

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-101
May 27, 2004

Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address Nearburg Producing Company 3300 N A St., Bldg 2, Ste 120, Midland, TX 79705		² OGRID Number 015742
		³ API Number 30- 15-26996
⁴ Property Code	⁵ Property Name Emerald 32 Federal Com	⁶ Well No. 1H
⁹ Proposed Pool 1 Undesignated; Delaware		¹⁰ Proposed Pool 2

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	32	24S	29E		2007	North	1468	West	Eddy

⁸ Proposed 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
C	32	24S	29E		330	North	1980	West	Eddy

Additional Well Location

¹¹ Work Type Code Plugback	¹² Well Type Code 0	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 2927
¹⁶ Multiple	¹⁷ Proposed Depth 6685	¹⁸ Formation Delaware	¹⁹ Contractor	²⁰ Spud Date 8/1/08
Depth to ground water		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic ☐ _____ mils thick Clay ☐ Pit Volume _____ bbls Drilling Method:				
Closed-Loop System ☐ Fresh Water ☐ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐				

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4	8-5/8	24	604	250 sxs	Surface
7-7/8	5-1/2	17	6643	550 sxs	TOC @ 4250
Above csg existing					
7-7/8	5-1/2	17	4200		
7-7/8	5-1/2	20	4200-6685	870 sxs	Circ to surface

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

See Attached procedure

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒ a general permit ☐, or an (attached) alternative OCD-approved plan ☐.
Signature:

Printed name: H. R. Willis

Title: Drilling Manager

E-mail Address: hwillis@nearburg.com

Date: 7/30/08

Phone: 432/686-8235

OIL CONSERVATION DIVISION

Approved by: Jim W. Green

Title: District II Supervisor

Approval Date: 7/30/08 Expiration Date: 7/30/10

Conditions of Approval:

Attached ☐

**ATTACHMENT TO FORM 3160-3
EMERALD 32 FEDERAL #1H
2007 FNL AND 1468 FWL, SECTION 32, 24S, 29E
EDDY COUNTY, NEW MEXICO**

DRILLING PROGRAM

1. GEOLOGIC NAME OF SURFACE FORMATION

Quaternary Aeolian Deposits

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Delaware 2785

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

Delaware Oil

4. CASING AND CEMENTING PROGRAM

<u>Casing Size</u>	<u>From</u> <u>To</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>
13-3/8" (existing)	0' - 604'	48#	H40	STC
5-1/2"	0' - 4,200'	17#	N80	LTC
	4,200' - 6685'	20#	N80	BTC

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

Set a CIBP in 5-1/2" csg @ 5,075' with 35' cmt on top. PU on 5-1/2" csg, free point and cut @ 4,100', LD 5-1/2" csg.

Spot 500' cmt plug in & above 5-1/2" csg stub to 3,900'. WOC. Move off pulling unit.

MIRU United Drilling Rig and rig up with closed loop mud system. Kick off plug by 4,000' around csg stub and be horizontal by 5,112' TVD.

Drill horizontal section to new BHL. Directional drilling plan attached.

7-7/8" hole will be drilled to 6,685' and 5-1/2" production casing will be cemented with :
Lead - 700 sxs Howco Lite PremPlus + Pheno Seal 1 pps - Wt - 12.8, Y - 1.4, W - 11.27
Tail - 170 sxs ASC-10 pps Silicalite + 0.7% Halad 344+0.25% D3000 + 0.7% HR601
Wt - 15.2, Y - 2.62, W - 11.32

Tail to cover from 6685 to 5000 and Lead from 5000 to surface.
These volumes have 50% excess.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

The BOP stack will consist of a 2,000 psi working pressure, dual ram type preventer and annular.

A BOP sketch is attached.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM

Kick off and drill with cut brine mud for existing horizontal. The horizontal section from 5,112' to 6685' will be Poly Pac/ XCD system with 9.0 ppg mud weight to TD.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

H2S equipment will be rig up before spud.

8. LOGGING, TESTING, AND CORING PROGRAM

No logs are planned.

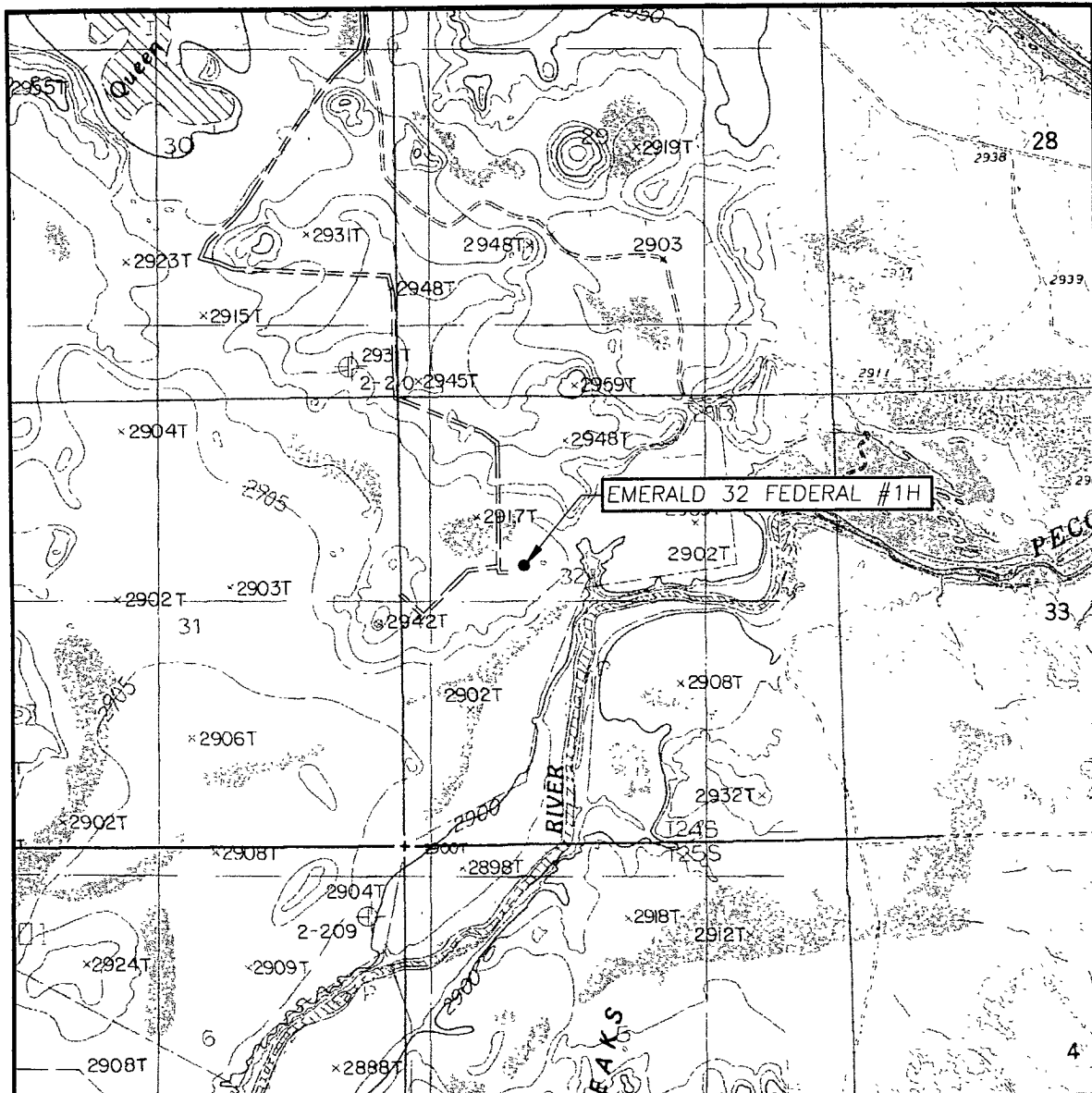
9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES & POTENTIAL HAZARDS

None anticipated. BHP – 2500 psi.

10. ANTICIPATED STARTING DATE:

Is planned that operations will commence on August 1, 2008 with drilling and completion operation lasting about 20 day.

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:

MALAGA, N.M. - 10'

SUPPLEMENTAL CONTOUR INTERVAL - 5'
PIERCE CANYON, N.M. - 10'

SEC. 32 TWP. 24-S RGE. 29-E

SURVEY _____ N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

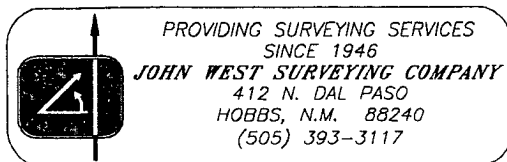
DESCRIPTION 2007' FNL & 1468' FWL

ELEVATION 2927'

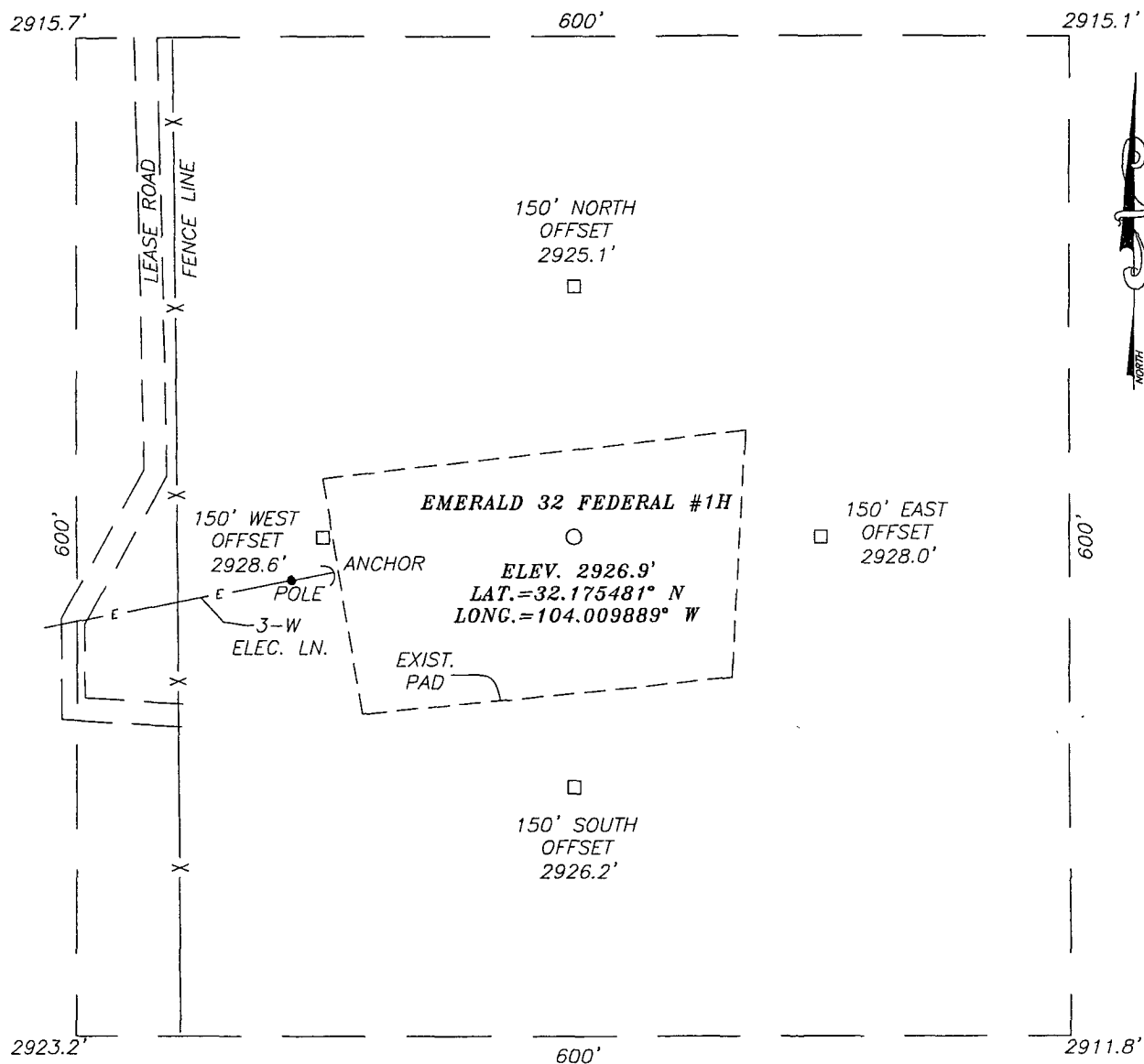
OPERATOR NEARBURG PRODUCING COMPANY

LEASE EMERALD 32 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
MALAGA, N.M.

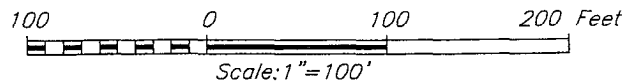


SECTION 32, TOWNSHIP 24 SOUTH, RANGE 29 WEST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. #285 & ST. HWY. #285 GO EAST ON CO. RD #720 APPROX. 1.4 MILES. TURN RIGHT ON CO. RD. #746 AND GO SOUTH THEN EAST APPROX. 3.0 MILES EAST. TURN RIGHT AND GO SOUTH-SOUTHWEST APPROX. 1.5 MILES THRU CATTLE GUARD. VEER LEFT AND GO EAST AND SOUTHEAST APPROX. 1.3 MILES TO THIS LOCATION.



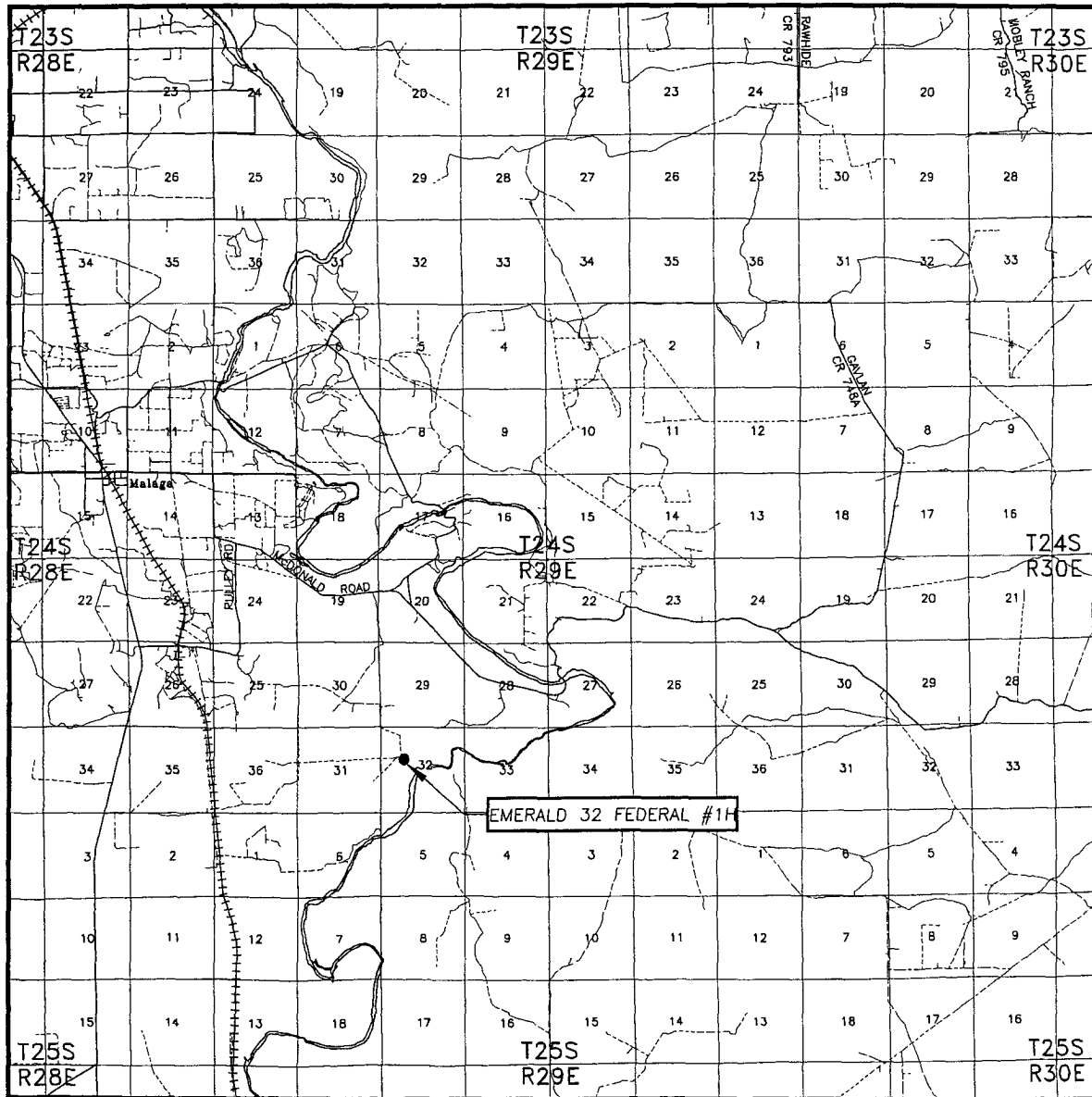
NEARBURG PRODUCING COMPANY

EMERALD 32 FEDERAL #1H WELL
LOCATED 2007 FEET FROM THE NORTH LINE
AND 1468 FEET FROM THE WEST LINE OF SECTION 32,
TOWNSHIP 24 SOUTH, RANGE 29 WEST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

Survey Date: 6/10/08	Sheet 1 of 1 Sheets
W.O. Number: 08.11.0931	Dr By: LA
Date: 6/17/08	08110931
	Scale: 1"=100'

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 32 TWP. 24-S RGE. 29-E

SURVEY N.M.P.M.

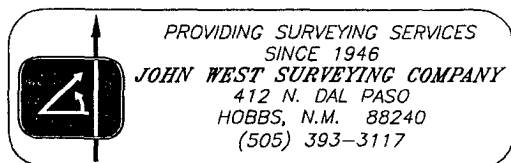
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2007' FNL & 1468' FWL

ELEVATION 2927'

OPERATOR NEARBURG PRODUCING COMPANY

LEASE EMERALD 32 FEDERAL



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

NEARBURG PRODUCTION

Project: Eddy County, NM
Site: Emerald 32 Federal #1H
Well: Emerald 32 Federal #1H
Wellbore: Lateral #1
Plan: Plan #1 (Emerald 32 Federal #1H/Lateral #1)



PROJECT DETAILS Eddy County, NM

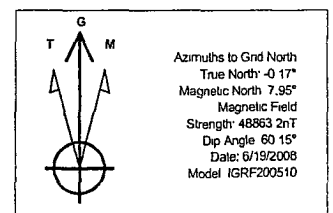
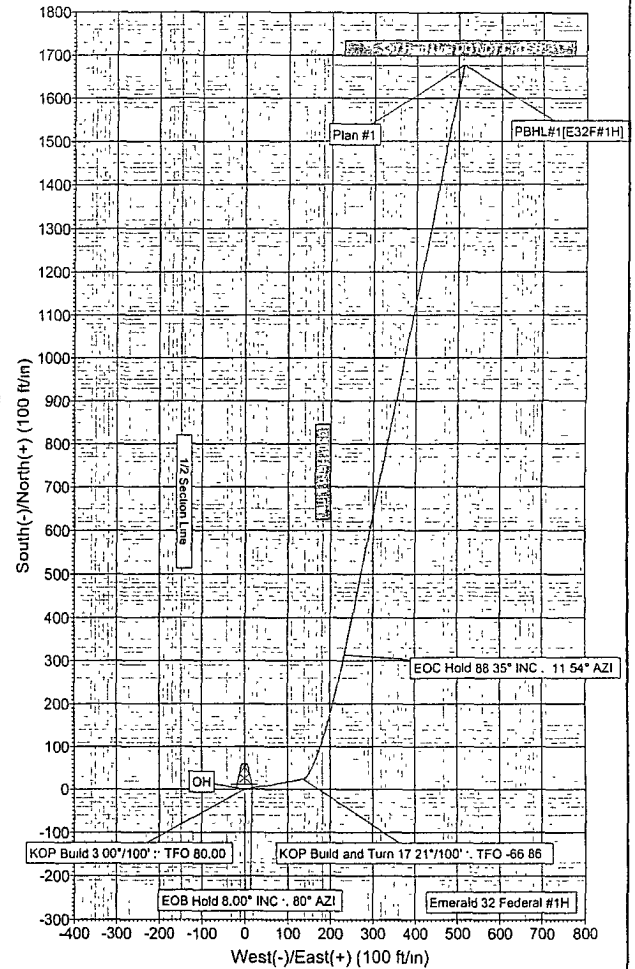
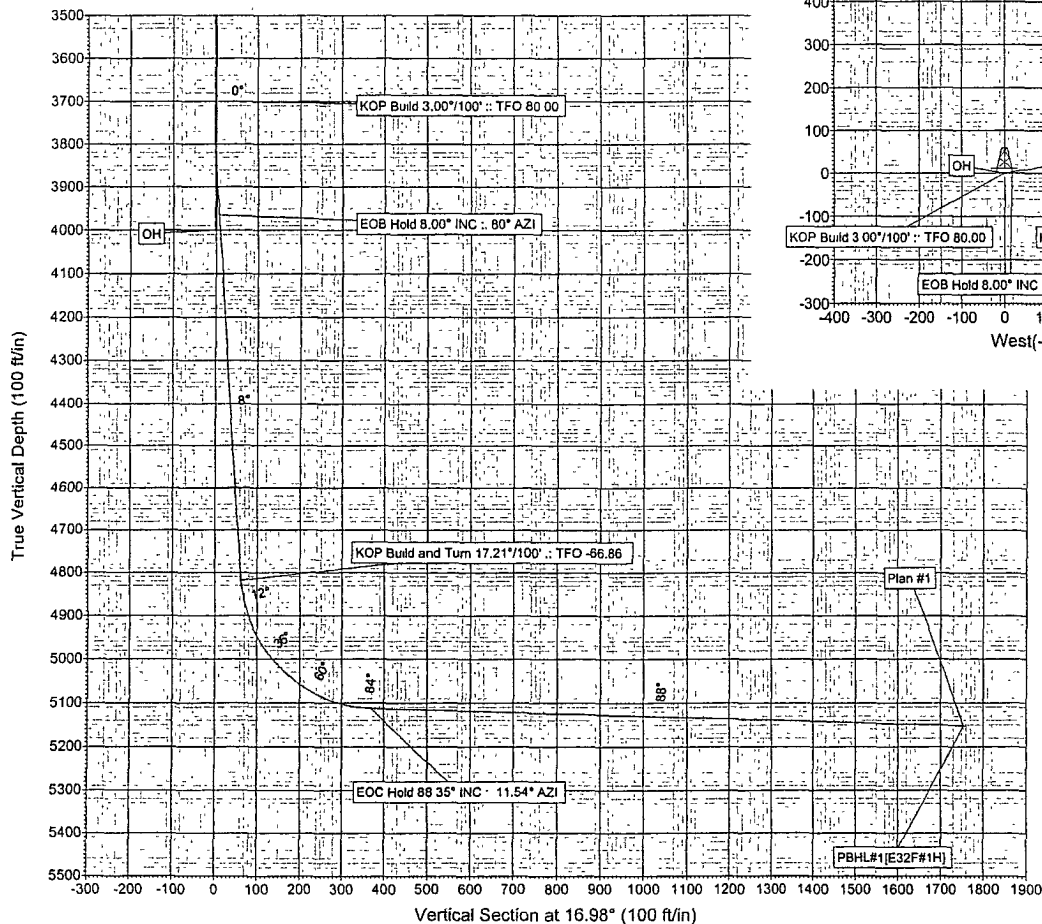
Geodetic System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone New Mexico East 3001
System Datum Mean Sea Level

ANNOTATIONS

TVD	MD	Annotation
3700.00	3700.00	KOP Build 3.00°/100' : TFO 80.00
3965.67	3965.67	EOB Hold 8.00° INC : 80° AZI
4826.67	4826.67	KOP Build and Turn 17.21°/100' : TFO -66.86
5111.99	5293.48	EOC Hold 88.35° INC : 11.54° AZI

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00	
2	3965.67	8.00	80.00	3965.67	3.23	18.30	3.00	80.00	8.43	
3	4826.67	8.00	80.00	4826.67	24.01	135.17	0.00	0.00	62.73	
4	5293.48	88.35	11.54	5111.99	314.10	233.62	18.30	-68.86	368.62	
5	6685.10	88.35	11.54	5152.00	1677.00	512.00	0.00	0.00	1753.42	PBHL#1[E32F#1H]



Nearburg Producing Co.

Eddy County, NM.

Emerald 32 Federal #1H

Emeral 32 Federal #1H

Lateral #1

Plan: Plan #1

Standard Survey Report

19 June, 2008

Black Viper Energy

Survey Report

Company:	Nearburg Producing Co.	Local Co-ordinate Reference:	Well Emerald 32 Federal #1H
Project:	Eddy County, NM.	TVD Reference:	WELL @ 2927.00ft (Original Well Elev)
Site:	Emerald 32 Federal #1H	MD Reference:	WELL @ 2927.00ft (Original Well Elev)
Well:	Emerald 32 Federal #1H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	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:		Northing:	427,710.90 ft	Latitude:	32° 10' 31.722 N
From:	Map	Easting:	600,074.90 ft	Longitude:	104° 0' 35.614 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	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:	ft	Ground Level:	2,927.00 ft

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/19/2008	8.13	60.15	48,863

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	3,700.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	16.98

Survey Tool Program	Date 6/19/2008			
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
3,700.00	6,685.10	Plan #1 (Lateral #1)	MWD	MWD - Standard

Planned Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP Build 3.00°/100' :: TFO 80.00										
3,720.00	0.60	80.00	3,720.00	0.02	0.10	0.05	3.00	3.00	0.00	
3,750.00	1.50	80.00	3,749.99	0.11	0.64	0.30	3.00	3.00	0.00	
3,780.00	2.40	80.00	3,779.98	0.29	1.65	0.76	3.00	3.00	0.00	
3,810.00	3.30	80.00	3,809.94	0.55	3.12	1.44	3.00	3.00	0.00	
3,840.00	4.20	80.00	3,839.87	0.89	5.05	2.33	3.00	3.00	0.00	
3,870.00	5.10	80.00	3,869.78	1.31	7.45	3.43	3.00	3.00	0.00	
3,900.00	6.00	80.00	3,899.63	1.82	10.30	4.75	3.00	3.00	0.00	
3,930.00	6.90	80.00	3,929.44	2.40	13.62	6.28	3.00	3.00	0.00	
3,960.00	7.80	80.00	3,959.20	3.07	17.40	8.02	3.00	3.00	0.00	
3,966.67	8.00	80.00	3,965.80	3.23	18.30	8.43	3.00	3.00	0.00	
EOB Hold 8.00° INC :: 80° AZI										

Black Viper Energy

Survey Report

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

Local Co-ordinate Reference: Well Emerald 32 Federal #1H
TVD Reference: WELL @ 2927.00ft (Original Well Elev)
MD Reference: WELL @ 2927.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.14 Server Db

Planned 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)
3,990.00	8.00	80.00	3,988.91	3.79	21.50	9.90	0.00	0.00	0.00
4,020.00	8.00	80.00	4,018.62	4.52	25.61	11.80	0.00	0.00	0.00
4,050.00	8.00	80.00	4,048.32	5.24	29.73	13.69	0.00	0.00	0.00
4,080.00	8.00	80.00	4,078.03	5.97	33.84	15.59	0.00	0.00	0.00
4,110.00	8.00	80.00	4,107.74	6.69	37.95	17.48	0.00	0.00	0.00
4,140.00	8.00	80.00	4,137.45	7.42	42.06	19.38	0.00	0.00	0.00
4,170.00	8.00	80.00	4,167.16	8.14	46.17	21.27	0.00	0.00	0.00
4,200.00	8.00	80.00	4,196.86	8.87	50.28	23.16	0.00	0.00	0.00
4,230.00	8.00	80.00	4,226.57	9.59	54.40	25.06	0.00	0.00	0.00
4,260.00	8.00	80.00	4,256.28	10.32	58.51	26.95	0.00	0.00	0.00
4,290.00	8.00	80.00	4,285.99	11.04	62.62	28.85	0.00	0.00	0.00
4,320.00	8.00	80.00	4,315.70	11.77	66.73	30.74	0.00	0.00	0.00
4,350.00	8.00	80.00	4,345.40	12.49	70.84	32.63	0.00	0.00	0.00
4,380.00	8.00	80.00	4,375.11	13.22	74.96	34.53	0.00	0.00	0.00
4,410.00	8.00	80.00	4,404.82	13.94	79.07	36.42	0.00	0.00	0.00
4,440.00	8.00	80.00	4,434.53	14.67	83.18	38.32	0.00	0.00	0.00
4,470.00	8.00	80.00	4,464.24	15.39	87.29	40.21	0.00	0.00	0.00
4,500.00	8.00	80.00	4,493.94	16.12	91.40	42.10	0.00	0.00	0.00
4,530.00	8.00	80.00	4,523.65	16.84	95.51	44.00	0.00	0.00	0.00
4,560.00	8.00	80.00	4,553.36	17.57	99.63	45.89	0.00	0.00	0.00
4,590.00	8.00	80.00	4,583.07	18.29	103.74	47.79	0.00	0.00	0.00
4,620.00	8.00	80.00	4,612.78	19.02	107.85	49.68	0.00	0.00	0.00
4,650.00	8.00	80.00	4,642.48	19.74	111.96	51.57	0.00	0.00	0.00
4,680.00	8.00	80.00	4,672.19	20.47	116.07	53.47	0.00	0.00	0.00
4,710.00	8.00	80.00	4,701.90	21.19	120.18	55.36	0.00	0.00	0.00
4,740.00	8.00	80.00	4,731.61	21.92	124.30	57.26	0.00	0.00	0.00
4,770.00	8.00	80.00	4,761.32	22.64	128.41	59.15	0.00	0.00	0.00
4,800.00	8.00	80.00	4,791.02	23.37	132.52	61.04	0.00	0.00	0.00
4,826.67	8.00	80.00	4,817.43	24.01	136.18	62.73	0.00	0.00	0.00
KOP Build and Turn 17.21°/100' :: TFO -66.86									
4,830.00	8.24	76.03	4,820.73	24.11	136.63	62.96	18.32	7.19	-119.31
4,860.00	11.67	50.66	4,850.29	26.55	141.07	66.59	18.30	11.44	-84.56
4,890.00	16.26	37.99	4,879.40	31.79	146.01	73.04	18.30	15.31	-42.22
4,920.00	21.28	30.97	4,907.80	39.78	151.40	82.25	18.30	16.71	-23.40
4,950.00	26.47	26.57	4,935.23	50.43	157.20	94.13	18.30	17.32	-14.68
4,980.00	31.76	23.54	4,961.43	63.66	163.34	108.58	18.30	17.63	-10.11
5,010.00	37.11	21.29	4,986.16	79.34	169.79	125.46	18.30	17.81	-7.47
5,040.00	42.48	19.55	5,009.20	97.34	176.47	144.62	18.30	17.92	-5.82
5,070.00	47.88	18.13	5,030.34	117.47	183.33	165.88	18.30	17.99	-4.74
5,100.00	53.29	16.93	5,049.38	139.57	190.29	189.05	18.30	18.04	-3.99
5,130.00	58.72	15.89	5,066.15	163.42	197.31	213.91	18.30	18.08	-3.46
5,160.00	64.15	14.97	5,080.49	188.81	204.31	240.24	18.30	18.10	-3.08
5,190.00	69.58	14.12	5,092.28	215.50	211.23	267.79	18.30	18.12	-2.81
5,220.00	75.02	13.34	5,101.39	243.26	218.01	296.31	18.30	18.13	-2.62
5,250.00	80.46	12.59	5,107.76	271.81	224.58	325.55	18.30	18.14	-2.49
5,280.00	85.91	11.87	5,111.32	300.92	230.89	355.22	18.30	18.15	-2.41
5,293.48	88.35	11.54	5,111.99	314.10	233.62	368.63	18.30	18.14	-2.38
EOC Hold 88.35° INC :: 11.54° AZI									
5,310.00	88.35	11.54	5,112.47	330.28	236.92	385.07	0.00	0.00	0.00
5,340.00	88.35	11.54	5,113.33	359.66	242.92	414.92	0.00	0.00	0.00
5,370.00	88.35	11.54	5,114.19	389.04	248.93	444.77	0.00	0.00	0.00
5,400.00	88.35	11.54	5,115.06	418.42	254.93	474.62	0.00	0.00	0.00
5,430.00	88.35	11.54	5,115.92	447.80	260.93	504.48	0.00	0.00	0.00
5,460.00	88.35	11.54	5,116.78	477.18	266.93	534.33	0.00	0.00	0.00

Black Viper Energy

Survey Report

Company: Nearburg Producing Co.
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Site: Emerald 32 Federal #1H
Well: Emerald 32 Federal #1H
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference: Well Emerald 32 Federal #1H
TVD Reference: WELL @ 2927.00ft (Original Well Elev)
MD Reference: WELL @ 2927.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.14 Server Db

Planned 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)
5,490.00	88.35	11.54	5,117.64	506.56	272.93	564.18	0.00	0.00	0.00
5,520.00	88.35	11.54	5,118.51	535.94	278.93	594.04	0.00	0.00	0.00
5,550.00	88.35	11.54	5,119.37	565.33	284.93	623.89	0.00	0.00	0.00
5,580.00	88.35	11.54	5,120.23	594.71	290.93	653.74	0.00	0.00	0.00
5,610.00	88.35	11.54	5,121.09	624.09	296.94	683.59	0.00	0.00	0.00
5,640.00	88.35	11.54	5,121.96	653.47	302.94	713.45	0.00	0.00	0.00
5,670.00	88.35	11.54	5,122.82	682.85	308.94	743.30	0.00	0.00	0.00
5,700.00	88.35	11.54	5,123.68	712.23	314.94	773.15	0.00	0.00	0.00
5,730.00	88.35	11.54	5,124.54	741.61	320.94	803.01	0.00	0.00	0.00
5,760.00	88.35	11.54	5,125.40	770.99	326.94	832.86	0.00	0.00	0.00
5,790.00	88.35	11.54	5,126.27	800.37	332.94	862.71	0.00	0.00	0.00
5,820.00	88.35	11.54	5,127.13	829.75	338.94	892.56	0.00	0.00	0.00
5,850.00	88.35	11.54	5,127.99	859.13	344.95	922.42	0.00	0.00	0.00
5,880.00	88.35	11.54	5,128.85	888.52	350.95	952.27	0.00	0.00	0.00
5,910.00	88.35	11.54	5,129.72	917.90	356.95	982.12	0.00	0.00	0.00
5,940.00	88.35	11.54	5,130.58	947.28	362.95	1,011.98	0.00	0.00	0.00
5,970.00	88.35	11.54	5,131.44	976.66	368.95	1,041.83	0.00	0.00	0.00
6,000.00	88.35	11.54	5,132.30	1,006.04	374.95	1,071.68	0.00	0.00	0.00
6,030.00	88.35	11.54	5,133.17	1,035.42	380.95	1,101.53	0.00	0.00	0.00
6,060.00	88.35	11.54	5,134.03	1,064.80	386.95	1,131.39	0.00	0.00	0.00
6,090.00	88.35	11.54	5,134.89	1,094.18	392.96	1,161.24	0.00	0.00	0.00
6,120.00	88.35	11.54	5,135.75	1,123.56	398.96	1,191.09	0.00	0.00	0.00
6,150.00	88.35	11.54	5,136.62	1,152.94	404.96	1,220.95	0.00	0.00	0.00
6,180.00	88.35	11.54	5,137.48	1,182.33	410.96	1,250.80	0.00	0.00	0.00
6,210.00	88.35	11.54	5,138.34	1,211.71	416.96	1,280.65	0.00	0.00	0.00
6,240.00	88.35	11.54	5,139.20	1,241.09	422.96	1,310.50	0.00	0.00	0.00
6,270.00	88.35	11.54	5,140.07	1,270.47	428.96	1,340.36	0.00	0.00	0.00
6,300.00	88.35	11.54	5,140.93	1,299.85	434.96	1,370.21	0.00	0.00	0.00
6,330.00	88.35	11.54	5,141.79	1,329.23	440.97	1,400.06	0.00	0.00	0.00
6,360.00	88.35	11.54	5,142.65	1,358.61	446.97	1,429.92	0.00	0.00	0.00
6,390.00	88.35	11.54	5,143.52	1,387.99	452.97	1,459.77	0.00	0.00	0.00
6,420.00	88.35	11.54	5,144.38	1,417.37	458.97	1,489.62	0.00	0.00	0.00
6,450.00	88.35	11.54	5,145.24	1,446.75	464.97	1,519.47	0.00	0.00	0.00
6,480.00	88.35	11.54	5,146.10	1,476.14	470.97	1,549.33	0.00	0.00	0.00
6,510.00	88.35	11.54	5,146.97	1,505.52	476.97	1,579.18	0.00	0.00	0.00
6,540.00	88.35	11.54	5,147.83	1,534.90	482.97	1,609.03	0.00	0.00	0.00
6,570.00	88.35	11.54	5,148.69	1,564.28	488.98	1,638.89	0.00	0.00	0.00
6,600.00	88.35	11.54	5,149.55	1,593.66	494.98	1,668.74	0.00	0.00	0.00
6,630.00	88.35	11.54	5,150.42	1,623.04	500.98	1,698.59	0.00	0.00	0.00
6,660.00	88.35	11.54	5,151.28	1,652.42	506.98	1,728.44	0.00	0.00	0.00
6,685.10	88.35	11.54	5,152.00	1,677.00	512.00	1,753.42	0.00	0.00	0.00

Black Viper Energy

Survey Report

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

Local Co-ordinate Reference: Well Emerald 32 Federal #1H
 TVD Reference: WELL @ 2927.00ft (Original Well Elev)
 MD Reference: WELL @ 2927.00ft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 2003.14 Server Db

Targets

Target Name

hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
1/2Sec[E32F#1H] - plan misses by 3700.00ft at 3700.00ft MD (3700.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W2,640.00 H1,320.00 D0.00)	0.00	0.00	0.00	0.00	0.00	427,710.90	600,074.90	32° 10' 31.722 N	104° 0' 35.614 W
LL[E32F#1H] - plan misses by 3700.00ft at 3700.00ft MD (3700.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W2,640.00 H2,640.00 D0.00)	0.00	0.00	0.00	0.00	0.00	427,710.90	600,074.90	32° 10' 31.722 N	104° 0' 35.614 W
HL - plan misses by 3700.00ft at 3700.00ft MD (3700.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W1,980.00 H660.00 D0.00)	0.00	0.00	0.00	0.00	0.00	427,710.90	600,074.90	32° 10' 31.722 N	104° 0' 35.614 W
PBHL#1[E32F#1H] - plan hits target - Point	0.00	0.00	5,152.00	1,677.00	512.00	429,387.90	600,586.90	32° 10' 48.303 N	104° 0' 29.597 W

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,700.00	3,700.00	0.00	0.00	KOP Build 3.00°/100' :: TFO 80.00
3,966.67	3,965.80	3.23	18.30	EOB Hold 8.00° INC :: 80° AZI
4,826.67	4,817.43	24.01	136.18	KOP Build and Turn 17.21°/100' :: TFO -66.86
5,293.48	5,111.99	314.10	233.62	EOC Hold 88.35° INC :: 11.54° AZI

Checked By: _____ Approved By: _____ Date: _____

Eddy County, NM.
Emerald 32 Federal #1H

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
3700.00	0.000	0.000	3700.00	0.00 N	0.00 E	0.00	0.00
3710.00	0.300	80.000	3710.00	0.00 N	0.03 E	0.01	3.00
3720.00	0.600	80.000	3720.00	0.02 N	0.10 E	0.05	3.00
3730.00	0.900	80.000	3730.00	0.04 N	0.23 E	0.11	3.00
3740.00	1.200	80.000	3740.00	0.07 N	0.41 E	0.19	3.00
3750.00	1.500	80.000	3749.99	0.11 N	0.64 E	0.30	3.00
3760.00	1.800	80.000	3759.99	0.16 N	0.93 E	0.43	3.00
3770.00	2.100	80.000	3769.98	0.22 N	1.26 E	0.58	3.00
3780.00	2.400	80.000	3779.98	0.29 N	1.65 E	0.76	3.00
3790.00	2.700	80.000	3789.97	0.37 N	2.09 E	0.96	3.00
3800.00	3.000	80.000	3799.95	0.45 N	2.58 E	1.19	3.00
3810.00	3.300	80.000	3809.94	0.55 N	3.12 E	1.44	3.00
3820.00	3.600	80.000	3819.92	0.65 N	3.71 E	1.71	3.00
3830.00	3.900	80.000	3829.90	0.77 N	4.36 E	2.01	3.00
3840.00	4.200	80.000	3839.87	0.89 N	5.05 E	2.33	3.00
3850.00	4.500	80.000	3849.85	1.02 N	5.80 E	2.67	3.00
3860.00	4.800	80.000	3859.81	1.16 N	6.60 E	3.04	3.00
3870.00	5.100	80.000	3869.78	1.31 N	7.45 E	3.43	3.00
3880.00	5.400	80.000	3879.73	1.47 N	8.35 E	3.85	3.00
3890.00	5.700	80.000	3889.69	1.64 N	9.30 E	4.28	3.00
3900.00	6.000	80.000	3899.63	1.82 N	10.30 E	4.75	3.00
3910.00	6.300	80.000	3909.58	2.00 N	11.36 E	5.23	3.00
3920.00	6.600	80.000	3919.51	2.20 N	12.46 E	5.74	3.00
3930.00	6.900	80.000	3929.44	2.40 N	13.62 E	6.28	3.00
3940.00	7.200	80.000	3939.37	2.62 N	14.83 E	6.83	3.00
3950.00	7.500	80.000	3949.29	2.84 N	16.09 E	7.41	3.00
3960.00	7.800	80.000	3959.20	3.07 N	17.40 E	8.02	3.00
3966.67	8.000	80.000	3965.80	3.23 N	18.30 E	8.43	3.00
3970.00	8.000	80.000	3969.10	3.31 N	18.76 E	8.64	0.00
3980.00	8.000	80.000	3979.00	3.55 N	20.13 E	9.27	0.00
3990.00	8.000	80.000	3988.91	3.79 N	21.50 E	9.90	0.00
4000.00	8.000	80.000	3998.81	4.03 N	22.87 E	10.54	0.00
4010.00	8.000	80.000	4008.71	4.27 N	24.24 E	11.17	0.00
4020.00	8.000	80.000	4018.62	4.52 N	25.61 E	11.80	0.00
4030.00	8.000	80.000	4028.52	4.76 N	26.98 E	12.43	0.00
4040.00	8.000	80.000	4038.42	5.00 N	28.36 E	13.06	0.00
4050.00	8.000	80.000	4048.32	5.24 N	29.73 E	13.69	0.00
4060.00	8.000	80.000	4058.23	5.48 N	31.10 E	14.32	0.00
4070.00	8.000	80.000	4068.13	5.72 N	32.47 E	14.96	0.00
4080.00	8.000	80.000	4078.03	5.97 N	33.84 E	15.59	0.00
4090.00	8.000	80.000	4087.93	6.21 N	35.21 E	16.22	0.00
4100.00	8.000	80.000	4097.84	6.45 N	36.58 E	16.85	0.00
4110.00	8.000	80.000	4107.74	6.69 N	37.95 E	17.48	0.00
4120.00	8.000	80.000	4117.64	6.93 N	39.32 E	18.11	0.00
4130.00	8.000	80.000	4127.54	7.17 N	40.69 E	18.74	0.00
4140.00	8.000	80.000	4137.45	7.42 N	42.06 E	19.38	0.00
4150.00	8.000	80.000	4147.35	7.66 N	43.43 E	20.01	0.00
4160.00	8.000	80.000	4157.25	7.90 N	44.80 E	20.64	0.00
4170.00	8.000	80.000	4167.16	8.14 N	46.17 E	21.27	0.00
4180.00	8.000	80.000	4177.06	8.38 N	47.54 E	21.90	0.00
4190.00	8.000	80.000	4186.96	8.62 N	48.91 E	22.53	0.00
4200.00	8.000	80.000	4196.86	8.87 N	50.28 E	23.16	0.00
4210.00	8.000	80.000	4206.77	9.11 N	51.66 E	23.79	0.00
4220.00	8.000	80.000	4216.67	9.35 N	53.03 E	24.43	0.00
4230.00	8.000	80.000	4226.57	9.59 N	54.40 E	25.06	0.00
4240.00	8.000	80.000	4236.47	9.83 N	55.77 E	25.69	0.00
4250.00	8.000	80.000	4246.38	10.07 N	57.14 E	26.32	0.00
4260.00	8.000	80.000	4256.28	10.32 N	58.51 E	26.95	0.00
4270.00	8.000	80.000	4266.18	10.56 N	59.88 E	27.58	0.00
4280.00	8.000	80.000	4276.09	10.80 N	61.25 E	28.21	0.00
4290.00	8.000	80.000	4285.99	11.04 N	62.62 E	28.85	0.00
4300.00	8.000	80.000	4295.89	11.28 N	63.99 E	29.48	0.00
4310.00	8.000	80.000	4305.79	11.52 N	65.36 E	30.11	0.00
4320.00	8.000	80.000	4315.70	11.77 N	66.73 E	30.74	0.00

4330.00	8.000	80.000	4325.60	12.01 N	68.10 E	31.37	0.00
4340.00	8.000	80.000	4335.50	12.25 N	69.47 E	32.00	0.00
4350.00	8.000	80.000	4345.40	12.49 N	70.84 E	32.63	0.00
4360.00	8.000	80.000	4355.31	12.73 N	72.21 E	33.26	0.00
4370.00	8.000	80.000	4365.21	12.97 N	73.58 E	33.90	0.00
4380.00	8.000	80.000	4375.11	13.22 N	74.96 E	34.53	0.00
4390.00	8.000	80.000	4385.01	13.46 N	76.33 E	35.16	0.00
4400.00	8.000	80.000	4394.92	13.70 N	77.70 E	35.79	0.00
4410.00	8.000	80.000	4404.82	13.94 N	79.07 E	36.42	0.00
4420.00	8.000	80.000	4414.72	14.18 N	80.44 E	37.05	0.00
4430.00	8.000	80.000	4424.63	14.42 N	81.81 E	37.68	0.00
4440.00	8.000	80.000	4434.53	14.67 N	83.18 E	38.32	0.00
4450.00	8.000	80.000	4444.43	14.91 N	84.55 E	38.95	0.00
4460.00	8.000	80.000	4454.33	15.15 N	85.92 E	39.58	0.00
4470.00	8.000	80.000	4464.24	15.39 N	87.29 E	40.21	0.00
4480.00	8.000	80.000	4474.14	15.63 N	88.66 E	40.84	0.00
4490.00	8.000	80.000	4484.04	15.88 N	90.03 E	41.47	0.00
4500.00	8.000	80.000	4493.94	16.12 N	91.40 E	42.10	0.00
4510.00	8.000	80.000	4503.85	16.36 N	92.77 E	42.74	0.00
4520.00	8.000	80.000	4513.75	16.60 N	94.14 E	43.37	0.00
4530.00	8.000	80.000	4523.65	16.84 N	95.51 E	44.00	0.00
4540.00	8.000	80.000	4533.55	17.08 N	96.88 E	44.63	0.00
4550.00	8.000	80.000	4543.46	17.33 N	98.26 E	45.26	0.00
4560.00	8.000	80.000	4553.36	17.57 N	99.63 E	45.89	0.00
4570.00	8.000	80.000	4563.26	17.81 N	101.00 E	46.52	0.00
4580.00	8.000	80.000	4573.17	18.05 N	102.37 E	47.15	0.00
4590.00	8.000	80.000	4583.07	18.29 N	103.74 E	47.79	0.00
4600.00	8.000	80.000	4592.97	18.53 N	105.11 E	48.42	0.00
4610.00	8.000	80.000	4602.87	18.78 N	106.48 E	49.05	0.00
4620.00	8.000	80.000	4612.78	19.02 N	107.85 E	49.68	0.00
4630.00	8.000	80.000	4622.68	19.26 N	109.22 E	50.31	0.00
4640.00	8.000	80.000	4632.58	19.50 N	110.59 E	50.94	0.00
4650.00	8.000	80.000	4642.48	19.74 N	111.96 E	51.57	0.00
4660.00	8.000	80.000	4652.39	19.98 N	113.33 E	52.21	0.00
4670.00	8.000	80.000	4662.29	20.23 N	114.70 E	52.84	0.00
4680.00	8.000	80.000	4672.19	20.47 N	116.07 E	53.47	0.00
4690.00	8.000	80.000	4682.09	20.71 N	117.44 E	54.10	0.00
4700.00	8.000	80.000	4692.00	20.95 N	118.81 E	54.73	0.00
4710.00	8.000	80.000	4701.90	21.19 N	120.18 E	55.36	0.00
4720.00	8.000	80.000	4711.80	21.43 N	121.56 E	55.99	0.00
4730.00	8.000	80.000	4721.71	21.68 N	122.93 E	56.62	0.00
4740.00	8.000	80.000	4731.61	21.92 N	124.30 E	57.26	0.00
4750.00	8.000	80.000	4741.51	22.16 N	125.67 E	57.89	0.00
4760.00	8.000	80.000	4751.41	22.40 N	127.04 E	58.52	0.00
4770.00	8.000	80.000	4761.32	22.64 N	128.41 E	59.15	0.00
4780.00	8.000	80.000	4771.22	22.88 N	129.78 E	59.78	0.00
4790.00	8.000	80.000	4781.12	23.13 N	131.15 E	60.41	0.00
4800.00	8.000	80.000	4791.02	23.37 N	132.52 E	61.04	0.00
4810.00	8.000	80.000	4800.93	23.61 N	133.89 E	61.68	0.00
4820.00	8.000	80.000	4810.83	23.85 N	135.26 E	62.31	0.00
4826.67	8.000	80.000	4817.43	24.01 N	136.17 E	62.73	0.00
4830.00	8.240	76.027	4820.73	24.11 N	136.63 E	62.96	18.30
4840.00	9.165	65.563	4830.62	24.61 N	138.06 E	63.85	18.30
4850.00	10.333	57.219	4840.47	25.43 N	139.53 E	65.06	18.30
4860.00	11.671	50.659	4850.29	26.55 N	141.07 E	66.59	18.30
4870.00	13.126	45.481	4860.06	27.99 N	142.66 E	68.43	18.30
4880.00	14.665	41.346	4869.76	29.74 N	144.31 E	70.58	18.30
4890.00	16.263	37.994	4879.40	31.79 N	146.01 E	73.04	18.30
4900.00	17.904	35.234	4888.96	34.15 N	147.76 E	75.81	18.30
4910.00	19.578	32.927	4898.43	36.81 N	149.55 E	78.88	18.30
4920.00	21.277	30.973	4907.80	39.78 N	151.40 E	82.25	18.30
4930.00	22.995	29.297	4917.06	43.03 N	153.29 E	85.92	18.30
4940.00	24.728	27.843	4926.21	46.59 N	155.22 E	89.88	18.30
4950.00	26.474	26.569	4935.23	50.43 N	157.20 E	94.13	18.30
4960.00	28.229	25.443	4944.11	54.56 N	159.21 E	98.67	18.30
4970.00	29.993	24.438	4952.84	58.97 N	161.26 E	103.49	18.30
4980.00	31.764	23.536	4961.43	63.66 N	163.34 E	108.58	18.30
4990.00	33.540	22.719	4969.85	68.62 N	165.46 E	113.95	18.30
5000.00	35.321	21.975	4978.09	73.85 N	167.61 E	119.58	18.30
5010.00	37.107	21.294	4986.16	79.34 N	169.79 E	125.46	18.30
5020.00	38.896	20.667	4994.04	85.09 N	171.99 E	131.61	18.30
5030.00	40.688	20.087	5001.72	91.09 N	174.22 E	137.99	18.30
5040.00	42.483	19.547	5009.20	97.34 N	176.47 E	144.62	18.30
5050.00	44.280	19.044	5016.47	103.82 N	178.74 E	151.49	18.30

5060.00	46.079	18.571	5023.52	110.53 N	181.02 E	158.58	18.30
5070.00	47.881	18.127	5030.34	117.47 N	183.33 E	165.88	18.30
5080.00	49.683	17.707	5036.93	124.63 N	185.64 E	173.40	18.30
5090.00	51.488	17.308	5043.28	132.00 N	187.96 E	181.13	18.30
5100.00	53.293	16.930	5049.38	139.57 N	190.29 E	189.05	18.30
5110.00	55.100	16.569	5055.23	147.33 N	192.63 E	197.16	18.30
5120.00	56.907	16.223	5060.82	155.29 N	194.97 E	205.45	18.30
5130.00	58.716	15.891	5066.15	163.42 N	197.31 E	213.91	18.30
5140.00	60.525	15.572	5071.21	171.72 N	199.65 E	222.54	18.30
5150.00	62.335	15.264	5075.99	180.19 N	201.98 E	231.32	18.30
5160.00	64.146	14.966	5080.49	188.81 N	204.31 E	240.24	18.30
5170.00	65.958	14.677	5084.71	197.57 N	206.63 E	249.30	18.30
5180.00	67.769	14.396	5088.64	206.47 N	208.94 E	258.49	18.30
5190.00	69.582	14.122	5092.28	215.50 N	211.23 E	267.79	18.30
5200.00	71.395	13.854	5095.62	224.65 N	213.51 E	277.20	18.30
5210.00	73.208	13.593	5098.66	233.90 N	215.77 E	286.71	18.30
5220.00	75.021	13.336	5101.39	243.26 N	218.01 E	296.31	18.30
5230.00	76.835	13.083	5103.82	252.70 N	220.23 E	305.99	18.30
5240.00	78.649	12.834	5105.95	262.22 N	222.42 E	315.74	18.30
5250.00	80.463	12.589	5107.76	271.81 N	224.58 E	325.55	18.30
5260.00	82.278	12.346	5109.26	281.47 N	226.72 E	335.40	18.30
5270.00	84.092	12.105	5110.45	291.17 N	228.82 E	345.30	18.30
5280.00	85.907	11.865	5111.32	300.92 N	230.89 E	355.22	18.30
5290.00	87.721	11.627	5111.87	310.69 N	232.92 E	365.16	18.30
5293.48	88.353	11.544	5111.99	314.10 N	233.62 E	368.62	18.30
5300.00	88.353	11.544	5112.18	320.48 N	234.92 E	375.11	0.00
5310.00	88.353	11.544	5112.47	330.28 N	236.92 E	385.07	0.00
5320.00	88.353	11.544	5112.76	340.07 N	238.92 E	395.02	0.00
5330.00	88.353	11.544	5113.04	349.86 N	240.92 E	404.97	0.00
5340.00	88.353	11.544	5113.33	359.66 N	242.92 E	414.92	0.00
5350.00	88.353	11.544	5113.62	369.45 N	244.93 E	424.87	0.00
5360.00	88.353	11.544	5113.91	379.25 N	246.93 E	434.82	0.00
5370.00	88.353	11.544	5114.19	389.04 N	248.93 E	444.77	0.00
5380.00	88.353	11.544	5114.48	398.83 N	250.93 E	454.72	0.00
5390.00	88.353	11.544	5114.77	408.63 N	252.93 E	464.67	0.00
5400.00	88.353	11.544	5115.06	418.42 N	254.93 E	474.62	0.00
5410.00	88.353	11.544	5115.34	428.21 N	256.93 E	484.57	0.00
5420.00	88.353	11.544	5115.63	438.01 N	258.93 E	494.53	0.00
5430.00	88.353	11.544	5115.92	447.80 N	260.93 E	504.48	0.00
5440.00	88.353	11.544	5116.21	457.60 N	262.93 E	514.43	0.00
5450.00	88.353	11.544	5116.49	467.39 N	264.93 E	524.38	0.00
5460.00	88.353	11.544	5116.78	477.18 N	266.93 E	534.33	0.00
5470.00	88.353	11.544	5117.07	486.98 N	268.93 E	544.28	0.00
5480.00	88.353	11.544	5117.36	496.77 N	270.93 E	554.23	0.00
5490.00	88.353	11.544	5117.64	506.56 N	272.93 E	564.18	0.00
5500.00	88.353	11.544	5117.93	516.36 N	274.93 E	574.13	0.00
5510.00	88.353	11.544	5118.22	526.15 N	276.93 E	584.08	0.00
5520.00	88.353	11.544	5118.51	535.94 N	278.93 E	594.04	0.00
5530.00	88.353	11.544	5118.79	545.74 N	280.93 E	603.99	0.00
5540.00	88.353	11.544	5119.08	555.53 N	282.93 E	613.94	0.00
5550.00	88.353	11.544	5119.37	565.33 N	284.93 E	623.89	0.00
5560.00	88.353	11.544	5119.66	575.12 N	286.93 E	633.84	0.00
5570.00	88.353	11.544	5119.94	584.91 N	288.93 E	643.79	0.00
5580.00	88.353	11.544	5120.23	594.71 N	290.93 E	653.74	0.00
5590.00	88.353	11.544	5120.52	604.50 N	292.94 E	663.69	0.00
5600.00	88.353	11.544	5120.81	614.29 N	294.94 E	673.64	0.00
5610.00	88.353	11.544	5121.09	624.09 N	296.94 E	683.59	0.00
5620.00	88.353	11.544	5121.38	633.88 N	298.94 E	693.54	0.00
5630.00	88.353	11.544	5121.67	643.67 N	300.94 E	703.50	0.00
5640.00	88.353	11.544	5121.96	653.47 N	302.94 E	713.45	0.00
5650.00	88.353	11.544	5122.24	663.26 N	304.94 E	723.40	0.00
5660.00	88.353	11.544	5122.53	673.06 N	306.94 E	733.35	0.00
5670.00	88.353	11.544	5122.82	682.85 N	308.94 E	743.30	0.00
5680.00	88.353	11.544	5123.10	692.64 N	310.94 E	753.25	0.00
5690.00	88.353	11.544	5123.39	702.44 N	312.94 E	763.20	0.00
5700.00	88.353	11.544	5123.68	712.23 N	314.94 E	773.15	0.00
5710.00	88.353	11.544	5123.97	722.02 N	316.94 E	783.10	0.00
5720.00	88.353	11.544	5124.25	731.82 N	318.94 E	793.05	0.00
5730.00	88.353	11.544	5124.54	741.61 N	320.94 E	803.01	0.00
5740.00	88.353	11.544	5124.83	751.40 N	322.94 E	812.96	0.00
5750.00	88.353	11.544	5125.12	761.20 N	324.94 E	822.91	0.00
5760.00	88.353	11.544	5125.40	770.99 N	326.94 E	832.86	0.00
5770.00	88.353	11.544	5125.69	780.79 N	328.94 E	842.81	0.00
5780.00	88.353	11.544	5125.98	790.58 N	330.94 E	852.76	0.00

5790.00	88.353	11.544	5126.27	800.37 N	332.94 E	862.71	0.00
5800.00	88.353	11.544	5126.55	810.17 N	334.94 E	872.66	0.00
5810.00	88.353	11.544	5126.84	819.96 N	336.94 E	882.61	0.00
5820.00	88.353	11.544	5127.13	829.75 N	338.94 E	892.56	0.00
5830.00	88.353	11.544	5127.42	839.55 N	340.95 E	902.51	0.00
5840.00	88.353	11.544	5127.70	849.34 N	342.95 E	912.47	0.00
5850.00	88.353	11.544	5127.99	859.13 N	344.95 E	922.42	0.00
5860.00	88.353	11.544	5128.28	868.93 N	346.95 E	932.37	0.00
5870.00	88.353	11.544	5128.57	878.72 N	348.95 E	942.32	0.00
5880.00	88.353	11.544	5128.85	888.52 N	350.95 E	952.27	0.00
5890.00	88.353	11.544	5129.14	898.31 N	352.95 E	962.22	0.00
5900.00	88.353	11.544	5129.43	908.10 N	354.95 E	972.17	0.00
5910.00	88.353	11.544	5129.72	917.90 N	356.95 E	982.12	0.00
5920.00	88.353	11.544	5130.00	927.69 N	358.95 E	992.07	0.00
5930.00	88.353	11.544	5130.29	937.48 N	360.95 E	1002.02	0.00
5940.00	88.353	11.544	5130.58	947.28 N	362.95 E	1011.98	0.00
5950.00	88.353	11.544	5130.87	957.07 N	364.95 E	1021.93	0.00
5960.00	88.353	11.544	5131.15	966.87 N	366.95 E	1031.88	0.00
5970.00	88.353	11.544	5131.44	976.66 N	368.95 E	1041.83	0.00
5980.00	88.353	11.544	5131.73	986.45 N	370.95 E	1051.78	0.00
5990.00	88.353	11.544	5132.02	996.25 N	372.95 E	1061.73	0.00
6000.00	88.353	11.544	5132.30	1006.04 N	374.95 E	1071.68	0.00
6010.00	88.353	11.544	5132.59	1015.83 N	376.95 E	1081.63	0.00
6020.00	88.353	11.544	5132.88	1025.63 N	378.95 E	1091.58	0.00
6030.00	88.353	11.544	5133.17	1035.42 N	380.95 E	1101.53	0.00
6040.00	88.353	11.544	5133.45	1045.21 N	382.95 E	1111.48	0.00
6050.00	88.353	11.544	5133.74	1055.01 N	384.95 E	1121.44	0.00
6060.00	88.353	11.544	5134.03	1064.80 N	386.95 E	1131.39	0.00
6070.00	88.353	11.544	5134.32	1074.60 N	388.96 E	1141.34	0.00
6080.00	88.353	11.544	5134.60	1084.39 N	390.96 E	1151.29	0.00
6090.00	88.353	11.544	5134.89	1094.18 N	392.96 E	1161.24	0.00
6100.00	88.353	11.544	5135.18	1103.98 N	394.96 E	1171.19	0.00
6110.00	88.353	11.544	5135.47	1113.77 N	396.96 E	1181.14	0.00
6120.00	88.353	11.544	5135.75	1123.56 N	398.96 E	1191.09	0.00
6130.00	88.353	11.544	5136.04	1133.36 N	400.96 E	1201.04	0.00
6140.00	88.353	11.544	5136.33	1143.15 N	402.96 E	1210.99	0.00
6150.00	88.353	11.544	5136.62	1152.94 N	404.96 E	1220.95	0.00
6160.00	88.353	11.544	5136.90	1162.74 N	406.96 E	1230.90	0.00
6170.00	88.353	11.544	5137.19	1172.53 N	408.96 E	1240.85	0.00
6180.00	88.353	11.544	5137.48	1182.33 N	410.96 E	1250.80	0.00
6190.00	88.353	11.544	5137.77	1192.12 N	412.96 E	1260.75	0.00
6200.00	88.353	11.544	5138.05	1201.91 N	414.96 E	1270.70	0.00
6210.00	88.353	11.544	5138.34	1211.71 N	416.96 E	1280.65	0.00
6220.00	88.353	11.544	5138.63	1221.50 N	418.96 E	1290.60	0.00
6230.00	88.353	11.544	5138.92	1231.29 N	420.96 E	1300.55	0.00
6240.00	88.353	11.544	5139.20	1241.09 N	422.96 E	1310.50	0.00
6250.00	88.353	11.544	5139.49	1250.88 N	424.96 E	1320.45	0.00
6260.00	88.353	11.544	5139.78	1260.67 N	426.96 E	1330.41	0.00
6270.00	88.353	11.544	5140.07	1270.47 N	428.96 E	1340.36	0.00
6280.00	88.353	11.544	5140.35	1280.26 N	430.96 E	1350.31	0.00
6290.00	88.353	11.544	5140.64	1290.06 N	432.96 E	1360.26	0.00
6300.00	88.353	11.544	5140.93	1299.85 N	434.96 E	1370.21	0.00
6310.00	88.353	11.544	5141.22	1309.64 N	436.97 E	1380.16	0.00
6320.00	88.353	11.544	5141.50	1319.44 N	438.97 E	1390.11	0.00
6330.00	88.353	11.544	5141.79	1329.23 N	440.97 E	1400.06	0.00
6340.00	88.353	11.544	5142.08	1339.02 N	442.97 E	1410.01	0.00
6350.00	88.353	11.544	5142.37	1348.82 N	444.97 E	1419.96	0.00
6360.00	88.353	11.544	5142.65	1358.61 N	446.97 E	1429.92	0.00
6370.00	88.353	11.544	5142.94	1368.41 N	448.97 E	1439.87	0.00
6380.00	88.353	11.544	5143.23	1378.20 N	450.97 E	1449.82	0.00
6390.00	88.353	11.544	5143.52	1387.99 N	452.97 E	1459.77	0.00
6400.00	88.353	11.544	5143.80	1397.79 N	454.97 E	1469.72	0.00
6410.00	88.353	11.544	5144.09	1407.58 N	456.97 E	1479.67	0.00
6420.00	88.353	11.544	5144.38	1417.37 N	458.97 E	1489.62	0.00
6430.00	88.353	11.544	5144.67	1427.17 N	460.97 E	1499.57	0.00
6440.00	88.353	11.544	5144.95	1436.96 N	462.97 E	1509.52	0.00
6450.00	88.353	11.544	5145.24	1446.75 N	464.97 E	1519.47	0.00
6460.00	88.353	11.544	5145.53	1456.55 N	466.97 E	1529.42	0.00
6470.00	88.353	11.544	5145.82	1466.34 N	468.97 E	1539.38	0.00
6480.00	88.353	11.544	5146.10	1476.14 N	470.97 E	1549.33	0.00
6490.00	88.353	11.544	5146.39	1485.93 N	472.97 E	1559.28	0.00
6500.00	88.353	11.544	5146.68	1495.72 N	474.97 E	1569.23	0.00
6510.00	88.353	11.544	5146.97	1505.52 N	476.97 E	1579.18	0.00
6520.00	88.353	11.544	5147.25	1515.31 N	478.97 E	1589.13	0.00

6530.00	88.353	11.544	5147.54	1525.10 N	480.97 E	1599.08	0.00
6540.00	88.353	11.544	5147.83	1534.90 N	482.97 E	1609.03	0.00
6550.00	88.353	11.544	5148.12	1544.69 N	484.98 E	1618.98	0.00
6560.00	88.353	11.544	5148.40	1554.48 N	486.98 E	1628.93	0.00
6570.00	88.353	11.544	5148.69	1564.28 N	488.98 E	1638.89	0.00
6580.00	88.353	11.544	5148.98	1574.07 N	490.98 E	1648.84	0.00
6590.00	88.353	11.544	5149.27	1583.87 N	492.98 E	1658.79	0.00
6600.00	88.353	11.544	5149.55	1593.66 N	494.98 E	1668.74	0.00
6610.00	88.353	11.544	5149.84	1603.45 N	496.98 E	1678.69	0.00
6620.00	88.353	11.544	5150.13	1613.25 N	498.98 E	1688.64	0.00
6630.00	88.353	11.544	5150.42	1623.04 N	500.98 E	1698.59	0.00
6640.00	88.353	11.544	5150.70	1632.83 N	502.98 E	1708.54	0.00
6650.00	88.353	11.544	5150.99	1642.63 N	504.98 E	1718.49	0.00
6660.00	88.353	11.544	5151.28	1652.42 N	506.98 E	1728.44	0.00
6670.00	88.353	11.544	5151.57	1662.21 N	508.98 E	1738.39	0.00
6680.00	88.353	11.544	5151.85	1672.01 N	510.98 E	1748.35	0.00
6685.10	88.353	11.544	5152.00	1677.00 N	512.00 E	1753.42	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.

Vertical depths are relative to WELL. Northings and Eastings are relative to well.

The Dogleg Severity is in Degrees per 100 feet.

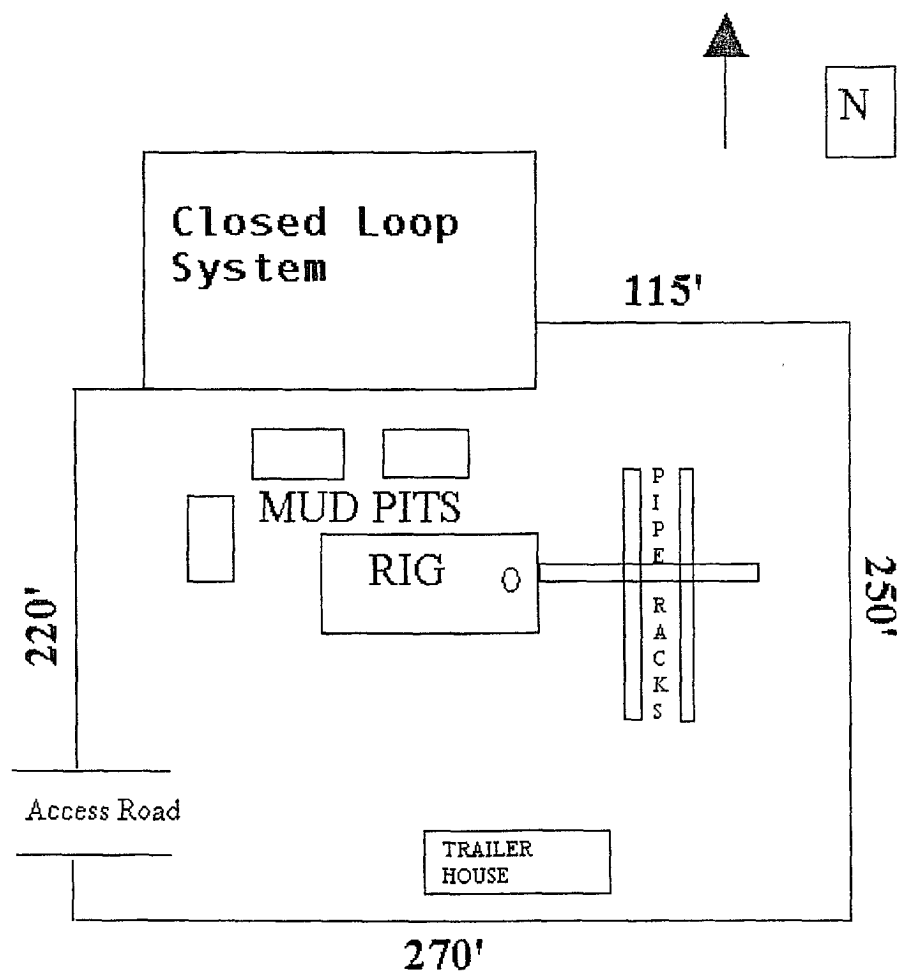
Vertical Section is from slot and calculated along an Azimuth of 16.978° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.

Central meridian is -104.333°.

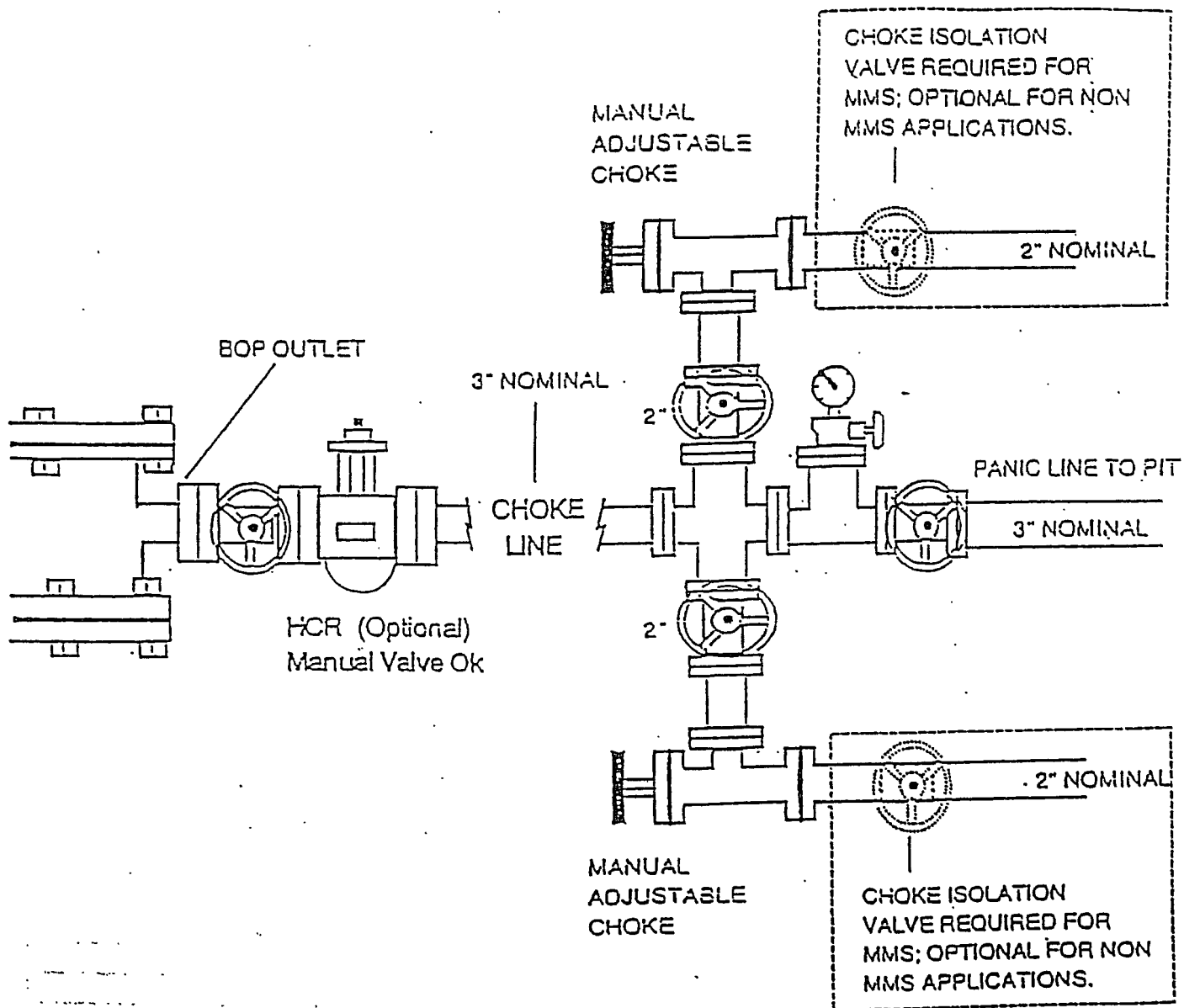
Grid Convergence at Surface is 0.172°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 6685.10ft., the Bottom Hole Displacement is 1753.42ft., in the Direction of 16.978° (Grid).

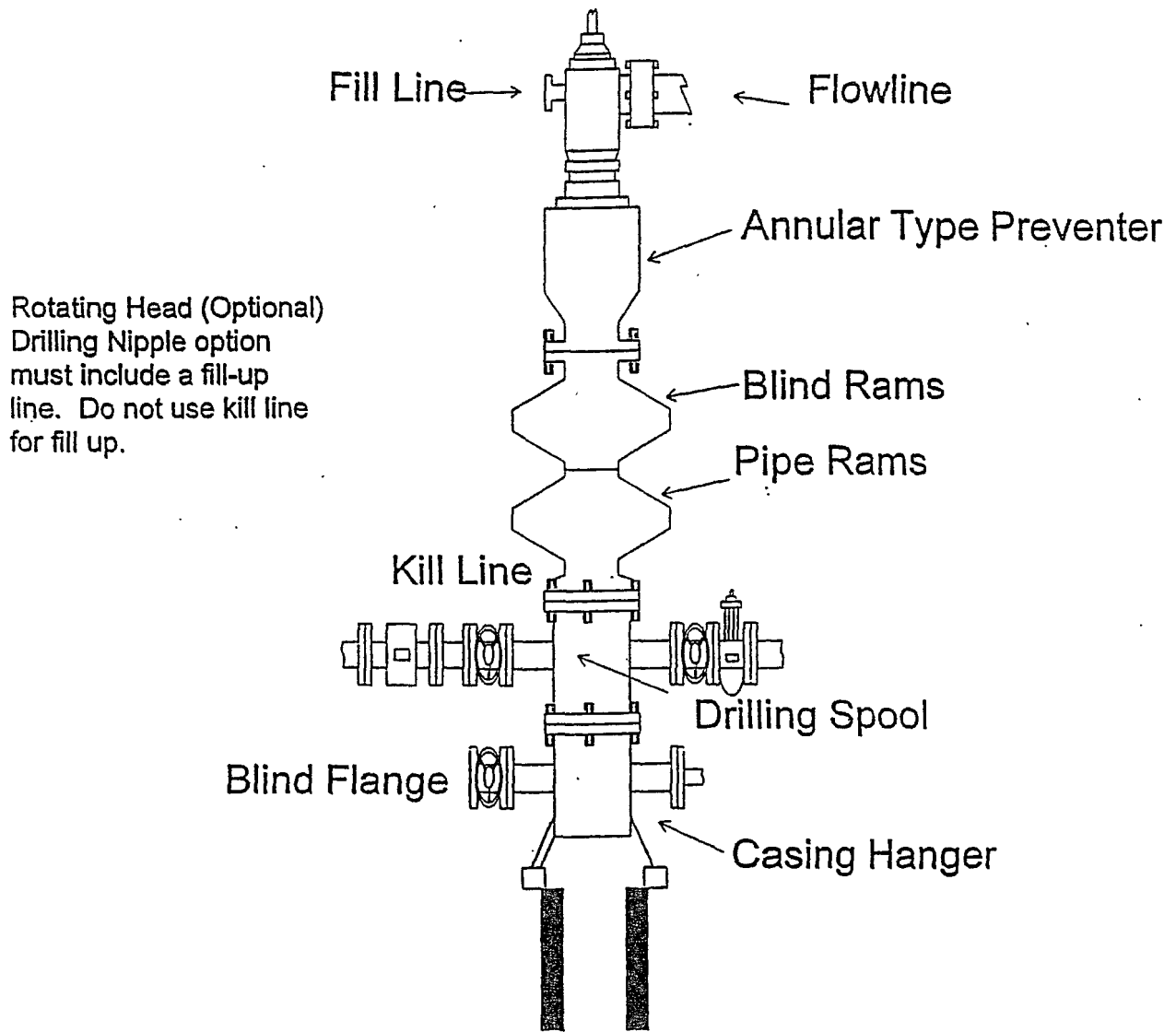


Emerald 32 Federal #1H

NEARBURG PRODUCING COMPANY
CHOKE MANIFOLD
2M AND 3M SERVICE



NEARBURG PRODUCING COMPANY
BOPE SCHEMATIC



900 Series

CURRENT WELLBORE DIAGRAM

LEASE:	Emerald 32 Federal #1	WELL:	#1	FIELD:	Willow Lake Delaware	API:	30-015-26996
LOC:	2007' FNL & 1470' FWL	SEC:	32	BLK:		Reservoir	Delaware
SVY:	Sec 32 T24S R29E	GL:	2929'	CTY/ST	Eddy County, NM	SPUD:	6/6/1992
CURRENT STATUS:	Producing	KB:	2946'	DF:		TD DATE:	6/24/1992
						COMP. DATE:	7/15/1992

FRESH WATER
DEPTH:

HOLE SIZE: 12.25"
SURF CSG & SIZE: 8-5/8" 24#
SET @: 604'
SXS CMT: 250 sx
CIRC:
TOC AT:
TOC BY:

COMMENTS:

*****GEOLOGY*****

TOPS OF ALL ZONES
PRODUCTIVE OF HYDRO-
CARBONS:

Bell Canyon: 2818'
Cherry Canyon: 3729'
Brushy Canyon: 4970'

CURRENT PERFS:

SQUEEZE JOBS:

TBG:
JTS:
SN:
TAC:
ROD SIZE:

PKR:
TYPE:

OH ID:
COTD:
PBDT:
TD:

4780-87'
4790-93'
5114-5137' 1 spf (24 holes)
6204', 6205'
6206', 6209'
6210', 6213'
6214', 6256'
6257', 6258'
6259', 6260'
6261', 6262'
6263', 6339'
6340', 6374'
6375', 6378'
6379', 6384'
6385', 6386'
6387', 6400'
6401', 6402'
6403'

HOLE SIZE: 7-7/8"
PROD, CSG & SIZE: 5-1/2" 17#
SET @: 6643'
SXS CMT: 550 sx
CIRC: No
TOC AT: 4250'
TOC BY:

OPEN HOLE:

PROPOSED WELLBORE DIAGRAM

LEASE: <u>Emerald 32 Federal #1</u>	WELL: <u>#1</u>	FIELD: <u>Willow Lake Delaware</u>	API: <u>30-015-26996</u>
LOC: <u>2007' FNL & 1470' FWL</u>	SEC: <u>32</u>	BLK: <u></u>	Reservoir: <u>Delaware</u>
SVY: <u>Sec 32 T24S R29E</u>	GL: <u>2929'</u>	CTY/ST: <u>Eddy County, NM</u>	SPUD: <u>6/6/1992</u>
CURRENT STATUS: <u>Producing</u>	KB: <u>2946'</u>	DF: <u></u>	TD DATE: <u>6/24/1992</u>
			COMP. DATE: <u>7/15/1992</u>

FRESH WATER
DEPTH:

HOLE SIZE: 12.25"
SURF CSG & SIZE: 8-5/8" 24#
SET @: 604'
SXS CMT: 250 sx
CIRC:
TOC AT:
TOC BY:

COMMENTS:

*****GEOLOGY*****

TOPS OF ALL ZONES
PRODUCTIVE OF HYDRO-
CARBONS:

Bell Canyon: 2818'
Cherry Canyon: 3729'
Brushy Canyon: 4970'

Kick off @ 4,000' around csg stub
be horizontal @ 5,112' TVD.
Directional plan attached

CURRENT PERFS:

TBG:
JTS:
SN:
TAC:
ROD SIZE:

5-1/2" csg stub @ 4,100'
w/ 50' cmt in & above

TOC @ 4,250' - Temp survey

SQUEEZE JOBS:

PKR:
TYPE:

CIBP w/ 35' cmt @ 5,075'
5114-5137' 1 spf (24 holes)

OH ID:
COTD:
PBD:
TD:

HOLE SIZE: 7-7/8"
PROD. CSG & SIZE: 5-1/2" 17#
SET @: 6643'
SXS CMT: 550 sx
CIRC: No
TOC AT: 4250'
TOC BY:

OPEN HOLE:

LINER:

NEARBURG PRODUCING COMPANY HYDROGEN SULFIDE (H₂S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'
100 ppm H₂S concentration shall trigger activation of this plan

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 1000 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response.
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H₂S and SO₂.

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm/ hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Nearburg Producing Company's personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Nearburg Producing Company's response must be in coordination with the State of NM's "Hazardous Materials Emergency Response Plan" (HMER).

NEARBURG PRODUCING COMPANY
H2S CONTINGENCY PLAY EMERGENCY CONTACTS
 (Name & Phone Numbers Must be Verified)

NPC Office	432/686-8235
Emergency Phone Number	432/686-8235 x 500

NPC Contact Personnel

Butch Willis, Drilling Manager	432/528-5254
Matt Lee, Production Superintendent	575/365-6662
Roger King, Production Foreman	575/361-3605

Artesia

Ambulance	911
NM State Police	575/746-2703
City Police	575/746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
NMOCD (Artesia)	575-748-1283

Carlsbad

Ambulance	911
NM State Police	575-885-3137
City Police	575/885-2111
Sheriff's Office	575-887-7551
Fire Department	575/887-3798
Local Emergency Planning Committee	575-887-6544
BLM	575-887-6544

NM Emergency Response Commission (Santa Fe)	505/476-9600
24 Hour	505/827-9126
NM State Emergency Operations Center	505/476-9635
National Emergency Response Center (Washington, DC)	800/424-8802

Other

Boots & Coots IWC	800/256-9688 or 281/934-8884
Cudd Pressure Control	432/699-0139 or 432/563-3356
Halliburton	575/746-2757
BJ Services	575/746-3569
Flight for Life - 4000 24th St Lubbock, TX	806/746-9911
Aerocare - R3, Box 49F, Lubbock, TX	806/747-8923
Med Flight Air Amb - 2301 Yale Blvd SE #d#, Albuquerque, NM	505/842-4433
S B Aid Med Service - 2505 Clark Carr Loop SE, Albuquerque, NM	505/842-4949