

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834

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

APPLICATION FOR PERMIT TO DRILL ON FEDERAL LAND

| | | |
|---|--|--|
| 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 <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name |
| 2. Name of Operator Chi Operating, Inc. 4378 | | 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 No. 2 |
| 3b. Phone No. (include area code) (915) 685-5001 | | 9. API Well No. 30-015-31778 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 990' FSL & 660' FWL At proposed prod. zone same UNIT M | | 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' | 16. No. of Acres in lease 2160.32 | 12. County or Parish Eddy |
| 17. Spacing Unit dedicated to this well 40 | 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1552' | 13. State NM |
| 19. Proposed Depth 6,700' | 20. BLM/BIA Bond No. on file NM-1616 | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3523' GL | 22. Approximate date work will start* 4/05/01 | 23. Estimated duration 3 weeks |

Secretary's Potash

24. Attachments

Capitan Controlled 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 George R. Smith | Name (Printed/Typed) George R. Smith | Date 03/14/01 |
| Title Agent for Chi Operating, Inc. | | |
| Approved by (Signature) (ORIG. SGN.) M. J. CHAVEZ | Name (Printed/Typed) M. J. CHAVEZ | Date MAY 07 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.

APPROVAL FOR 1 YEAR

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.

DECLARED WATER BASIN
CEMENT BEHIND THE 9 5/8"
CASING MUST BE CIRCULATED

George R. Smith, agent

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

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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 | Beason Bone Spring | | Pool Name |
| Property Code | MUNCHKIN FEDERAL | | | Property Name | Well Number 2 |
| OGRID No. | CHI OPERATING INC. | | | Operator Name | Elevation 3523. |

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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| M | 1 | 19-S | 30-E | | 990 | SOUTH | 660 | 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |

| | | | |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|
| ¹² Dedicated Acres 40 | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ 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 | | | | <p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>George R. Smith</i></p> <p>Signature George R. Smith, agent for:</p> <p>Printed Name Chi Operating, Inc.</p> <p>Title March 14, 2001</p> <p>Date</p> |
| | | | | |
| | | | | |
| | | | | <p>¹⁸ SURVEYOR CERTIFICATION</p> <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>FEBRUARY 13 2001</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>5412</p> <p>REGISTERED LAND SURVEYOR ENGINEER</p> <p>NM PEPS NO. 8742</p> |
| | | | | |
| | | | | |
| | LC-0560353 | | | |
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APPLICATION FOR DRILLING

CHI OPERATING, INC.
Munchkin Federal, Well No. 2
990' 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 |
|-----------|-------------|--------|-------|-------|---------------|--|
| 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. * |
| 6 1/4" | 4 1/2" | 11.6# | N-80 | LT&C | 6,700' | 1 st stage +/- 500 sx "C" 2 nd 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" |
|--------|--------|-------|------|------|--------|----------------------------------|

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".

| 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.

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Chi Operating, Inc.
Munchkin Federal, Well No. 2
Page 2

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. H₂S: None expected.
11. Anticipated starting date: April 4, 2001.
Anticipated completion of drilling operations: Approximately 30 days.

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MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC
Munchkin Federal, Well No. 2
990' 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. 250 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, then south .25 mile to the Munchkin Fed. #1 well site. The proposed access road will start at the northwest corner of this well pad and run west for approximately 1300 feet to the SE corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: There will be approximately 1300 feet of new access roads 12 feet wide (24' Max.). 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.

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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. Three (3) inch poly flow lines for gas, oil and water, as required or needed, will be run back parallel to the proposed access road to the Munchkin Fed. #1 tank battery. An electric power line will also be run from the Munchkin Fed. #1 well site parallel to the proposed access road to the Munchkin Fed. #2 well site.

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 NW $\frac{1}{4}$ SW $\frac{1}{4}$, 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.

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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 north.
- C. Cut & Fill: The location will require a cut of 2 foot cut on the south with fill to the north.
- 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 southwest from an elevation of 3523' GL.
- B. Soil: The topsoil at the well site is a deep reddish brown colored sandy loam with considerable scatter of caliche rock on the surface with more rock to the south side. The soil is of the Simona Gravelly Fine Sandy Loam complex series.
- C. Flora and Fauna: The vegetation cover is a fair to poor grass cover of threeawn, grama, dropseed, fluff grass, along with plants of mesquite, creosote bush, 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 area.
- E. Residences and Other Structures: None in the area except oil field equipment and tank batteries. There is a fence 200 to 250 feet to the west of the location.
- 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.

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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.

March 12, 2001



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

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W.D. 12-12-01

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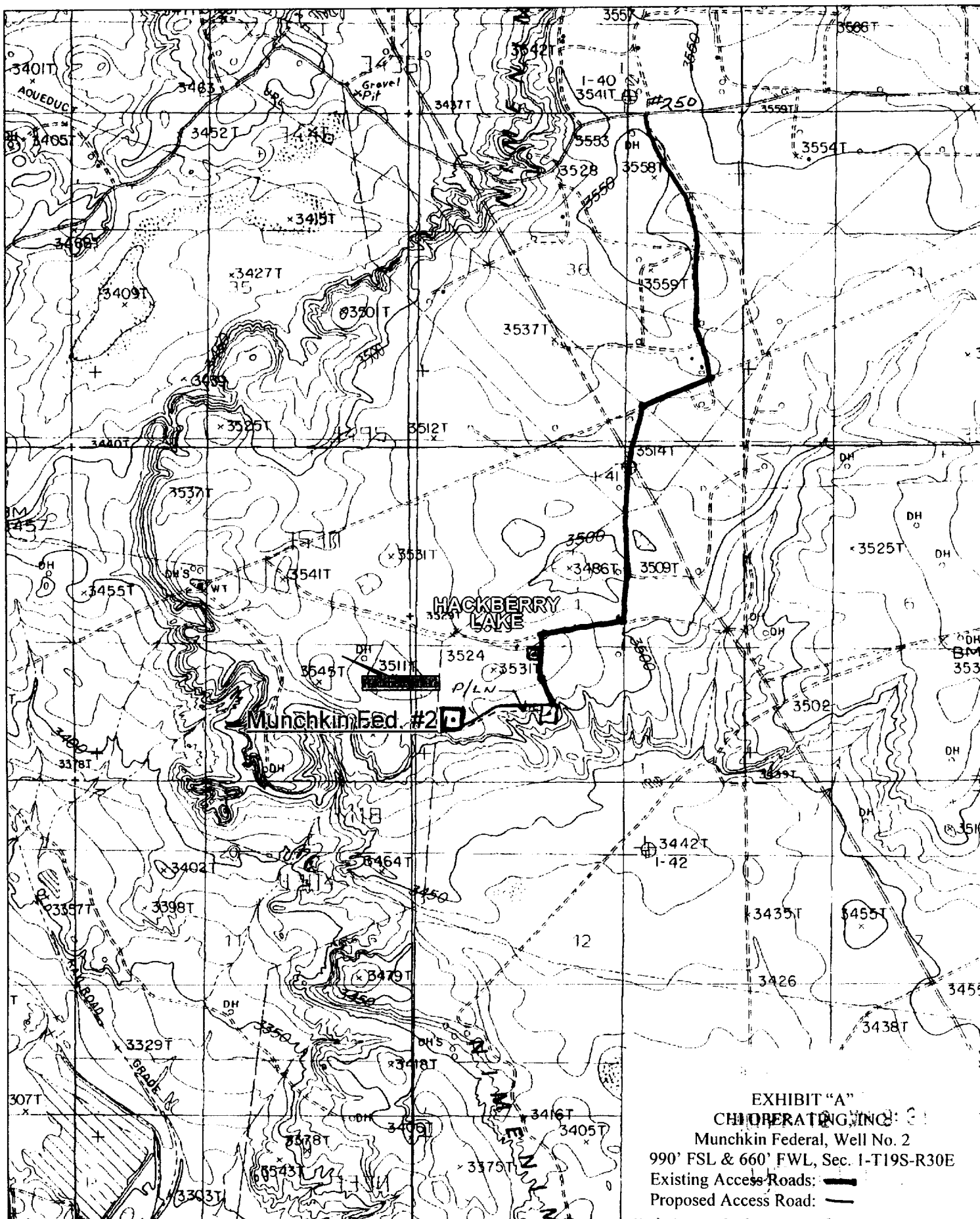


EXHIBIT "A"
 CH OPERATING, INC.
 Munchkin Federal, Well No. 2
 990' FSL & 660' FWL, Sec. 1-T19S-R30E
 Existing Access Roads: —
 Proposed Access Road: —

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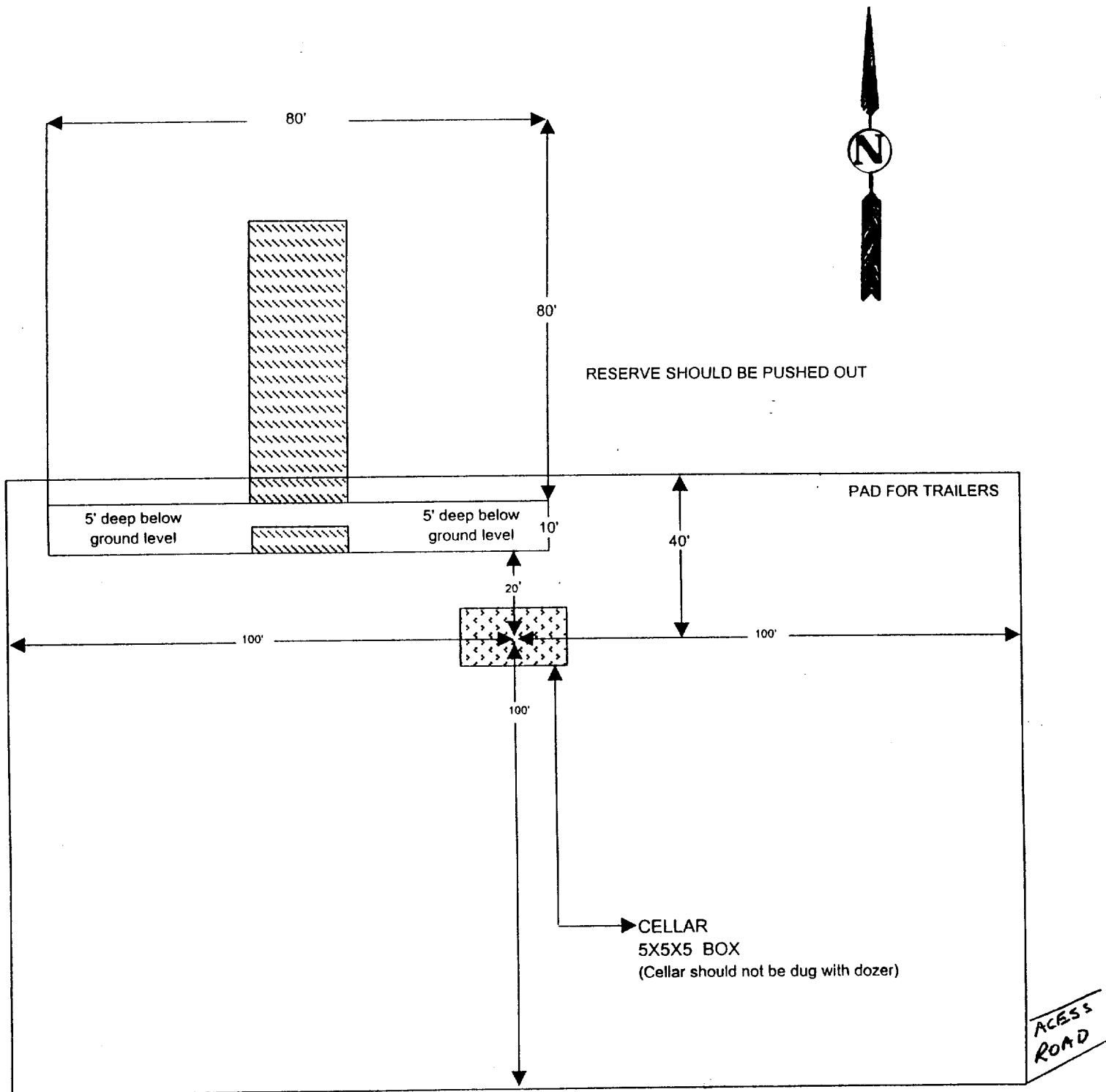
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CapStar Drilling, Inc.
LOCATION SPECIFICATIONS



Location Specs

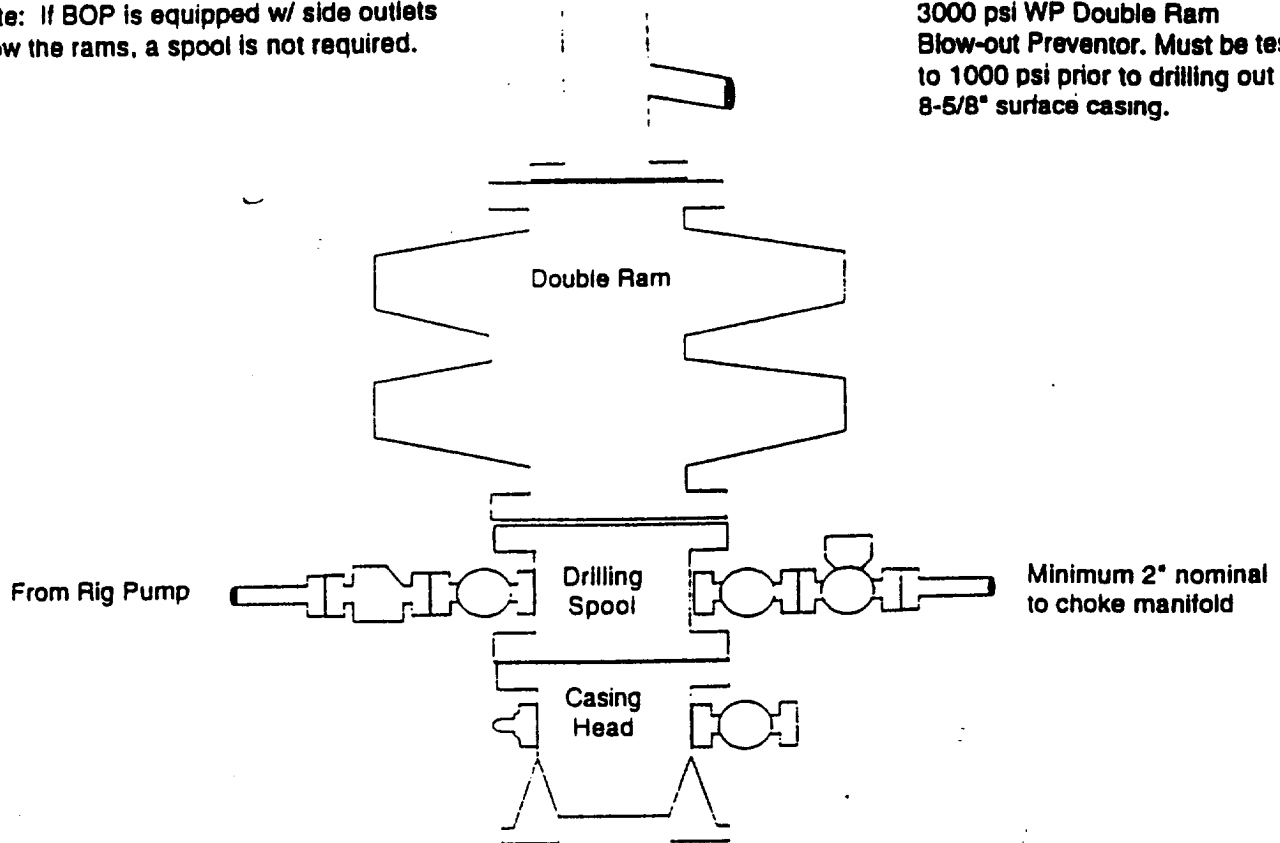
EXHIBIT "D"
CHI OPERATING, INC.
Munchkin Federal, Well No. 2
Pad & Pit Layout

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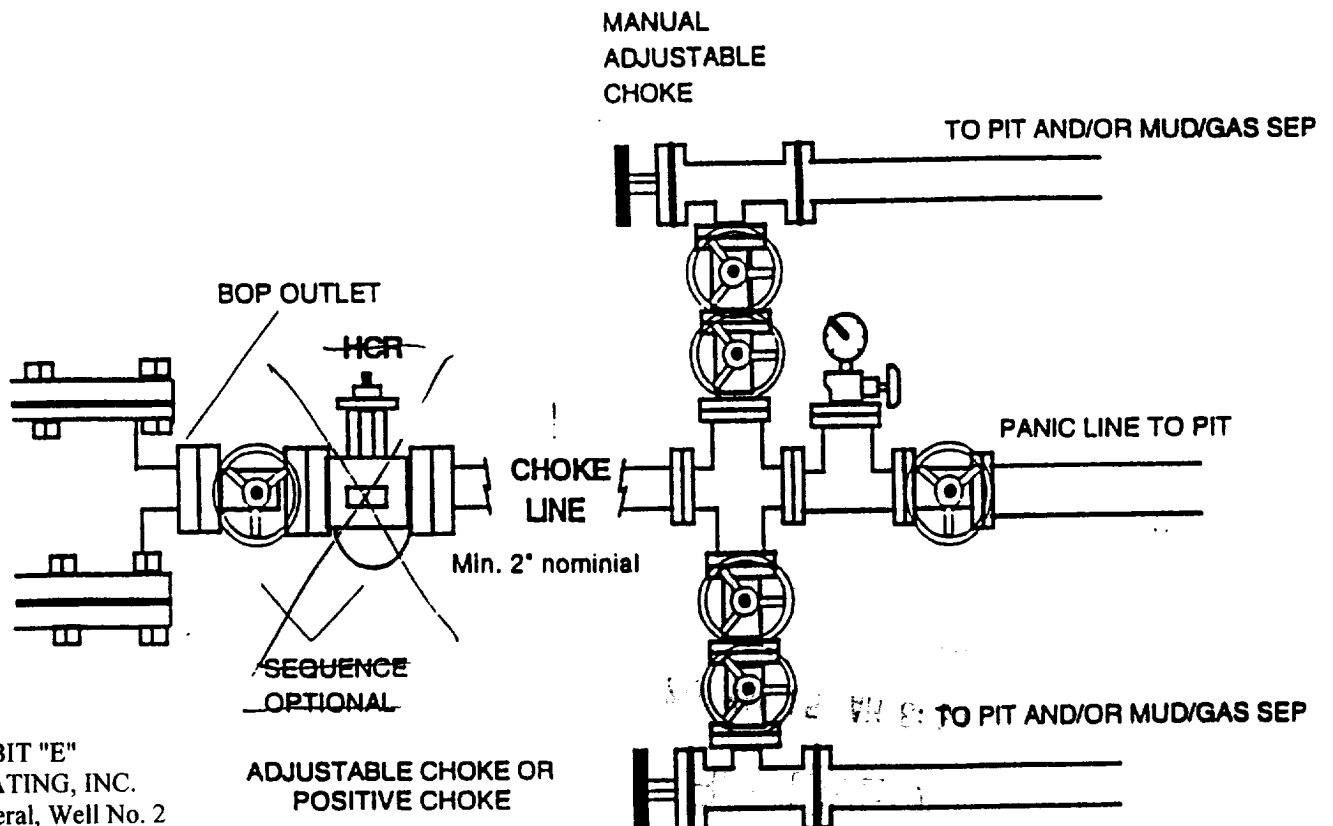
BOP Schematic

*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



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