13-174

Form 3160-3
(March 2012)

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MAR 25 2013
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FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

JCS 3/26/2013

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
LC068282-B

6. If Indian, Allotee or Tribe Name
N/A

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
N/A

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

8. Lease Name and Well No.
Golden Spur WC 25 # 2H <39780>

2. Name of Operator ConocoPhillips Company <217817>

9. API Well No.
30-015-41235

3a. Address P.O. Box 51810
Midland, Tx 79710

3b. Phone No. *(include area code)*
432-688-6943

10. Field and Pool or Exploratory
WC-015 G-08 S263125P; WC
Wolfcamp, Red Hills

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface 535 FSL & 965 FEL (SESE) 25-26S-31E
At proposed prod. zone 330 FNL & 330 FEL (NENE) 25-26S-31E

11. Sec., T. R. M. or Blk. and Survey or Area
Section 25-26S-31E <98042>

14. Distance in miles and direction from nearest town or post office*
~ 2 miles north/west of State Line

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 535'

16. No. of acres in lease
~~640~~ acres
400.8

17. Spacing Unit dedicated to this well
~~160~~ ac

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2000'

19. Proposed Depth
16396' MD/11866 TVD

20. BLM/BIA Bond No. on file
ES0085

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3146

22. Approximate date work will start*
01/01/2013

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

Name *(Printed/Typed)*
Donna Williams

Date
10/30/2012

Title
Sr. Regulatory Advisor

Approved by *(Signature)* /s/ Don Peterson

Name *(Printed/Typed)*

Date MAR 21 2013

Title FIELD MANAGER

Office CARLSBAD FIELD OFFICE

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

APPROVAL FOR TWO YEARS

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

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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

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 August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-41235	98012	Red Hills WC-015 G-08 S263125P; WC

Property Code	Property Name	Well Number
39780	GOLDEN SPUR WC 25	2H

OGRID No.	Operator Name	Elevation
217817	CONOCO PHILLIPS	3146'

Surface Location

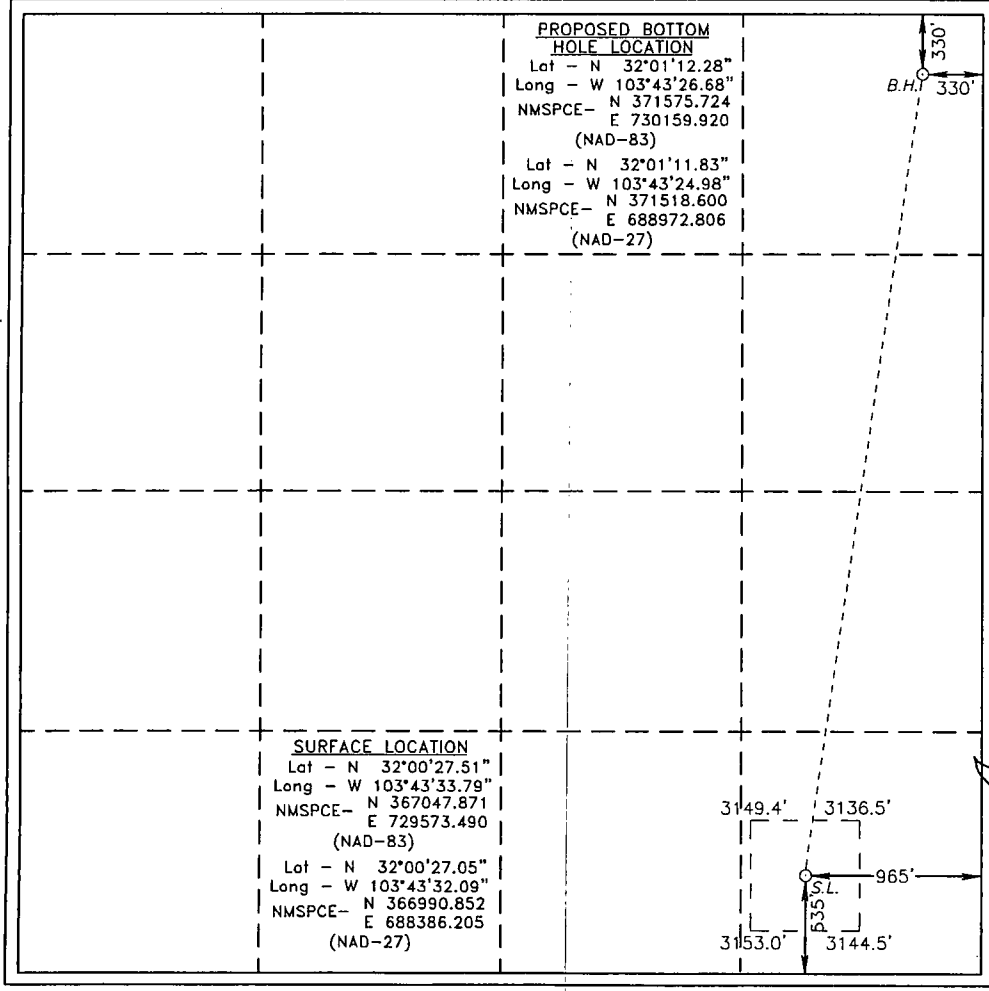
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	25	26 S	31 E		535	SOUTH	965	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	25	26 S	31 E		330	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



OPERATOR CERTIFICATION

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

10/29/12
Signature Date

Donna Williams
Printed Name

Donna.J.Williams@conocophilli
Email Address

SURVEYOR CERTIFICATION

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

OCTOBER 4, 2012
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

NO. 7977

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 27290

Operator Certification

CONOCOPHILLIPS COMPANY

CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application with bond coverage provided by Nationwide Bond ES0085. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Date: 10/30/12

Donna Williams
Sr. Regulatory Advisor

Proposed Drilling Plan
Golden Spur Federal WC 25-2H
October 25, 2012
Exploration Well - Wolfcamp
Eddy County, New Mexico

ConocoPhillips

1. Estimated tops of geological markers and estimated depths to water, oil, or gas formations:

The names, estimated tops, and thicknesses of the formations expected to be encountered, and the zones potentially containing usable water, oil, gas, or prospectively valuable deposits of other minerals, will be provided for each well on a separate document.

The ranges of depths for the formation tops, thicknesses, and planned Total Depths for the wells to be drilled under this Master Drilling Plan are presented in the table below.

The datum for these depths is RKB (which is **25'** above Ground Level).

Golden Spur 25 1H WC					**KB**	**3,171**
Notes:	A pilot hole willbe drilled. This horizontal well will be drilled from S to N into the Wolfcamp 1 Target Zone. The well will be drilled relatively flat to slightly toe down with a ~ 4,500' long lateral.					
Surface Location	Sec 25	26S	31E			Lea Co. NM, Surface Location: 180' FSL & 640' FEL
Golden Spur 25 1H WC BHL	Sec 25	26S	31E			Lea Co. NM, Terminus Location: 330' FNL & 380' FEL
Formation Name	Formation Top (TVD)	Subsea Depth	Gross Thickness	Gross Thickness	Gross Thickness	Comments
Quaternary	Surface					water
Rustler	761	2,410	341			salt
Salado	1,102	2,069	1,619			salt
Castile	2,721	450	1,433			salt
Delaware Top	4,154	-983	76			oil/gas/water
Ford Shale	4,230	-1,059	27			oil/gas/water
Olds	4,257	-1,086	817			oil/gas/water
Cherry Canyon	5,074	-1,903	1,861			
Brushy Canyon	6,935	-3,764	1,021			
Bone Spring Top	7,956	-4,785	275			
Bone Spring 1st Carbonate Top	8,231	-5,060	310			
Avalon A Shale Top	8,541	-5,370	230			
Avalon B	8,771	-5,600	95			
Avalon C Shale Top	8,866	-5,695	295			
Avalon D	9,161	-5,990	30			
1st Bone Spring Sand	9,191	-6,020	300			
FBS Shale Core Point Start	9,441	-6,270				
FBS Shale Top	9,491	-6,320	190			
2nd Bone Spring Carbonate	9,681	-6,510	130		190	290
FBS Shale Core Point Stop	9,731	-6,560				
2nd Bone Spring Sand	9,811	-6,640	460			
3rd Bone Spring Carbonate	10,271	-7,100	745			
3rd Bone Spring Sand	11,016	-7,845	385			
KOP (est)	11,068	-7,897				
Wolfcamp Core Point Start	11,371	-8,200				
Top of Wolfcamp	11,401	-8,230	35			
WCMP_SH1	11,436	-8,265	30			
WCMP_SH2	11,466	-8,295	80			
WCMP_SH3	11,546	-8,375	60			
WCMP_SH4	11,606	-8,435	145			
LANDING: W1 TARGET 1 Horizontal Upper Target Limit	11,751	-8,580				
LANDING: W1 TARGET 1 Horizontal Target Center	11,784	-8,613	65			
LANDING: W1 TARGET 1 Lower Target Limit	11,816	-8,645				
TERMINUS: W1 TARGET 1 Horizontal Upper Target Limit	11,761	-8,590				
TERMINUS: W1 TARGET 1 Horizontal Target Center	11,794	-8,623	65			
TERMINUS: W1 TARGET 1 Horizontal Lower Target Limit	11,826	-8,655			400	685
LANDING: W1 TARGET 2 Horizontal Upper Target Limit	11,826	-8,655				
LANDING: W1 TARGET 2 Horizontal Target Center	11,851	-8,680	50			
LANDING: W1 TARGET 2 Horizontal Lower Target Limit	11,876	-8,705				
TERMINUS: W1 TARGET 2 Horizontal Upper Target Limit	11,841	-8,670				
TERMINUS: W1 TARGET 2 Horizontal Target Center	11,866	-8,695	50			
TERMINUS: W1 TARGET 2 Horizontal Lower Target Limit	11,891	-8,720				
Wolfcamp 1	12,006	-8,835				
Wolfcamp Core Point Stop	12,056	-8,885				

Protection of fresh water will be accomplished by setting the surface casing at least 25' into the Rustler Anhydrite formation, but above the top of the Salado Salt, and **cementing** the surface casing from the casing shoe **to the surface of ground** in accordance with the provisions of Onshore Oil and Gas Order No. 2 and New Mexico Oil Conservation Division Title 19.

Protection of oil and gas resources will be accomplished by setting the production casing approximately 20' off bottom and cementing it in accordance with the provisions Onshore Oil and Gas Order No. 2 and New Mexico Oil Conservation Division Title 19.

2. Proposed casing program:

Type	Hole Size	Interval TVD / MD RKB (ft)		OD	Wt	Gr	Conn	Condition	Safety Factors Calculated per BLM Load Formulas		
	(in)	From	To	(inches)	(lb/ft)				Burst	Collapse	Tension Dry/Buoyant
Cond	26"	0	~ 85' (~ 60' BGL)	20"	0.25" wall	B	Line Pipe	New	NA	NA	NA
Surf	17-1/2	0	~~700~~ 1040'	13-3/8"	54.5#	J-55	BTC	New	1.13	3.2	20 // 23
Int	12-1/4	0	4,650'	9-5/8"	40#	L-80	BTC	New	1.03	1.4	4.9 // 5.8
Prod	8-3/4"	0	11,851' TVD 12,303' MD	7"	29#	P-110	BTC	New	2.03	1.5	2.7 // 3.1
Prod Lnr	6-1/8"	11,100' TVD MD	11,866' TVD 16,396' MD	4-1/2"	15.1#	P-110	BTC	New	2.45	2.1	3.4 // 7.6

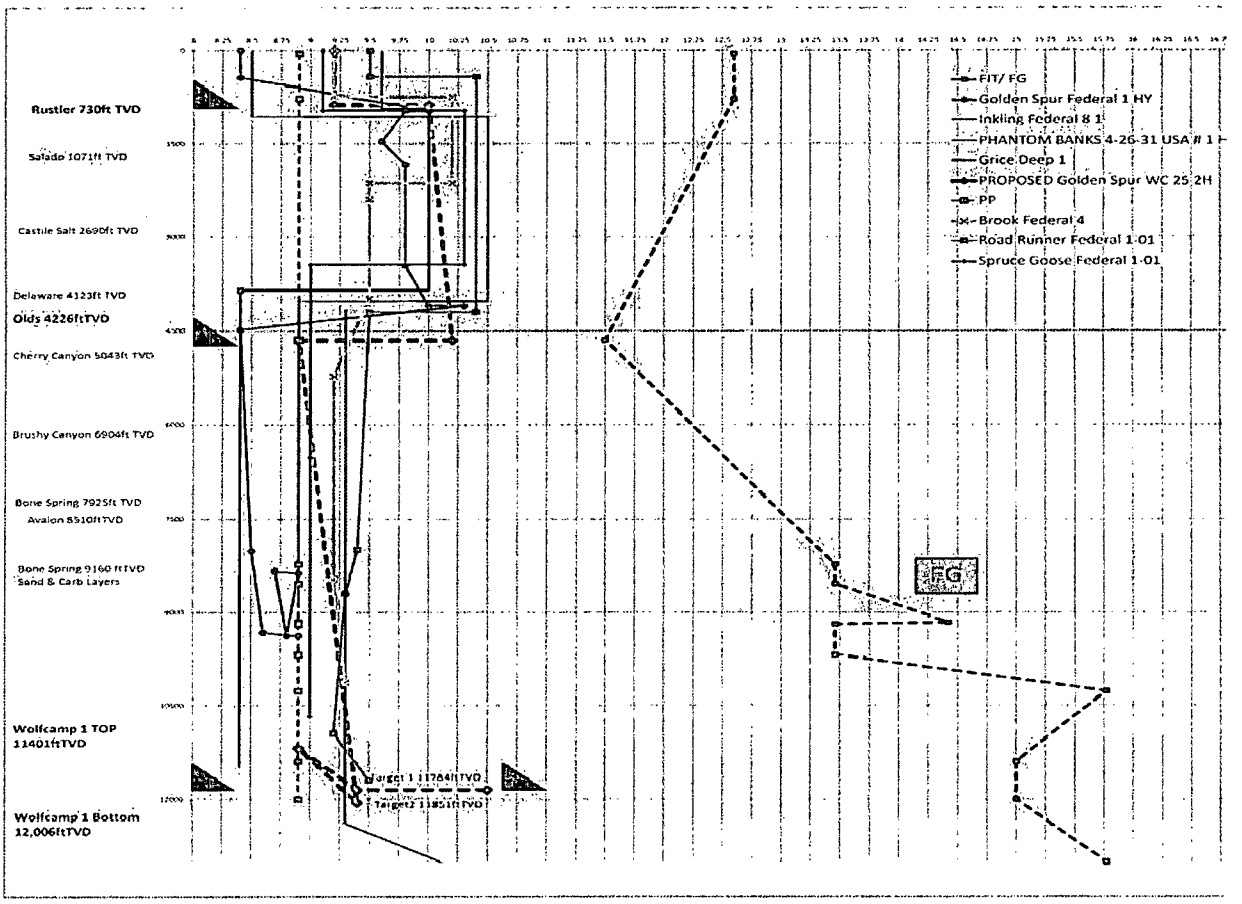
See COA

Type	Hole Size	Interval TVD / MD RKB (ft)		OD	Wt	Gr	Conn	Burst	Collapse	Jt Str
	(in)	From	To	(inches)	(lb/ft)					
Cond	26"	0	~ 85' (~ 60' BGL)	20"	0.25" wall	B	Line Pipe			
Surf	17-1/2	0	~~700~~ 1040'	13-3/8"	54.5#	J-55	BTC	2730	1130	853
Int	12-1/4	0	4,650'	9-5/8"	40#	L-80	BTC	5750	3090	916
Prod	8-3/4"	0	11,851' TVD 12,303' MD	7"	29#	P-110	BTC	11220	8530	929
Prod Lnr	6-1/8"	11,100' TVD MD	11,866' TVD 16,396' MD	4-1/2"	15.1#	P-110	BTC	13460	14350	509

The casing will be designed for Sweet Service less than .05 partial pressure H2S. No H2S is expected to be encountered.

The surface casing will be set at least 25' into the Rustler Anhydrite formation, but above the top of the Salado Salt, and **cemented to the surface of ground** in accordance with the provisions of Onshore Oil and Gas Order No. 2 and New Mexico Oil Conservation Division Title 19.

The surface, both intermediate strings and production casing will be set approximately 20' off bottom and we will drill the hole to fit the casing string so that the cementing head is positioned at the floor for the cement job.



Wolfcamp Estimated Pore Pressure/ MW and FG curves for the Wolfcamp wells in NM

LIST OF OFFSET WELLS

1. Golden Spur Federal 1Y API # 30-015-39649 Eddy County, New Mexico
2. Merphan 16 State 1 API # 30-015-30485 Eddy County, New Mexico
3. Inkling Federal 8 #1 API # 30-015-39649, New Mexico
4. Phantom Banks 4-26-31 USA #1H API # 30-015-39649 New Mexico
5. Grice Deep API # 30-015-39649 Texas
6. Brook Federal 4 API # 30-015-39649 Eddy County, New Mexico
7. Road Runner Federal 1-01 API # 30-015-39649 Eddy County, New Mexico
8. Spruce Goose Federal 1-01
9. Almost Texas Unit API #30-015-24277, New Mexico

Offset Analysis

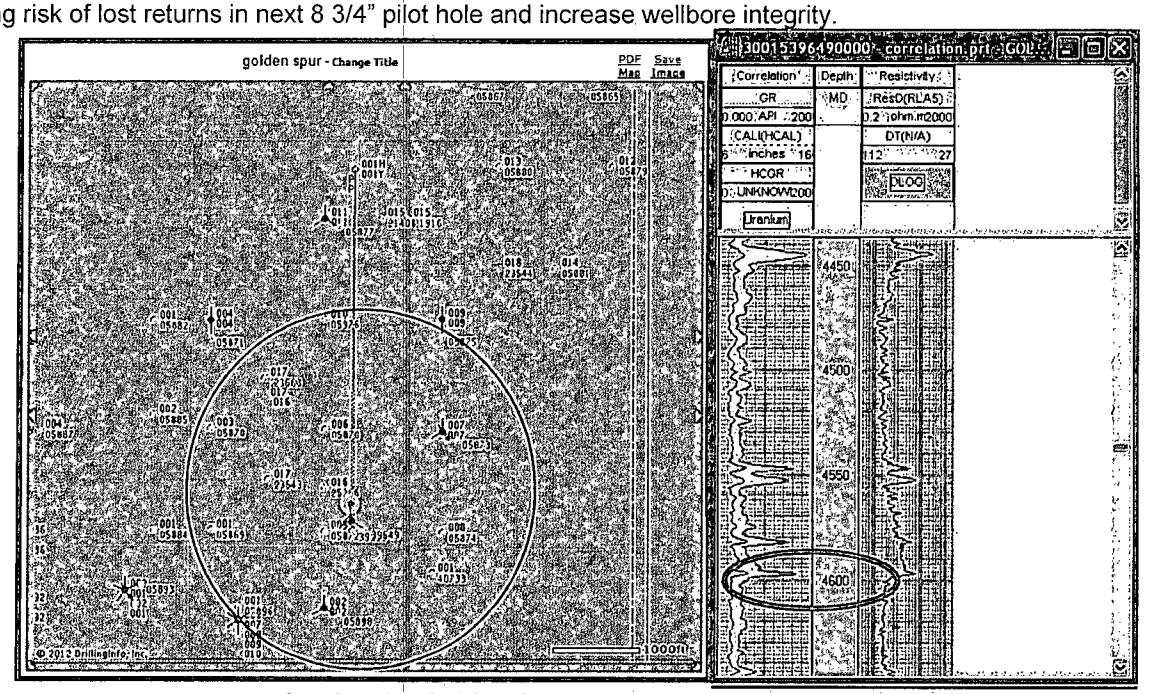
When ConocoPhillips acquired section 25 from Manzano LLC, there has been one well drilled and completed in this section but not produced yet: **Golden Spur Federal 1Y**. Proposed Golden Spur Federal WC 25 2H is planned to be drilled in the eastern part of the section.

Summary of Drilling Operations on Golden Spur Federal 1Y:

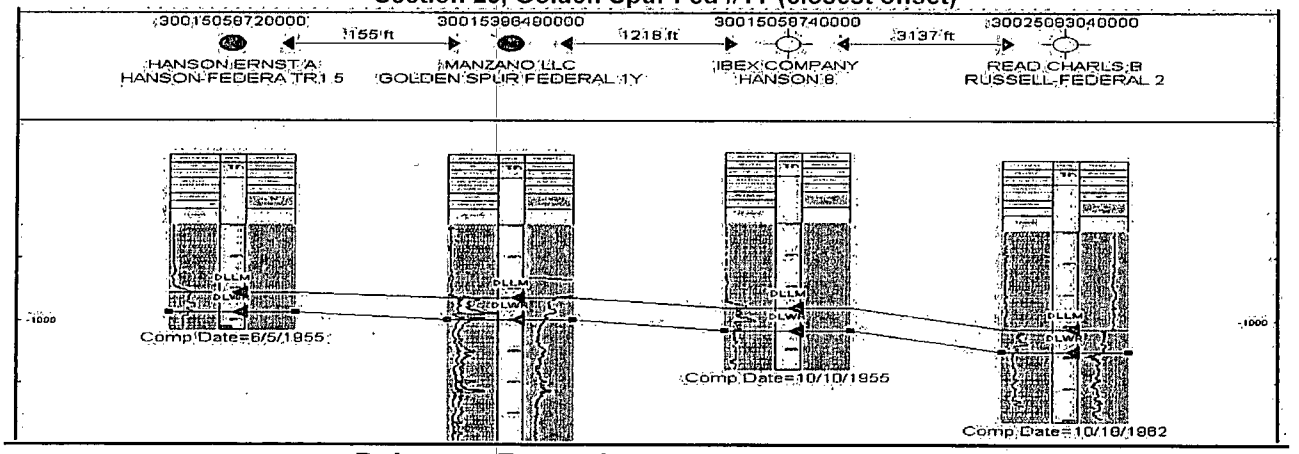
- Drilled 17 ½" and set 13 3/8 48# J55 at 1390ft and cemented to surface with no problems.
- Drilled 12 ¼" to 4100ft. RIH 9 5/8" 36# J55, would nto go past 1415ft. POOH and L/D Casing.
- Hole fell back in. Reamer Run. Large amount of red, gummy shale across shakers. Adjust water loss and mud viscosity. Hole Continue falling in.
- Cement squeeze. No success.
- Reamer Run. Cement Squeeze #2. Successful.

- Drill Out 12 ¼" and RIH 9 5/8" CSG to 4046ft.
- Drilled 8 ¾" second intermediate with no returns from 4100ft to 4550ft. Pumped 3 unsuccessful cement squeezes.
- Healed hole wit thixotropic plug.
- Resume drilling. Drill Pipe parted. Left fish in the hole. Successful fishing operations.
- Resuem drilling. Losses around 4500ft. Healed with LCM pill.
- TD 8 ¾" Pilot hole at 9363ft. Run Schlumberger Logs.
- Set cement Plug and drilled curve to 9337ft, RIH 7in 26# P110 BTC to the landing point in Avalon C.
- Drilled 6 1/8" Lateral to TD 13450ft MD. Reamer Run. RIH 4.5in 11.6# P110 LTC Production Liner.
- Could not work the liner past 12023ft. POOH and L/D Liner.
- Two Reamer Runs.
- RIH 4.5in Liner with Packers and sleeves open hole completion to TD.

Due to number of shallow (around 4500-4600ft TD) Delaware producing wells around Golden Spur Federal 1Y (please refer to the map below) and number of problems rig experienced while drilling intermediate and pilot hole sections (losses, tight hole, hole falling in, stuck), there is a very high probability of Bell Canyon Delaware Sand to be depleted due to long term production in the section.
Log from the Golden Spur Federal 1Y wells shows that there is a shale package around 4600ft therefore ConocoPhillips propose **to set 9 5/8' Casing around 4650ft** (+35ft formation top correlation) in order to case off depleted Bell Canyon and avoiding risk of lost returns in next 8 3/4" pilot hole and increase wellbore integrity.



Section 25, Golden Spur Fed #1Y (closest offset)



Delaware Formation top correlation +/- 35ft

Casing Design (Safety) Factors – BLM Criteria:

The casing design factors for this proposed casing program per BLM criteria are calculated as follows:

Joint Strength Design (Safety) Factor: SFt

SFt = Fj / Wt;

Where

- Fj is the rated pipe Joint Strength in pounds (lbs)
- Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Joint Strength Design (Safety) Factor SFT = **1.6 dry or 1.8 buoyant**

Collapse Design (Safety) Factor: SFc

SFc = Pc / (MW x .052 x Ls)

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = **1.125**

Burst Design (Safety) Factor: SFb

SFb = Pi / BHP

Where

- Pi is the rated pipe Burst (Minimum Internal Yield) Pressure in pounds per square inch (psi)
- BHP is bottom hole pressure in pounds per square inch (psi) of next hole section TD

The Minimum Acceptable Burst Design (Safety) Factor SFb = **1.0**

Joint Strength Design (Safety) Factors – BLM Criteria

Surface Casing:

- SFj Dry = 853,000 lbs / (790 ft x 54.5 lb/ft) = 853,000 lbs / 42,510 lbs = 20.0 Dry
- SFj Bouyant = 853,000 lbs / (790 ft x 54.5 lb/ft) [1-(8.5/65.5)] = 853,000 lbs / 36,669 lbs = 23.3 Buoyant

Intermediate Casing:

- SFj Dry = 916,000 lbs / (4650 ft x 40 lb/ft) = 916,000 lbs / 186,000 lbs = 4.9 Dry
- SFj Bouyant = 916,000 lbs / (4650 ft x 40 lb/ft) [1-(10/65.5)] = 916,000 lbs / 157,603 lbs = 5.8 Buoyant

Production Casing:

- SFj Dry = 929,000 lbs / (11851ft TVD x 29 lb/ft) = 929,000 lbs / 343,679lbs = 2.7 Dry
- SFj Bouyant = 929,000 lbs / (11851 ft TVD x 29 lb/ft) [1-(8.6/65.5)] = 929,000 lbs / 295,931 lbs = 3.1 Buoyant

Production Liner:

- SFj Dry = 509,000 lbs / (5296 ft length x 15.1 lb/ft) = 509,000 lbs / 79,970 lbs = 6.4 Dry
- SFj Bouyant = 509,000 lbs / (5296 ft length x 15.1 lb/ft) [1-(11/65.5)] = 509,000 lbs / 66,540 lbs = 7.6 Buoyant

Collapse Design (Safety) Factors – BLM Criteria

Surface Casing:

SFc = 1130 psi / (9.0 ppg x .052 x 790 ft) = 1130 psi / 349 = 3.2

Intermediate Casing:

SFc = 3090 psi / (10 ppg x .052 x 4650 ft) = 3090 psi / 2176 = 1.4

Production Casing:

SFc = 8530 psi / (9.1 ppg x .052 x 11851 ft TVD) = 8530 psi / 5608 psi = 1.52

Production Liner:

SFc = 14350 psi / (11 ppg x .052 x 11851 ft TVD) = 14350 psi / 6778 psi = 2.1

Burst Design (Safety) Factors – BLM Criteria

Surface Casing:

SFb = 2730 psi / (10 ppg x .052 x 4650 ft) = 2730 psi / 2072 psi = 1.13

Intermediate Casing:

SFb = 5750 psi / (8.9 ppg x .052 x 12076 ft pilot hole) = 1.03

Production Casing:

SFb = 11220 psi / (8.9 ppg x .052 x 11851 ft) = 11220 psi / 5486 psi = 2.05

Production Liner:

SFb = 13460 psi / (8.9 ppg x .052 x 11851 ft) = 13460 psi / 5486 psi = 2.45

Casing Design (Safety) Factors – Additional ConocoPhillips Criteria:

ConocoPhillips casing design policy establishes Corporate Minimum Design Factors (see table below) and requires that service life load cases be considered and provided for in the casing design.

ConocoPhillips Corporate Criteria for Minimum Design Factors

	Burst	Collapse	Axial
Casing Design Factors	1.15	1.05	1.91 for J-55 1.67 for L-80 1.59 for P-110

Surface Casing:

The maximum internal (burst) load on the Surface Casing occurs when the surface casing is tested to 1500 psi. We will pressure up to 1600 psi and let the pressure settle for 1 minute after shutting down the pump. Then we will begin the 30 minute test period. Therefore the maximum pressure that the surface casing will be exposed to will be 1600 psi.

Surface Casing Burst Design Factor
DF Burst = Burst Rating / Maximum Pressure During Casing Pressure Test = 2730 psi / 1600 psi = 1.71

The maximum collapse load on the Surface Casing occurs for the loss of circulation load case in which we assume that loss of circulation occurs and that the fluid level drops below the surface casing shoe. For the purposes of this load case, it is assumed that the pressure on the outside of the casing is equal to the mud weight that was in the hole when the casing was run.

Surface Casing Collapse Design Factor
DF Collapse = Collapse Rating / (Mud Wt x .052 x Shoe Depth)
DF Collapse = 1370 psi / (9.0 ppg x .052 x 790 ft)
DF Collapse = 3.7

The maximum axial load on the Surface Casing would occur if we were to get the surface casing stuck and pull on it to try to get it unstuck.

Surface Casing Axial (Tension) Maximum Allowable Hook Load Case:
Maximum Allowable Hookload = Joint Strength Rating / Axial Design Factor
Maximum Allowable Hookload = 853,000 / 1.91

Maxium Allowable Hookload = 446,597

Overpull Margin = Maximum Allowable Hook Load - Air Wt of the String
Overpull Margin = 446,597 lbs - (790' x 54.5 lb/ft)

Overpull Margin = 403,542 lbs

Intermediate Casing:

The maximum internal (burst) load on the Intermediate Casing occurs when the intermediate casing is tested to 1500 psi. We will pressure up to 1600 psi and let the pressure settle for 1 minute after shutting down the pump. Then we will begin the 30 minute test period. Therefore the maximum pressure that the surface casing will be exposed to will be 1600 psi.

Intermediate Casing Burst Design Factor
DF Burst = Burst Rating / Maximum Pressure During Casing Pressure Test = 5750 psi / 1600 psi = 3.59

The maximum collapse load on the intermediate casing occurs for the loss of circulation load case in which we assume that the fluid level drops to 1/3 of the TD of the hole section being drilled below the intermediate casing shoe. Also, for the purposes of this load case, it is assumed that the pressure on the outside of the casing is equal to the mud weight that was in the hole when the casing was run.

Fluid Level Drop = TD / 3
Fluid Level Drop = 12,076' in the vertical pilot hole / 3
Fluid Level Drop = 4025'

The maximum collapse load would occur at the bottom of the string and is calculated as follows:
Collapse Load = (4650' x 10 ppg x .052).- [(4650' – 4025') x 9.1 x .052]
Collapse Load = 2122 psi

Intermediate Casing Collapse Design Factor
DF Collapse = Collapse Rating / Collapse Load
DF Collapse = 3090 psi / 2122
DF Collapse = 1.46

The maximum axial load on the Surface Casing would occur if we were to get the surface casing stuck and pull on it to try to get it unstuck.

Surface Casing Axial (Tension) Maximum Allowable Hook Load Case:
Maximum Allowable Hookload = Joint Strength Rating / Axial Design Factor
Maximum Allowable Hookload = 916,000 / 1.67
Maxium Allowable Hookload = 548,503

Overpull Margin = Maximum Allowable Hook Load - Air Wt of the String
Overpull Margin = 548,503 lbs - (4650' x 40 lb/ft)
Overpull Margin = 362,503 lbs

2nd Intermediate Casing (7in):

The maximum internal (burst) load on the Intermediate Casing occurs when the intermediate casing is tested to 2500 psi. We will pressure up to 2600 psi and let the pressure settle for 1 minute after shutting down the pump. Then we will begin the 30 minute test period. Therefore the maximum pressure that the surface casing will be exposed to will be 2600 psi.

Intermediate Casing Burst Design Factor
DF Burst = Burst Rating / Maximum Pressure During Casing Pressure Test = 11220 psi / 2600 psi = 4.32

The maximum collapse load on the second intermediate 7in casing will be complete evacuation. To TD TVD while drilling next hole section. Also, for the purposes of this load case, it is assumed that the pressure on the outside of the casing is equal to the mud weight that was in the hole when the casing was run.

Fluid Level Drop = TD 11851' TVD

The maximum collapse load would occur at the bottom of the string and is calculated as follows:
Collapse Load = (11851' x 9.1 ppg x .052) - 0
Collapse Load = 5608 psi

Intermediate Casing Collapse Design Factor
DF Collapse = Collapse Rating / Collapse Load
DF Collapse = 8530 psi / 5608
DF Collapse = 1.52

The maximum axial load on the Surface Casing would occur if we were to get the surface casing stuck and pull on it to try to get it unstuck.

Surface Casing Axial (Tension) Maximum Allowable Hook Load Case:
Maximum Allowable Hookload = Joint Strength Rating / Axial Design Factor
Maximum Allowable Hookload = 929,000 / 1.59
Maxium Allowable Hookload = 584,277

Overpull Margin = Maximum Allowable Hook Load - Air Wt of the String
Overpull Margin = 584,277 lbs - (12303' x 29 lb/ft)
Overpull Margin = 227,490 lbs

Production Liner:

The maximum internal (burst) load would occur in the fracture stimulation either during fracture initiation or screen out.

The Maximum Allowable Working Pressure (MAWP) that we would impose in the fracture stimulation load case is the pressure that would result in a 1.15 burst design factor at surface.

For this well
MAWP for the Fracture Stimulation = Minimum Internal Yeild / 1.15
MAWP for the Fracture Stimulation = 13460 psi / 1.15
MAWP for the Fracture Stimulation = 11,704 psi

A pressure relief valve and pump truck kill settings will also be used to prevent overpressuring the production casing in the event of a screen out.

The maximum collapse load on the production casing occurs with the well pumped off on production. The offset research shows that wells within 10miles radius were fraced at 0.8-0.83 psi/ft.

DF Collapse = Collapse Rating / Bottom Hole Pressure
DF Collapse = 14350 psi / (16 ppg x .052 x 11866 ft) = 1.45

The maximum axial load on the Production Casing would occur if we were to get the Production Casing stuck and pull on it to try to get it unstuck.

Production Casing Axial (Tension) Maximum Hook Load Case:
Maximum Allowable Hookload = Joint Strength Rating / Axial Design Factor
Maximum Allowable Hookload = 509,000 lbs / 1.59
Maximum Allowable Hookload = 320,125 lbs

Overpull Margin = Maximum Allowable Hook Load - Air Wt of the String
Overpull Margin = 241,428 lbs - (5261' x 15.1 lb/ft)
Overpull Margin = 161,987 lbs

3. Proposed cementing program:

20" Conductor:
Cement to surface with rat hole mix, ready mix or Class C Neat cement.
(Note: The gravel used in the cement is not to exceed 3/8" dia)
TOC at surface.

13 3/8" Surface Casing:
The intention for the cementing program for the Surface Casing is to:

- Place the 300ft of Tail Slurry from the casing shoe around 790ft,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Gel Spacer (2.5 lbm/bbl of WG-19 Gelling Agent)

Lead Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
375 sx ExtendaCem-CZ Class C Excess = 100%	Surface	480	480	13.5	1.75	9.2	115.6bbl/ 649ft3

Tail Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
345 sx HALL Cem Class C Excess = 100%	480	780	300	14.8	1.33	6.34	80.4bbl/ 451.5ft3 Including shoe track

Displacement: Fresh Water
Note: In accordance with the Pecos District Conditions of Approval, we will Wait on Cement (WOC) for a period of not less than 18 hrs after placement or until at least 500 psi compressive strength has been reached in both the Lead Slurry and Tail Slurry cements on the Surface Casing, whichever is greater.

9 5/8" Intermediate Casing:

The intention for the cementing program for the Intermediate Casing is to:

- Place the 500ft of Tail Slurry from the casing shoe around 4,650ft,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Gel Spacer (2.5 lbm/bbl of WG-17 Gelling Agent)

Lead Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
1195 sx EconoCem-CZ Class C 1 lbm/sk Kol-Seal (LCM Additive) Excess = 150%	Surface	4150	4150	11.9	2.47	14.27	525.4bbl/ 2,950 ft3

Tail Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
310 sx HALL Cem Class C Excess = 150%	4,150	4,650	500	14.8	1.33	6.34	72.8bbl/ 408 ft3 Including shoe track

Note: In accordance with the Pecos District Conditions of Approval, we will Wait on Cement (WOC) for a period of not less than 18 hrs after placement or until at least 500 psi compressive strength has been reached in both the Lead Slurry and Tail Slurry cements on the Surface Casing, whichever is greater.

P&A Pilot Hole Cement Plugs:

The intention for the P&A Cement Plugs cementing program is to:

- RIH one run open hole whipstock system
- Place two 550ft each cement plugs across the wolfcamp formation to P&A the pilot hole (approximate TD 12,076ft)
- Have around 200ft of cement above the whipstock.

PLUG #1

Lead Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
235 sx PlugCem-CZ Class H 0.5% CFR-3 Dispersant 0.1% HR-601 Excess = 20%	11526	12076	550	15.6	1.19	5.36	49bbl/ 276 ft3

See COA

PLUG #2

Tail Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
295 sx PlugCem-CZ Class H 0.7% CFR-3 Dispersant 0.1% HR-601 Excess = 20%	1042 6	10976	550	17.5	0.95	3.49	49bbl/ 276 ft3 Including shoe track

7" Second Intermediate Casing:

The intention for the cementing program for the Second Intermediate Casing is to:

- Perform 2 stage cement job with DV tool placed around Avalon formation at 9,000ft
- Bring second stage Lead Slurry 500ft into 9 5/8" Casing to 4150ft.
- WOC 18hrsSpacer:
- 30 bbls Gel Spacer (2.5 lbm/bbl of WG-17 Gelling Agent)

STAGE #1

Lead Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
160 sx Tuned Light Cement 0.75% CFR-3 Dispersant 3 lbm/sk Kol-Seal (LCM Additive) Excess = 35%	9000	11073	2073	10.5	2.71	13.67	75bbl/ 420 ft3

Tail Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
185 sx VersaCem-PBSH2 0.5% Halad-344 LCM 0.4% CFR-3 Dispersant 3 lbm/sk Kol-Seal LCM 0.25 lbm/sk D-Air 5000 Defoamer Excess = 35%	1107 3	12,260	1187	14.0	1.38	6.41	44bbl/ 249 ft3

STAGE #2

Lead Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
321 sx Tuned Light Cement 0.75% CFR-3 Dispersant 3 lbm/sk Kol-Seal (LCM Additive) Excess = 35%	4150	8500	4350	10.5	2.71	13.67	155bbl/ 868 ft3

Tail Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
75 sx VersaCem-PBSH2 0.5% Halad-344 LCM 0.4% CFR-3 Dispersant 0.25 lbm/sk D-Air 5000 Defoamer Excess = 35%	8500	9000	500	14.0	1.36	6.57	18bbl/ 102 ft3

4-1/2" Production Casing Cementing Program:

The intention for the cementing program for the production Liner is to:

- Place 4100ft of tail slurry from the liner shoe to the landing point ;
- Bring the lead slurry to the TOL around 11,000.

Spacer: 20 bbls Gel Spacer (2.5 lbm/bbl of WG-17 Gelling Agent)

Lead Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
55 sx Tuned Light Cement 0.75% CFR-3 Dispersant 3 lbm/sk Kol-Seal (LCM Additive) Excess = 35%	9000	11073	2073	10.5	2.71	13.67	75bbl/ 420 ft3

Tail Slurry							
Volume (sx) Excess %	Top (ft MD)	Bottom (ft MD)	Length (ft)	Density (ppg)	Yield (cuft/sx)	Mix Wtr gal/sx	Volume
205 sx VersaCem-PBSH2 0.5% Halad-344 LCM 0.4% CFR-3 Dispersant 3 lbm/sk Kol-Seal LCM 0.25 lbm/sk D-Air 5000 Defoamer Excess = 35%	1107 3	12,260	1187	14.0	1.38	6.41	44bbl/ 249 ft3

Note: In accordance with the Pecos District Conditions of Approval, we will Wait on Cement (WOC) for a period of not less than 18 hrs after placement or until at least 500 psi compressive strength has been reached in both the Lead Slurry and Tail Slurry cements on the Surface Casing, whichever is greater.

4. Pressure Control Equipment:

The blowout preventer equipment (BOP) will conform to the requirements for a 5M System as described in Onshore Oil and Gas Order No. 2. However we will substitute higher rated BOP equipment and use additional equipment not required for a 5M System.

Our BOP equipment will be:
- Rotating Head, 13 5/8" 5M
- Annular BOP Hydril, 13 5/8" 5M
- Top Pipe Rams, 13 3/8" 10M
- Blind Rams, 13 5/8" 10M
- Bottom Pipe Rams, 13 5/8" 10M

The blowout preventer equipment will be installed after running and cementing the surface casing and installing the wellhead on the surface casing.

Testing of the BOP equipment will be as follows:

- The appropriate BLM office shall be notified a minimum 4 hours in advance for a representative to witness the tests.
- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- 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.
- 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.
- Ram type preventers and associated equipment shall be tested to approved stack working pressure of 5000 psi. The Annular type preventer will be tested to 50 percent of rated working pressure, and therefore will be tested to 2500 psi. The above tests will be performed:
  - When initially installed
  - Whenever any seal subject to test pressure is broken
  - Following related repairs, and
  - At 30 day intervals
- Annular preventers, if used, will be functionally operated at least weekly.
- Pipe and Blind rams shall be activated each trip, but not more than once per day.
- All of the above described tests will be recorded in the drilling log.

A diagram of the proposed BOPs and choke manifold is attached.

The Working Pressure Requirement for the BOP equipment is calculated per Onshore Order 2 as follows:
- Expected bottom hole pressure = 8.9 ppg gradient
- Required Working Pressure for BOP Eqpt = (8.9 x .052 x 12076) - (.22 psi/ft x 12076)
- Required Working Pressure for BOP Eqpt = 2932 psi

Required working pressure for the BOP Equipment is too close to use 3M system, therefore ConocoPhillips propose to us 5M system instead.

5. Proposed Wellhead Program:

The wellhead equipment will not be suitable for H_2S service.

We propose to use a Woodgroup SH2 13 3/8 x 9 5/8" x 7" x 2 7/8" 10M system with 10M Tubing head and adapter flange for the hydraulics fracturing stimulation..

6. Proposed Mud System

The mud systems that are proposed for use are as follows:

DEPTH See COA	TYPE	Density ppg	FV sec/qt	API Fluid Loss cc/30 min	pH
0 – Surface Casing Point	Spud Mud	8.5 – 9.0	32 – 36	N.C.	9 – 9.5
Surface Casing Point to Intermediate CSG Point	Brine (Saturated $NaCl_2$)	10-10.2	28 - 30	<1	9 – 10.5
From Intermd. CSG Point to Pilot hole TD	Cut Brine ($NaCl_2$)	8.8-9.1	28 – 45	<5	9 – 10.5
Conversion to Mud at KOP for Curve	Brine Based Mud ($NaCl_2$)	8.8-9.3	34 – 45	<5	10 - 11
From 7in CSG at Landing Point to Lateral TD	Brine Based Mud ($NaCl_2$) Hole Stability	10 - 11	34 – 45	<5	10 - 11

17-1/2" hole from surface of ground to surface casing point: The circulating closed loop system will be either a Aquagel/ Lime Spud Mud. The mud components will be:

- Fresh Water
- Bentonite (if needed)
- Lime
- Soda Ash
- Starch (if needed)
- Drilling Paper
- Other loss of circulation material if needed (nut plug or fiberous material)
- Soap sticks (if needed)

System will be managed by proper dilution and Optimization of solids control equipment.

12 1/4" hole from the surface casing shoe to TD: The circulating closed loop system will be 10 ppg saturated $NaCl_2$ brine. The mud components will be:

- Brine (approximately 10 lb/gal density, saturated $NaCl_2$)
- AQUAGEL viscosifier
- ZEOGEL viscosifier
- Lime
- Soda Ash
- Attapulgite
- Lime
- Starch if needed to lower API filtrate
- MF-55 Viscosifier/ Shale Stabilizer
- Drilling Paper, Walnut Hulls, and Fiberous LCM material such as BaroSeal if needed
- Soap Sticks if needed

8 3/4" hole from the intermediate shoe to the pilot TD and drilling the curve: The circulating closed loop system will be 8.9-9.1ppg cut brine and will be converted to a Flowzan/ Drispac Starch System around 9200ft prior coring. The mud components will be:

- Brine (approximately 9.0 lb/gal density)
- ZEOGEL Viscosifier
- FLOWZAN Viscosifier
- DRISPAC API Filtrate Control
- Bicarbonate of soda
- BARADEFOAM
- ENVIRO_TORQ and GRAPHITE for lubrication
- Lime
- Soda Ash
- BAROID weight agent
- PLUG-GIT or BARO-SEAL, cotton seed hulls in case of loss circulation. To prevent it from happening pump AQUAGEL/ LCM Sweeps to plug permeable Delware sands.

6 1/8" hole from the 7in CSG shoe to TD of the lateral: The circulating closed loop system will be 10.0-11.0ppg Flowzan/ Drispac Starch System from the previous interval. The mud components will be:

- ZEOGEL Viscosifier
- FLOWZAN Viscosifier
- DRISPAC API Filtrate Control
- Bicarbonate of soda
- BARADEFOAM
- ENVIRO_TORQ and GRAPHITE for lubrication
- Lime
- Soda Ash
- BAROID weight agent
- PLUG-GIT or BARO-SEAL, cotton seed hulls in case of loss circulation. To prevent it from happening pump AQUAGEL/ LCM Sweeps to plug permeable Delware sands.

7. Logging, Coring, and Testing Program:

a. No drill stem tests will be done
b. Mud Logging with Gas Detection is planned from the spud of surface hole for the remainder of the well. Isotube cuttings collection is planned from the top of Avalon A to the top of Wolcamp 2.
c. Whole cores are planned in the Bonesprings and Wolfcamp horizons as follows:
   - Core 1: Bonespring Shale, from 9432 to 9722 MD, 290' interval
   - Core 2: Upper Wolfcamp Shale, from 11,362 to 12,076 MD, 705' interval in the vertical pilot hole
d. The open hole electrical logging program is planned to be as follows:
   - The 12-1/4" Intermediate Hole is planned to be logged as follows:
     - Quad Combo: Resistivity, Density, and Gamma Ray, and Compensated Sonic, including Spectra Log, and Caliper.
     - Wave Sonic (shear) as an option
   - The 8-3/4" vertical pilot hole is planned to be logged as follows:
     - Gamma Ray while drilling.
     - Quad Combo: Resistivity, Density, and Gamma Ray, and Compensated Sonic, including Spectra Log, and Caliper.
     - Wave Sonic (shear)
     - FMI (Formation Micro Imager)
     - MR Scanner
     - Avalon Sidewall Cores

8. Abnormal Pressures, Temperatures. and Potential Hazards:

- We do not expect to encounter any abnormal pressures or abnormally pressured horizons.
- The expected Bottom Hole Temperature is 180 degrees F at 12076' TVD.
- Loss of circulation is a possibility in the Brushy Canyon Sands and in the Bone Spring interval. We expect that normal Loss of Circulation Material will be successful in healing any such loss of circulation events.
- The bottom hole pressure at TD is expected to be 8.9 ppg gradient or less while drilling due to no permeability and tight reservoir characteristics. The calculation of Required Working Pressure for the BOP Equipment is presented below:
  - Required Working Pressure for BOP Eqpt = (8.9 x .052 x 12076) - (.22 psi/ft x 12050)
  - Required Working Pressure for BOP Eqpt = 2931 psi
- H_2S is not expected to be encountered in any of the horizons to be penetrated. However a contingency H2S monitoring program will be implemented as follows:
  - *ConocoPhillips will comply with the provisions of Oil and Gas Order # 6, Hydrogen Sulfide Operations, and* will provide H_2S monitoring equipment which will be rigged up, tested, and operational prior to drilling out from surface casing.
  - All persons arriving on location will have H_2S certification & training that occurred within the last year.
  - Each occurrence of H_2S gas at surface is to be noted on the daily reports and any occurrence of H_2S in excess of 100 ppm will be reported to the authorized officer as soon as possible but no later than the next business day per the provisions of Oil and Gas Order # 6, Hydrogen Sulfide Operations.
  - ConocoPhillips will provide an H_2S Contingency Plan and will keep this plan updated and posted at the wellsite during drilling operations.
  - All equipment that has the potential to be exposed to H_2S will be suitable for H_2S service.

9. Anticipated starting date and duration of operations:

It is desired to drill this well starting with spud in February 2013. *Road and location construction will begin after the BLM and NMOCD have approved the APD and will take into account any closure stipulations that may be attached or specified in order to avoid operations in any closure period. Also, rig availability may impact our schedule. With consideration of these limiting factors, we would intend / plan to drill this well within two years after receiving approval of the APD.*

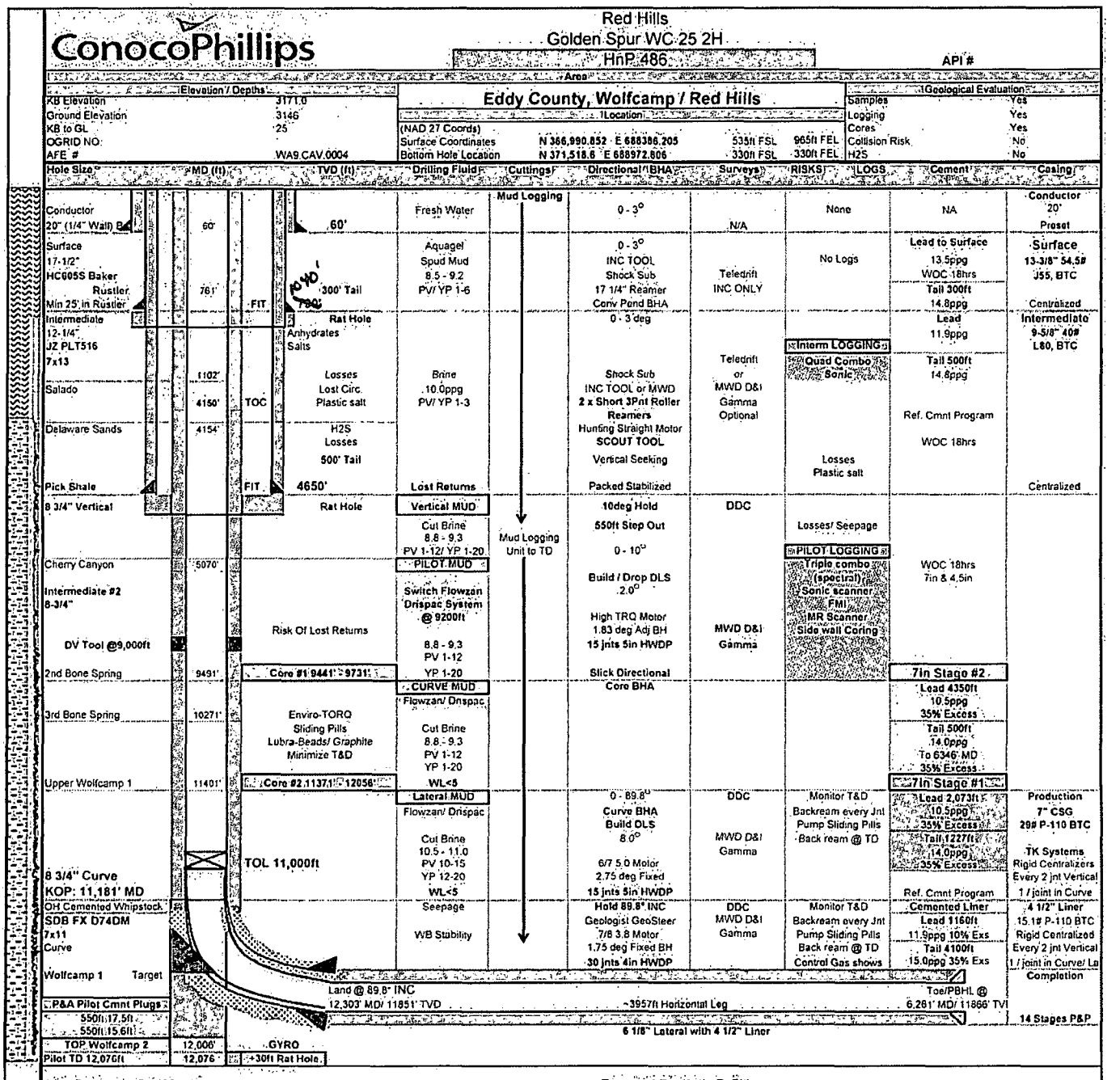
Attachments:

- Attachment # 1.....Wellbore schematic, Proposed Casing and Cementing Program
- Attachment # 2.....Choke Manifold Schematic – 5M System
- Attachment # 3.....BOP and Choke Manifold Schematic – 5M System
- Attachment # 4.....Rig Layout
- Attachment # 5.....Directional Plan
- Attachment # 6.....PP/ MW/ FG Curves

Contact Information:

Program prepared by:
Katia Filina
Staff Drilling Engineer, ConocoPhillips Company
Phone (832) 486-3155
Cell (281) 658-2631

Attachment #1 Wellbore Schematic, Mud and Cementing Program



Attachment # 5 Directional Plan

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Golden Spur WC 25 #2H
Company:	Conoco Phillips	TVD Reference:	WELL @ 3171.0usft (H&P #486)
Project:	Lea County, New Mexico	MD Reference:	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25 T26S 31E	North Reference:	Grid
Well:	Golden Spur WC 25 #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Project Lea County, New Mexico

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 Sec 25 T26S 31E

Site Position:		Northing:	368,990.85 usft	Latitude:	32° 0' 27.057 N
From:	Map	Easting:	688,388.20 usft	Longitude:	103° 43' 32.091 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well Golden Spur WC 25 #2H

Well Position	+N/-S	0.0 usft	Northing:	368,990.85 usft	Latitude:	32° 0' 27.057 N
	+E/-W	0.0 usft	Easting:	688,388.20 usft	Longitude:	103° 43' 32.091 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,146.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/19/2012	7.48	59.93	48,336

Design Design #5 Plan 2

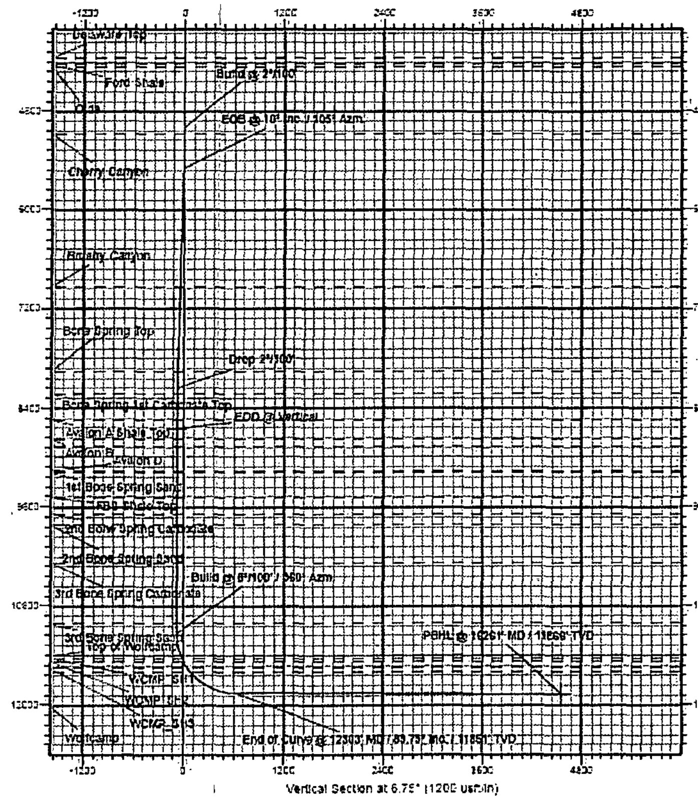
Audit Notes:

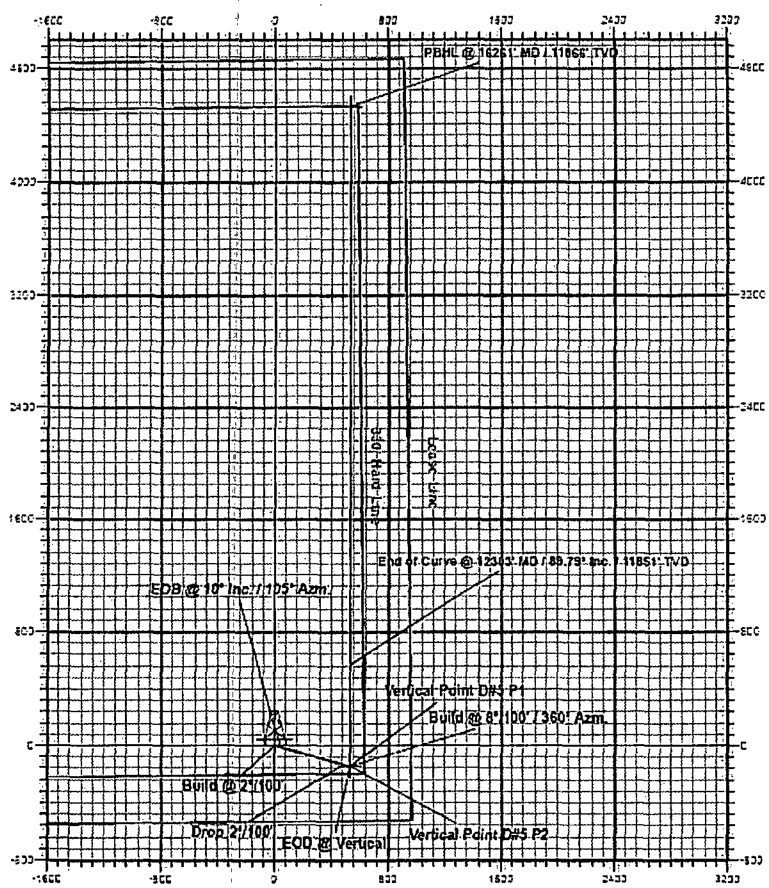
Version:		Phase:	PLAN	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	6.75

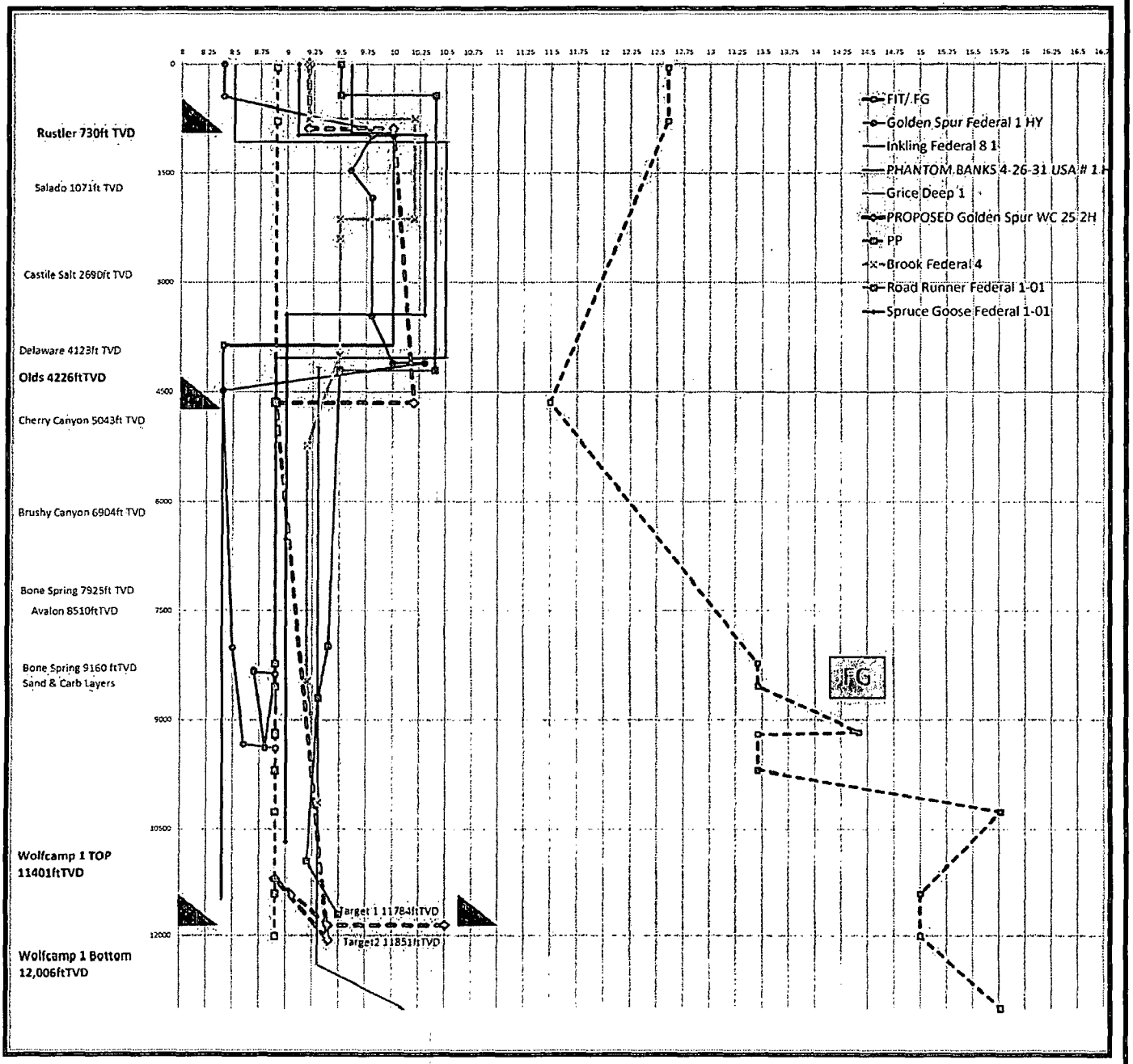
Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,500.0	10.00	105.00	5,497.5	-11.3	42.0	2.00	2.00	0.00	105.00	
8,196.0	10.00	105.00	8,152.5	-132.4	494.3	0.00	0.00	0.00	0.00	
8,696.0	0.00	0.00	8,650.0	-143.7	536.3	2.00	-2.00	0.00	180.00	Vertical Point D#5 F
11,191.0	0.00	0.00	11,135.0	-143.7	536.3	0.00	0.00	0.00	0.00	
12,303.4	89.79	360.00	11,851.2	569.8	536.3	8.00	8.00	0.00	360.00	
16,261.3	89.79	360.00	11,866.0	4,527.7	536.0	0.00	0.00	0.00	0.00	PBHL Golden Spur


Build @ 2°/100'
EOB @ 10° Inc. / 105° Azm.
Cherry Canyon
Brushy Canyon
Bone Spring Top
Drop 2°/100'
EOD @ Vertical
Avalon A Shale Top
1st Bone Spring Sand
2nd Bone Spring Carbonate
3rd Bone Spring Carbonate
Build @ 8°/100' / 360° Azm.
Top of Wolfcamp
PBHL @ 16261' MD / 11866' TVD
Wolfcamp
End of Curve @ 12303' MD / 89.79° Inc. / 11851' TVD
Vertical Section at 6.75° (1200 usft/in)


PBHL @ 16261' MD / 11866' TVD
350' Hard Line
End of Curve @ 12303' MD / 89.79° Inc. / 11851' TVD
EOB @ 10° Inc. / 105° Azm.
Vertical Point D#5 P1
Build @ 8°/100' / 360° Azm.
Build @ 2°/100'
Drop 2°/100'
EOD @ Vertical
Vertical Point D#5 P2

Attachment # 6 PP/ MW/ FG Curves



ConocoPhillips

Conoco Phillips

Lea County, New Mexico
Sec 25, T26S, 31E
Golden Spur WC 25 #2H

Wellbore #1

Plan: Design #5 Plan 2

DDC Well Planning Report

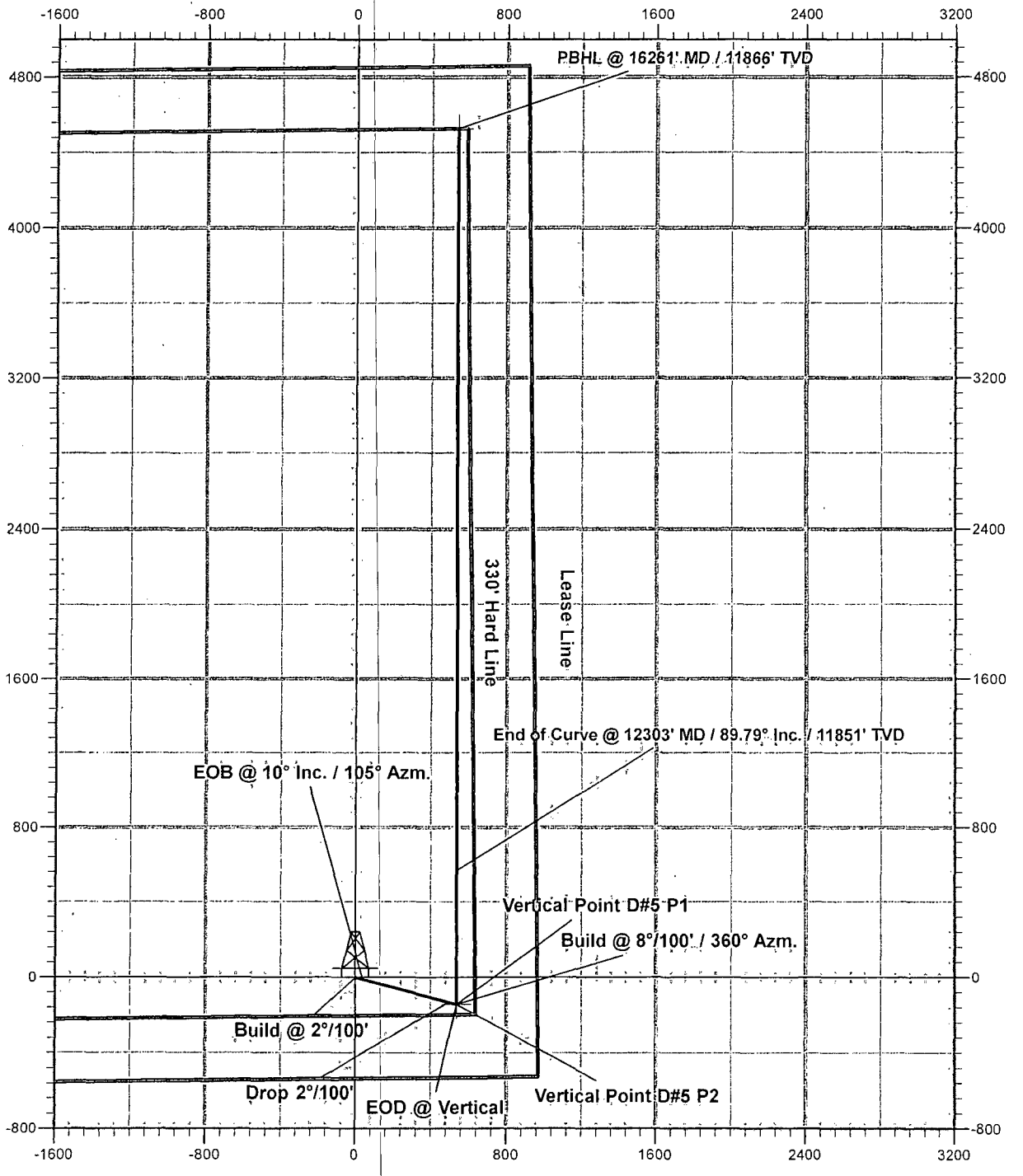
19 October, 2012

The DIRECTIONAL DRILLING COMPANY

ConocoPhillips

Lea County, New Mexico
Golden Spur WC 25 #2H
Design #5 Plan 2

RDC
The DIRECTIONAL DRILLING COMPANY



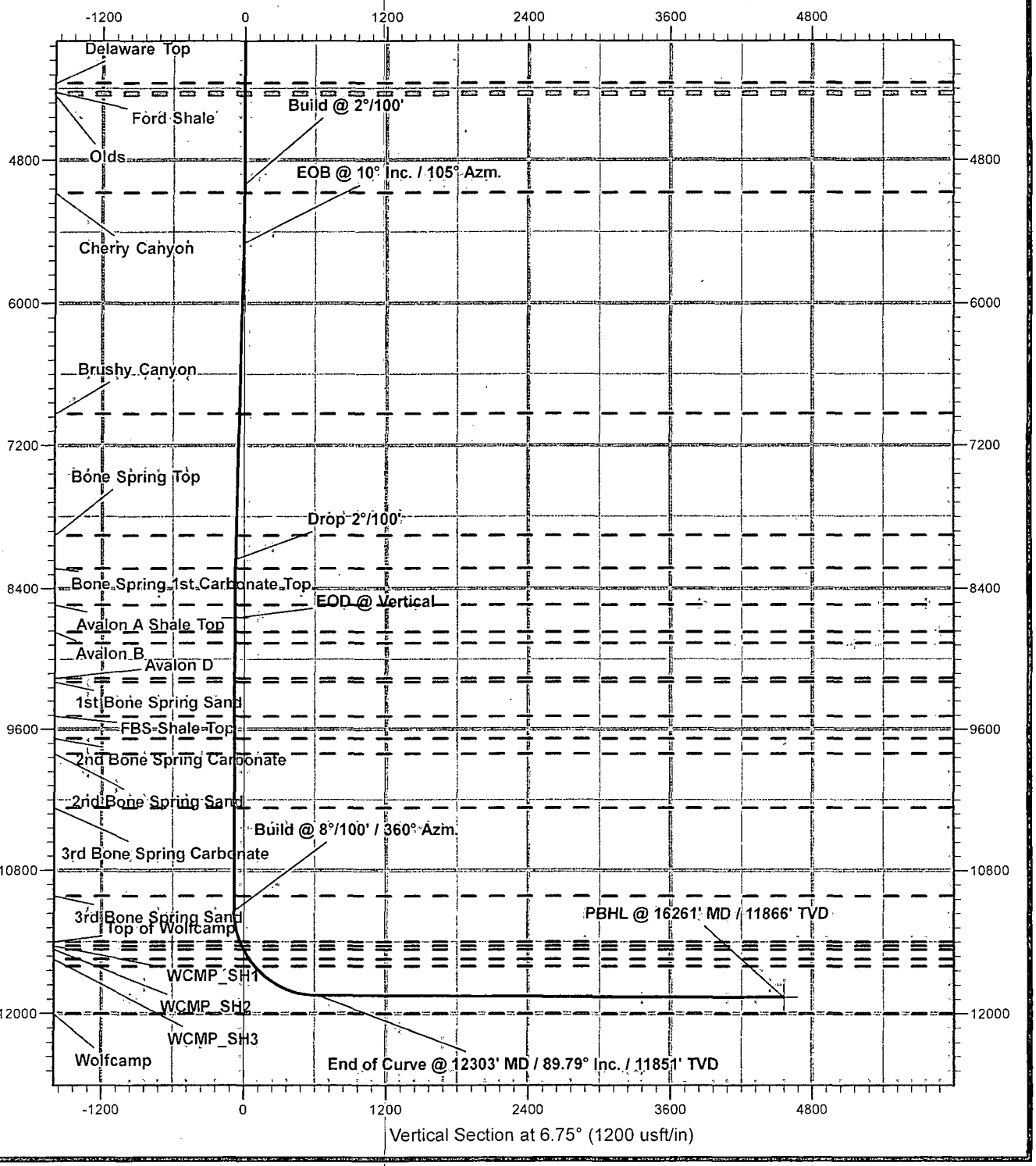
ConocoPhillips

Lea County, New Mexico

Golden Spur WC 25 #2H

Design #5 Plan 2

RDC The DIRECTIONAL DRILLING COMPANY



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Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3171.0usft (H&P #486)
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Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Project	Lea County, New Mexico		
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	Sec 25, T26S, 31E				
Site Position:		**Northing:**	366,990.85 usft	**Latitude:**	32° 0' 27.057 N
From:	Map	**Easting:**	688,386.20 usft	**Longitude:**	103° 43' 32.091 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.32 °

Well	Golden Spur WC 25 #2H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	366,990.85 usft	**Latitude:**	32° 0' 27.057 N
	+E/-W	0.0 usft	**Easting:**	688,386.20 usft	**Longitude:**	103° 43' 32.091 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,146.0 usft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	10/19/2012	7.48	59.93	48,336

Design	Design #5 Plan 2				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	6.75	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,500.0	10.00	105.00	5,497.5	-11.3	42.0	2.00	2.00	0.00	105.00	
8,196.0	10.00	105.00	8,152.5	-132.4	494.3	0.00	0.00	0.00	0.00	
8,696.0	0.00	0.00	8,650.0	-143.7	536.3	2.00	-2.00	0.00	180.00	Vertical Point D#5 F
11,181.0	0.00	0.00	11,135.0	-143.7	536.3	0.00	0.00	0.00	0.00	
12,303.4	89.79	360.00	11,851.2	569.8	536.3	8.00	8.00	0.00	360.00	
16,261.3	89.79	360.00	11,866.0	4,527.7	536.0	0.00	0.00	0.00	0.00	PBHL Golden Spur

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Golden Spur WC 25 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3171.0usft (H&P #486)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
Delaware Top									
4,154.0	0.00	0.00	4,154.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
Ford Shale									
4,230.0	0.00	0.00	4,230.0	0.0	0.0	0.0	0.00	0.00	0.00
Olds									
4,257.0	0.00	0.00	4,257.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Golden Spur WC 25 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3171.0usft (H&P #486)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Build @ 2°/100'									
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Cherry Canyon									
5,074.0	1.48	105.00	5,074.0	-0.2	0.9	-0.1	2.00	2.00	0.00
5,100.0	2.00	105.00	5,100.0	-0.5	1.7	-0.3	2.00	2.00	0.00
5,200.0	4.00	105.00	5,199.8	-1.8	6.7	-1.0	2.00	2.00	0.00
5,300.0	6.00	105.00	5,299.5	-4.1	15.2	-2.3	2.00	2.00	0.00
5,400.0	8.00	105.00	5,398.7	-7.2	26.9	-4.0	2.00	2.00	0.00
EOB @ 10° Inc. / 105° Azm.									
5,500.0	10.00	105.00	5,497.5	-11.3	42.0	-6.2	2.00	2.00	0.00
5,600.0	10.00	105.00	5,595.9	-15.8	58.8	-8.7	0.00	0.00	0.00
5,700.0	10.00	105.00	5,694.4	-20.3	75.6	-11.2	0.00	0.00	0.00
5,800.0	10.00	105.00	5,792.9	-24.7	92.4	-13.7	0.00	0.00	0.00
5,900.0	10.00	105.00	5,891.4	-29.2	109.1	-16.2	0.00	0.00	0.00
6,000.0	10.00	105.00	5,989.9	-33.7	125.9	-18.7	0.00	0.00	0.00
6,100.0	10.00	105.00	6,088.3	-38.2	142.7	-21.2	0.00	0.00	0.00
6,200.0	10.00	105.00	6,186.8	-42.7	159.5	-23.7	0.00	0.00	0.00
6,300.0	10.00	105.00	6,285.3	-47.2	176.2	-26.2	0.00	0.00	0.00
6,400.0	10.00	105.00	6,383.8	-51.7	193.0	-28.7	0.00	0.00	0.00
6,500.0	10.00	105.00	6,482.3	-56.2	209.8	-31.2	0.00	0.00	0.00
6,600.0	10.00	105.00	6,580.8	-60.7	226.5	-33.7	0.00	0.00	0.00
6,700.0	10.00	105.00	6,679.2	-65.2	243.3	-36.1	0.00	0.00	0.00
6,800.0	10.00	105.00	6,777.7	-69.7	260.1	-38.6	0.00	0.00	0.00
6,900.0	10.00	105.00	6,876.2	-74.2	276.9	-41.1	0.00	0.00	0.00
Brushy Canyon									
6,959.7	10.00	105.00	6,935.0	-76.9	286.9	-42.6	0.00	0.00	0.00
7,000.0	10.00	105.00	6,974.7	-78.7	293.6	-43.6	0.00	0.00	0.00
7,100.0	10.00	105.00	7,073.2	-83.2	310.4	-46.1	0.00	0.00	0.00
7,200.0	10.00	105.00	7,171.6	-87.7	327.2	-48.6	0.00	0.00	0.00
7,300.0	10.00	105.00	7,270.1	-92.2	344.0	-51.1	0.00	0.00	0.00
7,400.0	10.00	105.00	7,368.6	-96.7	360.7	-53.6	0.00	0.00	0.00
7,500.0	10.00	105.00	7,467.1	-101.2	377.5	-56.1	0.00	0.00	0.00
7,600.0	10.00	105.00	7,565.6	-105.6	394.3	-58.6	0.00	0.00	0.00
7,700.0	10.00	105.00	7,664.0	-110.1	411.1	-61.1	0.00	0.00	0.00
7,800.0	10.00	105.00	7,762.5	-114.6	427.8	-63.5	0.00	0.00	0.00
7,900.0	10.00	105.00	7,861.0	-119.1	444.6	-66.0	0.00	0.00	0.00
Bone Spring Top									
7,996.5	10.00	105.00	7,956.0	-123.5	460.8	-68.4	0.00	0.00	0.00
8,000.0	10.00	105.00	7,959.5	-123.6	461.4	-68.5	0.00	0.00	0.00
8,100.0	10.00	105.00	8,058.0	-128.1	478.2	-71.0	0.00	0.00	0.00
Drop 2°/100'									
8,196.0	10.00	105.00	8,152.5	-132.4	494.3	-73.4	0.00	0.00	0.00
8,200.0	9.92	105.00	8,156.4	-132.6	494.9	-73.5	2.00	-2.00	0.00
Bone Spring 1st Carbonate Top									
8,275.5	8.41	105.00	8,231.0	-135.7	506.5	-75.2	2.00	-2.00	0.00
8,300.0	7.92	105.00	8,255.2	-136.6	509.9	-75.7	2.00	-2.00	0.00
8,400.0	5.92	105.00	8,354.5	-139.7	521.5	-77.5	2.00	-2.00	0.00
8,500.0	3.92	105.00	8,454.1	-142.0	529.8	-78.7	2.00	-2.00	0.00
Avalon A Shale Top									
8,587.0	2.18	105.00	8,541.0	-143.2	534.3	-79.4	2.00	-2.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Golden Spur WC 25 #2H
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Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.0	1.92	105.00	8,554.0	-143.3	534.7	-79.4	2.00	-2.00	0.00
EOD @ Vertical									
8,696.0	0.00	0.00	8,650.0	-143.7	536.3	-79.7	2.00	-2.00	0.00
8,700.0	0.00	0.00	8,654.0	-143.7	536.3	-79.7	0.00	0.00	0.00
8,800.0	0.00	0.00	8,754.0	-143.7	536.3	-79.7	0.00	0.00	0.00
Avalon B									
8,817.0	0.00	0.00	8,771.0	-143.7	536.3	-79.7	0.00	0.00	0.00
8,900.0	0.00	0.00	8,854.0	-143.7	536.3	-79.7	0.00	0.00	0.00
Avalon C Shale Top									
8,912.0	0.00	0.00	8,866.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,000.0	0.00	0.00	8,954.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,100.0	0.00	0.00	9,054.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,200.0	0.00	0.00	9,154.0	-143.7	536.3	-79.7	0.00	0.00	0.00
Avalon D									
9,207.0	0.00	0.00	9,161.0	-143.7	536.3	-79.7	0.00	0.00	0.00
1st Bone Spring Sand									
9,237.0	0.00	0.00	9,191.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,300.0	0.00	0.00	9,254.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,400.0	0.00	0.00	9,354.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,500.0	0.00	0.00	9,454.0	-143.7	536.3	-79.7	0.00	0.00	0.00
FBS Shale Top									
9,537.0	0.00	0.00	9,491.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,600.0	0.00	0.00	9,554.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,654.0	-143.7	536.3	-79.7	0.00	0.00	0.00
2nd Bone Spring Carbonate									
9,727.0	0.00	0.00	9,681.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,800.0	0.00	0.00	9,754.0	-143.7	536.3	-79.7	0.00	0.00	0.00
2nd Bone Spring Sand									
9,857.0	0.00	0.00	9,811.0	-143.7	536.3	-79.7	0.00	0.00	0.00
9,900.0	0.00	0.00	9,854.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,000.0	0.00	0.00	9,954.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,100.0	0.00	0.00	10,054.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,200.0	0.00	0.00	10,154.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,300.0	0.00	0.00	10,254.0	-143.7	536.3	-79.7	0.00	0.00	0.00
3rd Bone Spring Carbonate									
10,317.0	0.00	0.00	10,271.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,400.0	0.00	0.00	10,354.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,500.0	0.00	0.00	10,454.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,600.0	0.00	0.00	10,554.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,700.0	0.00	0.00	10,654.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,800.0	0.00	0.00	10,754.0	-143.7	536.3	-79.7	0.00	0.00	0.00
10,900.0	0.00	0.00	10,854.0	-143.7	536.3	-79.7	0.00	0.00	0.00
11,000.0	0.00	0.00	10,954.0	-143.7	536.3	-79.7	0.00	0.00	0.00
3rd Bone Spring Sand									
11,062.0	0.00	0.00	11,016.0	-143.7	536.3	-79.7	0.00	0.00	0.00
11,100.0	0.00	0.00	11,054.0	-143.7	536.3	-79.7	0.00	0.00	0.00
Build @ 8°/100' / 360° Azm.									
11,181.0	0.00	0.00	11,135.0	-143.7	536.3	-79.7	0.00	0.00	0.00
11,200.0	1.52	360.00	11,154.0	-143.4	536.3	-79.4	8.00	8.00	0.00
11,250.0	5.52	360.00	11,203.9	-140.4	536.3	-76.4	8.00	8.00	0.00
11,300.0	9.52	360.00	11,253.4	-133.8	536.3	-69.9	8.00	8.00	0.00
11,350.0	13.52	360.00	11,302.4	-123.9	536.3	-60.0	8.00	8.00	0.00
11,400.0	17.52	360.00	11,350.6	-110.5	536.3	-46.7	8.00	8.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Golden Spur WC 25 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3171.0usft (H&P #486)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,450.0	21.52	360.00	11,397.7	-93.8	536.3	-30.1	8.00	8.00	0.00
Top of Wolfcamp									
11,453.6	21.80	360.00	11,401.0	-92.5	536.3	-28.8	8.00	8.00	0.00
WCMP_SH1									
11,491.7	24.85	360.00	11,436.0	-77.4	536.3	-13.8	8.00	8.00	0.00
11,500.0	25.52	360.00	11,443.5	-73.8	536.3	-10.3	8.00	8.00	0.00
WCMP_SH2									
11,525.1	27.53	360.00	11,466.0	-62.6	536.3	0.9	8.00	8.00	0.00
11,550.0	29.52	360.00	11,487.9	-50.7	536.3	12.7	8.00	8.00	0.00
11,600.0	33.52	360.00	11,530.5	-24.6	536.3	38.6	8.00	8.00	0.00
WCMP_SH3									
11,618.8	35.02	360.00	11,546.0	-14.0	536.3	49.1	8.00	8.00	0.00
11,650.0	37.52	360.00	11,571.2	4.4	536.3	67.4	8.00	8.00	0.00
WCMP_SH4									
11,695.0	41.12	360.00	11,606.0	33.0	536.3	95.8	8.00	8.00	0.00
11,700.0	41.52	360.00	11,609.7	36.2	536.3	99.0	8.00	8.00	0.00
11,750.0	45.52	360.00	11,646.0	70.7	536.3	133.2	8.00	8.00	0.00
11,800.0	49.52	360.00	11,679.7	107.5	536.3	169.8	8.00	8.00	0.00
11,850.0	53.52	360.00	11,710.9	146.7	536.3	208.7	8.00	8.00	0.00
11,900.0	57.52	360.00	11,739.2	187.9	536.3	249.6	8.00	8.00	0.00
11,950.0	61.52	360.00	11,764.5	231.0	536.3	292.4	8.00	8.00	0.00
12,000.0	65.52	360.00	11,786.8	275.7	536.3	336.8	8.00	8.00	0.00
12,050.0	69.52	360.00	11,805.9	321.9	536.3	382.7	8.00	8.00	0.00
12,100.0	73.52	360.00	11,821.8	369.3	536.3	429.8	8.00	8.00	0.00
12,150.0	77.52	360.00	11,834.3	417.7	536.3	477.8	8.00	8.00	0.00
12,200.0	81.52	360.00	11,843.4	466.9	536.3	526.7	8.00	8.00	0.00
12,250.0	85.52	360.00	11,849.0	516.5	536.3	576.0	8.00	8.00	0.00
End of Curve @ 12303' MD / 89.79° Inc. / 11851' TVD									
12,303.4	89.79	360.00	11,851.2	569.8	536.3	628.9	8.00	8.00	0.00
12,400.0	89.79	360.00	11,851.6	666.5	536.2	724.9	0.00	0.00	0.00
12,500.0	89.79	360.00	11,851.9	766.5	536.2	824.2	0.00	0.00	0.00
12,600.0	89.79	360.00	11,852.3	866.5	536.2	923.5	0.00	0.00	0.00
12,700.0	89.79	360.00	11,852.7	966.5	536.2	1,022.8	0.00	0.00	0.00
12,800.0	89.79	360.00	11,853.1	1,066.5	536.2	1,122.1	0.00	0.00	0.00
12,900.0	89.79	360.00	11,853.4	1,166.5	536.2	1,221.4	0.00	0.00	0.00
13,000.0	89.79	360.00	11,853.8	1,266.5	536.2	1,320.7	0.00	0.00	0.00
13,100.0	89.79	360.00	11,854.2	1,366.5	536.2	1,420.0	0.00	0.00	0.00
13,200.0	89.79	360.00	11,854.5	1,466.5	536.2	1,519.3	0.00	0.00	0.00
13,300.0	89.79	360.00	11,854.9	1,566.5	536.2	1,618.6	0.00	0.00	0.00
13,400.0	89.79	360.00	11,855.3	1,666.5	536.2	1,717.9	0.00	0.00	0.00
13,500.0	89.79	360.00	11,855.7	1,766.5	536.2	1,817.2	0.00	0.00	0.00
13,600.0	89.79	360.00	11,856.0	1,866.5	536.2	1,916.5	0.00	0.00	0.00
13,700.0	89.79	360.00	11,856.4	1,966.5	536.2	2,015.8	0.00	0.00	0.00
13,800.0	89.79	360.00	11,856.8	2,066.5	536.2	2,115.2	0.00	0.00	0.00
13,900.0	89.79	360.00	11,857.2	2,166.5	536.1	2,214.5	0.00	0.00	0.00
14,000.0	89.79	360.00	11,857.5	2,266.5	536.1	2,313.8	0.00	0.00	0.00
14,100.0	89.79	360.00	11,857.9	2,366.5	536.1	2,413.1	0.00	0.00	0.00
14,200.0	89.79	360.00	11,858.3	2,466.5	536.1	2,512.4	0.00	0.00	0.00
14,300.0	89.79	360.00	11,858.7	2,566.5	536.1	2,611.7	0.00	0.00	0.00
14,400.0	89.79	360.00	11,859.0	2,666.5	536.1	2,711.0	0.00	0.00	0.00
14,500.0	89.79	360.00	11,859.4	2,766.5	536.1	2,810.3	0.00	0.00	0.00
14,600.0	89.79	360.00	11,859.8	2,866.5	536.1	2,909.6	0.00	0.00	0.00
14,700.0	89.79	360.00	11,860.2	2,966.5	536.1	3,008.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Golden Spur WC 25 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3171.0usft (H&P #486)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,800.0	89.79	360.00	11,860.5	3,066.4	536.1	3,108.2	0.00	0.00	0.00
14,900.0	89.79	360.00	11,860.9	3,166.4	536.1	3,207.5	0.00	0.00	0.00
15,000.0	89.79	360.00	11,861.3	3,266.4	536.1	3,306.8	0.00	0.00	0.00
15,100.0	89.79	360.00	11,861.7	3,366.4	536.1	3,406.1	0.00	0.00	0.00
15,200.0	89.79	360.00	11,862.0	3,466.4	536.1	3,505.4	0.00	0.00	0.00
15,300.0	89.79	360.00	11,862.4	3,566.4	536.1	3,604.7	0.00	0.00	0.00
15,400.0	89.79	360.00	11,862.8	3,666.4	536.1	3,704.0	0.00	0.00	0.00
15,500.0	89.79	360.00	11,863.2	3,766.4	536.0	3,803.3	0.00	0.00	0.00
15,600.0	89.79	360.00	11,863.5	3,866.4	536.0	3,902.6	0.00	0.00	0.00
15,700.0	89.79	360.00	11,863.9	3,966.4	536.0	4,002.0	0.00	0.00	0.00
15,800.0	89.79	360.00	11,864.3	4,066.4	536.0	4,101.3	0.00	0.00	0.00
15,900.0	89.79	360.00	11,864.6	4,166.4	536.0	4,200.6	0.00	0.00	0.00
16,000.0	89.79	360.00	11,865.0	4,266.4	536.0	4,299.9	0.00	0.00	0.00
16,100.0	89.79	360.00	11,865.4	4,366.4	536.0	4,399.2	0.00	0.00	0.00
16,200.0	89.79	360.00	11,865.8	4,466.4	536.0	4,498.5	0.00	0.00	0.00
PBHL @ 16261' MD / 11866' TVD									
16,261.3	89.79	360.00	11,866.0	4,527.7	536.0	4,559.4	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Vertical Point D#5 P2 - plan hits target center - Point	0.00	0.00	8,650.0	-143.7	536.3	366,847.15	688,922.50	32° 0' 25.605 N	103° 43' 25.872 W
PBHL Golden Spur W - plan hits target center - Point	0.00	0.00	11,866.0	4,527.7	536.0	371,518.60	688,922.20	32° 1' 11.834 N	103° 43' 25.570 W

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Golden Spur WC 25 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3171.0usft (H&P #486)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3171.0usft (H&P #486)
Site:	Sec 25, T26S, 31E	**North Reference:**	Grid
Well:	Golden Spur WC 25 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #5 Plan 2		

Formations

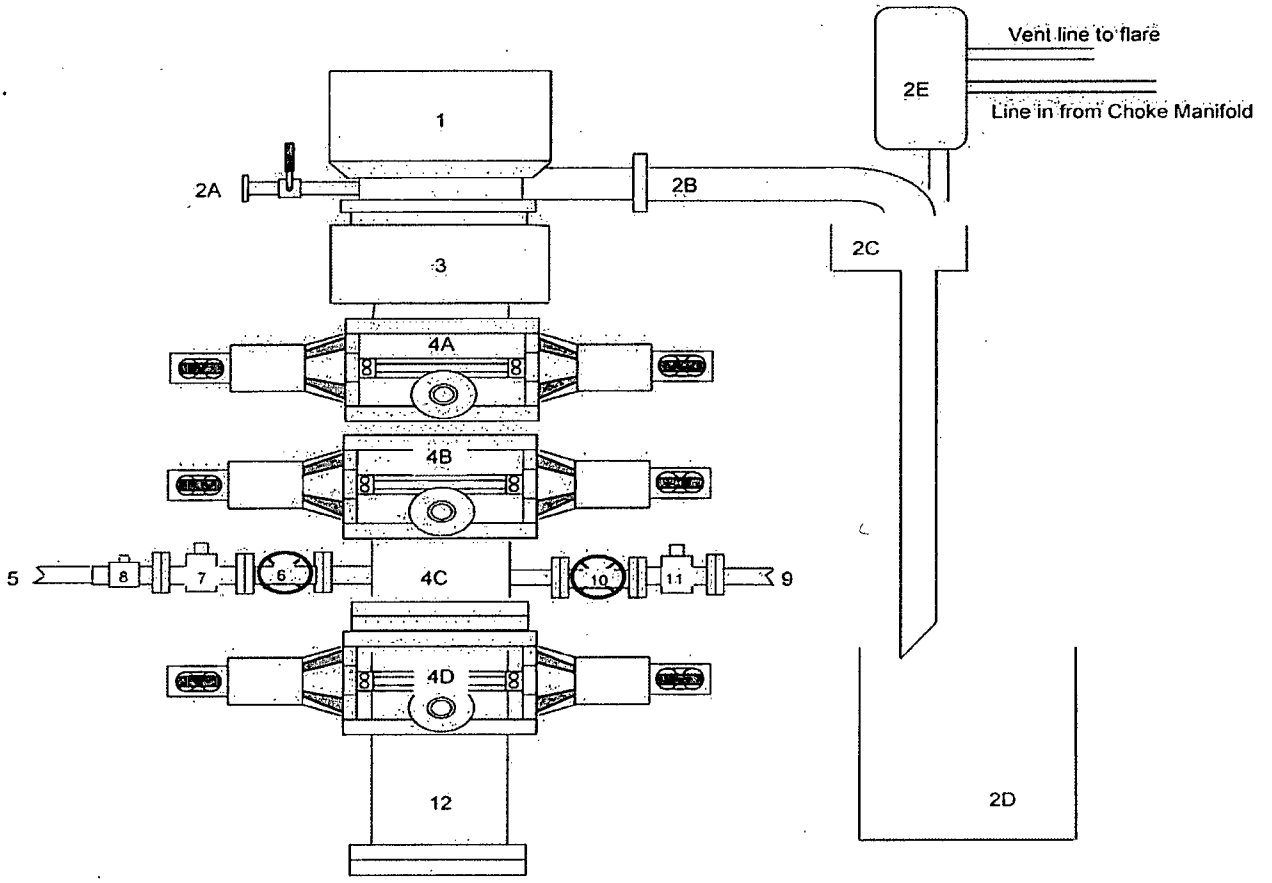
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,154.0	4,154.0	Delaware Top		0.00	0.00
4,230.0	4,230.0	Ford Shale		0.00	0.00
4,257.0	4,257.0	Olds		0.00	0.00
5,074.0	5,074.0	Cherry Canyon		0.00	0.00
6,959.7	6,935.0	Brushy Canyon		0.00	0.00
7,996.5	7,956.0	Bone Spring Top		0.00	0.00
8,275.5	8,231.0	Bone Spring 1st Carbonate Top		0.00	0.00
8,587.0	8,541.0	Avalon A Shale Top		0.00	0.00
8,817.0	8,771.0	Avalon B		0.00	0.00
8,912.0	8,866.0	Avalon C Shale Top		0.00	0.00
9,207.0	9,161.0	Avalon D		0.00	0.00
9,237.0	9,191.0	1st Bone Spring Sand		0.00	0.00
9,537.0	9,491.0	FBS Shale Top		0.00	0.00
9,727.0	9,681.0	2nd Bone Spring Carbonate		0.00	0.00
9,857.0	9,811.0	2nd Bone Spring Sand		0.00	0.00
10,317.0	10,271.0	3rd Bone Spring Carbonate		0.00	0.00
11,062.0	11,016.0	3rd Bone Spring Sand		0.00	0.00
11,453.6	11,401.0	Top of Wolfcamp		0.00	0.00
11,491.7	11,436.0	WCMP_SH1		0.00	0.00
11,525.1	11,466.0	WCMP_SH2		0.00	0.00
11,618.8	11,546.0	WCMP_SH3		0.00	0.00
11,695.0	11,606.0	WCMP_SH4		0.00	0.00

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5,000.0	5,000.0	0.0	0.0	Build @ 2°/100'
5,500.0	5,497.5	-11.3	42.0	EOB @ 10° Inc. / 105° Azm.
8,196.0	8,152.5	-132.4	494.3	Drop 2°/100'
8,696.0	8,650.0	-143.7	536.3	EOD @ Vertical
11,181.0	11,135.0	-143.7	536.3	Build @ 8°/100' / 360° Azm.
12,303.4	11,851.2	569.8	536.3	End of Curve @ 12303' MD / 89.79° Inc. / 11851' TVD
16,261.3	11,866.0	4,527.7	536.0	PBHL @ 16261' MD / 11866' TVD

Attachment # 3 BOP Stack Configuration

BLOWOUT PREVENTER ARRANGEMENT
5M System per Onshore Oil and Gas Order No. 2 utilizing 10M Rated Equipment



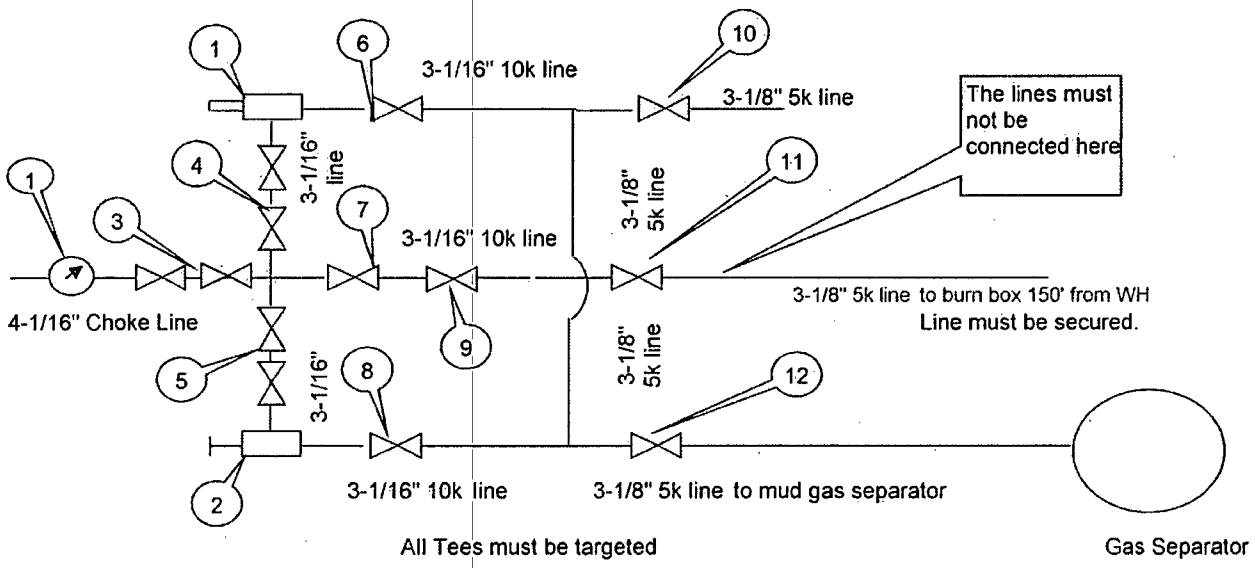
Item	Description
1	Rotating Head, 13-5/8"
2A	Fill up Line and Valve
2B	Flow Line (8")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (13-5/8", Hydrill CK5M)
4A	Single Ram (13-3/8", 10M, equipped with pipe Rams)
4B	Single Ram (13-3/8", 10M, equipped with blind Rams)
4C	Drilling Spool (13-3/8" 10M)
4D	Single Ram (13-3/8", 10M, equipped with pipe Rams)
5	Kill Line (2-1/16", 10k psi WP)
6	Kill Line Valve, Inner (Cameron "FLS" 2-1/16"", 10k psi WP)
7	Kill Line Valve, Outer (Cameron "FLS" 2-1/16"", 10k psi WP)
8	Kill Line Check Valve (2-1/16, 10k psi WP)
9	Choke Line (4-1/16", 10k psi WP)
10	Choke Line Valve, Inner (4-1/16", 10k psi WP)
11	Choke Line Valve, Outer, (4-1/6" 100 psi WP HCR)
12	Drilling Spool Adapter (13-3/8", 10M)

Drawn by: Salvatore Amico, Drilling Engineer, ConocoPhillips Company, Oct 26th, 2012

Attachment # 2 Choke Manifold Configuration

CHOKE MANIFOLD ARRANGEMENT

5M System per Onshore Oil and Gas Order No. 2 utilizing 10M Equipment



Item	Description
1	Remote Controlled Hydraulic Adjustable Choke, 4-1/16", 10M (Swaco Super hoke)
2	Manual Adjustable Choke, 4-1/16", 10M
3	2 Gate Valves, 4-1/16" 10M
4	Gate Valve, 3-1/16" 10M
5	Gate Valve, 3-1/16" 10M
6	Gate Valve, 3-1/16" 10M
7	Gate Valve, 3-1/16" 10M
8	Gate Valve, 3-1/16" 10M
9	Gate Valve, 3-1/16" 10M
10	Gate Valve, 3-1/8" 5M
11	Gate Valve, 3-1/8" 5M
12	Gate Valve, 3-1/8" 5M
13	Pressure Gauge

We will test each valve to 5000 psi from the upstream side.

Drawn by:
Salvatore Amico
Drilling Engineer, ConocoPhillips Company
Date: Oct 26th-2012

ConocoPhillips Company
Closed Loop System Design, Operating and Maintenance, and Closure Plan

Date: February 21, 2012

ConocoPhillips proposes the following plan for design, operating and maintenance, and closure of our proposed closed loop system for the above named well:

1. We propose to use a closed loop system with steel pits, haul-off bins, and frac tanks for containing all cuttings, solids, mud, water, brine, and liquids. We will not dig a pit, nor will we use a drying pad, nor will we dispose of or bury any waste on location.

   All drilling waste and all drilling fluids (fresh water, brine, mud, cuttings, drill solids, cement returns, and any other liquid or solid that may be involved) will be contained on location in the rig's steel pits or in haul-off bins or in frac tanks as needed. The intent is as follows:
   - We propose to use the rigs's steel pits for containing and maintaining the drilling fluids.
   - We propose to remove cuttings and drilled solids from the mud by using solids control equipment and to contain such cuttings and drilled solids on location in haul-off bins.
   - We propose that any excess water that may need to be stored on location will be stored in a fresh water pond.

   The closed loop system components will be inspected daily by each tour and any needed repairs will be made immediately. Any leak in the system will be repaired immediately, and any spilled liquids and / or solids will be cleaned immediately, and the area where any such spill occurred will be remediated immediately.

2. Cuttings and solids will be removed from location in haul-off bins by an authorized contractor and disposed of at an authorized facility. For this well, we propose the following disposal facility:

   Controlled Recovery Inc,
   4507 West Carlsbad Hwy, Hobbs, NM 88240,
   P.O. Box 388 Hobbs, New Mexico 88241
   Toll Free Phone: 877.505.4274, Local Phone Number: 432-638-4076

   The physical address for the plant where the disposal facility is located is Highway 62/180 at mile marker 66 (33 miles East of Hobbs, NM and 32 miles West of Carlsbad, NM).

   The Permit Number for CRI is R9166

   A photograph showing the type of haul-off bins that will be used is attached.

3. Mud will be transported by vacuum truck and disposed of at Controlled Recovery Inc at the facility described above.

4. Fresh Water and Brine will be hauled off by vacuum truck and disposed of at an authorized salt water disposal well. We propose the following for disposal of fresh water and brine as needed:

   - Nabors Well Services Company, 3221 NW County Rd, Hobbs, NM 88240, PO 5208 Hobbs, NM, 88241, Permit SWD 092. (Well Location: Section 3, T19S R37E)

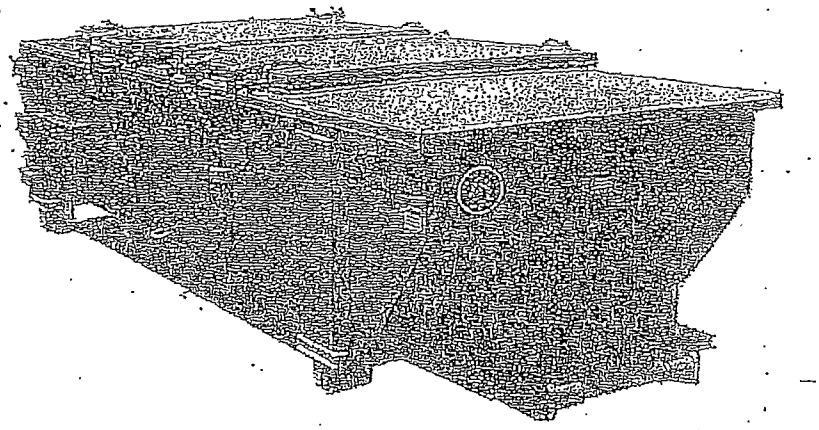
   - Basic Energy Services, PO Box 1869 Eunice, NM 88231 Phone Number 575 394 2545, Facility located at Hwy 18, Mile Marker 19, Eunice, NM.

Luis Serrano Drilling Engineer
ConocoPhillips Company, 600 North Dairy Ashford, Room #2WL-13016, Houston, TX 77079-1175
Office: 832-486-2346

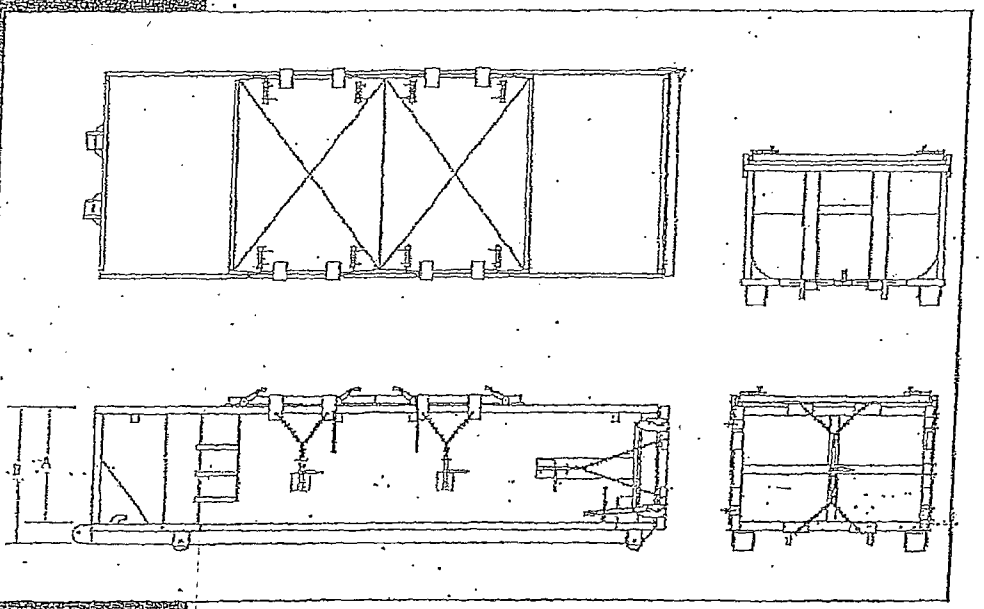
SPECIFICATIONS

Heavy Duty Split Metal Rolling Lid

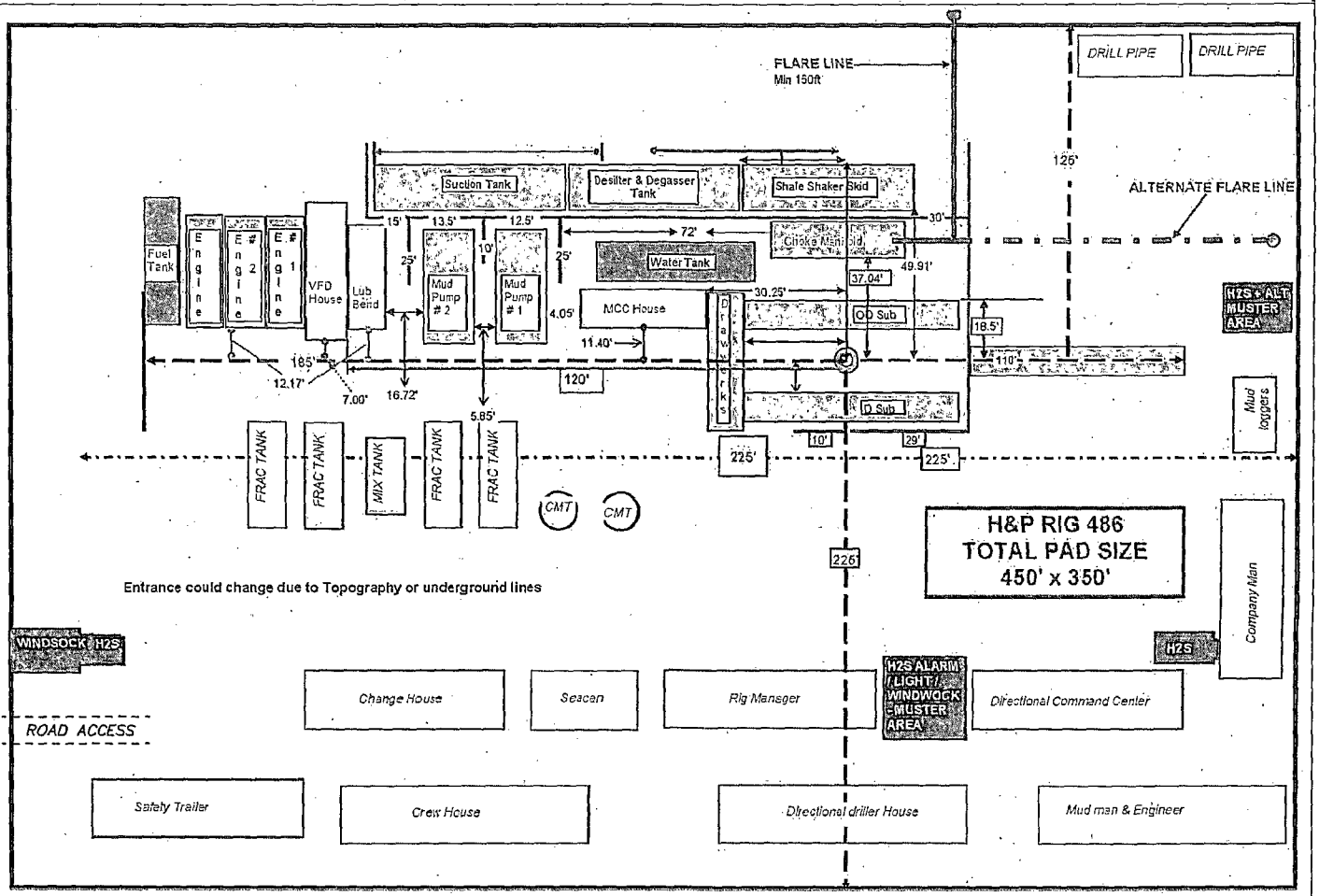
FLOOR: 3/16" PL one piece
CROSS MEMBER: 3"x4.1 channel 16" on center
WALLS: 3/16" PL solid welded with tubing top inside liner hooks
DOOR: 3/16" PL with tubing frame
FRONT: 3/16" PL slant formed
TRUCK U.P.: Standard cable with 2" x 6" x 1/4" rails, 2 per set at each crossmember
WHEELS: 10" DIA x 9" long with grease fittings
DOOR LATCH: 8 independent ratchet binders with chains, vertical second latch
GASKETS: Extruded rubber seal with metal retainers
WELDS: All welds continuous except sub structure crossmembers
FINISH: Coated inside and out with direct to metal rust inhibiting acrylic enamel color coat
HYDROTESTING: Full capacity static test
DIMENSIONS: 22'-11" long (21'-8" inside), 96" wide (88" inside), see drawing for height
OPTIONS: Steel grit blast and special paint
Amplroll, Heil and Dino pickup
ROOF: 3/16" PL roof panels with tubing and channel support frame
LIDS: (2) 68" x 90" metal rolling lids spring loaded self raising
ROLLERS: 4" V-groove rollers with delrin bearings and grease fittings
OPENING: (2) 60" x 82" openings with 6" divider centered on container
LATCH: (2) independent ratchet binders with chains per lid
GASKETS: Extruded rubber seal with metal retainers



CONT.	A	B
20 YD	41	53
25 YD	53	65
30 YD	65	77



RIG LAYOUT



GOLDEN SPUR WC 25 #2H
Located 535' FSL and 965' FEL
Section 25, Township 26 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number: JMS 27290
Survey Date: 10-11-2012
Scale: 1" = NONE
Date: 10-12-2012

ConocoPhillips

ConocoPhillips

HYDROGEN SULFIDE (H_2S) OPERATIONS

Contingency Plan
For
Permian Drilling Operations

ConocoPhillips Company
Mid-Continent Business Unit
Permian Asset Area

I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H_2S release. Release of H_2S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

II. SCOPE

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H2S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H_2S could exist under specific weather conditions.

III. PROCEDURES

First Employee on Scene

—— Assess the incident and ensure your own safety.

Note the following:

—— Location of the incident.
—— Nature of the incident.
—— Wind direction and weather conditions.
—— Other assistance that may be needed.

—— Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.

—— Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

—— Secure the site.

—— Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

—— Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.

—— Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

DETECT the problem
ESTIMATE likely harm without intervention
CHOOSE response objectives
IDENTIFY action options
DO the best option
EVALUATE the progress

—— Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).

—— Call your supervisor (refer to Section V: Emergency Call List).

—— Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).

—— Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).

—— Ensure site security.

—— Set barricades and /or warning signs at or beyond the calculated 100 ppm H_2S radius of exposure (ROE). All manned barricades must be equipped with an H_2S monitor and a 2-way radio.

—— Set roadblocks and staging area as determined.

—— Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:

Recording Secretary _____
Public Information Officer _____
Safety/Medical Officer _____
Decontamination Officer _____

—— Have the "Recording Secretary" begin documenting the incident on the "Incident Log" (refer to Section VIII: Forms/Reports).

—— If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.

—— Perform a Site Characterization and designate the following:

Hot Zone -- Hazardous Area
Warm Zone -- Preparation & Decontamination Area
Cold Zone -- Safe Area

AND

On-Scene Incident Command Post	(Cold Zone)
Public Relations Briefing Area	(Cold Zone)
Staging Area	(Cold Zone)
Triage Area	(Cold Zone)
Decontamination Area	(Warm Zone)

_____ Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).

_____ Coordinate the attempt to stop the release of H_2S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

_____ Once the emergency is over, return the situation to normal by:

Confirming the absence of H_2S and combustible gas throughout the area,

Discontinuing the radio silence on all channels, stating that the emergency incident is over,

Removing all barricades and warning signs,

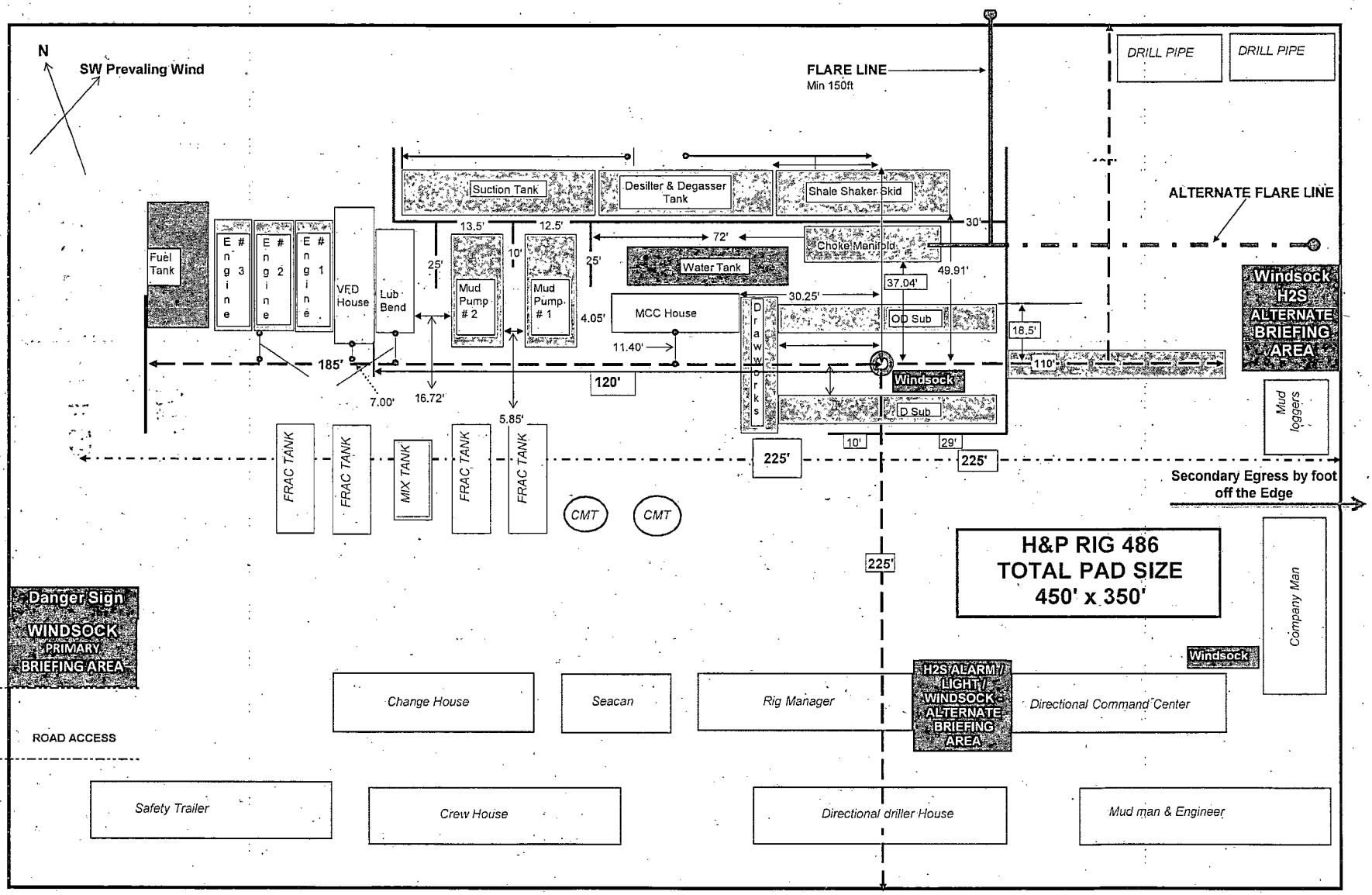
Allowing evacuees to return to the area, and

Advising all parties previously notified that the emergency has ended.

_____ Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).

_____ Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)

_____ Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Federal agencies.)


N
SW Prevaling Wind
FLARE LINE
Min 150ft
DRILL PIPE
DRILL PIPE
ALTERNATE FLARE LINE
Suction Tank
Desilter & Degasser Tank
Shale Shaker Skid
Choke Manifold
Water Tank
Fuel Tank
E # 3 engine
E # 2 engine
E # 1 engine
VFD House
Lub Bend
Mud Pump # 2
Mud Pump # 1
MCC House
Drawworks
OD Sub
D Sub
Windsock
Windsock H2S ALTERNATE BRIEFING AREA
Mud loggers
13.5'
12.5'
72'
30'
49.91'
37.04'
30.25'
25'
10'
25'
4.05'
11.40'
18.5'
110'
185'
120'
7.00'
16.72'
5.85'
10'
29'
225'
225'
225'
FRAC TANK
FRAC TANK
MIX TANK
FRAC TANK
FRAC TANK
CMT
CMT
Secondary Egress by foot off the Edge
H&P RIG 486
TOTAL PAD SIZE
450' x 350'
Company Man
Danger Sign
WINDSOCK
PRIMARY
BRIEFING AREA
Windsock
H2S ALARM / LIGHT / WINDSOCK ALTERNATE BRIEFING AREA
Change House
Seacan
Rig Manager
Directional Command Center
ROAD ACCESS
Safety Trailer
Crew House
Directional driller House
Mud man & Engineer

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Conoco Phillips**
LEASE NO.:	**NMLC-068282B**
WELL NAME & NO.:	**Golden Spur WC 25 2H**
SURFACE HOLE FOOTAGE:	**0535' FSL & 0965' FEL**
BOTTOM HOLE FOOTAGE	**0330' FNL & 0330' FEL**
LOCATION:	**Section 25, T. 26 S., R 31 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.

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. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

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

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

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

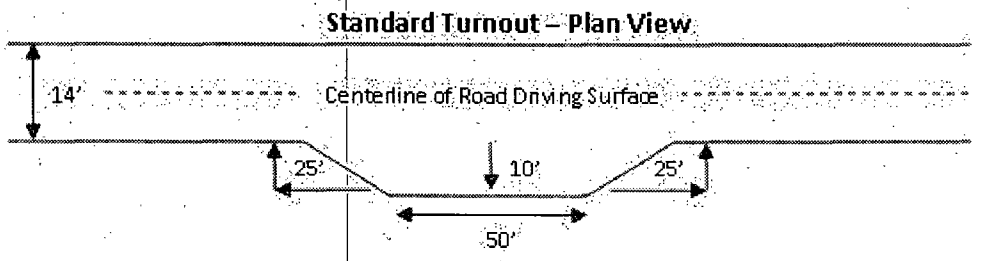
Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

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

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

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

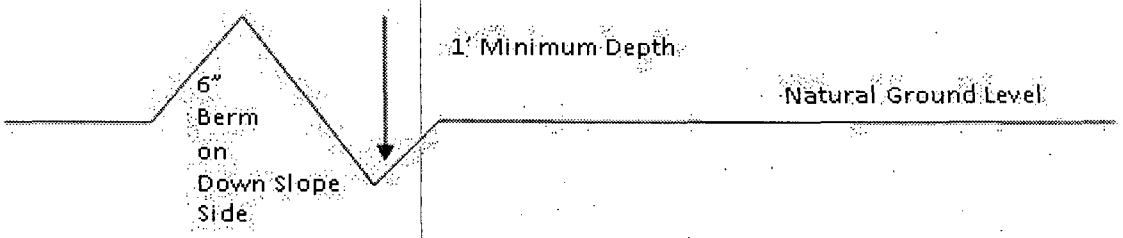
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



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

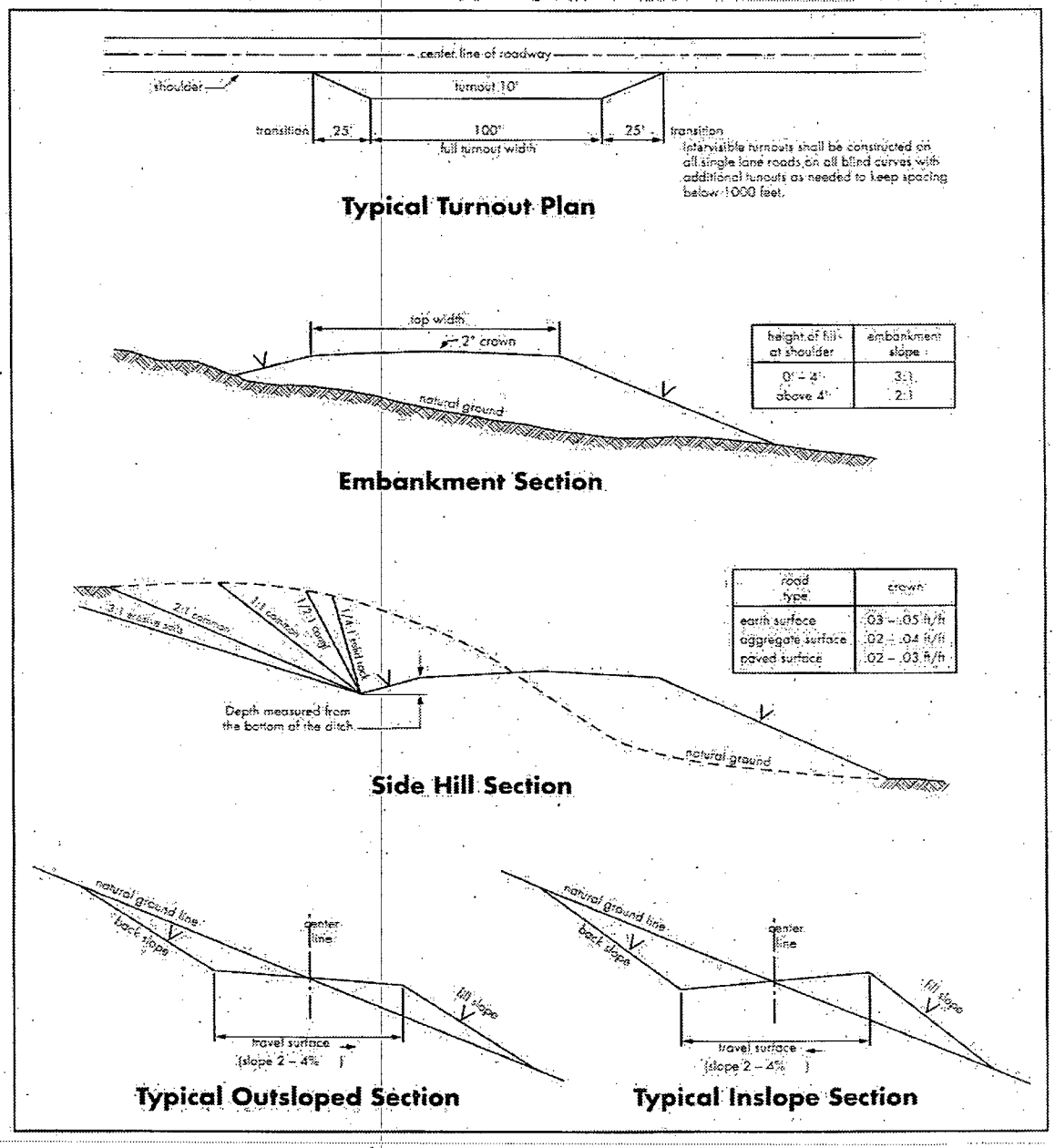
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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



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

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

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

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

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

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

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Abnormal pressures may occur in the Wolfcamp.
Possible water and brine flows in the Salado, Castile, Delaware, and Bone Springs Formations.
Possible lost circulation in the Red Beds, Delaware, and Bone Springs Formations.
Even though this area is recognized as low Cave/Karst, there is a greater possibility of finding caves in this particular area.

1. The **13-3/8** inch surface casing shall be set at approximately **1040** feet (**in a competent bed <u>below the Magenta Dolomite</u>, a <u>Member of the Rustler</u>**) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

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

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

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

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

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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

3. The minimum required fill of cement behind the 7 inch production casing is:

Operator has proposed DV tool at depth of 9000'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

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

☒ Cement to top of liner. Operator shall provide method of verification. **Excess calculates to -15% - Additional cement will be required.**

Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-361-2822) prior to tag of bottom plug, which must be a minimum of 220' in length. Operator can set one plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug.

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 **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.

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

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

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

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

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

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

F. WASTE MATERIAL AND FLUIDS

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

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

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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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant 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 **15** 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 behalf, 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)

BURIED PIPELINE STIPULATIONS

A copy of the Grant and attachments, including conditions of approval, 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 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. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil 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 or other

pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of 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 holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **15** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **15** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. 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.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless

otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

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. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

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. All signs and information thereon will be posted in a permanent, conspicuous manner, and 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 before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

15. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, 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 actions to prevent the loss of significant 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.

16. 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 associated roads, 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.

C. ELECTRIC LINES
STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant 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 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. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Power lines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. 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 the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, 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 actions to prevent the loss of significant 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.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly. Fill in any holes from the poles removed.

VIII. INTERIM RECLAMATION

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

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce

the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

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

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

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

X. FINAL ABANDONMENT & RECLAMATION

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

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

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

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

Seed Mixture 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

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

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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