Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN ...PLICATE*
(Other instructions on reverse side)

30-015-25977

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM-29234

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [XX] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Lotos Federal

2. NAME OF OPERATOR: Bettis, Boyle & Stovall

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: P.O. Box 1240, Graham, Texas 76046

10. FIELD AND POOL, OR WILDCAT: WND. S. SAND DUNES LOWER PENN.

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FSL & 1980' FEL, NW/4SE/4, Unit letter J
At proposed prod. zone: Same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 9, T24S, R31E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 16 1/2 air miles east of Malaga, New Mexico

12. COUNTY OR PARISH: Eddy

13. STATE: N.M.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
1980'	1280	320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
N/A	15,100'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3457.3' GR

22. APPROX. DATE WORK WILL START*: ASAP

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20"	94.00#	660'	1800 sx(Circulate)
17 1/2"	13 3/8"	68 & 72#	4,270'	4200 sx(Circulate)
12 1/4"	9 5/8"	47 & 53.50#	11,700'	900 sx
8 1/2"	7 5/8"	39.00#	11,500-13,850'	350 sx
6 1/2"	5 1/2"	23.00#	13,650-15,100'	225 sx

Operator proposes to drill to the Morrow formation and test for possible commercial production of gas.

Attachments:
- B.O.P. sketch
- C-102 plat
- Pertinent lease data
- Supplemental drilling data
- Surface use and operation plan
- Directional map to location
- Exhibits 'A' - 'C'

RECEIVED
AUG 30 1988
DIST. C N.M.
BUREAU OF LAND MANAGEMENT
ROSWELL, NEW MEXICO

RECEIVED
AUG 29 1988

Post ID#1
API & NL
9-9-88

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.

Map

24.

SIGNED Jerry W. Franklin TITLE Agent DATE August 27, 1988

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

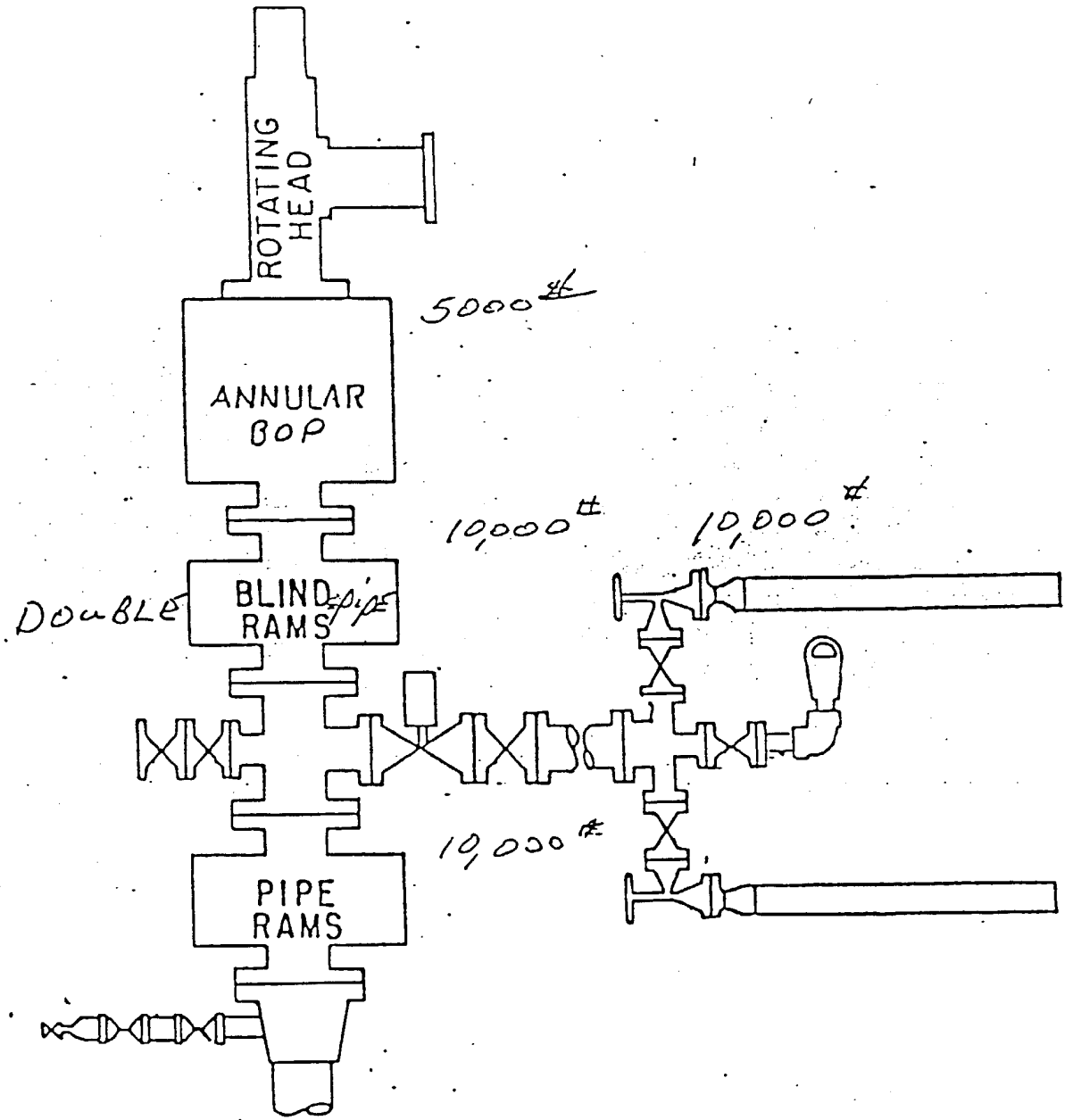
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

WILLBROS DRILLING, INC.

BOP STACK

RIG #11

EXHIBIT "B"



ng Tank: Size None

Hydration (Mix) Tank: Size 80 bbls.

Mud Mixing Pumps: (1) Number 1 Size 6 X 8 H.P. 75 HP Electric

(2) Number 2 Size 6 X 8 H.P. 75 HP Electric

Shaker: Make Derrick Model Single Screen

Atmospheric Degasser: None

Degasser: Make None Model

Desander: Number 1 Make Harrisburg Model 2 cone Capacity 800 gal.

Desilter: Number 1 Make Harrisburg Model 6 cone Capacity 800 gal.

Other Solids Removal Equipment: None

Drill Pipe: (1) Amount 8,029' Size 4-1/2 Weight 16.60 Grade E

Conn. 4-1/2 XH Range 2 API Class. Double White

(2) Amount 6,293' Size 4-1/2 Weight 16.60 Grade X-135

Conn. 4-1/2 Range 2 API Class. Double White

Drill Collars: (1) Number 18 Size 8" O.D. 8" I.D. 2-3/4

Range 2 Conn. 6-5/8 Type Reg.

(2) Number 24 Size 6-1/4 O.D. 6-1/4 I.D. 2-1/4

Range 2 Conn. 4-1/2 Type XH

(3) Number Size O.D. I.D.

Range Conn. Type

Pipe Racks: 7 Sets

Blowout Preventers:

Number	Make	Model	Size	Bore	Working Pressure
Double	Hydril	V	13-5/8	13-5/8	5,000
Single	Hydril	V	13-5/8	13-5/8	5,000
Single	Cameron	D-Bag.	13-5/8	13-5/8	5,000

Accumulator and Closing Unit:

Make Valcon Model D-700 Capacity 160 gal.

Choke and Kill Lines: Number 3 W.P. 5000 Size 4-1/2

Choke Manifold: Working Pressure 5000 psi

Choke (1) Type Barton Adjustable

Choke (2) Type Barton Positive

Choke (3) Type

Diverter Lines and Valves: If Applicable, Number 2 Size 4-1/2

Drilling Instrumentation (Weight, RPM, Pit Level, etc.):

Martin Decker - Wt. R.P.M. Pump Strokes 7-Pen

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	Lease	Well No.
Bettis-Boyle & Stovall	Lotos Federal	1

Unit Letter	Section	Township	Range	County
J	9	24 South	31 East	Eddy County

Actual Footage Location of Well:
1980 feet from the South line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3457.3	Morrow	UND. S. SAND DUNES LOWER PENN	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

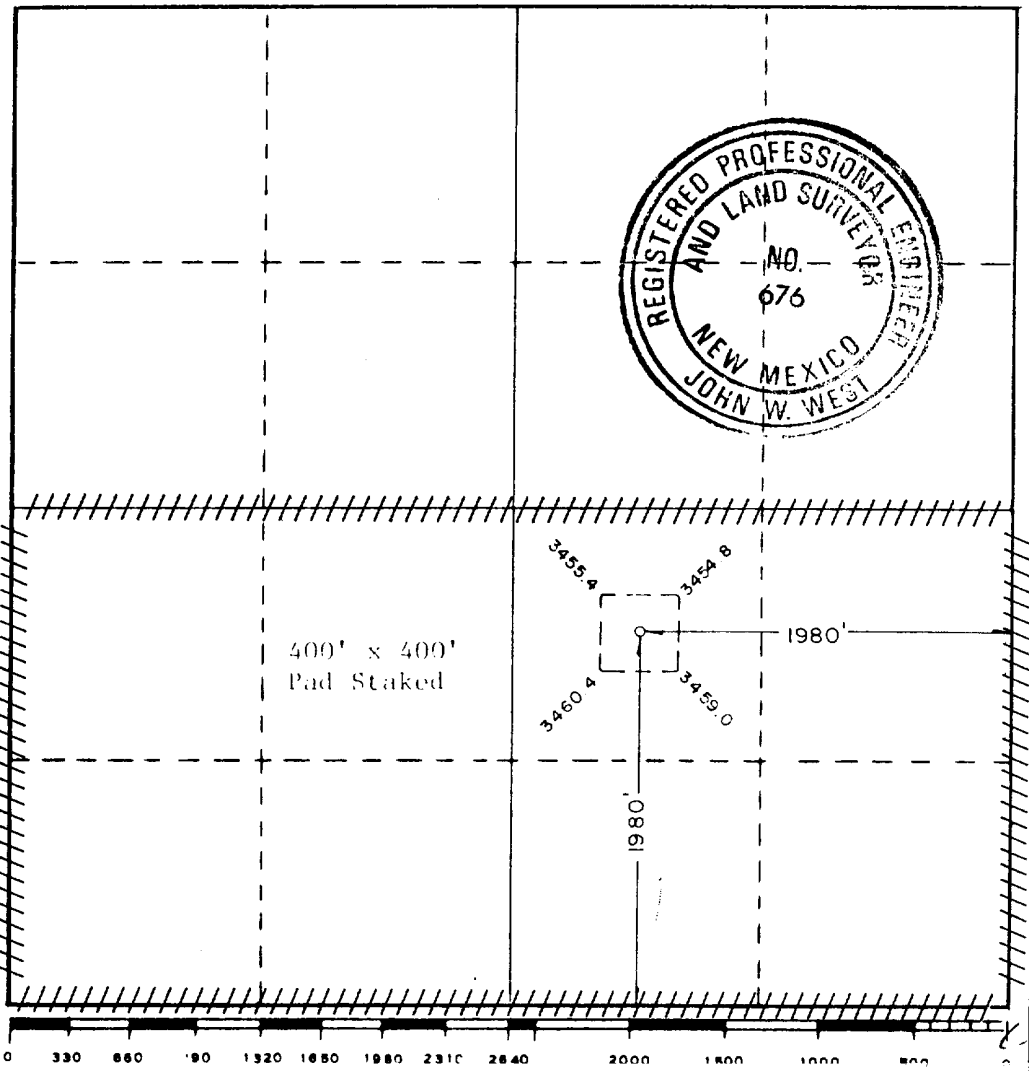
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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 _____

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.



96560

CERTIFICATION

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

Terry W. Franklin

Name: Terry W. Franklin

Position: Agent

Company: Bettis, Boyle & Stovall

Date: August 26, 1988

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: April 13, 1988

Registered Professional Engineer and/or Land Surveyor

John W. West

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

Pertinent Lease Data

Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E
Eddy County, N.M.

Located: 16 1/2 air miles east of Malaga, New Mexico

Lease Number: NM-29234

Lease Issued: January 1, 1977(Lease extended two years by the drilling of Bran Oil Corporation's Bran-Bettis Fed. No. 1, 660' FSL & 660' FEL, Sec. 11, T24S, R31E)

Record Lessee: Bettis Brothers, Inc.(100% effective 12-1-86)

Bond Coverage: Operator's $25,000 Statewide Oil and Gas Bond

Acres in Lease: 1280

Surface Ownership: Federal

Grazing Permitee: Snyder Ranches, Ltd.

Pool: Undesignated South Sand Dune Lower Penn

Exhibits: B.O.P. sketch
C-102 plat
Supplemental drilling data
Surface use and operation plan
Directional map to location
Exhibits 'A' - 'C'

SUPPLEMENTAL DRILLING DATA

Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E
Eddy County, N.M.
NM-29234

The following information is in accordance with 'Onshore Oil and Gas Order' No. 1:

1. Geologic Name of Surface Formation: Recent

2. Estimated Geological Marker Tops:

Rustler	800'	2nd Bone Springs	9,750'
Base of Salt	3,800'	3rd Bone Springs	11,000'
Lamar	4,260'	Wolfcamp	11,450'
Ramsey Sand	4,300'	Strawn	13,350'
Cherry Canyon	5,120'	Atoka	13,500'
Maneito	5,315'	Atoka Bank	13,660'
Brushy Canyon	6,800'	Lower Atoka	13,760'
Bone Springs	8,080'	Morrow	14,300'
1st Bone Springs	9,750'	Lower Morrow	15,030'

3. Estimated Depths to Oil, Gas and Water Zones:

Water: above 500'
Gas : below 14,300'

4. Proposed Casing and Cement Programs:

See Form 3160-3. Listed below are the grade rating for each casing and liner string.

20" Conductor to 660' - J-55, ST&C casing
13 3/8" Surface to 4,270' - J-55, ST&C casing
9 5/8" Intermediate to 11,700' - P-110, LT&C casing
7 5/8" Drilling Liner from 11,500-13,850' - P-110 liner
5 1/2" Production Liner from 13,650-15,100' - P-110 liner

5. Proposed Mud Program:

0 - 660'	Conventional bentonite system adding lime to system to induce flocculation. Paper should be used to control seepage loss. Add 12-15 ppg bentonite, adjust the PH to 9.5-10.0 with lime. Viscosity 36-38 sec/qt. Fluid density A.L.A.P.

660' - 4,270' Drill out under casing with brine, 10.0 ppg. Mix lime to flocculate and settle drill solids and maintain adequate rheological value. To insure clean hole for running 13 3/8" casing, run salt gel sweep before tripping to run casing. Viscosity 28-32 sec/qt.

4,270 - 11,700' Drill out under 13 3/8" casing with cut bring, mixing paper for seepage control. Insure clean hole with salt gel pills circulated as needed to sweep dense particles from hole. Chloride concentration will be sufficient prior to entering the Wolfcamp formation @ +/- 11,450'. Heavy brine may be added to system to adjust the salinity at the recommended minimum of 100,000 mg/l chlorides, if needed. Fluid density - initially 8.5-8.6 ppg. Increase to +/- 9.8 ppg prior to entering the Wolfcamp formation. Viscosity - minimum values will be sufficient for both drilling and logging operations.

11,700 - 13,850' Brine/polymer system. Drill out under 9 5/8" casing with 10.0 ppg brine water, circulating through the reserve pit. Continue to sweep the hole with Hi-Vis salt gel sweeps, maintaining the PH @ 9.5-10.0 with Caustic Soda. At the top of the Atoka(+/- 13,350'), or when the first gas kick is encountered, return to the steel pits and displace the hole with the brine/polymer system. Increase the mud weight until the formation is balanced and resume drilling.

INITIAL MIXING PROCEDURE:

1. Fill the tank to the required level with brine water.
2. Add 0.02 ppb of IDF PRESERVATIVE.
3. Simultaneously add: .75 ppb IDVIS
   1.00 ppb IDF FLR
4. Add caustic soda to raise PH to 9.0-9.5
5. Add barite to achieve the required density if necessary.

Fluid density - initial 11.0-11.5 ppg ending to 14.5 ppg. Viscosity 36-38 sec/qt. Fluid loss 10-12 ml/30 min reduced to 6 ml/30 min or less by total depth.

13,850 - 15,100' Brine system maintained essentially in same manner as listed above. Fluid density 10.0 ppg initially. Maximum anticipated mud wt. 11.7 ppg. Viscosity 34-36 sec/qt. PH 9.0-9.5 with caustic soda. Water loss below 6 ml/30 min

6. Pressure Control Equipment: B.O.P. sketch is attached.

7. Proposed Testing, Logging and Coring Programs:

   Testing: Possible DST's: Cherry Canyon
   Wolfcamp
   Atoka
   Morrow

   Logging: Dual Induction, Laterolog, Micro-laterolog

   Coring : None anticipated.

8. Auxiliary Equipment: A kelly cock will be installed on the rig floor while drilling operations are in progress.

9. Abnormal Pressures or Temperature Zones: Possible high pressure may exist in the Atoka formation at approximately 13,500'. No abnormal temperature zones are anticipated.

10. Anticipated Starting Date: Commence drilling operations upon approval of the Permit to Drill.

SURFACE USE AND OPERATION PLAN

Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E
Eddy County, N.M.

1. Location of Proposed Well:

   A. Exhibit 'A' is a portion of a map displaying the location as staked. Proposed location is approximately 16 1/2 air miles east of Malaga, New Mexico.

2. Access Roads to be Constructed and Reconstructed:

   A. Exhibit 'B' displays the existing roads and also the planned access roads.

   B. The new access road will measure 15' wide by approximately 6600' in length and will enter the northwest corner of the well pad as displayed on Exhibit 'B'.

   C. Existing roads will be used in their present state.

   D. One cattleguard will be installed as displayed on Exhibit 'B'.

3. Location of Existing Wells:

   A. Exhibit 'A' also displays the existing wells in the immediate area.

4. Location of Existing and/or Proposed Production Facilities:

   A. Necessary production equipment to produce the well will be constructed on the well pad.

5. Location and Type of Water Supply:

   A. Water necessary for drilling operations will be purchased from a nearby commercial source and trucked to the drill site.

6. Construction Materials:

   A. Construction materials for the well pad and access road will be caliche and will be purchased from an existing Federal pit located in the NE/4NE/4, Sec. 4, T24S, R31E. An archaeological survey was conducted on the pit by ACA, Portales, New Mexico, May 26, 1988, under report #F88-151. No cultural resources present.

7. Methods for Handling Waste Disposal:

A. Drill cuttings will be disposed of in the reserve pits.

B. Drilling fluids will be allowed to evaporate in the reserve pits until dry.

C. Water produced during tests will be disposed of in reserve pits.

D. Oil produced during testing operations will be stored in test tanks until sold or transferred to stock tanks.

E. All trash will be buried in a separate pit and covered with a minimum of 24 inches of dirt.

F. The location will be cleaned of all debris as soon as drilling operations are completed.

8. Ancillary Facilities:

A. None anticipated.

9. Well Site Layout:

A. Exhibit 'C' displays the well site and rig layout.

10. Plans for Reclamation of the Surface:

A. After completion of operations, all material not needed for producing the well will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in good condition.

B. Any unguarded pits containing fluids will be fenced until dry.

C. If the test well results in a non-commercial test, the well pad and new access road will be rehabilitated to BLM requirements.

11. Surface Ownership: The surface is Federal. Grazing allottee:

Snyder Ranches, Ltd.
c/o Larry Squires
P.O. Box 726
Lovington, New Mexico 88260
Telephone: 393-7544
Allottment #7042

12. Other Information:

A. Topography: Terrain in the area of the well pad and access road slopes to the northeast.

B. Soil: Consists of Berino complex sands.

C. Vegetation: oakbrush, prickly pear, snakeweed, mesquite, buckwheat, croton, three-awn, windmill grass, black gramma, cane bluestem, sand dropseed.

D. Archaeological Clearance: Archaeological survey performed May 26, 1988, by ACA, Portales, New Mexico, submitted under report #F88-151, dated May 31, 1988.

13. Operator's Representative and Certification:

Wayne Schkade
Bettis, Boyle & Stovall
P.O. Box 1240
Graham, Texas 76046
Telephone: (817)549-0780

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with operations herein will be performed by BETTIS, BOYLE & STOVALL and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

August 26, 1988
Date

Terry W. Franklin
Terry W. Franklin-Agent

Directions to Location

Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E
Eddy County, N.M.

Starting point being the junction of highway 31(Loving) & 128(Jal):

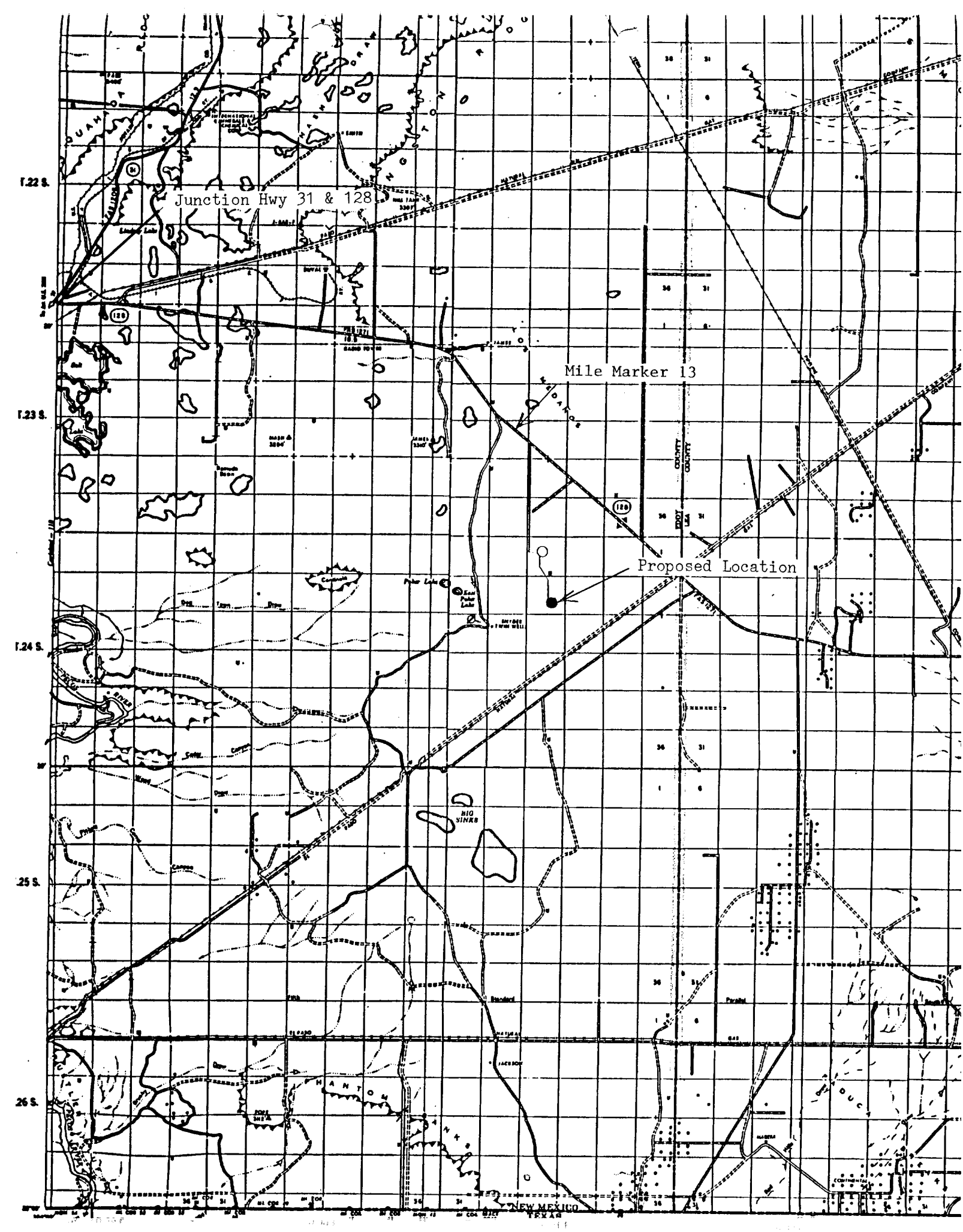
00.00 Proceed east-southeast on Highway 128(Jal) and proceed for 13.5 miles

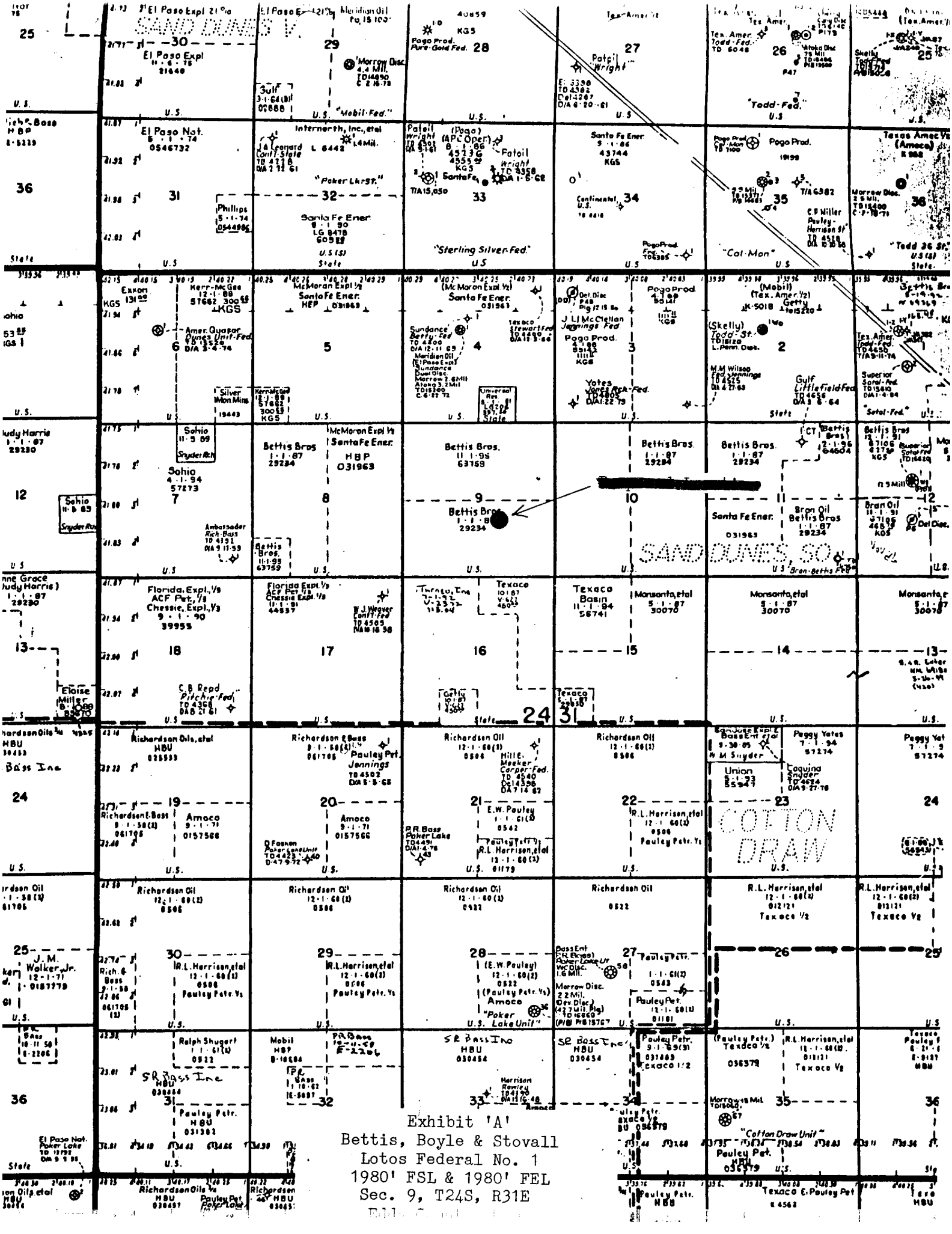
13.50 Turn south on oilfield road and proceed south for 2.8 miles

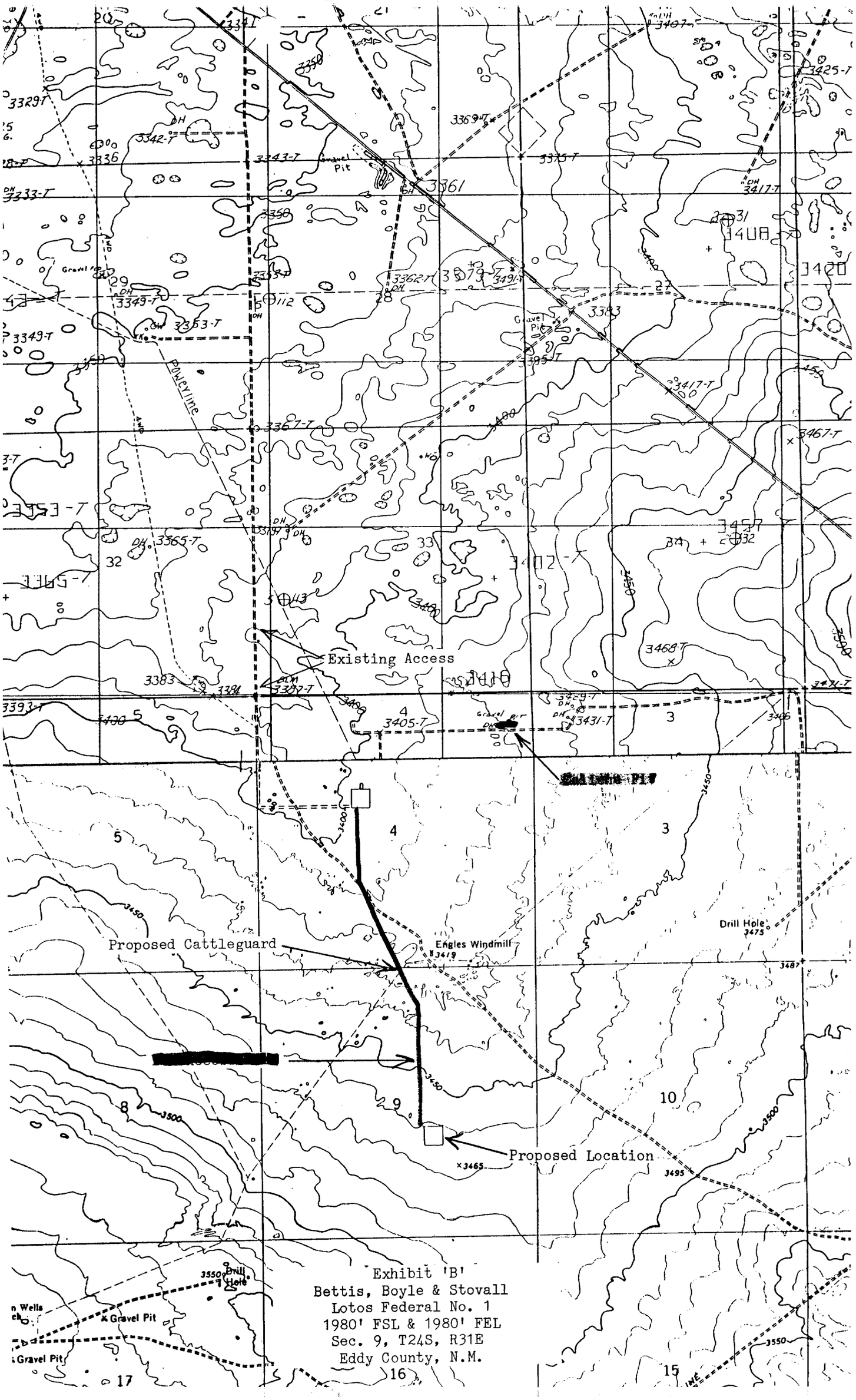
16.30 Turn east of .3 miles

16.60 Turn south for 1.2 miles

17.80 Location


Junction Hwy 31 & 128
Mile Marker 13
Proposed Location
T.22 S.
T.23 S.
T.24 S.
25 S.
26 S.
NEW MEXICO
TEXAS


SAND DUNES W.
SAND DUNES SW.
COTTON DRAW
"Cotton Draw Unit"
"Todd-Fed."
"Sterling Silver-Fed."
"Cal-Mon"
"Poker Lk-St."
"Mobil-Fed."
Exhibit 'A'
Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E


Existing Access
Proposed Cattleguard
Proposed Location
Engles Windmill
Drill Hole
Gravel Pit
Powerline
Exhibit 'B'
Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E
Eddy County, N.M.

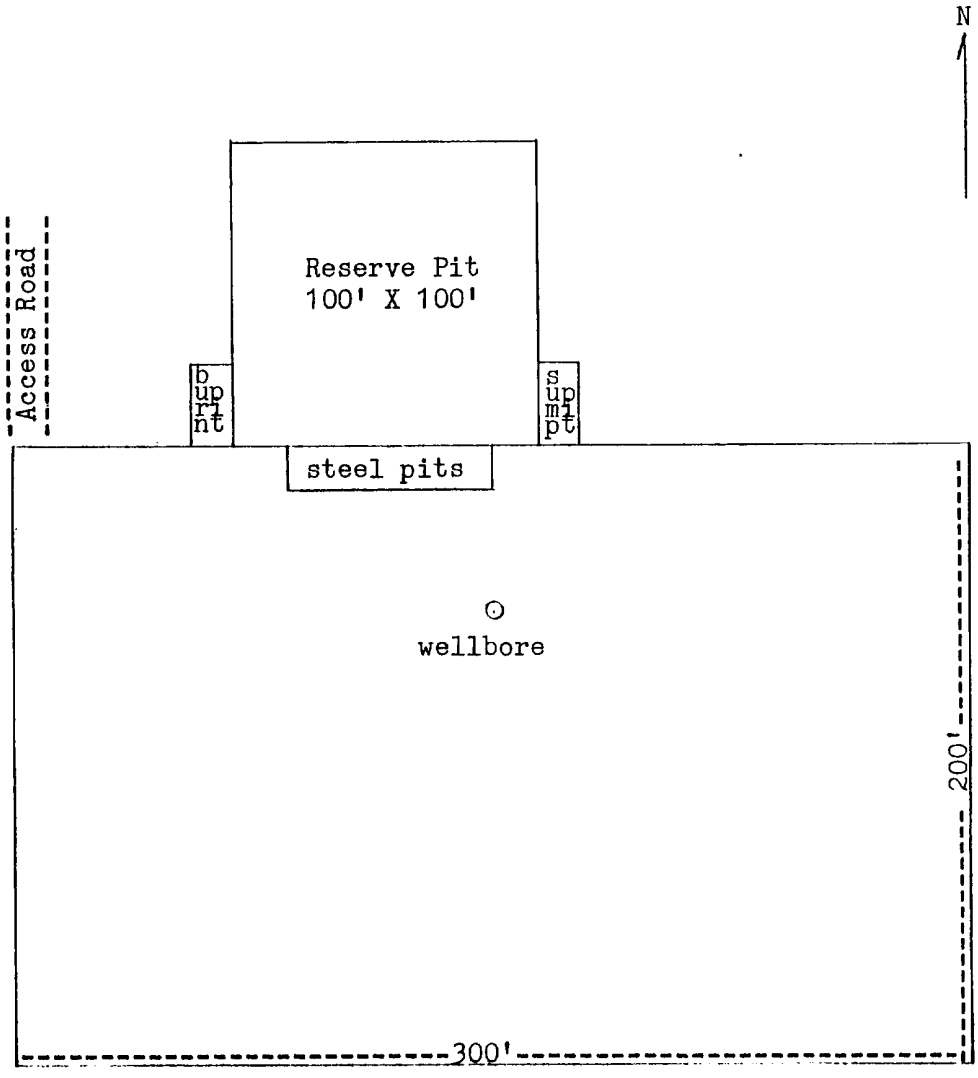


Exhibit 'C'
Bettis, Boyle & Stovall
Lotos Federal No. 1
1980' FSL & 1980' FEL
Sec. 9, T24S, R31E
Eddy County, N.M.