



Pro Directional
Planning Report



Database:	WellPlanner1	Local Co-ordinate Reference:	Well 5H
Company:	Devon Energy Corp.	TVD Reference:	GL 3460'+KB 24' @ 3484.00usft (Cactus 167)
Project:	Lea County, NM (NAD83)	MD Reference:	GL 3460'+KB 24' @ 3484.00usft (Cactus 167)
Site:	Gaucha 21 Fed	North Reference:	Grid
Well:	5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

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	Gaucha 21 Fed				
Site Position:	Northing:	499,653.98 usft	Latitude:	32.370678°N	
From: Map	Easting:	807,177.95 usft	Longitude:	103.472282°W	
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	5H					
Well Position	+N/-S	0.00 usft	Northing:	499,653.98 usft	Latitude:	32.370678°N
	+E/-W	0.00 usft	Easting:	807,177.95 usft	Longitude:	103.472282°W
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level:	3,460.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/2/2017	6.82	60.27	48,256.90

Design	Prelim Plan			
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	359.69

Plan Survey Tool Program	Date	8/2/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	14,723.34	Prelim Plan (OH)	MWD+HDGM OWSG MWD + HDGM

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	0.00	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,186.27	1.86	90.00	6,186.24	0.00	3.03	1.00	1.00	0.00	90.00	
9,076.42	1.86	90.00	9,074.86	0.00	96.97	0.00	0.00	0.00	0.00	
9,262.69	0.00	0.00	9,261.10	0.00	100.00	1.00	-1.00	0.00	180.00	
9,762.69	0.00	0.00	9,761.10	0.00	100.00	0.00	0.00	0.00	0.00	
10,654.24	89.16	359.69	10,334.00	564.50	96.96	10.00	10.00	-0.03	359.69	
14,723.37	89.16	359.69	10,394.00	4,633.13	75.06	0.00	0.00	0.00	0.00	BHL - Gaucha 5H



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Site:	Gaicho 21 Fed	North Reference:	Grid
Well:	5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
900.00	0.00	0.00	900.00	0.00	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	0.00
1,100.00	0.00	0.00	1,100.00	0.00	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	0.00
1,300.00	0.00	0.00	1,300.00	0.00	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	0.00
1,500.00	0.00	0.00	1,500.00	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	0.00
1,606.00	0.00	0.00	1,606.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler										
1,700.00	0.00	0.00	1,700.00	0.00	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	0.00
1,876.00	0.00	0.00	1,876.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt										
1,900.00	0.00	0.00	1,900.00	0.00	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	0.00
2,100.00	0.00	0.00	2,100.00	0.00	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	0.00
2,300.00	0.00	0.00	2,300.00	0.00	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	0.00
2,500.00	0.00	0.00	2,500.00	0.00	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	0.00
2,700.00	0.00	0.00	2,700.00	0.00	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	0.00
2,900.00	0.00	0.00	2,900.00	0.00	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	0.00
3,100.00	0.00	0.00	3,100.00	0.00	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	0.00
3,300.00	0.00	0.00	3,300.00	0.00	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	0.00
3,500.00	0.00	0.00	3,500.00	0.00	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	0.00
3,669.00	0.00	0.00	3,669.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt										
3,700.00	0.00	0.00	3,700.00	0.00	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	0.00
3,839.00	0.00	0.00	3,839.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yates										
3,900.00	0.00	0.00	3,900.00	0.00	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	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,181.00	0.00	0.00	4,181.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capitan										
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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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)	
4,300.00	0.00	0.00	4,300.00	0.00	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	0.00
4,500.00	0.00	0.00	4,500.00	0.00	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	0.00
4,700.00	0.00	0.00	4,700.00	0.00	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	0.00
4,900.00	0.00	0.00	4,900.00	0.00	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	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,284.00	0.00	0.00	5,284.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware										
5,300.00	0.00	0.00	5,300.00	0.00	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	0.00
5,484.00	0.00	0.00	5,484.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon										
5,500.00	0.00	0.00	5,500.00	0.00	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	0.00
5,700.00	0.00	0.00	5,700.00	0.00	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	0.00
5,900.00	0.00	0.00	5,900.00	0.00	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	0.00
Start Build 1.00										
6,100.00	1.00	90.00	6,100.00	0.00	0.87	0.00	1.00	1.00	0.00	0.00
6,186.27	1.86	90.00	6,186.24	0.00	3.03	-0.02	1.00	1.00	0.00	0.00
Start 2890.15 hold at 6186.27 MD										
6,200.00	1.86	90.00	6,199.96	0.00	3.47	-0.02	0.00	0.00	0.00	0.00
6,300.00	1.86	90.00	6,299.91	0.00	6.72	-0.04	0.00	0.00	0.00	0.00
6,400.00	1.86	90.00	6,399.85	0.00	9.97	-0.05	0.00	0.00	0.00	0.00
6,500.00	1.86	90.00	6,499.80	0.00	13.23	-0.07	0.00	0.00	0.00	0.00
6,600.00	1.86	90.00	6,599.75	0.00	16.48	-0.09	0.00	0.00	0.00	0.00
6,700.00	1.86	90.00	6,699.70	0.00	19.73	-0.11	0.00	0.00	0.00	0.00
6,800.00	1.86	90.00	6,799.64	0.00	22.98	-0.12	0.00	0.00	0.00	0.00
6,900.00	1.86	90.00	6,899.59	0.00	26.23	-0.14	0.00	0.00	0.00	0.00
7,000.00	1.86	90.00	6,999.54	0.00	29.48	-0.16	0.00	0.00	0.00	0.00
7,100.00	1.86	90.00	7,099.48	0.00	32.73	-0.18	0.00	0.00	0.00	0.00
7,200.00	1.86	90.00	7,199.43	0.00	35.98	-0.19	0.00	0.00	0.00	0.00
7,300.00	1.86	90.00	7,299.38	0.00	39.23	-0.21	0.00	0.00	0.00	0.00
7,400.00	1.86	90.00	7,399.33	0.00	42.48	-0.23	0.00	0.00	0.00	0.00
7,500.00	1.86	90.00	7,499.27	0.00	45.73	-0.25	0.00	0.00	0.00	0.00
7,600.00	1.86	90.00	7,599.22	0.00	48.98	-0.27	0.00	0.00	0.00	0.00
7,700.00	1.86	90.00	7,699.17	0.00	52.23	-0.28	0.00	0.00	0.00	0.00
7,800.00	1.86	90.00	7,799.11	0.00	55.48	-0.30	0.00	0.00	0.00	0.00
7,900.00	1.86	90.00	7,899.06	0.00	58.73	-0.32	0.00	0.00	0.00	0.00
8,000.00	1.86	90.00	7,999.01	0.00	61.98	-0.34	0.00	0.00	0.00	0.00
8,100.00	1.86	90.00	8,098.96	0.00	65.23	-0.35	0.00	0.00	0.00	0.00
8,200.00	1.86	90.00	8,198.90	0.00	68.48	-0.37	0.00	0.00	0.00	0.00
8,300.00	1.86	90.00	8,298.85	0.00	71.73	-0.39	0.00	0.00	0.00	0.00
8,400.00	1.86	90.00	8,398.80	0.00	74.99	-0.41	0.00	0.00	0.00	0.00
8,500.00	1.86	90.00	8,498.74	0.00	78.24	-0.42	0.00	0.00	0.00	0.00
8,504.25	1.86	90.00	8,502.99	0.00	78.37	-0.42	0.00	0.00	0.00	0.00
Bone Spring										
8,600.00	1.86	90.00	8,598.69	0.00	81.49	-0.44	0.00	0.00	0.00	0.00



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Wellbore:	OH		
Design:	Prelim Plan		

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)	
8,700.00	1.86	90.00	8,698.64	0.00	84.74	-0.46	0.00	0.00	0.00	
8,800.00	1.86	90.00	8,798.59	0.00	87.99	-0.48	0.00	0.00	0.00	
8,900.00	1.86	90.00	8,898.53	0.00	91.24	-0.49	0.00	0.00	0.00	
9,000.00	1.86	90.00	8,998.48	0.00	94.49	-0.51	0.00	0.00	0.00	
9,076.42	1.86	90.00	9,074.86	0.00	96.97	-0.52	0.00	0.00	0.00	
Start Drop -1.00										
9,100.00	1.63	90.00	9,098.43	0.00	97.69	-0.53	1.00	-1.00	0.00	
9,200.00	0.63	90.00	9,198.41	0.00	99.66	-0.54	1.00	-1.00	0.00	
9,262.69	0.00	0.00	9,261.10	0.00	100.00	-0.54	1.00	-1.00	-143.56	
Start 500.00 hold at 9262.69 MD										
9,300.00	0.00	0.00	9,298.41	0.00	100.00	-0.54	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,398.41	0.00	100.00	-0.54	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,498.41	0.00	100.00	-0.54	0.00	0.00	0.00	
9,545.59	0.00	0.00	9,543.99	0.00	100.00	-0.54	0.00	0.00	0.00	
1st BSPG Sand										
9,600.00	0.00	0.00	9,598.41	0.00	100.00	-0.54	0.00	0.00	0.00	
9,625.59	0.00	0.00	9,623.99	0.00	100.00	-0.54	0.00	0.00	0.00	
2nd BSPG Lime										
9,700.00	0.00	0.00	9,698.41	0.00	100.00	-0.54	0.00	0.00	0.00	
9,762.69	0.00	0.00	9,761.10	0.00	100.00	-0.54	0.00	0.00	0.00	
Start DLS 10.00 TFO 359.69										
9,800.00	3.73	359.69	9,798.38	1.21	99.99	0.67	10.00	10.00	0.00	
9,850.00	8.73	359.69	9,848.07	6.64	99.96	6.10	10.00	10.00	0.00	
9,900.00	13.73	359.69	9,897.10	16.37	99.91	15.83	10.00	10.00	0.00	
9,950.00	18.73	359.69	9,945.09	30.34	99.84	29.80	10.00	10.00	0.00	
10,000.00	23.73	359.69	9,991.68	48.44	99.74	47.90	10.00	10.00	0.00	
10,050.00	28.73	359.69	10,036.52	70.54	99.62	70.00	10.00	10.00	0.00	
10,100.00	33.73	359.69	10,079.26	96.45	99.48	95.91	10.00	10.00	0.00	
10,107.50	34.48	359.69	10,085.47	100.66	99.46	100.12	10.00	10.00	0.00	
2nd BSPG Sand										
10,150.00	38.73	359.69	10,119.58	125.99	99.32	125.46	10.00	10.00	0.00	
10,200.00	43.73	359.69	10,157.17	158.94	99.14	158.40	10.00	10.00	0.00	
10,250.00	48.73	359.69	10,191.75	195.03	98.95	194.49	10.00	10.00	0.00	
10,300.00	53.73	359.69	10,223.04	234.00	98.74	233.47	10.00	10.00	0.00	
10,350.00	58.73	359.69	10,250.83	275.55	98.52	275.02	10.00	10.00	0.00	
10,400.00	63.73	359.69	10,274.89	319.37	98.28	318.83	10.00	10.00	0.00	
10,450.00	68.73	359.69	10,295.03	365.11	98.03	364.58	10.00	10.00	0.00	
10,500.00	73.73	359.69	10,311.11	412.44	97.78	411.90	10.00	10.00	0.00	
10,550.00	78.73	359.69	10,323.01	460.98	97.52	460.45	10.00	10.00	0.00	
10,600.00	83.73	359.69	10,330.63	510.38	97.25	509.85	10.00	10.00	0.00	
10,654.24	89.16	359.69	10,334.00	564.50	96.96	563.97	10.00	10.00	0.00	
Start 4069.13 hold at 10654.24 MD										
10,700.00	89.16	359.69	10,334.67	610.25	96.72	609.72	0.00	0.00	0.00	
10,800.00	89.16	359.69	10,336.15	710.24	96.18	709.71	0.00	0.00	0.00	
10,900.00	89.16	359.69	10,337.62	810.23	95.64	809.70	0.00	0.00	0.00	
11,000.00	89.16	359.69	10,339.09	910.21	95.10	909.69	0.00	0.00	0.00	
11,100.00	89.16	359.69	10,340.57	1,010.20	94.56	1,009.68	0.00	0.00	0.00	
11,200.00	89.16	359.69	10,342.04	1,110.19	94.02	1,109.66	0.00	0.00	0.00	
11,300.00	89.16	359.69	10,343.52	1,210.18	93.49	1,209.65	0.00	0.00	0.00	
11,400.00	89.16	359.69	10,344.99	1,310.17	92.95	1,309.64	0.00	0.00	0.00	
11,500.00	89.16	359.69	10,346.47	1,410.15	92.41	1,409.63	0.00	0.00	0.00	
11,600.00	89.16	359.69	10,347.94	1,510.14	91.87	1,509.62	0.00	0.00	0.00	
11,700.00	89.16	359.69	10,349.42	1,610.13	91.33	1,609.61	0.00	0.00	0.00	



Pro Directional
Planning Report



Database:	WellPlanner1	Local Co-ordinate Reference:	Well 5H
Company:	Devon Energy Corp.	TVD Reference:	GL 3460'+KB 24' @ 3484.00usft (Cactus 167)
Project:	Lea County, NM (NAD83)	MD Reference:	GL 3460'+KB 24' @ 3484.00usft (Cactus 167)
Site:	Gaucha 21 Fed	North Reference:	Grid
Well:	5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

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)
11,800.00	89.16	359.69	10,350.89	1,710.12	90.79	1,709.60	0.00	0.00	0.00
11,900.00	89.16	359.69	10,352.37	1,810.10	90.26	1,809.59	0.00	0.00	0.00
12,000.00	89.16	359.69	10,353.84	1,910.09	89.72	1,909.58	0.00	0.00	0.00
12,100.00	89.16	359.69	10,355.32	2,010.08	89.18	2,009.57	0.00	0.00	0.00
12,200.00	89.16	359.69	10,356.79	2,110.07	88.64	2,109.56	0.00	0.00	0.00
12,300.00	89.16	359.69	10,358.26	2,210.05	88.10	2,209.55	0.00	0.00	0.00
12,400.00	89.16	359.69	10,359.74	2,310.04	87.57	2,309.53	0.00	0.00	0.00
12,500.00	89.16	359.69	10,361.21	2,410.03	87.03	2,409.52	0.00	0.00	0.00
12,600.00	89.16	359.69	10,362.69	2,510.02	86.49	2,509.51	0.00	0.00	0.00
12,700.00	89.16	359.69	10,364.16	2,610.01	85.95	2,609.50	0.00	0.00	0.00
12,800.00	89.16	359.69	10,365.64	2,709.99	85.41	2,709.49	0.00	0.00	0.00
12,900.00	89.16	359.69	10,367.11	2,809.98	84.87	2,809.48	0.00	0.00	0.00
13,000.00	89.16	359.69	10,368.59	2,909.97	84.34	2,909.47	0.00	0.00	0.00
13,100.00	89.16	359.69	10,370.06	3,009.96	83.80	3,009.46	0.00	0.00	0.00
13,200.00	89.16	359.69	10,371.54	3,109.94	83.26	3,109.45	0.00	0.00	0.00
13,300.00	89.16	359.69	10,373.01	3,209.93	82.72	3,209.44	0.00	0.00	0.00
13,400.00	89.16	359.69	10,374.49	3,309.92	82.18	3,309.43	0.00	0.00	0.00
13,500.00	89.16	359.69	10,375.96	3,409.91	81.64	3,409.41	0.00	0.00	0.00
13,600.00	89.16	359.69	10,377.43	3,509.89	81.11	3,509.40	0.00	0.00	0.00
13,700.00	89.16	359.69	10,378.91	3,609.88	80.57	3,609.39	0.00	0.00	0.00
13,800.00	89.16	359.69	10,380.38	3,709.87	80.03	3,709.38	0.00	0.00	0.00
13,900.00	89.16	359.69	10,381.86	3,809.86	79.49	3,809.37	0.00	0.00	0.00
14,000.00	89.16	359.69	10,383.33	3,909.84	78.95	3,909.36	0.00	0.00	0.00
14,100.00	89.16	359.69	10,384.81	4,009.83	78.42	4,009.35	0.00	0.00	0.00
14,200.00	89.16	359.69	10,386.28	4,109.82	77.88	4,109.34	0.00	0.00	0.00
14,300.00	89.16	359.69	10,387.76	4,209.81	77.34	4,209.33	0.00	0.00	0.00
14,400.00	89.16	359.69	10,389.23	4,309.80	76.80	4,309.32	0.00	0.00	0.00
14,500.00	89.16	359.69	10,390.71	4,409.78	76.26	4,409.31	0.00	0.00	0.00
14,600.00	89.16	359.69	10,392.18	4,509.77	75.72	4,509.30	0.00	0.00	0.00
14,700.00	89.16	359.69	10,393.66	4,609.76	75.19	4,609.28	0.00	0.00	0.00
14,723.37	89.16	359.69	10,394.00	4,633.13	75.06	4,632.66	0.00	0.00	0.00

TD at 14723.37

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,606.00	1,606.00	Rustler		0.84	359.69
1,876.00	1,876.00	Top of Salt		0.84	359.69
3,669.00	3,669.00	Base of Salt		0.84	359.69
3,839.00	3,839.00	Yates		0.84	359.69
4,181.00	4,181.00	Capitan		0.84	359.69
5,284.00	5,284.00	Delaware		0.84	359.69
5,484.00	5,484.00	Brushy Canyon		0.84	359.69
8,504.25	8,502.99	Bone Spring		0.84	359.69
9,545.59	9,543.99	1st BSPG Sand		0.84	359.69
9,625.59	9,623.99	2nd BSPG Lime		0.84	359.69
10,107.50	10,085.47	2nd BSPG Sand		0.84	359.69



Pro Directional
Planning Report



Database:	WellPlanner1	Local Co-ordinate Reference:	Well 5H
Company:	Devon Energy Corp.	TVD Reference:	GL 3460'+KB 24' @ 3484.00usft (Cactus 167)
Project:	Lea County, NM (NAD83)	MD Reference:	GL 3460'+KB 24' @ 3484.00usft (Cactus 167)
Site:	Gaicho 21 Fed	North Reference:	Grid
Well:	5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,000.00	6,000.00	0.00	0.00	Start Build 1.00
6,186.27	6,186.24	0.00	3.03	Start 2890.15 hold at 6186.27 MD
9,076.42	9,074.86	0.00	96.97	Start Drop -1.00
9,262.69	9,261.10	0.00	100.00	Start 500.00 hold at 9262.69 MD
9,762.69	9,761.10	0.00	100.00	Start DLS 10.00 TFO 359.69
10,654.24	10,334.00	564.50	96.96	Start 4069.13 hold at 10654.24 MD
14,723.37	10,394.00	4,633.13	75.06	TD at 14723.37

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the 9-5/8" intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.