

ATS-15-35

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

Staked

250 FNL

AUG 3 2015

OCD Artesia

RECEIVED  
358 FEL

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 57261
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator NADEL AND GUSSMAN PERMIAN, L.L.C.		7. If Unit or CA Agreement, Name and No. N/A
3a. Address 601 NORTH MARIENFELD, SUITE 508 MIDLAND, TX 79701	3b. Phone No. (include area code) (432) 682-4429	8. Lease Name and Well No. HONEY BADGER FEDERAL #1H
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 450' FNL & 330' FEL, UL A At proposed prod. zone 330' FSL & 330' FEL, UL P		9. API Well No. 30-015-43308
14. Distance in miles and direction from nearest town or post office* APPROX. 13.8 MILES SOUTHEAST OF MALAGA, NM		10. Field and Pool, or Exploratory (GAS) BRUSHY DRAW; WOLFCAMP (72897)
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330 FT	16. No. of acres in lease 200	11. Sec., T. R. M. or Blk. and Survey or Area SEC. 12, T-26-S, R29-E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 600FT PICOU FEDERAL #1	19. Proposed Depth 14,788 MD, 10,450 TVD	12. County or Parish EDDY
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3036' GL	22. Approximate date work will start* 01/15/2015	13. State NM
23. Estimated duration 45 DAYS		

24. Attachments

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

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

25. Signature 	Name (Printed/Typed) JASON GOSS	Date 09/15/2014
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Title  
DRILLING ENGINEER

Approved by (Signature) <b>Steve Caffey</b>	Name (Printed/Typed)	Date <b>JUL 24 2015</b>
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Title <b>FIELD MANAGER</b>	Office <b>CARLSBAD FIELD OFFICE</b>
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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)

Carlsbad Controlled Water Basin

  
8/19/15

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

**NM OIL CONSERVATION**

ARTESIA DISTRICT

Form C-102

Revised August 1, 2011

Submit one copy to appropriate District Office

State of New Mexico  
Energy, Minerals & Natural Resources Department

**OIL CONSERVATION DIVISION**

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

**RECEIVED**

AMENDED REPORT

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
DISTRICT II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
DISTRICT III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-015-43308</b>	Pool Code <b>72897</b>	Pool Name <b>Brushy Draw; Wolfcamp (gas)</b>
Property Code <b>315100</b>	Property Name <b>HONEY BADGER FEDERAL</b>	Well Number <b>1H</b>
OGRID No. <b>155615</b>	Operator Name <b>NADEL &amp; GUSSMAN PERMIAN, LLC</b>	Elevation <b>3036'</b>

Surface Location

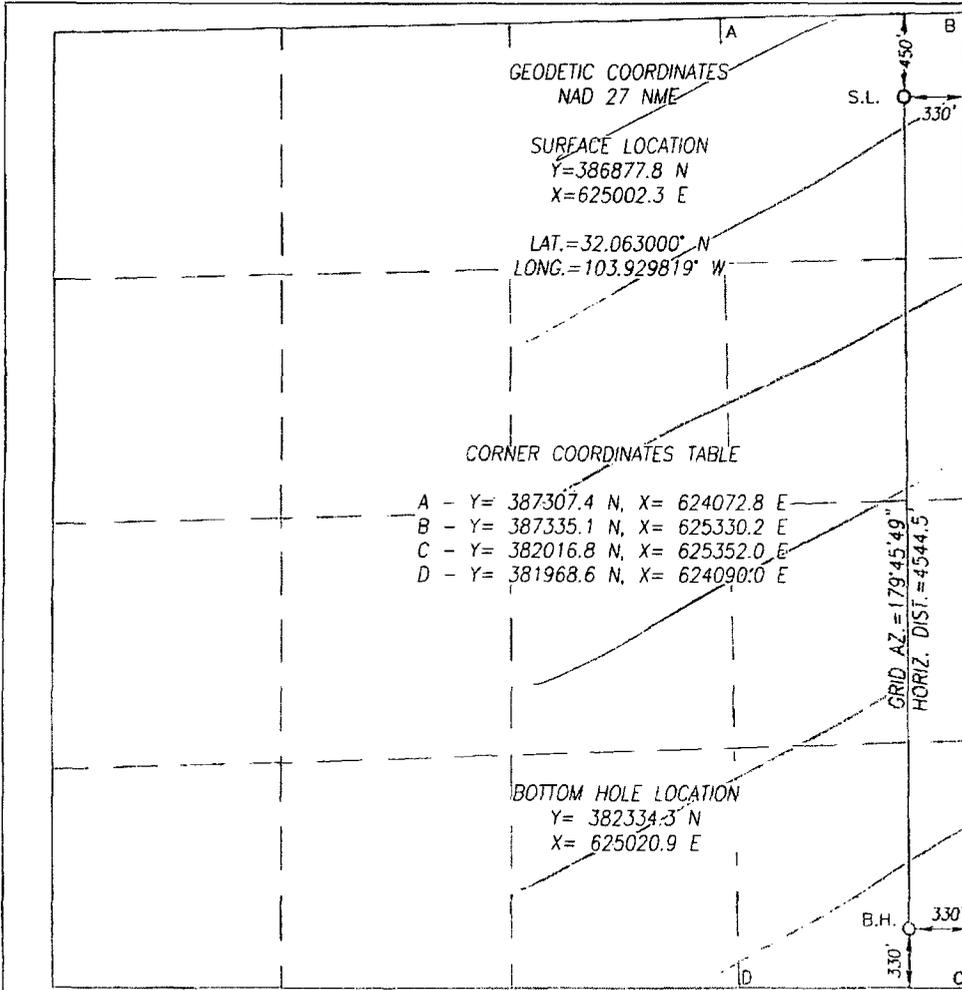
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	12	26-S	29-E		450	NORTH	330	EAST	EDDY

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
P	12	26-S	29-E		330	SOUTH	330	EAST	EDDY

Dedicated Acres <b>160 3/20</b>	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

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.

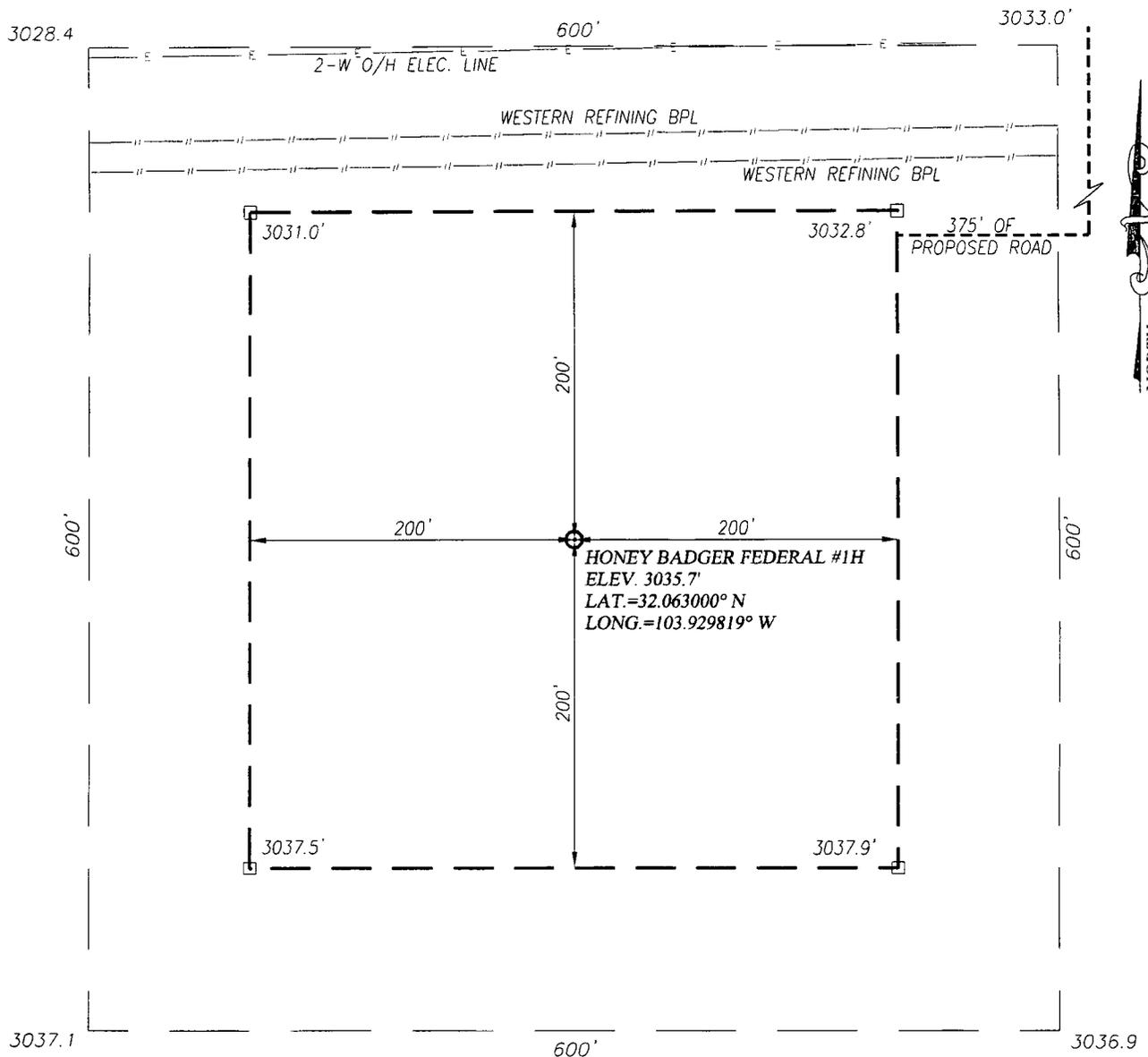
*Jason Goss* 9/9/14  
Signature Date  
**Jason Goss**  
Printed Name  
**jgoss@naguss.com**  
E-mail Address

**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.

JULY 25, 2014

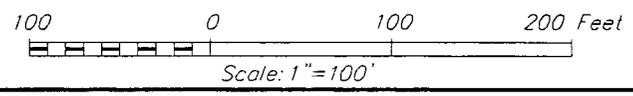
Date of Survey  
Signature & Seal of Professional Surveyor:  
**RONALD J. EIDSON**  
NEW MEXICO  
3239  
*Ronald J. Eidson* 08/05/2014  
Certificate Number 3239  
City of Edson  
Professional Surveyor  
LSL WSC W O : 14 11.0760



NOTE:  
 1) SEE "LOCATION VERIFICATION MAP"  
 FOR PROPOSED ROAD LOCATION.

**DIRECTIONS TO HONEY BADGER FEDERAL #1H**

FROM THE INTERSECTION OF U.S. 285 AND C.R. 725 GO NORTHEAST ON C.R. 725 APPROX 4.3 MILES THEN TURN LEFT ON CALICHE LEASE ROAD AND GO NORTHEAST APPROX. 0.1 MILE ROAD BENDS RIGHT AND GO EAST APPROX 4.1 MILES TO PROPOSED ROAD SURVEY FOLLOW PROPOSED ROAD SOUTH 256 THEN WEST 119' TO THE NORTHEAST CORNER OF THE PAD.



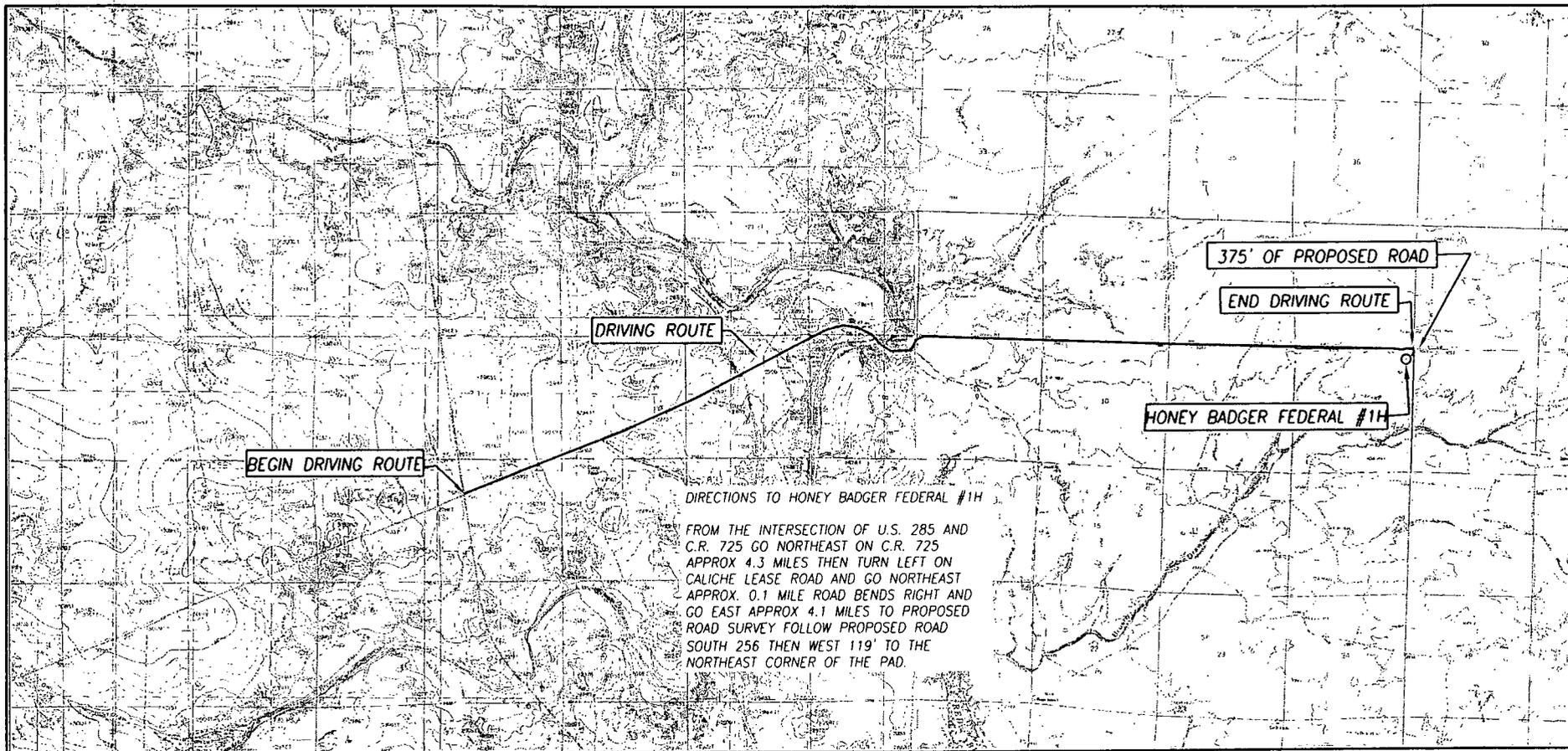
**NADEL & GUSSMAN PERMIAN, LLC**

**HONEY BADGER FEDERAL #1H WELL  
 LOCATED 450 FEET FROM THE NORTH LINE  
 AND 330 FEET FROM THE EAST LINE OF SECTION 12,  
 TOWNSHIP 26 SOUTH, RANGE 29 EAST, N.M.P.M.,  
 EDDY COUNTY, NEW MEXICO**

PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO HOBBS, N.M. 88240  
 (575) 393-3117 www.jwsc.biz  
 TBPLS# 10021000

Survey Date: 7/25/14	CAD Date: 7/30/14	Drawn By: LSL
W.O. No.: 14110760	Rev: .	Rel. W.O.: Sheet 1 of 1

# LOCATION VERIFICATION MAP



DIRECTIONS TO HONEY BADGER FEDERAL #1H  
 FROM THE INTERSECTION OF U.S. 285 AND  
 C.R. 725 GO NORTHEAST ON C.R. 725  
 APPROX 4.3 MILES THEN TURN LEFT ON  
 CALICHE LEASE ROAD AND GO NORTHEAST  
 APPROX. 0.1 MILE ROAD BENDS RIGHT AND  
 GO EAST APPROX 4.1 MILES TO PROPOSED  
 ROAD SURVEY FOLLOW PROPOSED ROAD  
 SOUTH 256 THEN WEST 119' TO THE  
 NORTHEAST CORNER OF THE PAD.

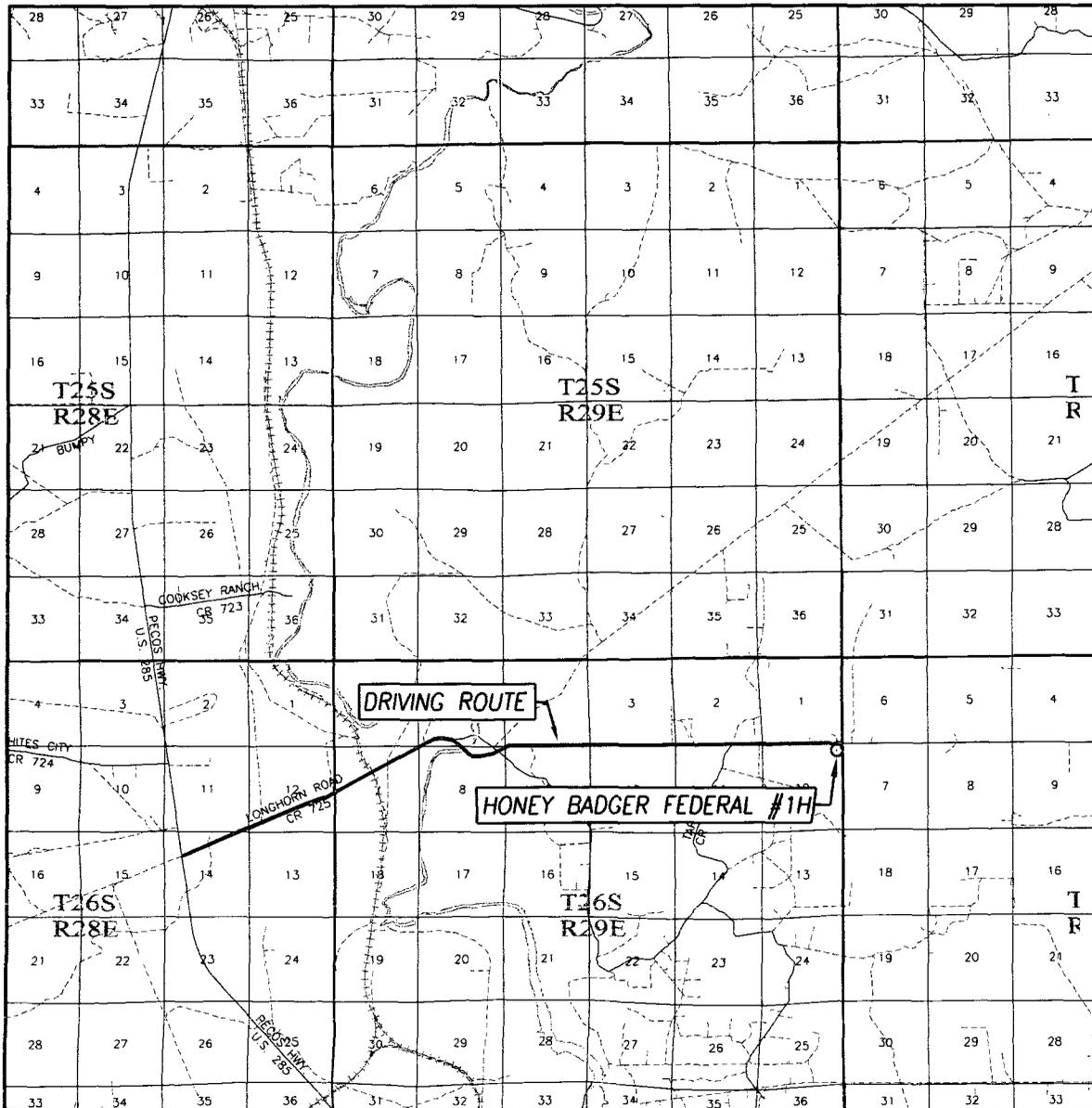
SEC. 12 TWP. 26-S RGE. 29-E  
 COUNTY EDDY STATE NEW MEXICO  
 DESCRIPTION 450' FNL & 330' FEL  
 ELEVATION 3036'  
 OPERATOR NADEL & GUSSMAN PERMIAN, LLC  
 LEASE HONEY BADGER FEDERAL  
 U.S.G.S. TOPOGRAPHIC MAP  
 ROSS RANCH, N.M. SURVEY N.M.P.M.

SCALE: 1" = 5280'

CONTOUR INTERVAL:  
 RED BLUFF, N.M. - 10' ROSS RANCH, N.M. - 10'

PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO HOBBS, N.M. 88240  
 (575) 393-3117 www.jwsc.biz  
 TBPLS# 10021000

# VICINITY MAP



SCALE: 1" = 2 MILES

DRIVING ROUTE: SEE LOCATION VERIFICATION MAP

SEC. 12 TWP. 26-S RGE. 29-E

SURVEY \_\_\_\_\_ N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 450' FNL & 330' FEL

ELEVATION \_\_\_\_\_ 3036'

OPERATOR NADEL & GUSSMAN PERMIAN, LLC

LEASE HONEY BADGER FEDERAL



PROVIDING SURVEYING SERVICES  
 SINCE 1946  
**JOHN WEST SURVEYING COMPANY**  
 412 N. DAL PASO HOBBS, N.M. 88240  
 (575) 393-3117 [www.jwsc.biz](http://www.jwsc.biz)  
 TBPLS# 10021000

**DRILLING AND OPERATIONS PLAN  
NADEL AND GUSSMAN PERMIAN, L.L.C.**

**HONEY BADGER FEDERAL #1H**

Surface: 450' FNL & 330' FEL, UL A

BHL: 330' FSL & 330' FEL, UL P

Sec 12, T-26-S, R-29-E

Eddy County, New Mexico

1. Geological Surface Formation: **Permian and Quaternary Alluvium.**
2. Horizontal Oil well. No pilot hole, total depth 14,788', depth to Fresh Water 650'. **Elevation 3036'**

**3. TOPS OF IMPORTANT GEOLOGICAL MARKERS: TVD**

Rustler	650'
Castile	1580'
Lamar Lime	3280'
Bell Canyon	3300'
Cherry Canyon	4200'
Brushy Canyon	5450'
Bone Springs Ls	7000'
1 <sup>st</sup> Bone Springs Sand	7950'
2 <sup>nd</sup> Bone Springs Sand	8550'
3 <sup>rd</sup> Bone Spring Sand	9800'
Wolfcamp	10150'
Target TVD	<b>10,450'</b>

**4. Estimated Depth of Anticipated/Possible Water, Oil or Gas:**

Rustler	0-650'	Fresh Water
Delware Mountain Group	3300	Oil, gas and water
Bone Springs	7000	Oil, gas and water
Wolfcamp	10150	Oil, gas and water

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water will be protected by setting 13 3/8" casing at 675' and circulating cement back to surface, all other intervals will be isolated by the 9 5/8 intermediate and 7" production casing.

**5. Proposed Casing Program**

HOLE SIZE	CASING SIZE	WT./GRADE	THREAD/COLLAR	SETTING DEPTH	TOP CEMENT
Conductor	20"	94# H-40	8rd STC	40'	Surface
17.5"	13 3/8" (new)	48# H-40	8rd STC	675'	Surface
12.25"	9 5/8" (new)	36# J-55	8rd LTC	3,300'	Surface
8.75"	7" (new)	26# P-110	8rd BTC	10,800'	Surface
*6.125"	4 1/2" (new)	13.5# P-110	8rd LTC	10,600'-14,788'	liner top

\*start 6.125" hole at end of curve 10,800' md, 4.5" casing set with liner hanger.

**MINIMUM SAFETY FACTORS: BURST 1.125 COLLAPSE 1.125 TENSION 1.8**

**ALL CASING WILL BE NEW API APPROVED**

**CEMENT PROGRAM-ALL CEMENT BLENDS WILL BE TESTED TO BLM MINIMUM REQUIREMENTS.**

- A. 13 3/8" SURFACE CEMENT TO SURFACE 100% EXCESS OVER CALCULATED**

550 SACKS CLASS "C"+2%CACL+.25# CELLO-FLAKE+.25% DEFOAMER, 14.8 PPG, 1.35 YIELD, 6.34 GAL/SK
- B. 9 5/8" INTERMEDIATE CEMENT TO SURFACE 75% EXCESS LEAD, 50% TAIL**

LEAD 800 SACKS CLASS "C" 35/65 +6% BENTONITE+5% SALT+.25% DEFOAMER 12.8 PPG, 1.9 YIELD, 11.2 GAL/SK

TAIL 200 SACKS CLASS "C" + .25% DEFOAMER, 14.8 PPG, 1.33 YIELD, 6.34 GAL/SK
- C. 7" PRODUCTION CEMENT TO SURFACE 50% EXCESS OVER CALCULATED.**

LEAD 800 SACKS CLASS C 50/50 +10% BENTONITE +.15% C-20 RETARDER +3# STAR SEAL +.3% C-12 FLUID LOSS+3% SALT+.25% DEFOAMER, 11.8 PPG, 2.37 YIELD, 13.52 GL/SK

TAIL 250 SACKS CLASS "H" +.5% FL-10+.2% C-20, 15.6 PPG, 1.2 YIELD, 5.5 GAL/SK
- D. 4.5" PRODUCTION LINER CEMENT TO LINER TOP 50% EXCESS OVER CALCULATED**

TAIL SLURRY: 750 SACKS PVL ACIDSOLID +30% CALCIUM CARBONATE, +5%PF174, +.7% PF606 + .2% PF153 +.4% PF813 +.4 PPS PF46, 13.0 PPG 1.87 YIELD 9.517 GALLONS/SACK MIX WATER

**SPECIFICATIONS FOR PRESSURE CONTROL EQUIPMENT: (EXHIBIT #5)**

A 2000# WP Annular will be installed after running the 13-3/8" casing. A 5,000# WP Double Ram BOP and 5,000 annular will be installed after running the 9-5/8" and 7" casing. Pressure test will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the Kelly is not in use. 7" and 9-5/8" BOP will be tested to 5000# and the annular to 1500# with a third party testing company before drilling below each shoe. If operations last more than 30 days from 1<sup>st</sup> test, will test again as per BLM Onshore Oil and Gas order #2.

**MUD PROGRAM:**

Spud and drill 17 1/2" surface hole with **fresh water (8.4 to 8.7 ppg)** to a depth of approx 675'. Control lost circulation with paper and LCM pills. Viscosity 28-55, no fluid loss control. Fresh water gel sweeps.

Drill 12 1/4" hole from 675' to 3,300' with **Brine (10.0 ppg)**. Control lost circulation with paper and LCM pills. Viscosity 28-36, no fluid loss control. Salt water gel sweeps.

Drill 8 3/4" production hole from 3,300' to 10,800' **cut brine (8.8 to 10.0 ppg)**. Control lost circulation with paper and LCM pills. Clean hole with salt water sweeps as necessary. System properties: viscosity 28-32, fluid loss <30 ml/30min.

Drill 6 1/8" horizontal production hole from 10,800'-14,788' with **Brine water (10.5-12.8 ppg)**, control filtrate and increase viscosity with Xanthan gum and Poly Anionic Cellulose. System Properties funnel viscosity 35-50 seconds, fluid loss <10 ml/30min, chlorides 150k.

All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program subject to change due to hole conditions.

**Mud monitoring system:** Mud will be maintained and checked daily for mud weight, viscosity, API water loss, pH, etc. Additional electronic monitoring will include a pit volume totalizer to monitor mud volume in active system, pump rate, and mud return flow percentage. H<sub>2</sub>S monitors and alarms will be located on rig floor, shale shakers, and mud tanks (see rig plat). Gas chromatograph with monitor hydrocarbon gas content of mud from 3,300' to TD. Third party corrosion company will utilize H<sub>2</sub>S/oxygen scavengers to monitor for corrosion and limit damage to tubulars.

**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 13 3/8" casing shoe until the 4 1/2" liner is run and set and rigging down operations have begun.

**TESTING, LOGGING & CORING PROGRAM:**

- a. Testing: No DST's will be conducted.
- b. Mud logging will take place from 3,300ft to TD 10ft samples
- c. Gyro survey will be run at KOP of 9,975'
- d. MWD (directional surveys) and LWD (gamma) surveys will be taken from KOP (9,975') to TD 14,788ft
- e. Cased hole CBL/gamma from 3,300 to 9,975.

**POTENTIAL HAZARDS:**

No significant hazards are expected, no abnormal pressures or temperatures are expected, **Expected pressure of .50 psi/ft. 5225 psi at 10,450 ft.** Expected temperature at 10,450 TVD is **160 deg F.** Lost circulation may

occur, no H<sub>2</sub>S is expected, but the operator will utilize a 3<sup>rd</sup> party H<sub>2</sub>S monitoring package from 675' to total depth. No losses or H<sub>2</sub>s occurred in offset wells. If H<sub>2</sub>S is encountered the operator will comply with the provisions of onshore oil and gas order no 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.

**ANTICIPATED STARTING DATE & DURATION:**

Nadel & Gussman Permian, LLC anticipates drilling operations to begin around January 15, 2015 and completed in approximately 45 days. An additional 15 days will be needed for completion activities. Road and location construction will begin after the BLM has approved the APD.



7/23/15

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Jason Goss, Drilling Engineer  
Nadel & Gussman Permian, LLC

Date

## Surface Use Plan

Nadel and Gussman Permian, LLC  
Honey Badger Federal #1H  
Section 12, T26S, R29E  
450' FNL & 330' FEL  
Eddy County, New Mexico

### 1. Existing Roads:

Exhibit 1 contains the surveys and a map with proposed location and lease roads. The location is approximately 13.8 miles Southeast of Malaga, NM. From Intersection of U.S. Hwy 285 and County Road 725, Go Northeast on C.R. 725 approx. 4.3 miles then turn left on caliche lease road and go Northeast approx. 0.1 mile. Road bends right and go East approx. 4.1 miles to proposed road survey. Nadel and Gussman Permian, LLC will improve or maintain existing roads in a condition the same as or better than before operations began. Nadel and Gussman Permian will repair pot holes, clear ditches, etc. All existing structures on the entire access route will be repaired or replaced if they are damaged or have deteriorated beyond practical use, BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

### 2. Planned Access Roads:

375 feet of new road will be built access the Honey Badger Federal #1H South to the well, Drilling pad (approximately 200' x 200' location) will be constructed. See road plat. The maximum width of the driving service will be 14 feet. The maximum width of surface disturbance needed to construct the road will be 25 feet. The road will be crowned and ditched with a 2 % slope from the tip of the crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

### 3. Location of Existing Wells:

See 1 mile radius map, existing wells within 1 mile.

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

- a. In the event the well is found productive, the tank battery would be utilized and the necessary production equipment (tanks, separator) would be built on location see battery diagram.
- b. NGP plans to use a generator for electric supply initially. Will submit a sundry for electric line construction when needed.

### 5. Location and Types of Water Supply:

This location will be drilled using a combination of water mud systems (outlined in the drilling program). Water will be obtained from commercial water stations in the area and hauled in by transport truck using the existing and proposed roads shown in the C-102.

## Surface Use Plan

Nadel and Gussman Permian, LLC  
Honey Badger Federal #1H  
Section 12, T26S, R29E  
450' FNL & 330' FEL  
Eddy County, New Mexico

### 6. Sources of Construction Material:

Top soil will be stock piled on the West side of the location and will be used after drilling and completion operations to reduce location size and reclaim and reseeded to BLM specifications. All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM / State approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche.

### 7. Methods of Handling Waste Disposal:

- a. All trash, junk, and other waste material will be contained in trash cages or trash bin to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill. The wellsite will be cleaned of all waste within 30 days of final completion of the well.
- b. A portable toilet will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- c. Disposal of fluids to be transported by trucks to a nearby approved disposal.
- d. Closed loop solid control will be used. Drill solids waste will be collected in bins and hauled to permitted disposal facility in accordance with NM OCD rules.

### 8. Ancillary Facilities:

Nadel and Gussman Permian will explore all options for obtaining water storage for stimulation and completion.

### 9. Wellsite Layout

- a. Rig Plat shows the relative location and dimensions of the well pad and major rig components.
- b. The land is relatively flat with no dunes.
- c. The pad area has been staked.

**Surface Use Plan**  
Nadel and Gussman Permian, LLC  
Honey Badger Federal #1H  
Section 12, T26S, R29E  
450' FNL & 330' FEL  
Eddy County, New Mexico

**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. 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.
- c. Interim reclamation consists of minimizing the footprint of disturbance by reclaiming all portions of the well site not needed for production operations. Topsoil is respread over areas not needed for production operations and recontoured to the surrounding area and reseeded.

**11. Surface Ownership:**

- a. The surface owner of the well pad is The United States of America. The surface ownership of the road is the State of New Mexico.

**12. Other Information:**

- a. The mineral and surface owner is the Federal Government; Grazing lease owner is Byron or Janey Paschal, P.O. Box 992, Pecos, TX 79772. Phone Number (432) 445-2988.
- b. An onsite was conducted on July 25, 2014 with Amanda Lynch of the BLM
- c. The topography consists of slightly sandy soil with native grasses. No wildlife was observed, but the usual inhabitants of this region are Jackrabbits, Reptiles, Coyotes, etc.
- d. There are no ponds, lakes, or rivers in this area.
- e. An Archaeological Survey will be completed and a copy will be sent to the Carlsbad BLM office by Boone Archeological Services. 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.
- f. 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.

**Surface Use Plan**

Nadel and Gussman Permian, LLC

Honey Badger Federal #1H

Section 12, T26S, R29E

450' FNL & 330' FEL

Eddy County, New Mexico

**13. Operator's Representative:**

The Nadel and Gussman Permian, LLC Company representatives responsible for ensuring compliance of the Surface Use plan are listed below.

Jason Goss, Drilling Engineer  
Nadel and Gussman Permian, L.L.C.  
601 N. Marienfeld, Suite 508  
Midland, TX 79701  
(432) 682-4429

Kurt Hood, Production Foreman

September 15, 2014

## OPERATOR CERTIFICATION

I certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal Laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true, and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed the 15th day of September 2014.

Name: Jason Goss

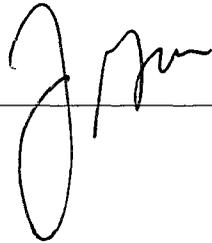
Position: Drilling Engineer

Address: 601 N. Marienfeld Suite 508

Telephone: 432-682-4429

Email: jgoss@naguss.com

Signed: \_\_\_\_\_

A handwritten signature in black ink, appearing to read 'J Goss', is written over a horizontal line. The signature is stylized with a large loop for the letter 'J' and a cursive 'Goss'.

Nadel and Gussman Permian, L.L.C.  
601 N. Marienfeld, Suite 508  
Midland, Texas 79701

September 15, 2014

**UNITED STATES DEPARTMENT OF INTERIOR**

Bureau of Land Management  
Carlsbad Field Office  
620 E. Greene Street  
Carlsbad, NM 88220

**RE: STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS**

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

Lease Name: Honey Badger Federal #1H

Lease Number: NMNM 57261 – N/2 of the NE/4, SE/4 of the NE/4, E/2 of the SE/4

Legal Description of Land: Section 12, T-26-S, R-29-E, Eddy Co., NM

Lease Covers: 200 Acres

Formations: Wolfcamp

Bond Coverage: Blanket Statewide

BLM Bond File Number: NM2812

Surface Ownership: USA

Mineral Ownership: USA

  
\_\_\_\_\_  
Jason Goss  
Drilling Engineer

**NADEL AND GUSSMAN PERMIAN, L.L.C.**  
**601 N. MARIENFELD STE. 508**  
**MIDLAND, TX 79701**  
**(432) 682-4429 (Office)**  
**(432) 682-4325 (Fax)**

September 15, 2014

Mr. Ingram  
Carlsbad BLM Field Office  
620 E. Greene St.  
Carlsbad, NM 88220

**Re: Honey Badger Federal #1H**  
**SHL: 450' FNL & 330' FEL UL A**  
**Sec. 12, T26S, R29E**  
**Eddy County, NM**  
**Rule 118 H2S Exposure**

Dear Mr. Ingram,

Nadel and Gussman Permian, LLC 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 surface casing and will continue monitoring the remainder of the well.

Please contact me if you have any additional questions.

Sincerely,



Jason Goss  
Drilling Engineer

**Hydrogen Sulfide Drilling Operations Plan**  
**Honey Badger Federal #1H**  
**Sec 12, T26S, R29E**  
**Eddy County N.M.**

1. Company and contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to the recognize and handle following:
  - A. Characteristics of H<sub>2</sub>S gas
  - 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 knowledge
  - E. Evacuation procedure, routes and first aid support
  - F. Proper use of 30 minutes Pressure-on-Demand Air Pack
  
2. Supervisory personnel will be trained in the following areas:
  - A. Effects of H<sub>2</sub>S on metal components.
  - B. Corrective action and shut in procedures, blowout prevention, and well control procedure.
  - C. Contents of Hydrogen Sulfide Drilling Operations Plan.
  
3. H<sub>2</sub>S Detection and Alarm Systems (will be in place after setting surface casing and will not drill ahead without alarm system working)
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, shale shaker and on derrick floor or doghouse installed and maintained by a third party safety company.
  - B. Thirty minute self-contained work unit located in dog house and at briefing areas.
  
3. Windssock and/or Wind Streamers
  - A. Windssock at mud pit area (high enough to be visible)
  - B. Windssock on dog house (high enough to be visible)
  
4. Condition Flags and Signs
  - A. H<sub>2</sub>S warning signs on lease access road into location
  - B. Flags displayed on sign at location entrance
    1. Green flag indicates "Normal Safe Conditions"
    2. Yellow Flag indicates "Potential Pressure and Danger"
    3. Red Flag indicates "Danger - H<sub>2</sub>S Present in High Concentrations" *admit only emergency personnel*
  
5. Well Control Equipment
  - A. See BOP, Choke, and Mud/Gas Separator exhibit.
  - B. Blow out preventers will be equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit. Annular type blowout preventer will also be in place. Supplemental fuel will be provided for flaring noncombustible gas.
  
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 radios or cell phones used to communicate off location or minimally in Drilling Foreman's trailer or living quarters
  
7. Drillstem Testing (**not planned**)
  - A. Exhausts watered
  - B. Flare line equipped with electric Igniter/propane pilot light in case gas reaches surface

C. If location near dwelling closed DST will be performed

9. If H<sub>2</sub>S encountered, mud system shall be addressed to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers, if necessary. pH will be maintained at 10, to minimize h<sub>2</sub>S in the system. Hydrogen sulfide scavengers will also be used to minimize hazards while drilling the well.
10. Mud program: pH of 10 will be maintained with additives to minimize hazards of H<sub>2</sub>S. H<sub>2</sub>S scavengers will also be used to minimize effects on tubulars and well control equipment and control effects of H<sub>2</sub>S on metallurgy.

PUBLIC PROTECTION PLAN FOR EMERGENCY CONTACTS

**NADEL AND GUSSMAN Permian, LLC** (432) 682-4429

**Company Personnel**

Jason Goss	Drilling Engineer	432-682-4429 512-784-2613
Kurt Hood	Foreman	575-513-1499 575-746-1428

**ARTESIA N.M.**

Ambulance	911
State Police	575-748-9718
City Police	575-746-5000
Sheriff's Office	575-746-9888
Fire Department	575-746-5050 or 575-746-5051
N.M.O.C.D	575-748-1283

**CARLSBAD N.M.**

Ambulance	911
State Police	575-885-3138
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-885-3125 or 575-885-2111
Carlsbad BLM	575-234-5972

**HOBBS N.M.**

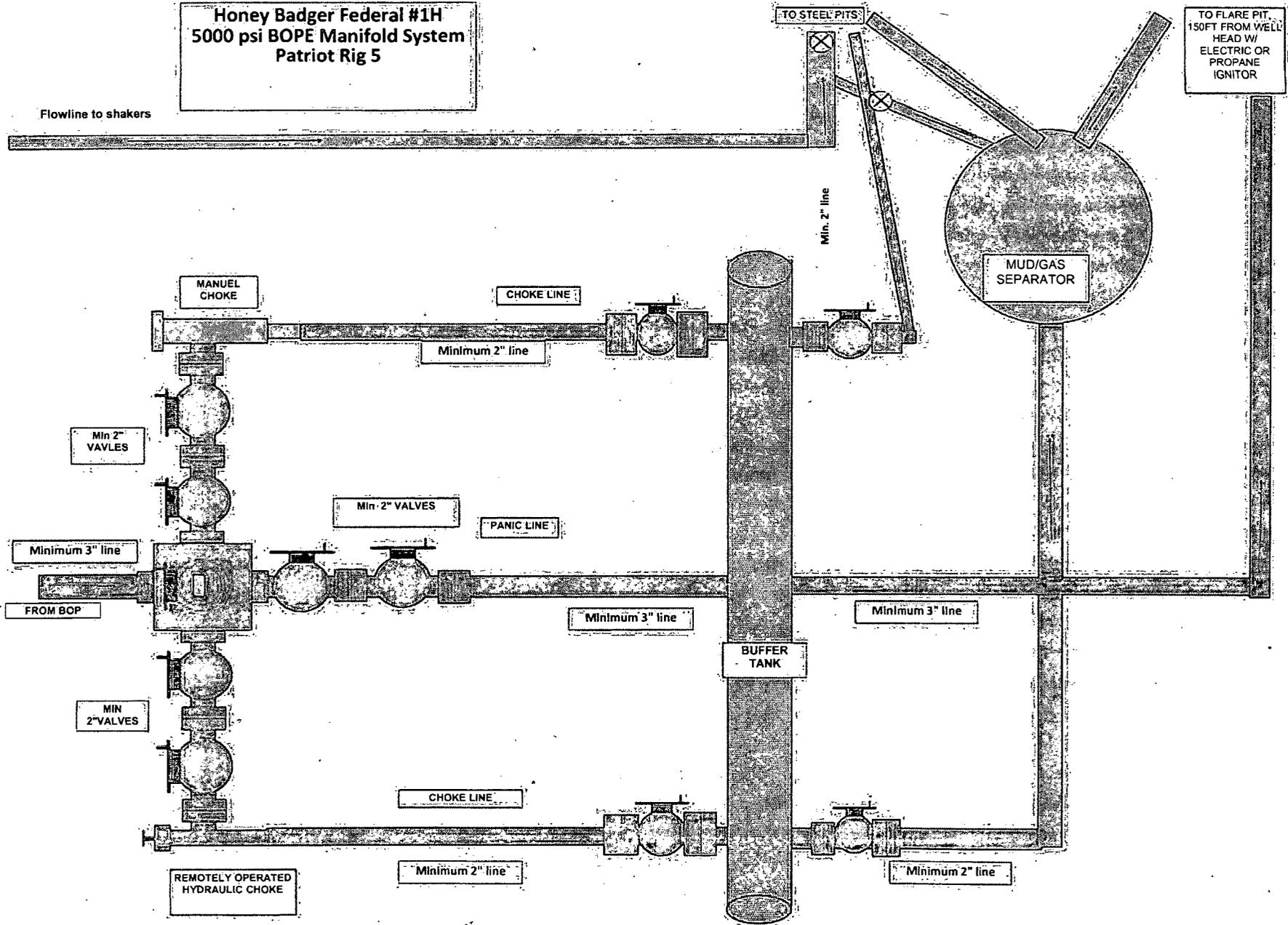
Ambulance	911
State Police	575-392-5580
City Police	575-397-9265
Sheriff's Office	575-396-3611
Fire Department	575-397-9308
N.M.O.C.D	575-393-6161
Hobbs BLM	575-393-3612

Flight for Life (Lubbock Tx)	806-743-9911
Aerocare (Lubbock Tx)	806-747-8923
Med flight air Ambulance (Albuq NM)	505-842-4433
SB air Med Services (Albuq NM)	505-842-4949

Wild Well Control	281-784-4700	Emergency Number 24 Hour
Boots & Coots IWC	281-931-8884	Emergency Number 24 Hour
Cudd Pressure Control	713-849-2769	Emergency Number 24 Hour
BJ Services (Artesia NM)	575-746-3569	
(Hobbs NM)	575-392-5556	

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
24 Hour	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

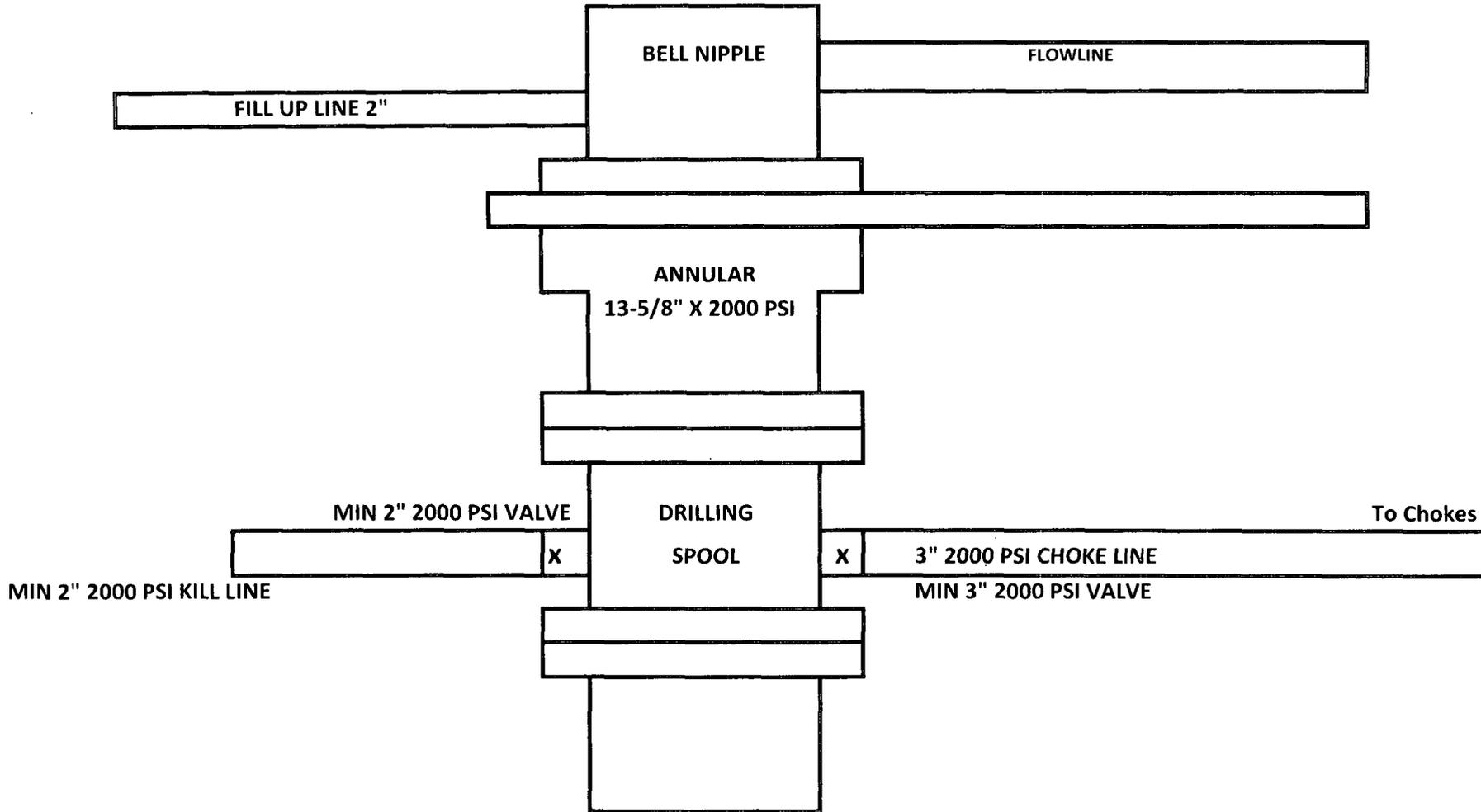
**Honey Badger Federal #1H  
5000 psi BOPE Manifold System  
Patriot Rig 5**



Exact manifold configuration may vary

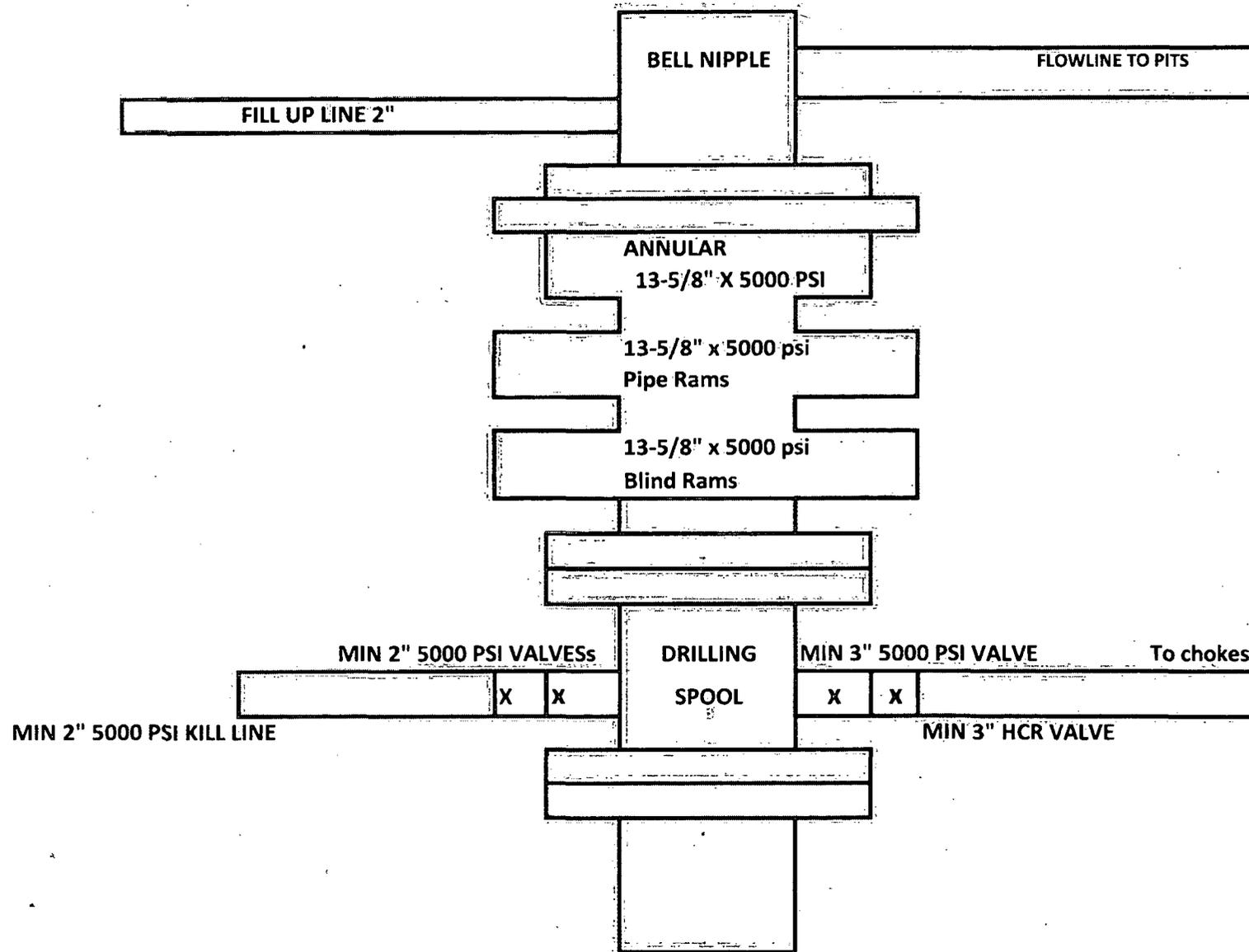
Well: Honey Badger Federal #1H  
450' FNL, 330' FEL, Sec. 12, T26S, R29E  
Eddy County, New Mexico

### Nadel and Gussman Permian, L.L.C. BOP Scematic 12.25" hole



Well: Honey Badger Federal #1H  
450' FNL, 330' FEL, Sec. 12, T26S, R29E.  
Eddy County, New Mexico

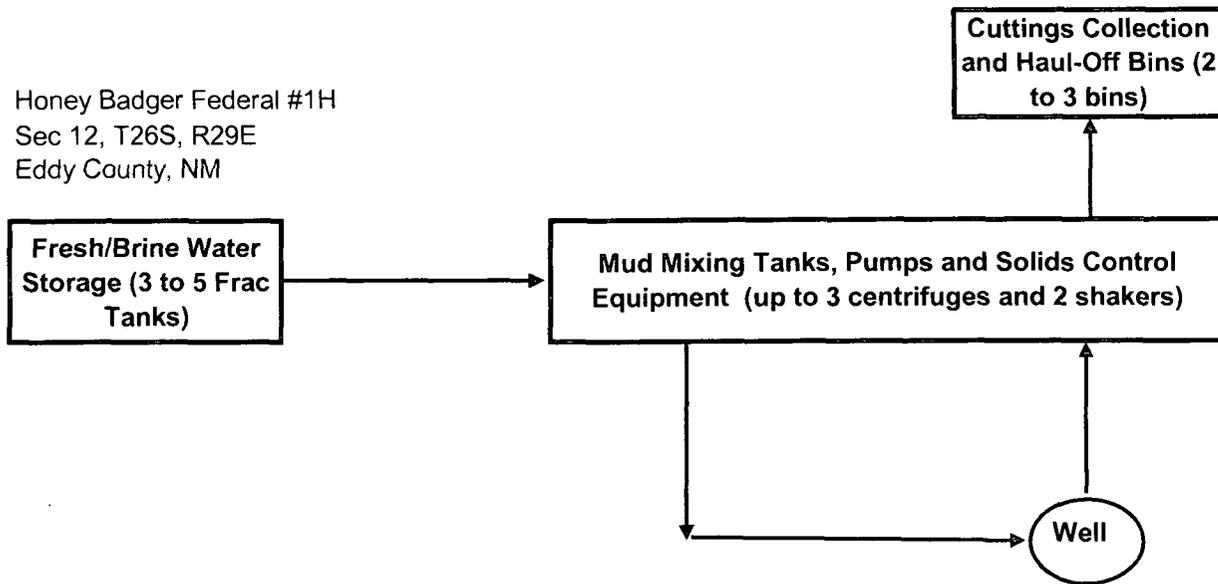
### Nadel and Gussman Permian, L.L.C. BOP Scematic 8.75" & 6.125" hole



# CLOSED-LOOP SYSTEM

## Design Plan:

Honey Badger Federal #1H  
Sec 12, T26S, R29E  
Eddy County, NM



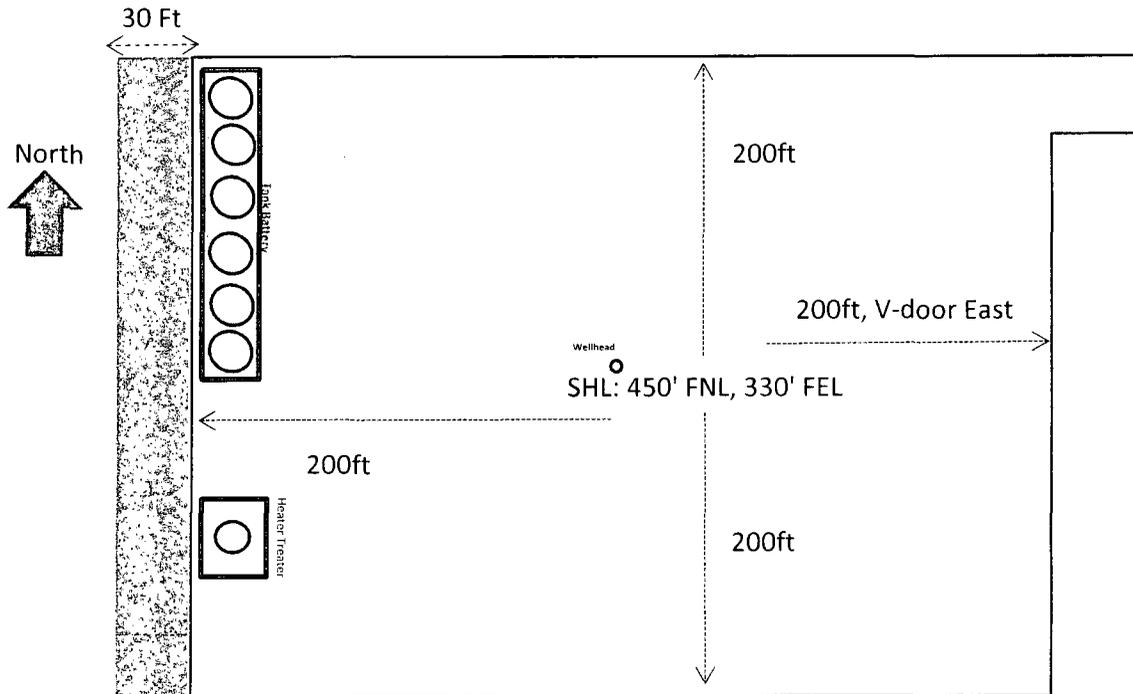
## Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluid and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

## Closure Plan:

During drilling operations, third party service companies will haul-off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.

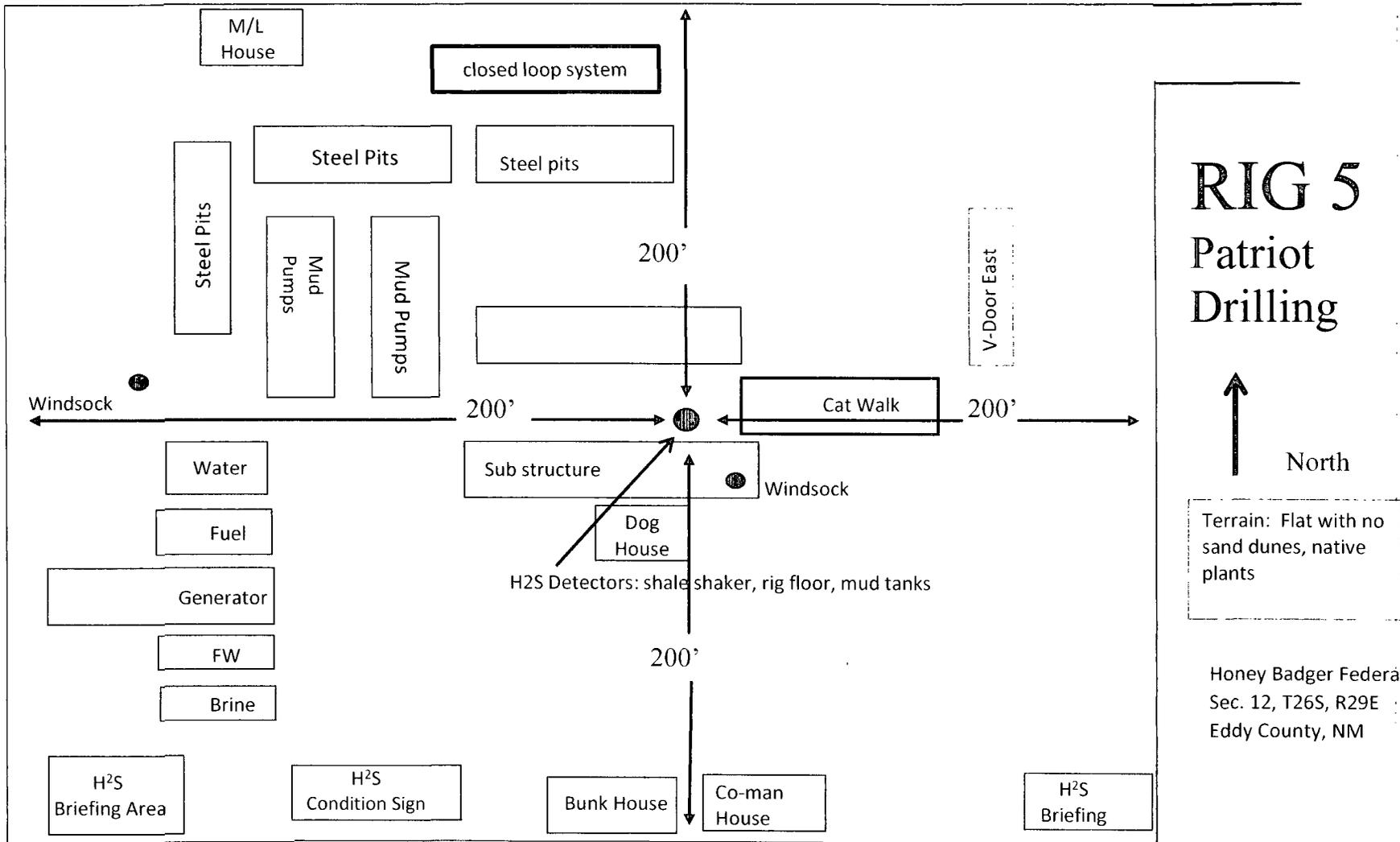
LOCATION/BATTERY DIAGRAM  
Honey Badger Federal #1H  
Section 12, T-26-S, R-29-E, Eddy County, NM



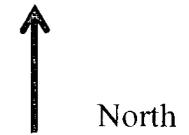
If well is found productive a tank battery will be constructed  
Battery will be buried and lined approx. 3-500 bbls oil tanks &  
3-500 bbl water tanks  
Gray area to be reclaimed and seeded to BLM Regulations  
Push top soil to West side and stock piled for later use

Closed loop system will but up to the steel pits.  
 Secondary Egress: Northwest to lease road that travels just North of the location

Prevailing wind out of SW 



# RIG 5 Patriot Drilling



Terrain: Flat with no sand dunes, native plants

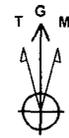
Honey Badger Federal #1H  
 Sec. 12, T26S, R29E  
 Eddy County, NM

# Nadel and Gussman Permian, LLC

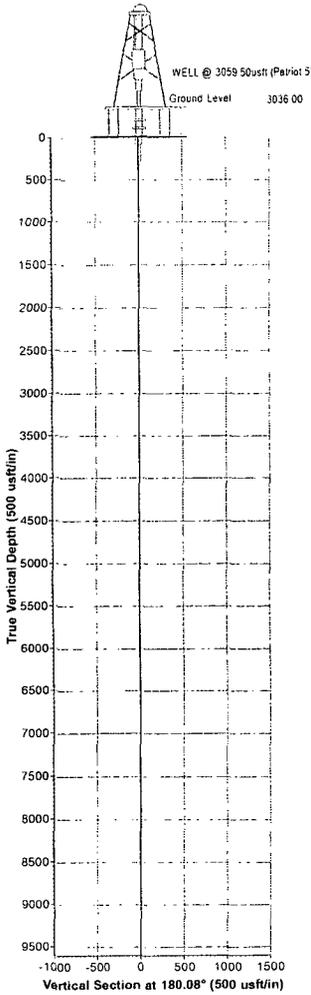
Project: Eddy County, New Mexico (NAD27)  
 Site: Honey Badger Federal  
 Well: 1H  
 Wellbore: Wellbore #1 Job #1411696  
 Design: Plan 1 09-05-14  
 Rig: Patriot 5



**PHOENIX**  
 TECHNOLOGY SERVICES



Azimuths to Grid North  
 True North: -0.21°  
 Magnetic North: 7.13°  
 Magnetic Field  
 Strength: 48161.1nT  
 Dip Angle: 59.90°  
 Date: 09/05/2014  
 Model: IGRF2010\_14



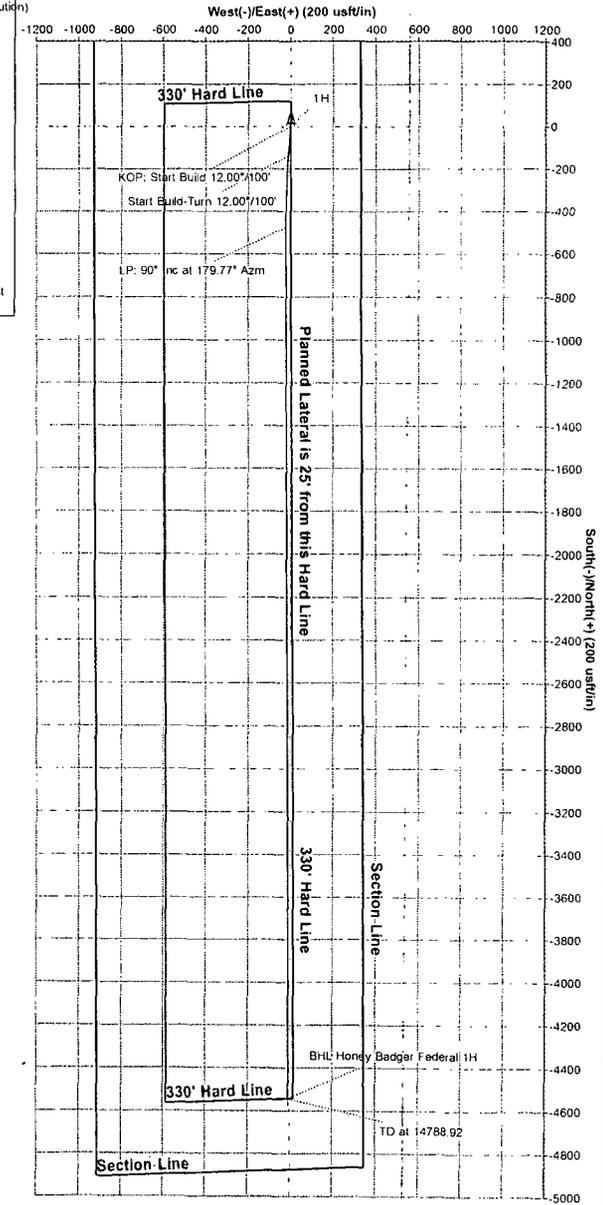
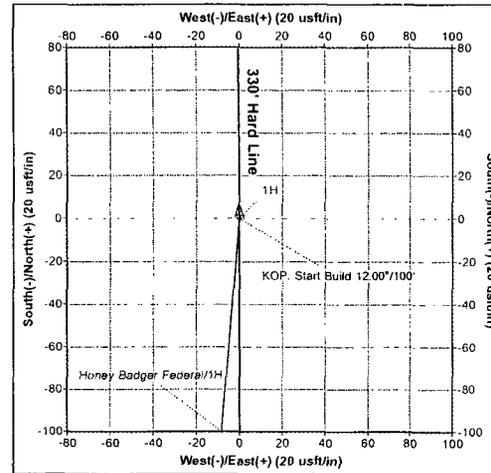
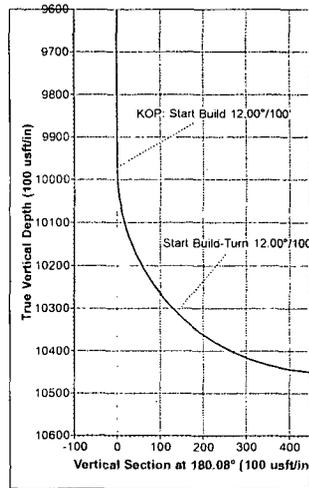
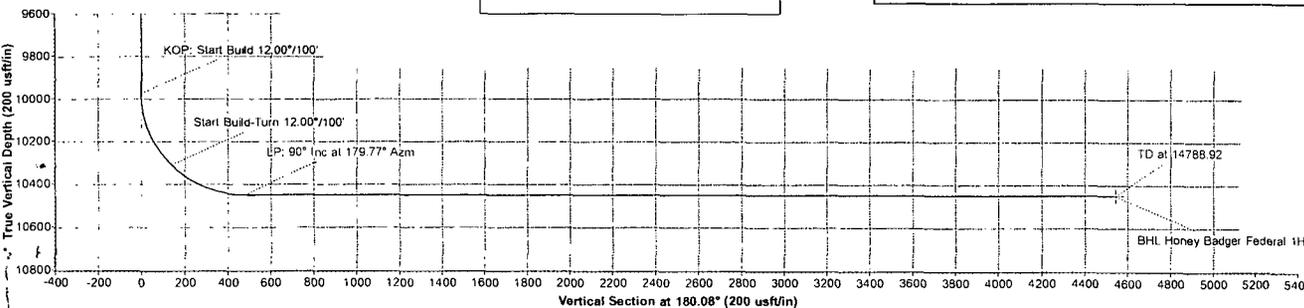
WELL DETAILS							
-N/S	-E/W	Northing	Ground Level	3036.00	Latitude	Longitude	
9.00	0.00	386877.80	Easting	625002.30	32° 3' 46.80000 N	103° 55' 47.34665 W	

SECTION DETAILS											
Sec	MD	Inc	Az	TVD	+N/S	+E/W	Dleg	TFace	VSec	Target	Annotation
1	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		KOP Start Build 12.00°/100'
2	9971.77	0.00	0.00	9971.77	0.00	0.00	0.00	0.00	0.00		Start Build-Turn 12.00°/100'
3	10345.77	45.00	184.60	10306.39	-139.36	-11.70	12.00	184.80	139.37		
4	10723.90	90.00	179.77	10450.00	-478.32	-22.57	12.00	-7.09	478.35		LP: 90° inc at 179.77° Azm
5	14788.92	90.00	179.77	10450.00	-4543.60	-6.40	0.00	0.09	4543.61	BHL Honey Badger Federal 1H	TD at 14788.92

DESIGN TARGET DETAILS									
Name	TVD	-N/S	-E/W	Northing	Easting	Latitude	Longitude	Shape	
BHL Honey Badger Federal 1H	10450.00	-4543.60	-6.40	382334.20	624995.90	32° 3' 1.83491 N	103° 55' 47.61635 W	Point	

CASING DETAILS		LEGEND	
No casing data is available		— Plan 1 09-05-14	

Map System: US State Plane 1927 (Exact solution)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone Name: New Mexico East 3001  
 Local Origin: Well 1H, Grid North  
 Latitude: 32° 3' 46.80000 N  
 Longitude: 103° 55' 47.34665 W  
 Grid East: 625002.30  
 Grid North: 386877.80  
 Scale Factor: 1.000  
 Geomagnetic Model: IGRF2010\_14  
 Sample Date: 05-Sep-14  
 Magnetic Declination: 7.34°  
 Dip Angle from Horizontal: 59.90°  
 Magnetic Field Strength: 48161  
 To convert a Magnetic Direction to a Grid Direction, Add 7.13°  
 To convert a Magnetic Direction to a True Direction, Add 7.34° East  
 To convert a True Direction to a Grid Direction, Subtract 0.21°



MEWBOURNE OIL CO  
BRUSHY DRAW 1 'DM' FEDERAL

LOFFLAND T W  
BRUNSON  
2

MEWBOURNE OIL CO  
BRUSHY DRAW 1 FEDERAL

1

6

BENNETT J GLENN  
CONTINENTAL-FEDERAL  
CHESAPEAKE OPERG INC  
FEDERAL  
PHILLIPS  
JFG ENTERPRISES  
PHILLIPS FEDERAL

BENNETT J GLENN  
BRUNSON

CHESAPEAKE OPERG INC  
PLU ROSS RANCH 6 FEDERAL

UNITED PET CORP  
PHILLIPS FEDERAL

HCW EXPLORATION INC  
AMOCO 'A' FEDERAL

NADEL AND GUSSMAN PERMIAN LLC  
HONEY BADGER FEDERAL #1

PET CORP OF DELAWARE  
BRUSHY '12-A' FEDERAL

PET CORP OF DELAWARE  
BRUSHY '12' FEDERAL  
2

7

PET CORP OF DELAWARE  
BRUSHY '12' FEDERAL  
4

HANKAMER CURTIS CORP  
HANSON-FEDERAL  
HANKAMER CURTIS CORP  
BRUSHY '12' FEDERAL  
3  
HANKAMER CURTIS CORP  
SCHRAM  
CHALLENGER ENRG CORP  
PICOU FEDERAL  
1

HANKAMER CURTIS CORP  
HANSON FEDERAL  
2

PET CORP OF DELAWARE  
BRUSHY '12' FEDERAL  
1

CHALLENGER ENRG CORP  
BEDENA-FEDERAL  
2

CHAPMAN FRD&ASSOC  
GULF A FEDERAL  
1

RHYMES DRLG CO INC  
GULF FEDERAL  
3

ALDRIDGE & STROUD INC  
AMERICAN TRADING  
1

HANKAMER CURTIS CORP  
GULF-FEDERAL A  
RHYMES DRLG CO INC  
GULF FEDERAL  
2

13

18

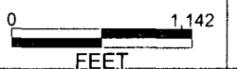
DILLON STEVE P  
GULF-FEDERAL

BLANCO ENGINEERING INC  
BEDENA FEDERAL  
1

T26.0S-R29.0E

HANKAMER CURTIS CORP  
MCKINNA-FEDERAL  
WD2

T26.0S-R30.0E



**NM OIL CONSERVATION**  
ARTESIA DISTRICT

AUG 3 2015

RECEIVED

## **Nadel and Gussman Permian, LLC**

Eddy County, New Mexico (NAD27)

Honey Badger Federal

1H

Wellbore #1 Job #1411696

Plan: Plan 1 09-05-14

## **Standard Planning Report**

05 September, 2014



**Phoenix Technology Services**  
Planning Report



<b>Database:</b>	Compass 5000 GCR DB	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Company:</b>	Nadel and Gussman Permian, LLC	<b>TVD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Project:</b>	Eddy County, New Mexico (NAD27)	<b>MD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Site:</b>	Honey Badger Federal	<b>North Reference:</b>	Grid
<b>Well:</b>	1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1 Job #1411696		
<b>Design:</b>	Plan 1 09-05-14		

<b>Project:</b>	Eddy County, New Mexico (NAD27)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site:</b>	Honey Badger Federal				
<b>Site Position:</b>	<b>Northing:</b>	386,877.80 usft	<b>Latitude:</b>	32° 3' 46.80000 N	
<b>From:</b> Map	<b>Easting:</b>	625,002.30 usft	<b>Longitude:</b>	103° 55' 47.34665 W	
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.21 °

<b>Well:</b>	1H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	386,877.80 usft	<b>Latitude:</b>	32° 3' 46.80000 N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	625,002.30 usft	<b>Longitude:</b>	103° 55' 47.34665 W
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	3,036.00 usft	

<b>Wellbore:</b>	Wellbore #1 Job #1411696				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010_14	09/05/14	7.34	59.90	48,161

<b>Design:</b>	Plan 1 09-05-14			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	180.08

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9.971.77	0.00	0.00	9.971.77	0.00	0.00	0.00	0.00	0.00	0.00	
10,346.77	45.00	184.80	10,309.39	-139.36	-11.70	12.00	12.00	0.00	184.80	
10,723.60	90.00	179.77	10,450.00	-478.32	-22.67	12.00	11.94	-1.33	-7.09	
14,788.92	90.00	179.77	10,450.00	-4,543.60	-6.40	0.00	0.00	0.00	0.00	BHL Honey Badger F

# Phoenix Technology Services

## Planning Report



<b>Database:</b>	Compass 5000 GCR DB	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Company:</b>	Nadel and Gussman Permian, LLC	<b>TVD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Project:</b>	Eddy County, New Mexico (NAD27)	<b>MD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Site:</b>	Honey Badger Federal	<b>North Reference:</b>	Grid
<b>Well:</b>	1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1 Job #1411696		
<b>Design:</b>	Plan 1 09-05-14		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Phoenix Technology Services**  
Planning Report



<b>Database:</b>	Compass 5000 GCR DB	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Company:</b>	Nadel and Gussman Permian, LLC	<b>TVD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Project:</b>	Eddy County, New Mexico (NAD27)	<b>MD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Site:</b>	Honey Badger Federal	<b>North Reference:</b>	Grid
<b>Well:</b>	1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1 Job #1411696		
<b>Design:</b>	Plan 1 09-05-14		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,971.77	0.00	0.00	9,971.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP: Start Build 12.00°/100'</b>										
9,975.00	0.39	184.80	9,975.00	-0.01	0.00	0.01	12.00	12.00	0.00	0.00
10,000.00	3.39	184.80	9,999.98	-0.83	-0.07	0.83	12.00	12.00	0.00	0.00
10,025.00	6.39	184.80	10,024.89	-2.95	-0.25	2.95	12.00	12.00	0.00	0.00
10,050.00	9.39	184.80	10,049.65	-6.37	-0.54	6.37	12.00	12.00	0.00	0.00
10,075.00	12.39	184.80	10,074.20	-11.08	-0.93	11.08	12.00	12.00	0.00	0.00

# Phoenix Technology Services

## Planning Report



<b>Database:</b>	Compass 5000 GCR DB	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Company:</b>	Nadel and Gussman Permian, LLC	<b>TVD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Project:</b>	Eddy County, New Mexico (NAD27)	<b>MD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Site:</b>	Honey Badger Federal	<b>North Reference:</b>	Grid
<b>Well:</b>	1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1 Job #1411696		
<b>Design:</b>	Plan 1 09-05-14		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,100.00	15.39	184.80	10,098.46	-17.06	-1.43	17.06	12.00	12.00	0.00	
10,125.00	18.39	184.80	10,122.38	-24.29	-2.04	24.29	12.00	12.00	0.00	
10,150.00	21.39	184.80	10,145.89	-32.77	-2.75	32.77	12.00	12.00	0.00	
10,175.00	24.39	184.80	10,168.92	-42.45	-3.56	42.46	12.00	12.00	0.00	
10,200.00	27.39	184.80	10,191.41	-53.33	-4.48	53.34	12.00	12.00	0.00	
10,225.00	30.39	184.80	10,213.29	-65.36	-5.49	65.37	12.00	12.00	0.00	
10,250.00	33.39	184.80	10,234.52	-78.52	-6.59	78.53	12.00	12.00	0.00	
10,275.00	36.39	184.80	10,255.02	-92.77	-7.79	92.78	12.00	12.00	0.00	
10,300.00	39.39	184.80	10,274.75	-108.07	-9.07	108.08	12.00	12.00	0.00	
10,325.00	42.39	184.80	10,293.65	-124.37	-10.44	124.39	12.00	12.00	0.00	
10,346.77	45.00	184.80	10,309.39	-139.36	-11.70	139.37	12.00	12.00	0.00	
<b>Start Build-Turn 12.00°/100°</b>										
10,350.00	45.38	184.73	10,311.67	-141.64	-11.89	141.66	12.00	11.91	-2.08	
10,375.00	48.36	184.24	10,328.75	-159.83	-13.32	159.85	12.00	11.91	-1.97	
10,400.00	51.34	183.79	10,344.87	-178.89	-14.65	178.91	12.00	11.92	-1.79	
10,425.00	54.33	183.38	10,359.97	-198.77	-15.90	198.79	12.00	11.93	-1.65	
10,450.00	57.31	183.00	10,374.02	-219.42	-17.05	219.44	12.00	11.93	-1.53	
10,475.00	60.29	182.64	10,386.97	-240.77	-18.10	240.80	12.00	11.94	-1.43	
10,500.00	63.28	182.30	10,398.78	-262.78	-19.04	262.81	12.00	11.94	-1.35	
10,525.00	66.26	181.98	10,409.44	-285.38	-19.89	285.40	12.00	11.94	-1.28	
10,550.00	69.25	181.67	10,418.90	-308.50	-20.63	308.53	12.00	11.95	-1.22	
10,575.00	72.24	181.38	10,427.14	-332.09	-21.25	332.12	12.00	11.95	-1.18	
10,600.00	75.23	181.10	10,434.15	-356.08	-21.77	356.11	12.00	11.95	-1.14	
10,625.00	78.21	180.82	10,439.89	-380.41	-22.18	380.44	12.00	11.95	-1.11	
10,650.00	81.20	180.55	10,444.36	-405.00	-22.47	405.03	12.00	11.95	-1.08	
10,675.00	84.19	180.28	10,447.53	-429.79	-22.65	429.83	12.00	11.95	-1.07	
10,700.00	87.18	180.02	10,449.41	-454.72	-22.72	454.75	12.00	11.95	-1.05	
10,723.60	90.00	179.77	10,450.00	-478.32	-22.67	478.35	12.00	11.95	-1.05	
<b>LP: 90° Inc at 179.77° Azm</b>										
10,800.00	90.00	179.77	10,450.00	-554.71	-22.37	554.74	0.00	0.00	0.00	
10,900.00	90.00	179.77	10,450.00	-654.71	-21.97	654.74	0.00	0.00	0.00	
11,000.00	90.00	179.77	10,450.00	-754.71	-21.57	754.74	0.00	0.00	0.00	
11,100.00	90.00	179.77	10,450.00	-854.71	-21.17	854.74	0.00	0.00	0.00	
11,200.00	90.00	179.77	10,450.00	-954.71	-20.76	954.74	0.00	0.00	0.00	
11,300.00	90.00	179.77	10,450.00	-1,054.71	-20.36	1,054.73	0.00	0.00	0.00	
11,400.00	90.00	179.77	10,450.00	-1,154.71	-19.96	1,154.73	0.00	0.00	0.00	
11,500.00	90.00	179.77	10,450.00	-1,254.70	-19.56	1,254.73	0.00	0.00	0.00	
11,600.00	90.00	179.77	10,450.00	-1,354.70	-19.16	1,354.73	0.00	0.00	0.00	
11,700.00	90.00	179.77	10,450.00	-1,454.70	-18.76	1,454.73	0.00	0.00	0.00	
11,800.00	90.00	179.77	10,450.00	-1,554.70	-18.36	1,554.73	0.00	0.00	0.00	
11,900.00	90.00	179.77	10,450.00	-1,654.70	-17.96	1,654.73	0.00	0.00	0.00	
12,000.00	90.00	179.77	10,450.00	-1,754.70	-17.56	1,754.72	0.00	0.00	0.00	
12,100.00	90.00	179.77	10,450.00	-1,854.70	-17.16	1,854.72	0.00	0.00	0.00	
12,200.00	90.00	179.77	10,450.00	-1,954.70	-16.76	1,954.72	0.00	0.00	0.00	
12,300.00	90.00	179.77	10,450.00	-2,054.70	-16.36	2,054.72	0.00	0.00	0.00	
12,400.00	90.00	179.77	10,450.00	-2,154.70	-15.96	2,154.72	0.00	0.00	0.00	
12,500.00	90.00	179.77	10,450.00	-2,254.70	-15.56	2,254.72	0.00	0.00	0.00	
12,600.00	90.00	179.77	10,450.00	-2,354.70	-15.16	2,354.72	0.00	0.00	0.00	
12,700.00	90.00	179.77	10,450.00	-2,454.70	-14.76	2,454.71	0.00	0.00	0.00	
12,800.00	90.00	179.77	10,450.00	-2,554.69	-14.36	2,554.71	0.00	0.00	0.00	
12,900.00	90.00	179.77	10,450.00	-2,654.69	-13.96	2,654.71	0.00	0.00	0.00	
13,000.00	90.00	179.77	10,450.00	-2,754.69	-13.56	2,754.71	0.00	0.00	0.00	
13,100.00	90.00	179.77	10,450.00	-2,854.69	-13.16	2,854.71	0.00	0.00	0.00	
13,200.00	90.00	179.77	10,450.00	-2,954.69	-12.76	2,954.71	0.00	0.00	0.00	

**Phoenix Technology Services**  
Planning Report



<b>Database:</b>	Compass 5000 GCR DB	<b>Local Co-ordinate Reference:</b>	Well 1H
<b>Company:</b>	Nadel and Gussman Permian, LLC	<b>TVD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Project:</b>	Eddy County, New Mexico (NAD27)	<b>MD Reference:</b>	WELL @ 3059.50usft (Patriot 5)
<b>Site:</b>	Honey Badger Federal	<b>North Reference:</b>	Grid
<b>Well:</b>	1H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1 Job #1411696		
<b>Design:</b>	Plan 1 09-05-14		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,300.00	90.00	179.77	10,450.00	-3,054.69	-12.36	3,054.70	0.00	0.00	0.00	
13,400.00	90.00	179.77	10,450.00	-3,154.69	-11.96	3,154.70	0.00	0.00	0.00	
13,500.00	90.00	179.77	10,450.00	-3,254.69	-11.56	3,254.70	0.00	0.00	0.00	
13,600.00	90.00	179.77	10,450.00	-3,354.69	-11.16	3,354.70	0.00	0.00	0.00	
13,700.00	90.00	179.77	10,450.00	-3,454.69	-10.76	3,454.70	0.00	0.00	0.00	
13,800.00	90.00	179.77	10,450.00	-3,554.69	-10.36	3,554.70	0.00	0.00	0.00	
13,900.00	90.00	179.77	10,450.00	-3,654.69	-9.96	3,654.70	0.00	0.00	0.00	
14,000.00	90.00	179.77	10,450.00	-3,754.68	-9.56	3,754.69	0.00	0.00	0.00	
14,100.00	90.00	179.77	10,450.00	-3,854.68	-9.16	3,854.69	0.00	0.00	0.00	
14,200.00	90.00	179.77	10,450.00	-3,954.68	-8.76	3,954.69	0.00	0.00	0.00	
14,300.00	90.00	179.77	10,450.00	-4,054.68	-8.36	4,054.69	0.00	0.00	0.00	
14,400.00	90.00	179.77	10,450.00	-4,154.68	-7.96	4,154.69	0.00	0.00	0.00	
14,500.00	90.00	179.77	10,450.00	-4,254.68	-7.56	4,254.69	0.00	0.00	0.00	
14,600.00	90.00	179.77	10,450.00	-4,354.68	-7.16	4,354.69	0.00	0.00	0.00	
14,700.00	90.00	179.77	10,450.00	-4,454.68	-6.76	4,454.68	0.00	0.00	0.00	
14,788.92	90.00	179.77	10,450.00	-4,543.60	-6.40	4,543.61	0.00	0.00	0.00	

TD at 14788.92

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL Honey Badger Fed	-	0.00	0.00	10,450.00	-4,543.60	-6.40	382,334.20	624,995.90	32° 3' 1.83491 N	103° 55' 47.61835 W
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
9,971.77	9,971.77	0.00	0.00	KOP: Start Build 12.00°/100'	
10,346.77	10,309.39	-139.36	-11.70	Start Build-Turn 12.00°/100'	
10,723.60	10,450.00	-478.32	-22.67	LP: 90° Inc at 179.77° Azm	
14,788.92	10,450.00	-4,543.60	-6.40	TD at 14788.92	

AUG 3 2015

**PECOS DISTRICT  
CONDITIONS OF APPROVAL**

RECEIVED

OPERATOR'S NAME:	Nadel and Gussman Permian, LLC
LEASE NO.:	NMNM57261
WELL NAME & NO.:	1H-Honey Badger Federal
SURFACE HOLE FOOTAGE:	450'/N & 330'/E
BOTTOM HOLE FOOTAGE:	330'/S & 330'/E
LOCATION:	Section 12, T.26 S., R.29 E., NMPM
COUNTY:	Eddy 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.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Phantom Bank Heronries
- Construction**
  - Notification
  - Topsoil
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  - Well Pads
  - Roads
- Road Section Diagram**
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  - Waste Material and Fluids
- Production (Post Drilling)**
  - Well Structures & Facilities
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **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)**

### **Phantom Bank Heronries**

Surface disturbance will not be allowed within up to 200 meters of active heronries or by delaying activity for up to 120 days, or a combination of both.

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.

## **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 (575) 234-5909 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 strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. 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. EXCLOSURE FENCING (CELLARS & PITS)**

##### **Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

#### **G. 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 twenty-five (25) 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**

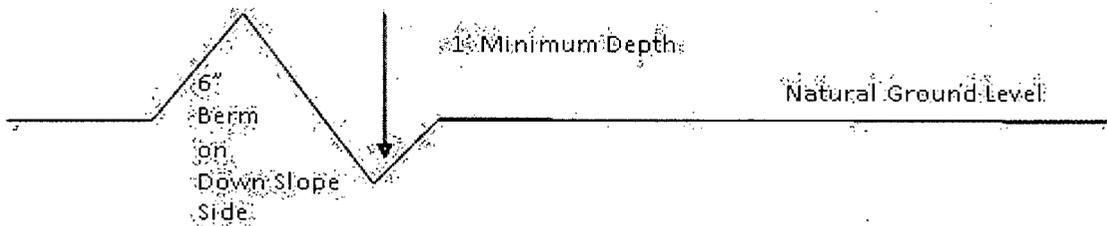
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outloping 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:

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

**Cattleguards**

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards on the access road route 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 cattleguards that are in place and are utilized during lease operations.

**Fence Requirement**

Where entry is granted 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 fences.

**Public Access**

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

- Construction Steps**
1. Salvage topsoil
  2. Construct road
  3. Redistribute topsoil
  4. Revegetate slopes

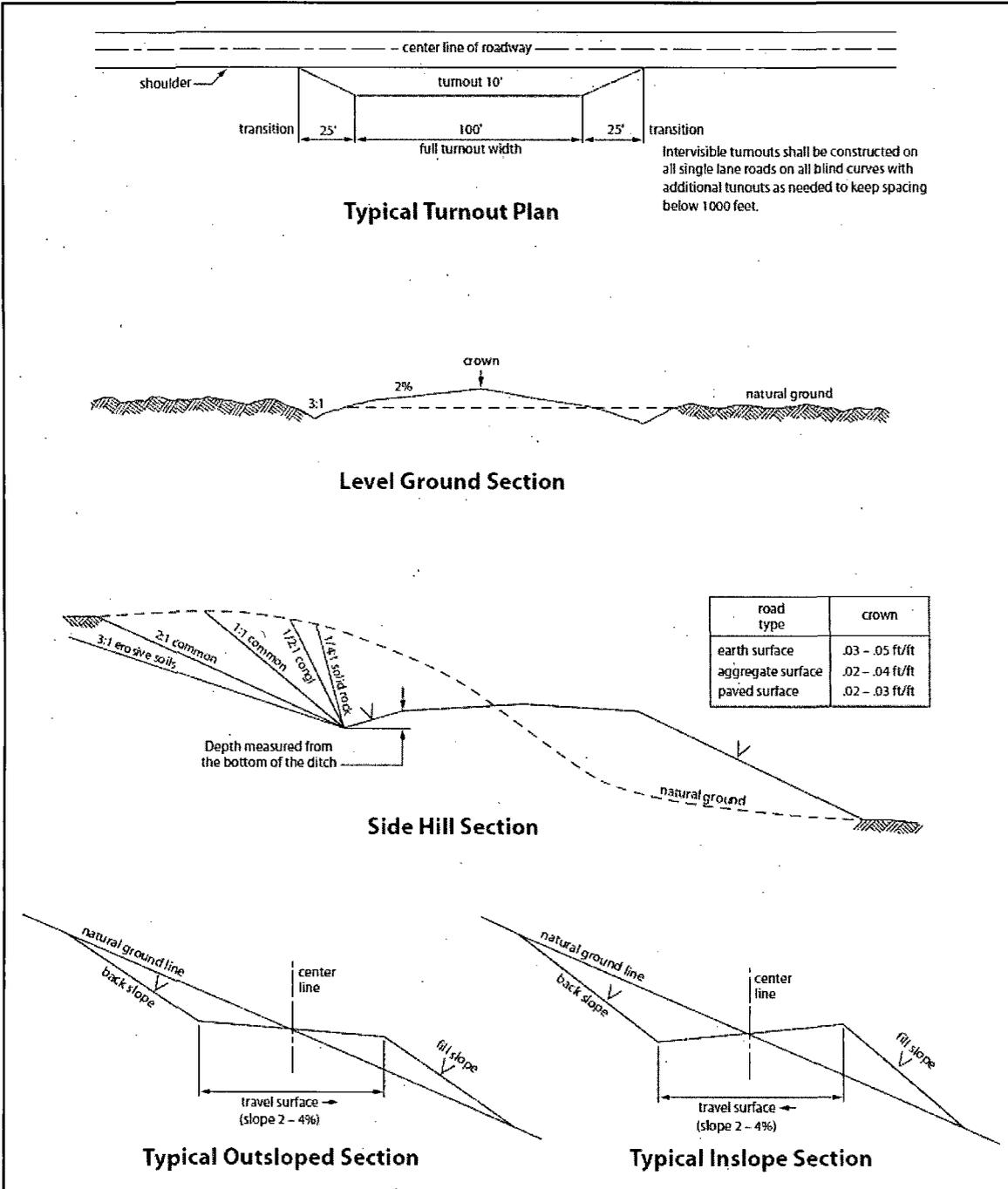


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

**Eddy County**

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe.**
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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
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 is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).**

The initial wellhead installed on the well will remain on the well with spools used as needed.

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

**Wait on cement (WOC) for Water Basin:**

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least **8 hours**. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. **DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE**

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

**Medium Cave/Karst**

Possibility of water flows in the top of salt and the Salado and Castile.

Possibility of lost circulation in the Rustler, Salado and Delaware.

Possible high pressure gas burst in the Wolfcamp.

1. The 13-3/8 inch surface casing shall be set at approximately 675 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
  - 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - 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.

If cement does not circulate to surface on the intermediate casing, the cement on the 7" production casing must come to surface due to Cave/Karst

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **3300** feet, is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

**7 inch is to be kept liquid filled while running in hole to meet BLM minimum collapse safety factor.**

3. The minimum required fill of cement behind the 7 inch production casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Operator shall provide method of verification.
4. The minimum required fill of cement behind the **4-1/2** inch production Liner is:
  - Cement as proposed by operator. Operator shall provide method of verification.
5. 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. **In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug ((against the intermediate casing only, in this case) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
  - d. The results of the test shall be reported to the appropriate BLM office.
  - e. 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.**

largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### **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** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

### **IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

### **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by

drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

## 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.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the

- f. 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. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2

#### **D. DRILL STEM TEST**

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

#### **E. DRILLING MUD**

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.

**Proposed mud weight may not be adequate for drilling through Wolfcamp.**

#### **F. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**EGF 071715**

## SEED MIXTURE 1 (LOAMY LOCATIONS)

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 months prior to purchase. Commercial seed will be 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 to 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 double the amounts listed below. 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 (**note: if broadcasting seed, amounts are to be doubled**):

Species	Pound/acre
Plains Lovegrass ( <i>Eragrostis intermedia</i> )	0.5
Sand Dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sideoats grama ( <i>Bouteloua curtipendula</i> )	5.0

\* Pounds of pure live seed = (Pounds of seed) x (Percent purity) x (Percent germination)