

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

RECEIVED

Form C-101  
May 27, 2004

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

JUL 13 2005

Submit to appropriate District Office

OOD-APTEOM

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address Nadel and Gussman Permian, LLC 601 N. Marienfeld Suite 508 Midland, TX 79701		<sup>2</sup> OGRID Number 155615
<sup>3</sup> Property Code 34206	<sup>4</sup> Property Name Big Chief Fee	<sup>5</sup> API Number 30-015-34204
<sup>6</sup> Proposed Pool 1 Wildcat Granite		<sup>7</sup> Proposed Pool 2

<sup>7</sup> 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	15	22 S	28 E		1,980	South	1,880	East	Eddy

<sup>8</sup> Proposed 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

Additional Well Information

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 3,112'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 12,900'	<sup>18</sup> Formation Morrow	<sup>19</sup> Contractor Paterson - UTI	<sup>20</sup> Spud Date 08/01/05
Depth to Groundwater: Greater than 100'		Distance from nearest fresh water well: Greater than 1,000'		Distance from nearest surface water: Greater than 1,000'
<sup>21</sup> Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume: 15,000_bbls Drilling Method: Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	48# H-40	300'	300sx	Circ. to Surf.
12 1/4"	9 5/8"	40# N-80, P-110	6,100'	900sx	Circ. to Surf.
8 3/4"	5 1/2"	17#, 20# HCP-110	12,900'	1,550sx	TOC @ 5,900'

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Nadel and Gussman Permian, LLC proposes to drill the Big Chief Fee #9. A mud gas separator will be installed and tested prior to drilling the Wolfcamp. A BOP will be installed on the 9 5/8" and tested. Cement to cover all water, oil and gas producing zones. NGP will notify NMOCD of spud date and cementing times so the surface and intermediate casing strings could be witnessed. No H<sub>2</sub>S is expected, but a contingency is attached.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Signature:

Josh Fernau

Printed name: Josh Fernau

Title: Staff Engineer

E-mail Address: joshf@naguss.com

Date: 07/11/05

Phone: 432-682-4429

OIL CONSERVATION DIVISION

Approved by:

Jim W. Guss  
District II Supervisor

Title:

Approval Date: JUL 14 2005 Expiration Date: JUL 14 2006

Conditions of Approval Attached ☐

28-5  
See b7

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State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-1  
June 1, 20  
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 ☐

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JUL 13 2005

Operator: Nadel and Gussman Permian, LLC Telephone: 432-682-4429 e-mail address: joshf@nadelguss.com  
Address: 601 N. Marienfeld Suite 508 Midland TX 79701  
Facility or well name: Big Chief Fee #9 API #:                      U/L or Qtr/Qtr J Sec 15 T 22 S            R 28E  
County: Eddy Latitude N 32 deg 23' 27.6" Longitude W104 deg 04' 22.3" NAD: 1927 ☒ 1983 ☐  
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

**Pit**  
Type: Drilling ☒ Production ☐ Disposal ☐  
Workover ☐ Emergency ☐  
Lined ☒ Unlined ☐  
Liner type: Synthetic ☒ Thickness 12 mil Clay ☐  
Pit Volume 15,000 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.)

Less than 50 feet	(20 points)
50 feet or more, but less than 100 feet	(10 points)
100 feet or more	( 0 points) x

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) x

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) x

Ranking Score (Total Points)	0
------------------------------	---

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

Additional Comments:

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

Date: 07/11/05

Printed Name/Title Josh Fernau, Staff Engineer

Signature 

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

Approval: Field Supervisor

Printed Name/Title                     

Signature 

JUL 14 2005

DISTRICT I  
1422 E. French Dr., Hobbs, NM 88240

DISTRICT II  
811 South First, Artesia, NM 88210

DISTRICT III  
1000 E. Spruce Rd., Aztec, NM 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised March 17, 1988

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 96542	Pool Name
Property Code	Property Name BIG CHIEF FEE	Well Number 9
OGED No.	Operator Name NADEL AND GUSSMAN PERMIAN	Elevation 3112'

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	15	22 S	28 E		1980	SOUTH	1880	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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

	<b>OPERATOR CERTIFICATION</b>  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.   Signature Josh Fernau Printed Name Staff Engineer Title 07/11/05 Date
	<b>SURVEYOR CERTIFICATION</b>  I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.  JUL 8, 2006 Date Surveyed Signature of Surveyor Professional Surveyor 7077 Certificate No. Gary L. Jones 7077
	<b>BASIN SURVEYS</b>

**NADEL AND GUSSMAN PERMIAN, L.L.C.**  
**601 N. Marienfeld, Suite 508**  
**Midland, TX 79701**  
**(432) 682-4429 (Office)**  
**(432) 682-4325 (Fax)**

07/11/05

Mr. Bryan Arrant  
District 2 Geologist  
New Mexico Oil and Gas Division  
1301 West Grand Avenue  
Artesia, NM 88210

**Re: Big Chief Fee #9**  
**1,980' FSL & 1,880' FEL**  
**Unit Letter J, Sec. 15-T22S-R28E**  
**Eddy, NM**  
**Rule 118 H2S Exposure**

Dear Mr. Arrant,

Nadel and Gussman Permian have evaluated this well and we do not expect to encounter hydrogen sulfide. However, we will employ a third party monitoring system. We will begin monitoring prior to drilling out the intermediate casing and will continue monitoring the remainder of the well.

Please contact me if you have any additional questions.

Sincerely,



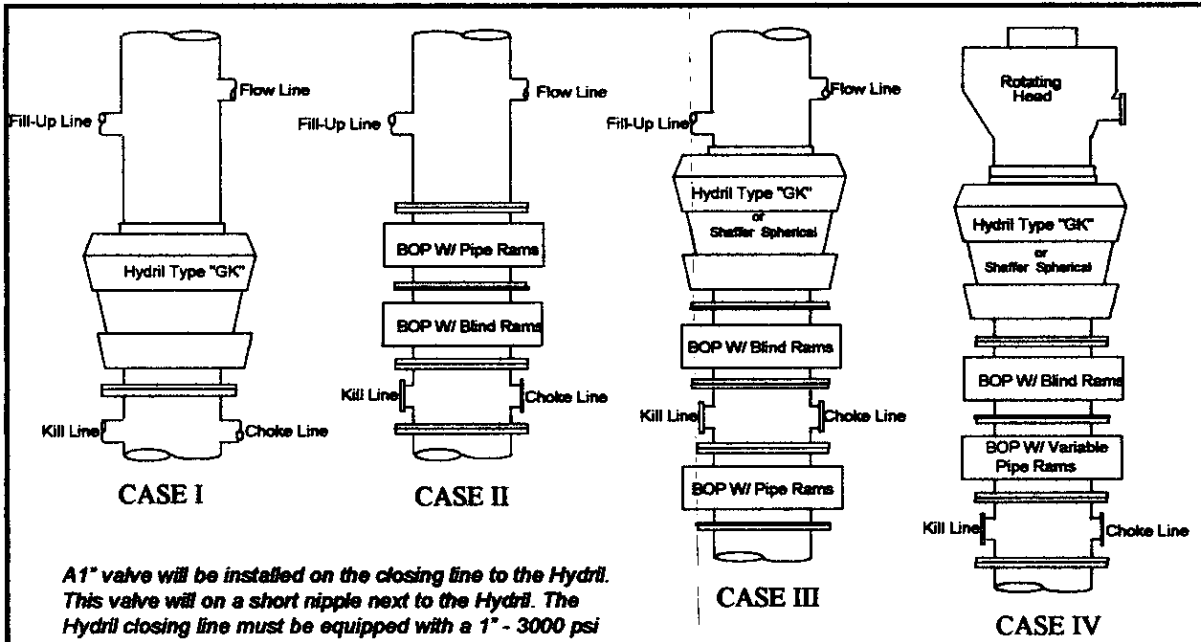
Josh Fernau  
Staff Engineer

## **Hydrogen Sulfide Drilling Operations Plan**

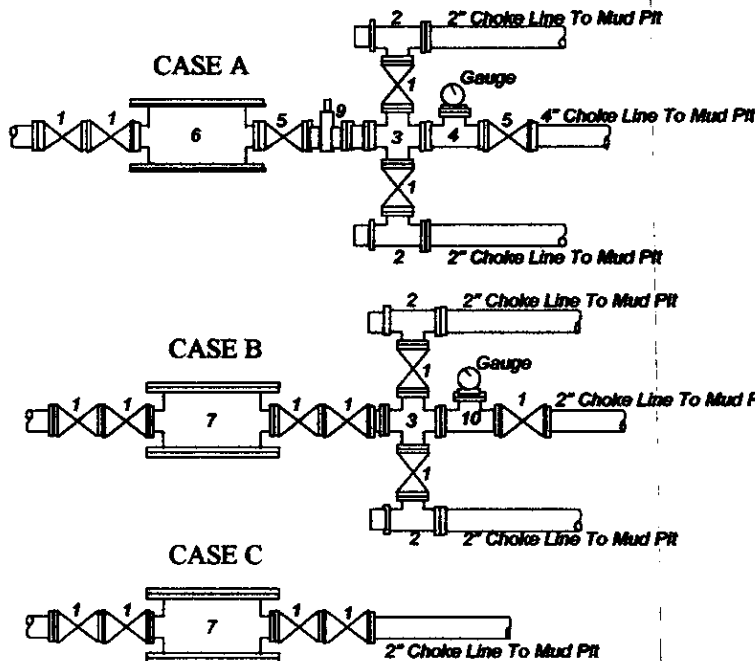
1. Company and Contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S.
  - B. Physical Effects and Hazards.
  - C. Proper Use of Safety Equipment and Life Support Systems.
  - D. Principle and Operation of H<sub>2</sub>S Detectors, Warning System and Briefing.
  - E. Evacuation Procedure, Routes and First Aid.
  - F. Proper Use of 30 minute Pressure Demand Air Pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S 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 Should be High Enough to be Visible.
  - B. Windsock at Briefing Area Should be High Enough to be Visible.
  - C. There Should be a Windsock at Entrance to Location.
4. Condition Flags and Signs
  - A. Warning Sign on Access Road to Location.
  - B. Flags to be Displayed on Sign at Entrance to Location.
    1. Green Flag, Normal Safe Condition.
    2. Yellow Flag, Indicates Potential Pressure and Danger.
    3. Red Flag, Danger H<sub>2</sub>S Present in Dangerous Concentration Only Emergency Personnel Admitted to Location.
5. Well Control Equipment
  - A. See Attached Diagram.
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 Radio or Cell Phone will be Used to Communicate off Location in Case of Available at Most Drilling Foreman's Trailer or Living Quarters.
7. Drillstem Testing
  - A. Exhausts will be Watered.
  - B. Flare Line will be Equipped with an Electric Igniter or a propane pilot light in case gas reaches the surface.
  - C. If Location is near any Dwelling a Closed DST will be Performed.
8. Drilling Contractor Supervisor will be Required to be Familiar with the Effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
9. If H<sub>2</sub>S Encountered, Mud system will be Altered if Necessary to Maintain Control of Formation. A Mud Gas Separator will be Brought into Service Along with H<sub>2</sub>S Scavengers if Necessary.

# Nadel and Gussman Permian

## MINIMUM BLOWOUT PREVENTER REQUIREMENTS



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



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13 5/8"	IV	5000#	A

**\*Rotating head required**

Bradenhead : \_\_\_\_\_  
Mfr. : \_\_\_\_\_  
Size : \_\_\_\_\_ Type : \_\_\_\_\_

### 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 & equipped 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.

(10-31-06) WTXBOPS.PPT

## RECOMMENDED MUD PROPERTIES

MD (RKB) (ft)	Mud Wt. (ppg)	Funnel Vis.	PV	YP	Fluid Loss	HTHP @ 250	pH	% Solids	CT
0-300'	8.4-9.0	26-36	1-3	1-3	N/C	N/A	9.5-10.0	<5	<10K
300'-6,100'	9.7-10.2	28-32	1-3	2-5	N/C	N/A	9.5-10.0	<3	>150,000
6,100'-10,400'	8.4-9.0	26-30	1-3	2-5	N/C	N/A	9.5-10.0	<2	>50K
10,400'-12,900'	10.0-12.0	35-45	6-9	9-18	<6	N/A	9.5-10.0	<5	>150K

### 0 - 300' MD

- A fresh water spud mud is recommended to drill this section of the hole.
- Circulate through the steel pits.
- Use **AQUAGEL®** for the initial viscosity.
- Lime will be used for alkalinity and flocculation.
- **EZ-MUD®** additions may be made at the drill pipe or run in sweeps to aid with hole cleaning.
- **HY-SEAL®** can be used also for sweeps and seepage control.
- If total losses are experienced, a more aggressive mixture of **HY-SEAL®**, **PLUG-GIT®**, or **BARO-SEAL®** can be used.
- Pump a hi-vis sweep (80-100 sec/qt) at TD to clean the hole.

### 300' - 6,100' MD

- Drill out with fresh water and displace to brine after drilling cement.
- Additions of lime and caustic soda can be used throughout this interval for pH control.
- Control seepage losses with **HY-SEAL®**, **PLUG-GIT®**, or **BARO-SEAL®**.
- Sweep the hole with **EZ-MUD®** for hole cleaning.
- Use **ZEOGEL®** as needed for viscosity or in sweeps.

### 6,100' - 10,400'

- Drill out with fresh water working through the reserve pit and drill to 10,400'
- Lime and caustic soda will be used for pH control.
- Control seepage losses with **HY-SEAL®**, **PLUG-GIT®**, or **BARO-SEAL®**.
- Sweep the hole with **EZ-MUD®** for hole cleaning.

## **10,400' – 12,900'**

- Prior to drilling the Canyon ( $\pm 10,400'$ ), displace to 10.0 ppg. brine water.
- Mud-up at  $\pm 10,500'$ . Increase the mud weight to 12.0 ppg. prior to drilling the Atoka ( $\pm 11,100'$ ).
- Additions of POLYOL HM will aid to inhibit and stabilize the water sensitive shales.
- Reduce the total hardness concentration of the mud with soda ash.
- Maintain viscosity/rheology with BARAZAN® D PLUS.
- Reduce the fluid loss as recommended with DEXTRID® prior to drilling the Morrow ( $\pm 12,200'$ ).
- Maintain pH with caustic soda.
- Add HY-SEAL®, PLUG-GIT®, or BARO-SEAL® for seepage or lost returns.
- Pump EZ-MUD® and HY-SEAL® sweeps to aid with hole cleaning.
- Pump a hi-vis sweep (80-100 sec/qt) at TD to clean the hole.



## DRILLING FLUID DISCUSSION BY INTERVAL

MD(RKB) (ft)	Mud Weight (ppg)	Funnel Vis.	PV	YP	Fluid Loss	HTHP @ 250	pH	% Solids	CF
0-300'	8.4-9.0	26-36	1-3	1-3	N/C	N/A	9.5-10.0	<5	<10K

### **Interval: 0 – 300' MD: Spud Mud**

#### **Mud Properties:**

**Operation:** Spud in and drill a 17 ½" hole and drill to ±300'. Set 13 ¾" surface casing.

**Mud System:** A fresh water system with **AQUAGEL®** is recommended for drilling this interval. Lime will be added to aid flocculation and to adjust pH for corrosion control.

**Solids Control:** Fully utilize at least two linear motion shakers, rig desilter, and rig desander to control drill solids. Run the finest mesh screens that will accommodate pump rates.

**Issues:** Lost Returns/Seepage - Add **HY-SEAL®** as needed for seepage. Use **PLUG-GIT®** or **BARO-SEAL®** if needed for lost returns. Circulation losses should be anticipated while drilling the surface hole. If returns cannot be established, "dry-drill" to surface casing TD.

Hole Cleaning: Use **EZ-MUD®** in sweeps or poured directly down the drill pipe on connections. **HY-SEAL®** can also be used for hole cleaning and/or tight connections. With the fast penetration rates and low annular viscosities it is important to maintain adequate viscosity to clean the large diameter hole. The cuttings should be circulated above the BHA prior to connections.

Sweep the hole at TD with a viscous **EZ-MUD®** and **HY-SEAL®** pill prior to wiper trip and while circulating and conditioning the hole for surface casing.

MD(RKB) (ft)	WEIGHT (ppg)	FUN	PV	YP	API	HTHP @ 250	pH	% SOLIDS	CF
300'-6,100'	9.7-10.2	28-32	1-3	2-5	N/C	N/A	9.5-10.0	<3	>150,000

### **Interval: 300' - 6,100' MD: Brine Water**

#### **Mud Properties:**

**Operation:** Drill out of surface casing and obtain successful shoe test. Drill a 12 ½" hole to 6,100'. Set 9 ¾" intermediate casing.

**Mud System:** Prior to drilling out, dump and clean the sand trap and settling pit. Dump as much cement contaminated mud as possible. Drill out of the surface casing with fresh water. Displace the system with 10.0 ppg. brine after drilling cement. Lime and caustic soda will be added to aid flocculation and to adjust pH for corrosion control. Pump **EZ-MUD®** sweeps to aid in hole cleaning.

**Solids Control:** Fully utilize at least two linear motion shakers, rig desilter, and rig desander to control drill solids. Run the finest mesh screens that will accommodate pump rates.

**Issues:** Seepage - Add HY-SEAL® as needed for seepage. PLUG-GIT® or BARO-SEAL® can be used for any lost returns.

Hole Cleaning- Use EZ-MUD® and HY-SEAL® in sweeps.

Sweep the hole at TD with a viscous EZ-MUD® and HY-SEAL® pill prior to wiper trip and while circulating and conditioning the hole for surface casing.

MD(RKB) (ft)	WEIGHT (ppg)	FUN	PV	YP	API	HTHP @ 250	pH	% SOLIDS	CF
6,100'-10,400'	8.4-9.0	26-30	1-3	2-5	N/C	N/A	9.5-10.0	<2	>50K

**Interval:** 6,100' – 10,400' MD: Brine Water

**Mud Properties:**

**Operation:** Drill out of intermediate casing and obtain successful shoe test. Drill an 8 ¾" hole.

**Mud System:** Prior to drilling out, dump and clean the sand trap and settling pit. Dump as much cement contaminated mud as possible. Drill out of the casing with fresh water, working through the reserve pit. Drill out the intermediate casing with fresh water and drill to ±10,400'. Prior to drilling the Canyon (±10,400') displace to 10.0 ppg. brine. The addition of POLYOL HM (1/2 to 1% by volume) will aid to inhibit and stabilize the water sensitive shale. Reduce the total hardness concentration to <150 mg/l with soda ash. Lime and Caustic soda will be added to adjust pH for corrosion control.

**Solids Control:** Fully utilize at least two linear motion shakers, rig desilter, and rig desander to control drill solids. Run the finest mesh screens that will accommodate pump rates.

**Issues:** Lost Returns/Seepage - Add HY-SEAL®, PLUG-GIT®, or BARO-SEAL® for seepage or lost returns.

Hole Cleaning: Use EZ-MUD® and HY-SEAL® in sweeps.

MD(RKB) (ft)	WEIGHT (ppg)	FUN	PV	YP	API	HTHP @ 250	pH	% SOLIDS	CF
10,400'-12,900'	10.0-12.0	35-45	6-9	9-18	<6	N/A	9.5-10.0	<5	>150K

**Interval: 10,400' – 12,900' MD: Brine Water**

**Mud Properties:**

**Operation:** Prior to drilling the Canyon ( $\pm 10,400'$ ), displace to 10.0 ppg. brine water. Mud-up at  $\pm 10,500'$ . Increase the mud weight to 12.0 ppg. prior to drilling the Atoka ( $\pm 11,100'$ ).

**Mud System:** Additions of POLYOL HM will aid to inhibit and stabilize the water sensitive shales. Reduce the total hardness concentration of the mud with soda ash. Maintain viscosity/rheology with BARAZAN® D PLUS as recommended. Reduce the fluid loss as recommended with DEXTRID® prior to drilling the Morrow ( $\pm 12,200'$ ). Maintain pH with caustic soda. Use BARA-THIN PLUS (DESCO) as needed for "thinning".

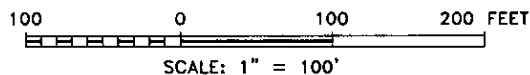
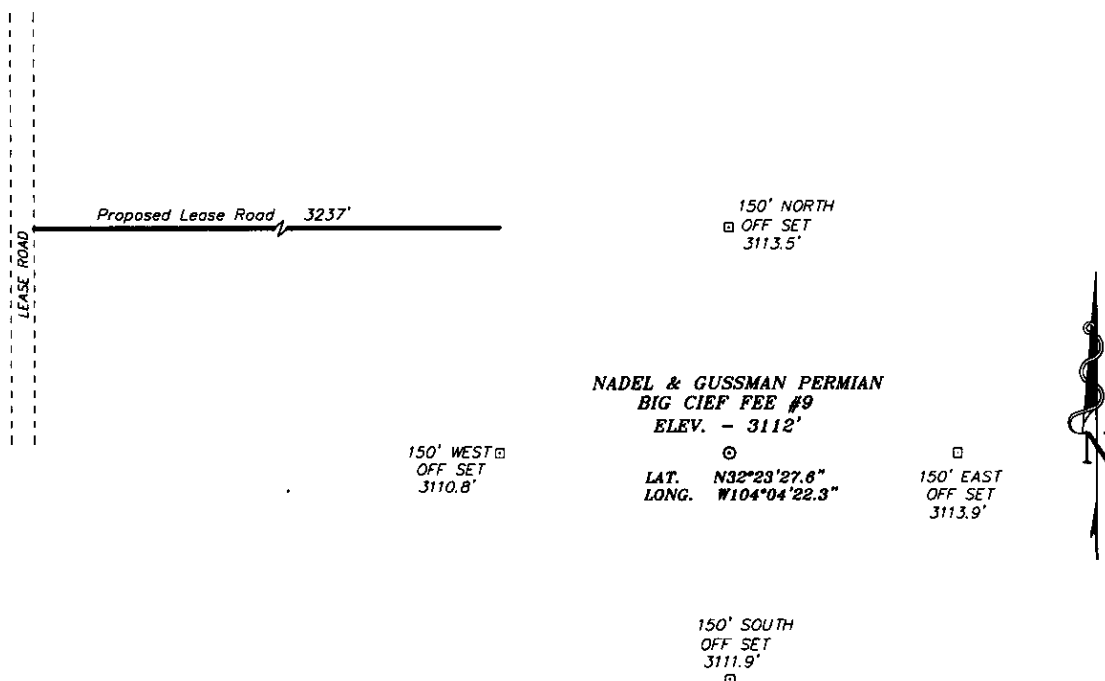
**Solids Control:** Fully utilize at least two linear motion shakers, rig desitter, and rig desander to control drill solids. Run the finest mesh screens that will accommodate pump rates.

**Issues:** Lost Returns/Seepage - Add HY-SEAL®, PLUG-GIT®, or BARO-SEAL® for seepage or lost returns.

Hole Cleaning: Use EZ-MUD® and HY-SEAL® in sweeps.

Mud Density: The Atoka/Morrow may require mud weights as high as 13.0 ppg. Rapid increases in formation pressure should be anticipated below intermediate casing. The maximum mud weight in this section should be 13.0 ppg. Cuttings at the shale shaker should be monitored for signs of sloughing shale which may indicate a need for higher mud weights. Tight hole, fill on trips, torque/drag on connections, and increasing connection gas may also be an early indication of the need to raise the mud weight.

SECTION 15, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF CO. RD. 605 AND CO. RD. 607, GO NORTHEAST ON 607 FOR 1.3 MILE TO a "Y", TAKE ROAD NORTH FOR 0.6 MILE PROPOSED LEASE ROAD.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 5579 Drawn By: K. GOAD

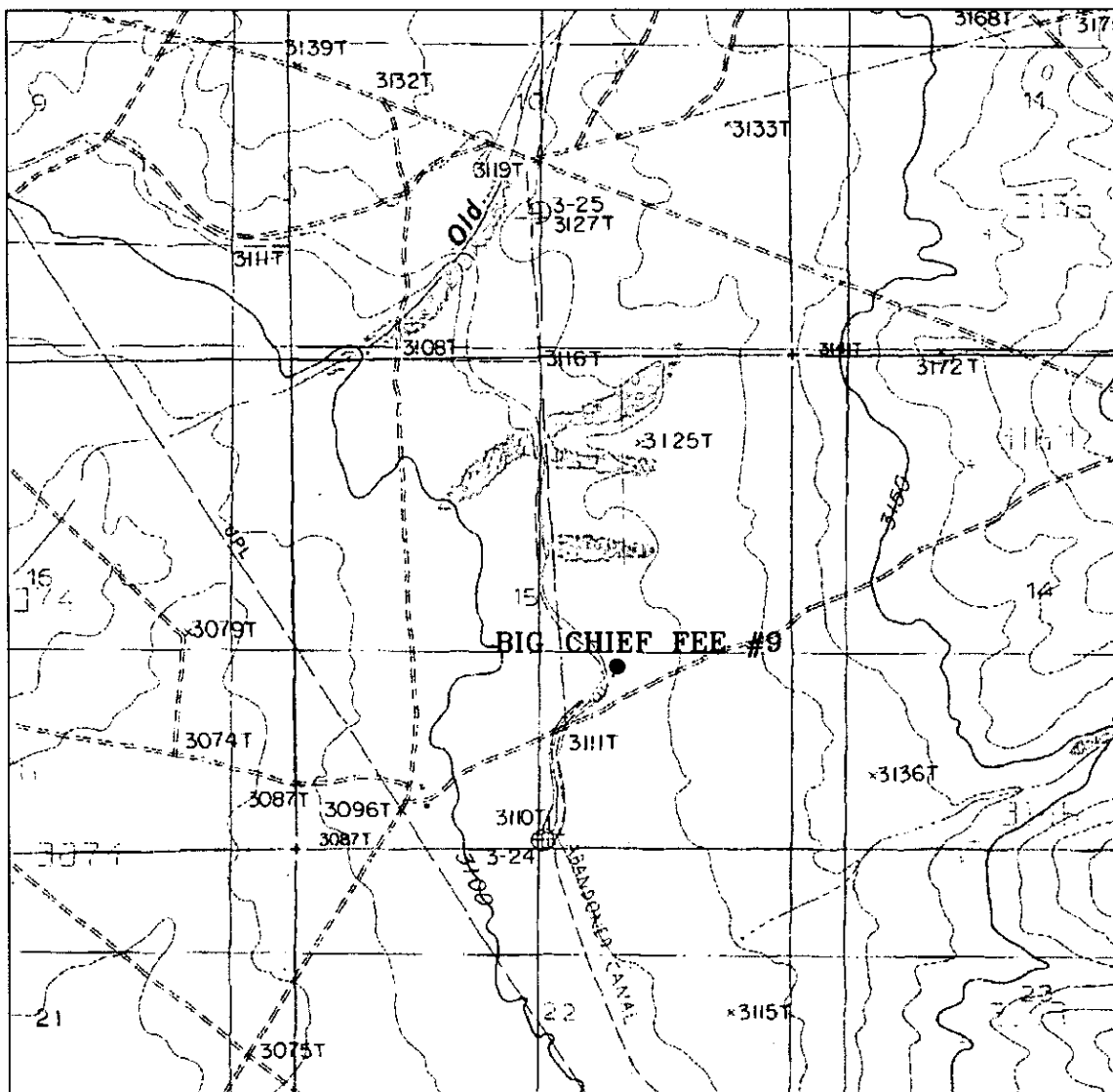
Date: 07-11-2005 Disk: KJG #9 - 5579A.DWG

**NADEL AND GUSSMAN PERMIAN**

REF: BIG CHIEF FEE No. 9 / Well Pad Topo

BIG CHIEF FEE No. 9 LOCATED 1980' FROM THE SOUTH LINE AND 1880' FROM THE EAST LINE OF SECTION 15, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 07-08-2005 Sheet 1 of 1 Sheets



## BIG CHIEF FEE #9

Located at 1980' FSL and 1880' FEL  
 Section 15, Township 22 South, Range 28 East,  
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (505) 393-7316 - Office  
 (505) 392-3074 - Fax  
[basinsurveys.com](http://basinsurveys.com)

W.O. Number: 5579AA - KJG #1

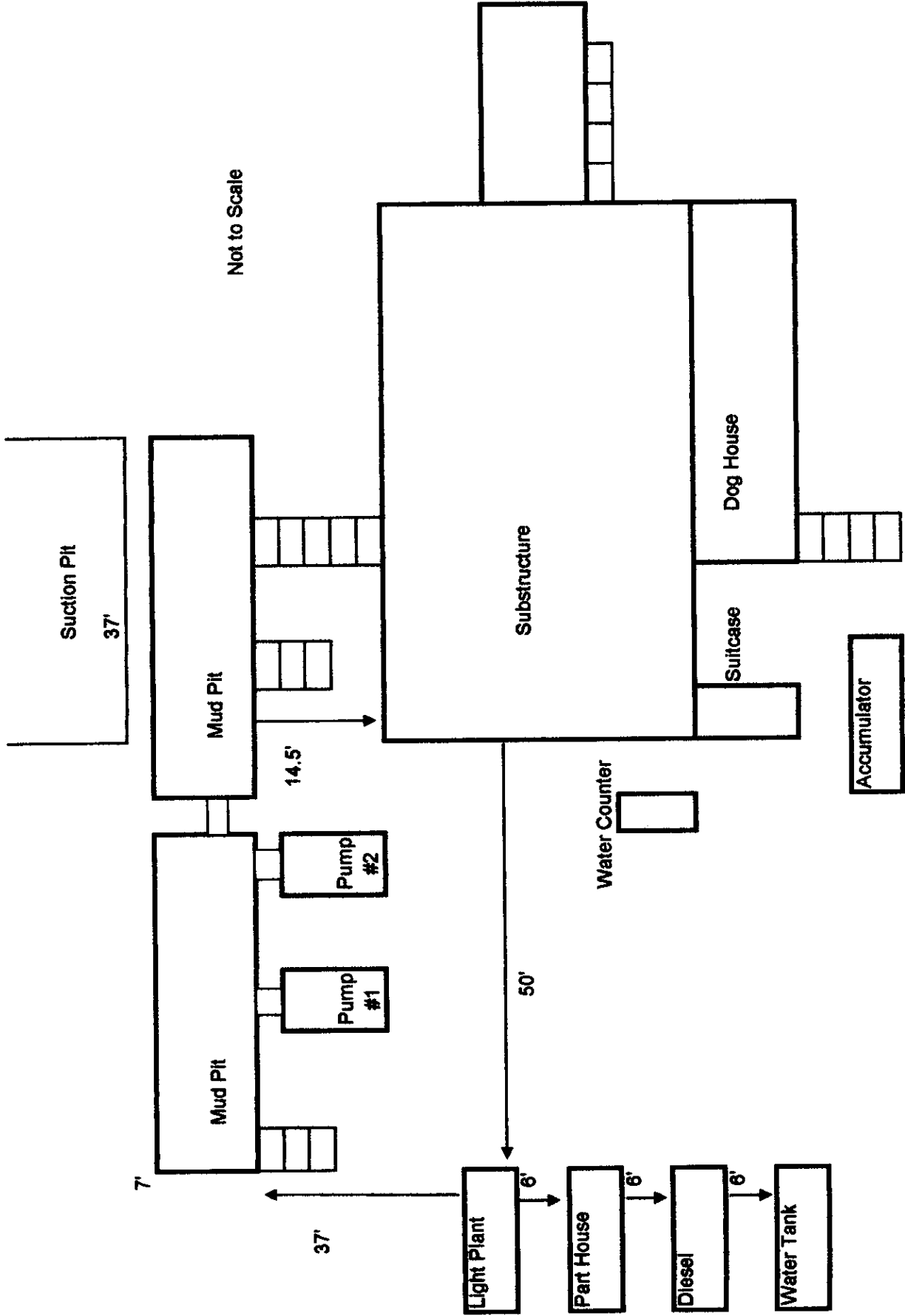
Survey Date: 07-08-2005

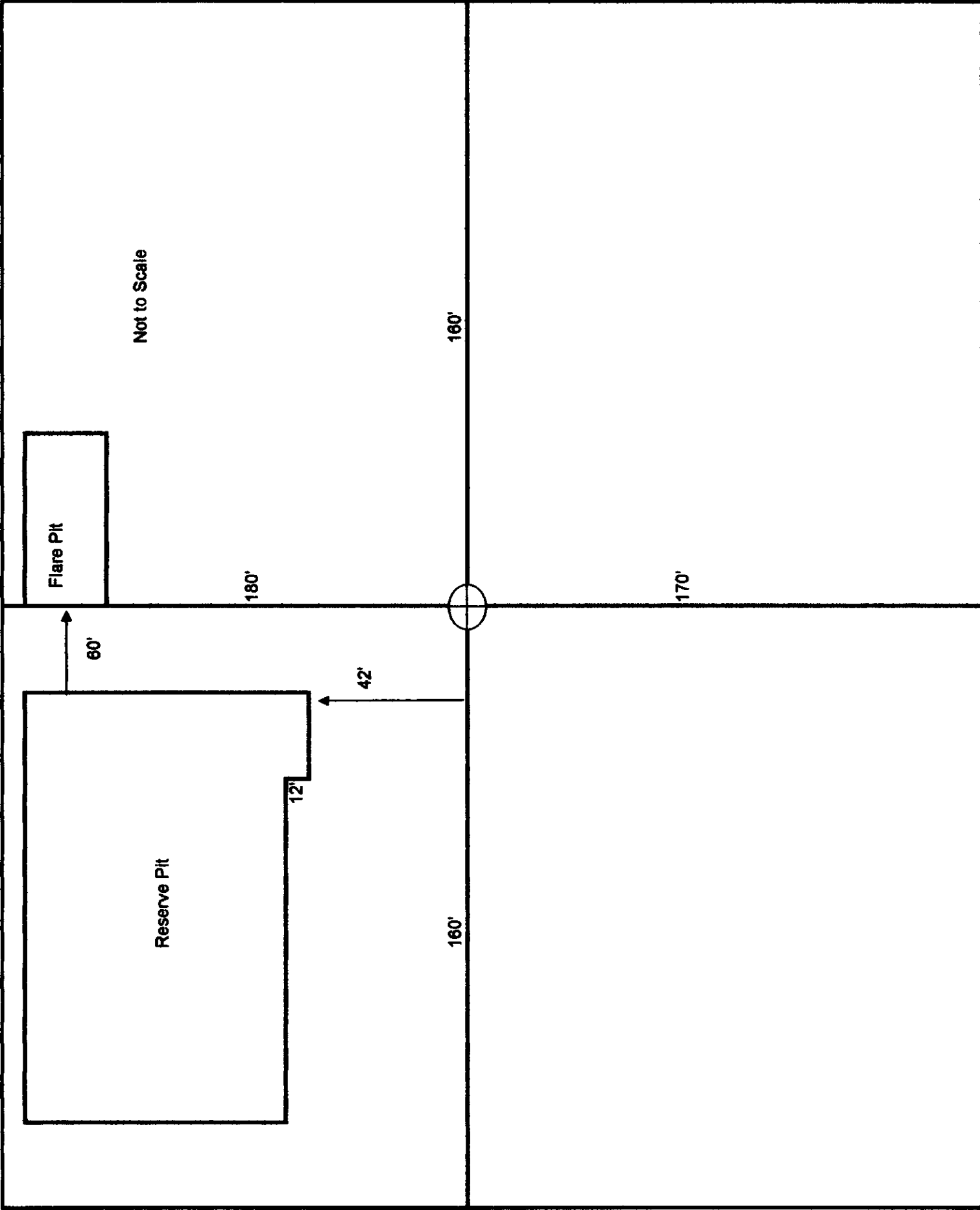
Scale: 1" = 2000'

Date: 07-11-2005

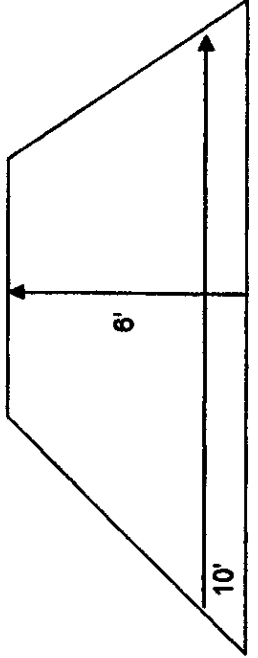
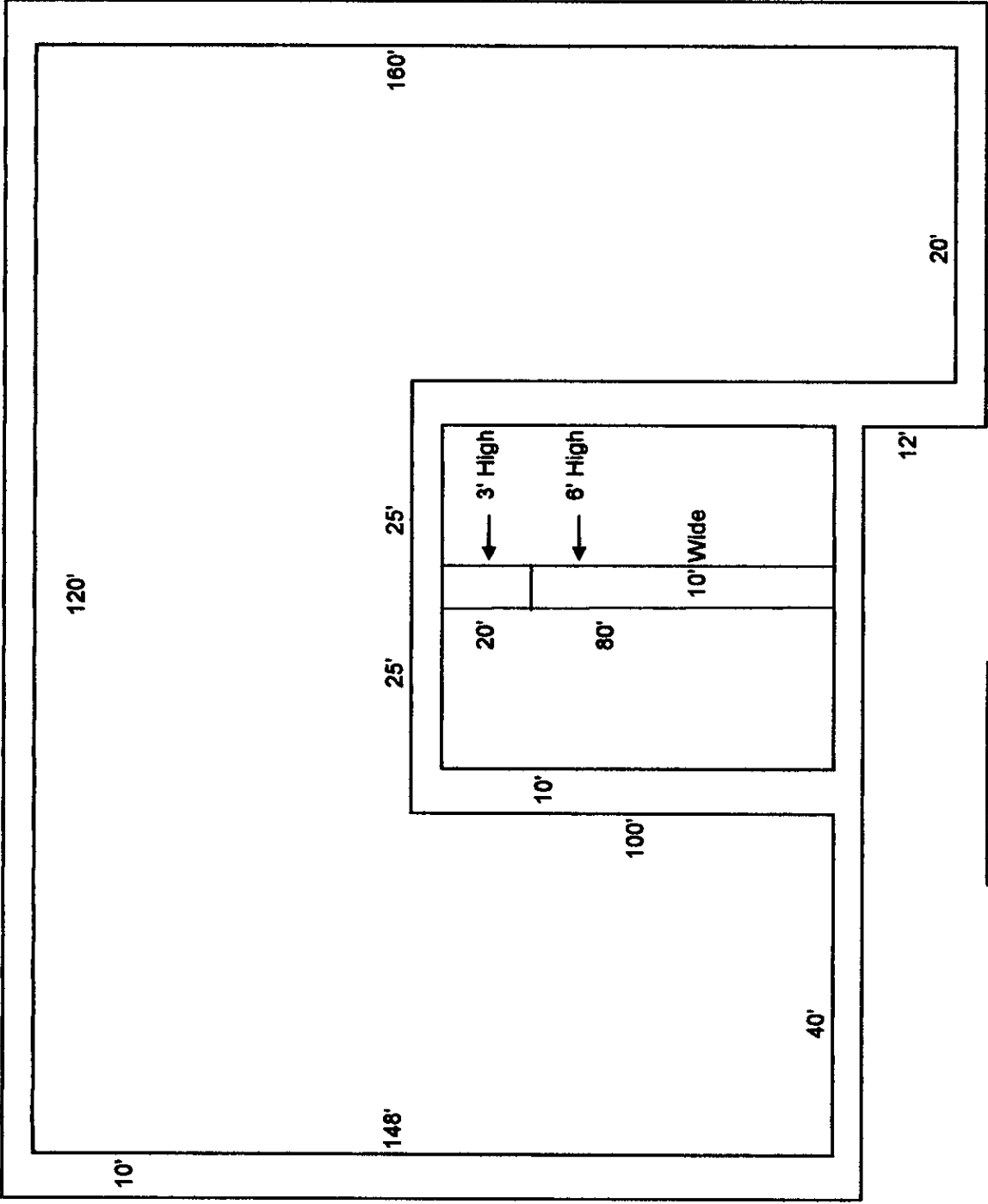
**NADEL AND  
 GUSSMAN PERMIAN,  
 L.L.C.**











Not to Scale