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Legend Natural Gas IV, LP

Eddy County, NM (Nad27)

Sec 29 T24S R 28E

Pardue 29 Fed Com 4H

Wellbore #1

Plan: Plan#1 012014

Standard Planning Report

20 January, 2014



Planning Report

Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well Pardue 28 Fed Com 4H
Company:	Legend Natural Gas IV, LP	TVD Reference:	WELL @ 3072.00usft (TBD)
Project:	Eddy County, NM (Nad27)	MD Reference:	WELL @ 3072.00usft (TBD)
Site:	Sec 29 T24S R 28E	North Reference:	Grid
Well:	Pardue 28 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan#1 012014		

Project:	Eddy County, NM (Nad27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 5001		

Site:	Sec 29 T24S R 28E		
Site Position:		Northing:	434,889.30 usft
From:	Map	Easting:	568,017.10 usft
Position Uncertainty:	0.00 usft	Grid Radius:	13-3/16 "
		Grid Convergence:	0.12 "

Well	Pardue 28 Fed Com 4H					
Well Position	N/S	0.10 usft	Northing:	434,889.40 usft	Latitude:	32° 11' 44.56300 N
	E/W	-31.10 usft	Easting:	567,986.00 usft	Longitude:	104° 6' 48.78728 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,047.00 usft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	1/20/2014	7.51	80.00	48,283

Design:	Plan#1 012014			
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	180.27

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	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,483.33	8.75	270.00	1,481.07	0.00	-44.46	1.50	1.50	0.00	270.00	
7,067.26	8.75	270.00	7,000.00	0.00	-893.00	0.00	0.00	0.00	0.00	
7,458.14	0.00	0.00	7,387.38	0.00	-923.64	2.25	-2.25	0.00	180.00	
7,488.41	0.00	0.00	7,427.65	0.00	-923.64	0.00	0.00	0.00	0.00	
8,236.16	88.77	179.75	7,905.00	-487.21	-921.62	12.00	12.00	0.00	179.75	BHL Pardue 28 Fed C
10,257.34	88.77	179.75	7,948.39	-2,487.91	-912.77	0.00	0.00	0.00	0.00	Target 1 Pardue 28 Fed C
10,291.92	89.46	179.75	7,948.92	-2,522.48	-912.62	2.00	2.00	0.00	0.00	
12,747.47	89.46	179.75	7,972.00	-4,977.90	-902.00	0.00	0.00	0.00	0.00	BHL Pardue 28 Fed C



Planning Report

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Company:	Legend Natural Gas IV, LP	TVD Reference:	WELL @ 3072.00ush (TBD)
Project:	Eddy County, NM (Nad27)	MD Reference:	WELL @ 3072.00ush (TBD)
Site:	Sec 29 T24S R 28E	North Reference:	Grid
Well:	Pardue 29 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan#1 012014		

Planned Survey									
Measured Depth (ush)	Inclination (°)	Azimuth (°)	Vertical Depth (ush)	N/S (ush)	E/W (ush)	Vertical Section (ush)	Dogleg Rate (°/100ush)	Build Rate (°/100ush)	Turn Rate (°/100ush)
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
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
KOP 1, Build 1.5°/100'									
1,000.00	1.50	270.00	999.99	0.00	-1.31	0.23	1.50	1.50	0.00
1,100.00	3.00	270.00	1,099.91	0.00	-5.23	0.93	1.50	1.50	0.00
1,200.00	4.50	270.00	1,199.69	0.00	-11.77	2.10	1.50	1.50	0.00
1,300.00	6.00	270.00	1,299.27	0.00	-20.92	3.73	1.50	1.50	0.00
1,400.00	7.50	270.00	1,398.57	0.00	-32.88	5.83	1.50	1.50	0.00
1,483.33	8.75	270.00	1,481.07	0.00	-44.46	7.93	1.50	1.50	0.00
Hold 8.75° Inc, 270° Azm									
1,500.00	8.75	270.00	1,487.54	0.00	-46.89	8.38	0.00	0.00	0.00
1,600.00	8.75	270.00	1,586.38	0.00	-62.20	11.09	0.00	0.00	0.00
1,700.00	8.75	270.00	1,685.21	0.00	-77.42	13.80	0.00	0.00	0.00
1,800.00	8.75	270.00	1,784.05	0.00	-92.63	16.52	0.00	0.00	0.00
1,900.00	8.75	270.00	1,882.89	0.00	-107.84	19.23	0.00	0.00	0.00
2,000.00	8.75	270.00	1,981.72	0.00	-123.05	21.94	0.00	0.00	0.00
2,100.00	8.75	270.00	2,080.56	0.00	-138.27	24.65	0.00	0.00	0.00
2,200.00	8.75	270.00	2,179.39	0.00	-153.48	27.36	0.00	0.00	0.00
2,300.00	8.75	270.00	2,278.23	0.00	-168.69	30.08	0.00	0.00	0.00
2,400.00	8.75	270.00	2,377.07	0.00	-183.90	32.79	0.00	0.00	0.00
2,500.00	8.75	270.00	2,475.90	0.00	-199.11	35.50	0.00	0.00	0.00
2,600.00	8.75	270.00	2,574.74	0.00	-214.33	38.21	0.00	0.00	0.00
2,700.00	8.75	270.00	2,673.58	0.00	-229.54	40.93	0.00	0.00	0.00
2,800.00	8.75	270.00	2,772.41	0.00	-244.75	43.64	0.00	0.00	0.00
2,900.00	8.75	270.00	2,871.25	0.00	-259.96	46.35	0.00	0.00	0.00
3,000.00	8.75	270.00	2,970.08	0.00	-275.18	49.06	0.00	0.00	0.00
3,100.00	8.75	270.00	3,068.92	0.00	-290.39	51.78	0.00	0.00	0.00
3,200.00	8.75	270.00	3,167.76	0.00	-305.60	54.49	0.00	0.00	0.00
3,300.00	8.75	270.00	3,266.59	0.00	-320.81	57.20	0.00	0.00	0.00
3,400.00	8.75	270.00	3,365.43	0.00	-336.03	59.91	0.00	0.00	0.00
3,500.00	8.75	270.00	3,464.26	0.00	-351.24	62.62	0.00	0.00	0.00
3,600.00	8.75	270.00	3,563.10	0.00	-366.45	65.34	0.00	0.00	0.00
3,666.66	8.75	270.00	3,639.00	0.00	-378.69	67.15	0.00	0.00	0.00
Bell Canyon									
3,700.00	8.75	270.00	3,671.94	0.00	-381.66	68.05	0.00	0.00	0.00
3,800.00	8.75	270.00	3,770.77	0.00	-396.87	70.76	0.00	0.00	0.00
3,900.00	8.75	270.00	3,869.61	0.00	-412.09	73.47	0.00	0.00	0.00
4,000.00	8.75	270.00	3,968.45	0.00	-427.30	76.19	0.00	0.00	0.00
4,100.00	8.75	270.00	4,067.28	0.00	-442.51	78.90	0.00	0.00	0.00
4,200.00	8.75	270.00	4,166.12	0.00	-457.72	81.61	0.00	0.00	0.00
4,300.00	8.75	270.00	4,264.95	0.00	-472.94	84.32	0.00	0.00	0.00
4,400.00	8.75	270.00	4,363.79	0.00	-488.15	87.04	0.00	0.00	0.00
4,500.00	8.75	270.00	4,462.63	0.00	-503.36	89.76	0.00	0.00	0.00
4,600.00	8.75	270.00	4,561.46	0.00	-518.57	92.46	0.00	0.00	0.00
4,700.00	8.75	270.00	4,660.30	0.00	-533.79	95.17	0.00	0.00	0.00

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Project:	Eddy County, NM (Nod27)	MD Reference:	WELL @ 3072.00usft (TBD)
Site:	Sec 28 T24S R 28E	North Reference:	Grid
Well:	Padue 29 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan#1 012014		

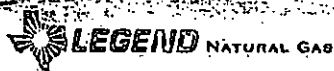
Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,800.00	8.75	270.00	4,759.13	0.00	-549.00	97.89	0.00	0.00	0.00	
4,900.00	8.75	270.00	4,857.97	0.00	-584.21	100.80	0.00	0.00	0.00	
5,000.00	8.75	270.00	4,956.81	0.00	-619.42	103.31	0.00	0.00	0.00	
5,100.00	8.75	270.00	5,055.64	0.00	-594.84	106.02	0.00	0.00	0.00	
5,200.00	8.75	270.00	5,154.48	0.00	-609.65	108.73	0.00	0.00	0.00	
5,300.00	8.75	270.00	5,253.32	0.00	-625.06	111.45	0.00	0.00	0.00	
5,400.00	8.75	270.00	5,352.15	0.00	-640.27	114.16	0.00	0.00	0.00	
5,500.00	8.75	270.00	5,450.99	0.00	-655.48	116.87	0.00	0.00	0.00	
5,600.00	8.75	270.00	5,549.82	0.00	-670.70	119.58	0.00	0.00	0.00	
5,700.00	8.75	270.00	5,648.66	0.00	-685.91	122.30	0.00	0.00	0.00	
5,800.00	8.75	270.00	5,747.50	0.00	-701.12	125.01	0.00	0.00	0.00	
5,900.00	8.75	270.00	5,846.33	0.00	-716.33	127.72	0.00	0.00	0.00	
6,000.00	8.75	270.00	5,945.17	0.00	-731.55	130.43	0.00	0.00	0.00	
6,100.00	8.75	270.00	6,044.00	0.00	-746.76	133.15	0.00	0.00	0.00	
6,103.03	8.75	270.00	6,047.00	0.00	-747.22	133.23	0.00	0.00	0.00	
Bone Spring Top										
6,159.69	8.75	270.00	6,103.00	0.00	-755.84	134.76	0.00	0.00	0.00	
Bn Sprg Avqion Up.										
6,200.00	8.75	270.00	6,142.84	0.00	-761.07	135.86	0.00	0.00	0.00	
6,300.00	8.75	270.00	6,241.68	0.00	-777.18	138.67	0.00	0.00	0.00	
6,339.79	8.75	270.00	6,281.00	0.00	-783.24	139.65	0.00	0.00	0.00	
Bn Sprg SH Top										
6,400.00	8.75	270.00	6,340.61	0.00	-792.40	141.28	0.00	0.00	0.00	
6,428.82	8.75	270.00	6,389.00	0.00	-798.78	142.08	0.00	0.00	0.00	
BN Sprg B La Top										
6,500.00	8.75	270.00	6,439.35	0.00	-807.61	143.89	0.00	0.00	0.00	
6,603.69	8.75	270.00	6,443.00	0.00	-808.17	144.09	0.00	0.00	0.00	
BN Sprg B La Bso										
6,600.00	8.75	270.00	6,538.19	0.00	-822.82	148.71	0.00	0.00	0.00	
6,700.00	8.75	270.00	6,637.02	0.00	-838.93	149.42	0.00	0.00	0.00	
6,784.87	8.75	270.00	6,721.00	0.00	-850.88	151.72	0.00	0.00	0.00	
BN Sprg C L6										
6,800.00	8.75	270.00	6,735.86	0.00	-853.25	152.13	0.00	0.00	0.00	
6,800.00	8.75	270.00	6,834.69	0.00	-868.46	154.84	0.00	0.00	0.00	
7,000.00	8.75	270.00	6,933.53	0.00	-883.67	157.56	0.00	0.00	0.00	
7,037.01	8.75	270.00	6,971.00	0.00	-889.44	158.68	0.00	0.00	0.00	
BN Sprg 1st Cedar										
7,087.25	8.75	270.00	7,000.00	0.00	-893.90	159.38	0.00	0.00	0.00	
Drop 2.25°/100'										
7,100.00	8.01	270.00	7,032.40	0.00	-898.87	160.23	2.25	-2.25	0.00	
7,200.00	6.76	270.00	7,131.67	0.00	-910.67	162.37	2.25	-2.25	0.00	
7,300.00	3.51	270.00	7,231.33	0.00	-918.75	163.81	2.25	-2.25	0.00	
7,327.71	2.89	270.00	7,259.00	0.00	-920.30	164.09	2.25	-2.25	0.00	
BN Sprg 1st Cedar B										
7,400.00	1.26	270.00	7,331.24	0.00	-922.02	164.65	2.25	-2.25	0.00	
7,456.14	0.00	0.00	7,387.38	0.00	-923.54	164.08	2.25	-2.25	0.00	
Begin Vertical Hold										
7,486.41	0.00	0.00	7,427.65	0.00	-923.54	164.66	0.00	0.00	0.00	
KOP 2, Build 12°/100'										
7,500.00	0.43	179.75	7,431.24	-0.01	-923.54	164.68	12.00	12.00	0.00	
7,600.00	12.43	179.75	7,530.43	-11.19	-923.49	175.87	12.00	12.00	0.00	
7,700.00	24.43	179.75	7,625.12	-42.75	-923.35	208.70	12.00	12.00	0.00	
7,733.37	28.44	179.75	7,655.00	-57.60	-923.29	221.30	12.00	12.00	0.00	



Planning Report

Database:	Compass 6000 GCR DB	Local Co-ordinate Reference:	Well Purdue 29 Fed Com 4H
Company:	Legend Natural Gas IV, LP	TVD Reference:	WELL @ 3072.00usft (TBD)
Project:	Eddy County, NM (Nad27)	MD Reference:	WELL @ 3072.00usft (TBD)
Site:	Sec 29 T24S R 29E	North Reference:	Grid
Well:	Purdue 29 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan# 1 012014		

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)	
BN Sprg 2nd Sd Target										
7,800.00	38.43	179.75	7,711.19	-83.31	-923.13	258.41	12.00	12.00	0.00	
7,889.78	47.20	179.75	7,778.00	-153.08	-922.88	315.17	12.00	12.00	0.00	
BN Sprg 2nd Sand										
7,900.00	48.43	179.75	7,784.88	-160.65	-922.84	322.62	12.00	12.00	0.00	
8,000.00	50.43	179.75	7,842.93	-241.85	-922.49	402.45	12.00	12.00	0.00	
8,100.00	72.43	179.75	7,882.84	-333.34	-922.10	492.40	12.00	12.00	0.00	
8,200.00	84.43	179.75	7,902.98	-431.12	-921.67	588.55	12.00	12.00	0.00	
8,236.16	88.77	179.75	7,905.00	-467.21	-921.62	624.03	12.00	12.00	0.00	
Hold 88.77° Inc, 179.75° Azm										
8,300.00	88.77	179.75	7,908.37	-531.04	-921.24	686.78	0.00	0.00	0.00	
8,400.00	88.77	179.75	7,908.52	-631.01	-920.81	785.08	0.00	0.00	0.00	
8,500.00	88.77	179.75	7,910.67	-730.89	-920.38	883.38	0.00	0.00	0.00	
8,600.00	88.77	179.75	7,912.81	-830.88	-919.94	981.67	0.00	0.00	0.00	
8,700.00	88.77	179.75	7,914.08	-930.94	-919.51	1,079.97	0.00	0.00	0.00	
8,800.00	88.77	179.75	7,917.11	-1,030.82	-919.08	1,178.27	0.00	0.00	0.00	
8,900.00	88.77	179.75	7,919.25	-1,130.89	-918.64	1,276.58	0.00	0.00	0.00	
9,000.00	88.77	179.75	7,921.40	-1,230.87	-918.21	1,374.88	0.00	0.00	0.00	
9,100.00	88.77	179.75	7,923.55	-1,330.84	-917.78	1,473.16	0.00	0.00	0.00	
9,200.00	88.77	179.75	7,925.68	-1,430.82	-917.35	1,571.45	0.00	0.00	0.00	
9,300.00	88.77	179.75	7,927.84	-1,530.80	-916.91	1,669.75	0.00	0.00	0.00	
9,400.00	88.77	179.75	7,929.98	-1,630.77	-916.48	1,768.05	0.00	0.00	0.00	
9,500.00	88.77	179.75	7,932.13	-1,730.75	-916.05	1,866.35	0.00	0.00	0.00	
9,600.00	88.77	179.75	7,934.28	-1,830.72	-915.62	1,964.64	0.00	0.00	0.00	
9,700.00	88.77	179.75	7,936.42	-1,930.70	-915.18	2,062.94	0.00	0.00	0.00	
9,800.00	88.77	179.75	7,938.57	-2,030.68	-914.75	2,161.24	0.00	0.00	0.00	
9,900.00	88.77	179.75	7,940.72	-2,130.65	-914.32	2,259.53	0.00	0.00	0.00	
10,000.00	88.77	179.75	7,942.86	-2,230.63	-913.89	2,357.83	0.00	0.00	0.00	
10,100.00	88.77	179.75	7,945.01	-2,330.60	-913.45	2,456.13	0.00	0.00	0.00	
10,200.00	88.77	179.75	7,947.16	-2,430.58	-913.02	2,554.42	0.00	0.00	0.00	
10,257.34	88.77	179.75	7,948.39	-2,487.91	-912.77	2,610.79	0.00	0.00	0.00	
Build 2°/100'										
10,291.92	89.46	179.75	7,948.02	-2,522.48	-912.62	2,644.78	2.00	2.00	0.00	
Hold 89.46° Inc, 179.75° Azm										
10,300.00	89.46	179.75	7,949.00	-2,530.58	-912.59	2,652.73	0.00	0.00	0.00	
10,400.00	89.46	179.75	7,949.94	-2,630.56	-912.16	2,761.04	0.00	0.00	0.00	
10,500.00	89.46	179.75	7,950.88	-2,730.55	-911.72	2,849.38	0.00	0.00	0.00	
10,600.00	89.46	179.75	7,951.82	-2,830.55	-911.28	2,947.07	0.00	0.00	0.00	
10,700.00	89.46	179.75	7,952.76	-2,930.54	-910.86	3,045.99	0.00	0.00	0.00	
10,800.00	89.46	179.75	7,953.70	-3,030.53	-910.43	3,144.30	0.00	0.00	0.00	
10,900.00	89.46	179.75	7,954.64	-3,130.53	-909.99	3,242.82	0.00	0.00	0.00	
11,000.00	89.46	179.75	7,955.58	-3,230.52	-909.56	3,340.93	0.00	0.00	0.00	
11,100.00	89.46	179.75	7,956.52	-3,330.52	-909.13	3,439.25	0.00	0.00	0.00	
11,200.00	89.46	179.75	7,957.46	-3,430.51	-908.70	3,537.58	0.00	0.00	0.00	
11,300.00	89.46	179.75	7,958.40	-3,530.51	-908.28	3,635.88	0.00	0.00	0.00	
11,400.00	89.46	179.75	7,959.34	-3,630.50	-907.83	3,734.19	0.00	0.00	0.00	
11,500.00	89.46	179.75	7,960.28	-3,730.50	-907.40	3,832.51	0.00	0.00	0.00	
11,600.00	89.46	179.75	7,961.22	-3,830.49	-906.96	3,930.82	0.00	0.00	0.00	
11,700.00	89.46	179.75	7,962.16	-3,930.49	-906.53	4,029.14	0.00	0.00	0.00	
11,800.00	89.46	179.75	7,963.10	-4,030.48	-906.10	4,127.45	0.00	0.00	0.00	
11,900.00	89.46	179.75	7,964.04	-4,130.48	-905.67	4,225.77	0.00	0.00	0.00	
12,000.00	89.46	179.75	7,964.98	-4,230.47	-905.23	4,324.08	0.00	0.00	0.00	
12,100.00	89.46	179.75	7,965.92	-4,330.47	-904.80	4,422.40	0.00	0.00	0.00	



Planning Report

Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well Pardue 29 Fed Com 4H
Company:	Legend Natural Gas IV, LP	TVD Reference:	WELL @ 3072.00usft (TBD)
Project:	Eddy County, NM (Nad27)	MD Reference:	WELL @ 3072.00usft (TBD)
Site:	Sec 29 T24S R 28E	North Reference:	Grid
Well:	Pardue 29 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore #:	Wellbore #1		
Design:	Plan# 1 012014		

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)
12,200.00	89.46	179.75	7,968.85	-4,430.46	-904.37	4,520.72	0.00	0.00	0.00
12,300.00	89.46	179.75	7,967.79	-4,530.45	-903.94	4,619.03	0.00	0.00	0.00
12,400.00	89.46	179.75	7,968.73	-4,630.45	-903.60	4,717.35	0.00	0.00	0.00
12,500.00	89.46	179.75	7,969.67	-4,730.44	-903.07	4,815.66	0.00	0.00	0.00
12,600.00	89.46	179.75	7,970.61	-4,830.44	-902.64	4,913.98	0.00	0.00	0.00
12,700.00	89.46	179.75	7,971.55	-4,930.43	-902.21	5,012.29	0.00	0.00	0.00
12,747.47	89.46	179.75	7,972.00	-4,977.90	-902.00	5,058.98	0.00	0.00	0.00
TD at 12747.47									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Eastng (usft)	Latitude	Longitude
hlt/miles target									
Shape									
Target 1 Pardue 29 Fed	0.00	0.00	7,948.00	-2,487.91	-912.77	432,501.48	567,073.23	32° 11' 19.96008 N	104° 6' 59.46829 W
- plan miss's target center by 0.39usft at 10257.34usft MD (7948.39 TVD, -2487.90 N, -912.77 E)									
- Point									
BHL Pardue 29 Fed Con	0.00	0.00	7,972.00	-4,977.90	-902.00	430,011.60	567,084.00	32° 10' 55.31769 N	104° 6' 59.40137 W
- plan hlt's target center									
- Point									

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,666.68	3,639.00	Bell Canyon		0.00	
6,103.03	6,047.00	Bone Spring Top		0.00	
6,159.60	6,103.00	Bn Sprig Avolon Up.		0.00	
6,339.79	6,261.00	Bn Sprig SH Top		0.00	
6,428.82	6,389.00	BN Sprig B La Top		0.00	
6,503.69	6,443.00	BN Sprig B La Bse		0.00	
6,784.97	6,721.00	BN Sprig C LS		0.00	
7,037.91	6,971.00	BN Sprig 1st Cedar		0.00	
7,327.71	7,259.00	BN Sprig 1st Cedar B		0.00	
7,733.37	7,655.00	BN Sprig 2nd Sd Target		0.00	
7,889.78	7,778.00	BN Sprig 2nd Sand		0.00	



Planning Report

Database:	Compass 5000 GCR DB	Local Co-ordinate Reference:	Well Purdue 29 Fed Com 4H
Company:	Legend Natural Gas IV, LP	TVC Reference:	WELL @ 3072.00ush (TBD)
Project:	Eddy County, NM (Neg27)	MD Reference:	WELL @ 3072.00ush (TBD)
Site:	Sec 29 T24S R 28E	North Reference:	Grid
Well:	Purdue 29 Fed Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan#1 012014		

Plan Annotations				
Measured Depth (ush)	Vertical Depth (ush)	Local Coordinates		Comment
		N-S (ush)	E-W (ush)	
600.00	600.00	0.00	0.00	KOP 1, Build 1.5"/100'
1,483.33	1,481.07	0.00	-44.46	Hold 8.75" Inc. 270° Azm
7,067.25	7,000.00	0.00	-693.90	Drop 2.25"/100'
7,458.14	7,387.38	0.00	-923.54	Begin Vertical Hold
7,496.41	7,427.65	0.00	-923.54	KOP 2, Build 12"/100'
8,236.16	7,905.00	-487.21	-921.52	Hold 88.77" Inc. 179.76° Azm
10,257.34	7,948.39	-2,487.91	-912.77	Build 2"/100'
10,281.82	7,948.92	-2,522.48	-912.62	Hold 88.46" Inc. 179.76° Azm
12,747.47	7,972.00	-4,977.80	-902.00	TD at 12747.47