

**N. M. Oil Cons. Division**  
811 S. 1ST ST  
ARTEZIA, NM 88210-1094

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS

**CARLSBAD CONTROLLED WATER BASIN**

Form 3160-3  
(August 1999)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

5. Lease Serial No. NM-89805

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.  
Big Mac Federal Com., Well #1

9. API Well No.  
30-015-31431

10. Field and Pool, or Exploratory  
Happy Valley Morrow

11. Sec., T., R., M., or Blk. and Survey or Area  
Revelation

Sec. 11-T22S-R25E

12. County or Parish  
Eddy

13. State  
NM

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator  
Chi Operating, Inc

3a. Address

PO Box 1799 Midland, TX 79702

3b. Phone No. (include area code)

(915) 685-5001

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*

At surface

1980' FNL & 1980' FWL

At proposed prod. zone

Same

UNIT F

14. Distance in miles and direction from nearest town or post office\*

7.2 miles west of Carlsbad, NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)

1980'

16. No. of Acres in lease

440

17. Spacing Unit dedicated to this well

320

18. Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft.

N/A

19. Proposed Depth

11,300'

20. BLM/BIA Bond No. on file

NM-1616

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3511' GL

22. Approximate date work will start\*

09/25/00

23. Estimated duration

30 days

**24. Attachments**

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Name (Printed/Typed)

George R. Smith

Date

09/08/00

Title

Agent for: Chi Operating, Inc.

Approved by (Signature)

/s/ LARRY D. BRAY

Name (Printed/Typed)

Date

NOV 03 2000

Title

Assistant Field Manager,  
Lands And Minerals

Office

KOSWI. L. FIELD OFFICE

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

Lease Responsibility Statement: Chi Operating, Inc. accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducte

George R. Smith, agent

Operator to notify NMOC time of spud  
& time to witness 5/8" casing

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 South First, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-102  
Revised March 17, 1999

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

☐ AMENDED REPORT

# WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code		Pool Name Happy Valley Morrow	
Property Code		Property Name BIG MAC 11 FEDERAL COM			Well Number 1
OGRID No.		Operator Name CHI OPERATING, INC.			Elevation 3511.

## 10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	11	22-S	25-E		1980	NORTH	1980	WEST	EDDY

## 11 Bottom Hole Location If Different From Surface

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320		Comm	

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

	<h3>17 OPERATOR CERTIFICATION</h3> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p>Signature: <i>George R. Smith</i> George R. Smith, agent for: Printed Name: Chi Operating, Inc. Title: 09/11/00 Date:</p>	
	<h3>18 SURVEYOR CERTIFICATION</h3> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>DATE OF SURVEY: AUGUST 29, 2000 Signature and Seal of Professional Surveyor:  </p>	

## APPLICATION FOR DRILLING

### CHI OPERATING, INC.

Big Mac Federal Com., Well No. 1  
1980' FNL & 1980' FWL, Sec. 11-T22S-R25E  
Eddy County, New Mexico  
Lease No.: NM-89805  
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Chi Operating, Inc. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware	2200'	Strawn	9570'
Bone Spring	4450'	Atoka Morrow	9930'
1st sand	5510'	Morrow Clastic	10,560'
2nd sand	6200'	Lower Morrow	10,900'
3rd sand	7720'	T.D.	11,300'
Wolfcamp	8050'		
Upper Penn	9000'		

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 1400'.

Oil: Possible in the Delaware below 2200' and Bone Spring 2nd sand..

Gas: Possible in the Wolfcamp, Upper Penn, Strawn between 8050' and 9900' and the L. Morrow below 10,900'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48.0#	K-55	ST&C	400'	Circ. 300 sx "C" to surface.
12 1/4"	8 5/8 "	24.0#	J-55	ST&C	2,200'	Circ. 570 sx "C" to surface.
7 7/8"	5 1/2"	17.0#	N-80	LT&C	11,300'	500 sx of "H" to 500' above top prod zone

5. Proposed Control Equipment: A 12" 5000 psi wp Shaffer Type LWS Double Gate BOP will be installed on the 13 3/8" casing. Casing and BOP will be tested before drilling out with 7 7/8" and will be tested daily. See Exhibit "E".

MUD PROGRAM	MUD WEIGHT	VIS.	W/L CONTROL
0' - 400': Fresh water mud:	8.4 - 8.8 ppg	28	No W/L control
400' - 2200': Fresh water mud	9.7 - 10.0 ppg	29	No W/L control
2340' - 8000': Fresh water mud:	8.5 - 8.8 ppg	28	No W/L control
8000' - 10,400': Cut Brine mud:	9.2 - 9.5 ppg	32 - 36	W/L control 15 cc +/-
10,400' - 11,300': Cut Brine mud:	9.5 - 10.0 ppg	42 - 48	W/L control 8 cc +/-

7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: As deemed necessary.

Logging: T.D.to 6500': GR-CAL-CNL-LDT-DLL-MICRO

T.D. to Surface: GR-Comp. Neutron

Coring: As dictated for the Morrow.

**Chi Operating, Inc.**

Big Mac Federal Com., Well No. 1

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9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated evacuated BHP = 4520 with a temperature of 173°.
10. H<sub>2</sub>S: None expected.
11. Anticipated starting date: September 25, 2000.  
Anticipated completion of drilling operations: Approximately 30 - 40 days.

## **MULTI POINT SURFACE USE AND OPERATIONS PLAN**

### **CHI OPERATING, INC.**

Big Mac Federal Com., Well No. 1  
1980' FNL & 1980' FWL, Sec. 11-T22S-R25E  
Eddy County, New Mexico  
Lease No.: NM-89805  
(Development Well)

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 to be followed in rehabilitating the surface and environmental effects associated with the operations.

#### **1. EXISTING ROADS:**

- A. Exhibit "A" is a portion of a BLM minerals map showing the location of the proposed well as staked. The well site location is approximately 7 road miles west of Carlsbad, NM. Traveling west of Carlsbad (Happy Valley) on Jones Rd. (Cnty Rd. # 427) there will be approximately 7.2 miles of existing paved and gravel County Rd. #427.
- B. Directions: Travel west of the west truck bypass in Carlsbad (Happy Valley) on Jones Rd. (Cnty Rd. # 427) for 6.8 miles to a "Y". Take the west road, which is County Rd. #427 for .4 mile to the start of the proposed access road on the right (north) side of the county road, and will run north for approximately 1500 feet to the SE corner of the proposed well pad.

#### **2. PLANNED ACCESS ROAD:**

- A. Length and Width: The proposed access roads will be approximately 1500 feet long. The proposed and existing roads are color coded on Exhibits "A" and "B".
- B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche. The surface will be properly drained.
- C. Turnouts: There may be one turnout at midsection of the road, increasing the width to 20 feet for passing.
- D. Culverts: None.
- E. Cuts and Fills: None required.
- F. Gates, Cattle guards: None required.
- G. Off lease right of way: None required.

#### **3. LOCATION OF EXISTING WELLS:**

- A. Existing wells within a two mile radius are shown on Exhibit "C".

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES;**

- A. Chi Operating, Inc. has no production facilities on the lease at this time.
- B. If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery, if required, will be installed on the drilling pad.

**5. LOCATION AND TYPE OF WATER SUPPLY:**

- A. It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads

**6. SOURCE OF CONSTRUCTION MATERIALS:**

- A. Caliche for surfacing the proposed access road and well site pad will be obtained from the location, if available, or use bottoms from a Federal pit in NE4 SW4 Sec. 11-T22S-R25E. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access road.

**7. METHODS OF 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 the pits are dry.
- C. All pits will be fenced with normal fencing materials to prevent livestock from entering the area.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering by the wind and will be removed for deposit in an approved sanitary land fill within 30 days after finishing drilling and/or completion operations.

**8. ANCILLARY FACILITIES:**

- A. None required.

**9. WELL SITE LAYOUT:**

- A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged, 400' X 400'.
- B. Mat Size: 250' X 175', plus 110' X 100' reserve pits on the North.
- C. Cut & Fill: The location will require a 4-5 foot cut on the north with fill to the south, plus cutting the northeast part of the east ridge with fill to the center.
- D. The surface will be topped with compacted caliche and the reserve pits will be plastic lined.

**10. PLANS FOR RESTORATION OF THE SURFACE:**

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled as soon as they are dry enough to be worked.

**11. OTHER INFORMATION:**

- A. Topography: The proposed well site and access road are located on a 3-4% slope to the southeast toward the confluence of Boyds Canyon and the North Fork Little McKittrick. The surface of the location is at the base of a 3792' peak in the Azotea Mesa with an elevation of 3511' GL.
- B. Soil: The topsoil at the well site is a light tan extremely rocky loam with a surface scatter of limestone rock and exposed bedrock outcrops. The location has heavy weathered bedrock outcrops on the west, north and east side, which will require some blasting. The soil is part of the Ector extremely rocky loam land complex.
- C. Flora and Fauna: The vegetation cover has a poor to fair grass, with the primary cover being plants of mesquite, yucca, broomweed, sage, Javelina bush, juniper, mountain mahogany, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, antelope, deer, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: None except intermittent running draws and canyons when it rains.
- E. Residences and Other Structures: None in the immediate vicinity.
- F. Land Use: Cattle grazing.

**11. OTHER INFORMATION: cont.....**

- G. Surface Ownership: The proposed well site and access road is on Federal surface and minerals.
- H. There may be a possibility of archaeological, historical or cultural sites in the staked area. An archaeological survey is being conducted by Archaeological Survey Consultants, P. O. Box D, Roswell, NM 88202, and their report will be submitted to the appropriate government agencies.

**12. OPERATOR'S REPRESENTATIVE:**

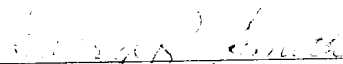
- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

John Qualls  
Chi Operating, Inc.  
P. O. Box 1799  
Midland, Texas 79701  
Office Phone: (915) 685-5001  
Home Phone: (915) 684-8825

**13. CERTIFICATION:**

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the 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 Chi Operating, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

September 8, 2000

  
\_\_\_\_\_  
George R. Smith  
Agent for: Chi Operating, Inc.



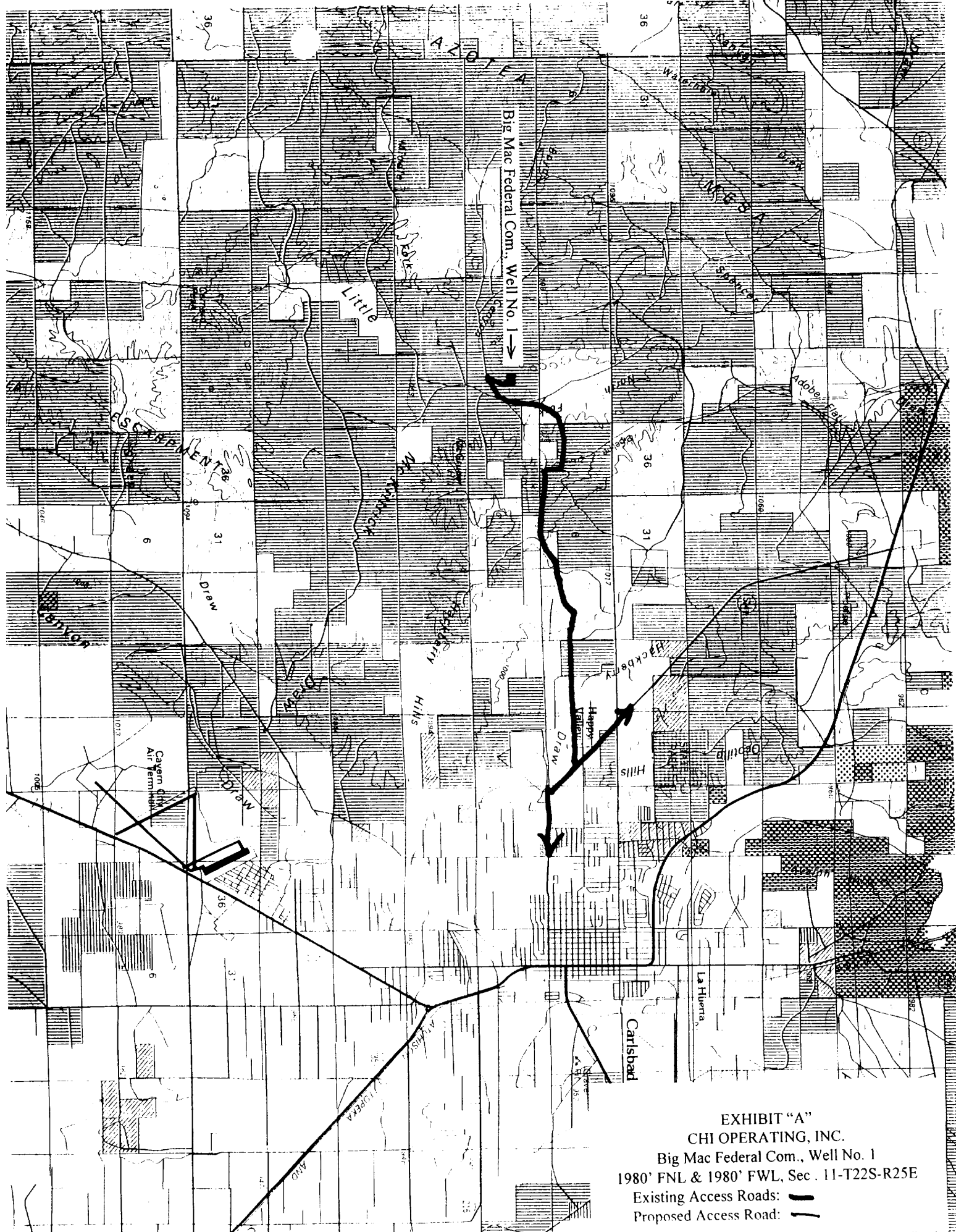



EXHIBIT "A"  
CHI OPERATING, INC.  
Big Mac Federal Com., Well No. 1  
1980' FNL & 1980' FWL, Sec. 11-T22S-R25E  
Existing Access Roads:   
Proposed Access Road: 