13-706

Form 3160-3
(March 2012)

HOBBS OCD
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NOV 20 2013
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM27508

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.: Wilder Federal 29 # 2H (39470)

2. Name of Operator: ConocoPhillips Company (217817)

9. API Well No.: 30-025-41511

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

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

10. Field and Pool, or Exploratory: Bone Springs UPPER SHALE (97838) JENNINGS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: 330 FNL & 2116 FEL (NWNE) 29-26S-32E (B)

At proposed prod. zone: 330 FSL & 2116 FEL (SWSE) 29-26S-32E (O)

11. Sec., T. R. M. or Blk. and Survey or Area: Section 29-26S-32E

14. Distance in miles and direction from nearest town or post office*: ~15 miles south/east of Orla, Texas

12. County or Parish: Lea

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
330'	~~640~~ acres 1440	160 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
50'	13597 MD/9249 TVD	ES0085
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3143	10/01/2013	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)*	Date
	Donna Williams	04/18/2013

Title: Sr. Regulatory Advisor

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/S/ STEPHEN J. CAFFEY		NOV 14 2013
Title	**Office**	
FIELD MANAGER	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

KB 11/22/13

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

NOV 26 2013

R.M.

OPERATORS NAME:	**ConocoPhillips Company**
LEASE NAME AND WELL NO.:	**Wilder Federal 29 # 2H**
SURFACE LOCATION:	**330 FNL & 2116 FEL (NWNE) 29-26S-32E**
CASING POINT:	**1041 FNL & 2111.7 FEL (NWNE) 29-26S-32E**
BHL:	**330 FSL & 2116 FEL (SWSE) 29-26S-32E**
FIELD NAME:	**Red Hills; Bone Spring**
POOL NAME:	**Bone Spring**
COUNTY:	**Lea County, New Mexico**
	Federal Surface/Minerals NMNM27508

The following information is to supplement the Application for Permit to Drill.

DRILLING PLAN

1. Name and estimated tops of all geologic groups, formations, members, or zones.(TVD)

Quaternary	Surface	Water
Rustler	981	Water
Salado	1395	Salt
Delaware Top	4320	Oil/gas/water
Ramsey	4359	Oil/gas/water
Ford Shale	4429	Oil/gas/water
Olds	4431	Oil/gas/water
Cherry Canyon	6528	Oil/gas/water
Brushy Canyon	N/A	Oil/gas/water
Bone Spring	8156	Oil/gas/water
Bone Spring 1st Carbonate	8375	Oil/gas/water
Base Bone Spring 1st Carb.	8473	Oil/gas/water
KOP	8520	
Avalon A Shale Top	8677	Oil/gas/water
Avalon B Zone Top	8921	Oil/gas/water
Avalon C Shale Top	9076	Oil/gas/water
Avalon Target	9274	Oil/gas/water

2. Estimated depths and thickness of formations, members or zones potentially containing usable water, oil, gas, or prospectively valuable deposits of other minerals that the operator expects to encounter, and the operator's plans for protecting such resources.

Quanternary	Surface
Rustler	981'

All of the water bearing formations identified above will be protected by the setting of the 13 3/8" casing at 1010' and circulating of cement to surface

Castille (Salt) 1824
Delaware 4320 (oil/gas/water)
The prospective formation identified above will be protected by the setting of the 9 5/8" casing set at 4350' and circulating of cement to surface.
Bone Spring 8156-9314 (oil/gas/water)
The geologic tops identified above from the top of the Bone Spring/Avalon are part of the target formation

3. The operator's minimum specifications for blowout prevention equipment and diverter systems to be used, including size, pressure rating, configuration, and the testing procedure and frequency.

A 5000# system will be installed, used, maintained, and tested accordingly. After nippling up, and every 30 days thereafter, preventors will be pressure tested. BOP will be inspected and operated at least daily to insure good working order. All pressure and operating tests will be recorded on the daily drilling reports. Ram Type preventors will be tested to rated working pressure or 70% of the minimum internal yield of the casing. Annular type preventer(s) shall be tested to 50% of the approved BOP stack working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer. Pursuant to Onshore Oil and Gas Order No. 2, the BOP equipment for a 5M system or greater shall include lower Kelly cock valve with handle available, safety valves and subs to fit all drill string connections in use and inside BOP or float sub shall be available. All choke lines from the drilling spool forward shall meet the requirements of the Onshore Order 2 as specified. **See Attached BOPe Schematic**

See COA
Test plug req.

4. The proposed casing program including size, grade, weights, type of thread and coupling, and the setting depth of each string and its condition. For exploratory wells, or for wells as otherwise specified by the authorized officer, the operator shall include the minimum design factors for tensions, burst, and collapse that are incorporated into the casing design. In cases where tapered casing strings are utilized, the operator shall also include and/or setting depths of each portion.

NEW CASING:

See COA

Surface: 17 1/2" hole, 13 3/8" 54.5# J55 STC csg, set @ 1010' (1030'). Drill out with 12 ¼" bit and perform shoe test to 12.5 ppg MWE.
Burst: 4.39/Collapse: 1.88/Tension: 5.98/9.13
Intermediate 1: 12 1/4" hole, 9 5/8" 36# J55 LTC csg, set @ 4350' (4300')
Burst: 2.43/Collapse: 1.4/Tension: 5.45/6.44
(This string of casing would not be subject to the production collapse load case of being pumped off to zero pressure on the inside by beam pump or ESP production pumping the fluid level down. The 9 5/8" casing would be isolated

from the beam pumping production collapse load case by the production casing that would be run. If loss of circulation occurs during the drilling phase while drilling below the 9 5/8" intermediate casing, we would expect the fluid level would fall no further than 2200' below the surface of ground before reaching hydrostatic balance with the pressure of the loss zone. Our anticipated maximum mud weight for drilling below the 9 5/8" intermediate casing is 9.3 ppg and our experience has been that we have not had severe losses with this mud weight in our previous wells in this area. The 9 5/8" casing will be filled with mud while running it by filling it at least once each 30 joints)

Intermediate 2: 8 3/4" hole, 7" 29# P110 BTC csg set @ 9624
Burst: 3.25/Collapse: 3.36/Tension: 5.78/6.8
Production Liner (Uncemented): 6" hole, 4 ½" 11.6# P110 BTC liner set @ 9080-13597 MD Burst: 3.25/Collapse: 3.36/Tension: 5.78/6.80 (Packers and Sleeves)
The plan is to set casing and drill open hole in a southern direction to a proposed bottomhole location of 330 FSL & 2116 FEL (SWSE) of Section 29-26S-32E
ConocoPhillips will utilize casing friendly hardbanded drill pipe in a manner that is consistent with current company policy and standards with respect to minimizing or mitigating internal casing wear. The responsibility to ensure all parties are acting according to their roles and responsibilities rest with the Company. Any damage or impacts from use of casing friendly hardbanded drill pipe rest with ConocoPhillips Company.

5. The amount and type(s) of cement, including anticipated additives to be used in setting each casing string, shall be described. If stage cementing techniques are to be employed, the setting depth of the stage collars and amount and type of cement, including additives, and preflush amounts to be used in each stage, shall be given. The expected linear fill-up of each cemented string, or each stage when utilizing stage-cementing techniques, shall also be given.

13 3/8 casing: Lead w/750 sxs Class C cmt + HalCem-C (Yield 1.33 cft) Tail w/320 sxs Class C cmt + 1 lbm/sk EconoChem HRLTRRC (Yield 1.85 Cuft/sk). Circulated to surface based on 17 ½" hole with 100% excess

9 5/8" casing: Lead w/980 sxs 50/50 Class C Poz + 2.5 gal/bbl WG-19 + 1 lbm/sk EconoCem-C (Yield 2.48 cft/sk), Tail w/140 sxs H + HalCem C (Yield 1.33 cft/sk) Circulated to surface based on 12 ¼" hole w/200% Excess.

7" casing: Lead w/560 sxs 50/50 Class C Poz (Tune Light System) + .2.5 ga/bbl WG-19 + 1 lbm/sk EconoCem-C (Yield: 2.0 cft/sk) Tail w/250 sxs Class H + HalCem C (Yield 1.2 cft/sk). Circulate cement 500'into the 9 5/8" casing based on 8 ¾" hole w/200% excess.

4 ½" Liner: Uncemented

6. The anticipated type and characteristics of the proposed circulating medium or mediums proposed for the drilling of each wellbore section, the quantities and types of mud and weighting material to be maintained, and the monitoring equipment to be used on the circulating system.

See COA

Mud Program:

0-1010 1070'	Aquagel-Spud Mud	8.9	Wt/Gl	32-36 Vis.	NC
1010-4350 4300'	Brine	10	Wt/Gl	28-30 Vis.	5-8
4350-9624	Brine	9.3	Wt/Gl	28-30 Vis	5-8
9624-13597	Cut Brine	9.3	Wt/Gl	30-40 Vis	<=5

Gas detection equipment and pit level flow monitoring equipment will be on location. ConocoPhillips Company will maintain sufficient mud and weighted material on location at all times.

7. The anticipated testing, logging, and coring procedures to be used, including drill stem testing procedures, equipment, and safety measures.

a. DST Program: None
b. Mud Logging: Two-Man – 1010-TD (Vertical & Horizontal Sections)
Logs to be run: Quad Combo + Sonic + FMI + VSP
Triple Combo w/spectral + Sonic Scanner + FMI + VSP Seismic + GR
Caliper + Spectral Gamma + Resistivity + Sonic + CMI(FMI) + GR

8. List the expected bottom-hole pressure and any anticipated abnormal pressures, temperatures or potential hazards that are expected to be encountered, such as lost circulation zones and hydrogen sulfide. The operator's plans for mitigating such hazards shall be discussed. Should the potential to encounter hydrogen sulfide exist, the mitigation procedures shall comply with the provisions of the BLM.

The maximum anticipated bottom hole pressure is .45 psi/ft
No hydrogen sulfide is expected during drilling operations; however, the potential does exist for H2S. Please see attached H2S contingency plan to be used in the event of occurrence.

See COA

Any other facets of the proposed operation which the operator wishes to be considered in reviewing the application.
Anticipated construction date is October 1, 2013 with anticipated spud date of November 1, 2013. Construction of well pad and road will begin as soon as all Agency approvals are obtained.

9. Address the proposed directional design, plan view, and vertical section in true vertical and measured depth for directional, horizontal, or coil tubing operations.

The proposed directional/horizontal documents are attached.

DRILLING PLAN

PROSPECT/FIELD	Bonespring/Red Hills			COUNTY/STATE		Lea County, NM
OWNERS	ConocoPhillips			LEASE		
WELL NO.	Wilder Federal 29 #2H	FNL	FSL	FEL	FWL	
LOCATION	Surface Location:	330		2116		
	Bottom Hole Location:		330	2116		
EST. T.D.	Leg #1 13,597' MD			GROUND ELEV.		3,143' (est)
					RKB	3159

PROGNOSIS: *Based on 3,159' KB(est)*

MARKER	S.S. DEPTH	TVD
Quaternary		Surface
Rustler	2,178	981
Delaware Top	-1,161	4,320
Bone Spring	-4,997	8,156
Bone Spring 1st Carbonate Top	-5,216	8,375
Bone Spring 1st Carbonate Base	-5,314	8,473
KOP		**8,503**
Avalon A Shale Top	-5,518	8,677
Avalon A Shale Base	-5,762	8,921
Avalon B Zone Top	-5,762	8,921
Avalon B Zone Base	-5,917	9,076
Avalon C Shale Top	-5,917	9,076
Avalon C Shale Horizontal Target	**6061**	**9,220**
Avalon C Shale Base	-6,155	9,314

LOGS:

Type	Interval
Open Hole:	
GR-MWD	KOP-TD

DEVIATION:

Surf:	3° max, 1°/100' every 500'
Int #1/2:	3° max, 1°/100' every 90'
Interm #2 Curve:	90°, 1°/100' every 30'
Prod Lateral:	90°, 1°/100' every 30'

DST'S:

CORES:

No core.

SAMPLES:

Mudlogging:	Start	End	
Two-Man:	1010'	TD	Vertical and Horizontal sections

BOP:

COP Category 3 Well Control Requirements

Precision 827 BOPE: *(With Rotating Head)*

- 13-5/8"-5Mpsi Annular
- 13-3/8"-5Mpsi Blind Ram
- 13-3/8"-5Mpsi Cross / Choke & Kill Lines
- 13-3/8"-5M psi Pipe Ram
- 13-3/8"-5Mpsi Spacer Spool

Dip Rate: (See inclination prediction)

Max. Anticipated BHP: 0.45 psi/ft

Surface Formation:

MUD:	Interval	Type	Max. MW	Vis	WL	Remarks
Surface:	0'-1010'	Aquagel - Spud Mud	8.9	32-36	NC	
Intermediate 1:	1030'-4350'	Brine	10	28-30	5-8	
Intermediate 2:	4350'-9624'	Brine	9.3	28-30	5-8	
Production:	9624'-13597'	Cut Brine	9.3	30-40	<=5	

CASING:	Size	Wt ppf	Hole	Depth	Cement	WOC	Remarks
Surface:	13-3/8"	54.5	17-1/2	1,010'	To Surface	18hrs	
Intermediate 1:	9-5/8"	36	12-1/4"	4,350'	To Surface	18hrs	
Intermediate 2:	7"	29	8 3/4"	9,624'	500' into the 9-5/8"	18hrs	
Production Lat #1:	4 1/2"	11.6	6"	13,597'	Packers and Sleeves	N/A	Liner

DIRECTIONAL PLAN

	MD	TVD	AZ
Surface:	N/A	N/A	0
Vertical KOP:	8,504'	8,504'	179.7
End Build/ 7" Casing (90° curve):	9,624'	9,220'	179.7
Tangent:	N/A	N/A	179.7
Turn:	N/A	N/A	179.7
TD:	13,597'	9,249'	179.7

Directional Company: DDC
Vertical Build Rate: 8.0 °/100'
Tan Leg Turn Rate: 0.0 °/100'

Comments:
Surveys will be taken with INC Survey Tool below surface casing while drilling with PDC + Scout Vertical Seeking Tool + Teledrift BHA

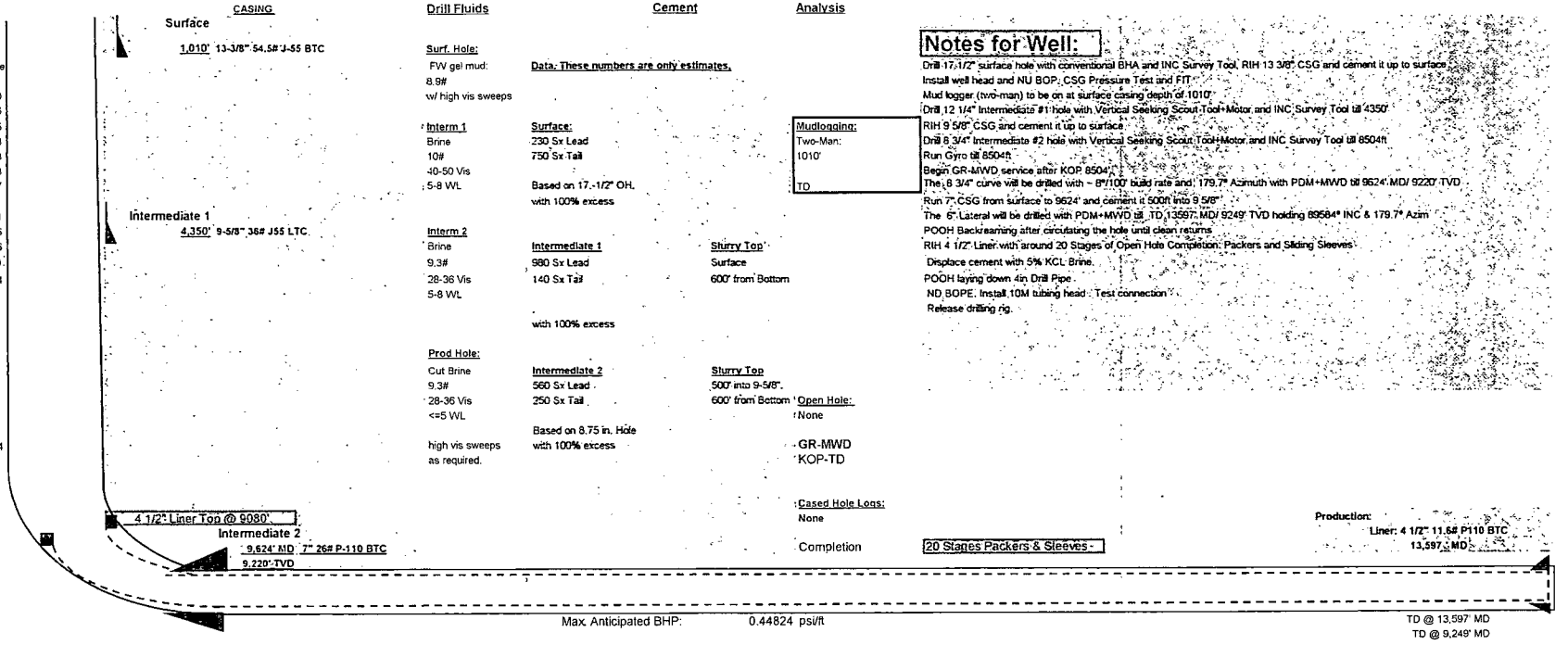
Prep By: Katia Filina Date: 7/26/12 Doc: REV.2

Wilder Federal 29 #2H	
Surface Location:	Bottom Hole Location
330FNL 2116FEL	330FSL 2116FEL

Directional:

	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI
Vertical KOP:	8504'	8504'	0	0	0	179.65
End Build/ 7"Casing (90° curve):	9,624'	9,220'	0	0	0	179.7
Tangent:	N/A	N/A	0	0	0	179.7
Turn:	N/A	N/A	0	0	0	179.7
TD:	13,597'	9,249'	0	0	0	179.7

Formation	TVD
Quaternary	Surface
Rustler	981
Delaware Top	4,320
KOP	8,156
Bone Spring	8,375
Bone Spring 1st Carbonate Top	8,473
Bone Spring 1st Carbonate Base	8,503
KOP	8,503
Avalon A Shale Top	8,677
Avalon A Shale Base	8,921
Avalon B Zone Top	8,921
Avalon B Zone Base	9,076
Avalon C Shale Top	9,076
Avalon C Shale Horizontal Target	**9,220**
Avalon C Shale Base	9,314
KOP (8°/100')	8,504



CASING	Drill Fluids	Cement	Analysis
1,010' 13-3/8" 54.5# J-55 BTC	Surf. Hole: FW gel mud: 8.9# w/ high vis sweeps	Data: These numbers are only estimates.	
	Interm 1 Brine 10# 40-50 Vis 5-8 WL	Surface: 230 Sx Lead 750 Sx Tail Based on 17-1/2" OH, with 100% excess	Mudlogging: Two-Man: 1010' TD
4,350' 9-5/8" 36# J55 LTC	Interm 2 Brine 9.3# 28-36 Vis 5-8 WL	Intermediate 1: 980 Sx Lead 140 Sx Tail with 100% excess	Slurry Top: Surface 600' from Bottom
	Prod Hole: Cut Brine 9.3# 28-36 Vis <=5 WL high vis sweeps as required.	Intermediate 2: 560 Sx Lead 250 Sx Tail Based on 8.75 in. Hole with 100% excess	Slurry Top: 500' into 9-5/8". 600' from Bottom
			Open Hole: None
			GR-MWD KOP-TD
			Cased Hole Logs: None
		Completion	20 Stages Packers & Sleeves

Notes for Well:

Drill 17-1/2" surface hole with conventional BHA and INC Survey Tool. RIH 13 3/8" CSG and cement it up to surface.
Install well head and NU BOP. CSG Pressure Test and FIT.
Mud logger (two-man) to be on at surface casing depth of 1010'.
Drill 12 1/4" Intermediate #1 hole with Vertical Seeking Scout Tool+Motor and INC Survey Tool til 4350'.
RIH 9 5/8" CSG and cement it up to surface.
Drill 8 3/4" Intermediate #2 hole with Vertical Seeking Scout Tool+Motor and INC Survey Tool til 8504ft.
Run Gyro til 8504ft.
Begin GR-MWD service after KOP 8504'.
The 8 3/4" curve will be drilled with ~ 8°/100' build rate and 179.7° Azimuth with PDM+MWD til 9624' MD/ 9220' TVD.
Run 7" CSG from surface to 9624' and cement it 500ft into 9 5/8".
The 6" Lateral will be drilled with PDM+MWD til TD 13597' MD/ 9249' TVD holding 89.584° INC & 179.7° Azm.
POOH Backreaming after circulating the hole until clean returns.
RIH 4 1/2" Liner with around 20 Stages of Open Hole Completion: Packers and Sliding Sleeves.
Displace cement with 5% KCL Brine.
POOH laying down 4in Drill Pipe.
ND BOPE. Install 10M tubing head. Test connection.
Release drilling rig.

Production:
Liner: 4 1/2" 11.6# P110 BTC
13,597' MD

Max. Anticipated BHP: 0.44824 psi/ft

TD @ 13,597' MD
TD @ 9,249' MD

Vick Harvey Geologist	Date 7/26/2012	
Katia filina Drilling Engineer	Date 7/26/2012	

Bonespring/Red Hills
ConocoPhillips
Wilder Federal 29 #2H

Surface Casing:	
Surface Casing Depth (Ft)	1,010'
Surface Casing O.D. (In.)	13.375
Surface Casing ID (In)	12.715
Hole O.D. (In)	17.5
Excess (%)	100%
Volume Tail (Sx)	230
Yield Tail (Cu. Ft./Sx)	1.85
Yield Lead (Cu. Ft./Sx)	1.33
Shoe Joint (Ft)	40
Shoe Volume (Cu. Ft)	35.3
Tail feet of cement	300'
Calculated Total Volume (Cu. Ft.)	1,438
Calc. Tail Volume (Cu. Ft.)	417
Calc. Lead Volume (Cu. Ft.)	986
Calc. Lead Volume (Sx)	750

Intermediate1 Casing (Lead):	
Intermediate Casing O.D. (In.)	9.625
Intermediate Casing ID (In)	8.921
Hole O.D. (In)	
Excess (%)	100%
cap 12-1/4 - 9-5/8"	0.0558
Calculated fill:	3,850'
Yield Lead (Cu. Ft./Sx)	2.48
Calculated Total Lead (Cu. Ft.)	2,412
Calc. Lead Volume (Sx)	980

Intermediate1 Casing (Tail):	
Intermediate Casing O.D. (In.)	9.625
Production Casing ID (In)	8.835
Hole O.D. (In)	12.25
Excess (%)	100%
cap 12-1/4 - 9-5/8"	0.0558
Calculated fill:	500'
Yield Tail (Cu. Ft./Sx)	1.33
Shoe Joint (Ft)	40
Shoe Volume (Cu. Ft)	17.0
Calc. Tail Volume (Cu. Ft.)	174
Required Tail Volume (Sx)	140

Intermediate2 Casing (Lead):	
Intermediate Casing O.D. (In.)	7.000
Intermediate Casing ID (In)	6.184
Hole O.D. (In)	8.75
Excess (%)	135%
cap 7" - 8-3/4" bls/ft	0.0268
cap 7 - 9-5/8" bls/ft	0.02823
Calculated fill: (500' into 9-5/8")	4,374'
Yield Lead (Cu. Ft./Sx)	2.0
Calculated Total Lead (Cu. Ft.)	1,118
Calc. Lead Volume (Sx)	560

Intermediate2 Casing (Tail):	
Intermediate Casing O.D. (In.)	7.000
Intermediate Casing ID (In)	6.184
Hole O.D. (In)	8.75
Excess (%)	135%
cap 7" - 8-3/4" bls/ft	0.0268
cap 7 - 9-5/8" bls/ft	0.02823
Calculated fill:	1,400'
Yield Lead (Cu. Ft./Sx)	1.2
Calculated Total Tail (Cu. Ft.)	300
Required Tail Volume (Sx)	250

8,224'

ConocoPhillips

Conoco Phillips

Lea County, New Mexico
Sec 29 T26S R32E
Wilder Federal 29 #2H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

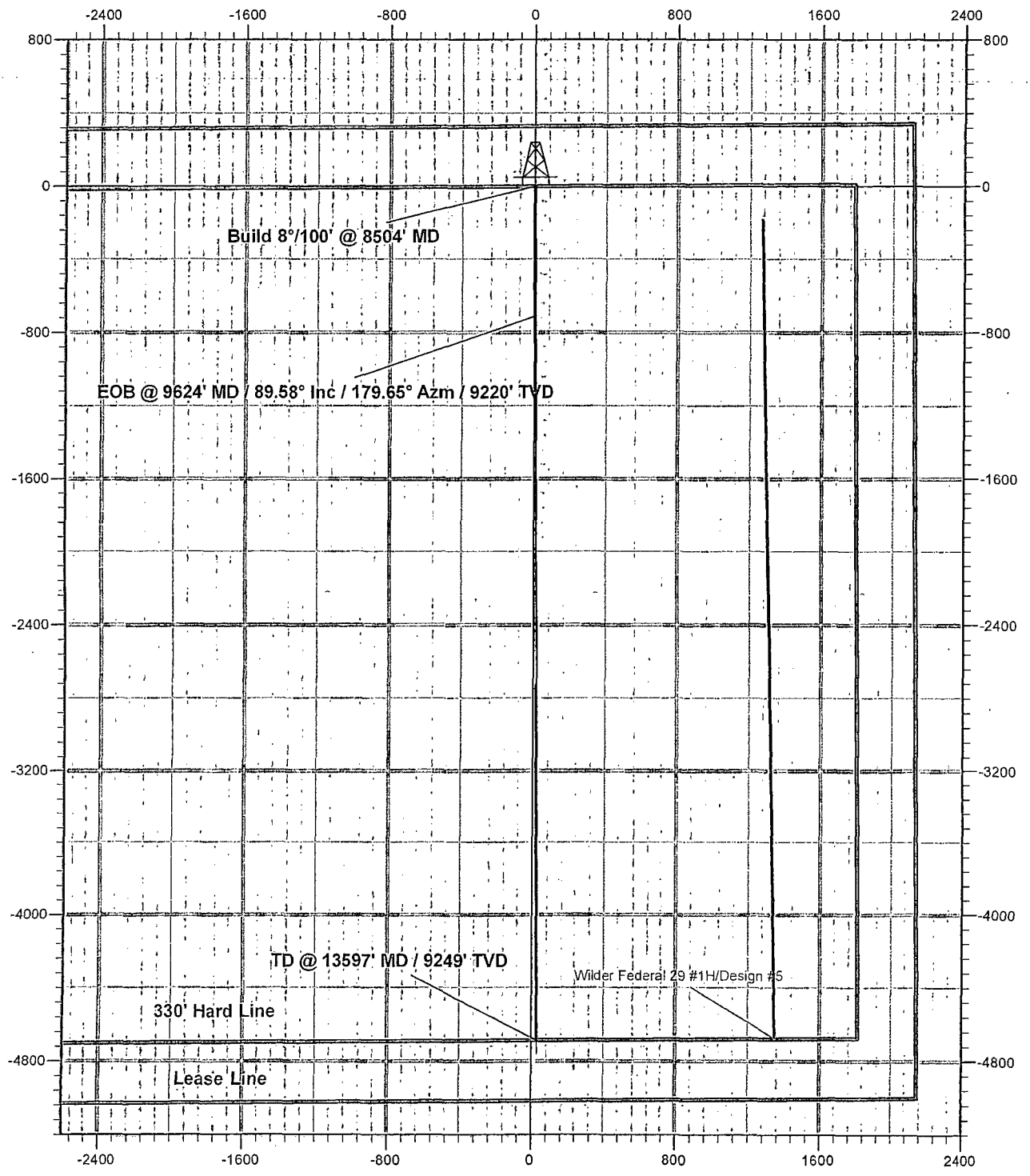
14 June, 2012

DDC
The DIRECTIONAL DRILLING COMPANY

ConocoPhillips

Lea County, New Mexico
Wilder Federal 29 #2H
Design #1

DDC
The DIRECTIONAL DRILLING COMPANY



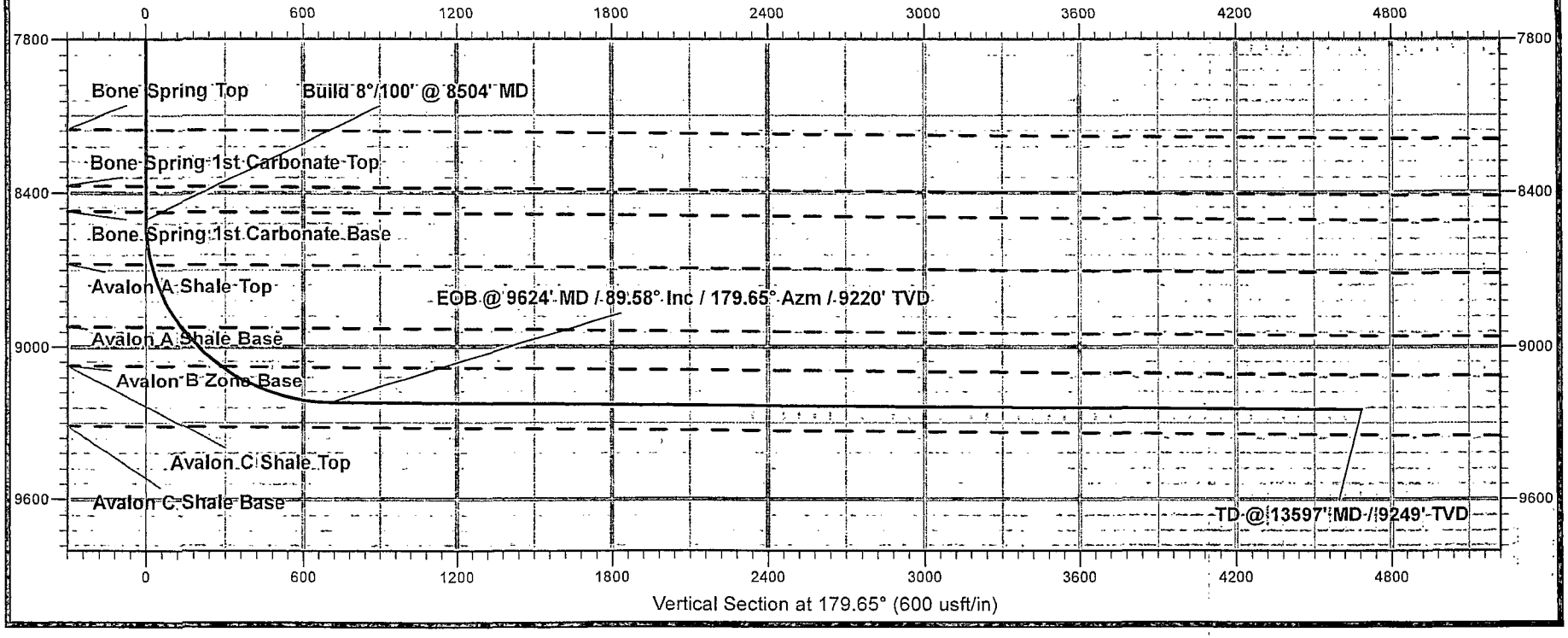
ConocoPhillips

Lea County, New Mexico

Wilder Federal 29 #2H

Design #1

DDC
The DIRECTIONAL DRILLING COMPANY



Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Wilder Federal 29 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3159.0usft (Original Well Elev)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3159.0usft (Original Well Elev)
Site:	Sec 29 T26S R32E	**North Reference:**	Grid
Well:	Wilder Federal 29 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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 29 T26S R32E

Site Position:		**Northing:**	371,336.41 usft	**Latitude:**	32° 1' 9.447 N
From:	Map	**Easting:**	699,118.36 usft	**Longitude:**	103° 41' 27.155 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.34 °

Well Wilder Federal 29 #2H

Well Position	**+N/-S**	183.4 usft	**Northing:**	371,519.81 usft	**Latitude:**	32° 1' 11.336 N
	+E/-W	-1,267.9 usft	**Easting:**	697,850.42 usft	**Longitude:**	103° 41' 41.869 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,143.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/14/2012	7.51	59.95	48,382

Design Design #1

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	179.65

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	
8,503.8	0.00	0.00	8,503.8	0.0	0.0	0.00	0.00	0.00	0.00	
9,623.6	89.58	179.65	9,220.0	-711.0	4.3	8.00	8.00	16.04	179.65	
13,597.1	89.58	179.65	9,249.0	-4,684.3	28.4	0.00	0.00	0.00	0.00	PBHL Wilder Feder

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Wilder Federal 29 #2H
Company:	Conoco Phillips	**TVD Reference:**	WELL @ 3159.0usft (Original Well Elev)
Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3159.0usft (Original Well Elev)
Site:	Sec 29 T26S R32E	**North Reference:**	Grid
Well:	Wilder Federal 29 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
Ramsey									
359.0	0.00	0.00	359.0	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
Rustler									
981.0	0.00	0.00	981.0	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
Castile									
1,824.0	0.00	0.00	1,824.0	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
4,200.0	0.00	0.00	4,200.0	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
Delaware Top									
4,320.0	0.00	0.00	4,320.0	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
Ford Sh									

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Wilder Federal 29 #2H
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Project:	Lea County, New Mexico	**MD Reference:**	WELL @ 3159.0usft (Original Well Elev)
Site:	Sec 29 T26S R32E	**North Reference:**	Grid
Well:	Wilder Federal 29 #2H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
4,429.0	0.00	0.00	4,429.0	0.0	0.0	0.0	0.00	0.00	0.00
Olds									
4,431.0	0.00	0.00	4,431.0	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
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
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Cherry Canyon Lower Top									
6,528.0	0.00	0.00	6,528.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
Bone Spring Top									
8,156.0	0.00	0.00	8,156.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
Bone Spring 1st Carbonate Top									
8,375.0	0.00	0.00	8,375.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
Bone Spring 1st Carbonate Base									
8,473.0	0.00	0.00	8,473.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 8°/100' @ 8504' MD									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Wilder Federal 29 #2H
Company:	Conoco Phillips	TVD Reference:	WELL @ 3159.0usft (Original Well Elev)
Project:	Lea County, New Mexico	MD Reference:	WELL @ 3159.0usft (Original Well Elev)
Site:	Sec 29 T26S R32E	North Reference:	Grid
Well:	Wilder Federal 29 #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
8,503.8	0.00	0.00	8,503.8	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	7.70	179.65	8,599.7	-6.5	0.0	6.5	8.00	8.00	0.00
Avalon A Shale Top									
8,678.9	14.01	179.65	8,677.2	-21.3	0.1	21.3	8.00	8.00	0.00
8,700.0	15.70	179.65	8,697.6	-26.7	0.2	26.7	8.00	8.00	0.00
8,800.0	23.70	179.65	8,791.6	-60.4	0.4	60.4	8.00	8.00	0.00
8,900.0	31.70	179.65	8,880.1	-106.8	0.6	106.8	8.00	8.00	0.00
Avalon A Shale Base - Avalon B Zone Top									
8,950.4	35.73	179.65	8,922.0	-134.8	0.8	134.8	8.00	8.00	0.00
9,000.0	39.70	179.65	8,961.2	-165.1	1.0	165.1	8.00	8.00	0.00
9,100.0	47.70	179.65	9,033.5	-234.1	1.4	234.2	8.00	8.00	0.00
Avalon B Zone Base - Avalon C Shale Top									
9,170.2	53.31	179.65	9,078.1	-288.3	1.8	288.3	8.00	8.00	0.00
9,200.0	55.70	179.65	9,095.4	-312.6	1.9	312.6	8.00	8.00	0.00
9,300.0	63.70	179.65	9,145.8	-398.8	2.4	398.8	8.00	8.00	0.00
9,400.0	71.70	179.65	9,183.8	-491.3	3.0	491.3	8.00	8.00	0.00
9,500.0	79.70	179.65	9,208.4	-588.1	3.6	588.1	8.00	8.00	0.00
9,600.0	87.70	179.65	9,219.4	-687.4	4.2	687.4	8.00	8.00	0.00
EOB @ 9624' MD / 89.58° Inc / 179.65° Azm / 9220' TVD									
9,623.6	89.58	179.65	9,220.0	-711.0	4.3	711.0	8.00	8.00	0.00
9,700.0	89.58	179.65	9,220.5	-787.4	4.8	787.4	0.00	0.00	0.00
9,800.0	89.58	179.65	9,221.3	-887.4	5.4	887.4	0.00	0.00	0.00
9,900.0	89.58	179.65	9,222.0	-987.4	6.0	987.4	0.00	0.00	0.00
10,000.0	89.58	179.65	9,222.7	-1,087.4	6.6	1,087.4	0.00	0.00	0.00
10,100.0	89.58	179.65	9,223.5	-1,187.4	7.2	1,187.4	0.00	0.00	0.00
10,200.0	89.58	179.65	9,224.2	-1,287.4	7.8	1,287.4	0.00	0.00	0.00
10,300.0	89.58	179.65	9,224.9	-1,387.4	8.4	1,387.4	0.00	0.00	0.00
10,400.0	89.58	179.65	9,225.6	-1,487.3	9.0	1,487.4	0.00	0.00	0.00
10,500.0	89.58	179.65	9,226.4	-1,587.3	9.6	1,587.4	0.00	0.00	0.00
10,600.0	89.58	179.65	9,227.1	-1,687.3	10.2	1,687.4	0.00	0.00	0.00
10,700.0	89.58	179.65	9,227.8	-1,787.3	10.9	1,787.4	0.00	0.00	0.00
10,800.0	89.58	179.65	9,228.6	-1,887.3	11.5	1,887.4	0.00	0.00	0.00
10,900.0	89.58	179.65	9,229.3	-1,987.3	12.1	1,987.4	0.00	0.00	0.00
11,000.0	89.58	179.65	9,230.0	-2,087.3	12.7	2,087.4	0.00	0.00	0.00
11,100.0	89.58	179.65	9,230.8	-2,187.3	13.3	2,187.4	0.00	0.00	0.00
11,200.0	89.58	179.65	9,231.5	-2,287.3	13.9	2,287.4	0.00	0.00	0.00
11,300.0	89.58	179.65	9,232.2	-2,387.3	14.5	2,387.4	0.00	0.00	0.00
11,400.0	89.58	179.65	9,233.0	-2,487.3	15.1	2,487.3	0.00	0.00	0.00
11,500.0	89.58	179.65	9,233.7	-2,587.3	15.7	2,587.3	0.00	0.00	0.00
11,600.0	89.58	179.65	9,234.4	-2,687.3	16.3	2,687.3	0.00	0.00	0.00
11,700.0	89.58	179.65	9,235.1	-2,787.3	16.9	2,787.3	0.00	0.00	0.00
11,800.0	89.58	179.65	9,235.9	-2,887.3	17.5	2,887.3	0.00	0.00	0.00
11,900.0	89.58	179.65	9,236.6	-2,987.3	18.1	2,987.3	0.00	0.00	0.00
12,000.0	89.58	179.65	9,237.3	-3,087.3	18.7	3,087.3	0.00	0.00	0.00
12,100.0	89.58	179.65	9,238.1	-3,187.3	19.4	3,187.3	0.00	0.00	0.00
12,200.0	89.58	179.65	9,238.8	-3,287.3	20.0	3,287.3	0.00	0.00	0.00
12,300.0	89.58	179.65	9,239.5	-3,387.3	20.6	3,387.3	0.00	0.00	0.00
12,400.0	89.58	179.65	9,240.3	-3,487.3	21.2	3,487.3	0.00	0.00	0.00
12,500.0	89.58	179.65	9,241.0	-3,587.3	21.8	3,587.3	0.00	0.00	0.00
12,600.0	89.58	179.65	9,241.7	-3,687.2	22.4	3,687.3	0.00	0.00	0.00
12,700.0	89.58	179.65	9,242.4	-3,787.2	23.0	3,787.3	0.00	0.00	0.00
12,800.0	89.58	179.65	9,243.2	-3,887.2	23.6	3,887.3	0.00	0.00	0.00
12,900.0	89.58	179.65	9,243.9	-3,987.2	24.2	3,987.3	0.00	0.00	0.00

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,000.0	89.58	179.65	9,244.6	-4,087.2	24.8	4,087.3	0.00	0.00	0.00
13,100.0	89.58	179.65	9,245.4	-4,187.2	25.4	4,187.3	0.00	0.00	0.00
13,200.0	89.58	179.65	9,246.1	-4,287.2	26.0	4,287.3	0.00	0.00	0.00
13,300.0	89.58	179.65	9,246.8	-4,387.2	26.6	4,387.3	0.00	0.00	0.00
13,400.0	89.58	179.65	9,247.6	-4,487.2	27.2	4,487.3	0.00	0.00	0.00
13,500.0	89.58	179.65	9,248.3	-4,587.2	27.9	4,587.3	0.00	0.00	0.00
TD @ 13597' MD / 9249' TVD									
13,597.1	89.58	179.65	9,249.0	-4,684.3	28.4	4,684.4	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
PBHL Wilder Federal - plan hits target center - Point	0.00	0.00	9,249.0	-4,684.3	28.4	366,835.47	697,878.87	32° 0' 24.977 N	103° 41' 41.860 W

Formations

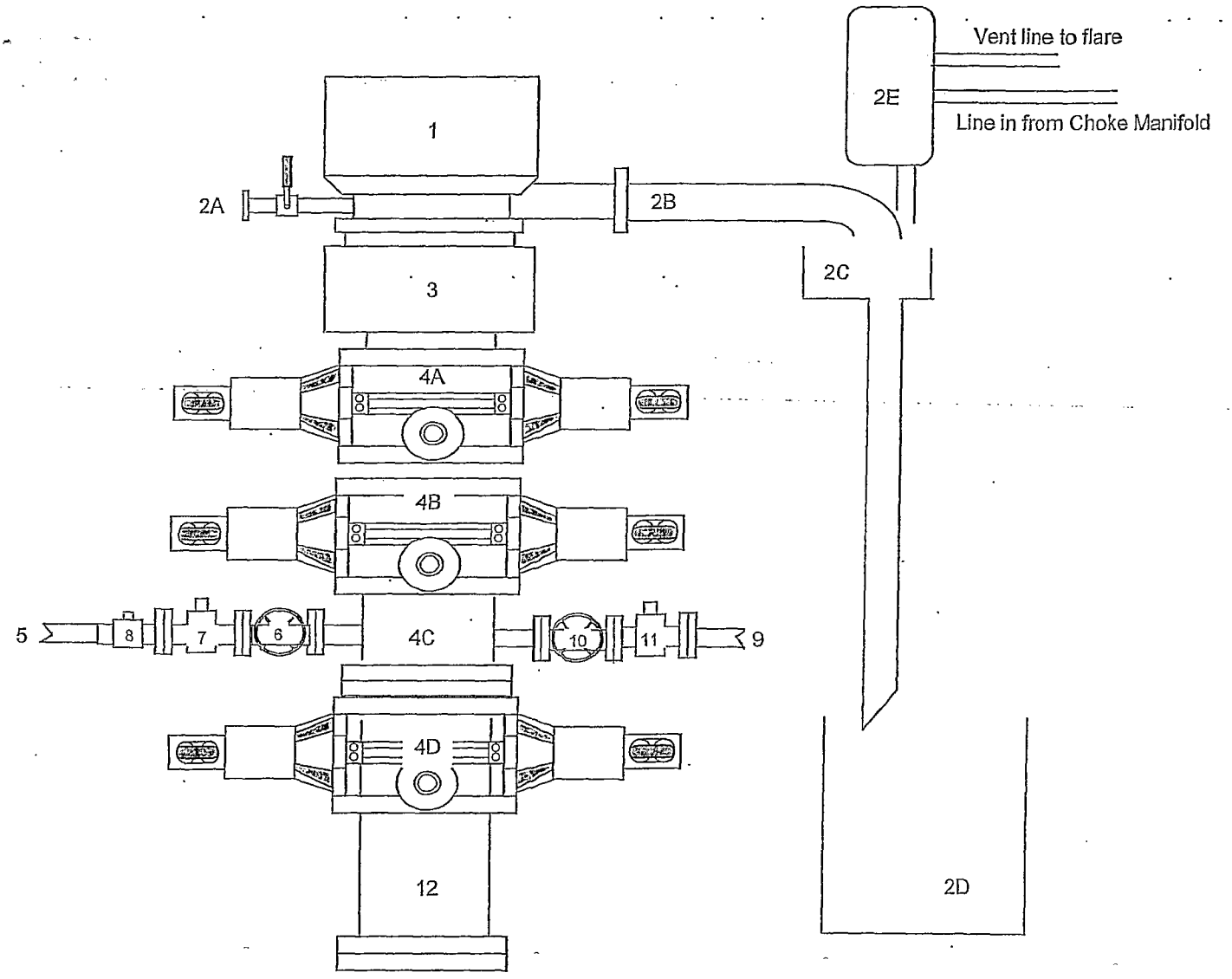
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
359.0	359.0	Ramsey		0.42	179.65
981.0	981.0	Rustler		0.42	179.65
1,824.0	1,824.0	Castile		0.42	179.65
4,320.0	4,320.0	Delaware Top		0.42	179.65
4,429.0	4,429.0	Ford Sh		0.42	179.65
4,431.0	4,431.0	Olds		0.42	179.65
6,528.0	6,528.0	Cherry Canyon Lower Top		0.42	179.65
8,156.0	8,156.0	Bone Spring Top		0.42	179.65
8,375.0	8,375.0	Bone Spring 1st Carbonate Top		0.42	179.65
8,473.0	8,473.0	Bone Spring 1st Carbonate Base		0.42	179.65
8,678.9	8,677.2	Avalon A Shale Top		0.42	179.65
8,950.4	8,922.0	Avalon A Shale Base		0.42	179.65
8,950.4	8,922.0	Avalon B Zone Top		0.42	179.65
9,170.2	9,078.1	Avalon B Zone Base		0.42	179.65
9,170.2	9,078.1	Avalon C Shale Top		0.42	179.65

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,503.8	8,503.8	0.0	0.0	Build 8°/100' @ 8504' MD
9,623.6	9,220.0	-711.0	4.3	EOB @ 9624' MD / 89.58° Inc / 179.65° Azm / 9220' TVD
13,597.1	9,249.0	-4,684.3	28.4	TD @ 13597' MD / 9249' TVD

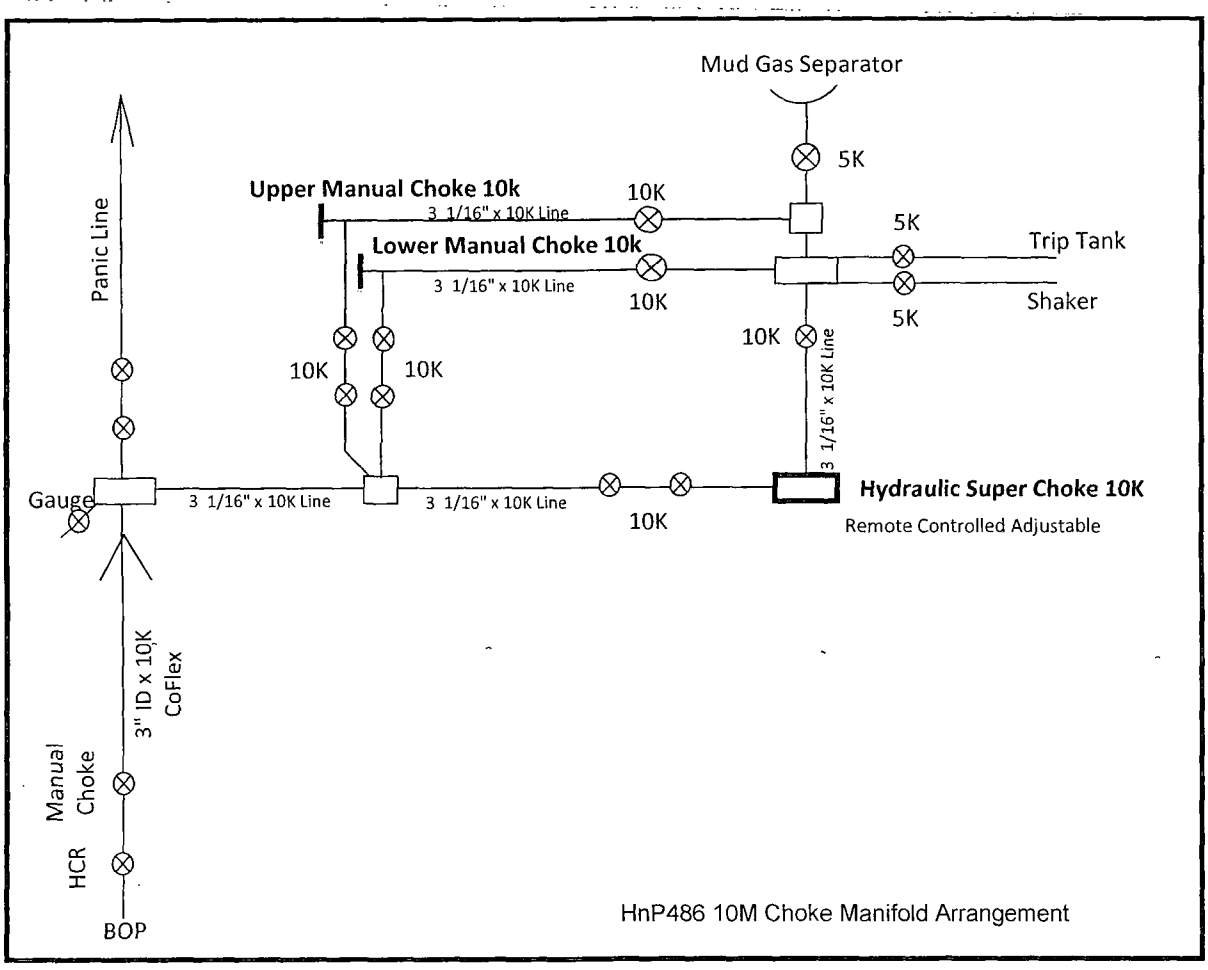
BLOWOUT PREVENTER ARRANGEMENT

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



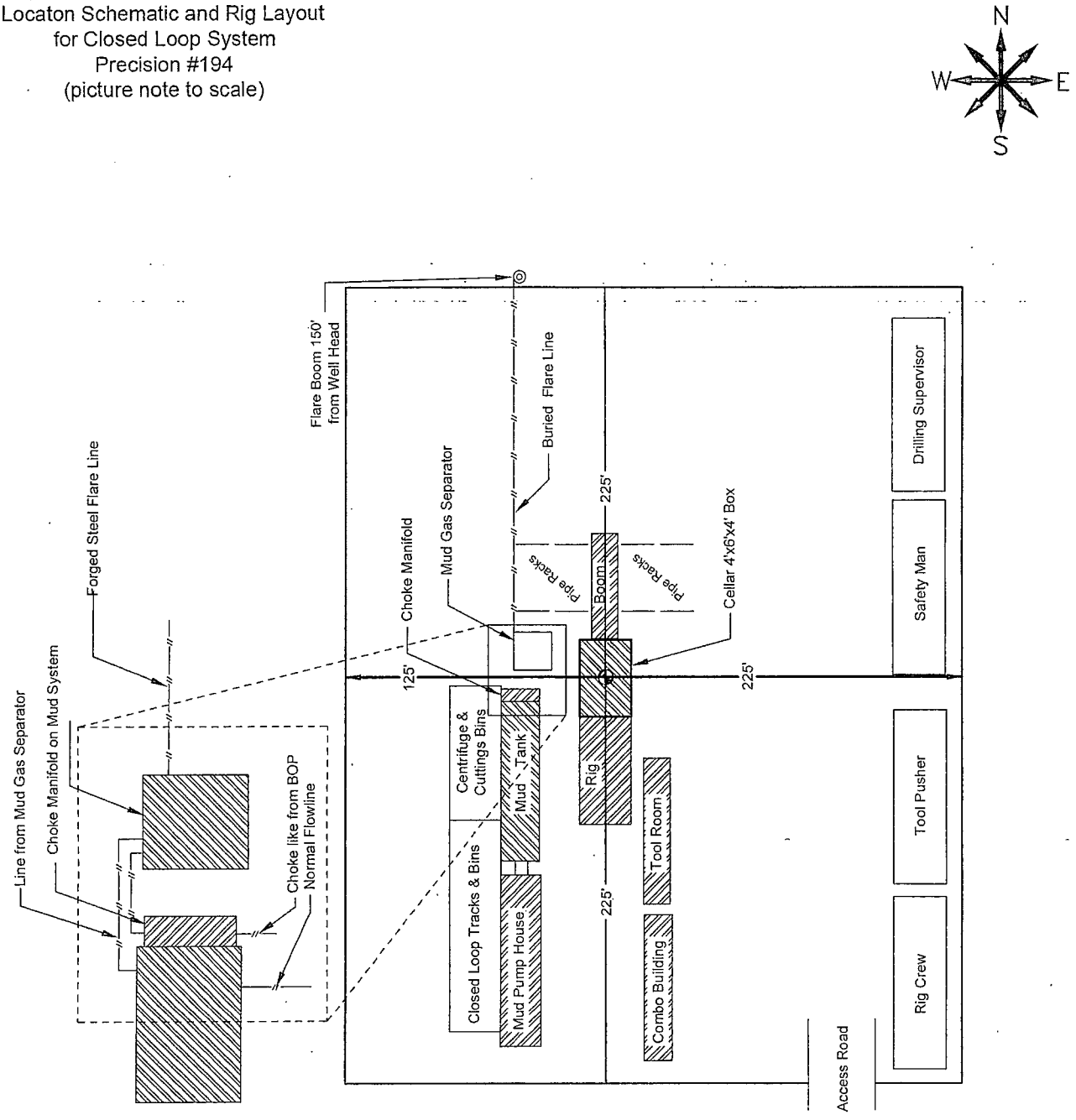
Item	Description
1	Rotating Head, 13-5/8"
2A	Fill up Line and Valve
2B	Flow Line (8")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (13-5/8", Hydrill CK5M)
4A	Single Ram (13-3/8", 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


Mud Gas Separator
5K
Upper Manual Choke 10k
3 1/16" x 10K Line
10K
5K
Trip Tank
Lower Manual Choke 10k
3 1/16" x 10K Line
10K
5K
Shaker
Panic Line
10K
10K
10K
3 1/16" x 10K Line
Gauge
3 1/16" x 10K Line
3 1/16" x 10K Line
10K
Hydraulic Super Choke 10K
Remote Controlled Adjustable
3" ID x 10K CoFlex
Manual Choke
HCR
BOP
HnP486 10M Choke Manifold Arrangement

RIG LAYOUT

Locaton Schematic and Rig Layout
for Closed Loop System
Precision #194
(picture note to scale)

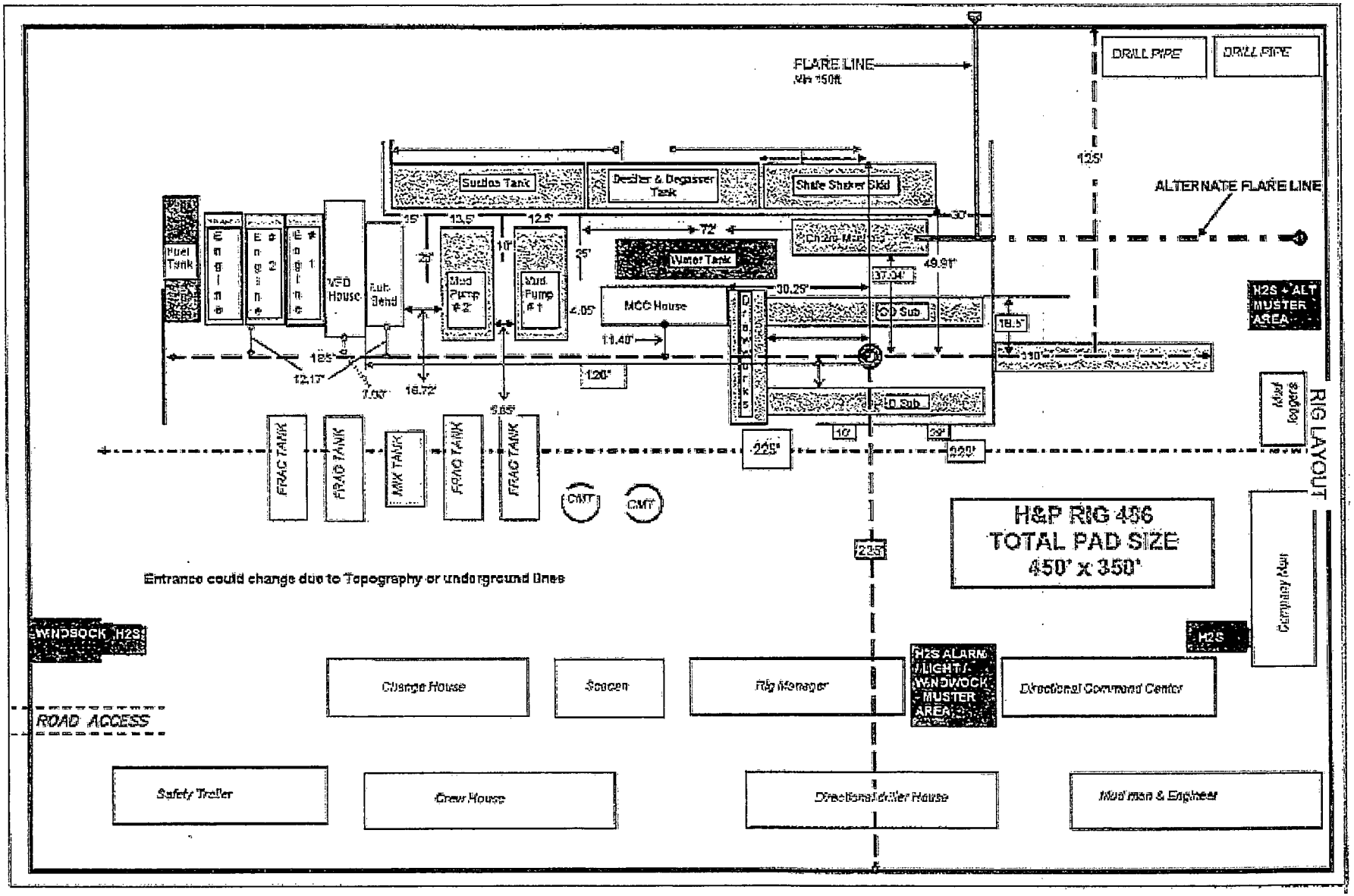


WILDER FEDERAL 29 #2H
Located 330' FNL and 2116' FEL
Section 29, Township 26 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

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 26450
Survey Date:	04-16-2012
Scale:	1" = NONE
Date:	04-30-2012

ConocoPhillips


FLARE LINE
DRILL PIPE
DRILL PIPE
ALTERNATE FLARE LINE
H2S + ALT MUSTER AREA
RIG LAYOUT
Suction Tank
Desilter & Degasser Tank
Shale Shaker Skid
Water Tank
MCC House
VFD House
Aux. Bend
Mud Pump #2
Mud Pump #1
Fuel Tank
Engine #1
Engine #2
Engine #3
Sub
FRAC TANK
FRAC TANK
MIX TANK
FRAC TANK
FRAC TANK
CMT
CMT
H&P RIG 436
TOTAL PAD SIZE
450' x 350'
Entrance could change due to Topography or underground lines
WINDSOCK H2S
ROAD ACCESS
Change House
Saucer
Rig Manager
H2S ALARM / LIGHT / WINDSOCK MUSTER AREA
Directional Command Center
Safety Trailer
Crew House
Directional Driller House
Mud man & Engineer
Company Man
H2S

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)

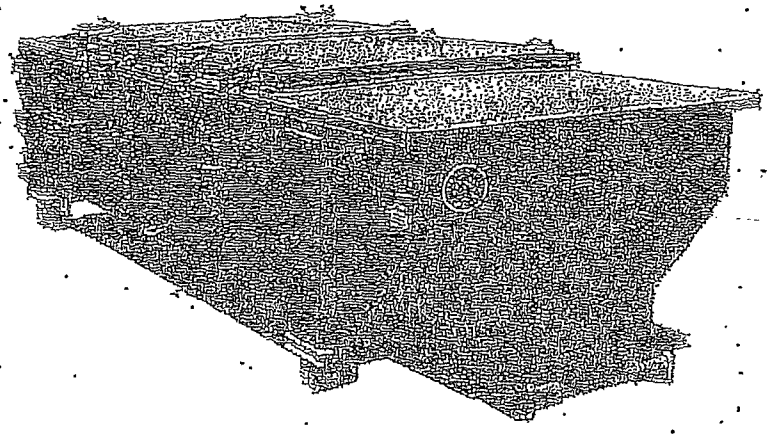
   - Basic Energy Services, PO Box 1869 Eunice, NM 88231 Phone Number 575 394 2545, Facility located at Hwy 18, Mile Marker 19, Eunice, NM.

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

SPECIFICATIONS

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 for hooks
DOOR: 3/16" PL with tubing frame
FRONT: 3/16" PL slant formed
PICK UP: Standard cable with 2"x6"x1/4" rails gusset at each crossmember
WHEELS: 10" DIA x 3" long with grease fittings
DOOR LATCH: 6 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
HYDRO TESTING: Full capacity static test
DIMENSIONS: 22'-1" long (21'-8" inside), 96" wide (82" inside), see drawing for height
CAPACITIES: Steel grit blast and special paint
Amplirol Heil and Dino pickup
ROOF: 3/16" PL roof panels with tubing and channel support frame
LIDS: (2) 62"x90" metal rolling lids spring loaded self raising
ROLLERS: 4" V groove rollers with delrin bearings and grease fittings
OPENING: (2) 60"x82" openings with 8" divider centered on container
LATCH: (2) independent ratchet binders with chains per lid
GASKETS: Extruded rubber seal with metal retainers

Heavy Duty Split Metal Rolling Lid



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