

Well Name: CARNIVAL FED COM	Well Location: T25S / R35E / SEC 2 / NWNE / 32.165838 / -103.334276	County or Parish/State: LEA / NM
Well Number: 304H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM101608	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002550371	Well Status: Drilling Well	Operator: FRANKLIN MOUNTAIN ENERGY LLC

Notice of Intent

Sundry ID: 2683953

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 07/25/2022	Time Sundry Submitted: 04:05
Date proposed operation will begin: 07/25/2022	

Procedure Description: Franklin Mountain Energy, LLC (FME), Operator, respectfully requests approval to make the following changes to the proposed drilling plan for the above referenced well. BHL Change: FME requests approval to change the BHL for this well to 150' FSL 900' FEL Sec 11 25S 35E SHL remains the same. Please see attached Plan #2, revised 14-point plan, geo prog and C-102.

NOI Attachments

Procedure Description

- C_102_Carnival_Fed_Com_304H_20220725160504.pdf
- FME_Federal_14_Point_Plan_Carnival_304_updated_20220725160453.pdf
- Carnival_Fed_Com_304H__Plan_2__WP_Report_20220725160453.pdf
- Carnival_Fed_Com_304H_GEOPROG_prelim_20220725160453.pdf

Received by OCD: 11/8/2022 7:40:19 AM

Page 2 of 22

Well Name: CARNIVAL FED COM	Well Location: T25S / R35E / SEC 2 / NWNE / 32.165838 / -103.334276	County or Parish/State: LEA / NM
Well Number: 304H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM101608	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002550371	Well Status: Drilling Well	Operator: FRANKLIN MOUNTAIN ENERGY LLC

Conditions of Approval

Additional

2_25_35_2_Sundry_ID_2683953_Carnival_Fed_Com_304H_Lea_NM101608_13_22d_5_6_2022_LV_20221027090836.pdf

Operator

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

Operator Electronic Signature: RACHAEL OVERBEY	Signed on: JUL 25, 2022 04:05 PM
Name: FRANKLIN MOUNTAIN ENERGY LLC	
Title: Director – Operations Planning and Regulatory	
Street Address: 2401 E 2nd Avenue, Suite 300	
City: Denver	State: CO
Phone: (720) 414-7868	
Email address: roverbey@fmellc.com	

Field

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

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: 11/07/2022
Signature: Chris Walls	

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

☐ AMENDED REPORT

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.

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: Carnival East Pad
Well: Carnival Fed Com 304H
Wellbore: OH
Design: Plan #2



Azimuths to Grid North
True North: -0.53°
Magnetic North: 5.85°

Magnetic Field
Strength: 47565.5nT
Dip Angle: 59.72°
Date: 9/27/2021
Model: HDGM_FILE

PROJECT DETAILS: Lea County, NM (NAD83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

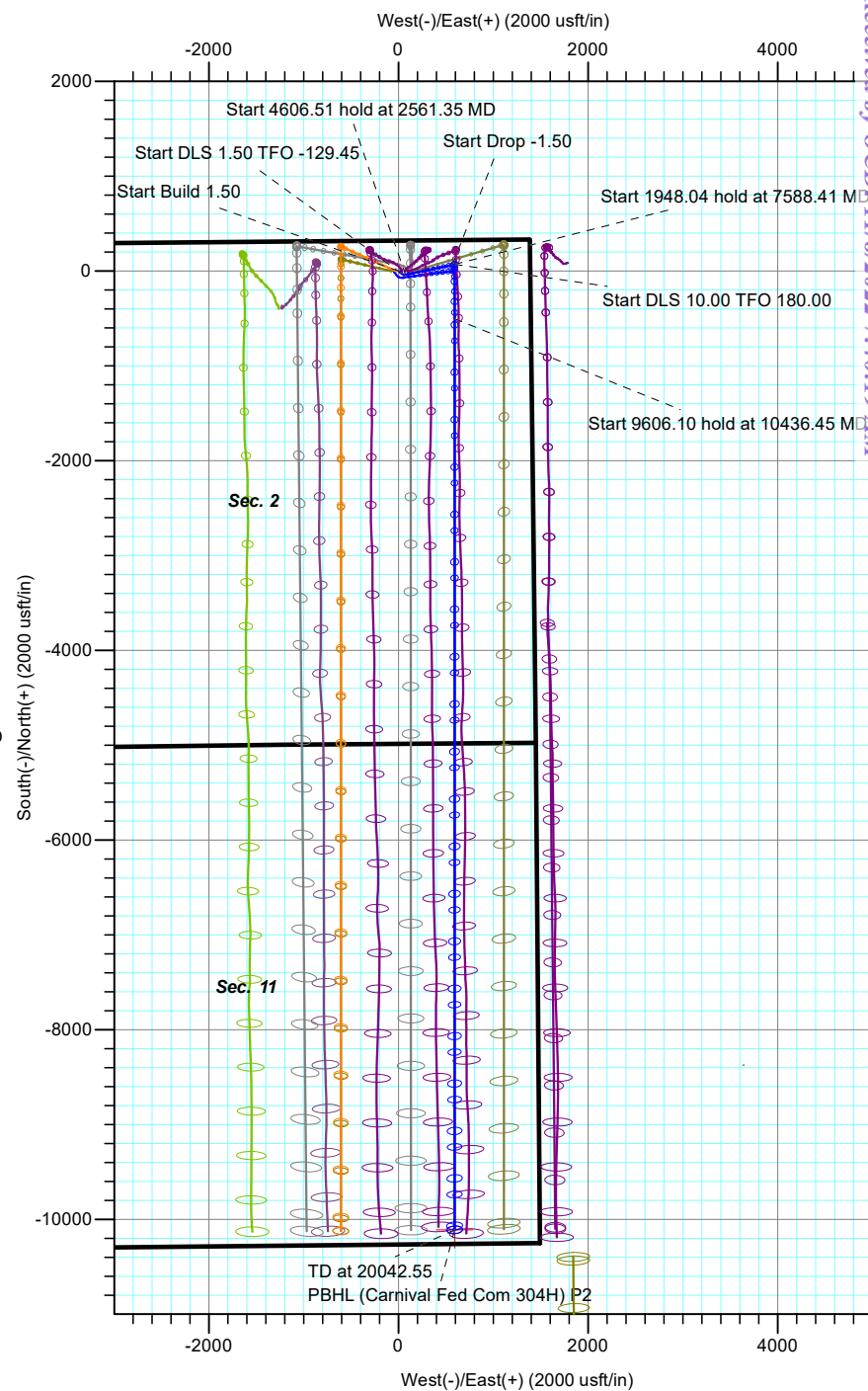
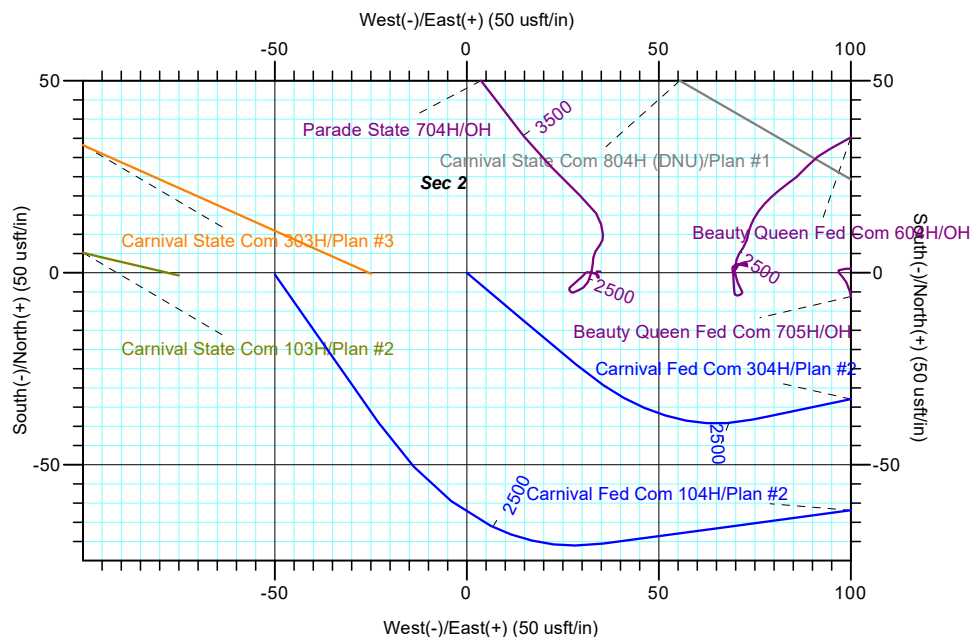


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (Carnival Fed Com 304H) P2	10076.00	-10109.06	592.45	415392.82	851074.07	32.138038	-103.332665

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	0.00	0.00	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2133.33	8.00	130.00	2131.60	-23.89	28.48	1.50	130.00	25.52	Start DLS 1.50 TFO -129.45
2561.35	6.31	78.20	2556.68	-38.25	74.36	1.50	-129.45	42.53	Start 4606.51 hold at 2561.35 MD
7167.86	6.31	78.20	7135.30	65.27	569.81	0.00	0.00	-31.82	Start Drop -1.50
7588.41	0.00	0.00	7555.00	70.00	592.45	1.50	180.00	-35.22	Start 1948.04 hold at 7588.41 MD
9536.45	0.00	0.00	9503.04	70.00	592.45	0.00	0.00	-35.22	Start DLS 10.00 TFO 180.00
10436.45	90.00	180.00	10076.00	-502.96	592.45	10.00	180.00	536.76	Start 9606.10 hold at 10436.45 MD
20042.55	90.00	180.00	10076.00	-10109.06	592.45	0.00	0.00	10126.41	TD at 20042.55



TOTAL DIRECTIONAL SERVICES LLC
671 Academy Ct, Windsor, CO 80550
Phone: (970) 460-9402

Plan: Plan #2 (Carnival Fed Com 304H/OH)
Carnival East Pad
Created By: R. Wafer
Date: 18:19, January 19 2022
Approved: _____ Date: _____

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: Carnival East Pad
Well: Carnival Fed Com 304H
Wellbore: OH
Design: Plan #2

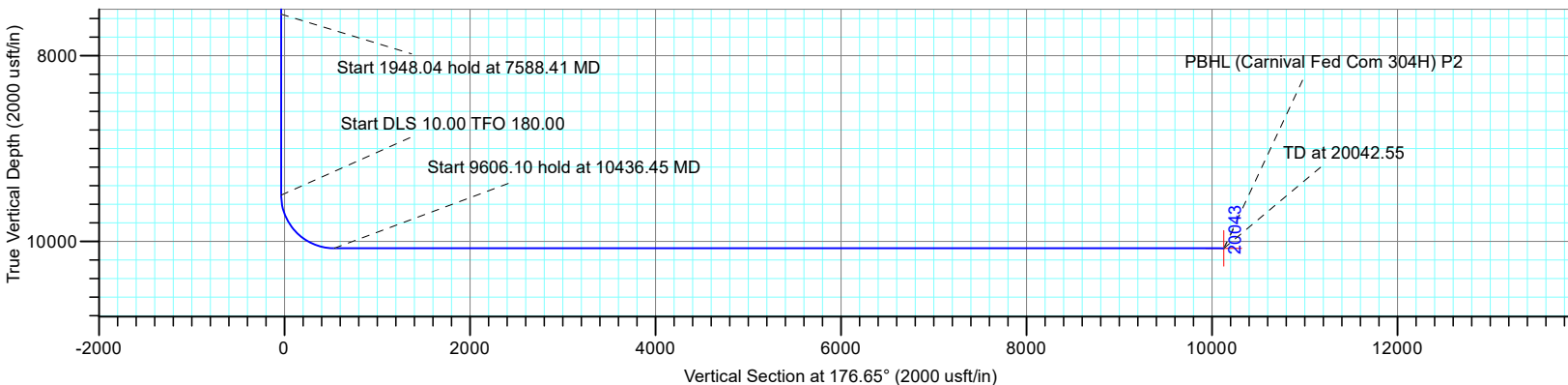
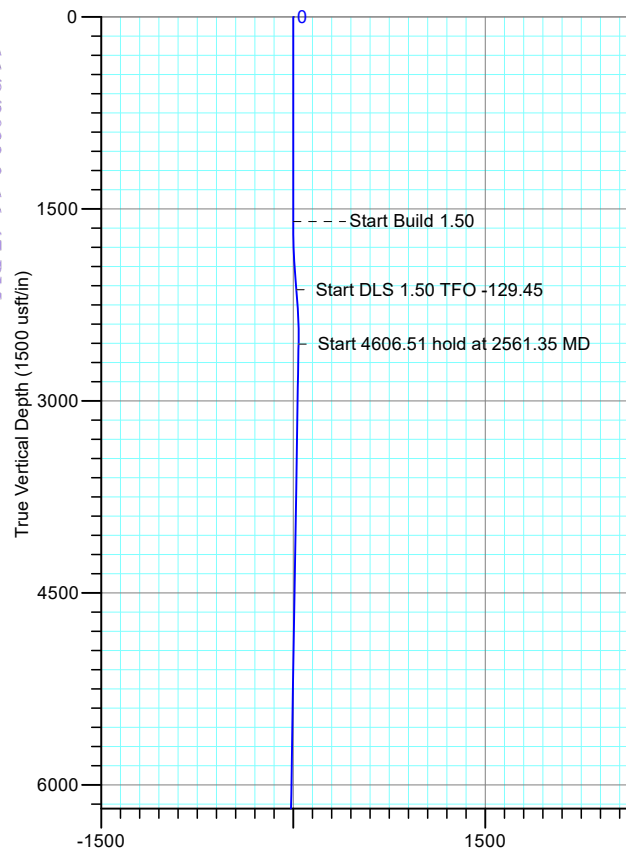


Azimuths to Grid North
True North: -0.53°
Magnetic North: 5.85°

Magnetic Field
Strength: 47565.5nT
Dip Angle: 59.72°
Date: 9/27/2021
Model: HDGM_FILE

PROJECT DETAILS: Lea County, NM (NAD83)

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

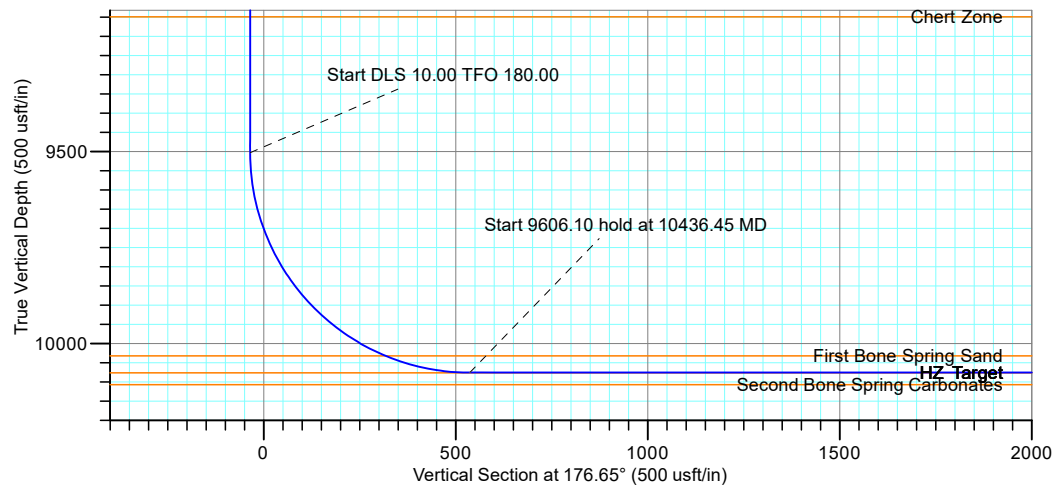


SECTION DETAILS

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	0.00	0.00	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2133.33	8.00	130.00	2131.60	-23.89	28.48	1.50	130.00	25.52	Start DLS 1.50 TFO -129.45
2561.35	6.31	78.20	2556.68	-38.25	74.36	1.50	-129.45	42.53	Start 4606.51 hold at 2561.35 MD
7167.86	6.31	78.20	7135.30	65.27	569.81	0.00	0.00	-31.82	Start Drop -1.50
7588.41	0.00	0.00	7555.00	70.00	592.45	1.50	180.00	-35.22	Start 1948.04 hold at 7588.41 MD
9536.45	0.00	0.00	9503.04	70.00	592.45	0.00	0.00	-35.22	Start DLS 10.00 TFO 180.00
10436.45	90.00	180.00	10076.00	-502.96	592.45	10.00	180.00	536.76	Start 9606.10 hold at 10436.45 MD
20042.55	90.00	180.00	10076.00	-10109.06	592.45	0.00	0.00	10126.41	TD at 20042.55

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL (Carnival Fed Com 304H) P2	10076.00	-10109.06	592.45	32.138038	-103.332665



TOTAL DIRECTIONAL SERVICES LLC
671 Academy Ct, Windsor, CO 80550
Phone: (970) 460-9402

Plan: Plan #2 (Carnival Fed Com 304H/OH)
Carnival East Pad
Created By: R. Wafer
Date: 18:21, January 19 2022
Approved: _____ Date: _____



Franklin Mountain Energy

Lea County, NM (NAD83)

Carnival East Pad

Carnival Fed Com 304H

OH

Plan: Plan #2

Standard Planning Report

19 January, 2022





Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Carnival Fed Com 304H
Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Carnival East Pad			
Site Position:		Northing:	425,501.21 usft	Latitude:	32.165838
From:	Map	Easting:	850,406.63 usft	Longitude:	-103.334518
Position Uncertainty:		0.00 usft	Slot Radius:	13.200 in	

Well	Carnival Fed Com 304H					
Well Position	+N/-S	0.00 usft	Northing:	425,501.88 usft	Latitude:	32.165838
	+E/-W	0.00 usft	Easting:	850,481.62 usft	Longitude:	-103.334276
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,259.20 usft
Grid Convergence:		0.53 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	9/27/2021	6.38	59.72	47,565.50000000

Design	Plan #2				
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	176.65	

Plan Survey Tool Program	Date	1/19/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	20,042.55	Plan #2 (OH)	OWSG (Rev2) MWD+IFR1	
				OWSG MWD + IFR1 + Mult	



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Carnival Fed Com 304H
Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
2,133.33	8.00	130.00	2,131.60	-23.89	28.48	1.50	1.50	0.00	130.00	
2,561.35	6.31	78.20	2,556.68	-38.25	74.36	1.50	-0.40	-12.10	-129.45	
7,167.86	6.31	78.20	7,135.30	65.27	569.81	0.00	0.00	0.00	0.00	
7,588.41	0.00	0.00	7,555.00	70.00	592.45	1.50	-1.50	0.00	180.00	
9,536.45	0.00	0.00	9,503.04	70.00	592.45	0.00	0.00	0.00	0.00	
10,436.45	90.00	180.00	10,076.00	-502.96	592.45	10.00	10.00	20.00	180.00	
20,042.55	90.00	180.00	10,076.00	-10,109.06	592.45	0.00	0.00	0.00	0.00	PBHL (Carnival Fec



Planning Report



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Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00
Cenozoic Alluvium (surface)									
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
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
1,190.00	0.00	0.00	1,190.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
Start Build 1.50									
1,700.00	1.50	130.00	1,699.99	-0.84	1.00	0.90	1.50	1.50	0.00
1,703.01	1.55	130.00	1,703.00	-0.89	1.06	0.95	1.50	1.50	0.00
Salado									
1,800.00	3.00	130.00	1,799.91	-3.36	4.01	3.59	1.50	1.50	0.00
1,900.00	4.50	130.00	1,899.69	-7.57	9.02	8.08	1.50	1.50	0.00
2,000.00	6.00	130.00	1,999.27	-13.45	16.03	14.36	1.50	1.50	0.00
2,100.00	7.50	130.00	2,098.57	-21.01	25.03	22.43	1.50	1.50	0.00
2,133.33	8.00	130.00	2,131.60	-23.89	28.48	25.52	1.50	1.50	0.00
Start DLS 1.50 TFO -129.45									
2,200.00	7.40	124.00	2,197.67	-29.28	35.59	31.31	1.50	-0.89	-9.00
2,300.00	6.69	113.20	2,296.92	-35.18	46.29	37.83	1.50	-0.71	-10.79
2,400.00	6.27	100.43	2,396.28	-38.46	57.02	41.73	1.50	-0.43	-12.77
2,500.00	6.18	86.59	2,495.70	-39.13	67.76	43.03	1.50	-0.08	-13.85
2,561.35	6.31	78.20	2,556.68	-38.25	74.36	42.53	1.50	0.21	-13.67
Start 4606.51 hold at 2561.35 MD									
2,600.00	6.31	78.20	2,595.10	-37.38	78.52	41.91	0.00	0.00	0.00
2,700.00	6.31	78.20	2,694.50	-35.13	89.27	40.29	0.00	0.00	0.00
2,800.00	6.31	78.20	2,793.89	-32.88	100.03	38.68	0.00	0.00	0.00
2,900.00	6.31	78.20	2,893.28	-30.64	110.78	37.06	0.00	0.00	0.00
3,000.00	6.31	78.20	2,992.68	-28.39	121.54	35.45	0.00	0.00	0.00
3,100.00	6.31	78.20	3,092.07	-26.14	132.29	33.84	0.00	0.00	0.00
3,200.00	6.31	78.20	3,191.47	-23.89	143.05	32.22	0.00	0.00	0.00
3,300.00	6.31	78.20	3,290.86	-21.65	153.80	30.61	0.00	0.00	0.00
3,400.00	6.31	78.20	3,390.26	-19.40	164.56	28.99	0.00	0.00	0.00
3,480.23	6.31	78.20	3,470.00	-17.60	173.19	27.70	0.00	0.00	0.00
Base Salt									
3,500.00	6.31	78.20	3,489.65	-17.15	175.31	27.38	0.00	0.00	0.00
3,600.00	6.31	78.20	3,589.05	-14.91	186.07	25.77	0.00	0.00	0.00
3,700.00	6.31	78.20	3,688.44	-12.66	196.83	24.15	0.00	0.00	0.00
3,800.00	6.31	78.20	3,787.84	-10.41	207.58	22.54	0.00	0.00	0.00
3,900.00	6.31	78.20	3,887.23	-8.16	218.34	20.92	0.00	0.00	0.00



Planning Report



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Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,928.95	6.31	78.20	3,916.00	-7.51	221.45	20.46	0.00	0.00	0.00
Capitan									
4,000.00	6.31	78.20	3,986.62	-5.92	229.09	19.31	0.00	0.00	0.00
4,100.00	6.31	78.20	4,086.02	-3.67	239.85	17.70	0.00	0.00	0.00
4,200.00	6.31	78.20	4,185.41	-1.42	250.60	16.08	0.00	0.00	0.00
4,300.00	6.31	78.20	4,284.81	0.83	261.36	14.47	0.00	0.00	0.00
4,400.00	6.31	78.20	4,384.20	3.07	272.11	12.85	0.00	0.00	0.00
4,500.00	6.31	78.20	4,483.60	5.32	282.87	11.24	0.00	0.00	0.00
4,600.00	6.31	78.20	4,582.99	7.57	293.63	9.63	0.00	0.00	0.00
4,700.00	6.31	78.20	4,682.39	9.81	304.38	8.01	0.00	0.00	0.00
4,800.00	6.31	78.20	4,781.78	12.06	315.14	6.40	0.00	0.00	0.00
4,900.00	6.31	78.20	4,881.18	14.31	325.89	4.78	0.00	0.00	0.00
5,000.00	6.31	78.20	4,980.57	16.56	336.65	3.17	0.00	0.00	0.00
5,088.97	6.31	78.20	5,069.00	18.55	346.22	1.73	0.00	0.00	0.00
Lamar									
5,100.00	6.31	78.20	5,079.96	18.80	347.40	1.55	0.00	0.00	0.00
5,200.00	6.31	78.20	5,179.36	21.05	358.16	-0.06	0.00	0.00	0.00
5,275.10	6.31	78.20	5,254.00	22.74	366.24	-1.27	0.00	0.00	0.00
Bell Canyon									
5,300.00	6.31	78.20	5,278.75	23.30	368.91	-1.67	0.00	0.00	0.00
5,400.00	6.31	78.20	5,378.15	25.54	379.67	-3.29	0.00	0.00	0.00
5,500.00	6.31	78.20	5,477.54	27.79	390.42	-4.90	0.00	0.00	0.00
5,600.00	6.31	78.20	5,576.94	30.04	401.18	-6.52	0.00	0.00	0.00
5,700.00	6.31	78.20	5,676.33	32.29	411.94	-8.13	0.00	0.00	0.00
5,800.00	6.31	78.20	5,775.73	34.53	422.69	-9.74	0.00	0.00	0.00
5,900.00	6.31	78.20	5,875.12	36.78	433.45	-11.36	0.00	0.00	0.00
6,000.00	6.31	78.20	5,974.51	39.03	444.20	-12.97	0.00	0.00	0.00
6,097.07	6.31	78.20	6,071.00	41.21	454.64	-14.54	0.00	0.00	0.00
Cherry Canyon									
6,100.00	6.31	78.20	6,073.91	41.27	454.96	-14.59	0.00	0.00	0.00
6,200.00	6.31	78.20	6,173.30	43.52	465.71	-16.20	0.00	0.00	0.00
6,300.00	6.31	78.20	6,272.70	45.77	476.47	-17.81	0.00	0.00	0.00
6,400.00	6.31	78.20	6,372.09	48.02	487.22	-19.43	0.00	0.00	0.00
6,500.00	6.31	78.20	6,471.49	50.26	497.98	-21.04	0.00	0.00	0.00
6,600.00	6.31	78.20	6,570.88	52.51	508.74	-22.66	0.00	0.00	0.00
6,700.00	6.31	78.20	6,670.28	54.76	519.49	-24.27	0.00	0.00	0.00
6,800.00	6.31	78.20	6,769.67	57.00	530.25	-25.88	0.00	0.00	0.00
6,900.00	6.31	78.20	6,869.07	59.25	541.00	-27.50	0.00	0.00	0.00
7,000.00	6.31	78.20	6,968.46	61.50	551.76	-29.11	0.00	0.00	0.00
7,100.00	6.31	78.20	7,067.85	63.75	562.51	-30.73	0.00	0.00	0.00
7,167.86	6.31	78.20	7,135.30	65.27	569.81	-31.82	0.00	0.00	0.00
Start Drop -1.50									
7,200.00	5.83	78.20	7,167.26	65.96	573.14	-32.32	1.50	-1.50	0.00
7,300.00	4.33	78.20	7,266.87	67.77	581.80	-33.62	1.50	-1.50	0.00
7,400.00	2.83	78.20	7,366.67	69.05	587.90	-34.54	1.50	-1.50	0.00
7,459.38	1.94	78.20	7,426.00	69.55	590.32	-34.90	1.50	-1.50	0.00
Brushy Canyon									
7,500.00	1.33	78.20	7,466.60	69.79	591.45	-35.07	1.50	-1.50	0.00
7,588.41	0.00	0.00	7,555.00	70.00	592.45	-35.22	1.50	-1.50	0.00
Start 1948.04 hold at 7588.41 MD									
7,600.00	0.00	0.00	7,566.59	70.00	592.45	-35.22	0.00	0.00	0.00
7,700.00	0.00	0.00	7,666.59	70.00	592.45	-35.22	0.00	0.00	0.00
7,800.00	0.00	0.00	7,766.59	70.00	592.45	-35.22	0.00	0.00	0.00



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Carnival Fed Com 304H
Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,900.00	0.00	0.00	7,866.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,000.00	0.00	0.00	7,966.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,100.00	0.00	0.00	8,066.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,200.00	0.00	0.00	8,166.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,300.00	0.00	0.00	8,266.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,400.00	0.00	0.00	8,366.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,500.00	0.00	0.00	8,466.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,600.00	0.00	0.00	8,566.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,700.00	0.00	0.00	8,666.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,800.00	0.00	0.00	8,766.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,875.41	0.00	0.00	8,842.00	70.00	592.45	-35.22	0.00	0.00	0.00
Bone Spring Lime									
8,900.00	0.00	0.00	8,866.59	70.00	592.45	-35.22	0.00	0.00	0.00
8,946.41	0.00	0.00	8,913.00	70.00	592.45	-35.22	0.00	0.00	0.00
Avalon									
9,000.00	0.00	0.00	8,966.59	70.00	592.45	-35.22	0.00	0.00	0.00
9,100.00	0.00	0.00	9,066.59	70.00	592.45	-35.22	0.00	0.00	0.00
9,182.41	0.00	0.00	9,149.00	70.00	592.45	-35.22	0.00	0.00	0.00
Chert Zone									
9,200.00	0.00	0.00	9,166.59	70.00	592.45	-35.22	0.00	0.00	0.00
9,300.00	0.00	0.00	9,266.59	70.00	592.45	-35.22	0.00	0.00	0.00
9,400.00	0.00	0.00	9,366.59	70.00	592.45	-35.22	0.00	0.00	0.00
9,500.00	0.00	0.00	9,466.59	70.00	592.45	-35.22	0.00	0.00	0.00
9,536.45	0.00	0.00	9,503.04	70.00	592.45	-35.22	0.00	0.00	0.00
Start DLS 10.00 TFO 180.00									
9,550.00	1.36	180.00	9,516.59	69.84	592.45	-35.06	10.00	10.00	0.00
9,600.00	6.36	180.00	9,566.46	66.48	592.45	-31.70	10.00	10.00	0.00
9,650.00	11.36	180.00	9,615.85	58.78	592.45	-24.02	10.00	10.00	0.00
9,700.00	16.36	180.00	9,664.38	46.81	592.45	-12.07	10.00	10.00	0.00
9,750.00	21.36	180.00	9,711.68	30.66	592.45	4.05	10.00	10.00	0.00
9,800.00	26.36	180.00	9,757.40	10.45	592.45	24.23	10.00	10.00	0.00
9,850.00	31.36	180.00	9,801.18	-13.68	592.45	48.32	10.00	10.00	0.00
9,900.00	36.36	180.00	9,842.69	-41.52	592.45	76.11	10.00	10.00	0.00
9,950.00	41.36	180.00	9,881.61	-72.88	592.45	107.42	10.00	10.00	0.00
10,000.00	46.36	180.00	9,917.65	-107.51	592.45	141.99	10.00	10.00	0.00
10,050.00	51.36	180.00	9,950.54	-145.15	592.45	179.57	10.00	10.00	0.00
10,100.00	56.36	180.00	9,980.02	-185.52	592.45	219.86	10.00	10.00	0.00
10,150.00	61.36	180.00	10,005.87	-228.30	592.45	262.57	10.00	10.00	0.00
10,200.00	66.36	180.00	10,027.90	-273.17	592.45	307.36	10.00	10.00	0.00
10,210.44	67.40	180.00	10,032.00	-282.77	592.45	316.95	10.00	10.00	0.00
First Bone Spring Sand									
10,250.00	71.36	180.00	10,045.93	-319.79	592.45	353.90	10.00	10.00	0.00
10,300.00	76.36	180.00	10,059.83	-367.80	592.45	401.83	10.00	10.00	0.00
10,350.00	81.36	180.00	10,069.49	-416.84	592.45	450.79	10.00	10.00	0.00
10,400.00	86.36	180.00	10,074.84	-466.54	592.45	500.40	10.00	10.00	0.00
10,436.45	90.00	180.00	10,076.00	-502.96	592.45	536.76	10.00	10.00	0.00
Start 9606.10 hold at 10436.45 MD - HZ Target									
10,500.00	90.00	180.00	10,076.00	-566.51	592.45	600.20	0.00	0.00	0.00
10,600.00	90.00	180.00	10,076.00	-666.51	592.45	700.03	0.00	0.00	0.00
10,700.00	90.00	180.00	10,076.00	-766.51	592.45	799.86	0.00	0.00	0.00
10,800.00	90.00	180.00	10,076.00	-866.51	592.45	899.69	0.00	0.00	0.00
10,900.00	90.00	180.00	10,076.00	-966.51	592.45	999.52	0.00	0.00	0.00
11,000.00	90.00	180.00	10,076.00	-1,066.51	592.45	1,099.35	0.00	0.00	0.00



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Carnival Fed Com 304H
Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,100.00	90.00	180.00	10,076.00	-1,166.51	592.45	1,199.18	0.00	0.00	0.00
11,200.00	90.00	180.00	10,076.00	-1,266.51	592.45	1,299.00	0.00	0.00	0.00
11,300.00	90.00	180.00	10,076.00	-1,366.51	592.45	1,398.83	0.00	0.00	0.00
11,400.00	90.00	180.00	10,076.00	-1,466.51	592.45	1,498.66	0.00	0.00	0.00
11,500.00	90.00	180.00	10,076.00	-1,566.51	592.45	1,598.49	0.00	0.00	0.00
11,600.00	90.00	180.00	10,076.00	-1,666.51	592.45	1,698.32	0.00	0.00	0.00
11,700.00	90.00	180.00	10,076.00	-1,766.51	592.45	1,798.15	0.00	0.00	0.00
11,800.00	90.00	180.00	10,076.00	-1,866.51	592.45	1,897.98	0.00	0.00	0.00
11,900.00	90.00	180.00	10,076.00	-1,966.51	592.45	1,997.81	0.00	0.00	0.00
12,000.00	90.00	180.00	10,076.00	-2,066.51	592.45	2,097.63	0.00	0.00	0.00
12,100.00	90.00	180.00	10,076.00	-2,166.51	592.45	2,197.46	0.00	0.00	0.00
12,200.00	90.00	180.00	10,076.00	-2,266.51	592.45	2,297.29	0.00	0.00	0.00
12,300.00	90.00	180.00	10,076.00	-2,366.51	592.45	2,397.12	0.00	0.00	0.00
12,400.00	90.00	180.00	10,076.00	-2,466.51	592.45	2,496.95	0.00	0.00	0.00
12,500.00	90.00	180.00	10,076.00	-2,566.51	592.45	2,596.78	0.00	0.00	0.00
12,600.00	90.00	180.00	10,076.00	-2,666.51	592.45	2,696.61	0.00	0.00	0.00
12,700.00	90.00	180.00	10,076.00	-2,766.51	592.45	2,796.43	0.00	0.00	0.00
12,800.00	90.00	180.00	10,076.00	-2,866.51	592.45	2,896.26	0.00	0.00	0.00
12,900.00	90.00	180.00	10,076.00	-2,966.51	592.45	2,996.09	0.00	0.00	0.00
13,000.00	90.00	180.00	10,076.00	-3,066.51	592.45	3,095.92	0.00	0.00	0.00
13,100.00	90.00	180.00	10,076.00	-3,166.51	592.45	3,195.75	0.00	0.00	0.00
13,200.00	90.00	180.00	10,076.00	-3,266.51	592.45	3,295.58	0.00	0.00	0.00
13,300.00	90.00	180.00	10,076.00	-3,366.51	592.45	3,395.41	0.00	0.00	0.00
13,400.00	90.00	180.00	10,076.00	-3,466.51	592.45	3,495.24	0.00	0.00	0.00
13,500.00	90.00	180.00	10,076.00	-3,566.51	592.45	3,595.06	0.00	0.00	0.00
13,600.00	90.00	180.00	10,076.00	-3,666.51	592.45	3,694.89	0.00	0.00	0.00
13,700.00	90.00	180.00	10,076.00	-3,766.51	592.45	3,794.72	0.00	0.00	0.00
13,800.00	90.00	180.00	10,076.00	-3,866.51	592.45	3,894.55	0.00	0.00	0.00
13,900.00	90.00	180.00	10,076.00	-3,966.51	592.45	3,994.38	0.00	0.00	0.00
14,000.00	90.00	180.00	10,076.00	-4,066.51	592.45	4,094.21	0.00	0.00	0.00
14,100.00	90.00	180.00	10,076.00	-4,166.51	592.45	4,194.04	0.00	0.00	0.00
14,200.00	90.00	180.00	10,076.00	-4,266.51	592.45	4,293.87	0.00	0.00	0.00
14,300.00	90.00	180.00	10,076.00	-4,366.51	592.45	4,393.69	0.00	0.00	0.00
14,400.00	90.00	180.00	10,076.00	-4,466.51	592.45	4,493.52	0.00	0.00	0.00
14,500.00	90.00	180.00	10,076.00	-4,566.51	592.45	4,593.35	0.00	0.00	0.00
14,600.00	90.00	180.00	10,076.00	-4,666.51	592.45	4,693.18	0.00	0.00	0.00
14,700.00	90.00	180.00	10,076.00	-4,766.51	592.45	4,793.01	0.00	0.00	0.00
14,800.00	90.00	180.00	10,076.00	-4,866.51	592.45	4,892.84	0.00	0.00	0.00
14,900.00	90.00	180.00	10,076.00	-4,966.51	592.45	4,992.67	0.00	0.00	0.00
15,000.00	90.00	180.00	10,076.00	-5,066.51	592.45	5,092.50	0.00	0.00	0.00
15,100.00	90.00	180.00	10,076.00	-5,166.51	592.45	5,192.32	0.00	0.00	0.00
15,200.00	90.00	180.00	10,076.00	-5,266.51	592.45	5,292.15	0.00	0.00	0.00
15,300.00	90.00	180.00	10,076.00	-5,366.51	592.45	5,391.98	0.00	0.00	0.00
15,400.00	90.00	180.00	10,076.00	-5,466.51	592.45	5,491.81	0.00	0.00	0.00
15,500.00	90.00	180.00	10,076.00	-5,566.51	592.45	5,591.64	0.00	0.00	0.00
15,600.00	90.00	180.00	10,076.00	-5,666.51	592.45	5,691.47	0.00	0.00	0.00
15,700.00	90.00	180.00	10,076.00	-5,766.51	592.45	5,791.30	0.00	0.00	0.00
15,800.00	90.00	180.00	10,076.00	-5,866.51	592.45	5,891.12	0.00	0.00	0.00
15,900.00	90.00	180.00	10,076.00	-5,966.51	592.45	5,990.95	0.00	0.00	0.00
16,000.00	90.00	180.00	10,076.00	-6,066.51	592.45	6,090.78	0.00	0.00	0.00
16,100.00	90.00	180.00	10,076.00	-6,166.51	592.45	6,190.61	0.00	0.00	0.00
16,200.00	90.00	180.00	10,076.00	-6,266.51	592.45	6,290.44	0.00	0.00	0.00
16,300.00	90.00	180.00	10,076.00	-6,366.51	592.45	6,390.27	0.00	0.00	0.00
16,400.00	90.00	180.00	10,076.00	-6,466.51	592.45	6,490.10	0.00	0.00	0.00



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Carnival Fed Com 304H
Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
16,500.00	90.00	180.00	10,076.00	-6,566.51	592.45	6,589.93	0.00	0.00	0.00	
16,600.00	90.00	180.00	10,076.00	-6,666.51	592.45	6,689.75	0.00	0.00	0.00	
16,700.00	90.00	180.00	10,076.00	-6,766.51	592.45	6,789.58	0.00	0.00	0.00	
16,800.00	90.00	180.00	10,076.00	-6,866.51	592.45	6,889.41	0.00	0.00	0.00	
16,900.00	90.00	180.00	10,076.00	-6,966.51	592.45	6,989.24	0.00	0.00	0.00	
17,000.00	90.00	180.00	10,076.00	-7,066.51	592.45	7,089.07	0.00	0.00	0.00	
17,100.00	90.00	180.00	10,076.00	-7,166.51	592.45	7,188.90	0.00	0.00	0.00	
17,200.00	90.00	180.00	10,076.00	-7,266.51	592.45	7,288.73	0.00	0.00	0.00	
17,300.00	90.00	180.00	10,076.00	-7,366.51	592.45	7,388.56	0.00	0.00	0.00	
17,400.00	90.00	180.00	10,076.00	-7,466.51	592.45	7,488.38	0.00	0.00	0.00	
17,500.00	90.00	180.00	10,076.00	-7,566.51	592.45	7,588.21	0.00	0.00	0.00	
17,600.00	90.00	180.00	10,076.00	-7,666.51	592.45	7,688.04	0.00	0.00	0.00	
17,700.00	90.00	180.00	10,076.00	-7,766.51	592.45	7,787.87	0.00	0.00	0.00	
17,800.00	90.00	180.00	10,076.00	-7,866.51	592.45	7,887.70	0.00	0.00	0.00	
17,900.00	90.00	180.00	10,076.00	-7,966.51	592.45	7,987.53	0.00	0.00	0.00	
18,000.00	90.00	180.00	10,076.00	-8,066.51	592.45	8,087.36	0.00	0.00	0.00	
18,100.00	90.00	180.00	10,076.00	-8,166.51	592.45	8,187.19	0.00	0.00	0.00	
18,200.00	90.00	180.00	10,076.00	-8,266.51	592.45	8,287.01	0.00	0.00	0.00	
18,300.00	90.00	180.00	10,076.00	-8,366.51	592.45	8,386.84	0.00	0.00	0.00	
18,400.00	90.00	180.00	10,076.00	-8,466.51	592.45	8,486.67	0.00	0.00	0.00	
18,500.00	90.00	180.00	10,076.00	-8,566.51	592.45	8,586.50	0.00	0.00	0.00	
18,600.00	90.00	180.00	10,076.00	-8,666.51	592.45	8,686.33	0.00	0.00	0.00	
18,700.00	90.00	180.00	10,076.00	-8,766.51	592.45	8,786.16	0.00	0.00	0.00	
18,800.00	90.00	180.00	10,076.00	-8,866.51	592.45	8,885.99	0.00	0.00	0.00	
18,900.00	90.00	180.00	10,076.00	-8,966.51	592.45	8,985.81	0.00	0.00	0.00	
19,000.00	90.00	180.00	10,076.00	-9,066.51	592.45	9,085.64	0.00	0.00	0.00	
19,100.00	90.00	180.00	10,076.00	-9,166.51	592.45	9,185.47	0.00	0.00	0.00	
19,200.00	90.00	180.00	10,076.00	-9,266.51	592.45	9,285.30	0.00	0.00	0.00	
19,300.00	90.00	180.00	10,076.00	-9,366.51	592.45	9,385.13	0.00	0.00	0.00	
19,400.00	90.00	180.00	10,076.00	-9,466.51	592.45	9,484.96	0.00	0.00	0.00	
19,500.00	90.00	180.00	10,076.00	-9,566.51	592.45	9,584.79	0.00	0.00	0.00	
19,600.00	90.00	180.00	10,076.00	-9,666.51	592.45	9,684.62	0.00	0.00	0.00	
19,700.00	90.00	180.00	10,076.00	-9,766.51	592.45	9,784.44	0.00	0.00	0.00	
19,800.00	90.00	180.00	10,076.00	-9,866.51	592.45	9,884.27	0.00	0.00	0.00	
19,900.00	90.00	180.00	10,076.00	-9,966.51	592.45	9,984.10	0.00	0.00	0.00	
20,000.00	90.00	180.00	10,076.00	-10,066.51	592.45	10,083.93	0.00	0.00	0.00	
20,042.55	90.00	180.00	10,076.00	-10,109.06	592.45	10,126.41	0.00	0.00	0.00	
TD at 20042.55										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL (Carnival Fed C	0.00	0.00	10,076.00	-10,109.06	592.45	415,392.82	851,074.07	32.138038	-103.332665	
- plan hits target center										
- Point										
PBHL (Carnival Fed C	0.00	0.00	10,101.00	-10,103.77	1,112.35	415,398.11	851,593.97	32.138039	-103.330985	
- plan misses target center by 520.50usft at 20037.26usft MD (10076.00 TVD, -10103.77 N, 592.45 E)										
- Point										



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Carnival Fed Com 304H
Company:	Franklin Mountain Energy	TVD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Project:	Lea County, NM (NAD83)	MD Reference:	GE 3259.2' + KB 30' @ 3289.20usft
Site:	Carnival East Pad	North Reference:	Grid
Well:	Carnival Fed Com 304H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
30.00	30.00	Cenozoic Alluvium (surface)			
1,190.00	1,190.00	Rustler			
1,703.01	1,703.00	Salado			
3,480.23	3,470.00	Base Salt			
3,928.95	3,916.00	Capitan			
5,088.97	5,069.00	Lamar			
5,275.10	5,254.00	Bell Canyon			
6,097.07	6,071.00	Cherry Canyon			
7,459.38	7,426.00	Brushy Canyon			
8,875.41	8,842.00	Bone Spring Lime			
8,946.41	8,913.00	Avalon			
9,182.41	9,149.00	Chert Zone			
10,210.44	10,032.00	First Bone Spring Sand			
10,436.45	10,076.00	HZ Target			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,600.00	1,600.00	0.00	0.00	Start Build 1.50
2,133.33	2,131.60	-23.89	28.48	Start DLS 1.50 TFO -129.45
2,561.35	2,556.68	-38.25	74.36	Start 4606.51 hold at 2561.35 MD
7,167.86	7,135.30	65.27	569.81	Start Drop -1.50
7,588.41	7,555.00	70.00	592.45	Start 1948.04 hold at 7588.41 MD
9,536.45	9,503.04	70.00	592.45	Start DLS 10.00 TFO 180.00
10,436.45	10,076.00	-502.96	592.45	Start 9606.10 hold at 10436.45 MD
20,042.55	10,076.00	-10,109.06	592.45	TD at 20042.55

FRANKLIN MOUNTAIN ENERGY



Geologic Prognosis

Well Name	Carnival Fed Com 304H
Operator	Franklin Mountain Energy, LLC
Project Area	Carnival Unit
Well Type	10,000' First Bone Spring Lateral
API	
Permit Number	
Rig	

State	NM	County	Lea						
SHL	Township	25S/35E	Section	2	1,390'	FEL	321'	FNL	
BHL	Township	25S/35E	Section	11	900'	FEL	150'	FSL	
Surface Latitude	NAD 83	32.165838							
Surface Longitude	NAD 83	103.334276							
Bottom Hole Latitude	NAD 83	32.138038							
Bottom Hole Longitude	NAD 83	103.332665							
Ground Level	3,259'	Rig KB	30'	KB	3,289'				

Formations	PROG SS	PROG TVD	Picked TVD	delta	Potential/Issues
Cenozoic Alluvium (surface)	3,259'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,099'	1,190'			Carbonates
Salado	1,586'	1,703'			Salt, Carbonate & Clastics
Base Salt	-181'	3,470'			Shaley Carbonate & Shale
Capitan	-627'	3,916'			Carbonates
Lamar	-1,780'	5,069'			Carbonate & Clastics
Bell Canyon	-1,965'	5,254'			Sandstone - oil/gas/water
Cherry Canyon	-2,782'	6,071'			Sandstone - oil/gas/water
Brushy Canyon	-4,137'	7,426'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,553'	8,842'			Shale/Carbonates - oil/gas
Avalon	-5,624'	8,913'			Shale/Carbonates - oil/gas
Chert Zone	-5,860'	9,149'			Carbonate/Chert
First Bone Spring Sand	-6,743'	10,032'			Sandstone - oil/gas/water
HZ Target	-6,787'	10,076'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,818'	10,107'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,231'	10,520'			Sandstone - oil/gas/water

Target interval is expected to have an average apparent dip of ~0 degrees up along the lateral based on the First Bone Spring structure

Target window tolerance is set at +/- 10'

Target Line: 10076' KBTVD @ 0' VS w/ 90.0° inc.

Offset Log: Proxy 1H (30025439220100)

Updated: 1/17/22

FME Geologist	Ellen Wilcox	ewilcox@fmellc.com
Office		Cell 585.880.1737

FME Geologist		Ben Kessel		bkessel@fmellc.com	
		Office	720-414-7868	Cell	303.868.9946
FME Engineer					
Electric Logs			From	To	
Open-Hole	n/a				
MWD/LWD	MWD GR			Int. 1 Csg. Point	TD
Mud Log:					
t drill out of surface casing					
Sampling:	10' samples in vertical and through curve, 30' samples in lateral				
Samples:	1 set dry samples at footage frequency noted above				
Mud Gas:	Continuous				
Daily Contact:	g/daily report at 7:30am and 4:30 pm CST				
Daily Mud Log Email Distribution List					
Final Mud Log Distribution					
	Ben Kessel (bkessel@fmellc.com)			email	
Cuttings/Samples Shipment Information					



Carnival Fed Com 304H

1. Geologic name of surface location: Permian
2. Estimated tops of important geological markers:

Formations	PROG SS	PROG TVD	Picked TVD	delta	Potential/Issues
Cenozoic Alluvium (surface)	3,259'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,099'	1,190'			Carbonates
Salado	1,586'	1,703'			Salt, Carbonate & Clastics
Base Salt	-181'	3,470'			Shaley Carbonate & Shale
Capitan	-627'	3,916'			Carbonates
Lamar	-1,780'	5,069'			Carbonate & Clastics
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HZ Target	-6,787'	10,076'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,818'	10,107'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,231'	10,520'			Sandstone - oil/gas/water

3. Estimated depth of anticipated fresh water, oil or gas:

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	5,254'	Oil
Bone Spring Sand	10,032'	Oil
Bone Spring Carbonate	11,107'	Oil

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface freshwater sands will be protected by setting 13 3/8" casing at 1,300' and circulating cement back to surface.

4. Casing Program:

All casing strings will be run new. Safety factors calculated assuming the well is vertical.

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
Surface 13 3/8"	54.5	J-55	2730	1130	853	BTC 909	1300	1.18	1.67	4.99	5.32
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	5150	1.78	1.76	2.99	3.41
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Stinger 564	10436	1.27	1.46	2.02	1.38
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606 TVD	20042 10076	1.32	1.55	1.30	1.08 1.83

7 5/8" casing will be set at 10,436' MD/10,076' TVD at 90° Inc. Stress calculations on 5 1/2" casing performed assuming 20,042' depth. Actual max vertical depth is 10,076'.



Cementing Program:

Cementing Stage tool can be placed in the 1st Intermediate string as a contingency to ensure required TOC to surface.

String Type	Hole Size	Casing Size	Setting Depth	Sacks	Type of cmt	Lead Yield ft ³ /sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Tail Yield ft ³ /sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	1300	803	Extenda Cem, 12.8 ppg Class C, 3lb/sk Kol-Seal	1.747	9.06	0	330	Tail, 14.8 ppg, Class C,	1.349	6.51	1000	100%
					0.125pps Poly-E-Flake					1% CaCl ₂ , 0.125pps Celo-Flake				
Int1	12.25	9.625	5150	1505	Lead, 12.8 ppg, Class C 5% Salt,	1.79	9.74	0	154	Tail, 14.8 ppg, Class C,	1.33	6.37	4850	100%
					0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal					0.1% HR 800 .125 pps Poly-E-Flake				
Int2	8.75	7.625	10436	283	Lite Fill, 9.5 ppg, Class C 3lb/sk	2.13	5.97	4150	94	NeoCem 14.8 ppg, Class C	1.33	6.29	9436	50%
					Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake					0.25 pps Cello-Flake, 2% CaCl ₂				
Prod	6.75	5.5	20042	791	Tail, 14.5 ppg, Gas Migration Control	1.34	6.22	9436						20%

5. Minimum Specifications for Pressure Control:

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000-psi WP). Both units will be hydraulically operated, and the ram-type will be equipped with blind rams on bottom and 4 ½" x 7" variable pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5,000/250 psig and the annular preventer to 5,000/250 psig. The surface casing will be tested to 0.22 psi/ft or 1500 psi for 30 minutes, whichever is greater, but not to exceed 70% of minimum internal yield.

Before drilling out of the second intermediate casing, the ram-type BOP and accessory equipment will be tested to 10,000/250 psig and the annular preventer to 5,000/250 psig. The second intermediate casing will be tested to 0.22 psi/ft or 1500 psi for 30 minutes, whichever is greater, but not to exceed 70% of minimum internal yield, prior to drillout.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.



6. Types and characteristics of the proposed mud system:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal. The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,300'	Fresh - Gel	8.6-8.8	28-34	N/c
1,300' – 10,436'	Brine	8.8-10.2	28-34	N/c
10,436' – 20,042' Lateral	Oil Base	10.0-12.0	58-68	3 - 6

The highest mud weight needed to balance formation is expected to be 10-11 ppg. In order to maintain hole stability, mud weights up to 12 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary well control and monitoring equipment:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

(D) A wear bushing will be installed in the wellhead prior to drilling out of the surface casing.

8. Logging, testing and coring program:

GR–CCL–CNL Will be run in cased hole during completions phase of operations.

Open-hole logs are not planned for this well.

9. Abnormal conditions, pressures, temperatures and potential hazards:

The estimated bottom-hole temperature at 10,076' TVD (deepest point of the well) is 170F with an estimated maximum bottom-hole pressure (BHP) at the same point of 6,287 psig (based on 12 ppg MW). Hydrogen sulfate may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

A. All personnel shall receive proper awareness H₂S training.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment

a. Well Control Equipment

i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.

ii. Choke manifold with a remotely operated hydraulic choke.

iii. Mud/gas separator

b. Protective equipment for essential personnel

i. Breathing Apparatus

1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.

2. Work/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity



3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.
- ii. Auxiliary Rescue Equipment
 1. Stretcher
 2. Two OSHA full body harnesses
 3. 100 feet of 5/8 inches OSHA approved rope
 4. 1-20# class ABC fire extinguisher
- c. H2S Detection and Monitoring Equipment
 - i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
 1. Rig Floor
 2. Below Rig Floor / Near BOPs
 3. End of flow line or where well bore fluid is being discharged (near shakers)
 - ii. If H2S is encountered, measured values and formations will be provided to the BLM.
- d. Visual Warning Systems
 - i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - iii. Two windsocks will be placed in strategic locations, visible from all angles.
- e. Mud Program
 - i. The Mud program will be designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.
- f. Metallurgy
 - i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service at the anticipated operating pressures to prevent sour sulfide stress cracking.
- g. Communication
 - i. Communication will be via cell phones and walkie talkies on location.

Franklin Mountain Energy has conducted a review of offset operated wells to determine if an H2S contingency plan is required for the proposed well. Based on concentrations of offset wells, proximity to main roads, and distance to populated areas, the radius of exposure created by a potential release was determined to be minimal and low enough to not necessitate an H2S contingency plan. This will be reevaluated during wellbore construction if H2S is observed and after the well is on production.

11. Anticipated starting date and duration of operations:

The drilling operations on the well should be finished in approximately one month. However, in order to minimize disturbance in the area and to improve efficiency Franklin Mountain is planning to drill all the wells on the pad prior to commence completion operations. To even further reduce the time heavy machinery is used the “batch drilling” method may be used. A batch drilling sequence sundry will be submitted for BLM approval prior to spud. A drilling rig with walking/skidding capabilities will be used.

**12. Disposal/environmental concerns:**

- (A) Drilled cuttings will be hauled to and disposed of in a state-certified disposal site.
- (B) Non-hazardous waste mud/cement from the drilling process will also be hauled to and disposed of in a state-certified disposal site.
- (C) Garbage will be hauled to the Pecos City Landfill.
- (D) Sewage (grey water) will be hauled to the Carlsbad City Landfill

13. Wellhead:

A multi-bowl wellhead system will be utilized.

After running the 13 3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5,000 psi pressure test. This pressure test will be repeated at least every 21 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 5,000 psi.

After running the 2nd intermediate casing, and before drilling out, the wellhead, BOP, and related equipment will be tested to 10,000/250 psig.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Cactus Multi-Bowl WH system has been sent to the BLM office in Carlsbad.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing strings. After installation of the first intermediate string the pack-off and lower flanges will be pressure tested to 5000 psi. After installation of the second intermediate string, the pack-off and upper flange will be pressure tested to 10,000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

14. Additional variance requests**A. Casing.**

In order to minimize potential environmental and technical hazards, this well is planned with two intermediate strings of casing.

1. Variance is requested to wave the centralizer requirements for the 7 5/8" casing due to the tight clearance with 9 5/8" string.
2. Variance is requested to wave/reduce the centralizer requirements for the 5 1/2" casing due to the tight clearance with 6 3/4" hole and 5 1/2" casing due to tight clearances.

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 156938

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 156938
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	11/8/2022