

Well Name: ROCK RIDGE FEDERAL WCB	Well Location: T24S / R29E / SEC 30 / SENE / 32.1892673 / -104.0159842	County or Parish/State: EDDY / NM
Well Number: 11H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM107384	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001546332	Well Status: Approved Application for Permit to Drill	Operator: MURCHISON OIL & GAS LLC

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Other
Date Sundry Submitted: 03/25/2021	Time Sundry Submitted: 08:42
Date proposed operation will begin: 05/13/2021	

Procedure Description: Murchison Oil and Gas, LLC respectfully requests permission to change the bottom hole location and landing point. This well will still be targeting the Wolfcamp B formation but will be landed at 10,750 feet TVD and bottom hole location will now be 2310 FNL and 330 FWL. Revised plats, directional plans, and casing assumption are attached for the new bottom hole location.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- ROCK_RIDGE_FEDERAL_WCB_11H_C102_20210325084048.pdf
- Rock_Ridge_Federal_WCB_11H___Casing_Assumptions_20210325084048.pdf
- Rock_Ridge_Federal_WCB_11H___Directional_Survey_3.24.21_20210325084049.pdf

Received by OCD: 9/22/2021 11:35:08 AM

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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: COTTRELL	Signed on: MAR 25, 2021 08:40 AM
Name: MURCHISON OIL & GAS LLC	
Title: Regulatory Coordinator	
Street Address: 7250 Dallas Parkway, Ste. 1400	
City: Plano	State: TX
Phone: (972) 931-0700	
Email address: ccottrell@jdmii.com	

Field Representative

Representative Name: Luke Pumphrey		
Street Address: 7250 Dallas Parkway, Ste 1400		
City: Plano	State: TX	Zip: 75024
Phone: (972)931-0700		
Email address: lpumphrey@jdmii.com		

BLM Point of Contact

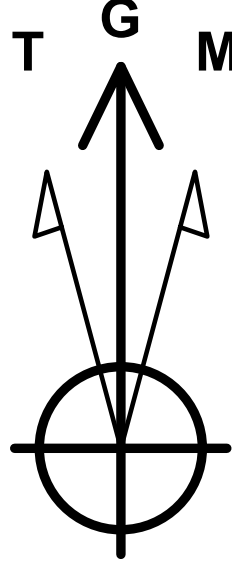
BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 04/05/2021
Signature: Chris Walls	



Company: Murchison Oil and Gas, LLC
Well: Rock Ridge Federal WCB 11H
County: Eddy County, New Mexico (NAD 83)
Rig: Latshaw 7
Wellbore: Wellbore #1
Design: Design #3
Date: 13:56, March 24 2021

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

To convert a Magnetic Direction to a Grid Direction, Add 6.598°
To convert a Magnetic Direction to a True Direction, Add 6.767° East
To convert a True Direction to a Grid Direction, Subtract 0.169°



Azimuths to Grid North
True North: -0.17°
Magnetic North: 6.60°

Magnetic Field
Strength: 47675.7nT
Dip Angle: 59.85°
Date: 5/31/2021
Model: HDGM2021

SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
0.00	15338.39	Design #3 (Wellbore #1)	MWD+HRGM

+N/-S	+E/-W	GL @ 2925.50 Northing	WELL @ 2950.50usft (Latshaw 7) Easting	Latitude	Longitude
0.00	0.00	432734.80	639509.55	32° 11' 21.362 N	104° 0' 57.543 W

DESIGN TARGET DETAILS

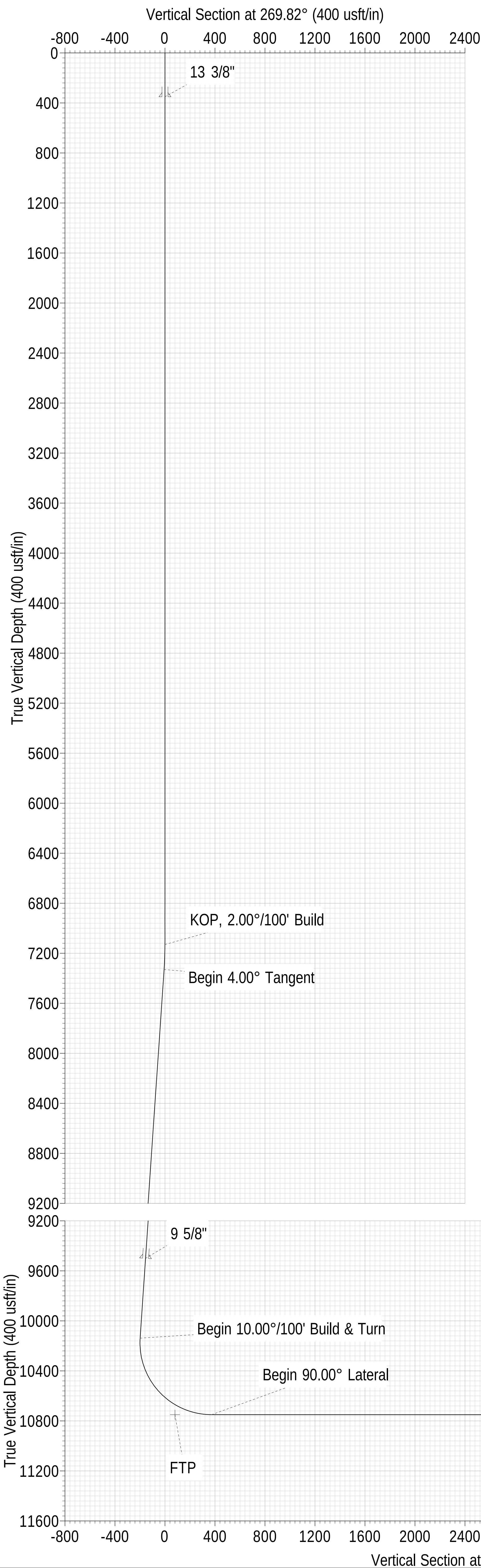
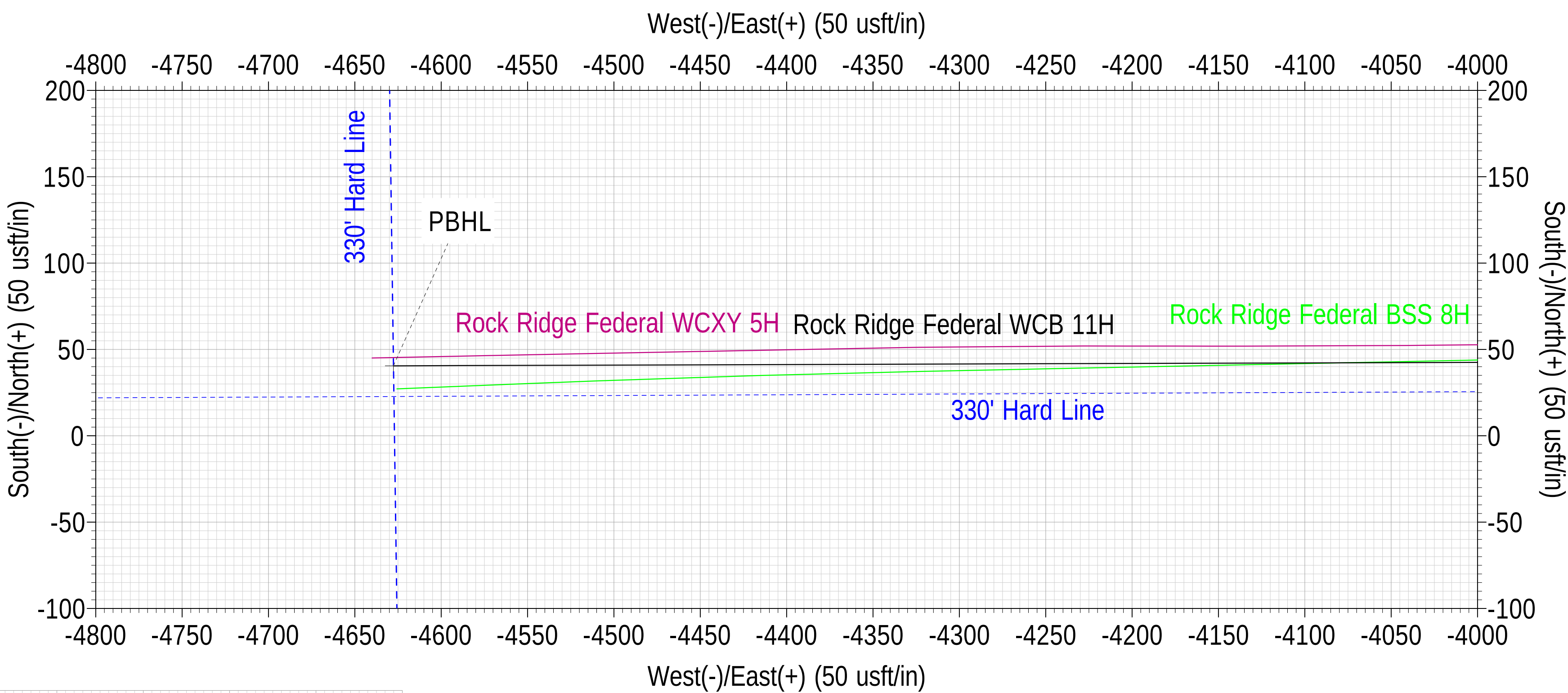
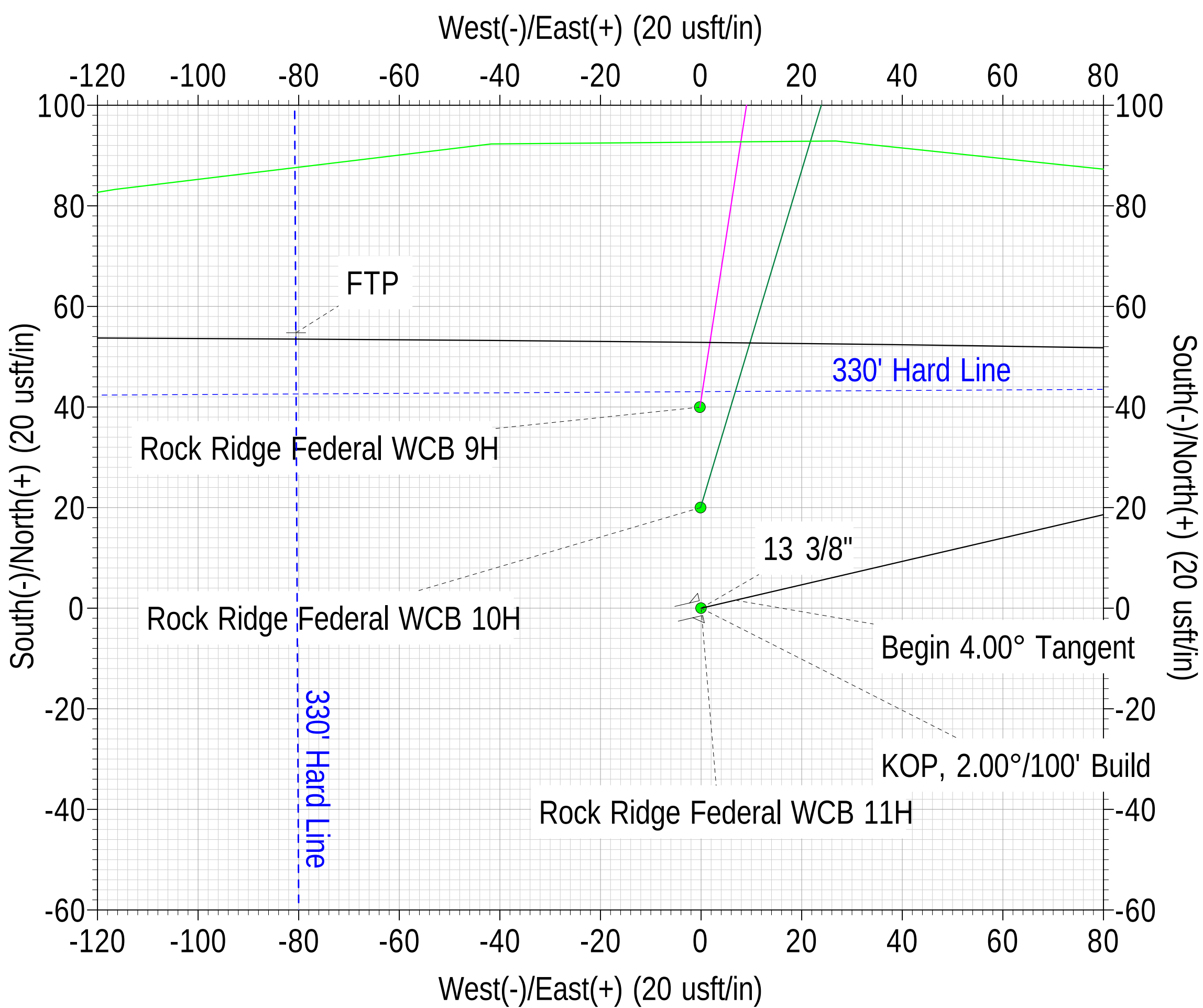
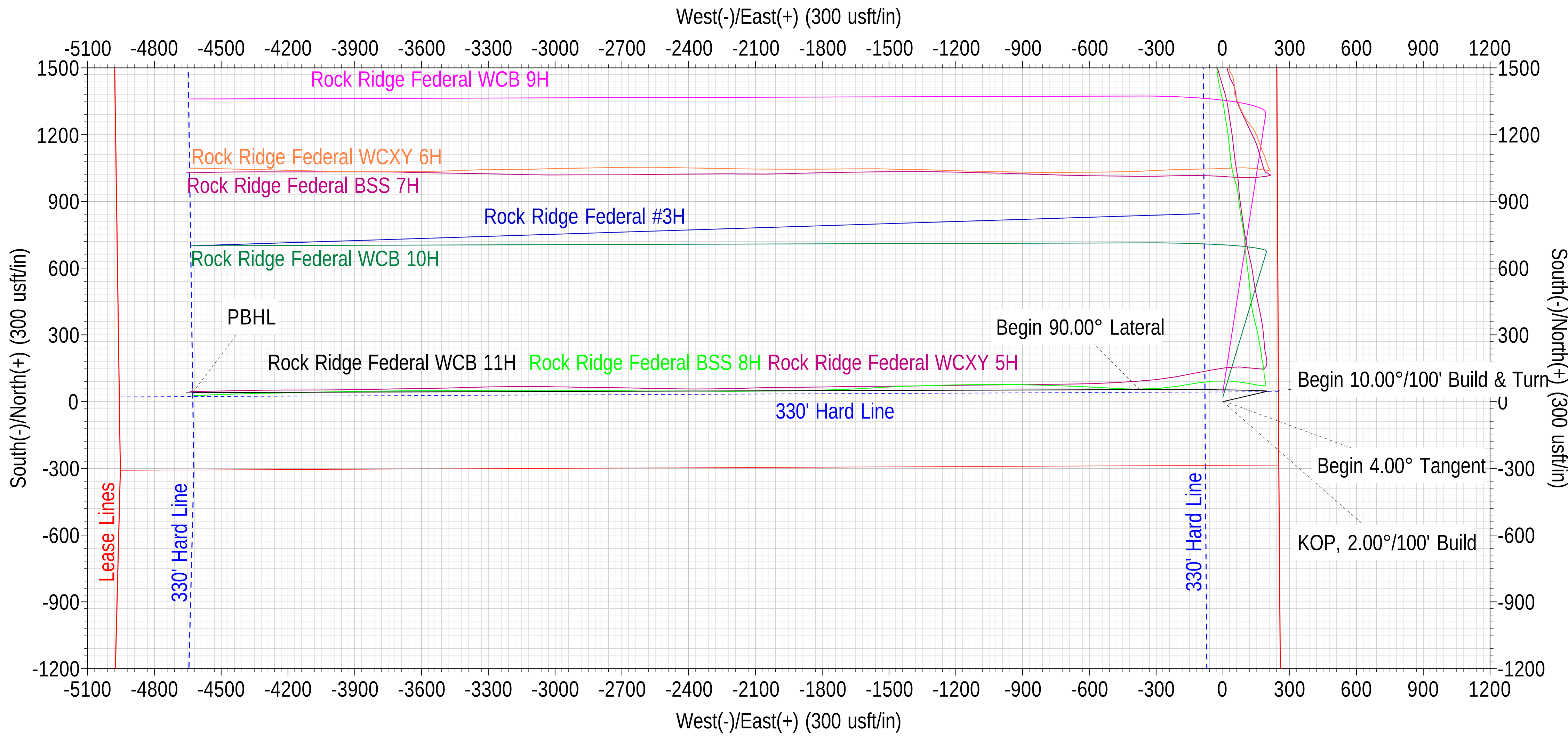
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL v3 - Rock Ridge Federal WCB 11H	10750.00	40.54	-4627.65	432775.34	634881.90	32° 11' 21.895 N	104° 1' 51.394 W
FTP v3 - Rock Ridge Federal WCB 11H	10750.00	54.77	-80.50	432789.56	639429.04	32° 11' 21.907 N	104° 0' 58.478 W

CASING DETAILS

TVD	MD	Name	Size
350.00	350.00	13 3/8"	13-3/8
9500.00	9505.47	9 5/8"	9-5/8

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	
7130.00	0.00	0.00	7130.00	0.00	0.00	0.00	0.000	0.00	KOP, 2.00°/100' Build
7330.13	4.00	76.91	7329.97	1.58	6.81	2.00	76.913	-6.81	Begin 4.00° Tangent
10145.16	4.00	76.91	10138.13	46.07	198.20	0.00	0.000	-198.34	Begin 10.00°/100' Build & Turn
11084.18	90.00	269.82	10750.00	53.85	-373.46	10.00	-167.062	373.29	Begin 90.00° Lateral
15338.39	90.00	269.82	10750.00	40.54	-4627.65	0.00	0.000	4627.50	PBHL





Murchison Oil and Gas, LLC

Eddy County, New Mexico (NAD 83)

Rock Ridge Federal 9-11

Rock Ridge Federal WCB 11H

Wellbore #1

Plan: Design #3

Standard Planning Report

24 March, 2021



Database:	5000.1 Conroe DB	Local Co-ordinate Reference:	Well Rock Ridge Federal WCB 11H
Company:	Murchison Oil and Gas, LLC	TVD Reference:	WELL @ 2950.50usft (Latshaw 7)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 2950.50usft (Latshaw 7)
Site:	Rock Ridge Federal 9-11	North Reference:	Grid
Well:	Rock Ridge Federal WCB 11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Project	Eddy County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Rock Ridge Federal 9-11			
Site Position: From:	Lat/Long	Northing:	432,724.79 usft	Latitude:	32° 11' 21.263 N
		Easting:	639,509.33 usft	Longitude:	104° 0' 57.546 W
	Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	Rock Ridge Federal WCB 11H					
Well Position	+N/-S	0.00 usft	Northing:	432,734.80 usft	Latitude:	32° 11' 21.362 N
	+E/-W	0.00 usft	Easting:	639,509.55 usft	Longitude:	104° 0' 57.543 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,925.50 usft
Grid Convergence:	0.169 °					

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021	5/31/2021	6.767	59.850	47,675.70

Design	Design #3				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	269.82	

Plan Survey Tool Program	Date	3/24/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	15,338.39	Design #3 (Wellbore #1)	MWD+HRGM	
				OWSG MWD + HRGM	

Plan Sections											
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000		
7,130.00	0.00	0.00	7,130.00	0.00	0.00	0.00	0.00	0.00	0.000		
7,330.13	4.00	76.91	7,329.97	1.58	6.81	2.00	2.00	0.00	76.913		
10,145.16	4.00	76.91	10,138.13	46.07	198.20	0.00	0.00	0.00	0.000		
11,084.18	90.00	269.82	10,750.00	53.85	-373.46	10.00	9.16	-17.79	-167.062		
15,338.39	90.00	269.82	10,750.00	40.54	-4,627.65	0.00	0.00	0.00	0.000	PBHL v3 - Rock Ri	

Database:	5000.1 Conroe DB	Local Co-ordinate Reference:	Well Rock Ridge Federal WCB 11H
Company:	Murchison Oil and Gas, LLC	TVD Reference:	WELL @ 2950.50usft (Latshaw 7)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 2950.50usft (Latshaw 7)
Site:	Rock Ridge Federal 9-11	North Reference:	Grid
Well:	Rock Ridge Federal WCB 11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,130.00	0.00	0.00	7,130.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 2.00°/100' Build									
7,200.00	1.40	76.91	7,199.99	0.19	0.83	-0.83	2.00	2.00	0.00
7,300.00	3.40	76.91	7,299.90	1.14	4.91	-4.92	2.00	2.00	0.00
7,330.13	4.00	76.91	7,329.97	1.58	6.81	-6.81	2.00	2.00	0.00
Begin 4.00° Tangent									
7,400.00	4.00	76.91	7,399.67	2.69	11.56	-11.56	0.00	0.00	0.00
7,500.00	4.00	76.91	7,499.42	4.27	18.36	-18.37	0.00	0.00	0.00
7,600.00	4.00	76.91	7,599.18	5.85	25.15	-25.17	0.00	0.00	0.00
7,700.00	4.00	76.91	7,698.94	7.43	31.95	-31.98	0.00	0.00	0.00
7,800.00	4.00	76.91	7,798.69	9.01	38.75	-38.78	0.00	0.00	0.00
7,900.00	4.00	76.91	7,898.45	10.59	45.55	-45.58	0.00	0.00	0.00
8,000.00	4.00	76.91	7,998.20	12.17	52.35	-52.39	0.00	0.00	0.00
8,100.00	4.00	76.91	8,097.96	13.75	59.15	-59.19	0.00	0.00	0.00
8,200.00	4.00	76.91	8,197.72	15.33	65.95	-66.00	0.00	0.00	0.00
8,300.00	4.00	76.91	8,297.47	16.91	72.75	-72.80	0.00	0.00	0.00
8,400.00	4.00	76.91	8,397.23	18.49	79.55	-79.60	0.00	0.00	0.00
8,500.00	4.00	76.91	8,496.98	20.07	86.34	-86.41	0.00	0.00	0.00
8,600.00	4.00	76.91	8,596.74	21.65	93.14	-93.21	0.00	0.00	0.00
8,700.00	4.00	76.91	8,696.50	23.23	99.94	-100.01	0.00	0.00	0.00
8,800.00	4.00	76.91	8,796.25	24.81	106.74	-106.82	0.00	0.00	0.00
8,900.00	4.00	76.91	8,896.01	26.39	113.54	-113.62	0.00	0.00	0.00
9,000.00	4.00	76.91	8,995.76	27.97	120.34	-120.43	0.00	0.00	0.00
9,100.00	4.00	76.91	9,095.52	29.56	127.14	-127.23	0.00	0.00	0.00
9,200.00	4.00	76.91	9,195.28	31.14	133.94	-134.03	0.00	0.00	0.00
9,300.00	4.00	76.91	9,295.03	32.72	140.74	-140.84	0.00	0.00	0.00
9,400.00	4.00	76.91	9,394.79	34.30	147.53	-147.64	0.00	0.00	0.00
9,500.00	4.00	76.91	9,494.54	35.88	154.33	-154.45	0.00	0.00	0.00
9,505.47	4.00	76.91	9,500.00	35.96	154.71	-154.82	0.00	0.00	0.00
9 5/8"									
9,600.00	4.00	76.91	9,594.30	37.46	161.13	-161.25	0.00	0.00	0.00
9,700.00	4.00	76.91	9,694.06	39.04	167.93	-168.05	0.00	0.00	0.00
9,800.00	4.00	76.91	9,793.81	40.62	174.73	-174.86	0.00	0.00	0.00

Database:	5000.1 Conroe DB	Local Co-ordinate Reference:	Well Rock Ridge Federal WCB 11H
Company:	Murchison Oil and Gas, LLC	TVD Reference:	WELL @ 2950.50usft (Latshaw 7)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 2950.50usft (Latshaw 7)
Site:	Rock Ridge Federal 9-11	North Reference:	Grid
Well:	Rock Ridge Federal WCB 11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,900.00	4.00	76.91	9,893.57	42.20	181.53	-181.66	0.00	0.00	0.00
10,000.00	4.00	76.91	9,993.33	43.78	188.33	-188.46	0.00	0.00	0.00
10,100.00	4.00	76.91	10,093.08	45.36	195.13	-195.27	0.00	0.00	0.00
10,145.16	4.00	76.91	10,138.13	46.07	198.20	-198.34	0.00	0.00	0.00
Begin 10.00°/100' Build & Turn									
10,150.00	3.53	75.16	10,142.96	46.15	198.51	-198.65	10.00	-9.71	-36.34
10,200.00	1.82	299.32	10,192.93	46.93	199.30	-199.45	10.00	-3.43	-271.67
10,250.00	6.64	277.53	10,242.78	47.70	195.74	-195.89	10.00	9.65	-43.57
10,300.00	11.62	274.18	10,292.13	48.45	187.85	-188.00	10.00	9.95	-6.70
10,350.00	16.61	272.83	10,340.61	49.17	175.69	-175.84	10.00	9.98	-2.71
10,400.00	21.60	272.08	10,387.84	49.86	159.34	-159.50	10.00	9.99	-1.48
10,450.00	26.60	271.61	10,433.47	50.51	138.94	-139.10	10.00	9.99	-0.95
10,500.00	31.59	271.28	10,477.15	51.11	114.65	-114.81	10.00	9.99	-0.67
10,550.00	36.59	271.03	10,518.54	51.67	86.63	-86.80	10.00	10.00	-0.50
10,600.00	41.59	270.83	10,557.34	52.18	55.12	-55.29	10.00	10.00	-0.39
10,650.00	46.59	270.67	10,593.24	52.63	20.35	-20.51	10.00	10.00	-0.32
10,700.00	51.59	270.53	10,625.97	53.03	-17.43	17.26	10.00	10.00	-0.27
10,750.00	56.59	270.41	10,655.29	53.36	-57.91	57.74	10.00	10.00	-0.24
10,800.00	61.59	270.31	10,680.97	53.62	-100.79	100.62	10.00	10.00	-0.21
10,850.00	66.59	270.21	10,702.81	53.83	-145.75	145.58	10.00	10.00	-0.19
10,900.00	71.58	270.12	10,720.66	53.96	-192.44	192.27	10.00	10.00	-0.18
10,950.00	76.58	270.03	10,734.36	54.02	-240.51	240.34	10.00	10.00	-0.17
11,000.00	81.58	269.95	10,743.83	54.02	-289.59	289.41	10.00	10.00	-0.16
11,050.00	86.58	269.87	10,748.98	53.94	-339.30	339.13	10.00	10.00	-0.16
11,084.18	90.00	269.82	10,750.00	53.85	-373.46	373.29	10.00	10.00	-0.16
Begin 90.00° Lateral									
11,100.00	90.00	269.82	10,750.00	53.80	-389.28	389.11	0.00	0.00	0.00
11,200.00	90.00	269.82	10,750.00	53.49	-489.28	489.11	0.00	0.00	0.00
11,300.00	90.00	269.82	10,750.00	53.18	-589.28	589.11	0.00	0.00	0.00
11,400.00	90.00	269.82	10,750.00	52.86	-689.28	689.11	0.00	0.00	0.00
11,500.00	90.00	269.82	10,750.00	52.55	-789.28	789.11	0.00	0.00	0.00
11,600.00	90.00	269.82	10,750.00	52.24	-889.28	889.11	0.00	0.00	0.00
11,700.00	90.00	269.82	10,750.00	51.92	-989.28	989.11	0.00	0.00	0.00
11,800.00	90.00	269.82	10,750.00	51.61	-1,089.28	1,089.11	0.00	0.00	0.00
11,900.00	90.00	269.82	10,750.00	51.30	-1,189.28	1,189.11	0.00	0.00	0.00
12,000.00	90.00	269.82	10,750.00	50.99	-1,289.28	1,289.11	0.00	0.00	0.00
12,100.00	90.00	269.82	10,750.00	50.67	-1,389.28	1,389.11	0.00	0.00	0.00
12,200.00	90.00	269.82	10,750.00	50.36	-1,489.28	1,489.11	0.00	0.00	0.00
12,300.00	90.00	269.82	10,750.00	50.05	-1,589.28	1,589.11	0.00	0.00	0.00
12,400.00	90.00	269.82	10,750.00	49.73	-1,689.28	1,689.11	0.00	0.00	0.00
12,500.00	90.00	269.82	10,750.00	49.42	-1,789.28	1,789.11	0.00	0.00	0.00
12,600.00	90.00	269.82	10,750.00	49.11	-1,889.28	1,889.11	0.00	0.00	0.00
12,700.00	90.00	269.82	10,750.00	48.80	-1,989.28	1,989.11	0.00	0.00	0.00
12,800.00	90.00	269.82	10,750.00	48.48	-2,089.28	2,089.11	0.00	0.00	0.00
12,900.00	90.00	269.82	10,750.00	48.17	-2,189.27	2,189.11	0.00	0.00	0.00
13,000.00	90.00	269.82	10,750.00	47.86	-2,289.27	2,289.11	0.00	0.00	0.00
13,100.00	90.00	269.82	10,750.00	47.55	-2,389.27	2,389.11	0.00	0.00	0.00
13,200.00	90.00	269.82	10,750.00	47.23	-2,489.27	2,489.11	0.00	0.00	0.00
13,300.00	90.00	269.82	10,750.00	46.92	-2,589.27	2,589.11	0.00	0.00	0.00
13,400.00	90.00	269.82	10,750.00	46.61	-2,689.27	2,689.11	0.00	0.00	0.00
13,500.00	90.00	269.82	10,750.00	46.29	-2,789.27	2,789.11	0.00	0.00	0.00
13,600.00	90.00	269.82	10,750.00	45.98	-2,889.27	2,889.11	0.00	0.00	0.00
13,700.00	90.00	269.82	10,750.00	45.67	-2,989.27	2,989.11	0.00	0.00	0.00
13,800.00	90.00	269.82	10,750.00	45.36	-3,089.27	3,089.11	0.00	0.00	0.00

Database:	5000.1 Conroe DB	Local Co-ordinate Reference:	Well Rock Ridge Federal WCB 11H
Company:	Murchison Oil and Gas, LLC	TVD Reference:	WELL @ 2950.50usft (Latshaw 7)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 2950.50usft (Latshaw 7)
Site:	Rock Ridge Federal 9-11	North Reference:	Grid
Well:	Rock Ridge Federal WCB 11H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,900.00	90.00	269.82	10,750.00	45.04	-3,189.27	3,189.11	0.00	0.00	0.00
14,000.00	90.00	269.82	10,750.00	44.73	-3,289.27	3,289.11	0.00	0.00	0.00
14,100.00	90.00	269.82	10,750.00	44.42	-3,389.27	3,389.11	0.00	0.00	0.00
14,200.00	90.00	269.82	10,750.00	44.10	-3,489.27	3,489.11	0.00	0.00	0.00
14,300.00	90.00	269.82	10,750.00	43.79	-3,589.27	3,589.11	0.00	0.00	0.00
14,400.00	90.00	269.82	10,750.00	43.48	-3,689.27	3,689.11	0.00	0.00	0.00
14,500.00	90.00	269.82	10,750.00	43.17	-3,789.27	3,789.11	0.00	0.00	0.00
14,600.00	90.00	269.82	10,750.00	42.85	-3,889.27	3,889.11	0.00	0.00	0.00
14,700.00	90.00	269.82	10,750.00	42.54	-3,989.27	3,989.11	0.00	0.00	0.00
14,800.00	90.00	269.82	10,750.00	42.23	-4,089.27	4,089.11	0.00	0.00	0.00
14,900.00	90.00	269.82	10,750.00	41.91	-4,189.26	4,189.11	0.00	0.00	0.00
15,000.00	90.00	269.82	10,750.00	41.60	-4,289.26	4,289.11	0.00	0.00	0.00
15,100.00	90.00	269.82	10,750.00	41.29	-4,389.26	4,389.11	0.00	0.00	0.00
15,200.00	90.00	269.82	10,750.00	40.98	-4,489.26	4,489.11	0.00	0.00	0.00
15,300.00	90.00	269.82	10,750.00	40.66	-4,589.26	4,589.11	0.00	0.00	0.00
15,338.39	90.00	269.82	10,750.00	40.54	-4,627.65	4,627.50	0.00	0.00	0.00
PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP v3 - Rock Ridge - hit/miss target - Shape - Point	0.00	0.00	10,750.00	54.77	-80.50	432,789.56	639,429.05	32° 11' 21.907 N	104° 0' 58.478 W
- plan misses target center by 70.57usft at 10811.93usft MD (10686.53 TVD, 53.68 N, -111.34 E)									
PBHL v3 - Rock Ridg - plan hits target center - Point	0.00	0.00	10,750.00	40.54	-4,627.65	432,775.34	634,881.90	32° 11' 21.895 N	104° 1' 51.394 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
350.00	350.00	13 3/8"		13-3/8	17-1/2
9,505.47	9,500.00	9 5/8"		9-5/8	12-1/4

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,130.00	7,130.00	0.00	0.00	KOP, 2.00°/100' Build
7,330.13	7,329.97	1.58	6.81	Begin 4.00° Tangent
10,145.16	10,138.13	46.07	198.20	Begin 10.00°/100' Build & Turn
11,084.18	10,750.00	53.85	-373.46	Begin 90.00° Lateral
15,338.39	10,750.00	40.54	-4,627.65	PBHL

Rock Ridge Federal WCB 11H**Casing Program**

Hole Size	Casing Size	Grade	Weight	Thread	SF Collapse	SF Burst	SF Tension	MW	Set Depth MD	Set Depth TVD
16	13 3/8	J55	48#	STC	4.78	7.56	25.77	8.5	350	
12.25	9 5/8	P110 HC	40#	LTC	1.28	3.41	3.24	10	0-6,500	
12.25	9 5/8	P110 HC	43.5#	LTC	1.21	13.01	10.6	9.6	6,500-9,500	
8.5	5 1/2	P110	17#	BTC	1.2	1.33	2.17	12	15338	10750

Casing Design Criteria and Loading Assumptions:

Collapse: 1.2 Design Factor with full internal evacuation.

Burst: 1.125 Design with a surface pressure equal to fracture gradient at depth set minus gas gradient

Production: Design with 1.25 factor of max pressure of stimulation

Tension: 2 Design Factor without effects of buoyancy

District I
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811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1,
2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-46332	² Pool Code 98220	³ Pool Name PURPLE SAGE; WC (GAS)
⁴ Property Code 324981	⁵ Property Name ROCK RIDGE FEDERAL WCB	⁶ Well Number 11H
⁷ OGRID No. 15363	⁸ Operator Name MURCHISON OIL AND GAS, LLC	⁹ Elevation 2925.5

¹⁰ Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	24 S	29 E		2365	NORTH	250	EAST	EDDY

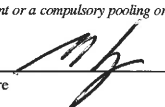
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	30	24 S	29 E		2310	NORTH	330	WEST	EDDY
¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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

N89°50'05"E 2607.02 FT NW CORNER SEC. 30 LAT. = 32.1957688°N LONG. = 104.0320931°W N/4 CORNER SEC. 30 LAT. = 32.1957641°N LONG. = 104.0236670°W NE CORNER SEC. 30 LAT. = 32.1957674°N LONG. = 104.0151925°W		N89°48'22"E 2622.00 FT	
ROCK RIDGE FEDERAL WCB 11H ELEV. = 2925.5' LAT. = 32.1892673°N (NAD83) LONG. = 104.0159842°W			
LOT 1 LOT 2 BHL/LTP BOTTOM OF HOLE & LTP LAT. = 32.1894154°N LONG. = 104.0309429°W FIRST TAKE POINT 2310' FNL, 330' FEL LAT. = 32.1894185°N LONG. = 104.0162439°W SHL		2310' 2365' 250'	
W/4 CORNER SEC. 30 LAT. = 32.1884580°N LONG. = 104.0319969°W LOT 3		E/4 CORNER SEC. 30 LAT. = 32.1884804°N LONG. = 104.0151751°W	
NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD88.			
LOT 4 SW CORNER SEC. 30 LAT. = 32.1811455°N LONG. = 104.0322358°W S/4 CORNER SEC. 30 LAT. = 32.1811449°N LONG. = 104.0237181°W SE CORNER SEC. 30 LAT. = 32.1811434°N LONG. = 104.0151360°W		2658.45 FT 2661.78 FT 2635.78 FT 2655.71 FT	

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature:  Date: **03/24/2021**

Printed Name: **Gary R. Cooper**

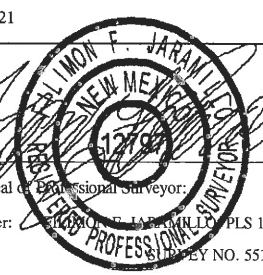
E-mail Address: **rcooper@jdmii.com**

¹⁸ 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.

MARCH 23, 2021

Date of Survey

Signature and Seal of Professional Surveyor: 

Certificate Number: **12797**

PLS 12797
PROFESSIONAL SURVEYOR
KEY NO. 5516E

Intent ☐ As Drilled ☐

API # 30-015-46332		
Operator Name: MURCHISON OIL AND GAS, LLC	Property Name: ROCK RIDGE FEDERAL WCB	Well Number 11H

Kick Off Point (KOP)

UL H	Section 30	Township 24S	Range 29E	Lot	Feet 2365	From N/S NORTH	Feet 250	From E/W EAST	County EDDY
Latitude 32.1892673					Longitude 104.0159842			NAD 83	

First Take Point (FTP)

UL H	Section 30	Township 24S	Range 29E	Lot	Feet 2310	From N/S NORTH	Feet 330	From E/W EAST	County EDDY
Latitude 32.1894185					Longitude 104.0162439			NAD 83	

Last Take Point (LTP)

UL	Section 30	Township 24S	Range 29E	Lot 2	Feet 2310	From N/S NORTH	Feet 330	From E/W WEST	County EDDY
Latitude 32.1894154					Longitude 104.0309429			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

CONDITIONS

Action 51074

CONDITIONS

Operator: Murchison Oil and Gas, LLC 7250 Dallas Parkway Plano, TX 75024	OGRID: 15363
	Action Number: 51074
	Action Type: [C-103] Sub. Drilling (C-103N)

CONDITIONS

Created By	Condition	Condition Date
ksimmons	None	9/23/2021