(September 2001)	1901	ll Cons. Di W. Grand J			PPROVED . 1004-0136 wary 31, 2004
UNITED STATES DEPARTMENT OF THE IN BUREAU OF LAND MANAG	NTERÎOR⊖			5. Lease Serial No.	
APPLICATION FOR PERMIT TO DE		EENTER		6. If Indian, Allottee	or Tribe Name
la. Type of Work: 🗹 DRILL 🔲 REENTE	 R			7. If Unit or CA Agre	ement, Name and No.
1b. Type of Well: Oil Well 🗹 Gas Well 🔲 Other	⊠ s	ingle Zone 🔲 Mul	tiple Zone	8. Lease Name and W Tornillo "18" Federa	
2. Name of Operator				9. API Well No.	<u></u>
Nadel Gussman Permian, L.L.C. 15561	5			30-015- 343	06
3a. Address		o. (include area code)		10. Field and Pool, or	
601 N. Marienfeld, TX 79701 Suite 508	(432) 682-4	429		Cemetary Morrow	
4. Location of Well (Report location clearly and in accordance with	<u> </u>				Blk. and Survey or Area
At surface 660' FSL & 660' FEL		RECE	IVED		
At proposed prod. zone 660' FSL & 660' FEL		AUG 3	0 2005	UL P - Sec. 18, T21	
14. Distance in miles and direction from nearest town or post office*		DOD-AF	TEBIA	12. County or Parish	13. State
14 Miles West of Carlsbad, NM			5 6 h= x 3/1/A	Eddy C ounty	NM
<ol> <li>Distance from proposed*         <ul> <li>location to nearest</li> <li>property or lease line, ft.</li> <li>(Also to nearest drig. unit line, if any) 660' FSL</li> </ul> </li> </ol>		Acres in lease		g Unit dedicated to this	well
18. Distance from proposed location*	320 19. Propose	d Danth	320	BIA Bond No. on file	
to nearest well, drilling, completed, applied for, on this lease, ft. N/A	9.800' TV	•	NM 2812		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		imate date work will		23. Estimated duration	
GL 3,847'	June 15, 2	005		33	
				ontrolled Water I	
The following, completed in accordance with the requirements of Onsho	re Oil and Gas	order No.1, shall be	attached to thi	s form:	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	Lands, the	Item 20 above) 5. Operator certifi	). ication. specific info	·	existing bond on file (see as may be required by the
25. Signature/		L			
		e (Printed/Typed) Eoreou			Date 05/09/05
Title	; <b>J</b> 080	Fernau			05/09/05
Staff Engineer					
Approved by (Signature) /s/ Joe G. Lara	Name	e (Printed/Typed)	/s/ Jo	e G. Lara	Date AUG 2 6 200
ACTINGIELD MANAGER	Offic	CARLS	BAD F		CE
Application approval dogs not warrant or certify that the applicant holds	legal or equits				
operations thereon. Conditions of approval, if any, are attached.	- •			OVAL FOR	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make States any false, fictitious or fraudulent statements or representations as	it a crime for a to any matter v	ny person knowingly within its jurisdiction.	and willfully	to make to any departme	ent or agency of the United
*(Instructions on reverse)					····
79.5			APPRO GENER	Val Subject Al Requirem	TO FATTS AMD

Witness Surface Casing

general requirements special stipulations attached

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#### Exhibit #1

DISTRICT L 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

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 Pool Code API Number Pool Name 4640 ene Tany Menner **Property** Code Property Name Well Number TORNILLO "18" FEDERAL 1 OGRID No. **Operator** Name Elevation NADEL AND GUSSMAN PERMIAN 3847' Surface Location UL or lot No. Section Township Range Lot ldn Feet from the North/South line Feet from the East/West line County P 18 21 S 24 E 660 SOUTH 660 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 best of my knowledge and belief.



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# 13 Point Land Use Plan

- 1. <u>Existing Roads</u> A small scale vicinity map is attached (Exhibit #3) which shows the location of this well in relation to an aerial view of surrounding townships and ranges. A larger scale topographical map is (Exhibit #4) shows the location of the well.
- 2. <u>Planned Access Roads</u> An access road from the location to the nearest exit leaving the lease, which is shown on (Exhibit #2), will have to be constructed. The lease is not fenced and a cattle guard or gate will not be needed.
- 3. Location of Existing Wells The Archimedes SWD #1, owned by Yates Petroleum Corp. is located in Section 18, T21S-R24E, 660' FSL & 660' FEL.
- 4. Location of Tank Batteries, Production Facilities & Lines -
  - We anticipate gas production from the Strawn, Atoka and Morrow, with possible volumes of produced oil or water. We will build a battery with a minimum of two 210 Bbl steel tanks, one for oil and one for water.
  - Pipe lines will be used to transport the sales of the natural gas using the access road / location to a commercial pipe line for sales.
  - We will also have a line heater and separator on location. All produced fluids from the Atoka or Morrow will be hauled off lease by road. There are no initial plans for oil pipelines, LACT units or SWD lines.
  - We do not anticipate a need for electrical service on the lease at this time.
- 5. <u>Location & Type- of Water Supply</u> Fresh and salt water will be trucked from the most economical location by a third- party contractor.
- 6. <u>Source of Construction Material</u> Primary source of caliche will be from the reserve pit area. If the reserve pit does not have sufficient amounts of caliche we will purchase the material from the most economical location followed by the proper documentation.
- 7. <u>Methods of Handling Waste Disposal</u> A lined reserve pit will be dug to handle drill cuttings and fluid. The 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 and leveled. All trash and debris will be removed from the location.
- 8. Ancillary Facilities There are no camps or airstrips planned.
- 9. <u>Well Site Layout</u> The well site (see NMOCD C-102 Form) has been staked and is also indicated on the enclosed maps (Exhibits #1, #2, #3 & #4). The drilling pad will be graded covered by 6"

caliche and native rock from grade cut. The drilling pad will blend in with the terrain since the topography is generally flat.

Cross section - Before and after is shown below:



- 10. Plans for Restoration of Surface Commercial Well:
  - <u>Reshaped Topography</u> Rubbish will be hauled off upon completion of drilling operations. All future rubbish will be removed by the subcontractor generating same.
  - <u>Caliche Pad</u> Caliche drilling pad will remain intact until well is abandoned.
  - <u>Road</u> The road will remain intact as long as there is production on the lease.
  - <u>Timetable</u> This well is expected to produce for several years.
  - <u>Plans for Restoration of Surface</u> <u>Plugged and Abandoned Well</u>:

Surface will be restored in accordance with all regulations in effect at the time of abandonment.

# 11. Other Information -

- <u>Topography</u> The proposed well location is on a west-facing slope of a mountain.
- <u>Soil Characteristics</u> The soils are classified as Reagan Upton association. The observed soils are rocky with areas of sandy loams.
- Flora Vegetation is composed of mesquite, narrow leaf yucca, snakeweed, and mixed grasses.
- <u>Fauna</u> The wildlife consists of rabbits, antelope, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semiarid desert land.
- Other Surface Use Activities N/A.
- <u>Surface Ownership</u> BLM.
- <u>Water Wells</u> No water wells within 1,000' of the location.
- <u>Lakes, Streams, Ponds</u> There is a pit +/-160' west of the location (Exhibit #2). A dike will be constructed between the location and the wellhead. The pits will be to the east of the location into the side of the hill this was agreed upon by Barry Hunt of the BLM.
- <u>Dwellings</u> There are no inhabited structure within 1000' of the location.

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- <u>Archeological Summary</u> It is recommended that construction of the proposed well location and access road precede without any additional cultural resource investigations.
- 12. Operator's Representative -

Josh Fernau	Office Phone Home Phone Mobile Phone	(432) 682-4429 (806) 978-1523 (432) 238-2874
Teddy Rowland	Office Phone Home Phone Mobile Phone	(505) 746-1428 (505) 746-4970 (505) 513-1499
Joel Martin	Office Phone Home Phone Mobile Phone	(432) 682-4429 (432) 694-2569 (432) 238-9969

13. <u>Certification</u> - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drilling site and access route; that I am familiar with the condition which presently exists; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by a construction company or their contractors and sub-contractors in conformity with this plan.

Josh Fernau Staff Engineer Staff Engineer Date: 05/09/05

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# **13 Point Drilling Plan:**

- 1. Location: (SHL) 660' FSL & 660' FEL, Sec. 18, T-21-S, R-24-E, Eddy County, New Mexico (Form C-102)
- 2. <u>Elevation</u>: 3,847' GL
- 3. Geological Name of Surface Formation: The soils are classified as Reagan Upton association.
- 4. Type of Drilling Tools to be utilized; Rotary Tools
- 5. Proposed Drilling Depth: 9,900'
- 6. Tops of Important Geological Markers:

San Andres	642'	Wolfcamp	6,556'	Atoka	9,029'
Glorieta	2,234'	Canyon	7,604'	Morrow	9,425'
Bone Springs	2,836	Strawn	8,024'		

7. Estimated Depth of Anticipated Water, Oil or Gas:

Gas	- Strawn	8,024'
Gas	-Atoka	9,029'
Gas	-Morrow	9,425'

#### 8. Casing Program:

Hole Size	Interval	OD Casing	Weight Grade Jt.	Cement
26"	0-40'	20"	48# H-40	Surface
12 ¼"	0-1,200'	9 <b>5/8</b> "	40# N-80	Surface SWTNESS TOC 1,100'
8 3/4"	0-9,900'	7"	17# N-80 or P-110	TOC 1,100'

9. Specifications for Pressure Control Equipment: (Exhibit #6)

This rig will have a 11" 3M BOP Shaffer with pipe rams and blind rams, kill line, Komey hydraulic controls, and accumulator with remote controls. When setting up, will test BOP and choke to 1,500psi with 3<sup>rd</sup> party tester, will operate BOP once a day or as directed by the company representative. The surface and intermediate will be witnessed by a BLM representative.

## 10. Mud Program:

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The well will be drilled to TD with a combination of brine, cut brine, and XCD Polymer mud system.

Depth	Type	<u>Wt</u>	<b>Viscosity</b>	<u>Waterloss</u>
0-40'	FW	8.4#	28-34	NC
40'-1,200'	СВ	8.4#	30-32	NC
9,900' <b>-</b> TD	CB/XCD-PLY	8.8-10.0#	32-45	10

# 11. Testing, Logging & Coring Program:

- a. Testing: No DST's are expected.
- b. Coring: no coring is planned.
- c. Logging: open hole logs will be run prior to running production casing. The standard suite will be a Dual Lateral/ ML and GR/Density/Neutron combination.
- d. Depending on the sand quality, a FMI and/or formation tester may be run.
- e. Open hole logs will not be run through the surface hole section.

#### 12. Potential Hazards:

No significant hazards are expected. Lost circulation may occur, no  $H_2S$  expected, but the operator will utilize a  $3^{rd}$  party  $H_2S$  monitoring package from 1,200' to TD.

13. Anticipated Starting Date & Duration:

Plans are to begin drilling operations about June 15, 2005, approximately 30 days will be required to drill the well and 10 days will be needed for the completion.

# 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  $H_2S$ .

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- 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 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 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<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.



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### **CONDITIONS OF APPROVAL - DRILLING**

# I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

A. Well spud



- B. Cementing casing: 9-5/8 inch 5-112 inch
- C. BOP tests

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15<sup>th</sup> days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15-day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

5. 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.

## II. CASING:

1. The <u>9-5/8</u> inch surface casing shall be set at <u>approximately 1200 feet</u> and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the <u>7</u> inch production casing is <u>to reach at least 500 feet</u> above the top of the uppermost hydrocarbon productive interval.

#### **III. PRESSURE CONTROL:**

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the **9-5/8** inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.

- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- 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.

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

## IV. DRILLING MUD:

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Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- Recording pit level indicator to indicate volume gains and losses.
- Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

5/12/05 acs