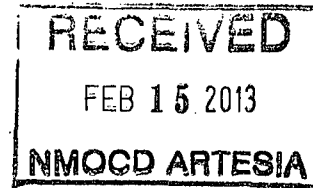




PHOENIX
TECHNOLOGY SERVICES

February 5, 2013

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210



Dear District 2 - Artesia

Re: Legend Natural Gas
State GQ Com 3H
Eddy Co., NM
API #30-015-40867
Job No. 1310019

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Eric W Blandin	3H	2,523	12,215	01/18/2013	01/27/2013	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt 70 11 1570 0001 4364. 8349

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1310019

OPERATOR Legend Natural Gas

WELL NAME State GQ Com 3H

COUNTY & STATE Eddy, New Mexico

API WELL NUMBER 30-015-40867

PROPOSED DIRECTION 179.25

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
2,437 ft	2,432.24 ft	8.4 ft	38.0 ft	107.34 ft	37.23 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
18-Jan-13	2,523 ft	9.1	28.6

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
27-Jan-13	12,415 ft	91.8	176.4

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
27-Jan-13	12,462 ft	91.8	176.4

Eric W Blandin

PRINT YOUR NAME ABOVE

Eric W Blandin

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.53
DECLINATION OR GRID	GRID

1/27/2013

TODAY'S DATE

MWD SUPERVISOR 1

Eric Blandin

DIRECTIONAL DRILLER 1

Vinn Adams

MWD SUPERVISOR 2

Craig Petersen

DIRECTIONAL DRILLER 2

Fernando Cano

1805 Brittmore Road Houston, Texas 77043 (713)3370609 (Voice), (713)337-0599 (Fax)

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-8161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 334-9178 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-9178 Fax: (505) 748-9720

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3480 Fax: (505) 478-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

FEB 15 2013

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-40867	Pool Code 30216	Pool Name HAY HOLLOW; BONE SPRING, NORTH
Property Code 305416	Property Name STATE GQ COM	Well Number 3H
GRID No. 258894	Operator Name LEGEND NATURAL GAS III, L.P.	Elevation 3041'

Surface Location

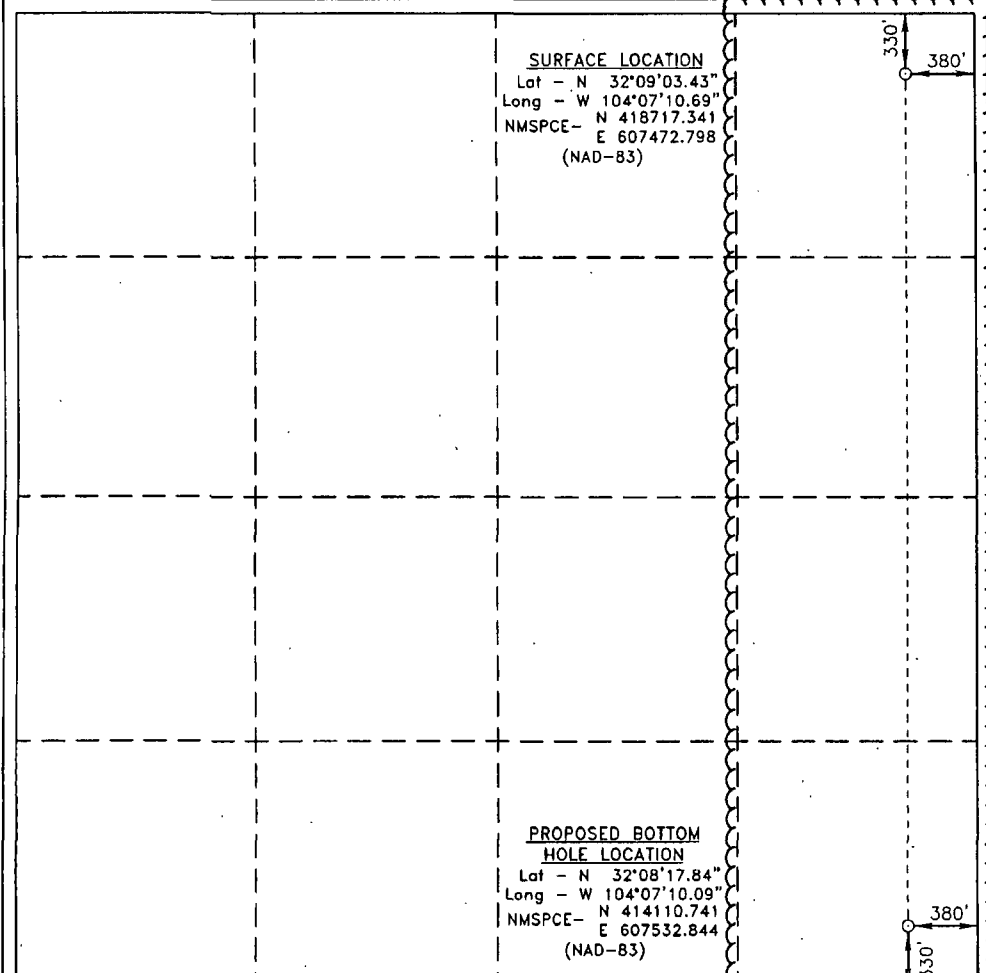
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	7	25 S	28 E		330	NORTH	380	EAST	EDDY

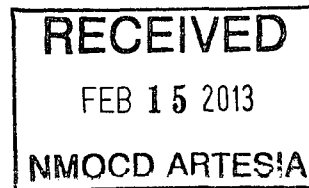
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	7	25 S	28 E		330	SOUTH	380	EAST	EDDY

Dedicated Acres 160	Joint or Infill	Consolidation Code	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

 SURFACE LOCATION Lat - N 32°09'03.43" Long - W 104°07'10.69" NMSPCE- N 418717.341 E 607472.798 (NAD-83) PROPOSED BOTTOM HOLE LOCATION Lat - N 32°08'17.84" Long - W 104°07'10.09" NMSPCE- N 414110.741 E 607532.844 (NAD-83)	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 <u>Brian Wood</u> Date <u>12-3-12</u> <u>brian@permitswest.com</u> Email Address
	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. NOVEMBER 1, 2012 Date Surveyed Signature of Professional Surveyor Certificate No. <u>889</u> L. Jones 7977 BASIN SURVEYS 27649



Legend Natural Gas iV, LP

Eddy County, NM (Nad83)

Sec 7 T25S R28E

State GQ Com 3H

Job# 1310019

Survey: Phoenix MWD Surveys

Standard Survey Report

28 January, 2013



Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV LP	Local Co-ordinate Reference:	Well State GQ Com 3H
Project:	Eddy County NM (Nad83)	TVD Reference:	WELL @ 3066.00usft (Original Well Elev + 25 KB)
Site:	Sec 7 T25S R28E	MD Reference:	WELL @ 3066.00usft (Original Well Elev + 25 KB)
Well:	State GQ Com 3H	North Reference:	Grid
Wellbore:	Job# 1310019	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Pat 444	Database:	GCR DB v5000

Project:	Eddy 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		Sec 7 T25S R28E			
Site Position:		Northing:	418,717.34 usft	Latitude:	32° 9' 3.4273 N
From:	Map	Easting:	607,472.80 usft	Longitude:	104° 7' 10.6853 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well	State GQ Com 3H					
Well Position	+N-S	0.00 usft	Northing:	418,717.34 usft	Latitude:	32° 9' 3.4273 N
	+E-W	0.00 usft	Easting:	607,472.80 usft	Longitude:	104° 7' 10.6853 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,041.00 usft	

Wellbore		Job# 1310019			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	12/11/12	7.65	59.99	48,365

Design:	Rig: Pat 444				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.25	

Survey Program		Date	01/28/13		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
27.66	2,437.34	Gyro Surveys (Job# 1310019)	MWD	MWD - Standard	
2,523.00	12,462.00	Phoenix MWD Surveys (Job# 1310019)	MWD	MWD - Standard	

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)
2,437.34	8.36	38.03	2,432.24	107.35	37.25	-106.85	0.00	0.00	0.00
Last Gyro									
2,523.00	9.10	28.60	2,516.91	118.20	44.33	-117.61	1.88	0.86	-11.01
First Phoenix MWD Survey									
2,617.00	9.10	27.00	2,609.73	131.35	51.27	-130.67	0.27	0.00	-1.70
2,712.00	8.00	27.30	2,703.67	143.92	57.71	-143.15	1.16	-1.16	0.32
2,807.00	6.90	23.00	2,797.87	155.05	62.97	-154.21	1.30	-1.16	-4.53
2,901.00	6.20	16.80	2,891.26	165.11	66.65	-164.22	1.06	-0.74	-6.60

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV, LP	Local Co-ordinate Reference:	Well State GQ Com 3H
Project:	Eddy County, NM (Nad83)	TVD Reference:	WELL @ 3066.00usft (Original Well Elev. + 25 KB)
Site:	Sec 7 T25S R28E	MD Reference:	WELL @ 3066.00usft (Original Well Elev. + 25 KB)
Well:	State GQ Com 3H	North Reference:	Grid
Wellbore:	Job# 1310019	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Pat 444	Database:	GCR DB v5000

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)
2,995.00	5.10	10.80	2,984.80	174.07	68.90	-173.15	1.33	-1.17	-6.38
3,090.00	3.80	4.80	3,079.51	181.36	69.95	-180.42	1.45	-1.37	-6.32
3,184.00	2.80	357.50	3,173.36	186.75	70.11	-185.82	1.15	-1.06	-7.77
3,278.00	1.40	345.20	3,267.29	190.16	69.72	-189.23	1.56	-1.49	-13.09
3,372.00	1.40	294.20	3,361.27	191.74	68.38	-190.83	1.28	0.00	-54.26
3,466.00	1.90	274.20	3,455.23	192.32	65.77	-191.45	0.80	0.53	-21.28
3,561.00	2.50	271.50	3,550.16	192.49	62.13	-191.66	0.64	0.63	-2.84
3,654.00	3.10	268.60	3,643.05	192.48	57.59	-191.71	0.66	0.65	-3.12
3,748.00	3.00	267.90	3,736.91	192.33	52.59	-191.63	0.11	-0.11	-0.74
3,842.00	2.50	267.50	3,830.81	192.15	48.09	-191.51	0.53	-0.53	-0.43
3,936.00	3.00	270.10	3,924.70	192.07	43.58	-191.48	0.55	0.53	2.77
4,029.00	3.80	275.00	4,017.53	192.34	38.07	-191.83	0.91	0.86	5.27
4,121.00	3.70	275.20	4,109.34	192.87	32.08	-192.44	0.11	-0.11	0.22
4,214.00	3.70	281.70	4,202.14	193.76	26.15	-193.40	0.45	0.00	6.99
4,308.00	3.60	281.20	4,295.95	194.94	20.29	-194.66	0.11	-0.11	-0.53
4,402.00	2.90	288.30	4,389.80	196.26	15.14	-196.05	0.86	-0.74	7.55
4,497.00	2.00	300.10	4,484.71	197.85	11.42	-197.68	1.08	-0.95	12.42
4,592.00	1.00	318.50	4,579.68	199.30	9.44	-199.16	1.16	-1.05	19.37
4,686.00	0.80	315.10	4,673.67	200.38	8.43	-200.25	0.22	-0.21	-3.62
4,779.00	0.80	314.80	4,766.66	201.30	7.51	-201.18	0.00	0.00	-0.32
4,873.00	0.70	302.40	4,860.65	202.07	6.56	-201.97	0.20	-0.11	-13.19
4,967.00	0.10	267.10	4,954.65	202.37	5.99	-202.28	0.66	-0.64	-37.55
5,061.00	0.50	101.20	5,048.65	202.29	6.31	-202.19	0.64	0.43	-176.49
5,155.00	0.50	92.60	5,142.64	202.19	7.13	-202.08	0.08	0.00	-9.15
5,250.00	0.60	92.20	5,237.64	202.15	8.04	-202.03	0.11	0.11	-0.42
5,344.00	0.50	93.40	5,331.63	202.11	8.94	-201.97	0.11	-0.11	1.28
5,439.00	0.40	104.10	5,426.63	202.00	9.67	-201.86	0.14	-0.11	11.26
5,532.00	0.40	138.80	5,519.63	201.68	10.20	-201.53	0.26	0.00	37.31
5,627.00	0.60	171.10	5,614.63	200.94	10.50	-200.78	0.36	0.21	34.00
5,721.00	0.70	183.10	5,708.62	199.88	10.54	-199.72	0.18	0.11	12.77
5,815.00	0.70	180.20	5,802.61	198.73	10.51	-198.58	0.04	0.00	-3.09
5,908.00	0.70	165.60	5,895.61	197.61	10.65	-197.46	0.19	0.00	-15.70
6,002.00	0.70	156.30	5,989.60	196.53	11.02	-196.37	0.12	0.00	-9.89
6,097.00	0.70	99.60	6,084.59	195.90	11.83	-195.73	0.70	0.00	-59.68
6,191.00	1.10	72.20	6,178.58	196.08	13.25	-195.89	0.61	0.43	-29.15
6,285.00	1.70	18.80	6,272.56	197.68	14.56	-197.47	1.45	0.64	-56.81
6,380.00	2.40	11.80	6,367.50	200.96	15.42	-200.74	0.78	0.74	-7.37
6,474.00	1.10	55.60	6,461.45	203.40	16.57	-203.16	1.89	-1.38	46.60
6,569.00	0.90	86.60	6,556.44	203.96	18.07	-203.70	0.60	-0.21	32.63
6,663.00	0.30	259.60	6,650.44	203.96	18.56	-203.70	1.27	-0.64	184.04
6,758.00	0.60	257.80	6,745.43	203.81	17.83	-203.55	0.32	0.32	-1.89
6,852.00	0.70	272.30	6,839.43	203.72	16.78	-203.49	0.20	0.11	15.43

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV LP	Local Co-ordinate Reference:	Well State GQ Com 3H
Project:	Eddy County NM (Nad83)	TVD Reference:	WELL @ 3066.00usft (Original Well Elev + 25' KB)
Site:	Sec 7 T25S R28E	MD Reference:	WELL @ 3066.00usft (Original Well Elev + 25' KB)
Well:	State GQ Com 3H	North Reference:	Grid
Wellbore:	Job# 1310019	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Pat 444	Database:	GCR DBiv5000

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)
6,946.00	0.70	282.80	6,933.42	203.88	15.64	-203.65	0.14	0.00	11.17
7,041.00	0.20	323.50	7,028.42	204.14	14.98	-203.92	0.59	-0.53	42.84
7,136.00	0.20	15.40	7,123.42	204.43	14.92	-204.22	0.18	0.00	54.63
7,220.00	0.10	132.20	7,207.42	204.52	15.02	-204.31	0.31	-0.12	139.05
7,289.00	0.00	36.00	7,276.42	204.48	15.06	-204.27	0.14	-0.14	0.00
7,320.00	0.20	153.20	7,307.42	204.43	15.09	-204.22	0.65	0.65	0.00
7,352.00	2.60	184.10	7,339.41	203.66	15.06	-203.44	7.60	7.50	96.56
7,383.00	6.30	181.40	7,370.31	201.26	14.97	-201.04	11.95	11.94	-8.71
7,415.00	10.50	178.00	7,401.96	196.59	15.03	-196.37	13.21	13.13	-10.63
7,446.00	15.10	176.80	7,432.18	189.73	15.35	-189.51	14.86	14.84	-3.87
7,477.00	19.70	177.40	7,461.75	180.47	15.81	-180.25	14.85	14.84	1.94
7,509.00	24.20	179.00	7,491.42	168.52	16.17	-168.29	14.18	14.06	5.00
7,539.00	28.20	180.30	7,518.34	155.28	16.24	-155.05	13.47	13.33	4.33
7,571.00	31.50	178.70	7,546.09	139.35	16.39	-139.13	10.61	10.31	-5.00
7,602.00	34.50	177.60	7,572.08	122.48	16.94	-122.25	9.87	9.68	-3.55
7,634.00	37.50	177.30	7,597.97	103.69	17.78	-103.45	9.39	9.38	-0.94
7,665.00	38.70	177.10	7,622.36	84.59	18.72	-84.34	3.89	3.87	-0.65
7,697.00	38.50	176.60	7,647.37	64.66	19.82	-64.39	1.16	-0.63	-1.56
7,729.00	39.40	178.50	7,672.26	44.56	20.67	-44.28	4.67	2.81	5.94
7,760.00	41.00	180.20	7,695.94	24.55	20.89	-24.28	6.26	5.16	5.48
7,791.00	43.70	180.90	7,718.85	3.67	20.69	-3.40	8.84	8.71	2.26
7,823.00	47.60	180.40	7,741.21	-19.20	20.43	19.47	12.24	12.19	-1.56
7,854.00	50.90	179.70	7,761.44	-42.68	20.42	42.95	10.78	10.65	-2.26
7,885.00	52.50	178.90	7,780.66	-67.01	20.72	67.27	5.54	5.16	-2.58
7,917.00	53.80	179.20	7,799.85	-92.61	21.14	92.88	4.13	4.06	0.94
7,948.00	56.00	180.10	7,817.67	-117.97	21.29	118.24	7.48	7.10	2.90
7,980.00	59.20	181.20	7,834.82	-144.98	20.98	145.25	10.41	10.00	3.44
8,011.00	62.50	181.10	7,849.91	-172.05	20.44	172.30	10.65	10.65	-0.32
8,043.00	64.40	180.00	7,864.22	-200.67	20.17	200.92	6.69	5.94	-3.44
8,074.00	66.50	179.90	7,877.10	-228.87	20.19	229.11	6.78	6.77	-0.32
8,105.00	68.20	179.70	7,889.03	-257.48	20.29	257.72	5.52	5.48	-0.65
8,137.00	71.00	179.10	7,900.19	-287.46	20.61	287.71	8.92	8.75	-1.88
8,169.00	74.10	178.00	7,909.78	-317.98	21.38	318.23	10.23	9.69	-3.44
8,201.00	76.30	178.10	7,917.96	-348.90	22.43	349.16	6.88	6.88	0.31
8,232.00	77.90	178.10	7,924.88	-379.10	23.44	379.37	5.16	5.16	0.00
8,264.00	81.20	178.50	7,930.68	-410.55	24.37	410.83	10.39	10.31	1.25
8,298.00	84.10	179.10	7,935.03	-444.26	25.07	444.55	8.71	8.53	1.76
8,329.00	85.90	179.70	7,937.73	-475.13	25.40	475.43	6.12	5.81	1.94
8,361.00	87.60	179.80	7,939.54	-507.08	25.54	507.37	5.32	5.31	0.31
8,455.00	89.90	179.40	7,941.60	-601.05	26.19	601.34	2.48	2.45	-0.43
8,550.00	91.20	179.70	7,940.68	-696.04	26.94	696.33	1.40	1.37	0.32
8,645.00	92.20	179.70	7,937.87	-791.00	27.44	791.29	1.05	1.05	0.00

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV, LP	Local Co-ordinate Reference:	Well State GQ Com 3H
Project:	Eddy County, NM (Nad83)	TVD Reference:	WELL @ 3066.00usft (Original Well Elev + 25 KB)
Site:	Sec 7, T25S, R28E	MD Reference:	WELL @ 3066.00usft (Original Well Elev + 25 KB)
Well:	State GQ Com 3H	North Reference:	Grid
Wellbore:	Job# 1310019	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Pat 444	Database:	GCR DB v5000

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)
8,740.00	90.10	180.90	7,935.96	-885.97	26.94	886.25	2.55	-2.21	1.26
8,835.00	91.30	180.50	7,934.80	-980.95	25.78	981.21	1.33	1.26	-0.42
8,929.00	89.10	181.30	7,934.47	-1,074.93	24.30	1,075.16	2.49	-2.34	0.85
9,024.00	89.80	180.70	7,935.38	-1,169.91	22.64	1,170.11	0.97	0.74	-0.63
9,118.00	89.10	180.10	7,936.28	-1,263.91	21.99	1,264.09	0.98	-0.74	-0.64
9,213.00	89.70	179.50	7,937.28	-1,358.90	22.32	1,359.08	0.89	0.63	-0.63
9,307.00	90.10	179.70	7,937.44	-1,452.90	22.97	1,453.07	0.48	0.43	0.21
9,402.00	91.20	178.50	7,936.37	-1,547.88	24.47	1,548.06	1.71	1.16	-1.26
9,497.00	88.70	178.40	7,936.45	-1,642.83	27.04	1,643.05	2.63	-2.63	-0.11
9,591.00	89.20	177.30	7,938.17	-1,736.75	30.56	1,737.00	1.29	0.53	-1.17
9,685.00	90.60	177.00	7,938.33	-1,830.63	35.24	1,830.94	1.52	1.49	-0.32
9,778.00	90.30	179.00	7,937.60	-1,923.57	38.48	1,923.91	2.17	-0.32	2.15
9,872.00	91.40	178.90	7,936.21	-2,017.54	40.20	2,017.89	1.18	1.17	-0.11
9,966.00	89.40	180.50	7,935.55	-2,111.53	40.70	2,111.88	2.72	-2.13	1.70
10,061.00	89.70	179.60	7,936.30	-2,206.52	40.61	2,206.87	1.00	0.32	-0.95
10,156.00	90.20	177.60	7,936.38	-2,301.49	42.93	2,301.86	2.17	0.53	-2.11
10,251.00	88.80	177.90	7,937.21	-2,396.41	46.66	2,396.82	1.51	-1.47	0.32
10,346.00	88.10	180.60	7,939.78	-2,491.36	47.91	2,491.77	2.94	-0.74	2.84
10,441.00	90.00	181.20	7,941.36	-2,586.33	46.41	2,586.72	2.10	2.00	0.63
10,534.00	91.00	180.10	7,940.55	-2,679.32	45.36	2,679.68	1.60	1.08	-1.18
10,629.00	89.60	180.90	7,940.05	-2,774.31	44.53	2,774.65	1.70	-1.47	0.84
10,724.00	90.10	180.50	7,940.30	-2,869.30	43.37	2,869.62	0.67	0.53	-0.42
10,817.00	90.00	179.00	7,940.22	-2,962.30	43.78	2,962.62	1.62	-0.11	-1.61
10,912.00	90.20	178.40	7,940.05	-3,057.27	45.93	3,057.61	0.67	0.21	-0.63
11,008.00	91.90	178.60	7,938.29	-3,153.22	48.44	3,153.58	1.78	1.77	0.21
11,102.00	90.10	180.20	7,936.65	-3,247.19	49.43	3,247.56	2.56	-1.91	1.70
11,197.00	90.90	180.20	7,935.82	-3,342.19	49.10	3,342.55	0.84	0.84	0.00
11,291.00	92.10	179.90	7,933.36	-3,436.15	49.01	3,436.50	1.32	1.28	-0.32
11,385.00	89.80	181.60	7,931.80	-3,530.12	47.78	3,530.45	3.04	-2.45	1.81
11,480.00	90.40	181.70	7,931.64	-3,625.08	45.05	3,625.36	0.64	0.63	0.11
11,575.00	89.90	180.80	7,931.39	-3,720.06	42.97	3,720.30	1.08	-0.53	-0.95
11,670.00	89.70	181.20	7,931.72	-3,815.04	41.32	3,815.26	0.47	-0.21	0.42
11,764.00	89.40	180.90	7,932.46	-3,909.03	39.59	3,909.21	0.45	-0.32	-0.32
11,858.00	89.20	180.30	7,933.61	-4,003.01	38.61	4,003.18	0.67	-0.21	-0.64
11,951.00	87.80	178.10	7,936.04	-4,095.96	39.91	4,096.14	2.80	-1.51	-2.37
12,045.00	87.40	177.00	7,939.98	-4,189.79	43.92	4,190.01	1.24	-0.43	-1.17
12,139.00	89.10	176.90	7,942.85	-4,283.61	48.92	4,283.89	1.81	1.81	-0.11
12,234.00	89.70	176.80	7,943.84	-4,378.46	54.14	4,378.80	0.64	0.63	-0.11
12,329.00	90.20	176.40	7,943.92	-4,473.30	59.78	4,473.70	0.67	0.53	-0.42
12,415.00	91.80	176.40	7,942.42	-4,559.11	65.17	4,559.57	1.86	1.86	0.00
Last Phoenix MWD Survey									
12,462.00	91.80	176.40	7,940.95	-4,606.00	68.12	4,606.49	0.00	0.00	0.00

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV, LP	Local Co-ordinate Reference:	Well State GQ Com 3H
Project:	Eddy County, NM (Nad83)	TVD Reference:	WELL @ 3066.00usft (Original Well Elev + 25' KB)
Site:	Sec 7, T25S R28E	MD Reference:	WELL @ 3066.00usft (Original Well Elev + 25' KB)
Well:	State GQ Com 3H	North Reference:	Grid
Wellbore:	Job# 1310019	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Pat 444	Database:	GCR DB v5000

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)
Projection to TD									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,437.34	2,432.24	107.35	37.25	Last Gyro
2,523.00	2,516.91	118.20	44.33	First Phoenix MWD Survey
12,415.00	7,942.42	-4,559.11	65.17	Last Phoenix MWD Survey
12,462.00	7,940.95	-4,606.00	68.12	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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