State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr.

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DEC = 2000 RECEIVED OCO VIARIES IA	ate Mitrict Office
AME DO STATE OF SERVICE SERVICES	NEDED REPORT

District IV

			Operator Name					N, PLUGBA	<sup>2</sup> OGRID Numbe	D A ZONE or 001801
BEPCO	O, L.P.	P. O. Bo	x 2760	Midland, Tex	xas 79702			30 - 01	3 API Number 5 - 35 275	001001
³ Propei	rty Code	,			<sup>5</sup> Property N	ame		1300		ell No.
E-5559	1177		Big Eddy L	Init	<u>-</u> -	<del></del>			168	
rBass	Morr	ow)	Proposed Pool 1					10 Prop	oosed Pool 2	
				7	Surface I	Locatio	n			
L or lot no.	Section	Township	Range	Lot Idn	Feet fron		North/South line	Feet from the	East/West line	County
0	16	218	28E	<u> </u>	660		South	1980	<u>East</u>	Eddy
				sed Bottom I						2
L or lot no.	Section	Township	Range	Lot Idn	Feet from	n the	North/South line	Feet from the	East/West line	County
				Addit	ional Wel	l Inforr	nation			
	Type Code		12 Well Type Co	de	13 Cable/	Rotary	1	Lease Type Code		und Level Elevation
N	ultiple	<del></del>	<sup>17</sup> Proposed Dep	th	Rotary  18 Form	ation		S Contractor	32	<sup>20</sup> Spud Date
No_	anipie		12,400'		Morrow			Grey Wolf		/01/07
epth to Grour	ndwater	37'		Distance from	n nearest fresh	water well	Sone'	Distance from	n nearest surface w	ater > [m:]
it: Liner:	Synthetic	X 12 mi	ls thick Clay				Drilling Method	 L_		
Closed	d-Loop Syst	tem 🔲				E	resh Water X	Brine Diesel/C	il-hased 🔲 Gas/	Air 🔲
			21	Proposed	Casing ar	nd Cem	ent Progra	m		
Hole Si	ize	Cas	ing Size	Casing wei			ting Depth	Sacks of Co	ement	Estimated TOC
17-1/2"		13-3/8		48#/ft			528'	550 sx		urface
12-1/4"		9-5/8	3"			+/- 2,508'		1300 sx	S <sub>1</sub>	urface
					,000	1000 37	30	ırface		
8-3/4"		5-1/2		17#/ft		+/- 12		2500 sx		)00'
	ne proposed		н	17#/ft	PLUG BACK	+/- 12	,400'	2500 sx	2,0	000'
<sup>2</sup> Describe the Describe the b	lowout pre	program. If vention progr	н	17#/ft s to DEEPEN or additional sheets		+/- 12	,400'	<del></del>	2,0	000'
Describe the bescribe the bescr	tify that the dge and bel coording to alternative	information ief. I further to NMOCD are Childers	this application is am, if any. Use sometary's area given above is true certify that the guidelines , a voved plan .	17#/ft s to DEEPEN or additional sheets	to the best be to the dest or to the best or to the dest or to the	+/- 12	OIL C	2500 sx sent productive zone CONSERVAT BRYAN G. A	E and proposed nev	N productive zone.
Describe the bescribe the b  This we  I hereby cert f my knowled onstructed a n (attached) rinted name:	tify that the dge and bel alternativ	program. If vention programs in the Section of the	this application is am, if any. Use cretary's area given above is true certify that the guidelines , a oved plan .	17#/ft s to DEEPEN or additional sheets  we and complete drilling pit wil general permit	to the best be to the dest or to the best or to the dest or to the	+/- 12	OIL C	2500 sx sent productive zone CONSERVAT BRYAN G. A	E and proposed nev	N productive zone.
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SURFACE CASING  $\, \dot{} \,$ ? Intermediate

## EIGHT POINT DRILLING PROGRAM BEPCO, L.P.

NAME OF WELL: BIG EDDY UNIT #168

LEGAL DESCRIPTION - SURFACE: 1980' FEL & 660' FSL, Section 16, T-21-S, R-28-E, 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 3278' (est)

GL 3255'

FORMATION	ESTIMATED TOP FROM KB	ESTIMATED SUB-SEA TOP	<u>BEARING</u>
T/Rustler	518'	+ 2760'	Barren
B/Rustler	1078'	+ 2200'	Barren
T/Reef	1378'	+ 1900'	Barren
T/Delaware Mtn. Group	2578'	+ 800'	Oil/Gas
T/1 <sup>st</sup> Delaware Sand	2628'	+ 650'	Oil/Gas
T/Old Indian Draw	3378'	- 100'	Oil/Gas
T/Bone Spring	5978'	- 2700'	Oil/Gas
T/Wolfcamp	9528'	- 6250'	Oil/Gas
T/Strawn	10638'	- 7360'	Oil/Gas
T/Atoka Sand	11018'	- 7740'	Oil/Gas
T/Upper Morrow	11438'	- 8160'	Oil/Gas
T/Middle Morrow	11788'	- 8510'	Oil/Gas
T/Lower Morrow	12078'	- 8800'	Oil/Gas
TD	12400'	- 9122'	

### **POINT 3: CASING PROGRAM**

IYPE	INTERVALS	PURPOSE	CONDITION
20"	0' - 80'	Conductor	New
13-3/8", 48#, J55, STC	0' - 538'	Surface	New
9-5/8", 36#, N80, LTC	0' - 2,580'	Intermediate	New
5-1/2", 17#, P110, LTC	0' - 12,400'	Production	New

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

A BOP equivalent to Diagram 1 will be nippled up on the surface and intermediate casing. When the BOP is installed on the surface casinghead, it will be tested to 70% of internal yield of casing or 1000 psig whichever is less. In addition, the BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. will be hydro-tested to 3,000 psi and 200 psi low by independent tester when installed on the intermediate casing spool.

The annular preventer will be tested to 2500 psi on intermediate casing. In addition to the rated working pressure test, a low pressure (200 psi) test will be performed. These tests will be done:

- a) Upon installation
- b) After any component changes
- c) Twenty-one 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. See the attached Diagram 1 for the minimum criteria for the choke manifold.

#### **POINT 5: MUD PROGRAM**

<u>DEPTH</u>	MUD TYPE	WEIGHT	_EV_	PV	YP	<u>.FL</u>	<u>.Ph</u>
0' - 538'	FW/Gel Spud	8.4 - 9.0	32-38	NC	NC	NC	9-10
538' - 2580'	FW/Gel	9.8 - 10.2	28-32	NC	NC	NC	9-10
2580' - 7000'	FW/Gel	8.3 - 8.6	28-32	NC	NC	NC	9-10
7000' - 9500'	FW/C-Brine	8.6 - 9.0	28-34	NC	NC	<100	9-10
9500' - 12450'	Brine/Polymer	9.5 - 11.0	30-36	6-10	6-10	<100	9-10

#### POINT 6: TECHNICAL STAGES OF OPERATION

#### A) TESTING

No DST's are planned, however any shows of significance will be tested.

### B) LOGGING

GR-CNL/LDT-HRLA from TD to intermediate casing. GR-CNL intermediate casing to surface.

## C) CONVENTIONAL CORING

None Anticipated.

## D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	ET <sup>3</sup> /SX
SURFACE 0' - 528' (100% excess) (Circ to Surface)	550	528	Premium Plus + 2% CaCl <sub>2</sub> + 1/4 #/sk Flocele	6.32	14.80	1.34
INTERMEDIATE Lead: 0' - 2008' (100% excess) (Circ to Surface)	525	2008	Interfil C + 0.25 #/sk Flocele + 1 #/sk Salt.	e 14.11	11.90	2.45
Tail: 2008' - 2508' (100% excess)	250	500	Premium Plus + 2% CaCl <sub>2</sub>	6.34	14.80	1.34
DV Tool @ 9000'						
1 <sup>st</sup> Stage Lead: 9000' - 12,4 (50% excess)	00' 815	3400	Super H w/5 #/sk Gilsonite + 0.5% Halad 344 + 0.4% CFR-3 + 0.1% HR-7	7.73	13.20	1.60
2 <sup>nd</sup> Stage Lead: 2008' - 5000 (50% excess)	o' 550	2992	Interfill C + 0.25 #/sk Flocele + 1 #/sk Salt	10.95	12.50	2.11
Tail: 5000' - 9000' (50% excess)	1000	4000	Premium Plus + 2% CaCl₂	7.73	13.20	1.60

## E) DIRECTIONAL DRILLING

No directional services anticipated.

## **POINT 7: ANTICIPATED RESERVOIR CONDITIONS**

Normal pressures are anticipated throughout the Delaware, Bone Spring & Wolfcamp sections. The Atoka may be abnormally pressured with expected BHP of 6300 psi (max) or an equivalent mud weight of 11.0 ppg. The Morrow expected BHP is 6400 (max) or an equivalent mud weight of 10.5 ppg @ TD. Due to the tight nature of the reservoir rock (high pressure, low volume), the well will be drilled under balanced utilizing a rotating head. The expected BHT at TD is 230°F. No  $H_2S$  is anticipated.

## **POINT 8: OTHER PERTINENT INFORMATION**

A) Auxiliary Equipment

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

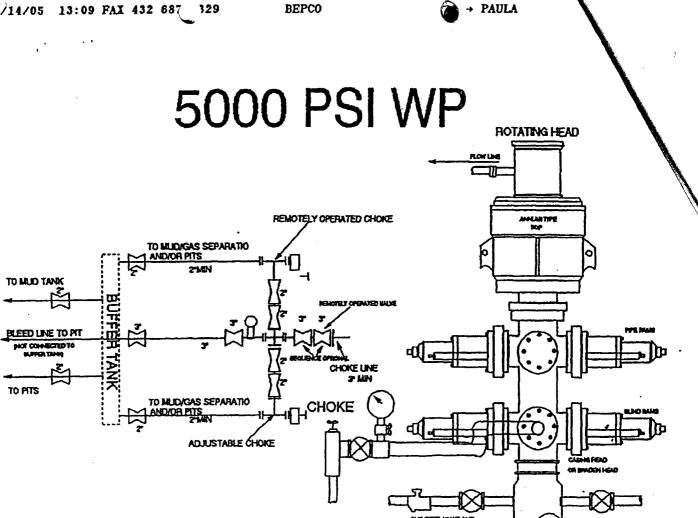
B) Anticipated Starting Date

Upon approval

35 days drilling operations

15 days completion operations

GEG/cnt December 4, 2006



## THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

ONE CHECK MATTA

- One double gate blowout preventer with lower rams for pipe and upper rams A. blind, all hydraulically controlled.
- Opening on preventers between rams to be flanged, studded or clamped and В. 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.
- The available closing pressure shall be at least 15% in excess of that D. required with sufficient volume to operate (close, open, and re-close) the preventers.
- All connections to and from preventers to have a pressure rating E. equivalent to that of the BOP's.
- F. Manual controls to be installed before drilling cement plug.
- G, Valve to control flow through drill pipe to be located on rig floor.
- All chokes will be adjustable. Choke spool may be used between rams. Η.

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 St. Francis Dr., Santa Fe, NM 87505 State of New Mexico
Energy, Minerals and Natural Resources Department

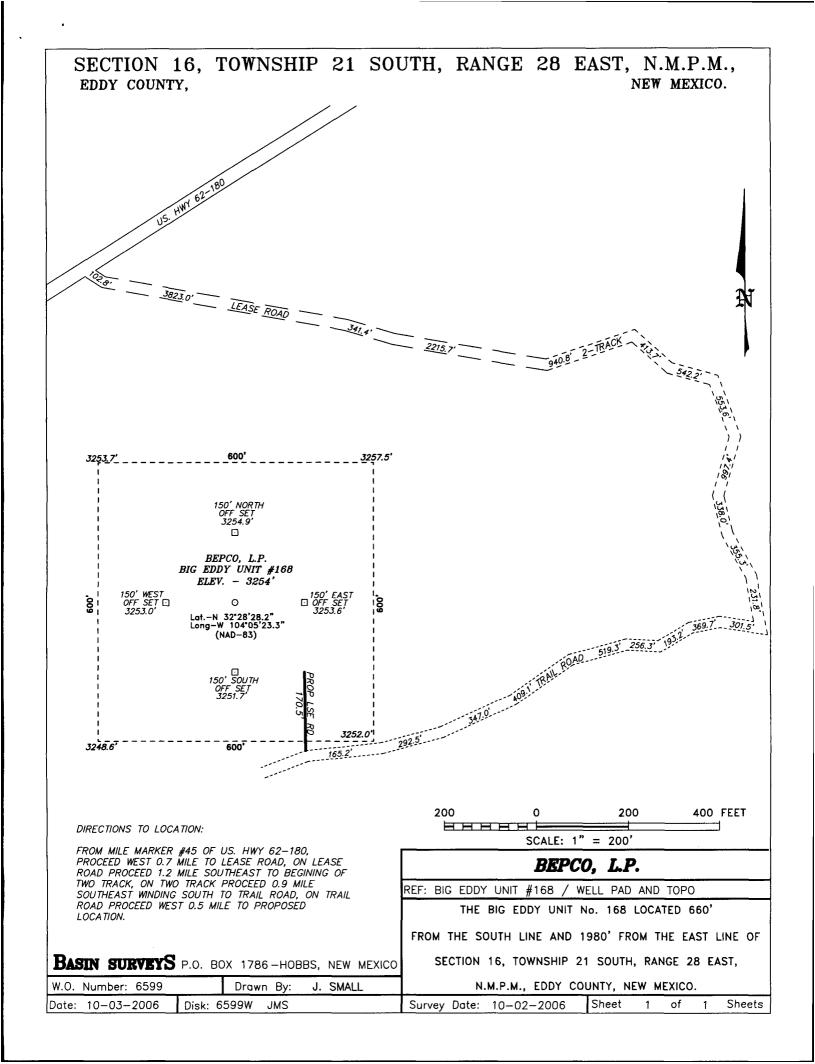
## OIL CONSERVATION DIVISION

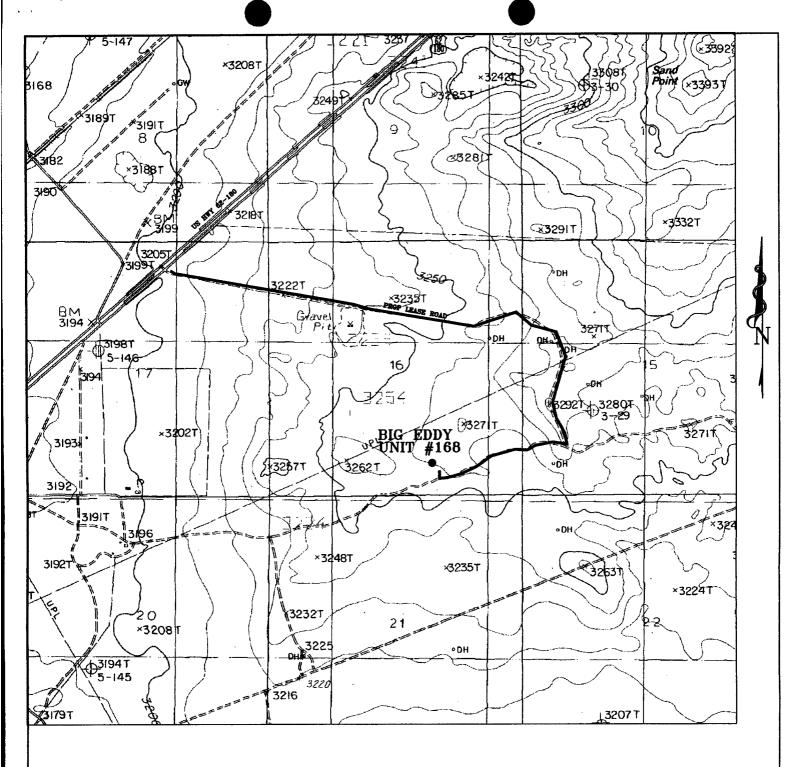
1220 South St. Francis Dr. Santa Fe, New Mexico 87505



## WELL LOCATION AND ACREAGE DEDICATION PLAT

API N	lumber	Pool Code Pool Name Pool Name								
Property Co	ode		-	)	Well Number 168					
OGRED No.						Elevation 3255'				
Surface Location										***************************************
UL or lot No.	Section	Township	Township Range Lot Idn Feet from the North/South line						East/West line	County
0	16	21 S	28 E		66	iO	SOUTH	1980	EAST	EDDY
			Bottom	Hole I	ocation I	f Diffe	rent From Sur	face		
UL or lot No.	Section	Township	Range	Lot Idn	Feet fro	m the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	r Infill C	onsolidation (	Code	Order No.					
NO ALLOV	VABLE W						NTIL ALL INTER APPROVED BY		EN CONSOLIDA	ATED
160.65 ACRES 160.52 ACRES							RES	I hereby cercontained herein the best of my his organization interest or unlead land including the location pursuant owner of such a or to a voluntary compulsory poolis the division.  Signature  CS219  Printed Name	E. Gerha	eation ete to end that ing in the sole an interest, or a intered by
	180.56	gres		3253	7/ /5257!	4	1960'	on this plat was actual surveys supervison and correct to the Date surveyed Signature & Spratessiques	9.9 E	notes of under my true and





BIG EDDY UNIT #168 Located at 660' FSL and 1980' FEL Section 16, Township 21 South, Range 28 East, N.M.P.M., Eddy County, New Mexico.



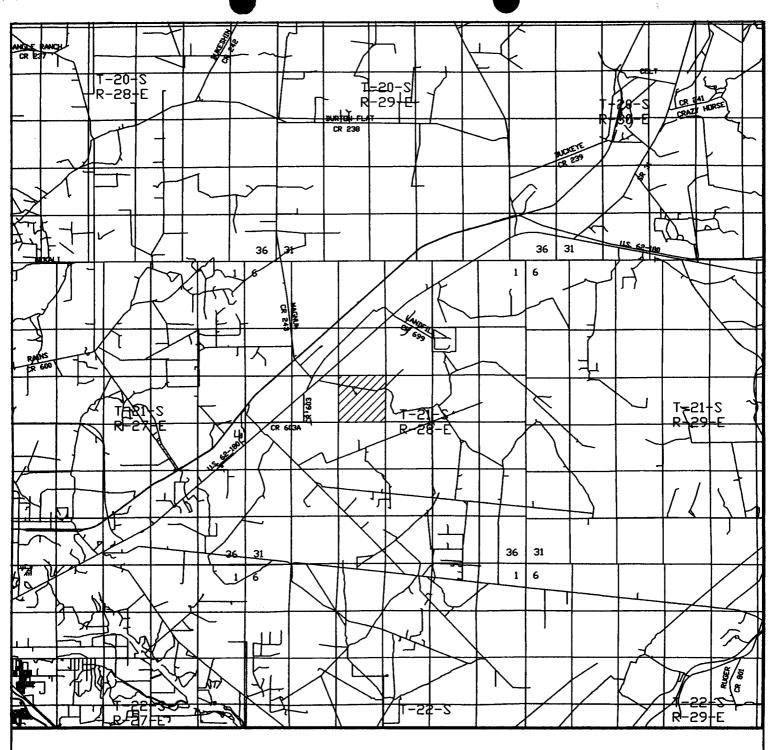
P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (505) 393—7316 — Office (505) 392—3074 — Fax basinsurveys.com W.O. Number: JMS 6599T

Survey Date: 10-02-2006

Scale: 1" = 2000'

Date: 10-03-2006

BEPCO, L.P.



BIG EDDY UNIT #168 Located at 660' FSL and 1980' FEL Section 16, Township 21 South, Range 28 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: JMS 6599T

Survey Date: 10-02-2006

Scale: 1" = 2 MILES

Date: 10-03-2006

BEPCO, L.P.



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

### **BILL RICHARDSON**

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

December 14, 2006 BEPCO,L.P. P.O. Box 2760 Midland, TX 79702

Attn: Annette Childers or To Whom It May Concern:

Dear Annette Childers or To Whom It May Concern:

RE: BEPCO, L.P.: Application to drill (APD) for the Big Eddy Unit # 168

Located in Unit O of Section 16, Township 21 South, Range 28 East, Eddy County, New Mexico NMPM.

In reference to the above noted APD, the New Mexico Oil Conservation Division (NMOCD) will require (in part) that drilling mud samples from the flow line be sampled every 100' in order to determine chloride levels during the drilling of the Capitan Reef section of the well bore. Results are to be submitted to our office before drilling to total depth of the well bore.

Please call me if you have any questions about this matter.

Respectfully yours,

Bryan G. Arrant NMOCD's District II Geologist Artesia, New Mexico 505-748-1283 ext. 103

CC: well file