

By Dec

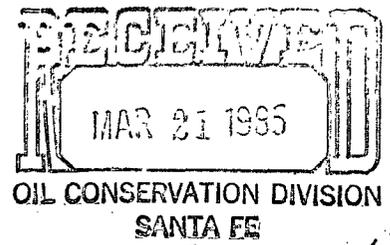
NSL-2012  
RULE-104(FE)

Release Immediately  
No offsets  
Date  
order  
March 26, 1985

DANIEL S. NUTTER  
REGISTERED PETROLEUM ENGINEER  
PETROLEUM CONSULTATION AND STATE AND FEDERAL REGULATORY SERVICES  
105 EAST ALCANTE  
SANTA FE, NEW MEXICO 87501  
PHONE (505) 982-0757

March 20, 1985

Indian Flats Morrow



320 Acre dedication  
S/2 Section 26 - 21 - 28

Mr. Richard L. Stamets  
Division Director  
Oil Conservation Division  
Energy and Minerals Department  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Application For Administrative  
Approval, Unorthodox Gas Well  
Location, Eddy Co., New Mexico

Dear Mr. Stamets:

This is the application of Perry R. Bass for administrative approval for an exception to the provisions of Division Rule 104 C. II for the unorthodox location of Big Eddy Unit Well No. 108, a proposed gas well which would be drilled at a point 1980 feet from the South line and 1500 feet from the East line of Section 26, Township 21 South, Range 28 East, NMPM, Indian Draw Field, Eddy County, New Mexico.

This well is projected to the Morrow formation with a possible completion also in the Atoka formation, and would have dedicated thereto the S/2 of the aforesaid Section 26.

Because of ancient artifacts discovered during the archeological survey, the United States Bureau of Land Management had requested that the proposed well be moved to the above-described location, and has now given its approval to the drilling permit, subject to like approval by the State, as evidenced by the enclosed Federal Form 9-331-C.

All proration units offsetting the S/2 of Section 26 are owned and operated by Bass (See Exhibit No. 1 attached hereto), and no notice to offset operators or waiting period is therefore required.

Richard L. Stamets  
March 20, 1985  
Page 2

Inasmuch as Bass would like to commence operations on the subject well as soon as possible, your earliest convenient approval of this application for both the Atoka and Morrow formations is respectfully requested.

Very truly yours,

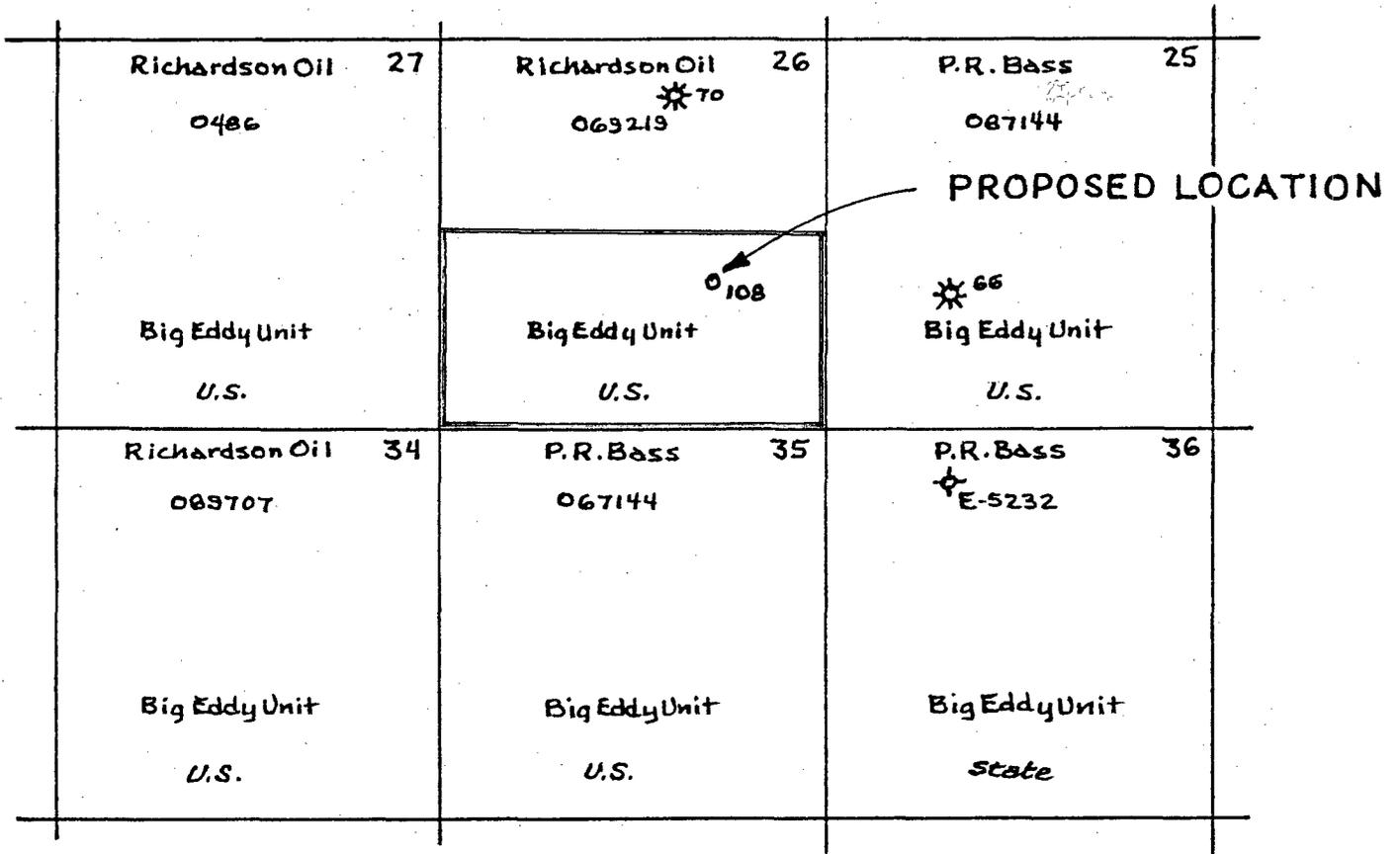


Daniel S. Nutter, P.E., and  
Agent, Perry R. Bass

DSN:ms

cc: Mr. Charles S. Dahlen  
Area Manager  
U. S. Bureau of Land Management  
P.O. Box 1778  
Carlsbad, NM 88220

Mr. John D. Rodgers  
Bass Enterprises Production Co.  
P.O. Box 2760  
Midland, TX 79702



TOWNSHIP 21 SOUTH, RANGE 28 EAST  
EDDY Co., N. M.

BASS EX. 1  
DSN  
3-20-85

MEXICO OIL CONSERVATION COMMISSION  
**WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
 Supersedes C-128  
 Effective 1-1-65

All distances must be from the outer boundaries of the Section.

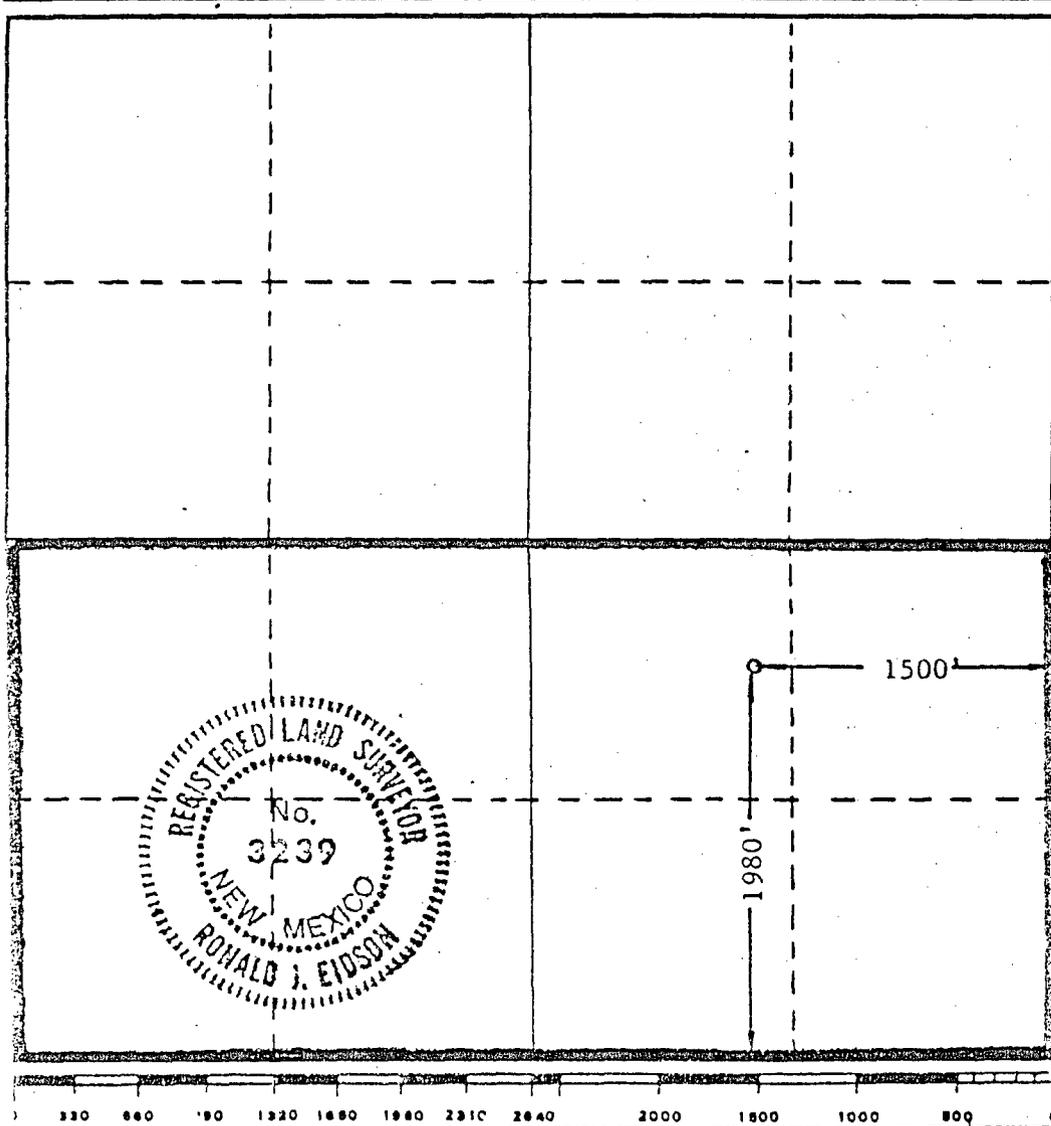
Operator <b>PERRY R. BASS</b>		Lease <b>BIG EDDY UNIT</b>			Well No. <b>108</b>
Unit Letter <b>J</b>	Section <b>26</b>	Township <b>21 SOUTH</b>	Range <b>28 EAST</b>	County <b>EDDY</b>	
Actual Footage Location of Well: <b>1980</b> feet from the <b>SOUTH</b> line and <b>1500</b> feet from the <b>EAST</b> line					
Ground Level Elev. <b>3200.2'</b>	Producing Formation <b>MORROW</b>		Pool <b>INDIAN FLATS</b>	Dedicated Acreage: <b>320</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation Unit

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
<i>Stephen D. Smith</i>	
Name	Stephen D. Smith
Position	Asst. Drilling Engineer
Company	Perry R. Bass
Date	March 1, 1985
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 knowledge and belief.	
Date Surveyed	March 1, 1985
Registered Professional Engineer and/or Land Surveyor	<i>Ronald J. Eidson</i>
Certificate No.	JOHN W. WEST, 676 RONALD J. EIDSON, 3239

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well  gas well  other

2. NAME OF OPERATOR  
PERRY R. BASS

3. ADDRESS OF OPERATOR  
P O BOX 2760 MIDLAND, TEXAS 79702

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1980' FSL & 1500' FEL  
AT TOP PROD. INTERVAL: same as above  
AT TOTAL DEPTH: same as above

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

MAR 06 1985

REQUEST FOR APPROVAL TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF <input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE <input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES <input type="checkbox"/>	<input type="checkbox"/>
ABANDON* <input type="checkbox"/>	<input type="checkbox"/>
(other) <input type="checkbox"/>	<input type="checkbox"/>

Move location 150' due East.

5. LEASE  
NM 069219

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
-----

7. UNIT AGREEMENT NAME  
BIG EDDY UNIT

8. FARM OR LEASE NAME  
BIG EDDY UNIT

9. WELL NO.  
108

10. FIELD OR WILDCAT NAME  
INDIAN FLATS (MORROW)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
SEC. 26, T21S, R28E

12. COUNTY OR PARISH | 13. STATE  
EDDY COUNTY | NM

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
GL 3200.2'

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

This location has been moved 150' due east because of artifacts being located at or within the 400'x400' pad area. As per New Mexico Archaeological Services Inc., Bass has staked another location as shown in #4 above. The old location was 1980' FSL & 1650' FEL.

Please attach this Sundry Notice to the APD submitted February 19, 1985.

NOTE: A new surface plat is attached. Everything else will remain the same.

The need for a hearing on this unorthodox location will not be necessary, since Perry R. Bass has both deep and shallow rights surrounding the 40 acre and 320 acre proration units. Administrative approval is there-by requested.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Stephen D. Smith TITLE Asst. Drlg. Eng. DATE March 1, 1985

APPROVED BY Charles A. Dohler (This space for Federal or State office use) TITLE AREA MANAGER DATE 3-7-85  
CONDITIONS OF APPROVAL, IF ANY: CARLSBAD RESOURCE AREA

MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-85

All distances must be from the outer boundaries of the Section.

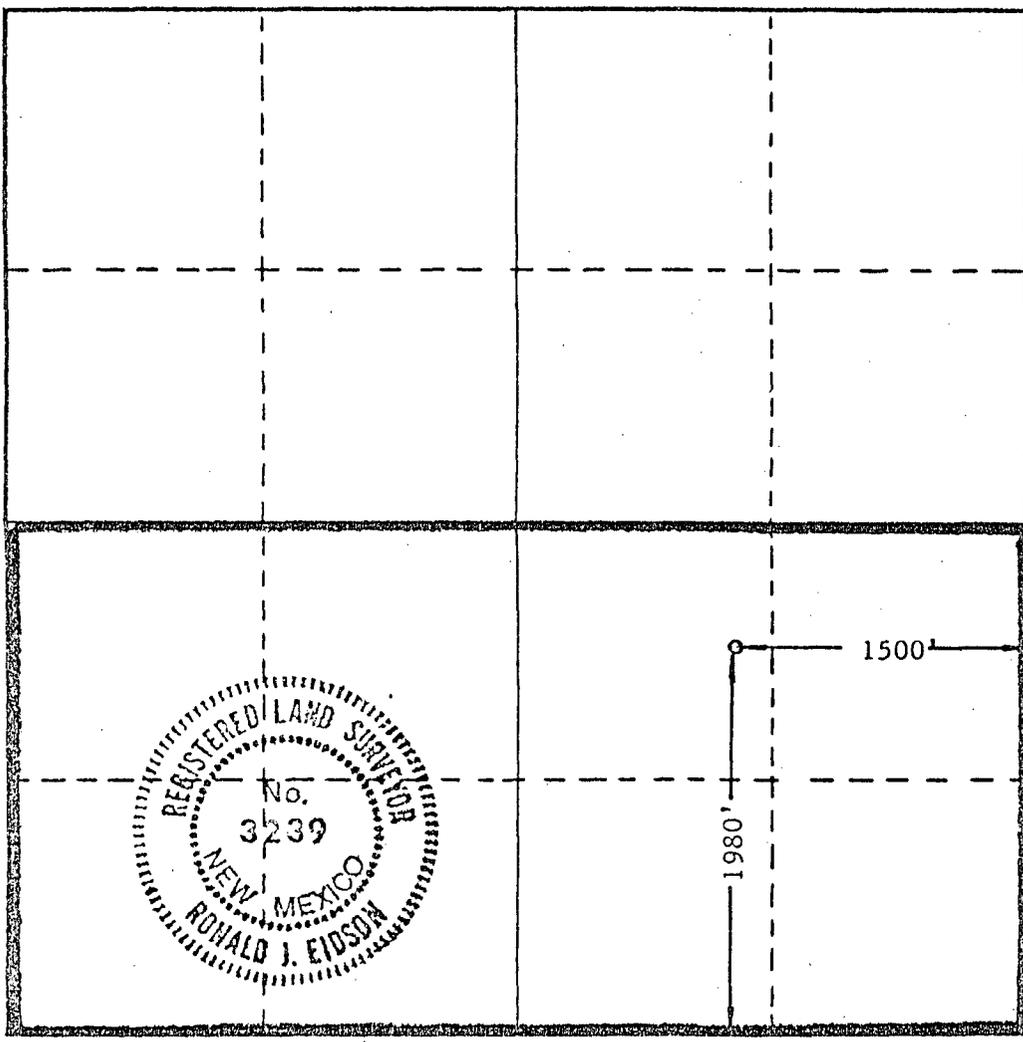
Operator <b>PERRY R. BASS</b>		Lease <b>BIG EDDY UNIT</b>		Well No. <b>108</b>
Unit Letter <b>J</b>	Section <b>26</b>	Township <b>21 SOUTH</b>	Range <b>28 EAST</b>	County <b>EDDY</b>
Actual Footage Location of Well: <b>1980</b> feet from the <b>SOUTH</b> line and <b>1500</b> feet from the <b>EAST</b> line				
Ground Level Elev. <b>3200.2'</b>	Producing Formation <b>MORROW</b>	Pool <b>INDIAN FLATS</b>	Dedicated Acreage: <b>320</b> Acres	

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Yes  No If answer is "yes," type of consolidation Unit

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

*Stephen D. Smith*

Name  
**Stephen D. Smith**  
Position  
**Asst. Drilling Engineer**  
Company  
**Perry R. Bass**

Date  
**March 1, 1985**

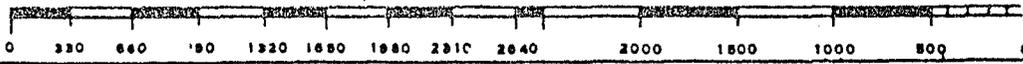
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed  
**March 1, 1985**

Registered Professional Engineer and/or Land Surveyor

*Ronald J. Eidson*

Certificate No. **JOHN W. WEST, 676**  
**RONALD J. EIDSON, 3239**





# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Carlsbad Resource Area Headquarters

P. O. Box 1778

Carlsbad, New Mexico 88220

### E S P E C I A L   A P P R O V A L   S T I P U L A T I O N

This APD is approved subject to the requirement that, should the well be successfully (COMPLETED FOR PRODUCTION), this office must be notified when it is placed in a producing status. Such notification may be provided ORALLY IF CONFIRMED IN WRITING and MUST BE RECEIVED IN THIS OFFICE BY NO LATER THAN THE FIFTH (5th) BUSINESS DAY NEXT FOLLOWING THE DATE ON WHICH THE WELL IS PLACED ON PRODUCTION. The notification shall provide, as a minimum, the following items:

1. Operator name.
2. Well name, number, and location.
3. Date well was placed on production.
4. The lease, or communized tract, or unit participating area to which the well's production is attributable.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL       DEEPEN       PLUG BACK

b. TYPE OF WELL  
 OIL WELL       GAS WELL       OTHER

2. NAME OF OPERATOR  
 Perry R. Bass

3. ADDRESS OF OPERATOR  
 P.O. Box 2760 Midland, Texas 79702

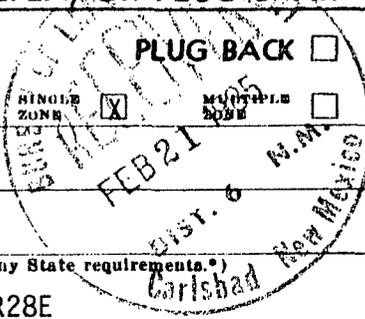
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
 At surface  
 1980' FSL & 1650' FEL Section 26, T21S, R28E  
 At proposed prod. zone  
 Same as above

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 12 miles NE of Carlsbad New Mexico

10. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1650'

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2640'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 GL 3200.2'



5. LEASE DESIGNATION AND SERIAL NO.  
 M 069219

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
 BIG EDDY UNIT

8. FARM OR LEASE NAME  
 BIG EDDY UNIT

9. WELL NO.  
 103

10. FIELD AND POOL, OR WILDCAT  
 INDIAN FLATS (MORROW)

11. SEC., T., S., M., OR BLE. AND SURVEY OR AREA  
 Section 26, T21S, R28E

12. COUNTY OR PARISH 13. STATE  
 EDDY COUNTY NM

16. NO. OF ACRES IN LEASE 640

17. NO. OF ACRES ASSIGNED TO THIS WELL 320

19. PROPOSED DEPTH 12,600

20. ROTARY OR CABLE TOOLS  
 Rotary

22. APPROX. DATE WORK WILL START\*  
 Upon Approval

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15"	11-3/4"	42	+ 500'	400 sxs Circ to Surface
11"	8-5/8"	28	- 2660'	1250 sxs Circ to Surface
7-7/8"	5-1/2"	17	TD	900 sxs Est TOC @ 8500'

Drilling Procedure, BOP Diagrams, formation tops and surface use plans are attached.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Stephen D. Smith TITLE Asst. Drilling Engineer DATE February 19, 1985

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
 APPROVED BY Mark Allen acting AREA MANAGER CARLSBAD DISTRICT DATE 3-5-85

Subject to Like Approval by State

Unorthodox location

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section

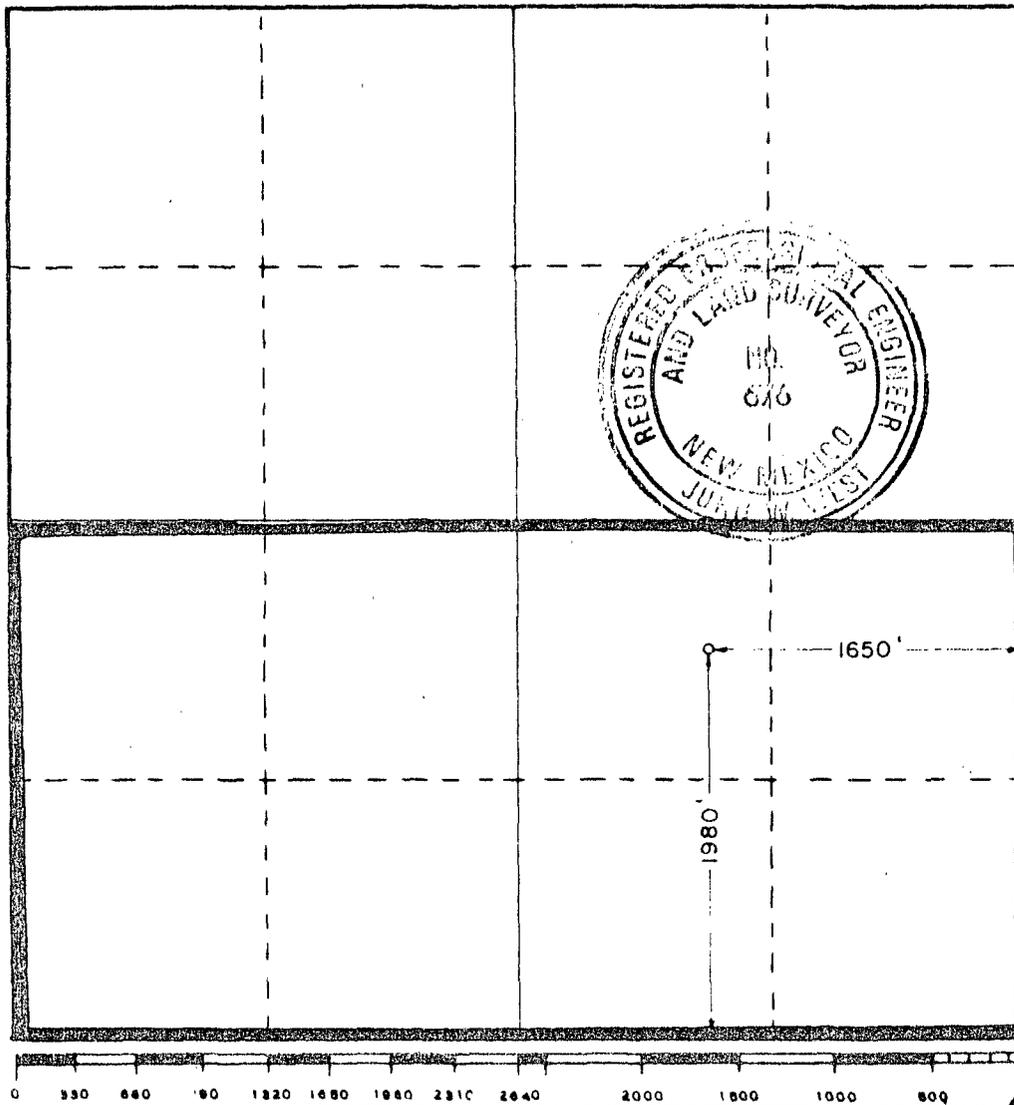
Operator Perry R. Bass		Lease Big Eddy Unit			Well No. 108
Unit Letter J	Section 26	Township 21 South	Range 28 East	County Eddy	
Actual Footage Location of Well: 1980 feet from the south line and 1650 feet from the east line					
Ground Level Elev. 3200.2'	Producing Formation MORROW	Pool INDIAN FLATS		Dedicated Acreage: 320 Acres	

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Yes  No If answer is "yes," type of consolidation Unit

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

*Stephen D. Smith*

Name  
Stephen D. Smith

Position  
Asst. Drilling Engineer

Company  
Perry R. Bass

Date  
February 19, 1985

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 knowledge and belief.

Date Surveyed  
February 13, 1985

Registered Professional Engineer  
and/or Land Surveyor

*John W. West*

Certificate No. JOHN W. WEST, 676

RONALD J. EIDSON, 3239

MULTIPOINT SURFACE USE AND OPERATIONS PLAN

BIG EDDY UNIT NO. 108

1980' FSL & 1650' FEL

Section 26, T21S R28E

Eddy County, New Mexico

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction, activities, and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to rehabilitate the surface after completion of operations so that an appraisal can be made on environmental effects.

1. Existing roads including location of exit from main highway Refer to Exhibit "A" location is obtained by going 2-1/2 miles ENE of Carlsbad, NM on Hwy 62-180 and turn right at Sheriffs Posse Roping Arena (Waterline Road). Continue  $\pm$  6 miles Southeast then 1-1/2 miles North to location.
  
2. Planned access road will be  $\pm$  4000' X 12' and constructed of water compacted caliche. No gates, culverts or turnouts are anticipated. There will be one cattleguard installed. The proposed access road will utilize existing Right-of-way in North 1/2 of Section 35 & South 1/2 of Section 26. See Exhibit "A" attached.
  
3. Location of existing wells see Exhibit "A" attached
  
4. Location of tank battery and flow lines See Exhibit "A", if a commercial well is obtained, the production facilities will be located on well pad.

5. Location and type of water supply, fresh water will be hauled from the City of Carlsbad. Brine water will be hauled from Champion Brine Water Station 3-1/2 miles East and 2-1/2 miles South of Carlsbad.
- 
6. Source of construction material, see Exhibit "A" it shows the approximate location of the caliche source, NW 1/4, SE 1/4, Section 35 T21S, R28E.
- 
7. Methods of handling waste disposal:
- A. Drill cuttings will be disposed of in the drilling pits.
  - B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
  - C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
  - D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
  - E. Trash, paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste materials will be contained to prevent scattering by the wind. Location of trash pit is shown in Exhibit "B".
  - F. Trash and debris will be buried or removed from the well site within 30 days after finishing drilling and/or completion operations. (Note: All trash left on well site to be removed or buried within 30 days must be contained to prevent scattering.)
8. Ancillary facilities : None required.
- 
9. Well site layout: Exhibit "B" shows the dimensions of the well pad and reserve pit, as well as the relative location of major rig components, trash pit, etc. Only minor levelling of the well site will be required. No significant cuts or fills will be necessary. The reserve pit will be lined with plastic. The pit and pad area have been staked and flagged.
- 
-

## 10. Plans for restoration of surface:

- A. Producing well - all pits will be cut, filled, and leveled as soon as practical to original conditions with rehabilitation to commence following removal of drilling and completion equipment.
- B. Dry hole - same as above with dry hole marker to be installed and surface reseeded if required. At the same time of final abandonment, USGS and BLM restoration stipulations will be complied with.

## 11. Other information:

- A. Terrain Flat with low lying sand hills.
- B. Soil sandy
- C. Vegetation sparse, primarily mesquite with very little grass.
- D. Surface Use grazing.
- E. Surface water none within one mile of location.
- F. Water wells none within one mile of location.
- G. Residences and buildings none within one mile of location.
- H. Surface ownership The well site and access road are on federal land.
- I. Well signs posted at each drilling site.
- J. Open pits - all pits containing liquid or mud will be fenced.
- K. Archaeological resources none observed.

12. Operator's representative  
(Field personnel responsible for compliance with development plan for surface use)

DRILLING  
Mike Cure  
Box 2760  
Midland, Texas 79702  
915-688-3300

PRODUCTION  
Al Gallas  
Box 1043  
Kermit, Texas 79745  
915-563-0656  
(or) Mike Cure  
Box 2760  
Midland, Texas 79702  
915-688-3300

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 presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Bass Enterprises Production Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Feb 7, 1985  
(Date)

Stephen D. Smith  
(Name)

Assistant Drilling Engineer  
(Title)

CEB:gp

DRILLING PROCEDURE  
BIG EDDY UNIT #108  
Eddy County, New Mexico

Location: 1980' FSL & 1650' FEL, Section 26, T21S, R28E

Conductor Pipe: 16" conductor casing will be set @ 40'+ with a rathole machine and cemented to surface with ready-mix.

Surface Casing: A 15" OH will be drilled to 500'+ (T/Rustler Anhy.) and 11-3/4" 42#/ft H-40 ST&C casing run to total depth. The surface casing will be cemented with approximately 400 sk Class "C" + 2% CaCl<sub>2</sub>. Cement must be circulated to the surface. Total WOC time is 8 hours.

Nipple up 11-3/4" Casing: After waiting 4 hours "nipping up" procedures may begin. An 11-3/4" SW x 3000# WP x 13 5/8" 3000# RJT casinghead will be welded in place. A set of hydraulic operated pipe and blind rams will then be installed. (See BEPCO II drawing attached) and tested to 1000 psi with the rig pump. The results of this test must be reported in the daily drillers' log.

Intermediate Casing: An 11" OH will be drilled to 2660'+ (T/Delaware Mtn. Group) 8-5/8" casing will be run to total depth and cemented with 1000 sk of Halliburton "Lite" cement tailed in with 250 sk Class "C" plus 2% CaCl<sub>2</sub>. Cement must be circulated to the surface. Total WOC time for this casing string will be 12 hours.

Nipping up 8 5/8" Casing: After waiting 4 hours "nipping up" procedures may begin. The 11-3/4" casinghead will be removed and a 8-5/8" SW 5000# WP x 13-5/8" 5000# WP RJT casing head installed.

A BOP stack consisting of hydrill, pipe rams, and blind rams will be installed as per BEPCO Drawing IV (attached). This BOP stack will be hydrostatically tested to 5000 psi (hydril 1500#) by Yellow Jacket. The MMS will be notified in sufficient time to witness the testing of the 8-5/8" BOP stack. A copy of the test results will be furnished to the MMS. The results of this test will be recorded in the daily drillers' log.

Production Hole: A 7-7/8" OH will then be drilled to TD (12,600' +). A PVT recorder, flow-show sensor and rotating head will be installed before drilling the Wolfcamp.

5 1/2" casing will then be run to TD. This casing string will be cemented with 900 sk Class "H" plus 5#/sk KCl. The cement volume should be sufficient to bring the cement top 1000' above the Wolfcamp.

Time: This well is estimated to take 45 days from spud to TD.

SDS:esa  
attachments

Stephen D. Smith  
Stephen D. Smith

2-8-85  
date

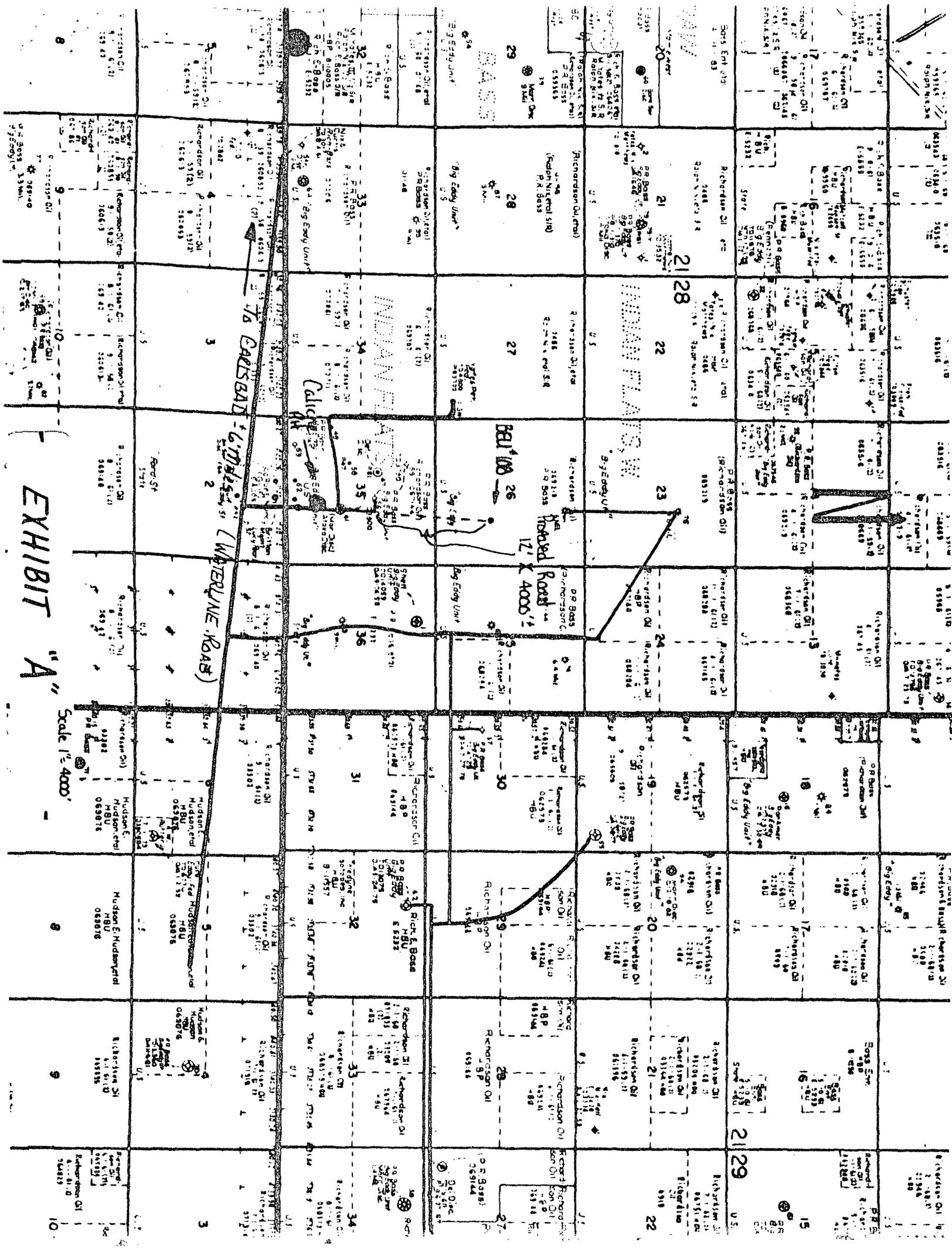


EXHIBIT "A"

Scale 1/2" = 4000'

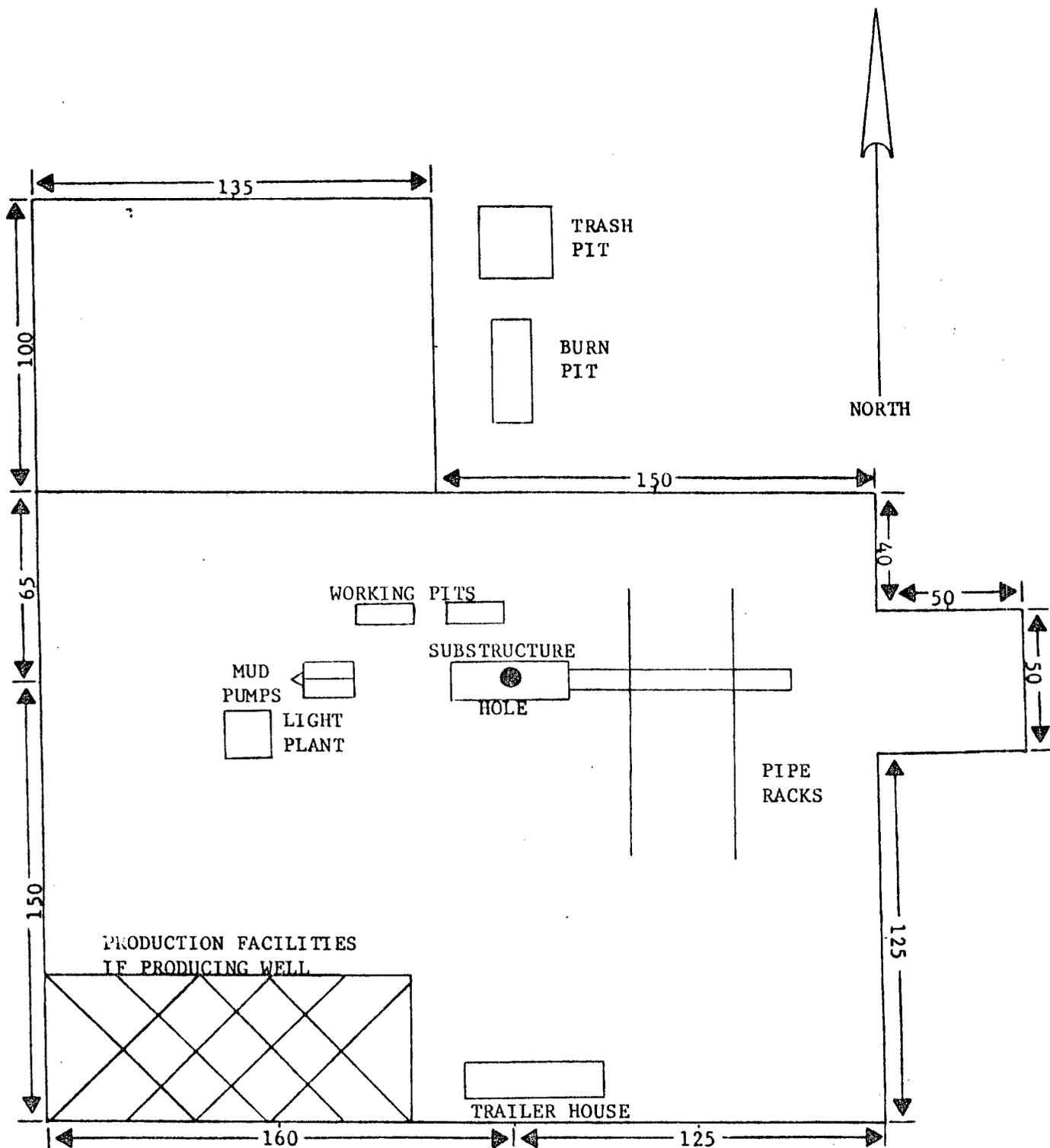
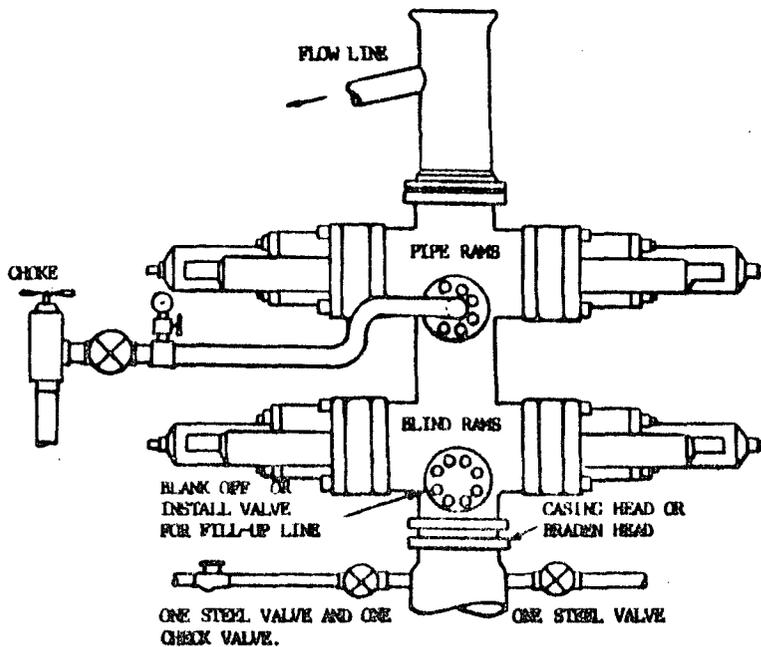


EXHIBIT "B"

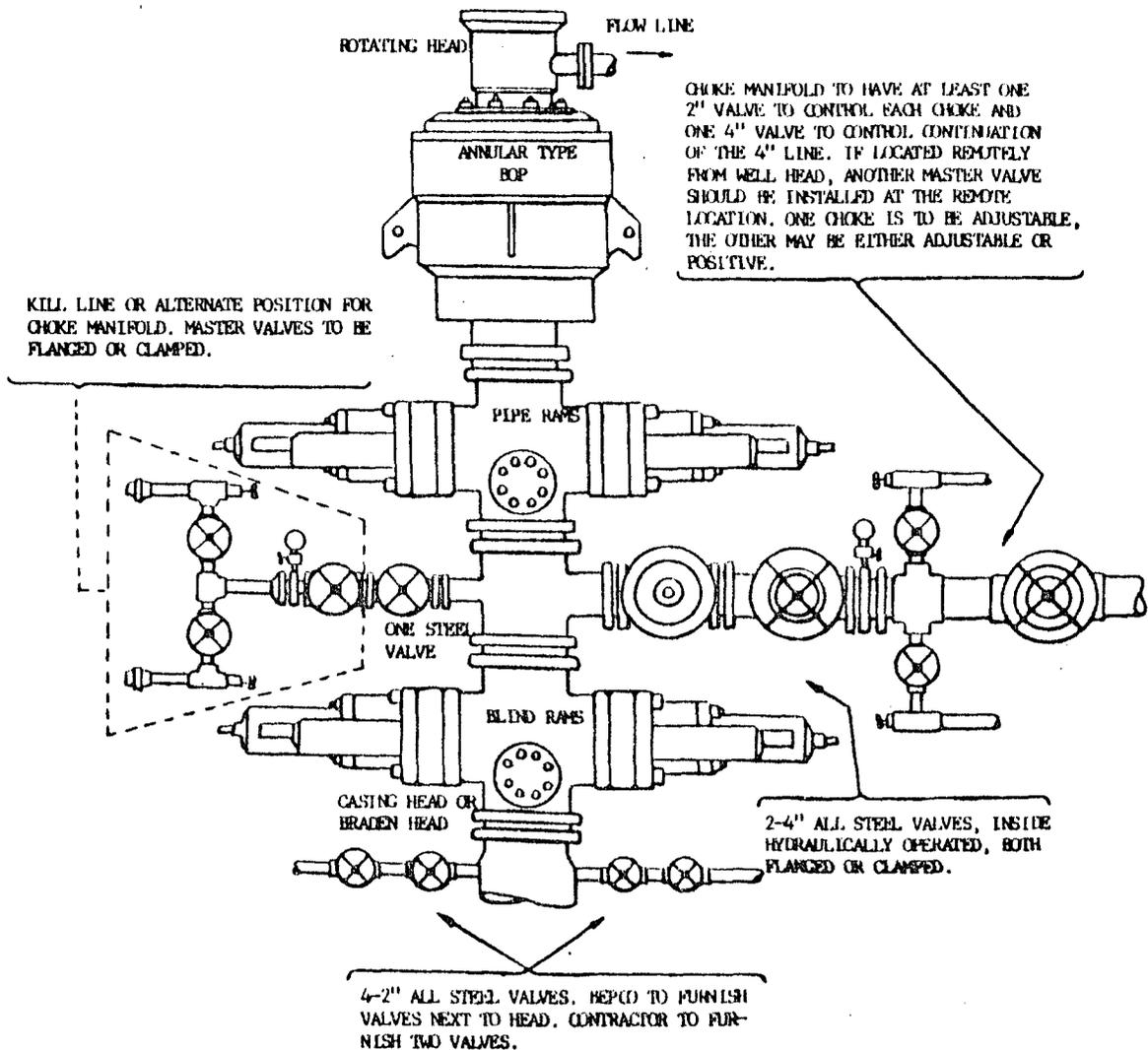


THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- A. One double gate blowout preventer with lower ram blind and upper ram for pipe, all hydraulically controlled.
- B. Opening on preventers between rams to be flanged, studded or clamped and at least two inches 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. Choke may be either positive or adjustable. Choke spool may be used between rams.

IESPO II

ONE HYDRAULIC DUAL BLOWOUT PREVENTER



THE FOLLOWING CONSTITUTE MINIMUM BLOWOUT PREVENTER REQUIREMENTS

- A. Conditions may be met with an annular type blowout preventer and pipe ram type blowout preventer above a choke spool, and a blind ram below the choke spool.
- B. Opening on choke spool to be flanged, studded or clamped.
- C. All connections from operating manifolds 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 preventer to have a pressure rating equivalent to that of the BOP's.
- F. Manual controls to be installed before drilling cement plug.
- G. Kelly cock to be installed on kelly.
- H. Inside blowout preventer to be available on rig floor.
- I. Dual operating controls: one located by drillers position and the other located a safe distance from the rig floor.

BEPCO IV

THREE CLOSURE HYDRAULIC BLOWOUT PREVENTERS



United States Department of the Interior # 108

*Gerry R. Bass*  
*Big Eddy Unit*  
IN REPLY REFER TO

BUREAU OF LAND MANAGEMENT

Roswell District Office

SPECIAL APPROVAL STIPULATIONS

PERRY R. BASS  
Big Eddy Unit No. 108  
NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Sec. 26, T. 21 S., R. 28 E.  
Eddy County  
LC-069219

The special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the general requirements. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 and 3165.4.

A. The Bureau of Land Management office is to be notified at:

- (505) 624-1790 Roswell
- (505) 887-6544 Carlsbad
- (505) 393-3612 Hobbs

in sufficient time for a representative to witness:

- 1. Spudding
- 2. Cementing
  - 1 3/4 inch
  - 8 5/8 inch
- 3. BOP tests \_\_\_\_\_ inch

*Capitan water basin -*  
*(Four miles from the*  
*Potash area)*

B. At least one working day prior to constructing the well pad, access roads and/or related facilities, the operator or dirt contractor shall notify the authorized officer of the surface management agency. The surface management agency may be contacted at:

- BLM phone (505) 887-6544 Carlsbad, New Mexico
- BLM phone (505) 624-1790 Roswell, New Mexico

He shall also notify the surface management agency within two working days after completion of earth-moving activities.

C. Roads in the area of operation of this authorization will require surfacing.

D. 1 3/4 surface casing should be set in the Rustler Anhydrite formation *(at surface)* and cement circulated to the surface. If surface casing is set at a lesser depth, the N/A casing must be cemented from the casing shoe to the surface or cemented to the surface through a stage tool set at least 50 feet below the top of the Rustler after cementing around the shoe with sufficient cement to fill to the base of the salt section.

E. Before drilling below the 8 5/8" casing, the blowout preventer assembly will consist of a minimum of one annular type and two ram type preventers.

F. Minimum required fill of cement behind the 8 5/8" casing is to Tie back to base of salt *(Recommend it be circulated)*.

G. After setting the 8 5/8" casing string and before drilling into the Delaware formation, the blowout preventers and related control equipment failing to test satisfactorily shall be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.

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

- 1. A recording pit level indicator to determine pit volume gains and losses.
- 2. A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.
- 3. A flow sensor on the flow-line to warn of any abnormal mud returns from the well.

I. A kelly cock will be installed and maintained in operable condition.

J. A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the Bureau of Land Management, P. O. Box 1379, Roswell, New Mexico 88201. The effective date of the agreement must be prior to any sales.

K. Above ground structures, not subject to applicable safety requirements shall be painted. The paint color is to simulate:

- Sandstone Brown, Fed. Std. 595-20318 or 30318
- Sagebrush Gray, Fed. Std. 595-26357 or 36357

L. A Gamma Ray-Compensated Neutron log is required from the base of the salt section to the surface with cable speed not to exceed 30 feet per minute.

M. Rehabilitation

At least 3 working days prior to commencing any of the following rehabilitation activities, the operator shall notify the appropriate surface managing agency, shown in part 5.

1. Upon the conclusion of drilling and completion operations when mud pits are dry they will be leveled, plastic will be removed and area reseeded with mixture No. 2 shown on last page of General Requirements.

2. Following the down-hole plugging and abandonment of all operation:

a. The drill pad and 4,000 feet of access road shall be ripped to a minimum of 12" in depth. Ripping shall be on the contour with rips being approximately 3 feet or less apart.

b. The drill site and 4,000 feet of access road will be reseeded with mixture No. 2 shown on the last page of the General Requirements.

c. All ripped surfaces are to be protected from vehicular travel by constructing a dead-end ditch and earthen barricade at the entrance to these ripped areas. The barricade is to be constructed using spoil materials from the ditch and should be of sufficient magnitude to discourage vehicle entry.

d. Private Surface: Abandonment stipulations to coincide with operator-landowner agreement. (Where no agreement exists, BLM will be requested to provide abandonment stipulations.)

e. The surface location is to be cleaned and leveled.

3. Modifications in the rehabilitation stipulations made necessary by unforeseen circumstances or improvements in rehabilitation methods may be made when the Notice of Intention to Abandon is filed.

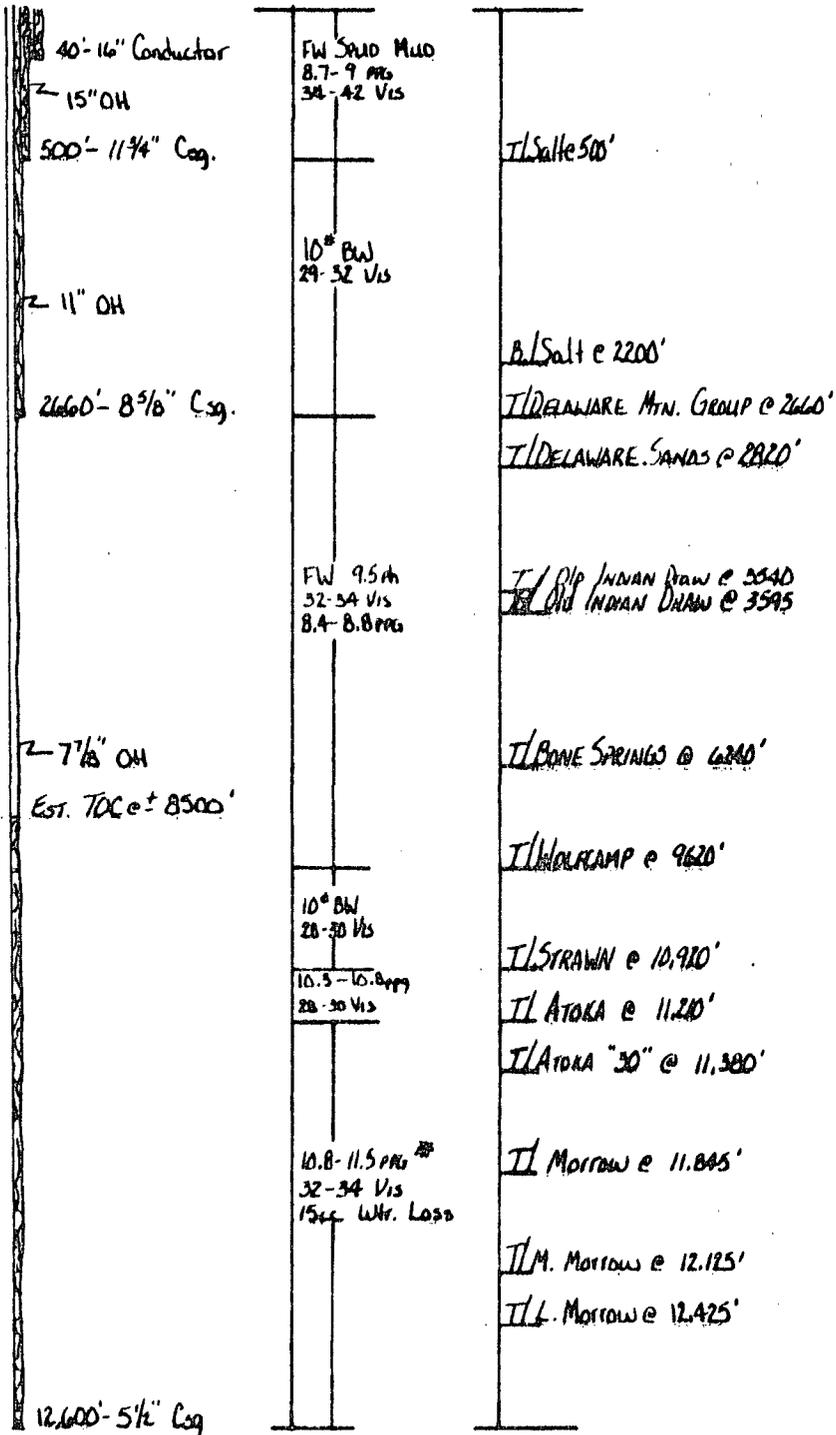
N. Other: archaeology (see also attached figures from report)  
Site NMAS 5713: reroute road to the east following orange glow flags. Current access road along pipeline to be blocked with a truck load of caliche at the north & south ends of the site.

Site NMAS 5714: relocate wellpad to 1980 FS2, 1500 FEL  
Dunes on western edge of 400' x 400' to be left intact

Site NMAS 5715 all activities to be confined to  
50' ROW for access road (Big Eddy #108 - Big Eddy #70)

SDS 2-7-85

BIG EDDY UNIT #108  
INDIAN FLATS (MOR) #1  
SECTION 26 T21S, R20E  
EDDY COUNTY, NEW MEXICO



\* Note: By 11,600' 3% KCl should be added to the system & water loss maintained to 10cc or less.



Site No.  
5714

**NMAS**  
**New Mexico Archaeological Services, Inc.**

P. O. Box 1341  
Carlsbad, New Mexico 88220  
(505) 887-7646

28 February 1985

Reconnaissance  
Excavation  
Analysis  
Explanation  
Curation

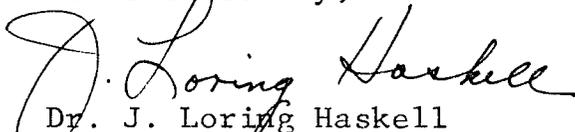
Mr. Stephen D. Smith  
Assistant Drilling Engineer  
PERRY R. BASS  
P.O. Box 2760  
Midland, Texas 79701

Dear Mr. Smith:

Enclosed please find NMAS' Archaeological Clearance Report for PERRY R. BASS' proposed Big Eddy Unit Well No. 108, its associated access road, the proposed road between Big Eddy Unit Well No. 70 and Big Eddy Unit Well No. 108, and the expansion of the quarry in Section 35, T21S, R28E, NMPM, Eddy County, New Mexico. Three archaeological sites (NMAS 5713, NMAS 5714 and NMAS 5715), one isolated cultural occurrence (ICO) and one instance of burned caliche (BC) were recorded during these surveys. NMAS is suggesting clearance for this work provided the archaeological sites are avoided; please consult our report for the suggested mitigation.

If you have any questions pertaining to this report, please call my office. Thank you for asking NMAS to do these surveys.

Yours sincerely,

  
Dr. J. Loring Haskell  
Principal Investigator

Enclosure

cc: Ms. Linda Brett, BLM, Carlsbad  
Mr. Tom Hewitt, Bureau of Land Management Minerals  
Oil and Gas, Roswell  
Mr. Thomas W. Merlan, SHPO, Santa Fe

as

Archaeological Clearance Report

for

PERRY R. BASS

Big Eddy Unit Well No. 108  
Quarry,  
Section 35, T21S, R28E;  
Proposed Road, Big Eddy Unit 70 to Big Eddy Unit 108,  
Section 26, T21S, R28E, NMPM, Eddy County, NM

Prepared

By

Dr. J. Loring Haskell

Submitted

By

Dr. J. Loring Haskell  
Principal Investigator  
New Mexico Archaeological Services, Inc.  
Carlsbad, New Mexico

28 February 1985

Permit No. 14-2920-84-B

Report Number: NMAS 1985-36-F

## ABSTRACT

New Mexico Archaeological Services, Inc., representing PERRY R. BASS, Midland, undertook a Class III survey of Bureau of Land Management lands scheduled to be impacted by the construction of a drill location, its access road and the expansion of an existing quarry. Additionally, BASS proposes to construct a road between its Big Eddy Unit Well No. 108 and existing Big Eddy Unit Well No. 70. Field work was conducted under partly cloudy conditions in mid-afternoon on 19 and 27 February 1985. The proposed location will measure 300 X 315 ft (Actual Area Surveyed 5.98 Acres). The access road will measure 20 X 4000 ft (Actual Area Surveyed 4.59 Acres). The proposed road between Big Eddy Unit Well No. 70 and Big Eddy Unit Well No. 108 will measure 20 X 3000 ft (Actual area surveyed 3.44 acres). As for the quarry, an area extending 300 ft beyond the existing boundaries of the quarry (400 X 500 ft) was surveyed (Actual Area Surveyed 8.27 Acres). They are situated in Sections 26 and 35, T21S, R28E, NMPM, Eddy County, New Mexico. Cultural properties consist of three archaeological sites (NMAAS 5713, NMAAS 5714 and NMAAS 5715), one isolated cultural occurrence (ICO) and one instance of burned caliche (BC). Clearance is suggested provided all archaeological sites are avoided.

## Introduction

On 19 and 27 February 1985, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, undertook for PERRY R. BASS, Midland, an archaeological survey of federal lands administered by the Bureau of Land Management in Eddy County, New Mexico. Field work was conducted under partly cloudy conditions in mid-afternoon on 19 and 27 February 1985. Reconnoitered areas will be impacted by the construction of a drill location, its associated access road, a new road between Big Eddy Unit Well No. 70 and Big Eddy Unit Well No. 108 and the expansion of an existing quarry. This project was advanced by Mr. Stephen D. Smith, Assistant Drilling Engineer, PERRY R. BASS, and administered by Dr. J. Loring Haskell, Principal Investigator, NMAS, Inc. This survey was undertaken by Dr. Haskell.

## Survey Technique

For this investigation, PERRY R. BASS' proposed location was reconnoitered for evidence of man's past activities by walking it in a series of 25 ft wide, close interval ( $15^\circ$  or less), zigzag transects. In addition, an added zone extending 20 ft on each side of the staked 400 X 400ft location, and lying outside the bounds of the proposed work area, was reconnoitered by a similar means. The access road and new road between proposed Big Eddy Unit Well No. 108 and existing Big Eddy Unit Well No. 70 were walked in two 25 ft wide transects. Lathe and/or flags are considered to be the center of the proposed road. As for the quarry, the investigated zone extends back from the edge of the quarry for a distance of 300 ft. Four, 24 inch stakes, tipped with orange paint, were set at each corner of the surveyed tract of land. Stakes were placed near, or within

bushes, in order to achieve some semblance of permanence for them. Additionally, orange glow flags were placed above stakes on overhanging tree branches. Methodologically, these procedures served to promote optimal conditions for the visual examination of areas to be impacted by construction-related activities.

### Big Eddy Well No. 108

#### Location

The proposed location will measure 300 X 315 ft (Actual Area Surveyed 5.98 Acres) on federal lands and will be situated 1980 ft from the south line and 1650 ft from the east line.

Section 26, T21S, R28E, NMPM, Eddy County, NM

Thus it will be situated in the:

NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM

The associated access road will measure approximately 20 X 4000 ft (Actual Area Surveyed 4.59 Acres) and is situated in the:

SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 35, T21S, R28E, NMPM, Eddy County, NM

NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 35, T21S, R28E, NMPM, Eddy County, NM

SW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM

NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM

Map Reference: USGS CARLSBAD QUADRANGLE, 15 Minute Series, 1939.

#### Terrain

PERRY R. BASS' proposed location will be situated on a heavily duned landform lying due north of Old Indian Draw. As a whole, the coeval surface is characterized by a continuous system of well-developed coppice dunes and typically interconnecting denuded, or partially denuded areas. Local soils are uniformly dominated by the sand separate and commonly harbor caliche inclusions. Drainage is toward the southwest. Soil individuals are assignable to the Typic Torripsamment subgroup.

### Floristics

Plants of the overstory are Prosopis juliflora, Acacia greggii, and Atriplex canescens. Attendant forbs include Gutierrezia sarothrae, Salsola kali, Mentzelia sp., Croton sp., and several unidentified members of the Compositae. The Gramineae is represented by Aristida sp., Cenchrus incertus, Muhlenbergia porterii, Panicum sp., Sporobolus flexuosus, Setaria macrostachys and Tridens pulchellus. Most plants are currently browned and desiccated.

### Cultural Resources.

During the course of this survey, three archaeological sites (NMAS 5713, NMAS 5714 and NMAS 5715) and one isolated cultural occurrence (ICO) were recorded.

#### Isolated Cultural Occurrence (ICO)

The ICO, consisting of one burned caliche cobble and one very dark red quartzite primary decortication flake, with bulb but lacking platform (3.4 X 2.7 X 0.9 cm), is situated in the pipeline road at a point 100 ft south of the southwestern corner of the location. It is located in the:

SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM

UTM: Zone 13, N3,590,275; E588,860

Map Reference: USGS CLARSLBAD QUADRANGLE, 15 Minute Series, 1939.

NMAS 5713

Location: SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 35, T21S, R28E, NMPM, Eddy County, NM

UTM: Zone 13, N3,589,425; E588,775

Map Reference: USGS CARLSBAD QUADRANGLE, 15 Minute Series, 1939.

Ownership: Bureau of Land Management

Dimension of Resources: 30 X 90 m

Typological Designation: Special Activities Zone

Authorship/Temporaligy: Eastern Jornada Mogollon

Nature of Cultural Resources: NMAS 5713, a small special activities zone, is situated within a series of minor deflation basins separated by coppice dunes to 1.0 m in height. Associated soils are loose, non-calcareous and host caliche inclusions.

Observed cultural properties include Jornada Brownware potsherds, several ground stone fragments, a tested very dark red quartzite core, several quartzite secondary decortication flakes, angular, tan chert debris, and an amorphous scatter of burned caliche cobbles and gravels.

Resources occur in the form of two concentrations with a light scatter occurring elsewhere. Activities here focused on testing of potentially usable siliceous lithic sources and some milling-related tasks and cooking. Occupancy seemingly was brief. The presence of the Jornada Brownware indicates Eastern Jornada Mogollon authorship with occupancy occurring at some time between A.D. 950 and 1350. The site has been impacted by the construction of a nearby pipeline and associated two-track pipeline road.

Further work at NMAS 5713 should focus on more precise mapping, collection and sub-surface testing of the basin hosting most of the associated cultural properties. Given the duned character of the landform, sub-surface remains are probable.

NMAS 5714

Location: SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM  
 SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM  
 UTM: Zone 13, N3,590,400; E588,850

Map Reference: USGS CARLSBAD QUADRANGLE, 15 Minute Series, 1939.

Ownership: Bureau of Land Management

Dimension of Resources: 45 X 90 m

Typological Designation: Special Activities Zone

Authorship/Temporality: Unknown

Nature of Cultural Resources: NMAS 5714, a special activities zone, is situated within a series of deflation basins and interconnecting partially denuded areas which are separated by a well-developed system of coppice-type dunes. Areal microrelief ranges up to 2.25 m in height. Lithic inclusions in associated soils are limited mostly to caliche.

Observed cultural properties include at least three eroded, caliche-type fire hearths, occasional chert and quartzite primary- and secondary decortication flakes, ground stone fragments, a tested chert core, and a light-to very-light scatter of burned caliche.

Observed resources are concentrated in the immediate vicinity of the fire hearths with sporadic occurrences occurring elsewhere. Owing to deflation and some sheetwash activity, fire hearths are uniformly eroded. No diagnostic artifacts were observed; consequently, temporality and authorship cannot be established at this time. Task-related activities focused on the testing of siliceous lithic sources, along with some probable flaked-tool production, food processing and cooking. Judging by the limited nature of attendant resources, occupancy was brief.

Further work at NMAS 5714 should focus on the testing of

the fire hearth features. Retrieval of specimens suitable for radiometric dating purposes would establish authorship as well as temporality. Additionally, attendant resources should be mapped in place, collected and analyzed with findings published in a scholarly fashion.

NMAS 5715

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM

UTM: Zone 13, N3,590,500; E588,975

Map Reference: USGS CARLSBAD QUADRANGLE, 15 Minute Series, 1939.

Ownership: Bureau of Land Management

Dimension of Resources: 60 X 120 m

Typological Designation: Task Locus

Authorship/Temporality: Unknown

Nature of Cultural Resources: NMAS 5715, a task locus, is situated within an interconnecting network of partially denuded areas. Overall, this landform is subject to the effects of ephemeral sheetwash. Areal microrelief ranges between 1.0 and 1.50 m in height.

Observed cultural properties include at least five, caliche-type fire hearths, a light- to very light, amorphous scatter of burned caliche, and occasional chert and quartzite primary- and secondary-decortication flakes. Cultural properties are associated principally with the fire hearths. No diagnostic artifacts were noted and hence temporality and authorship remain unknown at this juncture. The fire hearths, judging by the highly reduced character of the associated caliche, were

subject to intense and repeated firings; therefore, occupancy probably lasted several days. NMAS 5715 may be related to spatially near NMAS 5714 owing to similarities in their makeup. No diagnostic artifacts were noted thereby precluding the establishment of authorship.

Further work should focus on the sub-surface examination of the five hearths in order to retrieve possible radiometric specimens and macro- and micro-fossils. Resultant data would, of course, establish authorship and the nature of dietary habits and season of occupancy.

#### Recommendations

NMAS suggests clearance for PERRY R. BASS' proposed Big Eddy Unit Well No. 108 provided the three archaeological sites (NMAS 5713, NMAS 5714 and NMAS 5715) are avoided. Beginning on the south, NMAS 5713 can be avoided by shifting the proposed road to the eastside of Natural Gas Pipeline Company's easement. Three orange-glow flags, placed on bushes at the beginning- and ending-points of the reroute, indicate the segment of road suggested for abandonment. Barricades, consisting of a truck load of caliche, should be placed immediately north and south of these points (Fig. 1). Orange glow flags indicate the route along the east-side of the pipeline.

As for NMAS 5714, it can be avoided by shifting the proposed location 150 ft to the east, i.e., 1500 FEL, 1980 FSL, Section 26, T21S, R28E, NMPM, Eddy County, New Mexico (Fig. 2). BASS' proposed location will measure 300 ft (east-west) and 315 ft (north-south). This area has been surveyed and is free of cultural properties. Additionally, NMAS suggests that the dunes separating the site from the proposed well pad be left intact. This strip (occurring within

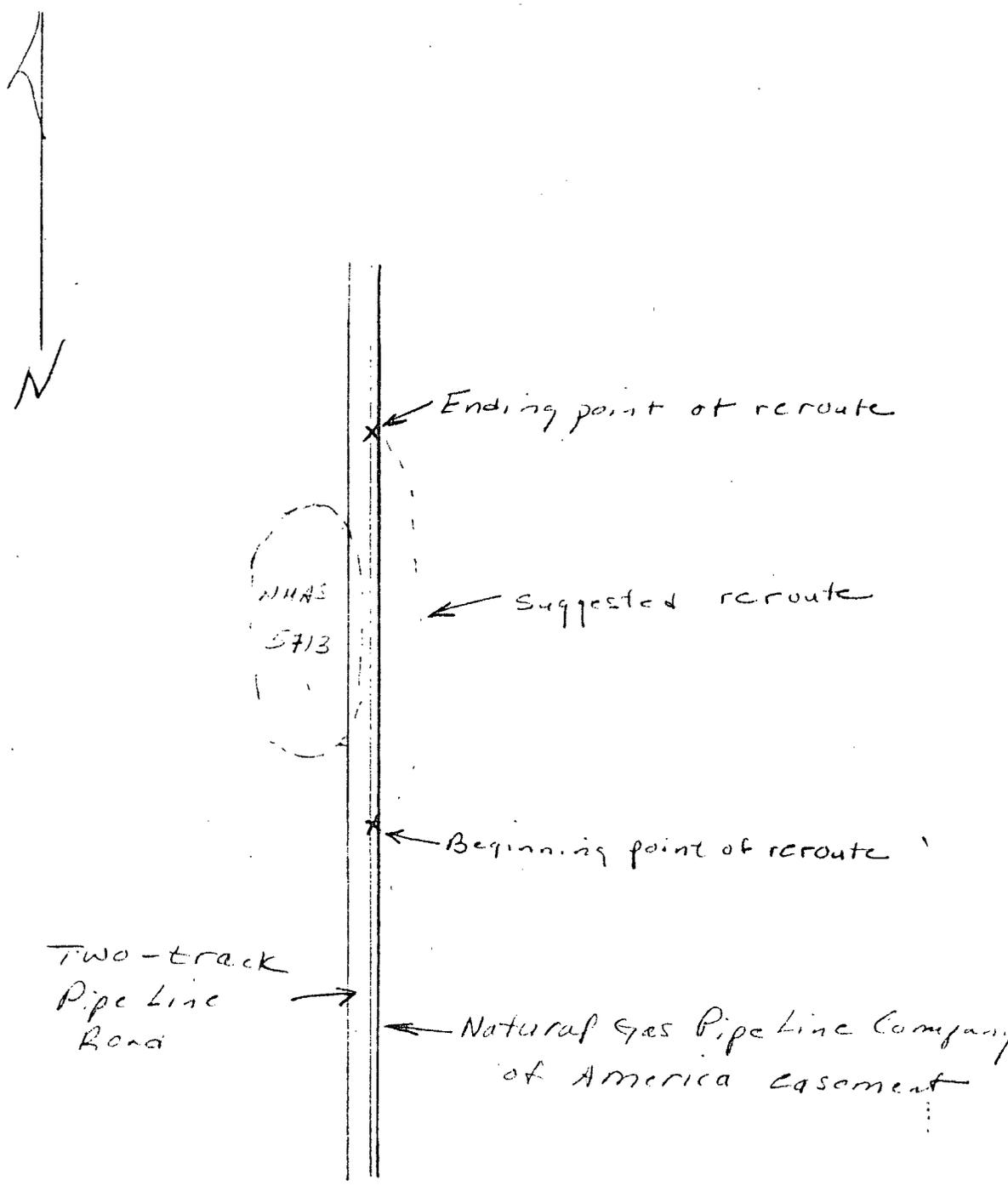


Fig. 1. Schematic representation showing proposed re-route to the east of NMAS 5713. Flags are considered to be the center of the suggested BASS re-route.

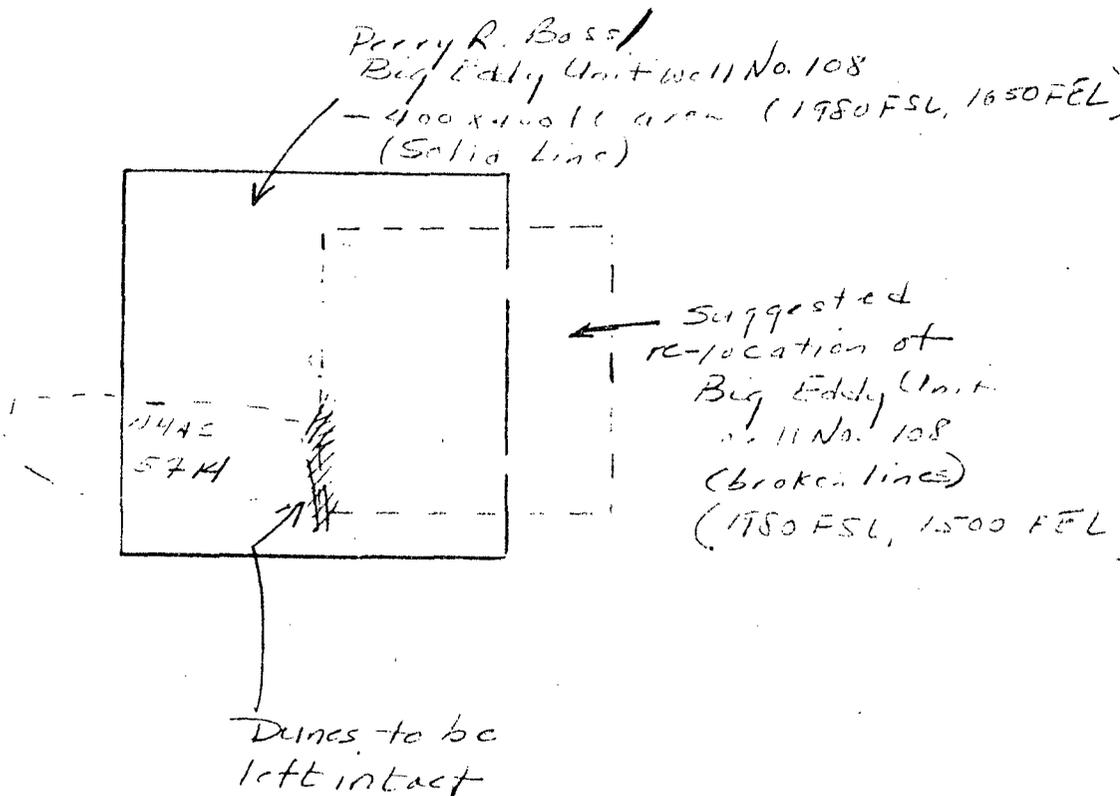


Fig. 2. Schematic representation showing PERRY R. BASS' proposed Big Eddy Unit Well No. 108 vis a vis N44E 57H and the suggested shift to the east, viz., 1500 FEL, 1980 FSL, Section 26, T21S, R28E, NMPM, Eddy County, New Mexico. Dunes situated along the western edge of the southwestern quadrant of the proposed pad area, are to be left intact.

the pad area), therefore, will be deleted from the location. These dunes, located along the westside of the southwestern quadrant of the location, have been indicated by orange-glow and blue flags. Lastly, NMAS 5715 is situated outside the 400 X 400ft area and is not threatened by the proposed construction as long as men and materiel are confined to the 300 X 315 ft work area (Fig. 3).

In each instance, men are to refrain from illicit collecting activities and avoid the three archaeological sensitive areas altogether. Clearance, of course, is granted by the Bureau of Land Management. If additional cultural properties are encountered during construction the BLM and NMAS are to be notified immediately.

Proposed Road/Big Eddy Unit 70 to Big Eddy Unit Well No. 108  
Section 26, T21S, R28E, NMPM, Eddy County, New Mexico

#### Location

As proposed, PERRY R. BASS' road will measure 20 X 3000 ft (Actual Area Surveyed 3.44 Acres) on federal lands and will be situated in the:

NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM  
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM  
NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 26, T21S, R28E, NMPM, Eddy County, NM

UTM: Beginning Zone 13, N3,591,100; E588,850  
Ending Zone 13, N3,590,375; E588,990

Map Reference: USGS CARLSBAD QUADRANGLE, 15 Minute Series, 1939.

#### Terrain

The proposed road will traverse an undulating landform whose surface is generally overlain by a thick deposit of aeolian material. Surficial deposits are made up of sandy loams, loamy sands and sandy clay loams. Caliche inclusions commonly occur in attendant soils. Groute calcaire outcrops within the bed of an ephemeral, unnamed drain-

age which discharges toward the southwest. Excepting the south, dune development is typically minor. Soils fall within the Typic Torripsamment subgroup.

### Floristics

Chief constituents of local soils are Prosopis juliflora, Yucca glauca, Atriplex canescens, Acacia greggii, Artemisia filifolia and Quercus havardii. Associated forbs include Gutierrezia sarothrae, Salsola kali, Mentzelia sp., Croton sp., Lesquerella sp. and Penstemon sp. Most commonly occurring grasses are Aristida sp., Cenchrus incertus, Muhlenbergia porterii, Sporobolus flexuosus and Tridens pulchellus.

### Cultural Resources

During the course of this survey, one instance of burned caliche (BC) was noted.

#### Burned Caliche (BC)

The BC, consisting of an amorphous scatter, is situated at a point 650 ft south-southeast of PERRY R. BASS' Big Eddy Unit Well No. 70. Material cultural remains are not associated with it.

Locally, prehistoric land usage was intense with economic pursuits focusing on hunting and gathering. Related tasks centered on flaked- and ground-stone tool production and food processing.

### Recommendations

NMAS recommends clearance for PERRY R. BASS' road/Big Eddy Unit Well 70 to Big Eddy Unit Well No. 108 and suggests that work-related activities proceed in accordance with company plans. Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during construction, the BLM and NMAS should

be notified immediately.

Quarry, Section 35, T21S, R28E

#### Location

The existing quarry measures 400 X 500 ft on federal lands (The actual surveyed area embraces 8.27 acres more or less). It is situated in the:

NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 35, T21S, R28E, NMPM, Eddy County, NM

This quarry is situated next to an existing lease road (Fig. 4).

Map Reference: USGS CARLSBAD QUADRANGLE, 15 Minute Series, 1939.

#### Terrain

The investigated quarry is situated on Indian Flats immediately north of the Old Indian Draw catchment. Locally, the coevals surface is marked by a veneer of sandy clay loams which overlie a thick deposit of indurated caliche. Soil individuals fall within the Typic Paleorthid and Typic Haplargid subgroups.

#### Floristics

Associated soils host an overstory of Prosopis juliflora and Acacia greggii. Principal forbs are Senecio longilobus, Gutierrezia sarothrae, Croton sp., and Dyssodia sp. Grasses of this association are Aristida sp., Bouteloua sp. and Tridens pulchellus.

#### Cultural Resources

No cultural properties were recorded during the course of this survey. Principal reasons for their absence include a bona fide dearth of siliceous lithic sources, shelter and a typical deficiency of surface water. Land usage in the immediately vicinity should have centered chiefly on hunting- and hunting-related tasks.

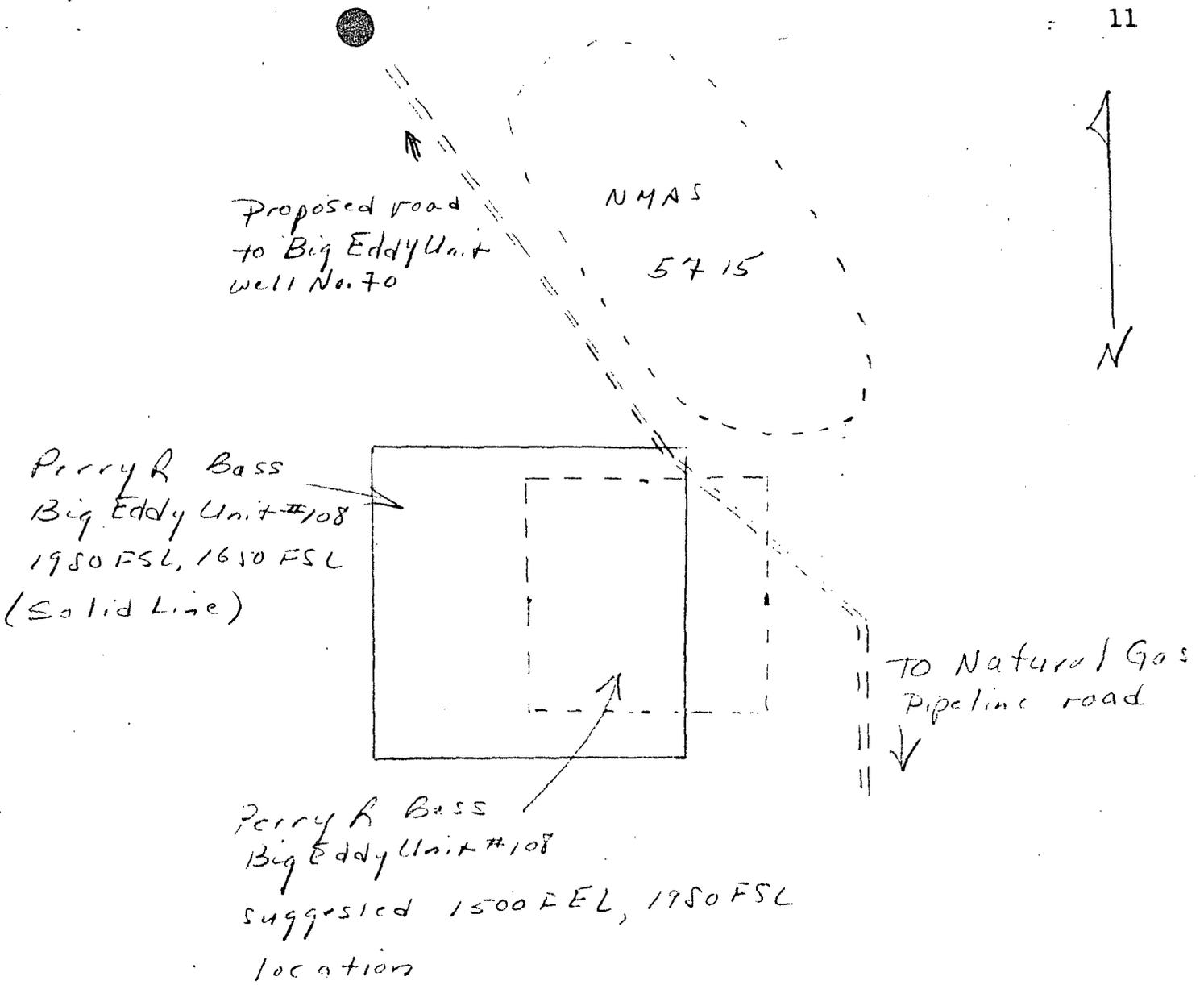


Fig. 3. Schematic representation showing PERRY R. BASS' proposed Big Eddy Unit Well No. 108 and the proposed road between Big Eddy Unit Well No. 70 and Big Eddy Unit Well No. 108 vis à vis NMA 5715.

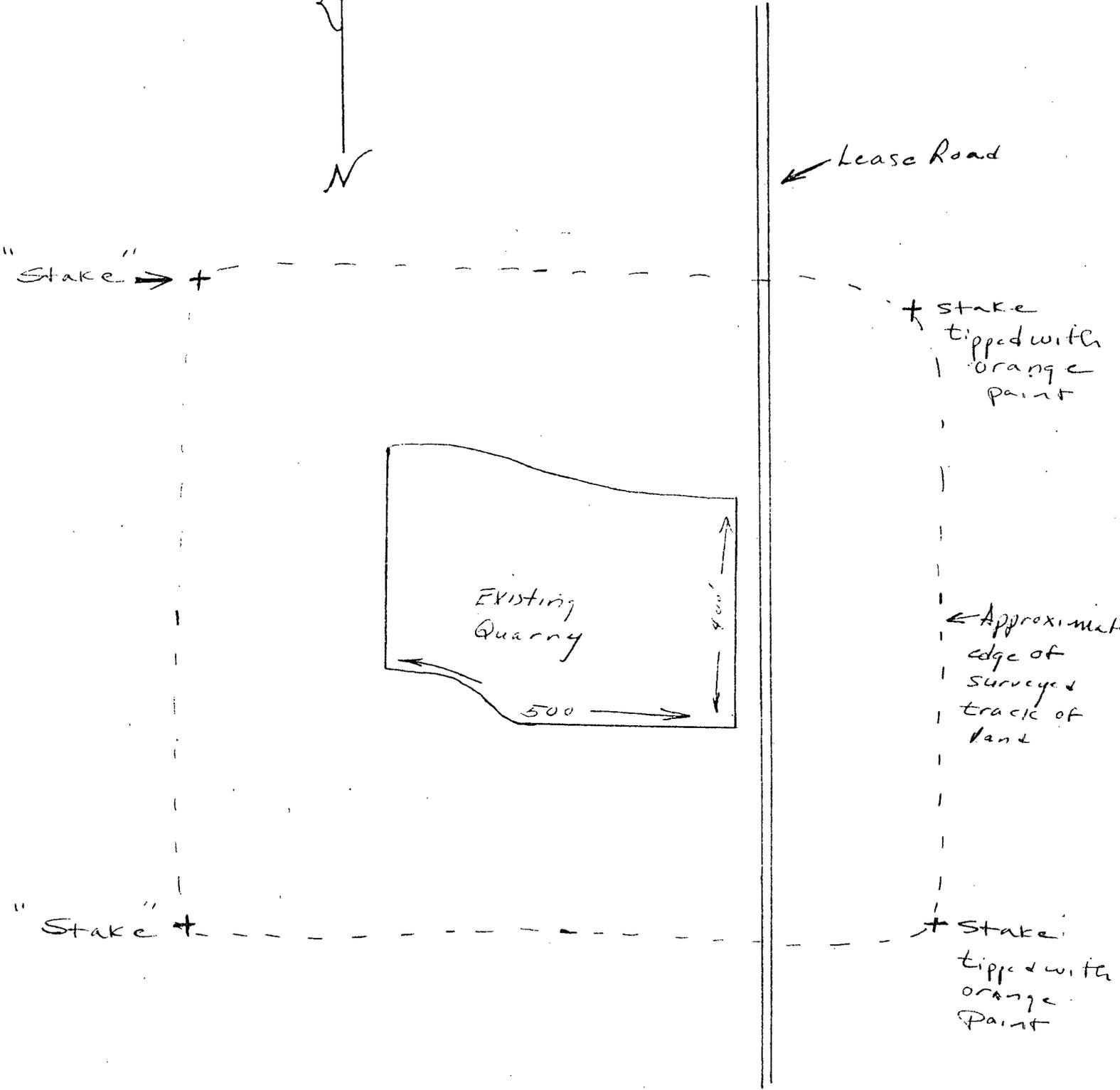
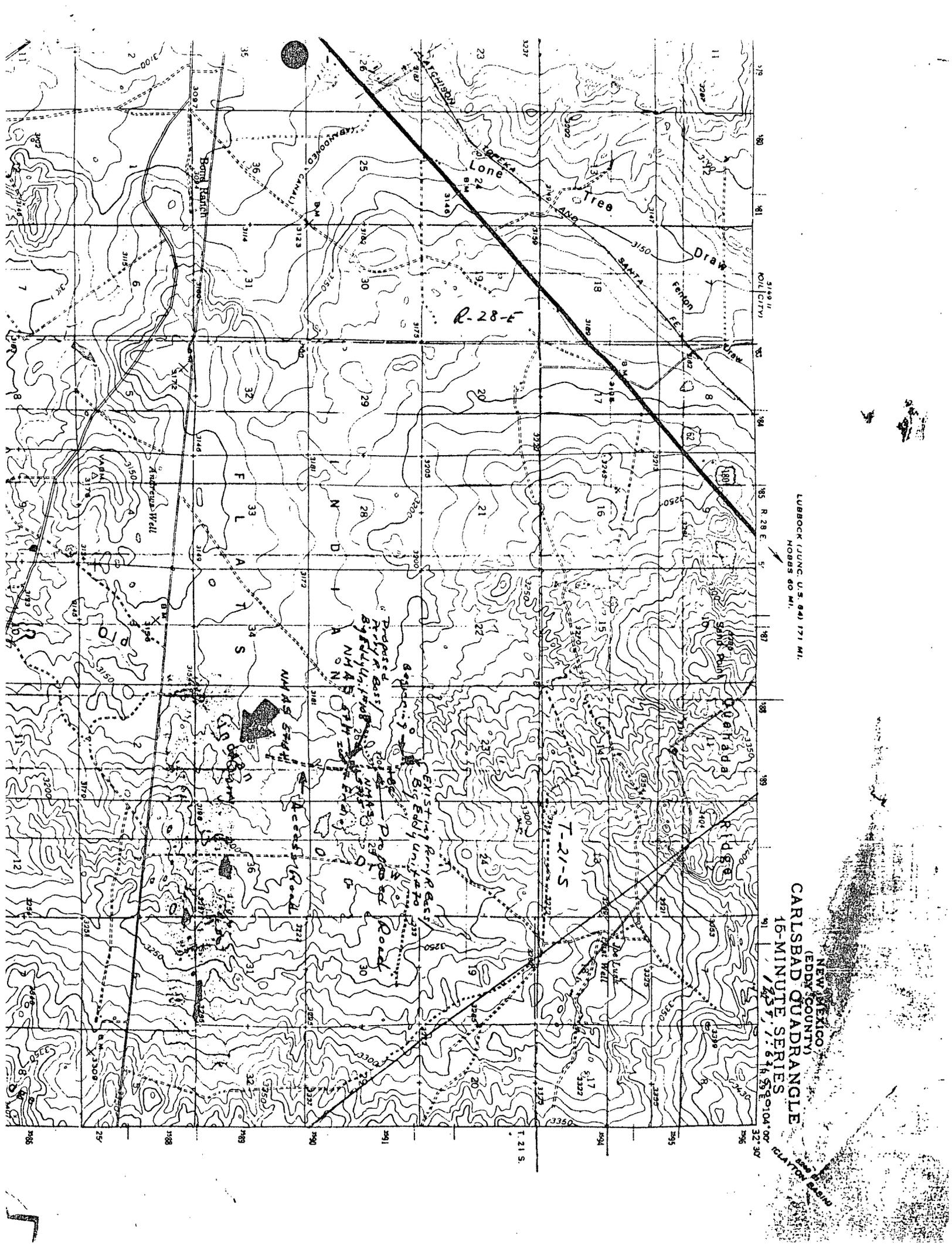


Fig. 4. Schematic representation showing existing quarry in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 35, T21S, R28E, NMPM, Eddy County, New Mexico, to be used by PERRY R. BASS for Big Eddy Unit Well No. 108 pad and road construction.

Recommendations

NMAS recommends clearance for PERRY R. BASS' quarry expansion and suggests that work-related activities proceed in accordance with company plans. Clearance, of course, is granted by the Bureau of Land Management. If cultural resources are encountered during expansion, the BLM and NMAS should be notified immediately.



LUBBOCK (JUNC. U.S. 64) 17.1 MI.  
HOBSBS 60 MI.

NEW MEXICO  
(EDDY COUNTY)  
CARLSBAD QUADRANGLE  
15-MINUTE SERIES  
64 29 104 00  
32 30

T. 21 S.

R-28-E

T-21-S

Proposed  
River Basin  
Study Unit  
N.M.A.S. Study  
Area  
Existing River Basin  
Study Unit  
Proposed  
Road  
N.M. State Highway

N.M. State Highway

N.M. State Highway

Boeing Aircraft

Andrews Well

80

Quindada  
Ridge

Quindada  
Ridge

Quindada  
Ridge

Quindada  
Ridge

Quindada  
Ridge

## NMAS' Site Typology

As used by NMAS, a "site" is defined as any cultural material containing clear evidence of other than en passant human occupation. (A site is a physical location of past human activities or events. Cultural resource sites are extremely variable in size, and range from a cluster of several objects or materials to structures with associated objects or features.)

### OCCUPATION ZONE

An occupation zone is a site at which associated cultural properties occur scattered over an extensive tract of land. Specifically, resources occur as a light, but extensive, scatter, and lack overall concentration. Sites of this type, may or may not, reflect one task-specific activity.

### TASK LOCUS

A task locus is a site at which an individual, or social unit, carries out a single task-related activity, e.g., a milling station or a lithic fabrication station (one type of cultural resource).

### SPECIAL ACTIVITIES ZONE

A special activities zone is distinguished by a small range of related tasks, e.g., milling tools in association with hide working tools (more varied cultural resources).

### LIMITED BASE

A limited base is characterized by a wider range of socio-economic activities resulting from more sustained occupation. Although it contains a wider array of task-related activities than at the above, it represents less than the full range of expected cultural resources construed as constituting a local group.

### HOME BASE

A home base is a site which evidences signs of year-around occupation and hence was occupied by the full spectrum of social units normally construed as constituting a local group, i.e., the full range of cultural resources.

### ISOLATED CULTURAL RESOURCE(S)

Isolated Occurrences generally contain fewer than 10 artifacts, have densities of less than one artifact per square meter, and have only a single type of material present.

## LITHIC DEFINITIONS

- CORES: The block or nodules of raw material from which flakes are removed in the manufacture of chipped-stone tools.
- UNPREPARED CORE: A core which possesses no systematic shaping of lateral edges and primary flaking is limited to preparation of a striking platform.
- PREPARED CORE: A core which displays systematic preparation of the lateral edges.
- PRIMARY DECORTICATION FLAKE: A flake struck during the initial shaping of a core which displays cortex over the entire dorsal surface.
- SECONDARY DECORTICATION FLAKE: A flake struck during the initial shaping of the core which exhibits cortex over only part of the dorsal surface. An important difference between primary and secondary decortication flakes is that the latter are often utilized as tools themselves in a modified or unmodified state.
- TABULAR FLAKE: Flake struck from an unprepared core, exhibiting a quadrilateral cross-section. The dorsal and ventral surfaces of these flakes are flat and parallel.
- PARALLEL-SIDED FLAKE: Flake struck from a prepared core; large, thick flakes possessing a triangular cross section.
- RECTANGULAR FLAKE: Flake struck from a prepared core exhibiting parallel, or slightly expanding lateral edges in relation to its longitudinal axis. These flakes are generally smaller than Parallel-Sided flakes and are believed to be struck from the edges, toward the center of a pyramidal core.
- LAMELLAR FLAKE: Flake struck from a prepared core which exhibits a thinner, more regular shape than the other flakes detached from prepared cores. The symmetry and length-width ratio of Lamellar Flakes cause them to possess traits intermediate between those of flakes and blades. Indeed, they are removed from cores prepared similarly to the ones true blades are struck from, but lack the careful attention to the striking platform necessary to produce such a blade.
- THINNING FLAKE: Flake removed to thin a piece for artifact manufacture.
- BLADE: A specialized flake which possesses parallel lateral edges and a length equal to or more than twice the width. Blades are manufactured from carefully prepared

LITHIC DEFINITIONS (Cont.)

core, utilizing a blade technique which results in a unique pattern of ridges on the dorsal surface.

GRAVER: Chipped stone tool designed to possess a point or spur which is generally assumed to function as an incising implement. Frequently, heavy wear on such a spur is a diagnostic trait of such tools.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**SUNDRY NOTICES AND REPORTS ON WELLS**

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

MAR 06 1985

1. oil well  gas well  other

2. NAME OF OPERATOR  
PERRY R. BASS

3. ADDRESS OF OPERATOR  
P O BOX 2760 MIDLAND, TEXAS 79702

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)  
AT SURFACE: 1980' FSL & 1500' FEL  
AT TOP PROD. INTERVAL: same as above  
AT TOTAL DEPTH: same as above

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE  
NM 069219

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
-----

7. UNIT AGREEMENT NAME  
BIG EDDY UNIT

8. FARM OR LEASE NAME  
BIG EDDY UNIT

9. WELL NO.  
108

10. FIELD OR WILDCAT NAME  
INDIAN FLATS (MORROW)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
SEC. 26, T21S, R28E

12. COUNTY OR PARISH  
EDDY COUNTY

13. STATE  
NM

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)  
GL 3300.2'

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	<input type="checkbox"/>
(other) <u>Move location 150' due East.</u>		

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

This location has been moved 150' due east because of artifacts being located at or within the 400'x400' pad area. As per New Mexico Archaeological Services Inc., Bass has staked another location as shown in #4 above. The old location was 1980' FSL & 1650' FEL.

Please attach this Sundry Notice to the APD submitted February 19, 1985.

NOTE: A new surface plat is attached. Everything else will remain the same.

The need for a hearing on this unorthodox location will not be necessary, since Perry R. Bass has both deep and shallow rights surrounding the 40 acre and 320 acre proration units. Administrative approval is there-by requested.

Subsurface Safety Valve: Manu. and Type \_\_\_\_\_ Set @ \_\_\_\_\_ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Stephen D. Smith TITLE Asst. Drlg. Eng. DATE March 1, 1985

(This space for Federal or State office use)  
APPROVED BY Charles A. Dohler TITLE AREA MANAGER DATE 3-7-85  
CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_

MEXICO OIL CONSERVATION COMMISSION  
**WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
 Supersedes C-128  
 Effective 1-4-85

All distances must be from the outer boundaries of the Section.

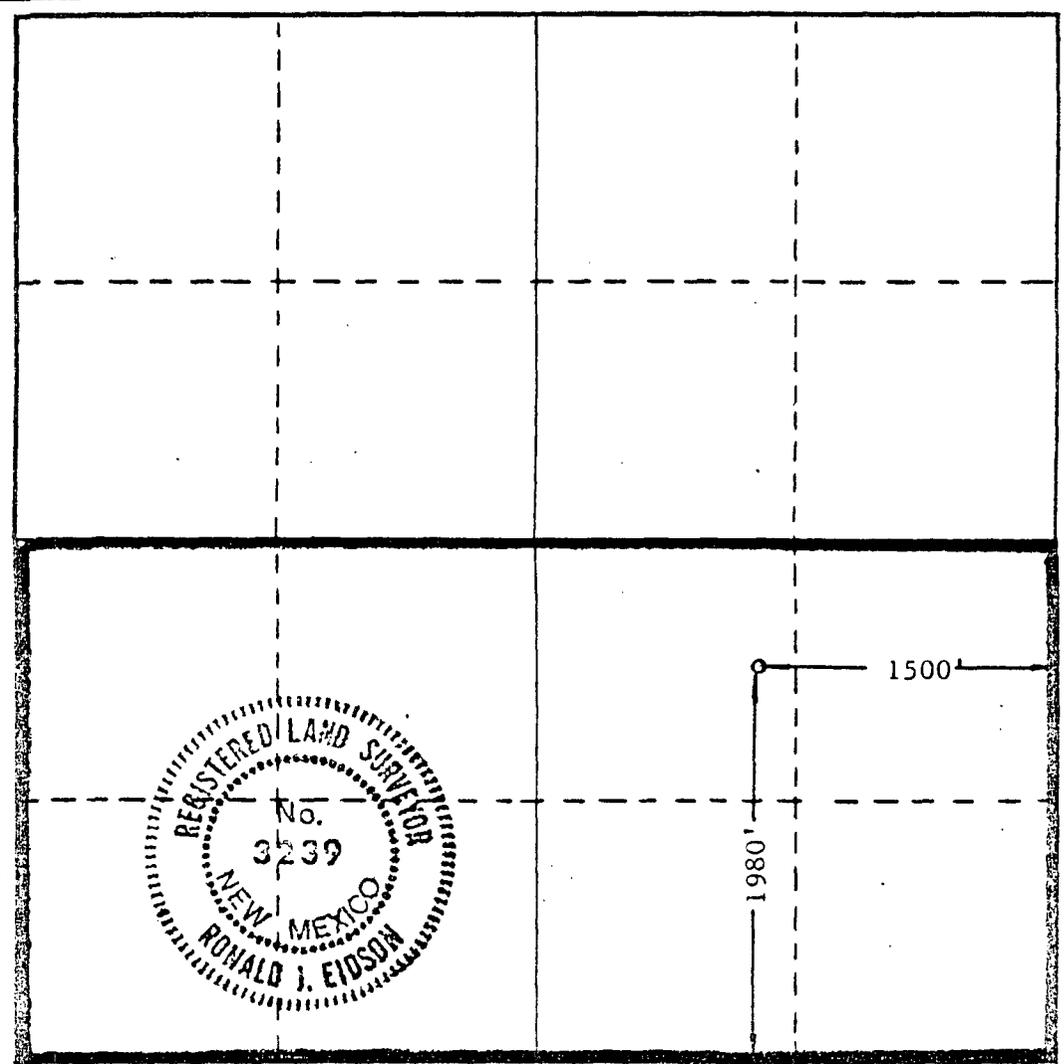
Operator <b>PERRY R. BASS</b>		Lease <b>BIG EDDY UNIT</b>		Well No. <b>108</b>	
Unit Letter <b>J</b>	Section <b>26</b>	Township <b>21 SOUTH</b>	Range <b>28 EAST</b>	County <b>EDDY</b>	
Actual Footage Location of Well: <b>1980</b> feet from the <b>SOUTH</b> line and <b>1500</b> feet from the <b>EAST</b> line					
Ground Level Elev. <b>3200.2'</b>	Producing Formation <b>MORROW</b>		Pool <b>INDIAN FLATS</b>	Dedicated Acreage: <b>320</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation Unit

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

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

*Stephen D. Smith*

Name <b>Stephen D. Smith</b>
Position <b>Asst. Drilling Engineer</b>
Company <b>Perry R. Bass</b>
Date <b>March 1, 1985</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 knowledge and belief.

Date Surveyed <b>March 1, 1985</b>
Registered Professional Engineer and/or Land Surveyor <i>Ronald J. Eidson</i>
Certificate No. <b>JOHN W. WEST, 476</b> <b>RONALD J. EIDSON, 3239</b>

