

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-101  
May 27, 2004

SEP 06 2007  
Submit to appropriate District Office  
OCD-ARTESIA  
☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address BEPCO, L.P P. O. Box 2760 Midland, Texas 79702		<sup>2</sup> OGRID Number 001801
<sup>3</sup> Property Code 35100	<sup>4</sup> Property Name Horned Toad 36 State	<sup>5</sup> API Number 30 - 015 - 35784 <sup>6</sup> Well No 2H
<sup>9</sup> Proposed Pool 1 Nash Draw (Delaware, Bone Spring, Avalon Sd)		<sup>10</sup> 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
A	36	24S	29E		330	North	500	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
B	36	24S	29E		750	North	2300	East	Eddy

**Additional Well Information**

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code O	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3127' GL
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 7132' MD 5487' TVD	<sup>18</sup> Formation Delaware	<sup>19</sup> Contractor Adobe Drilling	<sup>20</sup> Spud Date 10/15/2007
Depth to Groundwater 150'		Distance from nearest fresh water well 2-1/2 miles		Distance from nearest surface water 6 miles
Pit Liner Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume 1500 bbls Drilling Method _____ Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

**21 Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	907' MD	829	Surface
12-1/4"	9-5/8"	36#	3860' MD	864	Surface
8-3/4"	5-1/2"	17#	7132' MD	635	3040'

<sup>22</sup> 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.

SURFACE IS OWNED BY THE STATE OF NEW MEXICO ATTACHED IS A DRILLING PROGNOSIS AND A BOP DIAGRAM

As stated in the attached drilling plan this well will be a horizontal well with KOP of approximately 5010' TVD an azimuth of 257.5°, build angle of 12.00°, and a bottom hole target of 7132' MD (lateral displacement +/- 1850') TVD 5487'. See attached directional plan and 8 point drilling plan for details.

<sup>23</sup> 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 ☐.

Printed name: Annette Childers

Title: Administrative Assistant

E-mail Address: machilders@basspet.com

Date: 9-4-2007

Phone: 432-683-2277

**OIL CONSERVATION DIVISION**

Approved by

Title:

Approval Date

Conditions of Approval Attached ☐

BRYAN G. ARANT  
DISTRICT II GEOLOGIST

Expiration Date

SEP 07 2007

SEP 07 2008

Surface casing to be set into the Rustler below all fresh water sands.

Production casing will be cemented using Halliburton acid soluble cement system in lateral hole with TOC at approximately 2,860' (approximately 500' into intermediate casing).

Drilling procedure, BOP diagram, anticipated tops attached.

This well is located outside the Secretary's Potash area. There are no potash leases within 1 mile of the location.

BEPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BEPCO, L.P., 201 Mail Street, Ft. Worth, TX, 76102. Bond No. NM 2204 (Nationwide).

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State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 47545	Pool Name Nash Draw (Delaware, Bone Spring, Avalon Sd)
Property Code 35100	Property Name HORNED TOAD "36" STATE	Well Number 2H
OGRID No. 001801	Operator Name BEPCO, L.P.	Elevation 3127'

Surface Location

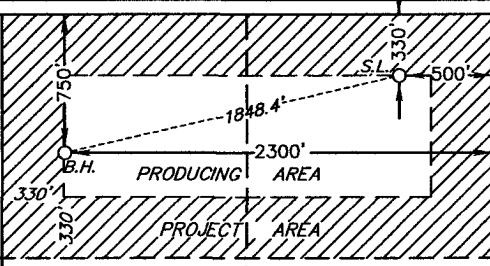
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	36	24 S	29 E		330	NORTH	500	EAST	EDDY

Bottom Hole Location If Different From Surface

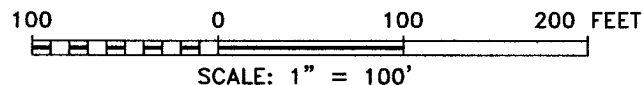
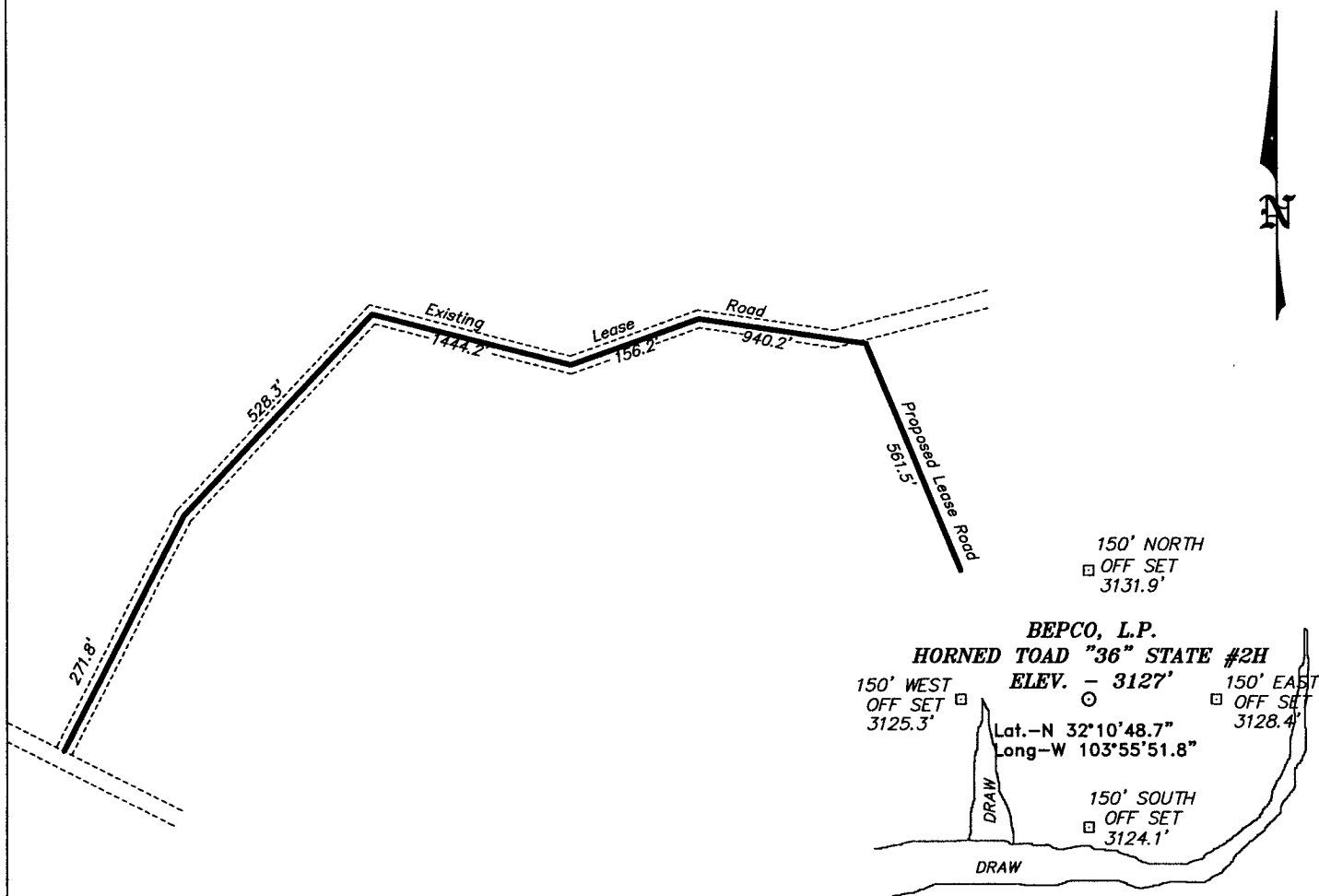
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	24 S	29 E		750	NORTH	2300	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
80	N		

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

<p><b>BOTTOM HOLE</b> LAT - N32°10'44.6" LONG - W103°56'12.9"</p> <p>162.31 acres</p>			
		<p><b>SURFACE LOCATION</b> LAT - N32°10'48.7" LONG - W103°55'51.8"</p> <p>161.82 acres</p>	
<p>161.69 acres</p>		<p>161.20 acres</p>	
<p><b>OPERATOR CERTIFICATION</b></p> <p>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 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.</p> <p><i>Gary E. Gerhard</i> 8/31/07 Signature Date Gary E. Gerhard Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>AUGUST 20, 2007 Date Surveyed Signature of Gary L. Jones Professional Surveyor W.B. Jones Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>			

SECTION 36, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



**DIRECTIONS TO LOCATION:**

FROM THE JUNCTION OF CO. RD. 748 AND CO. RD. 746A, GO SOUTHEAST 1.2 MILE TO LEASE ROAD; THENCE SOUTH FOR 0.6 MILE TO CATTLE GUARD; THENCE GO WEST FOR 1.5 MILE TO PROPOSED LEASE ROAD.

**BASIN SURVEYS** P.O. BOX 1786—HOBBS, NEW MEXICO

W.O. Number: 5650 Drawn By: K. GOAD

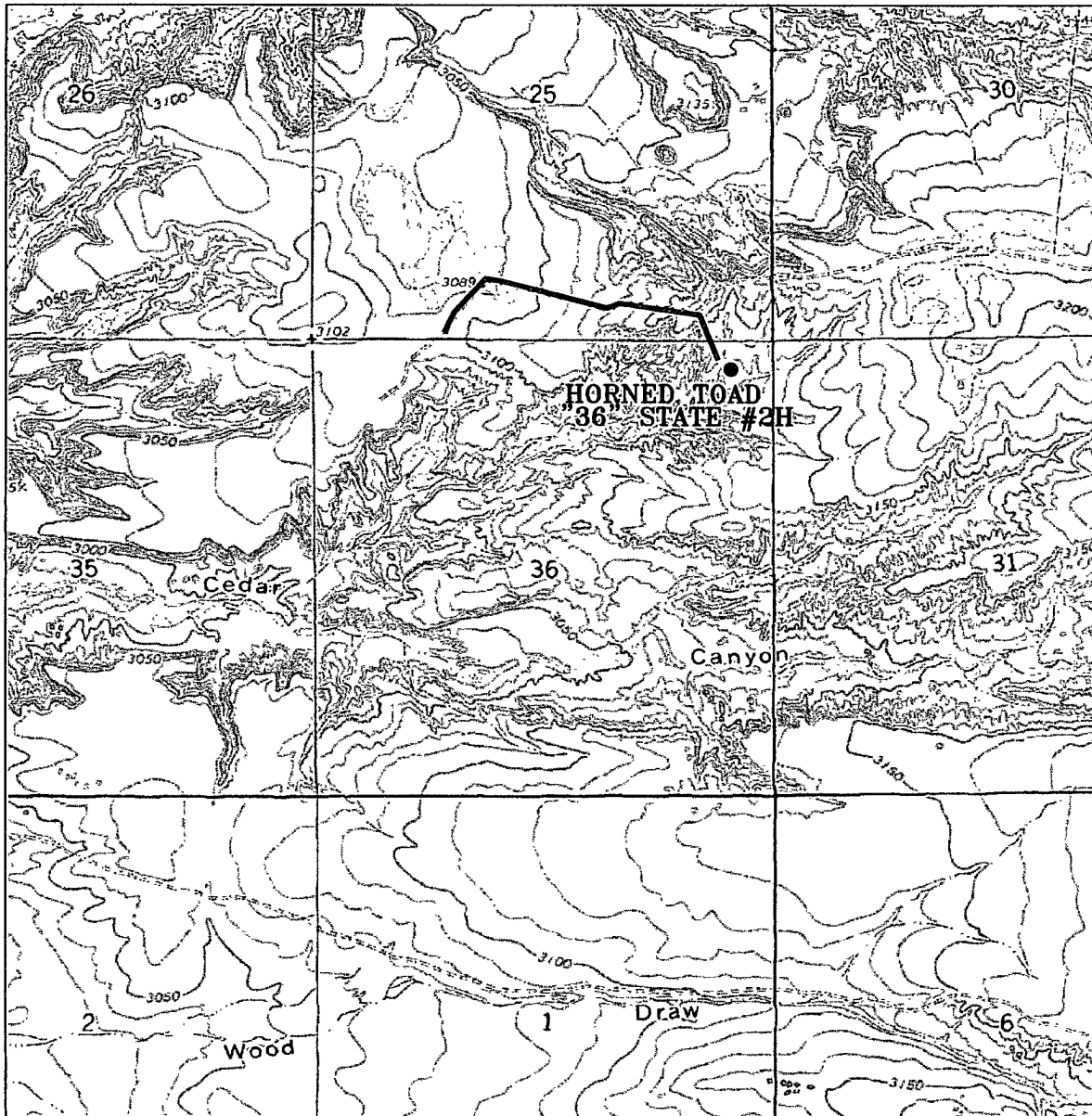
Date: 08-25-2005 Disk: KJG CD#7 — 5650A.DWG

**BEPCO, L.P.**

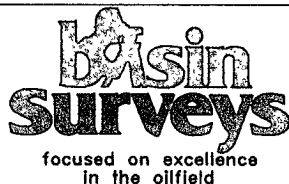
REF: HORNED TOAD "36" STATE No. 2H / Well Pad Topo

THE HORNED TOAD "36" STATE No. 2H LOCATED 330' FROM THE NORTH LINE AND 500' FROM THE EAST LINE OF SECTION 36, TOWNSHIP 24 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 08-19-2005 Sheet 1 of 1 Sheets



**HORNED TOAD "36" STATE #2H**  
 Located at 330' FNL and 500' FEL  
 Section 36, Township 24 South, Range 29 East,  
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

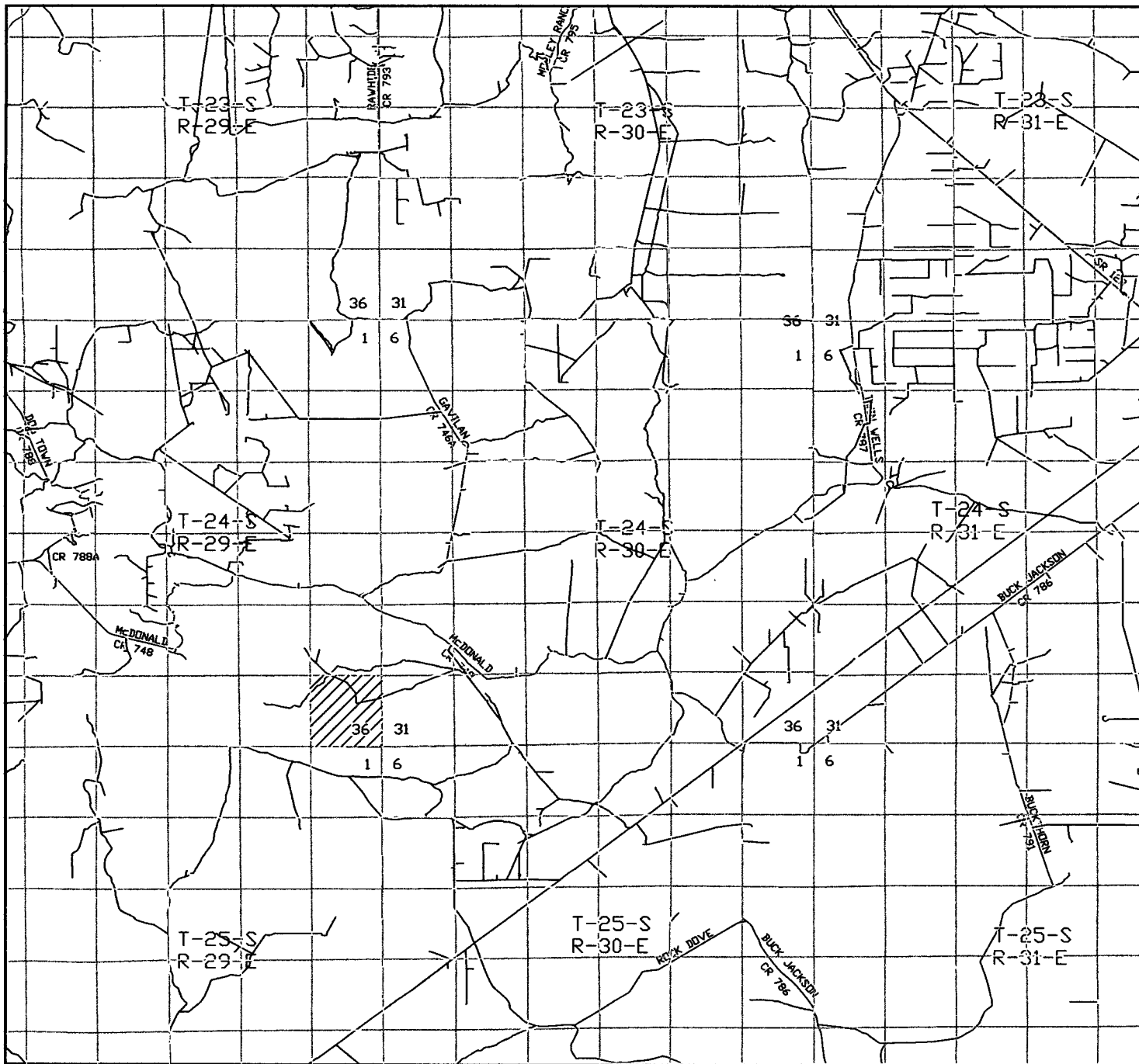
W.O. Number: 5650AA - KJG #7

Survey Date: 08-19-2005

Scale: 1" = 2000'

Date: 08-25-2005

**BEPCO, L.P.**



**HORNED TOAD "36" STATE #2H**  
 Located at 330' FNL and 500' FEL  
 Section 36, Township 24 South, Range 29 East,  
 N.M.P.M., Eddy County, New Mexico.

**basin**  
**surveys**  
 focused on excellence  
 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
 basinsurveys.com

W.O. Number: 5650AA - KJG #7

Survey Date: 08-19-2005

Scale: 1" = 2 miles

Date: 08-25-2005

**BEPCO, L.P.**

# EIGHT POINT DRILLING PROGRAM

## BEPCO, L.P.

**NAME OF WELL: Horned Toad 36 State #2H**

LEGAL DESCRIPTION - SURFACE: 330' FNL & 500' FEL, Section 36, T24S, R29E, Eddy County, New Mexico.  
BHL: 750' FNL & 2300' FEL, Section 36, T24S, R29E, Eddy County, New Mexico.

### POINT 1: ESTIMATED FORMATION TOPS

(See No. 2 Below)

### POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3144' (est.)  
GL 3127'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>		<u>ESTIMATED SUB-SEA TOP</u>	<u>BEARING</u>
	<u>TVD</u>	<u>MD</u>		
T/Rustler	450'	450'	+ 2692'	Barren
B/Rustler	892'	892'	+ 2250'	Barren
T/Salt	917'	917'	+ 2225'	Barren
B/Salt	3132'	3132'	+ 10'	Barren
T/Lamar Lime	3342'	3342'	- 200'	Barren
T/Ramsey	3377'	3377'	- 235'	Oil/Gas
KOP (Kick Off Point)	5010'	5010'	- 1883'	NA
T/Lower Cherry Canyon	5452'	5667'	- 2310'	Oil/Gas
T/Lower Cherry Canyon Lateral Target (end of curve)	5487'	5760'	- 2345'	Oil/Gas
TD (end of lateral)	5487'	7132'	- 2345'	Oil/Gas

### POINT 3: CASING PROGRAM

<u>TYPE</u>	<u>INTERVALS (MD)</u>	<u>Hole Size</u>	<u>PURPOSE</u>	<u>CONDITION</u>
20"	0' - 60'	24"	Conductor	Contractor Discretion
13-3/8", 48#, H-40, ST&C	0' - 907'	17-1/2"	Surface	New
9-5/8", 36#, J-55, 8rd, LT&C	0' - 3360'	12-1/4"	Intermediate	New
5-1/2", 17#, P-110, LT&C	0' - 3750'	8-3/4"	Production	New
5-1/2", 17#, P-110, Ultra Flush Jt	3750' - 7132'	8-3/4"	Production	New

### POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

The blowout preventer equipment will be as shown in Diagram #2 and will consist of a double ram type preventer (3000 psi WP) and a bag type (Hydril) annular preventer (3000 psi WP). The same BOPE will be installed on the surface casinghead and on all subsequent casing strings. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. when installed on the surface casinghead will be hydro-tested to 1000 psig with the rig mud pump. The BOPE when rigged up on the intermediate casing spool will be tested to 3000 psig by independent tester. In addition to the high pressure test, a low pressure (200 psig) test will be required.

These tests will be performed:

- a) Upon installation
- b) After any component changes
- c) Fifteen days after a previous test
- d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip.

## POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 907'	FW Spud Mud	8.5 – 9.2	38-70	NC	NC	NC	10.0
907' - 3360'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	9.5 – 10.5
3360' - 5617'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
5617' - 5700'	FW/Gel	8.7 – 9.0	28-36	NC	NC	NC	9.5 – 10.0
5700' - 7132'	FW/Gel/Starch	8.7 – 9.0	28-36	NC	NC	<100	9.5 – 10.0

**NOTE:** *May increase vis for logging purposes only.*

## POINT 6: TECHNICAL STAGES OF OPERATION

### A) TESTING

None anticipated.

### B) LOGGING

Run #1: PEX (GR-CNL/LDT-AIT) as deep as possible in deviated hole to 3200' with GR-CNL to surface.

Run #2: GR with MWD during drilling of build and horizontal portions of 8-3/4" hole.

### C) CONVENTIONAL CORING

None anticipated.

### D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT <sup>3</sup> /SX
<b>SURFACE:</b>						
Lead: 0 – 607' (100% excess Circ to surface)	490	607	Halliburton Light + 2.7 #/sk Salt	10.14	12.8	1.87
Tail: 607' – 907' (100% excess)	340	300	Premium Plus + 2% CaCl <sub>2</sub>	6.37	14.8	1.35
<b>INTERMEDIATE:</b>						
Lead: 0' – 2860' (100% excess Circ to surface)	600	2860	Interfill C + 0.125 lb/sk Poly-e-flake	16.43	11.5	2.76
Tail: 2860' – 3360' (100% excess)	263	500	Premium Plus + 0.4% Halad-9	6.29	14.8	1.33



## PRODUCTION:

Lead 2860' - 5025'	325	2165	50/50 Poz C + 10% D20 + 0.02% D46 + 0.125 pps D130 + 5% D44	14.68	11.8	2.52
(50% excess circ to surface)						
Tail 5025' - 7132'	305	2107	Super H Cement + 0.5% LAP-1 + 0.3% CFR-3 + 3 #/sk Salt + 5 #/sk Gilsonite + 0.25 #/sk D-AIR 3000	11.20	15.0	2.61
(50% excess)						

## E) DIRECTIONAL DRILLING

BEPCO, L.P. plans to drill out the 9-5/8" intermediate casing with a 8-3/4" bit to a TVD of approximately 5010' at which point a directional hole will be kicked off and drilled at an azimuth of 257.5°, building angle at 12.00°/100' to a max angle of 90° at a TVD of 5487' (MD 5760'). This 90° angle will be maintained to a MD of 7132' or TVD of 5487'.

## POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. A BHP of 2397 psi (max) or MWE of 8.4 ppg is expected. Lost circulation may exist in the Delaware Section from 3342'-7132'. No H<sub>2</sub>S is anticipated.

## POINT 8: OTHER PERTINENT INFORMATION

## A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

## B) Anticipated Starting Date

Upon approval

25 days drilling operations

14 days completion operations



Gary E. Gerhard

GEG/mac  
September 4, 2007

**BEPCO, L.P.**  
P. O. Box 2760  
Midland, Texas 79702

432-683-2277

August 29, 2007

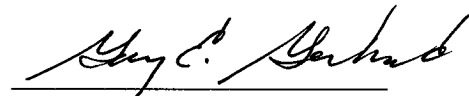
FAX: 432-687-0329

State of New Mexico Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

To Whom It May Concern:

I am writing to request a waiver for the inclusion of an H<sub>2</sub>S Contingency Plan for Horned Toad 36 State #2H. The current plan is to complete this well in the Delaware Lower Cherry Canyon, which is not known to BEPCO, L.P. to contain H<sub>2</sub>S in excess of 100 ppm and we do not anticipate encountering any H<sub>2</sub>S bearing formations during drilling operations.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary E. Gerhard", written over a horizontal line.

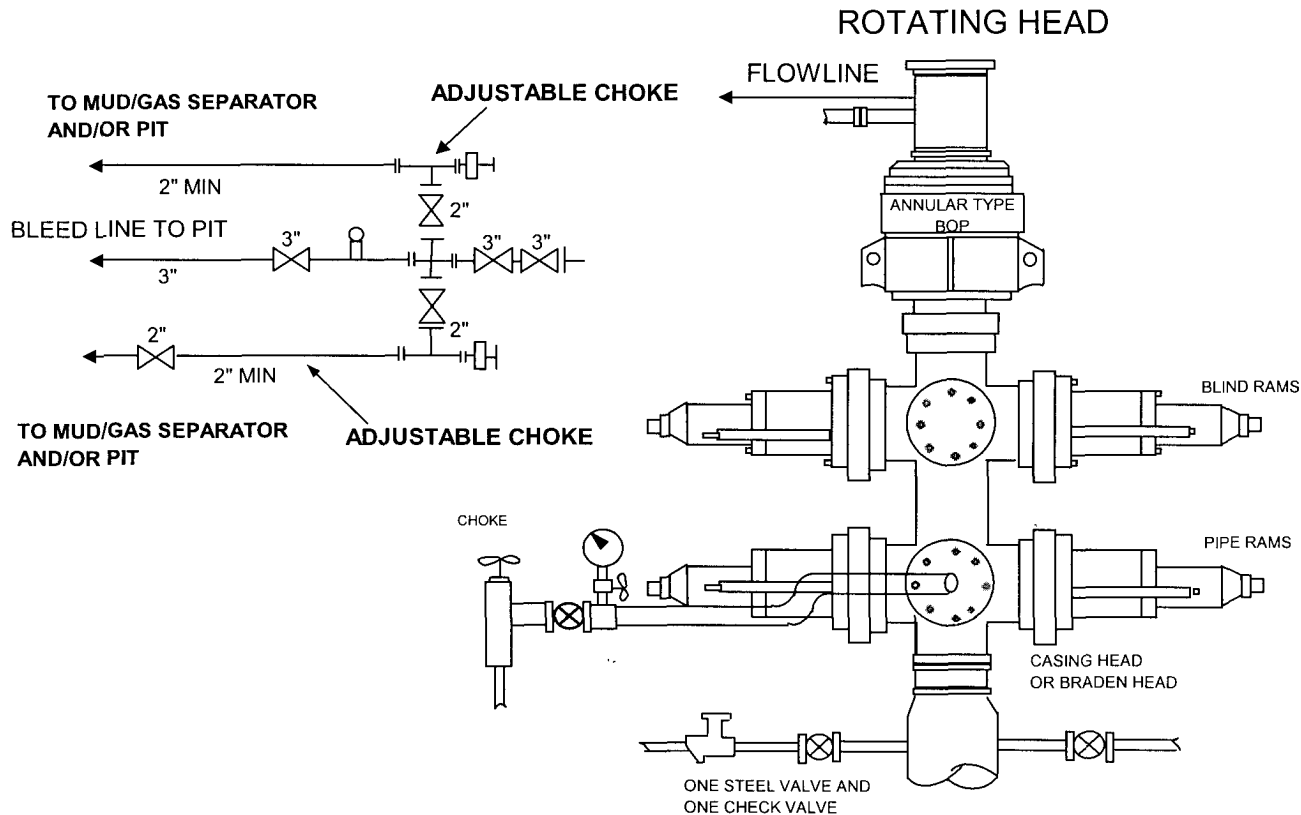
Gary E. Gerhard  
Drilling Engineer

GEG/mac

# BEPCO, L. P.

## 3-M WP BOPE WITH 3-M WP ANNULAR

3 M CHOKE MANIFOLD EQUIPMENT-CONFIGURATION MAY VARY



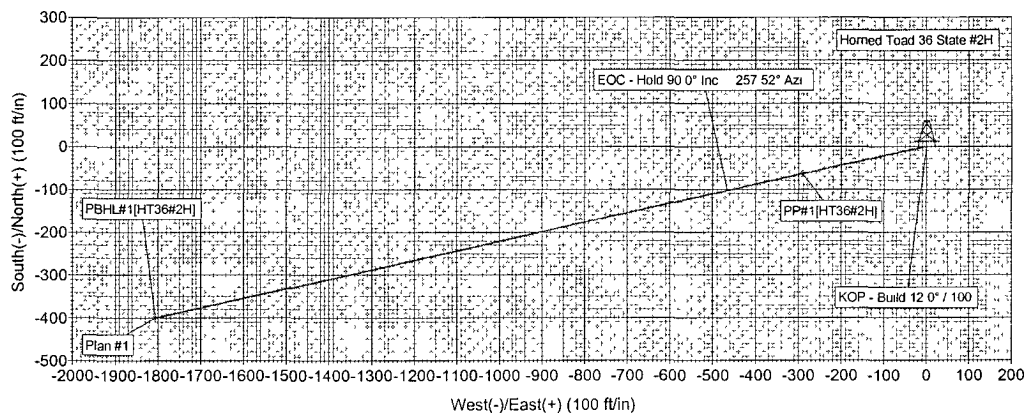
### THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- A. One double gate Blowout preventer with lower pipe rams and upper blind rams, all hydraulically controlled.
- B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
- C. All connections from operating manifold to preventers to be all steel hose or tube a minimum of one inch in diameter.
- D. The available closing pressure shall be at least 15% in excess of that required with sufficient volume to operate (close, open, and re-close) the preventers.
- E. All connections to and from preventers to have a pressure rating equivalent to that of the BOPs.
- F. Manual controls to be installed before drilling cement plug.
- G. Valve to control flow through drill pipe to be located on rig floor.
- H. Chokes must be adjustable. Choke spool may be used between rams.

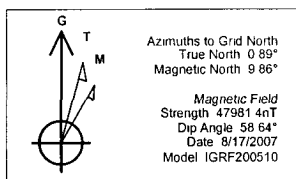
**DIAGRAM 1**



Project Eddy Co., New Mexico (Nad 83)  
Site Horned Toad 36 State #2H  
Well Horned Toad 36 State #2H  
Wellbore Lateral #1  
Plan Plan #1 (Horned Toad 36 State #2H/Lateral #1)

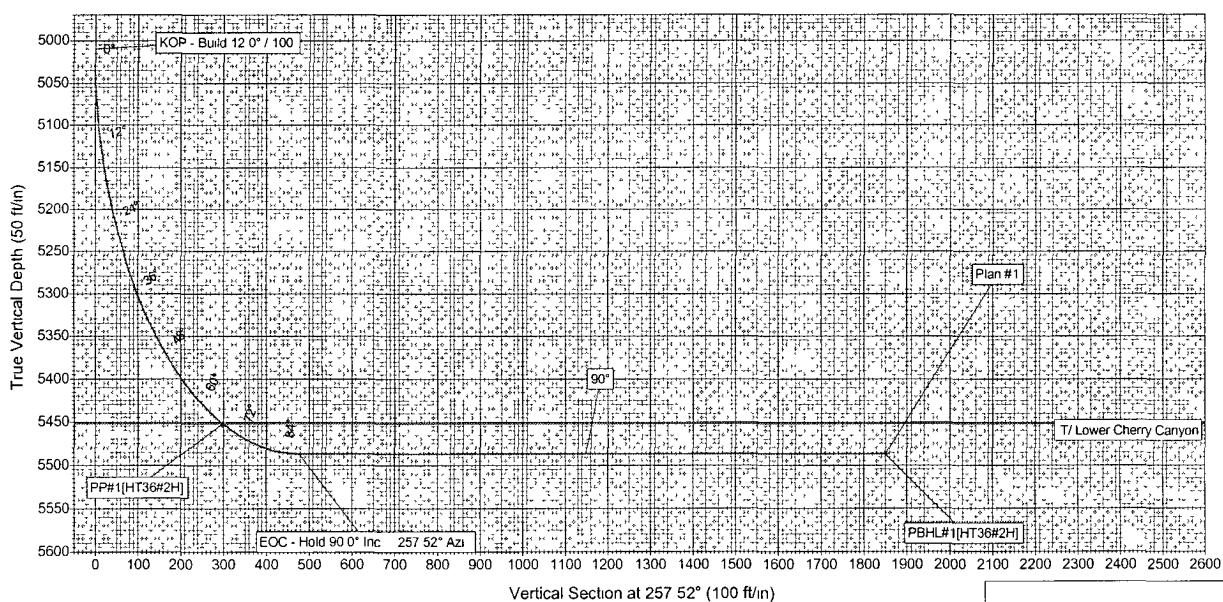


ANNOTATIONS		
TVD	MD	Annotation
5009.53	5009.53	KOP - Build 12 0° / 100
5487.00	5759.54	EOC - Hold 90 0° Inc 257 52° Azi



PROJECT DETAILS	
Eddy Co., New Mexico (Nad 83)	
Geodetic System US State Plane 1983	
Datum North American Datum 1983	
Ellipsoid GRS 1980	
Zone New Mexico Eastern Zone	
System Datum Ground Level	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	5009.00	0.00	360.00	5009.00	0.00	0.00	0.00	0.00	0.00	
2	5009.53	0.00	0.00	5009.53	0.00	0.00	0.00	0.00	0.00	
3	5759.54	90.00	257.52	5487.00	-103.21	-466.18	12.00	257.52	477.47	
4	7132.07	90.00	257.52	5487.00	-399.90	-1806.26	0.00	0.00	1850.00	PBHL#1[HT36#2H]



Plan Plan #1 (Horned Toad 36 State #2H/Lateral #1)  
Created By L.D. Burton Date August 28, 2007