

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		R-111-POTASH		5. Lease Serial No. NM-96243	
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.		3a. Address P.O. Box 1799 Midland, TX 79702		3b. Phone No. (include area code) (432) 685-5001	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) 1980' FSL & 1980' FEL At proposed prod. zone same		10. Field and Pool, or Exploratory Exploratory		9. API Well No. 30-025-37701	
14. Distance in miles and direction from nearest town or post office* 25 miles west of Eunice, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec. 1-T22S-R33E		12. County or Parish Lea	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1,980'		16. No. of Acres in lease 640.4		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 15,200'		20. BLM/BIA Bond No. on file NM-1616	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3553 GL		22. Approximate date work will start* January 9, 2006		23. Estimated duration 80 days	
24. Attachments Certified 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 George R. Smith		Name (Printed/Typed) George R. Smith		Date 11/21/05	
Title Agent for Chi Operating, Inc.		Name (Printed/Typed) Linda S. C. Rundell		Date FEB 06 2006	
Approved by (Signature) /s/ Linda S. C. Rundell		Title 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 SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

George R. Smith, agent

DISTRICT I

1625 N. FRENCH DR., HOBBBS, NM 88240

State of New Mexico

Energy, Minerals and Natural Resources Department

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

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-37701		Pool Code /	Pool Name Wildcat Morrow
Property Code 35428	Property Name MESA VERDE FEDERAL		Well Number 1
OGRID No. 4378	Operator Name CHI OPERATING, INC.		Elevation 3553'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	1	22-S	33-E		1980	SOUTH	1980	EAST	LEA

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 320	Joint or Infill	Consolidation Code	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

LOT 4	LOT 3	LOT 2	LOT 1
40.02 AC	40.01 AC	40.01 AC	40.00 AC
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=517022.0 N X=749909.3 E</p> <p>LAT.=32°25'07.69" N LONG.=103°31'24.49" W</p>			
<p>3556.5' 3552.3'</p> <p>600'</p> <p>3548.9' 3548.2'</p> <p>1980'</p>			

OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

George R. Smith
Signature

George R. Smith, agent
Printed Name

for Chi Operating, Inc.
Title

November 21, 2005
Date

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 belief.

NOVEMBER 5, 2005

Date Surveyed **JR**

Signature & Seal of **RONALD J. EIDSON**
Professional Surveyor

Ronald J. Eidson 11/09/05

05.11.1692

Certificate No. **GARY EIDSON 12041**
RONALD J. EIDSON 3239

APPLICATION FOR DRILLING

CHI OPERATING, INC.
Mesa Verde Federal, Well No. 1
1980' FSL & 1980' FEL, Sec. 1-T22S-R33E
Lea County, New Mexico
Lease No.: NM-96243
(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:

Rustler	1641'	Bone Spring	8600'
Top Salt	1717'	Wolfcamp	11,950'
Base Salt	3543'	Strawn	13,460'
Yates	3846'	Atoka	13,660'
Capitan Reef	4084'	Upper Morrow	14,450'
Base of Capitan Reef	5200'	Lower Morrow	15,000'
Delaware	5228'	T.D.	15,200'

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 300' and Capitan Reef below 4084'.

Oil: Possible in the Bone Spring below 8600' and Delaware below 5300'.

Gas: Possible in the Atoka below 13,700' and the Morrow below 14,500'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	54.5#	J-55	STC	0' - 950'	Circ. 630 sx "C" + POZ to surface
12 1/4"	9 5/8"	40.0#	J 55	LTC	0' - 5,200'	Circ. 1400 sx 50:50 POZ & "C" + addit.
8 3/4"	7"	26.0#	HCP-110	LTC	0' - 12,150'	CMT w/439 sx 15:61:11 POZ, "C", CSE + additives with estimated TOC @8,000'.
6 1/8"	4 1/2" liner	15.1#	P-110	LTC	11,850' - 15,200'	466 sx Class H + additives, TOC 11,650

5. Proposed Control Equipment: A 12" 5000/10,000 psi wp Shaffer Type LWS Double Gate BOP will be installed on the 13 3/8" casing. Casing and BOP will be tested as per Onshore Oil & Gas Order #2). Casing and BOP will be tested before drilling out with the 12 1/4" and 9 5/8". See Exhibit "E".

6. MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 950': Fresh water mud:	8.4 - 8.8 ppg	29 - 36	No W/L control
950' - 5,200': Brine mud:	10.0 - 10.1 ppg	29 - 32	No W/L control
Note: If circulation is lost in the Reef, switch to fresh water.			
5,200' - 12,150': Cut Brine mud:	8.4 - 9.0 ppg	29 - 34	No W/L control
12,150' - 15,200': Cut Brine	9.0 - 12.5 ppg	34 - 38	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 5200': (GR-CAL-CNL-LDT)(GR-CAL-DLL-MICRO)
5200' to Surface: GR/CNL
 - Coring: Rotary Sidewall as dictated by logs.

Chi Operating, Inc.
Mesa Verde Federal, 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 = 6688 psi and surface Pressure of 3344 psi with a BH temperature of 212°.
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: January 9, 2006
Anticipated completion of drilling operations: Approximately 80 days.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

CHI OPERATING, INC.
Mesa Verde Federal, Well No. 1
1980' FSL & 1980' FEL, Sec. 1-T22S-R33E
Lea County, New Mexico
Lease No.: NM-96243
(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 USGS/BLM Topo map showing the location of the proposed well as staked. The well site location is approximately 61 road miles east of Carlsbad, New Mexico. Traveling east from Carlsbad there will be approximately 52.0 miles of paved highway and 9.3 miles of gravel oil field roads.
- B. Directions: Travel east from Carlsbad, NM on U.S. Highway 62/180 for approximately 32 miles to NM Highway #176. Turn southeast and east on NM #176 for 12.5 miles to Marathon Rd. Continue southeast on NM #176 for approximately 7.5 miles (.2 mile west of San Simon county rd.) Turn southwest at a SWD and a red Exxon sign and continue southwest and south for approximately 4.3 miles to a caliche pit on the west side of road. Continue southwest and west for approximately 3.1 miles to a windmill on the side of road. Continue west for approximately 1 mile, passing a caliche pit on the south side of road, to a road intersection and a TOCO sign. Turn north for .9 mile to the C.W. Trainer, Barbara Federal #1 well site. The proposed access road is staked from the southeast corner of this pad for 6,205 ft. to the SE corner of the proposed well site.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed access road will be approximately 6200 feet in length and 12 feet wide (24' 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. The surface will be properly drained.
- C. Turnouts: Approximately five turnouts will be required, increasing the road width to 20 feet for passing.
- D. Culverts: None required.
- E. Cuts and Fills: None required except leveling small (2-3 foot) dunes and basins
- F. Gates, Cattle guards: None required.
- G. Off Lease R/W: Right of Way 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, gas production-process equipment and tank battery, if required, will be installed on the drilling pad. A 4" steel 5000 psi gas flow line, with maximum of 600 psi operating pressures, will be buried and run east parallel to the proposed access road to the Duke gas line.

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 the access road and well site pad will be obtained on location, if available, or from an approved State pit located in the SWNW of Sec. 8-T22S-R34E. No surface materials will be disturbed except those necessary for actual grading and construction 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 and wildlife 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 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: 340' X 215', plus 175 X 175' mud pits. The pits will be on the north.
- C. Cut & Fill: There will be a 2-foot cut on the northwest with fill to the south.
- D. The surface will be topped with compacted caliche and the mud 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 work after abandonment.

11. OTHER INFORMATION:

- A. Topography: The proposed well site and access road is located north of San Simon Swale and south of the Grama Ridge. The location has a southwesterly slope of 1.3 % from an elevation of 3553'.
- B. Soil: The topsoil on the well site and access road is reddish brown colored fine sand. The soil is of the Kermit soils and dune land Soils Series.
- C. Flora and Fauna: The vegetation at the well site is a sparse to fair grass cover of three-awn, grama, bluestem, dropseed, burrograss, muhly and other miscellaneous native grasses along with plants of mesquite, yucca, sage, shinnery oak brush, broomweed, cacti, buckwheat and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: None.
- E. Residences and Other Structures: None, but existing oil field facilities.
- F. Land Use: Cattle grazing.
- G. Surface Ownership: The proposed well site and access road are on Federal surface.
- H. There is no evidence of archaeological, historical or cultural sites in the area. Archaeological Survey Consultants, P.O. Box 2285, Roswell, NM 88202 are conducting an archaeological survey and their report will be submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

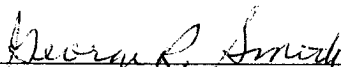
- A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

Gary Womack
Chi Operating, Inc.
P.O. Box 1799
Midland, TX 79702
Office Phone: (432) 685-5001

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.

November 21, 2005



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

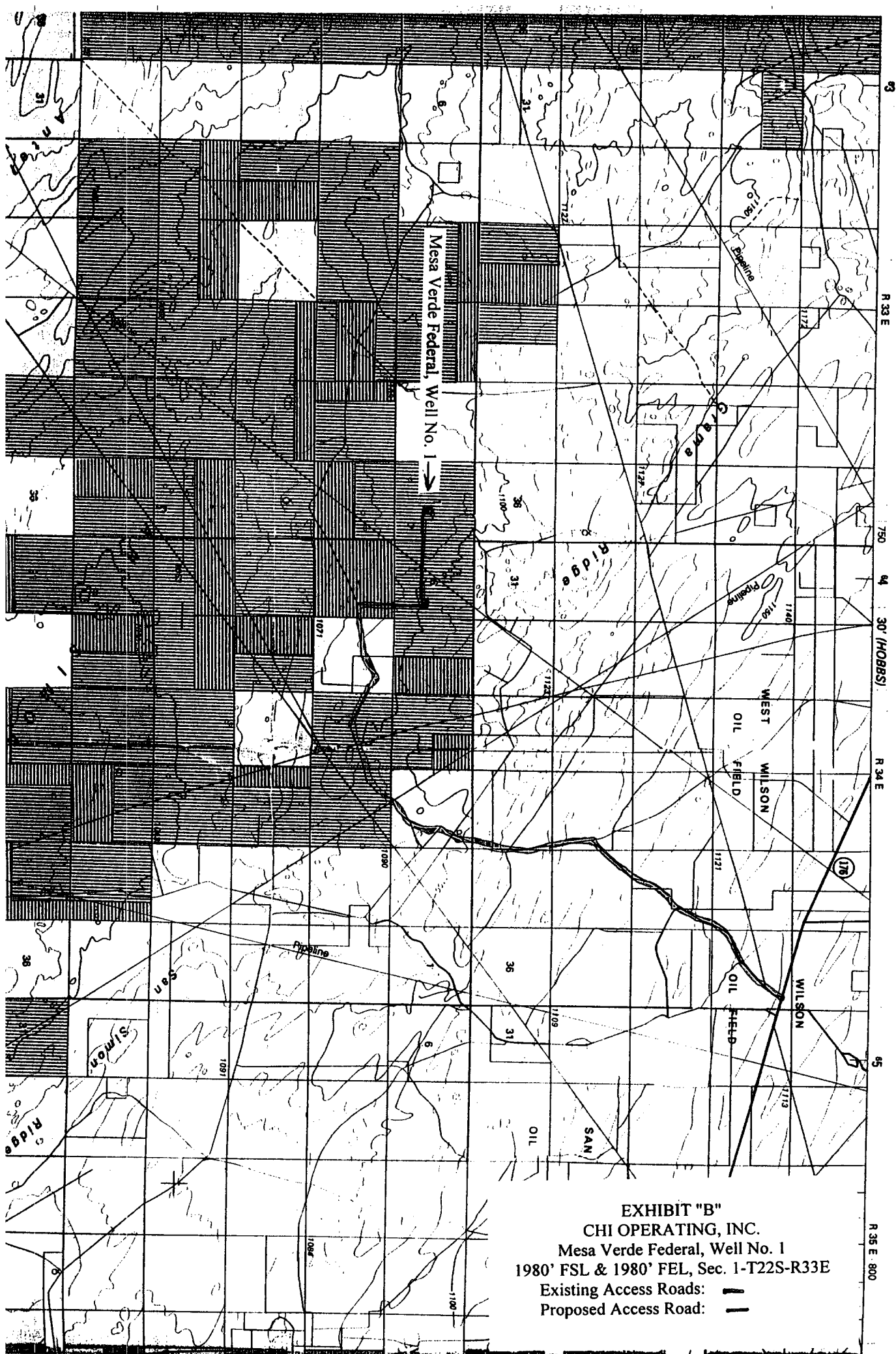


EXHIBIT "B"
CHI OPERATING, INC.
Mesa Verde Federal, Well No. 1
1980' FSL & 1980' FEL, Sec. 1-T22S-R33E
Existing Access Roads: —
Proposed Access Road: —

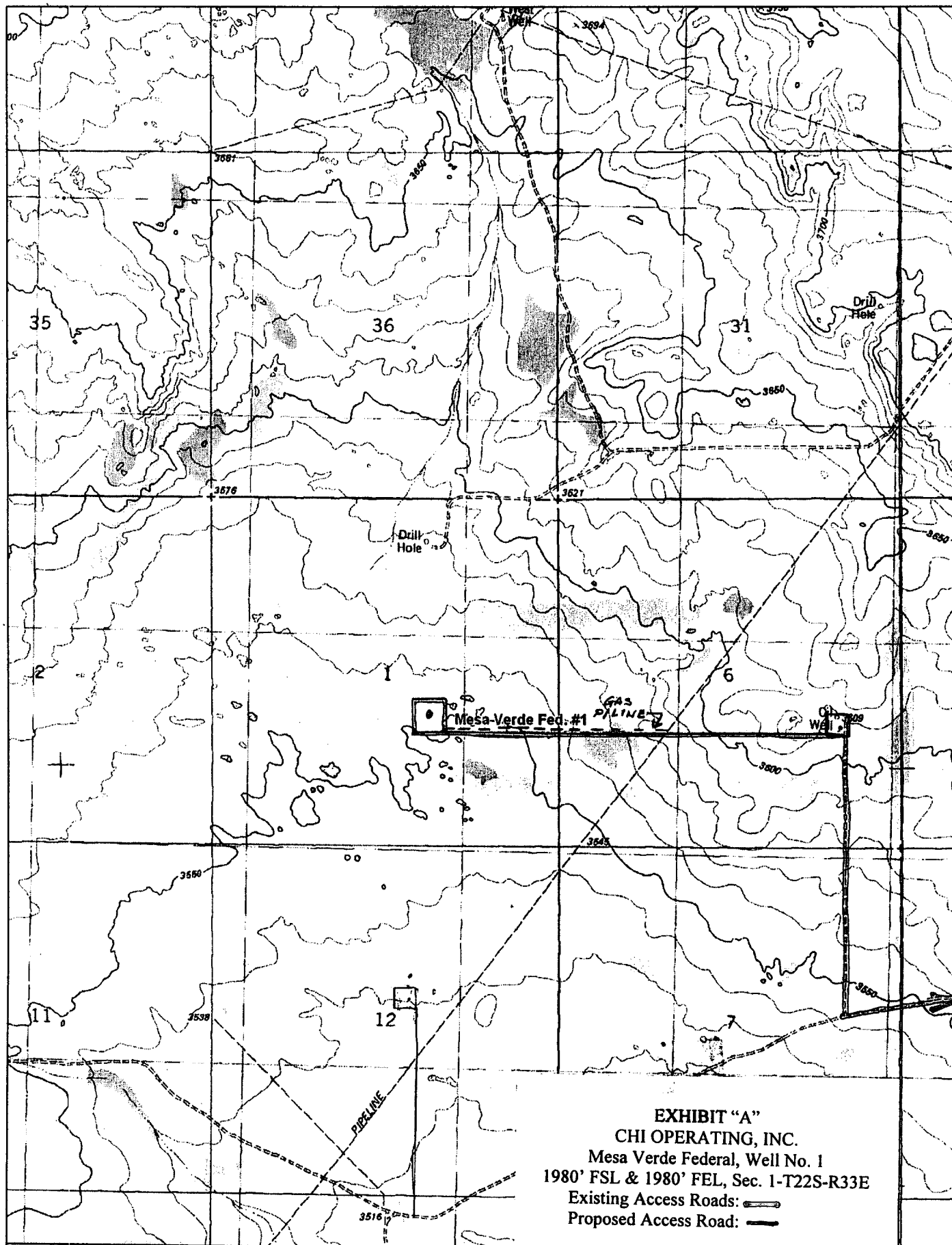
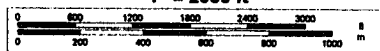


EXHIBIT "A"
CHI OPERATING, INC.
 Mesa Verde Federal, Well No. 1
 1980' FSL & 1980' FEL, Sec. 1-T22S-R33E
 Existing Access Roads:
 Proposed Access Road:

DELORME

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www.delorme.com

Scale 1 : 24,000
 1" = 2000 ft



TM
 MN
 8.8°E

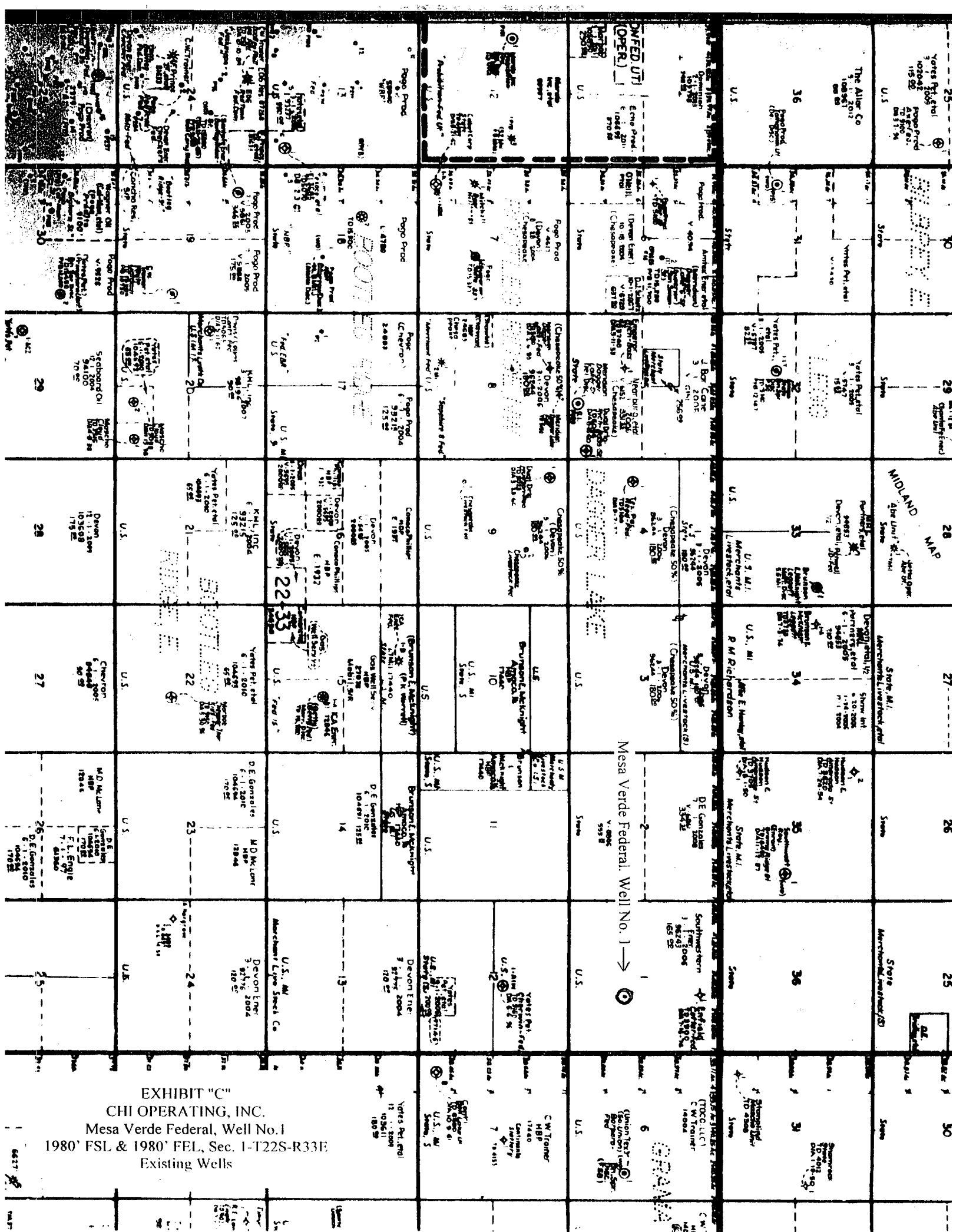


EXHIBIT "C"

CHI OPERATING, INC.

Mesa Verde Federal, Well No.1

1980' FSL & 1980' FEL, Sec. 1-T22S-R33E

Existing Wells

LAYOUT WITH TOPDRIVE

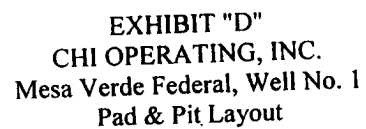


EXHIBIT "D"
CHI OPERATING, INC.
Mesa Verde Federal, Well No. 1
Pad & Pit Layout

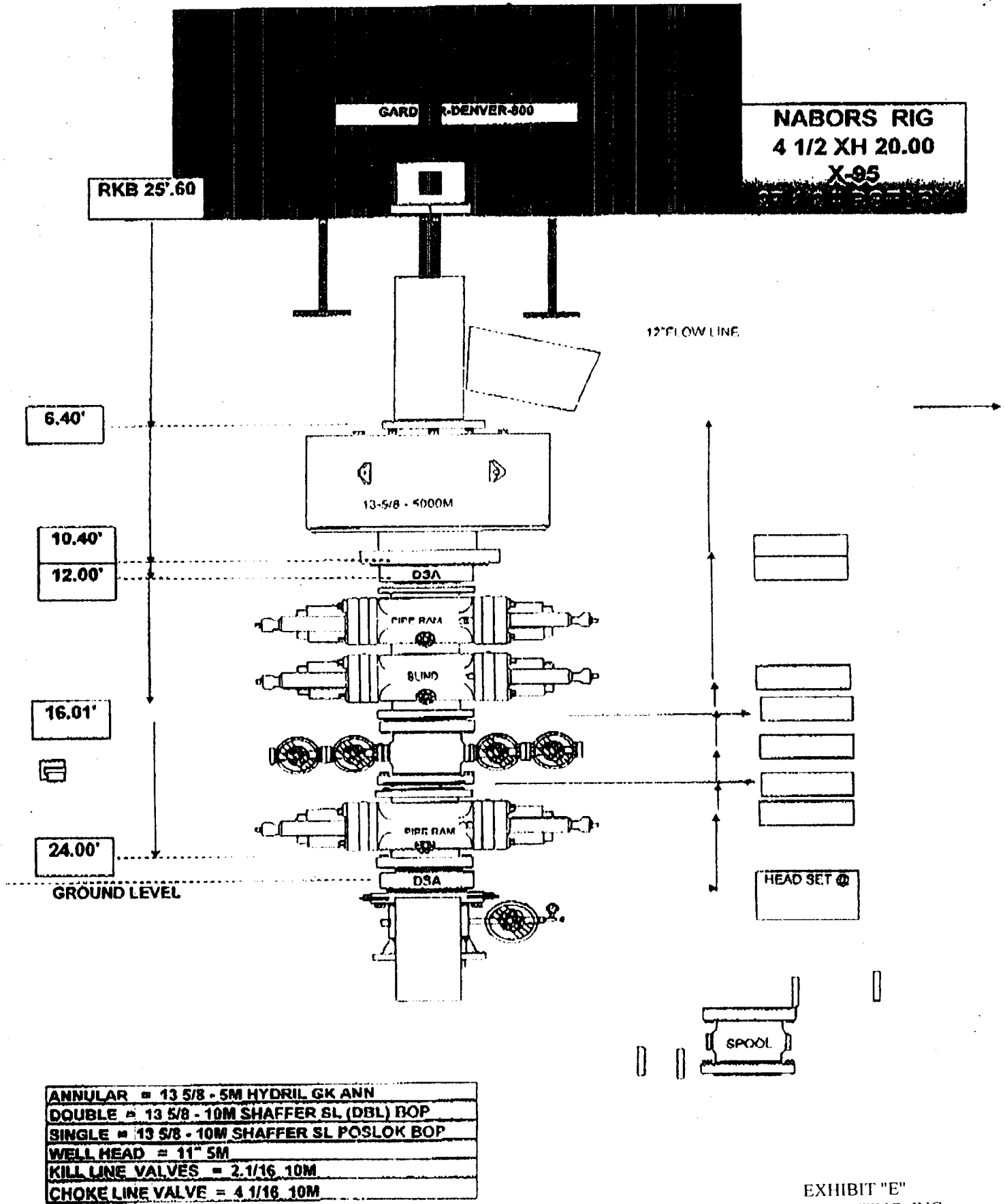


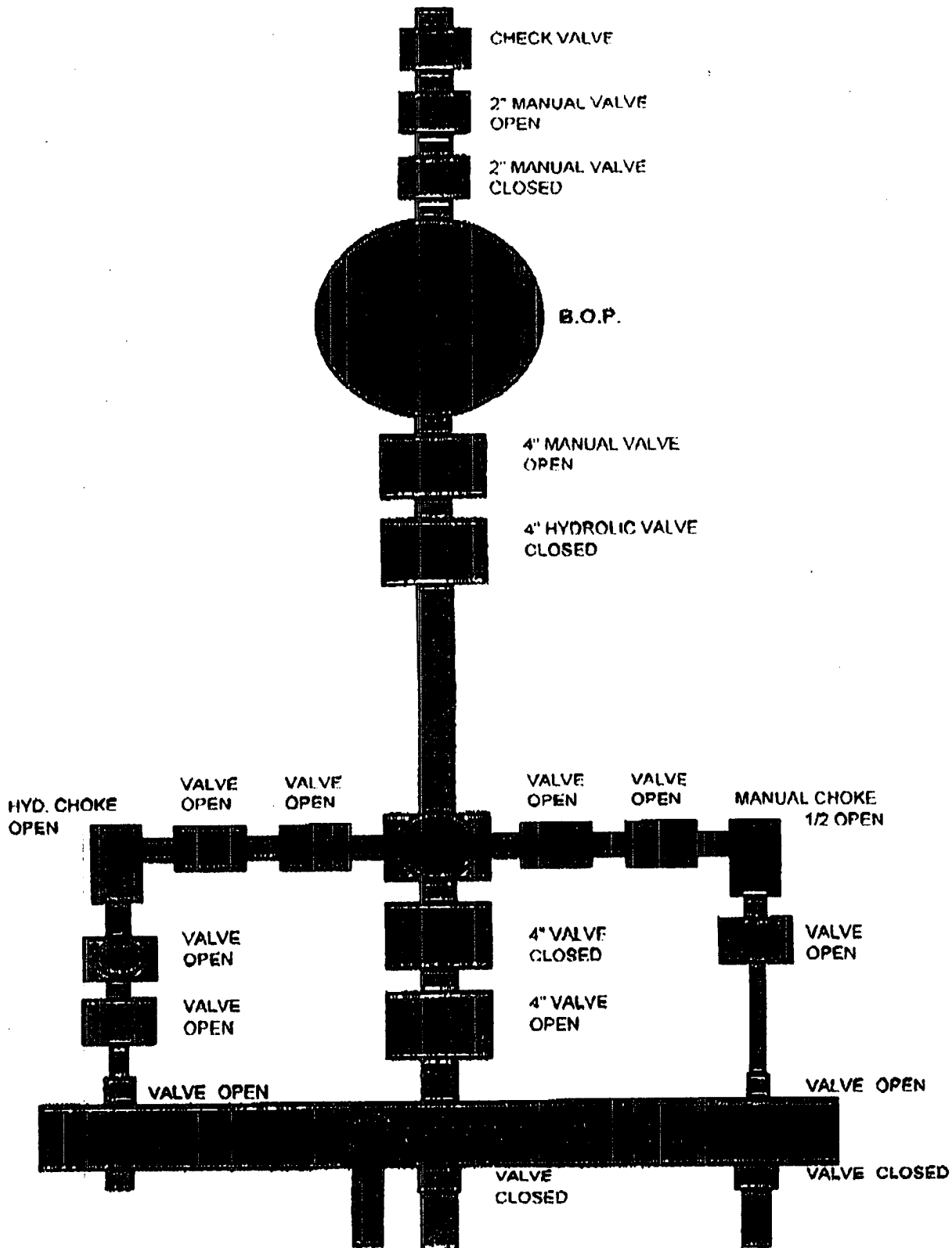
EXHIBIT "E"
CHI OPERATING, INC.
Mesa Verde Federal, Well No. 1
BOP Specifications

Rig 329

N.D.U.S.A.

MANIFOLD SETUP

NUEVO ENERGY



SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: Chi Operating Inc Well Name & #: Mesa Verde Federal #1
Location: 1980 F S L & 1980 F E L Sec. 1, T. 22 S., R. 33 E.
Lease: NM96243 County: Lea 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 CRF 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

- (X) Lesser Prairie Chicken (stips attached) () Flood plain (stips attached)
() San Simon Swale (stips attached) () Other

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

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

(X) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche.

() 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.

(X) 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.

(X) 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 ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre. 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. **See attached seed mixture.**

() A. Seed Mixture 1 (Loamy Sites)
Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0

(x) 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 (*Boute curtipendula*) 1.0

() D. Seed Mixture 4 (Gypsum Sites)
Alkali Sacaton (*Sporobolud airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

() 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.

BLM SERIAL #: NM96243
COMPANY REFERENCE: Chi Operating Inc
WELL # & NAME: Mesa Verde Federal #1

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below: All of section 1, T. 22 S., R. 33 E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Chi Operating, Inc. Well No. 1 - Mesa Verde Federal
Location: 1980' FSL & 1980' FEL sec. 1, T. 22 S., R. 33 E.
Lease: NM-96243

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I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at (505) 393-3612 in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13-3/8 inch 9-5/8 inch 7 inch 4-1/2 inch *liner. (JL)*

C. BOP tests

2. 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.

3. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

4. 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. 13-3/8 inch surface casing should be set at approximately 950 feet, below usable water and circulate cement to the surface. If cement does not circulate to the surface the Hobbs BLM office shall be notified at (505) 393-3612 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. 9-5/8 inch intermediate casing should be set at approximately 5200 feet (below the Base of the Capitan Reef at approximately 5180 feet) and circulate cement to the surface. If cement does not circulate to the surface the Hobbs BLM office shall be notified at (505) 393-3612 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. Brine water mud may be used to drill the hole for the 9-5/8 inch intermediate casing until lost circulation occurs in the Capitan Reef. If at anytime lost circulation occurs in the reef, the operator will be required to notify the Hobbs BLM office at (505) 393-3612 and to switch to fresh water mud until the 9-5/8 intermediate casing depth is reached at approximately 5200 feet.

3. Minimum required fill of cement behind the 7 inch production casing is sufficient to bring top of cement back to 4600 feet. *or tie back into 9-5/8" csg. log 200' (JL)*

4. Minimum required fill of cement behind the 4-1/2 inch production liner is sufficient to tie back 200 feet into the 7 inch production casing at approximately 12150 feet.

5. 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. Before drilling below the 13-3/8 inch surface casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve. Before drilling below the 9-5/8 inch intermediate casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.

2. Before drilling below the 13-3/8 inch surface casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi. Before drilling below the 9-5/8 inch intermediate casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 5000 psi. Before drilling below the 7 inch production casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 10000 psi.

CONDITIONS OF APPROVAL - DRILLING (CONTINUED)

Operator's Name: Chi Operating, Inc. **Well No.** 1 – Mesa Verde Federal

Location: 1980' FSL & 1980' FEL sec. 1, T. 22 S., R. 33 E.

Lease: NM-96243
.....

3. After setting the 9-5/8 inch intermediate casing and before drilling into the **Wolfcamp** formation, the BOPE shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

A. The Hobbs BLM office shall be notified at (505) 393-3612 in sufficient time for a representative to witness the tests.

B. The tests shall be done by an independent service company.

C. The results of the test shall be reported to the BLM Hobbs Office at 414 West Taylor, Hobbs, New Mexico 88240.

D. 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.

E. Testing must be done in a safe workman like manner. Hard line connections shall be required.

IV. DRILLING MUD:

1. 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:

A. Recording pit level indicator to indicate volume gains and losses.

B. Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

BLM Serial #: NM96243
Company Reference: Chi Operating, Inc
Well # & Name: Mesa Verde Federal #1

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS
CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all

damages to Federal lands resulting there from the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar. The Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

☐ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

☐ Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

☐ Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, out-sloping, in-sloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

☐ 400 foot intervals.

☐ _____ foot intervals.

☐ locations staked in the field as per spacing intervals above.

☐ locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

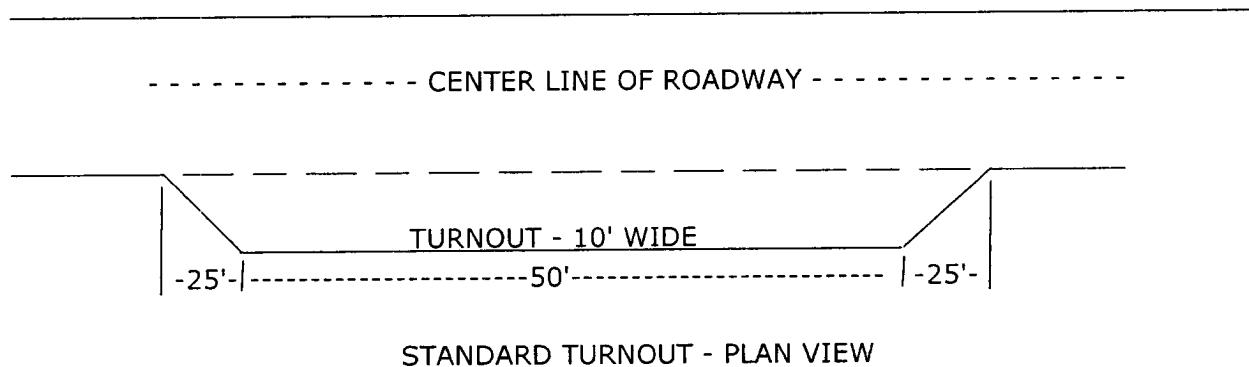
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

Example: 4% slope: spacing interval = $\frac{400}{4} + 100 = 200$ feet

4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS:

See reclamation 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 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: Mesa Verde Federal, Well No 1 API 30-025-3779 U/L or Qtr/Qtr NWSE Sec 1 T 22S R 33E
County: Lea Latitude 32.25°07.69"N Longitude 103.31°24.49"W 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: November 21, 2005

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:

Date: FEB 13 2006

Printed Name/Title PETROLEUM ENGINEER

Signature