

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

JUN 07 2006

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMLC-069159
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input 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. NMNM68294X
3a. Address P. O. Box 2760 Midland, Tx 79702		8. Lease Name and Well No. 1776 Big Eddy Unit 155
3b. Phone No. (include area code) (432)683-2277		9. API Well No. 30-015-34921
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE 990' FNL & 810' FWL, Lat 32.368333 deg N, Lon 104.047306 deg W At proposed prod. zone Same		10. Field and Pool, or Exploratory Dublin Ranch (Morrow)
14. Distance in miles and direction from nearest town or post office* 15 miles east of Carlsbad, New Mexico		11. Sec., T., R., M., or Blk, and Survey or Area Sec 25, T22S, R28E, Mer NMP SME: BLM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 810'	16. No. of Acres in lease 1596	12. County or Parish Eddy
17. Spacing Unit dedicated to this well 339.005	13. State NM	
18. Distance from proposed location* 3323' to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth .13,400' MD	20. BLM/BIA Bond No. on file 123967222
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3153' GL	22. Approximate date work will start* 06/01/2006	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:

- | | |
|---|--|
| 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 <i>Cindi Goodman</i>	Name (Printed/Typed) Cindi Goodman	Date 04/19/2006
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Title
Production Clerk

Approved by (Signature) /s/ Linda S. C. Rundell	Name (Printed/Typed) /s/ Linda S. C. Rundell	Date MAY 30 2006
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Title
STATE DIRECTOROffice
NM STATE 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 fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

Witness Surface Casing

Carlsbad Controlled Water Books

5a 17
> 9.5

DISTRICT I
1325 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 76140	Pool Name Dublin Ranch (Morrow)
Property Code 001776	Property Name BIG EDDY UNIT	Well Number 155
OGRID No. 001801	Operator Name BASS ENTERPRISES PRODUCTION COMPANY	Elevation 3153'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 4	25	22 S	28 E		990	NORTH	810	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 339.005	Joint or Infill N	Consolidation Code	Order No.						

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. Signature W.R. DANNELS Printed Name DIVISION DRILLING SUPT. Title 4/19/06 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 supervision, and that the same is true and correct to the best of my belief. FEBRUARY 27, 2006 Date Surveyed Signature Professional Surveyor NEW MEXICO 7977 No. 6272 Certificate No. Gary L. Jones 7977 BASIN SURVEYS	

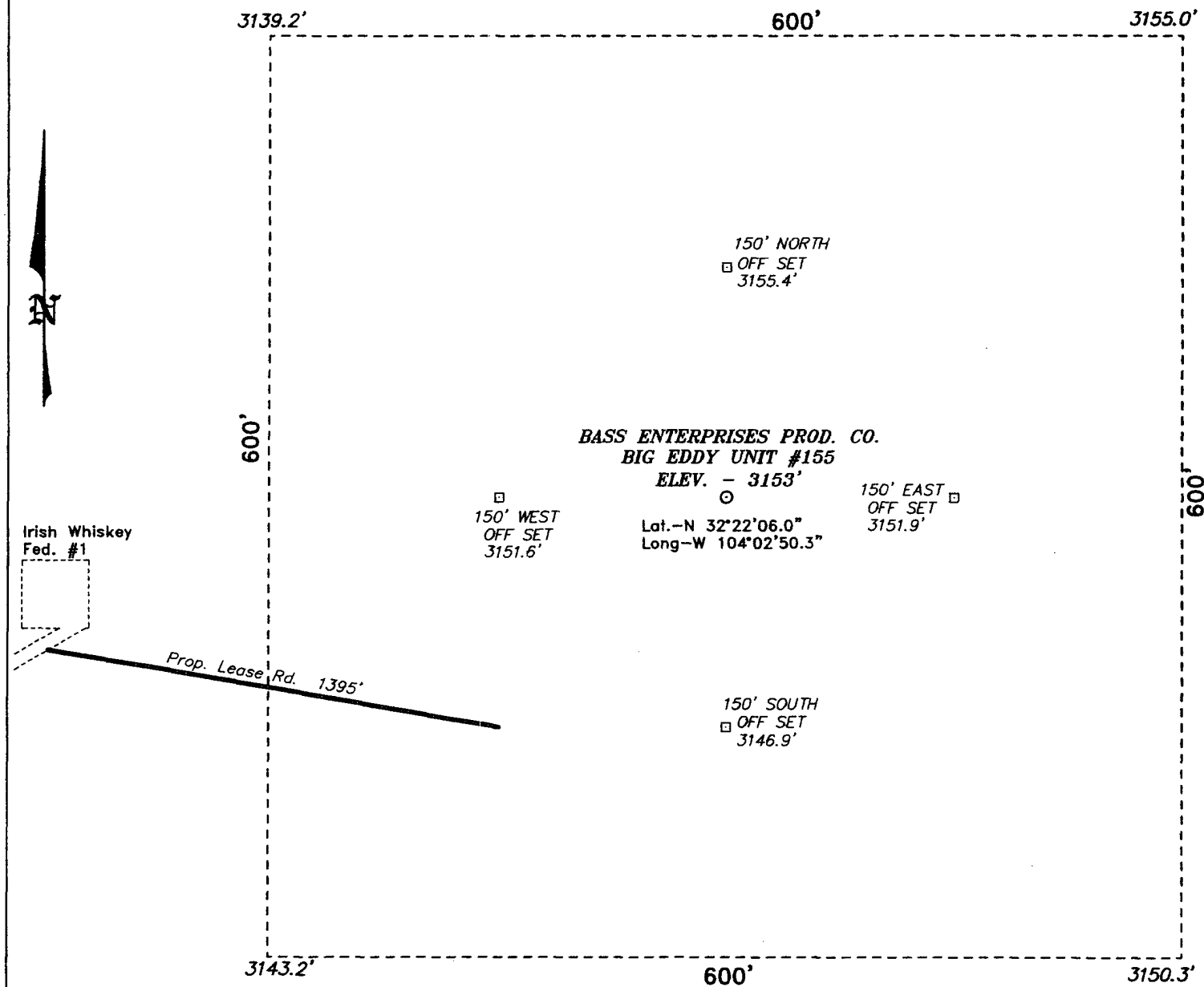
Surface casing to be set into the Rustler below all fresh water sands.

Production casing will be cemented using Howco Interfill system with TOC 500' above all productive intervals.

Drilling Procedure, BOP diagram, anticipated tops and surface plans attached.

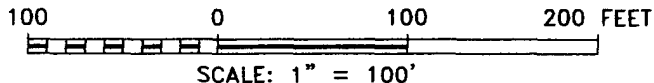
This well is located inside the Secretary's Potash area and outside the R-111 Potash area. There are no potash leases within 1 mile of the location.

SECTION 25, TOWNSHIP 22 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. 605, GO SOUTHEAST ON CO. RD. 605 FOR 8.7 MILES; THENCE EAST FOR 0.5 MILE; THENCE NORTHEAST FOR 0.8 MILE; THENCE NORTHWEST FOR 0.3 MILE; THENCE EAST FOR 0.1 MILE TO THE PROPOSED LEASE ROAD.



BASS ENTERPRISES PRODUCTION CO.

REF: BIG EDDY UNIT No. 155 / Well Pad Topo

THE BIG EDDY UNIT No. 155 LOCATED 990' FROM
THE NORTH LINE AND 810' FROM THE WEST LINE OF
SECTION 25, 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: 6272

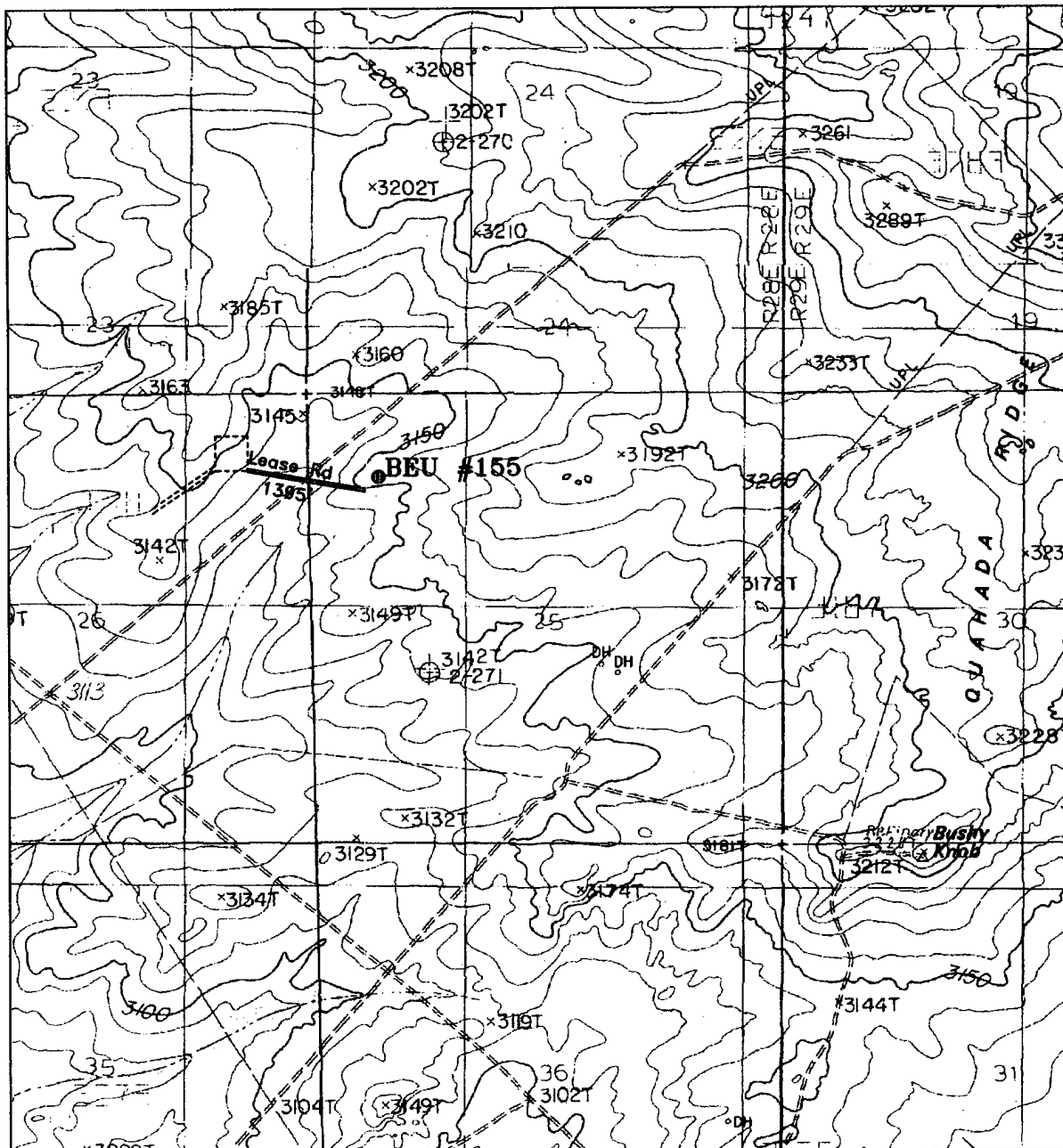
Drawn By: K. GOAD

Date: 02-28-2006

Disk: KJG CD#7 - 6272A.DWG

Survey Date: 02-27-2006

Sheet 1 of 1 Sheets



BIG EDDY UNIT #155

Located at 990' FNL and 810' FWL
 Section 25, Township 22 South, Range 28 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: 6272AA - KJG #7

Survey Date: 02-27-2006

Scale: 1" = 2000'

Date: 02-28-2006

**BASS ENTERPRISES
PRODUCTION CO.**

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

NAME OF WELL: BIG EDDY UNIT #155

LEGAL DESCRIPTION - SURFACE: 990' FNL & 810' FWL, Section 25, 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 3180' (est)
GL 3153'

<u>FORMATION</u>	<u>ESTIMATED TOP FROM KB</u>	<u>ESTIMATED SUBSEA TOP</u>	<u>BEARING</u>
T/Salt	477'	+ 2,703'	Barren
T/Lamar	2,865'	+ 315'	Barren
T/Wolfcamp	9,810'	- 6,630'	Oil/Gas
TD	13,400'	- 10,220'	

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' - 467'	Surface	New WITNESS
9-5/8", 36#, K-55, LTC	0' - 6,350'	Intermediate	New
5-1/2", 17#, HCP110, LTC	0' - 13,400'	Production	New

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOP equivalent to Diagram 1 will be nipped up on the surface and intermediate casings. The BOPE on the surface casing will be tested to 70% of interval yield or 1000 psig whichever is less using the rig pump.

On the intermediate casing the BOPE will be hydro-statically tested by independent tester to 5000 psig and 250 psig. BOPE includes choke manifold, upper & lower Kelly cocks, kill lines, etc. The annular preventor will be tested to 2500 psig. 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

<u>DEPTH</u>	<u>MUD TYPE</u>	<u>WEIGHT</u>	<u>FV</u>	<u>PV</u>	<u>YP</u>	<u>FL</u>	<u>Ph</u>
0' - 467'	FW	8.5 - 9.2	45-35	NC	NC	NC	9.5
467' - 6,350'	BW	10.0	28-30	NC	NC	NC	9.5
6,350' - 9,000'	FW	8.6 - 8.9	28-30	4	2	NC	9.5
9,000' - TD	CBW/Polymer	8.9 - 10.5	28-30	6	4	<20	9.5

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 13,400' (TD) to intermediate casing at 6350', GR-CNL to surface. May run FMI logging over Morrow.

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>FT³/SX</u>
<u>SURFACE</u>						
Lead						
0' - 467'	525	467	Premium Plus + 2% CaCl ₂	6.32	14.8	1.34
(100% Excess)			+ 1/4#/sx Pol-e-flake			
<u>INTERMEDIATE</u>						
Lead						
0' - 5850'	2325	5850	Interfill C + 1/4#/sx	14.10	11.90	2.45
(100% Excess)			Pol-e-flake			
Tail						
5850' - 6350'	375	500	Premium Plus + 2%	6.34	14.80	1.34
(100% Excess)			CaCl ₂			
<u>PRODUCTION</u>						
1 st Stage						
LEAD						
5850'-9300'	550	3450	Interfill H + 5pps Gilsonite	13.61	11.90	2.47
(50% excess)			+ 0.5% Halad 9 + 1/8 pps			
			Pol-e-flake			
TAIL						
9300'-13,400'	800	4100	Super H + 0.5% Halad 344	8.20	13.00	1.67
(50% excess)			+ 0.4% CFR3 + 5 pps Gilsonite			
			+ 1 pps Salt + 0.2% HRT			

E) DIRECTIONAL DRILLING

No directional services anticipated. A straight hole will be drilled to 13,400' 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 Atoka is usually over pressured 10.5 to 11.5 ppg. However the direct offset Marbob Irish Whiskey Federal #1 did not need mud weights over 10 ppg (according to bit records). The well plan therefore reflects this. 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 H₂S 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 #155

LEGAL DESCRIPTION – SURFACE: 990' FNL & 810' FWL, Section 25, T21S-R28E, Eddy County, NM

POINT 1: EXISTING ROADS

A) Proposed Well Site Location

See Exhibit "A".

B) Existing Roads:

From junction of US Hwy 62/180 and Co Road 605, go southeast on Co Road 605 for 8.7 miles, turn east for 0.5 miles, then northeast for 0.8 miles, turn northwest for 0.3 miles, then east for 0.1 mile to proposed lease road.

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 1395' 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) No Existing facilities within one mile owned or controlled by lessee/operator:

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 at Big Eddy Unit #155 (Sec 25, T22S, R28E). Powerlines if required will follow existing or proposed lease roads.

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 "A" shows location of caliche source. It is planned to use on-site caliche if possible. Pits are located in Sec 8, T22S, R28E and Sec 9, T23S, R28E if necessary.

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

As described in point 2, 1395' of new lease road will be built. Exhibit B.

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" shows 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. Closest known water well is SWSE Sec 15, T22S, R28E. (approx 1-1/2 miles northeast of BEU #155).

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 600' x 600' 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

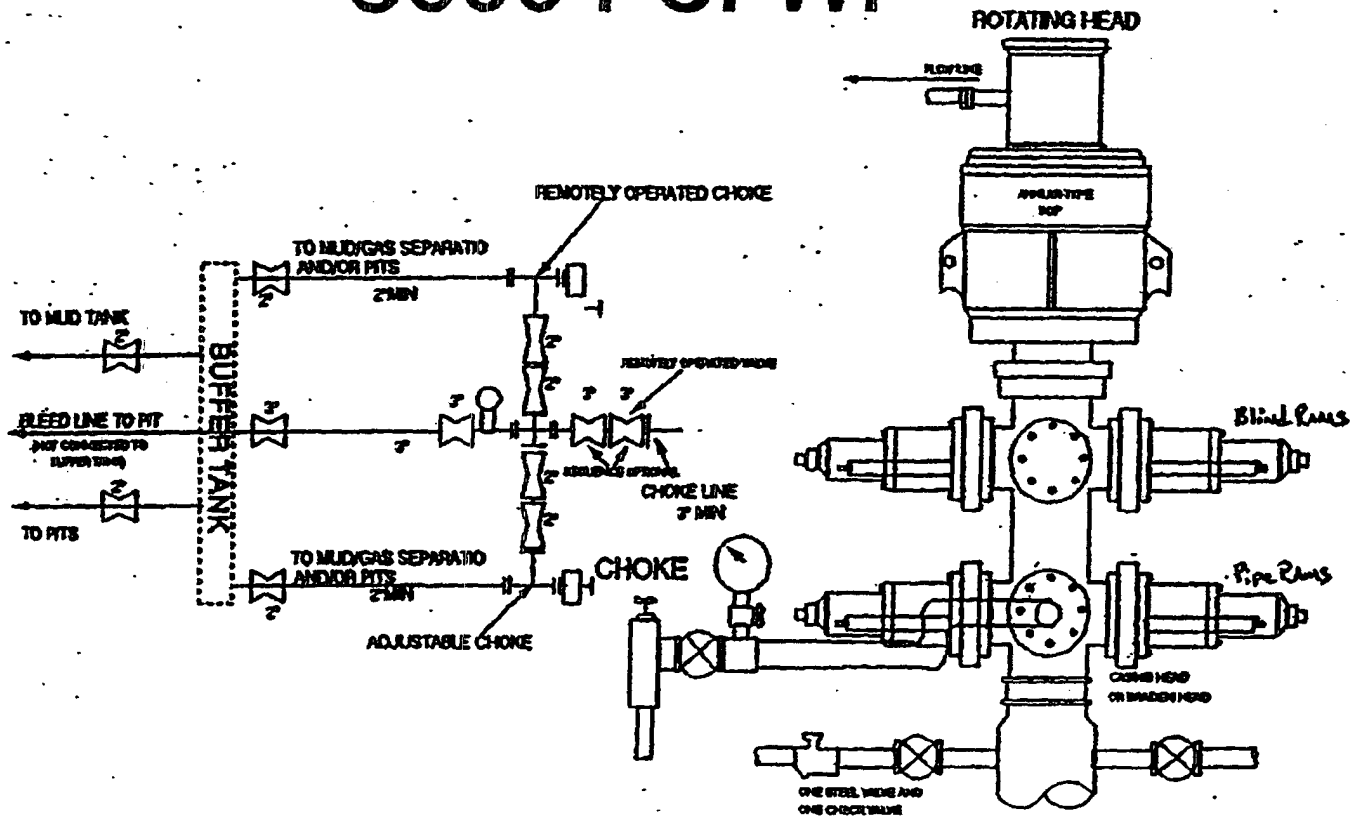
I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Bass Enterprises Production Co. and its 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.

4/19/06
Date

William R. Dannels
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. Big Eddy Unit #155
Location: 990' FNL, 810' FWL, Section 25, T. 22 S., R. 28 E., Eddy County, New Mexico
Lease: NM-069159A

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:
 - A. Well spud
 - B. Cementing casing: 13-3/8 inch 9-5/8 inch 5-1/2 inch
 - 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 approximately 467 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 to be circulated to the surface.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is to be sufficient to reach at least 500 feet above the top of the uppermost hydrocarbon productive 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 13-3/8 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.

Note: The surface casing may be tested with rig pumps.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) 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.

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:

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

5/3/06

acs

5/3/2006

acs