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-101
May 27, 2004

RECEIVED
FEB 08 2006
OCD-ARTESIA

Submit to appropriate District Office

☐ AMENDED REPORT

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

[1] Operator Name and Address	[2] OGRID Number
Nadel and Gussman Permian, LLC 601 N. Marienfeld Suite 508 Midland, TX 79701	155615
	[3] API Number 30 – 015- 34600

[5] Property Code	[5] Property Name	[6] Well No.
35438	Hannibal Fee Com	#1

[9] Proposed Pool 1	[10] Proposed Pool 2
Dublin Ranch; Morrow 76140	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	31	22 S	28 E		660	North	1,980	East	Eddy

[8] 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

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	G	R	P	3,050'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
No	12,900'	Morrow	Paterson - UTI	04/01/06

Depth to Groundwater: 50' or Less | Distance from nearest fresh water well: 200' or Less | Distance from nearest surface water: Less than 200'

Pit: Liner: Synthetic ☒ 20 mils thick Clay ☐ Pit Volume: 15,000 bbls Drilling Method:

Closed-Loop System ☐ Fresh Water ☒ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 ½"	13 3/8"	48# H-40	400'	300sx	Circ. to Surf.
12 ¼"	9 5/8"	40# N-80	5,000'	900sx	Circ. to Surf.
8 ¾"	5 ½"	17#, 20# HCP-110	12,900'	1,550sx	TOC @ 9,000'

[22] 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 Hannibal Fee Com #1. 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_2S is expected, but a contingency is attached.

[23] 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:

Date: 02/07/06 | Phone: 432-682-4429

OIL CONSERVATION DIVISION

Approved by: Jim W. Gum
District II Supervisor

Title:

Approval Date: FEB 08 2006 | Expiration Date: FEB 08 2007

Conditions of Approval Attached ☐

Salt > 9.5

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Dublin Ranch; Morrow

Property Code	Property Name	Well Number
	HANNIBAL FEE COM	1

OGRID No.	Operator Name	Elevation
	NADEL AND GUSSMAN PERMIAN	3050'

Surface Location

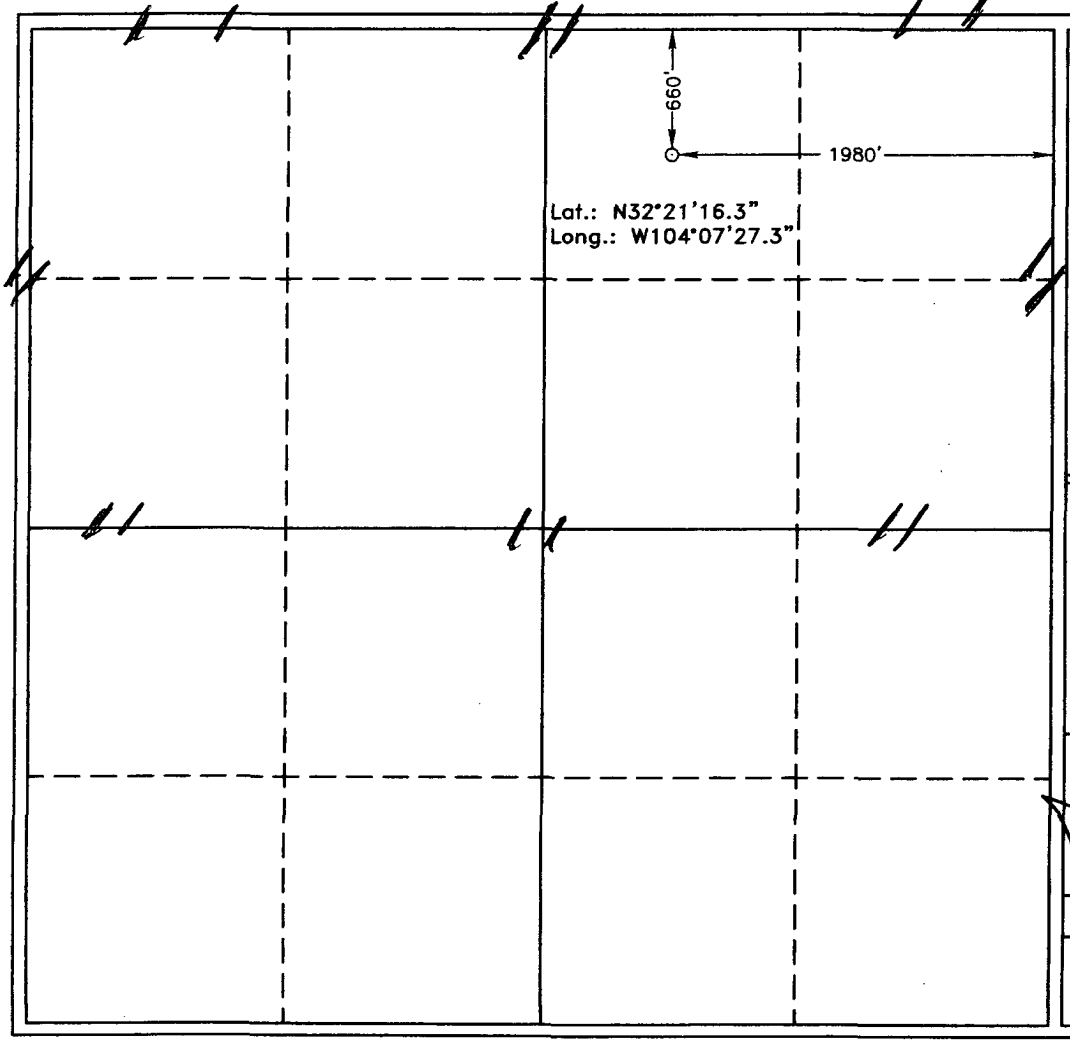
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	31	22 S	28 E		660	NORTH	1980	EAST	EDDY

Bottom Hole Location If Different From Surface

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

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

Signature: Josh Ferman
Printed Name: Josh Ferman
Title: Staff Engineer
Date: 02/07/06

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 supervison, and that the same is true and correct to the best of my belief.

NOVEMBER 14, 2005

Date Surveyed

Signature & Seal of Professional Surveyor

W.O. No. 5971

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

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

02/07/06

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

Re: Hannibal Fee Com #1
660' FNL & 1,980' FEL
Unit Letter B, Sec. 31-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_2S safety instructor to the following:
    A. Characteristics of H_2S.
    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.
    E. Evacuation Procedure, Routes and First Aid.
    F. Proper Use of 30 minute Pressure 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 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_2S Present in Dangerous Concentration Only Emergency Personnel Admitted to Location.

5. Well Control Equipment
    A. See Attached Diagram.

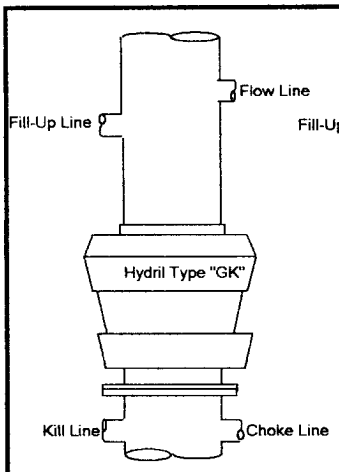
6. Communication
    A. While Working Under Masks Chalkboards Will be Used for Communication.
    B. Hand Signals will be Used Where Chalk Board is Inappropriate.
    C. Two Way Radio or Cell Phone will be Used to Communicate off Location in Case of Available at Most Drilling Foreman's Trailer or Living 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.

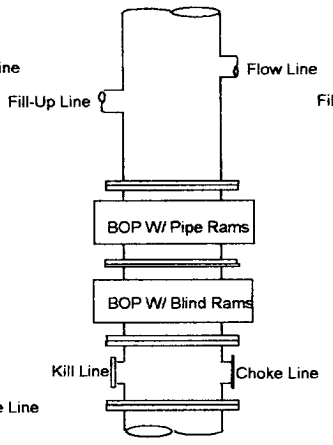
8. Drilling Contractor Supervisor will be Required to be Familiar with the Effects H_2S has on tubular goods and other mechanical equipment.

9. If H_2S 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_2S Scavengers if Necessary.

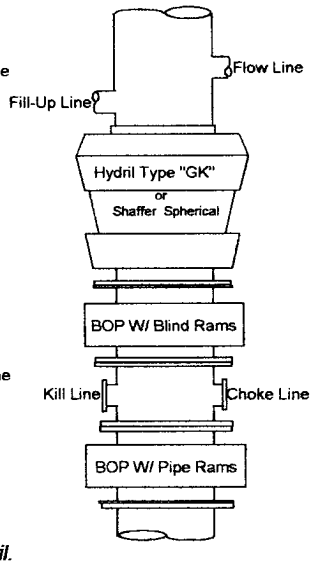
Nadel and Gussman Permian _____
MINIMUM BLOWOUT PREVENTER REQUIREMENTS



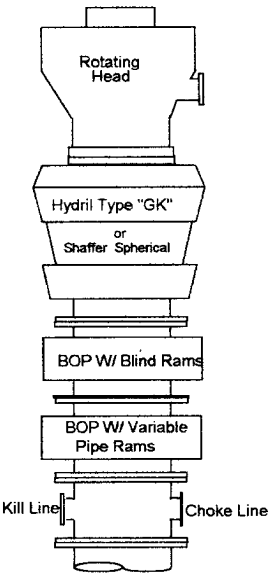
CASE I



CASE II



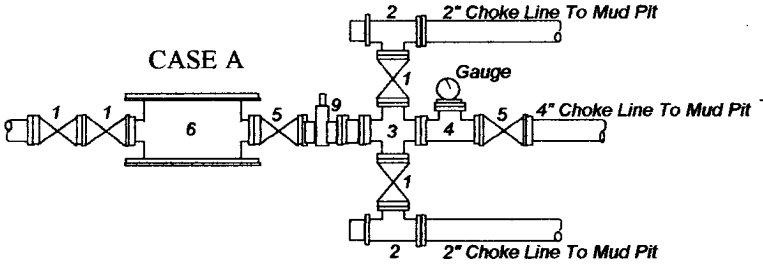
CASE III



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.

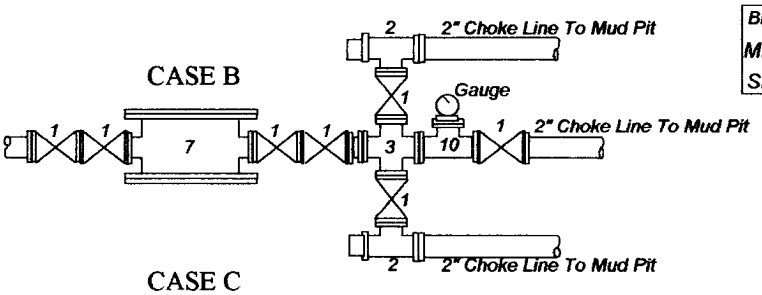
CASE A



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13⅝"	II	5,000#	A

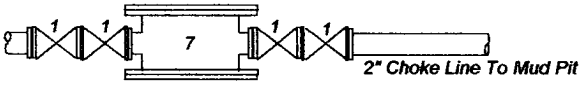
**Rotating head required*

CASE B



Bradenhead :
Mfr: _____
Size: _____ *Type:* _____

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

PROPOSED MUD PROGRAM

CASING DESIGN

13 3/8"	Surface Casing	at	400'
9 5/8"	Intermediate Casing	at	5,000'
8 3/4"	Open Hole	to	12,700'

RECOMMENDED MUD PROPERTIES

DEPTH	MUD WEIGHT	VISCOSITY	FLUID LOSS
Spud	8.6- 8.7	32-34	No Control
400'	8.9- 9.2	32-34	No Control

Set 13 3/8" Surface Casing at 400'**. Drill out with Brine Water.**

400'	9.8-10.0	28-30	No Control
1,500'	10.0-10.1	28-30	No Control
3,000'	10.0-10.1	28-30	No Control
4,500'	10.0-10.1	28-30	No Control
5,000'	10.0-10.1	28-30	No Control

Set 9 5/8" Intermediate Casing at 5,000'**. Drill out with Fresh Water.**

5,000'	8.4- 8.5	28-29	No Control
7,000'	8.4- 8.5	28-29	No Control
8,000'	8.4- 8.5	28-29	No Control
9,000'	8.4- 8.5	28-29	No Control
9,500'	9.2- 9.4	28-29	No Control
10,000'	9.4- 9.6	28-29	No Control

10,800'	9.8- 10.0	32-34	<12
11,400'	10.2-12.0	32-34	<12
11,800'	10.2-12.0	45-50	<12
12,200'	10.2-12.0	45-50	<12
12,700'	10.2-12.0	45-50	<12

RECOMMENDED MUD PROGRAM BY CASING INTERVAL

Surface Hole 0 – 400'

Spud with a Horizon **Gel/Lime** slurry, mixing one **Lime** per ten **Gel** for a 32-34 viscosity. Lost circulation is common in this area. Should lost circulation occur and cannot be re-gained with one LCM pill, dry drill to total depth.

Intermediate Hole 400' – 5,000'

Drill out from under the surface casing with brine water, circulating through the reserve pit to allow maximum time for settling drilled-solids.

Severe lost circulation is possible while drilling this interval. Seepage can be controlled with additions of **Paper**. Should complete loss of returns occur while drilling, we recommend pulling up above the loss zone to avoid differential sticking and spotting a 100-200 barrel pill containing 15-25 lb/bbl lost circulation material. Spot the pill from above at a reduced pump rate before returning to bottom to commence drilling operations. If lost circulation is not regained with one or two LCM pills, some blind drilling may be required. . If partial returns are maintained, use only brine for volume to avoid severe washouts.

Crooked hole can be a problem in this area.

Allow hole conditions to dictate the need for any additional viscosity or hole sweeps at total depth to clean the hole and insure smooth casing operations.

Open Hole– 5,000' **-12,700'**

Drill out from under the intermediate casing with fresh water, circulating through the outer reserve pit to, once again, allow maximum time for settling drilled-solids. A flocculent (**MF-1**) can be used to aid in dropping solids, providing a clear fluid and maximum penetration rates.

We recommend that the surface pit system include the following:

⇒ **Flo-line Cleaner** – This will allow removal of a wider range of solids and will assist in optimizing the efficiency of the de-sander and de-silter (or scale shaker).

⇒ **Centrifuge**—This will allow for fine solids removal and barite recovery.

⇒ **Shale and settling pit by-pass Canal** – To reduce volumes when conditioning mud for DST's or added hole cleaning at total depth.

⇒ **Pit Volume Totalizers** – To more accurately monitor pit gains and losses.

⇒ **One 1000 sack Barite Bin**- For barite storage on location.

We recommend maintaining a 9.0 – 9.5 pH with **Caustic.**

As drilling progresses post **6,000'**, some loss of fluid should occur. Minor seepage can be controlled with additions of **Paper**. Complete lost circulation is also possible during this interval. Should complete loss of returns occur while drilling, we recommend following the same procedure described in the previous section.

Severe seepage in the **Delaware** and **Bone Springs** may require alternative methods of combating losses, such as:

⇒ **Heavy bentonite pills**

⇒ **Diesel/Loloss pills**

Crooked hole can also be a problem in this section past **8,000'**.

Utilize **Horizon Poly-Vis II** and Prehydrated **Gel** for periodic sweeps while drilling, prior to mud-up.

Kick-off at **9,000'** and drill a **1.75° angle to 9.56°** and hold to achieve **1,000'** hole displacement.

At a depth of **9,500' or the top of the Wolfcamp,** we recommend returning to the working pits and displacing with brine weighing **9.2 – 9.4 ppg**.

By **10,800' or the top of the Strawn**, we recommend displacing with brine and mudding-up with an **XC Polymer/MF-55** system to achieve the following properties:

Mud Weight	**9.8–10.0**
Viscosity	**32 – 34**
Fluid Loss	**<12**

It is also possible to encounter abnormal pressure in the **Atoka** formation. Drilling slightly under-balanced has proven successful at maximizing penetration rates, however, it may be necessary to increase the mud weight to **10.5 –12.0 ppg** to control formation pressure. It may be possible to avoid increasing the weigh of the entire system by spotting heavy pills on bottom for trips.

If higher mud weights are required, **7" casing** may be necessary to cover the **Bone Springs** formation.

> **XCD Polymer** at higher concentrations has the unique ability to increase the "low-shear rate viscosity" of the fluid. This property has proven to minimize losses in the **Delaware** and **Bone Springs**. On two wells in the immediate area, this fluid has eliminated the need for **7" casing** while formation pressures required as high as an **11.8 ppg** mud weight to control.

We recommend adding **MF-55** to the system in this particular area to minimize potential sloughing shale. **MF-55** is a non-ionic emulsion polymer that will chemically tie up water. This "taking on of water" effect has proven to significantly minimize fluid invasion. **MF-55** also has the ability to inhibit through encapsulation, or coating of the wellbore.

Lost circulation could occur after mud-up. We recommend using fibrous-type **LCM** to control seepage. Should complete loss of returns occur, we recommend following the same procedure as described in the previous section.

REDUCED FORMATION DAMAGE WITH XC POLYMER

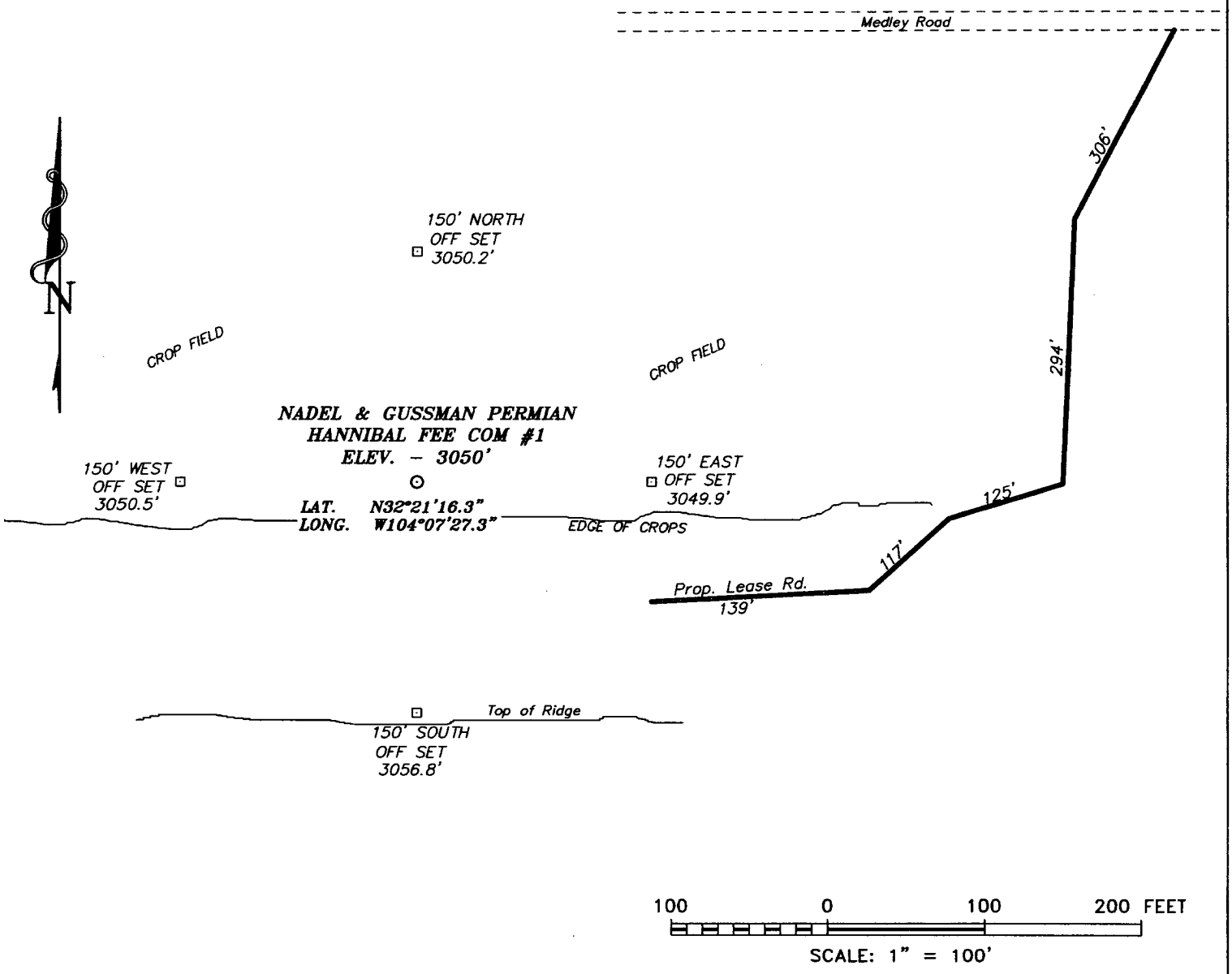
At **11,800' or the top of the Morrow**, we recommend increasing the concentration of **XC Polymer** to **1 3/4 to 2 ppb** to achieve low shear-rate viscosity **(LSRV)**. This concentration of **XC Polymer** is necessary to accomplish the networking effect of the polymers. It is this networking effect of the **Zanthan Gum** polymer that gives it its unique ability to increase the **LSRV**.

By achieving elevated viscosity in the low shear region of the flow profile, lateral penetration of fluid into the formation is reduced. This will minimize damage to the **Morrow** formation caused by the migration of clays once the kaolinite booklets have been broken. Also, an additional benefit of reaching this flow profile is that hole cleaning is maximized.

LSRV is monitored by measuring the gel strength and the relaxation time of the fluid. Minimum gel strength values of **40 – 60 (.2 spring)** and a relaxation measurement of **3 to 4 minutes** are essential to provide the proper flow profile. The "relaxation measurement" directly measures the LSRV of the fluid. The **Brookfield Rheometer** is also used in the field to correlate with the relaxation measurement.

This fluid, adjusted as shown in the **"RECOMMENDED MUD PROPERTIES"** section, or as hole conditions dictate, should provide good hole conditions for any testing, logging and casing operations.

SECTION 31, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**



Directions to Location:

FROM THE JUNCTION OF US HWY 285 AND MEDLEY ROAD, GO EAST ON MEDLEY ROAD FOR 3.0 MILES TO PROPOSED LEASE ROAD.

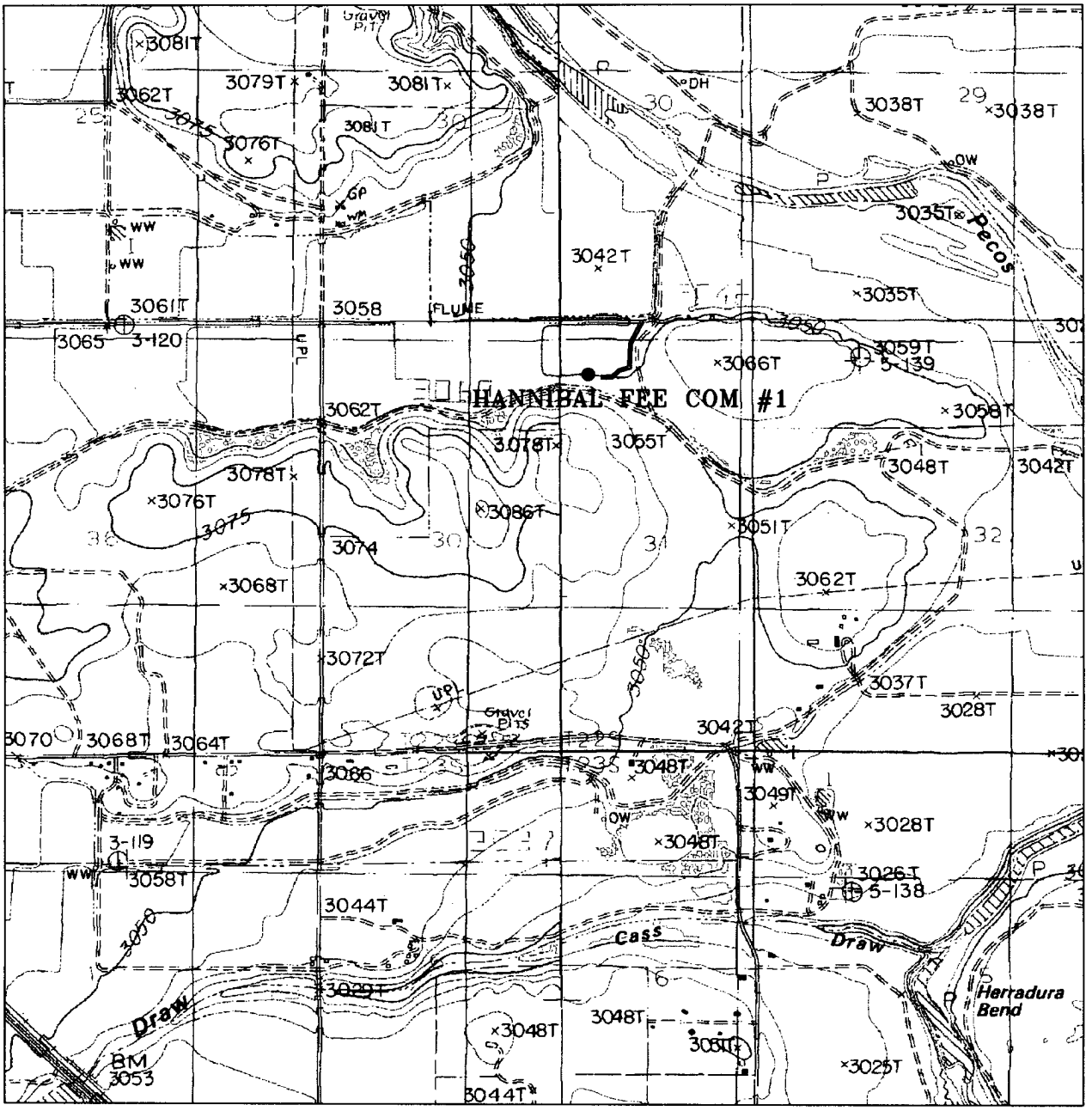
NADEL AND GUSSMAN PERMIAN

REF: HANNIBAL FEE COM No. 1 / Well Pad Topo

HANNIBAL FEE COM No. 1 LOCATED 660' FROM THE NORTH LINE AND 1980' FROM THE EAST LINE OF SECTION 31, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

W.O. Number: 5971	Drawn By: K. GOAD		
Date: 11-18-2005	Disk: KJG #9 - 5971A.DWG	Survey Date: 11-14-2005	Sheet 1 of 1 Sheets



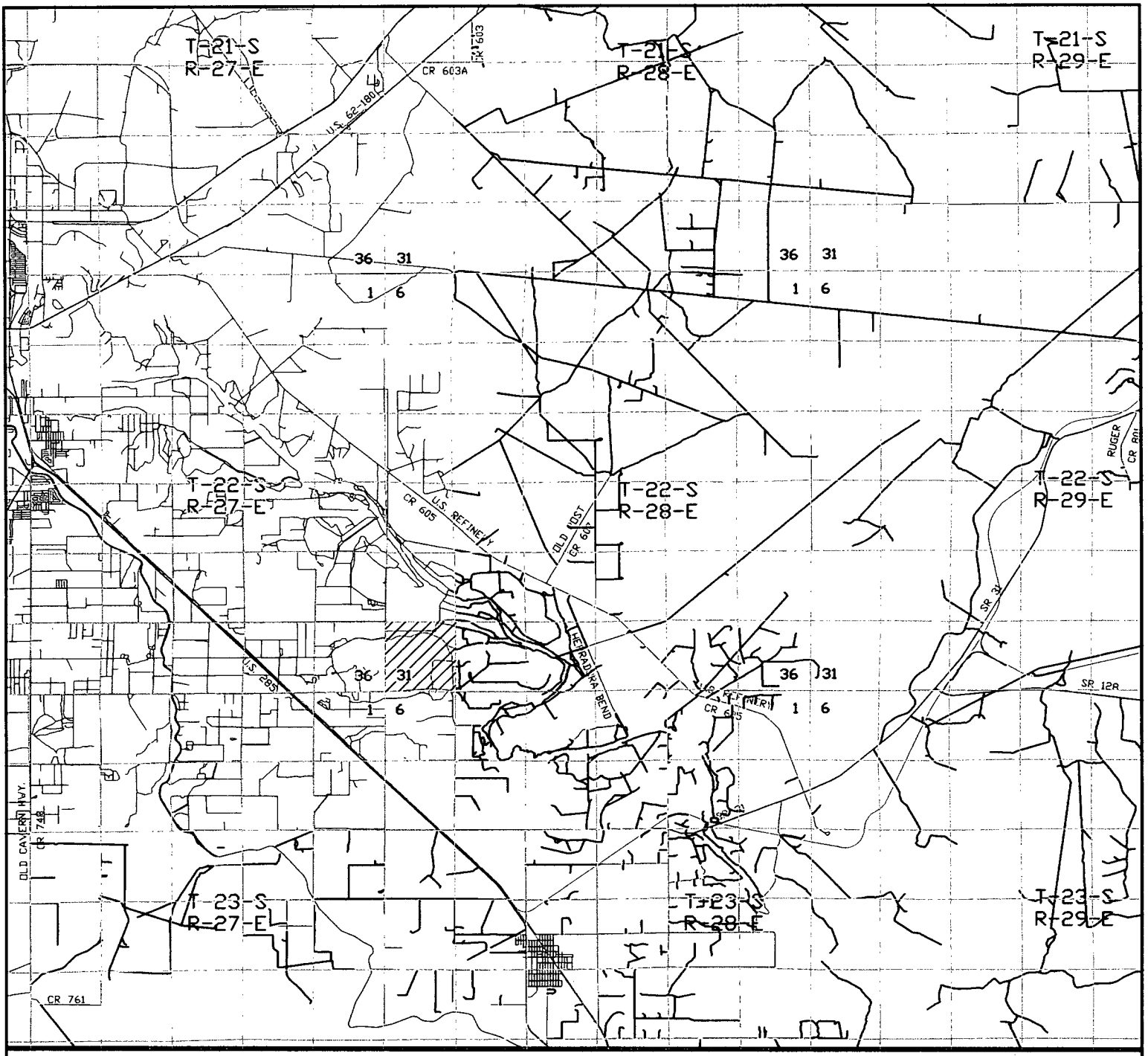
HANNIBAL FEE COM #1
Located at 660' FNL and 1980' FEL
Section 31, Township 22 South, Range 28 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

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

W.O. Number:	5971AA - KJG #1
Survey Date:	11-14-2005
Scale:	1" = 2000'
Date:	11-18-2005

NADEL AND GUSSMAN PERMIAN, L.L.C.



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Section 31, Township 22 South, Range 28 East,
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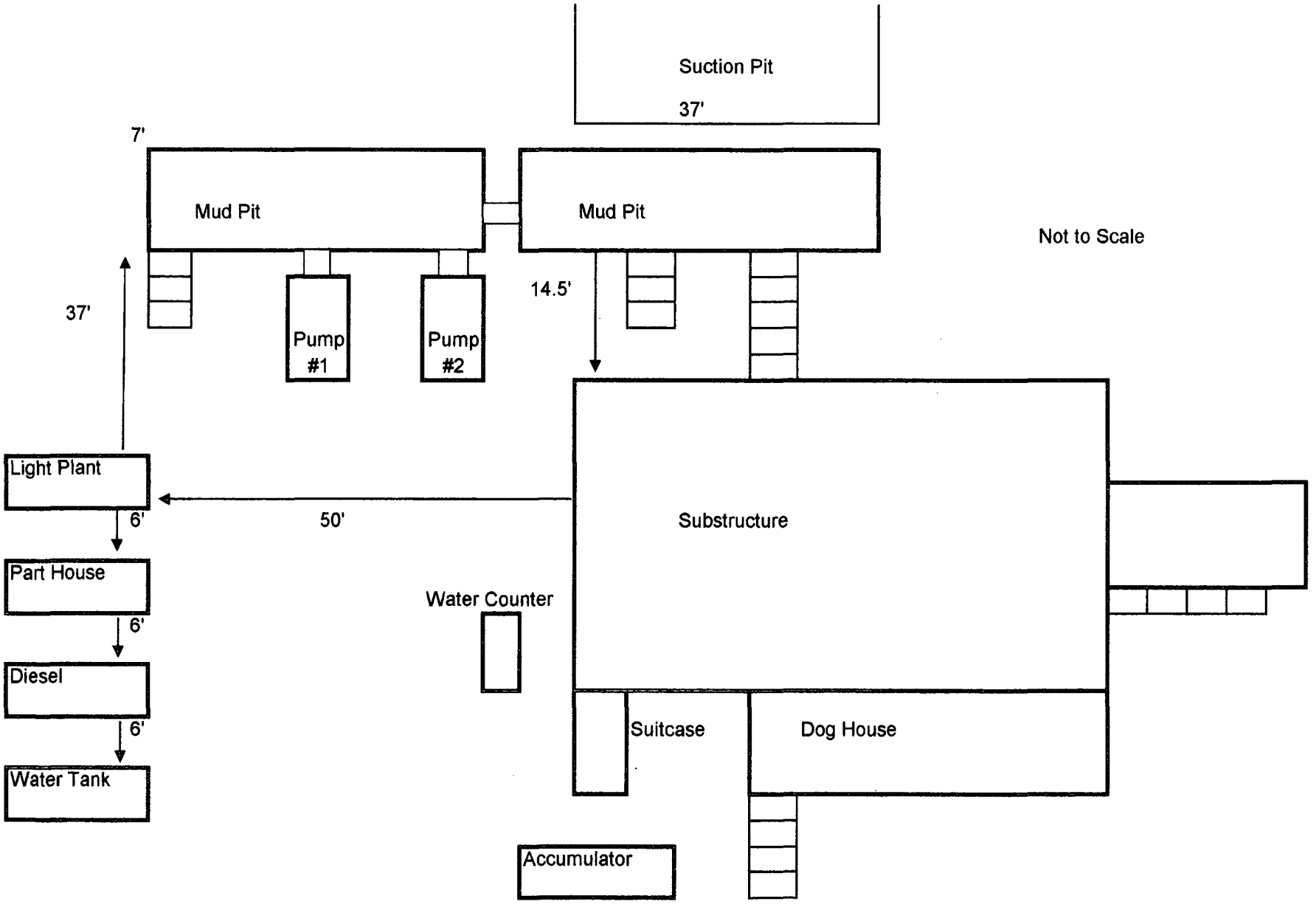
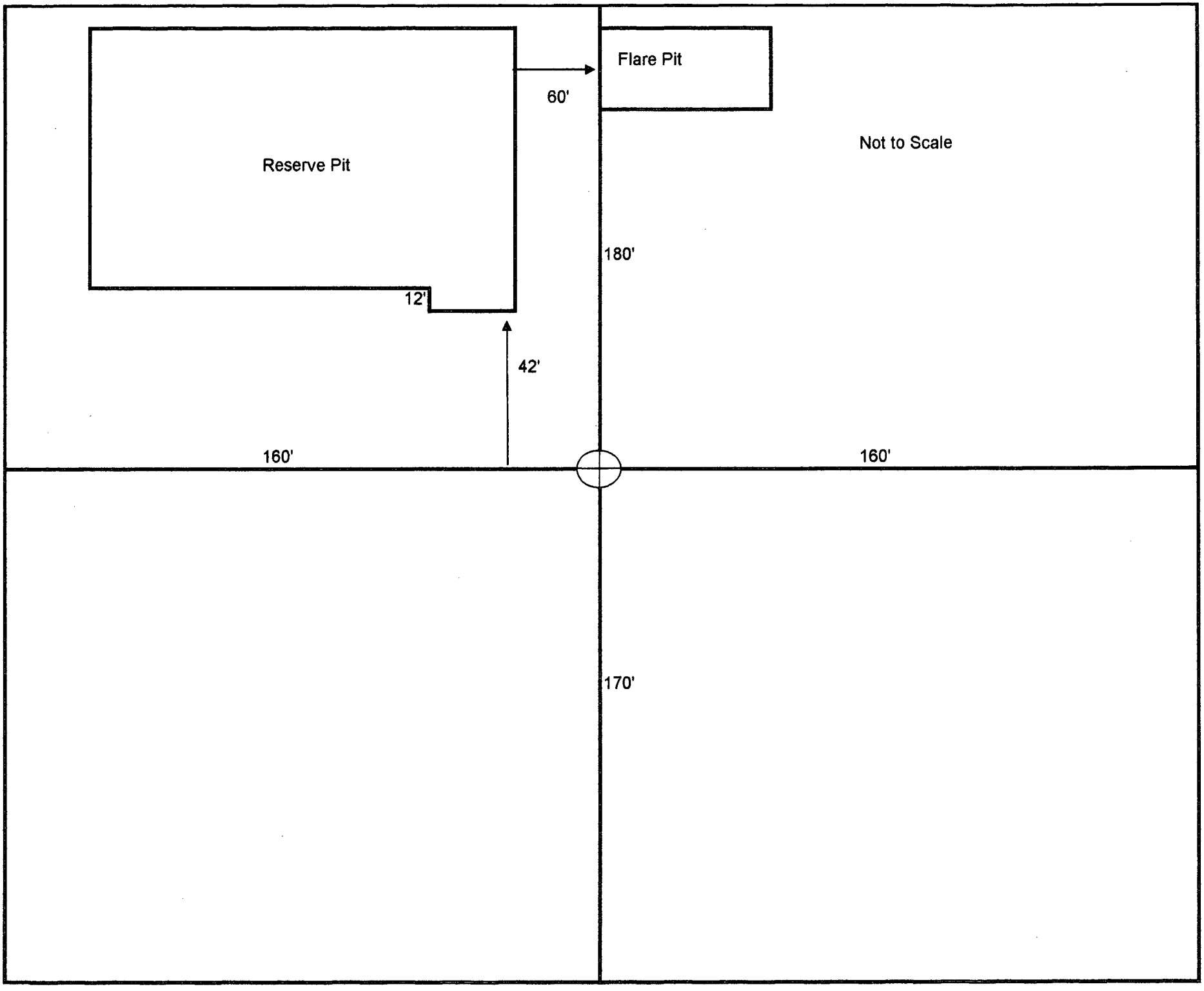
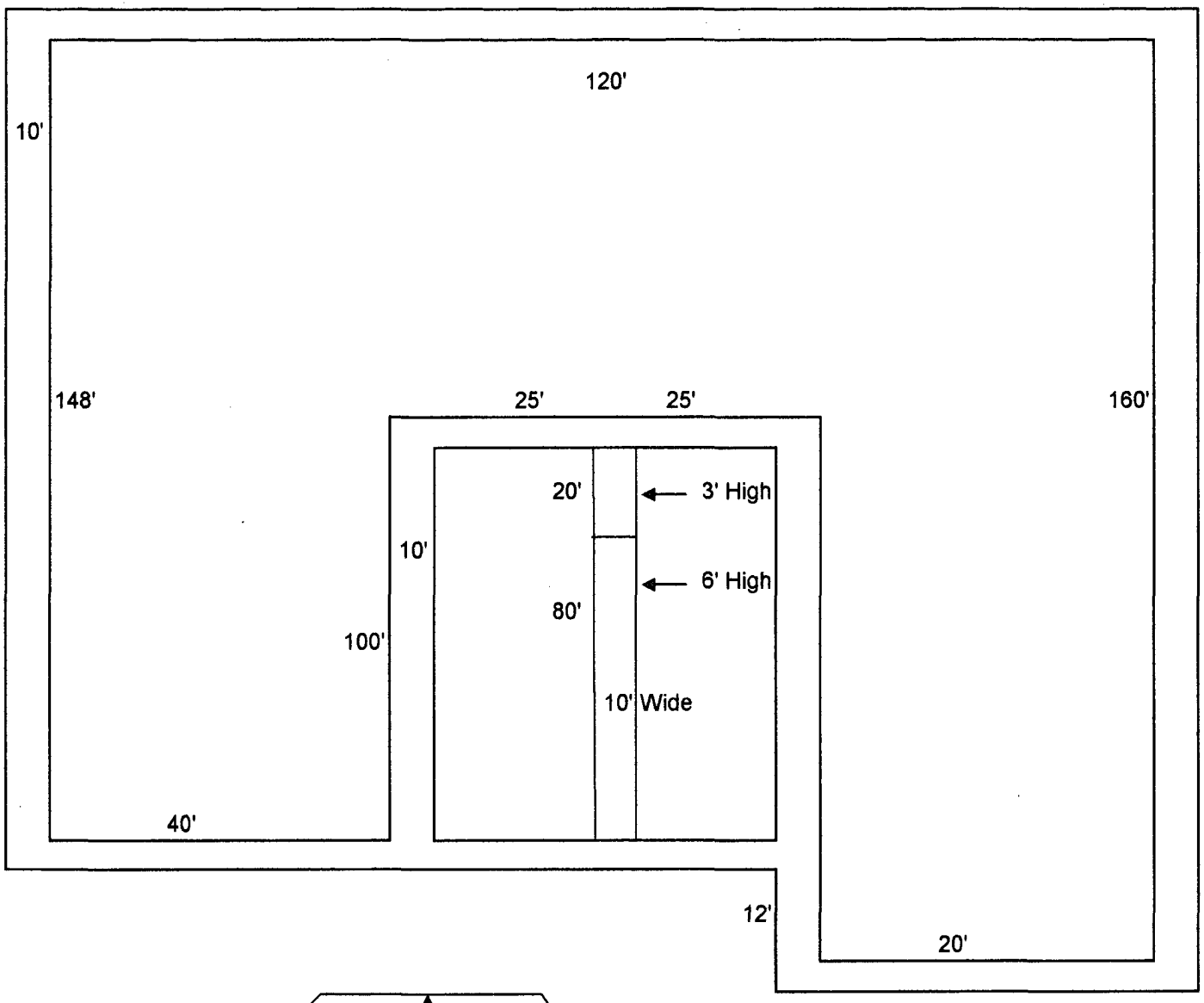
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	5971AA - KJG #1
Survey Date:	11-14-2005
Scale:	1" = 2 MILES
Date:	11-18-2005

NADEL AND GUSSMAN PERMIAN, L.L.C.


Suction Pit
37'
7'
Mud Pit
Mud Pit
Not to Scale
37'
Pump #1
Pump #2
14.5'
Light Plant
6'
50'
Substructure
Part House
6'
Water Counter
Diesel
6'
Suitcase
Dog House
Water Tank
Accumulator


Flare Pit
60'
Reserve Pit
Not to Scale
180'
12'
42'
160'
160'
170'



Not to Scale