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Form 3160-3
(August 2007)

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
NMNM- 056376

6. If Indian, Allotee or Tribe Name

1a Type of work: ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No.

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

8. Lease Name and Well No
Paloma Ridge 28 Federal #3 <37541>

2 Name of Operator
Nadel and Gussman HEYCO, LLC <258462>

9. API Well No.
30-025-39437

3a. Address
P.O Box 1936
Roswell N.M. 88202

3b Phone No. *(include area code)*
575- 623-6601

10 Field and Pool, or Exploratory <96325>
~~Pearl West~~ Lea Grayburg NE

4 Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 1650' FNL & 660' FWL Unit E
At proposed prod. zone

11 Sec., T. R. M. or Blk. and Survey or Area
Sec 28, T19S, R34E

14 Distance in miles and direction from nearest town or post office*
20 miles west of Hobbs N.M

12. County or Parish
Lea

13 State
NM

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any)	16. No of acres in lease	17 Spacing Unit dedicated to this well
1980'	640	40
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19 Proposed Depth	20 BLM/BIA Bond No on file
	5050'	NMB000520

21 Elevations (Show whether DF, KDB, RT, GL, etc)	22. Approximate date work will start*	23. Estimated duration
3704' GL per operator	08/18/2009	30

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM

25. Signature	Name *(Printed/Typed)*	Date
Keith Cannon	Keith Cannon	04/22/2009

Title
Drilling Superintendent

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson		MAY 28 2009
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Continued on page 2)

*(Instructions on page 2)

KZ

Capitan Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Roswell Resource Area
P.O. Drawer 1857
Roswell, New Mexico 88202-1857

Statement Accepting Responsibilities for Operations

Operator Name: Nadel and Gussman Heyco, LLC
Street or Box: P.O. Box 1936
City, State: Roswell, New Mexico
Zip Code: 88202

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

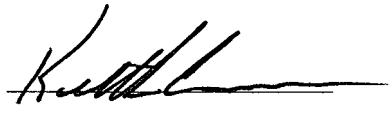
Lease No.: NMNM - 056376

Lease Name: Paloma Ridge 28 Federal #3
Legal description of land: Sec 28, T19S, R34E, Lea County, New Mexico

Formation(s) (if applicable): Grayburg, Queen, Seven Rivers

Bond Coverage: Statewide Bond

BLM Bond File No.: NM B 000520

Authorized Signature: 

Title: Drilling Superintendent

Date: 4/22/2009

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

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-39437	~~006311~~ 96325	~~Pearl West~~ Lea Graybury NE

Property Code	Property Name	Well Number
37541	PALOMA RIDGE "28" FEDERAL	3

OGRID No.	Operator Name	Elevation
258462	NADEL AND GUSSMAN HAYCO, LLC	3704'

Surface Location

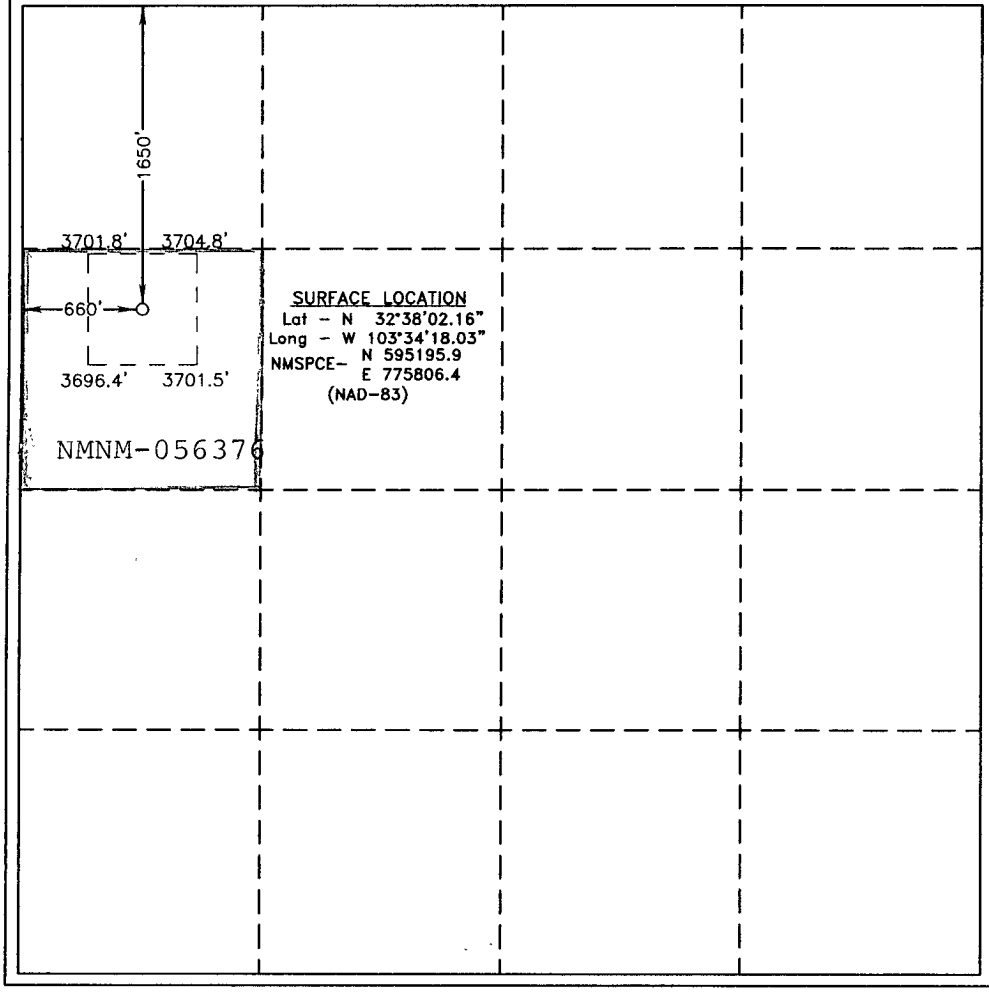
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	28	19 S	34 E		1650	NORTH	660	WEST	LEA

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
E	28	19S	34E		1650	North	660	West	Lea

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 4/22/09
Date

Keith Cannon
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

APRIL 20, 2009
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

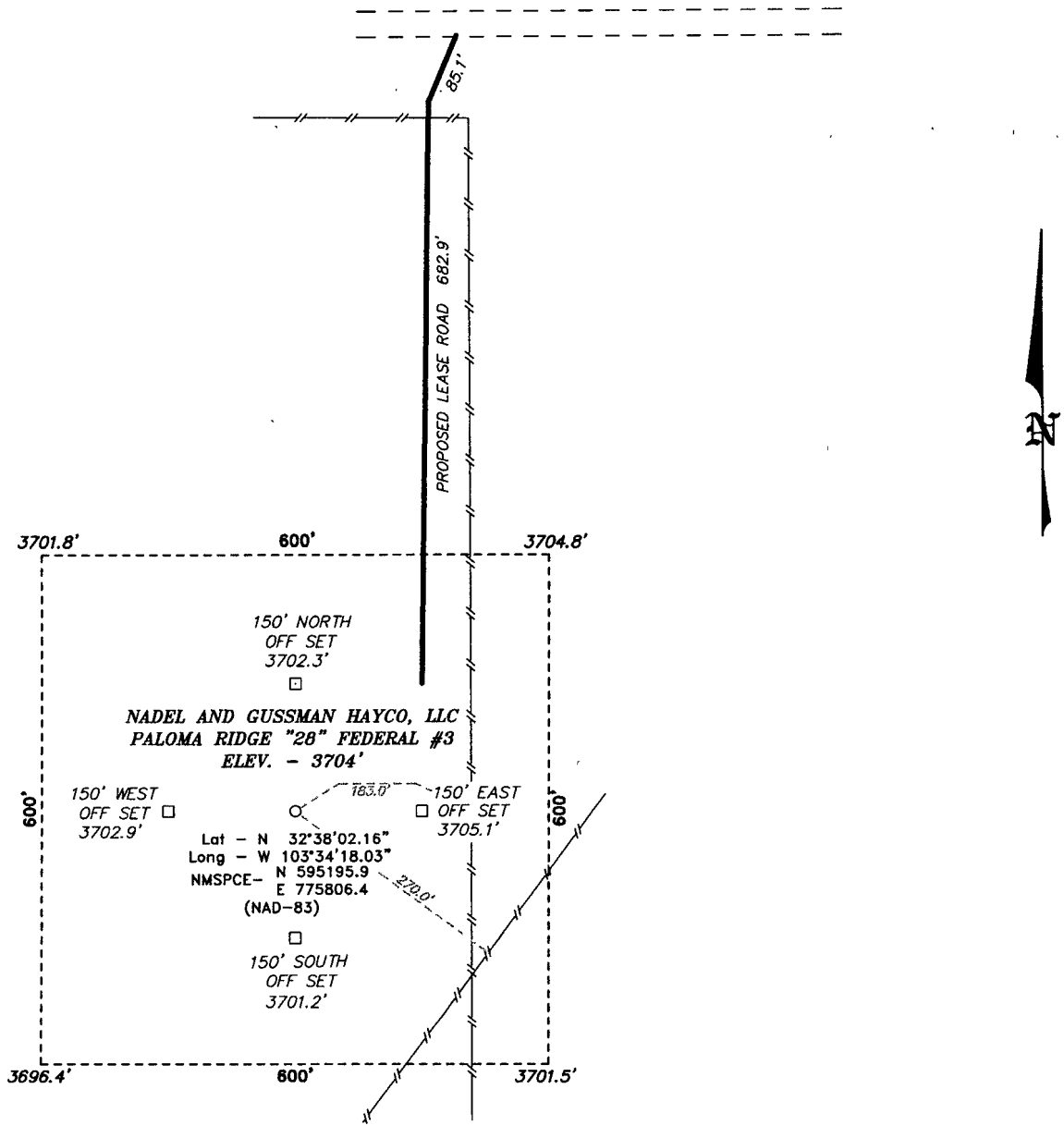
W.O. No. 21

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 34 EAST, N.M.P.M.,

LEA COUNTY, **NEW MEXICO.**



Directions to Location:

FROM MILE MARKER 78 OF HWY 62-180, GO EASTERLY 0.2 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTH 1.6 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 0.4 MILES TO PROPOSED LEASE ROAD.

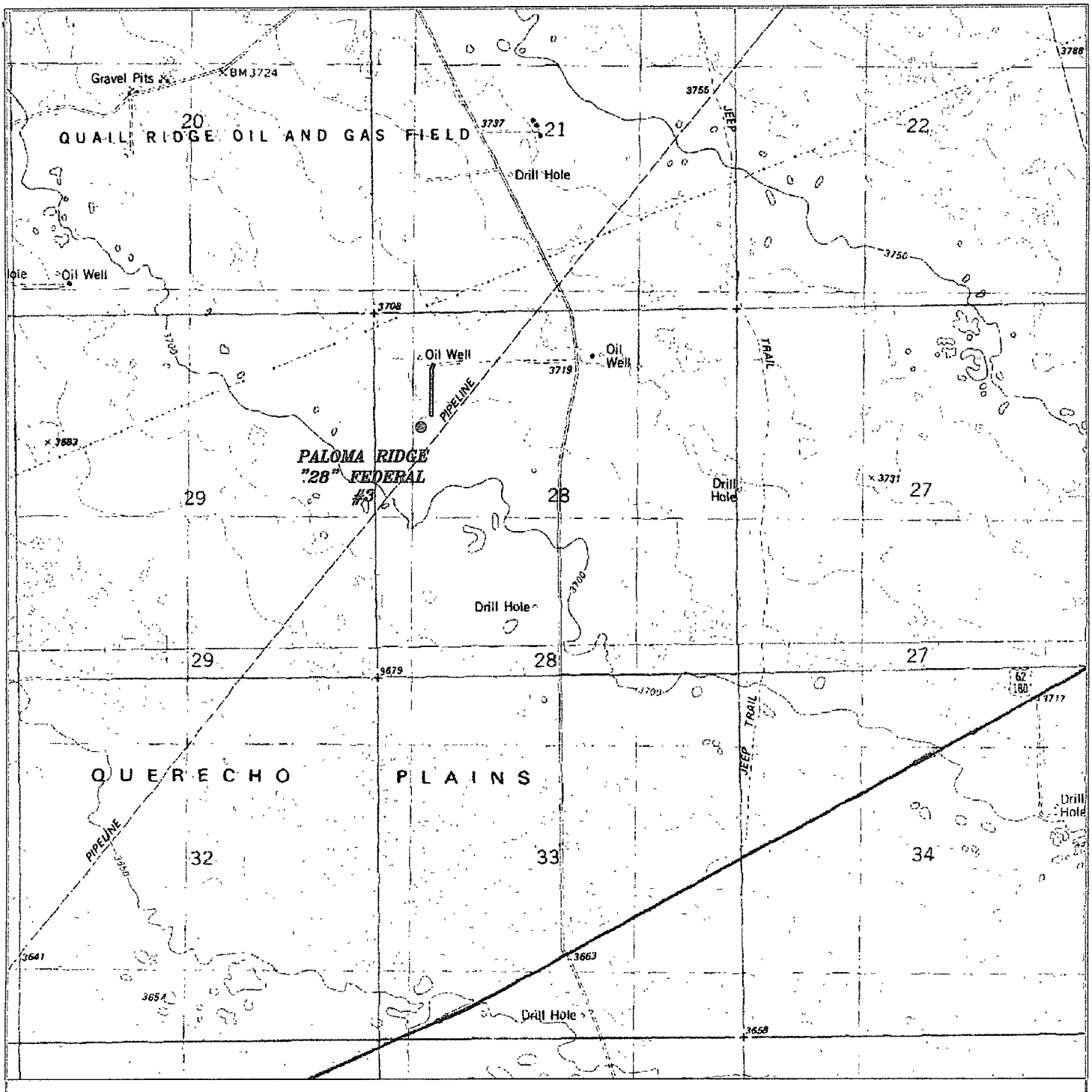
NADEL AND GUSSMAN HAYCO, LLC

REF: PALOMA RIDGE "28" FEDERAL #3 / WELL PAD TOPO

THE PALOMA RIDGE "28" FEDERAL #3 LOCATED 1650' FROM THE NORTH LINE AND 660' FROM THE WEST LINE OF SECTION 28, TOWNSHIP 19 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 21314	Drawn By: J. SMALL		
Date: 04-21-2009	Disk: JMS 21314	Survey Date: 04-20-2009	Sheet 1 of 1 Sheets



PALOMA RIDGE "28" FEDERAL #3

Located 1650' FNL and 660' FWL
Section 28, Township 19 South, Range 34 East,
N.M.P.M., Lea County, New Mexico.

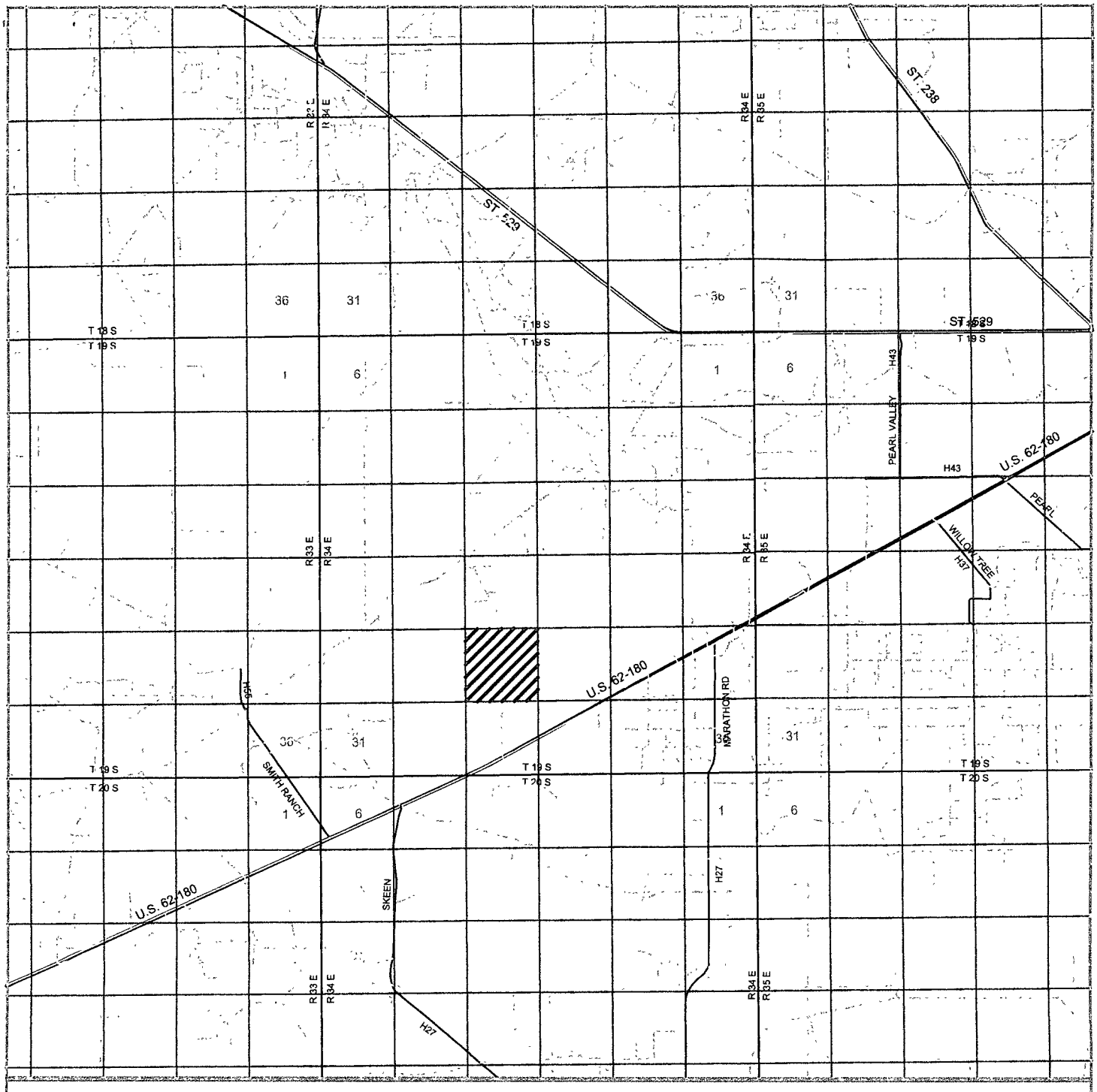
Basin Surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	JMS 21314
Survey Date:	04-20-2009
Scale:	1" = 2000'
Date:	04-21-2009

N

NADEL AND GUSSMAN HAYCO, LLC



PALOMA RIDGE "28" FEDERAL #3

Located 1650' FNL and 660' FWL
Section 28, Township 19 South, Range 34 East,
N.M.P.M., Lea County, New Mexico.

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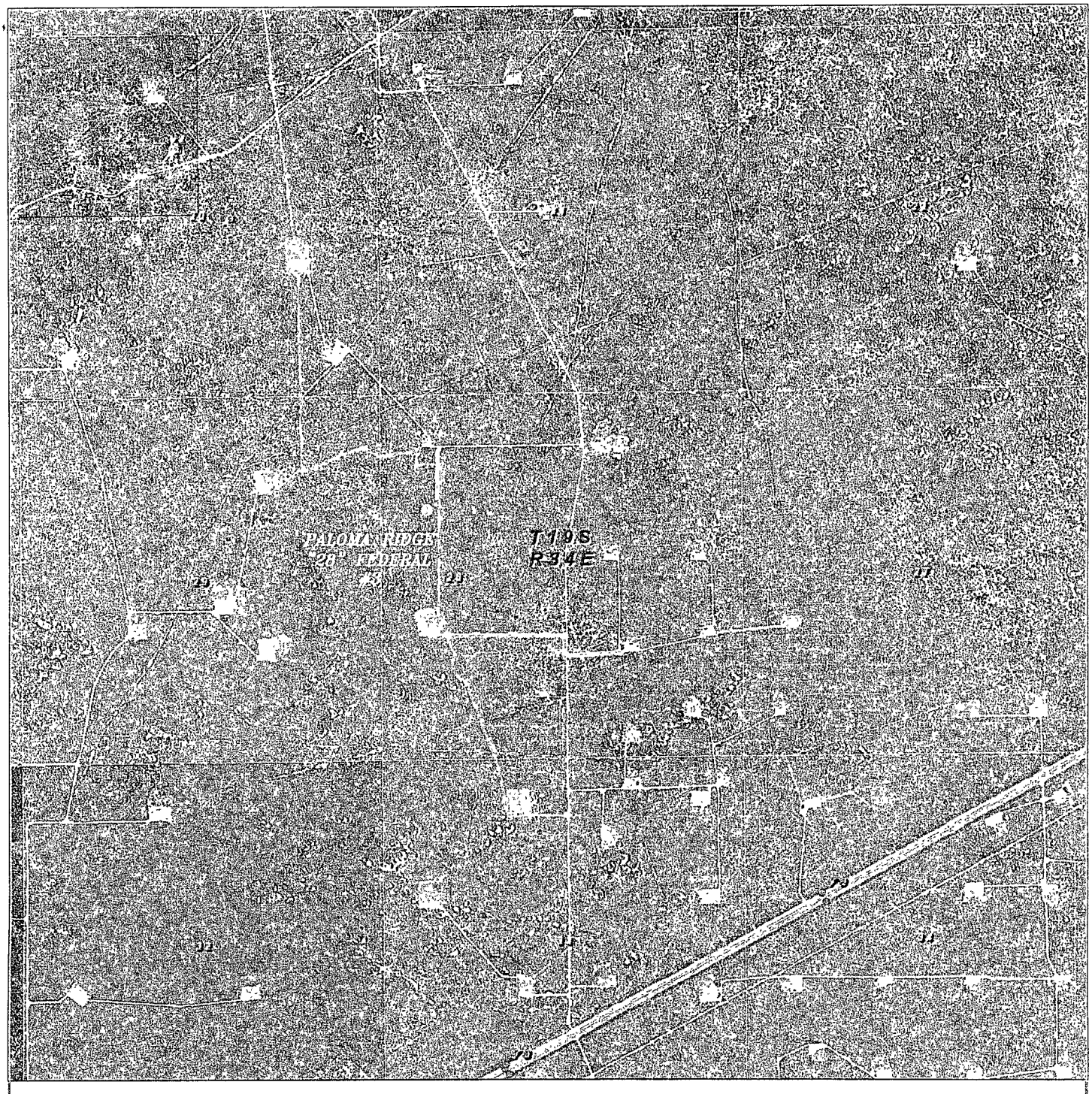
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 21314
Survey Date: 04-20-2009
Scale: 1" = 2 Miles
Date: 04-21-2009

NADEL AND GUSSMAN HAYCO, LLC



PALOMA RIDGE "28" FEDERAL #3

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Section 28, Township 19 South, Range 34 East,
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W.O. Number: JMS 21314

Scale: 1" = 2000'

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

NADEL AND GUSSMAN HAYCO, LLC

Application
Nadel and Gussman Heyco, LLC
Paloma Ridge 28 Federal #3
Sec 28, T19S, R34E
1650' FNL & 660' FWL
Lea County, New Mexico

In conjunction with Form 3160-3, Application For Permit To Drill Or Deepen subject well, Nadel and Gussman Heyco, LLC submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 10.

1. Geologic Name of Surface Formation:
   Quaternary Allunium

2. Estimated Tops of Significant Geologic Markers:

Formation	Depth	
Qal-Vegitated Dunes	At Surface	
Triassic Red Chinie-Grarita Creek	140'	Water
Santa Rosa-Tres Lagunas	310'	Water
Santa Rosa-Los Esteros	900'	Water
Santa Rosa-Tecolotitos	1030'	Water
Permian Ochoan-Dewey Lake	1350'	Water
Rustler Anhydrite	1690'	Water
Salado	1815'	Oil
Cowden Anhydrite	3060'	Oil
BX(base of salt)-Tansill	3255'	Oil
Yates	3435'	Oil
Seven Rivers	3885'	Oil
Bowers	4370'	Oil
Queen	4582'	Oil
Penrose	4785'	Oil
Grayburg-Getaway Bank	4930'	Oil
PDT	5050'	

No other formations are expected to yield oil, gas, or fresh water in measurable ~~volumes~~. See COA
The surface fresh water sands will be protected by setting 8 5/8" casing at ~~895~~' and circulating Cement back to surface. All other intervals will be isolation by setting 4 ½"Casing to total depth and circulating cement up into the 8 5/8" casing.

3. Proposed Casing Program:

Hole size	Depth	OD Csg	Weight	Collar	Grade	New/Used
12 ¼"	0' – ~~400~~ See COA	8 5/8"	24#	ST&C	J-55	NEW
7 ⅞"	400' – 5050'	4 ½"	10.5#	ST&C	J-55	NEW

Safety Factors: Burst 1.21 Collapse 1.125 Tension 1.8
All casing is new and API approved

4. Cement Program: (Note yields; and DV tool depths if multiple stages)

   a. 8 5/8" Surface — Cement to surface with: ← See COA
   200sx C, 2% CaCl and 0.125 ppg Celloflake, 14.8 ppg 1.34 cu.ft./ sx yield

   b. 4 1/2" Production — (Cement to surface with:) not per other paragraphs
   Lead- 400sx 35:65 Poz C, 1% Salt, 2ppg Kollte LCM, 0.2% antifoamer 0.2% Uniflac, 0.2% TIC, Dispersant and 0.1% Retarder, 12.7ppg 1.99 cuft/sk Yield
   Tail – 400 sx TXI Lightweight, 1.33% salt. 0.2% Antifoamer, 0.3% Uniflac 0.2% TIC Dispersant and 0.55% Retarder, 13.0ppg 1.42 CuFt/sk Yield, TOC @ 3000'.

The above volumes, additives and depths may be revised based on open hole logs, conditions encountered while drilling and on cement field blend tests. The top of cement for the production string is designed to reach approximately 200' above the 8 5/8" casing shoe.

5. Pressure Control Equipment:

The blowout preventor equipment (BOPE) shown in Exhibit #1 will consist of a (3m system) Double ram type (3000psi WP) preventor and a bag type (hydril) preventor (3000psi WP) Both unit will be hydraulically operated and the ram type preventor will be equipped with blind rams on top 4 ½" drill pipe rams on bottom. The BOP's and Hydrill will be tested as per BLM Drilling Operations Order #2. Pipe rams will be Operated and checked each 24hr period and each time drill pipe is out of the hole. These functional Test will be documented on the daily driller log. A 2" kill line and 3" choke line will be incorporated In the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly Cock, floor safety valve, choke line and choke manifold having a 3000psi wp rating.

6. Drilling Fluid Program:

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – ~~400'~~	8.4 – 8.8	80 – 55	NC	Fresh Water
~~400'~~ – 5050'	9.0 – 9.5	28 - 38	NC	Cut Brine Water ← See COA

See COA

The necessary mud products for weight addition and fluid loss control will be on Location at all times. Mud Program Sudject to change due to hole conditions.

7. Auxiliary Equipment:
   a. A Kelly Cock will be in the drill string at all times.
   b. A full opening drill pipe stabbing valve having the appropriate Connections will be on the rig floor at all times.
   c. Hydrogen Sulfide detection equipment will be in operation after drilling Out the 8 5/8" casing shoe unit the 4 ½" casing is cemented. Breathing Equipment will be on location upon drilling the 8 5/8" shoe unit total Depth is reached.

8. Testing, Logging, & Coring Program:

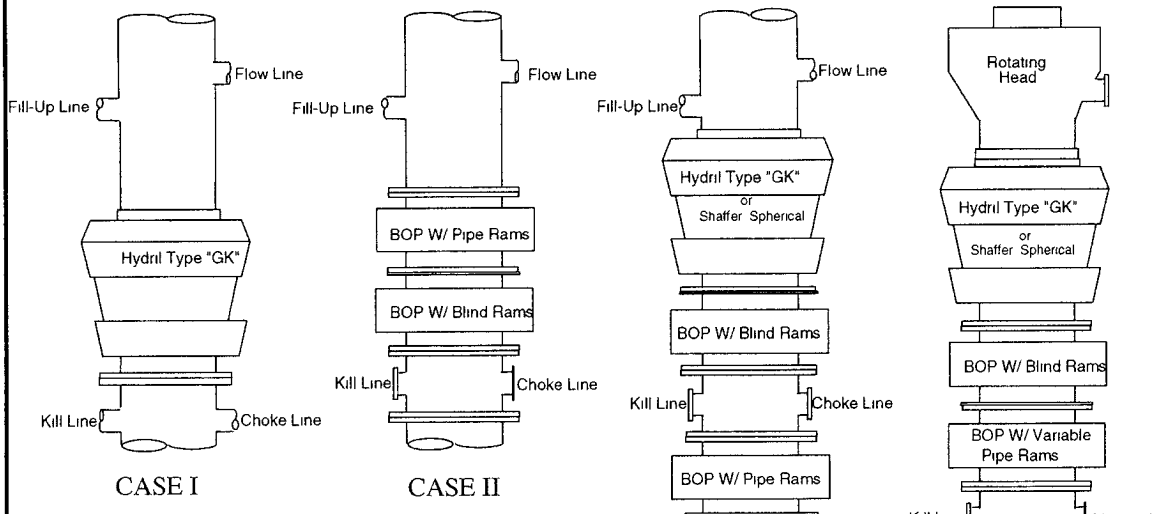
   a. Mud logging unit from the base intermediate casing to depth 10' samples will be caught by loggers
   b. Possible rotary sidewall cores
   c. Drill stem test will be based on geological sample shows Wolfcamp and Strawn.
   e. Platform express (GR / LDT – CNL – PE / DLL – MCFL / NGT)

9. Abnormal Conditions, Pressures, Temperature, or Potential Hazards:
No abnormal conditions are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No 6. Lost circulation might occur in the Capitan Reef. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 4700 psi and estimated BHT 180. No H2S is anticipated to be encountered.

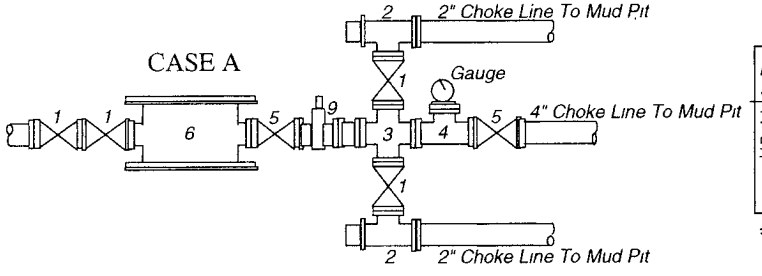
9. Anticipated Starting Date & Duration of Operation:
Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 15 days. If production casing is run then an additional 15 days will be needed to complete well And construct surface facilities and/or lay flow line in order to place well on production.

Nadel and Gussman Heyco, LLC

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

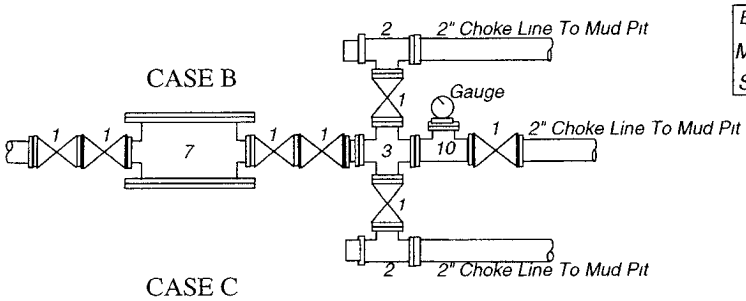


A1" valve will be installed on the closing line to the Hydril This valve will on a short nipple next to the Hydril. The Hydril closing line must be equipped with a 1" - 3000 psi WP plug valve on the nipple into the Hydril.

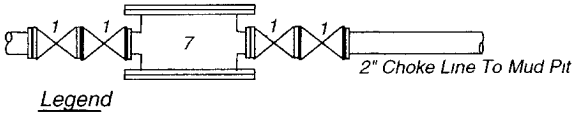


BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13-5/8"	III	3000 psi	B

**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 & 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

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Nadel & Gussman HEYCO
LEASE NO.:	NM056376
WELL NAME & NO.:	3 Paloma Ridge 28 Fed
SURFACE HOLE FOOTAGE:	1650' FNL & 660' FWL
BOTTOM HOLE FOOTAGE	' F L & ' F L
LOCATION:	Section 28, T. 19 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

1. Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

2. Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The operator has applied for a closed-loop system. The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

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

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS

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

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

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

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

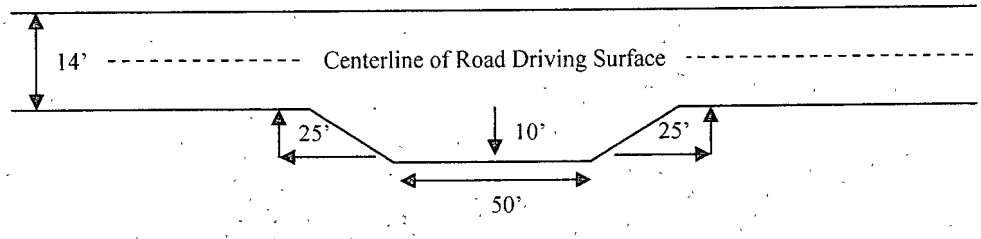
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on the uphill side of the road.

Ditching shall be required on both sides of the road.

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

Standard Turnout – Plan View

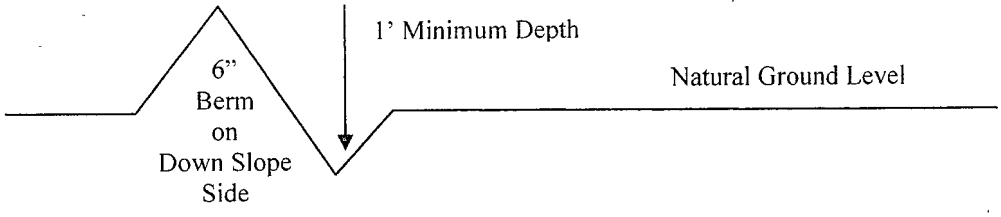


Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

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

A gate shall be constructed and fastened securely to H-braces.

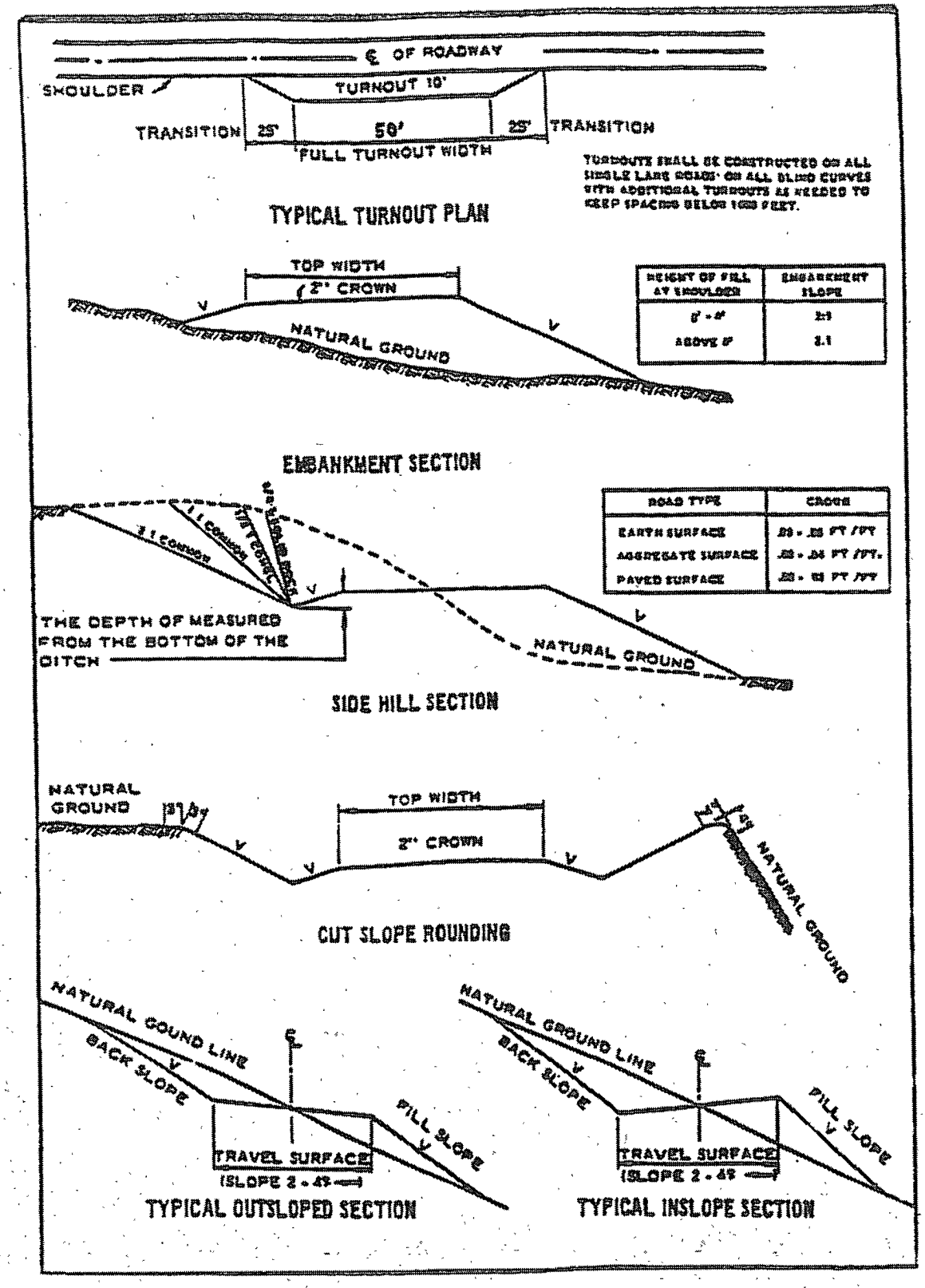
Fence Requirement

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

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

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Queen** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

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. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

1. The **8-5/8** inch surface casing shall be set **at approximately 1750 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth. Additional cement will be required.**

Onshore Order II requires casing to be set across a competent bed and the Rustler Anhydrite is the first formation that meets that criteria.

   a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

   b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

   c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

   d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **4-1/2** inch production casing is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

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

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

    b. The results of the test shall be reported to the appropriate BLM office.

    c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

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

D. DRILLING MUD

Fresh water mud to be used to setting depth of surface casing in the Rustler Anhydrite.

Saturated brine mud should be used to drill the thick salt section from approximately 1900-3350'.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 052209

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

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

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

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

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

**Four-winged Saltbush 5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.