

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

Form C-101
May 27, 2004

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

Submit to appropriate District Office
RECEIVED
MAY 27 2005
☐ AMENDED REPORT

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

¹ Operator Name and Address Nadel and Gussman Permian, LLC 601 N. Maricfield Suite 508 Midland, TX 79701		² OGRID Number 155615
³ Property Code 34872	⁴ Property Name Dinero "16" State	⁵ API Number 30-015-34139
⁶ Proposed Pool 1 Dublin Ranch Morrow		⁷ Proposed Pool 2

⁷ Surface Location									
UL or lot no. N	Section 16	Township 22 S	Range 28 E	Lot ldn	Feet from the 1,310	North/South line South	Feet from the 1,980	East/West line West	County Eddy

⁸ Proposed Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3,083'
¹⁶ Multiple No	¹⁷ Proposed Depth 12,800'	¹⁸ Formation Morrow	¹⁹ Contractor Paterson - UTI	²⁰ Spud Date 06/04/05
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'
²¹ Proposed Casing and Cement Program				


Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume: 15,000_bbls	Drilling Method: Fresh Water <input checked="" type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>
Closed-Loop System <input type="checkbox"/>	

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	4,500'	900sx	Circ. to Surf.
8 3/4"	5 1/2"	17#, 20# HCP-110	12,800'	1,550sx	TOC @ 4,000'

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 Dinero "16" State #4. 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 H₂S 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: 

Printed name: Josh Fernau

Title: Staff Engineer

E-mail Address: joshf@naguss.com

Date: 05/25/05

Phone: 432-682-4429

OIL CONSERVATION DIVISION

Approved by:

TIM W. GUM
DISTRICT II SUPERVISOR

Title:

Approval Date:

MAY 27 2005

Expiration Date:

MAY 27 2006

Conditions of Approval Attached ☐

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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-144
June 1, 2004

For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Nadel and Gussman Permian, LLC</u> Telephone: <u>432-682-4429</u> e-mail address: <u>joshf@naguss.com</u>		
Address: <u>601 N. Marienfeld Suite 508 Midland TX 79701</u>		
Facility or well name: <u>Dinero "16" State #4</u> API # <u>30-015-34139</u> U/L or Qtr/Qtr <u>N</u> Sec <u>16T</u> <u>22 S</u> R <u>28E</u>		
County: <u>Eddy</u> Latitude <u>N 32 deg 23' 20.6"</u> Longitude <u>W104 deg 05' 41.7"</u> NAD: 1927 <input checked="" type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input type="checkbox"/> State <input checked="" type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
Pit Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>15,000</u> bbl	Below-grade tank Volume: <u> </u> bbl Type of fluid: <u> </u> Construction material: <u> </u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. <u> </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (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 No	(20 points) (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 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (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: 05/25/05

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: 

Printed Name/Title

Signature 

Date:

JUN 01 2005

DISTRICT I
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DISTRICT II
811 South First, Artesia, NM 88210

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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

Form C-102
Revised March 17, 1999

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	Pool Name
Property Code	Property Name DINERO "16" STATE	Well Number 4
OGRID No.	Operator Name NADEL AND GUSSMAN PERMIAN	Elevation 3083'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	22 S	28 E		1310	SOUTH	1980	WEST	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.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>[Signature]</i> Signature Josh Fernau Printed Name Staff Engineer Title 05/25/05 Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>MAY 17, 2005 Date Surveyed NEW MEXICO Signature & Seal of Professional Surveyor 7977 No. 5368 Certificate No. Gary L. Jones 7977 Basin Surveys</p>
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NADEL AND GUSSMAN PERMIAN, L.L.C.
601 N. Marienfeld, Suite 508
Midland, TX 79701
(432) 682-4429 (Office)
(432) 682-4325 (Fax)

05/25/05

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

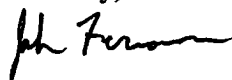
Re: Dinero "16" State #4
1,310' FSL & 1,980' FWL
Unit Letter N, Sec. 16-T22S-R28E
Eddy, NM
Rule 118 H2S Exposure

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,

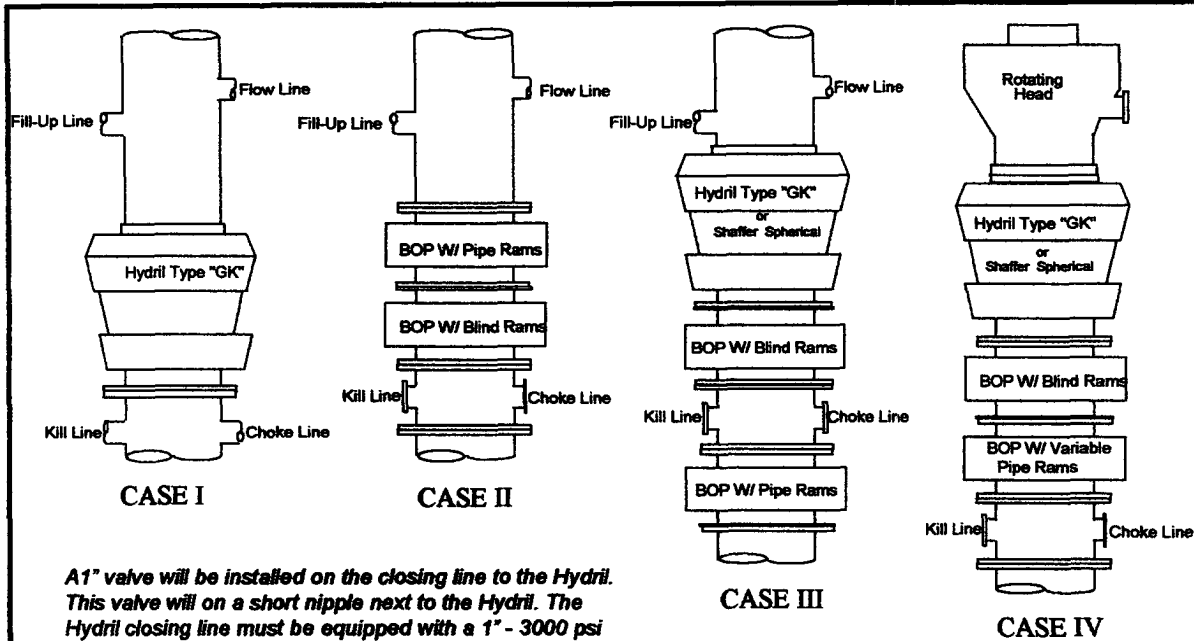


Josh Fernau
Staff Engineer

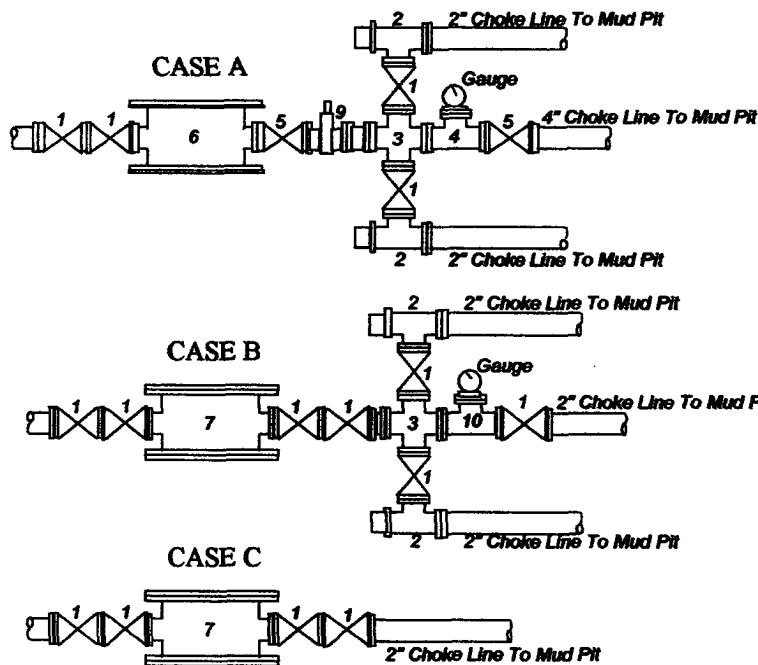
Hydrogen Sulfide Drilling Operations Plan

1. Company and Contract personnel admitted on location should be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S.
 - B. Physical Effects and Hazards.
 - C. Proper Use of Safety Equipment and Life Support Systems.
 - D. Principle and Operation of H₂S Detectors, Warning System and Briefing.
 - E. Evacuation Procedure, Routes and First Aid.
 - F. Proper Use of 30 minute Pressure Demand Air Pack.
2. H₂S Detection and Alarm Systems
 - A. H₂S Detectors and Audio Alarm System to be Located at Bell Nipple, End of Blooie Line (mud pit) and on Derrick floor or doghouse.
3. Windsack and/or Wind Streamers
 - A. Windsack at Mud Pit Area Should be High Enough to be Visible.
 - B. Windsack at Briefing Area Should be High Enough to be Visible.
 - C. There Should be a Windsack 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 H₂S 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 H₂S has on tubular goods and other mechanical equipment.
9. If H₂S Encountered, Mud system will be Altered if Necessary to Maintain Control of Formation. A Mud Gas Separator will be Brought into Service Along with H₂S Scavengers if Necessary.

Nadel and Gussman Permian MINIMUM BLOWOUT PREVENTER REQUIREMENTS



A1" valve will be installed on the closing line to the Hydril. This valve will be 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.



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
15 3/8	II	5,000 #	A

***Rotating head required**

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

Legend

1. 2" flanged all steel valve must be either Cameron "F", Hailburton 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.

OBJECTIVES AND METHODS

- 1) **Meet environmental standards.**
 - The proposed mud system provides economical inhibition and excellent well bore stability.
- 2) **Provide borehole stability.**
 - The Baroid Engineer will control flow properties, gel strengths, and solids in the desired ranges. In addition, we must follow prudent operating procedures such as short trips and optimized penetration rates.
- 3) **Prevent induced kicks and lost circulation. Minimize swab/surge pressures.**
- 4) **Optimize well bore cleaning in large diameter hole.**
 - This is accomplished by coordinating flow rates, penetration rates, and mud properties. Short trips are essential.
- 5) **Seal massive and/or depleted sands/limestone.**
 - **AQUAGEL®, HY-SEAL®, PLUG-GIT®, and BARO-SEAL™** will provide a good particle size distribution and a controlled fluid loss for plugging depleted or weak sands/limestone in the hole intervals.
- 6) **Prevent differentially stuck pipe.**
- 7) **Safe and economical completion of the project.**
 - Baroid personnel are dedicated to safety. The recommended fluid system is quite cost effective, when used to reduce total well cost, by reducing well bore related problems and the associated days.

Casing Program

Hole Size	Casing Size	Top MD/RKB	Set @ MD / RKB	Fluid Density	Drilling Fluid System
17 ½"	13 ¾"	300'	300'	8.4 – 9.0 ppg.	FW/Native
12 ¼"	9 5/8"	4,500'	4,500'	9.7-10.2 ppg.	Brine water
8 ¾"	5 ½"	12,800'	12,800'	8.4-11.0 ppg.	Brine/Polymer

*Casing program provided by Nadel & Gussman

Formation Tops (Estimated Depths) MD

System	Formation	GL (ft)	KB (ft)	Sub Sea (ft)
Permian	Delaware	±2,600'	±00'	±00'
	Canyon	± 3,438'	±00'	±00'
	Bone Spring	± 6,050'	±00'	±00'
	Wolfcamp	± 9,550'	±00'	±00'
	Strawn	± 10,780'	±00'	±00'
	Lower Atoka	± 11,100'	±00'	±00'
Target	Morrow	± 12,270'	±00'	±00'
Total Depth (TVD/MD)		± 12,800'	±00'	±00'

RECOMMENDED MUD PROPERTIES

MD(RKB) (ft)	Mud Wt. (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
300'- 4,500'	9.7-10.2	28-32	1-3	2-5	N/C	N/A	9.5-10.0	<3	180K
4,500' -10,400'	8.4-9.0	28-32	1-3	2-5	N/C	N/A	9.5-10.0	<2	8K-20K
10,400'-12,800'	10.0-11.0	35-45	6-9	9-18	<10	N/A	9.5-10.0	<5	100K-150K

DRILLING FLUID DISCUSSION BY INTERVAL

Interval: 0 – 300' MD: Spud Mud

Mud Properties:

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

Operation: Spud in and drill a 17 ½" hole and drill to 300'. Run and cement 13 3/8" surface casing.

Mud System: A fresh water system is recommended for drilling this interval. Build spud mud with **AQUAGEL®** for the desired funnel viscosity. 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®** for seepage. For excessive seepage or lost returns mix in 100 bbls of fresh water the following: 1 sack of soda ash to reduce hardness to <200 ppm, **AQUAGEL®** for a 35+ viscosity, 8-10 ppb **PLUG-GIT®**, 8-10 ppb **BARO-SEAL™**, and 6-8 ppb cottonseed hulls. In the event of complete loss of returns, dry drill (minimum 7 bpm) using gel/paper sweeps to keep the hole clean. **Be prepared for severe lost circulation and the possibility of "dry drilling" to TD.**

Hole Cleaning: Use EZ-MUD® in sweeps as needed or poured directly down the drill pipe on connections.

Corrosion Control- Refer to Corrosion Control Program. Add DA-370 (corrosion inhibitor) and FA-200 (filming amine) for corrosion control. Run corrosion rings in the drill pipe. Rings should be in place for a minimum of 100 hours unless the drill pipe is observed to be corroding or as instructed by the Corrosion Engineer. Monitor effectiveness of corrosion treatments. Record results on morning reports. Monitor corrosion rates and assure a rate of less than 1.5 lbs/ft²/yr. Ensure that the mud engineer's corrosion formulae are followed precisely and ensure that corrosion rings are submitted in a timely manner.

***At TD, sweep the hole with 50 bbls of pre-mixed fresh water/ AQUAGEL®/Lime/ HY-SEAL® with a funnel viscosity of 45-50 sec/qt.**

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

Mud Properties:

Interval	MW	VIS	PV	YP	FL	pH	% Solids	CR
300' - 4,500'	9.7-10.2	28-32	1-3	2-5	N/C	9.5-10.0	<3	180,000

Operation: Drill out of surface casing and obtain a successful shoe test. Drill a 12 1/4" hole to 6,100'. Run and cement 9 5/8" intermediate casing.

Mud System: Brine water is recommended to drill this interval. Maintain a 10 pH with Caustic soda.

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: *Deviation is possible in this interval.*

Lost Returns/Seepage - Add BARO-SEAL™, PLUG-GIT®, or HY-SEAL® for seepage or lost returns. DIAMONDSEAL™ is a water-swellable but not water soluble, 100% crystalline synthetic polymer that absorbs hundreds of times its own weight in water. It has been used in the area in conjunction with "regular" LCM products with good success.

Hole Cleaning: Use EZ-MUD® in sweeps or poured directly down the drill pipe on connections.

Corrosion Control- Add DA-370 (corrosion inhibitor) and FA-200 (filming amine) for corrosion control. *Keep the corrosion rates below 1.5 lbs/ft²/yr.* Run corrosion rings in the drill pipe. Rings should be in place for a minimum of 100 hours unless the drill pipe is observed to be corroding or as instructed by the Corrosion Engineer. Monitor effectiveness of corrosion treatments. Record results on morning reports. Monitor corrosion rates and assure a rate of less than 1.5 lbs/ft²/yr. Ensure that the mud engineer's corrosion formulae are followed precisely and ensure that corrosion rings are submitted in a timely manner.

***At TD, sweep the hole with 50 bbls of pre-mixed fresh water/ AQUAGEL®/Lime/ HY-SEAL® with a funnel viscosity of 45-50 sec/qt.**

Interval: 6,100' - 10,400' MD: Cut Brine Water

Mud Properties:

Interval	MW	VIS	PV	YP	FL	pH	% Solids	CF
4,500' -10,400'	8.4-9.0	28-32	1-3	2-5	N/C	9.5-10.0	<2	8-20K

Operation: Drill out of intermediate casing and obtain a successful shoe test. Drill an 8 ¾" hole to 10,400'.

Mud System: Cut Brine water is recommended to drill this interval. Use caustic soda to maintain the pH above 10. Sweep hole as needed for adequate 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. *To control solids, add 2.5 gals/2 hrs. of SS-105 at the flowline.*

Issues: Lost Returns/Seepage - Add BARO-SEAL™, PLUG-GIT®, or HY-SEAL® for seepage or lost returns. *Pump LCM (starting with 3-4 sx/hr of paper) as needed to control seepage and lost circulation. For excessive seepage mix 35-40 sx of starch to the system at 5 min/sk.*

Hole Cleaning: Use EZ-MUD® in sweeps or poured directly down the drill pipe on connections. HY-SEAL® can also be used in sweeps for additional hole cleaning. *Sweep the hole every 200' or as needed for fill or drag with 1-2 gals. of SS-105 (add at the pump suction).*

Corrosion Control- Add DA-370 (corrosion inhibitor), DA-320 (H₂S scavenger), and FA-200 (filming amine) for corrosion control. Run corrosion rings in the drill pipe. Rings should be in place for a minimum of 100 hours unless the drill pipe is observed to be corroding or as instructed by the Corrosion Engineer. Monitor effectiveness of corrosion treatments. Record results on morning reports. Monitor corrosion rates and assure a rate of less than 1.5 lbs/ft²/yr. Ensure that the mud engineer's corrosion formulae are followed precisely and ensure that corrosion rings are submitted in a timely manner.

**Ensure corrosion chemicals are mixed exactly as recommended by the mud engineer. Ensure that corrosion rings are run in saver sub and top of drill collars. Rings should be submitted for analysis on each trip. Visually check pipe on trips and check for unusual wear or corrosion*

Interval: 10,400'- 12,800' MD: Barazan D+/Dextrid

Mud Properties:

Interval	MW	VIS	PV	YP	FL	pH	% Solids	CF
10,400'-12,800'	10.0-11.0	34-45	6-9	9-18	<10	9.5-10.0	<5	100-150K

Operation: At ~10,400' begin mud up with **BARAZAN® D PLUS/DEXTRID® LT**. Mix **BAROID®** for desired mud weight as dictated by hole conditions.

Mud System: A brine/polymer system is recommended to drill this interval. Use caustic soda to maintain the pH above 10. Sweep hole as needed for adequate 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: Lost Returns/Seepage - Add **BARO-SEAL™**, **PLUG-GIT®**, or **HY-SEAL®** for seepage or lost returns. *Pump LCM (starting with 3-4 sx/hr of paper) as needed to control seepage and lost circulation. For excessive seepage mix 35-40 sx of starch to the system at 5 min/sk.*

Hole Cleaning: **HY-SEAL®** may be used in sweeps for additional hole cleaning.

***At TD, mud from system may be pulled into slug pit and viscosity raised to 60-70 sec/qt for added hole cleaning.**

Corrosion Control- Add **DA-370** (corrosion inhibitor), **DA-320** (H₂S scavenger), and **FA-200** (filming amine) for corrosion control. Run corrosion rings in the drill pipe. Rings should be in place for a minimum of 100 hours unless the drill pipe is observed to be corroding or as instructed by the Corrosion Engineer. Monitor effectiveness of corrosion treatments. Record results on morning reports. Monitor corrosion rates and assure a rate of less than 1.5 lbs/ft²/yr. Ensure that the mud engineer's corrosion formulae are followed precisely and ensure that corrosion rings are submitted in a timely manner.

****Ensure corrosion chemicals are mixed exactly as recommended by the mud engineer. Ensure that corrosion rings are run in saver sub and top of drill collars. Rings should be submitted for analysis on each trip. Visually check pipe on trips and check for unusual wear or corrosion***

**SECTION 16, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.**

150' NORTH
□ OFF SET
3083.5'

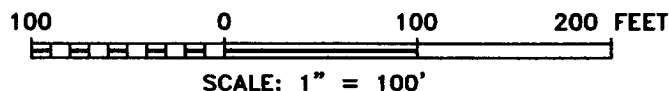
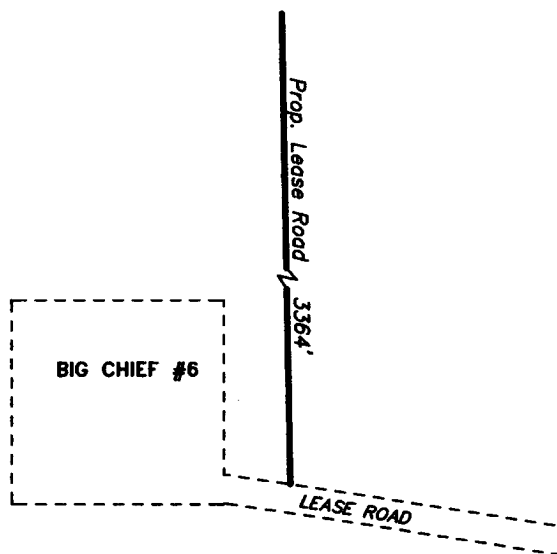
**NADEL & GUSSMAN PERMIAN
DINERO "16" STATE #4
ELEV. - 3083'**

150' WEST □
OFF SET
3083.1'

⊙
LAT. N32°23'20.6"
LONG. W104°05'41.7"

150' EAST
□ OFF SET
3083.4'

150' SOUTH
□ OFF SET
3082.2'



Directions to Location:

FROM THE JUNCTION OF CO. RD. 605 AND CO. RD. 607, GO NORTHEAST ON 607 FOR 0.9 MILE TO LEASE ROAD; THENCE WEST ON LEASE ROAD FOR 0.5 MILE PAST BIG CHIEF #3 TO PROPOSED LEASE ROAD.

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

W.O. Number: 5399 Drawn By: **K. GOAD**

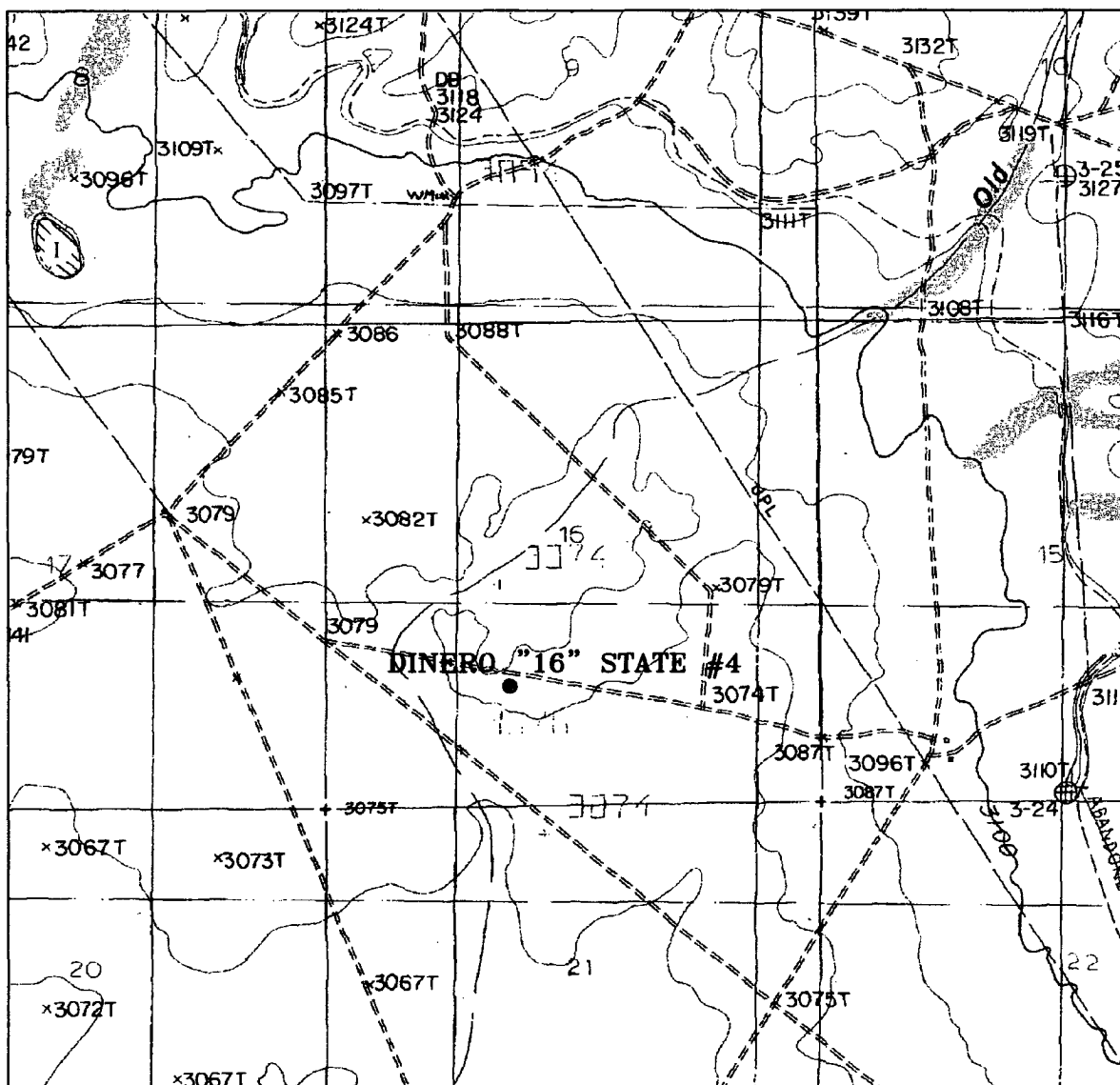
Date: 05-24-2005 Disk: KJG #9 - 5399A.DWG

NADEL AND GUSSMAN PERMIAN

REF: DINERO "16" STATE No. 4 / Well Pad Topo

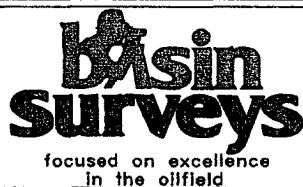
- DINERO "16" STATE No. 4 LOCATED 1310' FROM THE SOUTH LINE AND 1980' FROM THE WEST LINE OF SECTION 16, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 05-17-2005 Sheet 1 of 1 Sheets



DINERO "16" STATE #4

Located at 1310' FSL and 1980' FWL
 Section 16, 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

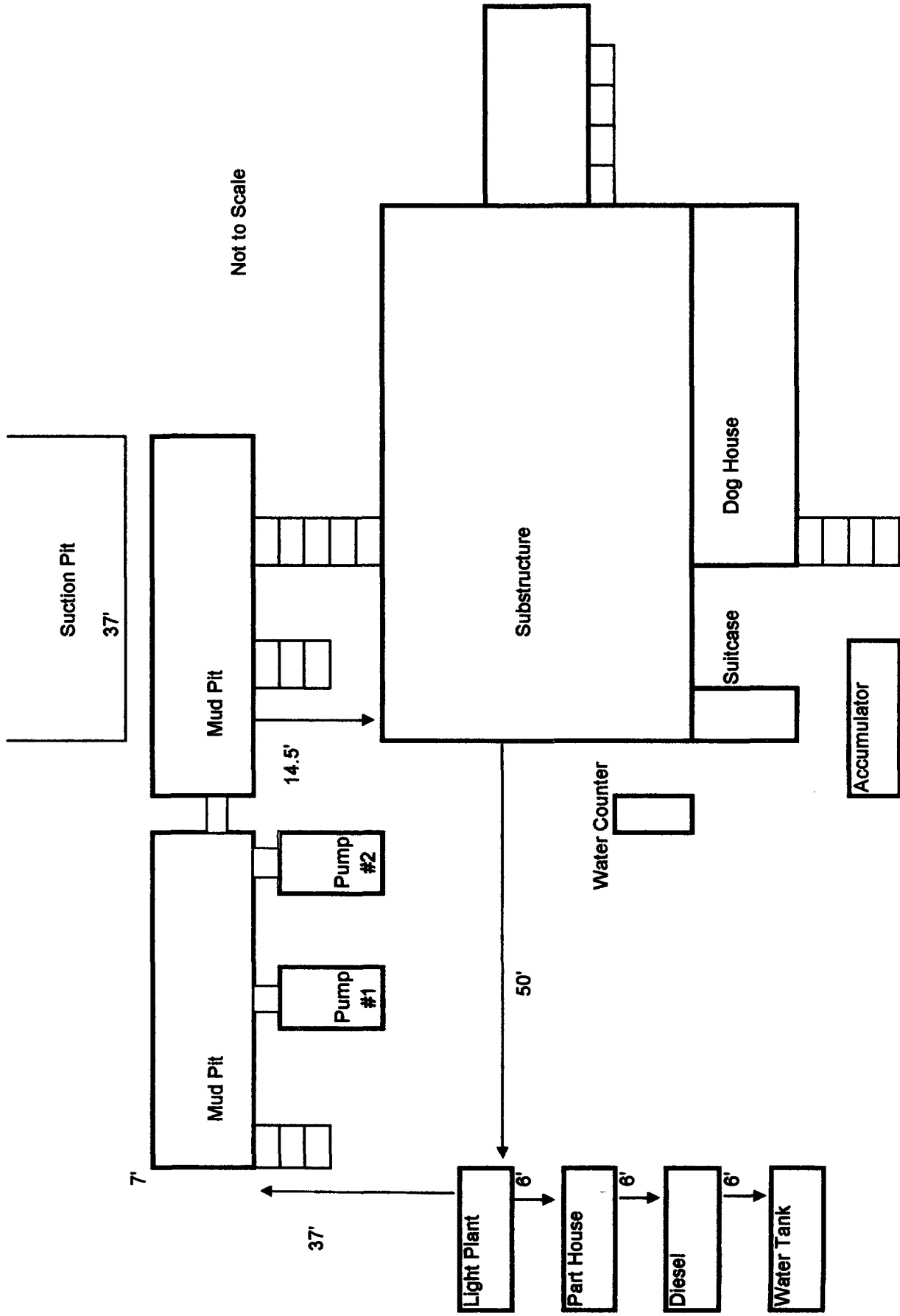
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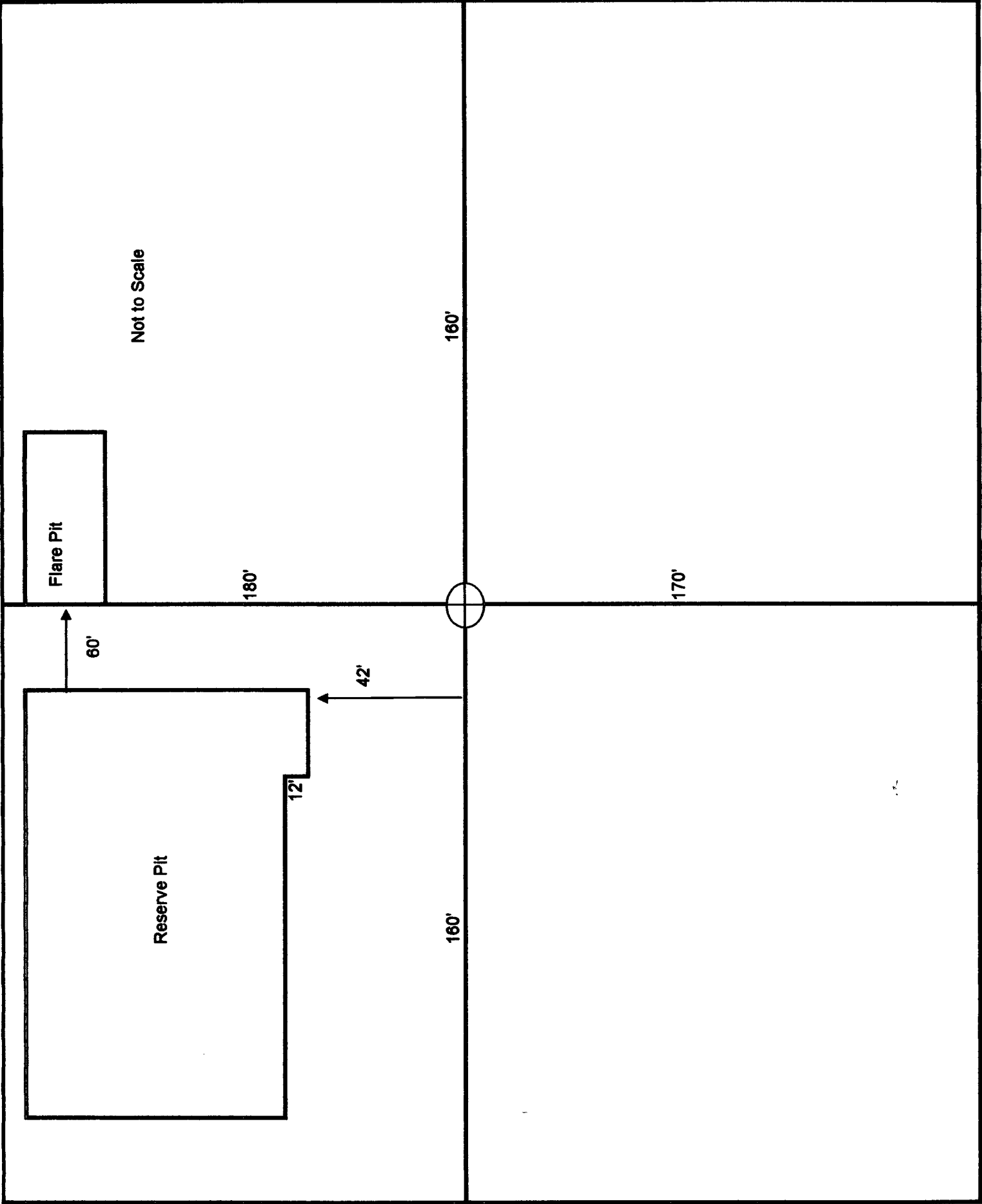
Survey Date: 05-17-2005

Scale: 1" = 2000'

Date: 05-24-2005

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





Not to Scale

