

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-0560353	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Chi Operating, Inc. 4375		7. If Unit or CA Agreement, Name and No. 27108	
3a. Address P.O. Box 1799 Midland, TX 79702		8. Lease Name and Well No. Munchkin Federal, Well # 4	
3b. Phone No. (Include area code) (915) 685-5001		9. API Well No. 30-015-31779	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1980' FSL & 660' FWL At proposed prod. zone same		10. Field and Pool, or Exploratory Benson Bone Spring	
14. Distance in miles and direction from nearest town or post office* 16 road miles S. of Loco Hills, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 1-T19S-R30E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		12. County or Parish Eddy	13. State NM
16. No. of Acres in lease 2160.32		17. Spacing Unit dedicated to this well 40	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 990'		20. BLM/BIA Bond No. on file NM-1616	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3526' GL		22. Approximate date work will start* 5/14/01	
		23. Estimated duration 3 weeks	
24. Attachments Benson Bone Spring Water Basin			

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 <i>George R. Smith</i>	Name (Printed/Typed) George R. Smith	Date 04/18/01
Title Agent for Chi Operating, Inc.		
Approved by (Signature) (ORIG. SGN.) M. J. CHAVEZ	Name (Printed/Typed) (ORIG. SGN.) M. J. CHAVEZ	Date MAY 04 2001
Title STATE DIRECTOR	Office NM 50	

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, 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 conducted on the leased land or portion thereof.

George R. Smith, agent

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

CIRCULATED

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	
Property Code		Property Name			Well Number
		MUNCHKIN FEDERAL			4
OGRID No.		Operator Name			Elevation
		CHI OPERATING INC.			3526.

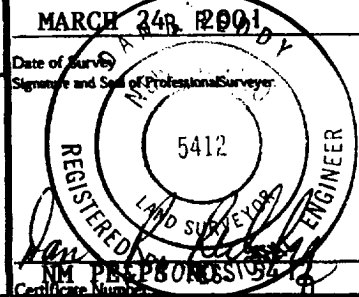
#### <sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	I	19-S	30-E		1980	SOUTH	660	WEST	EDDY

#### <sup>11</sup> 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
<sup>12</sup> Dedicated Acres		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16					<b><sup>17</sup> OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
					Signature <i>George R. Smith</i> George R. Smith, agent for:	
					Printed Name Chi Operating, Inc. Title April 18, 2001 Date	
NM-0560353					<b><sup>18</sup> SURVEYOR CERTIFICATION</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 belief.	
					MARCH 24, 2001 Date of Survey	
					Signature and Seal of Professional Surveyor 	
					Certificate Number	

## APPLICATION FOR DRILLING

**CHI OPERATING, INC.**  
Munchkin Federal, Well No. 4  
1980' FSL & 660' FWL, Sec. 1-T19S-R30E  
Eddy County, New Mexico  
Lease No.: NM-0560353  
(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:

Anhydrite	400'	Delaware	4170'
Yates	2240'	Bone Spring	6175'
Seven Rivers	2430'	B/S Avalon Sand	6500'
Queen	3050'	T. D.	6700'

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

Water: Surface water between 100' - 300'.  
Oil: Possible in the Queen, Delaware and Bone Spring.  
Gas: Possible in the Bone Spring.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT	<b>WITNESS</b>
12 1/4"	9 5/8"	36.0#	J-55	ST&C	475'	Circ. 400 sx "C" + add.	
8 3/4"	7"	23.0#	J-55	LT&C	3,200'	Circ. 450 sx "C" + add.	<b>WITNESS</b>
6 1/4"	4 1/2"	11.6#	N-80	LT&C	6,700'	1 <sup>st</sup> stage +/- 500 sx "C"	
						2 <sup>nd</sup> stage +/- 700 sx "C"	

\* NOTE: If severe lost circulation is NOT encountered, the 8 3/4" hole will be reduced at 3200' to 7 7/8" and drill ahead WITHOUT setting the 8 5/8" casing. See following casing program.

7 7/8"	5 1/2"	15.5#	J-55	LT&C	6,700'	Circ in 2 stages: 1200 sx of "C"
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5. Proposed Control Equipment: A 10" 3000 psi wp Shaffer Type "E" double hydraulic ram BOP will be installed on the 9 5/8" casing. Casing and BOP will be tested before drilling out with 12 1/4" and will be tested daily. See Exhibit "E".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 475': Fresh water mud:	8.4 - 8.7 ppg	32 - 34	No W/L control
475' - 3200': Brine mud:	10.0 ppg	29 - 30	No W/L control
3200' - 6700': Brine mud:	10.0 ppg	29 - 32	No W/L control
Without Intermediate casing:			
0' - 475': Fresh water spud mud	8.4 - 8.7 ppg	32 - 34	No W/L control
475' - 6700': Brine mud	10.0 ppg	29 - 30	W/L cont. < 15 cc @ TD

7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: As deemed necessary.  
Logging: T.D thru pay: GR-CAL-CNL-LDT-DLL-MICRO  
T.D. to Surface: GR-Neutron  
Coring: Rotary Sidewall: As dictated by logs.

Chi Operating, Inc.  
Munchkin Federal, Well No. 4  
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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 = 2680 with a temperature of 127°.
10. H<sub>2</sub>S: None expected.
11. Anticipated starting date: May 14, 2001.  
Anticipated completion of drilling operations: Approximately 30 days.

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

**CHI OPERATING, INC**  
Munchkin Federal, Well No. 4  
1980' FSL & 660' FWL, Sec. 1 -T19S-R30E  
Eddy County, New Mexico  
Lease No.: NMLC-0560353  
(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 environmental effects associated with the operations.

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

- A. Exhibit "A" is a portion of a BLM Hackberry Lake Topo map showing the location of the proposed well as staked. The well site location is approximately 36 road miles southeast of Artesia, NM. Traveling east of Artesia on U.S. Highway 82, NM Hwy 360 and county roads No. 450 and 251, there will be 33 miles of paved highway, plus 3 miles of existing gravel oilfield roads.
- B. Directions: Travel east from U. S. Highway #285 in Artesia, NM on U. S. Highway 82 for approximately 14 miles, turn southeast on NM Hwy 360 for approximately 13 miles to paved County Rd #251. Turn north on #251 for 1.8 mile to County Rd. # 250, then turn right on #250 for 3.8 miles to top of Nimenim Ridge. Turn south onto a gravel oilfield road just west of a cattle guard with a pipeline buried near the road. Continue south for .8 mile to a large tank battery and injection pump house; turn right (west) for .25 mile to a pump jack, then south (left) for .63 mile to a P/A well site with a gas line tap. Turn right (west) for a .3 mile, to the northeast corner of the proposed well site for the Munchkin Fed., #3. The existing two track access road will have to be detoured around this well pad and continue west for .2 mile to the start of the proposed access on the left (south). The access road will run southwest for 300 feet to the northwest corner of the pad.

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

- A. Length and Width: The proposed access road will be constructed to a width of 12 feet (24' Max.) and approximately 300 feet in length. The proposed and existing roads are color coded on Exhibit "A".
- B. Construction: The new access road will be constructed by grading and topping with compacted caliche. The existing access road will be graded and repaired as required.
- C. Turnouts: None required.
- D. Culverts: None required.
- E. Cuts and Fills: No cuts or fills required.
- F. Gates, Cattle guards: None required.
- G. Off Lease ROW: An off lease ROW No. NM-102279 was issued with a previous APD covering the existing access road in the E2 of Sec. 1-T19S-R30E.

**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 production facilities on the lease at this time.
- B. If the well proves to be commercial, the necessary production facilities and gas production-process equipment will be installed on the drilling pad. All necessary oil and water lines will be run parallel to the existing access road to the Munchkin Fed. #1 tank battery. The flow lines will be 3" poly including a gas line that will run parallel to the existing access road east to a gas hook up point in the NW4SE4 Sec. 1-T19S-R30E.

**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 a pit on the location, if available, or from a Federal pit in the NW¼SW¼, Sec. 26-T18S-R30E. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access roads.

**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 landfill 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: 200' X 140', plus 80' X 80' reserve pits on the east.
- C. Cut & Fill: The location will require a cut of 2-3 foot cut on the east with fill to the west.
- 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 required 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 well site and access road are located in a area on top of the Niminem Ridge with small hummocky dunes. There is an overall 1% slope to the northeast from an elevation of 3526' GL.
- B. Soil: The topsoil at the well site is a deep reddish brown colored sandy loam with some caliche scatter on the surface. The soil is of the Simona Gravelly Fine Sandy Loam complex series.
- C. Flora and Fauna: The vegetation cover is a fair to good grass cover of threeawn, grama, dropseed, fluff grass, along with plants of mesquite, broomweed, yucca, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: None in the area.
- E. Residences and Other Structures: None in the area except oil field equipment and tank batteries.
- F. Land Use: Cattle grazing.
- G. Surface Ownership: The proposed well site and access road is on Federal surface and minerals.
- H. There is no evidence of any archaeological, historical or cultural sites in the area. Archaeological Survey Consultants, P. O. Box D, Roswell, NM 88202 are conducting an archaeological survey, and their report will be submitted to the appropriate government agencies.

**12. OPERATOR'S REPRESENTATIVE:**

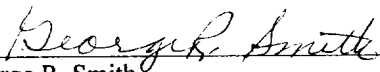
- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

John Qualls  
Chi Operating, Inc.  
P. O. Box 1799  
Midland, Texas 79701  
Office Phone: (915) 685-5001  
Home Phone: (915) 684-6847

**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.

April 18, 2001

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



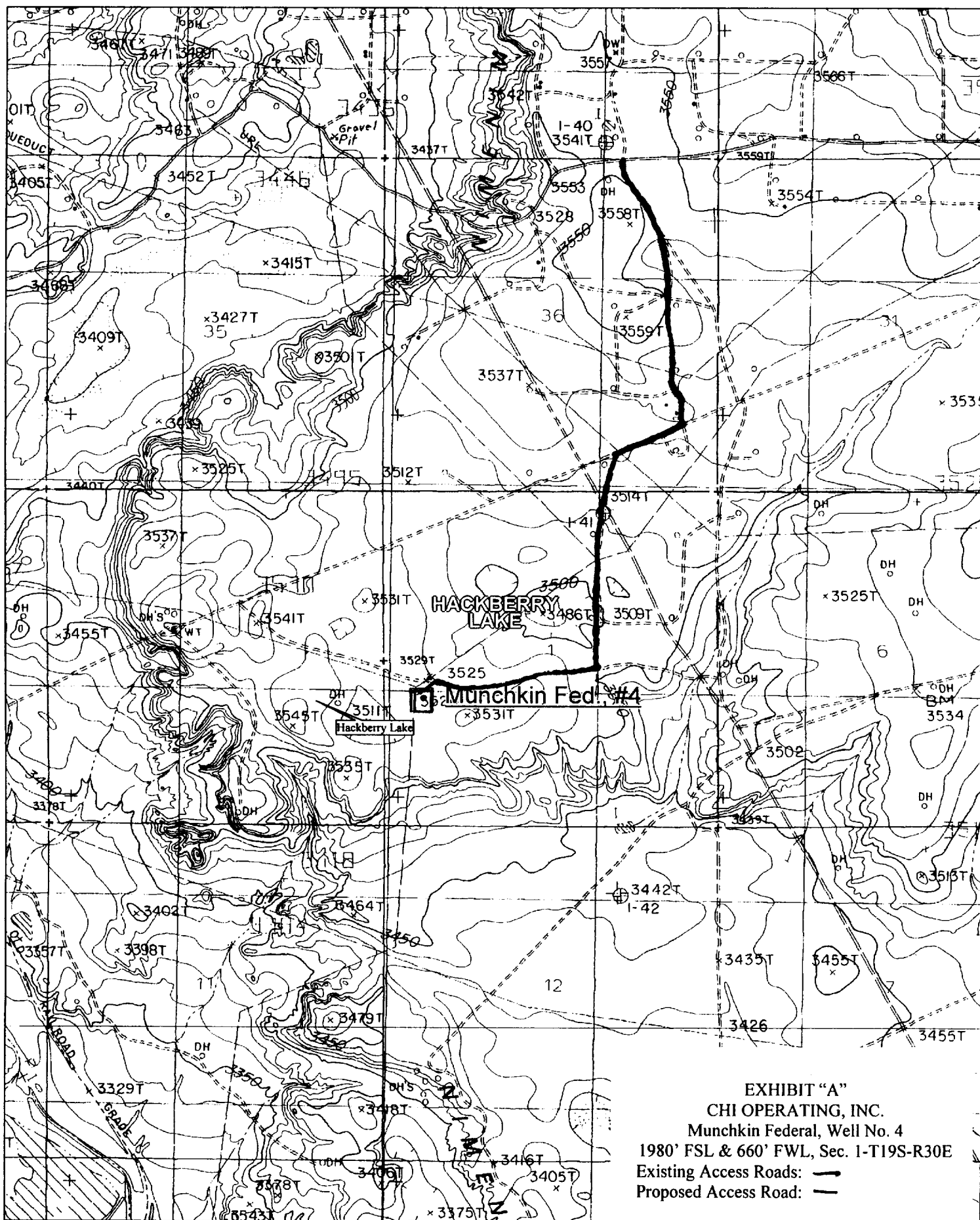
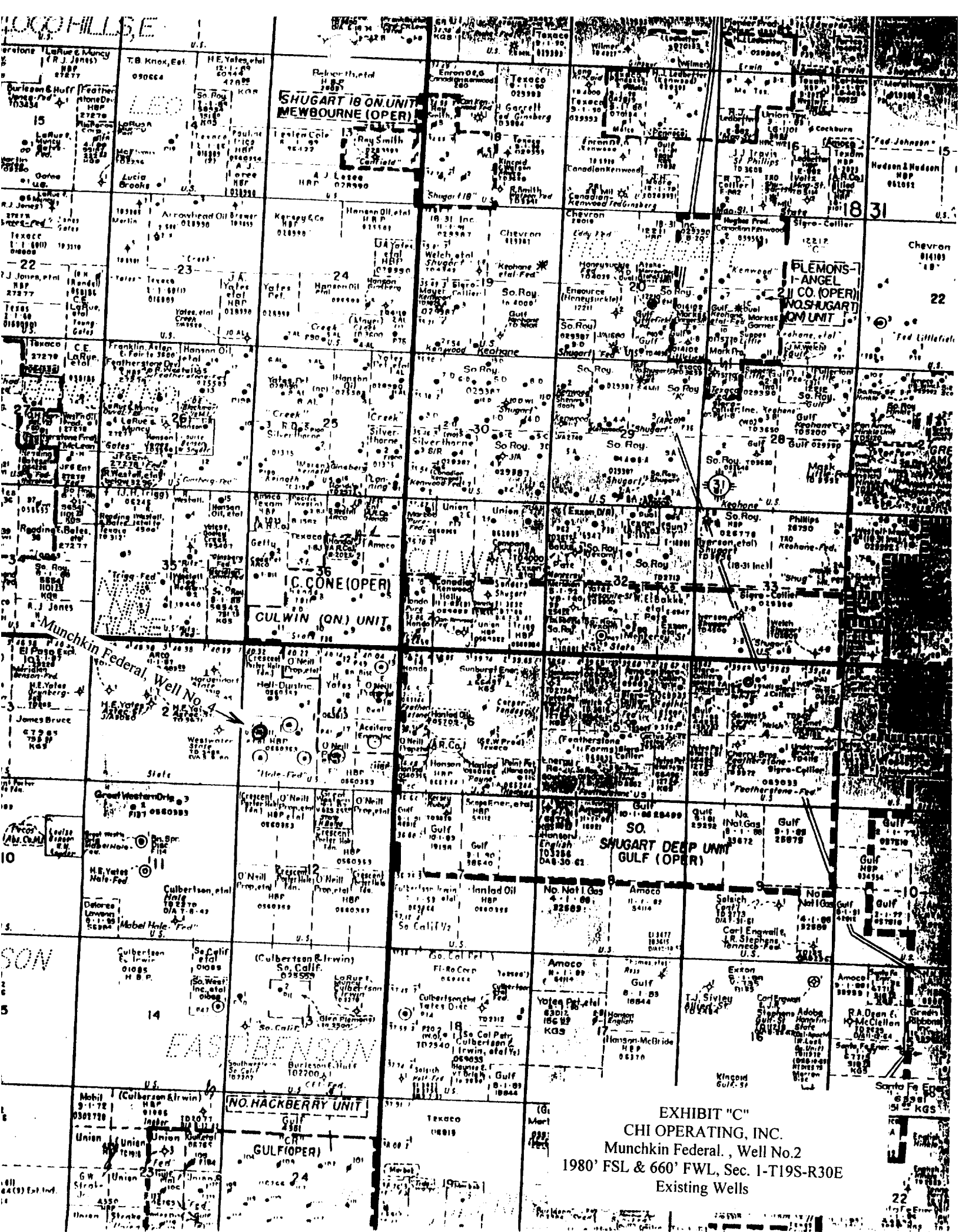
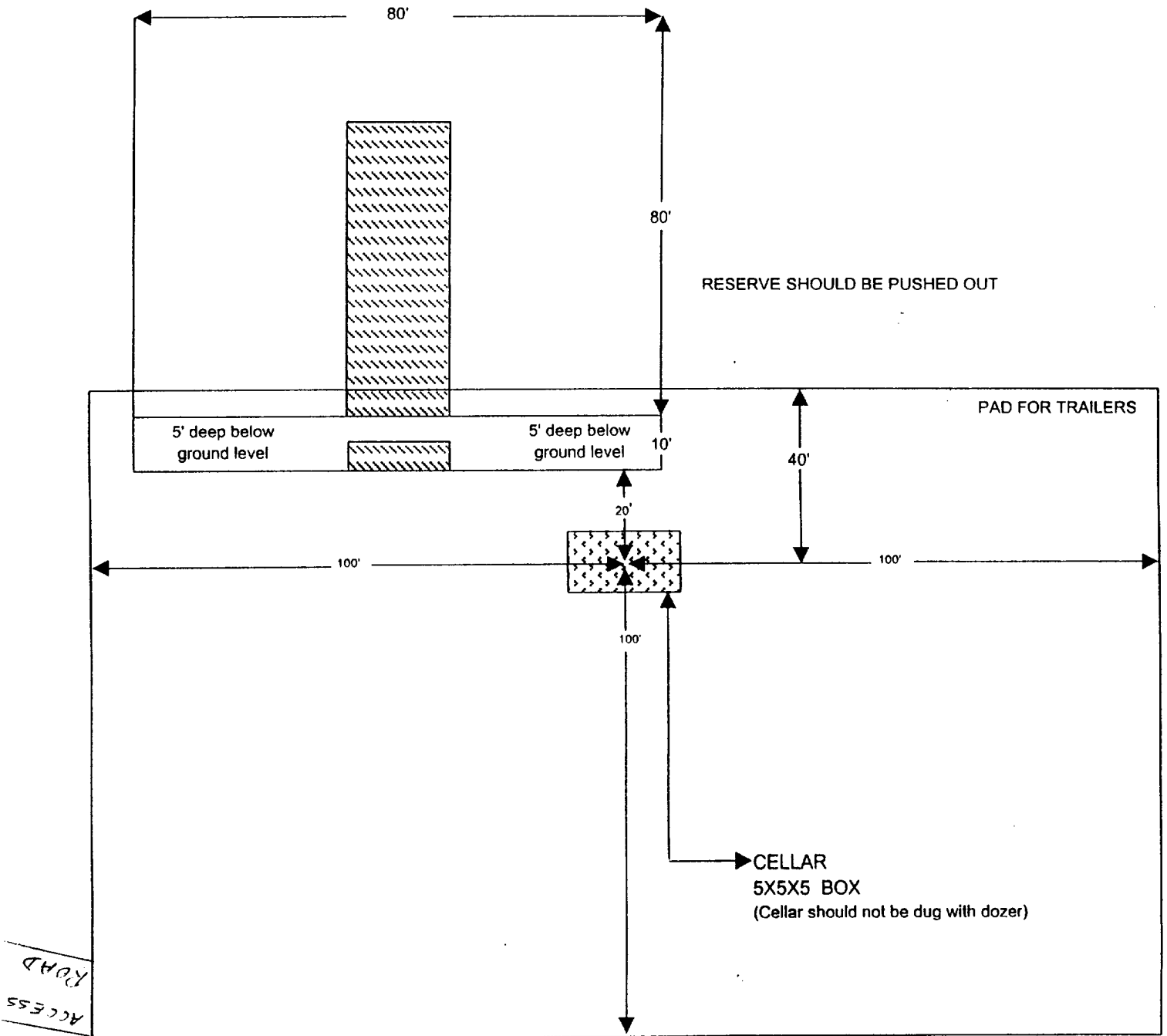


EXHIBIT "A"  
 CHI OPERATING, INC.  
 Munchkin Federal, Well No. 4  
 1980' FSL & 660' FWL, Sec. 1-T19S-R30E  
 Existing Access Roads: —  
 Proposed Access Road: —



CapStar Drilling, Inc.  
LOCATION SPECIFICATIONS



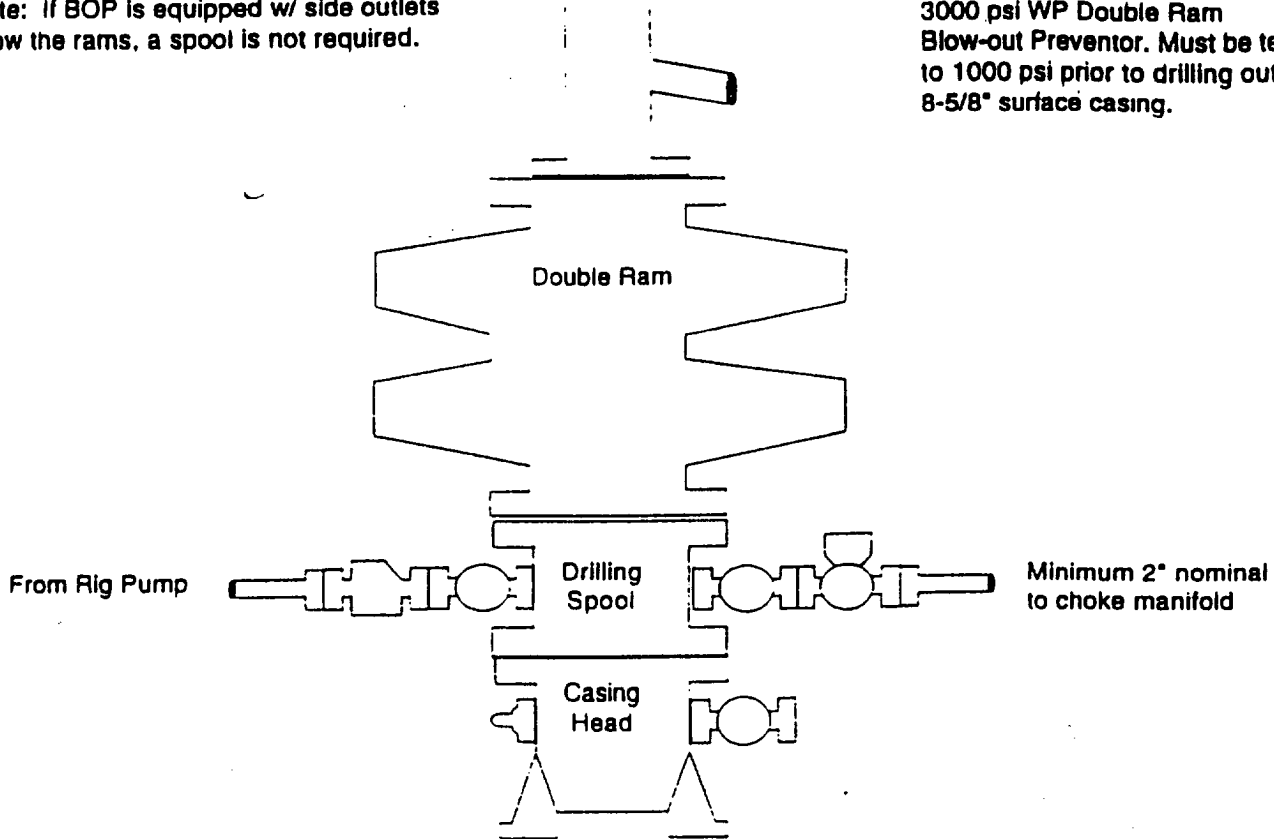
Location Specs

EXHIBIT "D"  
CHI OPERATING, INC.  
Munchkin Federal, Well No. 4  
Pad & Pit Layout

## BOP Schematic

\*Note: If BOP is equipped w/ side outlets below the rams, a spool is not required.

3000 psi WP Double Ram  
Blow-out Preventor. Must be tested  
to 1000 psi prior to drilling out  
8-5/8" surface casing.



## Choke Manifold Schematic

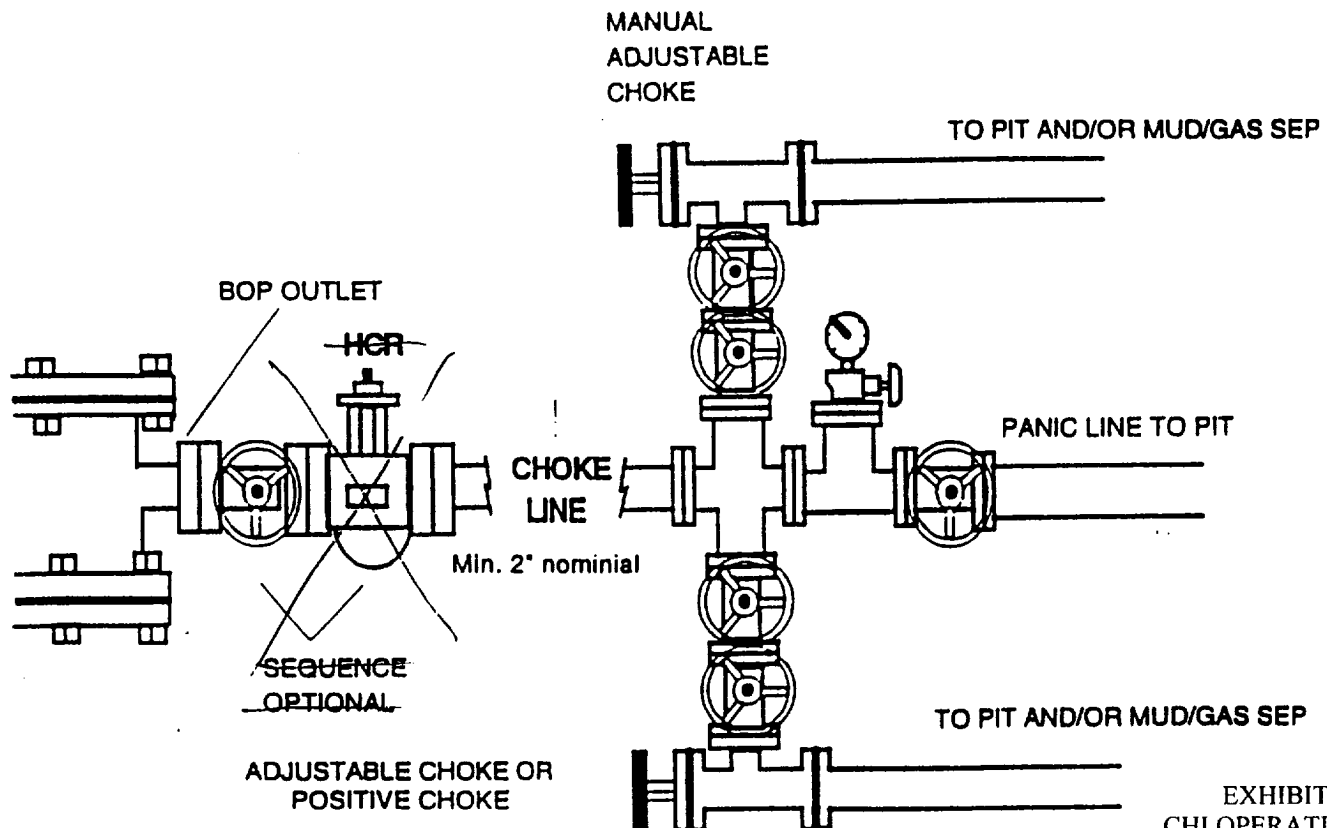


EXHIBIT "E"  
CHI OPERATING, INC.  
Munchkin Federal, Well No. 4  
BOP Specifications