.36	268.808	6,772.66	-694.31	-2,896.63	2,024,123.934	2,827,562.883	36.562148649	-107.477595177
9,600.00	90.36	268.808	6,772.03	-696.39	-2,996.60	2,024,121.853	2,827,462.907	36.562143948	-107.477935629
9,700.00	90.36	268.808	6,771.40	-698.47	-3,096.58	2,024,119.772	2,827,362.931	36.562139246	-107.478276081
9,800.00	90.36	268.808	6,770.77	-700.56	-3,196.55	2,024,117.691	2,827,262.954	36.562134542	-107.478616533
9,900.00	90.36	268.808	6,770.14	-702.64	-3,296.53	2,024,115.610	2,827,162.978	36.562129838	-107.478956985
10,000.00	90.36	268.808	6,769.51	-704.72	-3,396.51	2,024,113.529	2,827,063.002	36.562125133	-107.479297437
10,100.00	90.36	268.808	6,768.88	-706.80	-3,496.48	2,024,111.448	2,826,963.026	36.562120427	-107.479637889
10,200.00	90.36	268.808	6,768.25	-708.88	-3,596.46	2,024,109.367	2,826,863.050	36.562115720	-107.479978341
10,300.00	90.36	268.808	6,767.62	-710.96	-3,696.44	2,024,107.285	2,826,763.074	36.562111012	-107.480318793
10,400.00	90.36	268.808	6,766.99	-713.04	-3,796.41	2,024,105.204	2,826,663.097	36.562106304	-107.480659245



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude		Longitude
10,500.00	90.36	268.808	6,766.36	-715.12	-3,896.39	2,024,103.123	2,826,563.121	36.562101594		-107.480999697
10,600.00	90.36	268.808	6,765.73	-717.20	-3,996.37	2,024,101.042	2,826,463.145	36.562096883		-107.481340149
10,700.00	90.36	268.808	6,765.10	-719.28	-4,096.34	2,024,098.961	2,826,363.169	36.562092171		-107.481680600
10,800.00	90.36	268.808	6,764.47	-721.37	-4,196.32	2,024,096.880	2,826,263.193	36.562087458		-107.482021052
10,900.00	90.36	268.808	6,763.84	-723.45	-4,296.29	2,024,094.799	2,826,163.217	36.562082744		-107.482361504
11,000.00	90.36	268.808	6,763.21	-725.53	-4,396.27	2,024,092.718	2,826,063.241	36.562078030		-107.482701956
11,100.00	90.36	268.808	6,762.58	-727.61	-4,496.25	2,024,090.637	2,825,963.264	36.562073314		-107.483042407
11,200.00	90.36	268.808	6,761.95	-729.69	-4,596.22	2,024,088.556	2,825,863.288	36.562068597		-107.483382859
11,300.00	90.36	268.808	6,761.32	-731.77	-4,696.20	2,024,086.475	2,825,763.312	36.562063879		-107.483723310
11,400.00	90.36	268.808	6,760.69	-733.85	-4,796.18	2,024,084.394	2,825,663.336	36.562059161		-107.484063762
11,500.00	90.36	268.808	6,760.06	-735.93	-4,896.15	2,024,082.313	2,825,563.360	36.562054441		-107.484404213
11,600.00	90.36	268.808	6,759.43	-738.01	-4,996.13	2,024,080.232	2,825,463.384	36.562049721		-107.484744665
11,700.00	90.36	268.808	6,758.80	-740.10	-5,096.11	2,024,078.151	2,825,363.407	36.562044999		-107.485085116
11,800.00	90.36	268.808	6,758.17	-742.18	-5,196.08	2,024,076.070	2,825,263.431	36.562040276		-107.485425568
11,900.00	90.36	268.808	6,757.54	-744.26	-5,296.06	2,024,073.989	2,825,163.455	36.562035553		-107.485766019
12,000.00	90.36	268.808	6,756.91	-746.34	-5,396.03	2,024,071.908	2,825,063.479	36.562030828		-107.486106471
12,100.00	90.36	268.808	6,756.28	-748.42	-5,496.01	2,024,069.827	2,824,963.503	36.562026103		-107.486446922
12,200.00	90.36	268.808	6,755.65	-750.50	-5,595.99	2,024,067.746	2,824,863.527	36.562021377		-107.486787373
12,300.00	90.36	268.808	6,755.02	-752.58	-5,695.96	2,024,065.665	2,824,763.551	36.562016649		-107.487127824
12,400.00	90.36	268.808	6,754.39	-754.66	-5,795.94	2,024,063.584	2,824,663.574	36.562011921		-107.487468276
12,500.00	90.36	268.808	6,753.76	-756.74	-5,895.92	2,024,061.503	2,824,563.598	36.562007191		-107.487808727
12,600.00	90.36	268.808	6,753.13	-758.82	-5,995.89	2,024,059.422	2,824,463.622	36.562002461		-107.488149178
12,700.00	90.36	268.808	6,752.50	-760.91	-6,095.87	2,024,057.340	2,824,363.646	36.561997730		-107.488489629
12,800.00	90.36	268.808	6,751.87	-762.99	-6,195.85	2,024,055.259	2,824,263.670	36.561992998		-107.488830080
12,900.00	90.36	268.808	6,751.24	-765.07	-6,295.82	2,024,053.178	2,824,163.694	36.561988264		-107.489170531
13,000.00	90.36	268.808	6,750.61	-767.15	-6,395.80	2,024,051.097	2,824,063.717	36.561983530		-107.489510982
13,100.00	90.36	268.808	6,749.98	-769.23	-6,495.77	2,024,049.016	2,823,963.741	36.561978795		-107.489851433
13,200.00	90.36	268.808	6,749.35	-771.31	-6,595.75	2,024,046.935	2,823,863.765	36.561974059		-107.490191884
13,300.00	90.36	268.808	6,748.72	-773.39	-6,695.73	2,024,044.854	2,823,763.789	36.561969322		-107.490532335
13,400.00	90.36	268.808	6,748.09	-775.47	-6,795.70	2,024,042.773	2,823,663.813	36.561964584		-107.490872786
13,500.00	90.36	268.808	6,747.46	-777.55	-6,895.68	2,024,040.692	2,823,563.837	36.561959844		-107.491213237
13,600.00	90.36	268.808	6,746.83	-779.63	-6,995.66	2,024,038.611	2,823,463.861	36.561955104		-107.491553688
13,700.00	90.36	268.808	6,746.20	-781.72	-7,095.63	2,024,036.530	2,823,363.884	36.561950363		-107.491894139
13,800.00	90.36	268.808	6,745.57	-783.80	-7,195.61	2,024,034.449	2,823,263.908	36.561945621		-107.492234589
13,900.00	90.36	268.808	6,744.94	-785.88	-7,295.59	2,024,032.368	2,823,163.932	36.561940878		-107.492575040
14,000.00	90.36	268.808	6,744.31	-787.96	-7,395.56	2,024,030.287	2,823,063.956	36.561936134		-107.492915491
14,100.00	90.36	268.808	6,743.68	-790.04	-7,495.54	2,024,028.206	2,822,963.980	36.561931390		-107.493255941
14,200.00	90.36	268.808	6,743.05	-792.12	-7,595.51	2,024,026.125	2,822,864.004	36.561926644		-107.493596392
14,300.00	90.36	268.808	6,742.42	-794.20	-7,695.49	2,024,024.044	2,822,764.027	36.561921897		-107.493936843
14,400.00	90.36	268.808	6,741.79	-796.28	-7,795.47	2,024,021.963	2,822,664.051	36.561917149		-107.494277293
14,500.00	90.36	268.808	6,741.16	-798.36	-7,895.44	2,024,019.882	2,822,564.075	36.561912400		-107.494617744
14,600.00	90.36	268.808	6,740.53	-800.45	-7,995.42	2,024,017.801	2,822,464.099	36.561907650		-107.494958194
14,700.00	90.36	268.808	6,739.90	-802.53	-8,095.40	2,024,015.720	2,822,364.123	36.561902900		-107.495298645
14,800.00	90.36	268.808	6,739.27	-804.61	-8,195.37	2,024,013.639	2,822,264.147	36.561898148		-107.495639095
14,900.00	90.36	268.808	6,738.64	-806.69	-8,295.35	2,024,011.558	2,822,164.171	36.561893395		-107.495979545
15,000.00	90.36	268.808	6,738.01	-808.77	-8,395.33	2,024,009.476	2,822,064.194	36.561888642		-107.496319996
15,100.00	90.36	268.808	6,737.38	-810.85	-8,495.30	2,024,007.395	2,821,964.218	36.561883887		-107.496660446
15,200.00	90.36	268.808	6,736.75	-812.93	-8,595.28	2,024,005.314	2,821,864.242	36.561879131		-107.497000896
15,300.00	90.36	268.808	6,736.12	-815.01	-8,695.25	2,024,003.233	2,821,764.266	36.561874375		-107.497341347
15,400.00	90.36	268.808	6,735.49	-817.09	-8,795.23	2,024,001.152	2,821,664.290	36.561869617		-107.497681797
15,500.00	90.36	268.808	6,734.86	-819.17	-8,895.21	2,023,999.071	2,821,564.314	36.561864859		-107.498022247
15,600.00	90.36	268.808	6,734.23	-821.26	-8,995.18	2,023,996.990	2,821,464.337	36.561860099		-107.498362697
15,700.00	90.36	268.808	6,733.60	-823.34	-9,095.16	2,023,994.909	2,821,364.361	36.561855339		-107.498703147
15,800.00	90.36	268.808	6,732.97	-825.42	-9,195.14	2,023,992.828	2,821,264.385	36.561850577		-107.499043597
15,900.00	90.36	268.808	6,732.34	-827.50	-9,295.11	2,023,990.747	2,821,164.409	36.561845815		-107.499384047



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,000.00	90.36	268.808	6,731.71	-829.58	-9,395.09	2,023,988.666	2,821,064.433	36.561841052	-107.499724497
16,100.00	90.36	268.808	6,731.08	-831.66	-9,495.07	2,023,986.585	2,820,964.457	36.561836287	-107.500064947
16,200.00	90.36	268.808	6,730.45	-833.74	-9,595.04	2,023,984.504	2,820,864.481	36.561831522	-107.500405397
16,300.00	90.36	268.808	6,729.82	-835.82	-9,695.02	2,023,982.423	2,820,764.504	36.561826756	-107.500745847
16,400.00	90.36	268.808	6,729.19	-837.90	-9,794.99	2,023,980.342	2,820,664.528	36.561821988	-107.501086297
16,500.00	90.36	268.808	6,728.56	-839.99	-9,894.97	2,023,978.261	2,820,564.552	36.561817220	-107.501426747
16,588.49	90.36	268.808	6,728.00	-841.83	-9,983.44	2,023,976.419	2,820,476.086	36.561813000	-107.501728000
PBHL/TD 16588.49 MD 6728.00 TVD									

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	
Rincon 613 LTP 1719 Ft - plan hits target center - Point	0.00	2.190	6,728.00	-841.83	-9,983.44	2,023,976.419	2,820,476.086	36.561813000	-107.501728000	
Rincon 613 FTP 1754 Ft - plan hits target center - Point	0.00	2.190	6,787.22	-646.23	-586.67	2,024,172.017	2,829,872.838	36.562257000	-107.469729000	

Casing Points										
	Measured Depth (ft)	Vertical Depth (ft)	Name				Casing Diameter (")	Hole Diameter (")		
	320.00	320.00	13 3/8" Casing				13-5/8	17-1/2		
	5,979.48	5,938.00	9 5/8" Casing				9-5/8	12-1/4		



Planning Report - Geographic

Database:	DB_Feb2822	Local Co-ordinate Reference:	Well Rincon Unit 613H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6538+25 @ 6563.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM W	MD Reference:	RKB=6538+25 @ 6563.00ft
Site:	Rincon pad (613, 615, 713 & 715)	North Reference:	Grid
Well:	Rincon Unit 613H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,559.45	2,548.00	Ojo Alamo				
2,655.31	2,643.00	Kirtland				
2,937.81	2,923.00	Fruitland				
3,195.10	3,178.00	Pictured Cliffs				
3,462.47	3,443.00	Lewis				
3,765.16	3,743.00	Chacra_A				
4,910.33	4,878.00	Cliff House				
5,011.23	4,978.00	Menefee				
5,450.13	5,413.00	Point Lookout				
5,863.80	5,823.00	Mancos				
6,483.18	6,433.00	Gallup (MNCS_A)				
6,540.14	6,483.00	MNCS_B				
6,629.08	6,555.00	MNCS_C				
6,741.42	6,633.00	MNCS_E				
6,864.96	6,700.00	MNCS_F				
7,018.68	6,763.00	MNCS_G				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,100.00	1,100.00	0.00	0.00	KOP Begin 3°/100' build	
1,354.73	1,353.97	-16.93	1.12	Begin 7.64° tangent	
5,871.16	5,830.30	-616.22	40.60	Begin 3°/100' drop	
6,125.89	6,084.27	-633.15	41.72	Begin vertical hold	
6,225.89	6,184.27	-633.15	41.72	Begin 10°/100' build	
6,825.89	6,680.47	-639.11	-244.70	Begin 60.00° tangent	
6,885.89	6,710.47	-640.19	-296.65	Begin 10°/100' build	
7,189.50	6,787.22	-646.23	-586.67	FTP Begin 90.36° lateral	
16,588.49	6,728.00	-841.83	-9,983.44	PBHL/TD 16588.49 MD 6728.00 TVD	



ENDURING RESOURCES IV, LLC
6300 S SYRACUSE WAY, SUITE 525
CENTENNIAL, CO 80111

DRILLING PLAN: *Drill, complete, and equip single lateral in the Mancos-G formation.*

WELL INFORMATION:

Name: RINCON UNIT 613H

API Number: 30-039-31371

State: New Mexico

County: Rio Arriba

Surface Elevation: 6,538 ft ASL (GL) 6,552 ft ASL (KB)

Surface Location: 21-27N-06W Sec-Twn-Rng 1,117 ft FNL 1,225 ft FEL

36.564026 ° N latitude 107.467723 ° W longitude (NAD 83)

BH Location: 19-27N-06W Sec-Twn-Rng 1,719 ft FNL 672 ft FEL

36.561813 ° N latitude 107.501728 ° W longitude (NAD 83)

Driving Directions: From intersection of US Hwy 64 & US Hwy 550 in Bloomfield, NM: east on Hwy 64 for 36.8 miles to General American Road (GAR) just past MM 101, right (S) on GAR for 1.2 miles to fork, continue right (SW) on GAR for 3.4 miles to 4-way intersection, straight (S) on GAR for 1.1 miles to fork, right (SW) along Munoz Wash for 4.3 miles to 4-way intersection, straight (SW) across Carrizo Wash for 0.3 mile to fork, left (SE) onto CR #492 for 0.4 miles to fork, straight (S) on 492 for 1.4 miles to fork, right (N) uphill on existing road for 0.6 miles to fork, left (SW) for 0.8 miles to fork, left (SE) for 0.1 miles to fork, right (SW) to location to staked location which overlaps existing roadway.

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	4,004	2,548	2,559	W	normal
	Kirtland	3,909	2,643	2,655	W	normal
	Fruitland	3,629	2,923	2,938	G, W	sub
	Pictured Cliffs	3,374	3,178	3,195	G, W	sub
	Lewis	3,109	3,443	3,462	G, W	normal
	Chacra	2,809	3,743	3,765	G, W	normal
	Cliff House	1,674	4,878	4,910	G, W	sub
	Menefee	1,574	4,978	5,011	G, W	normal
	Point Lookout	1,139	5,413	5,450	G, W	sub
	Mancos	729	5,823	5,864	O,G	normal
	Gallup (MNCS_A)	119	6,433	6,483	O,G	normal
	MNCS_B	69	6,483	6,540	O,G	normal
	MNCS_C	-3	6,555	6,629	O,G	normal
	MNCS_E	-81	6,633	6,741	O,G	normal
	MNCS_F	-148	6,700	6,865	O,G	normal
	MNCS_G_Ash	-239	6,791	7,051	O,G	normal
	MNCS_G TARGET (POE)	-235	6,787	7,190	O,G	normal
	PROJECTED WELL TD (BHL)	-176	6,728	16,589	O,G	normal

Surface: San Jose

Oil & Gas Zones: Several gas bearing zones will be encountered; target formation is the MNCS G

Pressure: Normal pressure gradient (0.43 psi/ft) anticipated in all formations

Max. pressure gradient: 0.43 psi/ft Evacuated hole gradient: 0.22 psi/ft

Maximum anticipated BH pressure, assuming maximum pressure gradient: 2,920 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,430 psi

Temperature: Maximum anticipated BHT is 185° F or less

H₂S INFORMATION:

H₂S Zones: Encountering hydrogen-sulfide bearing zones is **NOT** anticipated.

Safety: Sensors and alarms will be placed in the substructure, on the rig floor, above the pits, and at the shakers.

LOGGING, CORING, AND TESTING:

Mud Logs: Requested; remote geo-steering from drill out of 9-5/8" casing to TD; gas detection from drillout of 13-3/8" casing to TD.

MWD / LWD: Gamma Ray from drillout of 13-3/8" casing to TD

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 5-1/2" casing from deepest free-fall depth to surface

DRILLING RIG INFORMATION:

Contractor: Ensign

Rig No.: 145

Draw Works: ADR 1000AC

Mast: ADR 1000 Cantilever Triple (134 ft, 500,000 lbs, 12 lines)

Top Drive: Tesco 350-EXI-600 (350 ton, 600 hp)

Prime Movers: 3 - CAT 3512 (1,475 hp)

Pumps: 2 - Mudder MD-11 5,000 psi

BOPE 1: T3 Annular & Shaffer double gate ram (13-5/8", 5,000 psi)

Int Hole BOPE 2: T3 annular(13-5/8", 5,000 psi)

Prod Hole BOPE 2: T3 annular/ Townsend Double gate(11", 5,000 psi)

Choke 3", 5,000 psi

KB-GL (ft): 14

Note: Actual drilling rig may vary depending on availability at time the well is scheduled to be drilled.

Note: BOPE 2 are alternate stacks to be used only if problems with rig height and BOP 1 height are encountered.

Intermediate hole BOPE 2 is designed for 2,000 psi permit requirements.

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 2) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 3) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum. If alternate intermediate hole BOPE 2 is needed, testing of annular will be to 1,500 psi/ 10 min, 250 psi/5 min. Prod hole BOPE 2 will be tested same as BOPE 1
- 4) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 5) Manual locking devices (hand wheels) shall be intalled on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:**Fluid Measurement:**

Pumps shall be equipped with stroke counters with displays in the dog-house. Slow pump speed shall be recorded daily and after mudding up, at a minimum, on the drilling report. A Pit Volume Totalizer will be installed and the readout will be displayed in the dog-house. Gas-detecting equipment will be installed at the shakers, and readouts will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).

Closed-Loop System:

A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads. All equipment will be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimize the amount of fluids and solids that require disposal.

Fluid Disposal: Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

Solids Disposal: Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

Fluid Program: See "Detailed Drilling Plan" section for specifics.

DETAILED DRILLING PLAN:

SURFACE: Drill vertically to casing setting depth, run casing, cement casing to surface.

0 ft (MD)	to	320 ft (MD)	Hole Section Length:	320 ft
0 ft (TVD)	to	320 ft (TVD)	Casing Required:	320 ft

Note: Surface hole may be drilled, cased, and cemented with a smaller rig in advance of the drilling rig.

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	Fresh Water	8.4	N/C	2 - 8	2 - 12	9.0	Spud mud

Hole Size: 17-1/2"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, run deviation survey after drilling

Logging: None

Casing Specs:	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	13.375	54.5	J-55	BTC	1,130	2,730	853,000
Loading					70	1,518	115,209
Min. S.F.					16.17	1.80	7.40

Assumptions: Collapse: partially evacuated casing with 8.4 ppg fluid outside casing

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling

intermediate hole and 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: N/A Optimum: N/A Maximum: N/A

Make-up as per API Buttress Connection running procedure.

Casing Details: Float shoe, 1 jt casing, float collar, casing to surface

Centralizers: 2 centralizers per jt stop-banded 10' from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)
	Class G	15.8	1.174	5.15	100%	0	379

Annular Capacity 0.6946 cuft/ft 13-3/8" casing x 17-1/2" hole annulus

Calculated cement volumes assume gauge hole and the excess noted in table

Halliburton HALCEM surface cementing blend

Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

INTERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.

320 ft (MD)	to	5,965 ft (MD)	Hole Section Length:	5,645 ft
320 ft (TVD)	to	5,923 ft (TVD)	Casing Required:	5,965 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCI)	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5	

Interm Hole Mud: Losses may occur around 5,400' TVD. Maintain minimum mud weights. Pre-treat with gilsonite and medium LCM products, 60% fibrous, 20% platey, 20% granular. If needed, reduce gpm

Hole Size: 12-1/4"

Bit / Motor: PDC w/mud motor

Bit / Motor (Detail): MOTOR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 900 GPM, 950 DIFF PSIG

BIT: 5- or 6-BLADE PDC w/16 mm or 19 mm cutters, target TFA 0.65 - 1.0 max); 6 - 14s = 0.902 sq-in TFA

MWD / Survey: MWD with GR, inclination, and azimuth survey (every 100' at a minimum)

Logging: None

Pressure Test: NU BOPE and test (as noted above); pressure test 13-3/8" casing to 1,500 psi for 30 minutes.
Maximum anticipated surface pressure while drilling intermediate hole section is 1,250 psi

Casing Specs:	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	36.0	J55	LTC	2,020	3,520	564,000
Loading					1,263	1,790	285,945
Min. S.F.					1.60	1.97	1.58

Assumptions: Collapse: evacuated casing with 8.33 ppg equiv external pressure gradient, .22 psi/ft backup

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: 3,400 Optimum: 4,530 Maximum: 5,660

Casing Summary: Float shoe, 1 jt casing, float collar, casing to surface (**FLOAT EQUIPMENT FROM WEATHERFORD**)

Centralizers: 1 centralizers jt stop-banded 10' from float shoe on bottom 1 jt & 1 centralizer floating on bottom joint, 1 centralizer per jt (floating) to KOP ; 1 centralizer per 2 jts (floating) to surface (**CENTRALIZERS FROM ARSENAL - SLIP'N'SLIDE 9-5/8" x 12" SOLID BODY POLYMER**)

Casing Contingency: Hole conditions encountered during the drilling of the 12-1/4" intermediate hole section may warrant the use of an ECP and/or a DV Tool to ensure that cement can be successfully circulated to surface. Anticipated placement tool placement is ~100' above the Point Lookout top. Actual drilling conditions will determine if a tools are needed and their exact placement.

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)
Lead	III:POZ Blend	12.5	2.140	12.05	70%	0	1,372
Tail	Type III	14.6	1.38	6.64	20%	5,465	136

Annular Capacity 0.3627 cuft/ft 9-5/8" casing x 13-3/8" casing annulus

0.3132 cuft/ft 9-5/8" casing x 12-1/4" hole annulus

Calculated cement volumes assume gauge hole and the excess (open hole only) noted in table

Drake Energy Services Intermediate Cementing Program

Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

PRODUCTION: Drill to TD following directional plan, run casing, cement casing to surface.

5,965 ft (MD)	to	16,589 ft (MD)	Hole Section Length:	10,624 ft
5,923 ft (TVD)	to	6,728 ft (TVD)	Casing Required:	16,589 ft

Estimated KOP:	6,886 ft (MD)	6,710 ft (TVD)
Estimated Landing Point (P.O.E.):	7,190 ft (MD)	6,787 ft (TVD)
Estimated Lateral Length:	9,399 ft (MD)	

Fluid:	Type	MW (ppg)	FL (mL/30')	PV (cp)	YP (lb/100 sqft)	ES	OWR	Comment
	OBM	8.7 - 9.0	10 - 15	10 - 20	6 - 10	500+	80:20	WBM as contingency

Hole Size: 8-1/2"

Bit / Motor: PDC w/mud motor

Bit / Motor (Detail): **MOTOR:** NOV 077857 - 6.5" 7/8, 5.0 stage, 0.23 rev/gal, 1.83 deg, 750 GPM, 1,580 DIFF PSIG (or similar); on demand friction breaking device(s) as required, bottom tool spaced ~3,000' behind the bit.

BIT: 5-BLADE PDC w/16 mm - 19 mm cutters, matrix body, target TFA = 1.0 - 1.5 sq-in

MWD / Survey: MWD with GR, inclination, and azimuth (survey every joint from KOP to Landing Point and survey every 100' minimum before KOP and after Landing Point)

Logging: GR MWD for entire section, no mud-log or cuttings sampling, no OH WL logs

Pressure Test: NU BOPE and test (as noted above); pressure test 9-5/8" casing to 1,500 psi for 30 minutes.

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	5.500	17.0	P-110	LTC	7,460	10,640	546,000	445,000
Loading					3,353	6,970	343,352	343,352
Min. S.F.					2.23	1.53	1.59	1.30

Assumptions: Collapse: fully evacuated casing with 9.5 ppg fluid in the annulus (floating casing during running)

Burst: 8,500 psi maximum surface treating pressure with 10.2 ppg equivalent mud weight sand laden fluid with 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 9.0 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: 3,470 Optimum: 4,620 Maximum: 5,780

Casing Summary: Float shoe, 1 jt casing, float collar w/debris catcher, 1 jt casing, float collar (**WFT float equipment**), 20' marker joint, toe-initiation sleeve (**WFT RD 9,500 psi**), 20' marker joint, toe-initiation sleeve (Weatherford RD 10,500 psi), casing to KOP with 20' marker joints spaced evenly in lateral every ~2,000', floatation sub (**NCS Air-Lock 4,500 psi from WFT**), casing to surface. The toe-initiation sleeve shall be placed no closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the the azimuth of the well. **Note: the LTP is the maximum depth of the toe sleeve and is noted on the Well Plan. Drill past the LTP as required for necessary rat-hole and shoe-track length to place the toe sleeve as close to (but not past) the planned LTP as possible.**

Centralizers: Centralizer count and placement may be adjusted based on well conditions and as-drilled surveys (**ARSENAL**)

Lateral: 1 centralizer per joint

POE to 9-5/8" shoe: 1 centralizer per joint

9-5/8" shoe to surface: 1 centralizer per 2 joints

Casing Summary: Float shoe, 1 jt casing, float collar, 1 jt casing, float collar, 1 jt casing, toe-initiation sleeve, 20' marker joint, toe-initiation sleeve, casing to KOP with 20' marker joints spaced evenly in lateral every 2,000', floatation sub, casing to surface. **The toe-initiation sleeves must be positioned INSIDE any unit setback.**

Casing Details: Float shoe, 1 jt casing, float collar, NCS debris catcher, 1 jt casing, float collar, 1 jt casing, toe-initiation sleeve (**WFT RD 9,500 psi**), 20' marker joint, toe-initiation sleeve (**Weatherford RD 10,500 psi**), casing to KOP with 20' marker joints spaced evenly in lateral every 2,000'. Place **NCS Floatation Sub** (opening pressure 3,000 psi - 3,500 psi applied) at KOP (+/-), casing to surface. Run **Arsenal Slip N Slide 8" x 5-1/2" polymer centralizers** on casing as noted below. **The toe-initiation sleeves must be positioned INSIDE the 330' unit setback.**

Centralizers: Centralizer count and placement may be adjusted based on well conditions and as-drilled surveys.

Lateral: 1 centralizer per joint

Curve: 1 centralizer per joint from landing point to KOP

KOP to surf: 1 centralizer per 2 joints

	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)
Cement:							
Lead	Type III	12.4	2.360	13.40	65%	0	1,106
Tail	G:POZ blend	13.3	1.360	6.00	10%	5,864	1,987
Annular Capacity	0.2691	cuft/ft	5-1/2" casing x 9-5/8" casing annulus				
	0.2291	cuft/ft	5-1/2" casing x 8-1/2" hole annulus				

Calculated cement volumes assume gauge hole and the excess noted in table

American Cementing Liner & Production Blend

Notify NMOCD & BLM if cement is not circulated to surface.

Note: This well will not be considered an unorthodox well location as defined by NMAC 19.15.16.15.C.5. As defined in NMAC 19.15.16.15.C.1.a and 19.15.16.15.C.1.b, no point in the completed interval shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth well. The boundaries of the completed interval, as defined by NMAC 19.15.16.7.B, are the last take point and first take point, as defined by NMAC 19.15.16.7.E and NMAC 19.15.16.7.J, respectively. In the case of this well, the last take point will be the bottom toe-initiation sleeve, and the first take point will be the top perforation. **Neither the bottom toe-initiation sleeve nor the top perforation shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth of the well.**

FINISH WELL: ND BOP, cap well, RDMO.

COMPLETION AND PRODUCTION PLAN:

Frac: 40 plug-and-perf stages with 300,000 bbls slickwater fluid and 24,000,000 lbs of proppant (estimated)

Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assistance)

Production: Produce through production tubing via gas-lift into permanent production and storage facilities

ESTIMATED START DATES:

Drilling: 7/11/2022

Completion: 10/10/2022

Production: 12/9/2022

Prepared by: Alec Bridge 9/4/2018

Updated by: Alec Bridge 10/5/2018 - changed 9-5/8" casing weight to 40#, updated AFE-information

Alec Bridge 10/18/2018 - eliminated pilot hole, lengthened lateral by ~5,000', updated BOPE information

Alec Bridge 10/26/2018 - updated directional plan based on final plats, updated AFE-information

Alec Bridge 3/6/2019 - lowered 9-5/8" casing point into the Mancos, added contingency ECP and/or DV Tool in 9-5/8" casing string, modified directional plan for AC (COMPASS Design #2)

Alec Bridge 7/29/2019 - updated AFE information, updated rig information, updated BOPE schematic

Alec Bridge 2/7/2022 - updated AFE information for 10K LL

Greg Olson 4/21/2022 updated geology, directional, mud, casing, rig, BOPE, cement

WELL NAME: RINCON UNIT 613H

OBJECTIVE: Drill, complete, and equip single lateral in the Mancos-G formation.

API Number: 30-039-31371

State: New Mexico

County: Rio Arriba

Surface Elev.: 6,538 ft ASL (GL) 6,552 ft ASL (KB)

Surface Location: 21-27N-06W Sec-Twn- Rng 1,117 ft FNL 1,225 ft FEL

BH Location: 19-27N-06W Sec-Twn- Rng 1719 ft FNL 672 ft FEL

Driving Directions: From intersection of US Hwy 64 & US Hwy 550 in Bloomfield, NM: east on Hwy 64 for 36.8 miles to General American Road (GAR) just past MM 101, right (S) on GAR for 1.2 miles to fork, continue right (SW) on GAR for 3.4 miles to 4-way intersection, straight (S) on GAR for 1.1 miles to fork, right (SW) along Munoz Wash for 4.3 miles to 4-way intersection, straight (SW) across Carrizo Wash for 0.3 mile to fork, left (SE) onto CR #492 for 0.4 miles to fork, straight (S) on 492 for 1.4 miles to fork, right (N) uphill on existing road for 0.6 miles to fork, left (SW) for 0.8 miles to fork, left (SE) for 0.1 miles to fork, right (SW) to location to staked location which overlaps existing roadway.

QUICK REFERENCE	
Sur TD (MD)	320 ft
Int TD (MD)	5,965 ft
KOP (MD)	6,886 ft
KOP (TVD)	6,710 ft
Target (TVD)	6,787 ft
Curve BUR	10 °/100 ft
POE (MD)	7,190 ft
TD (MD)	16,589 ft
Lat Len (ft)	9,399 ft

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	17.500	320	13.375	54.5	J-55	BTC	0	320
Intermediate	12.250	5,965	9.625	36	J55	LTC	0	5,965
Production	8.500	16,589	5.500	17.0	P-110	LTC	0	16,589

CEMENT PROPERTIES SUMMARY:

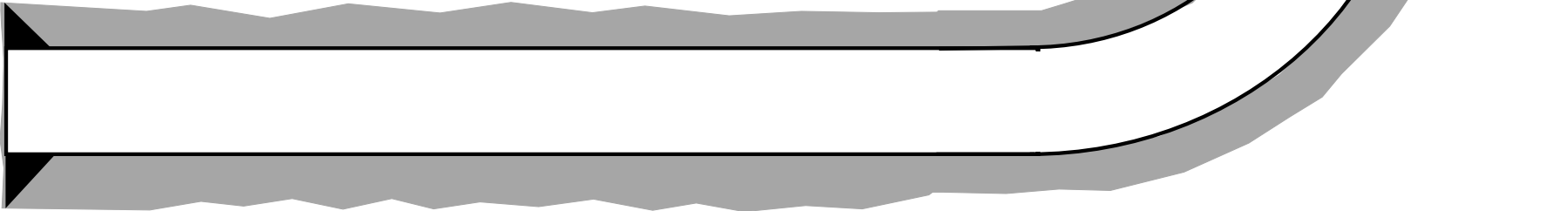
	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	% Excess	TOC (ft MD)	Total (sx)
Surface	Class G	15.8	1.174	5.15	100%	0	379
Inter. (Lead)	III:POZ Blend	12.5	2.14	12.05	70%	0	1,372
Inter. (Tail)	Type III	14.6	1.38	6.64	20%	5,465	136
Prod. (Lead)	Type III	12.4	2.36	13.4	65%	0	1,106
Prod. (Tail)	G:POZ blend	13.3	1.3602	5.999	10%	5,864	1,987

COMPLETION / PRODUCTION SUMMARY:

Frac: 40 plug-and-perf stages with 300,000 bbls slickwater fluid and 24,000,000 lbs of proppant (estimated)

Flowback: Flow back through production tubing as pressures allow (ESP may be used for load recovery assistance)

Production: Produce through production tubing via gas-lift into permanent production and storage facilities



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

CONDITIONS

Action 101446

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 101446
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	4/28/2022