

N.M. Oil Cons. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

Form 3160-3  
(August 1999)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

AUG 17 2005

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

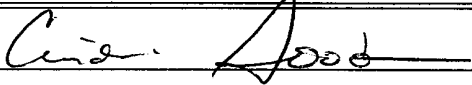
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC060613
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Bass Enterprises Production Co. 1801		7. If Unit or CA Agreement, Name and No. NMNM68249 1775
3a. Address P. O. Box 2760 Midland, TX 79702		8. Lease Name and Well No. BIG EDDY UNIT 147
3b. Phone No. (include area code) (432)683-2277		9. API Well No. 30-015-32859
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENW 660 FNL, 1980 FWL At proposed prod. zone SAME C		10. Field and Pool, or Exploratory EAST CARLSBAD MORROW
14. Distance in miles and direction from nearest town or post office* 9 MILES EAST OF CARLSBAD NM		11. Sec., T., R., M., or Blk. and Survey or Area SEC 7, T22S, R28E Mer NMP b
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 1156.51	12. County or Parish EDDY
17. Spacing Unit dedicated to this well 320.00	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 4742	19. Proposed Depth 12600 MD	
20. BLM/BIA Bond No. on file NM2204		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3146 GL	22. Approximate date work will start* 09/01/2005	23. Estimated duration 45 DAYS

24. Attachments CARLSBAD CONTROLLED WATER BASIN

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

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan  | 5. Operation certification.  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Cindi Goodman	Date 06/01/2005
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Title Production Clerk
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Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G. Lara	Date AUG 16 2005
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Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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Application approval does not warrant or certify the 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 willful States and false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

29.5  
5 ft

Any new pit constructed  
must be permitted under  
Rule 50.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

WITNESS: 13 3/8 Cement Job

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

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

DISTRICT I  
1625 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 Pacheco, Santa Fe, NM 87505

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 Pacheco  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		East Carlsbad (Morrow)
Property Code	Property Name	Well Number
001775	BIG EDDY UNIT	147
OCRD No.	Operator Name	Elevation
001801	BASS ENTERPRISES PRODUCTION COMPANY	3146'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	6	22 S	28 E		660	NORTH	1980	WEST	EDDY

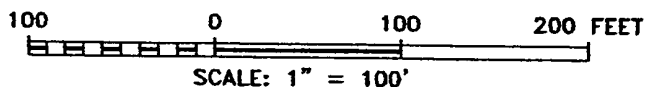
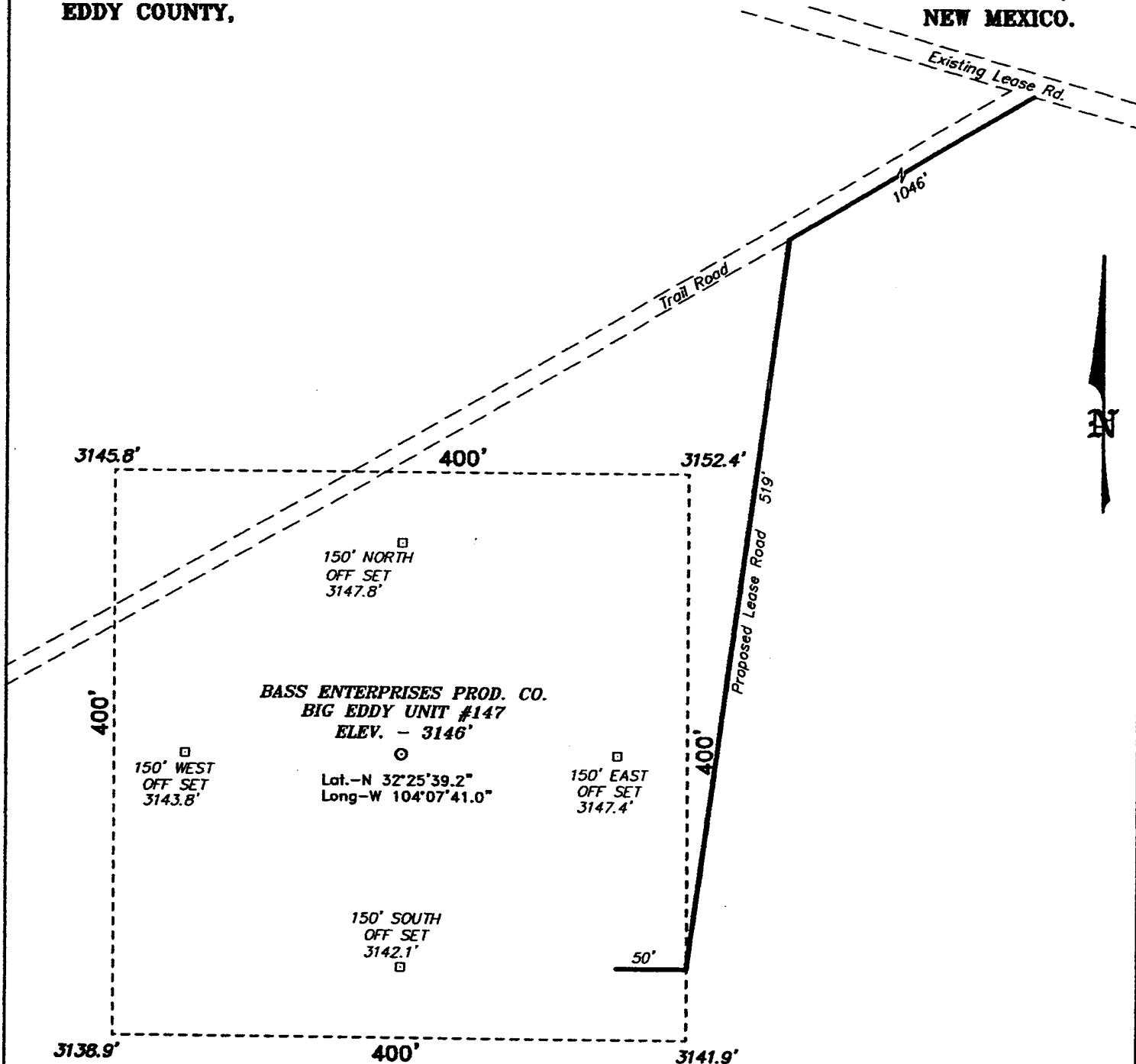
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
320									

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>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>William R. Dannels</i></p> <p>Signature</p> <p>W.R. DANNELS</p> <p>Printed Name</p> <p>DIVISION DRILLING SUPT.</p> <p>Title</p> <p>5/21/03</p> <p>Date</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>MARCH 28, 2003</p> <p>Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p>W.O. No. 3161</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>

**SECTION 6, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.**



**DIRECTIONS TO LOCATION:**

FROM THE JUNCTION OF CO. RD. 603A AND US HWY 62/180, GO SOUTHWEST ON HWY 62/180 FOR APPROX. 4.75 MILES TO A LEASE ROAD; THENCE EASTERLY FOR APPROX. 3.5 MILES TO PROPOSED LEASE ROAD AND TRAIL ROAD.

**BASS ENTERPRISES PRODUCTION CO.**

REF: BIG EDDY UNIT No. 147 / Well Pad Topo

THE BIG EDDY UNIT No. 147 LOCATED 660' FROM  
THE NORTH LINE AND 1980' FROM THE WEST LINE OF  
SECTION 6, TOWNSHIP 22 SOUTH, RANGE 28 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 3161

Drawn By: K. GOAD

Date: 04-01-2003 Disk: KJG CD#7 - 3161A.DWG

Survey Date: 03-28-2003 Sheet 1 of 1 Sheets

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

**NAME OF WELL: BIG EDDY UNIT #147**

**LEGAL DESCRIPTION - SURFACE:** 660' FNL & 1980' FWL, Section 6, T22S, 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 3168' (est)  
GL 3146'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>	<u>ESTIMATED SUBSEA TOP</u>	<u>BEARING</u>
T/Rustler	338'	+ 2,830'	Barren
T/Delaware Sands	2,368'	+ 800'	Oil/Gas
T/Bone Spring	5,768'	- 2,600'	Oil/Gas
T/Wolfcamp	9,218'	- 6,052'	Oil/Gas
T/Strawn	10,503'	- 7,335'	Oil/Gas
T/Strawn "C"	10,758'	- 7,590'	Oil/Gas
T/Atoka	10,893'	- 7,725'	Oil/Gas
T/Morrow	11,498'	- 8,330'	Oil/Gas
TD	12,600'	- 9,432'	

**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", 54.5#, J-55, STC	0' - 500'	Surface	New
9-5/8", 40#, N80, LTC	0' - 1,000'	Intermediate	New
9-5/8", 40#, K-55, LTC	1,000' - 2,700'	Intermediate	New
7", 26#, P-110, LTC	0' - 11,000'	Intermediate	New
7", 26#, S-95, LTC	11,000' - 11,200'	Intermediate	New
5", 18#, P110, STL	10,800' - 12,600'	Production Liner	New

#### 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 first and second intermediate casings. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. will be hydro-tested to 5,000 psi on the first intermediate and the second intermediate casing. 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' – 500'	FW	8.5 - 9.2	45-35	NC	NC	NC	9.5
500' – 2,700'	BW	10.0 – 10.2	28-30	NC	NC	NC	9.5
2,540' – 9,000'	FW	8.6 – 8.9	28-30	4	2	NC	9.5
9,000' – 11,200'	CBW	8.9 – 11.5	28-30	6	4	<20	9.5
11,200' – TD	CBW/Polymer	9.0 – 9.5	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

Run #1:

GR-CNL-LDT-LLD run from 11,200' to TD to first ICP, GR-CNL to surface. May run logging suite across Delaware prior to drilling below 6000' if mud log shows warrant.

Run #2:

GR-CNL-LDT-LLD run from TD to second ICP, FMI as required.

##### C) CORING

No cores are anticipated.

## D) CEMENT

<u>INTERVAL</u>	<u>AMOUNT SX</u>	<u>FT OF FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
<u>SURFACE</u>						
Lead						
0' – 200' (100% excess)	170	200	Permian Basin Critical + Zone + Pol-e-flake	10.30	12.80	1.89
Tail						
200'-500' (100% Excess)	340	300	Premium Plus + 2% CaCl <sub>2</sub> + 1/8#/sx Pol-e-flake	6.32	14.80	1.34
<u>INTERMEDIATE</u>						
<u>INTERVAL</u>	<u>AMOUNT SXS</u>	<u>FT OF FILL</u>	<u>TYPE</u>	<u>GALS/SX</u>	<u>PPG</u>	<u>FT<sup>3</sup>/SX</u>
Lead						
0' – 2265' (100% Excess)	590	2265	Interfill C + 1/8#/sx + Pol-e-flake	14.10	11.90	2.45
Tail						
2265' – 2700' (100% Excess)	235	435	Premium Plus + 2% CaCl <sub>2</sub>	6.34	14.80	1.34
<u>PRODUCTION</u> (Two stage w/DV tool @ 8000' and circulate cement to 2000')						
<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>
<u>1<sup>st</sup> Stage</u>						
LEAD						
8000'-10,500' (50% excess)	225	2500	Interfill H + 5pps Gilsonite + 0.5% Halad 9 + 1/8 pps Pol-e-flake	13.61	11.90	2.46
TAIL						
10,500'-11,200' (50% excess)	100	700	Super H + 0.5% Halad 344 + 0.4% CFR3 + 5 pps Gilsonite + 1 pps Salt + 0.2% HRT	8.20	13.00	1.67
<u>2<sup>nd</sup> Stage</u>						
LEAD						
2000'-7,300' (50% excess)	495	5300	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 Gilsonite + 1 pps Salt + 0.2% HRT	8.20	13.00	1.67
<u>PRODUCTION LINER</u>						
10,800'-12,600' (25% excess)	155	1800	Class H + 0.8% Halad 322 + 0.6% Halad 344 + 0.2% HR-7 + 5pps Microbond M	5.68	15.40	1.28

## E) DIRECTIONAL DRILLING

No directional services anticipated. A straight hole will be drilled to 12,500' TD.

## POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout the Delaware, Bone Spring & Wolfcamp sections. The Strawn expected BHP is 5515 (max) or an equivalent mud weight of 10.0 ppg. The Morrow will be normally pressured. 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 200°F. No H<sub>2</sub>S is anticipated.

## **MULTI-POINT SURFACE USE PLAN**

**NAME OF WELL: BIG EDDY UNIT #147**

**LEGAL DESCRIPTION – SURFACE:** 660' FNL & 1980' FWL, Section 6, T22S-R28E, Eddy County, NM

### **POINT 1: EXISTING ROADS**

A) Proposed Well Site Location

See Exhibit "B".

B) Existing Roads:

Turn off Hwy 62-180 onto "Sheriffs Posse Road" between mile markers 38 and 39 southeast and go 3.5 miles. Turn right and go 0.4 miles to new location.

C) Existing Road Maintenance or Improve Plan:

See Exhibit "B"

### **POINT 2: NEW PLANNED ACCESS ROUTE**

A) Route Location:

See Exhibit "B". The new road will be 12' wide and approximately 1960' 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**

Exhibit "A" indicates 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:

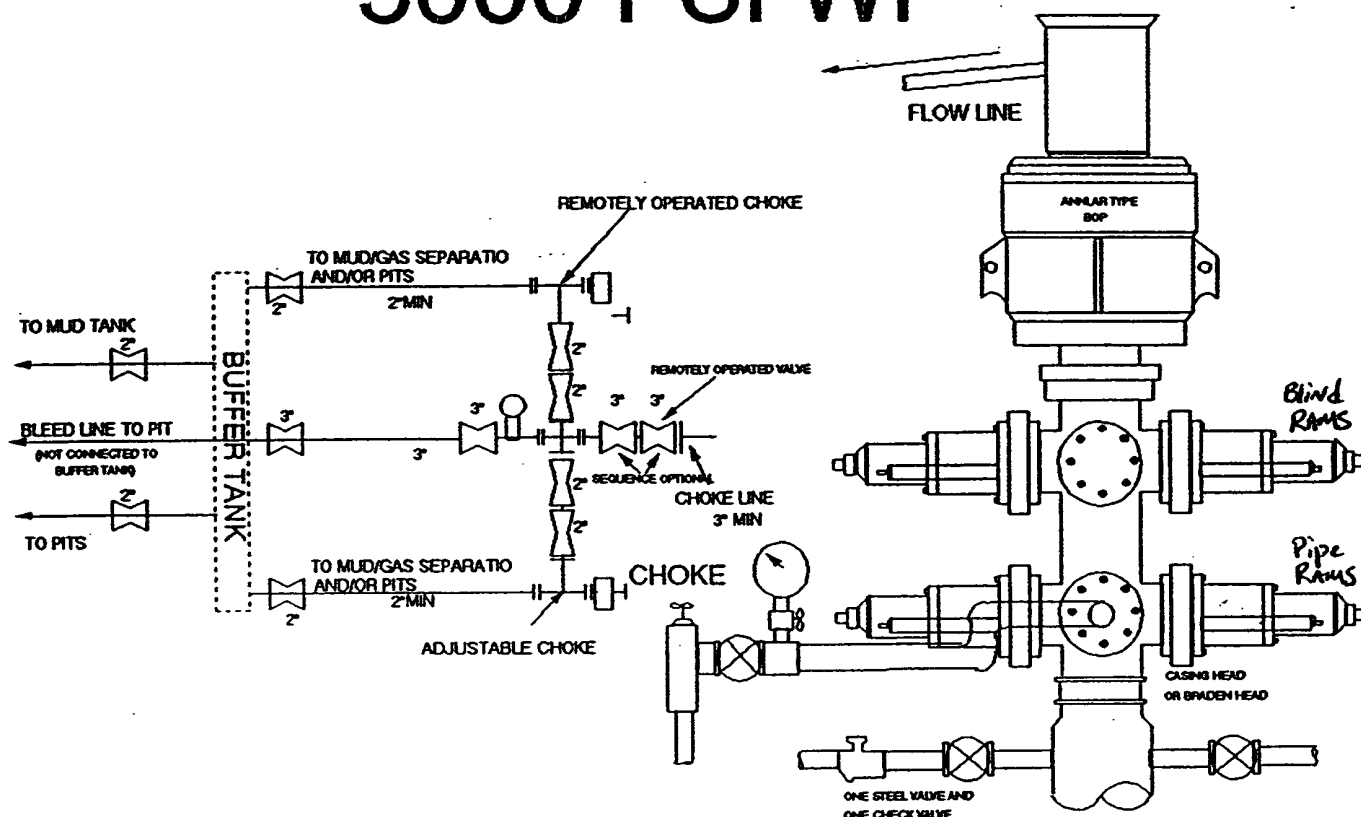
None

B) New Facilities in the Event of Production:

New production facilities will be installed at the new location.



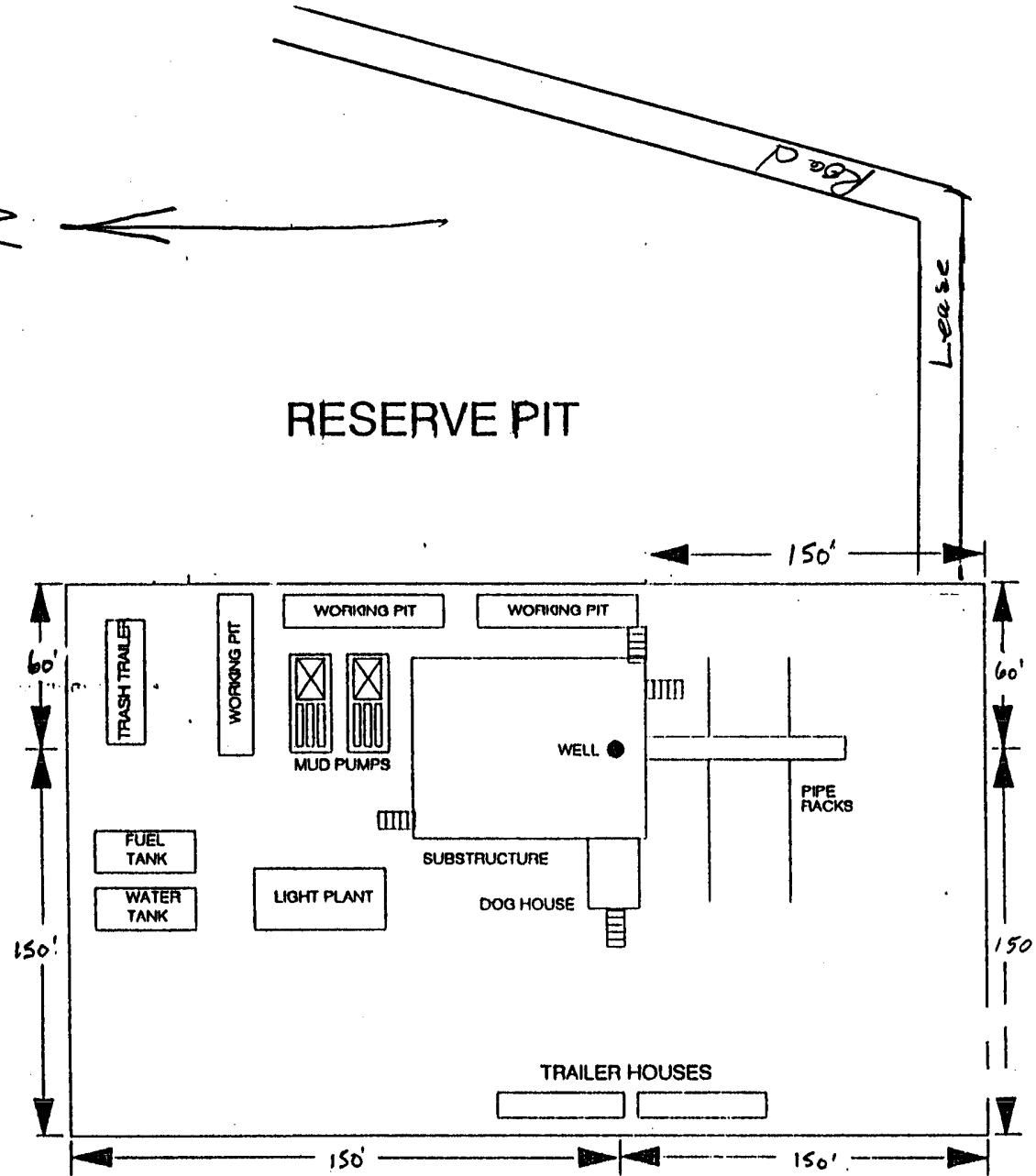
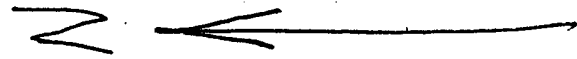
# 5000 PSI WP



## THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- A. One double gate blowout preventer with lower rams for pipe and upper rams blind, 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 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.
- H. All chokes will be adjustable. Choke spool may be used between rams.

DIAGRAM 1



"V" Door South  
as per Barry Howl.

EXHIBIT "C"

BEU # 147

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: BASS ENTERPRISES PRODUCTION CO.  
Well Name & No. 147 - BIG EDDY UNIT  
Location: 660' FNL & 1980' FWL - SEC 6 - T22S - R28E - EDDY COUNTY  
Lease: LC-060613

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 (Daytime) or (505) 361-2822 (After hours) -for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13-3/8 inch 9-5/8 inch 7 inch 5 inch production liner

C. BOP tests

2 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.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

### II. CASING:

1. The 13-3/8 inch surface casing shall be set at 500 feet and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is circulate cement to the surface.

3. The minimum required fill of cement behind the 7 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.

4. The minimum required fill of cement behind the 5 inch liner is cement shall extend upward to the top of the 5 inch liner at approximately 10800 feet.

(ORIG. SGD.) LES BABYAK

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

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 9-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
2. Minimum working pressure of the blowout preventer while drilling the surface and intermediate strings shall be 2000 psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) while drilling below the 9-5/8 inch casing shall be 5000 psi.
3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
  - The tests shall be done by an independent service company.
  - The results of the test shall be reported to the appropriate BLM office.
  - Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
  - Testing must be done in a safe workman-like manner. Hard line connections shall be required.
  - BOPE must be tested prior to drilling into the Wolfcamp formation by an independent service company.

### **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.