

30-015-26996

Nearburg Producing Co.

Eddy County, NM.

Emerald 32 Federal #1H

Emeral 32 Federal #1H

OH

Survey: Gyro Survey #1

Standard Survey Report

02 September, 2008

Provide survey @ TS

Black Viper Energy

Survey Report

Company:	Nearburg Producing Co.	Local Co-ordinate Reference:	Well Emerald 32 Federal #1H
Project:	Eddy County, NM	TVD Reference:	KB Elev @ 2942 00ft (KB Elevation)
Site:	Emerald 32 Federal #1H	MD Reference:	KB Elev @ 2942 00ft (KB Elevation)
Well:	Emerald 32 Federal #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OHa	Database:	EDM 2003 14 Server Db

Project:	Eddy County, NM.		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Emerald 32 Federal #1H		
Site Position:	Map	Northing:	427,710 90 ft
From:	Map	Easting:	600,074 90 ft
Position Uncertainty:	0 00 ft	Slot Radius:	"
		Latitude:	32° 10' 31 722 N
		Longitude:	104° 0' 35 614 W
		Grid Convergence:	0 17 °

Well:	Emerald 32 Federal #1H					
Well Position	+N-S	0 00 ft	Northing:	427,710 90 ft	Latitude:	32° 10' 31 722 N
	+E-W	0 00 ft	Easting:	600,074 90 ft	Longitude:	104° 0' 35 614 W
Position Uncertainty	0 00 ft	Wellhead Elevation:	2,942 00 ft	Ground Level:	2,927 00 ft	

Wellbore:	OH					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
			(°)	(°)	(nT)	
	IGRF200510	6/19/2008	8 13	60 15	48,863	

Design:	OHa					
Audit Notes:						
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 00	
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction		
	(ft)	(ft)	(ft)	(°)		
	0 00	0 00	0 00	49 56		

Survey Program	Date:	8/12/2008			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
100 00	4,100.00	Gyro Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Bulld 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
100 00	0 48	158 42	100.00	-0 39	0 15	-0 14	0 48	0 48	0 00
200 00	0 77	167 71	199.99	-1 44	0 45	-0 59	0 31	0 29	9 29
300 00	0 62	161 04	299.99	-2 60	0 77	-1 10	0 17	-0 15	-6 67
400 00	0 95	150 38	399.98	-3 84	1 36	-1 46	0 36	0 33	-10 66
500 00	0 85	132 73	499.96	-5 06	2 31	-1 52	0 29	-0 10	-17 65
600 00	1 31	83 26	699.93	-5 80	5 67	0 55	0 50	0 23	-24 74
700 00	1 52	84 41	799.90	-5 54	8 13	2 59	0 21	0 21	1 15
800 00	1 66	84 76	899.86	-5 27	10 89	4 87	0 14	0 14	0 35
900 00	1 72	80 25	999.82	-4 89	13 81	7 34	0 15	0 06	-4 51
1,000 00	1 75	83 02	1,099.77	-4 45	16.80	9 90	0 09	0 03	2 77
1,100 00	1 24	76.20	1,199.74	-4 00	19.37	12 15	0 54	-0 51	-6 82
1,200 00	1 39	66.40	1,299.71	-3 26	21 53	14 27	0 27	0 15	-9 80

Black Viper Energy

Survey Report

Company: Nearburg Producing Co
Project: Eddy County, NM.
Site: Emerald 32 Federal #1H
Well: Emerald 32 Federal #1H
Wellbore: OH
Design: OHa

Local Co-ordinate Reference: Well Emerald 32 Federal #1H
TVD Reference: KB Elev @ 2942.00ft (KB Elevation)
MD Reference: KB Elev @ 2942.00ft (KB Elevation)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 14 Server.Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,400.00	1.95	38.75	1,399.67	-1.45	23.71	17.11	0.97	0.56	-27.65
1,500.00	2.56	28.34	1,499.59	1.84	25.83	20.86	0.73	0.61	-10.41
1,600.00	3.50	25.13	1,599.45	6.57	28.19	25.72	0.95	0.94	-3.21
1,700.00	4.04	24.26	1,699.24	12.55	30.93	31.68	0.54	0.54	-0.87
1,800.00	4.35	28.07	1,798.97	19.11	34.17	38.40	0.42	0.31	3.81
1,900.00	4.23	33.83	1,898.69	25.52	38.00	45.48	0.45	-0.12	5.76
2,000.00	3.56	33.55	1,998.46	31.17	41.77	52.01	0.67	-0.67	-0.28
2,100.00	3.54	32.62	2,098.27	36.36	45.15	57.95	0.06	-0.02	-0.93
2,200.00	3.87	37.38	2,198.06	41.64	48.87	64.20	0.45	0.33	4.76
2,300.00	4.55	47.38	2,297.79	47.01	53.83	71.46	1.00	0.68	10.00
2,400.00	4.33	52.63	2,397.49	51.98	59.75	79.20	0.46	-0.22	5.25
2,500.00	4.38	56.28	2,497.20	56.39	65.93	86.76	0.28	0.05	3.65
2,600.00	4.12	56.12	2,596.92	60.52	72.09	94.12	0.26	-0.26	-0.16
2,700.00	2.98	53.93	2,696.73	64.05	77.17	100.28	1.15	-1.14	-2.19
2,800.00	2.20	47.15	2,796.63	66.89	80.68	104.79	0.84	-0.78	-6.78
2,900.00	1.84	44.67	2,896.57	69.33	83.22	108.31	0.37	-0.36	-2.48
3,000.00	1.67	39.94	2,996.52	71.59	85.28	111.34	0.22	-0.17	-4.73
3,100.00	1.21	36.84	3,096.49	73.55	86.85	113.81	0.47	-0.46	-3.10
3,200.00	1.32	37.80	3,196.46	75.31	88.19	115.97	0.11	0.11	0.96
3,300.00	1.03	49.99	3,296.44	76.80	89.58	117.99	0.38	-0.29	12.19
3,400.00	0.85	50.31	3,396.43	77.85	90.84	119.63	0.18	-0.18	0.32
3,500.00	0.72	54.55	3,496.42	78.69	91.92	121.00	0.14	-0.13	4.24
3,600.00	0.50	52.01	3,596.41	79.32	92.78	122.06	0.22	-0.22	-2.54
3,700.00	0.05	159.67	3,696.41	79.55	93.14	122.48	0.52	-0.45	107.66
3,800.00	0.22	238.82	3,796.41	79.41	92.99	122.28	0.22	0.17	79.15
3,900.00	0.09	245.51	3,896.41	79.27	92.75	122.01	0.13	-0.13	6.69
4,000.00	0.14	213.38	3,996.41	79.14	92.61	121.82	0.08	0.05	-32.13
4,100.00	0.37	212.19	4,096.41	78.76	92.38	121.40	0.23	0.23	-1.19

Checked By: _____ Approved By: _____ Date: _____