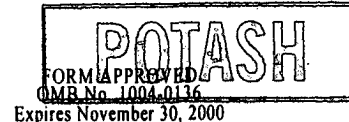


N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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-111959	
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. Freeway Federal., Well # 1	
3b. Phone No. (include area code) (432) 685-5001		9. API Well No. 30-015-33790	
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 F		10. Field and Pool, or Exploratory HG Morrow	
14. Distance in miles and direction from nearest town or post office* 24 road miles NE. of Carlsbad, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 30 -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	
16. No. of Acres in lease 316.97		13. State NM	
17. Spacing Unit dedicated to this well 316.97			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A			
19. Proposed Depth 12,100'		20. BLM/BIA Bond No. on file NM-1616	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3344' GL		22. Approximate date work will start* 8/23/04	
23. Estimated duration 4-6 weeks			
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. | 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 06/18/04
Title Agent for Chi Operating, Inc.		
Approved by (Signature) /s/ Jesse J. Juen	Name (Printed/Typed) /s/ Jesse J. Juen	Date SEP 27 2004
Title ACTING STATE DIRECTOR		
Office NM STATE 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.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED*GRS*
George R. Smith, agent

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

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For drilling and production facilities, submit
to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: CHI OPERATING, INC Telephone: 432-685-5001 e-mail address: _____
Address: P.O. BOX 1799 MIDLAND, TX, 79702
Facility or well name: Freeway Federal #1 API #: _____ U/L or Qtr/Qtr SENW Sec 30 - T19S - R30E
County: Eddy Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit
Type: Drilling ☒ Production ☐ Disposal ☐
Workover ☐ Emergency ☐
Lined ☐ Unlined ☐
Liner type: Synthetic ☒ Thickness AS PER REQUIREMENT @
TIME mil Clay ☐
Pit Volume _____ bbl

Below-grade tank

Volume: _____ bbl Type of fluid: _____
Construction material: _____
Double-walled, with leak detection? Yes ☐ If not, explain why not. _____

RECEIVED

OCT 07 2004

OCB-ARTESIA

Depth to ground water (vertical distance from bottom of pit to seasonal
high water elevation of ground water.) Not Available. Est. 200-300'

Less than 50 feet

(20 points)

50 feet or more, but less than 100 feet

(10 points)

100 feet or more

(0 points)

Wellhead protection area: (Less than 200 feet from a private domestic
water source, or less than 1000 feet from all other water sources.)

Yes

(20 points)

No

(0 points)

Distance to surface water: (horizontal distance to all wetlands, playas,
irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

(20 points)

200 feet or more, but less than 1000 feet

(10 points)

1000 feet or more

(0 points)

Ranking Score (Total Points)

0

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 10/05/04

Printed Name/Title John W. Wolf

Signature [Signature]

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title [Signature]

Signature [Signature]

OCT 8 2004
Date: _____

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, N M 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 HG Morrow
Property Code	Property Name FREEWAY FEDERAL	Well Number 1
OGRID No. 4378	Operation Name CHI OPERATING, INC.	Elevation 3344

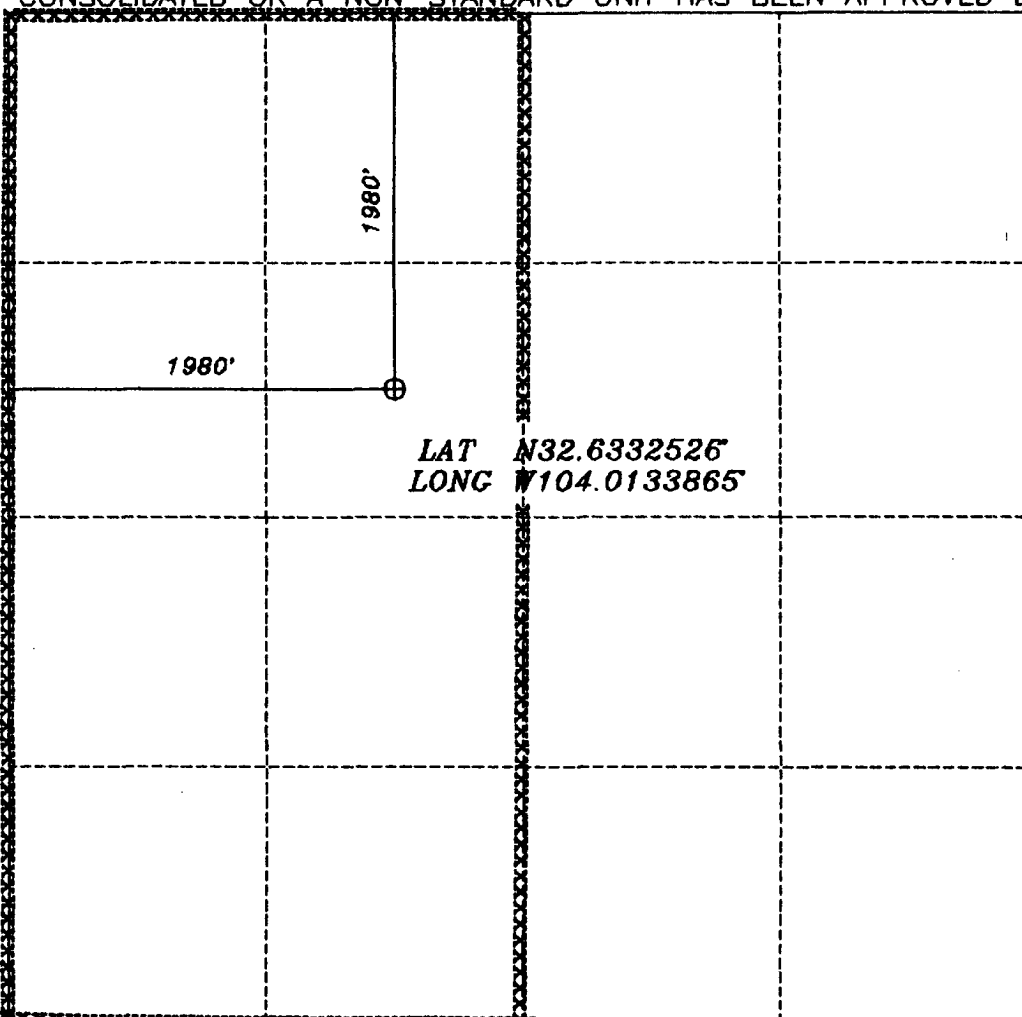
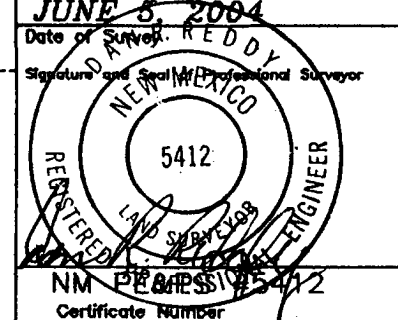
Surface Location

UL or Lot No. F	Section 30	Township 19-S	Range 30-E	Lot Idn.	Feet from the 1980	North/South line NORTH	Feet from the 1980	East/West line WEST	County EDDY
--------------------	---------------	------------------	---------------	----------	-----------------------	---------------------------	-----------------------	------------------------	----------------

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 316.97	Joint or Infill	Consolidation Code	Order No.						

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

	OPERATOR CERTIFICATION I HEREBY CERTIFY THAT THE INFORMATION HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.
	Signature <i>George R. Smith</i>
	Printed Name George R. Smith
	Title agent
Date 6/18/04	
SURVEYOR CERTIFICATION 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 KNOWLEDGE AND BELIEF.	
Date of Survey <i>JUNE 8, 2004</i>	
Signature and Seal of Professional Surveyor 	
Certificate Number	

APPLICATION FOR DRILLING

CHI OPERATING, INC.
Freeway Federal, Well No. 1
1980' FNL & 1980' FWL, Sec. 30-T19S-R30E
Eddy County, New Mexico
Lease No.: NM-111959
(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:

Rustler	373'	Strawn	10,650'
Top of Capitan Reef	1920'	Atoka	10,650'
Yates	1,740'	Morrow Clastics	11,590'
Delaware	4,300'	Lower Morrow	11,880'
Bone Spring Lm	6,145'	T.D.	12,100'
3rd Bone Spring Sd.	9,060'		
Wolfcamp	9,660'		

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 Atoka below 10,945' and the Morrow below 11,590'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT	WITNESS
17 1/2"	13 3/8"	54.5#	J-55	ST&C	0" - 400'	Circ. 350 sx "C" + add.	
11"	8 5/8"	32.0#	J-55	ST&C	0' - 3,600'	Circ. 600 sx "C" w/additives	
7 7/8"	5 1/2"	20.0#	N-80	LT&C	0' - 400'		
7 7/8"	5 1/2"	17.0#	N-80	LT&C	400' - 9,500'		
7 7/8"	5 1/2"	20.0#	N-80	LT&C	9,500' - 12,100'	Amount cement necessary for TOC to be 500'	

above productive formations

5. Minimum Specifications for Pressure Control Equipment:

A 12" 5000 psi WP Shaffer, LWS Double Gate BOP will be installed on the 13 3/8" casing and tested per order #2.
Request waiver to operate as a 3,000 psi WP system and test to the maximum expected surface pressure of 2,662 psi WP
Casing and BOP will be tested before drilling out with the 11" and will be tested daily.

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 400': Fresh water mud:	8.4 - 8.5 ppg	28 - 34	No W/L control
400' - 3600': Brine mud:	10.0 - 10.1 ppg	29	No W/L control
Note: Will switch to fresh water if lost circulation occurs in the Capitan Reef			
3600' - 9600': Fresh water mud:	8.4 - 8.5 ppg	28	No W/L control
9600' - 10,850': Brine/C. Brine mud:	9.5 - 9.6 ppg	29	No W/L control
10,850' - 11,500': Brine/C. Brine (starch):	9.5 - 10.+ ppg	32 - 34	W/L control 12-15 cc +/-
11,500' - 12,100': Controlled Brine	9.5 - 10.+ ppg	42 - 45	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: Run #1: Pending mud log shows: 400' - 3600': GR/CAL/CNL/LDT/DLL/MSFL
Run #2: T.D. - 3600': GR/CAL/CNL/LDT/DLL/MSFL
3600': GR/CNL if run 1 not performed.

Coring: As dictated by logs.

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 = 5324 psi and surface pressure of 2662 psi with a temperature of 181°.

10. H₂S: None expected. The Mud Log Unit will be cautioned to use a gas trap to detect H₂S and if any is detected the mud weight will be increased along with H₂S inhibitors sufficient to control the gas.

11. Anticipated starting date: August 23, 2004.

Anticipated completion of drilling operations: Approximately 30 - 40days.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC
Freeway Federal, Well No. 1
1980' FNL & 1980' FWL, Sec. 30 -T19S-R30E
Eddy County, New Mexico
Lease No.: NM-111959
(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 Illinois Camp NE Topo map showing the location of the proposed well as staked. The well site location is approximately 24 road miles northeast of Carlsbad, NM. Traveling east of Carlsbad on U.S. Highway 62/180, New Mexico 360 and county road No. 235, there will be 20 miles of paved highway, plus 4 miles of existing gravel county roads.
- B. Directions: Travel east of Carlsbad, NM on U. S. Highway #62/180 for approximately 15 miles, turn north on NM #360 for 5.4 to the Eddy County Potash Mine and Eddy County Rd. #235. Turn west on CR 235 for approximately 3.8 miles to the start of the proposed access road flagged on the north side. Turn north on an old oil field gravel road with a berm across it and continue north for 900 feet to the start of the proposed access road. The proposed access road will start on the east side of the existing access road and will run east for 800 feet, crossing the Duke Energy pipe line, to the southwest corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed and existing access road will be approximately 1700 feet in length, 12 feet wide (24' Max.). The proposed and existing roads are color coded on Exhibit "A".
- B. Construction: The proposed and existing access road will be constructed by grading and topping with compacted caliche.
- C. Turnouts: Two turnouts increasing the road width to 20 feet for passing will be constructed at the midpoint of each leg of the proposed access road.
- D. Culverts: None required.
- E. Cuts and Fills: There will be some minor leveling of the surface.
- F. Gates, Cattle guards: None required.
- G. Off Lease ROW: 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 and gas production-process equipment and tank battery, if required, will be installed on the drilling pad. A buried flow line will be run west parallel to the access road for approximately 250 – 300 feet to the Duke Energy 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 a pit on the location, if available, or from a Federal pit in the NW¼NE¼, Sec. 3-T20S-R29E. 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, 500' X 500'.
- B. Mat Size: 270' X 175', plus 120' X 110 reserve pits on the east.
- C. Cut & Fill: The location will require a cut of 3 – 3.5 foot cut on the north and east with fill to the south and 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 north of CR 235 and northeast of a Duke Energy pipeline with rolling hills and playas. There is an overall 1.6% slope to the southeast from an elevation of 3344' GL.
- B. Soil: The topsoil at the well site is a dark brown colored gravelly loam with a surface scatter of caliche rock. The soil is of the Tonuco loamy fine sands series underlain with fractured, platy, indurated caliche.
- C. Flora and Fauna: The vegetation cover is a poor to fair grass cover of threeawn, grama, dropseed, fluff grass, along with plants of mesquite, creosote bush, sage, broomweed, yucca, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, antelope, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: None in the immediate vicinity.
- E. Residences and Other Structures: None in the area.
- 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.

June 18, 2004



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

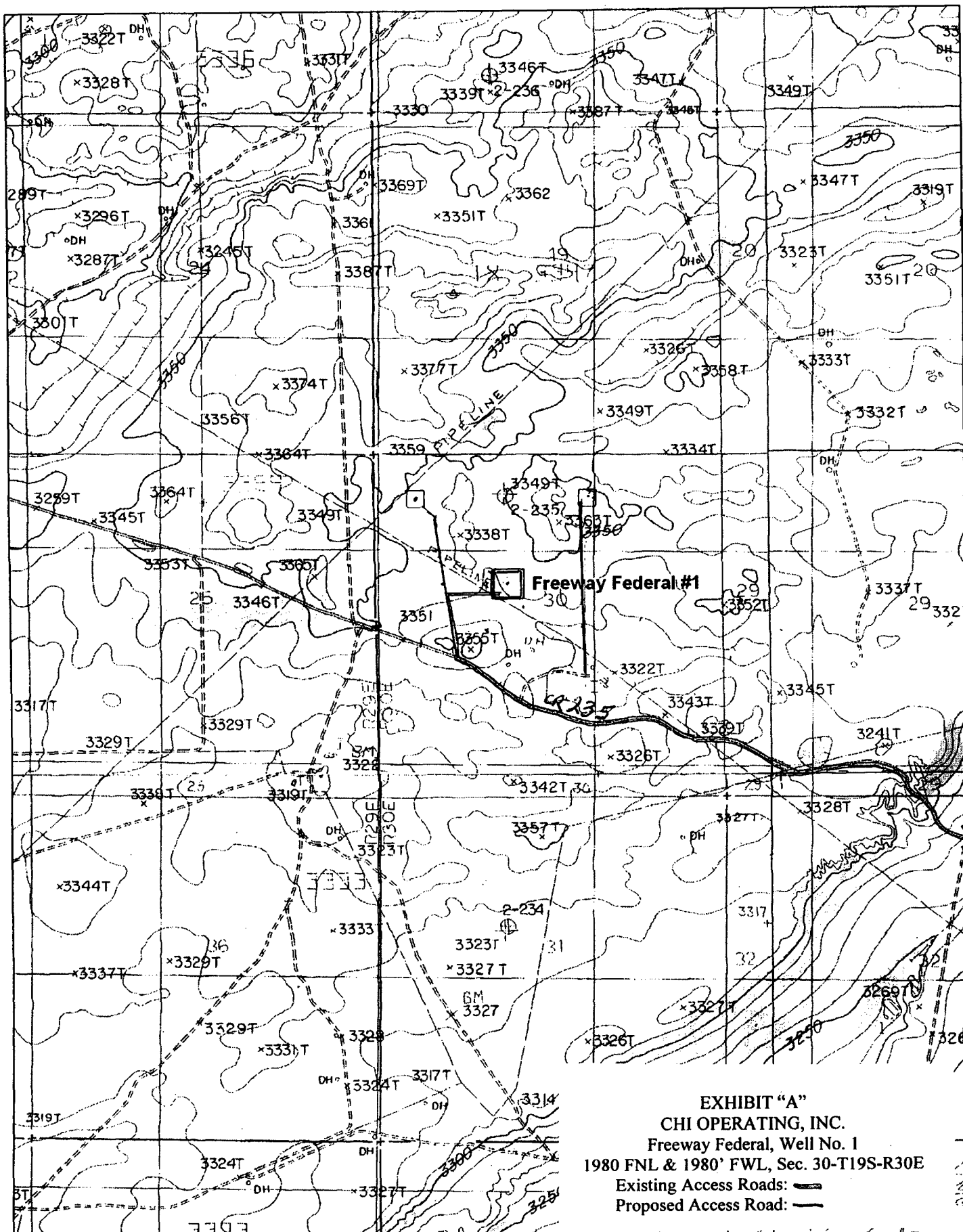


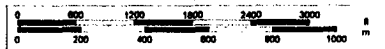
EXHIBIT "A"
 CHI OPERATING, INC.
 Freeway Federal, Well No. 1
 1980 FNL & 1980' FWL, Sec. 30-T19S-R30E
 Existing Access Roads: —
 Proposed Access Road: - - -

DELOME

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 www.delorme.com

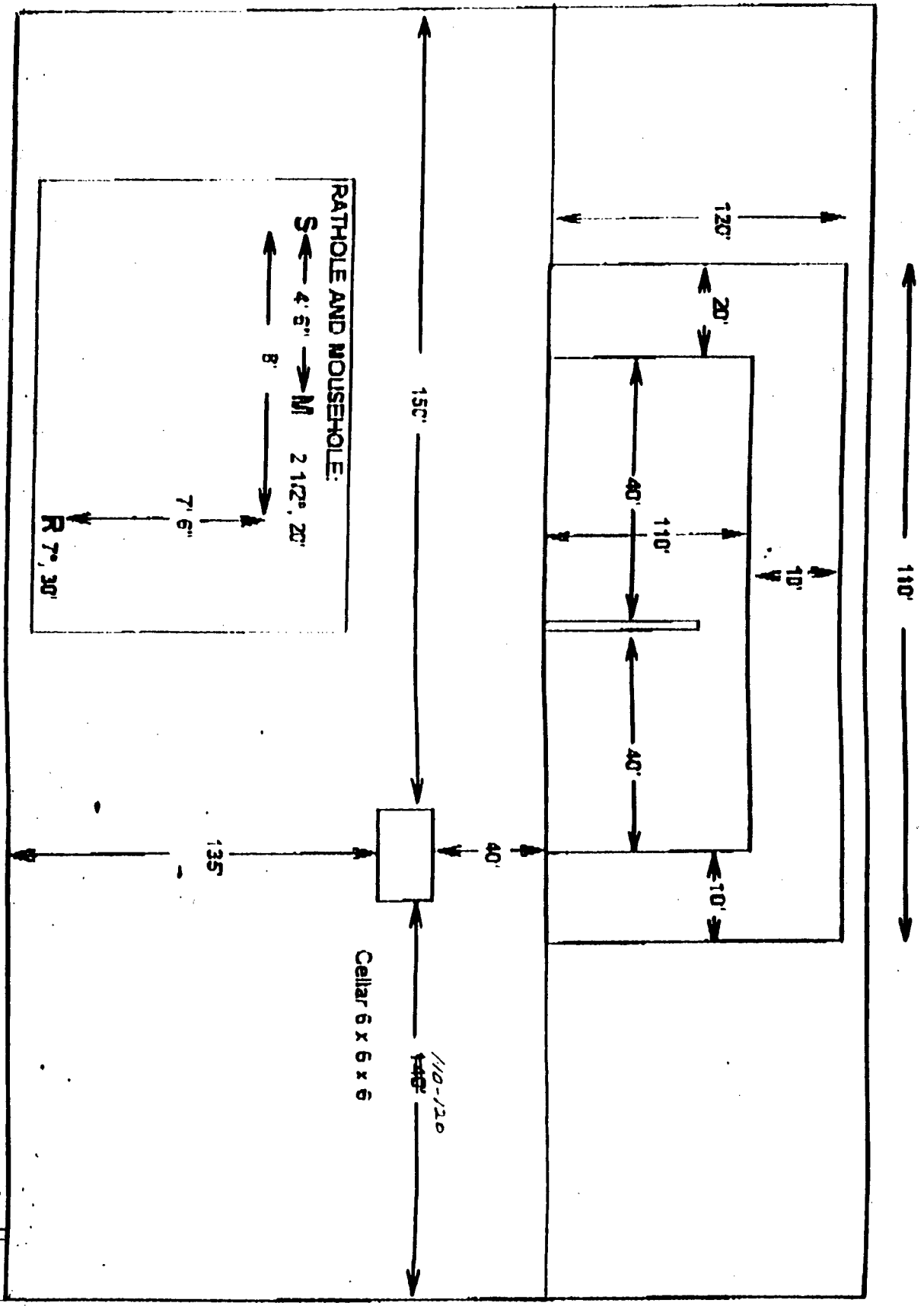
Scale 1 : 24,000

1" = 2000 ft





TMBR/Sharp Rig #22



REV 2/7/95

TRIMBLE/SHARP DRILLING

B.O.P. Equipment Intended for use on Rig # 24 d 22
Well To Be drilled for Trimble/Sharp

- * All B.O.P. equipment is H2S Trim *
- * All Accumulators are Kookey Type-80 : Dual Power Electric/Air *
- * Choke Manifold: * See sheet 2
- 4" Valves : Cameron F/FC, 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 Hydril: Type GK)

BOP Type Shaffer LWS

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

BOP Size: 13 5/8" - 5000 PSI

Rotating Head Type Smith

Rot-Head Furnished By Trimble

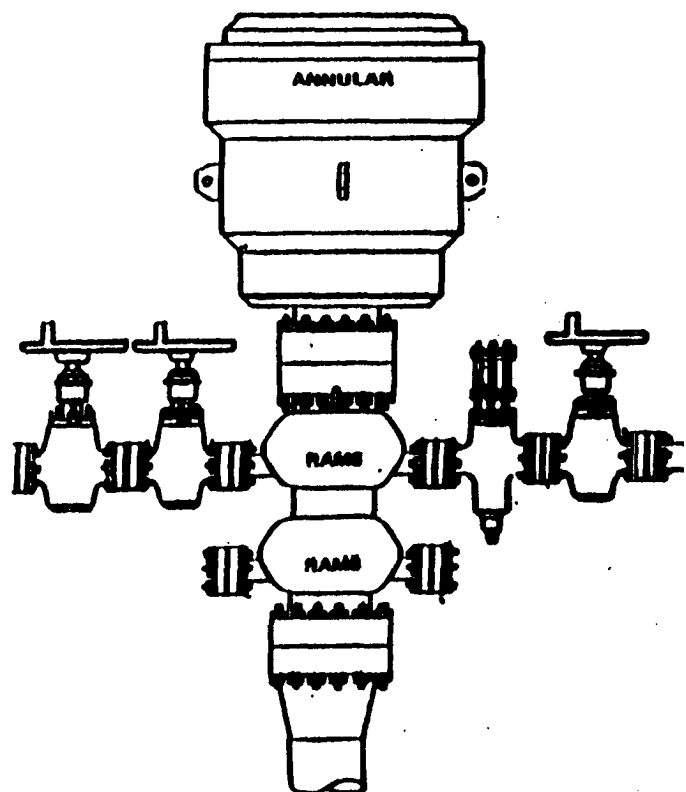
Rams in top gate: 4 1/2" pipe

Rams in bottom: Blinds

Side Outlets used:

Bottom X Top

4" Valves on Tee



B.O.P. Equipment Intended for use on Rig # 24 d 22
Well To Be drilled for Trimble/Sharp

* All Valves (H2S) *

Choke Manifold:

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

1 - 4" Valves

2 - 2" Valves

2 - 2" Adjustable Chokes

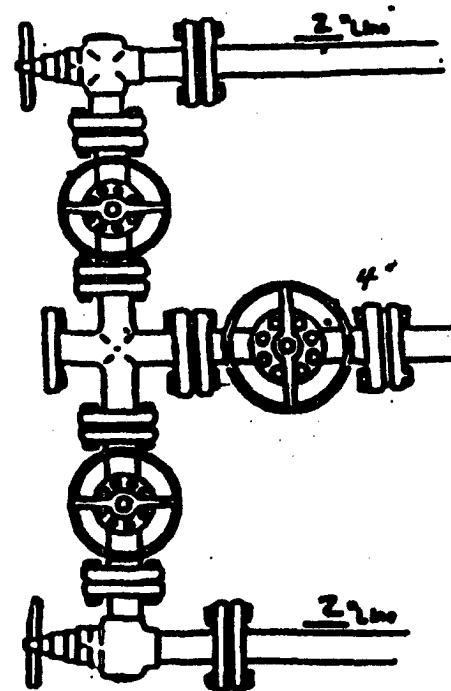
Valve Types Used:

Cameron - F or FC

Shaffer - B Floseal

WKM - type 2

Chokes - Cameron H2 or TC unibolt





NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

January 4, 2005
Chi Operating, Inc.
P.O. Box 1799
Midland, TX 79702
Attn: Mr. John Wolf

**RE: CHI Operating, Inc.: Freeway Federal Well #1, located in Unit F (1980' FNL & 1980' FWL) of Section 30, Township 19 South Range 30 East Eddy County, New Mexico.
API # 30-015-33790**

Dear Mr. Wolf,

In regards to our phone conversation this morning I would like to recap the New Mexico Oil Conservation Divisions' (NMOCD) requirement for approval to drill for the above captioned well. This is for Chi Operating, Inc. to take samples of the drilling mud every 100' in order to determine the chloride levels from surface casing setting depth down to the intermediate casing point, which is on the drilling prognosis to be @ 3600'.

In addition for the condition of approval of said well, please be aware that the NMOCD will require that the Capitan Reef is to be drilled with a fresh water mud which the estimated depth on your prognosis is to be @ 1920'.

Please give our office a call if you have any questions regarding this matter.

Respectfully yours,

A handwritten signature in black ink, appearing to read "Bryan G. Arrant".

Bryan G. Arrant

PES

CC: Tim Gum-District Supervisor-Artesia
Bureau of Land Management-Roswell