

**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) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form C-101  
August 1, 2011

Permit 278893

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

1. Operator Name and Address CONOCOPHILLIPS COMPANY P.O.Box 2197 Houston, TX 77252		2. OGRID Number 217817
		3. API Number 30-025-46955
4. Property Code 327229	5. Property Name CAPROCK YESO AREA CYA W	6. Well No. 100H

**7. Surface Location**

UL - Lot K	Section 7	Township 17S	Range 33E	Lot Idn K	Feet From 2302	N/S Line S	Feet From 2462	E/W Line W	County Lea
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**8. Proposed Bottom Hole Location**

UL - Lot I	Section 8	Township 17S	Range 33E	Lot Idn I	Feet From 2273	N/S Line S	Feet From 47	E/W Line E	County Lea
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**9. Pool Information**

WC-025 G-03 S173318N;YESO	97727
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 4229
16. Multiple N	17. Proposed Depth 14344	18. Formation Yeso Formation	19. Contractor	20. Spud Date 5/1/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1360	790	0
Int1	12.25	9.625	40	2742	290	0
Prod	8.75	7	35	14344	2300	0

**Casing/Cement Program: Additional Comments**

The production string is a 7" and 5.5" with a cross-over joint. The 7" casing weight is 35 lbs/ft and the 5.5" casing is 20 lbs/ft.
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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	Cameron
Double Ram	5000	5000	Cameron
Pipe	5000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. <b>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.</b>	<b>OIL CONSERVATION DIVISION</b>	
Signature:		
Printed Name: Electronically filed by Susan B Maunder	Approved By: Paul F Kautz	
Title: Sr. Regulatory Coordinator	Title: Geologist	
Email Address: Susan.B.Maunder@conocophillips.com	Approved Date: 3/10/2020	Expiration Date: 3/10/2022
Date: 3/3/2020	Phone: 432-688-6913	Conditions of Approval Attached

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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-46955	<sup>2</sup> Pool Code 97727	<sup>3</sup> Pool Name WC-025 G-03 S173318N;YESO
<sup>4</sup> Property Code 327229	<sup>5</sup> Property Name CAPROCK YESO AREA CYA W	<sup>6</sup> Well Number 100H
<sup>7</sup> OGRID No. 217817	<sup>8</sup> Operator Name ConocoPhillips Company	<sup>9</sup> Elevation 4229.3'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	7	17S	33E		2302	SOUTH	2462	WEST	LEA

<sup>11</sup> 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
I	8	17S	33E		2273	SOUTH	47	EAST	LEA
<sup>12</sup> Dedicated Acres 240	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

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.

<sup>16</sup>

● = SURFACE HOLE LOCATION  
○ = BHL/LTP  
◇ = FIRST TAKE POINT  
▲ = SECTION CORNER LOCATED

NOTE:

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

**LINE TABLE**

LINE	DIRECTION	LENGTH
L1	N00°33'46"W	5277.69'
L2	N89°40'56"E	384.88'

2000' 1000' 0 2000'

SCALE

REV: 4 02-25-20 T.A.  
(UPDATE WELL BORE & ADD LEASE BOUNDRY)

**17 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.

Susan B. Maunder 2/28/2020

Signature Date

Susan B. Maunder

Printed Name

Susan.B.Maunder@conocophillips.com

E-mail Address

**18 SURVEYOR CERTIFICATION**

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

December 18, 2019

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number:

<p><b>NAD 83 (SURFACE HOLE LOCATION)</b></p> <p>LATITUDE = N32°50'53.30" (32.848140°)</p> <p>LONGITUDE = W103°42'11.83" (-103.703285°)</p>	<p><b>NAD 83 (FIRST TAKE POINT)</b></p> <p>LATITUDE = N32°50'53.32" (32.848144°)</p> <p>LONGITUDE = W103°42'07.32" (-103.702032°)</p>	<p><b>NAD 83 (BHL/LTP)</b></p> <p>LATITUDE = N32°50'53.26" (32.848127°)</p> <p>LONGITUDE = W103°40'36.70" (-103.676862°)</p>
<p><b>NAD 27 (SURFACE HOLE LOCATION)</b></p> <p>LATITUDE = N32°50'52.87" (32.848020°)</p> <p>LONGITUDE = W103°42'10.01" (-103.702781°)</p> <p>STATE PLANE NAD 83 (N.M. EAST)</p> <p>N: 672863.53' E: 734827.34'</p> <p>STATE PLANE NAD 27 (N.M. EAST)</p> <p>N: 672798.84' E: 693649.10'</p>	<p><b>NAD 27 (FIRST TAKE POINT)</b></p> <p>LATITUDE = N32°50'52.89" (32.848024°)</p> <p>LONGITUDE = W103°42'05.50" (-103.701528°)</p> <p>STATE PLANE NAD 83 (N.M. EAST)</p> <p>N: 672867.30' E: 735212.13'</p> <p>STATE PLANE NAD 27 (N.M. EAST)</p> <p>N: 672802.60' E: 694033.90'</p>	<p><b>NAD 27 (BHL/LTP)</b></p> <p>LATITUDE = N32°50'52.83" (32.848007°)</p> <p>LONGITUDE = W103°40'34.89" (-103.676359°)</p> <p>STATE PLANE NAD 83 (N.M. EAST)</p> <p>N: 672908.43' E: 742942.06'</p> <p>STATE PLANE NAD 27 (N.M. EAST)</p> <p>N: 672843.62' E: 701763.80'</p>

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

## GAS CAPTURE PLAN

Date: 3/10/2020

☒ Original

Operator & OGRID No.: [217817] CONOCOPHILLIPS COMPANY

☐ Amended - Reason for  
Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

### **Well(s)/Production Facility – Name of facility**

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
CAPROCK YESO AREA CYA W #100H	30-025-46955	K-7-17S-33E	2302S 2462W	700	None	Intermittent flaring may be necessary during facility and well start-up of production.

### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP Low Pressure gathering system located in Lea County, New Mexico. It will require 1800' of pipeline to connect the facility to Low Pressure gathering system. CONOCOPHILLIPS COMPANY provides (periodically) to DCP OPERATING COMPANY, LP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, CONOCOPHILLIPS COMPANY and DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP Processing Plant located in Sec. 06, Twn. 19S, Rng. 37E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

### **Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP OPERATING COMPANY, LP system at that time. Based on current information, it is CONOCOPHILLIPS COMPANY's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form APD Comments

Permit 278893

PERMIT COMMENTS

Operator Name and Address: CONOCOPHILLIPS COMPANY [217817] P.O.Box 2197 Houston, TX 77252		API Number: 30-025-46955
		Well: CAPROCK YESO AREA CYA W #100H

Created By	Comment	Comment Date
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Form APD Conditions

Permit 278893

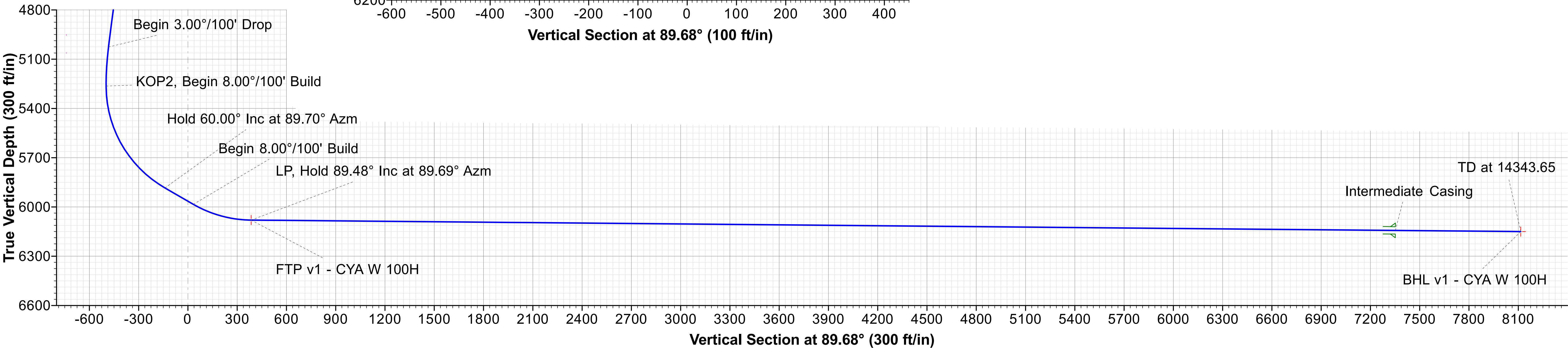
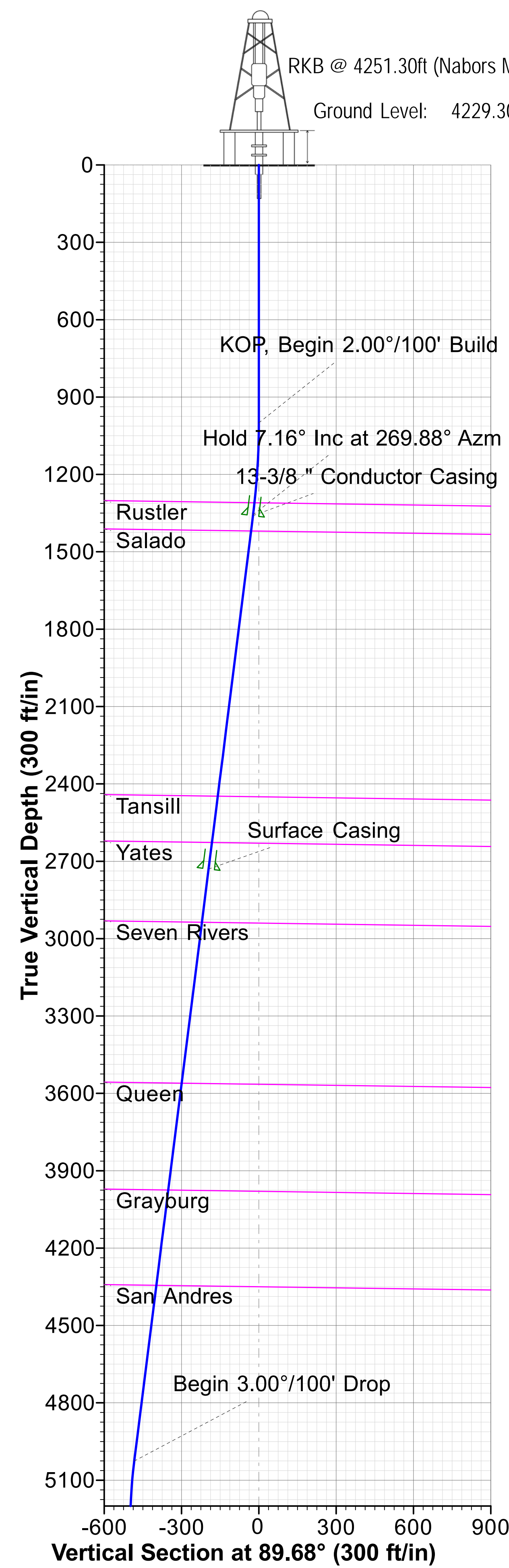
**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: CONOCOPHILLIPS COMPANY [217817] P.O.Box 2197 Houston, TX 77252	API Number: 30-025-46955
	Well: CAPROCK YESO AREA CYA W #100H

OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.



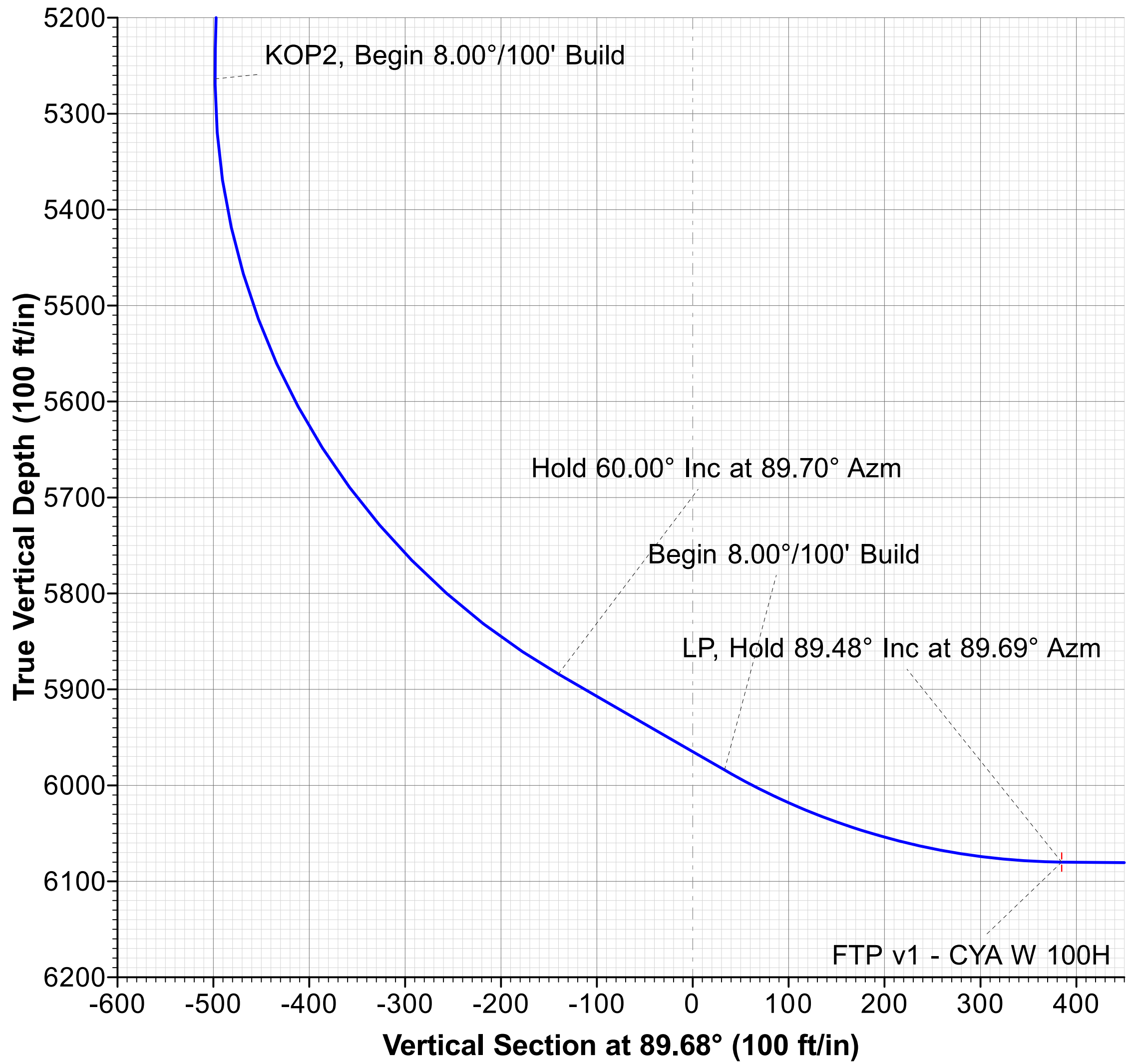
Project: Planning - NM East State Zone - 3001  
Site: Caprock CYA W 100H  
Well: CYA W 100H  
Wellbore: OH  
Design: Plan 3 02-27-20  
Rig: Nabors M51



WELL DETAILS					
+N/-S	+E/-W	Ground Level: Northing	Ground Level: Easting	4229.30	
0.00	0.00	672798.895	693649.155	32° 50' 52.872 N	103° 42' 10.012 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP v1 - CYA W 100H	6080.00	3.71	384.76	672802.600	694033.900	32° 50' 52.886 N	103° 42' 5.502 W
BHL v1 - CYA W 100H	6150.00	45.22	8115.25	672844.108	701764.000	32° 50' 52.830 N	103° 40' 34.890 W

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		KOP, Begin 2.00°/100' Build
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00		Hold 7.16° Inc at 269.88° Azm
3	1358.03	7.16	269.88	1357.10	-0.05	-22.34	2.00	269.88	-22.34		Begin 3.00°/100' Drop
4	5055.53	7.16	269.88	5025.76	-1.03	-483.24	0.00	0.00	-483.24		KOP2, Begin 8.00°/100' Build
5	5294.22	0.00	0.00	5263.83	-1.06	-498.14	3.00	180.00	-498.14		Hold 60.00° Inc at 89.70° Azm
6	6044.22	60.00	89.69	5884.08	0.87	-140.05	8.00	0.00	-140.04		Begin 8.00°/100' Build
7	6244.22	60.00	89.69	5984.08	1.81	33.16	0.00	0.00	33.17		LP, Hold 89.48° Inc at 89.69° Azm
8	6612.74	89.48	89.69	6080.00	3.71	384.76	8.00	0.00	384.78	FTP v1 - CYA W 100H	
9	14343.65	89.48	89.69	6150.00	45.22	8115.25	0.00	0.00	8115.38	BHL v1 - CYA W 100H	TD at 14343.65



Map System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone Name: New Mexico East 3001

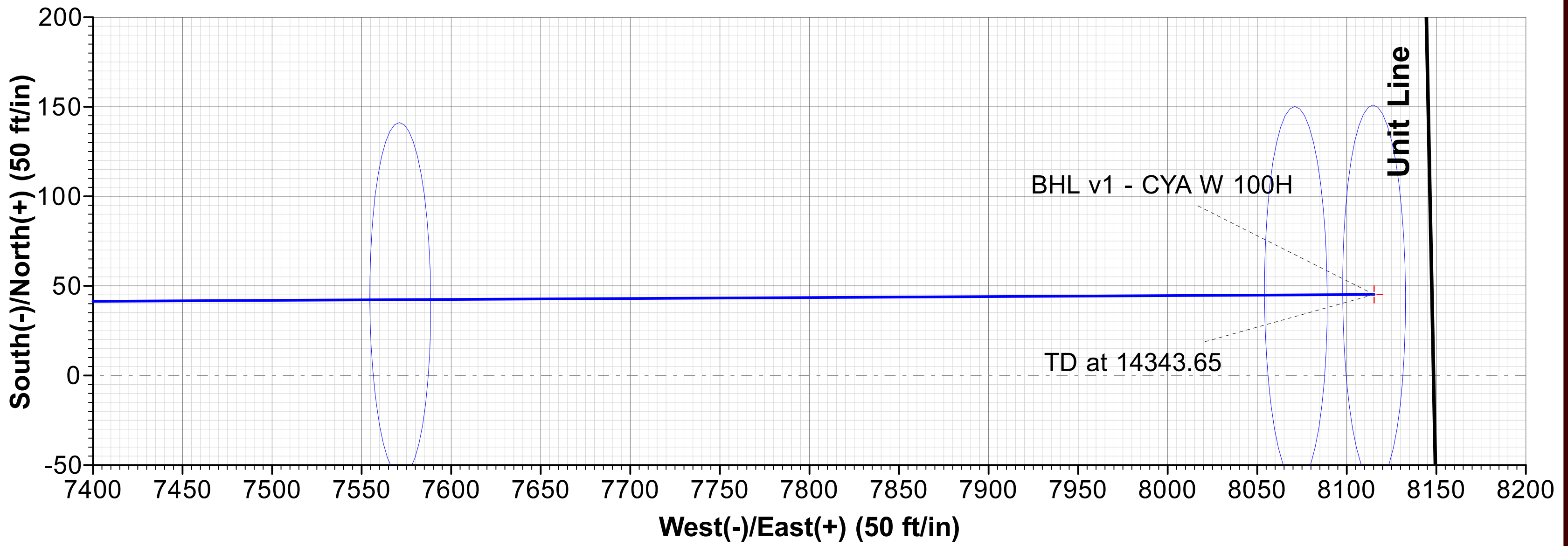
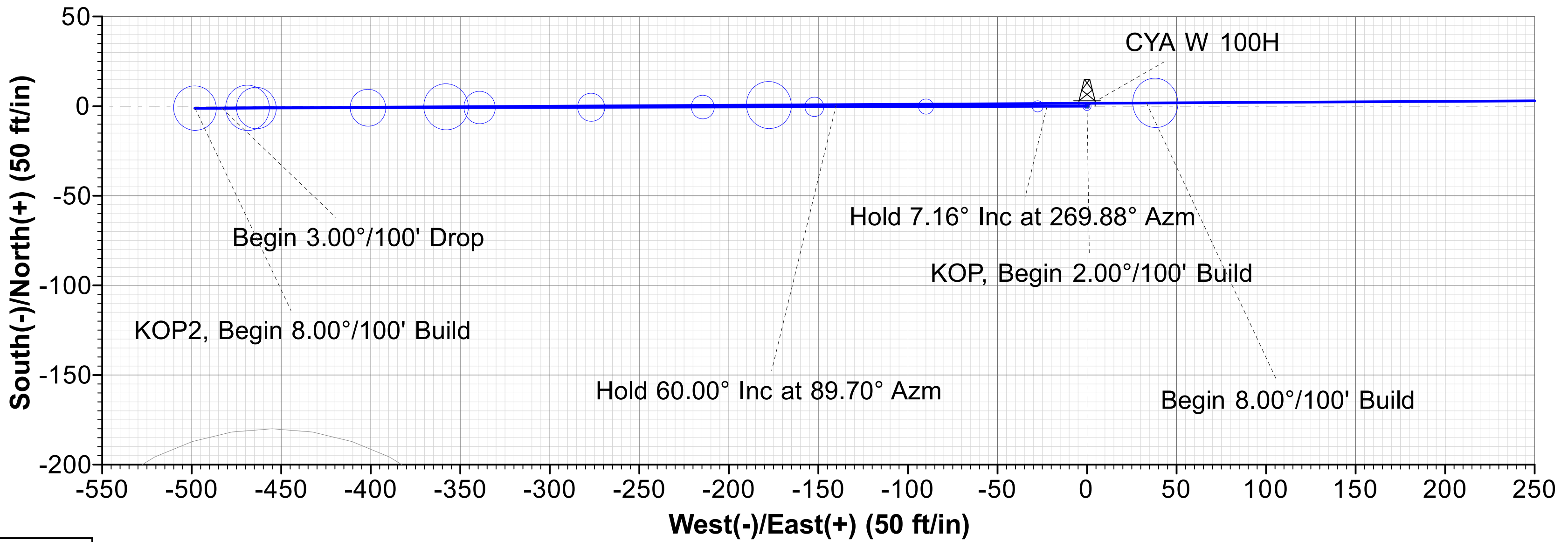
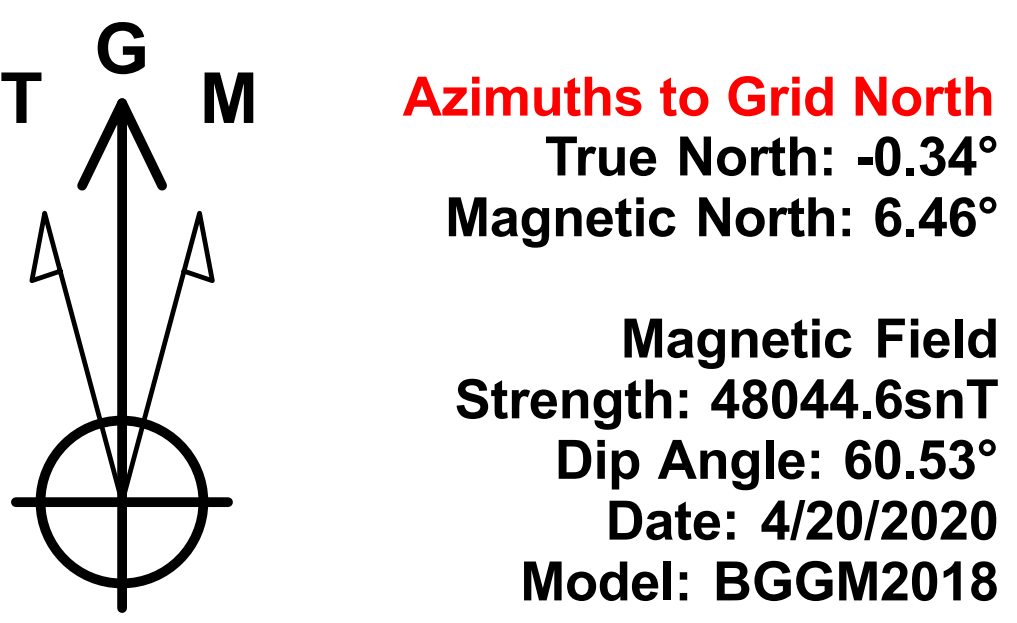
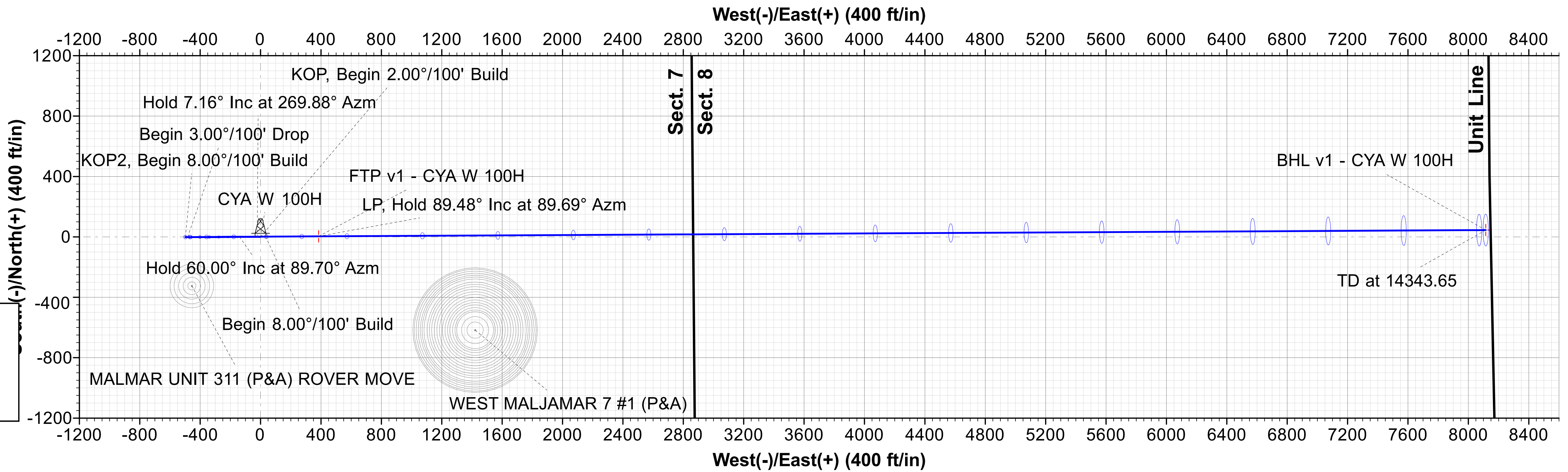
Local Origin: Well CYA W 100H, Grid North

Latitude: 32° 50' 52.872 N  
Longitude: 103° 42' 10.012 W

Grid East: 693649.155  
Grid North: 672798.895  
Scale Factor: 1.000

Geomagnetic Model: BGGM2018  
Sample Date: 20-Apr-20  
Magnetic Declination: 6.80°  
Dip Angle from Horizontal: 60.53°  
Magnetic Field Strength: 48044.58991666nT

To convert a Magnetic Direction to a Grid Direction, Add 6.46°  
To convert a Magnetic Direction to a True Direction, Add 6.80° East  
To convert a True Direction to a Grid Direction, Subtract 0.34°



# **ConocoPhillips MCBU - Permian-Panhandle Gold Data**

**Planning - NM East State Zone - 3001**

**Caprock CYA W 100H**

**CYA W 100H**

**OH**

**Plan: Plan 3 02-27-20**

## **Standard Planning Report**

**28 February, 2020**



## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Project:</b>	Planning - NM East State Zone - 3001	<b>MD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Site:</b>	Caprock CYA W 100H	<b>North Reference:</b>	Grid
<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

<b>Project</b>	Planning - NM East State Zone - 3001, Permian Basin - New Mexico - East/South East, Planning Project for Permian wells in NM Zone 3001		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		Using geodetic scale factor

Site		Caprock CYA W 100H			
Site Position:		Northing:	672,798.895 usft	Latitude:	32° 50' 52.872 N
From:	Lat/Long	Easting:	693,649.155 usft	Longitude:	103° 42' 10.012 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.34

Well	CYA W 100H					
Well Position	+N/-S	0.00 ft	Northing:	672,798.895 usft	Latitude:	32° 50' 52.872 N
	+E/-W	0.00 ft	Easting:	693,649.155 usft	Longitude:	103° 42' 10.012 W
Position Uncertainty		1.00 ft	Wellhead Elevation:	4,217.00 ft	Ground Level:	4,229.30 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2018	4/20/2020	6.80	60.53	48,044.58991666

<b>Design</b>	Plan 3 02-27-20				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	89.68	

<b>Plan Survey Tool Program</b>	<b>Date</b>	2/28/2020			
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	14,343.65 Plan 3 02-27-20 (OH)	MWD+IFR1+MS_CoP		
			Fixed:v2:Eagleford, crustal dec		



## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Project:</b>	Planning - NM East State Zone - 3001	<b>MD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Site:</b>	Caprock CYA W 100H	<b>North Reference:</b>	Grid
<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,358.03	7.16	269.88	1,357.10	-0.05	-22.34	2.00	2.00	0.00	269.88	
5,055.53	7.16	269.88	5,025.76	-1.03	-483.24	0.00	0.00	0.00	0.00	
5,294.22	0.00	0.00	5,263.83	-1.06	-498.14	3.00	-3.00	0.00	180.00	
6,044.22	60.00	89.69	5,884.08	0.87	-140.05	8.00	8.00	0.00	0.00	
6,244.22	60.00	89.69	5,984.08	1.81	33.16	0.00	0.00	0.00	0.00	
6,612.74	89.48	89.69	6,080.00	3.71	384.76	8.00	8.00	0.00	0.00	FTP v1 - CYA W 100H
14,343.65	89.48	89.69	6,150.00	45.22	8,115.25	0.00	0.00	0.00	0.00	BHL v1 - CYA W 100H

## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Project:</b>	Planning - NM East State Zone - 3001	<b>MD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Site:</b>	Caprock CYA W 100H	<b>North Reference:</b>	Grid
<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>KOP, Begin 2.00°/100' Build</b>										
1,100.00	2.00	269.88	1,099.98	0.00	-1.75	-1.75	2.00	2.00	0.00	
1,200.00	4.00	269.88	1,199.84	-0.01	-6.98	-6.98	2.00	2.00	0.00	
1,300.00	6.00	269.88	1,299.45	-0.03	-15.69	-15.69	2.00	2.00	0.00	
1,310.37	6.21	269.88	1,309.76	-0.04	-16.80	-16.80	2.00	2.00	0.00	
<b>Rustler</b>										
1,358.03	7.16	269.88	1,357.10	-0.05	-22.34	-22.34	2.00	2.00	0.00	
<b>Hold 7.16° Inc at 269.88° Azm</b>										
1,400.00	7.16	269.88	1,398.74	-0.06	-27.58	-27.57	0.00	0.00	0.00	
1,421.00	7.16	269.88	1,419.57	-0.06	-30.19	-30.19	0.00	0.00	0.00	
<b>Salado</b>										
1,500.00	7.16	269.88	1,497.96	-0.09	-40.04	-40.04	0.00	0.00	0.00	
1,600.00	7.16	269.88	1,597.18	-0.11	-52.51	-52.51	0.00	0.00	0.00	
1,700.00	7.16	269.88	1,696.40	-0.14	-64.97	-64.97	0.00	0.00	0.00	
1,800.00	7.16	269.88	1,795.62	-0.17	-77.44	-77.44	0.00	0.00	0.00	
1,900.00	7.16	269.88	1,894.84	-0.19	-89.90	-89.90	0.00	0.00	0.00	
2,000.00	7.16	269.88	1,994.06	-0.22	-102.37	-102.37	0.00	0.00	0.00	
2,100.00	7.16	269.88	2,093.28	-0.25	-114.83	-114.83	0.00	0.00	0.00	
2,200.00	7.16	269.88	2,192.50	-0.27	-127.30	-127.30	0.00	0.00	0.00	
2,300.00	7.16	269.88	2,291.72	-0.30	-139.76	-139.76	0.00	0.00	0.00	
2,400.00	7.16	269.88	2,390.94	-0.33	-152.23	-152.23	0.00	0.00	0.00	
2,457.25	7.16	269.88	2,447.75	-0.34	-159.36	-159.36	0.00	0.00	0.00	
<b>Tansill</b>										
2,500.00	7.16	269.88	2,490.16	-0.35	-164.69	-164.69	0.00	0.00	0.00	
2,600.00	7.16	269.88	2,589.38	-0.38	-177.16	-177.16	0.00	0.00	0.00	
2,638.34	7.16	269.88	2,627.43	-0.39	-181.94	-181.94	0.00	0.00	0.00	
<b>Yates</b>										
2,700.00	7.16	269.88	2,688.60	-0.40	-189.62	-189.62	0.00	0.00	0.00	
2,800.00	7.16	269.88	2,787.82	-0.43	-202.09	-202.09	0.00	0.00	0.00	
2,900.00	7.16	269.88	2,887.04	-0.46	-214.55	-214.55	0.00	0.00	0.00	
2,950.23	7.16	269.88	2,936.88	-0.47	-220.81	-220.81	0.00	0.00	0.00	
<b>Seven Rivers</b>										
3,000.00	7.16	269.88	2,986.26	-0.48	-227.02	-227.02	0.00	0.00	0.00	
3,100.00	7.16	269.88	3,085.48	-0.51	-239.48	-239.48	0.00	0.00	0.00	
3,200.00	7.16	269.88	3,184.70	-0.54	-251.95	-251.95	0.00	0.00	0.00	
3,300.00	7.16	269.88	3,283.92	-0.56	-264.41	-264.41	0.00	0.00	0.00	
3,400.00	7.16	269.88	3,383.14	-0.59	-276.88	-276.88	0.00	0.00	0.00	
3,500.00	7.16	269.88	3,482.36	-0.62	-289.34	-289.34	0.00	0.00	0.00	
3,579.02	7.16	269.88	3,560.77	-0.64	-299.19	-299.19	0.00	0.00	0.00	
<b>Queen</b>										
3,600.00	7.16	269.88	3,581.58	-0.64	-301.81	-301.81	0.00	0.00	0.00	
3,700.00	7.16	269.88	3,680.80	-0.67	-314.27	-314.27	0.00	0.00	0.00	
3,800.00	7.16	269.88	3,780.02	-0.70	-326.74	-326.74	0.00	0.00	0.00	
3,900.00	7.16	269.88	3,879.24	-0.72	-339.20	-339.20	0.00	0.00	0.00	
3,996.54	7.16	269.88	3,975.03	-0.75	-351.24	-351.24	0.00	0.00	0.00	
<b>Grayburg</b>										
4,000.00	7.16	269.88	3,978.46	-0.75	-351.67	-351.67	0.00	0.00	0.00	
4,100.00	7.16	269.88	4,077.68	-0.78	-364.13	-364.13	0.00	0.00	0.00	
4,200.00	7.16	269.88	4,176.90	-0.80	-376.60	-376.60	0.00	0.00	0.00	
4,300.00	7.16	269.88	4,276.12	-0.83	-389.07	-389.06	0.00	0.00	0.00	

## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Project:</b>	Planning - NM East State Zone - 3001	<b>MD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Site:</b>	Caprock CYA W 100H	<b>North Reference:</b>	Grid
<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,368.79	7.16	269.88	4,344.38	-0.85	-397.64	-397.64	0.00	0.00	0.00
<b>San Andres</b>									
4,400.00	7.16	269.88	4,375.34	-0.86	-401.53	-401.53	0.00	0.00	0.00
4,500.00	7.16	269.88	4,474.56	-0.88	-414.00	-413.99	0.00	0.00	0.00
4,600.00	7.16	269.88	4,573.78	-0.91	-426.46	-426.46	0.00	0.00	0.00
4,700.00	7.16	269.88	4,673.00	-0.94	-438.93	-438.92	0.00	0.00	0.00
4,800.00	7.16	269.88	4,772.22	-0.96	-451.39	-451.39	0.00	0.00	0.00
4,900.00	7.16	269.88	4,871.44	-0.99	-463.86	-463.85	0.00	0.00	0.00
5,000.00	7.16	269.88	4,970.66	-1.02	-476.32	-476.32	0.00	0.00	0.00
5,055.53	7.16	269.88	5,025.76	-1.03	-483.24	-483.24	0.00	0.00	0.00
<b>Begin 3.00°/100' Drop</b>									
5,100.00	5.83	269.88	5,069.94	-1.04	-488.27	-488.27	3.00	-3.00	0.00
5,200.00	2.83	269.88	5,169.65	-1.06	-495.82	-495.81	3.00	-3.00	0.00
5,294.22	0.00	269.88	5,263.83	-1.06	-498.14	-498.14	3.00	-3.00	0.00
<b>KOP2, Begin 8.00°/100' Build</b>									
5,300.00	0.46	89.69	5,269.61	-1.06	-498.12	-498.11	8.00	7.99	3,110.94
5,400.00	8.46	89.69	5,369.23	-1.02	-490.34	-490.34	8.00	8.00	0.00
5,500.00	16.46	89.69	5,466.79	-0.91	-468.78	-468.78	8.00	8.00	0.00
5,600.00	24.46	89.69	5,560.40	-0.72	-433.85	-433.85	8.00	8.00	0.00
5,700.00	32.46	89.69	5,648.25	-0.46	-386.23	-386.23	8.00	8.00	0.00
5,800.00	40.46	89.69	5,728.61	-0.14	-326.85	-326.85	8.00	8.00	0.00
5,894.58	48.03	89.69	5,796.31	0.22	-260.91	-260.90	8.00	8.00	0.00
<b>Glorieta</b>									
5,900.00	48.46	89.69	5,799.92	0.24	-256.87	-256.86	8.00	8.00	0.00
6,000.00	56.46	89.69	5,860.80	0.67	-177.64	-177.63	8.00	8.00	0.00
6,044.22	60.00	89.69	5,884.08	0.87	-140.05	-140.04	8.00	8.00	0.00
<b>Hold 60.00° Inc at 89.70° Azm</b>									
6,093.31	60.00	89.69	5,908.62	1.10	-97.54	-97.53	0.00	0.00	0.00
<b>Paddock</b>									
6,100.00	60.00	89.69	5,911.97	1.13	-91.74	-91.74	0.00	0.00	0.00
6,200.00	60.00	89.69	5,961.97	1.60	-5.14	-5.13	0.00	0.00	0.00
6,244.22	60.00	89.69	5,984.08	1.81	33.15	33.16	0.00	0.00	0.00
<b>Begin 8.00°/100' Build</b>									
6,300.00	64.46	89.69	6,010.06	2.08	82.50	82.51	8.00	8.00	0.00
6,400.00	72.46	89.69	6,046.74	2.58	175.44	175.45	8.00	8.00	0.00
6,500.00	80.46	89.69	6,070.13	3.11	272.58	272.59	8.00	8.00	0.00
6,600.00	88.46	89.69	6,079.77	3.64	372.03	372.04	8.00	8.00	0.00
6,612.74	89.48	89.69	6,080.00	3.71	384.77	384.78	8.00	8.00	0.02
<b>LP, Hold 89.48° Inc at 89.69° Azm</b>									
6,700.00	89.48	89.69	6,080.79	4.17	472.02	472.04	0.00	0.00	0.00
6,800.00	89.48	89.69	6,081.70	4.71	572.02	572.03	0.00	0.00	0.00
6,900.00	89.48	89.69	6,082.60	5.25	672.01	672.03	0.00	0.00	0.00
7,000.00	89.48	89.69	6,083.51	5.78	772.01	772.03	0.00	0.00	0.00
7,100.00	89.48	89.69	6,084.41	6.32	872.00	872.02	0.00	0.00	0.00
7,200.00	89.48	89.69	6,085.32	6.86	971.99	972.02	0.00	0.00	0.00
7,300.00	89.48	89.69	6,086.22	7.40	1,071.99	1,072.01	0.00	0.00	0.00
7,400.00	89.48	89.69	6,087.13	7.93	1,171.98	1,172.01	0.00	0.00	0.00
7,500.00	89.48	89.69	6,088.03	8.47	1,271.98	1,272.00	0.00	0.00	0.00
7,600.00	89.48	89.69	6,088.94	9.01	1,371.97	1,372.00	0.00	0.00	0.00
7,700.00	89.48	89.69	6,089.84	9.54	1,471.97	1,472.00	0.00	0.00	0.00
7,800.00	89.48	89.69	6,090.75	10.08	1,571.96	1,571.99	0.00	0.00	0.00
7,900.00	89.48	89.69	6,091.66	10.62	1,671.96	1,671.99	0.00	0.00	0.00

## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Project:</b>	Planning - NM East State Zone - 3001	<b>MD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Site:</b>	Caprock CYA W 100H	<b>North Reference:</b>	Grid
<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,000.00	89.48	89.69	6,092.56	11.15	1,771.95	1,771.98	0.00	0.00	0.00	
8,100.00	89.48	89.69	6,093.47	11.69	1,871.94	1,871.98	0.00	0.00	0.00	
8,200.00	89.48	89.69	6,094.37	12.23	1,971.94	1,971.98	0.00	0.00	0.00	
8,300.00	89.48	89.69	6,095.28	12.76	2,071.93	2,071.97	0.00	0.00	0.00	
8,400.00	89.48	89.69	6,096.18	13.30	2,171.93	2,171.97	0.00	0.00	0.00	
8,500.00	89.48	89.69	6,097.09	13.84	2,271.92	2,271.96	0.00	0.00	0.00	
8,600.00	89.48	89.69	6,097.99	14.38	2,371.92	2,371.96	0.00	0.00	0.00	
8,700.00	89.48	89.69	6,098.90	14.91	2,471.91	2,471.96	0.00	0.00	0.00	
8,800.00	89.48	89.69	6,099.80	15.45	2,571.91	2,571.95	0.00	0.00	0.00	
8,900.00	89.48	89.69	6,100.71	15.99	2,671.90	2,671.95	0.00	0.00	0.00	
9,000.00	89.48	89.69	6,101.62	16.52	2,771.89	2,771.94	0.00	0.00	0.00	
9,100.00	89.48	89.69	6,102.52	17.06	2,871.89	2,871.94	0.00	0.00	0.00	
9,200.00	89.48	89.69	6,103.43	17.60	2,971.88	2,971.94	0.00	0.00	0.00	
9,300.00	89.48	89.69	6,104.33	18.13	3,071.88	3,071.93	0.00	0.00	0.00	
9,400.00	89.48	89.69	6,105.24	18.67	3,171.87	3,171.93	0.00	0.00	0.00	
9,500.00	89.48	89.69	6,106.14	19.21	3,271.87	3,271.92	0.00	0.00	0.00	
9,600.00	89.48	89.69	6,107.05	19.74	3,371.86	3,371.92	0.00	0.00	0.00	
9,700.00	89.48	89.69	6,107.95	20.28	3,471.86	3,471.91	0.00	0.00	0.00	
9,800.00	89.48	89.69	6,108.86	20.82	3,571.85	3,571.91	0.00	0.00	0.00	
9,900.00	89.48	89.69	6,109.76	21.36	3,671.84	3,671.91	0.00	0.00	0.00	
10,000.00	89.48	89.69	6,110.67	21.89	3,771.84	3,771.90	0.00	0.00	0.00	
10,100.00	89.48	89.69	6,111.58	22.43	3,871.83	3,871.90	0.00	0.00	0.00	
10,200.00	89.48	89.69	6,112.48	22.97	3,971.83	3,971.89	0.00	0.00	0.00	
10,300.00	89.48	89.69	6,113.39	23.50	4,071.82	4,071.89	0.00	0.00	0.00	
10,400.00	89.48	89.69	6,114.29	24.04	4,171.82	4,171.89	0.00	0.00	0.00	
10,500.00	89.48	89.69	6,115.20	24.58	4,271.81	4,271.88	0.00	0.00	0.00	
10,600.00	89.48	89.69	6,116.10	25.11	4,371.81	4,371.88	0.00	0.00	0.00	
10,700.00	89.48	89.69	6,117.01	25.65	4,471.80	4,471.87	0.00	0.00	0.00	
10,800.00	89.48	89.69	6,117.91	26.19	4,571.79	4,571.87	0.00	0.00	0.00	
10,900.00	89.48	89.69	6,118.82	26.73	4,671.79	4,671.87	0.00	0.00	0.00	
11,000.00	89.48	89.69	6,119.72	27.26	4,771.78	4,771.86	0.00	0.00	0.00	
11,100.00	89.48	89.69	6,120.63	27.80	4,871.78	4,871.86	0.00	0.00	0.00	
11,200.00	89.48	89.69	6,121.54	28.34	4,971.77	4,971.85	0.00	0.00	0.00	
11,300.00	89.48	89.69	6,122.44	28.87	5,071.77	5,071.85	0.00	0.00	0.00	
11,400.00	89.48	89.69	6,123.35	29.41	5,171.76	5,171.85	0.00	0.00	0.00	
11,500.00	89.48	89.69	6,124.25	29.95	5,271.76	5,271.84	0.00	0.00	0.00	
11,600.00	89.48	89.69	6,125.16	30.48	5,371.75	5,371.84	0.00	0.00	0.00	
11,700.00	89.48	89.69	6,126.06	31.02	5,471.74	5,471.83	0.00	0.00	0.00	
11,800.00	89.48	89.69	6,126.97	31.56	5,571.74	5,571.83	0.00	0.00	0.00	
11,900.00	89.48	89.69	6,127.87	32.09	5,671.73	5,671.82	0.00	0.00	0.00	
12,000.00	89.48	89.69	6,128.78	32.63	5,771.73	5,771.82	0.00	0.00	0.00	
12,100.00	89.48	89.69	6,129.68	33.17	5,871.72	5,871.82	0.00	0.00	0.00	
12,200.00	89.48	89.69	6,130.59	33.71	5,971.72	5,971.81	0.00	0.00	0.00	
12,300.00	89.48	89.69	6,131.50	34.24	6,071.71	6,071.81	0.00	0.00	0.00	
12,400.00	89.48	89.69	6,132.40	34.78	6,171.71	6,171.80	0.00	0.00	0.00	
12,500.00	89.48	89.69	6,133.31	35.32	6,271.70	6,271.80	0.00	0.00	0.00	
12,600.00	89.48	89.69	6,134.21	35.85	6,371.70	6,371.80	0.00	0.00	0.00	
12,700.00	89.48	89.69	6,135.12	36.39	6,471.69	6,471.79	0.00	0.00	0.00	
12,800.00	89.48	89.69	6,136.02	36.93	6,571.68	6,571.79	0.00	0.00	0.00	
12,900.00	89.48	89.69	6,136.93	37.46	6,671.68	6,671.78	0.00	0.00	0.00	
13,000.00	89.48	89.69	6,137.83	38.00	6,771.67	6,771.78	0.00	0.00	0.00	
13,100.00	89.48	89.69	6,138.74	38.54	6,871.67	6,871.78	0.00	0.00	0.00	
13,200.00	89.48	89.69	6,139.64	39.07	6,971.66	6,971.77	0.00	0.00	0.00	



## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Project:</b>	Planning - NM East State Zone - 3001	<b>MD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
<b>Site:</b>	Caprock CYA W 100H	<b>North Reference:</b>	Grid
<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
13,300.00	89.48	89.69	6,140.55	39.61	7,071.66	7,071.77	0.00	0.00	0.00	
13,400.00	89.48	89.69	6,141.46	40.15	7,171.65	7,171.76	0.00	0.00	0.00	
13,500.00	89.48	89.69	6,142.36	40.69	7,271.65	7,271.76	0.00	0.00	0.00	
13,600.00	89.48	89.69	6,143.27	41.22	7,371.64	7,371.75	0.00	0.00	0.00	
13,700.00	89.48	89.69	6,144.17	41.76	7,471.63	7,471.75	0.00	0.00	0.00	
13,800.00	89.48	89.69	6,145.08	42.30	7,571.63	7,571.75	0.00	0.00	0.00	
13,900.00	89.48	89.69	6,145.98	42.83	7,671.62	7,671.74	0.00	0.00	0.00	
14,000.00	89.48	89.69	6,146.89	43.37	7,771.62	7,771.74	0.00	0.00	0.00	
14,100.00	89.48	89.69	6,147.79	43.91	7,871.61	7,871.73	0.00	0.00	0.00	
14,200.00	89.48	89.69	6,148.70	44.44	7,971.61	7,971.73	0.00	0.00	0.00	
14,300.00	89.48	89.69	6,149.60	44.98	8,071.60	8,071.73	0.00	0.00	0.00	
14,343.65	89.48	89.69	6,150.00	45.22	8,115.25	8,115.37	0.00	0.00	0.00	
TD at 14343.65										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
FTP v1 - CYA W 100H	0.00	0.00	6,080.00	3.71	384.76	672,802.600	694,033.900	32° 50' 52.886 N	103° 42' 5.502 W	
- hit/miss target										
- plan misses target center by 0.01ft at 6612.74ft MD (6080.00 TVD, 3.71 N, 384.76 E)										
- Point										
BHL v1 - CYA W 100H	0.00	0.01	6,150.00	45.22	8,115.25	672,844.108	701,764.000	32° 50' 52.830 N	103° 40' 34.890 W	
- plan hits target center										
- Point										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,360.95	1,360.00	13-3/8 " Conductor Casing	13-3/8	17-1/2	
2,741.72	2,730.00	Surface Casing	9-5/8	12-1/4	
13,580.00	6,143.09	Intermediate Casing	5-1/2	8-3/4	

## ConocoPhillips

## Planning Report

<b>Database:</b>	EDT 14 Central Planning	<b>Local Co-ordinate Reference:</b>	Well CYA W 100H
<b>Company:</b>	ConocoPhillips MCBU - Permian-Panhandle Gold Data	<b>TVD Reference:</b>	RKB @ 4251.30ft (Nabors M51)
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<b>Well:</b>	CYA W 100H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 02-27-20		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,310.37	1,309.76	Rustler		0.81	89.47
1,421.00	1,419.57	Salado		0.81	89.47
2,457.25	2,447.75	Tansill		0.81	89.47
2,638.34	2,627.43	Yates		0.81	89.47
2,950.23	2,936.88	Seven Rivers		0.81	89.47
3,579.02	3,560.77	Queen		0.81	89.47
3,996.54	3,975.03	Grayburg		0.81	89.47
4,368.79	4,344.38	San Andres		0.81	89.47
5,894.58	5,796.31	Glorieta		0.81	89.47
6,093.31	5,908.62	Paddock		0.81	89.47

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP, Begin 2.00°/100' Build	
1,358.03	1,357.10	-0.05	-22.34	Hold 7.16° Inc at 269.88° Azm	
5,055.53	5,025.76	-1.03	-483.24	Begin 3.00°/100' Drop	
5,294.22	5,263.83	-1.06	-498.14	KOP2, Begin 8.00°/100' Build	
6,044.22	5,884.08	0.87	-140.05	Hold 60.00° Inc at 89.70° Azm	
6,244.22	5,984.08	1.81	33.15	Begin 8.00°/100' Build	
6,612.74	6,080.00	3.71	384.77	LP, Hold 89.48° Inc at 89.69° Azm	
14,343.65	6,150.00	45.22	8,115.25	TD at 14343.65	



**H<sub>2</sub>S Contingency Plan**  
April 2018

H<sub>2</sub>S Contingency Plan Holders:

Attached is an H<sub>2</sub>S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

If you have any question regarding this plan, please call Matt Oster (830) 583-1297, or Ryan Vacarella (985) 217-7594.

## **Table of Contents**

### **Section**

#### **I. Purpose**

#### **II. Scope**

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Emergency Equipment Suppliers  
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#### **V. Emergency Call List**

#### **VI. Public/Media Relations**

#### **VII. Public Notification/Evacuation**

#### **VIII. Forms/Reports**





# **HYDROGEN SULFIDE (H<sub>2</sub>S) 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<sub>2</sub>S 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<sub>2</sub>S release. Release of H<sub>2</sub>S 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 H<sub>2</sub>S 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<sub>2</sub>S 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<sub>2</sub>S radius of exposure (ROE). All manned barricades must be equipped with an H<sub>2</sub>S 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<sub>2</sub>S. 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<sub>2</sub>S 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. (Environmentalism will report this to the proper State and/or Federal agencies.)
- \_\_\_\_\_ Fill out all required incident reports and send originals to the Safety Department. (Keep a copy for your records.)
  - Company employee receiving occupational injury or illnesses.
  - Company employee involved in a vehicle accident while driving a company vehicle.
  - Company property that is damaged or lost.
  - Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.
  - Hazardous Material Spill/Release Report Form
  - Emergency Drill Report
- \_\_\_\_\_ Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.
- \_\_\_\_\_ If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

## **Emergency Procedures Responsibility**

In the event of a release of potentially hazardous amounts of H<sub>2</sub>S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.
2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.
3. Advise each contractor, service company, and all others entering the site that H<sub>2</sub>S may be encountered and the potential hazards that may exist.
4. Authorize the evacuation of local residents if H<sub>2</sub>S threatens their safety.
5. Keep the number of persons on location to a minimum during hazardous operations.
6. Direct corrective actions to control the flow of gas.
7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard.

This should be used **ONLY AS A LAST RESORT.**

## **IV. EMERGENCY EQUIPMENT and MAINTENANCE**

### **Emergency Equipment Suppliers**

#### **United Safety**

Safety Equipment 432.400.2889

#### **Gryphon Oilfield Services**

Safety Equipment 432.550.0600

#### **DXP/ Safety International – Odessa, Tx.**

H<sub>2</sub>S monitors 432.580.3770  
Breathing air includes cascade systems  
First aid and medical supplies  
Safety equipment  
H<sub>2</sub>S Specialist

#### **Total Safety US Odessa, Tx/ Hobs, NM**

H<sub>2</sub>S monitors 432.561.5049 Odessa  
575.392.2973 Hobbs  
Breathing air includes cascade systems  
First aid and medical supplies  
Safety equipment

#### **DXP/ Indian Fire & Safety – Hobbs, NM**

H<sub>2</sub>S monitors 575.393.3093  
Breathing air including cascade systems trailer mounted  
30 minute air packs  
Safety Equipment

#### **TC Safety – Odessa, Tx.**

H<sub>2</sub>S monitors 432.413.8240  
Cascade systems trailer mounted  
30 minute air packs  
Safety Equipment  
H<sub>2</sub>S Specialist

#### **Secorp Industries – Odessa, Tx.**

H<sub>2</sub>S Monitor Systems 432.614.2565  
Cascade Systems  
H<sub>2</sub>S Specialist  
H<sub>2</sub>S, CPR, First Aid Training



## **Emergency Equipment and Maintenance (continued)**

### **General Information**

Materials used for repair should be suitable for use where H<sub>2</sub>S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H<sub>2</sub>S areas shall have received training on the hazards, characteristics, and properties of H<sub>2</sub>S, and on procedures and safety equipment applicable for use in H<sub>2</sub>S areas.

## **H2S Safety Equipment and Monitoring Systems**

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

3 – Fixed H2S sensors located as follows:

- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker or Flowline

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

2 – Windsocks that are clearly visible.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)

- 1 – Located at the rig floor
- 1 – Located in the mud mixing room

**Note: All alarms (audible and visual) should be set to alarm at 10 ppm.**

2 - Briefing areas clearly marked

- 2 - SCBA's at each briefing area
- 1- SCBA located at the Drilling Reps office

**Note:**

- 1. All SCBA's must be positive pressure type only!!!**
- 2. All SCBA's must either be Scott or Drager brand.**
- 3. All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.**

5 – Emergency Escape Paks located at Top Doghouse.

Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1 – Tri or Quad gas monitor located at the Drilling Reps office. This will be used to determine if the work area is safe to re-enter prior to returning to work following any alarm.

**V. EMERGENCY CALL LIST:**

The following is a priority list of personnel to contact in an emergency situation.

<b>Supervisory Personnel</b>	<b>Office No.</b>	<b>Cellphone</b>
Drilling Supt. (Unconventional) <b>Scott Nicholson</b>	432.688.9065	432.230.8010
Field Supervisors: <b>Clint Case</b> <b>Patrick Wellman</b>	432.688.6878 432.688.9183	940.231.2839 432.215.7079
Safety Support: <b>Matt Oster</b> <b>Ryan Vaccarella</b>	830.583.1245 985.217.7594	601.540.6988 NA
Operations Support: <b>Dale Rowell</b>	NA	830.400.2006
Supt Operations-SENM <b>Mike Neuschafer</b> -Delaware Basin <b>Sean Robinson</b> -SENM	432.688.6834 575.391.3147	713.419.9919 575.390.8873
MCBU HSE Permian Supervisor <b>Chris Boggs</b>	432.688.6806	907.903.5815
Manager RBU/MCBU D & C <b>Colin Stevenson</b>	832.486.2527	832.240.6606

**EMERGENCY CALL LIST: State Officials****Regulatory Agencies**

**Texas Railroad Commission (District 8)**  
Midland, Texas

Office: 432.684.5581

**New Mexico Oil Conservation Commission**  
P. O. Box 1980  
Hobbs, New Mexico 88240-1980

Office: 575.393.6161

**Bureau of Land Mngt.**  
Carlsbad Field Office  
620 E. Greene St.  
Carlsbad, NM 88220

Office: 575.234.5972  
Fax: 575.885.9264

## **EMERGENCY CALL LIST: Local Officials**

**Refer to the Location Information Sheet**

**Note:** The LIS should include any area residents (i.e. rancher's house, etc)

### **VI. Public Media Relations**

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and **only with facts**, do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

**Note:**

**Do Not** Say "No Comment." (This implies a cover-up.)

**Do Not Disclose Names of Injured or Dead!** Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

## **VII. Public Notification/Evacuation**

### **Alert and/or Evacuate People within the Exposure Area**

1. **Public Notification** – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

Note: Bilingual employees may be needed to assist in notification of residents.

2. **Evacuation Procedures** – Evacuation will proceed upwind from the source of the release of H<sub>2</sub>S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

Roadblocks and the staging area should be established as necessary for current wind conditions.

**Note:** In all situations, consideration should be given to wind direction and weather conditions. H<sub>2</sub>S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

## **VIII. FORMS & REPORTS**

- I. Incident Log
- II. Preliminary Emergency Information Sheet
- III. Emergency Drill Report
- IV. Onshore Hazardous Material Spill/Release Report Form
- V. Immediate Report of Occupational Injury or Illness
  - Report of Accident-Public Contractor
  - Report of Loss or Damage to Company Property
  - Report of Automotive Incident