N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

JUN 16 2008
OCD-ARTESIA

Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. NM 107037

6 If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☑ REENTER

7 If Unit or CA Agreement, Name and No

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

8 Lease Name and Well No
Cazador Federal Com. #1

2 Name of Operator
Nadel & Gussman Permian, LLC

9 API Well No.
30-005-64030

3a Address **601 N. Marienfeld, Suite #508**
Midland, TX 79701

3b Phone No. *(include area code)*
432-682-4429

10 Field and Pool, or Exploratory
Wildcat

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **UL H Sec. 8 T13S R27E, 2034' FNL and 660 FEL**
At proposed prod zone **UL H Sec. 8 T13S R27E, 2034' FNL and 660 FEL**

11 Sec., T R M or Blk and Survey or Area
Section 8, T13S R27E

14 Distance in miles and direction from nearest town or post office*
8.5 miles northeast of Dexter, NM

12 County or Parish
Chaves

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
320 acres +

17 Spacing Unit dedicated to this well
East 1/2 Stand Up

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft

19 Proposed Depth
6500'

20 BLM/BIA Bond No. on file
NM 2812

21 Elevations (Show whether DF, KDB, RT, GL, etc.)
3498' GL

22 Approximate date work will start*
05/15/2008

23 Estimated duration
15 days

24. Attachments

ROSWELL CONTROLLED WATER BASIN

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form.

1 Well plat certified by a registered surveyor
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 Terry West — Name *(Printed Typed)* **Terry West** — Date **03/28/2008**

Title **Engineer**

Approved by *(Signature)* /s/ Jerry Dutchover — Name *(Printed Typed)* /s/ Jerry Dutchover — Date JUN 12 2008

Title Acting **Assistant Field Manager, Lands And Minerals** — Office ROSWELL FIELD OFFICE

APPROVED FOR 2 YEARS

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 page 2)

NOTE: NEW PIT RULE 19.15.17 NMAC.

Drilling pit must be constructed, operated and closed per above new rule.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

ENTERED AFMSS

ENTERED

Nadel & Gussman Permian, LLC
601 N. Marienfeld, Suite 508
Midland, TX 79701
April 2, 2008

Bureau of Land Management
Lands & Minerals Division
Roswell Field Office
2909 West Second Street
Roswell, NM 88201

Attn: Ms. Linda Askwig

Re: Cazador Federal Com. No. 1 Statement of Private Surface Owner Agreement

Dear Ms. Askwig,

Nadel and Gussman Permian, LLC (NGP), as operator, has contacted Billy Hill, Vice President of Conejo Cattle Company and reached a mutually acceptable agreement concerning the surface use of his private land for the drilling and production of the Cazador Federal Com. # 1 which will be a re-enty of the former Pecos River Bluff Unit #1 at 2034' FNL and 660' FEL of UL H Sec. 8, T13S-R27E in Chaves County, New Mexico.

Sincerely,

Terry West

Terry West
Engineer

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-005-64030	97338	~~Wildcat~~ Mississippian G

Property Code	Property Name	Well Number
34643	CAZADOR FEDERAL	1

OGRID No.	Operator Name	Elevation
155615	NADEL AND GUSSMAN PERMIAN, L.L.C.	3498'

Surface Location

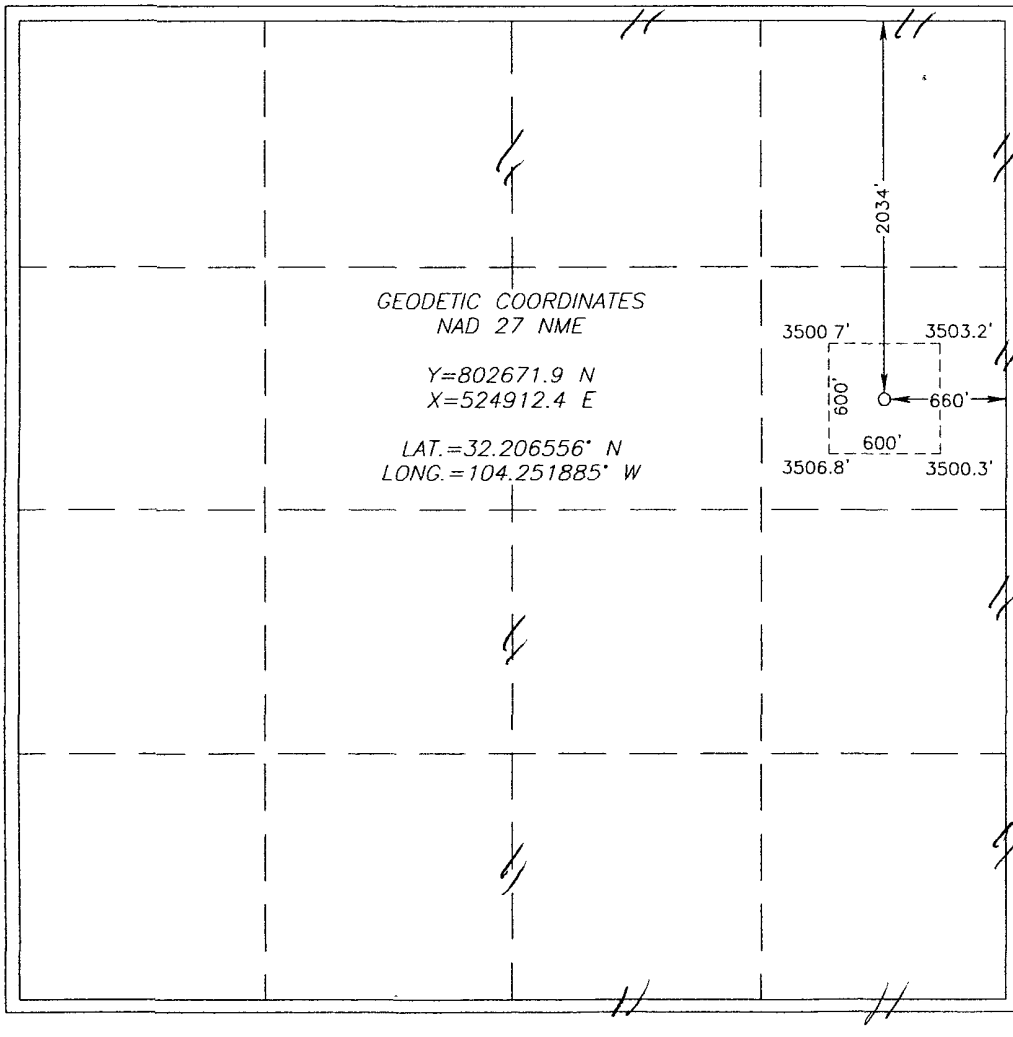
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	8	13-S	27-E		2034	NORTH	660	EAST	CHAVES

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	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

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.

Terry West 3/28/08
Signature Date

TERRY WEST
Printed Name

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.

FEBRUARY 25, 2008
Date Surveyed LA

Signature & Seal of Professional Surveyor

GARY L. EIDSON NEW MEXICO 12641 REGISTERED PROFESSIONAL SURVEYOR

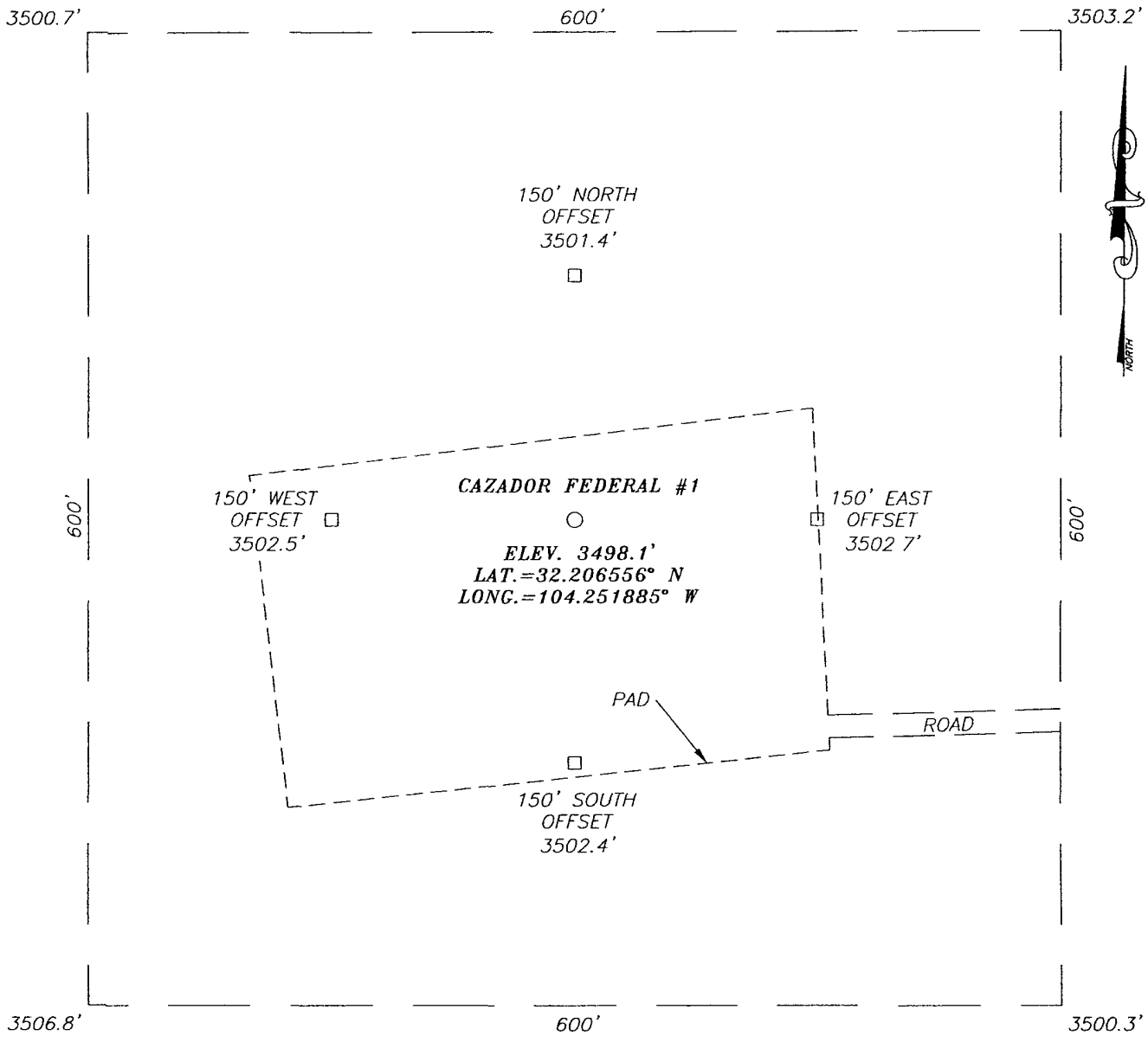
Ronald J. Eidson 3239

08.11.0182

Certificate No. GARY EIDSON 12641
RONALD EIDSON 3239

SECTION 8, TOWNSHIP 13 SOUTH, RANGE 27 EAST, N.M.P.M.,

CHAVES COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HWY. #2 AND STATE HWY. #190 GO EAST ON ST. HWY. #190 APPROX. 2.0 MILES. TURN LEFT AND GO NORTH APPROX. 2.0 MILES. TURN RIGHT AND GO EAST–NORTHEAST APPROX. 4.7 MILES TO RANCH HOUSE. GO SOUTH APPROX. 2.5 MILES. TURN RIGHT AND GO WEST APPROX. 330 FEET TO THIS LOCATION.

100 0 100 200 Feet

Scale: 1"=100'

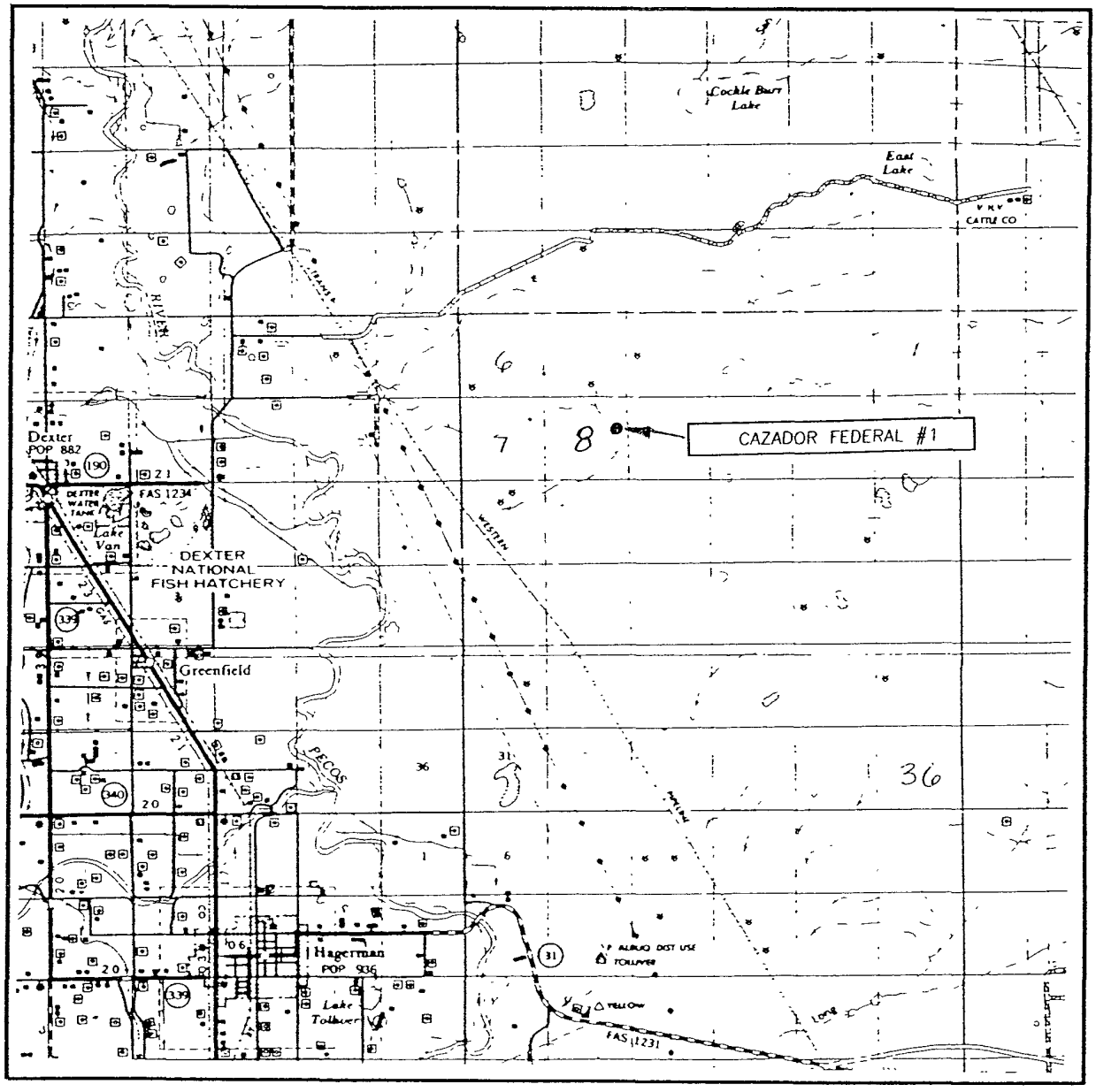
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

NADEL AND GUSSMAN PERMIAN, L.L.C.

CAZADOR FEDERAL #1 WELL
LOCATED 2034 FEET FROM THE NORTH LINE
AND 660 FEET FROM THE EAST LINE OF SECTION 8,
TOWNSHIP 13 SOUTH, RANGE 27 EAST, N.M.P.M.,
CHAVES COUNTY, NEW MEXICO.

Survey Date: 2/9/08	Sheet 1 of 1 Sheets	
W.O. Number. 08.11.0182	Dr By: LA	Rev 1:N/A
Date: 2/20/08	08110182	Scale: 1"=100'

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 8 TWP. 13-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 2034' FNL & 660' FEL

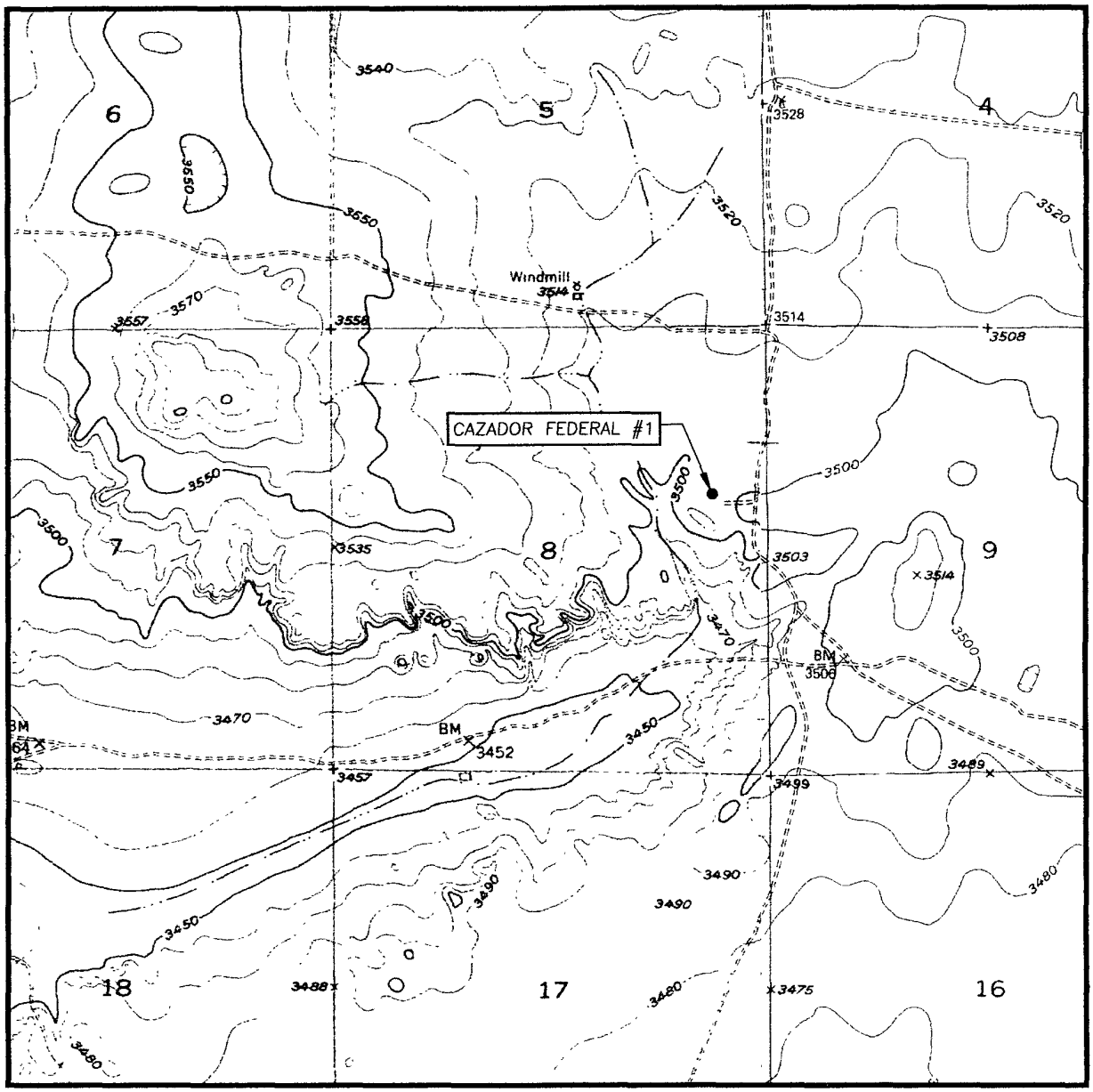
ELEVATION 3498'

OPERATOR NADEL AND GUSSMAN PERMIAN, L.L.C.

LEASE CAZADOR FEDERAL

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
DEXTER EAST, N.M. – 10'

SEC. 8 TWP. 13-S RGE. 27-E

SURVEY N.M.P.M.

COUNTY CHAVES STATE NEW MEXICO

DESCRIPTION 2034' FNL & 660' FEL

ELEVATION 3498'

OPERATOR NADEL AND GUSSMAN PERMIAN, L.L.C.

LEASE CAZADOR FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
DEXTER EAST, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

DRILLING PROGRAM

Cazador Federal Com. #1

1. **Geologic Name of Surface Formation**
   a. Tencee-Sotim

2. **Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

a.	Tencee-Sotim	65'	Water
b.	San Andres	1100'	Oil & Gas
c.	San Andres P	1573'	
d.	Abo	4612'	Gas
e.	B/Abo Shale	5000'	
f.	Wolfcamp	5530'	
g.	Three Bothers	6184'	
h.	Three Bothers Porosity	6202'	Gas
i.	B/Three Brothers Porosity	6208'	
j.	Cisco	6292'	Gas

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands are already protected by both 13 3/8" casing set at 360' and cemented back to surface and by 9 5/8" casing set at 1300' and cemented back to surface. The productive intervals will be isolated by setting 5 ½" casing to 6360' and circulating cement above the base of the 9 5/8" casing.

3. **Casing Program:**

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used
Old Strings:						
17 1/2"	0' – 360'	13 3/8"	48#	ST&C	H-40	Used - Cemented to Surface
12 1/4"	0'– 1300'	9 5/8"	32.3#	ST&C	H-40	Used - Cemented to Surface
New String:						
8 ¾"	0' –6360'	5 /12"	17#	LT&C	L-80	New

Safety Factors: Burst 1.125 Collapse 1.125 Tension 1.8

4. **Cement Program:**

a.	13 3/8"	Surface	Already cemented to surface
b.	9 5/8"	Intermediate	Already cemented to surface
c.	5 1/2"	Production	Cement with 650 sx lead (35:65 Poz:Class C + 5% Salt (bwow) + 6% Bentonite Gel + 0.2% Uniflac + 0.2% TIC Dispersant + 0.125 pps Polyflake, 12.6 ppg, 2.04 cfps yield) and 250 sx tail (TXI Lightweight + 1.33% salt (bwow) + 0.2% Uniflac + 0.2% TIC Dispersant + 0.2% D46 + 0.1%, 13.0 ppg, 1.40 cfps yield). Estimated TOC is 1100'.

The above cement volumes may be revised depending on the caliper measurement when the open hole logs are ran. Also, cement additives may be revised due to field blend test results, down-hole conditions encountered, etc. The top of cement is designed to reach approximately 200' above the 9 5/8" casing shoe.

5. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown on attachment will consist of a (5M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (5000 psi WP) and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. The drilling head will be installed on the 9 5/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested prior to drilling out the 9 5/8" casing shoe as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having a 5000 psi WP rating.

6. Proposed Mud Circulation System

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 6360'	9.4-10.0	29-40	5-20	Cut Brine/Polymer

The necessary mud products for weight addition and fluid loss control will be on location at all times.

DRILLING PROGRAM

Cazador Federal Com. #1

7. Auxiliary Well Control and Monitoring Equipment:

a. A Kelly cock will be in the drill string at all times.
b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 9 5/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 9 5/8" shoe until total depth is reached.

8. Logging, Coring, and Testing Program:

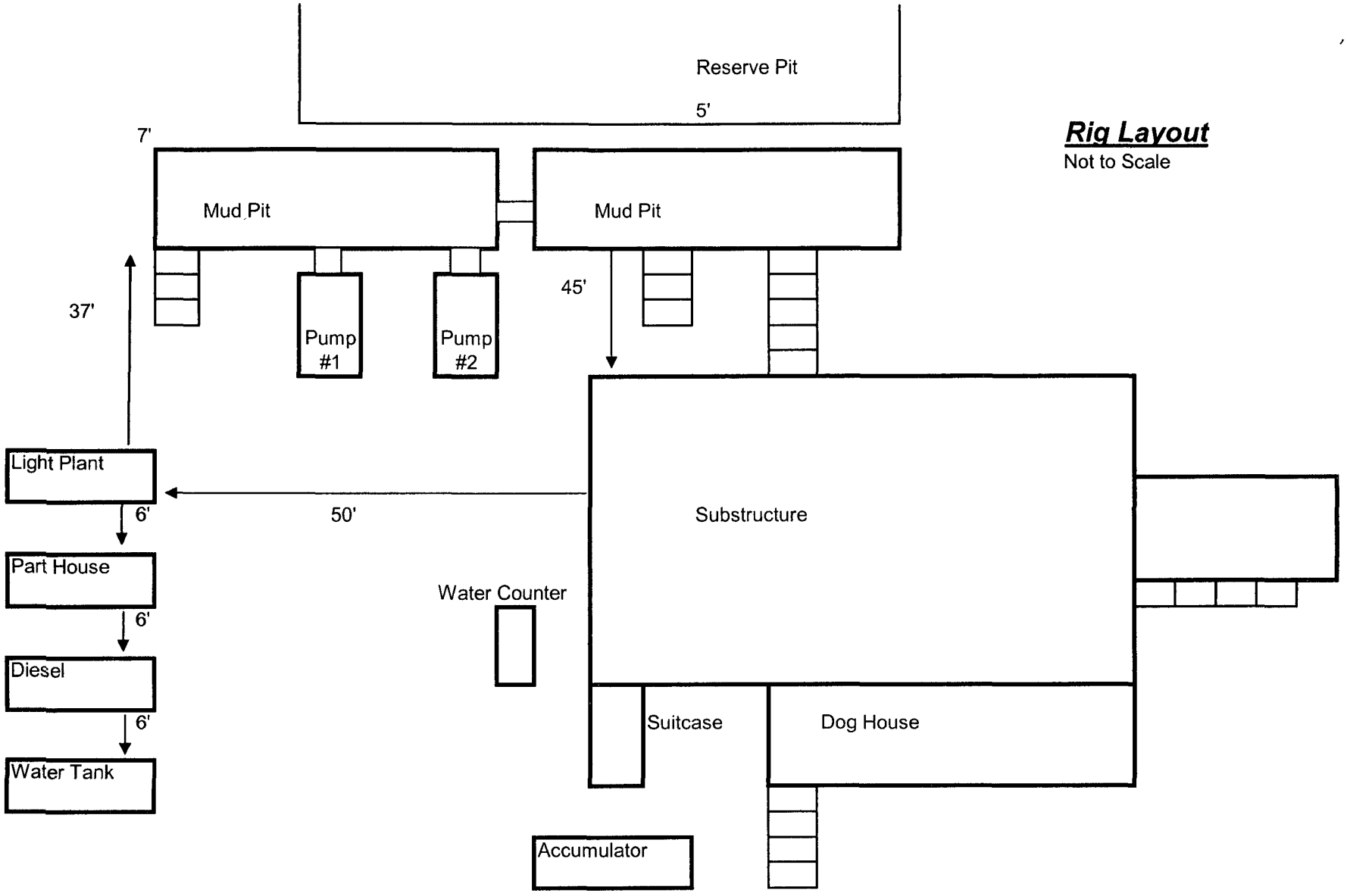
a. No drill stem tests are planned
b. The open hole electrical logging program will be:
    i. Total Depth to Intermediate Casing: Dual Laterolog with Gamma Ray. Compensated Neutron /LithoDensity log with Gamma Ray and Caliper.
    ii. Intermediate Casing to Surface: Compensated Neutron with Gamma Ray
    iii. No coring program is planned
    iv. Additional testing may be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows, etc.

9. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area and encountering it is not expected. However, if H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3200 psi and Estimated BHT 130°.

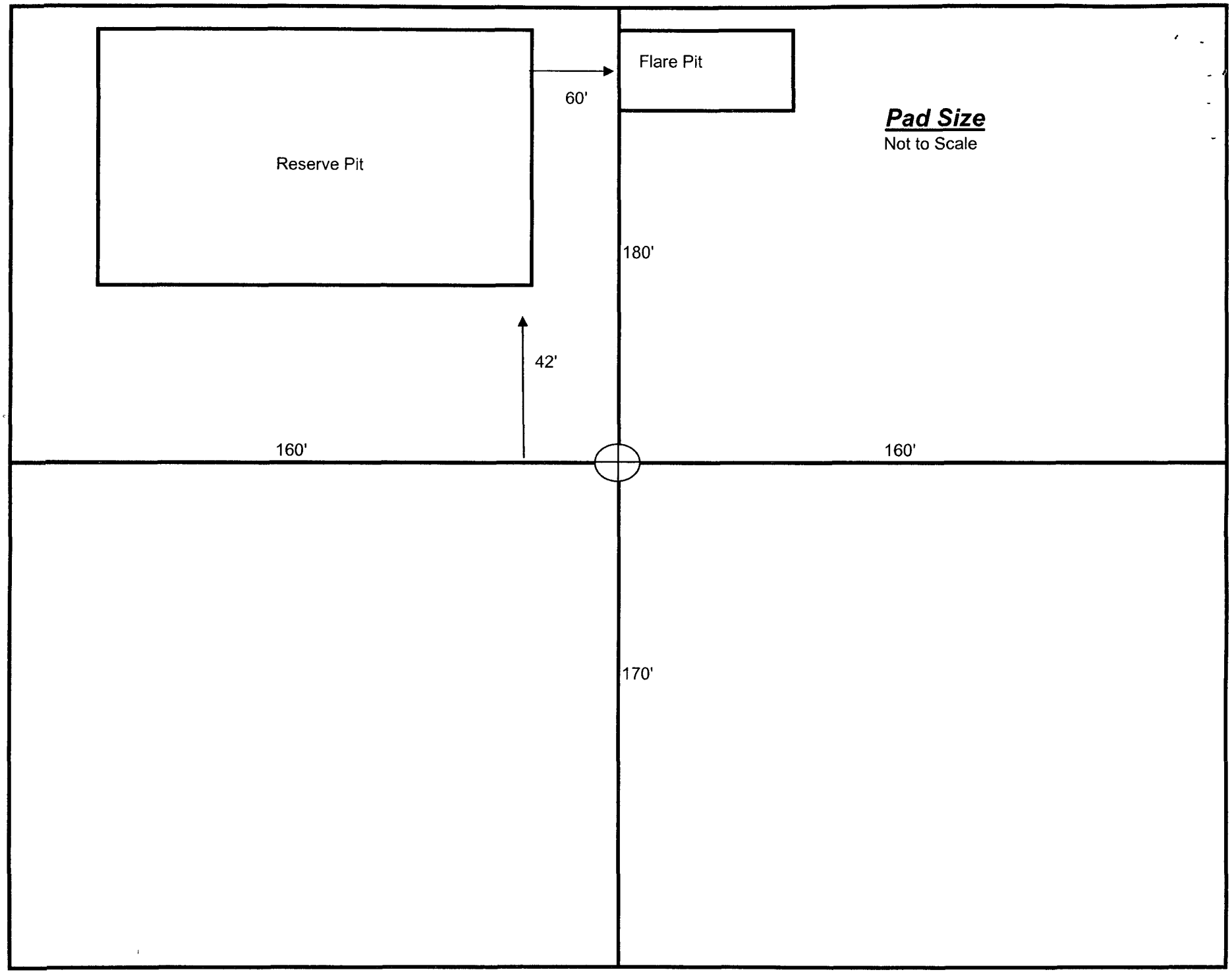
10. Anticipated Starting Date and Duration of Operations:

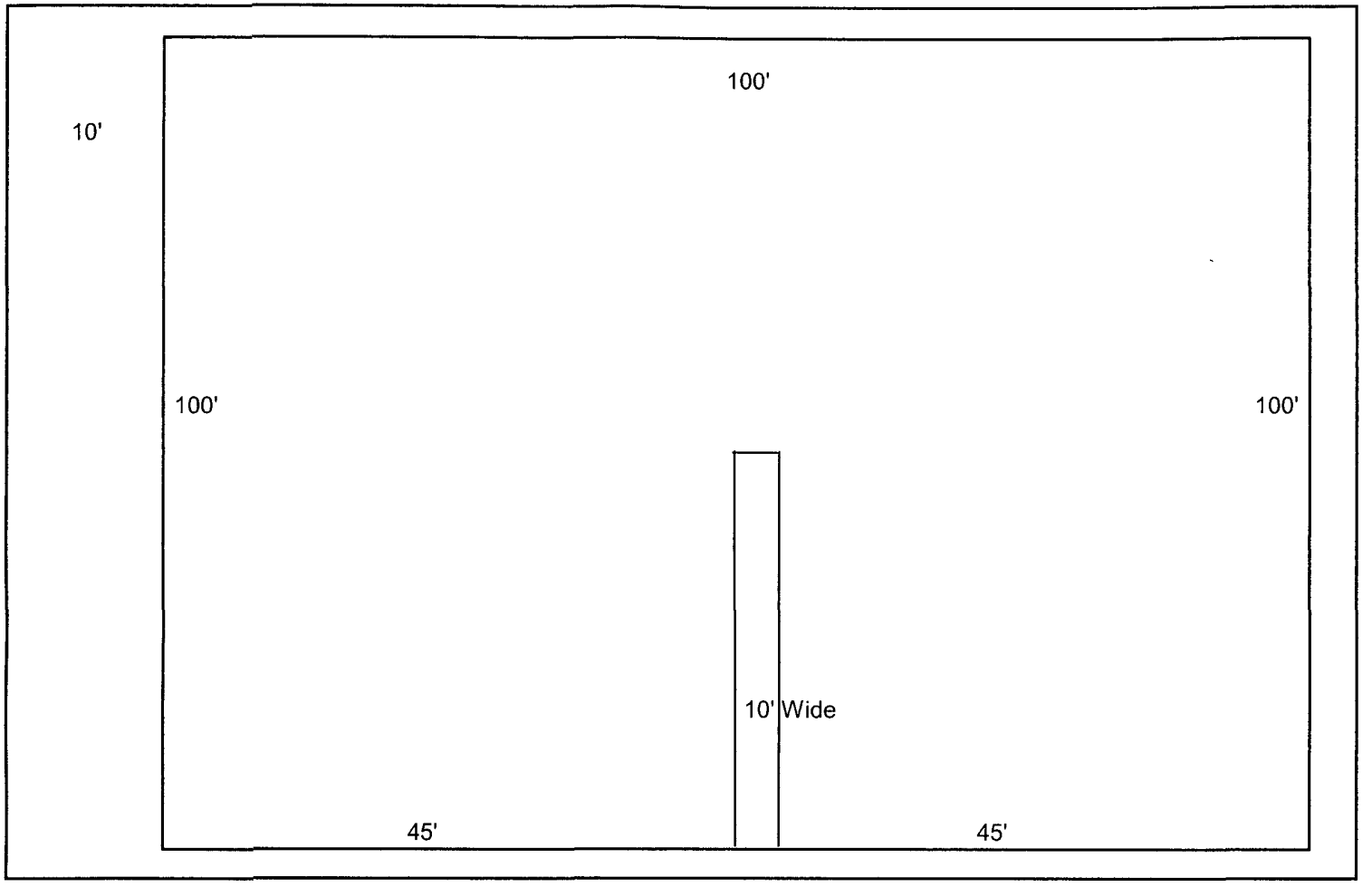
a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be around May 15, 2008. Move in operations and drilling is expected to take 15 days. If production casing is run then an estimated additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.



Rig Layout

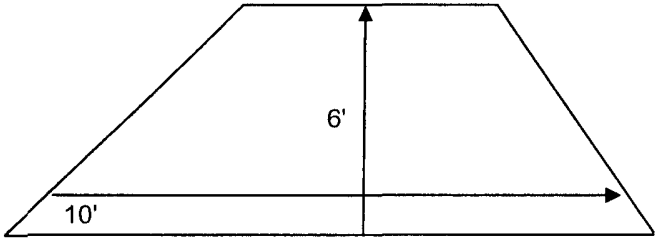
Not to Scale


Flare Pit
60'
Reserve Pit
Pad Size
Not to Scale
180'
42'
160'
160'
170'

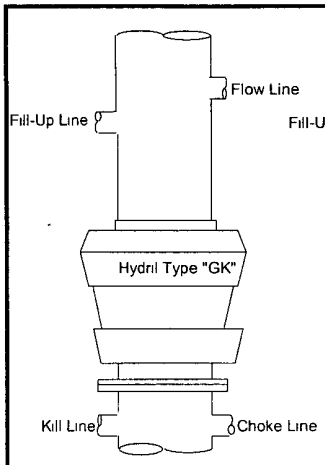


Reserve Pit

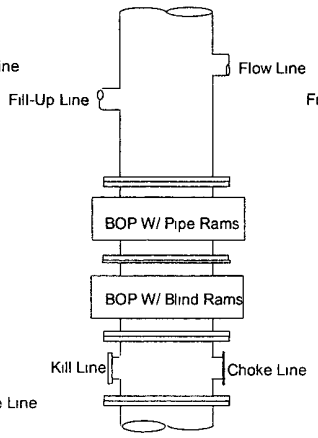
Not to Scale



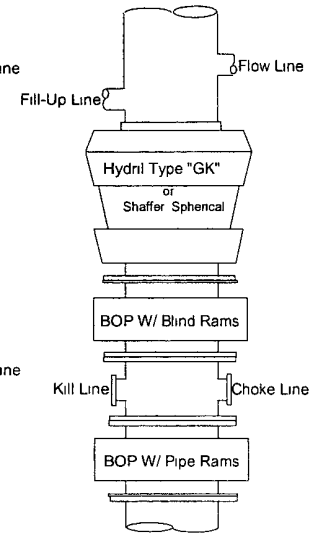
Nadel and Gussman Permian _____
MINIMUM BLOWOUT PREVENTER REQUIREMENTS



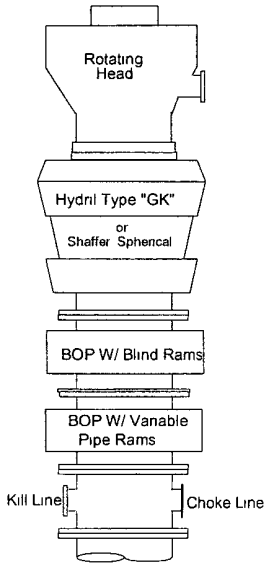
CASE I



CASE II



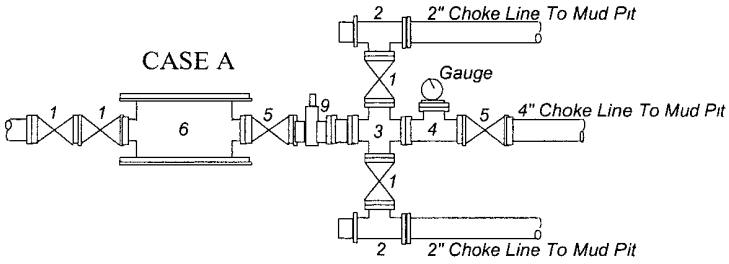
CASE III



CASE IV

A1" valve will be installed on the closing line to the Hydril. This valve will on a short nipple next to the Hydril. The Hydril closing line must be equipped with a 1" - 3000 psi WP plug valve on the nipple into the Hydril.

CASE A



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
11"	IV	5000 psi	A

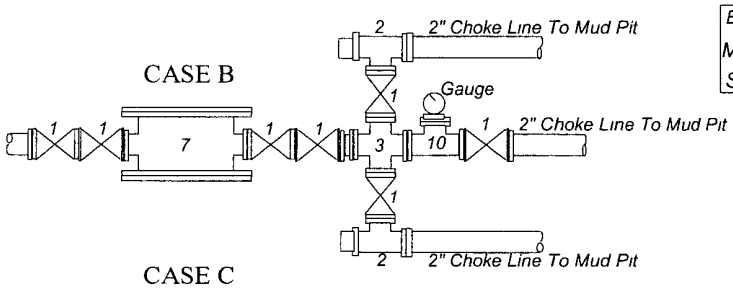
**Rotating head required*

Bradenhead

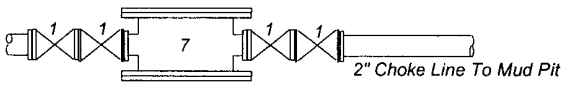
Mfr: _____

Size: _____ Type: _____

CASE B



CASE C



Legend

1. *2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal.*
2. *2" flanged adjustable chokes, min. 1" full opening & equiped with hard trim.*
3. *4" x 2" flanged steel cross.*
4. *4" flanged steel tee.*
5. *4" flanged all steel valve (Type as in no 1).*
6. *Drilling Spool with 2" x 4" flanged outlet.*
7. *Drilling Spool with 2" x 2" flanged outlet*
8. *2" x 2" flanged steel cross.*
9. *4" pressure operated gate valve.*
10. *2" flanged steel tee.*

Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

(10-31-96) WTXBOPS PPT

Hydrogen Sulfide Drilling Operations Plan
Cazador Federal Com. No. 1

1. Company and contract personnel admitted on location should be trained by a qualified H_2S safety instructor to the recognize and handle following:
    A. Characteristics of H_2S gas
    B. Physical effects and hazards
    C. Proper use of safety equipment and life support systems
    D. Principle and operation of H_2S detectors, warning system and briefing knowledge
    E. Evacuation procedure, routes and first aid support
    F. Proper use of 30 minutes Pressure-on-Demand Air Pack

2. H_2S Detection and Alarm Systems
    A. H_2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse

3. Windsock and/or Wind Streamers
    A. Windsock at mud pit area (high enough to be visible)
    B. Windsock at briefing area (high enough to be visible)
    C. Windsock at location entrance

4. Condition Flags and Signs
    A. H_2S warning signs on lease access road into location
    B. Flags displayed on sign at location entrance
        1. Green flag indicates "Normal Safe Conditions"
        2. Yellow Flag indicates "Potential Pressure and Danger"
        3. Red Flag indicates "Danger - H_2S Present in High Concentrations" *admit only emergency personnel*

5. Well Control Equipment
    A. See Exhibit #5.

6. Communication
    A. While working under masks chalkboards will be used for communication
    B. Hand signals will be used where chalk board is inappropriate
    C. Two -way radios or cell phones used to communicate off location or minimally in Drilling Foreman's trailer or living quarters

7. Drillstem Testing
    A. Exhausts watered
    B. Flare line equipped with electric Igniter/propane pilot light in case gas reaches surface
    C. If location near dwelling closed DST will be performed

8. Drilling Supervisor required to be familiar with effects of H_2S on tubular goods/mechanical equipment

9. If H_2S encountered, mud system shall be addressed to maintain control of formation. A mud gas separator will be brought into service along with H_2S scavengers, if necessary.

SURFACE USE PLAN
CAZADOR FEDERAL COM NO. 1

Existing Roads – This location is located in UL H S8 T13S R27E, 2034' FNL & 660' FEL. A small-scale vicinity map is attached which shows the location of the Cazador Federal Com No. 1 well in relation to an aerial view of surrounding townships and ranges. A larger scale (1" – 2,000') topographic map further delineates the location of this well. One begins travel from Dexter, NM and heads east on State Hwy 190 for 2.0 miles to Wichita Raod. Then goes north on Wichita Road for 1.7 miles and then turns east on Merllinda Road. After traveling 4.7 miles on Merlinda Road, turn south just past a ranch house on a lease road. Go south approximately 2.5 miles and then turn west and go about 330' to the location.

Planned Access Roads – There is an existing access road from the location to the nearest exit leaving the lease. The lease is fenced and a cattle guard with gate will be needed.

Location of Existing Wells – This is a Re-entry of the Pecos River Bluff Unit #1. The Buffalo Hunt #1, drilled by Nadel and Gussman Permian, LLC is located in Section 21, T13S-R27E, 660' FSL & 1980' FEL.

Location of Tank Batteries, Production Facilities & Lines –

- Gas production is anticipated from the Wolfcamp, with possible volumes of produced oil or water. A battery with a minimum of two 210 bbl steel tanks will be placed on location, one for oil and one for water.
- Pipelines will be used to transport the sale of natural gas using the permitted access road to the location as cited in "Planned Access Roads" above.
- A Stack-Pack separator or line heater and separator will be placed on location. All produced fluids from the Wolfcamp will be hauled off lease by road. There are no initial plans for oil pipelines, LACT units or SWD lines.
- No electrical service is anticipated on the lease at this time.

Location & Type- of Water Supply - Fresh and salt water will be trucked from the most economical location by a third party.

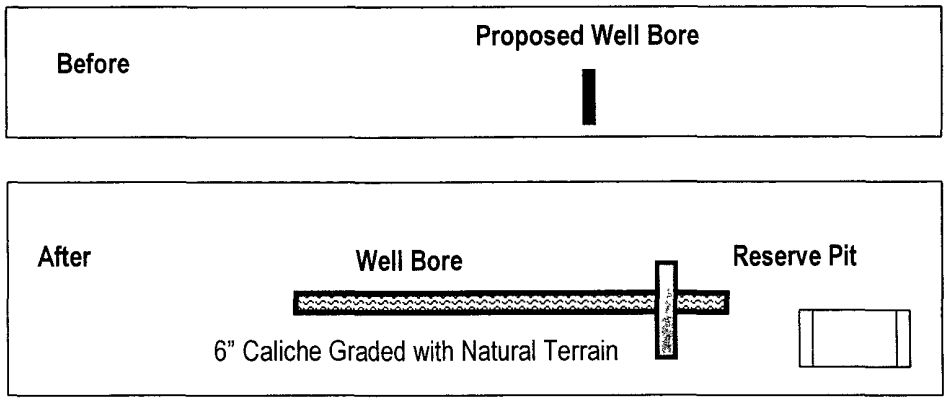
Source of Construction Material – Caliche will be sourced from the closest, most economical existing pit preceded by the proper documentation and approval.

Methods of Handling Waste Disposal - An HDPE 20 ml liner shall be placed into the reserve pit dug to handle drill cuttings and fluids. This pit will not be in the same location as the old reserve pit. Nadel and Gussman Permian, LLC will incur no responsibility for the old pit. The new pit will be lined in accordance with BLM specifications. After sufficient time has elapsed to allow drilling fluids to dry, all pits will be closed pursuant to the C-144 and Closure Plan filed with and approved by the New Mexico, Oil Conservation Division. Once the pit has been closed, the area shall be reseeded per BLM specifications. All trash and debris shall be removed from the location

Ancillary Facilities – No camps or airstrips planned

Well Site Layout – The well site (see NMOCD C-102 Form) has been staked and is also indicated on the enclosed maps. The proposed well location is at the base of a grade cut. The drilling pad will be graded and covered by 6" caliche and native rock. The drilling pad will blend in with the terrain since the topography is generally flat.

Cross Section – Before and After Well Site Layout:



PLANS FOR RESTORATION OF SURFACE – COMMERCIAL WELL:

- **Reshaped Topography** – Rubbish will be hauled off upon completion of drilling operations. A subcontractor will remove all future rubbish. The overall pit area shall be reclaimed to match the surrounding topographic relief of the area within 6 months of setting production casing, unless an exception is required and an extension permitted at the time.
- **Caliche Pad** – Caliche drilling pad will remain intact until well is plugged and abandoned.
- **Road** – The road will remain intact as long as there is production on the lease.
- **Timetable** – This well is expected to produce for several years.
- **Plans for Restoration of Surface – Plugged and Abandoned Well:**
  Surface will be restored in accordance with all regulations in effect at the time of abandonment.

OTHER INFORMATION

- **Topography** – The proposed well location is on a east/west trending low rise..
- **Soil Characteristics** – Classified as Tenee-Sotim association: Observed soils are rocky with fine sands.
- **Flora** – Vegetation includes mequite, little leaf sumac, cholla catus, yucca, snakemweed, and mixed grasses.
- **Fauna** – rabbits, mice, rats, birds and snakes.
- **Other Surface Use Activities** – Ranching
- **Surface Ownership** – Private (Fee)
- **Water Wells** – No windmills within 1000' of the location
- **Lakes, Streams, Ponds** –There are draws
- **Dwellings** – There are no inhabited structures within 1,000' of the location
- **Archeological Summary** – It is recommended that construction of the proposed well location and access road precede without any additional cultural resource investigations..

- **Nadel & Gussman Permian, LLC Representatives:**

Terry West	Office Phone	(432) 682-4429
	Home Phone	(432) 897-1472
	Mobile Phone	(432) 238-2874
Kurt Hood	Office Phone	(505) 746-1428
	Home Phone	(505) 234-2747
	Mobile Phone	(505) 513-1499
Joel Martin	Office Phone	(432) 682-4429
	Home Phone	(432) 694-2569
	Mobile Phone	(432) 238-9969

Certification: I hereby certify that I, Terry West, Engineer for Nadel & Gussman Permian, LLC or persons under my direct supervision have (1) inspected the proposed drilling site and access route and are familiar with the conditions which presently exist; (2) that the statements made in this plan are to the best of my knowledge, true and correct; and (3) that the work associated with the operations proposed herein will be performed by Diamond Back Disposal Company or their contractors and sub-contractors in conformity with this plan.

Terry West

Terry West, Engineer
Nadel & Gussman Permian, LLC

April 2, 2008
Date

TITLE PAGE/ABSTRACT/NEGATIVE SITE REPORT

1. BLM Report No. 2. Reviewer's Initials/Date.....3. NMCRIS Number
Accepted ( ) Rejected ( )

4. Type of Report: Negative (X) Positive ( )

5. Title of Report: **A CULTURAL RESOURCE SURVEY OF THE CAZADOR FEDERAL #1 WELL LOCATION AND ACCESS ROAD, CHAVES COUNTY, NEW MEXICO**
Author: **Don Clifton**

6. Fieldwork Date(s)
07Jan2005

7. Report Date
26Jan2005

8. Consultant Name and Address:
Direct Charge: **Don Clifton**
Field Personel: **Don Clifton**
Address: **P.O. Box 30, Pep, N.M. 88126**
Phone: **(505)675-2360**

9. Cultural Resource Permit No.:
83-2920-02-O

10. Consultant Report Number
554

11. Client Name: **Nadel and Gussman Permian LLC**
Responsible Individual: **Josh Fernau**
Address: **601 N. Marienfeld, Suite 508, Midland, Tx 79701**
Phone: **432-682-4325**

13. Land Status	BLM	State	Private	Other	Total
a. Area Surveyed	.7		29.1		**29.8 acres**
b. Area of Effect	.3		17		17.3

14. Linear Length: **2.5 miles** Width: **100'**

15. Location:
a. State: **New Mexico**
b. County: **Chaves**
c. BLM Office: **Roswell**
d. Nearest City or Town: **Dexter**
e. Legal Description: T13S R27E Section 8 SE1/4 NE1/4
f. Well Pad Footages: **1980' fnl/660'fel**
g. USGS 7.5' Map: **Dexter East, N. M. 1950 33104 B3**
C BAR Ranch, N.M. 1952 33104 B2

16. Project Data:
a. Records Search:
Date of BLM Review: **07Jan2005** Name of Reviewer: **Pat Flanary**
Date of ARMS Data Review: **05Jan2005** Name of Reviewer: **Don Clifton**

Findings: **Three previously recorded sites are within one mile of the proposed access road. Two are tipi rings and one is historic. None of the sites are in the vicinity of the proposed road.**

b. Description of Undertaking. **Nadel and Gussman propose to construct the Cazador Federal #1 well location at an existing abandoned well. An existing two-track road will serve as access.**

c. Environmental Setting: **The proposed well location is approximately 8.5 miles northeast of Dexter, New Mexico. The proposed well pad is at the base of an east/west trending low rise. Soils are classified as Tencee-Sotim association. Observed soils are rocky with fine sands. Vegetation includes mesquite, little leaf sumac, cholla cactus, yucca, snakeweed, and mixed grasses. Surface visibility is an estimated 75%.**

d. Field Methods: **The proposed well location was examined by walking a series of transects spaced no wider than 50' apart. The access road was inspected by walking a linear transect on either side of an existing two-track road.**

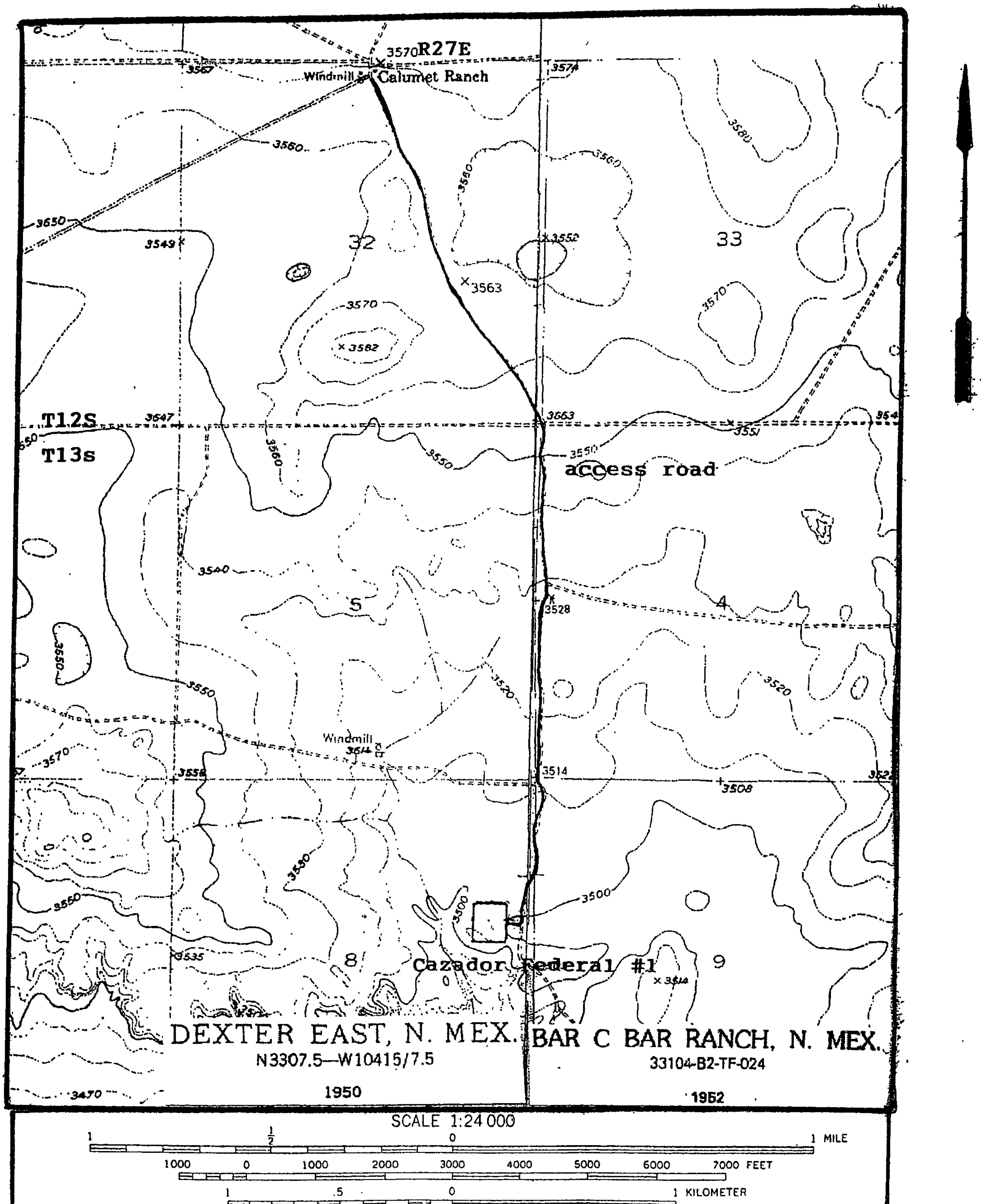
e. Artifacts Collected: **None**

17. Cultural Resource Findings: **No cultural resources were discovered within the areas examined.**
a. Location and Identification of each resource:
b. Evaluation of significance of each resource:

18. Management Summary: **It is recommended that construction of the Cazador Federal #1 well location and access road proceed without any additional cultural resource investigations.**

19. I certify the information provided is correct and accurate to my knowledge and meets all applicable BLM standards.

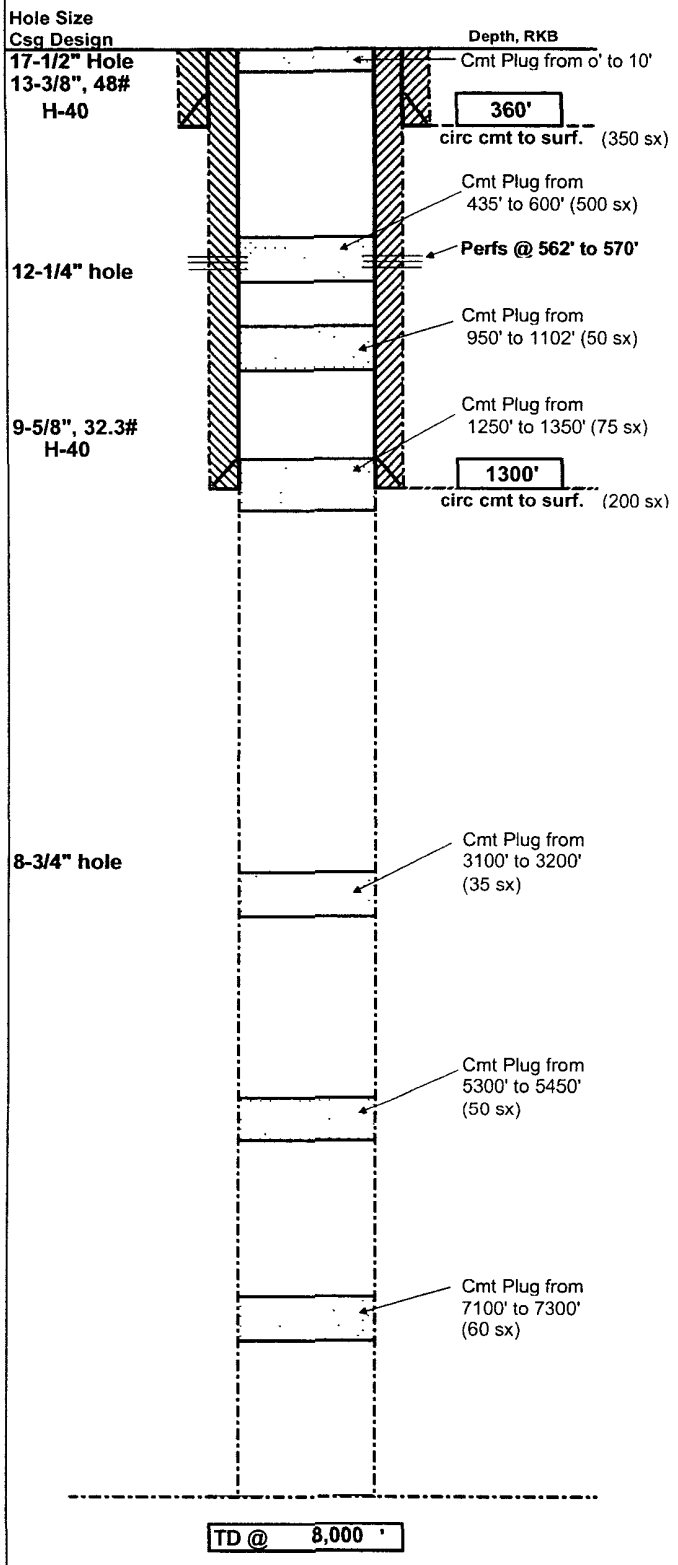
Responsible Archaeologist: Don Clifford Date: January 26, 2005


R27E
Windmill
Calumet Ranch
32
33
T12S
T13s
access road
5
4
Windmill
8
9
Cazador Federal #1
DEXTER EAST, N. MEX.
N3307.5—W10415/7.5
1950
BAR C BAR RANCH, N. MEX.
33104-B2-TF-024
1952
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER

Cazador Federal Com. #1

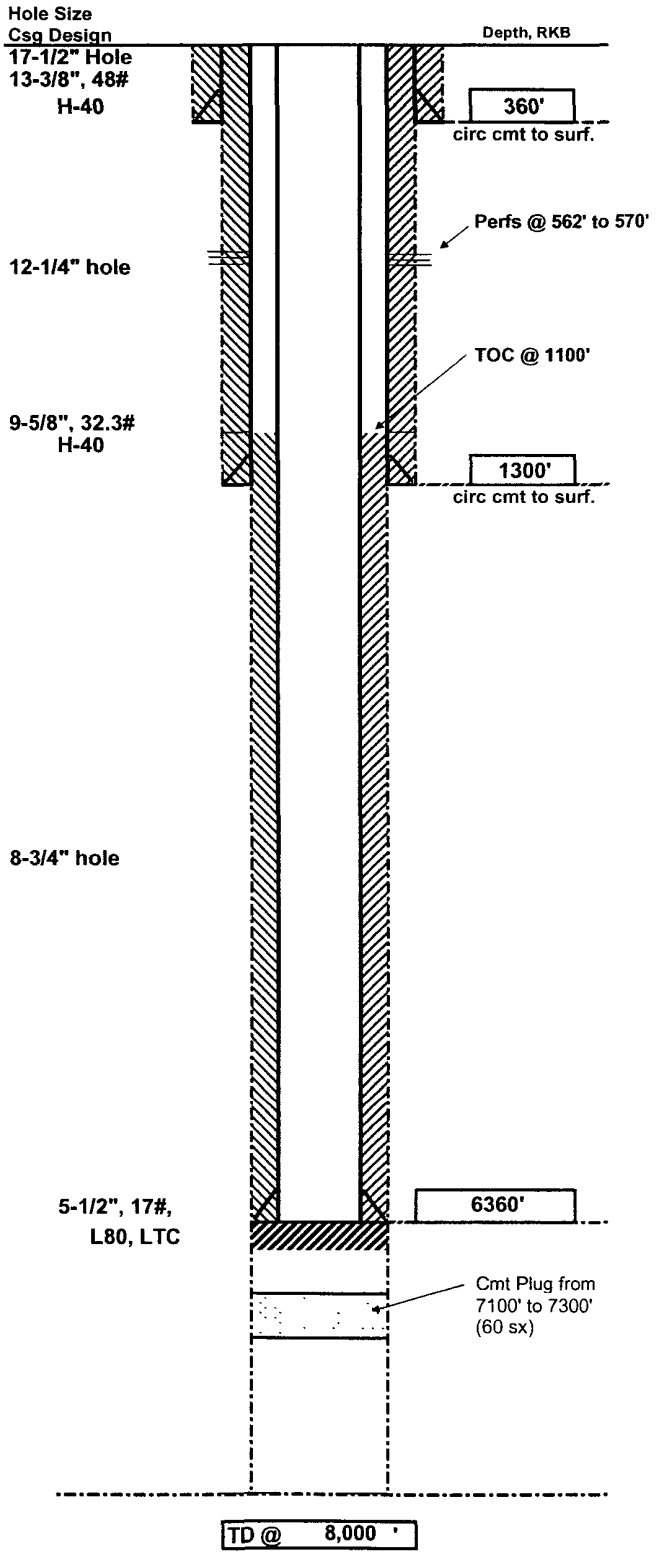
(Formerly Pecos River Bluff Unit #1)

Current (Before)

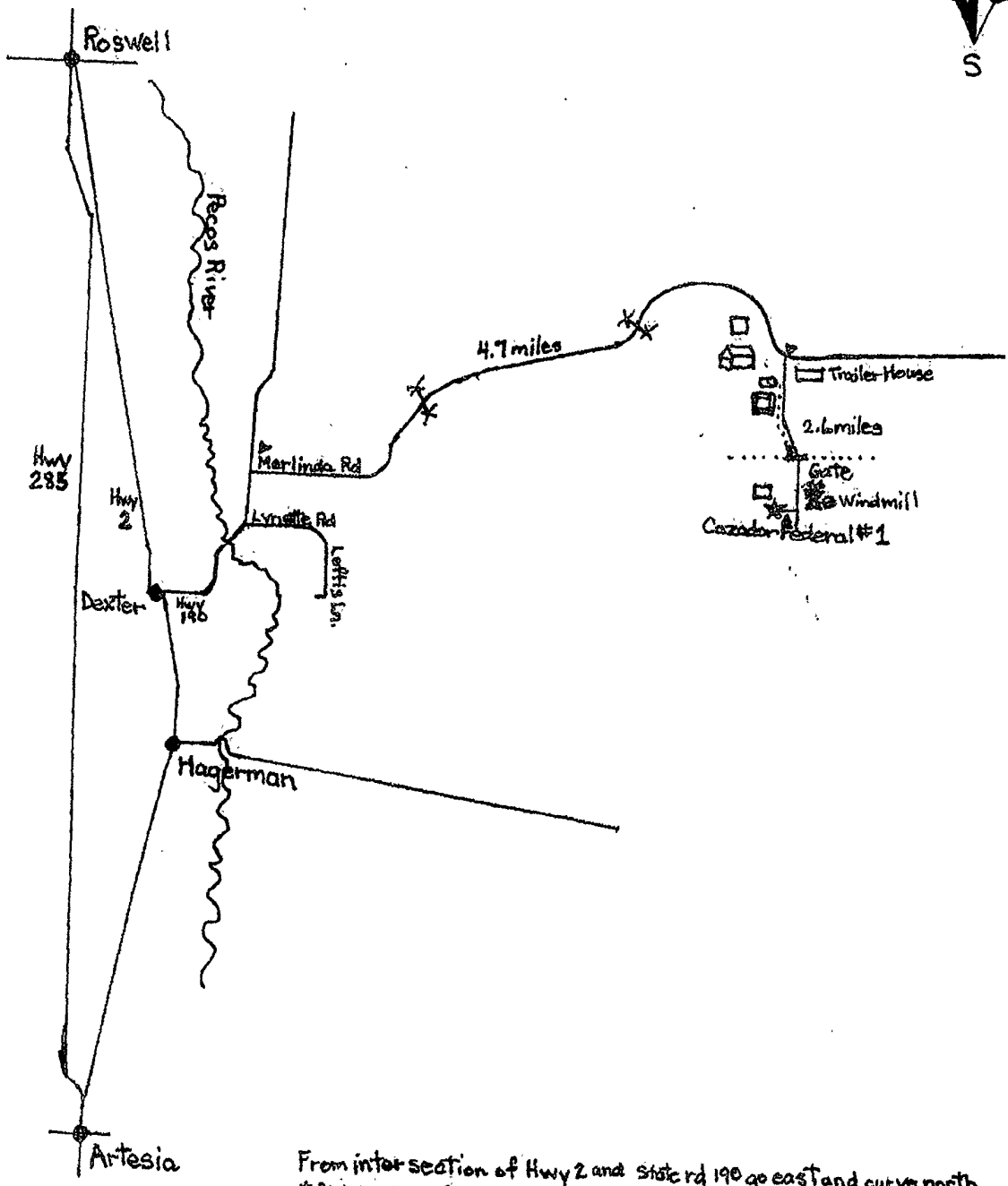


Cazador Federal Com. #1

Proposed (After)



Cheetah Prospect
Cazador Federal #1



From intersection of Hwy 2 and state rd 190 go east and curve north at fish hatchery. Cross Pecos River and go to Merlinda Rd. Turn east and go 4.7 mile behind ranch house. Turn south and go 1.1 mile to gate. Go south by windmill 1.5 miles to location on right.

PECOS DISTRICT - RFO
CONDITIONS OF APPROVAL

6/12/08

OPERATORS NAME: **Nadel and Gussman Permian, L.L.C.**
LEASE NO.: **NMNM-108037**
WELL NAME & NO: **Cazador Federal Com. #1**
SURFACE HOLE FOOTAGE: **2034' FNL & 660' FEL**
LOCATION: **Section 8, T. 13 S., R. 27 E., NMPM**
COUNTY: **Chaves County, New Mexico**

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator 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 shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL:

The existing well pad does not have soil to stockpile. No topsoil stockpile is required.

C. CLOSED-LOOP SYSTEM:

Closed-loop system is required for drilling operations: No Pits Allowed.
The operator shall properly dispose of drilling contents at an authorized disposal site.

The historic reserve pit located on the north side of the well pad shall not be disturbed. During the conduct of the drilling phase or during production operations the operator shall avoid any impact to the historic reserve pit. If the historic reserve pit is breached or ruptured in any way during the conduct of operations on this well the operator shall obtain NMOCD Rule 50 pit closure approval.

D. FEDERAL MINERAL MATERIALS PIT:

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Roswell Field Office at (505) 627-0236.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

F. ON LEASE ACCESS ROADS:

Road Egress and Ingress

The existing access road shall egress and ingress the southeast corner of the well pad. No new access road construction is required.

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

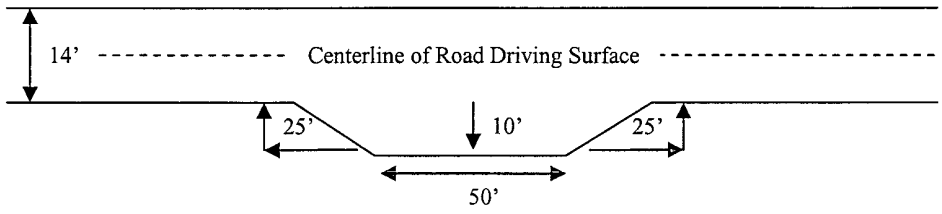
Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

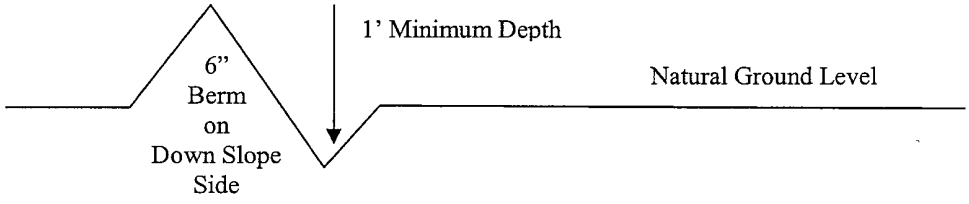


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of Typical Lead-off Ditch



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

Formula For Spacing Interval Of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattleguards

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

Fence Requirement

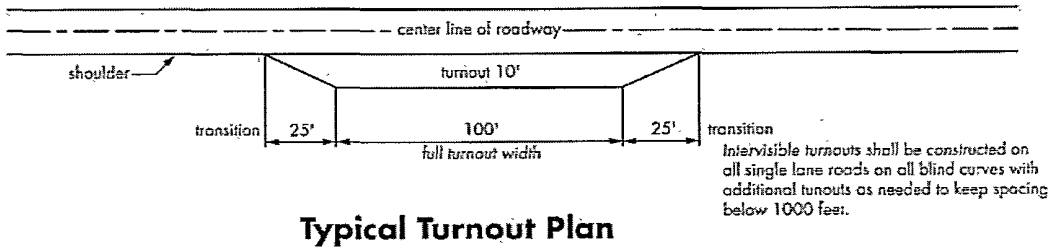
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access

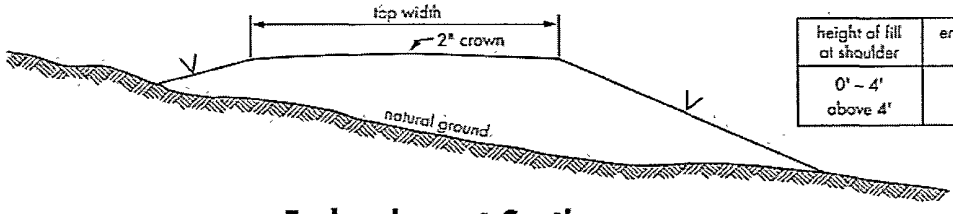
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



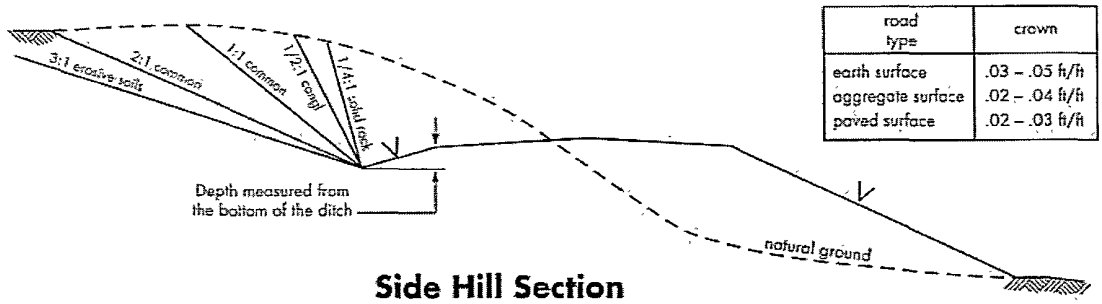
Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional turnouts as needed to keep spacing below 1000 feet.

Typical Turnout Plan



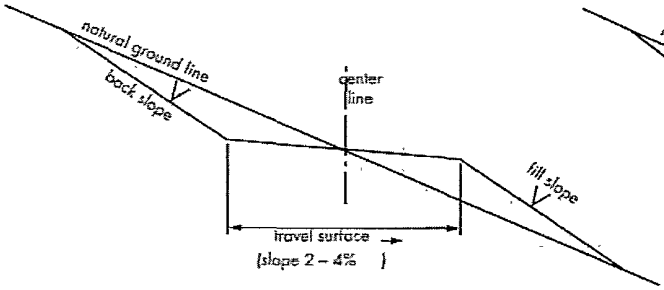
height of fill at shoulder	embankment slope
0' – 4'	3:1
above 4'	2:1

Embankment Section

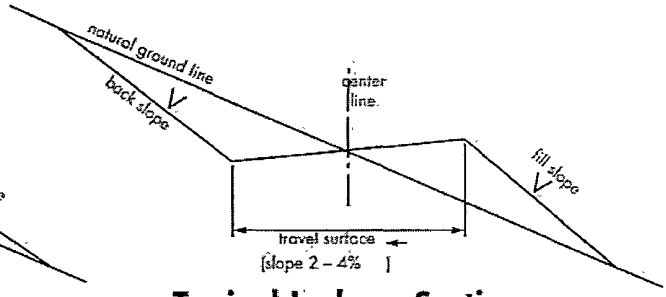


road type	crown
earth surface	.03 – .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

Side Hill Section



Typical Outsloped Section



Typical Inslope Section

V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201. During office hours call (575) 627-0258. After office hours call (575) 627-0205. Engineer on call phone (after hours): (575) 626-5749.

2. The Roswell Field Office is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Re-Entry
b. Cementing casing: **5-1/2** inch
c. BOPE Tests

3. 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.

B. CASING

1. Minimum required fill of cement behind the **5-1/2** inch production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone.**

C. PRESSURE CONTROL:

1. Before drilling into the **cement plug set below the base of the 13-3/8 inch surface casing from 600 feet to 435 feet**, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve.

2. Before drilling into the **cement plug set below the base of the 13-3/8 inch surface casing from 600 feet to 435 feet**, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

3. The BOPE shall be installed before drilling into the **cement plug set at the base of the 9-5/8 inch intermediate casing from 1350 feet to 1250 feet**, and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

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

c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.

e. 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.

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

VI. PRODUCTION

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, Olive Drab, Munsell Soil Color Chart 18-0622 TPX.

VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations.

In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RECLAMATION SEED MIXTURE

At the time well is reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

The well location shall be recontoured, all trash removed, and reseeded as follows:

Ecological Site: Shallow Sand SD-3 & Sandy SD-3

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Black grama	*(Bouteloua eriopoda)*	3.00 Lbs.
or Blue grama,	*(Bouteloua gracilis)*	
Sideoats grama	*(Bouteloua curtipendula)*	2.00 Lbs.
Sand dropseed	*(Sporobolus cryptandrus)*	1.50 Lbs.
or Mesa dropseed	*(S. flexuosus)*	
or Spike dropseed	*(S. contractus)*	
Desert or Scarlet	*(Sphaeralcea ambigua)*	1.00 Lb.
Globemallow or	*(S. coccinea)*	
Croton	*(Croton* spp.*)*	1.00 Lbs.
TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE		8.50 Lbs.

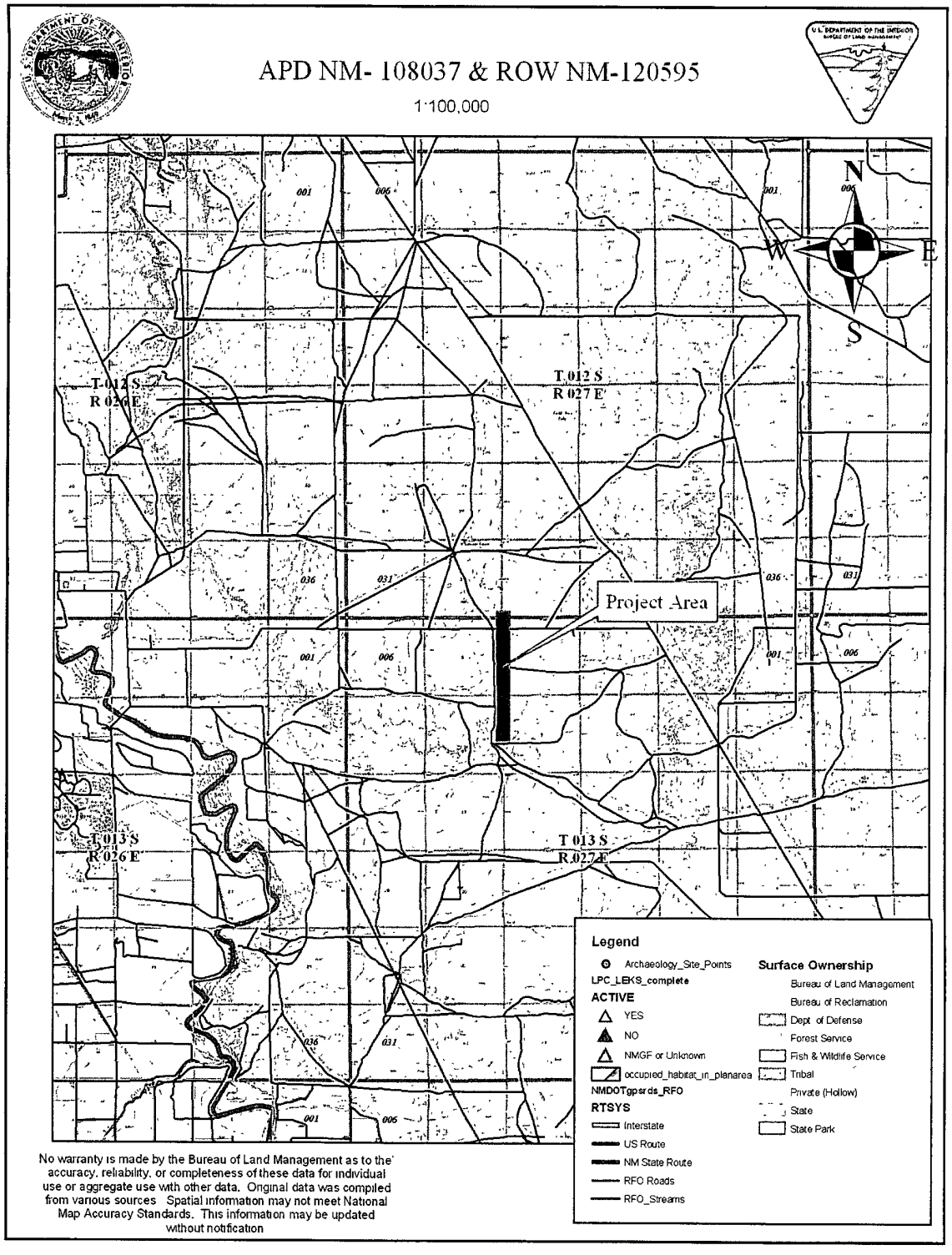
IF ONE SPECIES IS NOT AVAILABLE, INCREASE ALL OTHERS PROPORTIONATELY
Use no less than 4 species, including 1 forb. No less than 8.5 pounds pls per acre shall be applied
Certified Weed Free Seed

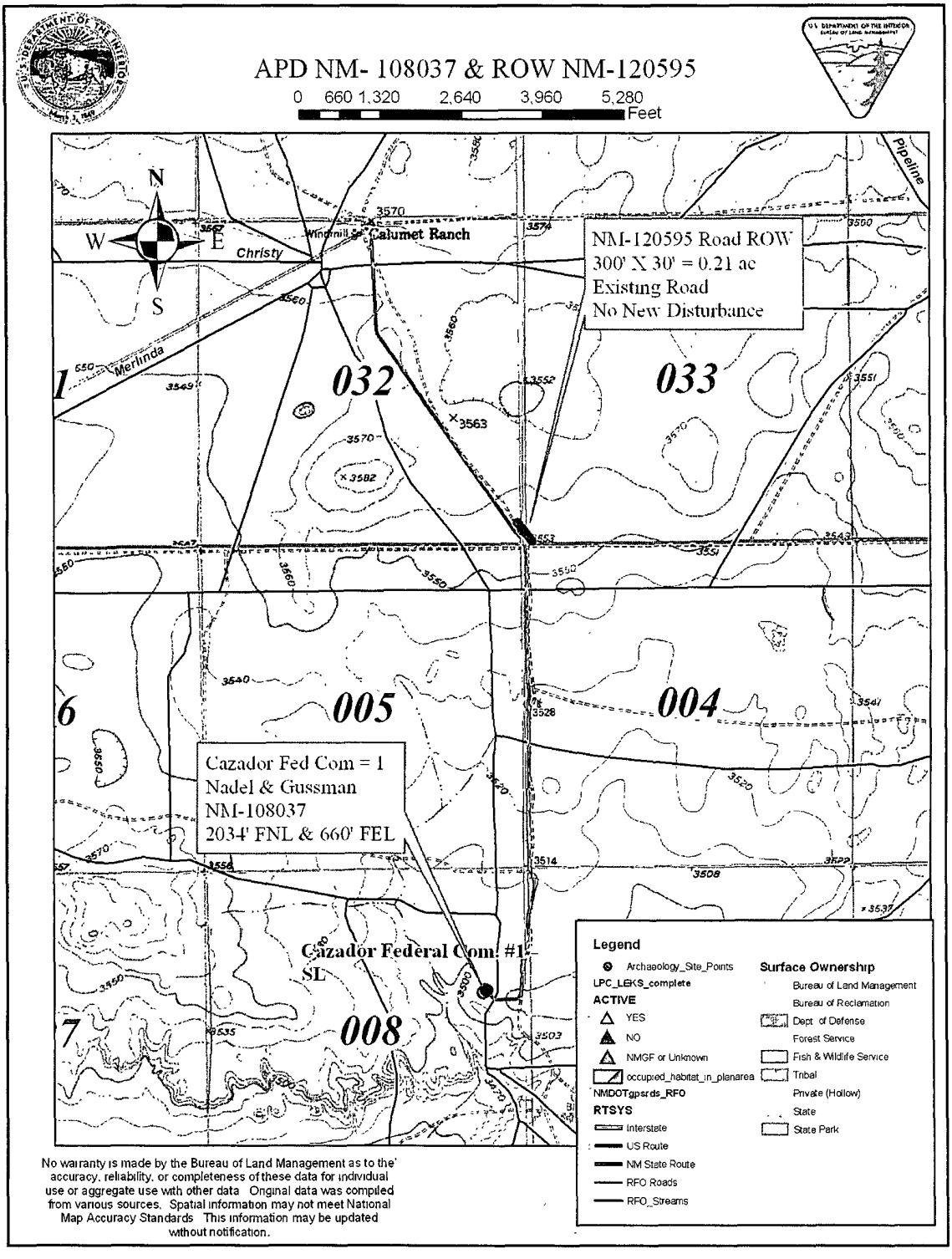
VIII. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the Private Surface Land Owner agreements.

Exhibit A Maps




APD NM- 108037 & ROW NM-120595
0 660 1,320 2,640 3,960 5,280
Feet
N
W
E
S
Windmill
Calumet Ranch
Christy
Merlinda
Pipeline
NM-120595 Road ROW
300' X 30' = 0.21 ac
Existing Road
No New Disturbance
1
032
033
6
005
004
7
008
Cazador Fed Com = 1
Nadel & Gussman
NM-108037
2034' FNL & 660' FEL
Cazador Federal Com #1
SL
Legend
Archaeology_Site_Points
LPC_LEKS_complete
ACTIVE
YES
NO
NMGF or Unknown
occupied_habitat_in_planarea
NMDOTgpsrds_RFO
RTSYS
Interstate
US Route
NM State Route
RFO Roads
RFO_Streams
Surface Ownership
Bureau of Land Management
Bureau of Reclamation
Dept of Defense
Forest Service
Fish & Wildlife Service
Tribal
Private (Hollow)
State
State Park
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.