

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER



45-07-45
FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator

Chi Operating, Inc.

3a. Address

P.O. Box 1799 Midland, TX 79702

3b. Phone No. (include area code)

(432) 685-5001 Unders Cedar Lake

5. Lease Serial No.

NM-97882

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

Lion Federal Com., Well No. 1

9. API Well No.

30-015-35364

10. Field and Pool, or Exploratory

Morrow

11. Sec., T., R., M., or Blk. and Survey or Area

Sec. 14-T18S-R30E

14. Distance in miles and direction from nearest town or post office*

15 miles south of Loco Hills, NM

12. County or Parish

Eddy

13. State

NM

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

160

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

12,070'

20. BLM/BIA Bond No. on file

NM-1616

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3515' GL

22. Approximate date work will start*

Nov. 20, 2006

23. Estimated duration

4-6 weeks

24. Attachments

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

10/31/06

Title

Agent for Chi Operating, Inc.

Approved by (Signature)

/s/ Tony J. Heredia

Name (Printed/Typed)

Date

JAN 10 2007

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.

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 FOR 1 YEAR

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

George R. Smith, agent

1625 N. FRENCH DR., HORRS, NM 88240

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Received October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 5 Copies

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

DISTRICT II

1000 Rio Brazos Rd., Artec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87606

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 71560	Pool Name Undes. Cedar-hale; Morrow
Property Code	Property Name LION FEDERAL COM	Well Number 1
OGRIID No. 4378	Operator Name CHI OPERATING, INC.	Elevation 3515'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	14	18-S	30-E		1980	NORTH	1980	EAST	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
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Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320		Com.	

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

<p style="text-align: center;">NM-97882</p>	<h3 style="text-align: center;">OPERATOR CERTIFICATION</h3> <p><i>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p style="text-align: right;"> <i>George R. Smith</i> 10/31/06 _____ Signature Date George R. Smith, agent _____ Printed Name </p>
<hr style="border-top: 1px dashed black;"/> <h3 style="text-align: center;">SURVEYOR CERTIFICATION</h3> <p><i>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.</i></p> <p style="text-align: center; font-weight: bold;">OCTOBER 23, 2006</p> <p> Date Surveyed JMD Signature & Seal of Professional Surveyor </p> <p style="text-align: right;"> <i>Gary H. Edmon</i> 10/30/06 _____ 06.11.1651 </p>	
<h3 style="text-align: center;">GEODETIC COORDINATES</h3> <p style="text-align: center;">NAD 27 NME</p> <p style="text-align: center;">Y=636463.5 N X=620936.6 E</p> <p style="text-align: center;">LAT.=32.749115° N LONG.=103.939978° W</p>	

APPLICATION FOR DRILLING

CHI OPERATING, INC.
Lion Federal Com., Well No. 1
1980' FNL & 1980' FEL, Sec. 14-T18S-R30E
Eddy County, New Mexico
Lease No.: NM-97882
(Undesignated 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	2,100'	Strawn	10,710'
Queen	2,875'	Atoka	11,000'
San Andres	3,800'	Morrow Clastic	11,510'
Delaware	4,050'	Lower Morrow.	11,780'
Bone Spring LS	5,270'	T.D	12,070'
1 st Bone Spring Sd	7,280'		
3 rd Bone Spring Sd	8,930'		
Wolfcamp	9,320'		

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 11,000' and the Morrow below 11,510'.

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	0' - 475'	Circ. 450 sx "C" + add.
11"	8 5/8"	32.0#	J-55	ST&C	0' - 4,400'	Circ. 2000 sx 65/35 "C" + Poz.
7 7/8"	5 1/2"	20.0#	N-80	LT&C	0' - 2,400'	
7 7/8"	5 1/2"	17.0#	N-80	LT&C	2,400' - 9,600'	
7 7/8"	5 1/2"	20.0#	N-80	LT&C	9,600' - 12,070'	1500 sx "H" + add.

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 as described in Onshore Oil & Gas Order No. 1 before drilling out with 11" and will be tested weekly. Request waiver to test to a maximum of 3000 psi wp, which is in excess of maximum expected surface pressure. See Exhibit "E".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 475': Fresh water mud:	8.4 - 8.5 ppg	32 - 38	No W/L control
475' - 4400': Brine mud:	10.0 - 10.1 ppg	32 - 38	No W/L control
4400' - 9700': Fresh water mud:	8.4 - 8.5 ppg	32 - 38	No W/L control
9700' - 10,900': Cut Brine mud:	9.2 - 9.5 ppg	32 - 38	No W/L control
10,900' - 11,700': Brine (starch) mud:	9.5 - 9.7 ppg	35 - 38	W/L control 15 cc +/-
11,700' - 12,070': Controlled Brine	9.5 - 9.7 ppg	38 - 42	W/L control 10 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 4400': (GR/CAL-CNL-LDT)DLL/MSFL
4400' To surface: GR/Neutron

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 = 5311 and 2655 psi surface pressure 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: November 20, 2006.

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

MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC
Lion Federal Com., Well No. 1
1980' FNL & 1980' FEL, Sec. 14 -T18S-R30E
Eddy County, New Mexico
Lease No.: NM-97882
(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 environmental effects associated with the operations.

1. EXISTING ROADS:

- A. Exhibit "A" is a portion of a BLM Loco Hills Topo map showing the location of the proposed well as staked. The well site location is approximately 40 road miles southeast of Artesia, NM or 15 road miles south of Loco Hills. Traveling east of Artesia on U.S. Highway 82 and County Road No. 222, there will be 36 miles of paved highway and 4 miles of oilfield roads.
- B. Directions: Travel east from U. S. Highway #285 in Artesia, NM on U. S. Highway 82 for approximately 31 miles, turn south on County Rd. #222 for 4.9 miles to an oilfield road on the west side of highway. Turn west at an EOG and a Gruy sign on a caliche oilfield road for approximately 2.9 miles, then turn right on for approximately .7 mile to the start of the proposed access road on the left (west). The proposed access road will run west for 1000 feet to the northeast corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed access road will be approximately 1000 feet in length, 12 feet wide (14' Max.). 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.
- C. Turnouts: One will be required at the midpoint increasing the width to 20 feet for passing.
- D. Culverts: None required.
- E. Cuts and Fills: There will be considerable cuts and fills of sand dunes and basins.
- F. Gates, Cattle guards: None will be required.
- G. Off Lease ROW: Right of Way is being applied for.

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 will be installed on the drilling pad. A flow line for gas production will be applied for under a separate Right of Way or Sundry Report.

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 from a Federal pit in the SE4NE4 Sec. 13-T-18S-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, 600' X 600'.
- B. Mat Size: 285' X 200', plus 125' X 125 reserve pits on the south.
- C. Cut & Fill: The location will require cutting 5 feet on top of the dune to level the pad. The pits will be located on 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 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 an area below Niminem Ridge. There is an overall .67% slope to the southwest from an elevation of 3515' GL.
- B. Soil: The topsoil at the well site is a dark brown colored sandy loam. The soil is of the Kermit Berino Fine Sands complex series.
- C. Flora and Fauna: The vegetation cover is a sparse grass cover of threeawn, dropseed, bluestem, burro grass, along with plants of shinny oak brush, mesquite, sage, broomweed, yucca, 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 except oil field equipment.
- 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. Southern New Mexico Archaeological Services, Inc., P.O. Box 1, Bent, NM 88314 is conducting an archaeological survey and their report will be submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

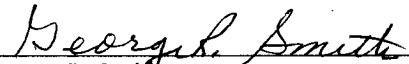
- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

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.

October 31, 2006



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

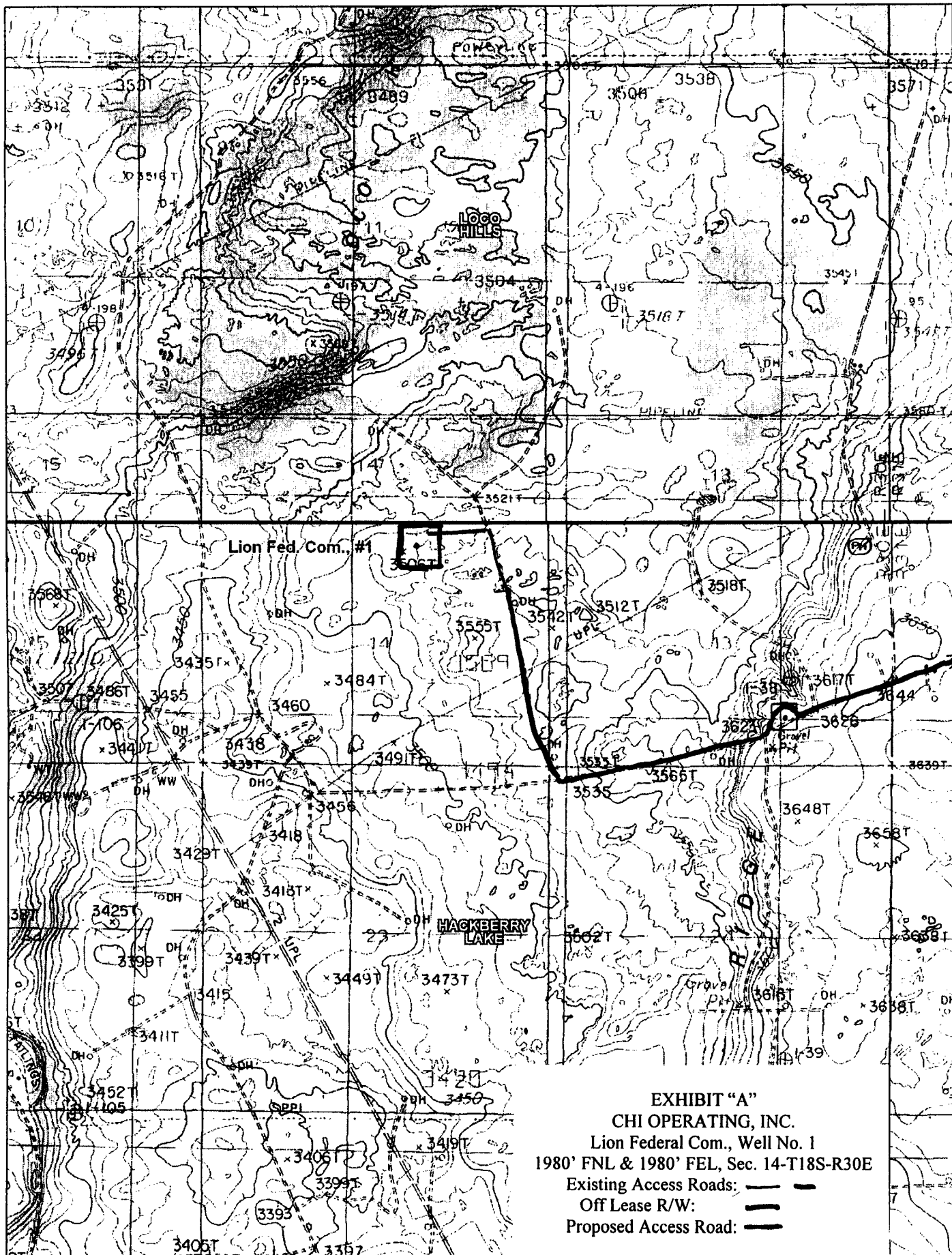


EXHIBIT "A"
CHI OPERATING, INC.
 Lion Federal Com., Well No. 1
 1980' FNL & 1980' FEL, Sec. 14-T18S-R30E
 Existing Access Roads: — —
 Off Lease R/W: ||||
 Proposed Access Road: ||||



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 www.delorme.com

Scale 1 : 24,000
 1" = 2000 ft



TN
 MN
 9.0°E

RIG #2

BLOWOUT PREVENTOR ARRANGEMENT

13 5/8" SHAFFER TYPE 8L, 5000 psi WP
13 5/8" Hydril SPHERICAL, 5000 psi WP
80 GALLON, 6 STATION KOOMEY ACCUMULATOR
5000 psi WP CHOKE MANIFOLD

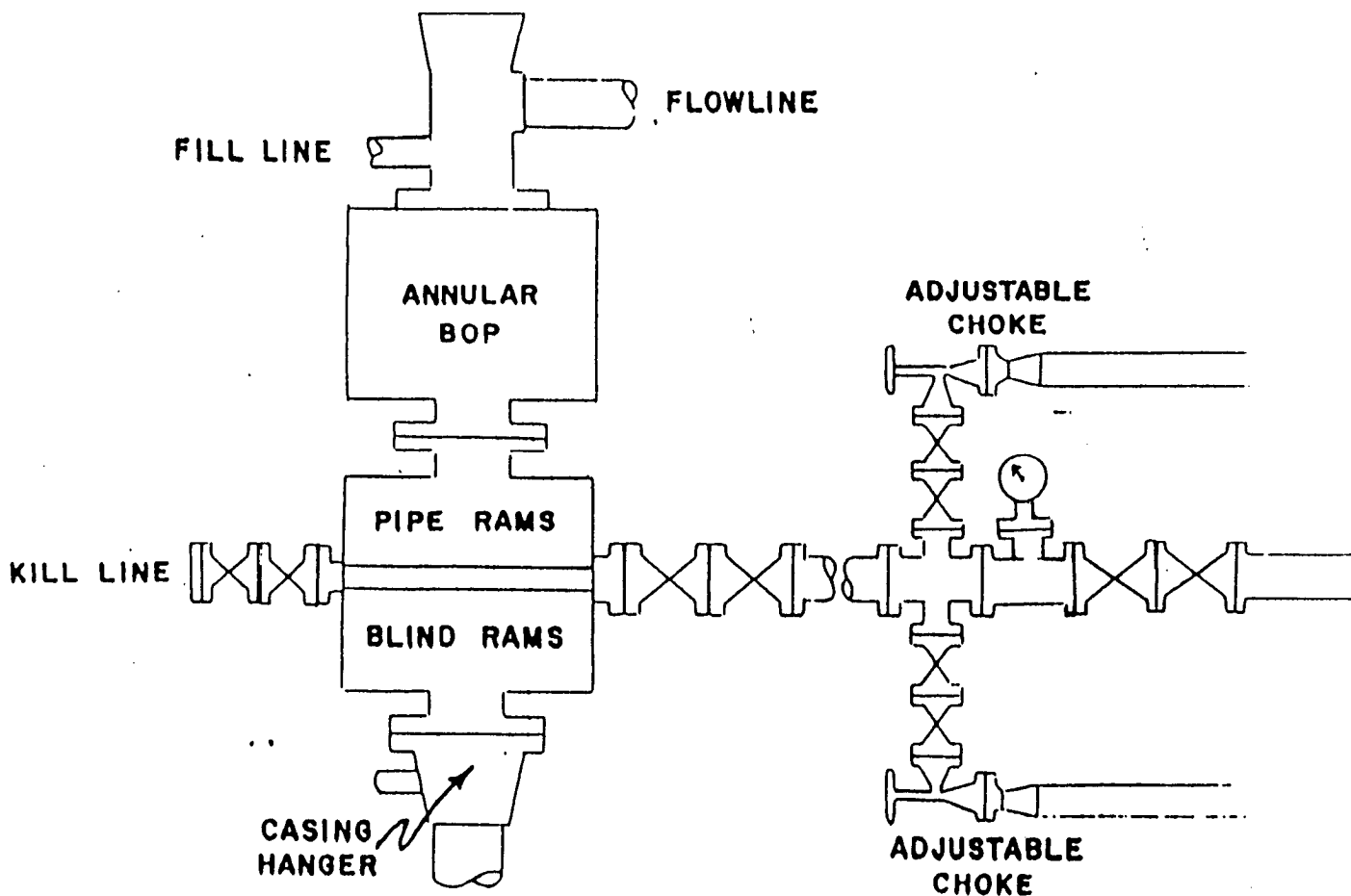


EXHIBIT "E"
CHI OPERATING, INC.
Lion Federal Com., Well No. 1
BOP Specifications

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: Chi Operating, Inc. Well Name & #: Lion Fed. Com. #1
Location 1980 F N L & 1980 F E L; Sec. 14, T. 18 S., R. 30 E.
Lease #: NM-97882 County: Eddy State: New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. **EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 AND 3165.4.**

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

- (☒) Lesser Prairie Chicken (stips attached) (☐) Flood plain (stips attached)
(☐) San Simon Swale (stips attached) (☒) Other **See attached Special Management Area Conditions of Approval for the Hackberry Lake OHV area.**

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

(☒) The BLM will monitor construction of this drill site. Notify the (☒) Carlsbad Field Office at (505) 234-5972 (☐) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

(☒) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche upon completion of well and it is determined to be a producer.

(☐) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____ inches in depth. Approximately _____ cubic yards of topsoil material will be stockpiled for reclamation.

(☐) Other.

III. WELL COMPLETION REQUIREMENTS

(☐) A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(☒) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of 1/2 inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre. If broadcasting, the seeding rate must be doubled.

(☐) A. Seed Mixture 1 (Loamy Sites)

Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0
Plains lovegrass (*Eragrostis intermedia*) 0.5

(☒) B. Seed Mixture 2 (Sandy Sites)

Sand Dropseed (*Sporobolus crptandrus*) 1.0
Sand Lovegrass (*Eragostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

(☐) C. Seed Mixture 3 (Shallow Sites)

Side oats Grama (*Bouteloua curtipendula*) 5.0
Green Spangletop (*Leptochloa dubia*) 2.0
Plains Bristlegrass (*Setaria magrostachya*) 1.0

(☐) D. Seed Mixture 4 (Gypsum Sites)

Alkali Sacaton (*Sporobolus airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

(☐) OTHER SEE ATTACHED SEED MIXTURE

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

(☐) Other

RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic.

Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- (1) Lined as specified above and
- (2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be re-contoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to process by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

CONDITIONS OF APPROVAL - DRILLING

Well Name & No. 1-Lion Federal Com
Operator's Name: Chi Operating, Inc
Location: 1980FNL, 1980FEL, Section 14, T-18-S, R-30-E
Lease: NM-97882

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5972 or (505) 361-2822 - for wells in Eddy County in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch

C. BOP tests

2. **Although no H₂S has been reported in this section, it has been reported in Section 7, T-18-S, R-31-E measuring 150-380 ppm in gas streams from the North Shugart Field. It is recommended that monitoring equipment be available.**

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 covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

II. CASING:

1. The 13-3/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 525 feet**, below usable water and 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. **Fresh water mud to be used to setting depth of surface casing.**

Possible water flows in the Salado Group and the Premier member of the Grayburg formation.

2. The minimum required fill of cement behind the 8-5/8 inch salt protection casing is **circulate cement to the surface.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is **cement shall circulate to surface.**

4. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

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 13-3/8 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.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be 2M psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 8-5/8 inch casing shall be 5M psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- The tests 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 a safe workman-like manner. Hard line connections shall be required.
- BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.

Engineer on call phone: 505-706-2779

WWI 120606

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

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

Form C-144
March 12, 2004

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: 1-432-685-5001 e-mail address: _____
Address: P.O. Box 1799 Midland, TX 79702
Facility or well name: Lion Federal Com., Well No 1 30-015-35364 U/L or Qtr/Qtr SWNE Sec 14 T 18S R 30E
County: Lea Latitude N 32.749115' Longitude W 103.939978' NAD: 1927X 1983 Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit

Type: Drilling - Production ☒ Disposal ☐

Workover Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness current rule at time of drilling mil

Clay ☐ Volume 1,000 +/- bbl

Below-grade tank

Volume: bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain why not. _____

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water. Not Avail. 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- points

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:

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.

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 according to NMOCD guidelines X, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: October 31, 2006

Printed Name/Title George R. Smith, agent for Chi Operating, Inc. (505) 623-4940 Signature George R. Smith

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: 11/21/07
Date: _____

Printed Name/Title _____ Signature Jim W. Green
District II Supervisor