

OCD-ARTESIA

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

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-103871	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" 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.		7. If Unit or CA Agreement, Name and No.	
3a. Address P.O. Box 1799 Midland, TX 79702		8. Lease Name and Well No. Crow Flats 18 Fed. Com., #1	
3b. Phone No. (include area code) (432) 685-5001		9. Well No. 30-015-34808	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) 660' FNL & 860' FEL At proposed prod. zone same		10. Field and Pool, or Exploratory Undesignated Crow Flats Morrow	
14. Distance in miles and direction from nearest town or post office* 22 miles northwest of Loco Hills, NM		11. Sec., T., R., M., or Blk. and Survey or Area 75720 Sec. 18-T16S-R28E	
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 280	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 9,700'	20. BLM/BIA Bond No. on file NM-1616	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3621 GL	22. Approximate date work will start* February 27, 2006	23. Estimated duration 4-6 weeks	
24. Attachments Roswell 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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification.   |
| 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). | 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 1/24/06
Title Agent for Chi Operating, Inc.		
Approved by (Signature) <i>/s/ James Stovall</i>	Name (Printed/Typed) /s/ James Stovall	Date APR 19 2006
Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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.

Witness Surface Casing

*George R. Smith*  
George R. Smith, agent

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
**District II**  
1301 W. Grand Avenue, Artesia, NM 88210  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised June 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies  
☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number	<sup>2</sup> Pool Code 75720	<sup>3</sup> Pool Name Undesignated Crow Flats Morrow
<sup>4</sup> Property Code	<sup>5</sup> Property Name CROW FLATS 18 FEDERAL COM	<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 4378	<sup>8</sup> Operator Name CHI OPERATING, INC.	<sup>9</sup> Elevation 3621

<sup>10</sup> Surface Location

UL or lot no. A	Section 18	Township 16-S	Range 28-E	Lot Idn	Feet from the 660	North/South line NORTH	Feet from the 860	East/West line EAST	County EDDY
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<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 Acre 320		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code Com.		<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.

	<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, and that this organization either owns a working interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
	Signature: <u>George R. Smith</u> Date: <u>1/23/06</u> Printed Name: <u>George R. Smith, agent</u>	
	<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.	
	Date of Survey: <u>DECEMBER 19, 2005</u> Signature and Seal of Professional Surveyor: <u>DAN R. REDDY</u> Certificate Number: <u>5412</u> DAN R. REDDY NM P.E. & S. NO. 5412	

## APPLICATION FOR DRILLING

### CHI OPERATING, INC.

Crow Flats 18 Federal Com., Well No. 1  
660' FNL & 860' FEL, Sec. 18-T 16S-R28E  
Eddy County, New Mexico  
Lease No.: NM-103871  
(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:

San Andres	1,790'	Wolfcamp	6,540'
Glorieta	31280'	Atoka	8,970'
Tubb	4,560'	Morrow Clastic	9,140'
Abo Shale	5,320'	Mississippian	9,600'
		T.D.	9,700'

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 San Andres below 1790'.

Gas: Possible in the Wolfcamp, Atoka below 8,970' and Morrow below 9,140'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
26"	20" (If necessary)				40'	Circ to surface
17 1/2"	13 3/8"	48.5/54.5#	H-40	ST&C	400'	Circ. 300 sx "C" + add to surface.
11"	8 5/8"	32#	J-55	ST&C	1,800'	Circ. 1000 sx "C" + add. to surface.
7 7/8"	5 1/2"	17#	N-80	LT&C	9,700'	1000 sx of "C" + add to 500' above top prod

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
0' - 400': Fresh water spud:	8.4 - 8.5 ppg	32 - 36	No W/L control
400' - 1,800': Brine mud:	10.0 ppg	29	No W/L control
1,800' - 6,500': Fresh water mud:	8.4 ppg	28	No W/L control
6,500' - 8,870': C.Brine/Brine mud:	9.3 - 10.0 ppg	29	No W/L control
8,870' - 9,040': C.Brine/Brine(starch):	9.3 - 10.0 ppg	32 - 34	W/L control 12-15cc
9,040' - 9,700': (XCD-LSRV-20000):	9.3 - 10.0 ppg	42	W/L control <8 cc +/-
(XCD subject to change)			

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 1800': GR/CAL-CNL/LDT-DLL/MICRO  
T.D to surface: GR/CNL
  - Coring: As dictated by logs for the Morrow.

Chi Operating, Inc.  
Crow Flats 18 Federal Com., Well No. 1  
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 = 4268 and a surface pressure of 2134 with a temperature of 157°.

10. H<sub>2</sub>S: None expected.

11. Anticipated starting date: February 27, 2006.  
Anticipated completion of drilling operations: Approximately 40 days.

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

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

Crow Flats 18 Federal Com., Well No. 1  
660' FNL & 860' FEL, Sec. 18-T16S -R28E  
Eddy County, New Mexico  
Lease No.: NM-103871  
(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 22 road miles northwest of Loco Hills, NM. Traveling east of Artesia, NM on U.S. Highway 82, there will be approximately 20 miles of paved highway and 17.5 miles of gravel County Road #214 and oil field roads.
- B. Directions: Travel east of Artesia, NM on U.S. Highway 82 for approximately 20 miles to County Rd# 214 (Barnaval Draw Rd.). Turn north on #214 for 6.9 miles to a "Y". Take northwest road and continue northwest 3.9 miles to caliche pit on the left. Continue northwest, then southwest, circling Jahie Lake of the Nakee Ishee Lakes. Continue southwest for a total from the pit of 4.9 miles on Dog Canyon Rd past Cave Lake. Turn northeast for .3 mile to a road turnoff to the west. The road goes to the Devon Energy, Blackbird 8 Fed., Well No. 1. The proposed access road for the Crow Flats 18 Federal Com., #1 will start at the southwest corner of this well pad and run southwest for 2400 feet, parallel to and south of an El Paso gas line to the southeast 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 2400 feet long. The proposed and existing roads are color coded on Exhibit "A".
- 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 will be at least one and possibly two turnouts, 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: An off lease Road and Pipeline Right of Way is being submitted.

#### **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. A 4.5" steel line will be buried parallel to the access road northeast for approximately 350' to the El Paso gas pipeline.

**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 Federal pit in NW4SE4 Sec. 1-T16S-R28E. 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, 500' X 500'.
- B. Mat Size: 250' X 175', plus 110' X 100' reserve pits on the northwest, to parallel the pipeline.
- C. Cut & Fill: The location will require a cutting of 1.5 feet on the north with fill to the south.
- 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 proposed well site and access road are located .7 mile northwest of Dog Canyon Rd. with a 2.0% slope to the south from an elevation of 3621' GL.
- B. Soil: The topsoil at the well site is a deep reddish brown calcareous loam with a surface scatter of caliche rock and some exposed thin outcrops of limestone and gypsiferous rock. The soil is part of the Largo-Stony land complex.
- C. Flora and Fauna: The vegetation cover has a poor to fair grass stand consisting of three-awn, muhly, grama and other miscellaneous grasses along with plants of mesquite, javalina bush, yucca, broomweed, 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: Henderson Lake, a dry lake, is 7,500 feet to the southeast.
- E. Residences and Other Structures: None in the immediate vicinity except oil field facilities.
- 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 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:**

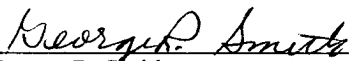
- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

John Qualls  
Chi Operating, Inc.  
P. O. Box 1799  
Midland, Texas 79701  
Office Phone: (432) 685-5001  
Cell Phone: (432) 557-8774

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.

January 23, 2006

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



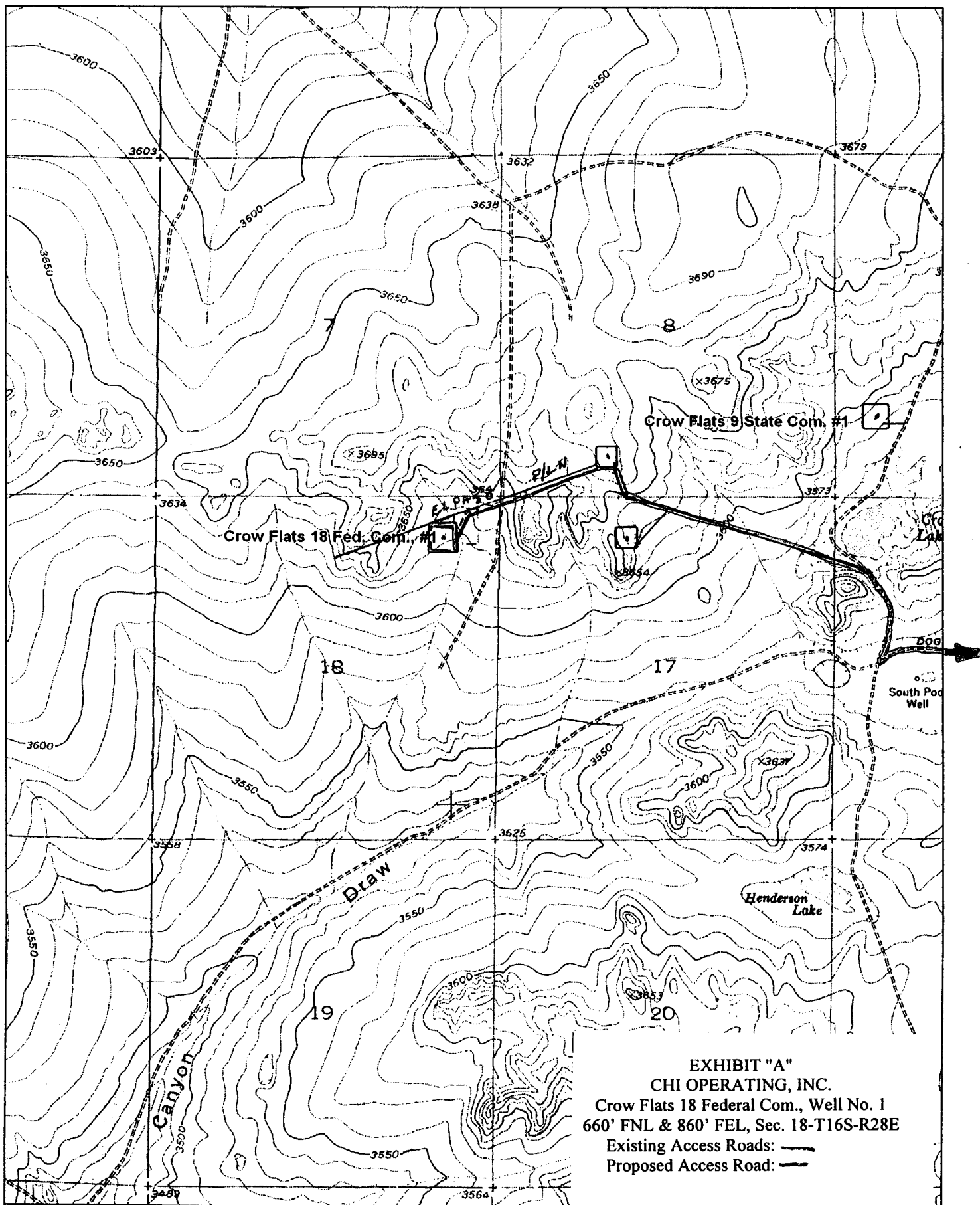
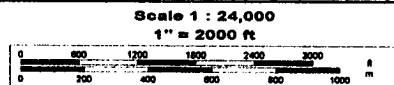


EXHIBIT "A"  
CHI OPERATING, INC.  
Crow Flats 18 Federal Com., Well No. 1  
660' FNL & 860' FEL, Sec. 18-T16S-R28E  
Existing Access Roads: - - -  
Proposed Access Road: - - -

DELOMME

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www.delorme.com



# TIMBER//SHARP DRILLING

B.O.P. Equipment Intended for use on Rtg # 24 d. 22

Well To Be drilled for IM32/Sharp

- \* All B.O.P equipment is 1125 Tc/in
- \* All Accumulators are Kookey Type 80 : Dual Power Electric/Air
- \* Check Manifold: \* See sheet 2
- 4" Valves : Cameron FFC, Shaffer DB Hydraulic
- 2" Check Valve: Cameron Type R
- 2" Valves : Cameron or Shaffer

**Annular Shaffer** Type: Spherical

Annular PSI: 3000

( If Shaffer: Spherical , If Hydell: Type OK )

**BOP Type** Shaffer LWS

( If Shaffer: LWS or SL. If Cameron: Type U )

**BOP Size:** 13<sup>5</sup>/<sub>8</sub> " - 5000 PSI

### Rotating Head Type Smith

Rot-Head Furnished By Wmbe

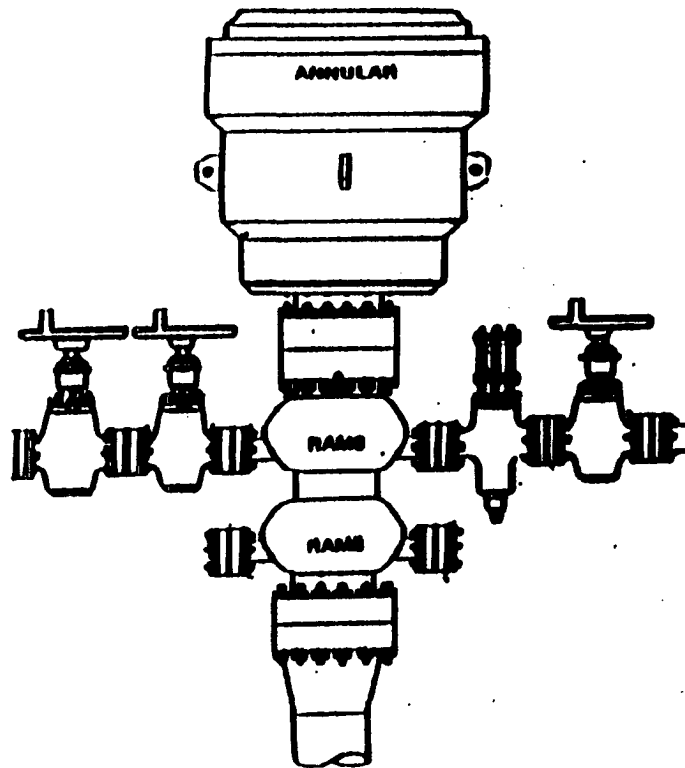
Rams in top gale: 4 1/2 pipe

Rams in bollom: Blinds

**Side Outlets used:**

Bottom X Top     

### 4" Valves on Tee



**B.O.P. Equipment Intended for use on Rig #**

Well To Be drilled for Time / Sharp

**'All Valves (H2O)'**

### Choke Manifold:

**Pressure Rating 3,000 or 5,000 (as Req.)**

## 1 - 4" Valves

**2 - 2" Valves**

## 2 - 2" Adjustable Chokes

**Valve Types Used:**

**Cameron - F or FC**

## Shaffer - B Flo Seal

**WKM - type 2**

**Chokes - Cameron H2 or TC unibolt**

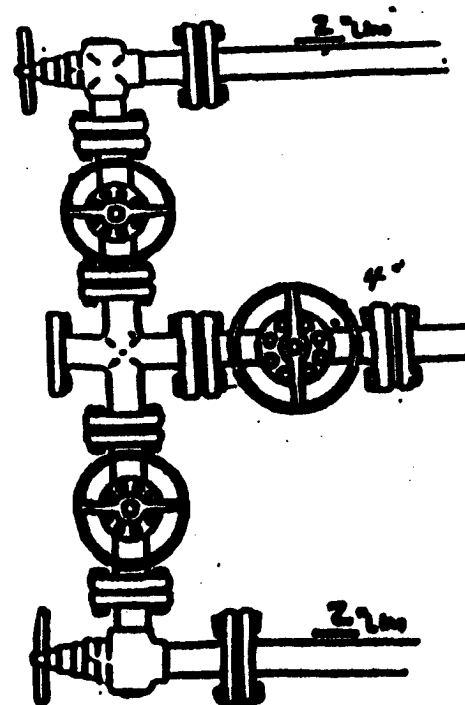


EXHIBIT "E"

CHI OPERATING, INC.

Crow Flats 18 Federal Com., Well No. 1

## BOP Specifications

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Chi Operating Inc  
Well Name & No: Crow Flats 18 Fed Com No. 01  
Location: Surface 660' F&L & 860' FEL, Sec.18, T. 16 S. R. 28 E.  
Lease: NMNM 103871  
Eddy County, New Mexico

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### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:
  - A. Spudding
  - B. Cementing casing: 13 7/8 inch; 8 5/8 inch; 5 1/2 inch.
  - C. BOP Tests
2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this well bore.
3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
6. A Communitization Agreement must be filed and approved by this office prior to any sales from this well.

### II. CASING:

1. The 13 7/8 inch shall be set at 400 Feet with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
2. The minimum required fill of cement behind the 8 5/8 inch Intermediate casing is to circulate to surface.
3. The minimum required fill of cement behind the 5 1/2 inch Production casing is to place TOC at least 500 feet above any potential hydrocarbons bearing formations.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 7/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

III. (Pressure Control Con't).

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3 M psi.
3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.
  - The test shall be done by an independent service company
  - The results of the test shall be reported to the appropriate BLM office.
  - Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
  - Use of drilling mud for testing is not permitted since it can mask small leaks.
  - Testing must be done in safe workman-like manner. Hard line connections shall be required.
  - Both low pressure and high pressure testing of BOPE is required.

g goursley 2/7/06