7032 S ATS-08-39

Form 3160-3
(August 2007)

DEC 26 2007
OCD-ARTESIA

OCD-HOBBS

159

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NM-84729

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.: (10723) Cuervo Federal #3

2. Name of Operator: Strata Production Company (21712)

9. API Well No.: 30-025-38680

3a. Address: P.O. Box 1030, Roswell, New Mexico 88202

3b. Phone No. *(include area code)*: (575) 622-1127

10. Field and Pool, or Exploratory: Diamondtail Delaware

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface 1980' FNL & 1650' FWL
At proposed prod. zone Delaware

11. Sec., T. R. M. or Blk. and Survey or Area: Unit Letter F, Section 14 T23S R32E

14. Distance in miles and direction from nearest town or post office*: 45 miles East of Carlsbad. 25 miles South of 62-180

12. County or Parish: Lea

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 1650' FWL

16. No. of acres in lease: 640

17. Spacing Unit dedicated to this well: 40 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 1650' FWL

19. Proposed Depth: 8000"

20. BLM/BIA Bond No. on file: Statewide Bond NM1538
Bond Number ~~OCD-233~~

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3709' GL

22. Approximate date work will start*: 12/30/2007

23. Estimated duration: 30 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: Frank S. Morgan — Name *(Printed/Typed)*: Frank S. Morgan — Date: 11/08/2007

Title: Vice President Field Operations

Approved by *(Signature)*: /s/ Don Peterson — Name *(Printed/Typed)*: /s/ Don Peterson — Date: DEC 19 2007

Title: FIELD MANAGER — Office: CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

RECEIVED

JAN - 4 2008

HOBBS OCD

*(Instructions on page 2)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

POST OFFICE DRAWER 1030
ROSWELL, NM 88202-1030

STRATA PRODUCTION COMPANY

TELEPHONE (505) 622-1127
FACSIMILE (505) 623-3533

200 WEST FIRST STREET, ROSWELL PETROLEUM BUILDING, SUITE 700
ROSWELL, NEW MEXICO 88203

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

TO WHOM IT MAY CONCERN:

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

Cuervo
~~Urraca~~ Federal #3
Federal Lease Number NM-85940
Township 23 South, Range 32 East
Section 14: ~~W/2~~
Lea County, New Mexico
Formation: Diamondtail Delaware
Bond: Statewide
Bond Number: ~~OGB 233~~ NM1538

11/08/2007
Date

Frank S. Morgan
Vice-President

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 & Natural Resources Department

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-38680	17647	Diamondtail Delaware

4 Property Code	5 Property Name	6 Well Number
10723	CUERVO FEDERAL	3

7 OGRID No.	8 Operator Name	9 Elevation
21712	STRATA PRODUCTION COMPANY	3709

10 Surface Location

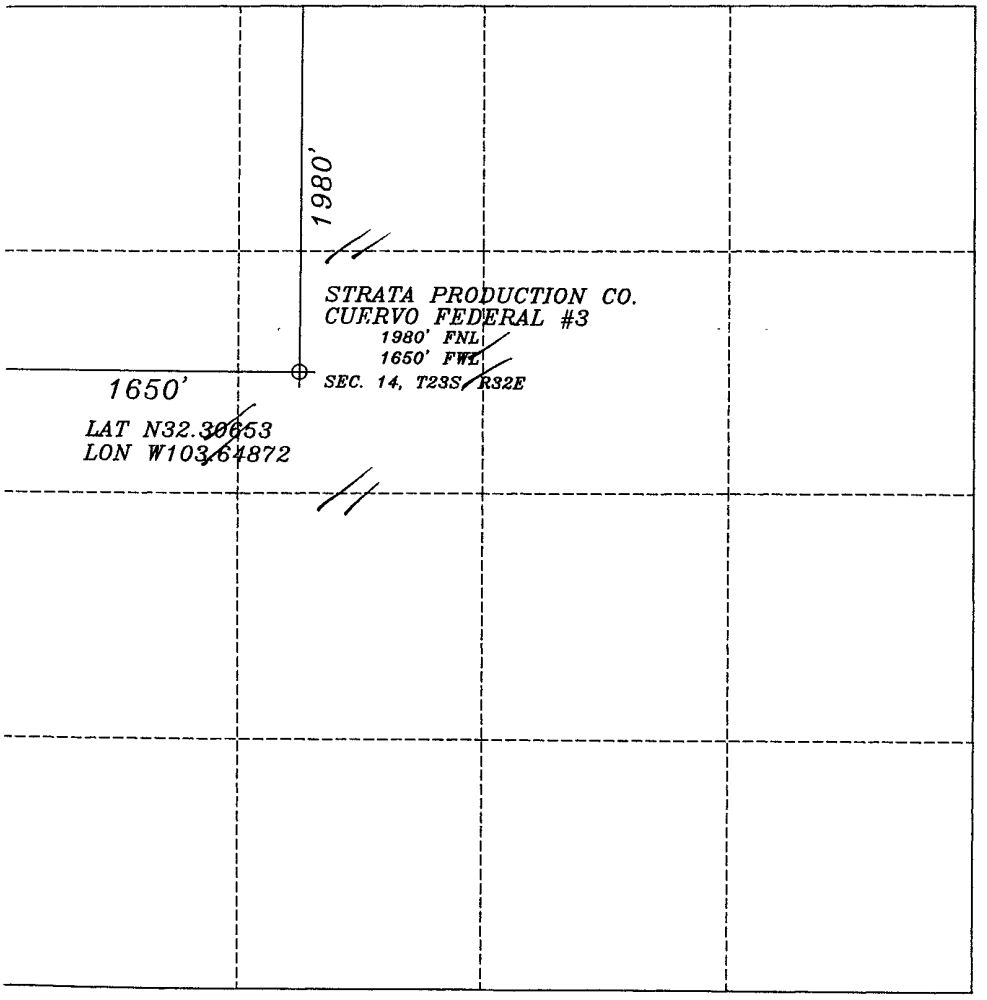
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	14	23-S	32-E		1980	NORTH	1650	WEST	LEA

11 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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
40			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



17 OPERATORS CERTIFICATION

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

Signature — Date 11/08/07

Frank S. Morgan 11/08/2007
Printed Name

18 SURVEYOR CERTIFICATION SURFACE LOCATION ONLY

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.
Signature and Seal of Professional Surveyor:
OCTOBER 12, 2007
Date of Survey

DAN R. REDDY
NEW MEXICO
5412
REGISTERED PROFESSIONAL ENGINEER
LAND SURVEYOR

Certificate Number
DAN R. REDDY NM PE&PS #5412

HOLE PROGNOSIS
FORM 3160-3 APPLICATION FOR PERMIT TO DRILL
STRATA PRODUCTION COMPANY
CUERVO FEDERAL #3
1980' FNL & 1650' FWL
SECTION 14-23S-32E
LEA COUNTY, NEW MEXICO

In conjunction with Form 3160-3, Application for Permit to Drill, Deepen, or Plug Back, Strata Production Company submits the following items in accordance with Onshore Oil and Gas Order Numbers 1 and 2, and all other applicable federal and state regulations.

1. Geologic Name of Surface Formation:

   Permian

2. Estimated Tops of Geologic Markers:

Triassic Redbed	Surface	Cherry Canyon	6000'
Rustler	1200'	Brushy Canyon	7000'
Top of Salt	1300'	Base of Salt	3600'
Lamar Lime	4950'	TD	8000'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Surface	100' – 300'	Fresh Water
Delaware	4950' - 8000'	Oil or Gas

No other formations are expected to produce oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8" casing at 600' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across the zone by either using approx. 900 sacks of Lite Crete or by inserting a cementing stage tool into the 5 1/2" production casing which will be run at TD.

4. Casing Program:

Hole Size	Interval	OD csg	Weight, Grade, Jt. Cond, Type
17 1/2"	600'	13 3/8"	48#, H-40, ST&C, New
12 1/4"	~~4900'~~ 4700	8 5/8"	32#, J-55, ST&C, New
7 7/8"	8000'	5 1/2"	17#, J-55, LT&C, New

see COA → 4000' +

32# HCK-55 STC New 700'

per operator 12/14/07 JML

HOLE PROGNOSIS
CUERVO FEDERAL #3
Page 2

Cementing Program:

Surface Casing: 13 3/8" casing will be set at approximately 600' and cemented with approximately 640 sks. Class 'C' cement + 2 % S1 5 pps D24 + 0.125 PPS. D 130. Yield 1.35 cu.ft/sk. Weight of 14.8 PPG. The amount could be adjusted dependent upon fluid caliper results, however, cement in sufficient quantities to circulate to surface will be utilized.

see COA

Intermediate Casing: 8 5/8" casing will be set at approximately 4700' and cemented with a Lead System of 605 sks. 50:50 Poz Cl. 'C' + 5% D44 (bwow) 0.2% D46 + 0.125 pps D130 + 10% D-20. Yield 2.46 cu.ft/sk. Weight of 11.9. PPG. Tail System: 200 sks. Cl 'C' + 1% S1 + 0.125 pps D130. Yield 1.33 cu.ft./sk. Weight 14.8 PPG. The amounts could be adjusted dependent upon fluid caliper results, however, cement in sufficient quantities to circulate to surface will be utilized.

see COA

Production Casing: If appropriate, 5 1/2" casing will be set at Total Depth. Strata utilizes cement in sufficient quantities to bring the cement into the 8 5/8" intermediate casing. This is normally done using approximately 490 sks. /cemCRETE Blend with 0/60 (D961/D124) + 0.03 gpsb M45 + 0.05 gpsb D604AM + 0.05 gpsb D801 + 0.125 pps D130 + 2% bwob D153. Yield 2.27 cu.ft./sk. Weight 10.53 PPG.

CEMENTING PROGRAM

HOLE SIZE	CASING	DEPTH	%EXCESS	CEMENT	YIELD
SURFACE					
17 1/2"	13 3/8"	610	circ.	640 sks. Class 'C' + 2% S1	
				5 pps D24 + 0.125 pps D130	1.35 cu.ft/sk.
INTERMEDIATE					
11"	8 5/8"	4700'	40%	Lead System: 605 sks.	
				50:50 Poz Cl 'C' + 5% D44 (bwow)	2.46 cu.ft/sk.
				0.2% D46 + 0.125 pps D130 +10%	
				D-20. Tail System: 200 sks.	
				Cl 'C' + 1% S1 + 0.125 pps D130	1.33 cu.ft/sk.
PRODUCTION					
7 7/8"	5 1/2"	8000'	30%	460 sks. CemCRETE Blend	
				0/60 (D961/D124) + 0.03 gpsb	
				M45 + 0.05 gpsb D604AM +	
				0.05 gpsb D801 + .125 pps D130 2% D153	

CASING EQUIPMENT Float Epuip. P & P Oil Tool Services Owen Puckett C (575) 365-8580

SURFACE INSERT FLOAT, FLOAT SHOE, 13 3/8" WOODEN PLUG, 3 CENTRALIZERS AND 1 LIMIT CLAMP

INTERMEDIATE FLOAT COLLAR, FLOAT SHOE, 6 CENTALIZERS, 1 LIMIT CLAMP AND PLUG SET 3 CENTALIZERS ON BOTTOM, 3 AT 1300' AND 3 INSIDE 13 3/8" CASING.

PRODUCTION FLOAT COLLAR, FLOAT SHOE, 15 CENTRALIZERS, 1 LIMIT CLAMP

MUD PROGRAM

INTERVAL	WEIGHT	VIS. (SEC)	PH	W.L.(CC)	TYPE MUD AND ADDITIVES
0-610'	8.4-9.0#/gal	34-36 sec/1000	10	NC	Spud and drlg. With fresh water gel.
					Lime at a ratio of 10:1 for vis. At 34-36
					sec/1000. Add paper for seepage.
610-4700'	10.0#/gal	28 sec/1000	10	NC	Drlg. With Native mud and cut brine.
					Control ph at 10 with lime. Control
					seepage with paper. Treat fill/drag/
					torque with 25 BBLs sweeps of salt
					gel with vis of 38 sec/1000. Casing pt
					pump 50 BBL sweep of 40 sec/1000
4700-8000'	8.4-9.0#/gal	28-32 sec/1000	10	NC-5800'	Drlg. Out with FW weighting 8.4#/gal
				15cc to 7500'	Add caustic soda for ph 10 and paper
				12cc to 8000'	for seepage. 5500' circ. Outside res.
					Add KCl and Ammonium Nitrate for
					3% KCl and 30-40 ppm Nitrate. At
					5800' add starch to reduce WL to 15cc
					Reduce WL at 7500' to 12cc. At TD
					sweep hole with 50 BBls 50 vis and
					pump while circ.

see COA

see COA

NOTIFICATION

NAME	TITLE	OFFICE PHONE	Ext.	HOME PHONE	MOBILE PHONE	FAX
FRANK MORGAN	VICE PRESIDENT	622-1127	14		365-7757	623-3533
MARK MURPHY	PRESIDENT	622-1127	12			
BOBBY GRISE	CONSULTANT				703-0939	

5. Proposed Control Equipment:

A 10" 3000 psi wp Shaffer Type "E" BOP will be installed on the 13 3/8" casing and operated as a 2M system. Casing and BOP will be tested with the rig pump before drilling out with 11". Request waiver to test BOP and the 8 5/8" casing to a maximum of 2000 psi wp in accordance with the Onshore Oil & Gas Order No. 2. See Exhibit "E". The BOP will tested daily with blind-rams tested during trips.

See COA

6. Types and Characteristics of the Proposed Mud System:

See COA → 0' to 600'	Fresh water w/gel spud mud:
See COA → 600' to 1210'	Native mud consisting of fresh water and native muds. Mud Wt 8.4, Vis 28, W/L Control NC.
See COA → 1210' to 4700'	Native Mud consisting of fresh water and native muds. Mud Wt 10.2, Vis 30, W/L Control NC.
4700' to TD	Brine and fresh water with salt gel and starch will be used to maintain a viscosity of approximately 30 and W/L Control 50 – 10 CC.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary Well Control and Monitoring Equipment:

A. A kelly cock will be kept in the drill string at all times.

B. A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

8. Testing, Logging and Coring Program:

Two (2) man Mudlogging unit from top of Delaware to TD DLL-MSFL, CNL-Density, Gamma Ray, Caliper.

Mudlogging unit will be employed from approximately **4700'** (Top of Delaware) **to 8000' (Total Depth)**. The Dual Laterolog will be run from TD back to the intermediate casing and the Compensated Neutron/Density Log will be run from TD back to surface. In some cases, Strata elects to run rotary sidewall cores from selected intervals from approximately **4700' to 7600' dependent upon logging results.**

9. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated evacuated BHP=3828 psi and a surface pressure of 1914 psi with a temperature of 147 degrees.

Loss of circulation is possible in the Delaware section of the hole, however, no major loss circulation zones have been reported in offsetting wells.

Strata has drilled and completed seventeen (18) wells in the immediate area. To date, Hydrogen Sulfide has not been encountered . However, if Hydrogen Sulfide is encountered, a Hydrogen Sulfide alarm on the drilling rig would be activated. All personnel have had Hydrogen Sulfide training and appropriate breathing apparatus is located on site. If necessary, the well can be shut in utilizing the blow out pre-venter and other equipment to prevent the migration of Hydrogen Sulfide to the surface.

10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is **December 31, 2007**. Once commenced, the drilling operation should be finished in approximately 20 days. If the well is productive, an additional 15 days will be required for completion and testing before a decision is made to install permanent facilities.

Operator: STRAT PROD. CO.	Well Name: Cuervo Fed. #3
Project ID: 3	Location: Eddy County, NM

Design Parameters:

Mud weight (9.40 ppg) : 0.488 psi/ft
Shut in surface pressure : 3906 psi
Internal gradient (burst) : 0.000 psi/ft
Annular gradient (burst) : 0.000 psi/ft
Tensile load is determined using air weight
Service rating is "Sweet"

Design Factors:

Collapse	: 1.125	
Burst	: 1.00	
8 Round	: 1.80	(J)
Buttress	: 1.60	(J)
Other	: 1.50	(J)
Body Yield	: 1.50	(B)

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	8,000	5.500	17.00	J-55	LT&C	8,000	4.767	

	Collapse Load (psi)	Collapse Strgth (psi)	Collapse S.F.	Burst Load (psi)	Min Int Yield Strgth (psi)	Burst S.F.	Tension Load (kips)	Tension Strgth (kips)	Tension S.F.
1	3906	4910	1.257	3906	5320	1.36	136.00	247	1.82 J

Prepared by : Frank Morgan, Artesia, New Mexico
Date : 12-06-2007
Remarks :

Minimum segment length for the 8,000 foot well is 1,000 feet.
The mud gradient and bottom hole pressures (for burst) are 0.488 psi/ft and 3,906 psi, respectively.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1987 pricing model. (Version 1.05+)

Operator: STRATA PROD. CO.	Well Name: Cuervo Fed #3
Project ID: 1	Location: Eddy County, NM

Design Parameters:

Mud weight (9.00 ppg)	: 0.468	psi/ft
Shut in surface pressure	: 285	psi
Internal gradient (burst)	: 0.000	psi/ft
Annular gradient (burst)	: 0.000	psi/ft

Tensile load is determined using air weight
Service rating is "Sweet"

Design Factors:

Collapse	: 1.125	
Burst	: 1.00	
8 Round	: 1.80	(J)
Buttress	: 1.60	(J)
Other	: 1.50	(J)
Body Yield	: 1.50	(B)

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	610	13.375	48.00	H-40	ST&C	610	12.559	

	Collapse Load (psi)	Collapse Strgth (psi)	S.F.	Burst Load (psi)	Min Int Yield Strgth (psi)	S.F.	Tension Load (kips)	Tension Strgth (kips)	S.F.
1	285	740	2.595	285	1730	6.07	29.28	322	11.00 J

Prepared by : Frank Morgan, Artesia, New Mexico
Date : 12-06-2007
Remarks :

Minimum segment length for the 610 foot well is 100 feet.
The mud gradient and bottom hole pressures (for burst) are 0.468 psi/ft and 285 psi, respectively.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1987 pricing model. (Version 1.06+)

Operator: STRATA PROD. CO.	Well Name: Cuervo Fed. #3
Project ID: 2	Location: Eddy County, NM

Design Parameters:

Mud weight (10.00 ppg)	: 0.519	psi/ft
Shut in surface pressure	: 3052	psi
Internal gradient (burst)	: 0.000	psi/ft
Annular gradient (burst)	: 0.000	psi/ft

Tensile load is determined using air weight
Service rating is "Sweet"

Design Factors:

Collapse	: 1.125	
Burst	: 1.00	
8 Round	: 1.80	(J)
Buttress	: 1.60	(J)
Other	: 1.50	(J)
Body Yield	: 1.50	(B)

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	4,070	8.625	32.00	J-55	ST&C	4,070	7.875	

	Collapse Load (psi)	Collapse Strgth (psi)	Collapse S.F.	Burst Load (psi)	Min Int Yield Strgth (psi)	Burst S.F.	Tension Load (kips)	Tension Strgth (kips)	Tension S.F.
1	2114	2530	1.197	3053	3930	1.29	130.24	372	2.86 J

Incorrect
Rec'd APD
12/14/07

Prepared by : Frank Morgan, Artesia, New Mexico
Date : 12-06-2007
Remarks :

Minimum segment length for the 4,070 foot well is 1,000 feet.

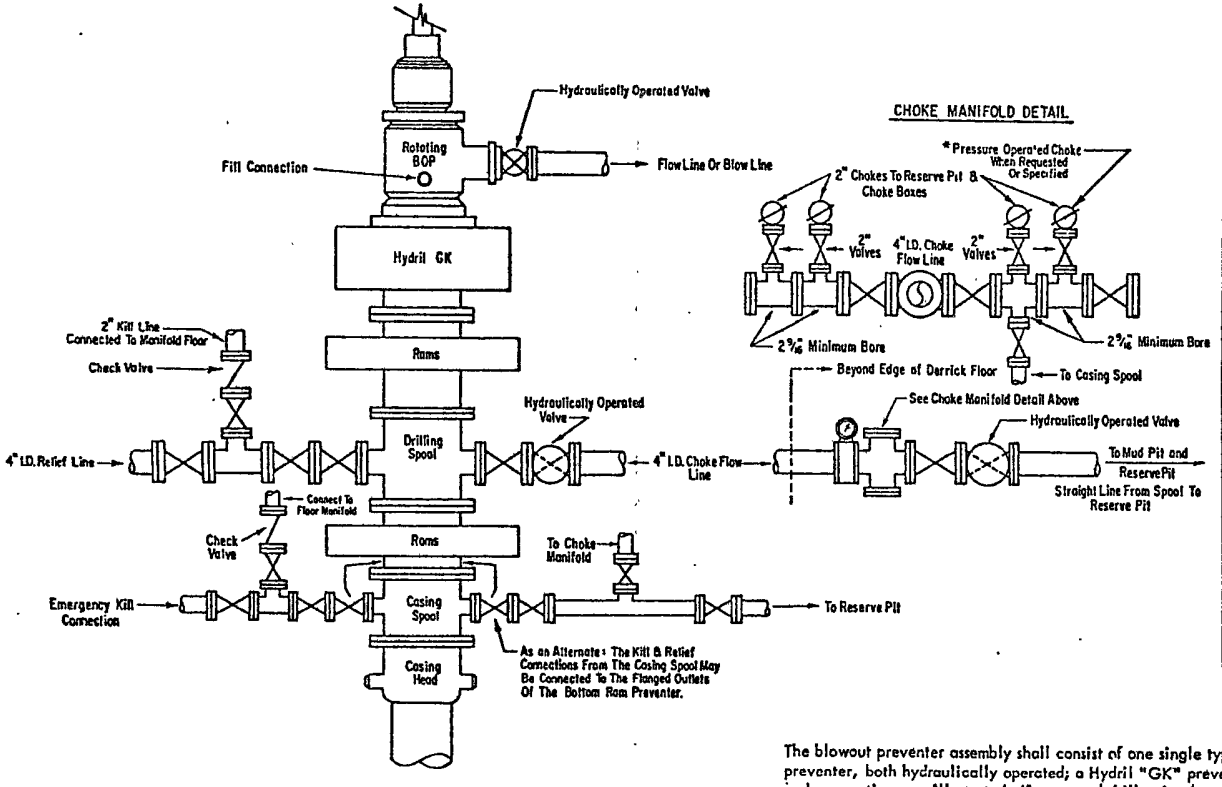
Surface/Intermediate string:

Next string will set at 8,000 ft with 9.40 ppg mud (pore pressure of 3,906 psi.) The frac gradient of 0.750 psi/ft at 4,070 feet results in an injection pressure of 3,052 psi Effective BHP (for burst) is 3,052 psi.

The minimum specified drift diameter is 7.875 in.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve Engineering responsibility for use of this design will be that of the purchaser.

Costs for this design are based on a 1987 pricing model. (Version 1.05+)



3000# PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

The blowout preventer assembly shall consist of one single type blind ram preventer and one single type pipe ram preventer, both hydraulically operated; a Hydril "GK" preventer; a rotating blowout preventer; valves; chokes and connections, as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing rams to fit the preventers are to be available as needed. If correct in size, the flanged outlets of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and 4-inch I.D. relief line, except when air or gas drilling. All preventer connections are to be open-face flanged.

Minimum operating equipment for the preventers and hydraulically operated valves shall be as follows: (1)Multiple pumps, driven by a continuous source of power, capable of fluid charging the total accumulator volume from the nitrogen precharge pressure to its rated pressure within_____ minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) Accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive the aforementioned fluid charge. With the charging pumps shut down, the pressurized fluid volume stored in the accumulators must be sufficient to close all the pressure-operated devices simultaneously within_____ seconds; after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume at least_____ percent of the original. (3) When requested, an additional source of power, remote and equivalent, is to be available to operate the above pumps; or there shall be additional pumps operated by separate power and equal in performance capabilities.

The closing manifold and remote closing manifold shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided for operating the Hydril preventer. When requested, a second pressure reducer shall be available to limit operating fluid pressures to ram preventers. Gulf Legion No. 38 hydraulic oil, an equivalent or better, is to be used as the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, relief line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line, relief line, and choke lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. If deemed necessary, walkways and stairways shall be erected in and around the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valves and relief line valves connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand-wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

* To include derrick floor mounted controls.

EXHIBIT "A"

EQUIPMENT DESCRIPTION

All equipment should be at least 3,000 psi WP or higher unless otherwise specified.

1. Bell nipple
2. Hydril bag type preventer
3. Ram type pressure operated blowout preventer with blind rams.
4. Flanged spool with one 3"and one 2"(minimum) outlet.
5. 2"(minimum) flanged plug or gate valve.
6. 2"x 2"x 2"(minimum) flanged.
7. 3"gate valve.
8. Ram type pressure operated blowout preventer with pipe rams.
9. Flanged type casing head with one side outlet.
10. 2" threaded (or flanged) plug or gate valve. Flanged on 5000# WP, threaded on 3000# WP or less.
11. 3" flanged spacer spool.
12. 3"x 2"x 2"x 2" flanged cross.
13. 2" flanged plug or gate valve.
14. 2" flanged adjustable choke.
15. 2" threaded flange.
16. 2" XXH nipple.
17. 2" forged steel 90° Ell.
18. Cameron (or equal) threaded pressure gauge.
19. Threaded flange.
20. 2" flanged tee.
21. 2" flanged plug or gate valve.
22. 2 1/2" pipe, 300' to pit, anchored.
23. 2 1/2" SE valve.
24. 2 1/2" line to steel pit or separator.

NOTES:

1). Items 3,4 and 8 may be replaced with double ram type preventer with side outlets between the rams.
2). The two valves next tho the stack on the fill and kill line to be closed unless drill string is being pulled.
3). Kill line is for emergency use only. This connection shall not be used for filling.
4). Replacement pipe rams and blind rams shall be on location at all times.
5). Only type U, LSW and QRC ram type preventers with secondary seals are acceptable for 5000 psi WP and higher BOP stacks.
6). Type E ram-type BOP's with factory modified side outlets may be used on 3000 psi or lower WP BOP stacks.

Attachment to Exhibit "C"

STATUS OF WELLS WITHIN ONE MILE RADIUS

CUERVO FEDERAL #3
Section 14-T23S-R32E
1980' FNL & 1650' FWL
Lea County, New Mexico

Section 14-T23S-R32E	OPERATOR	Footage	Status
Cuervo Federal #1	Strata Prod. Co.	1980' FSL & 1980' FEL	SWD
Cuervo Federal #2	Strata Prod. Co.	460' FNL & 1650' FWL	Producing
Pre-Ongard Well #2	Pre-Ongard Op.	1980' FSL & 2480' FEL	P/A
Section 13-23S-32E			
No wells in West Half			
Section 15-23S-32E			
Pre-Ongard Well #1	Pre-Ongard Op.	1980' FNL & 1980' FEL	P/A
Codorniz Federal #1	Strata Prod. Co.	330' FNL & 660' FEL	APD Expired 6/96
Codorniz Federal #2	Strata Prod. Co.	1850' FNL & 330' FEL	
Tomcat 15 Federal #2	Devon Energy Prod	1980' FSL & 1980' FEL	P/A
Cotton Draw Unit #94	Pogo Prod. Co.	2550' FSL & 2310' FWL	APD Filed 11/05
Section 22-23S-32E			
Avion Federal #1	Strata Prod. Co.	660' FNL & 1980' FEL	APD Expired 2/98
Section 23-23S-32E			
No wells in North Half			
Section 24-23S-32E			
No wells in NW corner			
Section 10-23S-32E			
Colibri Federal #1	Strata Prod. Co.	990' FSL & 330' FEL	Producing
Section 11-23S-32E			
Urraca Federal #1	Strata Prod. Co.	660' FSL & 1980' FWL	P/A
Urraca Federal #2	Strata Prod. Co.	560' FSL & 660' FWL	Producing
Urraca Federal #3	Strata Prod. Co.	1980' FSL & 660' FWL	Producing
Pre-Ongard Well #2	Pre-Ongard Op.	1850' FSL & 660' FWL	
Amanda Amn Federal #1	Yates Petroleum	2310' FNL & 1650' FWL	
Section 12-23S-32E			
No wells in SW corner			

STRATA PRODUCTION COMPANY

H_2S DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

A. All contractors and subcontractors employed by Strata Production Company will receive or have received training from a qualified instructor within the last twelve months in the following areas prior to commencing drilling operations on the well.

1. The hazards and characteristics of hydrogen sulfide (H_2S).
2. Safety precautions.
3. Operations of safety equipment and life support systems.

B. In addition, contractor supervisory personnel will be trained or prepared in the following areas:

1. The effect of H_2S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-down procedures when drilling or reworking a well, blowout prevention and well control procedures, if the nature of work performed involves these items.
3. The contents and requirements of the contingency plan when such plan is required.

C. All personnel will be required to carry documentation of the above training on their person.

II. H_2S EQUIPMENT AND SYSTEMS

A. SAFETY EQUIPMENT

The following safety equipment will be on location.

1. Wind direction indicators as seen in attached diagram.
2. Automatic H_2S detection alarm equipment both audio and visual.
3. Clearly visible warning signs as seen on the attached diagram. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.
4. Protective breathing equipment will be located in the dog house and at briefing areas as seen in the attached Diagram.

B. WELL CONTROL SYSTEMS

1. Blowout Prevention Equipment

Equipment includes but is not limited to:

a. Pipe rams to accommodate all pipe sizes.
b. Blind rams.
c. Choke manifold.
d. Closing unit.

2. Communication

a. The rig contractor will be required to have two-way communication capability. Strata Production Company will have either land-line or mobile telephone capabilities.

3. Mud Program

a. The mud program has been designed to minimize the volume of H_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers, when appropriate, will minimize hazards when penetrating H_2S bearing zones.

4. Drill Stem Test intervals are as follows:

a. None planned

III. WELLSITE DIAGRAM

A. A complete wellsite diagram including the following information is attached.

1. Rig orientation
2. Terrain
3. Briefing areas
4. Ingress and egress
5. Pits and flare lines
6. Caution and danger signs
7. Wind indicators and prevailing wind direction

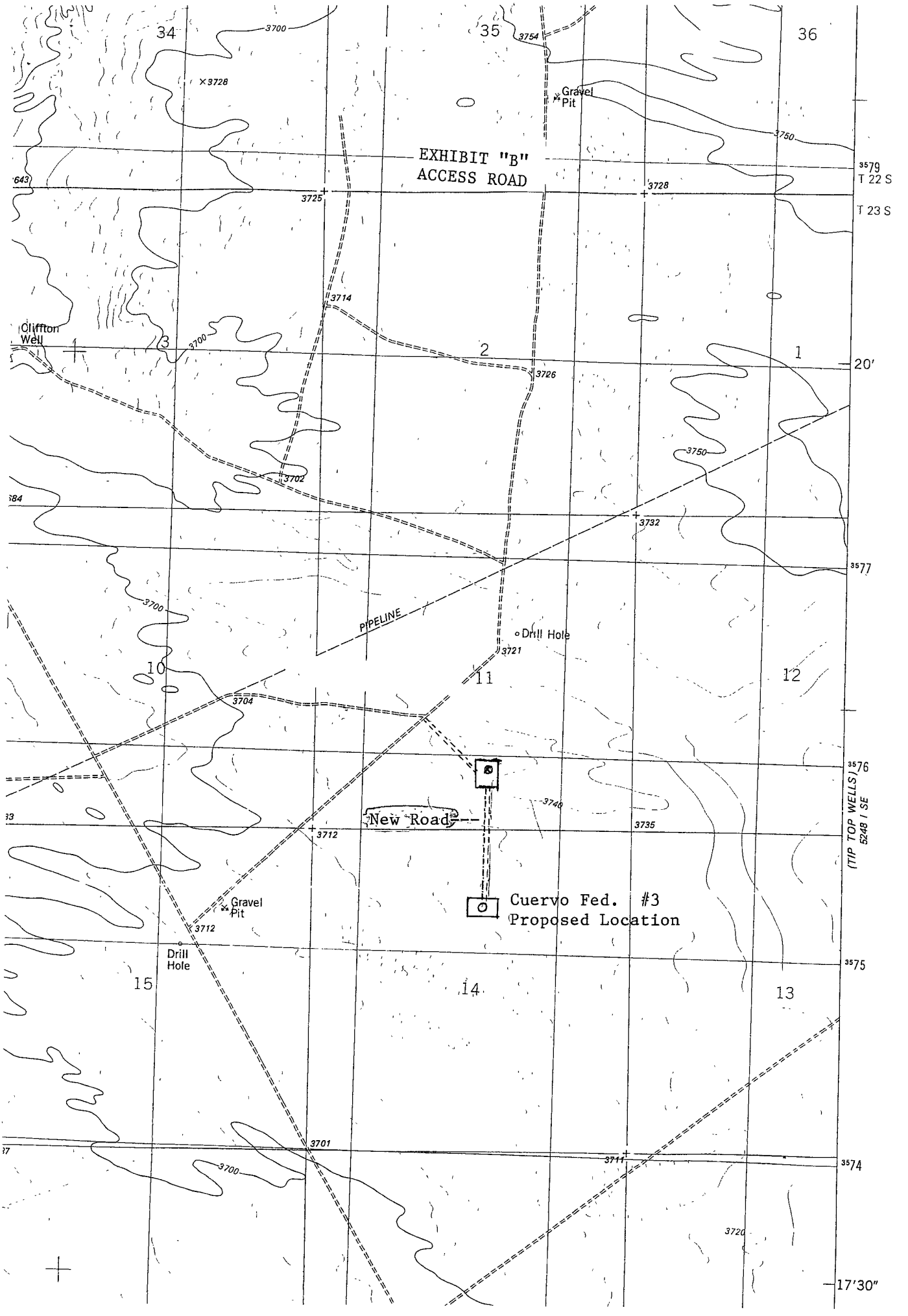


EXHIBIT "B"
ACCESS ROAD
Gravel Pit
Cliffton Well
Drill Hole
PIPELINE
New Road
Cuervo Fed. #3
Proposed Location
Gravel Pit
Drill Hole
T 22 S
T 23 S
(TIP TOP WELLS) 5248 I SE
17'30"
20'
34
35
36
1
2
3
10
11
12
13
14
15
3700
3754
3728
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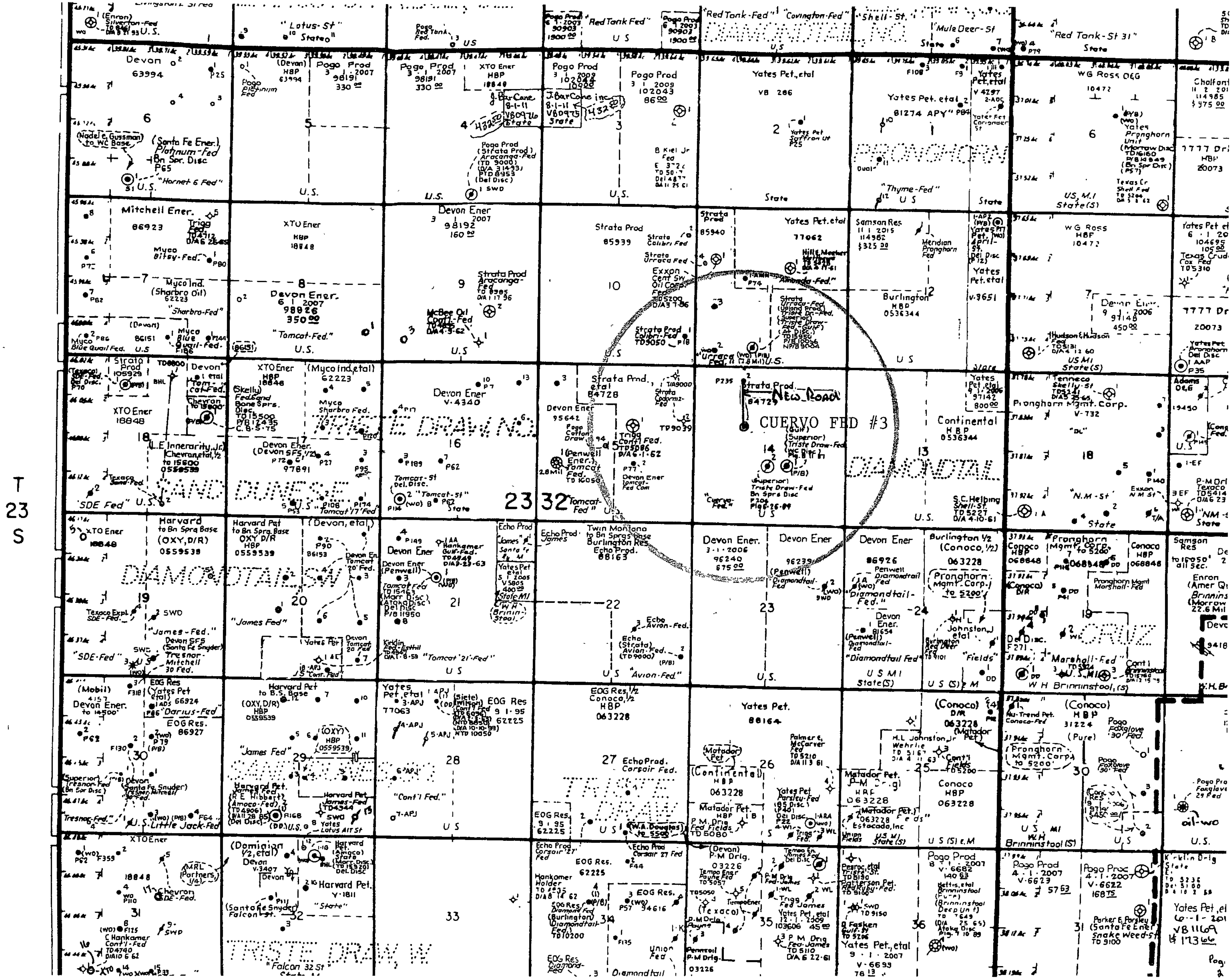


CUERVO FED #3
New Road
Strata Prod.
T
23
S
PRONGHORN
TRISTE DRAW
DIAMONDTAIL
CRUZ
Devon Ener
Yates Pet. etal
Pogo Prod
"Tomcat-Fed."
"Red Tank-St 31"

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Strata Production Company
LEASE NO.:	NMNM84729
WELL NAME & NO.:	Cuervo Federal No 3
SURFACE HOLE FOOTAGE:	1980' FNL & 1650' FWL
BOTTOM HOLE FOOTAGE	
LOCATION:	Section 14, T. 23 S., R 32 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENTS

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

V. 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 to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

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

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

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

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

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

D. FEDERAL MINERAL MATERIALS PIT

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

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS

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

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

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

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

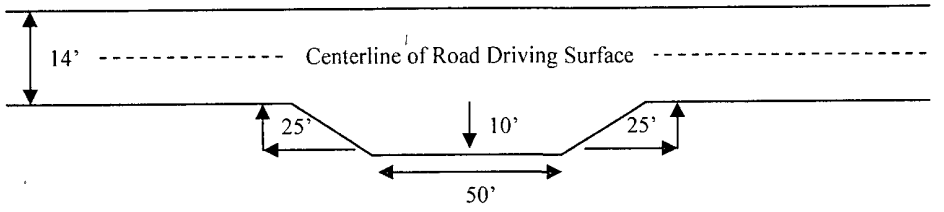
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

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

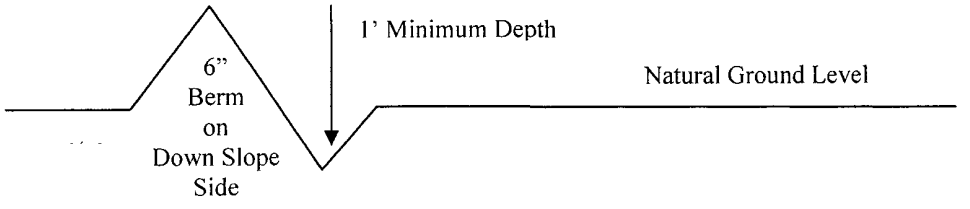
Standard Turnout – Plan View



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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

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

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

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

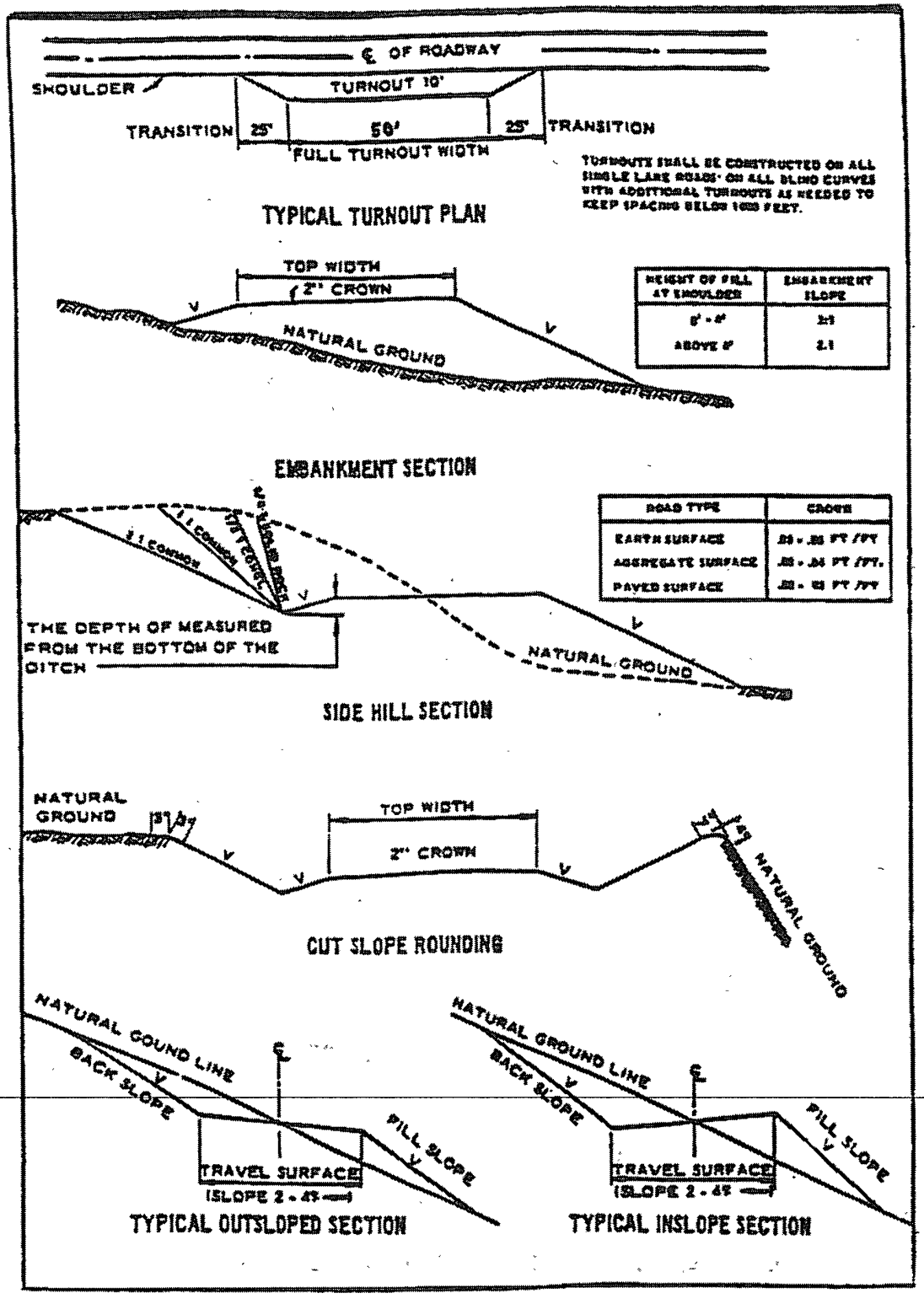
A gate shall be constructed and fastened securely to H-braces.

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

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

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

Figure 1 – Cross Sections and Plans For Typical Road Sections



VI. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Delaware** formation. **Hydrogen Sulfide has been reported in gas streams measuring 100-500 ppm in gas streams and 100-2000ppm in STVs.**

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.

B. CASING

1. The **13-3/8** inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 1225** feet and cemented to the surface. **Onshore Order II requires casing to be set across a competent bed and the Rustler Anhydrite is the first formation that meets that criteria. Fresh water mud to be used to this depth. Additional cement will be required.**

   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 action will be done prior to drilling out that string.

Possible lost circulation in the Delaware and Bone Spring formations.
Possible water flows in the Salado, Castile, Delaware, and Bone Spring formations.

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. **Additional cement will be required. Operator has proposed setting at 4700'. Casing should be set approximately 100 feet below the salt at 4800', but prior to penetrating the Delaware hydrocarbon bearing formations.**

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

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

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. 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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8"** intermediate casing shoe shall be **3000 (3M)** psi.

4. 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 to the reduced pressure of **1200** psi with the rig pumps is approved.

D. DRILLING MUD

Mud to drill from setting of surface casing to setting of intermediate casing is to be a brine mud since the drilling will primarily be through the salt formation.

Engineer on call phone (after hours): Carlsbad: (575) 706-2779

WWI 120807

VII. 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

VIII. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

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

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

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

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

B. RESERVE PIT CLOSURE

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

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be 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.