

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

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
June 16, 2008

Oil Conservation Division
1220 South 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 Nadel and Gussman HEYCO, LLC P.O. Box 1936 Roswell N.M. 88202		² OGRID Number 258462 ✓
³ Property Code 38494 ✓	⁴ Property Name Rock Island 16 State ✓	⁵ API Number 30-015-38461 ⁶ Well No. #1 H ✓
⁹ Proposed Pool 1 Glorietta		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
G	16	18S	26E		2260'	NORTH	1650'	EAST	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
E	16	18S	26E		2260'	NORTH	330'	WEST	EDDY

Additional Well Information

¹¹ Work Type Code N ✓	¹² Well Type Code O ✓	¹³ Cable/Rotary R ✓	¹⁴ Lease Type Code S ✓	¹⁵ Ground Level Elevation 3360' ✓
¹⁶ Multiple Y	¹⁷ Proposed Depth 5471' MD/ 2575' TVD	¹⁸ Formation Glorietta ✓	¹⁹ Contractor N/A	²⁰ Spud Date 2/15/11

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12 1/4"	9 5/8"	36#	1400'	850sx	Surface
8 3/4"	5 1/2"	17#	2936' MD	None*	N/A
7 7/8"	4 1/2"	11.6#	5741' MD	None*	

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.

Mud Program:

0' to 1400': 8.4 to 8.8 ppg, 80 - 55 visc w/ Fresh water spud mud
1400' to 5471': 8.8 to 10.0 ppg, 28-30 visc, w/ brine / cut brine water

**Casing Cement - will utilize a Packers Plus type open hole system to complete well.
If H2s is encountered, will set ECP @ +/- 2300', cement 2300' to surface with 700 sx Class C.

RECEIVED
JAN 31 2011
NMOCD ARTESIA

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name: JJ McGlasson

Title: Completions Engineer

E-mail Address: jmcglasson@heycoenergy.com

Date: 12/21/10

Phone: 575 - 623-6601

OIL CONSERVATION DIVISION

Approved by:

Geologist

Title:

Approval Date: 2/16/2011

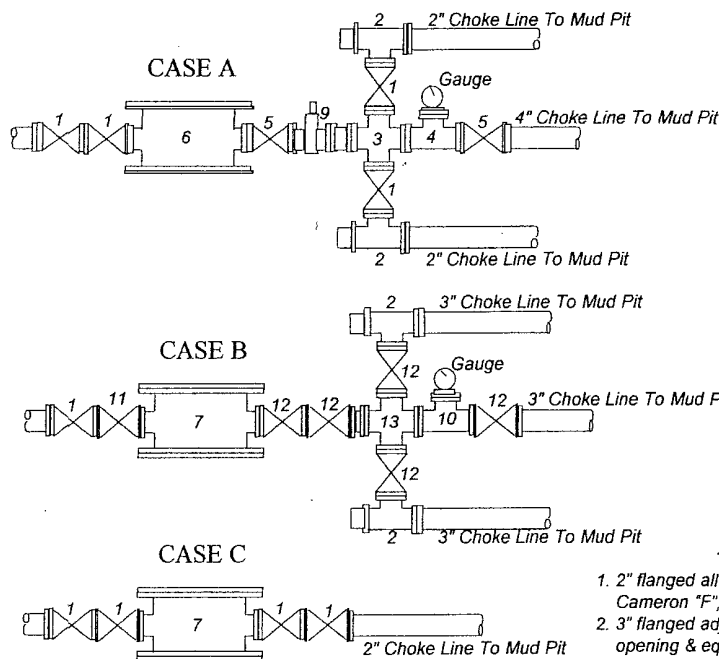
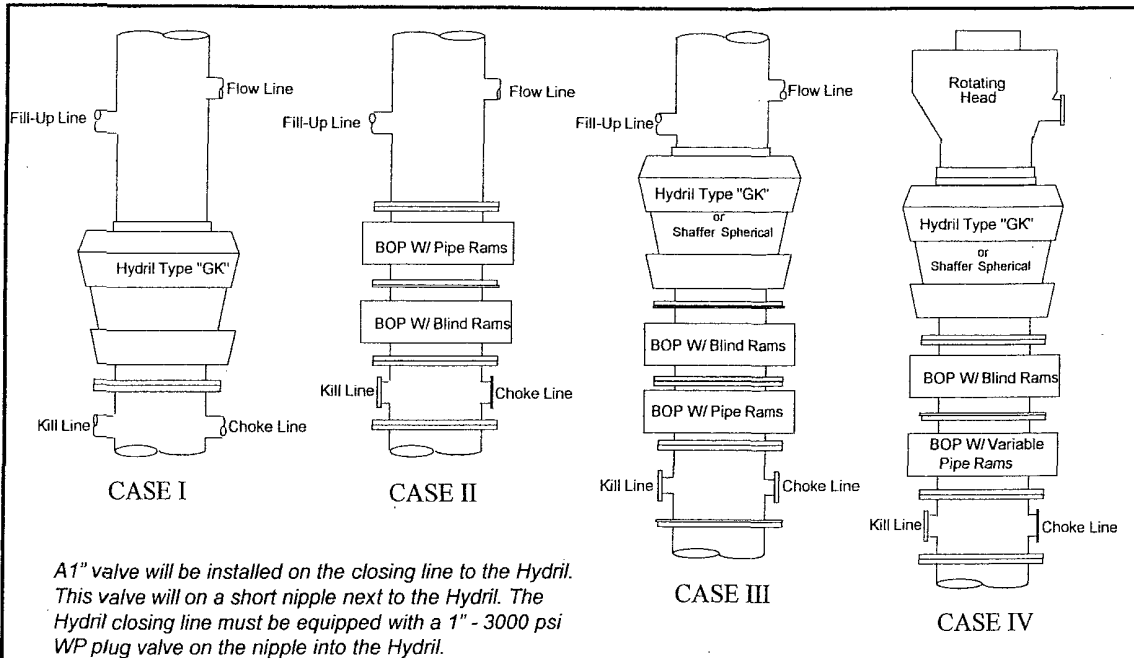
Expiration Date: 2/16/2013

Conditions of Approval Attached ☐

MS

Nadel and Gussman Heyco, LLC

MINIMUM BLOWOUT PREVENTER REQUIREMENTS



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13-3/8"	II	2000 psi	B
9"	III	3000 psi	B

***Rotating head required**

Bradenhead : _____

Mfr: _____

Size: _____ Type: _____

Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

Legend

1. 2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal.
2. 3" flanged adjustable chokes, min. 1" full opening & equipped with hard trim.
3. 4" x 2" flanged steel cross.
4. 4" flanged steel tee.
5. 4" flanged all steel valve (Type as in no. 1).
6. Drilling Spool with 2" x 4" flanged outlet.
7. Drilling Spool with 2" Flanged Kill inlet, & 3" flanged choke outlet.
8. 2" x 2" flanged steel cross.
9. 4" pressure operated gate valve.
10. 3" flanged steel tee.
11. 2" Flanged check valve
12. 3" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal.
13. 3" x 3" flanged steel cross.

Nadel & Gussman

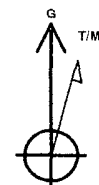
Project: Eddy County NM (NAD 27)
 Site: Rock Island 16 State #1
 Well: Rock Island 16 State #1
 Wellbore: Lateral #1
 Plan: Plan #1 (Rock Island 16 State #1/Lateral #1)



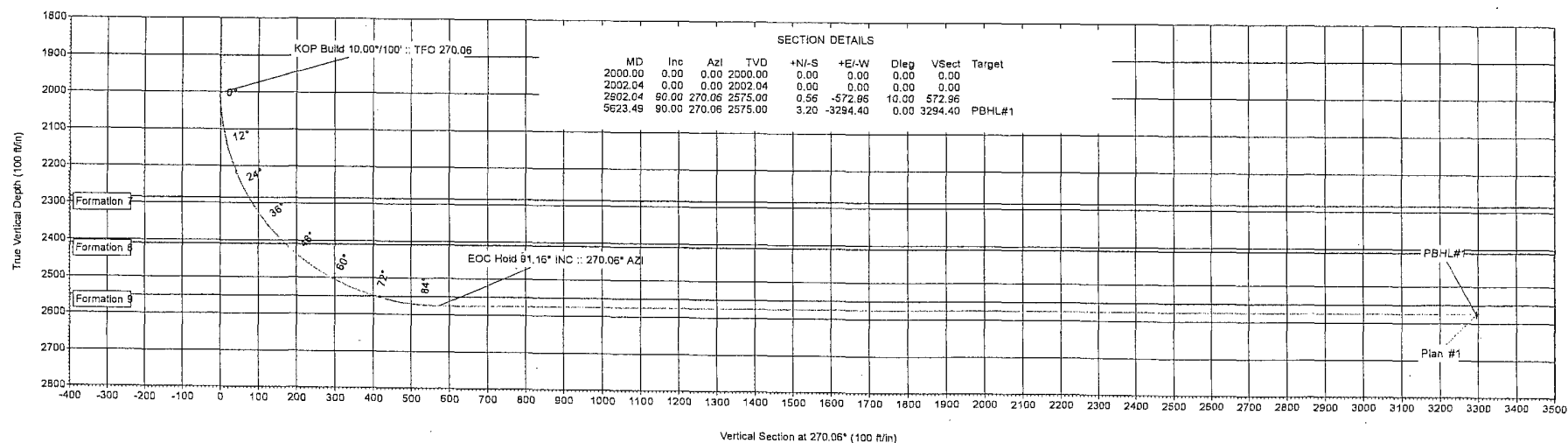
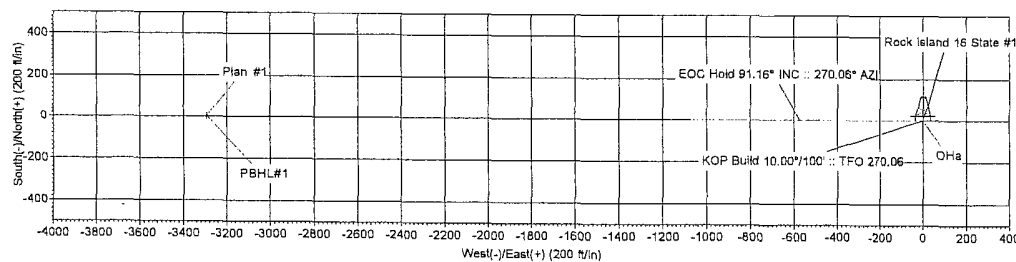
ANNOTATIONS

TVD	MD	Annotation
2002.04	2002.04	KOP Build 10.00°/100' :: TFO 270.06
2575.00	2802.04	EOC Hold 91.16° INC :: 270.06° AZI

PROJECT DETAILS: Eddy County NM (NAD 27)
 Geodetic System: US State Plane 1627 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level



Azimuths to Grid North
 True North: 0.03°
 Magnetic North: 0.03°
 Magnetic Field
 Strength: 0.05nT
 Dip Angle: 0.00°
 Date: 12/7/2010
 Model: USER DEFINED



Black Viper

Planning Report

Database: EDM 5000.1 Black Viper
 Company: Nadel & Gusman
 Project: Eddy County NM (NAD 27)
 Site: Rock Island 16 State #1
 Well: Rock Island 16 State #1
 Wellbore: Lateral #1
 Design: Plan #1

Local Co-ordinate Reference: Site Rock Island 16 State #1
 TVD Reference: KB1 @ 3375.00ft
 MD Reference: KB1 @ 3375.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Eddy County NM (NAD 27)		
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	Rock Island 16 State #1		
Site Position:	Map	Northing:	636,173.30 ft
From:		Easting:	484,663.00 ft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	32° 44' 56.116 N
		Longitude:	104° 22' 59.596 W
		Grid Convergence:	-0.03 °

Well	Rock Island 16 State #1		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,375.00 ft
		Latitude:	32° 44' 56.116 N
		Longitude:	104° 22' 59.596 W
		Ground Level:	3,360.00 ft

Wellbore	Lateral #1		
Magnetics	Model Name	Sample Date	Declination
	User Defined	12/7/2010	(°)
			0.00
			Dip Angle
			(°)
			0.00
			Field Strength
			(nT)
			0

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			2,000.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			270.06

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,002.04	0.00	0.00	2,002.04	0.00	0.00	0.00	0.00	0.00	0.00	
2,902.04	90.00	270.06	2,575.00	0.56	-572.96	10.00	10.00	0.00	270.06	
5,623.49	90.00	270.06	2,575.00	3.20	-3,294.40	0.00	0.00	0.00	0.00	PBHL#1

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 Wellbore: Lateral #1
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Site Rock Island 16 State #1
 KB1 @ 3375.00ft
 KB1 @ 3375.00ft
 Grid
 Minimum Curvature

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)
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,002.04	0.00	0.00	2,002.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP Build 10.00°/100' :: TFO 270.06									
2,010.00	0.80	270.06	2,010.00	0.00	-0.06	0.06	10.00	10.00	0.00
2,040.00	3.80	270.06	2,039.97	0.00	-1.26	1.26	10.00	10.00	0.00
2,070.00	6.80	270.06	2,069.84	0.00	-4.03	4.03	10.00	10.00	0.00
2,100.00	9.80	270.06	2,099.52	0.01	-8.35	8.35	10.00	10.00	0.00
2,130.00	12.80	270.06	2,128.94	0.01	-14.23	14.23	10.00	10.00	0.00
2,160.00	15.80	270.06	2,158.01	0.02	-21.64	21.64	10.00	10.00	0.00
2,190.00	18.80	270.06	2,186.65	0.03	-30.55	30.55	10.00	10.00	0.00
2,220.00	21.80	270.06	2,214.78	0.04	-40.96	40.96	10.00	10.00	0.00
2,250.00	24.80	270.06	2,242.33	0.05	-52.82	52.82	10.00	10.00	0.00
2,280.00	27.80	270.06	2,269.22	0.06	-66.11	66.11	10.00	10.00	0.00
2,297.98	29.59	270.06	2,285.00	0.07	-74.75	74.75	10.00	10.00	0.00
Formation 7									
2,310.00	30.80	270.06	2,295.38	0.08	-80.79	80.79	10.00	10.00	0.00
2,340.00	33.80	270.06	2,320.74	0.09	-96.82	96.82	10.00	10.00	0.00
2,370.00	36.80	270.06	2,345.22	0.11	-114.15	114.15	10.00	10.00	0.00
2,400.00	39.80	270.06	2,368.77	0.13	-132.74	132.74	10.00	10.00	0.00
2,430.00	42.80	270.06	2,391.30	0.15	-152.53	152.53	10.00	10.00	0.00
2,456.04	45.40	270.06	2,410.00	0.17	-170.65	170.65	10.00	10.00	0.00
Formation 8									
2,460.00	45.80	270.06	2,412.77	0.17	-173.48	173.48	10.00	10.00	0.00
2,490.00	48.80	270.06	2,433.12	0.19	-195.52	195.52	10.00	10.00	0.00
2,520.00	51.80	270.06	2,452.28	0.21	-218.60	218.60	10.00	10.00	0.00
2,550.00	54.80	270.06	2,470.21	0.24	-242.65	242.65	10.00	10.00	0.00
2,580.00	57.80	270.06	2,486.85	0.26	-267.61	267.61	10.00	10.00	0.00
2,610.00	60.80	270.06	2,502.17	0.28	-293.40	293.40	10.00	10.00	0.00
2,640.00	63.80	270.06	2,516.11	0.31	-319.96	319.96	10.00	10.00	0.00
2,670.00	66.80	270.06	2,528.65	0.34	-347.21	347.21	10.00	10.00	0.00
2,700.00	69.80	270.06	2,539.74	0.36	-375.08	375.08	10.00	10.00	0.00
2,730.00	72.80	270.06	2,549.36	0.39	-403.49	403.49	10.00	10.00	0.00
2,732.16	73.01	270.06	2,550.00	0.39	-405.56	405.56	10.00	10.00	0.00
Formation 9									
2,760.00	75.80	270.06	2,557.48	0.42	-432.37	432.37	10.00	10.00	0.00
2,790.00	78.80	270.06	2,564.08	0.45	-461.63	461.63	10.00	10.00	0.00
2,820.00	81.80	270.06	2,569.14	0.48	-491.20	491.20	10.00	10.00	0.00
2,850.00	84.80	270.06	2,572.64	0.51	-520.99	520.99	10.00	10.00	0.00
2,880.00	87.80	270.06	2,574.58	0.54	-550.92	550.92	10.00	10.00	0.00
2,902.04	90.00	270.06	2,575.00	0.56	-572.96	572.96	10.00	10.00	0.00
EOC Hold 91.16° INC :: 270.06° AZI									
2,910.00	90.00	270.06	2,575.00	0.56	-580.92	580.92	0.00	0.00	0.00
2,940.00	90.00	270.06	2,575.00	0.59	-610.92	610.92	0.00	0.00	0.00
2,970.00	90.00	270.06	2,575.00	0.62	-640.92	640.92	0.00	0.00	0.00
3,000.00	90.00	270.06	2,575.00	0.65	-670.92	670.92	0.00	0.00	0.00
3,030.00	90.00	270.06	2,575.00	0.68	-700.92	700.92	0.00	0.00	0.00
3,060.00	90.00	270.06	2,575.00	0.71	-730.92	730.92	0.00	0.00	0.00
3,090.00	90.00	270.06	2,575.00	0.74	-760.92	760.92	0.00	0.00	0.00
3,120.00	90.00	270.06	2,575.00	0.77	-790.92	790.92	0.00	0.00	0.00
3,150.00	90.00	270.06	2,575.00	0.80	-820.92	820.92	0.00	0.00	0.00
3,180.00	90.00	270.06	2,575.00	0.83	-850.92	850.92	0.00	0.00	0.00
3,210.00	90.00	270.06	2,575.00	0.86	-880.92	880.92	0.00	0.00	0.00
3,240.00	90.00	270.06	2,575.00	0.88	-910.92	910.92	0.00	0.00	0.00
3,270.00	90.00	270.06	2,575.00	0.91	-940.92	940.92	0.00	0.00	0.00

Black Viper

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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
3,300.00	90.00	270.06	2,575.00	0.94	-970.92	970.92	0.00	0.00	0.00
3,330.00	90.00	270.06	2,575.00	0.97	-1,000.92	1,000.92	0.00	0.00	0.00
3,360.00	90.00	270.06	2,575.00	1.00	-1,030.92	1,030.92	0.00	0.00	0.00
3,390.00	90.00	270.06	2,575.00	1.03	-1,060.92	1,060.92	0.00	0.00	0.00
3,420.00	90.00	270.06	2,575.00	1.06	-1,090.92	1,090.92	0.00	0.00	0.00
3,450.00	90.00	270.06	2,575.00	1.09	-1,120.92	1,120.92	0.00	0.00	0.00
3,480.00	90.00	270.06	2,575.00	1.12	-1,150.92	1,150.92	0.00	0.00	0.00
3,510.00	90.00	270.06	2,575.00	1.15	-1,180.92	1,180.92	0.00	0.00	0.00
3,540.00	90.00	270.06	2,575.00	1.18	-1,210.92	1,210.92	0.00	0.00	0.00
3,570.00	90.00	270.06	2,575.00	1.21	-1,240.92	1,240.92	0.00	0.00	0.00
3,600.00	90.00	270.06	2,575.00	1.23	-1,270.92	1,270.92	0.00	0.00	0.00
3,630.00	90.00	270.06	2,575.00	1.26	-1,300.92	1,300.92	0.00	0.00	0.00
3,660.00	90.00	270.06	2,575.00	1.29	-1,330.91	1,330.92	0.00	0.00	0.00
3,690.00	90.00	270.06	2,575.00	1.32	-1,360.91	1,360.92	0.00	0.00	0.00
3,720.00	90.00	270.06	2,575.00	1.35	-1,390.91	1,390.92	0.00	0.00	0.00
3,750.00	90.00	270.06	2,575.00	1.38	-1,420.91	1,420.92	0.00	0.00	0.00
3,780.00	90.00	270.06	2,575.00	1.41	-1,450.91	1,450.92	0.00	0.00	0.00
3,810.00	90.00	270.06	2,575.00	1.44	-1,480.91	1,480.92	0.00	0.00	0.00
3,840.00	90.00	270.06	2,575.00	1.47	-1,510.91	1,510.92	0.00	0.00	0.00
3,870.00	90.00	270.06	2,575.00	1.50	-1,540.91	1,540.92	0.00	0.00	0.00
3,900.00	90.00	270.06	2,575.00	1.53	-1,570.91	1,570.92	0.00	0.00	0.00
3,930.00	90.00	270.06	2,575.00	1.56	-1,600.91	1,600.92	0.00	0.00	0.00
3,960.00	90.00	270.06	2,575.00	1.58	-1,630.91	1,630.92	0.00	0.00	0.00
3,990.00	90.00	270.06	2,575.00	1.61	-1,660.91	1,660.92	0.00	0.00	0.00
4,020.00	90.00	270.06	2,575.00	1.64	-1,690.91	1,690.92	0.00	0.00	0.00
4,050.00	90.00	270.06	2,575.00	1.67	-1,720.91	1,720.92	0.00	0.00	0.00
4,080.00	90.00	270.06	2,575.00	1.70	-1,750.91	1,750.92	0.00	0.00	0.00
4,110.00	90.00	270.06	2,575.00	1.73	-1,780.91	1,780.92	0.00	0.00	0.00
4,140.00	90.00	270.06	2,575.00	1.76	-1,810.91	1,810.92	0.00	0.00	0.00
4,170.00	90.00	270.06	2,575.00	1.79	-1,840.91	1,840.92	0.00	0.00	0.00
4,200.00	90.00	270.06	2,575.00	1.82	-1,870.91	1,870.92	0.00	0.00	0.00
4,230.00	90.00	270.06	2,575.00	1.85	-1,900.91	1,900.92	0.00	0.00	0.00
4,260.00	90.00	270.06	2,575.00	1.88	-1,930.91	1,930.92	0.00	0.00	0.00
4,290.00	90.00	270.06	2,575.00	1.90	-1,960.91	1,960.92	0.00	0.00	0.00
4,320.00	90.00	270.06	2,575.00	1.93	-1,990.91	1,990.92	0.00	0.00	0.00
4,350.00	90.00	270.06	2,575.00	1.96	-2,020.91	2,020.92	0.00	0.00	0.00
4,380.00	90.00	270.06	2,575.00	1.99	-2,050.91	2,050.92	0.00	0.00	0.00
4,410.00	90.00	270.06	2,575.00	2.02	-2,080.91	2,080.92	0.00	0.00	0.00
4,440.00	90.00	270.06	2,575.00	2.05	-2,110.91	2,110.92	0.00	0.00	0.00
4,470.00	90.00	270.06	2,575.00	2.08	-2,140.91	2,140.92	0.00	0.00	0.00
4,500.00	90.00	270.06	2,575.00	2.11	-2,170.91	2,170.92	0.00	0.00	0.00
4,530.00	90.00	270.06	2,575.00	2.14	-2,200.91	2,200.92	0.00	0.00	0.00
4,560.00	90.00	270.06	2,575.00	2.17	-2,230.91	2,230.92	0.00	0.00	0.00
4,590.00	90.00	270.06	2,575.00	2.20	-2,260.91	2,260.92	0.00	0.00	0.00
4,620.00	90.00	270.06	2,575.00	2.23	-2,290.91	2,290.92	0.00	0.00	0.00
4,650.00	90.00	270.06	2,575.00	2.25	-2,320.91	2,320.92	0.00	0.00	0.00
4,680.00	90.00	270.06	2,575.00	2.28	-2,350.91	2,350.92	0.00	0.00	0.00
4,710.00	90.00	270.06	2,575.00	2.31	-2,380.91	2,380.92	0.00	0.00	0.00
4,740.00	90.00	270.06	2,575.00	2.34	-2,410.91	2,410.92	0.00	0.00	0.00
4,770.00	90.00	270.06	2,575.00	2.37	-2,440.91	2,440.92	0.00	0.00	0.00
4,800.00	90.00	270.06	2,575.00	2.40	-2,470.91	2,470.92	0.00	0.00	0.00
4,830.00	90.00	270.06	2,575.00	2.43	-2,500.91	2,500.92	0.00	0.00	0.00
4,860.00	90.00	270.06	2,575.00	2.46	-2,530.91	2,530.92	0.00	0.00	0.00
4,890.00	90.00	270.06	2,575.00	2.49	-2,560.91	2,560.92	0.00	0.00	0.00

Black Viper

Planning Report

Database: EDM 5000.1 Black Viper
 Company: Nadel & Gusman
 Project: Eddy County NM (NAD 27)
 Site: Rock Island 16 State #1
 Well: Rock Island 16 State #1
 Wellbore: Lateral #1
 Design: Plan #1

Local Co-ordinate Reference: Site Rock Island 16 State #1
 TVD Reference: KB1 @ 3375.00ft
 MD Reference: KB1 @ 3375.00ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
4,920.00	90.00	270.06	2,575.00	2.52	-2,590.91	2,590.92	0.00	0.00	0.00
4,950.00	90.00	270.06	2,575.00	2.55	-2,620.91	2,620.92	0.00	0.00	0.00
4,980.00	90.00	270.06	2,575.00	2.57	-2,650.91	2,650.92	0.00	0.00	0.00
5,010.00	90.00	270.06	2,575.00	2.60	-2,680.91	2,680.92	0.00	0.00	0.00
5,040.00	90.00	270.06	2,575.00	2.63	-2,710.91	2,710.92	0.00	0.00	0.00
5,070.00	90.00	270.06	2,575.00	2.66	-2,740.91	2,740.92	0.00	0.00	0.00
5,100.00	90.00	270.06	2,575.00	2.69	-2,770.91	2,770.92	0.00	0.00	0.00
5,130.00	90.00	270.06	2,575.00	2.72	-2,800.91	2,800.92	0.00	0.00	0.00
5,160.00	90.00	270.06	2,575.00	2.75	-2,830.91	2,830.92	0.00	0.00	0.00
5,190.00	90.00	270.06	2,575.00	2.78	-2,860.91	2,860.92	0.00	0.00	0.00
5,220.00	90.00	270.06	2,575.00	2.81	-2,890.91	2,890.92	0.00	0.00	0.00
5,250.00	90.00	270.06	2,575.00	2.84	-2,920.91	2,920.92	0.00	0.00	0.00
5,280.00	90.00	270.06	2,575.00	2.87	-2,950.91	2,950.92	0.00	0.00	0.00
5,310.00	90.00	270.06	2,575.00	2.90	-2,980.91	2,980.92	0.00	0.00	0.00
5,340.00	90.00	270.06	2,575.00	2.92	-3,010.91	3,010.92	0.00	0.00	0.00
5,370.00	90.00	270.06	2,575.00	2.95	-3,040.91	3,040.92	0.00	0.00	0.00
5,400.00	90.00	270.06	2,575.00	2.98	-3,070.91	3,070.92	0.00	0.00	0.00
5,430.00	90.00	270.06	2,575.00	3.01	-3,100.91	3,100.92	0.00	0.00	0.00
5,460.00	90.00	270.06	2,575.00	3.04	-3,130.91	3,130.92	0.00	0.00	0.00
5,490.00	90.00	270.06	2,575.00	3.07	-3,160.91	3,160.92	0.00	0.00	0.00
5,520.00	90.00	270.06	2,575.00	3.10	-3,190.91	3,190.92	0.00	0.00	0.00
5,550.00	90.00	270.06	2,575.00	3.13	-3,220.91	3,220.92	0.00	0.00	0.00
5,580.00	90.00	270.06	2,575.00	3.16	-3,250.91	3,250.92	0.00	0.00	0.00
5,610.00	90.00	270.06	2,575.00	3.19	-3,280.91	3,280.92	0.00	0.00	0.00
5,623.49	90.00	270.06	2,575.00	3.20	-3,294.40	3,294.40	0.00	0.00	0.00

PBHL#1

Design 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
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PBHL#1	0.00	360.00	2,575.00	3.20	-3,294.40	636,176.50	481,368.60	32° 44' 56.130 N	104° 23' 38.171 W
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- plan hits target center
- Point

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
110.00	110.00	Formation 1		0.00	
300.00	300.00	Formation 2		0.00	
505.00	505.00	Formation 3		0.00	
940.00	940.00	Formation 4		0.00	
1,500.00	1,500.00	Formation 5		0.00	
1,900.00	1,900.00	Formation 6		0.00	
2,297.98	2,285.00	Formation 7		0.00	
2,456.04	2,410.00	Formation 8		0.00	
2,732.16	2,550.00	Formation 9		0.00	

Black Viper

Planning Report

Database: EDM 5000.1 Black Viper
Company: Nadel & Gusman
Project: Eddy County NM (NAD 27)
Site: Rock Island 16 State #1
Well: Rock Island 16 State #1
Wellbore: Lateral #1
Design: Plan #1

Local Co-ordinate Reference: Site Rock Island 16 State #1
TVD Reference: KB1 @ 3375.00ft
MD Reference: KB1 @ 3375.00ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,002.04	2,002.04	0.00	0.00	KOP Build 10.00°/100' :: TFO 270.06
2,902.04	2,575.00	0.56	-572.96	EOC Hold 91.16° INC :: 270.06° AZI

NADEL AND GUSSMAN HEYCO, L.L.C.
P.O. BOX 1936
ROSWELL N.M. 88202
(575) 623-6601 (Office)
(575) 624-5321 (Fax)

12/22/10

Miss Reeves
District 2 Geologist
New Mexico Oil and Gas Division
1301 West Grand Avenue
Artesia, NM 88210

Re: Rock Island 16 State 1
SHL: 2260' FNL & 1650' FEL UL G
BHL: 2260' FNL & 330' FWL UL E
Sec. 16, T18S, R26E
Eddy, NM
Rule 118 H2S Exposure

Dear Miss. Reeves

Nadel and Gussman Heyco, LLC have evaluated this well and we do not expect to encounter hydrogen sulfide. However, we will employ a third party monitoring system. We will begin monitoring prior to drilling out the intermediate casing and will continue monitoring the remainder of the well.

Please contact me if you have any additional questions.

Sincerely,

JJ McGlasson
Completions Engineer



Hydrogen Sulfide Drilling Operations Plan
Rock Island 16 State 1
SHL UNIT G, Sec 16, T18S, R26E
2260' FNL & 1650' FEL
Eddy Co. N.M.

1. Company and contract personnel admitted on location should be trained by a qualified H₂S safety instructor to the recognize and handle following:
 - A. Characteristics of H₂S gas
 - B. Physical effects and hazards
 - C. Proper use of safety equipment and life support systems
 - D. Principle and operation of H₂S detectors, warning system and briefing knowledge
 - E. Evacuation procedure, routes and first aid support
 - F. Proper use of 30 minutes Pressure-on-Demand Air Pack
2. H₂S Detection and Alarm Systems
 - A. H₂S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse
3. Windsock and/or Wind Streamers
 - A. Windsock at mud pit area (high enough to be visible)
 - B. Windsock at briefing area (high enough to be visible)
 - C. Windsock at location entrance
4. Condition Flags and Signs
 - A. H₂S warning signs on lease access road into location
 - B. Flags displayed on sign at location entrance
 1. Green flag indicates "Normal Safe Conditions"
 2. Yellow Flag indicates "Potential Pressure and Danger"
 3. Red Flag indicates "Danger - H₂S Present in High Concentrations" *admit only emergency personnel*
5. Well Control Equipment
 - A. See BOP schematic page
6. Communication
 - A. While working under masks chalkboards will be used for communication
 - B. Hand signals will be used where chalk board is inappropriate
 - C. Two -way radios or cell phones used to communicate off location or minimally in Drilling Foreman's trailer or living quarters
7. Drillstem Testing
 - A. Exhausts watered
 - B. Flare line equipped with electric Igniter/propane pilot light in case gas reaches surface
 - C. If location near dwelling closed DST will be performed
8. Drilling Supervisor required to be familiar with effects of H₂S on tubular goods/mechanical equipment
9. If H₂S encountered, mud system shall be addressed to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers, if necessary.

PUBLIC PROTECTION PLAN FOR EMERGENCY CONTACTS

NADEL AND GUSSMAN HEYCO, LLC

(575) 623-6601

Company Personnel

Joel Martin	Drilling Enrineer	432-682-4429
		432-238-9969
Keith Cannon	Drilling Supt.	575-623-6601
		575-626-1936

ARTESIA N.M.

Ambulance	911
State Police	575-746-5000
City Police	575-746-5000
Sheriff's Office	575-746-9888
Fire Department	575-746-5050 or 575-746-5051
N.M.O.C.D	575-748-1283

CARLSBAD N.M.

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-885-3125 or 575-885-2111
Carlsbad BLM	575-887-6544

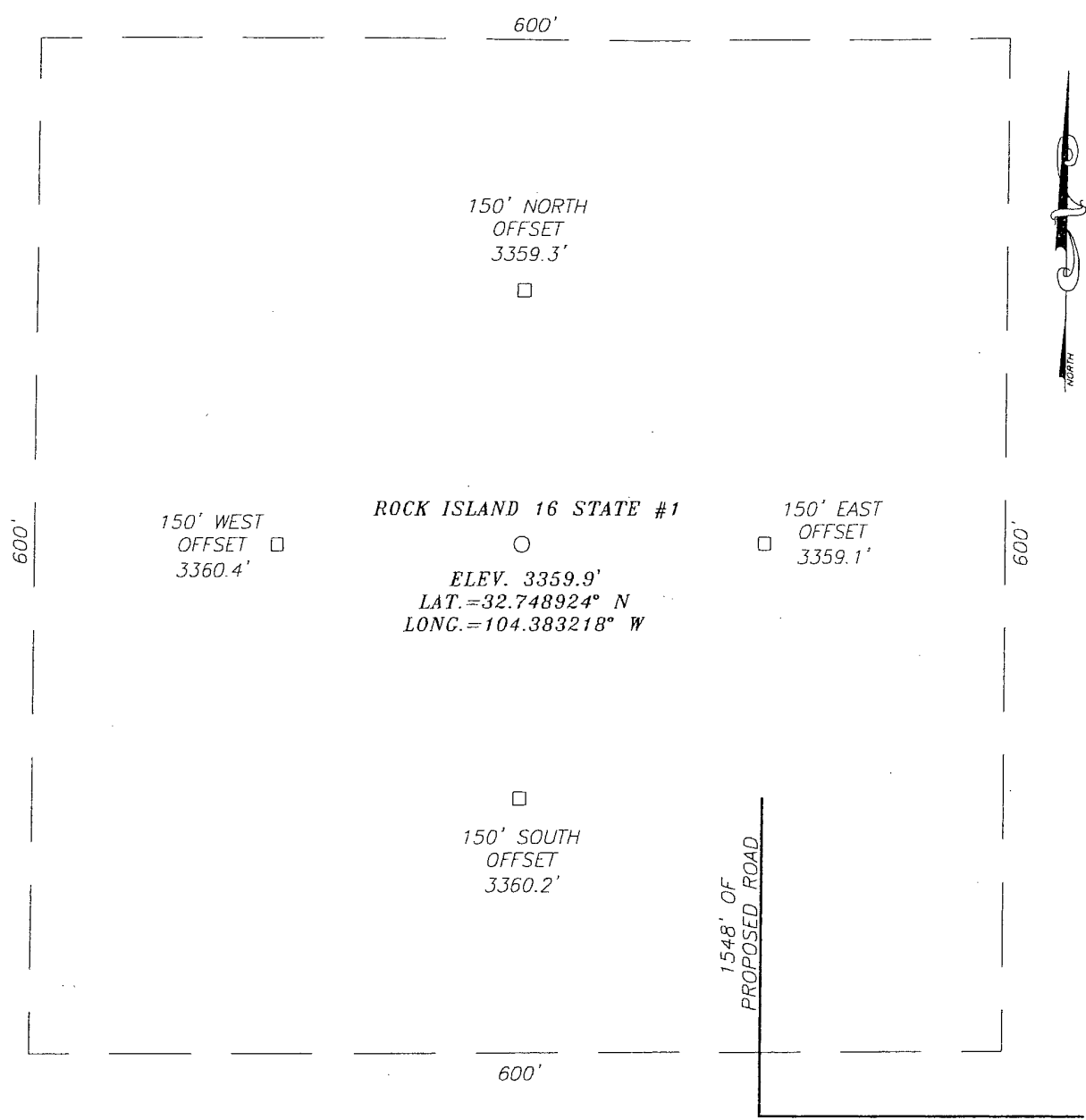
HOBBS N.M.

Ambulance	911
State Police	575-392-5588
City Police	575-397-9265
Sheriff's Office	575-396-3611
Fire Department	575-397-9308
N.M.O.C.D	575-393-6161
Hobbs BLM	575-393-3612

Flight for Life (Lubbock Tx)	806-743-9911
Aerocare (Lubbock Tx)	806-747-8923
Med flight air Ambulance (Albuq NM)	505-842-4433
SB air Med Services (Albuq NM)	505-842-4949

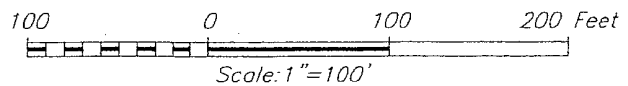
Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd Pressure Control	915-699-0139 or 915-563-3356
BJ Services (Artesia NM)	575-746-3569
(Hobbs NM)	575-392-5556

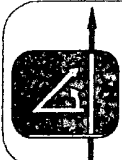
New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. #285 AND CO. RD. #39 (FOUR DINKUS ROAD), GO EAST ON (FOUR DINKUS) ROAD APPROX. 1.0 MILES. TURN RIGHT AND GO SOUTH APPROX. 0.5 MILES TO A PROPOSED ROAD SURVEY. FOLLOW ROAD SURVEY WEST 1360 FEET, THEN NORTH 188 FEET. THIS LOCATION IS APPROX. 212 FEET NORTHWEST.





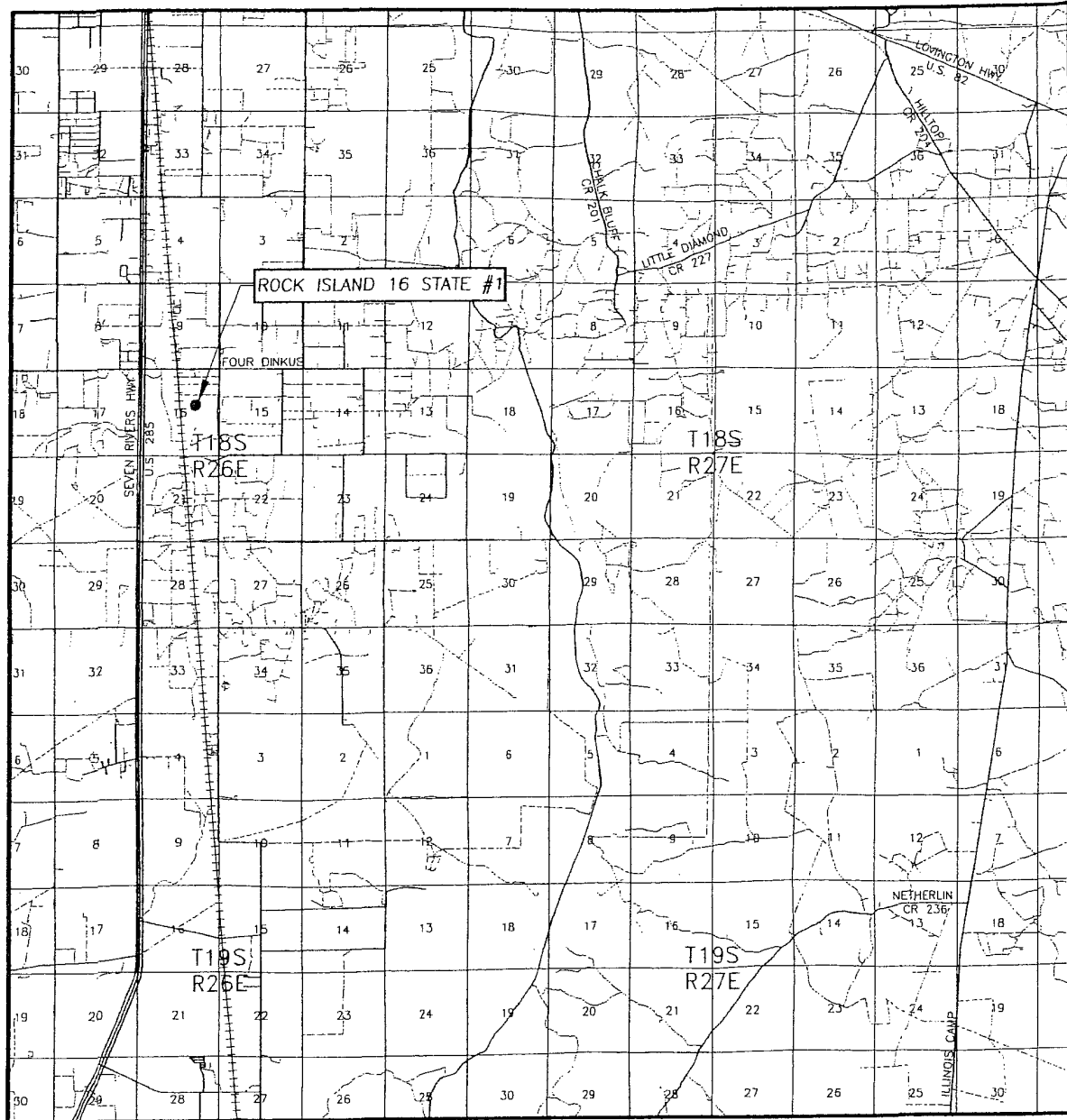
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(575) 393-3117

NADEL AND GUSSMAN HEYCO, LLC

ROCK ISLAND 16 STATE #1 WELL
LOCATED 2260 FEET FROM THE NORTH LINE
AND 1650 FEET FROM THE EAST LINE OF SECTION 16,
TOWNSHIP 18 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

Survey Date: 11/24/10	Sheet 1 of 1 Sheets		
W.O. Number: 10.11.1753	Dr By: LA	Rev 1:N/A	
Date: 12/3/10	Disk:	10111753	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 16 TWP. 18-S RGE. 26-E

SURVEY N.M.P.M.

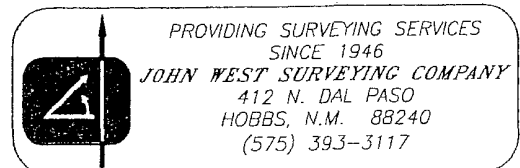
COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2260' FNL & 1650' FEL

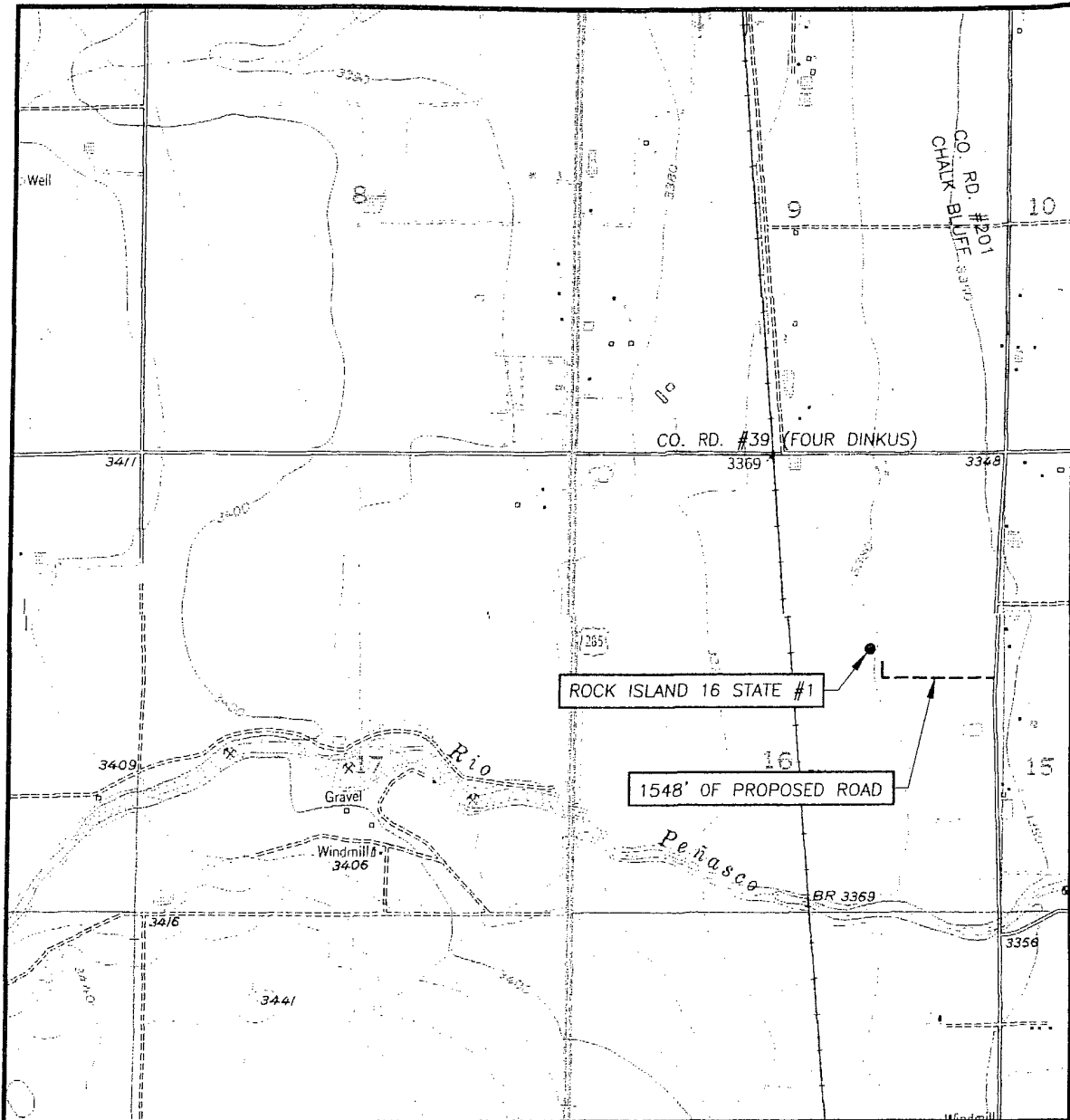
ELEVATION 3360'

OPERATOR NADEL AND GUSSMAN.
HEYCO, LLC

LEASE ROCK ISLAND 16 STATE



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
ARTESIA, N.M. - 10'
DAYTON, N.M. - 10'

SEC. 16 TWP. 18-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2260' FNL & 1650' FEL

ELEVATION 3360'

OPERATOR NADEL AND GUSSAMAN
HEYCO, LLC

LEASE ROCK ISLAND 16 STATE

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

