

## APPLICATION FOR DRILLING

**CHI OPERATING, INC.**  
 Spruce Federal, Well No. 1  
 1980' FSL & 660' FWL, Sec. 30-T16S-R30E  
 Eddy County, New Mexico  
 Lease No.: NM-105214  
 (Exploratory 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:

Yates	1150'	Penn	8700'
Queen	1950'	Strawn	9930'
San Andres	2750'	Atoka	10,250'
Glorieta	4150'	Morr. Clastic	10,650'
Tubb	5450'	Mississippi Uncon.	10,820'
Wolfcamp	7550'	T.D.	11,000'

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 Penn or Cisco below 8700'.  
 Gas: Possible in the Atoka below 10,250' and the Morrow below 10,650'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48.0#	H-40	ST&C	450' 540'	Circ. 450 sx "C"
11"	8 5/8"	32.0#	J-55	ST&C	2,900' MIN	Circ. 850 sx "C" cement.
7 7/8"	5 1/2"	17.0#	N-80	LT&C	11,000'	675 sx of Super "C"

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 11" and will be tested daily. See Exhibit "E".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
540' 0' - 450': Fresh water mud:	8.4 - 8.7 ppg	32 - 36	No W/L control
450' 2900': Brine mud:	10.0 - 10.1 ppg	29 - 30	No W/L control
2900' - 7450': Fresh water mud:	8.4 - 8.7 ppg	28 - 29	No W/L control
7450' - 8700': Cut Brine mud:	9.0 - 9.2 ppg	28 - 29	No W/L control
8700' - 10,550': Brine (starch) mud:	10.0 - 10.1 ppg	30 - 32	W/L control 15 cc +/-
10,600' - 11,000': Brine (XCD/etc)	10.0 - 10.1 ppg	36 - 42	W/L control 8 cc +/-

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. to 2900': (GR-CAL-CNL-LDT)(GR-CAL-DLL-MICRO)(FMI)  
 2900' to Surface: GR/NDL (if not previously logged.)  
 Coring: As dictated by logs.

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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 = 4400 with a temperature of 170°.
10. H<sub>2</sub>S: None expected.
11. Anticipated starting date: April 16, 2001.  
Anticipated completion of drilling operations: Approximately 30 days.

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

**CHI OPERATING, INC.**  
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1980' FSL & 660' FWL, Sec. 30-T16S-R30E  
Eddy County, New Mexico  
Lease No.: NM-105214  
(Exploratory 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 6 road miles northwest of Loco Hills, NM. Traveling east of Artesia, NM on U.S. Highway 82, there will be approximately 22 miles of paved highway and 4.4 miles of gravel County Road #215.
- B. Directions: Travel east of Artesia, NM on U.S. Highway 82 for approximately 22 miles to County Rd# 215 (Kewanee Rd.). Turn north on #215 for 3.5 miles to County Rd. # 257 on the east. Continue north on #215 for .9 mile to a two-track on the east. Take the two track east for .9 mile to the Ledbetter Heard "6" Fed. pump jack on the north side of the road. The start of the proposed access road for the Pinon Fed. Com., #1 is on the west side of this well site and will run north for approximately 1200 feet to the southwest corner of the Piñon Fed. #1 location. The proposed access road for the Spruce Fed., #1 will start at this point and run east for approximately 1320 feet to the southwest corner of the proposed location.

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

- A. Length and Width: The proposed access road will be constructed to a surface width of 12 feet and will be approximately 1320 feet long east/west and the north/south 1200 feet to the Piñon Fed Com., #1, if the Spruce Fed. #1 is drilled first. The existing east/west .9 mile of oil field access road will be upgraded as above. 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 on each section or the proposed access road at the midsection of the road, increasing the width to 20 feet for passing.
- D. Culverts: None.
- E. Cuts and Fills: None required, except leveling small dunes.
- 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 will use a State pit in NE4 Sec. 2-T17S-R29E. 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 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: 250' X 175', plus 110' X 100' reserve pits on the North.
- C. Cut & Fill: The location will require a cutting of 2 feet on the west and northwest with fill to the southeast and some leveling of small sand dunes and deflation basins.
- 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 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 northwest of Loco Hills on a slight .5% slope to the southwest from an elevation of 3717' GL. The area has 3 – 4 foot sand dunes and basins with areas of wind erosion.
- B. Soil: The topsoil at the well site is a reddish brown sandy loam with a surface scatter of caliche rock and some exposed outcrops of caliche, possibly indicating underlying caliche material. The soil is part of the Tonuco loamy fine sand complex.
- C. Flora and Fauna: The vegetation cover has a poor to fair grass stand consisting of three-awn, fluff grass, blue stem and other miscellaneous grasses along with plants of mesquite, yucca, broomweed, shinnery oak brush, 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.
- E. Residences and Other Structures: None in the immediate vicinity except oil field facilities.
- F. Land Use: Cattle grazing.

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

- G. Surface Ownership: The proposed well site and access road is on Federal surface and minerals.
- H. There is no visible evidence of archaeological, historical or cultural sites in the staked 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:**

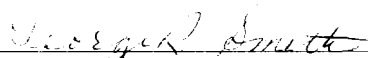
- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

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.

March 21, 2001

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

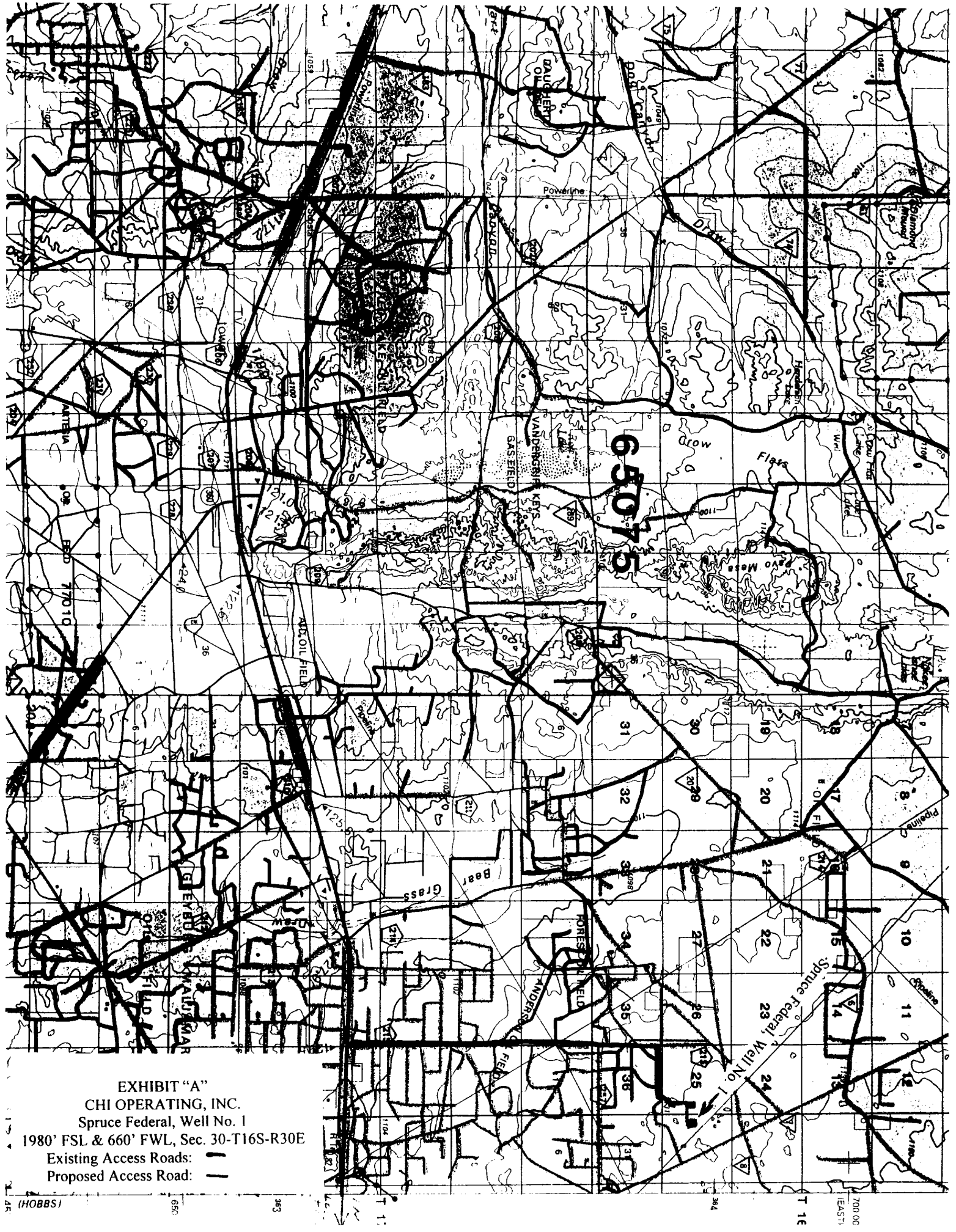


EXHIBIT "A"

CHI OPERATING, INC.

Spruce Federal, Well No. 1

1980' FSL & 660' FWL, Sec. 30-T16S-R30E

Existing Access Roads:

Proposed Access Road:

(HOBBS)

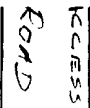




1980' FSL & 660' FWL, Sec. 30-T16S-R30E  
Existing Wells

### Existing Wells

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