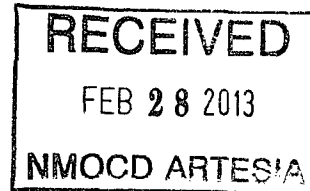




PHOENIX
TECHNOLOGY SERVICES

February 22, 2013

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



Dear District 2 - Artesia

Re: Legend Natural Gas
High Brass 2H
Eddy Co., NM
API #30-015-40865
Job No. 1310108

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	
Craig Peterson	2H	414	12,567	02/07/2013	02/19/2013	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 7011 1570 0001 4364 9414.

Phoenix Technology Services SURVEY DATA CERTIFICATION

RECEIVED
FEB 28 2013
NMOCD ARTESIA



PHOENIX JOB NUMBER

1310108

OPERATOR

Legend Natural Gas

WELL NAME

High Brass 2H

COUNTY & STATE

Eddy County, New Mexico

API WELL NUMBER

30-015-40865

PROPOSED DIRECTION

359.66

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
ft	.00 ft	.0 ft	.0 ft	.00 ft	.00 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
7-Feb-13	414 ft	0.8	37.3

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
19-Feb-13	12,567 ft	93	3

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
19-Feb-13	12,630 ft	93	3

Craig Petersen

PRINT YOUR NAME ABOVE

Craig Petersen

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	
	7.52
DECLINATION OR GRID	GRID

2/19/2013

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)

RECEIVED
FEB 28 2013
NMOC D ARTESIA

DISTRICT I
 1825 N. French Dr., Hobbs, NM 88240
 Phone (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
 611 S. First St., Artesia, NM 88210
 Phone (505) 740-1293 Fax: (505) 740-8720

DISTRICT III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone (505) 354-6178 Fax: (505) 354-6170

DISTRICT IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505
 Phone (505) 478-3460 Fax: (505) 478-3462

State of New Mexico
 Energy, Minerals and Natural Resources Department

Form C-102
 Revised August 1, 2011

Submit one copy to appropriate
 District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name HIGH BRASS	Well Number 2H
OGRID No.	Operator Name LEGEND NATURAL GAS III, L.P.	Elevation 3039'

Surface Location

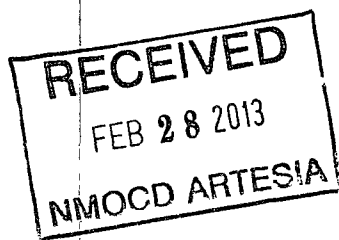
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	24 S	28 E		330	SOUTH	2256	WEST	EDDY

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
N	20	24 S	28 E		330	NORTH	2258	WEST	EDDY
Dedicated Acres	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

PROPOSED BOTTOM HOLE LOCATION Lat - N 32°12'34.79" Long - W 104°06'39.53" NMSPCE- N 440080.620 E 610106.821 (NAD-83) SURFACE LOCATION Lat - N 32°11'48.72" Long - W 104°06'39.33" NMSPCE- N 435425.307 E 610134.111 (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: <i>[Signature]</i> Date: 2-22-13 Printed Name: DAVID R. DIXON Email Address: david@lucy.com
	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. DEC 12 2012 Date Surveyed: 12-12-12 Signature & Seal of Professional Surveyor: <i>[Signature]</i> Certificate No. Gary L. Jones 7977 BASIN SURVEYS 27888



Legend Natural Gas iV, LP

Eddy County, NM (Nad83)

Sec 20 T24S R 28E

High Brass 2H

Job# 1310108

Survey: Phoenix MWD Surveys

Standard Survey Report

20 February, 2013



Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV, LP	Local Co-ordinate Reference:	Well: High Brass 2H
Project:	Eddy County NM (Nad83)	TVD Reference:	WELL @ 3064.00usft (Original Well Elev + 25' KB)
Site:	Sec 20 T24S R 28E	MD Reference:	WELL @ 3064.00usft (Original Well Elev + 25' KB)
Well:	High Brass 2H	North Reference:	Grid
Wellbore:	Job# 1310108	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patt 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 20 T24S R 28E		
Site Position:	From: Map	Northing:	435,425.31 usft
		Easting:	610,134.11 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 11' 48.7171 N
		Longitude:	104° 6' 39.3262 W
		Grid Convergence:	0.12 °

Well	High Brass 2H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 11' 48.7171 N
		Longitude:	104° 6' 39.3262 W
		Ground Level:	3,039.00 usft

Wellbore	Job# 1310108		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	01/17/13	7.64
		Dip Angle	60.03
		Field Strength	48,384

Design	Rig: Patt 444		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			359.66

Survey Program	Date 02/20/13		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
414.00	12,630.00	Phoenix MWD Surveys (Job# 1310108)	MWD
			Description
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
414.00	0.80	37.30	413.99	2.30	1.75	2.29	0.19	0.19	0.00
First Phoenix MWD Survey									
502.00	1.00	50.20	501.98	3.28	2.71	3.26	0.32	0.23	14.66
592.00	0.90	46.50	591.96	4.27	3.83	4.25	0.13	-0.11	-4.11
683.00	0.70	66.80	682.95	4.98	4.86	4.95	0.38	-0.22	22.31
744.00	0.70	83.50	743.95	5.17	5.57	5.14	0.33	0.00	27.38
835.00	1.00	108.10	834.94	4.98	6.88	4.94	0.51	0.33	27.03
927.00	1.60	129.00	926.92	3.93	8.64	3.88	0.82	0.65	22.72

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV LP	Local Co-ordinate Reference:	Well: High Brass 2H
Project:	Eddy County NM (Nad83)	TVD Reference:	WELL @ 3064.00usft (Original Well Elev + 25' KB)
Site:	Sec 20 T24S R 28E	MD Reference:	WELL @ 3064.00usft (Original Well Elev + 25' KB)
Well:	High Brass 2H	North Reference:	Grid
Wellbore:	Job# 1310108	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patt 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)
1,018.00	1.80	140.50	1,017.88	2.02	10.54	1.96	0.43	0.22	12.64
1,109.00	1.30	145.80	1,108.84	0.07	12.03	0.00	0.57	-0.55	5.82
1,199.00	1.10	156.70	1,198.82	-1.57	12.94	-1.65	0.34	-0.22	12.11
1,290.00	1.00	160.30	1,289.81	-3.12	13.55	-3.20	0.13	-0.11	3.96
1,382.00	0.90	166.30	1,381.80	-4.58	14.00	-4.66	0.15	-0.11	6.52
1,473.00	0.70	180.10	1,472.79	-5.83	14.16	-5.91	0.30	-0.22	15.16
1,564.00	0.70	199.70	1,563.78	-6.91	13.98	-6.99	0.26	0.00	21.54
1,655.00	0.50	212.60	1,654.78	-7.76	13.58	-7.85	0.26	-0.22	14.18
1,748.00	1.00	83.60	1,747.77	-8.02	14.16	-8.10	1.47	0.54	-138.71
1,777.00	1.70	89.30	1,776.76	-7.98	14.84	-8.07	2.45	2.41	19.66
1,874.00	2.10	87.60	1,873.71	-7.89	18.06	-8.00	0.42	0.41	-1.75
1,968.00	1.90	77.70	1,967.65	-7.49	21.30	-7.61	0.42	-0.21	-10.53
2,063.00	2.20	85.30	2,062.59	-7.00	24.66	-7.15	0.43	0.32	8.00
2,157.00	2.60	90.40	2,156.51	-6.87	28.59	-7.04	0.48	0.43	5.43
2,251.00	3.40	96.60	2,250.38	-7.20	33.49	-7.40	0.92	0.85	6.60
2,346.00	3.10	98.80	2,345.23	-7.92	38.83	-8.15	0.34	-0.32	2.32
2,439.00	2.60	100.70	2,438.11	-8.70	43.38	-8.95	0.55	-0.54	2.04
2,471.00	2.40	100.80	2,470.08	-8.96	44.76	-9.22	0.63	-0.63	0.31
2,567.00	1.80	104.80	2,566.02	-9.72	48.19	-10.00	0.64	-0.63	4.17
2,661.00	1.80	178.60	2,659.98	-11.57	49.65	-11.87	2.30	0.00	78.51
2,756.00	3.90	196.10	2,754.86	-16.17	48.79	-16.46	2.37	2.21	18.42
2,850.00	5.30	203.70	2,848.56	-23.22	46.16	-23.49	1.62	1.49	8.09
2,945.00	5.80	203.80	2,943.11	-31.63	42.46	-31.88	0.53	0.53	0.11
3,039.00	7.10	216.00	3,036.52	-40.67	37.13	-40.89	2.00	1.38	12.98
3,133.00	7.60	219.40	3,129.74	-50.17	29.77	-50.35	0.70	0.53	3.62
3,227.00	8.80	216.40	3,222.78	-60.77	21.55	-60.89	1.35	1.28	-3.19
3,322.00	8.90	207.20	3,316.66	-73.15	13.88	-73.23	1.49	0.11	-9.68
3,416.00	8.80	201.40	3,409.54	-86.31	7.94	-86.36	0.95	-0.11	-6.17
3,510.00	8.90	194.10	3,502.42	-100.06	3.54	-100.08	1.20	0.11	-7.77
3,604.00	9.50	186.80	3,595.22	-114.82	0.85	-114.82	1.39	0.64	-7.77
3,700.00	9.20	178.90	3,689.94	-130.36	0.06	-130.36	1.37	-0.31	-8.23
3,795.00	9.50	179.90	3,783.68	-145.79	0.22	-145.79	0.36	0.32	1.05
3,889.00	9.60	180.60	3,876.38	-161.38	0.15	-161.38	0.16	0.11	0.74
3,983.00	9.40	183.10	3,969.09	-176.89	-0.35	-176.88	0.49	-0.21	2.66
4,076.00	9.70	185.00	4,060.80	-192.28	-1.44	-192.26	0.47	0.32	2.04
4,172.00	9.00	179.10	4,155.53	-207.84	-2.03	-207.83	1.24	-0.73	-6.15
4,266.00	8.40	179.90	4,248.45	-222.06	-1.90	-222.04	0.65	-0.64	0.85
4,360.00	7.30	176.90	4,341.56	-234.89	-1.56	-234.88	1.25	-1.17	-3.19
4,455.00	5.90	176.20	4,435.93	-245.79	-0.91	-245.78	1.48	-1.47	-0.74
4,548.00	5.40	174.30	4,528.48	-254.91	-0.16	-254.91	0.57	-0.54	-2.04
4,643.00	4.20	172.10	4,623.15	-262.81	0.76	-262.81	1.28	-1.26	-2.32
4,736.00	3.40	191.20	4,715.94	-268.88	0.69	-268.88	1.60	-0.86	20.54

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas, LP	Local Co-ordinate Reference:	Well: High Brass 2H
Project:	Eddy County, NM (Nad83)	TVD Reference:	WELL @ 3064.00usft (Original Well Elev + 25 KB)
Site:	Sec 20 T24S R 28E	MD Reference:	WELL @ 3064.00usft (Original Well Elev + 25 KB)
Well:	High Brass 2H	North Reference:	Grid
Wellbore:	Job# 1310108	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patt 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)
4,831.00	2.10	183.30	4,810.83	-273.39	0.04	-273.38	1.42	-1.37	-8.32
4,925.00	2.10	180.80	4,904.77	-276.83	-0.08	-276.82	0.10	0.00	-2.66
5,020.00	0.80	196.90	4,999.74	-279.20	-0.30	-279.20	1.42	-1.37	16.95
5,114.00	0.50	192.20	5,093.73	-280.23	-0.57	-280.22	0.32	-0.32	-5.00
5,208.00	0.70	198.90	5,187.73	-281.18	-0.85	-281.17	0.23	0.21	7.13
5,302.00	0.70	202.10	5,281.72	-282.25	-1.25	-282.24	0.04	0.00	3.40
5,397.00	0.90	201.90	5,376.71	-283.48	-1.75	-283.47	0.21	0.21	-0.21
5,492.00	0.80	205.10	5,471.70	-284.77	-2.30	-284.75	0.12	-0.11	3.37
5,586.00	1.10	217.40	5,565.69	-286.08	-3.13	-286.06	0.38	0.32	13.09
5,681.00	0.30	313.20	5,660.68	-286.64	-3.87	-286.61	1.23	-0.84	100.84
5,775.00	0.20	332.40	5,754.68	-286.32	-4.12	-286.30	0.14	-0.11	20.43
5,871.00	0.30	269.70	5,850.68	-286.18	-4.45	-286.15	0.29	0.10	-65.31
5,966.00	0.60	245.60	5,945.68	-286.38	-5.15	-286.35	0.37	0.32	-25.37
6,060.00	1.40	253.30	6,039.66	-286.92	-6.70	-286.87	0.86	0.85	8.19
6,154.00	1.20	318.20	6,133.64	-286.51	-8.46	-286.46	1.49	-0.21	69.04
6,250.00	1.40	347.90	6,229.62	-284.62	-9.37	-284.56	0.72	0.21	30.94
6,343.00	1.70	332.00	6,322.58	-282.29	-10.26	-282.22	0.56	0.32	-17.10
6,438.00	2.50	352.60	6,417.52	-278.99	-11.19	-278.92	1.15	0.84	21.68
6,532.00	0.70	55.20	6,511.49	-276.63	-10.98	-276.56	2.41	-1.91	66.60
6,626.00	0.50	68.40	6,605.48	-276.15	-10.13	-276.09	0.26	-0.21	14.04
6,720.00	0.20	243.40	6,699.48	-276.07	-9.89	-276.01	0.74	-0.32	186.17
6,814.00	0.30	226.10	6,793.48	-276.32	-10.22	-276.25	0.13	0.11	-18.40
6,908.00	0.80	192.30	6,887.47	-277.13	-10.53	-277.06	0.61	0.53	-35.96
7,003.00	1.10	180.10	6,982.46	-278.69	-10.68	-278.62	0.38	0.32	-12.84
7,098.00	1.50	182.10	7,077.44	-280.84	-10.72	-280.77	0.42	0.42	2.11
7,192.00	1.40	185.10	7,171.41	-283.22	-10.87	-283.15	0.13	-0.11	3.19
7,287.00	1.50	193.10	7,266.38	-285.58	-11.26	-285.51	0.24	0.11	8.42
7,319.00	1.50	186.80	7,298.36	-286.41	-11.40	-286.33	0.52	0.00	-19.69
7,350.00	0.90	72.10	7,329.36	-286.73	-11.22	-286.66	6.60	-1.94	-370.00
7,382.00	4.20	27.60	7,361.33	-285.62	-10.43	-285.55	11.29	10.31	-139.06
7,413.00	7.20	17.90	7,392.17	-282.76	-9.31	-282.70	10.13	9.68	-31.29
7,444.00	10.20	16.10	7,422.81	-278.28	-7.95	-278.22	9.72	9.68	-5.81
7,474.00	13.20	14.40	7,452.18	-272.41	-6.36	-272.36	10.06	10.00	-5.67
7,506.00	16.90	8.70	7,483.08	-264.27	-4.75	-264.23	12.44	11.56	-17.81
7,537.00	20.70	3.40	7,512.43	-254.34	-3.74	-254.31	13.43	12.26	-17.10
7,568.00	23.40	0.80	7,541.16	-242.71	-3.33	-242.69	9.26	8.71	-8.39
7,600.00	25.70	1.90	7,570.26	-229.42	-3.01	-229.40	7.33	7.19	3.44
7,631.00	28.30	2.90	7,597.88	-215.36	-2.42	-215.34	8.51	8.39	3.23
7,662.00	30.90	2.20	7,624.83	-200.07	-1.74	-200.05	8.46	8.39	-2.26
7,694.00	33.40	1.30	7,651.92	-183.05	-1.23	-183.04	7.95	7.81	-2.81
7,726.00	36.20	0.50	7,678.20	-164.79	-0.94	-164.78	8.87	8.75	-2.50
7,757.00	38.60	359.70	7,702.82	-145.96	-0.91	-145.95	7.90	7.74	-2.58

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV, LP	Local Co-ordinate Reference:	Well: High Brass 2H
Project:	Eddy County, NM (Nad83)	TVD Reference:	WELL @ 3064.00usft (Original Well Elev + 25 KB)
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Well:	High Brass 2H	North Reference:	Grid
Wellbore:	Job# 1310108	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patt 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)	
7,788.00	41.00	359.30	7,726.64	-126.12	-1.09	-126.11	7.79	7.74	-1.29	
7,820.00	43.00	358.60	7,750.42	-104.71	-1.48	-104.70	6.42	6.25	-2.19	
7,852.00	46.80	359.50	7,773.08	-82.13	-1.85	-82.12	12.04	11.88	2.81	
7,883.00	51.80	0.80	7,793.29	-58.64	-1.78	-58.63	16.44	16.13	4.19	
7,915.00	55.10	1.40	7,812.34	-32.94	-1.28	-32.93	10.42	10.31	1.88	
7,946.00	58.00	1.60	7,829.43	-7.09	-0.61	-7.08	9.37	9.35	0.65	
7,977.00	60.80	1.80	7,845.21	19.58	0.19	19.58	9.05	9.03	0.65	
8,009.00	63.00	2.10	7,860.28	47.79	1.15	47.78	6.92	6.88	0.94	
8,041.00	65.40	1.50	7,874.21	76.58	2.05	76.57	7.69	7.50	-1.88	
8,073.00	68.00	0.60	7,886.86	105.97	2.59	105.95	8.53	8.13	-2.81	
8,104.00	69.80	359.70	7,898.02	134.89	2.66	134.87	6.41	5.81	-2.90	
8,135.00	71.60	359.10	7,908.27	164.14	2.35	164.13	6.09	5.81	-1.94	
8,165.00	73.60	359.00	7,917.24	192.76	1.88	192.75	6.67	6.67	-0.33	
8,196.00	76.20	358.30	7,925.31	222.68	1.17	222.67	8.67	8.39	-2.26	
8,228.00	78.70	358.20	7,932.27	253.90	0.22	253.89	7.82	7.81	-0.31	
8,259.00	81.40	358.60	7,937.62	284.42	-0.63	284.42	8.80	8.71	1.29	
8,298.00	85.80	359.40	7,941.97	323.16	-1.31	323.16	11.46	11.28	2.05	
8,329.00	88.00	359.40	7,943.65	354.11	-1.63	354.12	7.10	7.10	0.00	
8,424.00	89.90	0.10	7,945.39	449.09	-2.05	449.09	2.13	2.00	0.74	
8,517.00	90.00	0.70	7,945.47	542.09	-1.40	542.09	0.65	0.11	0.65	
8,611.00	89.50	1.00	7,945.88	636.08	0.00	636.06	0.62	-0.53	0.32	
8,704.00	90.10	1.00	7,946.20	729.06	1.62	729.04	0.65	0.65	0.00	
8,797.00	89.30	1.30	7,946.69	822.04	3.49	822.00	0.92	-0.86	0.32	
8,890.00	89.00	358.10	7,948.07	915.02	3.00	914.98	3.46	-0.32	-3.44	
8,984.00	91.30	358.50	7,947.82	1,008.97	0.21	1,008.95	2.48	2.45	0.43	
9,078.00	91.60	358.70	7,945.44	1,102.91	-2.09	1,102.90	0.38	0.32	0.21	
9,171.00	89.40	357.90	7,944.63	1,195.86	-4.84	1,195.87	2.52	-2.37	-0.86	
9,266.00	89.70	358.80	7,945.38	1,290.82	-7.58	1,290.84	1.00	0.32	0.95	
9,360.00	90.00	359.40	7,945.62	1,384.80	-9.06	1,384.83	0.71	0.32	0.64	
9,453.00	90.40	0.10	7,945.30	1,477.80	-9.46	1,477.83	0.87	0.43	0.75	
9,547.00	90.60	0.50	7,944.48	1,571.80	-8.97	1,571.82	0.48	0.21	0.43	
9,642.00	89.70	0.30	7,944.23	1,666.79	-8.31	1,666.81	0.97	-0.95	-0.21	
9,736.00	89.40	0.30	7,944.97	1,760.79	-7.81	1,760.80	0.32	-0.32	0.00	
9,829.00	91.30	0.30	7,944.40	1,853.78	-7.33	1,853.79	2.04	2.04	0.00	
9,924.00	89.10	359.10	7,944.07	1,948.77	-7.82	1,948.78	2.64	-2.32	-1.26	
10,018.00	91.30	359.00	7,943.74	2,042.75	-9.38	2,042.77	2.34	2.34	-0.11	
10,112.00	90.90	359.20	7,941.94	2,136.72	-10.86	2,136.75	0.48	-0.43	0.21	
10,207.00	90.40	358.50	7,940.86	2,231.70	-12.77	2,231.73	0.91	-0.53	-0.74	
10,302.00	90.60	359.40	7,940.03	2,326.68	-14.51	2,326.72	0.97	0.21	0.95	
10,395.00	90.90	359.60	7,938.81	2,419.66	-15.32	2,419.71	0.39	0.32	0.22	
10,490.00	89.80	358.70	7,938.23	2,514.65	-16.73	2,514.70	1.50	-1.16	-0.95	
10,584.00	90.10	358.60	7,938.31	2,608.62	-18.94	2,608.69	0.34	0.32	-0.11	

Phoenix Technology Services

Survey Report



Company:	Legend Natural Gas IV, LP	Local Co-ordinate Reference:	Well High Brass 2H
Project:	Eddy County, NM (Nad83)	TVD Reference:	WELL @ 3064.00usft (Original Well Elev + 25' KB)
Site:	Sec 20 T24S R 28E	MD Reference:	WELL @ 3064.00usft (Original Well Elev + 25' KB)
Well:	High Brass 2H	North Reference:	Grid
Wellbore:	Job# 1310108	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patt 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)
10,678.00	90.40	359.30	7,937.90	2,702.61	-20.66	2,702.68	0.81	0.32	0.74
10,773.00	89.20	358.60	7,938.24	2,797.59	-22.41	2,797.67	1.46	-1.26	-0.74
10,867.00	89.30	358.80	7,939.47	2,891.55	-24.54	2,891.65	0.24	0.11	0.21
10,961.00	90.40	358.90	7,939.71	2,985.53	-26.42	2,985.64	1.18	1.17	0.11
11,055.00	91.20	0.00	7,938.40	3,079.52	-27.33	3,079.63	1.45	0.85	1.17
11,151.00	91.00	359.50	7,936.56	3,175.50	-27.75	3,175.61	0.56	-0.21	-0.52
11,244.00	91.20	359.50	7,934.77	3,268.48	-28.56	3,268.59	0.22	0.22	0.00
11,340.00	88.30	358.00	7,935.19	3,364.44	-30.65	3,364.56	3.40	-3.02	-1.56
11,433.00	90.70	358.00	7,936.00	3,457.37	-33.90	3,457.51	2.58	2.58	0.00
11,528.00	90.70	358.00	7,934.84	3,552.31	-37.21	3,552.47	0.00	0.00	0.00
11,623.00	87.70	357.30	7,936.17	3,647.21	-41.11	3,647.39	3.24	-3.16	-0.74
11,717.00	89.60	356.30	7,938.38	3,741.03	-46.35	3,741.24	2.28	2.02	-1.06
11,812.00	91.30	357.90	7,937.64	3,835.90	-51.16	3,836.14	2.46	1.79	1.68
11,907.00	88.00	357.00	7,938.22	3,930.79	-55.38	3,931.05	3.60	-3.47	-0.95
12,001.00	89.80	357.80	7,940.02	4,024.67	-59.65	4,024.95	2.10	1.91	0.85
12,095.00	92.00	0.30	7,938.54	4,118.63	-61.20	4,118.92	3.54	2.34	2.66
12,190.00	89.60	0.00	7,937.22	4,213.62	-60.96	4,213.90	2.55	-2.53	-0.32
12,285.00	92.60	1.80	7,935.39	4,308.57	-59.46	4,308.85	3.68	3.16	1.89
12,379.00	94.20	2.30	7,929.82	4,402.34	-56.11	4,402.60	1.78	1.70	0.53
12,474.00	95.00	1.80	7,922.20	4,496.98	-52.72	4,497.21	0.99	0.84	-0.53
12,567.00	93.00	3.00	7,915.71	4,589.66	-48.84	4,589.87	2.51	-2.15	1.29
Last Phoenix MWD Survey									
12,630.00	93.00	3.00	7,912.42	4,652.49	-45.54	4,652.68	0.00	0.00	0.00
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
414.00	413.99	2.30	1.75	First Phoenix MWD Survey
12,567.00	7,915.71	4,589.66	-48.84	Last Phoenix MWD Survey
12,630.00	7,912.42	4,652.49	-45.54	Projection to TD

Checked By: _____ Approved By: _____ Date: _____