

ATS-07-300

449

OCD-ARTESIA

Form 3160-3  
(April 2004)

RE-SUBMITTAL

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

**S**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

Month-Year  
MAR - 8 2007  
OCD - ARTESIA, NM

5. Lease Serial No.  
NMLC 069219

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.  
NMNM 68294X

8. Lease Name and Well No.  
BIG EDDY UNIT 152 1776

9. API Well No.  
30-015 - 35481

10. Field and Pool, or Exploratory  
INDIAN FLATS (MORROW)

11. Sec., T. R. M. or Bk. and Survey or Area  
SEC 26, T21S, R28E, MER NMP

12. County or Parish  
EDDY COUNTY

13. State  
NM

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator  
BEPCO, L.P. Roswell Controlled Water Basin 1801

3a. Address P O Box 2760 - Midland, TX 79702

3b. Phone No. (include area code)  
(432) 683-2277

4. Location of Well (Report location clearly and in accordance with any State requirements \*)  
At surface NESE 1980' FSL, 660' FEL, 32.449472 N LAT, 104.050750 W LON  
At proposed prod. zone SAME

14. Distance in miles and direction from nearest town or post office\*  
12 MILES EAST OF CARLSBAD, NM

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
660'

16. No. of acres in lease  
1680

17. Spacing Unit dedicated to this well  
320

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft.  
1700'

19. Proposed Depth  
12,850'

20. BLM/BIA Bond No. on file  
NM 2204

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
3163' GL

22. Approximate date work will start\*  
11/29/2007

23. Estimated duration  
45 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature *Annette Childers*

Name (Printed Typed)  
Annette Childers

Date  
2-1-2007

Title  
Administrative Assistant

Approved by (Signature) */s/ James Stovall*

Name (Printed Typed)  
/s/ James Stovall

Date  
MAR 07 2007

Title  
ACTING FIELD MANAGER

Office  
CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

APPROVAL FOR 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

SEE ATTACHED FOR  
CONDITIONS OF APPLICATION

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

If earthen pits are used in  
association with the drilling of this  
well, an OCD pit permit must be  
obtained prior to pit construction.

## DISTRICT I

1825 N. French Dr., Hobbs, NM 88240

## DISTRICT II

811 South First, Artesia, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

2040 South Pabeco, Santa Fe, NM 87506

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised March 17, 1999

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## OIL CONSERVATION DIVISION

2040 South Pabeco

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 79080	Pool Name INDIAN FLATS MORROW
Property Code 001776	Property Name BIG EDDY UNIT	Well Number 152
OGRID No. 001801	Operator Name BASS ENTERPRISES PRODUCTION COMPANY	Elevation 3208'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	26	21 S	28 E		1980	SOUTH	660	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

Dedicated Acres 320	Joint or Infill I	Consolidation Code	Order No.
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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

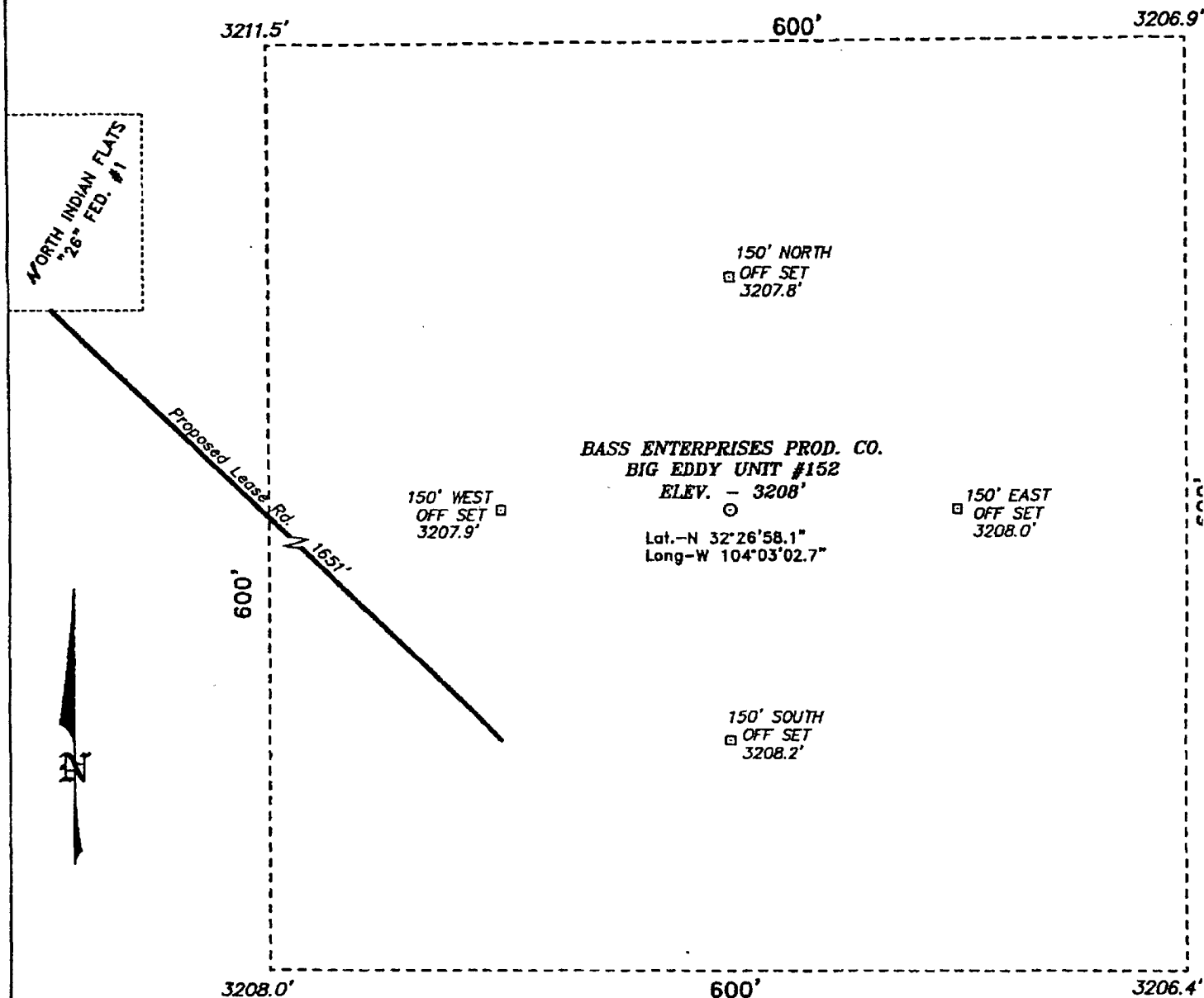
	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.   Signature W.R. DANNELS Printed Name DIVISION DRILLING SUPT. Title Date 2/10/05
	<b>SURVEYOR CERTIFICATION</b>  I hereby certify that the well location shown 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.  JANUARY 21, 2005- Date Surveyed Signature & Seal of Professional Surveyor  Certificate No. Gary L. Jones 7977

**Additional Operator Remarks:**

Surface casing to be set into Rustler below all fresh water sands.  
Production casing will be cemented using Zone Seal Cement.  
Drilling Procedure, BOP Diagram, Anticipated tops & surface plans attached.

This well is located outside the Secretary's Potash area and outside the R-111 area. There are no potash leases within 1 mile of the location.

SECTION 26, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF US HWY 62/180 AND CO. RD. 699 (LANDFILL ROAD), GO SOUTHEAST ON LANDFILL ROAD FOR 1.0 MILE TO LANDFILL; THENCE SOUTHEAST PAST LANDFILL FOR 1.0 MILE TO A "Y", GO RIGHT (WEST) FOR 0.3 MILE TO A DRY HOLE; THENCE GO SOUTH ON PIPELINE R/W FOR 0.8 MILE TO BIG EDDY TANK BATTERY; THENCE SOUTH ON LEASE ROAD FOR 1.0 MILE TO THE BASS NORTH INDIAN FLATS "26" #1 AND PROPOSED LEASE ROAD.



**BASS ENTERPRISES PRODUCTION CO.**

REF: BIG EDDY UNIT No. 152 / Well Pad Topo

THE BIG EDDY UNIT No. 152 LOCATED 1980' FROM  
THE SOUTH LINE AND 660' FROM THE EAST LINE OF  
SECTION 26, TOWNSHIP 21 SOUTH, RANGE 28 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 4995

Drawn By: K. GOAD

Date: 01-26-2005 Disk: K.I.G. CD#7 - 4995A.DWG

Survey Date: 01-21-2005 Sheet 1 of 1 Sheet

**EIGHT POINT DRILLING PROGRAM  
BASS ENTERPRISES PRODUCTION CO.**

**NAME OF WELL: BIG EDDY UNIT #152**

**LEGAL DESCRIPTION - SURFACE: 1980' FSL & 660' FEL, Section 26, T21S, R28E, 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 3230' (est)  
GL 3208'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>	<u>ESTIMATED SUBSEA TOP</u>	<u>BEARING</u>
T/Rustler	Outcrops at surface		
T/Salt	510'	+ 2720'	Barren
T/Delaware Mtn Group	2,690'	+ 540'	Oil/Gas
T/Bone Spring	6,280'	- 3,050'	Oil/Gas
T/Atoka	11,190'	- 7,960'	Oil/Gas
T/UPR Morrow	11,745'	- 8,515'	Oil/Gas
T/Lower Morrow	12,480'	- 9,250'	Oil/Gas
TD	12,850'	- 9,620'	

**POINT 3: CASING PROGRAM**

<u>TYPE</u>	<u>INTERVALS</u>	<u>PURPOSE</u>	<u>CONDITION</u>
20"	0' - 40'	Conductor	Contractor Discretion
13-3/8", 48#, H40, STC	0' - 470'	Surface	New
9-5/8", 36#, K-55, LTC	0' - 2,650'	Intermediate	New
7", 26#, HCP-110, LTC (contingent)	0' - 12,850'	Production Casing	New

see  
COA

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

A rotating head will be nipped up on the surface casing. The rotating head will not be hydro-tested.

A BOP equivalent to Diagram 1 will be nipped up on the intermediate casing. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. will be hydro-tested to 5,000 psi. The annular will be tested to 2500 psi. In addition to the rated working pressure test, a low pressure (250 psi) test will be required. These tests will be performed:

- 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**

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 470'	FW	8.5 - 9.2	45-35	NC	NC	NC	9.5
470' - 2,650'	SBW	9.8 - 10.2	28-30	NC	NC	NC	9.5
2,650' - 9,500'	FW	8.6 - 8.9	28-30	4	2	NC	9.5
9,500' - 11,000'	SBW	9.8 - 10.2	28-30	6	4	<20	9.5
11,000' - TD	BW/Polymer	10.0 - 11.5	32-55	12-20	12-22	10-15	9.5-10.0

**POINT 6: TECHNICAL STAGES OF OPERATION****A) TESTING**

Drill stem tests may be performed on significant shows in zones of interest, but none are anticipated.

**B) LOGGING**

One run at 12,850' PTD.

Run #1:

GR-CNL-LDT-LLD run from TD to ICP, GR-CNL to surface. May run logging suite across Delaware prior to drilling below 6000' if mud log shows warrant.

**C) CORING**

Several cores may be cut in the Morrow formation to determine shale stability and drilling fluid compatibility.

**D) CEMENT**

<u>SURFACE</u> <u>INTERVAL</u>	<u>AMOUNT SX</u>	<u>FT OF</u> <u>FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
Lead 0' - 220' (100% excess)	170	220	Permian Basin Critical Zone + 1/2#/sx Pol-e-flake	10.30	12.80	1.89
Tail 220'-470' (100% Excess)	290	250	Premium Plus + 2% CaCl <sub>2</sub> + 1/2#/sx Pol-e-flake	6.32	14.80	1.34

**INTERMEDIATE**

<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FT OF</u> <u>FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
Lead 0' - 2150' (100% Excess)	600	2150	Interfill C + 1/2#/sx Pol-e-flake	14.10	11.90	2.45
Tail 2150' - 2650' (100% Excess)	240	500	Premium Plus + 2% CaCl <sub>2</sub>	6.34	14.80	1.34

**PRODUCTION** (Two stage w/DV tool @ 8000' and circulate cement to 2500')

<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
1 <sup>st</sup> Stage LEAD 8000'-10,800' (50% excess)	260	2800	Interfill H + 5pps Gillsonite + 0.5% Halad 9 + 1/8 pps Pol-e-flake	13.61	11.90	2.46
TAIL 10,800'-12,850' (50% excess)	280	2050	Super H + 0.5% Halad 344 + 0.4% CFR3 + 5 pps Gillsonite + 1 pps Salt + 0.2% HRT	8.20	13.00	1.67
2 <sup>nd</sup> Stage LEAD 2300'-7300' (50% excess)	450	5000	Interfill H + 1/8 pps Pol-e-flake + 0.5% Halad 9	14.00	11.90	2.45
TAIL 7,300'-8,000' (50% excess)	100	700	Super H + 0.5% Halad 344 + 0.4% CFR3 + 5 pps Gillsonite + 1 pps Salt + 0.2% HRT	8.20	13.00	1.67

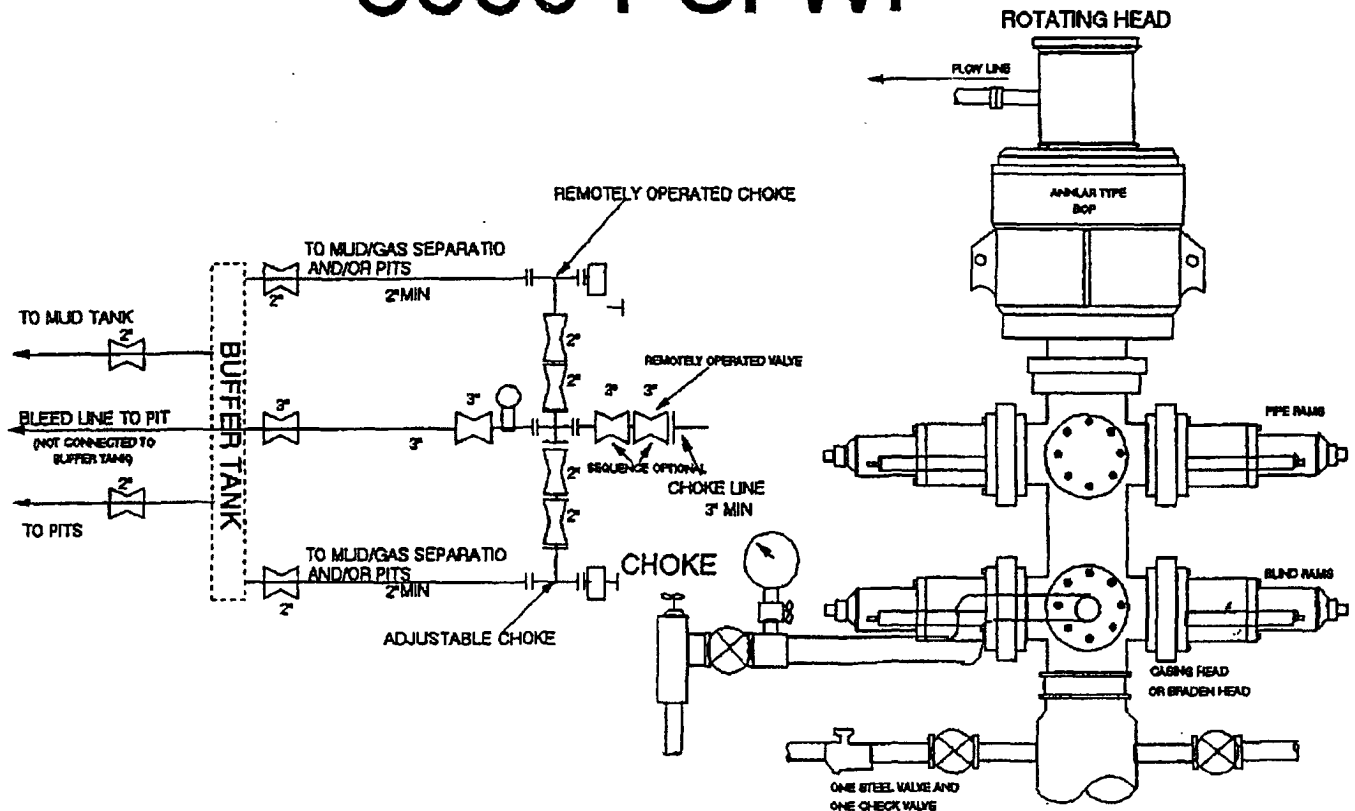
**E) DIRECTIONAL DRILLING**

No directional services anticipated. A straight hole will be drilled to 12,850' TD.

**POINT 7: ANTICIPATED RESERVOIR CONDITIONS**

Normal pressures are anticipated throughout the Delaware, Bone Spring & Wolfcamp sections. The Atoka expected BHP is 6580 (max) or an equivalent mud weight of 11.3 ppg. The Morrow will be normally pressured. The expected BHT at TD is 200°F. No H<sub>2</sub>S is anticipated.

# 5000 PSI WP



## THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- One double gate blowout preventer with lower rams for pipe and upper rams blind, all hydraulically controlled.
- Opening on preventers between rams to be flanged, studded or clamped and at least two inches in diameter.
- 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 required with sufficient volume to operate (close, open, and re-close) the preventers.
- All connections to and from preventers to have a pressure rating equivalent to that of the BOP's.
- Manual controls to be installed before drilling cement plug.
- 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.



**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

45 days drilling operations

20 days completion operations

2/10/05  
Date

WCH/cdg

William R. Dannels  
William R. Dannels

018

→ PAULA

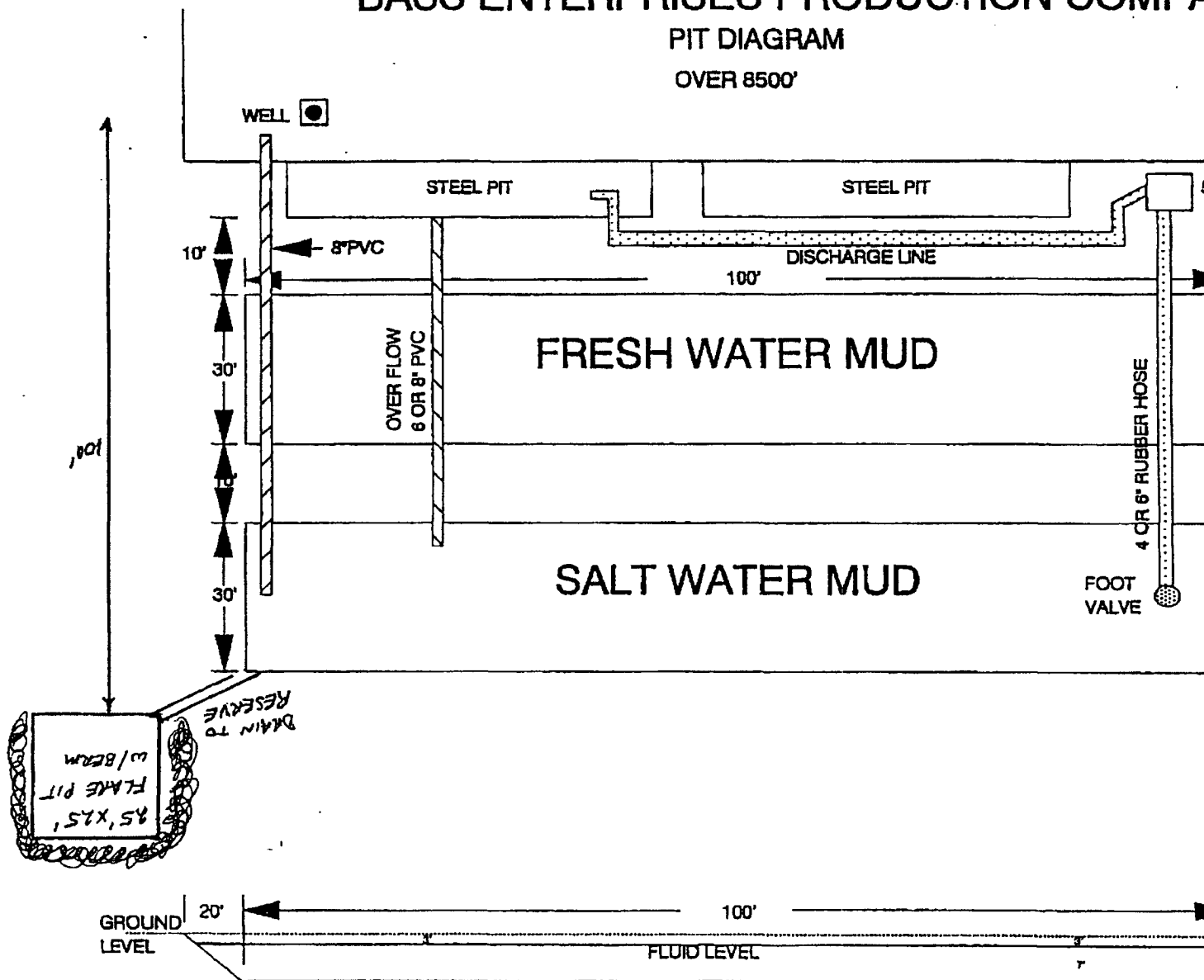
BEPCO

02/11/05 09:43 FAX 432 687 0329

# BASS ENTERPRISES PRODUCTION COMPA

## PIT DIAGRAM

OVER 8500'



LINE PITS WITH 20 MILL PLASTIC

**MULTI-POINT SURFACE USE PLAN****NAME OF WELL: BIG EDDY UNIT #152****LEGAL DESCRIPTION – SURFACE:** 1980' FSL & 660' FEL, Section 26, T21S-R28E, Eddy County, NM**POINT 1: EXISTING ROADS****A) Proposed Well Site Location**

See Exhibit "A" and Survey plats.

**B) Existing Roads:**

Turn South off Hwy 62-180 between mile markers 42 and 43 and go 4.4 miles. Road tees into "Waterline" road, turn left and go 2.1 miles, turn left again and go 2.5 miles. Veer left and go 1.1 miles, veer left again and go 1.2 miles to North Indian Flats 26 Federal #1 well. New lease road goes 0.3 miles Southeast to location.

**C) Existing Road Maintenance or Improvement Plan:**

See Exhibit "A"

**POINT 2: NEW PLANNED ACCESS ROUTE****A) Route Location:**

See Exhibit "A". The proposed new road will be 12' wide and approximately 1650' long from existing lease road. The road will be constructed of watered and compacted caliche.

**B) Width**

12' Wide.

**C) Maximum Grade**

Not Applicable.

**D) Turnouts**

As required by BLM stipulations

**E) Culverts, Cattle Guards, and Surfacing Equipment**

None

**POINT 3: LOCATION OF EXISTING WELLS**

Exhibits "A" and "B" indicate existing wells within the surrounding area.

**POINT 4: LOCATION OF EXSITING OR PROPOSED FACILITIES****A) Existing facilities within one mile owned or controlled by lessee/operator:**

Bass production facilities are located at Bass Big Eddy Unit #66, #70 & #74 wellsites. Bass Production facilities are also located at Bass North Indian Flats 26 Federal #1.

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: BEPCO, LP  
Well Name & No. Big Eddy Unit # 152  
Location: 1980'FSL, 660'FEL, SEC 26, T21S, R28E, Eddy County, NM  
Lease: LC-069219

### I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:

1. Spudding
2. Cementing casing: 20 inch 13.375 inch 9.625 inch, 7 inch
3. BOP tests
  - Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822
  - Lea County call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612

B. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated 500 feet prior to drilling into the Atoka formation. A copy of the plan shall be posted at the drilling site.

C. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

D. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute. (R-111-P area only)

E. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

### II. CASING:

A. The 13.375 inch surface casing shall be set above the salt, should it occur more shallow, at least 25 feet into the Rustler Anhydrite @ approximately 470 feet and cement circulated to the surface.

1. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
2. Wait on Cement (WOC) time for a primary cement job will be a minimum of 12 hours for a non-water basin, 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, which ever is greater. (This is to include the lead cement)
3. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds of compression strength, which ever is greater.
4. If cement falls back, Remedial cementing shall be completed prior to drilling out that string.

B. The minimum required fill of cement behind the 9.625 inch intermediate casing is circulate cement to the surface. This casing will be set below the salt @ approximately 2650'. If cement does not circulate see A.1 thru 4.

C. The minimum required fill of cement behind the 7 inch production casing is cement shall extend upward a minimum of 350 feet above the base of the intermediate casing string.

D. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **III. PRESSURE CONTROL:**

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53.
- B. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the intermediate casing well bore shall be 2000 psi.
- C. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 9.625 inch casing shall be 5000 psi.
- D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - 1. The tests shall be done by an independent service company.
  - 2. The results of the test shall be reported to the appropriate BLM office.
  - 3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of the independent service company test will be submitted to the appropriate BLM office.
  - 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53. The test will be held for a minimum of 10 minutes if the test is done with a test plug and 30 minutes without a test plug.
  - 5. BOP/BOPE must be tested by an independent service within 500 feet of the top of the **Wolfcamp** Formation. This test does not exclude the test prior to drilling out the casing shoe as per onshore order No. 2.

### **IV. DRILLING MUD:**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- 1. Recording pit level indicator to indicate volume gains and losses.
- 2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- 3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.

### **V. Hazards:**

- 1. Our geologist has indicated the potential for possible shallow Karst structures, and lost circulation zones in the Delaware and Bone Spring formations.
- 2. Our geologist has indicated the potential for possible abnormal pressure in the Wolfcamp, Strawn, Atoka and Morrow formations

**Engineering may be contacted at 505-706-2779 for variances if necessary.**

**FWright 2/23/07**