ATS-08-417
EA-08-708

S **OCD-ARTESIA**

Form 3160-3
(February 2005)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

JUN 06 2008
OCD-ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. **NMNM 115411**

6 If Indian, Allotee or Tribe Name

1a. Type of work ☑ DRILL ☐ REENTER

7 If Unit or CA Agreement, Name and No.

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

8. Lease Name and Well No. **Really Scary Federal #3H** 36723

2. Name of Operator **Marbob Energy Corporation**

9 API Well No. 30-015-36372

3a Address **P.O. Box 227, Artesia, NM 88211-0228**

3b Phone No. *(include area code)* **505-748-3303**

10 Field and Pool, or Exploratory **Willow Lake; Delaware, SW**

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **430' FSL & 2310' FWL**
At proposed prod zone **430' FSL & 330' FWL**

11 Sec, T R M. or Blk and Survey or Area **Section 33, T24S - R28E**

14 Distance in miles and direction from nearest town or post office* **About 4.5 miles from Malaga, NM**

12 County or Parish **Eddy County**
13 State **NM**

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) **430'**

16 No of acres in lease **600**

17 Spacing Unit dedicated to this well **80**

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft

19 Proposed Depth ~~6800'~~ 6575 MD 4800 TVD

20 BLM/BIA Bond No. on file **NMB000412**

21 Elevations (Show whether DF, KDB, RT, GL, etc.) **3006' GL**

22 Approximate date work will start* **03/28/2008**

23 Estimated duration **21 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

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

25. Signature Nancy T. Agnew
Name *(Printed/Typed)* **Nancy T. Agnew**
Date **02/28/2008**

Title **Land Department**

Approved by *(Signature)* /s/ Don Peterson
Name *(Printed/Typed)*
Date JUN 5 2008

Title **FOR FIELD MANAGER**
Office **CARLSBAD FIELD OFFICE**

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

APPROVAL FOR TWO YEARS

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

*(Instructions on page 2)

NOTE: New Pit Rule
NMAC 19-15-17

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

6-11-08

SELF-CERTIFICATION STATEMENT
FROM LESSEE/OPERATOR

SURFACE OWNER IDENTIFICATION

Federal or Indian Lease No. NMNM-115411

I hereby certify to the Authorized Officer of the Bureau of Land Management that I have reached one of the following agreements with the Surface Owner; or after failure of my good-faith effort to come to an agreement of any kind with the Surface Owner, have provided a bond and will provide evidence of service of such bond to the Surface Owner:

1) ✓ I have a signed access agreement to enter the leased lands;

2) _____ I have a signed waiver from the surface owner;

3) _____ I have entered into an agreement regarding compensation to the surface owner for damages for loss of crops and tangible improvements.

4) _____ because I have been unable to reach either 1), 2), or 3) with the surface owner, I have obtained a bond to cover loss of crops and damages to tangible improvements and served the surface owner with a copy of the bond.

Surface owner information: (if available after diligent effort)

Surface Owner Name: Pardue Limited Company

Surface Owner Address: P.O. Box 2018, Carlsbad, NM 88221

Surface Owner Phone Number: (505) 887-9525

Signed this 3rd -- day of July -, 2007.

Marbob Energy Corporation By: [signature]
(Name of lessee/operator) Ross Duncan

I (Surface Owner) accept ✓ do not accept _____ the lessee or operator=s Surface Owner Agreement under 1, 2, or 3 above.

Signed this 3rd - day of July -, 2007.

Pardue Limited Company By: [signature]
(Signature of Surface Owner if an agreement has been reached)

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:

Date: February 28, 2008

Lease #: NMNM 115411
Really Scary Federal #3H

Legal Description: Sec. 33-T24S-R28E
Eddy County, New Mexico

Formation(s): Permian

Bond Coverage: Statewide

BLM Bond File #: NMB000412

Nancy Agnew
Land Department

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State EDDYse – 4 Copies
Fee EDDYse – 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	96855	WILLOW LAKE; DELAWARE, SW

Property Code	Property Name	Well Number
36723	REALLY SCARY FEDERAL	3H

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3006'

Surface Location

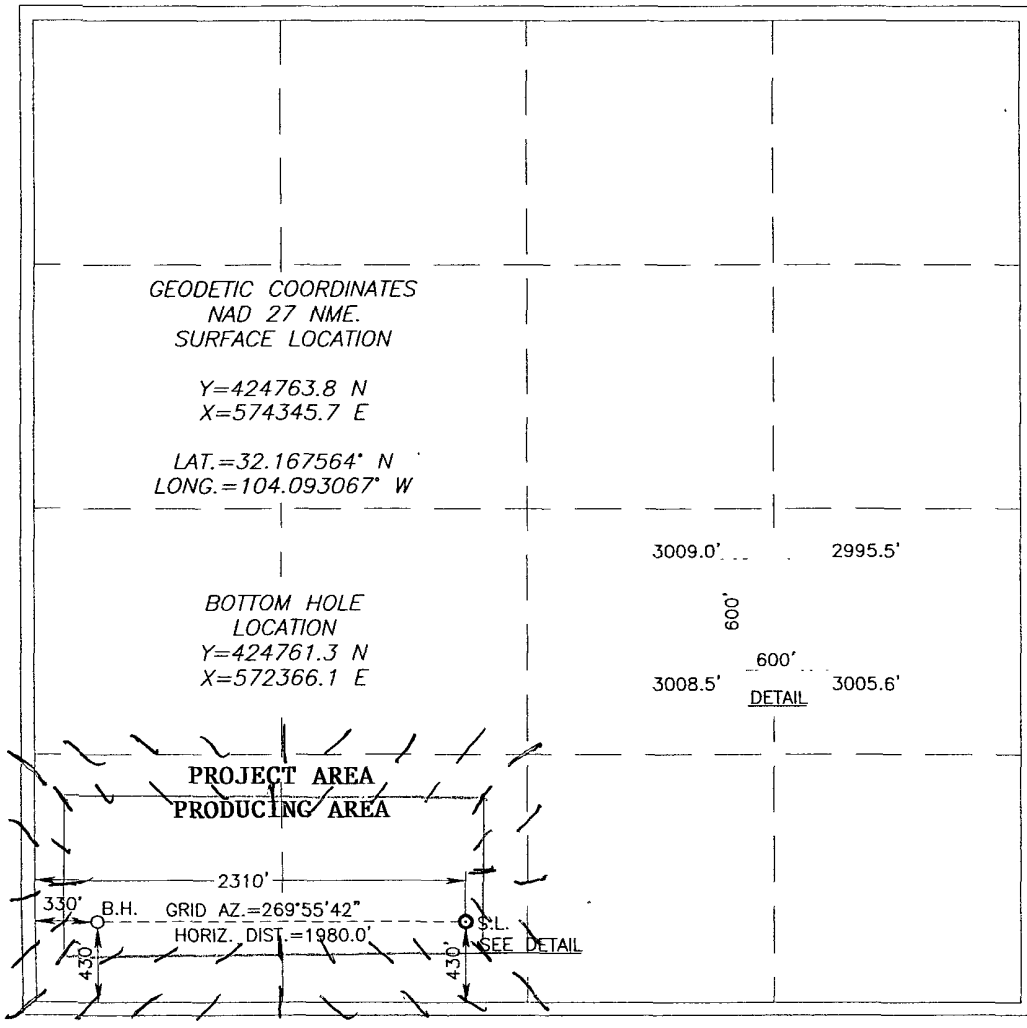
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	33	24-S	28-E		430	SOUTH	2310	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	33	24-S	28-E		430	SOUTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
80			

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.

Nancy Agnew 2/28/08
Signature Date

NANCY AGNEW
Printed Name

SURVEYOR CERTIFICATION

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

FEBRUARY 7, 2008
Date Surveyed DSS

Signature & Seal of Professional Surveyor

NEW MEXICO 3239 08.11.01.06

Ronald J. Eidson 2/13/08

Certificate No. GARY G. EIDSON 12641
RONALD J. EIDSON 3239

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Really Scary Federal #3H
Surf: 430' FSL & 2310' FWL
BHL: 430' FSL & 330' FWL
Section 33, T24S – R28E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. Geological surface formation: Permian

2. The estimated tops of geologic markers are as follows:

Top of Salt	550'
Base of Salt	2350'
Delaware	2550'
TD Pilot Hole	5200'
TD LATERAL	6800'

3. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Delaware	2550'	Oil

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8" casing at 300' and circulating cement back to surface. All intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 13 3/8" casing.

4. **Proposed Casing Program:**

Hole Size	Interval	OD Casing	New or Used	Wt	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17 ½"	0' – ~~300'~~	13 3/8"	New	48#	STC	H-40	1.125	1.125	1.6
12 ¼"	300' – 2450'	8 5/8"	New	24#	STC	J-55	1.125	1.125	1.6
7 7/8"	2450'– 6800'	5 1/2"	New	17#	LTC	J-55	1.125	1.125	1.6

See COA

5. Proposed Cement Program:

a. 13 3/8" Surf — Cement to Surface with 300 Sk "c" wt 14.8 ppg yield 1.34

b. 8 5/8" Int — Cement to surface with 550 sk "c" light wt 12.7 ppg yield 1.91, tail in with 200 sk "c" wt 14.8 ppg yield 1.34

c. 5 1/2" Prod	Cement 1st stage with 300 sk acid soluble cement wt 15.0 ppg yield 2.6 Cement 2nd stage with 200 sk "H" light wt 12.7 yield 1.91 Tail in with 100 sk "H" wt 13.0 yield 1.64 DV Tool @ 4300' TOC 2200'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 200' above the 13 3/8" casing shoe. **All casing is new and API approved.**

6. Minimum Specifications for Pressure Control:

Nipple up on 13 3/8 with 2M system testing to 1000 psi with rig pumps. Nipple up on 8 5/8 with 2M system and test to 2000 psi with independent tester.

BOP will be operationally checked each 24 hour period. These checks will be noted on the daily tour sheets. A 2"kill line and a 3" choke line will be included in the drilling spool located below the BOP. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 2000 psi WP rating.

7. Estimated BHP: 2828.8 psi

8. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' – ~~300'~~	Fresh Water	8.4	29	N.C.
~~300'~~ – 2450'	Brine	10.0	29	N.C.
2450' – 6800'	Cut Brine	8.9	29	N.C.

See COA

The necessary mud products for weight addition and fluid loss control will be on location at all times.

9. Auxiliary Well Control and Monitoring 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 5 ½" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

10. Testing, Logging and Coring Program:

a. Drill stem tests will be based on geological sample shows.
b. The open hole electrical logging program will be:
   i. Total Depth to Intermediate Casing: Dual Laterolog-Micro Laterolog and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.

ii. Total Depth to Surface: Compensated Neutron with Gamma Ray
iii. No coring program is planned
iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

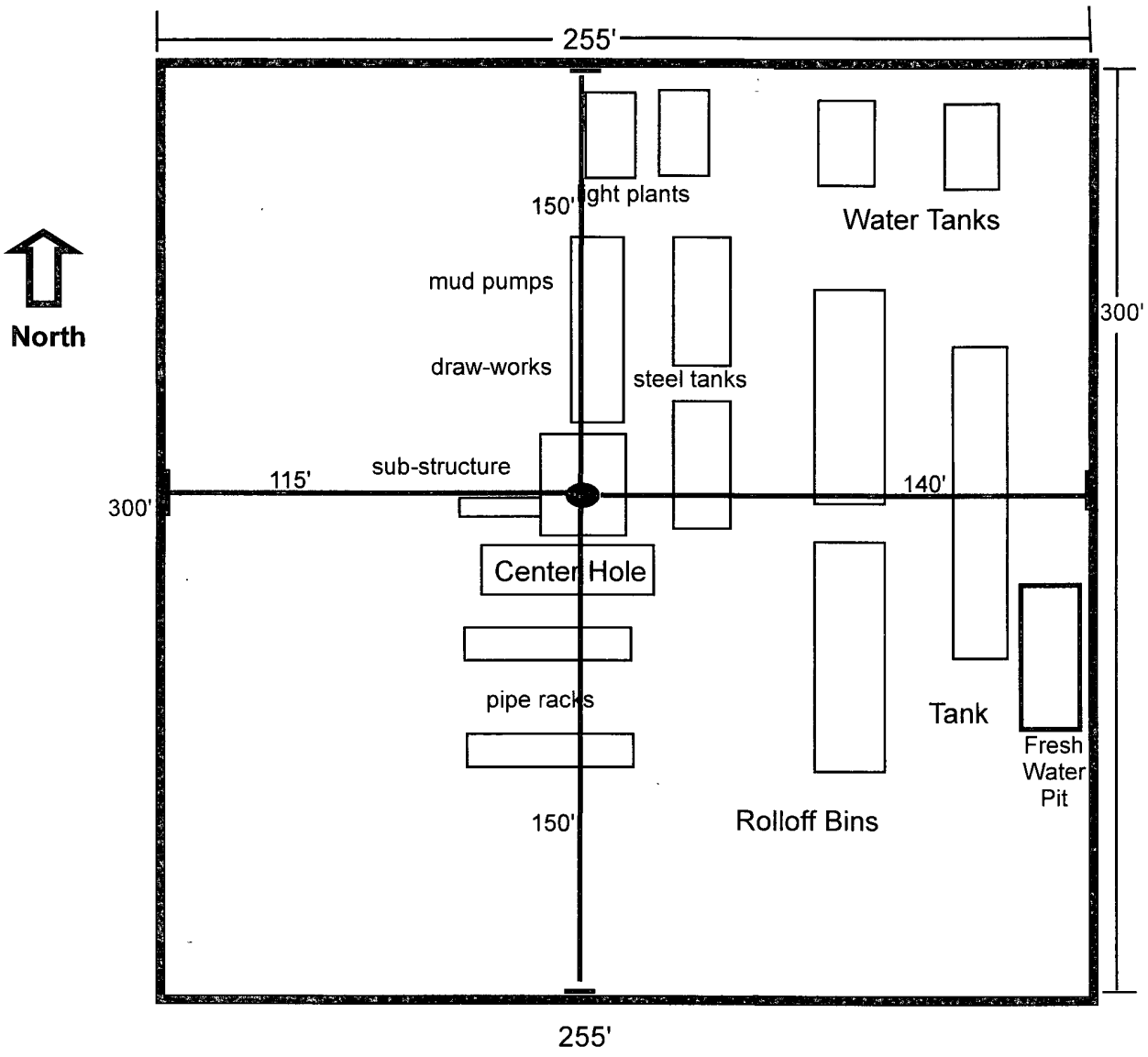
11. Potential Hazards:

a. No abnormal pressures or temperatures 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. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP: 2828.8 psi. No H2S is anticipated to be encountered.

12. Anticipated starting date and Duration of Operations:

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 21 days.

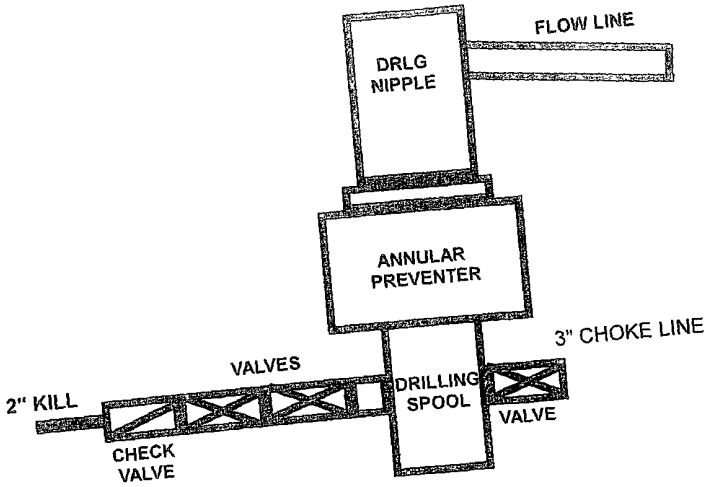
Well Site Lay-Out Plat

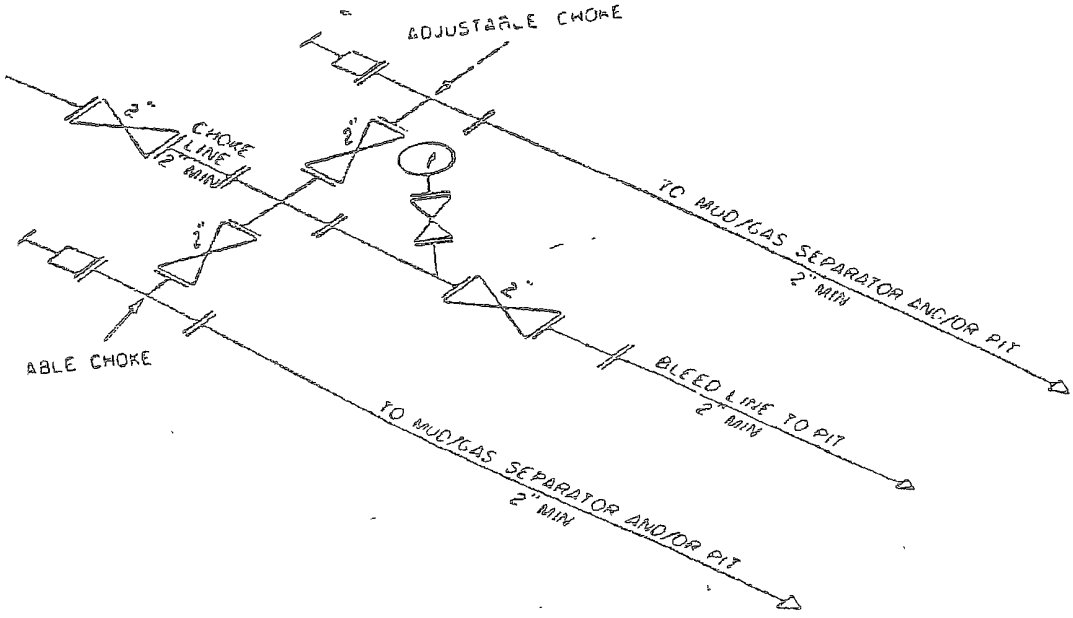


Really Scary Federal #3H
Surf: 430' FSL & 2310' FWL
BHL: 430' FSL & 330' FWL
Section 33, T24S – R28E
Eddy County, New Mexico

EXHIBIT THREE

2M SYSTEM





2M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Exhibit One

Marbob

Really Scary Federal #3H
S33 T24S R28E
Really Scary Federal #3H
Original Hole

Plan: Plan #1

Pathfinder Survey Report

22 February, 2008

BUREAU OF LAND MGMT
CARLSBAD FIELD OFFICE
2008 MAR -4 PM 2:40
RECEIVED

marbob energy corporation
Artesia, N.M.

Azimuths to Grid North
True North: -0.13°
Magnetic North: 8.07°

Magnetic Field
Strength: 48878.8snT
Dip Angle: 60.13°
Date: 2/22/2008
Model: IGRF200510

Project: Really Scary Federal #3H
Site: S33 T24S R28E
Well: Really Scary Federal #3H
Wellbore: Original Hole
Plan: Plan #1 (Really Scary Federal #3H/Original Hole)

PATHFINDER ENERGY SERVICES

WELL DETAILS: Really Scary Federal #3H

Ground Elevation.: 3006.00
RKB Elevation: EST RKB @ 3006.00ft
Rig Name:

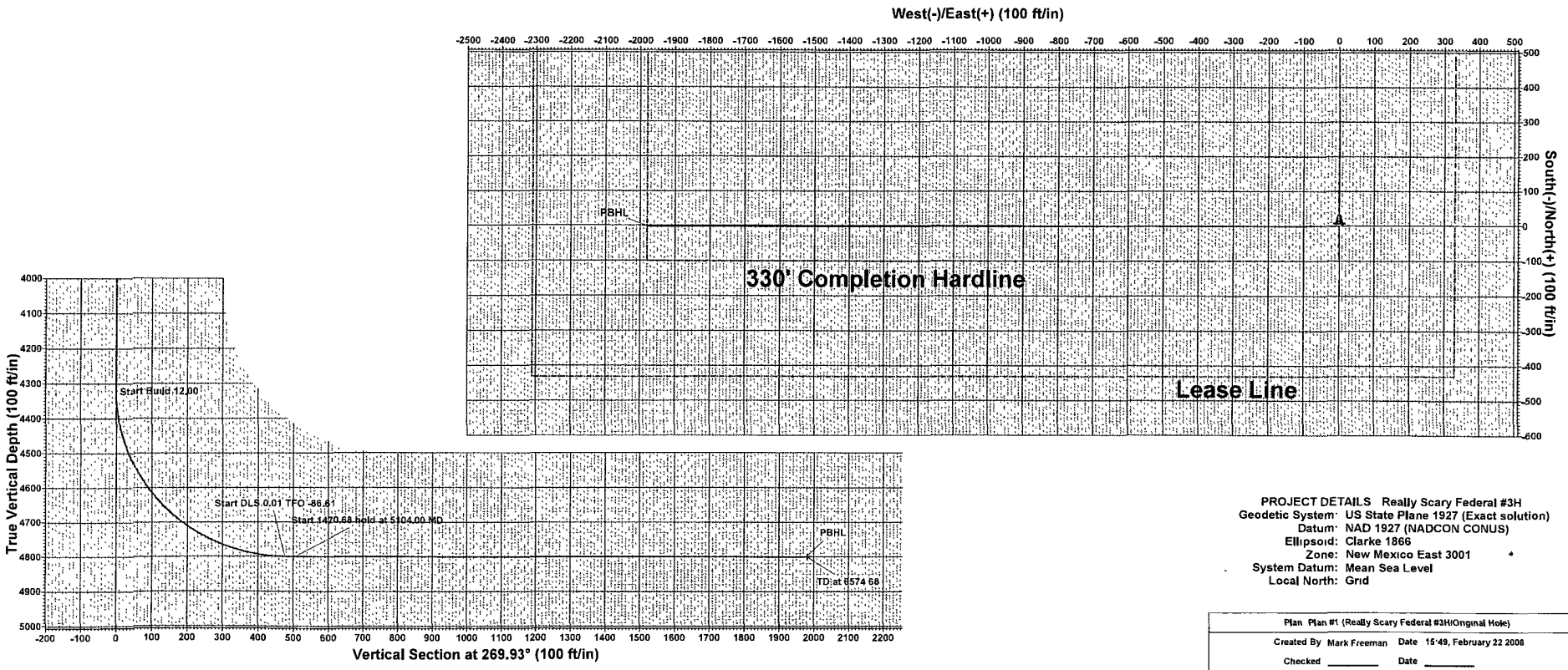
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	424763.800	574345.700	32° 10' 3.232 N	104° 5' 35.040 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4322.54	0.00	0.00	4322.54	0.00	0.00	0.00	0.00	0.00	
3	5072.54	90.00	269.93	4800.00	-0.58	-477.46	12.00	269.93	477.46	
4	5104.00	90.00	269.93	4800.00	-0.62	-508.92	0.01	-86.61	508.92	
5	6574.68	90.00	269.93	4800.00	-2.50	-1979.60	0.00	0.00	1979.60	PBHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	4800.00	-2.50	-1979.60	424761.300	572366.100	Point



PROJECT DETAILS Really Scary Federal #3H
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

Plan Plan #1 (Really Scary Federal #3H/Original Hole)
Created By Mark Freeman Date 15:49, February 22 2008
Checked _____ Date _____

WHS

Pathfinder Survey Report

Company:	Marbob	**Local Co-ordinate Reference:**	Well Really Scary Federal #3H
Project:	Really Scary Federal #3H	**TVD Reference:**	EST RKB @ 3006.00ft
Site:	S33 T24S R28E	**MD Reference:**	EST RKB @ 3006.00ft
Well:	Really Scary Federal #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003 16 Single User Db

Project Really Scary Federal #3H

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site S33 T24S R28E

Site Position:		**Northing:**	424,763.800 ft	**Latitude:**	32° 10' 3.232 N
From:	Map	**Easting:**	574,345.700 ft	**Longitude:**	104° 5' 35.040 W
Position Uncertainty:	0 00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 13 °

Well Really Scary Federal #3H

Well Position	**+N/-S**	0 00 ft	**Northing:**	424,763.800 ft	**Latitude:**	32° 10' 3.232 N
	+E/-W	0 00 ft	**Easting:**	574,345 700 ft	**Longitude:**	104° 5' 35.040 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,006.00 ft

Wellbore Original Hole

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	2/22/2008	8.20	60.13	48,879

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0 00

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0.00	0.00	0.00	269.93

Survey Tool Program **Date** 2/22/2008

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.00	6,574.68	Plan #1 (Original Hole)	MWD	MWD - Standard

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
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
200.00	0 00	0.00	200.00	0 00	0.00	0 00	0.00
300.00	0.00	0 00	300.00	0.00	0.00	0 00	0.00
400.00	0 00	0 00	400.00	0.00	0.00	0 00	0 00
500 00	0 00	0.00	500.00	0.00	0.00	0.00	0.00
600 00	0 00	0 00	600.00	0.00	0.00	0 00	0.00
700.00	0 00	0 00	700.00	0 00	0.00	0.00	0.00
800.00	0 00	0 00	800.00	0 00	0.00	0 00	0.00
900 00	0 00	0 00	900.00	0.00	0 00	0 00	0.00
1,000.00	0.00	0 00	1,000.00	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

Company:	Marbob	**Local Co-ordinate Reference:**	Well Really Scary Federal #3H
Project:	Really Scary Federal #3H	**TVD Reference:**	EST RKB @ 3006.00ft
Site:	S33 T24S R28E	**MD Reference:**	EST RKB @ 3006 00ft
Well:	Really Scary Federal #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
1,200.00	0 00	0 00	1,200 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
1,400.00	0.00	0 00	1,400.00	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
1,600.00	0.00	0 00	1,600.00	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
1,800 00	0.00	0.00	1,800.00	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
2,000 00	0.00	0.00	2,000.00	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
2,200.00	0.00	0 00	2,200.00	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
2,400 00	0 00	0 00	2,400.00	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
2,600.00	0 00	0.00	2,600.00	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
2,800.00	0.00	0.00	2,800 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
3,000 00	0.00	0 00	3,000 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
3,200.00	0 00	0 00	3,200.00	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
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3,500.00	0.00	0.00	3,500.00	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
3,700.00	0.00	0.00	3,700.00	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
3,900 00	0 00	0 00	3,900.00	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
4,100.00	0.00	0.00	4,100 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
4,300.00	0 00	0 00	4,300.00	0 00	0.00	0.00	0.00
4,322 54	0 00	0 00	4,322 54	0 00	0 00	0 00	0.00
4,325 00	0 30	269.93	4,325 00	0 00	-0 01	0.01	12 00
4,350.00	3.30	269.93	4,349 98	0.00	-0 79	0.79	12 00
4,375.00	6.30	269.93	4,374 89	0.00	-2.88	2 88	12.00
4,400.00	9.30	269.93	4,399.66	-0.01	-6.27	6 27	12.00
4,425 00	12 30	269.93	4,424 22	-0.01	-10.95	10.95	12 00
4,450 00	15 30	269.93	4,448.49	-0 02	-16.91	16.91	12.00
4,475.00	18 30	269.93	4,472 42	-0.03	-24 13	24.13	12 00
4,500.00	21 30	269.93	4,495.94	-0 04	-32.60	32.60	12.00
4,525.00	24 30	269.93	4,518.99	-0.05	-42 29	42.29	12.00
4,550.00	27.30	269 93	4,541.49	-0.06	-53 16	53.16	12 00
4,575 00	30.30	269 93	4,563.40	-0.08	-65.20	65.20	12.00

Company:	Marbob	**Local Co-ordinate Reference:**	Well Really Scary Federal #3H
Project:	Really Scary Federal #3H	**TVD Reference:**	EST RKB @ 3006.00ft
Site:	S33 T24S R28E	**MD Reference:**	EST RKB @ 3006.00ft
Well:	Really Scary Federal #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)
4,600.00	33 30	269 93	4,584 65	-0 10	-78.37	78.37	12.00
4,625 00	36 30	269 93	4,605 17	-0 11	-92.64	92.64	12 00
4,650 00	39 30	269 93	4,624 93	-0.13	-107 96	107.96	12 00
4,675 00	42 30	269.93	4,643 85	-0 15	-124.29	124.29	12.00
4,700.00	45.30	269.93	4,661.89	-0.17	-141 59	141.59	12.00
4,725.00	48 30	269.93	4,679.01	-0.20	-159 81	159.81	12 00
4,750.00	51.30	269 93	4,695.14	-0.22	-178.90	178.90	12.00
4,775 00	54.30	269 93	4,710.26	-0.24	-198 81	198 81	12.00
4,800.00	57 30	269.93	4,724 31	-0 27	-219 49	219 49	12 00
4,825.00	60 30	269.93	4,737 26	-0 29	-240.87	240 87	12.00
4,850.00	63.30	269.93	4,749 08	-0.32	-262.89	262.90	12 00
4,875 00	66.30	269.93	4,759.72	-0.35	-285.51	285 51	12.00
4,900.00	69.30	269.93	4,769.17	-0.38	-308.66	308.66	12.00
4,925.00	72 30	269.93	4,777 39	-0.41	-332 26	332.26	12 00
4,950.00	75 30	269.93	4,784 37	-0.44	-356 27	356 27	12 00
4,975.00	78 30	269.93	4,790 08	-0 46	-380.60	380 60	12 00
5,000.00	81 30	269.93	4,794 51	-0.50	-405.20	405.20	12.00
5,025 00	84 30	269 93	4,797.64	-0.53	-430.00	430.00	12.00
5,050.00	87.30	269 93	4,799.47	-0.56	-454 93	454.93	12 00
5,072 54	90.00	269 93	4,800.00	-0.58	-477.46	477 46	12.00
5,104.00	90.00	269.93	4,800.00	-0.62	-508.92	508.92	0.01
5,200 00	90.00	269.93	4,800.00	-0.75	-604.92	604.92	0 00
5,300.00	90 00	269.93	4,800.00	-0.87	-704 92	704.92	0.00
5,400.00	90.00	269.93	4,800.00	-1.00	-804 92	804.92	0.00
5,500.00	90.00	269 93	4,800 00	-1 13	-904.92	904 92	0 00
5,600 00	90 00	269.93	4,800 00	-1 26	-1,004.92	1,004.92	0 00
5,700 00	90.00	269.93	4,800 00	-1.38	-1,104 92	1,104 92	0.00
5,800 00	90 00	269.93	4,800 00	-1.51	-1,204.92	1,204.92	0 00
5,900.00	90 00	269.93	4,800.00	-1.64	-1,304.92	1,304.92	0.00
6,000.00	90.00	269.93	4,800.00	-1 77	-1,404.92	1,404.92	0.00
6,100.00	90 00	269 93	4,800.00	-1 89	-1,504.92	1,504.92	0.00
6,200.00	90 00	269.93	4,800.00	-2.02	-1,604 92	1,604 92	0.00
6,300.00	90.00	269.93	4,800.00	-2.15	-1,704 92	1,704.92	0.00
6,400 00	90.00	269.93	4,800 00	-2.28	-1,804.92	1,804.92	0.00
6,500.00	90.00	269 93	4,800 00	-2.40	-1,904.92	1,904.92	0.00
6,574.68	90.00	269.93	4,800 00	-2.50	-1,979.60	1,979 60	0 00

Company:	Marbob	**Local Co-ordinate Reference:**	Well Really Scary Federal #3H
Project:	Really Scary Federal #3H	**TVD Reference:**	EST RKB @ 3006.00ft
Site:	S33 T24S R28E	**MD Reference:**	EST RKB @ 3006.00ft
Well:	Really Scary Federal #3H	**North Reference:**	Grid
Wellbore:	Original Hole	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	EDM 2003.16 Single User Db

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL - plan hits target - Point	0.00	0.00	4,800.00	-2.50	-1,979.60	424,761.300	572,366.100	32° 10' 3.251 N	104° 5' 58.071 W

Checked By: _____ Approved By: _____ Date: _____

MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

A. The hazards and characteristics of hydrogen sulfide (H_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

A. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

C. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

A. Well Control Equipment:

Flare line.

Choke manifold.

Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. H_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

D. Visual warning systems:

Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

E. Mud Program:

The mud program has been designed to minimize the volume of H_2S circulated to the surface.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

G. Communication:

Company vehicles equipped with cellular telephone and 2-way radio.

Marbob Energy has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H2S Contingency Plan would be necessary.

WARNING

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH MARBOB FOREMAN AT MAIN OFFICE***

MARBOB ENERGY CORPORATION

1-505-748-3303

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Really Scary Federal #3H
Surf: 430' FSL & 2310' FWL
BHL: 430' FSL & 330' FWL
Section 33, T24S – R28E
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by John West Surveying Company.
b. Exhibit 2 is a portion of a topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location are indicated in red on Exhibit 2.
c. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

DIRECTIONS:

From the intersection of county road #720 (Black River Village Road) and U.S. Hwy 285, go South on U.S. Hwy 285 approx. 4.0 miles. Turn right and go west approx. 0.7 miles. Turn right and go northwest approx. 0.12 miles to the Really Scary Federal #1 well pad. From the northeast corner of the Really Scary Federal #1 well pad follow proposed road approx. 112 feet. Turn left at proposed road survey and go west approx. 0.5 miles. This location is approx. 210 feet northwest.

2. PLANNED ACCESS ROAD:

There is a proposed access road of 2543 feet ending on the southeastern side of the well pad.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. In the event the well is found productive, the Really Scary Federal #1 tank battery would be utilized and the necessary production equipment will be installed at the well site. A Site Facilities Diagram will be submitted upon completion of facility.
B. All flowlines will adhere to API standards

C. If electricity is needed, power will be obtained from Central Valley Electric. Central Valley Electric will apply for ROW for their power lines.
D. If the well is productive, rehabilitation plans are as follows:
    i. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. LOCATION AND TYPES OF WATER SUPPLY:

This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in Exhibit #2. On occasion, water will be obtained form a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, the existing and proposed road shown in Exhibit "2" will be utilized.

5. CONSTRUCTION MATERIALS:

All Caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

6. METHODS OF HANDLING WASTE MATERIAL:

a. All trash, junk and other waste material will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.

b. The supplier, including broken sacks, will pick up slats remaining after completion of well.

c. A porto-john 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.

d. Disposal of fluids and cuttings below the fresh water zone will be transported by an approved disposal company.

7. ANCILLARY FACILITIES:

No campsite or other facilities will be constructed as a result of this well.

8. WELLSITE LAYOUT:

a. Exhibit 3 shows the proposed well site layout with dimensions of the pad layout.

b. This exhibit indicates proposed location of fresh water sump pits if utilized and living facilities.

c. Mud pits in the active circulating system will be steel pits and a closed loop system will be utilized.

d. A fresh water/Cement Pit will be on the pad and will be closed at the end of drilling operations.

9. PLANS FOR SURFACE RECLAMATION:

a. After finishing drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original state.

b. The location and road will be rehabilitated as recommended by the BLM.

c. If the well is deemed commercially productive, the reserve pit will be restored as described in 10(A) within 120 days subsequent to the completion date. Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

10. SURFACE OWNERSHIP:

The surface is owned by Pardue Limited Surface. We do have a surface agreement.

11.OTHER INFORMATION:

a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, some mesquite bushes and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.

b. There is no permanent or live water in the general proximity of the location.

c. There are no dwellings within 2 miles of location.

d. A Cultural Resources Examination will be completed by Boone Archeological and forwarded to the BLM office in Carlsbad, New Mexico.

12.OPERATOR'S REPRESENTATIVE:

A. Through A.P.D. Approval:

Dean Chumbley, Landman
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505) 748-5988

B. Through Drilling Operations

Sheryl Baker, Drilling Supervisor
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5489

CERTIFICATION:

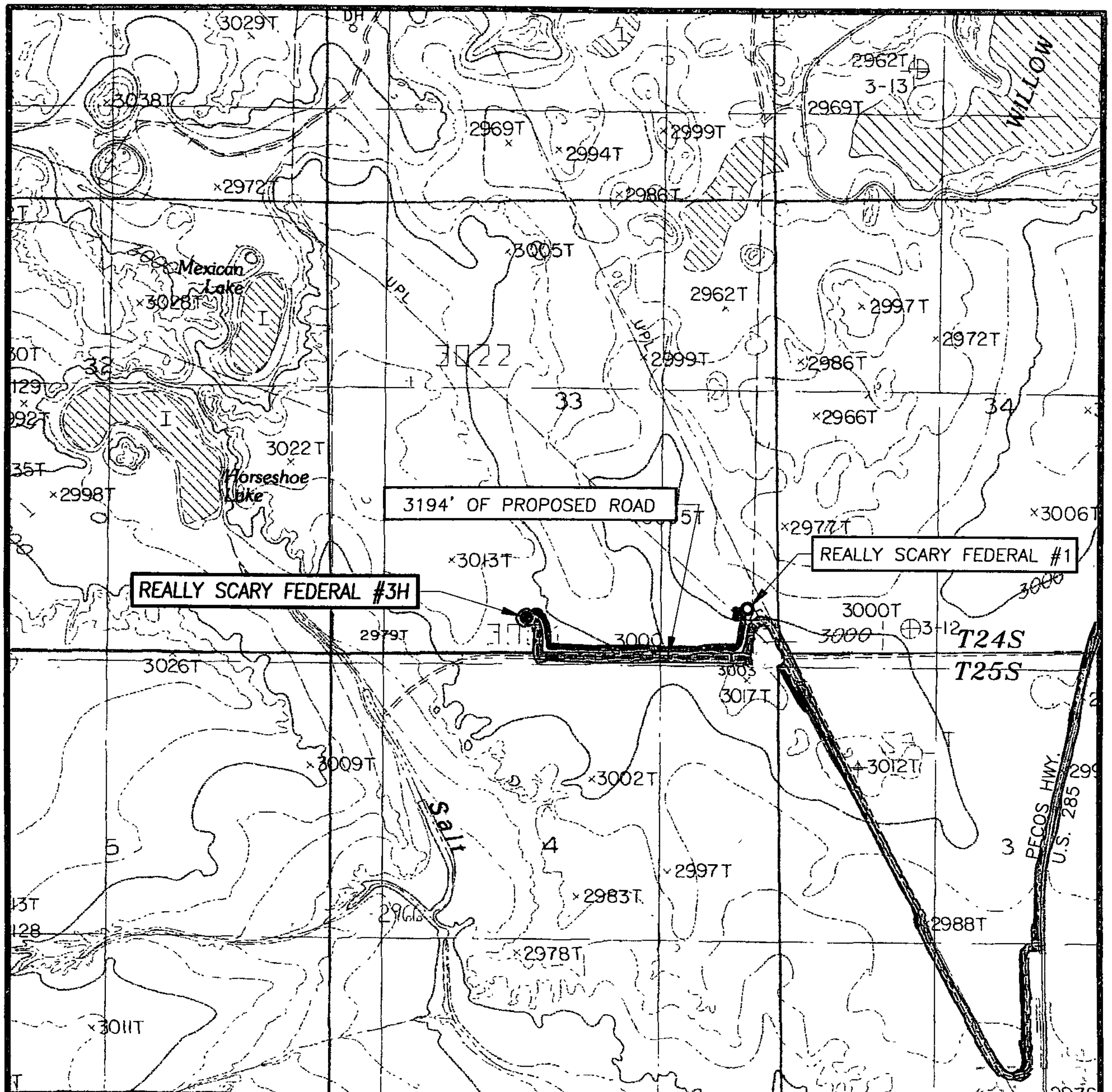
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Marbob Energy Corporation 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.

Marbob Energy Corporation

2/28/08
Date

Ross Duncan
Land Department

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
MALAGA, NM

SEC. 33 TWP. 24-S RGE. 28-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 430' FSL & 2310' FWL

ELEVATION 3006'

OPERATOR MARBOB ENERGY CORPORATION

LEASE REALLY SCARY FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
MALAGA, NM

Existing Roads
Proposed Flowline

REV: 4/1/08

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

Exhibit #2

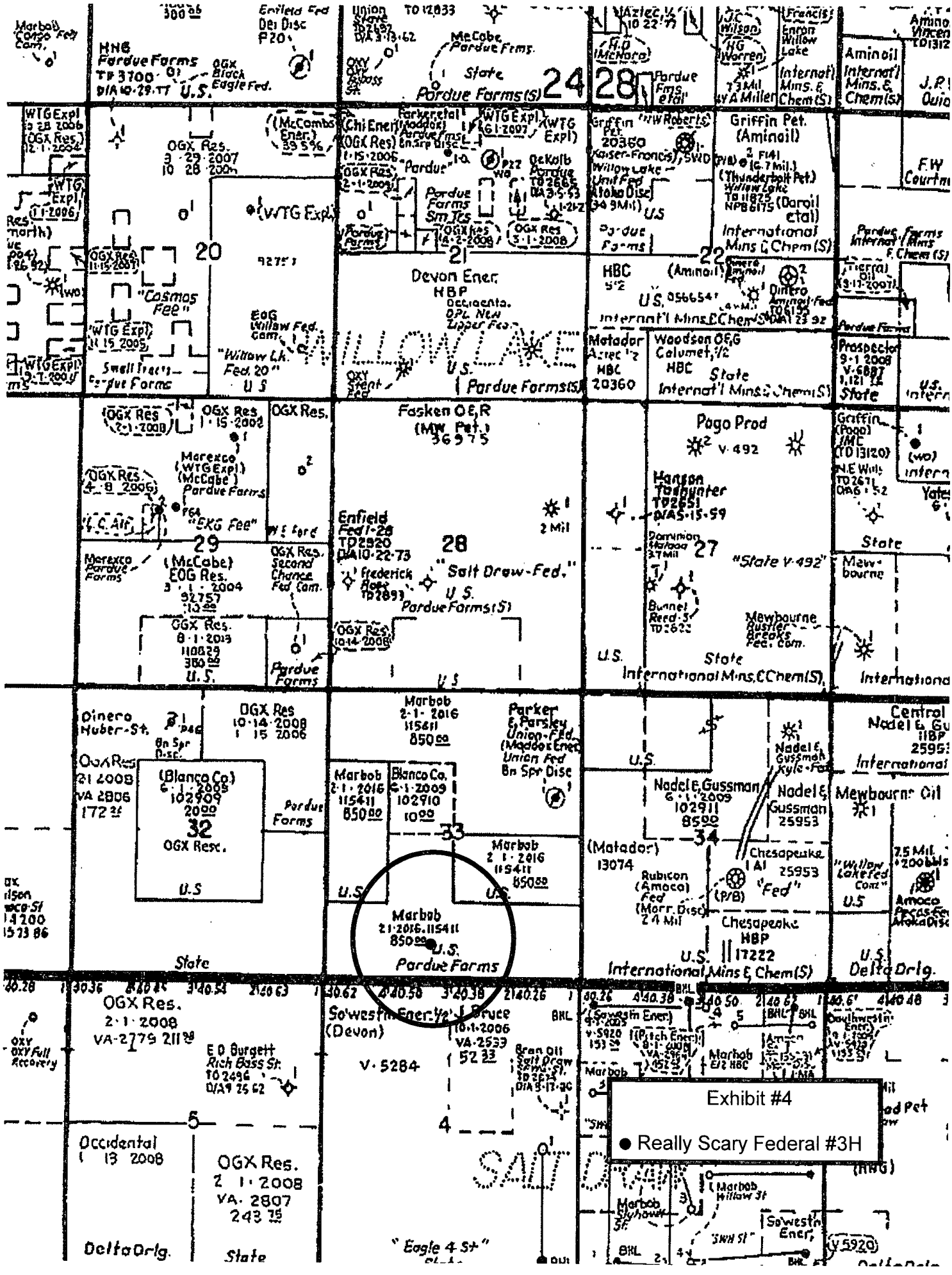


Exhibit #4
Really Scary Federal #3H

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Marbob Energy
LEASE NO.:	NMNM115411
WELL NAME & NO.:	Really Scary Federal No 3H
SURFACE HOLE FOOTAGE:	430' FSL & 2310' FWL
BOTTOM HOLE FOOTAGE	430' FSL & 330' FWL
LOCATION:	Section 33, T.24 S., R 28 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
  - Cave/Karst
  - Hydrology
- ☒ Construction
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☒ Road Section Diagram
- ☒ Drilling
- ☒ Production (Post Drilling)
  - Well Structures & Facilities
  - Pipelines
- ☒ 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)

Mitigation Measures: The mitigation measures include the Pecos District Conditions of Approval, the standard stipulation for High Cave/Karst, the standard stipulation for surface flow lines, and the standard stipulations for permanent resource roads. There will also need to be some mitigation measures in place for a nearby playa.

In order to help protect a playa located approximately 600 feet to the east of the proposed well pad location a berm will need to be place on the North and East side of the proposed well pad location. This will help to ensure that any runoff of fluids or of sediments from rain events will not deposits contaminants or pollutants into the nearby hydrological formations.

Really Scary Hawk Federal # 3H: Closed Loop System V-Door East

Conditions of Approval
Cave and Karst

EA#: NM 520-08-708
Lease #: NM-115411
Marbob Energy Corporation
Really Scary Hawk Federal # 3H

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:
Tank batteries will be bermed to contain 1 ½ times the content of the largest tank.

Bermed areas will be lined with a 4 oz. felt liner to prevent tears or punctures and a permanent 60 mil plastic liner.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will

assess the situation and work with the operator on corrective actions to resolve the problem.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Abandonment Cementing:
Upon well abandonment the well bore will be cemented completely from 100 feet below the bottom of the cave bearing zone to the surface.

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. Closed Loop Sytem

Really Scary Federal # 3H: V-Door East

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

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.

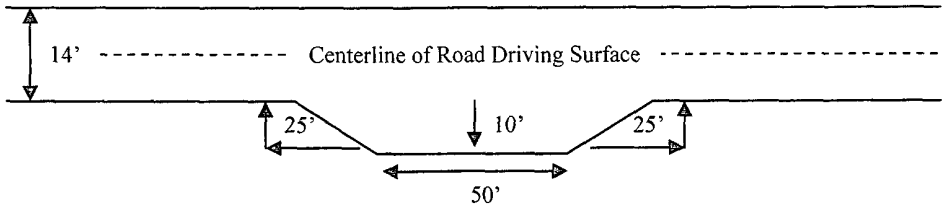
Ditching

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

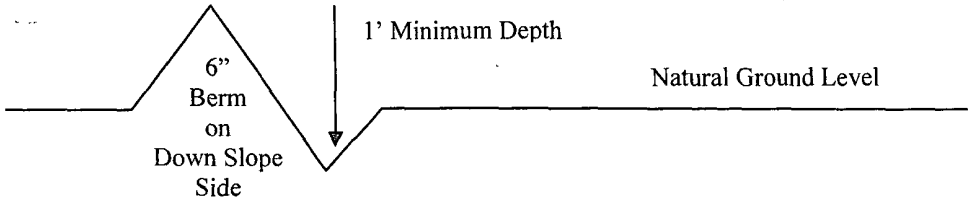


Drainage

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.

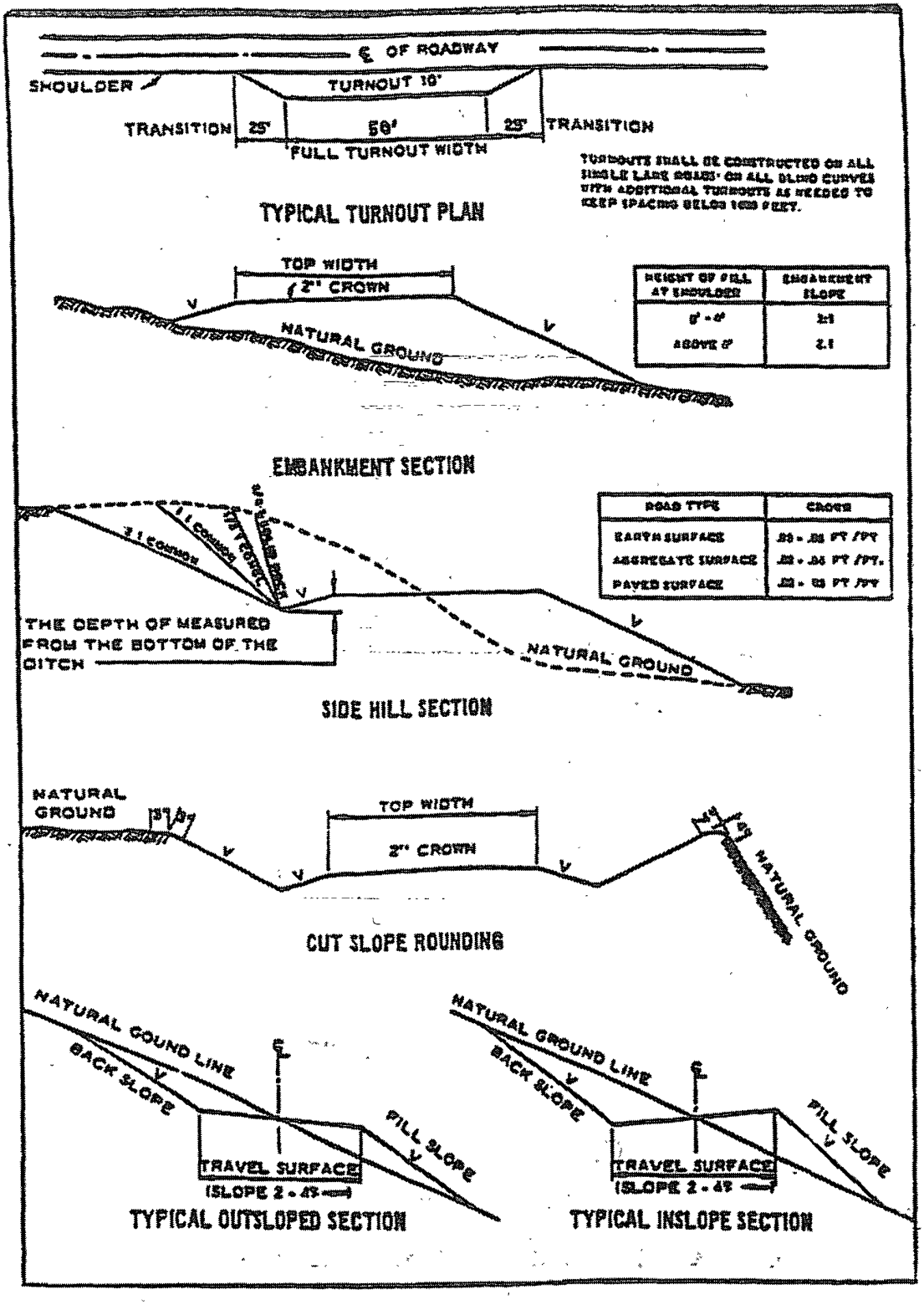
A gate shall be constructed and fastened securely to H-braces.

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. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If Hydrogen Sulfide is encountered, please report measured amounts 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.

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.

High cave/karst
Possible lost circulation in the Triassic Redbeds and the Castile Group

1. The **13-3/8** inch surface casing shall be set **at approximately 375 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Use fresh water mud to setting depth. Rustler Anhydrite could be deeper.**

    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 **8-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a-d above.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    a. First stage to DV tool, cement shall:

    ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

    b. Second stage above DV tool, cement shall:

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

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

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 051208

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

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder

of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 25 feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – Shale Green, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his hehalf, on public or Federal land shall be immediately reported to the authorized officer. Holder 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 will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

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 the pad is 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.

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 no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The 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:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*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.