**UNITED STATES** 

DEPARTMENT OF THE INTERIOR

# OCD-ARTESIA

ATS-08-475 EA-08-1018

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

CACARTERIAMNM-106718

5. Lease Serial No.

APPLICATION FOR PERMIT TO		••		6. If Indian, Allotee or Tri	be Name	
Ia. Type of work: DRILL REENT	Type of work: DRILL REENTER					
Ib. Type of Well: Oll Well Gas Well Other	<b>✓</b> Su	igle Zone   Multip	8. Lease Name and Well N CHOLLA 1 FEDERAL #		<del>8</del> 4	
2 Name of Operator NADEL AND GUSSMAN HEYCO, LLC	258	462		9. API Well No. 30 - 015	-365	- 43
3a. Address P.O. BOX 1936 ROSWELL N.M 88202	3b. Phone No. (575) 623-6	(include area code) 6601		10. Field and Pool, or Explor TAMANO; BONE SPRIN		<del></del>
4. Location of Well (Report location clearly and in accordance with a At surface 930 FSL & 660 FEL	iny State requirem	ents.*)		11. Sec., T. R. M. or Blk. and SEC 1, T18S, R31E	Survey or Area	
At proposed prod. zone  14. Distance in miles and direction from nearest town or post office*  10 MILES SOUTH EAST OF LOCO HILLS N.M.				12. County or Parish EDDY	13 State N.	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg. unit line, if any)	16 No. of a 320.06	cres in lease	17. Spacin 40 Acre	ng Unit dedicated to this well		
*8. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  1050'	19. Proposed 9100'	l Depth	B004230	WBIA Bond No. on file 30 5000520 5-16 - 08 am		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3801.8'	22. Approxis 06/15/200	nate date work will sta 8		23. Estimated duration 40 DAYS		
	24. Attac	hments				
<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 must be filed with the appropriate Forest Service Office).</li> </ol>		Bond to cover t Item 20 above).     Operator certifi	he operation	is form:  ns unless covered by an existi  ormation and/or plans as may		
25. Signature		Name (Printed Typed) Keith Cannon			Date 05/06/2008	
Title Drilling superintendent						
Approved by (Signature) /s/ Don Peterson	Name	(Printed/Typed)		Date	IUL 16	2008
Title FIELD MANAGER	Office	CARLSBA	DFIELD	OFFICE		
Application approval does not warrant or certify that the applicant ho conduct operations thereon.  Conditions of approval, if any, are attached.	lds legal or equi	_		oject lease which would entitle	the applicant to	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations a	crime for any p s to any matter v	erson knowingly and			ncy of the Unite	:đ

Capitan Controlled Water Basin

(Continued on page 2)

SEE ATTACHED FOR CONDITIONS OF APPROVAL Approval Subject to General Requirements & Special Stipulations Attached

\*(Instructions on page 2)

Form 3160-5 (April 2004)

## **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

OCD-	ARTESIA	
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FORM APPROVED OM B No. 1004-0137

CONDIN NO NOTO THE CONTO ON THERE	SUNDRY	NOTICES	AND	REPORTS	ON	WELLS
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	Expires: March 31, 2007	
5.	Lease Serial No.	
	NM-89879	

SUNDRY	11111-07077					
Do not use the	6. If Indian, Allottee or Tribe Name					
SUBMIT IN TR	7. If Unit or CA/Agreement, Name and/or No.					
1. Type of Well Oil Well	8. Well Name and No.					
2. Name of Operator				Mesquite 3 Federal #4		
2. Name of Operator Nadel and G	ussman HEYCO, LLC			9. API Well No.		
3a Address PO BOX 1936 ~ ROSWELL	NM 88202-1936	3b. Phone No. (include 505.623.6601	area code)	10. Field and Pool, or Exploratory Area		
4. Location of Well (Footage, Sec.,		Shugart; Bone Spring North				
330' FSL & 330' FWL, Sec. 3,	T18S, R31E			11. County or Parish, State  Eddy, New Mexico		
12. CHECK AI	PPROPRIATE BOX(ES) TO	INDICATE NATUR	E OF NOTICE, R	EPORT, OR OTHER DATA		
TYPE OF SUBMISSION	_	TYI	PE OF ACTION			
Notice of Intent Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction Plug and Abandon Plug Back	Production (Standard Reclamation Recomplete Temporarily Al	Well Integrity Other		
13 Describe Proposed or Complet	ed Operation (clearly state all pert	inent details, including esti	mated starting date of a	ty proposed work and approximate duration thereof		

If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Going from Pit's to Closed Loop System.

1
Title Production Tech
Date 07/07/2008
OR STATE OFFICE USE
Title FIELD MANAGER Date JUL 16 2008
nt or Office CARLSBAD FIELD OFFICE

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.

(Instructions on page 2)

# **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.:

Lease Name: Cholla 1 Federal #9

Legal description of land: Sec 1, T18S, R31E, Eddy County, New Mexico

Formation(s) (if applicable): Middle Morrow

**Bond Coverage: Statewide Bond** 

BLM Bond File No.: B004230

Authorized Signature:

**Title: Drilling Superintendent** 

Date: 5/5/08

# State of New Mexico

Fnergy, Minerals and Natural Resources Department

DISTRICT II

1301 W GRAND AVENUE, ARTESIA, NM 88210

1000 RIO BRAZOS RD, AZTEC, NM 87410

# 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

#### DISTRICT IV

DISTRICT III

DISTRICT IV 1220 S ST FRANCIS DR., SANTA FE, NM 87505	WELL LOCATION AND ACREAGE DEDICATION PLAT  ——AMENDED REPORT					
API Number	Pool Code	Pool Name	C ANEINDED REFORM			
· ·	58040	TAMANO: BONE SPRINGS				
Property Code	Pro	operty Name	Well Number			
205024	CHOLLA	9				
OGRID No	Op	erator Name	Elevation			
258462	NADEL AND GU	3802'				

#### Surface Location

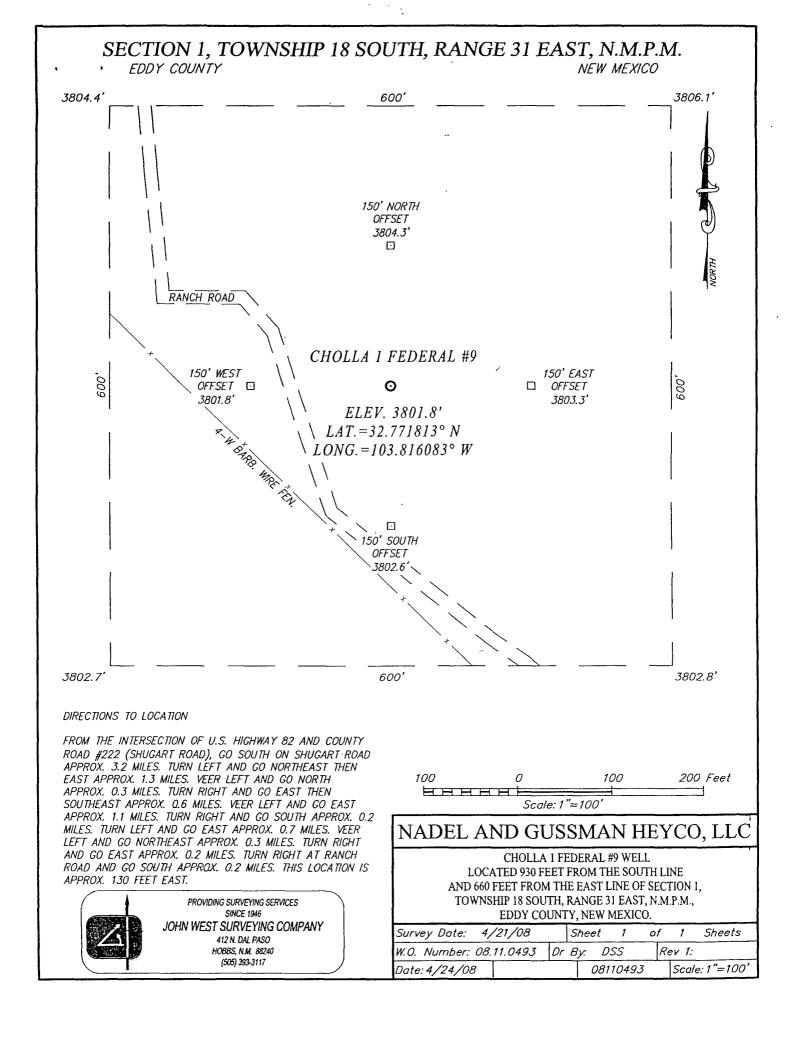
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Соилту
Р	1	18-S	31-E		930	SOUTH	660	EAST	EDDY

#### Bottom Hole Location If Different From Surface

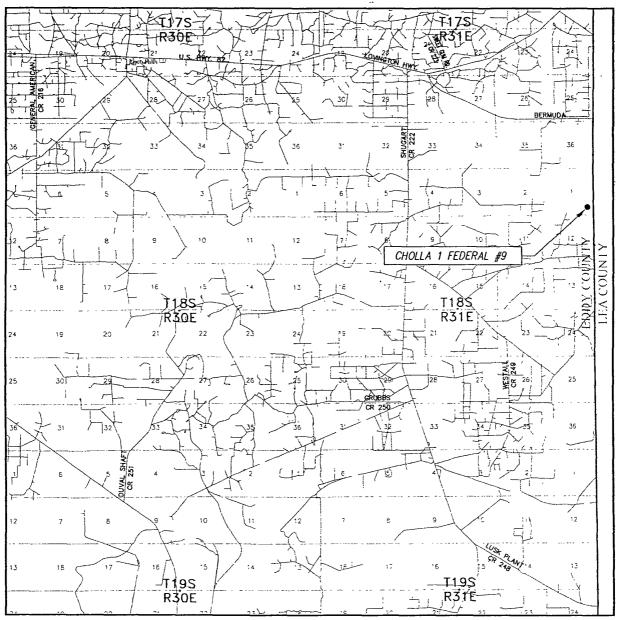
UL or lot No	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	i								
Dedicated Acres	Joint or	Infill	Consolidation Code	Orde	er No				

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

LOT 4	LOT 3	LOT 2	LOT 1	OPERATOR CERTIFICATION
40.11 AC	40.07 AC	40.05 AC	40.01 AC	I hereby certify that the information 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 or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division
	GEODETIC CO	OORDINATES		
	NAD 27			1 2/1/
				Signature Date
	Y=6448			1/-1/
	X=6589	88.0 E	'	Printed Name
	LAT.=32.7	71813°N		
	LONG.=103.	816083° W	'	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 supervision, and that the same is true and correct to the best of my belief.
				APPAL 91.72680 CONT.
			 	Date Surveyed ME O'DSS Signature & Sear of WE Professional Surveyo
			600'	0 R (3239) E
			660'	Kenal Mikan dan Aliahua
			3802.7'	08/11/04937/11/
			NMNM-106718	Certificate No. Gary G Eidson 12641 Ronald J Eidson 3239
L			<u> </u>	



# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 1 TWP. 18-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 930' FSL & 660' FEL

ELEVATION 3802'

NADEL AND

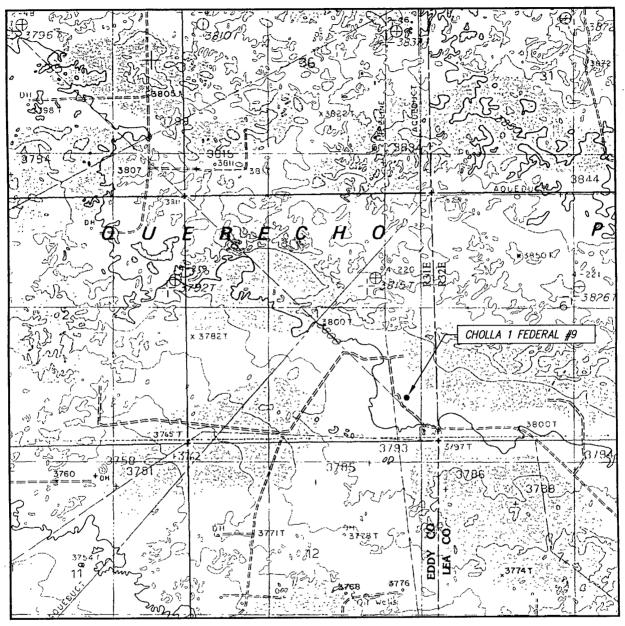
OPERATOR GUSSMAN HEYCO, LLC

LEASE CHOLLA 1 FEDERAL



PROVIDING SURVEYING SERVICES SINCE 1946 JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: MALJAMAR, N.M. - 10'

SEC. 1 TWP. 18—S RGE. 31—E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 930' FSL. & 660' FEL

ELEVATION 3802'

NADEL AND

OPERATOR GUSSMAN HEYCO, LLC

LEASE CHOLLA 1 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP MALJAMAR, N.M.



PROVIDING SURVEYING SERVICES SINCE 1946 JOHN WEST SURVEYING COMPANY: 412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

# Application Nadel and Gussman Heyco, LLC Cholla 1 Federal #9 Sec 1, T18S, R31E 930' FSL & 660' FEL Eddy 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: PERMIAN

# 2. Estimated Tops of Significant Geologic Markers:

Formation	Depth	
Rustler	925'	Water
Salado	1065'	
BX (BASE OF SALT)	2230'	
Yates	2425'	
Seven Rivers	2820'	Oil
Bowers	3275'	Oil
Queen	3530'	Oil
Penrose	3775'	Oil
Grayburg	4045'	Oil
Loco Hills	4145'	Oil
Metex	4260'	Oil
Premier	4390'	Oil
San Andres	4530'	Oil
Delaware-Cherry Canyon	4850'	Oil
Brushy Canyon	5150'	Oil
L. San Andres Equiv.	5730'	Oil
Bone Spring Ls	6250"	Oil
A-Zone Carb	7370'	Oil
BSPG 1 <sup>st</sup> Sand	7610'	Oil
B-Zone	7840'	Oil
BSPG 2 <sup>nd</sup> Sand	8275'	Oil
C-zone	8605'	Oil
C- Zone Carb	8775'	Oil
BSPG 3 <sup>rd</sup> Sand	8980'	Oil
PTD	9100'	

No other formations are expected to yield oil, gas, or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 450 and circulating Cement back to surface. Potash/ fresh water sands will be protected by setting 9 5/8" casing at 3000' and circulating cement back to surface. Morrow intervals will be isolation by setting 5 ½" Casing to total depth and circulating cement up into the 9 5/8" casing.

# 3. Proposed Casing Program:

	Hole size	<u>Depth</u>	OD Csq	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	New/Used
Q.,,,	17 ½"	0' – <del>950</del> '	13 3/8"	48#	ST&C	H-40	NEW
See _	≤512 ½"	0, — <del>3000</del> ,	9 5/8"	36#	ST&C	J-55	NEW
Coll	<b>8 ¾"</b>	0' - 4600'	5 ½"	17#	LT&C	L-80	NEW
	8 ¾"	4600' - 7600'	5 ½"	17#	LT&C	J-55	NEW
	8 ¾''	7600' – 9100'	5 ½"	17#	LT&C	L-80	NEW

Safety Factors: Burst 1.0 Collapse 1.125 Tension 1.8

- 4. Cement Program: ( Note yields; and DV tool depths if multiple stages )
  - -a. 13 3/8" Surface

Cement to surface with:

Lead - 525 sx 35:65 Poz C, 3% CaCl, 0.125 pps Celloflake and 6% Bentonite, 12.7 ppg, 1.94 cu.ft./sk yield, TOC @ surface.
Tail – 200 sx C, 2% CaCl and 0.125 pps Celloflake, 14.8 ppg, 1.34 cu.ft./sk yield, TOC @ 732'.

b. 9 5/8" Intermediate Cement to surface with:

3 % , S. G.

Lead - 410 sx 50:50 Poz C, 5% Salt, 0.125 pps Celloflake, 10% Bentonite and 0.2% AntiFoamer, 11.9 ppg, 2.46 cu.ft./sk yield, TOC @ surface.

Tail - 200 sx C and 1% CaCl, 14.8 ppg, 1.33 cu.ft./sk yield, TOC @ 2430'.

c. 5 1/2" Production First Stage:

Lead - 445 sx 35:65 Poz H, 5% Salt, 6% Bentonite, 0.2% Uniflac, 0.2% TIC Dispersant and 0.3% Retarder, 12.7 ppg, 1.99 cu.ft./sk yield, TOC @ 5500'.

Tail - 780 sx TXI Lightweight, 1.33% Salt, 0.2% AntiFoamer, 0.3%, Uniflac, 0.2% TIC Dispersant and 0.55% Retarder, 13.0 ppg, 1.41 cu.ft./sk yield, TOC @ 2800'.

COA

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 9 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) and rotating head. 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 drilling head will be installed on the 13 3/8" surface casing and ntilized continuously unit depth is reached. All BOP's and associated equipment will be tested to 1200psi with the rig pump before drilling Out the 13 3/8" casing shoe (70% of 54.4# J-55 casing). Prior to drilling out the 9 5/8" shoe, the 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:

C	Depth	Mud Wt.	Visc	Fluid Loss	Type System
See	0' - 950°	8.4 - 8.8	80 - 55	NC	Fresh Water
COA	950' - 3000'	9.8 - 10.0	28 - 30	NC	Brine Water
	3000' 7500'	8.8 - 9.4	28 - 32	NC	Cut Brine Water
	7500' — 9100'	8.8 - 10.0	34 - 36	6-10	Cut Brine Water

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:

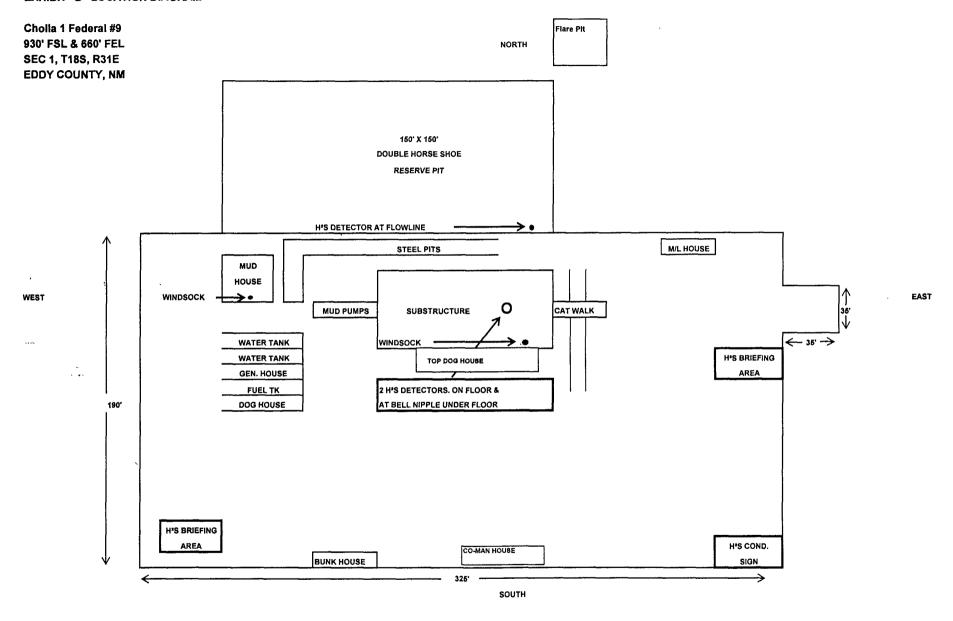
- a. A Kelly Cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate Connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling Out the 9 5/8" casing shoe unit the 5 ½" casing is cemented. Breathing Equipment will be on location upon drilling the 9 5/8" shoe unit total Depth is reached.

# 8. Testing, Logging, & Coring Program:

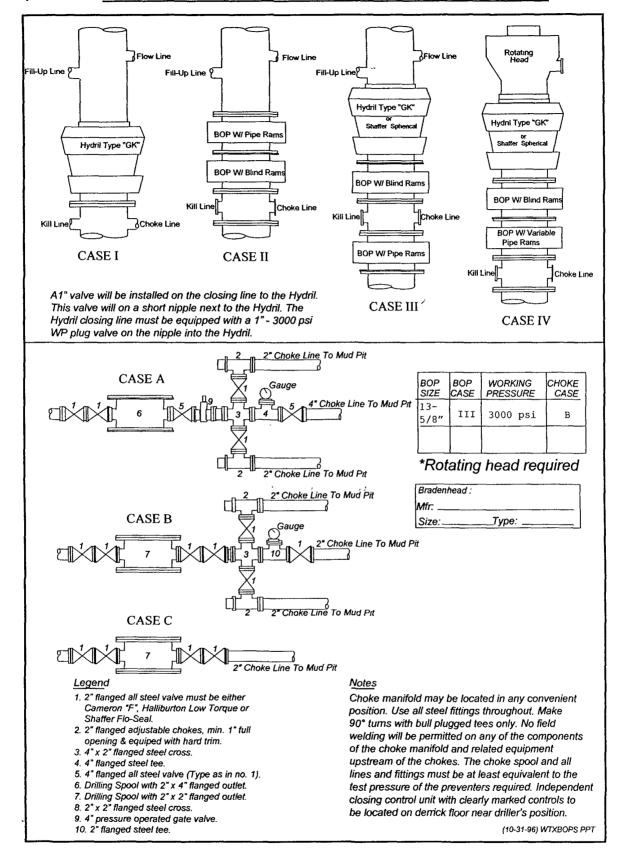
- a. Mud logging unit from the base intermediate casing to depth 10' samples will be caught by loggers
- b. Possible rotary sidewall cores

- 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:

The anticipated starting date is set for as soon as possible after examination and approval of all drilling requirements. Duration of this project will be approximately 50 days from start of Construction of drilling pad until finish of completion operations



# Nadel and Gussman Heyco, LLC MINIMUM BLOWOUT PREVENTER REQUIREMENTS



# NADEL AND GUSSMAN HEYCO, L.L.C. P.O. BOX 1936 ROSWELL N.M. 88202 (575) 623-6601 (Office) (575) 624-5321 (Fax)

Re: Cholla 1 Federal #9 930' FSL & 660' FEL Unit Letter P, Sec. 1, T18S, R31E Eddy, NM Rule 118 H2S Exposure

Dear Mr. Amos,

Nadel and Gussman Heyco 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.

Keith Cannon

Sinoerely,

**Drilling Superintendent** 

# Hydrogen Sulfide Drilling Operations Plan

- 1. Company and Contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S.
  - B. Physical Effects and Hazards.
  - C. Proper Use of Safety Equipment and Life Support Systems.
  - D. Principle and Operation of H<sub>2</sub>S Detectors, Warning System and Briefing.
  - E. Evacuation Procedure, Routes and First Aid.
  - F. Proper Use of 30 minute Pressure Demand Air Pack.

# 2. H<sub>2</sub>S Detection and Alarm Systems

- A. H<sub>2</sub>S Detectors and Audio Alarm System to be Located at Bell Nipple, End of Blooie Line (mud pit) and on Derrick floor or doghouse.
- 3. Windsock and/or Wind Streamers
  - A. Windsock at Mud Pit Area Should be High Enough to be Visible.
  - B. Windsock at Briefing Area Should be High Enough to be Visible.
  - C. There Should be a Windsock at Entrance to Location.
- 4. Condition Flags and Signs
  - A. Warning Sign on Access Road to Location.
  - B. Flags to be Displayed on Sign at Entrance to Location.
    - 1. Green Flag, Normal Safe Condition.
    - 2. Yellow Flag, Indicates Potential Pressure and Danger.
    - 3. Red Flag, Danger H<sub>2</sub>S Present in Dangerous Concentration Only Emergency Personnel Admitted to Location.
- 5. Well Control Equipment
  - A. See Attached Diagram.
- 6. Communication
  - A. While Working Under Masks Chalkboards Will be Used for Communication.
  - B. Hand Signals will be Used Where Chalk Board is Inappropriate.
  - C. Two Way Radio or Cell Phone will be Used to Communicate off Location in Case of Available at Most Drilling Foreman's Trailer or Living Quarters.
- 7. Drillstem Testing
  - A. Exhausts will be Watered.
  - B. Flare Line will be Equipped with an Electric Igniter or a propane pilot light in case gas reaches the surface.
  - C. If Location is near any Dwelling a Closed DST will be Performed.
- 8. Drilling Contractor Supervisor will be Required to be Familiar with the Effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
- 9. If H<sub>2</sub>S Encountered, Mud system will be Altered if Necessary to Maintain Control of Formation. A Mud Gas Separator will be Brought into Service Along with H<sub>2</sub>S Scavengers if Necessary.

# **CONTACTING AUTHORITIES**

Nadel and Gussman HEYCO personnel must liason with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as; type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. This response plan must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

LOCATION	ENTITY	PHONE NUMBER:
Artesia	Sheriff's Office	(575) 746-9888
Artesia	State Police	(575) 748-9718
Carlsbad Bureau of land Management		(575) 887-6544
^	Ambulance	911
Loce Hills	Fire Department	(505) 677-2349
Artesia	Fire Department	(505) 746-2701
Carlsbad	Local Emergency Planning Committee	(505) 887-3798
Roswell	Nadel and Gussman HEYCO, LLC	Off. (505) 623-6601
Midland Tx	Terry West, Drilling Engineer.	Cell (432) 682-1472
Artesia	Keith Cannon, Drlg Superintendent	Cell (575) 626-1936
Artesia	Clay Stevens, Safety Man	Cell (575) 626-1965
OTHER CONTACTS	,	
Artesia	Schlumberger Technology	(575) 748-1392
Artesia	South Environmental	(575) 420-1942
Hobbs	Horizon Mud	(575) 393-8641
Lovington	Assurance Fire Safety	(575) 396-7004
Odessa, TX	Wild Well Control, Inc.	(432) 550-6202
Odessa, TX	Cudd Pressure Control, Inc.	(432) 563-3356
Lubbock, TX	Flight for Life	(806) 743-9911
Albuquerque, NM	Med Flight Air Ambulance	(505) 842-4433

#### Surface Use Plan

Nadel and Gussman Heyco. LLc Cholla 1 Federal #9 Section 1, T18S, R31E 660' FSL & 660' FEL Eddy County, New Mexico

## 1. Existing Roads:

Exhibit Å is a portion of a New Mexico map showing the location of the proposed location. The location is approximately 10 miles South East of Loco Hills, NM. Leave Loco Hills on US 82 & travel East 5 miles & turn South on Co Rd.222 Go 3.2 mile & turn left on Caliche road. Go 1.3 miles Turn left. Go 0.3 turn right. Go 1.6 mile turn right. Go 0.2 mile turn left. Go 1.3 miles turn right. And Go 0.1 mile to location.

#### 2. Planned Access Roads:

0.2 Miles new road will be built to access this location come in from the North.

#### 3. Location of Existing Wells:

See EXHIBIT B From the surveying company / vicinity map

# 4. Location of Tank Batteries, Electric Lines, Etc:

In the event a producing well is drilled, a tank battery will be built on the location.

# 5. Location and Type of Water Supply:

Water will be obtained from commercial sources.

#### 6. Source of Construction Material:

We will use materials from reserve pit or a state, BLM approved pits to build the location.

# 7. Methods of Handling Waste Disposal:

Waste will be handled in an approved manner. The wellsite will be cleaned of all waste within 30 days of final completion of the well.

# 8. Ancillary Facilities:

N/A

## 9. Wellsite Layout:

- a. EXHIBIT D shows the relative location and dimensions of the well pad, reserve pits, and major rig components.
- b. The land is relatively flat with sandy soil
- c. The pad and pit area have been staked.

# 10. Plan for Restoration of the Surface:

- a. After drilling and completion operations are completed, all equipment and other materials not needed for further operations will be removed. Pits will be back filled and the location cleaned of all trash to leave the wellsite as pleasant in appearance as possible.
- b. If the proposed operation is nonproductive, all restoration and/or vegetation requirements of the BLM will be complied with, and will be accomplished as quickly as possible. All pits will be filled and leveled within 90 days after abandonment.

## 11. Other Information:

- a. The mineral and surface owner is the Federal Government, Land and Grazing leasing Winston Ballard had been contacted.
- b. The topography consists of sandy soil with native grasses. No wildlife was observed, but the usual inhabitants of this region are Jackrabbits, Reptiles, Coyotes, etc.
- c. There are no ponds, lakes, or rivers in this area.
- d. An Archaeological Survey has been made and a copy has been sent to the Carlsbad BLM office. There is no evidence of any significant archaeological, historical, or cultural sites in the area. Further, there are no occupied dwellings or windmills in the area.
- e. Should any incidental oil be recovered during testing of this well, this oil will be considered waste oil and not sellable due to contamination by drilling and/or completion fluids.

Keith Cannon, Drilling Superintendent Nadel and Gussman Heyco, LLC P.O. Box 1936 Roswell, NM 505-623-6601

May 5, 2008

# **Operator's Certification:**

I certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; that the work associated with operations proposed herein will be performed by Nadel and Gussman Heyco, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Keith Cannon, Drilling Superintendent Nadel and Gussman Heyco, LLC P.O. Box 1936

Roswell, NM 505-623-6601

May 5, 2008

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Nadel & Gussman Heyco LLC
LEASE NO.:	
WELL NAME & NO.:	
SURFACE HOLE FOOTAGE:	
BOTTOM HOLE FOOTAGE	
	Section 1, T. 18 S., R 31 E., NMPM
1	Eddy County, New Mexico

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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.

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# 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)

**Mitigation Measures:** The mitigation measures include the Pecos District Conditions of Approval, the standard stipulations for the Lesser Prairie Chicken, the standard stipulation for permanent resource roads.

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.

Cholla 1 Federal #9: Reserve pits North V-Door East

# VI. CONSTRUCTION

# A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (505) 234-5972 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

The operator shall stockpile the topsoil of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

## C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 150' X 150' on the North side of the well pad V-Door East.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

# 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 (505) 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.

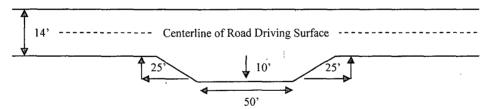
# **Ditching**

Ditching shall be required on 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

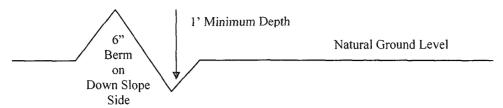


# Drainage

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:

400 foot road with 4% road slope: 
$$\frac{400'}{4\%}$$
 + 100' = 200' 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

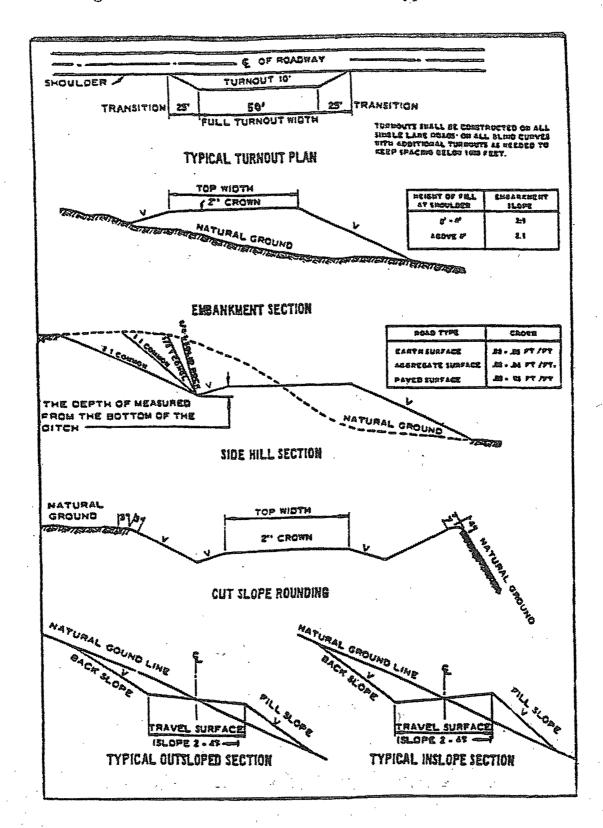
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

# **⊠** Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- 1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Queen formation. 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.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

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

Possible lost circulation in the Grayburg and San Andres formations.

Possible water flows in the Salado group and the Premier member of the Grayburg formation.

- 1. The 13-3/8 inch surface casing shall be set at approximately 975 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. Fresh water to be used to setting depth.
  - 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 will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).
  - 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 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a-d above.

    This casing is to be set in the Tansill formation at approximately 2350' in order to separate the salt from the hydrocarbon bearing formations and because it is a more competent formation than the Yates.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. Additional cement may be required due to change in setting depth for intermediate casing.
- 4. 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. 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.
  - e. A variance to test the surface casing and BOP/BOPE (entire system) to the reduced pressure of 1000 psi with the rig pumps is approved.

# D. DRILL STEM TEST

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

WWI 071408

# 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

- B. PIPELINES
- C. ELECTRIC LINES

# 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.

At the time reserve pits are to be reclaimed, 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.

# B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

# Seed Mixture 2, for Sandy 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 <u>no</u> 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 see 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:

<u>Species</u>	l <u>b/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

<sup>\*</sup>Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed (Insert Seed Mixture Here)

# 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.