Form 3160-3
(July 1992)

CONSERVATION DI
S. 1st ST.
ARTESIA, NM 88210-2834

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. Lease Designation and Serial No.: NM-02862

6. If Indian, Allottee or Tribe Name:

1a. TYPE OF WORK
DRILL ☐ DEEPEN ☐ ReENTRY ☒

7. Unit agreement name: POKER LAKE UNIT

b. TYPE OF WELL ~~WELL~~ W. DISPOSAL
Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone ☐

8. Farm or Lease Name, Well No.: POKER LAKE UNIT #107 1796

2. Name of Operator: BASS ENTERPRISES PRODUCTION COMPANY 180

9. API Well No.: 30-015-27959

3. Address and Telephone No.: P.O. BOX 2760, MIDLAND, TEXAS 79702 (915) 683-2277

10. Field and Pool, or Wildcat: ~~POKER LAKE~~ SWD (DELAWARE) 96100

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At Surface: 1980' FSL & 660' FEL, Section 26, T24S, R30E
At proposed prod. zone: Unit I

11. Sec., T., R., M., or Blk. and Survey or Area: Section 26, T24S, R30E

14. Distance in miles and direction from nearest town or Post Office*: 14 miles East from Malaga, New Mexico

12. County or Parish: EDDY
13. State: NEW MEXICO

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
660'	1920	40
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**
NONE	6000'	Rotary

21. Elevations (Show whether DF, RT, GR, etc.): 3404 GR

22. Approx. date work will start*: Upon approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14 3/4"	11 3/4" WC 40	42#	628' (EXISTING)	365 sx. Circulated to surface.
* 11"	8 5/8" WC 50	32#	4055' (EXISTING)	1600 sx. Circulated to surface
** 7 7/8"	5 1/2" K 55	15.50#	5200'	450 sx. TOC 3500'.

Post ID-1
8-30-96
Re-entry

* Wellhead will be tied into 8 5/8" casing. (See attached wellhead skematic.)
** Cement to tie back 500' into intermediate casing.

Well was originally drilled to 8100' and abandoned in November 1994. Plan to re-enter wellbore, drill out cement plugs to 5900', set cement plug from 5700'-5000', drill plug to 5200', and set 5 1/2" casing. Complete well for saltwater disposal. Procedure, BOP diagram, anticipated tops and surace use plans attached.
Note: This well is outside the R-111 Potash Area.

Subject to Like Approval By State

RECEIVED
96 JUL 29 AM 8:29
070 FARMINGTON, NM

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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 William R Dannels W. R. Dannels Title Division Drilling Supt. Date July 26, 1996

(This space for Federal or State office use)

Permit No. _____ Approval Date _____

Approval Subject to General Requirements and Special Stipulations Attached

Application approval does not warrant or certify that 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:

Approved by /s/ Gary Bowers Title Acting Area Manager Date AUG 16 1996

*See Instruction 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 representatives as to any matter within its jurisdiction.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

BEPC[illegible] [illegible]ODUCTION
APR 11 1994
RECEIVED

Form C-102
Revised February 10, 1994
Instruction on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		POKER LAKE (DELAWARE)

Property Code	Property Name	Well Number
	POKER LAKE UNIT	107

OGRID No.	Operator Name	Elevation
001801	BASS ENTERPRISES PRODUCTION CO.	3404'

Surface Location

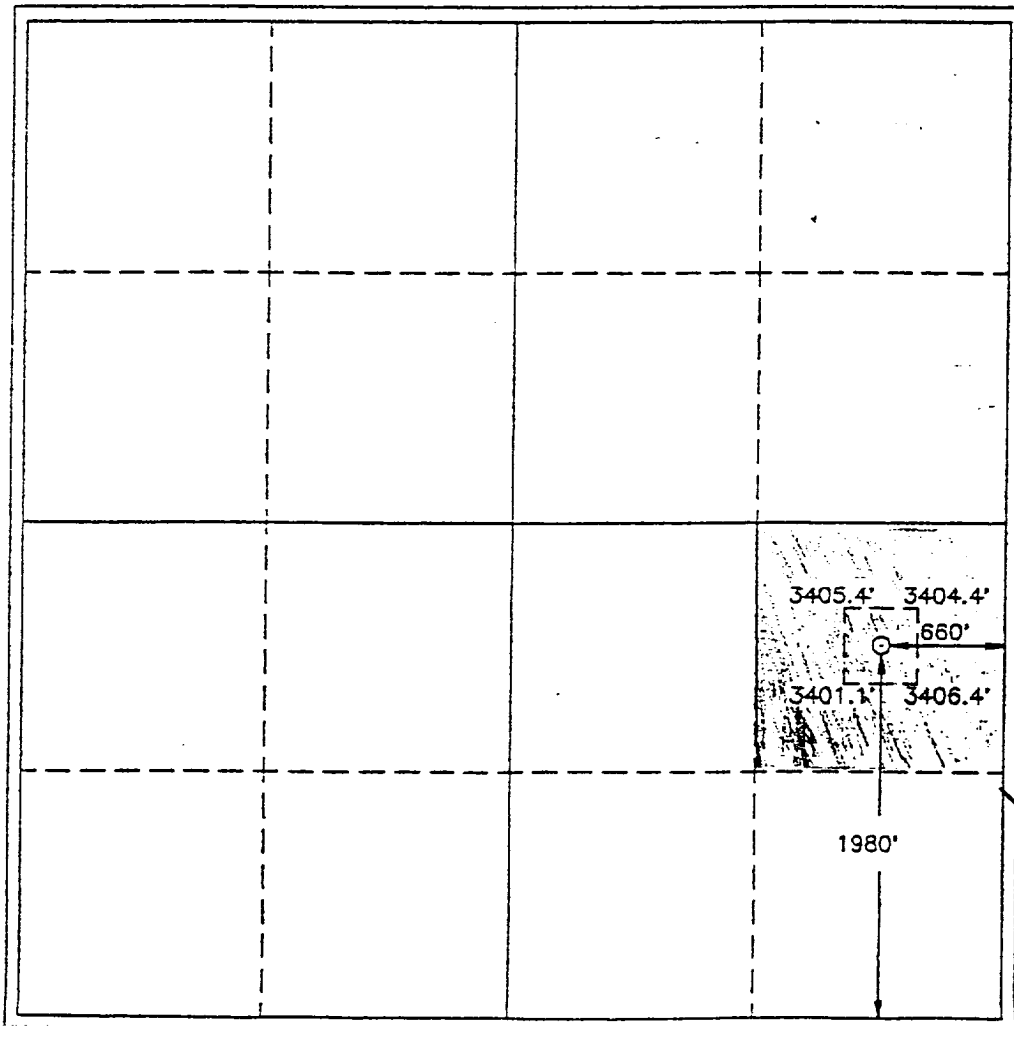
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	26	24 S	30 E		1980	SOUTH	660	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40	N	U	

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.

William R. Dannels
Signature

William R. Dannels
Printed Name

Division Drilling Supt.
Title

4-19-94
Date

SURVEYOR CERTIFICATION

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

GARY L JONES
April 6, 1994
NEW MEXICO
REGISTERED PROFESSIONAL LAND SURVEYOR

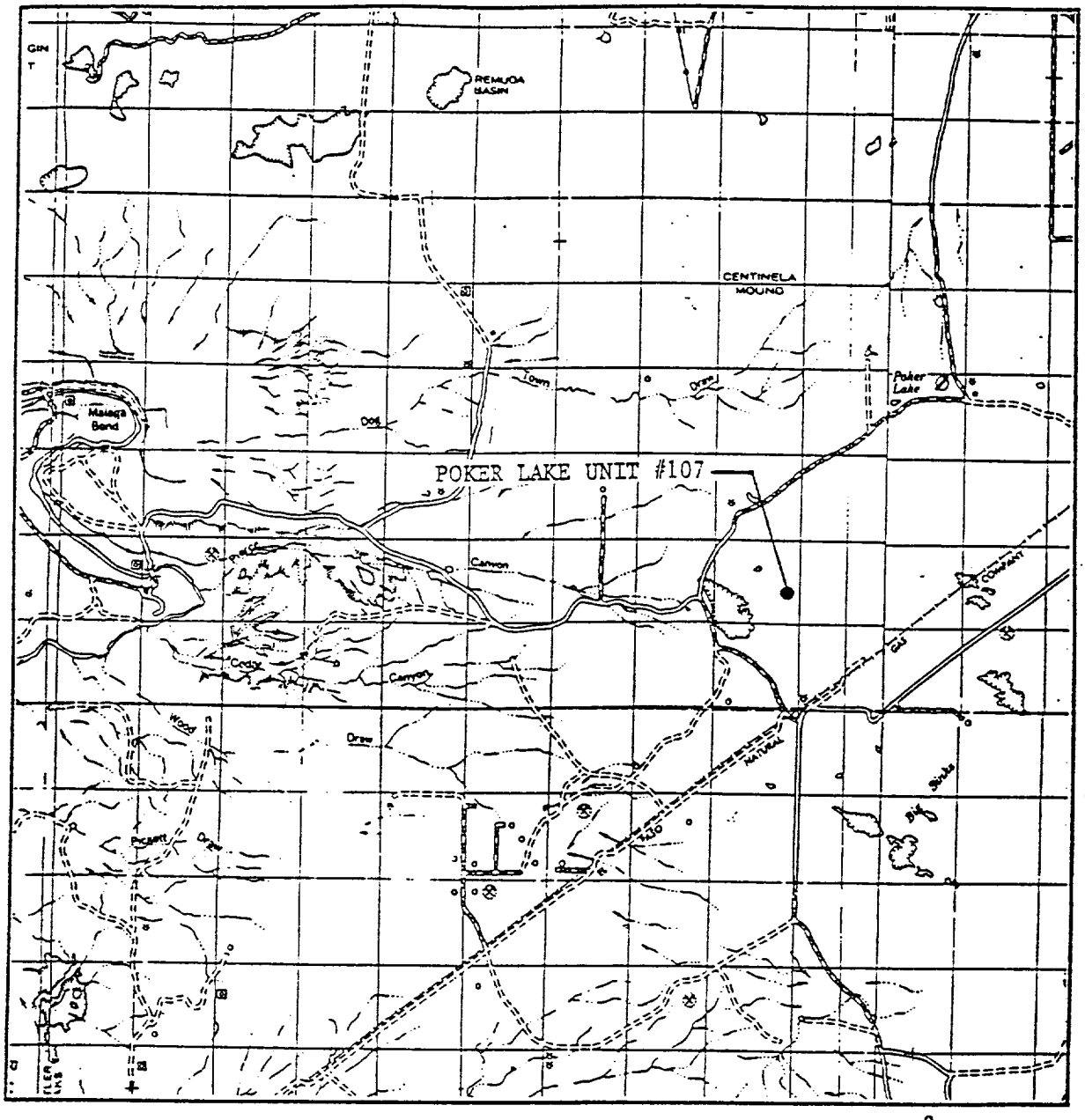
Date Surveyed

Signature & Seal of Professional Surveyor

W.O. Number 94-11-0615

Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239
GARY L. JONES, 7977

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 26 TWP. 24 S RGE. 30 E

SURVEY N.M.P.M

COUNTY EDDY STATE N.M.

DESCRIPTION 1980' FSL & 660' FEL

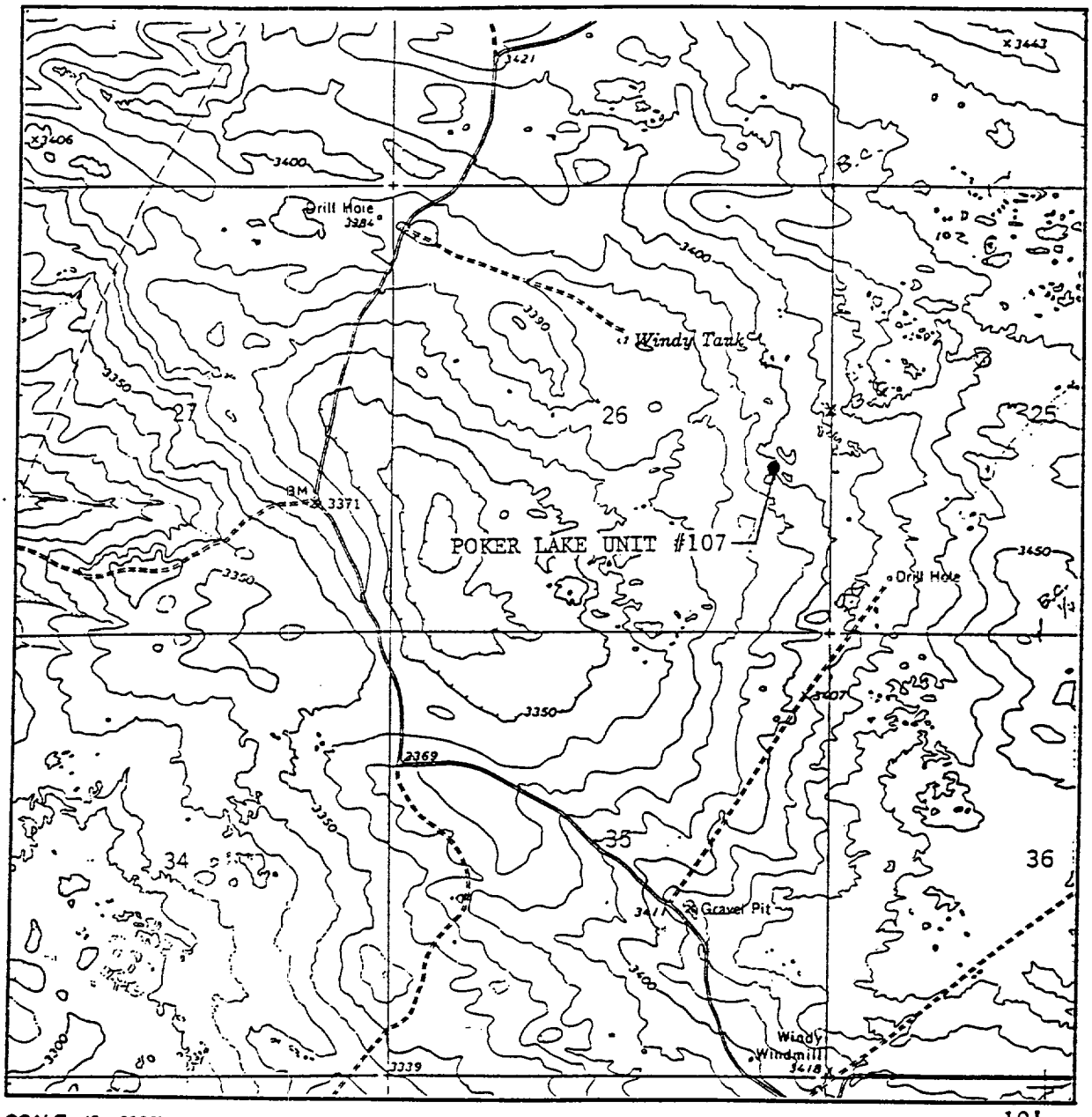
ELEVATION 3404.4'

OPERATOR BASS ENTERPRISES

LEASE POKER LAKE

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL 10'

SEC. 26 TWP. 24 S RGE. 30 E

SURVEY N.M.P.M

COUNTY EDDY STATE N.M.

DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3404.4'

OPERATOR BASS ENTERPRISES

LEASE POKER LAKE

U.S.G.S. TOPOGRAPHIC MAP

BIG SINKS

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117

3 Present

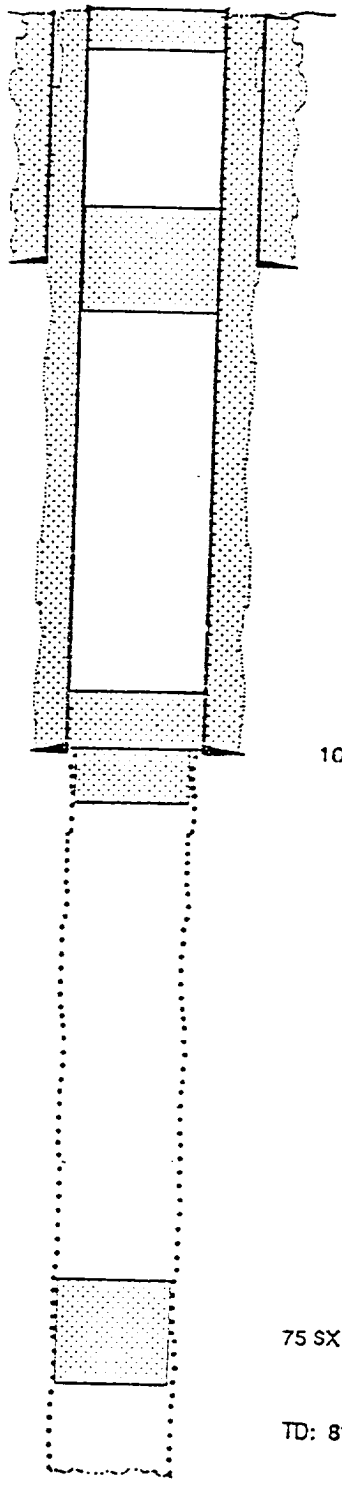
SSF
GF

POKER LAKE UNIT #107

LOC: 1980' FSL & 660' FEL, UT I, SEC 26, T24S, R30E
API NO: 30-015-27959
ELEVS: GL 3331.1', KB 3358.7'
SPUD DATE: 10/18/94, P&A: 11/4/94

BASS ENTERPRISES
POKER LAKE (DELAWARE) SW
EDDY COUNTY, NEW MEXICO
DATE: 9/29/95; LAH; PLU107

WELLBORE INFORMATION



40 SX CMT PLUG 0-63'

11-3/4" 42# WC-40 ST&C CSA 628'.
CMTD W/365 SX. CMT CIRC.
14-3/4" HOLE 0-628'.

25 SX CMT PLUG 520-720'

8-5/8" 32# WC-50 LT&C CSA 4055'.
CMTD W/1600 SX. CMT CIRC.
11" HOLE 628-4055'.

100 SX CMT PLUG 3895-4193'

75 SX CMT PLUG 7510-7600'

7-7/8" OPEN HOLE 4055-8100'

TD: 8100'

Proposed SWD

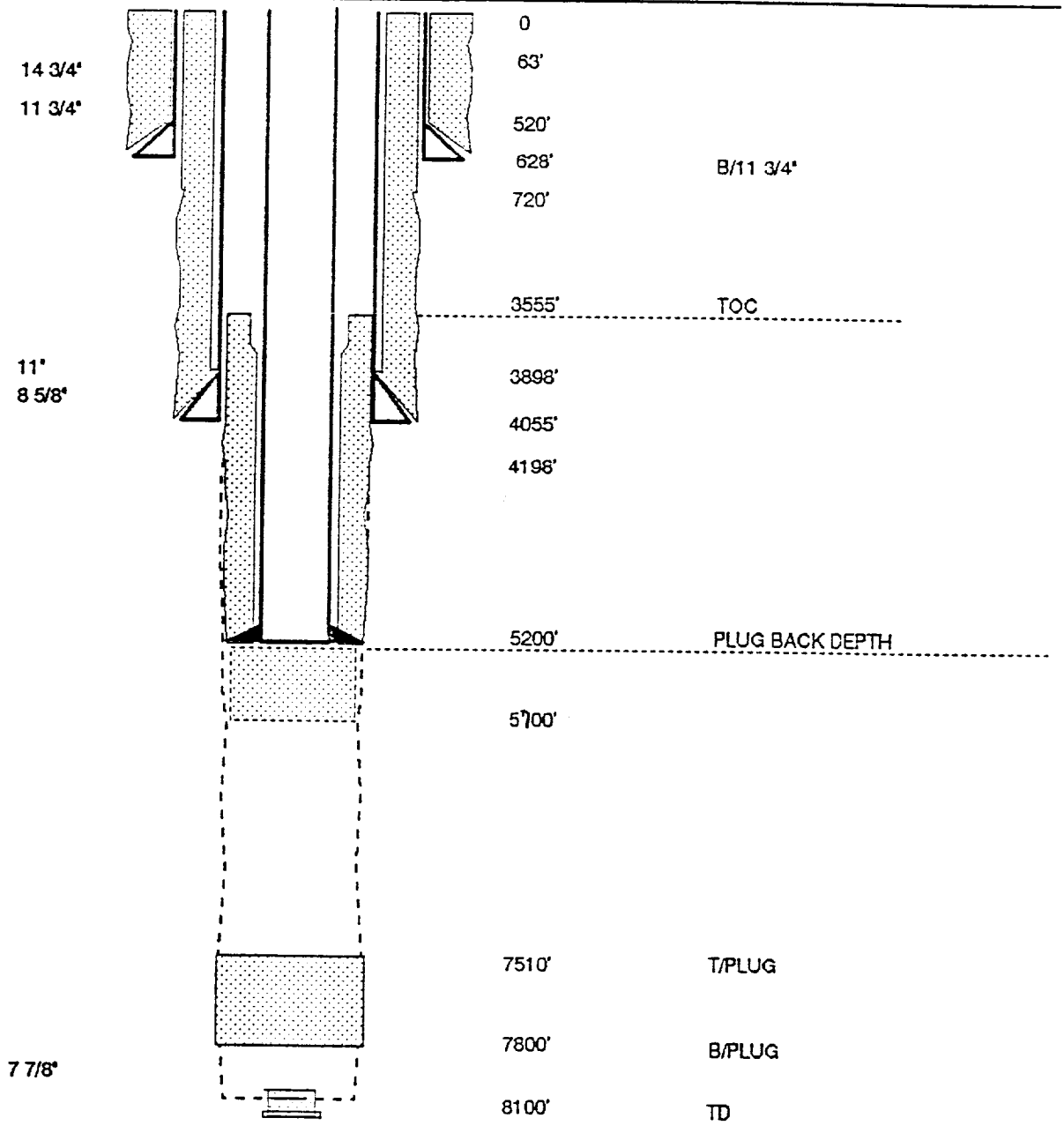
BASS ENTERPRISES PRODUCTION COMPANY

POKER LAKE UNIT # 107 RE-ENTRY

06\05\96

LOCATION: 1980' FSL & 660' FEL SECTION 26, T24S, R30E

COUNTY: EDDY STATE: NEW MEXICO



MAC

Ingram
Cactus
FLEXUS PRODUCTS / CANADA WORKS
Ingram Cactus Company

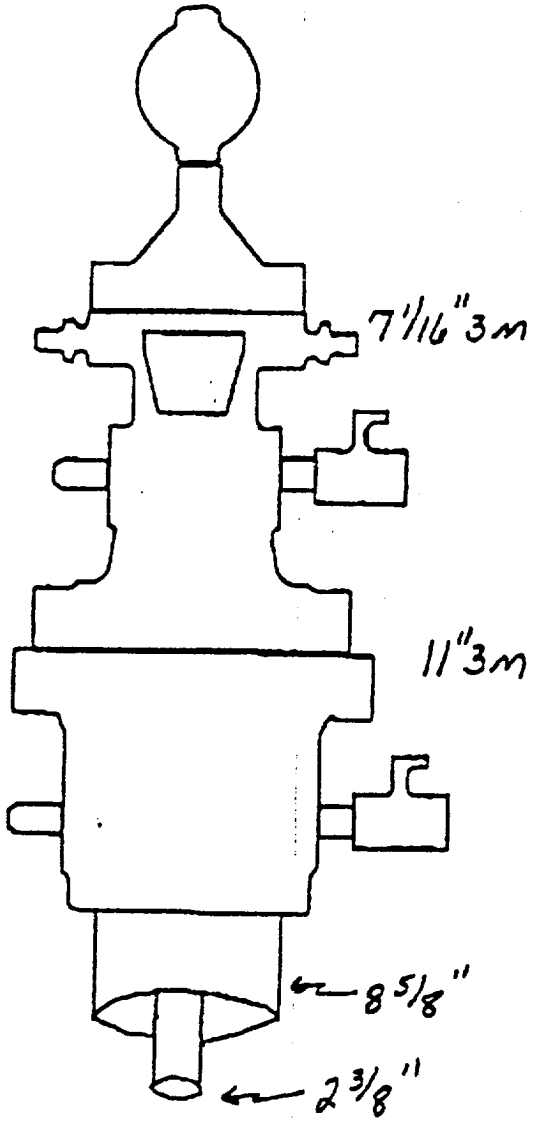
PLU # 107

FRANK COLLINS

"C" SECTION
$795.96

"B" SECTION
$1104.24

"A" SECTION
$635.64



6445 Burlington North • Houston, Texas 77092 (713) 690-3553 • Fax: (713) 690-4344

EIGHT POINT DRILLING PROGRAM
BASS ENTERPRISES PRODUCTION CO.

NAME OF WELL: POKER LAKE UNIT #107

LEGAL DESCRIPTION - SURFACE: 1980' FSL & 660' FEL, Section 26, T-24-S, R-30-E, 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 3414' (est)
GL 3404'

FORMATION	ESTIMATED TOP FROM KB	ESTIMATED SUBSEA TOP	BEARING
T/Rustler	526'	+2888'	Barren
T/Salt	896'	+2518'	Barren
B/Salt	3852'	- 438'	Barren
T/Lamar	4066'	- 652'	Salt Water
T/Delaware Sand	4098'	- 684'	Salt Water
T/Lower Brushy Canyon	7642'	-4228'	Plugged off
T/Bone Spring Lime	7938'	-4524'	Plugged off

POINT 3: CASING PROGRAM

TYPE	INTERVALS	PURPOSE	CONDITION
20"	0' - 40'	Conductor	Existing
11-3/4" 42# WC-40 ST&C	0' - 628'	Surface	Existing
8-5/8" 32# WC-50 LT&C	0' - 4055'	Intermediate	Existing
5-1/2" 15.5# K-55 LT&C	0' - 5200'	Production	New

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAM)

A BOP equivalent to Diagram 1 will be nippled up on the surface casing head. The BOP stack, choke, kill lines, kelly cocks, inside BOP, etc. will be hydro-tested. These tests will be run at 200 PSI and 70 percent of internal yield pressure of casing. These tests will be performed:

a) Upon installation
b) After any component changes
c) Fifteen days after a previous test
d) As required by well conditions

A function test to insure that the preventers are operating correctly will be performed on each trip. See the attached Diagram 1 for the minimum criteria for the choke manifold.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0' - 5900'	FW	8.4 - 8.6	28-30	NC	NC	NC	10.0

POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING

None.

B) LOGGING

None.

C) CONVENTIONAL CORING

None.

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
PLUG 5700'-5000'	225 sx	700'	Class C + 1% CaCl2	6.32	14.8	1.32
PRODUCTION						
Lead 3500-4000'	50 sx	500'	35/65 Poz C + 6% D20 + 5% D44 + 1/4# D29	16.02	12.4	2.14
Tail 4000-5200'	400 sx (tie back to int csg)	1200'	Class "C" + 2% SI	6.32	14.80	1.32

E) DIRECTIONAL DRILLING

No directional services.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout the Delaware section. A BHP of 3495 psi (max) or MWE of 8.3 ppg at 8100' is expected. No lost circulation was experienced in the Delaware section from 4098-8100'. No H_2S is anticipated. Estimated BHT at TD is 145° F.

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

5 days clean out cement plugs, set cement plug, run 5 1/2" casing and complete well for water ~~injection~~. DISPOSAL.

MULTI-POINT SURFACE USE PLAN

NAME OF WELL: POKER LAKE UNIT #107

LEGAL DESCRIPTION - SURFACE: 1980' FSL & 660' FEL, Section 26, T-24-S, R-30-E, Eddy County, New Mexico.

POINT 1: EXISTING ROADS

A) Proposed Well Site Location:

See Exhibit "A". Original site was ripped and re-seeded. Will grade and pack existing well site to original specifications.

B) Existing Roads:

From Carlsbad, New Mexico, go 8 miles south on Highway 285 to Highway 31. Turn north and go 7 miles to Highway 128 then turn east on Highway 128. Go 12 miles, turn south between mile markers 12 and 13 on Twin Wells Road (Co. Road #787). Go 10.1 miles to intersection of McDonald and Twin Wells Road. Turn left and go 1 mile. Turn left at caliche pit and go 2.1 miles. Turn left and go 1980' to location.

C) Existing Road Maintenance or Improvement Plan:

See Exhibit "A".

POINT 2: NEW PLANNED ACCESS ROUTE

A) Route Location:

See Exhibit "A". Original access road was ripped and re-seeded. Will grade and re-build road to original specifications. (12' wide x 1980' long).

B) Width

12' Wide.

C) Maximum Grade

Not applicable.

D) Turnout Ditches

Spaced per BLM requirements.

E) Culverts, Cattle Guards, and Surfacing Equipment

None.

POINT 3: LOCATION OF EXISTING WELLS

Exhibit "A" & "B" indicates existing wells within the surrounding area.

POINT 4: LOCATION OF EXISTING OR PROPOSED FACILITIES

A) Existing facilities within one mile owned or controlled by lessee/operator:

Oil/Gas production facilities are located 1.1 miles northeast at Poker Lake Unit #78. (See Exhibit A)

B) New Facilities in the Event of Production:

None.

C) Rehabilitation of Disturbed Areas Unnecessary for Water Injection:

Following the construction of water injection facilities, those access areas required for continued water injection will be graded to provide drainage and minimize erosion. The areas unnecessary for use will be graded to blend in with the surrounding topography (See Point 10).

POINT 5: LOCATION AND TYPE OF WATER SUPPLY

A) Location and Type of Water Supply

Fresh water will be hauled from Diamond and Half Water Station 35 miles east of Carlsbad, New Mexico. No brine water will be required.

B) Water Transportation System

Water hauling to the location will be over existing and re-built roads.

POINT 6: SOURCE OF CONSTRUCTION MATERIALS

A) Materials

If not found on location, the caliche source will be the nearest open pit approved by BLM.

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

See Exhibit "A".

POINT 7: METHODS FOR HANDLING WASTE MATERIAL

A) Cuttings

Cuttings will be contained in the plastic lined reserve pit.

B) Drilling Fluids

Drilling fluids will be contained in the plastic lined reserve pit.

C) Produced Fluids

Water production will be contained in the plastic lined reserve pit.

No hydrocarbon fluid or other fluids should be on location since well will not be tested for production.

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. 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

Water injection and control devices will be added to the existing facilities located at Poker Lake Unit #78 tank battery.

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 Exhibit "C".

C) Lining of the Pits

The reserve pits will be lined with plastic.

POINT 10: PLANS FOR RESTORATION OF THE SURFACE

A) Reserve Pit Cleanup

The pits will be fenced immediately after spudding and shall be maintained until they are backfilled. Previous to backfill operations, any hydrocarbon material on the pits' surfaces shall be removed. The fluids and solids contained in the pits shall be backfilled with soil excavated from the site and soil adjacent to the reserve pits. The restored surface of the pits 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 Bureau of Land Management stipulations during the appropriate season following restoration.

B) Restoration Plans - For disposal needs of active well

Reserve pits 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 disposal will be graded to minimize erosion and provide access during inclement conditions. For abandonment of the site, restoration procedures will be those that follow under Item C.

C) Restoration Plans - Following abandonment of well

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 Bureau of Land Management's stipulations.

D) Rehabilitations 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

Sand.

C) Vegetation

Sparse, primarily grasses and mesquite with very little grass.

D) Surface Use

Primarily grazing.

E) Surface Water

There is one stock tank located 1/2 mile northwest of location. No other lakes, streams, or rivers are located within several miles of the wellsite.

F) Water Wells

There are (2) windmills; one (1) located 1.1 miles northwest of location and one (1) located 1.3 miles south of location.

G) Residences and Buildings

Twin Wells Ranch, approximately 3 miles north northeast of the location.

H) Historical Sites

None observed.

I) Archeological Resources

An archeological survey was be obtained for this area. A full and complete archeological survey conducted by Laura Michalik and dated April 28, 1994 was submitted to the Bureau of Land Management. A copy of that report is attached for your convience.

J) Surface Ownership

The well site and new access road is 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.

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
(915) 683-2277

PRODUCTION
Mike Waygood
910 N. Canal Suite 704
Carlsbad, New Mexico 88220
(505) 887-7329

Keith E. Bucy
Box 2760
Midland, Texas 79702
(915) 683-2277

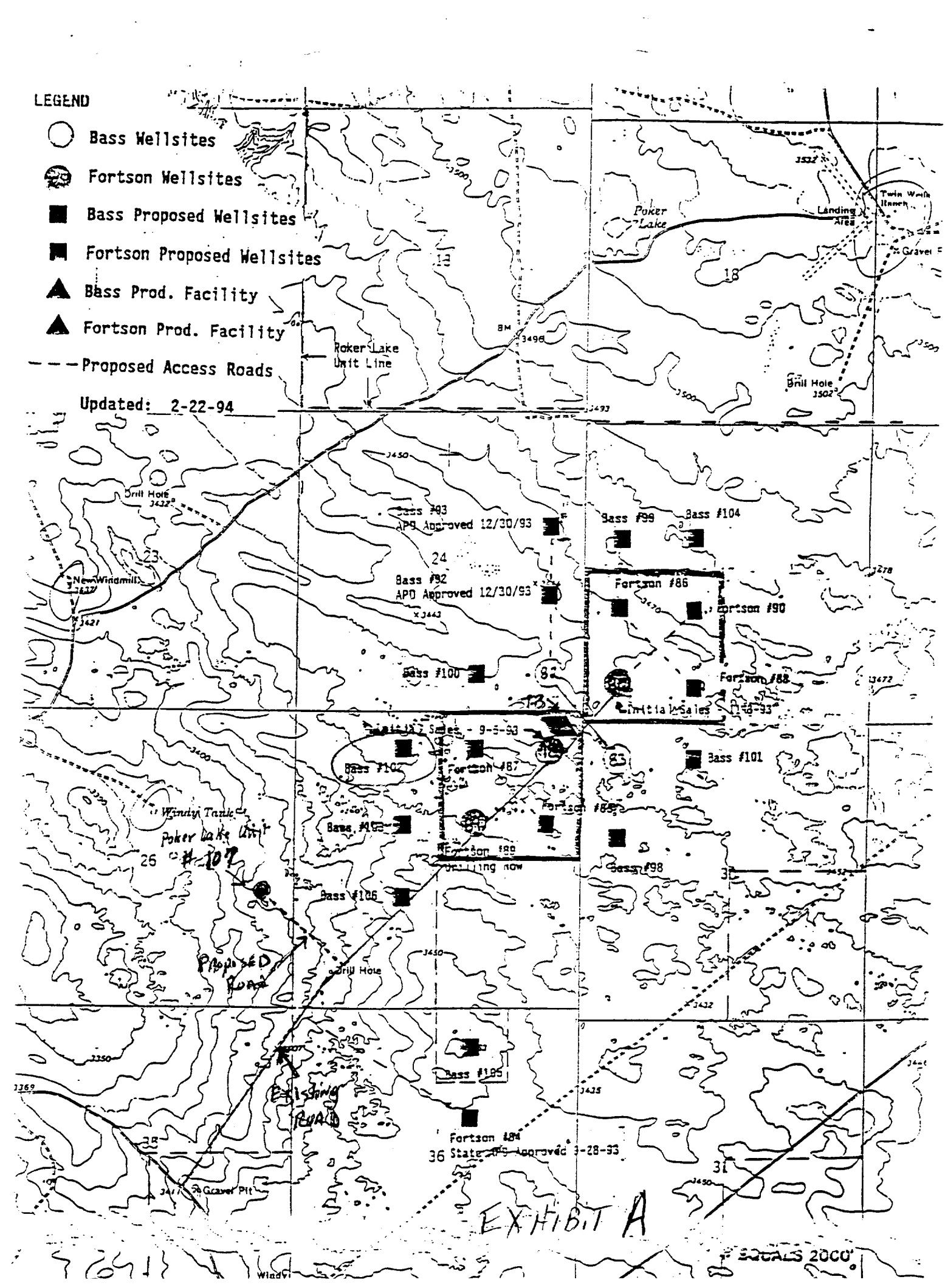
POINT 13: CERTIFICATION

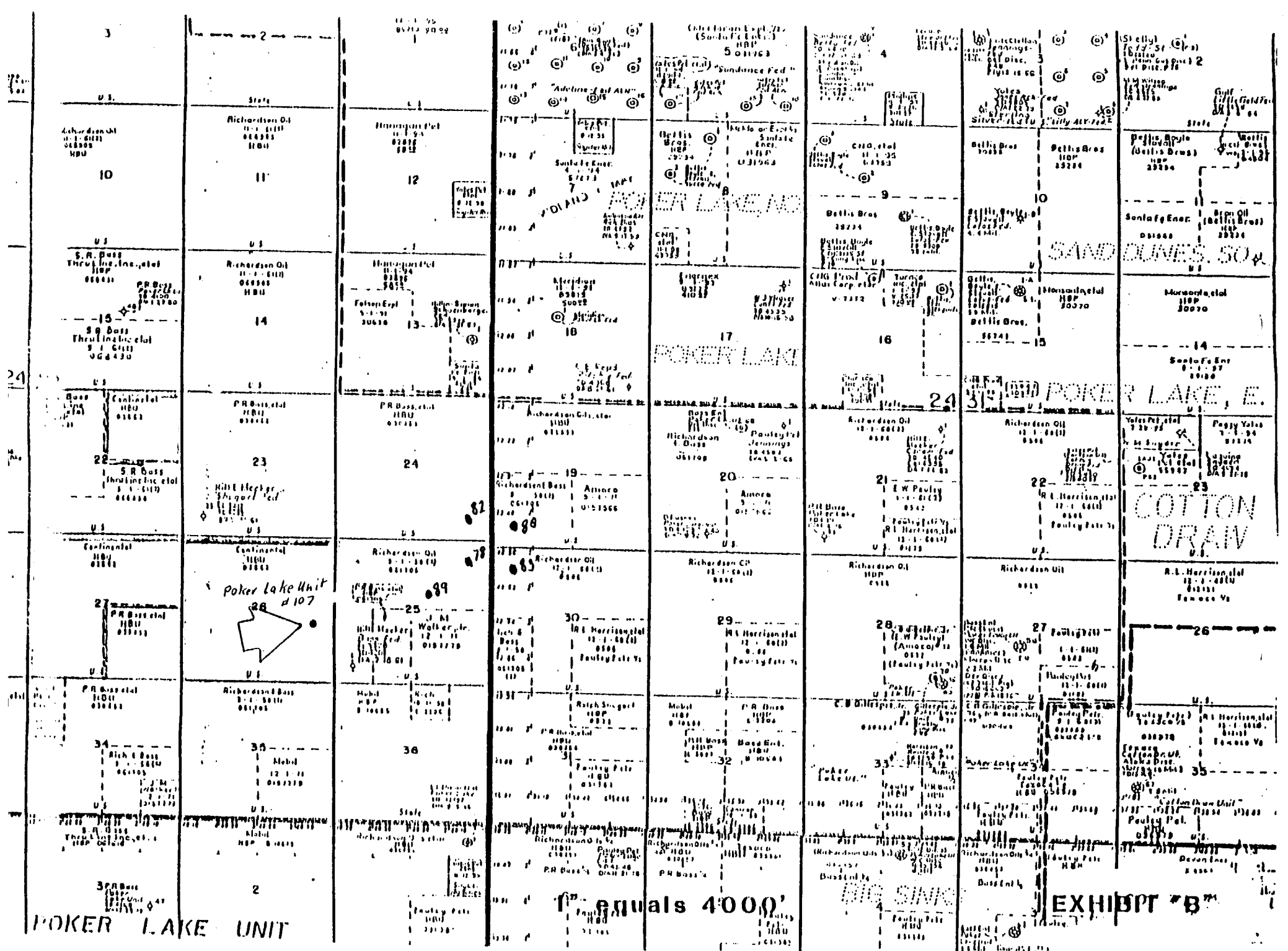
I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and that the work associated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

July 26, 1996
Date

William R. Dannels
William R. Dannels

BGH:rmn


LEGEND
Bass Wellsites
Fortson Wellsites
Bass Proposed Wellsites
Fortson Proposed Wellsites
Bass Prod. Facility
Fortson Prod. Facility
Proposed Access Roads
Updated: 2-22-94
Poker Lake Unit Line
Poker Lake
Landing Area
Twin Wells Ranch
Gravel
Drill Hole 3502
Drill Hole 3432
New Windmill
Bass #93 APD Approved 12/30/93
Bass #92 APD Approved 12/30/93
Bass #99
Bass #104
Fortson #86
Fortson #90
Bass #100
Fortson #88
Initial Sales - 9-6-93
Bass #102
Fortson #87
Bass #101
Windy Tank
Poker Lake Unit #107
Fortson #89
Drilling now
Bass #98
Bass #106
Proposed Road
Drill Hole
Bass #105
Existing Road
Fortson #84
36 State APD Approved 3-28-93
Gravel Pit
EXHIBIT A
EQUALS 2000'


POKER LAKE UNIT
1" equals 4000'
EXHIBIT "B"
POKER LAKE
SAND DUNES, SO.
POKER LAKE, E.
COTTON DRAW
BIG SINK
Poker Lake Unit #107

POKER LAKE UNIT # 107

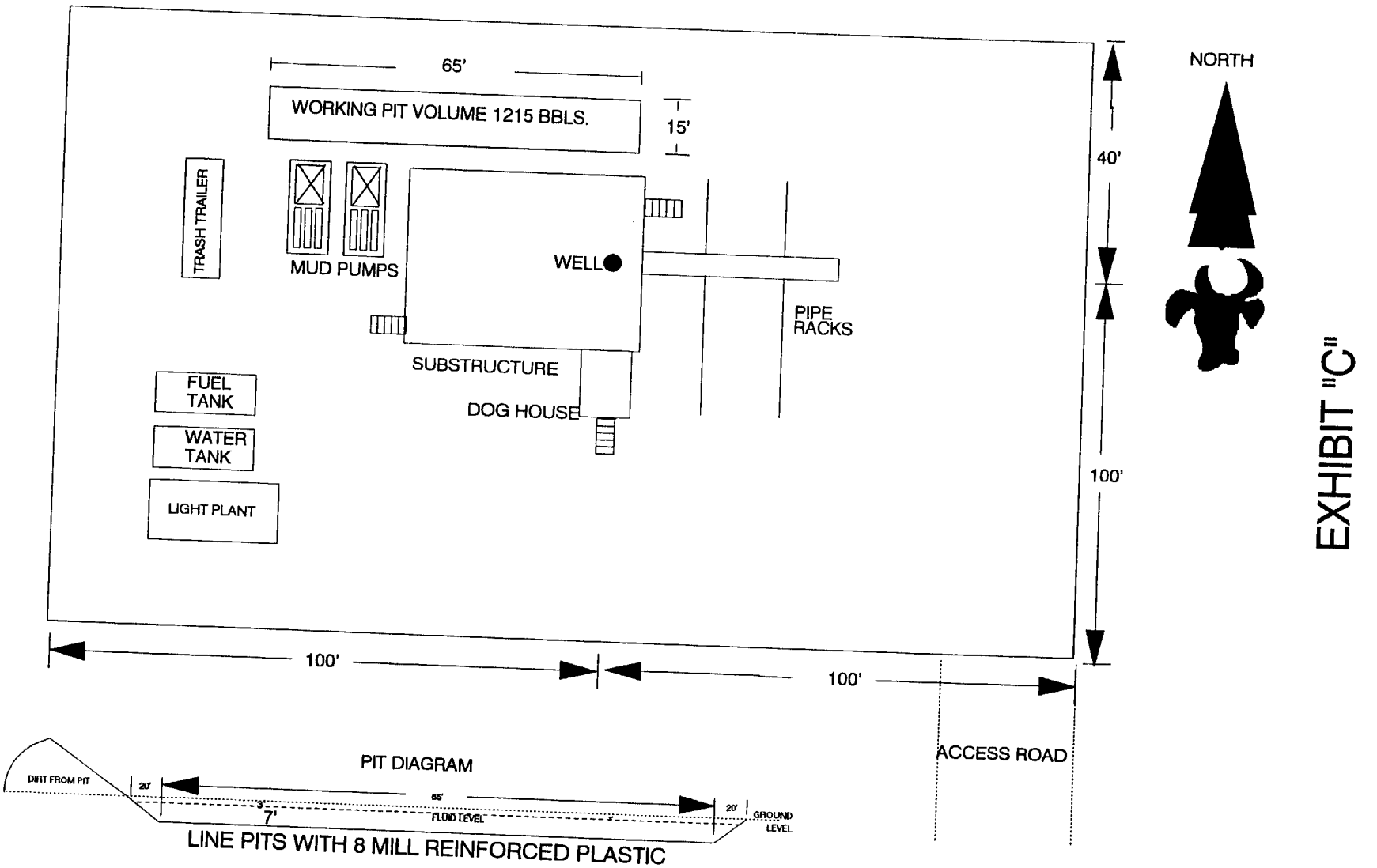
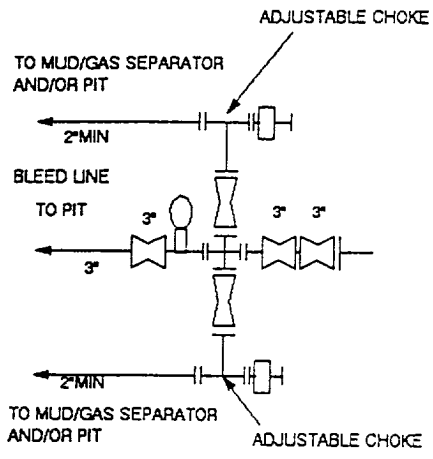
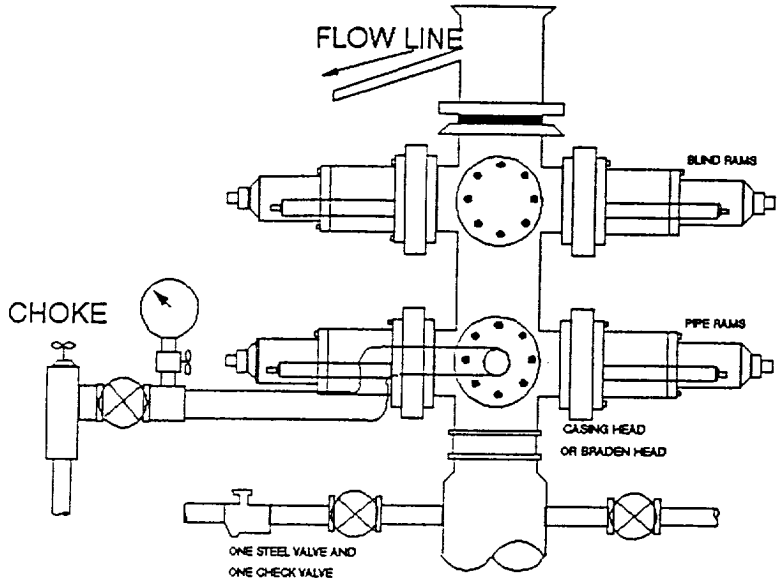


EXHIBIT "C"

07/24/96 FDC

3000 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

BASS ENTERPRISES PRODUCTION CO
201 MAIN ST.
FORT WORTH, TEXAS 76102-3131
817/390-8400

December 4, 1995

FEDERAL EXPRESS

Conoco, Inc.
10 Desta Drive, Suite 100W
Midland, Texas 79705-4500

Attention: Mr. Warren Richardson

Re: Conversion to Saltwater Disposal
Poker Lake No. 107
Section 26, T24S-R30E; USA NM 02862
Poker Lake Unit
Eddy County, New Mexico

Gentlemen:

As advised in our recent telephone conversation, Bass plans to utilize the referenced wellbore for disposal of saltwater into an upper Delaware zone in the approximate interval between 4,000' and 5,000' subsurface. As you are aware, Bass and Conoco are 50/50 co-owners in the subject wellbore and accompanying lease under the provisions of that certain Joint Operating Agreement dated February 24, 1994. You will recall that the Poker Lake No. 107 was jointly drilled and plugged and abandoned in November, 1994.

Bass is currently in the process of obtaining all necessary permits and approvals from the Bureau of Land Management, as surface owner. Also, Bass respectfully requests Conoco's approval of our proposed operations, as co-Lessee. Inasmuch as Conoco will not be involved in saltwater disposal operations, Bass hereby releases and indemnifies Conoco from all costs and responsibility associated with any and all claims, obligations, liabilities, losses or damages (including, without limitation, all attorneys fees, including trial and appeal) arising out of, or caused by Bass' conversion and/or operations of the subject saltwater disposal well. To signify Conoco's acceptance hereof, please execute one (1) copy

of this letter and return one (1) original hereof to the undersigned at your earliest convenience. Thank you very much and should you have any questions or comments in the above regard, please advise. Awaiting your reply, I remain

Yours very truly,

J. Wayne Bailey

JWB:ca

AGREED AND ACCEPTED this 15th day of February, 1995.

CONOCO, INC.

By: _____ ADK

Its: 2-15 David W Twomey, Jr.
Attorney-in-fact

ARCHAEOLOGICAL SERVICES
by
LAURA MICHALIK
Surveys • Monitoring • Consultation • Research

WRD

April 28, 1994

Mr. Bobby Herriage
Bass Enterprises Production
P.O. Box 2760
Midland, TX 79702

Dear Bobby:

Enclosed please find one copy of the archaeological clearance report for the Poker Lake 107 well pad. This is for your files. The appropriate number of copies of this report are being forwarded today directly to the BLM in Carlsbad. If you have any questions, please do not hesitate to call.

Sincerely,

Laura Michalik

Laura Michalik

Invoice enclosed

P.O. Box 8262 • Las Cruces, New Mexico 88006 • (505) 382-0247

ARCHAEOLOGICAL SERVICES
by
LAURA MICHALIK
Surveys • Monitoring • Consultation • Research

AN ARCHAEOLOGICAL CLEARANCE SURVEY OF THE PROPOSED POKER LAKE UNIT #107 WELL PAD LOCATION AND ACCESS ROAD SOUTHEAST OF CARLSBAD, EDDY COUNTY, NEW MEXICO

by

Laura Michalik
Principal Investigator

Performed under BLM Permit No. 84-2920-93-G

Carlsbad Resource Area, Roswell District

A REPORT PREPARED BY ARCHAEOLOGICAL SERVICES BY LAURA MICHALIK AND SUBMITTED TO BASS ENTERPRISES PRODUCTION MIDLAND, TEXAS

ARCHAEOLOGICAL SERVICES BY LAURA MICHALIK
CULTURAL RESOURCES REPORT NUMBER 351

April 27, 1994

P.O. Box 8262 • Las Cruces, New Mexico 88006 • (505) 382-0247

ABSTRACT

On April 13, 1994, an archaeological clearance survey of a proposed well pad location and access road was conducted by Allen Rorex of Archaeological Services by Laura Michalik. The proposed project area consists of the Poker Lake Unit #107 Well (1980 FSL, 660 FEL). The proposed well pad consists of a square parcel of land measuring 400 by 400 feet (3.67 acres). The area surveyed for the proposed well pad consists of a square parcel of land measuring 600 by 600 feet (8.26 acres). The area surveyed for the proposed access road consists of a corridor of land measuring 1500 feet in length by 100 feet in width (3.44 acres). The total area surveyed for this project equals 11.70 acres. The proposed well pad and road are located on land administered by the Bureau of Land Management, Roswell District, Carlsbad Resource Area in Eddy County, New Mexico in the E 1/2 of the SE 1/4 of Section 26, T-24-S, R-30-E and the NW 1/4 of the SW 1/4 of the SW 1/4 of Section 25, T-24-S, R-30-E. The survey was conducted under BLM Permit No. 84-2920-93-G. The project was initiated at the request of Mr. Bobby Herriage of Bass Enterprises Production, P.O. Box 2760, Midland, Texas 79702 (ph. 915-683-2277).

No prehistoric archaeological or historical sites were identified during the course of this survey. Seven isolated occurrences were recorded. Archaeological clearance is recommended for the proposed undertaking.

MANAGEMENT SUMMARY

Location: Well Pad - NE 1/4, SE 1/4, Section 26, T-24-S, R-30-E (1980 FSL, 660 FEL)
Road - SE 1/4, NE 1/4, SE 1/4 and NW 1/4, SE 1/4, SE 1/4, Section 26, T-24-S, R-30-E and NW 1/4, SW 1/4, SW 1/4, Section 25, T-24-S, R-30-E

Land Ownership: BLM, Roswell District, Carlsbad Resource Area

U.S.G.S. Quad: Big Sinks, NM 7.5' (1968)

Area Covered: Well pad - 600 by 600 feet (8.26 acres)
Access Road - 1500 by 100 feet (3.44 acres)
Total Area Covered - 11.70 acres

Cultural Resources: Seven isolated occurrences

PROJECT LOCATION AND BACKGROUND

This project involves a 100% cultural resources inventory of a proposed well pad location and access road. The project area is located in the central portion of Eddy County, approximately 25 miles southeast of the town of Carlsbad, New Mexico. The proposed project area consists of the Poker Lake Unit #107 Well (1980 FSL, 660 FEL). The proposed well pad consists of a square parcel of land measuring 400 by 400 feet (3.67 acres). The area surveyed for the proposed well pad consists of a square parcel of land measuring 600 by 600 feet (8.26 acres). The area surveyed for the proposed access road consists of a corridor of land measuring 1500 feet in length by 100 feet in width (3.44 acres). The total area surveyed for this project equals 11.70 acres. The proposed well pad and road are located on land administered by the Bureau of Land Management, Roswell District, Carlsbad Resource Area in Eddy County, New Mexico in the E 1/2 of the SE 1/4 of Section 26, T-24-S, R-30-E and the NW 1/4 of the SW 1/4 of the SW 1/4 of Section 25, T-24-S, R-30-E. The project area is located on the Big Sinks, NM 7.5' (1968) U.S.G.S. topographic map (Figure 1).

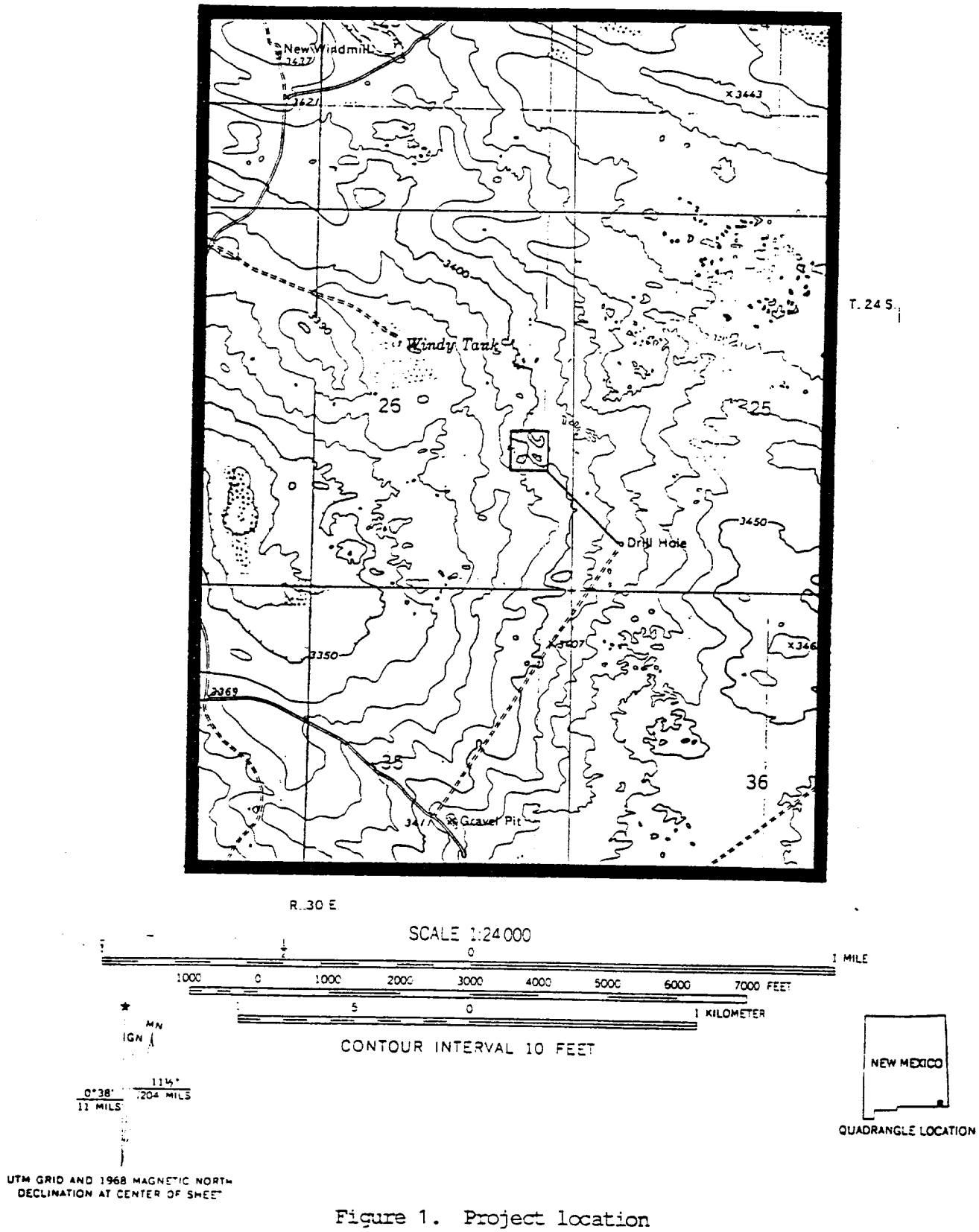


Figure 1. Project location

The undertaking calls for the blading of vegetation and leveling of land necessary to establish drilling equipment and conduct drilling operations. The access road will be bladed to connect the well pad to an existing well pad.

RECORDS SEARCH

A records search of the Carlsbad Resource Area Office of the Bureau of Land Management was conducted on April 13, 1994 by Allen Rorex. An examination of the Big Sinks, NM 7.5' (1968) U.S.G.S. topographic map revealed a number of projects within a one mile radius of the current project area. These projects include surveys for well pad locations, pipelines and access roads. Only one site was identified within a one mile radius of the current project area. It consists of a prehistoric artifact scatter with burnt caliche features. It will not be impacted by the current undertaking. A telephone check of the Laboratory of Anthropology site files conducted by telephone confirmed this information.

ENVIRONMENTAL SETTING

The project area lies in a physiographic province known as the Pecos Valley Section of the Great Plains Province (Hawley 1986). It is characterized on the east side of the river by rolling uplands, valleys and basins, and some areas of rough and broken terrain, and on the west side of the river by undulating hills. Specifically, the project area is located on a flat to gently undulating sandy area dotted with a scattering of low dunes. Drainage within the area is primarily to the west toward the Pecos River. Dog Town Draw is located three miles west-northwest of the project area. Slopes within the project area average 0 to 1%. The elevation of the proposed drill pad is 3400 feet above mean sea level. Vegetation is dominated by scrub oak, mesquite, yucca, snakeweed and grasses. Soils consist of aridisols (Maker and

Daugherty 1986). These are light-colored, calcareous soils, found predominantly in the lower elevations of New Mexico. Large portions of the surrounding region have been disturbed by drilling activity and by the blading of access roads as well as by livestock grazing.

REGIONAL CULTURE HISTORY

Southeastern New Mexico is generally considered in terms of the archaeological record, to have encompassed the eastern extension of the Jornada Mogollon culture area. The record of occupation begins around 10,000 B.C. and lasts through historic times, during which a variety of subsistence-settlement strategies were maintained.

The Paleoindian period (10,000-5,000 B.C.) is generally thought to have been a time during which the economic focus was on the highly mobile hunting of large game species. It is well represented in southeastern New Mexico both by isolated artifacts and by major excavated sites which have been radiocarbon dated to this period. The majority of these sites are found along the Mescalero pediment, but whether this is reflective of actual Paleoindian hunting strategies, or just a result of increased erosion near these features, can not yet be determined.

The Archaic period in southeastern New Mexico dates from 5000 B.C. to approximately A.D. 1000. It is much less well known than the Paleoindian period but like elsewhere in New Mexico, is considered to have been a time when there was a shift away from big game hunting to an emphasis on plant gathering and the hunting of smaller game species. The majority of the Archaic sites in this region are generally assigned to this period on the basis of surface remains, that is, because they are aceramic, or because there are Archaic-style projectile points present. There are, however, a few sites which have yielded C-14 dates from this period, thus supporting the presence of Archaic populations through absolute dates.

The Ceramic period occupations are also poorly documented since they number proportionately fewer than sites of other periods. They begin anywhere from A.D. 750 to 900 and last anywhere from A.D. 1450 to 1550 and are tied to the advent of agriculture in the region. While there is evidence of increased sedentism and trade throughout the region during this period, only the northern portion shows evidence of agricultural pursuits. There is little evidence of agriculture in the south, bringing to question, the actual dependence of the populations upon agricultural activities. In A.D. 1250 there appears to have been a shift back to the hunting of large game. While some groups later returned (after A.D. 1300) to a partial dependence on agriculture, others continued to rely on bison hunting. This is supported by the records of the early Spanish expeditions in the 16th and 17th centuries which document the presence of mobile hunters in the area.

The Historic period begins with the 1583 journey by the Espejo expedition through the Pecos Valley and was followed by de Sosa's unauthorized expedition in 1590. Although they experienced few problems with the native Indians, the increasingly aggressive presence of the Apaches and Comanches served to keep out additional settlers and explorers for years to come. Attempts were made by the Spanish beginning in the 1770s to subdue the Indians but it was not until the 1850s and 1860s that US military troops began to quiet the area. Small Hispanic settlements began to spring up in the 1850s and were followed by the first cattle drives in the 1860s and the establishment of large cattle ranches in the 1870s. Farming was introduced in the 1880s but cattle and sheep ranching, and the oil and gas industry, continue to dominate the economy of the area today.

SURVEY METHODS AND RESULTS

The boundaries of the well pad and the centerline of the access road were clearly marked by lathe and flagging. The weather was clear and the general lack of vegetation made ground visibility good. The survey of the well pad was conducted by the archaeologist walking straight transects spaced 15 meters apart. An additional buffer zone of 100 feet was surveyed around the edges of the proposed well pad. The survey of the proposed access road was conducted by walking straight transects spaced 7.5 meters from the proposed centerline. This allowed coverage of an area measuring 30 meters (100 feet) in width. The area was field checked on April 17, 1994 by Laura Michalik.

No prehistoric archaeological or historical sites were identified within the boundaries of the proposed project area. Seven isolated occurrences were recorded within the boundaries of the proposed well pad and access road. The IOs are detailed in Table 1. Their locations are depicted on Figure 2.

IMPACT ASSESSMENT

Impact refers to those activities that directly or indirectly affect cultural resources and result in their alteration or destruction. Such impacts can be the result of the immediate effects of construction activities or from the longer term adverse effects that result from modification of the land surface and increased access to site areas.

Since only seven isolated occurrences, and no archaeological or historical sites, occur within the boundaries of the surveyed area, no cultural resources will be impacted by the proposed undertaking.

Table 1. Isolated Occurrences

IO#	Item	UTM	T	R	Sec.	1/4,1/4,1/4	Elev.	Topography	Vegetation
1	Grey siltstone primary flake, 80% cortex, 1.7 x 1.9 x .4 cm	Zone 13 3561480N 609000E	24S	30E	26	SE, NE, SE	3400	Dunes	Mesquite Shin oak
2	Tan chert secondary flake, 20% cortex, 2.6 x 3.1 x .7 cm	Zone 13 3561470N 609000E	24S	30E	26	SE, NE, SE	3400	Dunes	Mesquite Shin oak
3	Tan chert secondary flake, 40% cortex, 3.7 x 2.7 x 1.1 cm	Zone 13 3561460N 609000E	24S	30E	26	SE, NE, SE	3400	Dunes	Mesquite Shin oak
4	Red chert primary flake, 70% cortex, 1.7 x 2.0 x .8 cm	Zone 13 3561480N 608900E	24S	30E	26	SW, NE, SE	3395	Dunes	Mesquite Shin oak
5	Tan chert secondary flake, 30% cortex, 3.0 x 2.4 x .7 cm	Zone 13 3561520N 608880E	24S	30E	26	SW, NE, SE	3400	Dunes	Mesquite Shin oak
6	Purple quartzite secondary flake, 20% cortex, 3.2 x 2.0 x .5 cm	Zone 13 3561500N 608920E	24S	30E	26	SW, NE, SE	3400	Dunes	Mesquite Shin oak
7	3 pieces of burnt caliche	Zone 13 3561180N 609340E	24S	30E	25	NW, SW, SW	3415	Dunes	Mesquite Shin oak

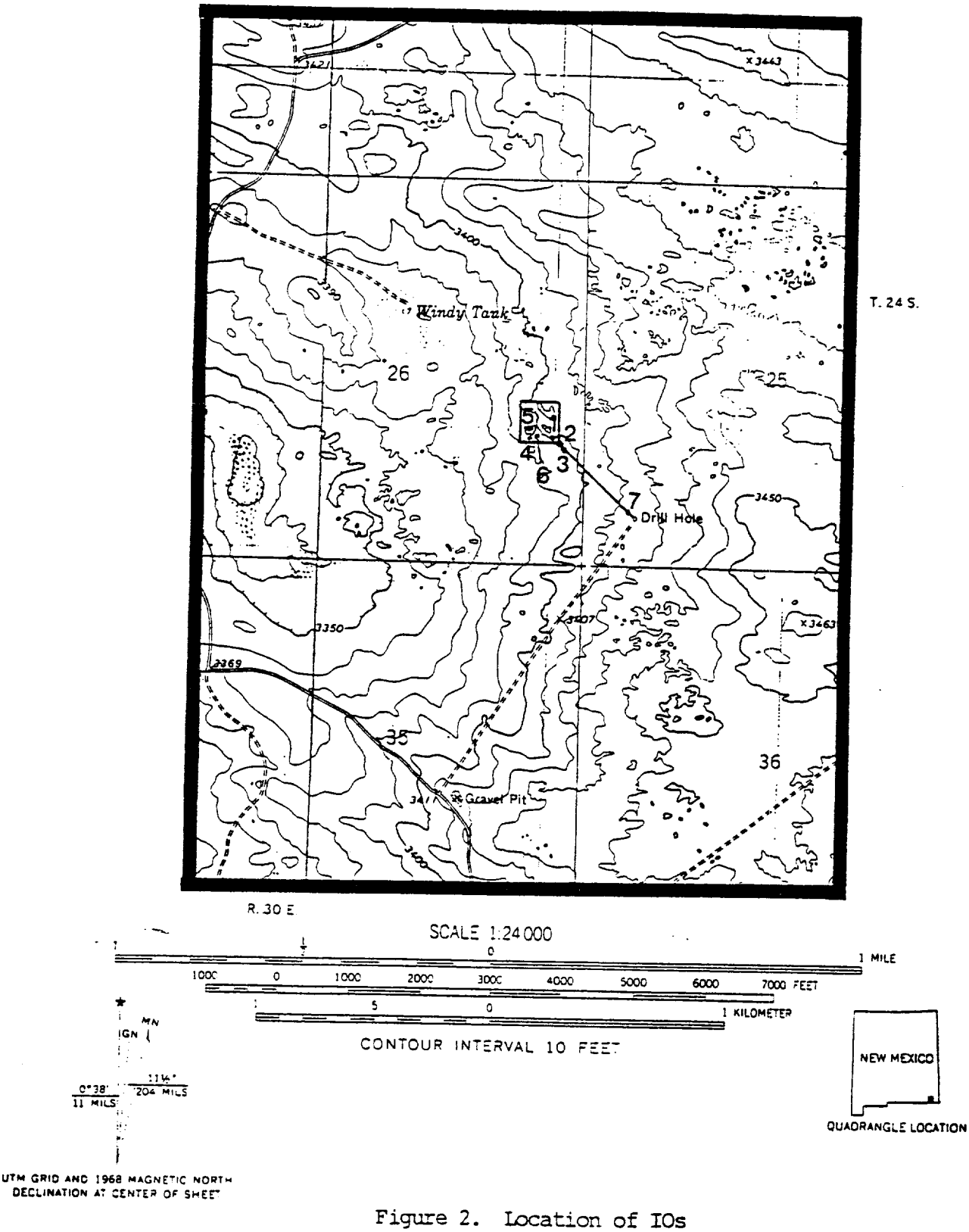


Figure 2. Location of IOs

RECOMMENDATIONS

Since no archaeological or historical sites, and only seven isolated occurrences, were located within the boundaries of the project area, archaeological clearance is recommended. However, in the event that subsurface artifacts or features are discovered during the implementation of this project, the Carlsbad Resource Area Office of the Bureau of Land Management shall be notified and all activities having a potential impact shall be halted until a suitable course of action has been determined.

REFERENCES CITED

Hawley, John W.

1986 Physiographic provinces. In New Mexico in Maps, Second Edition. Edited by Jerry L. Williams. University of New Mexico Press. Albuquerque.

Maker, H. J. and L. A. Daugherty

1986 Soils. In New Mexico in Maps, Second Edition. Edited by Jerry L. Williams. University of New Mexico Press. Albuquerque.