N M Oil Cons. DIV-Dist. 2 Resubmitted

Form 3160-3
(April 2002)

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

Avenue
3210

DEPA
BUR

FORM APPROVED
OMB No. 1004-0136
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC059365

6. If Indian, Allottee or Tribe Name

1a. Type of Work: [X] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.
NMNM68294

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [ ] Multiple Zone

8. Lease Name and Well No.
Big Eddy Unit 151

2. Name of Operator
Bass Enterprieses Production Co.

9. API Well No.
30-015-33157

3a. Address P. O. Box 2760
Midland, Tx 79702

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

10. Field and Pool, or Exploratory
Carlsbad Morrow East

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENE 1650' FNL & 990' FEL
At proposed prod. zone Same

RECEIVED
JAN 23 2006
OCD-ARTESIA

11. Sec., T., R., M., or Blk, and Survey or Area
Sec 30, T21S, R28E, Mer NMP
SME: BLM

14. Distance in miles and direction from nearest town or post office*
9 miles east of Carlsbad, New Mexico

12. County or Parish
Eddy

13. State
NM

15. Distance from porposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
1043' from unit line	2553.61	320.00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
2500'	12,500' MD	

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3178' GL	07/15/2006	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:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operation certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
Annette Childers	Annette Childers	12/07/2005

Title
Administrative Assistant

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Joe G. Lara	/s/ Joe G. Lara	JAN 19 2006

Title	Office
ACTING FIELD MANAGER	CARLSBAD FIELD OFFICE

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 willfully to make to any department or agency of the United States and false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**(Instructions on page 2)*

Carlsbad Controlled Water Basin

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

WITNESS: 13 3/8" CASING CEMENT SUR

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

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	73920	Carlsbad; Morrow, East

Property Code	Property Name	Well Number
	BIG EDDY UNIT	151

OGRID No.	Operator Name	Elevation
	BASS ENTERPRISES PRODUCTION COMPANY	3178'

Surface Location

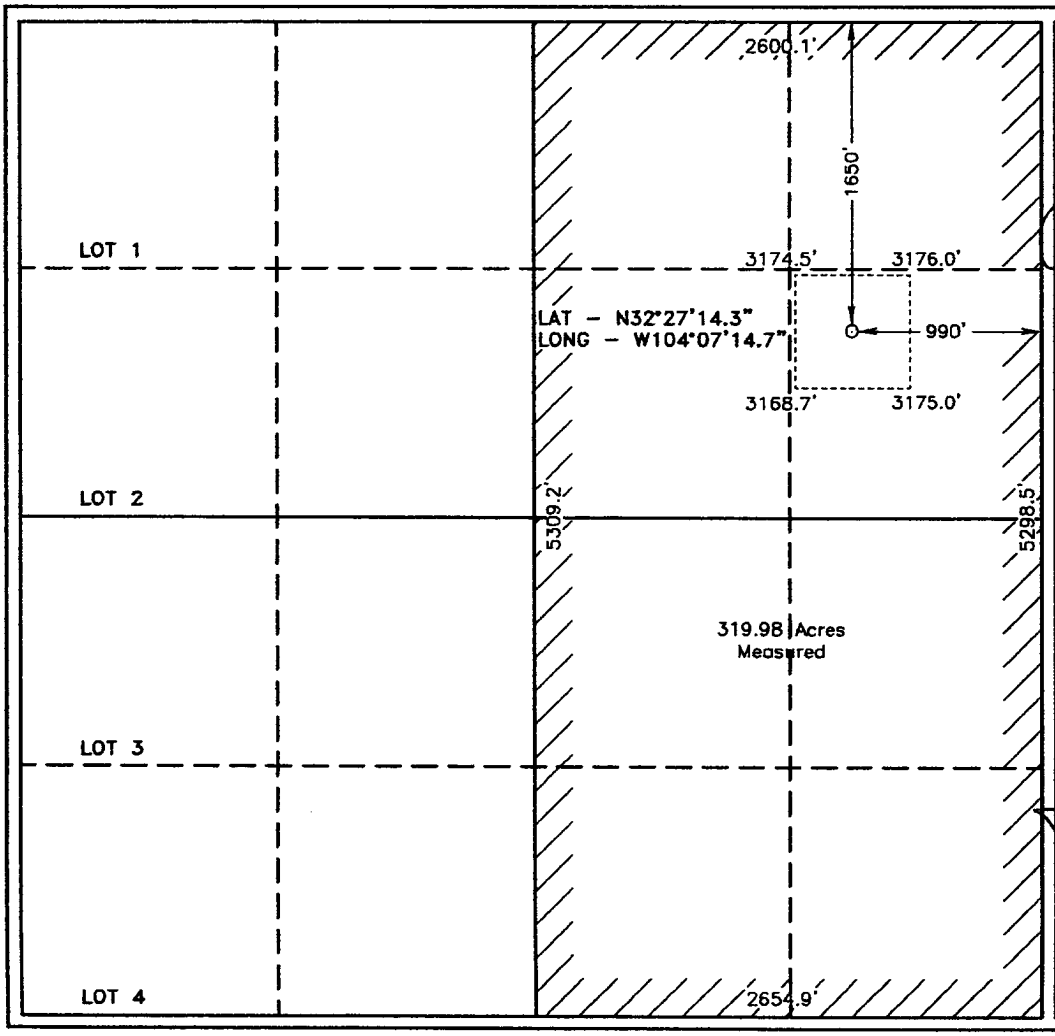
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	21 S	28 E		1650	NORTH	990	EAST	EDDY

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	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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

W.R. DANNELS
Printed Name

DIVISION DRILLING SUPT.
Title

12/12/05
Date

SURVEYOR CERTIFICATION

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 supervison, and that the same is true and correct to the best of my belief.

OCTOBER 30, 2003
Date Surveyed

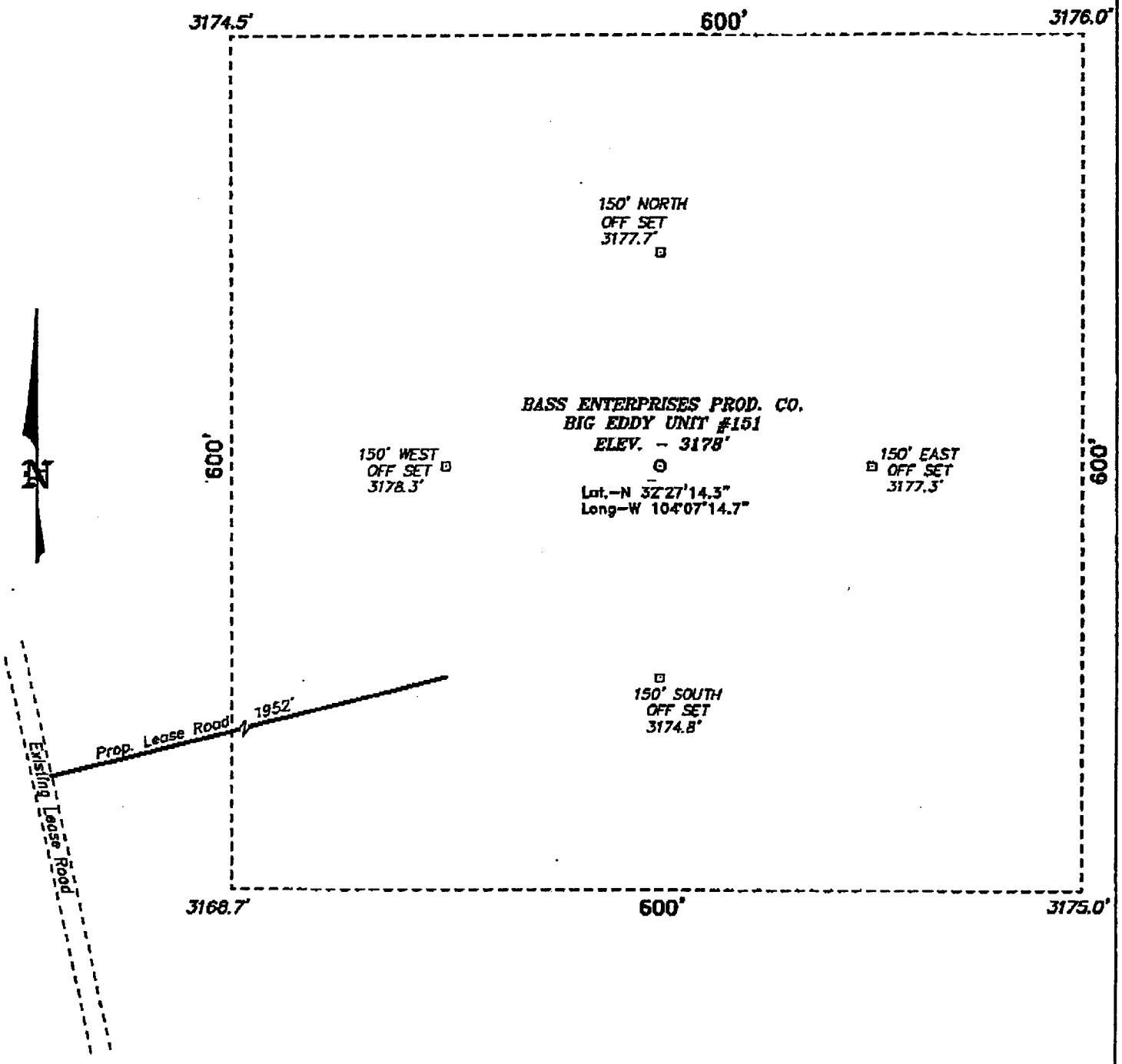
Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR
BASIN SURVEYS

W.O. No. 3745

Certificate No. Gary L. Jones 7977

SECTION 30, TOWNSHIP 21 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



100 0 100 200 FEET

SCALE: 1" = 100'

DIRECTIONS TO LOCATION:

FROM MILE MARKER 43 ON US HWY 62/180, GO WEST FOR 0.4 MILE TO LEASE ROAD; THENCE SOUTH ON LEASE ROAD FOR 0.3 MILE TO A "Y"; THENCE GO RIGHT AT "Y" FOR 1.1 MILE TO PROPOSED LEASE ROAD.

BASS ENTERPRISES PRODUCTION CO.

REF: BIG EDDY UNIT No. 151 / Well Pad Topo

THE BIG EDDY UNIT No. 151 LOCATED 1650' FROM THE NORTH LINE AND 990' FROM THE EAST LINE OF SECTION 30, 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: 3745	Drawn By: K. GOAD		
Date: 10-31-2003	Disk: KJG CD#7 – 3745A.DWG	Survey Date: 10-30-2003	Sheet 1 of 1 Sheets

EIGHT POINT DRILLING PROGRAM
BASS ENTERPRISES PRODUCTION CO.

NAME OF WELL: BIG EDDY UNIT #151

LEGAL DESCRIPTION - SURFACE: 1650' FNL & 990' FEL, Section 30, 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 3200' (est)
GL 3178'

FORMATION	ESTIMATED TOP FROM KB	ESTIMATED SUBSEA TOP	BEARING
T/Capitan Reef	945'	+ 2,255'	Barren
B/Reef (T/Delaware Sands)	2,575'	+ 625'	Oil/Gas
T/Bone Spring	5,730'	- 2,530'	Barren
T/Wolfcamp	9,175'	- 5,975'	Oil/Gas
T/Strawn	10,390'	- 7,190'	Oil/Gas
T/Strawn "C"	10,630'	- 7,430'	Oil/Gas
T/Atoka	10,780'	- 7,580'	Oil/Gas
T/UPR Morrow	11,325'	- 8,125'	Oil/Gas
T/Middle Morrow	11,645'	- 8,445'	Oil/Gas
T/Lower Morrow	11,910'	- 8,710'	Oil/Gas
TD	12,500'	- 9,300'	

POINT 3: CASING PROGRAM

TYPE	INTERVALS	PURPOSE	CONDITION
20"	0' - 40'	Conductor	Contractor Discretion
13-3/8", 48#, H40, STC	0' - 550'	Surface	New
9-5/8", 40#, K-55, LTC	0' - 2,575'	Intermediate	New
7", 26#, HCP-110, LTC (contingent)	0' - 11,200'	Intermediate	New
4-1/2", 13.5#, HCP-110, LTC (contingent)	10,800' - 12,500'	Production Liner	New
5-1/2", 17#, HCP110, LTC	0' – 12,500'	Production Casing	New

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

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

A BOP equivalent to Diagram 1 will be nippled 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' – 550'	FW	8.5 - 9.2	45-35	NC	NC	NC	9.5
550' – 2,900'	FW	8.5 – 9.2	28-30	NC	NC	NC	9.5
2,900' – 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

Two runs only if hole can not be drilled to 12,500' PTD without second intermediate casing; otherwise, one run at 12,500' PTD.

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

INTERVAL	AMOUNT SX	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE						
Lead						
0' – 250' (100% excess)	200	250	Permian Basin Critical Zone + ¼#/sx Pol-e-flake	10.30	12.80	1.89
Tail						
250'-550' (100% Excess)	340	300	Premium Plus + 2% $CaCl_2$ + ¼#/sx Pol-e-flake	6.32	14.80	1.34
INTERMEDIATE						
INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
Lead						
0' – 2400' (100% Excess)	550	2400	Interfill C + ¼#/sx Pol-e-flake	14.10	11.90	2.45
Tail						
2400' – 2900' (100% Excess)	240	500	Premium Plus + 2% $CaCl_2$	6.34	14.80	1.34
PRODUCTION (Two stage w/DV tool @ 8000' and circulate cement to 2000')						
INTERVAL	AMOUNT SXS	FILL	TYPE	GALS/SX	PPG	FT^3/SX
1st Stage						
LEAD						
8000'-10,500' (50% excess)	400	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)	200	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
2nd Stage						
LEAD						
2240'-7,300' (50% excess)	800	5060	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)	200	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
PRODUCTION LINER						
10,800'-12,500' (25% excess)	145	1700	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_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

45 days drilling operations

20 days completion operations

GEG/mac

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: BIG EDDY UNIT #151

LEGAL DESCRIPTION – SURFACE: 1650' FNL & 990' FEL, Section 30, T21S-R28E, Eddy County, NM

POINT 1: EXISTING ROADS

A) Proposed Well Site Location

See Exhibit "B".

B) Existing Roads:

Turn off Hwy 62-180 between mile markers 42 and 43 south and go 0.4 miles. Turn right and go 1.1 miles, turn left along power lines 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 2000' 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:

Bass production facilities are located at Bass Big Eddy Unit #39 & #143 wellsite.

POINT 4: LOCATION OF EXSITING OR PROPOSED FACILITIES

B) New Facilities in the Event of Production:

New production facilities will be installed at the new location.

C) Rehabilitation of Disturbed Areas Unnecessary for Production:

Following the construction of production facilities, those access areas required for continued production will be graded to provide drainage and minimize erosion. The areas necessary for use will be graded to blend in the surrounding topography – See Point 10.

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

A) Location and Type of Water Supply

Fresh water and brine will be hauled from the City of Carlsbad. Brine water will be hauled from Champion Brine Water Station, 3.5 miles east and 2.5 miles south of Carlsbad.

B) Water Transportation System

Water hauling to the location will be over the existing and proposed roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

A) Materials

Exhibit "B" shows location of caliche source.

B) Land Ownership

Federally Owned.

C) Materials Foreign to the Site

No construction materials foreign to this area are anticipated for this drill site.

D) Access Roads

No additional access roads are required.

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the reserve pit.

B) Drilling Fluids

Drilling fluids will be contained in the reserve pit.

C) Produced Fluids

Water Production will be contained in the reserve pit.

Hydrocarbon fluid or other fluids that may be produced during testing will be retained in the test tanks. Prior to cleanup operations, any hydrocarbon material in the reserve pit will be removed by skimming or burning as the situation would dictate.

D) Sewage

Current laws and regulations pertaining to the disposal of human waste will be complied with.

E) Garbage

Portable containers will be utilized for garbage disposal during the drilling of this well.

F) Cleanup of Well Site

Upon release of the drilling rig, the surface of the drilling pad will be graded to accommodate a completion rig if testing indicates potential productive zones. In any case, the "mouse" hole and the "rat" hole will be covered. The reserve pit will be fenced and the fence maintained until the pit is backfilled. Reasonable cleanup will be performed prior to the final restoration of the site.

POINT 8: ANCILLARY FACILITIES

None Required.

POINT 9: WELL SITE LAYOUT

A) Rig Orientation and Layout

Exhibit "C" show the dimensions of the well pad and reserve pits and the location of major rig components. Only minor leveling of the well site will be required. No significant cuts or fills will be necessary.

B) Locations of Pits and Access Road

See Exhibits "B" and "C"

C) Lining of the Pits

The reserve pit will be lined with plastic.

POINT 10: PLANS FOR RESTORATION OF THE SERVICE

A) Reserve Pit Cleanup

A pit will be fenced at the time of rig release and shall be maintained until the pit is backfilled. Previous to backfill operations, any hydrocarbon material on the pit surface shall be removed. The fluids and solids contained in the pit shall be backfilled with soil excavated from the site and soil adjacent to the reserve pit. The restored surface of the pit shall be contoured to prevent impoundment of surface water flow. Water – bars will be constructed as needed to prevent excessive erosion. Topsoil, as available, shall be placed over the restored surface in a uniform layer. The area will be seeded according to the BLM stipulations during the appropriate season following restoration.

B) Restoration Plans – Production Developed

The reserve pit will be backfilled and restored as described above under Item A. In addition, those areas not required for production will be graded to blend with the surrounding topography. Topsoil, as available, will be placed upon those areas and seeded. The portion of the site required for production will be graded to minimize erosion and provide access during inclement conditions. Following depletion and abandonment of the site, restoration procedures will be those that follow under Item C.

C) Restoration Plans – No Production Developed

The reserve pit will be restored as described above. With no production developed, the entire surface disturbed by construction of the well site will be restored. The site will be contoured to blend with the surrounding topography and provide drainage of surface water. The topsoil, as available, shall be replaced in a uniform layer and seeded according to the BLM stipulations.

D) Rehabilitation Timetable

Upon completion of drilling operations, the initial cleanup of the site will be performed as soon as weather and site conditions allow economic execution of the work.

POINT 11: OTHER INFORMATION

A) Terrain

Relatively Flat

B) Soil

Caliche and sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There are no ponds, lakes, streams, or rivers within several miles of the wellsite.

F) Water Wells

There are no water wells within 1 mile of location.

G) Residences and Buildings

None in the immediate vicinity.

H) Historical Sites

None observed.

I) Archeological Resources

An archeological survey will be obtained for this area. The survey area will be a 750' x 750' square with its center on the wellhead stake. Before any construction begins, a full and complete archeological survey will be submitted to the BLM. Any location or construction conflicts will be resolved before construction begins.

J) Surface Ownership

The well site and access road are both on federally owned land.

K) Well signs will be posted at the drilling site.

L) Open Pits

All pits containing liquid or mud will be fenced and bird-netted.

POINT 12: OPERATOR'S FIELD REPRESENTATIVE

(Field personnel responsible for compliance with development plan for surface use).

DRILLING
William R. Dannels
Box 2760
Midland, Texas 79702
(432) 683-2277

PRODUCTION
Mike Waygood
3104 East Green Street
Carlsbad, New Mexico 88220
(505) 887-7329

Michael Lyon
Box 2760
Midland, Texas 79702
(432) 683-2277

POINT 13: CERTIFICATION

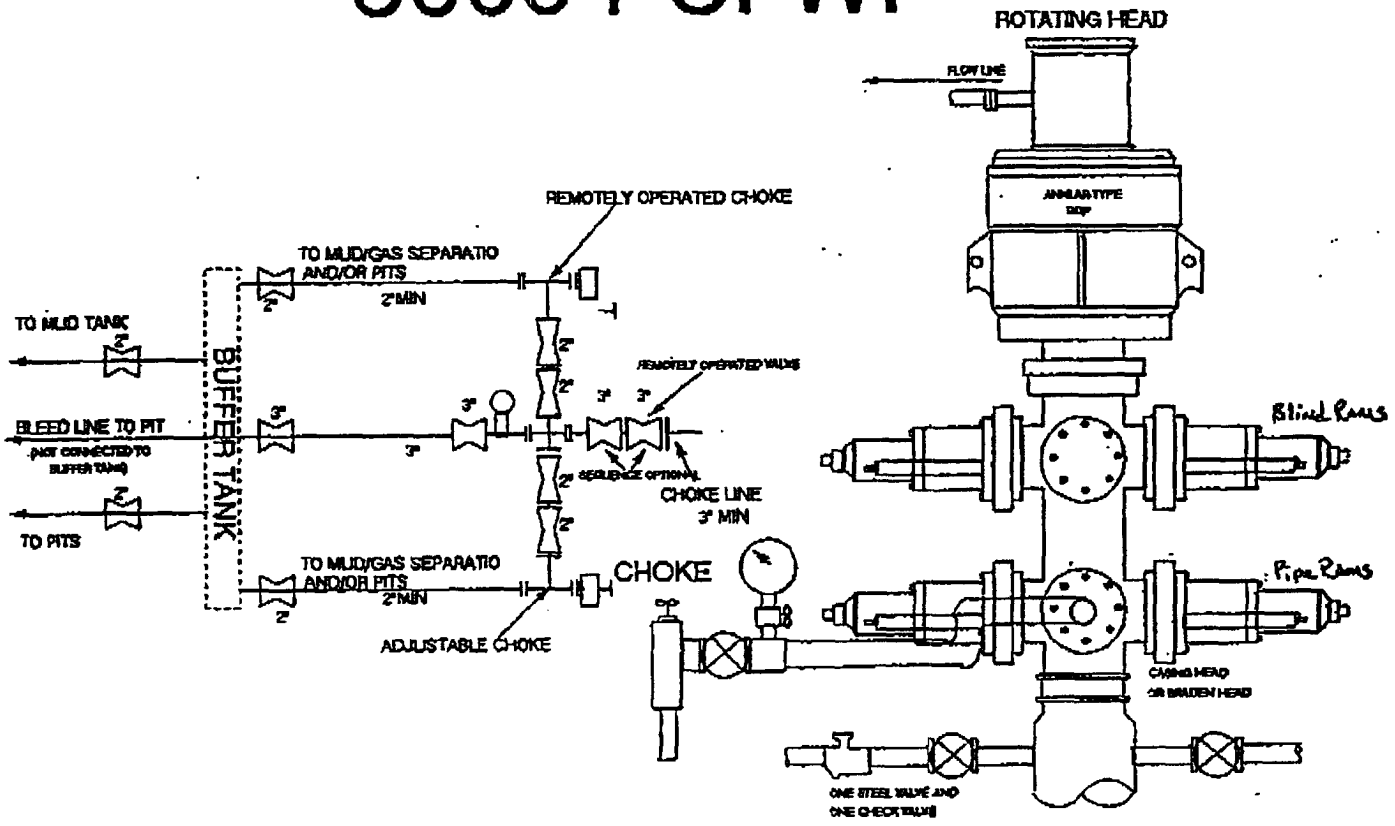
I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Bass Enterprises Production Co. and it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

12/12/05
Date

William R. Dannels

GEG/mac

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

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: BASS ENTERPRISES PRODUCTION CO.
Well Name & No. 151 – BIG EDDY UNIT
Location: 1650' FNL & 990' FEL – SEC 30 – T21S – R28E – EDDY COUNTY
Lease: LC-059365

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 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 **5-1/2*** inch

***(Note: 7" casing set @ 11,200' with a 4.500" liner @ 10,800'-12,500' may be substituted depending on hole conditions.)**

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 **550 feet**, below usable water 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.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is **cement shall extend upward a minimum of 500 feet above the top of the uppermost hydrocarbon bearing interval.**

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 and related equipment (BOPE) is **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.