

Santa Fe Main Office
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General Information
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State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

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

Online Phone Directory Visit:
<https://www.emnrd.nm.gov/ocd/contact-us/>

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		WELL API NO. 30-025-53344 5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> 6. State Oil & Gas Lease No. VB2312002
2. Name of Operator Coterra Energy Operating Co.		7. Lease Name or Unit Agreement Name Rope State Com 8. Well Number 604H
3. Address of Operator 6001 Deauville Blvd, Midland, TX 79706		9. OGRID Number 215099 10. Pool name or Wildcat Airstrip; Bone Spring, WC-025 G-06 S183518A; Bone Spring
4. Well Location Unit Letter <u>M</u> : <u>338</u> feet from the <u>18S</u> line and <u>1133</u> feet from the <u>E</u> line Section <u>30</u> Township <u>18S</u> Range <u>35E</u> NMPM SESE County <u>Lea</u>		
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3939.1		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input checked="" type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> DOWNHOLE COMMINGLE <input type="checkbox"/> CLOSED-LOOP SYSTEM <input type="checkbox"/> OTHER: <input type="checkbox"/>		SUBSEQUENT REPORT OF: REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/> OTHER: <input type="checkbox"/>	
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13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Coterra Energy Operating Co. requests the following changes to the Rope State Com 604H:

- BHL from 100 FNL 925 FEL to 2545 FSL 730 FEL
- MD from 25844' to 28563'
- TVD from 10348' to 10432'
- Update Airstrip; Bone Spring spacing to 320 acres
- Update WC-025 G-06 S183518A; Bone Spring spacing to 800 acres

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Shelly Bowen TITLE Sr. Regulatory Analyst DATE 34/21/2026

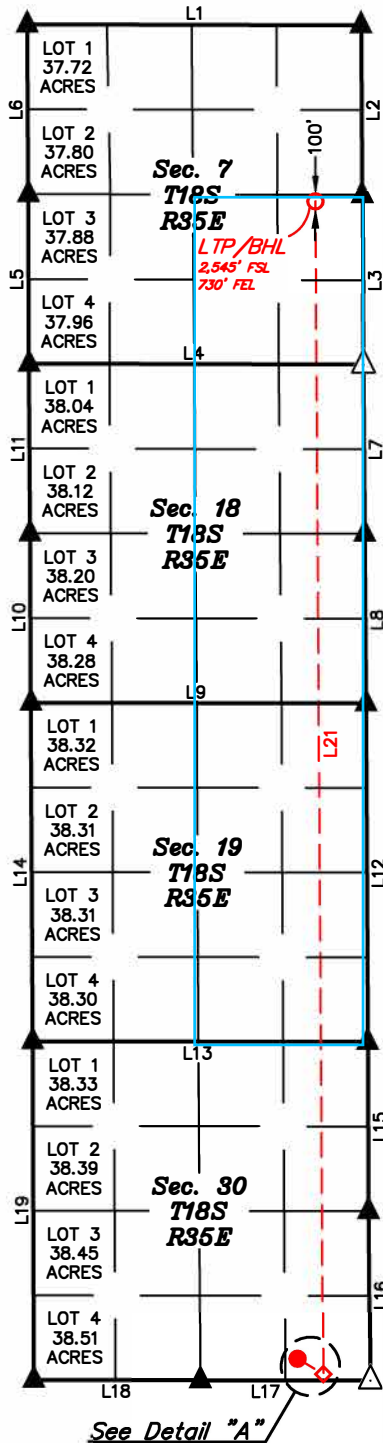
Type or print name Shelly Bowen E-mail address: shelly.bowen@coterra.com PHONE: 432-620-1644

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

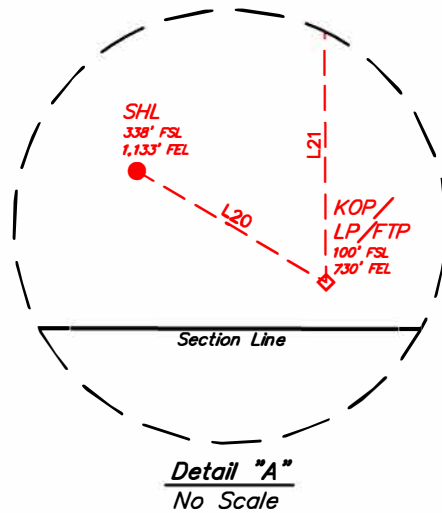
Conditions of Approval (if any): _____

Property Name ROPE STATE COM	Well Number 604H	Drawn By E.C. 11-12-25	Revised By REV. 2 N.R. 02-19-26 (UPDATE KOP/LP/FTP & LTP/BHL)
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LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N89°52'35"W	5215.75'
L2	N00°20'12"W	2652.85'
L3	N00°29'20"W	2644.93'
L4	N89°50'52"W	5226.42'
L5	N00°14'19"W	2646.78'
L6	N00°21'23"W	2648.29'
L7	N00°25'18"W	2644.91'
L8	N00°27'34"W	2647.99'
L9	N89°54'23"W	5237.28'
L10	N00°17'55"W	2647.91'
L11	N00°20'48"W	2650.24'
L12	N00°16'43"W	5289.66'
L13	N89°55'29"W	5236.78'
L14	N00°17'02"W	5291.33'
L15	N00°17'51"W	2644.77'
L16	N00°23'11"W	2647.64'
L17	N89°52'25"W	2645.47'
L18	N89°51'48"W	2601.02'
L19	N00°14'14"W	5287.20'
L20	S59°27'25"E	469.57'
L21	N00°22'21"W	18320.46'

NAD 83 (SURFACE HOLE LOCATION) LATITUDE = 32°42'44.63" (32.712397°) LONGITUDE = -103°29'30.79" (-103.491885°)
NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 32°42'44.18" (32.712273°) LONGITUDE = -103°29'29.01" (-103.491392°)
STATE PLANE NAD 83 (N.M. EAST) N: 623928.52' E: 800143.29'
STATE PLANE NAD 27 (N.M. EAST) N: 623864.21' E: 758963.56'
NAD 83 (KOP/LP/FTP) LATITUDE = 32°42'42.25" (32.711737°) LONGITUDE = -103°29'26.07" (-103.490574°)
NAD 27 (KOP/LP/FTP) LATITUDE = 32°42'41.81" (32.711613°) LONGITUDE = -103°29'24.29" (-103.490080°)
STATE PLANE NAD 83 (N.M. EAST) N: 623691.65' E: 800548.65'
STATE PLANE NAD 27 (N.M. EAST) N: 623627.35' E: 759368.91'
NAD 83 (LTP/BHL) LATITUDE = 32°45'43.50" (32.762082°) LONGITUDE = -103°29'26.66" (-103.490740°)
NAD 27 (LTP/BHL) LATITUDE = 32°45'43.05" (32.761958°) LONGITUDE = -103°29'24.88" (-103.490245°)
STATE PLANE NAD 83 (N.M. EAST) N: 642008.07' E: 800351.79'
STATE PLANE NAD 27 (N.M. EAST) N: 641943.25' E: 759172.57'



NOTE:

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)
- Section breakdown information for this plan may be obtained from Uintah Engineering and Land Surveying.

- = SURFACE HOLE LOCATION
- ◆ = KICK OFF POINT/LANDING POINT/FIRST TAKE POINT
- = LAST TAKE POINT/BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- △ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)



1. Geological Formations

TVD of target Pilot Hole TD N/A
 MD at TD Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	1893	N/A	
Top of Salt	2159	N/A	
Base of Salt/Lamar	5732	N/A	
Top Delaware Sands/Bell Canyon	5847	N/A	
Cherry Canyon	6115	N/A	
Brushy Canyon	6573	N/A	
Basal Brushy Canyon	7413	N/A	
Bone Spring Lime	7575	N/A	
Leonard/Avalon Sand	7795	N/A	
1st Bone Spring Sand	9097	Hydrocarbons	
2nd Bone Spring Sand	9633	Hydrocarbons	
3rd Bone Spring Carb	10162	Hydrocarbons	
3rd Bone Spring Sand	10295	Hydrocarbons	
3rd Bone Spring Sand - Target	10427	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	2004	2004	13-3/8"	54.50	J-55	BT&C	1.31	3.17	7.81
12 1/4	0	5757	5757	9-5/8"	40.00	HCK-55	LT&C	1.24	1.28	2.44
8 1/2	0	9856	9856	7"	29.00	P-110	BT&C	1.85	2.43	5.18
8 1/2	9856	28563	8975	5-1/2"	20.00	P-110	BT&C	2.64	2.94	(36.38)
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.
 All casing strings will be tested in accordance with 43 CFR 3172.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	Y

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	971	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	260	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	1075	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	292	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	224	10.30	3.64	22.18		Lead: Tuned Light + LCM
	4946	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface		45
Intermediate		52
Production	5557	

Cimarex request the ability to perform casing integrity tests after plug bump of cement job.

4. Pressure Control Equipment

A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	10M	Annular	5M	100% of working pressure
			Blind Ram		10M
			Pipe Ram		
			Double Ram	X	
			Other		
8 1/2	13 5/8	10M	Annular	5M	100% of working pressure
			Blind Ram		10M
			Pipe Ram	X	
			Double Ram	X	
			Other		

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 2004'	Fresh Water	7.80 - 8.30	28	N/C
2004' to 5757'	Brine Water	9.80 - 10.30	30-32	N/C
5757' to 28563'	Oil Based Mud	8.50 - 9.00	50-70	N/C

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

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing	
	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
X	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4200 psi
Abnormal Temperature	No

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
X	H2S is present
X	H2S plan is attached

8. Other Facets of Operation

9. Wellhead

1. The multi-bowl wellhead will be installed by a vendor representative. A copy of the installation instructions has been sent to the BLM field office.
2. A packoff will be installed after running and cementing the production casing. This packoff will be tested to 10K psi.

BOPE Additional Information & Testing

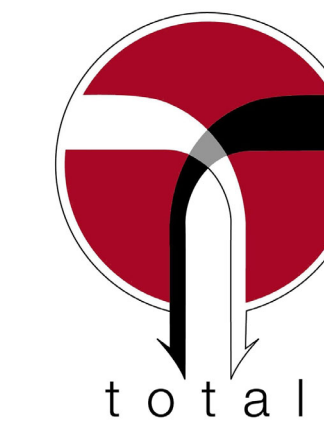
1. After running the first string of casing, a 10M BOP/BOPE system with 5M annular will be installed. BOPs will be tested according to Onshore Order #2. BOPE will be tested to full rated pressure (10K for all BOPE except the annular, which is tested to 5K). For the low test, the system will be tested to 250 psi.
2. All BOP equipment will be tested utilizing a conventional test plug.
3. A remote kill line is included in the BOPE system
4. All casing strings will be tested per Onshore Order #2, to 0.22 psi/ft or 1,500 psi, whichever is greater, not to exceed 70% of casing burst.
5. If well conditions dictate, conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Additional Well Control Notes

1. In the event wellbore pressure encroaches to the maximum rated pressure of the annular, primary pressure control will be switched to the higher rated components (i.e., switch from annular to pipe rams) – upper pipe rams will be closed, and the annular opened in order to not exceed maximum rated pressures.



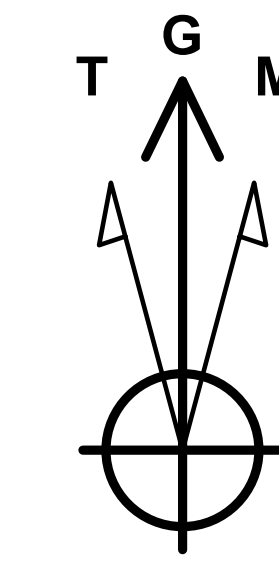
Coterra Energy
 Site: Rope State Com Pad
 Well: Rope State Com 604H
 Wellbore: OH
 Design: Plan #2
 Rig:



SHL

338' FSL, 1133' FEL
 RKB Elevation: GE 3939.1' + KB 23' @ 3962.10usft

Formations			+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
TVDPATH	MDPATH	Formation	0.00	0.00	623928.52	800143.29	32.7123970	-103.4918854	
1893.00	1893.48	Rustler							
1979.00	1979.81	A3 Top							
2077.00	2078.19	A3 Base (Tamarisk)							
2159.00	2160.50	Top Salt/Salado							
5732.00	5745.53	Base Salt/Lamar/CTRA_BASE_ANHYDRITE							
5847.00	5860.53	Top Delaware Sands/Bell Canyon							
6115.00	6128.53	Cherry Canyon							
6573.00	6586.53	Brushy Canyon							
7413.00	7426.53	Basal Brushy Canyon							
7575.00	7588.53	Bone Spring Lime							
7795.00	7808.53	Leonard/Avalon Sand							
9097.00	9110.53	1st Bone Spring Sand							
9633.00	9646.53	2nd Bone Spring Sand							
10162.00	10194.90	3rd Bone Spring Carb							
10295.00	10377.50	3rd Bone Spring Sand							
10427.00	10768.78	3rd Bone Spring Sand Target							



Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 5.53°
 Magnetic Field Strength: 47286.3nT
 Dip Angle: 60.42°
 Date: 3/11/2026
 Model: HDGM2026

To convert a Magnetic Direction to a Grid Direction, Add 5.53°

PROJECT DETAILS: Lea County, NM (NAD 83)

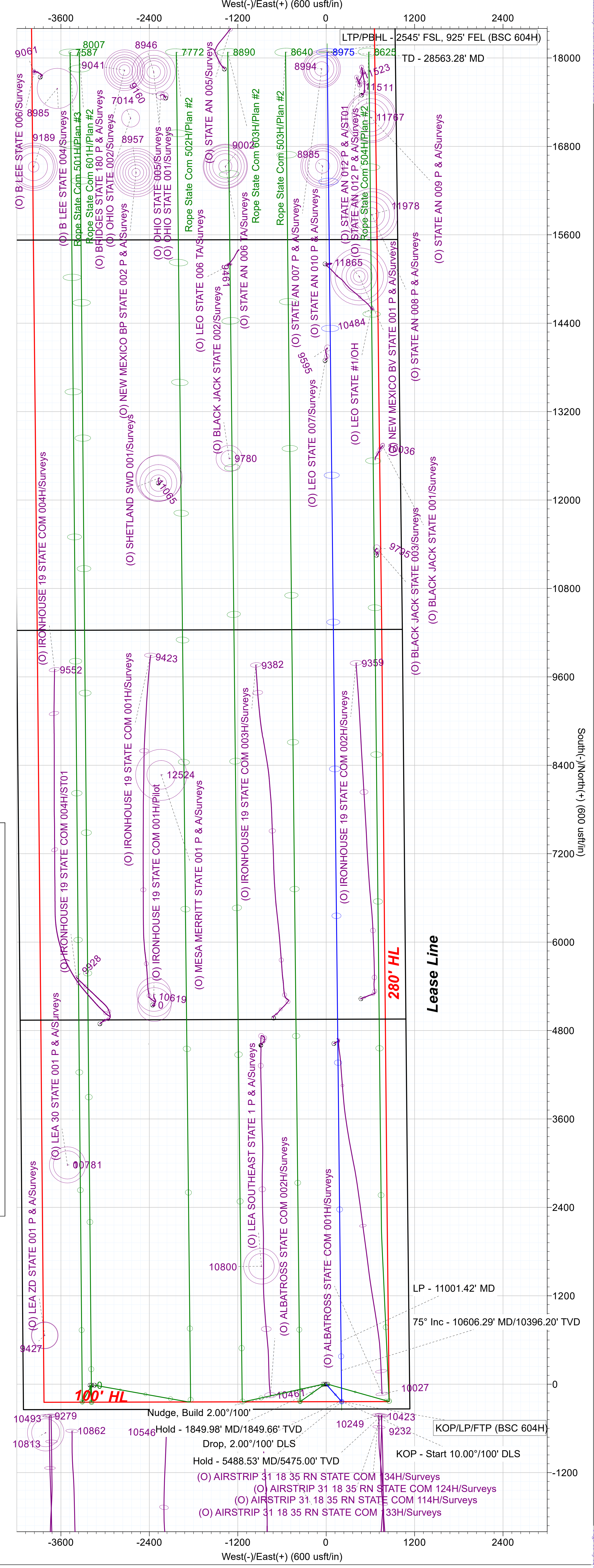
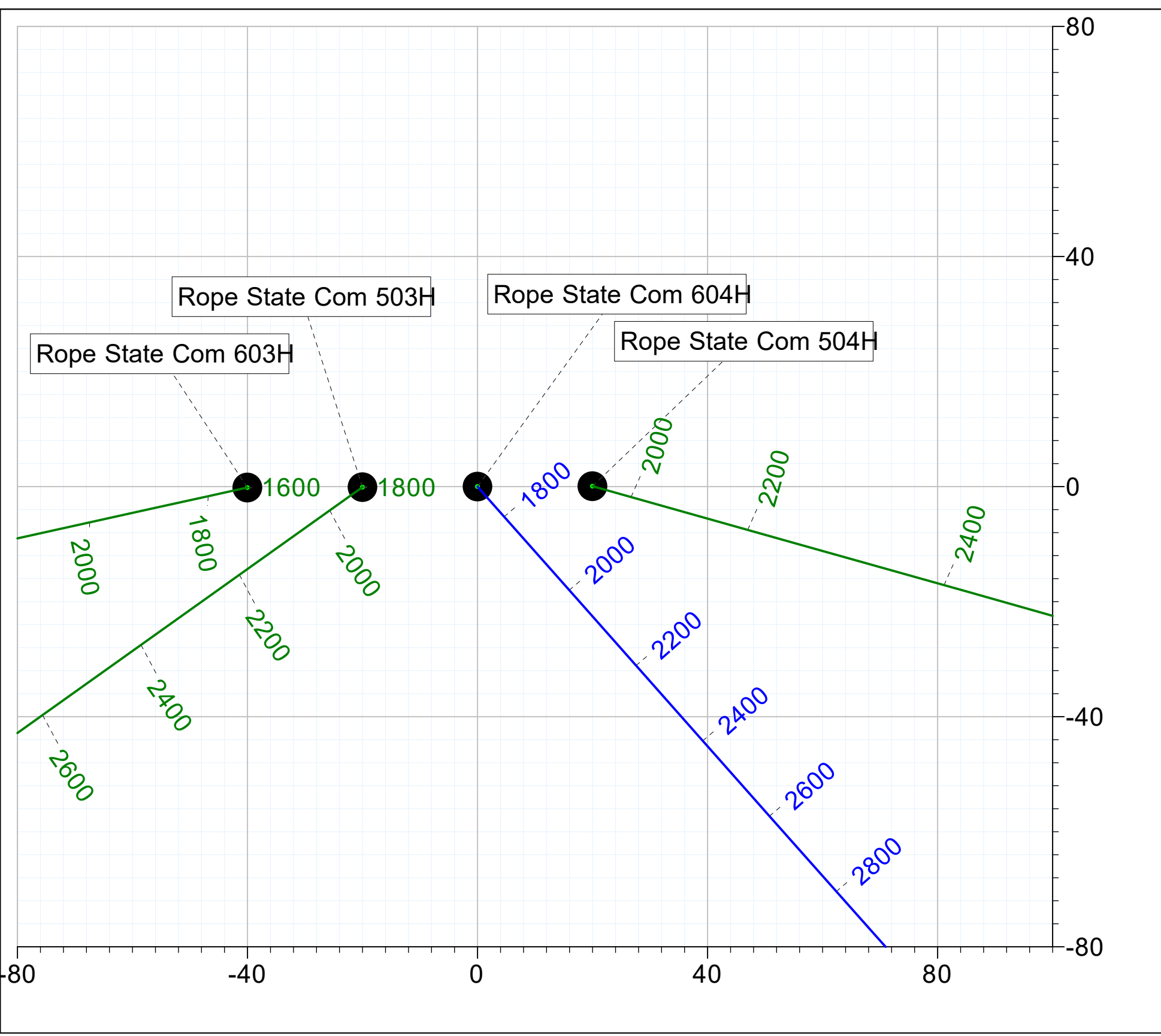
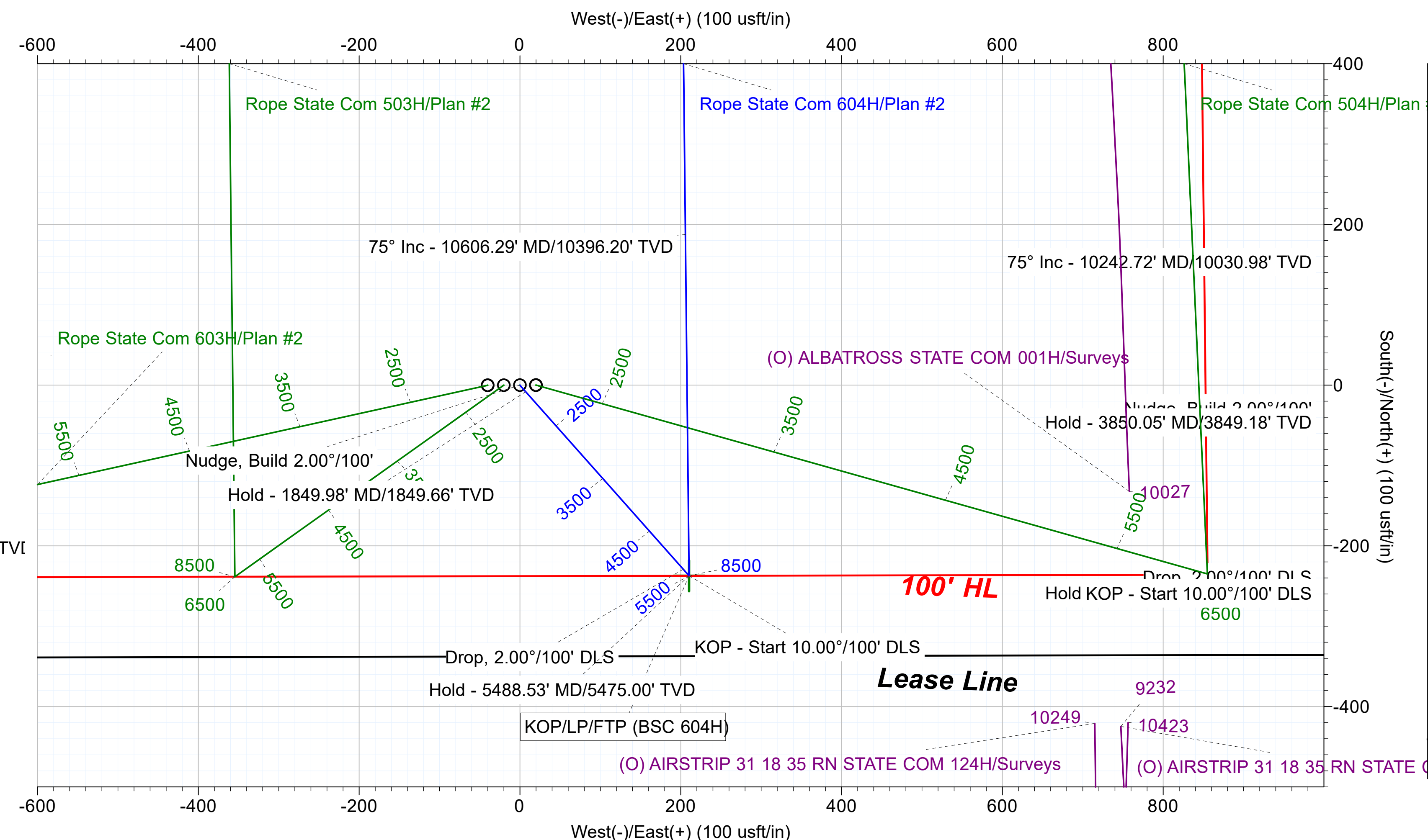
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Nudge, Build 2.00°/100'
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	Hold - 1849.98' MD/1849.66' TVD
1849.98	5.00	138.44	1849.66	-8.16	7.23	2.00	138.44	-8.23	Drop, 2.00°/100' DLS
5238.55	5.00	138.44	5225.34	-229.11	203.15	0.00	0.00	-231.30	Hold - 5488.53' MD/5475.00' TVD
5488.53	0.00	0.00	5475.00	-237.27	210.38	2.00	180.00	-239.53	KOP - Start 10.00°/100' DLS
9856.29	0.00	0.00	9842.76	-237.27	210.38	0.00	0.00	-239.53	LP - 11001.42' MD
10606.29	75.00	359.38	10396.19	187.37	205.78	10.00	359.38	185.13	TD - 28563.28' MD
11001.42	94.76	359.38	10431.29	578.96	201.56	5.00	0.01	576.74	
28563.28	94.76	359.38	8975.00	18079.32	13.52	0.00	0.00	18078.12	

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP/LP/FTP (BSC 604H)	0.00	-237.27	210.38	623691.25	800353.67	32.7117403	-103.4912076
LTP/PBHL - 2545' FSL, 925' FEL (BSC 604H)	8975.00	18079.32	13.52	642007.84	800156.81	32.7620857	-103.4913744



Coterra Energy

Lea County, NM (NAD 83)

Rope State Com Pad

Rope State Com 604H

338' FSL, 1133' FEL

OH

Plan: Plan #2



Standard Plan Report

18 March, 2026

Total Report Version 1.80

COMPASS 5000.16 Build 97

ATTENTION

All annotation callouts related to distances are uncertified and are approximated footages using available software and measurement tools. They should not be mistaken as an official record, which can only be obtained via a certified land surveyor.

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Project Lea County, NM (NAD 83)	System Datum: Mean Sea Level
Map System: US State Plane 1983	
Geo Datum: North American Datum 1983	
Map Zone: New Mexico Eastern Zone	

Site Rope State Com Pad	
Site Position:	Northing: 623,928.44 usft
From: Map	Latitude: 32.7123973
Position Uncertainty: 0.00 usft	Easting: 800,123.29 usft
	Longitude: -103.4919504
	Slot Radius: 13-3/16 "

Well Rope State Com 604H	
Well Position +N/-S 0.00 usft	Northing: 623,928.52 usft
+E/-W 0.00 usft	Latitude: 32.7123970
Position Uncertainty 0.00 usft	Easting: 800,143.29 usft
Grid Convergence: 0.45 °	Longitude: -103.4918854
	Wellhead Elevation: usft
	Ground Level: 3,939.10 usft

Wellbore OH	
Magnetics	
Model Name	Sample Date
HDGM2026	3/11/2026
Declination (°)	Dip Angle (°)
5.98	60.42
	Field Strength (nT)
	47,286.30000000

Design Plan #2	
Audit Notes:	
Version:	Phase: PLAN
	Tie On Depth: 0.00
Vertical Section:	
Depth From (TVD) (usft)	+N/-S (usft)
0.00	0.00
	+E/-W (usft)
	0.00
	Direction (°)
	359.38

Survey Tool Program	Date 3/18/2026
From (usft)	To (usft)
0.00	28,563.18
Survey (Wellbore)	Tool Name
Plan #2 (OH)	MWD+IFR1+MS
	Description
	OWSG MWD + IFR1 + Multi-Station Correction

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Plan Summary

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,849.98	5.00	138.44	1,849.66	-8.16	7.23	2.00	2.00	0.00	138.44	
5,238.55	5.00	138.44	5,225.34	-229.11	203.15	0.00	0.00	0.00	0.00	
5,488.53	0.00	0.00	5,475.00	-237.27	210.38	2.00	-2.00	0.00	180.00	
9,856.29	0.00	0.00	9,842.76	-237.27	210.38	0.00	0.00	0.00	0.00	
10,606.29	75.00	359.38	10,396.19	187.37	205.78	10.00	10.00	0.00	359.38	
11,001.42	94.76	359.38	10,431.29	578.96	201.56	5.00	5.00	0.00	0.01	
28,563.28	94.76	359.38	8,975.00	18,079.32	13.52	0.00	0.00	0.00	0.00	LTP/PBHL - 2545' F

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Geo Coordinates (°)		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	0.00	0.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
KOP/LP/FTP (BSC 604H)													
100.00	0.00	0.00	100.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	623,928.52	800,143.29	32.7123970	-103.4918854	0.00	0.00	0.00	0.00
Nudge, Build 2.00°/100'													
1,700.00	2.00	138.44	1,699.98	-1.31	1.16	623,927.21	800,144.45	32.7123934	-103.4918817	-1.32	2.00	2.00	0.00
1,800.00	4.00	138.44	1,799.84	-5.22	4.63	623,923.30	800,147.92	32.7123826	-103.4918705	-5.27	2.00	2.00	0.00
1,849.98	5.00	138.44	1,849.66	-8.16	7.23	623,920.36	800,150.52	32.7123745	-103.4918621	-8.23	2.00	2.00	0.00
Hold - 1849.98' MD/1849.66' TVD													
1,893.48	5.00	138.44	1,893.00	-10.99	9.75	623,917.53	800,153.04	32.7123666	-103.4918540	-11.10	0.00	0.00	0.00
Rustler													
1,900.00	5.00	138.44	1,899.49	-11.42	10.12	623,917.10	800,153.41	32.7123654	-103.4918528	-11.53	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,979.81	5.00	138.44	1,979.00	-16.62	14.74	623,911.90	800,158.03	32.7123510	-103.4918379	-16.78	0.00	0.00	0.00
A3 Top													
2,000.00	5.00	138.44	1,999.11	-17.94	15.90	623,910.58	800,159.19	32.7123474	-103.4918342	-18.11	0.00	0.00	0.00
2,078.19	5.00	138.44	2,077.00	-23.04	20.43	623,905.48	800,163.72	32.7123333	-103.4918196	-23.26	0.00	0.00	0.00
A3 Base (Tamarisk)													
2,100.00	5.00	138.44	2,098.73	-24.46	21.69	623,904.06	800,164.98	32.7123293	-103.4918155	-24.69	0.00	0.00	0.00
2,160.50	5.00	138.44	2,159.00	-28.40	25.18	623,900.12	800,168.47	32.7123184	-103.4918043	-28.67	0.00	0.00	0.00
Top Salt/Salado													
2,200.00	5.00	138.44	2,198.35	-30.98	27.47	623,897.54	800,170.76	32.7123113	-103.4917969	-31.27	0.00	0.00	0.00
2,300.00	5.00	138.44	2,297.97	-37.50	33.25	623,891.02	800,176.54	32.7122933	-103.4917783	-37.86	0.00	0.00	0.00
2,400.00	5.00	138.44	2,397.59	-44.02	39.03	623,884.50	800,182.32	32.7122752	-103.4917597	-44.44	0.00	0.00	0.00
2,500.00	5.00	138.44	2,497.21	-50.54	44.81	623,877.98	800,188.10	32.7122572	-103.4917410	-51.02	0.00	0.00	0.00
2,600.00	5.00	138.44	2,596.83	-57.06	50.60	623,871.46	800,193.89	32.7122391	-103.4917224	-57.61	0.00	0.00	0.00
2,700.00	5.00	138.44	2,696.45	-63.58	56.38	623,864.94	800,199.67	32.7122211	-103.4917038	-64.19	0.00	0.00	0.00
2,800.00	5.00	138.44	2,796.07	-70.10	62.16	623,858.42	800,205.45	32.7122030	-103.4916852	-70.77	0.00	0.00	0.00
2,900.00	5.00	138.44	2,895.69	-76.62	67.94	623,851.90	800,211.23	32.7121850	-103.4916665	-77.36	0.00	0.00	0.00
3,000.00	5.00	138.44	2,995.31	-83.15	73.72	623,845.37	800,217.01	32.7121669	-103.4916479	-83.94	0.00	0.00	0.00
3,100.00	5.00	138.44	3,094.93	-89.67	79.50	623,838.85	800,222.79	32.7121489	-103.4916293	-90.52	0.00	0.00	0.00
3,200.00	5.00	138.44	3,194.55	-96.19	85.29	623,832.33	800,228.58	32.7121308	-103.4916106	-97.10	0.00	0.00	0.00
3,300.00	5.00	138.44	3,294.17	-102.71	91.07	623,825.81	800,234.36	32.7121128	-103.4915920	-103.69	0.00	0.00	0.00
3,400.00	5.00	138.44	3,393.79	-109.23	96.85	623,819.29	800,240.14	32.7120947	-103.4915734	-110.27	0.00	0.00	0.00
3,500.00	5.00	138.44	3,493.41	-115.75	102.63	623,812.77	800,245.92	32.7120767	-103.4915548	-116.85	0.00	0.00	0.00
3,600.00	5.00	138.44	3,593.02	-122.27	108.41	623,806.25	800,251.70	32.7120586	-103.4915361	-123.44	0.00	0.00	0.00
3,700.00	5.00	138.44	3,692.64	-128.79	114.19	623,799.73	800,257.48	32.7120406	-103.4915175	-130.02	0.00	0.00	0.00
3,800.00	5.00	138.44	3,792.26	-135.31	119.98	623,793.21	800,263.27	32.7120225	-103.4914989	-136.60	0.00	0.00	0.00
3,900.00	5.00	138.44	3,891.88	-141.83	125.76	623,786.69	800,269.05	32.7120045	-103.4914802	-143.18	0.00	0.00	0.00
4,000.00	5.00	138.44	3,991.50	-148.35	131.54	623,780.17	800,274.83	32.7119864	-103.4914616	-149.77	0.00	0.00	0.00
4,100.00	5.00	138.44	4,091.12	-154.87	137.32	623,773.65	800,280.61	32.7119684	-103.4914430	-156.35	0.00	0.00	0.00
4,200.00	5.00	138.44	4,190.74	-161.39	143.10	623,767.13	800,286.39	32.7119503	-103.4914244	-162.93	0.00	0.00	0.00
4,300.00	5.00	138.44	4,290.36	-167.91	148.88	623,760.61	800,292.17	32.7119323	-103.4914057	-169.52	0.00	0.00	0.00
4,400.00	5.00	138.44	4,389.98	-174.44	154.67	623,754.08	800,297.96	32.7119143	-103.4913871	-176.10	0.00	0.00	0.00
4,500.00	5.00	138.44	4,489.60	-180.96	160.45	623,747.56	800,303.74	32.7118962	-103.4913685	-182.68	0.00	0.00	0.00
4,600.00	5.00	138.44	4,589.22	-187.48	166.23	623,741.04	800,309.52	32.7118782	-103.4913499	-189.26	0.00	0.00	0.00
4,700.00	5.00	138.44	4,688.84	-194.00	172.01	623,734.52	800,315.30	32.7118601	-103.4913312	-195.85	0.00	0.00	0.00
4,800.00	5.00	138.44	4,788.46	-200.52	177.79	623,728.00	800,321.08	32.7118421	-103.4913126	-202.43	0.00	0.00	0.00
4,900.00	5.00	138.44	4,888.08	-207.04	183.57	623,721.48	800,326.86	32.7118240	-103.4912940	-209.01	0.00	0.00	0.00
5,000.00	5.00	138.44	4,987.70	-213.56	189.36	623,714.96	800,332.65	32.7118060	-103.4912753	-215.60	0.00	0.00	0.00
5,100.00	5.00	138.44	5,087.32	-220.08	195.14	623,708.44	800,338.43	32.7117879	-103.4912567	-222.18	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey													
Measured			Vertical	Local Coordinates		Map Coordinates		Geo Coordinates		Vertical	Dogleg	Build	Turn
Depth	INC	AZI	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(°)	(usft)	(%/100usft)	(%/100usft)	(%/100usft)
5,200.00	5.00	138.44	5,186.94	-226.60	200.92	623,701.92	800,344.21	32.7117699	-103.4912381	-228.76	0.00	0.00	0.00
5,238.55	5.00	138.44	5,225.34	-229.11	203.15	623,699.41	800,346.44	32.7117629	-103.4912309	-231.30	0.00	0.00	0.00
Drop, 2.00°/100' DLS													
5,300.00	3.77	138.44	5,286.61	-232.63	206.27	623,695.89	800,349.56	32.7117532	-103.4912209	-234.85	2.00	-2.00	0.00
5,400.00	1.77	138.44	5,386.49	-236.25	209.47	623,692.27	800,352.76	32.7117432	-103.4912105	-238.50	2.00	-2.00	0.00
5,488.53	0.00	0.00	5,475.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	2.00	-2.00	0.00
Hold - 5488.53' MD/5475.00' TVD													
5,500.00	0.00	0.00	5,486.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
5,600.00	0.00	0.00	5,586.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
5,700.00	0.00	0.00	5,686.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
5,745.53	0.00	0.00	5,732.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
Base Salt/Lamar/CTRA_BASE_ANHYDRITE													
5,800.00	0.00	0.00	5,786.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
5,860.53	0.00	0.00	5,847.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
Top Delaware Sands/Bell Canyon													
5,900.00	0.00	0.00	5,886.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,000.00	0.00	0.00	5,986.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,100.00	0.00	0.00	6,086.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,128.53	0.00	0.00	6,115.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
Cherry Canyon													
6,200.00	0.00	0.00	6,186.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,300.00	0.00	0.00	6,286.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,400.00	0.00	0.00	6,386.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,500.00	0.00	0.00	6,486.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,586.53	0.00	0.00	6,573.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
Brushy Canyon													
6,600.00	0.00	0.00	6,586.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,700.00	0.00	0.00	6,686.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,800.00	0.00	0.00	6,786.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
6,900.00	0.00	0.00	6,886.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,000.00	0.00	0.00	6,986.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,100.00	0.00	0.00	7,086.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,200.00	0.00	0.00	7,186.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,300.00	0.00	0.00	7,286.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,400.00	0.00	0.00	7,386.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,426.53	0.00	0.00	7,413.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
Basal Brushy Canyon													
7,500.00	0.00	0.00	7,486.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,588.53	0.00	0.00	7,575.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Bone Spring Lime													
7,600.00	0.00	0.00	7,586.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,700.00	0.00	0.00	7,686.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,800.00	0.00	0.00	7,786.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
7,808.53	0.00	0.00	7,795.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
Leonard/Avalon Sand													
7,900.00	0.00	0.00	7,886.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,000.00	0.00	0.00	7,986.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,100.00	0.00	0.00	8,086.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,200.00	0.00	0.00	8,186.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,300.00	0.00	0.00	8,286.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,400.00	0.00	0.00	8,386.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,500.00	0.00	0.00	8,486.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,600.00	0.00	0.00	8,586.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,700.00	0.00	0.00	8,686.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,800.00	0.00	0.00	8,786.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
8,900.00	0.00	0.00	8,886.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,000.00	0.00	0.00	8,986.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,100.00	0.00	0.00	9,086.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,110.53	0.00	0.00	9,097.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
1st Bone Spring Sand													
9,200.00	0.00	0.00	9,186.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,300.00	0.00	0.00	9,286.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,400.00	0.00	0.00	9,386.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,500.00	0.00	0.00	9,486.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,600.00	0.00	0.00	9,586.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,646.53	0.00	0.00	9,633.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
2nd Bone Spring Sand													
9,700.00	0.00	0.00	9,686.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,800.00	0.00	0.00	9,786.47	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
9,856.29	0.00	0.00	9,842.76	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076	-239.53	0.00	0.00	0.00
KOP - Start 10.00°/100' DLS													
9,900.00	4.37	359.38	9,886.43	-235.60	210.36	623,692.92	800,353.65	32.7117449	-103.4912076	-237.87	10.00	10.00	0.00
9,950.00	9.37	359.38	9,936.06	-229.62	210.30	623,698.90	800,353.59	32.7117614	-103.4912077	-231.89	10.00	10.00	0.00
10,000.00	14.37	359.38	9,984.97	-219.34	210.19	623,709.18	800,353.48	32.7117896	-103.4912078	-221.60	10.00	10.00	0.00
10,050.00	19.37	359.38	10,032.80	-204.84	210.03	623,723.68	800,353.32	32.7118295	-103.4912079	-207.10	10.00	10.00	0.00
10,100.00	24.37	359.38	10,079.19	-186.22	209.83	623,742.30	800,353.12	32.7118807	-103.4912081	-188.48	10.00	10.00	0.00
10,150.00	29.37	359.38	10,123.78	-163.63	209.58	623,764.89	800,352.87	32.7119428	-103.4912083	-165.88	10.00	10.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,194.90	33.86	359.38	10,162.00	-140.10	209.33	623,788.42	800,352.62	32.7120074	-103.4912085	-142.35	10.00	10.00	0.00
3rd Bone Spring Carb													
10,200.00	34.37	359.38	10,166.23	-137.24	209.30	623,791.28	800,352.59	32.7120153	-103.4912085	-139.49	10.00	10.00	0.00
10,250.00	39.37	359.38	10,206.21	-107.25	208.97	623,821.27	800,352.26	32.7120977	-103.4912088	-109.50	10.00	10.00	0.00
10,300.00	44.37	359.38	10,243.43	-73.88	208.61	623,854.64	800,351.90	32.7121894	-103.4912091	-76.14	10.00	10.00	0.00
10,350.00	49.37	359.38	10,277.60	-37.41	208.22	623,891.11	800,351.51	32.7122897	-103.4912095	-39.66	10.00	10.00	0.00
10,377.50	52.12	359.38	10,295.00	-16.12	207.99	623,912.40	800,351.28	32.7123482	-103.4912097	-18.37	10.00	10.00	0.00
3rd Bone Spring Sand													
10,400.00	54.37	359.38	10,308.47	1.91	207.79	623,930.43	800,351.08	32.7123978	-103.4912098	-0.34	10.00	10.00	0.00
10,450.00	59.37	359.38	10,335.78	43.77	207.34	623,972.29	800,350.63	32.7125128	-103.4912102	41.52	10.00	10.00	0.00
10,500.00	64.37	359.38	10,359.35	87.84	206.86	624,016.36	800,350.15	32.7126340	-103.4912106	85.60	10.00	10.00	0.00
10,550.00	69.37	359.38	10,378.98	133.81	206.36	624,062.33	800,349.65	32.7127603	-103.4912111	131.57	10.00	10.00	0.00
10,600.00	74.37	359.38	10,394.53	181.31	205.85	624,109.83	800,349.14	32.7128909	-103.4912115	179.07	10.00	10.00	0.00
10,606.29	75.00	359.38	10,396.19	187.37	205.78	624,115.89	800,349.07	32.7129075	-103.4912116	185.13	10.00	10.00	0.00
75° Inc - 10606.29' MD/10396.20' TVD													
10,700.00	79.69	359.38	10,416.72	278.78	204.80	624,207.30	800,348.09	32.7131588	-103.4912124	276.54	5.00	5.00	0.00
10,768.78	83.12	359.38	10,427.00	346.76	204.06	624,275.28	800,347.35	32.7133456	-103.4912131	344.54	5.00	5.00	0.00
3rd Bone Spring Sand Target													
10,800.00	84.69	359.38	10,430.32	377.81	203.73	624,306.33	800,347.02	32.7134310	-103.4912133	375.58	5.00	5.00	0.00
10,900.00	89.69	359.38	10,435.22	477.65	202.65	624,406.17	800,345.94	32.7137054	-103.4912143	475.43	5.00	5.00	0.00
11,001.42	94.76	359.38	10,431.29	578.96	201.56	624,507.48	800,344.85	32.7139838	-103.4912152	576.74	5.00	5.00	0.00
LP - 11001.42' MD													
11,100.00	94.76	359.38	10,423.12	677.19	200.51	624,605.71	800,343.80	32.7142539	-103.4912161	674.98	0.00	0.00	0.00
11,200.00	94.76	359.38	10,414.83	776.84	199.44	624,705.36	800,342.73	32.7145278	-103.4912170	774.64	0.00	0.00	0.00
11,300.00	94.76	359.38	10,406.54	876.49	198.37	624,805.01	800,341.66	32.7148017	-103.4912179	874.29	0.00	0.00	0.00
11,400.00	94.76	359.38	10,398.24	976.14	197.29	624,904.66	800,340.58	32.7150756	-103.4912188	973.95	0.00	0.00	0.00
11,500.00	94.76	359.38	10,389.95	1,075.79	196.22	625,004.31	800,339.51	32.7153495	-103.4912197	1,073.60	0.00	0.00	0.00
11,600.00	94.76	359.38	10,381.66	1,175.44	195.15	625,103.96	800,338.44	32.7156234	-103.4912206	1,173.26	0.00	0.00	0.00
11,700.00	94.76	359.38	10,373.37	1,275.09	194.08	625,203.61	800,337.37	32.7158973	-103.4912215	1,272.92	0.00	0.00	0.00
11,800.00	94.76	359.38	10,365.07	1,374.74	193.01	625,303.26	800,336.30	32.7161712	-103.4912224	1,372.57	0.00	0.00	0.00
11,900.00	94.76	359.38	10,356.78	1,474.39	191.94	625,402.91	800,335.23	32.7164451	-103.4912233	1,472.23	0.00	0.00	0.00
12,000.00	94.76	359.38	10,348.49	1,574.04	190.87	625,502.56	800,334.16	32.7167190	-103.4912243	1,571.88	0.00	0.00	0.00
12,100.00	94.76	359.38	10,340.20	1,673.69	189.80	625,602.21	800,333.09	32.7169929	-103.4912252	1,671.54	0.00	0.00	0.00
12,200.00	94.76	359.38	10,331.90	1,773.34	188.73	625,701.86	800,332.02	32.7172668	-103.4912261	1,771.19	0.00	0.00	0.00
12,300.00	94.76	359.38	10,323.61	1,872.99	187.66	625,801.51	800,330.95	32.7175407	-103.4912270	1,870.85	0.00	0.00	0.00
12,400.00	94.76	359.38	10,315.32	1,972.64	186.59	625,901.16	800,329.88	32.7178146	-103.4912279	1,970.50	0.00	0.00	0.00
12,500.00	94.76	359.38	10,307.03	2,072.29	185.52	626,000.81	800,328.81	32.7180885	-103.4912288	2,070.16	0.00	0.00	0.00
12,600.00	94.76	359.38	10,298.73	2,171.94	184.45	626,100.46	800,327.74	32.7183624	-103.4912297	2,169.82	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Geo Coordinates (°)		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
12,700.00	94.76	359.38	10,290.44	2,271.59	183.37	626,200.11	800,326.66	32.7186363	-103.4912306	2,269.47	0.00	0.00	0.00
12,800.00	94.76	359.38	10,282.15	2,371.24	182.30	626,299.76	800,325.59	32.7189102	-103.4912315	2,369.13	0.00	0.00	0.00
12,900.00	94.76	359.38	10,273.86	2,470.89	181.23	626,399.41	800,324.52	32.7191841	-103.4912324	2,468.78	0.00	0.00	0.00
13,000.00	94.76	359.38	10,265.56	2,570.54	180.16	626,499.06	800,323.45	32.7194580	-103.4912333	2,568.44	0.00	0.00	0.00
13,100.00	94.76	359.38	10,257.27	2,670.19	179.09	626,598.71	800,322.38	32.7197319	-103.4912342	2,668.09	0.00	0.00	0.00
13,200.00	94.76	359.38	10,248.98	2,769.84	178.02	626,698.36	800,321.31	32.7200058	-103.4912351	2,767.75	0.00	0.00	0.00
13,300.00	94.76	359.38	10,240.69	2,869.49	176.95	626,798.01	800,320.24	32.7202797	-103.4912360	2,867.41	0.00	0.00	0.00
13,400.00	94.76	359.38	10,232.40	2,969.14	175.88	626,897.66	800,319.17	32.7205536	-103.4912370	2,967.06	0.00	0.00	0.00
13,500.00	94.76	359.38	10,224.10	3,068.79	174.81	626,997.31	800,318.10	32.7208275	-103.4912379	3,066.72	0.00	0.00	0.00
13,600.00	94.76	359.38	10,215.81	3,168.44	173.74	627,096.96	800,317.03	32.7211014	-103.4912388	3,166.37	0.00	0.00	0.00
13,700.00	94.76	359.38	10,207.52	3,268.09	172.67	627,196.61	800,315.96	32.7213753	-103.4912397	3,266.03	0.00	0.00	0.00
13,800.00	94.76	359.38	10,199.23	3,367.74	171.60	627,296.26	800,314.89	32.7216492	-103.4912406	3,365.68	0.00	0.00	0.00
13,900.00	94.76	359.38	10,190.93	3,467.39	170.53	627,395.91	800,313.82	32.7219231	-103.4912415	3,465.34	0.00	0.00	0.00
14,000.00	94.76	359.38	10,182.64	3,567.04	169.46	627,495.56	800,312.75	32.7221970	-103.4912424	3,564.99	0.00	0.00	0.00
14,100.00	94.76	359.38	10,174.35	3,666.69	168.38	627,595.21	800,311.67	32.7224709	-103.4912433	3,664.65	0.00	0.00	0.00
14,200.00	94.76	359.38	10,166.06	3,766.34	167.31	627,694.86	800,310.60	32.7227448	-103.4912442	3,764.31	0.00	0.00	0.00
14,300.00	94.76	359.38	10,157.76	3,865.99	166.24	627,794.51	800,309.53	32.7230187	-103.4912451	3,863.96	0.00	0.00	0.00
14,400.00	94.76	359.38	10,149.47	3,965.64	165.17	627,894.16	800,308.46	32.7232926	-103.4912460	3,963.62	0.00	0.00	0.00
14,500.00	94.76	359.38	10,141.18	4,065.29	164.10	627,993.81	800,307.39	32.7235665	-103.4912469	4,063.27	0.00	0.00	0.00
14,600.00	94.76	359.38	10,132.89	4,164.94	163.03	628,093.46	800,306.32	32.7238404	-103.4912478	4,162.93	0.00	0.00	0.00
14,700.00	94.76	359.38	10,124.59	4,264.59	161.96	628,193.11	800,305.25	32.7241143	-103.4912487	4,262.58	0.00	0.00	0.00
14,800.00	94.76	359.38	10,116.30	4,364.24	160.89	628,292.76	800,304.18	32.7243882	-103.4912497	4,362.24	0.00	0.00	0.00
14,900.00	94.76	359.38	10,108.01	4,463.89	159.82	628,392.41	800,303.11	32.7246621	-103.4912506	4,461.89	0.00	0.00	0.00
15,000.00	94.76	359.38	10,099.72	4,563.54	158.75	628,492.06	800,302.04	32.7249360	-103.4912515	4,561.55	0.00	0.00	0.00
15,100.00	94.76	359.38	10,091.42	4,663.19	157.68	628,591.71	800,300.97	32.7252099	-103.4912524	4,661.21	0.00	0.00	0.00
15,200.00	94.76	359.38	10,083.13	4,762.84	156.61	628,691.35	800,299.90	32.7254838	-103.4912533	4,760.86	0.00	0.00	0.00
15,300.00	94.76	359.38	10,074.84	4,862.48	155.54	628,791.00	800,298.83	32.7257577	-103.4912542	4,860.52	0.00	0.00	0.00
15,400.00	94.76	359.38	10,066.55	4,962.13	154.46	628,890.65	800,297.75	32.7260316	-103.4912551	4,960.17	0.00	0.00	0.00
15,500.00	94.76	359.38	10,058.26	5,061.78	153.39	628,990.30	800,296.68	32.7263055	-103.4912560	5,059.83	0.00	0.00	0.00
15,600.00	94.76	359.38	10,049.96	5,161.43	152.32	629,089.95	800,295.61	32.7265794	-103.4912569	5,159.48	0.00	0.00	0.00
15,700.00	94.76	359.38	10,041.67	5,261.08	151.25	629,189.60	800,294.54	32.7268533	-103.4912578	5,259.14	0.00	0.00	0.00
15,800.00	94.76	359.38	10,033.38	5,360.73	150.18	629,289.25	800,293.47	32.7271272	-103.4912587	5,358.80	0.00	0.00	0.00
15,900.00	94.76	359.38	10,025.09	5,460.38	149.11	629,388.90	800,292.40	32.7274011	-103.4912596	5,458.45	0.00	0.00	0.00
16,000.00	94.76	359.38	10,016.79	5,560.03	148.04	629,488.55	800,291.33	32.7276750	-103.4912605	5,558.11	0.00	0.00	0.00
16,100.00	94.76	359.38	10,008.50	5,659.68	146.97	629,588.20	800,290.26	32.7279489	-103.4912614	5,657.76	0.00	0.00	0.00
16,200.00	94.76	359.38	10,000.21	5,759.33	145.90	629,687.85	800,289.19	32.7282228	-103.4912624	5,757.42	0.00	0.00	0.00
16,300.00	94.76	359.38	9,991.92	5,858.98	144.83	629,787.50	800,288.12	32.7284967	-103.4912633	5,857.07	0.00	0.00	0.00
16,400.00	94.76	359.38	9,983.62	5,958.63	143.76	629,887.15	800,287.05	32.7287706	-103.4912642	5,956.73	0.00	0.00	0.00

Total Directional Planned Survey Report



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Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
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Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Geo Coordinates Latitude (°)	Geo Coordinates Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,500.00	94.76	359.38	9,975.33	6,058.28	142.69	629,986.80	800,285.98	32.7290445	-103.4912651	6,056.38	0.00	0.00	0.00
16,600.00	94.76	359.38	9,967.04	6,157.93	141.62	630,086.45	800,284.91	32.7293184	-103.4912660	6,156.04	0.00	0.00	0.00
16,700.00	94.76	359.38	9,958.75	6,257.58	140.55	630,186.10	800,283.84	32.7295923	-103.4912669	6,255.70	0.00	0.00	0.00
16,800.00	94.76	359.38	9,950.45	6,357.23	139.47	630,285.75	800,282.76	32.7298662	-103.4912678	6,355.35	0.00	0.00	0.00
16,900.00	94.76	359.38	9,942.16	6,456.88	138.40	630,385.40	800,281.69	32.7301401	-103.4912687	6,455.01	0.00	0.00	0.00
17,000.00	94.76	359.38	9,933.87	6,556.53	137.33	630,485.05	800,280.62	32.7304140	-103.4912696	6,554.66	0.00	0.00	0.00
17,100.00	94.76	359.38	9,925.58	6,656.18	136.26	630,584.70	800,279.55	32.7306879	-103.4912705	6,654.32	0.00	0.00	0.00
17,200.00	94.76	359.38	9,917.29	6,755.83	135.19	630,684.35	800,278.48	32.7309618	-103.4912714	6,753.97	0.00	0.00	0.00
17,300.00	94.76	359.38	9,908.99	6,855.48	134.12	630,784.00	800,277.41	32.7312357	-103.4912723	6,853.63	0.00	0.00	0.00
17,400.00	94.76	359.38	9,900.70	6,955.13	133.05	630,883.65	800,276.34	32.7315096	-103.4912732	6,953.28	0.00	0.00	0.00
17,500.00	94.76	359.38	9,892.41	7,054.78	131.98	630,983.30	800,275.27	32.7317835	-103.4912741	7,052.94	0.00	0.00	0.00
17,600.00	94.76	359.38	9,884.12	7,154.43	130.91	631,082.95	800,274.20	32.7320574	-103.4912750	7,152.60	0.00	0.00	0.00
17,700.00	94.76	359.38	9,875.82	7,254.08	129.84	631,182.60	800,273.13	32.7323313	-103.4912760	7,252.25	0.00	0.00	0.00
17,800.00	94.76	359.38	9,867.53	7,353.73	128.77	631,282.25	800,272.06	32.7326052	-103.4912769	7,351.91	0.00	0.00	0.00
17,900.00	94.76	359.38	9,859.24	7,453.38	127.70	631,381.90	800,270.99	32.7328791	-103.4912778	7,451.56	0.00	0.00	0.00
18,000.00	94.76	359.38	9,850.95	7,553.03	126.63	631,481.55	800,269.92	32.7331530	-103.4912787	7,551.22	0.00	0.00	0.00
18,100.00	94.76	359.38	9,842.65	7,652.68	125.55	631,581.20	800,268.84	32.7334269	-103.4912796	7,650.87	0.00	0.00	0.00
18,200.00	94.76	359.38	9,834.36	7,752.33	124.48	631,680.85	800,267.77	32.7337008	-103.4912805	7,750.53	0.00	0.00	0.00
18,300.00	94.76	359.38	9,826.07	7,851.98	123.41	631,780.50	800,266.70	32.7339747	-103.4912814	7,850.18	0.00	0.00	0.00
18,400.00	94.76	359.38	9,817.78	7,951.63	122.34	631,880.15	800,265.63	32.7342486	-103.4912823	7,949.84	0.00	0.00	0.00
18,500.00	94.76	359.38	9,809.48	8,051.28	121.27	631,979.80	800,264.56	32.7345225	-103.4912832	8,049.50	0.00	0.00	0.00
18,600.00	94.76	359.38	9,801.19	8,150.93	120.20	632,079.45	800,263.49	32.7347964	-103.4912841	8,149.15	0.00	0.00	0.00
18,700.00	94.76	359.38	9,792.90	8,250.58	119.13	632,179.10	800,262.42	32.7350703	-103.4912850	8,248.81	0.00	0.00	0.00
18,800.00	94.76	359.38	9,784.61	8,350.23	118.06	632,278.75	800,261.35	32.7353442	-103.4912859	8,348.46	0.00	0.00	0.00
18,900.00	94.76	359.38	9,776.31	8,449.88	116.99	632,378.40	800,260.28	32.7356181	-103.4912868	8,448.12	0.00	0.00	0.00
19,000.00	94.76	359.38	9,768.02	8,549.53	115.92	632,478.05	800,259.21	32.7358920	-103.4912877	8,547.77	0.00	0.00	0.00
19,100.00	94.76	359.38	9,759.73	8,649.18	114.85	632,577.70	800,258.14	32.7361659	-103.4912886	8,647.43	0.00	0.00	0.00
19,200.00	94.76	359.38	9,751.44	8,748.83	113.78	632,677.35	800,257.07	32.7364398	-103.4912895	8,747.09	0.00	0.00	0.00
19,300.00	94.76	359.38	9,743.15	8,848.48	112.71	632,777.00	800,256.00	32.7367137	-103.4912905	8,846.74	0.00	0.00	0.00
19,400.00	94.76	359.38	9,734.85	8,948.13	111.64	632,876.65	800,254.93	32.7369876	-103.4912914	8,946.40	0.00	0.00	0.00
19,500.00	94.76	359.38	9,726.56	9,047.78	110.56	632,976.30	800,253.85	32.7372615	-103.4912923	9,046.05	0.00	0.00	0.00
19,600.00	94.76	359.38	9,718.27	9,147.43	109.49	633,075.95	800,252.78	32.7375354	-103.4912932	9,145.71	0.00	0.00	0.00
19,700.00	94.76	359.38	9,709.98	9,247.08	108.42	633,175.60	800,251.71	32.7378093	-103.4912941	9,245.36	0.00	0.00	0.00
19,800.00	94.76	359.38	9,701.68	9,346.73	107.35	633,275.25	800,250.64	32.7380832	-103.4912950	9,345.02	0.00	0.00	0.00
19,900.00	94.76	359.38	9,693.39	9,446.38	106.28	633,374.90	800,249.57	32.7383571	-103.4912959	9,444.67	0.00	0.00	0.00
20,000.00	94.76	359.38	9,685.10	9,546.03	105.21	633,474.55	800,248.50	32.7386310	-103.4912968	9,544.33	0.00	0.00	0.00
20,100.00	94.76	359.38	9,676.81	9,645.68	104.14	633,574.20	800,247.43	32.7389049	-103.4912977	9,643.99	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Geo Coordinates (°)		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
20,200.00	94.76	359.38	9,668.51	9,745.33	103.07	633,673.85	800,246.36	32.7391788	-103.4912986	9,743.64	0.00	0.00	0.00
20,300.00	94.76	359.38	9,660.22	9,844.98	102.00	633,773.50	800,245.29	32.7394527	-103.4912995	9,843.30	0.00	0.00	0.00
20,400.00	94.76	359.38	9,651.93	9,944.63	100.93	633,873.15	800,244.22	32.7397265	-103.4913004	9,942.95	0.00	0.00	0.00
20,500.00	94.76	359.38	9,643.64	10,044.28	99.86	633,972.80	800,243.15	32.7400004	-103.4913013	10,042.61	0.00	0.00	0.00
20,600.00	94.76	359.38	9,635.34	10,143.93	98.79	634,072.45	800,242.08	32.7402743	-103.4913022	10,142.26	0.00	0.00	0.00
20,700.00	94.76	359.38	9,627.05	10,243.58	97.72	634,172.10	800,241.01	32.7405482	-103.4913031	10,241.92	0.00	0.00	0.00
20,800.00	94.76	359.38	9,618.76	10,343.23	96.64	634,271.75	800,239.93	32.7408221	-103.4913040	10,341.57	0.00	0.00	0.00
20,900.00	94.76	359.38	9,610.47	10,442.88	95.57	634,371.40	800,238.86	32.7410960	-103.4913050	10,441.23	0.00	0.00	0.00
21,000.00	94.76	359.38	9,602.18	10,542.53	94.50	634,471.05	800,237.79	32.7413699	-103.4913059	10,540.89	0.00	0.00	0.00
21,100.00	94.76	359.38	9,593.88	10,642.18	93.43	634,570.70	800,236.72	32.7416438	-103.4913068	10,640.54	0.00	0.00	0.00
21,200.00	94.76	359.38	9,585.59	10,741.83	92.36	634,670.35	800,235.65	32.7419177	-103.4913077	10,740.20	0.00	0.00	0.00
21,300.00	94.76	359.38	9,577.30	10,841.48	91.29	634,770.00	800,234.58	32.7421916	-103.4913086	10,839.85	0.00	0.00	0.00
21,400.00	94.76	359.38	9,569.01	10,941.13	90.22	634,869.64	800,233.51	32.7424655	-103.4913095	10,939.51	0.00	0.00	0.00
21,500.00	94.76	359.38	9,560.71	11,040.77	89.15	634,969.29	800,232.44	32.7427394	-103.4913104	11,039.16	0.00	0.00	0.00
21,600.00	94.76	359.38	9,552.42	11,140.42	88.08	635,068.94	800,231.37	32.7430133	-103.4913113	11,138.82	0.00	0.00	0.00
21,700.00	94.76	359.38	9,544.13	11,240.07	87.01	635,168.59	800,230.30	32.7432872	-103.4913122	11,238.48	0.00	0.00	0.00
21,800.00	94.76	359.38	9,535.84	11,339.72	85.94	635,268.24	800,229.23	32.7435611	-103.4913131	11,338.13	0.00	0.00	0.00
21,900.00	94.76	359.38	9,527.54	11,439.37	84.87	635,367.89	800,228.16	32.7438350	-103.4913140	11,437.79	0.00	0.00	0.00
22,000.00	94.76	359.38	9,519.25	11,539.02	83.80	635,467.54	800,227.09	32.7441089	-103.4913149	11,537.44	0.00	0.00	0.00
22,100.00	94.76	359.38	9,510.96	11,638.67	82.73	635,567.19	800,226.02	32.7443828	-103.4913158	11,637.10	0.00	0.00	0.00
22,200.00	94.76	359.38	9,502.67	11,738.32	81.65	635,666.84	800,224.94	32.7446567	-103.4913167	11,736.75	0.00	0.00	0.00
22,300.00	94.76	359.38	9,494.37	11,837.97	80.58	635,766.49	800,223.87	32.7449306	-103.4913176	11,836.41	0.00	0.00	0.00
22,400.00	94.76	359.38	9,486.08	11,937.62	79.51	635,866.14	800,222.80	32.7452045	-103.4913185	11,936.06	0.00	0.00	0.00
22,500.00	94.76	359.38	9,477.79	12,037.27	78.44	635,965.79	800,221.73	32.7454784	-103.4913194	12,035.72	0.00	0.00	0.00
22,600.00	94.76	359.38	9,469.50	12,136.92	77.37	636,065.44	800,220.66	32.7457523	-103.4913204	12,135.38	0.00	0.00	0.00
22,700.00	94.76	359.38	9,461.20	12,236.57	76.30	636,165.09	800,219.59	32.7460262	-103.4913213	12,235.03	0.00	0.00	0.00
22,800.00	94.76	359.38	9,452.91	12,336.22	75.23	636,264.74	800,218.52	32.7463001	-103.4913222	12,334.69	0.00	0.00	0.00
22,900.00	94.76	359.38	9,444.62	12,435.87	74.16	636,364.39	800,217.45	32.7465740	-103.4913231	12,434.34	0.00	0.00	0.00
23,000.00	94.76	359.38	9,436.33	12,535.52	73.09	636,464.04	800,216.38	32.7468479	-103.4913240	12,534.00	0.00	0.00	0.00
23,100.00	94.76	359.38	9,428.04	12,635.17	72.02	636,563.69	800,215.31	32.7471218	-103.4913249	12,633.65	0.00	0.00	0.00
23,200.00	94.76	359.38	9,419.74	12,734.82	70.95	636,663.34	800,214.24	32.7473957	-103.4913258	12,733.31	0.00	0.00	0.00
23,300.00	94.76	359.38	9,411.45	12,834.47	69.88	636,762.99	800,213.17	32.7476696	-103.4913267	12,832.96	0.00	0.00	0.00
23,400.00	94.76	359.38	9,403.16	12,934.12	68.81	636,862.64	800,212.10	32.7479435	-103.4913276	12,932.62	0.00	0.00	0.00
23,500.00	94.76	359.38	9,394.87	13,033.77	67.73	636,962.29	800,211.02	32.7482174	-103.4913285	13,032.28	0.00	0.00	0.00
23,600.00	94.76	359.38	9,386.57	13,133.42	66.66	637,061.94	800,209.95	32.7484913	-103.4913294	13,131.93	0.00	0.00	0.00
23,700.00	94.76	359.38	9,378.28	13,233.07	65.59	637,161.59	800,208.88	32.7487652	-103.4913303	13,231.59	0.00	0.00	0.00
23,800.00	94.76	359.38	9,369.99	13,332.72	64.52	637,261.24	800,207.81	32.7490391	-103.4913312	13,331.24	0.00	0.00	0.00
23,900.00	94.76	359.38	9,361.70	13,432.37	63.45	637,360.89	800,206.74	32.7493130	-103.4913321	13,430.90	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey													
Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates (usft)		Map Coordinates (usft)		Geo Coordinates (°)		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
24,000.00	94.76	359.38	9,353.40	13,532.02	62.38	637,460.54	800,205.67	32.7495869	-103.4913330	13,530.55	0.00	0.00	0.00
24,100.00	94.76	359.38	9,345.11	13,631.67	61.31	637,560.19	800,204.60	32.7498608	-103.4913339	13,630.21	0.00	0.00	0.00
24,200.00	94.76	359.38	9,336.82	13,731.32	60.24	637,659.84	800,203.53	32.7501347	-103.4913348	13,729.86	0.00	0.00	0.00
24,300.00	94.76	359.38	9,328.53	13,830.97	59.17	637,759.49	800,202.46	32.7504086	-103.4913358	13,829.52	0.00	0.00	0.00
24,400.00	94.76	359.38	9,320.23	13,930.62	58.10	637,859.14	800,201.39	32.7506825	-103.4913367	13,929.18	0.00	0.00	0.00
24,500.00	94.76	359.38	9,311.94	14,030.27	57.03	637,958.79	800,200.32	32.7509564	-103.4913376	14,028.83	0.00	0.00	0.00
24,600.00	94.76	359.38	9,303.65	14,129.92	55.96	638,058.44	800,199.25	32.7512303	-103.4913385	14,128.49	0.00	0.00	0.00
24,700.00	94.76	359.38	9,295.36	14,229.57	54.89	638,158.09	800,198.18	32.7515042	-103.4913394	14,228.14	0.00	0.00	0.00
24,800.00	94.76	359.38	9,287.07	14,329.22	53.82	638,257.74	800,197.11	32.7517781	-103.4913403	14,327.80	0.00	0.00	0.00
24,900.00	94.76	359.38	9,278.77	14,428.87	52.74	638,357.39	800,196.03	32.7520520	-103.4913412	14,427.45	0.00	0.00	0.00
25,000.00	94.76	359.38	9,270.48	14,528.52	51.67	638,457.04	800,194.96	32.7523259	-103.4913421	14,527.11	0.00	0.00	0.00
25,100.00	94.76	359.38	9,262.19	14,628.17	50.60	638,556.69	800,193.89	32.7525998	-103.4913430	14,626.77	0.00	0.00	0.00
25,200.00	94.76	359.38	9,253.90	14,727.82	49.53	638,656.34	800,192.82	32.7528737	-103.4913439	14,726.42	0.00	0.00	0.00
25,300.00	94.76	359.38	9,245.60	14,827.47	48.46	638,755.99	800,191.75	32.7531476	-103.4913448	14,826.08	0.00	0.00	0.00
25,400.00	94.76	359.38	9,237.31	14,927.12	47.39	638,855.64	800,190.68	32.7534215	-103.4913457	14,925.73	0.00	0.00	0.00
25,500.00	94.76	359.38	9,229.02	15,026.77	46.32	638,955.29	800,189.61	32.7536954	-103.4913466	15,025.39	0.00	0.00	0.00
25,600.00	94.76	359.38	9,220.73	15,126.42	45.25	639,054.94	800,188.54	32.7539693	-103.4913475	15,125.04	0.00	0.00	0.00
25,700.00	94.76	359.38	9,212.43	15,226.07	44.18	639,154.59	800,187.47	32.7542432	-103.4913484	15,224.70	0.00	0.00	0.00
25,800.00	94.76	359.38	9,204.14	15,325.72	43.11	639,254.24	800,186.40	32.7545171	-103.4913493	15,324.35	0.00	0.00	0.00
25,900.00	94.76	359.38	9,195.85	15,425.37	42.04	639,353.89	800,185.33	32.7547910	-103.4913502	15,424.01	0.00	0.00	0.00
26,000.00	94.76	359.38	9,187.56	15,525.02	40.97	639,453.54	800,184.26	32.7550649	-103.4913511	15,523.67	0.00	0.00	0.00
26,100.00	94.76	359.38	9,179.26	15,624.67	39.90	639,553.19	800,183.19	32.7553388	-103.4913521	15,623.32	0.00	0.00	0.00
26,200.00	94.76	359.38	9,170.97	15,724.32	38.82	639,652.84	800,182.11	32.7556127	-103.4913530	15,722.98	0.00	0.00	0.00
26,300.00	94.76	359.38	9,162.68	15,823.97	37.75	639,752.49	800,181.04	32.7558866	-103.4913539	15,822.63	0.00	0.00	0.00
26,400.00	94.76	359.38	9,154.39	15,923.62	36.68	639,852.14	800,179.97	32.7561605	-103.4913548	15,922.29	0.00	0.00	0.00
26,500.00	94.76	359.38	9,146.09	16,023.27	35.61	639,951.79	800,178.90	32.7564344	-103.4913557	16,021.94	0.00	0.00	0.00
26,600.00	94.76	359.38	9,137.80	16,122.92	34.54	640,051.44	800,177.83	32.7567083	-103.4913566	16,121.60	0.00	0.00	0.00
26,700.00	94.76	359.38	9,129.51	16,222.57	33.47	640,151.09	800,176.76	32.7569822	-103.4913575	16,221.25	0.00	0.00	0.00
26,800.00	94.76	359.38	9,121.22	16,322.22	32.40	640,250.74	800,175.69	32.7572561	-103.4913584	16,320.91	0.00	0.00	0.00
26,900.00	94.76	359.38	9,112.93	16,421.87	31.33	640,350.39	800,174.62	32.7575300	-103.4913593	16,420.57	0.00	0.00	0.00
27,000.00	94.76	359.38	9,104.63	16,521.52	30.26	640,450.04	800,173.55	32.7578039	-103.4913602	16,520.22	0.00	0.00	0.00
27,100.00	94.76	359.38	9,096.34	16,621.17	29.19	640,549.69	800,172.48	32.7580778	-103.4913611	16,619.88	0.00	0.00	0.00
27,200.00	94.76	359.38	9,088.05	16,720.82	28.12	640,649.34	800,171.41	32.7583517	-103.4913620	16,719.53	0.00	0.00	0.00
27,300.00	94.76	359.38	9,079.76	16,820.47	27.05	640,748.99	800,170.34	32.7586256	-103.4913629	16,819.19	0.00	0.00	0.00
27,400.00	94.76	359.38	9,071.46	16,920.12	25.98	640,848.64	800,169.27	32.7588995	-103.4913638	16,918.84	0.00	0.00	0.00
27,500.00	94.76	359.38	9,063.17	17,019.77	24.90	640,948.28	800,168.19	32.7591734	-103.4913647	17,018.50	0.00	0.00	0.00
27,600.00	94.76	359.38	9,054.88	17,119.42	23.83	641,047.93	800,167.12	32.7594473	-103.4913656	17,118.15	0.00	0.00	0.00

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
27,700.00	94.76	359.38	9,046.59	17,219.06	22.76	641,147.58	800,166.05	32.7597212	-103.4913665	17,217.81	0.00	0.00	0.00
27,800.00	94.76	359.38	9,038.29	17,318.71	21.69	641,247.23	800,164.98	32.7599951	-103.4913674	17,317.47	0.00	0.00	0.00
27,900.00	94.76	359.38	9,030.00	17,418.36	20.62	641,346.88	800,163.91	32.7602690	-103.4913683	17,417.12	0.00	0.00	0.00
28,000.00	94.76	359.38	9,021.71	17,518.01	19.55	641,446.53	800,162.84	32.7605429	-103.4913693	17,516.78	0.00	0.00	0.00
28,100.00	94.76	359.38	9,013.42	17,617.66	18.48	641,546.18	800,161.77	32.7608168	-103.4913702	17,616.43	0.00	0.00	0.00
28,200.00	94.76	359.38	9,005.12	17,717.31	17.41	641,645.83	800,160.70	32.7610907	-103.4913711	17,716.09	0.00	0.00	0.00
28,300.00	94.76	359.38	8,996.83	17,816.96	16.34	641,745.48	800,159.63	32.7613646	-103.4913720	17,815.74	0.00	0.00	0.00
28,400.00	94.76	359.38	8,988.54	17,916.61	15.27	641,845.13	800,158.56	32.7616385	-103.4913729	17,915.40	0.00	0.00	0.00
28,500.00	94.76	359.38	8,980.25	18,016.26	14.20	641,944.78	800,157.49	32.7619124	-103.4913738	18,015.06	0.00	0.00	0.00
28,563.28	94.76	359.38	8,975.00	18,079.32	13.52	642,007.84	800,156.81	32.7620857	-103.4913744	18,078.12	0.00	0.00	0.00

TD - 28563.28' MD - LTP/PBHL - 2545' FSL, 925' FEL (BSC 604H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
KOP/LP/FTP (BSC 60)	0.00	0.00	0.00	-237.27	210.38	623,691.25	800,353.67	32.7117403	-103.4912076
- plan misses target center by 317.11usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
LTP/PBHL - 2545' FSI	0.00	0.00	8,975.00	18,079.32	13.52	642,007.84	800,156.81	32.7620857	-103.4913744
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,893.48	1,893.00	Rustler			
1,979.81	1,979.00	A3 Top			
2,078.19	2,077.00	A3 Base (Tamarisk)			
2,160.50	2,159.00	Top Salt/Salado			
5,745.53	5,732.00	Base Salt/Lamar/CTRA_BASE_ANI			
5,860.53	5,847.00	Top Delaware Sands/Bell Canyon			
6,128.53	6,115.00	Cherry Canyon			
6,586.53	6,573.00	Brushy Canyon			
7,426.53	7,413.00	Basal Brushy Canyon			
7,588.53	7,575.00	Bone Spring Lime			
7,808.53	7,795.00	Leonard/Avalon Sand			
9,110.53	9,097.00	1st Bone Spring Sand			
9,646.53	9,633.00	2nd Bone Spring Sand			
10,194.90	10,162.00	3rd Bone Spring Carb			
10,377.50	10,295.00	3rd Bone Spring Sand			
10,768.78	10,427.00	3rd Bone Spring Sand Target			

Total Directional Planned Survey Report



Company: Coterra Energy	Local Co-ordinate Reference: Well Rope State Com 604H
Project: Lea County, NM (NAD 83)	TVD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Site: Rope State Com Pad	MD Reference: GE 3939.1' + KB 23' @ 3962.10usft
Well: Rope State Com 604H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: Plan #2	Database: .Total Directional Production DB

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1600	1600	0	0	Nudge, Build 2.00°/100'
1850	1850	-8	7	Hold - 1849.98' MD/1849.66' TVD
5239	5225	-229	203	Drop, 2.00°/100' DLS
5489	5475	-237	210	Hold - 5488.53' MD/5475.00' TVD
9856	9843	-237	210	KOP - Start 10.00°/100' DLS
10,606	10,396	187	206	75° Inc - 10606.29' MD/10396.20' TVD
11,001	10,431	579	202	LP - 11001.42' MD
28,563	8975	18,079	14	TD - 28563.28' MD

Checked By: _____ Approved By: _____ Date: _____

COMPANY Coterra Energy
 FIELD Lea County, NM (NAD 83)
 SITE Rope State Com Pad
 WELL Rope State Com 604H
 WELLPATH OH
 DESIGN Plan #2
 DEPTHUNT (usft)

WELL INFO

MAP DATUM North American Datum 1983
 MAP SYSTEM US State Plane 1983
 MAP ZONE New Mexico Eastern Zone
 WELL LAT 32.712397
 WELL LON -103.491885
 WELL EW MAI 800143.29
 WELL NS MAP 623928.52
 CONVERGENC 0.45
 MAGMODEL HDGM2026
 DECLINATION 5.98
 NORTH REF Grid
 GROUND ELE\ 3939.1
 KB ELEVN 3962.1
 VS AZI 359.38

SURVEY PROGRAM

1 0.00 - 28563.18 PLAN #2 : MWD+IFR1+MS

SURVEY LIST

Measured Depth	Inclination	Azimuth	Course Length	True Vertical	SubSea TVD	Local N/-S
MD	INC	AZI	CL	TVD	SSTVD	NS
0.00	0.00	0.00	0.00	0.00	3962.10	0.00
100.00	0.00	0.00	100.00	100.00	3862.10	0.00
200.00	0.00	0.00	100.00	200.00	3762.10	0.00
300.00	0.00	0.00	100.00	300.00	3662.10	0.00
400.00	0.00	0.00	100.00	400.00	3562.10	0.00
500.00	0.00	0.00	100.00	500.00	3462.10	0.00
600.00	0.00	0.00	100.00	600.00	3362.10	0.00
700.00	0.00	0.00	100.00	700.00	3262.10	0.00
800.00	0.00	0.00	100.00	800.00	3162.10	0.00
900.00	0.00	0.00	100.00	900.00	3062.10	0.00
1000.00	0.00	0.00	100.00	1000.00	2962.10	0.00
1100.00	0.00	0.00	100.00	1100.00	2862.10	0.00
1200.00	0.00	0.00	100.00	1200.00	2762.10	0.00
1300.00	0.00	0.00	100.00	1300.00	2662.10	0.00

1400.00	0.00	0.00	100.00	1400.00	2562.10	0.00
1500.00	0.00	0.00	100.00	1500.00	2462.10	0.00
1600.00	0.00	0.00	100.00	1600.00	2362.10	0.00
1700.00	2.00	138.44	100.00	1699.98	2262.12	-1.31
1800.00	4.00	138.44	100.00	1799.84	2162.26	-5.22
1849.98	5.00	138.44	49.98	1849.66	2112.44	-8.16
1900.00	5.00	138.44	50.02	1899.49	2062.61	-11.42
2000.00	5.00	138.44	100.00	1999.11	1962.99	-17.94
2100.00	5.00	138.44	100.00	2098.73	1863.37	-24.46
2200.00	5.00	138.44	100.00	2198.35	1763.75	-30.98
2300.00	5.00	138.44	100.00	2297.97	1664.13	-37.50
2400.00	5.00	138.44	100.00	2397.59	1564.51	-44.02
2500.00	5.00	138.44	100.00	2497.21	1464.89	-50.54
2600.00	5.00	138.44	100.00	2596.83	1365.27	-57.06
2700.00	5.00	138.44	100.00	2696.45	1265.65	-63.58
2800.00	5.00	138.44	100.00	2796.07	1166.03	-70.10
2900.00	5.00	138.44	100.00	2895.69	1066.41	-76.62
3000.00	5.00	138.44	100.00	2995.31	966.79	-83.15
3100.00	5.00	138.44	100.00	3094.93	867.17	-89.67
3200.00	5.00	138.44	100.00	3194.55	767.55	-96.19
3300.00	5.00	138.44	100.00	3294.17	667.93	-102.71
3400.00	5.00	138.44	100.00	3393.79	568.31	-109.23
3500.00	5.00	138.44	100.00	3493.41	468.70	-115.75
3600.00	5.00	138.44	100.00	3593.03	369.08	-122.27
3700.00	5.00	138.44	100.00	3692.64	269.46	-128.79
3800.00	5.00	138.44	100.00	3792.26	169.84	-135.31
3900.00	5.00	138.44	100.00	3891.88	70.22	-141.83
4000.00	5.00	138.44	100.00	3991.50	-29.40	-148.35
4100.00	5.00	138.44	100.00	4091.12	-129.02	-154.87
4200.00	5.00	138.44	100.00	4190.74	-228.64	-161.39
4300.00	5.00	138.44	100.00	4290.36	-328.26	-167.92
4400.00	5.00	138.44	100.00	4389.98	-427.88	-174.44
4500.00	5.00	138.44	100.00	4489.60	-527.50	-180.96
4600.00	5.00	138.44	100.00	4589.22	-627.12	-187.48
4700.00	5.00	138.44	100.00	4688.84	-726.74	-194.00
4800.00	5.00	138.44	100.00	4788.46	-826.36	-200.52
4900.00	5.00	138.44	100.00	4888.08	-925.98	-207.04
5000.00	5.00	138.44	100.00	4987.70	-1025.60	-213.56
5100.00	5.00	138.44	100.00	5087.32	-1125.22	-220.08
5200.00	5.00	138.44	100.00	5186.94	-1224.84	-226.60
5238.55	5.00	138.44	38.55	5225.34	-1263.24	-229.12
5300.00	3.77	138.44	61.45	5286.61	-1324.51	-232.63
5400.00	1.77	138.44	100.00	5386.49	-1424.39	-236.25
5488.53	0.00	0.00	88.53	5475.00	-1512.90	-237.27

5500.00	0.00	0.00	11.47	5486.47	-1524.37	-237.27
5600.00	0.00	0.00	100.00	5586.47	-1624.37	-237.27
5700.00	0.00	0.00	100.00	5686.47	-1724.37	-237.27
5800.00	0.00	0.00	100.00	5786.47	-1824.37	-237.27
5900.00	0.00	0.00	100.00	5886.47	-1924.37	-237.27
6000.00	0.00	0.00	100.00	5986.47	-2024.37	-237.27
6100.00	0.00	0.00	100.00	6086.47	-2124.37	-237.27
6200.00	0.00	0.00	100.00	6186.47	-2224.37	-237.27
6300.00	0.00	0.00	100.00	6286.47	-2324.37	-237.27
6400.00	0.00	0.00	100.00	6386.47	-2424.37	-237.27
6500.00	0.00	0.00	100.00	6486.47	-2524.37	-237.27
6600.00	0.00	0.00	100.00	6586.47	-2624.37	-237.27
6700.00	0.00	0.00	100.00	6686.47	-2724.37	-237.27
6800.00	0.00	0.00	100.00	6786.47	-2824.37	-237.27
6900.00	0.00	0.00	100.00	6886.47	-2924.37	-237.27
7000.00	0.00	0.00	100.00	6986.47	-3024.37	-237.27
7100.00	0.00	0.00	100.00	7086.47	-3124.37	-237.27
7200.00	0.00	0.00	100.00	7186.47	-3224.37	-237.27
7300.00	0.00	0.00	100.00	7286.47	-3324.37	-237.27
7400.00	0.00	0.00	100.00	7386.47	-3424.37	-237.27
7500.00	0.00	0.00	100.00	7486.47	-3524.37	-237.27
7600.00	0.00	0.00	100.00	7586.47	-3624.37	-237.27
7700.00	0.00	0.00	100.00	7686.47	-3724.37	-237.27
7800.00	0.00	0.00	100.00	7786.47	-3824.37	-237.27
7900.00	0.00	0.00	100.00	7886.47	-3924.37	-237.27
8000.00	0.00	0.00	100.00	7986.47	-4024.37	-237.27
8100.00	0.00	0.00	100.00	8086.47	-4124.37	-237.27
8200.00	0.00	0.00	100.00	8186.47	-4224.37	-237.27
8300.00	0.00	0.00	100.00	8286.47	-4324.37	-237.27
8400.00	0.00	0.00	100.00	8386.47	-4424.37	-237.27
8500.00	0.00	0.00	100.00	8486.47	-4524.37	-237.27
8600.00	0.00	0.00	100.00	8586.47	-4624.37	-237.27
8700.00	0.00	0.00	100.00	8686.47	-4724.37	-237.27
8800.00	0.00	0.00	100.00	8786.47	-4824.37	-237.27
8900.00	0.00	0.00	100.00	8886.47	-4924.37	-237.27
9000.00	0.00	0.00	100.00	8986.47	-5024.37	-237.27
9100.00	0.00	0.00	100.00	9086.47	-5124.37	-237.27
9200.00	0.00	0.00	100.00	9186.47	-5224.37	-237.27
9300.00	0.00	0.00	100.00	9286.47	-5324.37	-237.27
9400.00	0.00	0.00	100.00	9386.47	-5424.37	-237.27
9500.00	0.00	0.00	100.00	9486.47	-5524.37	-237.27
9600.00	0.00	0.00	100.00	9586.47	-5624.37	-237.27
9700.00	0.00	0.00	100.00	9686.47	-5724.37	-237.27
9800.00	0.00	0.00	100.00	9786.47	-5824.37	-237.27

9856.29	0.00	0.00	56.29	9842.76	-5880.66	-237.27
9900.00	4.37	359.38	43.71	9886.43	-5924.33	-235.60
9950.00	9.37	359.38	50.00	9936.06	-5973.96	-229.62
10000.00	14.37	359.38	50.00	9984.97	-6022.87	-219.34
10050.00	19.37	359.38	50.00	10032.80	-6070.70	-204.84
10100.00	24.37	359.38	50.00	10079.19	-6117.09	-186.22
10150.00	29.37	359.38	50.00	10123.78	-6161.68	-163.63
10200.00	34.37	359.38	50.00	10166.23	-6204.13	-137.24
10250.00	39.37	359.38	50.00	10206.21	-6244.11	-107.25
10300.00	44.37	359.38	50.00	10243.43	-6281.33	-73.89
10350.00	49.37	359.38	50.00	10277.60	-6315.50	-37.41
10400.00	54.37	359.38	50.00	10308.47	-6346.37	1.91
10450.00	59.37	359.38	50.00	10335.78	-6373.68	43.77
10500.00	64.37	359.38	50.00	10359.35	-6397.25	87.84
10550.00	69.37	359.38	50.00	10378.98	-6416.88	133.81
10600.00	74.37	359.38	50.00	10394.53	-6432.43	181.31
10606.29	75.00	359.38	6.29	10396.20	-6434.10	187.37
10700.00	79.69	359.38	93.71	10416.72	-6454.62	278.78
10800.00	84.69	359.38	100.00	10430.32	-6468.22	377.81
10900.00	89.69	359.38	100.00	10435.22	-6473.12	477.65
11001.42	94.76	359.38	101.42	10431.29	-6469.19	578.96
11100.00	94.76	359.38	98.58	10423.12	-6461.02	677.19
11200.00	94.76	359.38	100.00	10414.83	-6452.73	776.84
11300.00	94.76	359.38	100.00	10406.54	-6444.44	876.49
11400.00	94.76	359.38	100.00	10398.24	-6436.14	976.14
11500.00	94.76	359.38	100.00	10389.95	-6427.85	1075.79
11600.00	94.76	359.38	100.00	10381.66	-6419.56	1175.44
11700.00	94.76	359.38	100.00	10373.37	-6411.27	1275.09
11800.00	94.76	359.38	100.00	10365.07	-6402.97	1374.74
11900.00	94.76	359.38	100.00	10356.78	-6394.68	1474.39
12000.00	94.76	359.38	100.00	10348.49	-6386.39	1574.04
12100.00	94.76	359.38	100.00	10340.20	-6378.10	1673.69
12200.00	94.76	359.38	100.00	10331.90	-6369.80	1773.34
12300.00	94.76	359.38	100.00	10323.61	-6361.51	1872.99
12400.00	94.76	359.38	100.00	10315.32	-6353.22	1972.64
12500.00	94.76	359.38	100.00	10307.03	-6344.93	2072.29
12600.00	94.76	359.38	100.00	10298.73	-6336.63	2171.94
12700.00	94.76	359.38	100.00	10290.44	-6328.34	2271.59
12800.00	94.76	359.38	100.00	10282.15	-6320.05	2371.24
12900.00	94.76	359.38	100.00	10273.86	-6311.76	2470.89
13000.00	94.76	359.38	100.00	10265.57	-6303.47	2570.54
13100.00	94.76	359.38	100.00	10257.27	-6295.17	2670.19
13200.00	94.76	359.38	100.00	10248.98	-6286.88	2769.84
13300.00	94.76	359.38	100.00	10240.69	-6278.59	2869.49

13400.00	94.76	359.38	100.00	10232.40	-6270.30	2969.14
13500.00	94.76	359.38	100.00	10224.10	-6262.00	3068.79
13600.00	94.76	359.38	100.00	10215.81	-6253.71	3168.44
13700.00	94.76	359.38	100.00	10207.52	-6245.42	3268.09
13800.00	94.76	359.38	100.00	10199.23	-6237.13	3367.74
13900.00	94.76	359.38	100.00	10190.93	-6228.83	3467.39
14000.00	94.76	359.38	100.00	10182.64	-6220.54	3567.04
14100.00	94.76	359.38	100.00	10174.35	-6212.25	3666.69
14200.00	94.76	359.38	100.00	10166.06	-6203.96	3766.34
14300.00	94.76	359.38	100.00	10157.76	-6195.66	3865.99
14400.00	94.76	359.38	100.00	10149.47	-6187.37	3965.64
14500.00	94.76	359.38	100.00	10141.18	-6179.08	4065.29
14600.00	94.76	359.38	100.00	10132.89	-6170.79	4164.94
14700.00	94.76	359.38	100.00	10124.59	-6162.49	4264.59
14800.00	94.76	359.38	100.00	10116.30	-6154.20	4364.24
14900.00	94.76	359.38	100.00	10108.01	-6145.91	4463.89
15000.00	94.76	359.38	100.00	10099.72	-6137.62	4563.54
15100.00	94.76	359.38	100.00	10091.43	-6129.33	4663.19
15200.00	94.76	359.38	100.00	10083.13	-6121.03	4762.84
15300.00	94.76	359.38	100.00	10074.84	-6112.74	4862.49
15400.00	94.76	359.38	100.00	10066.55	-6104.45	4962.14
15500.00	94.76	359.38	100.00	10058.26	-6096.16	5061.78
15600.00	94.76	359.38	100.00	10049.96	-6087.86	5161.43
15700.00	94.76	359.38	100.00	10041.67	-6079.57	5261.08
15800.00	94.76	359.38	100.00	10033.38	-6071.28	5360.73
15900.00	94.76	359.38	100.00	10025.09	-6062.99	5460.38
16000.00	94.76	359.38	100.00	10016.79	-6054.69	5560.03
16100.00	94.76	359.38	100.00	10008.50	-6046.40	5659.68
16200.00	94.76	359.38	100.00	10000.21	-6038.11	5759.33
16300.00	94.76	359.38	100.00	9991.92	-6029.82	5858.98
16400.00	94.76	359.38	100.00	9983.62	-6021.52	5958.63
16500.00	94.76	359.38	100.00	9975.33	-6013.23	6058.28
16600.00	94.76	359.38	100.00	9967.04	-6004.94	6157.93
16700.00	94.76	359.38	100.00	9958.75	-5996.65	6257.58
16800.00	94.76	359.38	100.00	9950.45	-5988.35	6357.23
16900.00	94.76	359.38	100.00	9942.16	-5980.06	6456.88
17000.00	94.76	359.38	100.00	9933.87	-5971.77	6556.53
17100.00	94.76	359.38	100.00	9925.58	-5963.48	6656.18
17200.00	94.76	359.38	100.00	9917.29	-5955.19	6755.83
17300.00	94.76	359.38	100.00	9908.99	-5946.89	6855.48
17400.00	94.76	359.38	100.00	9900.70	-5938.60	6955.13
17500.00	94.76	359.38	100.00	9892.41	-5930.31	7054.78
17600.00	94.76	359.38	100.00	9884.12	-5922.02	7154.43
17700.00	94.76	359.38	100.00	9875.82	-5913.72	7254.08

17800.00	94.76	359.38	100.00	9867.53	-5905.43	7353.73
17900.00	94.76	359.38	100.00	9859.24	-5897.14	7453.38
18000.00	94.76	359.38	100.00	9850.95	-5888.85	7553.03
18100.00	94.76	359.38	100.00	9842.65	-5880.55	7652.68
18200.00	94.76	359.38	100.00	9834.36	-5872.26	7752.33
18300.00	94.76	359.38	100.00	9826.07	-5863.97	7851.98
18400.00	94.76	359.38	100.00	9817.78	-5855.68	7951.63
18500.00	94.76	359.38	100.00	9809.48	-5847.38	8051.28
18600.00	94.76	359.38	100.00	9801.19	-5839.09	8150.93
18700.00	94.76	359.38	100.00	9792.90	-5830.80	8250.58
18800.00	94.76	359.38	100.00	9784.61	-5822.51	8350.23
18900.00	94.76	359.38	100.00	9776.32	-5814.22	8449.88
19000.00	94.76	359.38	100.00	9768.02	-5805.92	8549.53
19100.00	94.76	359.38	100.00	9759.73	-5797.63	8649.18
19200.00	94.76	359.38	100.00	9751.44	-5789.34	8748.83
19300.00	94.76	359.38	100.00	9743.15	-5781.05	8848.48
19400.00	94.76	359.38	100.00	9734.85	-5772.75	8948.13
19500.00	94.76	359.38	100.00	9726.56	-5764.46	9047.78
19600.00	94.76	359.38	100.00	9718.27	-5756.17	9147.43
19700.00	94.76	359.38	100.00	9709.98	-5747.88	9247.08
19800.00	94.76	359.38	100.00	9701.68	-5739.58	9346.73
19900.00	94.76	359.38	100.00	9693.39	-5731.29	9446.38
20000.00	94.76	359.38	100.00	9685.10	-5723.00	9546.03
20100.00	94.76	359.38	100.00	9676.81	-5714.71	9645.68
20200.00	94.76	359.38	100.00	9668.51	-5706.41	9745.33
20300.00	94.76	359.38	100.00	9660.22	-5698.12	9844.98
20400.00	94.76	359.38	100.00	9651.93	-5689.83	9944.63
20500.00	94.76	359.38	100.00	9643.64	-5681.54	10044.28
20600.00	94.76	359.38	100.00	9635.34	-5673.24	10143.93
20700.00	94.76	359.38	100.00	9627.05	-5664.95	10243.58
20800.00	94.76	359.38	100.00	9618.76	-5656.66	10343.23
20900.00	94.76	359.38	100.00	9610.47	-5648.37	10442.88
21000.00	94.76	359.38	100.00	9602.18	-5640.08	10542.53
21100.00	94.76	359.38	100.00	9593.88	-5631.78	10642.18
21200.00	94.76	359.38	100.00	9585.59	-5623.49	10741.83
21300.00	94.76	359.38	100.00	9577.30	-5615.20	10841.48
21400.00	94.76	359.38	100.00	9569.01	-5606.91	10941.13
21500.00	94.76	359.38	100.00	9560.71	-5598.61	11040.78
21600.00	94.76	359.38	100.00	9552.42	-5590.32	11140.43
21700.00	94.76	359.38	100.00	9544.13	-5582.03	11240.07
21800.00	94.76	359.38	100.00	9535.84	-5573.74	11339.72
21900.00	94.76	359.38	100.00	9527.54	-5565.44	11439.37
22000.00	94.76	359.38	100.00	9519.25	-5557.15	11539.02
22100.00	94.76	359.38	100.00	9510.96	-5548.86	11638.67

22200.00	94.76	359.38	100.00	9502.67	-5540.57	11738.32
22300.00	94.76	359.38	100.00	9494.37	-5532.27	11837.97
22400.00	94.76	359.38	100.00	9486.08	-5523.98	11937.62
22500.00	94.76	359.38	100.00	9477.79	-5515.69	12037.27
22600.00	94.76	359.38	100.00	9469.50	-5507.40	12136.92
22700.00	94.76	359.38	100.00	9461.21	-5499.11	12236.57
22800.00	94.76	359.38	100.00	9452.91	-5490.81	12336.22
22900.00	94.76	359.38	100.00	9444.62	-5482.52	12435.87
23000.00	94.76	359.38	100.00	9436.33	-5474.23	12535.52
23100.00	94.76	359.38	100.00	9428.04	-5465.94	12635.17
23200.00	94.76	359.38	100.00	9419.74	-5457.64	12734.82
23300.00	94.76	359.38	100.00	9411.45	-5449.35	12834.47
23400.00	94.76	359.38	100.00	9403.16	-5441.06	12934.12
23500.00	94.76	359.38	100.00	9394.87	-5432.77	13033.77
23600.00	94.76	359.38	100.00	9386.57	-5424.47	13133.42
23700.00	94.76	359.38	100.00	9378.28	-5416.18	13233.07
23800.00	94.76	359.38	100.00	9369.99	-5407.89	13332.72
23900.00	94.76	359.38	100.00	9361.70	-5399.60	13432.37
24000.00	94.76	359.38	100.00	9353.40	-5391.30	13532.02
24100.00	94.76	359.38	100.00	9345.11	-5383.01	13631.67
24200.00	94.76	359.38	100.00	9336.82	-5374.72	13731.32
24300.00	94.76	359.38	100.00	9328.53	-5366.43	13830.97
24400.00	94.76	359.38	100.00	9320.23	-5358.13	13930.62
24500.00	94.76	359.38	100.00	9311.94	-5349.84	14030.27
24600.00	94.76	359.38	100.00	9303.65	-5341.55	14129.92
24700.00	94.76	359.38	100.00	9295.36	-5333.26	14229.57
24800.00	94.76	359.38	100.00	9287.07	-5324.97	14329.22
24900.00	94.76	359.38	100.00	9278.77	-5316.67	14428.87
25000.00	94.76	359.38	100.00	9270.48	-5308.38	14528.52
25100.00	94.76	359.38	100.00	9262.19	-5300.09	14628.17
25200.00	94.76	359.38	100.00	9253.90	-5291.80	14727.82
25300.00	94.76	359.38	100.00	9245.60	-5283.50	14827.47
25400.00	94.76	359.38	100.00	9237.31	-5275.21	14927.12
25500.00	94.76	359.38	100.00	9229.02	-5266.92	15026.77
25600.00	94.76	359.38	100.00	9220.73	-5258.63	15126.42
25700.00	94.76	359.38	100.00	9212.43	-5250.33	15226.07
25800.00	94.76	359.38	100.00	9204.14	-5242.04	15325.72
25900.00	94.76	359.38	100.00	9195.85	-5233.75	15425.37
26000.00	94.76	359.38	100.00	9187.56	-5225.46	15525.02
26100.00	94.76	359.38	100.00	9179.26	-5217.16	15624.67
26200.00	94.76	359.38	100.00	9170.97	-5208.87	15724.32
26300.00	94.76	359.38	100.00	9162.68	-5200.58	15823.97
26400.00	94.76	359.38	100.00	9154.39	-5192.29	15923.62
26500.00	94.76	359.38	100.00	9146.10	-5184.00	16023.27

26600.00	94.76	359.38	100.00	9137.80	-5175.70	16122.92
26700.00	94.76	359.38	100.00	9129.51	-5167.41	16222.57
26800.00	94.76	359.38	100.00	9121.22	-5159.12	16322.22
26900.00	94.76	359.38	100.00	9112.93	-5150.83	16421.87
27000.00	94.76	359.38	100.00	9104.63	-5142.53	16521.52
27100.00	94.76	359.38	100.00	9096.34	-5134.24	16621.17
27200.00	94.76	359.38	100.00	9088.05	-5125.95	16720.82
27300.00	94.76	359.38	100.00	9079.76	-5117.66	16820.47
27400.00	94.76	359.38	100.00	9071.46	-5109.36	16920.12
27500.00	94.76	359.38	100.00	9063.17	-5101.07	17019.77
27600.00	94.76	359.38	100.00	9054.88	-5092.78	17119.42
27700.00	94.76	359.38	100.00	9046.59	-5084.49	17219.07
27800.00	94.76	359.38	100.00	9038.29	-5076.19	17318.71
27900.00	94.76	359.38	100.00	9030.00	-5067.90	17418.36
28000.00	94.76	359.38	100.00	9021.71	-5059.61	17518.01
28100.00	94.76	359.38	100.00	9013.42	-5051.32	17617.66
28200.00	94.76	359.38	100.00	9005.12	-5043.02	17717.31
28300.00	94.76	359.38	100.00	8996.83	-5034.73	17816.96
28400.00	94.76	359.38	100.00	8988.54	-5026.44	17916.61
28500.00	94.76	359.38	100.00	8980.25	-5018.15	18016.26
28563.28	94.76	359.38	63.28	8975.00	-5012.90	18079.32

Local E/-W EW	Easting X	Northing Y	Latitude LAT	Longitude LON	Dogleg Severi DLS	Build Rate BLD
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00

0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
0.00	800143.29	623928.52	32.712397	-103.491885	0.00	0.00
1.16	800144.45	623927.21	32.712393	-103.491882	2.00	2.00
4.63	800147.92	623923.30	32.712383	-103.491871	2.00	2.00
7.23	800150.52	623920.37	32.712374	-103.491862	2.00	2.00
10.12	800153.41	623917.10	32.712365	-103.491853	0.00	0.00
15.91	800159.20	623910.58	32.712347	-103.491834	0.00	0.00
21.69	800164.98	623904.06	32.712329	-103.491816	0.00	0.00
27.47	800170.76	623897.54	32.712311	-103.491797	0.00	0.00
33.25	800176.54	623891.02	32.712293	-103.491778	0.00	0.00
39.03	800182.32	623884.50	32.712275	-103.491760	0.00	0.00
44.81	800188.10	623877.98	32.712257	-103.491741	0.00	0.00
50.60	800193.89	623871.46	32.712239	-103.491722	0.00	0.00
56.38	800199.67	623864.94	32.712221	-103.491704	0.00	0.00
62.16	800205.45	623858.42	32.712203	-103.491685	0.00	0.00
67.94	800211.23	623851.90	32.712185	-103.491667	0.00	0.00
73.72	800217.01	623845.38	32.712167	-103.491648	0.00	0.00
79.50	800222.79	623838.85	32.712149	-103.491629	0.00	0.00
85.29	800228.58	623832.33	32.712131	-103.491611	0.00	0.00
91.07	800234.36	623825.81	32.712113	-103.491592	0.00	0.00
96.85	800240.14	623819.29	32.712095	-103.491573	0.00	0.00
102.63	800245.92	623812.77	32.712077	-103.491555	0.00	0.00
108.41	800251.70	623806.25	32.712059	-103.491536	0.00	0.00
114.19	800257.48	623799.73	32.712041	-103.491518	0.00	0.00
119.98	800263.27	623793.21	32.712023	-103.491499	0.00	0.00
125.76	800269.05	623786.69	32.712004	-103.491480	0.00	0.00
131.54	800274.83	623780.17	32.711986	-103.491462	0.00	0.00
137.32	800280.61	623773.65	32.711968	-103.491443	0.00	0.00
143.10	800286.39	623767.13	32.711950	-103.491424	0.00	0.00
148.89	800292.18	623760.61	32.711932	-103.491406	0.00	0.00
154.67	800297.96	623754.09	32.711914	-103.491387	0.00	0.00
160.45	800303.74	623747.56	32.711896	-103.491368	0.00	0.00
166.23	800309.52	623741.04	32.711878	-103.491350	0.00	0.00
172.01	800315.30	623734.52	32.711860	-103.491331	0.00	0.00
177.79	800321.08	623728.00	32.711842	-103.491313	0.00	0.00
183.58	800326.87	623721.48	32.711824	-103.491294	0.00	0.00
189.36	800332.65	623714.96	32.711806	-103.491275	0.00	0.00
195.14	800338.43	623708.44	32.711788	-103.491257	0.00	0.00
200.92	800344.21	623701.92	32.711770	-103.491238	0.00	0.00
203.15	800346.44	623699.41	32.711763	-103.491231	0.00	0.00
206.27	800349.56	623695.89	32.711753	-103.491221	2.00	-2.00
209.47	800352.76	623692.27	32.711743	-103.491211	2.00	-2.00
210.38	800353.67	623691.25	32.711740	-103.491208	2.00	-2.00

210.38	800353.67	623691.25	32.711740	-103.491208	0.00	0.00
210.36	800353.65	623692.92	32.711745	-103.491208	10.00	10.00
210.30	800353.59	623698.90	32.711761	-103.491208	10.00	10.00
210.19	800353.48	623709.18	32.711790	-103.491208	10.00	10.00
210.03	800353.32	623723.68	32.711829	-103.491208	10.00	10.00
209.83	800353.12	623742.30	32.711881	-103.491208	10.00	10.00
209.58	800352.87	623764.89	32.711943	-103.491208	10.00	10.00
209.30	800352.59	623791.29	32.712015	-103.491209	10.00	10.00
208.97	800352.26	623821.28	32.712098	-103.491209	10.00	10.00
208.61	800351.90	623854.64	32.712189	-103.491209	10.00	10.00
208.22	800351.51	623891.11	32.712290	-103.491209	10.00	10.00
207.79	800351.08	623930.43	32.712398	-103.491210	10.00	10.00
207.34	800350.63	623972.29	32.712513	-103.491210	10.00	10.00
206.86	800350.15	624016.36	32.712634	-103.491211	10.00	10.00
206.36	800349.65	624062.33	32.712760	-103.491211	10.00	10.00
205.85	800349.14	624109.83	32.712891	-103.491212	10.00	10.00
205.79	800349.08	624115.89	32.712908	-103.491212	10.00	10.00
204.80	800348.09	624207.30	32.713159	-103.491212	5.00	5.00
203.73	800347.02	624306.33	32.713431	-103.491213	5.00	5.00
202.65	800345.94	624406.17	32.713705	-103.491214	5.00	5.00
201.56	800344.85	624507.48	32.713984	-103.491215	5.00	5.00
200.51	800343.80	624605.71	32.714254	-103.491216	0.00	0.00
199.44	800342.73	624705.36	32.714528	-103.491217	0.00	0.00
198.37	800341.66	624805.01	32.714802	-103.491218	0.00	0.00
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0.00	12434.34
0.00	12534.00
0.00	12633.65
0.00	12733.31
0.00	12832.96
0.00	12932.62
0.00	13032.28
0.00	13131.93
0.00	13231.59
0.00	13331.24
0.00	13430.90
0.00	13530.55
0.00	13630.21
0.00	13729.87
0.00	13829.52
0.00	13929.18
0.00	14028.83
0.00	14128.49
0.00	14228.14
0.00	14327.80
0.00	14427.45
0.00	14527.11
0.00	14626.77
0.00	14726.42
0.00	14826.08
0.00	14925.73
0.00	15025.39
0.00	15125.04
0.00	15224.70
0.00	15324.35
0.00	15424.01
0.00	15523.67
0.00	15623.32
0.00	15722.98
0.00	15822.63
0.00	15922.29
0.00	16021.94

0.00	16121.60
0.00	16221.25
0.00	16320.91
0.00	16420.57
0.00	16520.22
0.00	16619.88
0.00	16719.53
0.00	16819.19
0.00	16918.84
0.00	17018.50
0.00	17118.16
0.00	17217.81
0.00	17317.47
0.00	17417.12
0.00	17516.78
0.00	17616.43
0.00	17716.09
0.00	17815.74
0.00	17915.40
0.00	18015.06
0.00	18078.12

Coterra Energy

Lea County, NM (NAD 83)

Rope State Com Pad

Rope State Com 604H

338' FSL, 1133' FEL

OH

Plan #2



Anticollision Report

Minimum Magnetic Interference Warning level is 20' center to center

18 March, 2026

Total Report Version 1.70

COMPASS 5000.16 Build 97

[Click here for our anticollision policy](#)

ATTENTION

All offset data provided was gathered using available software and resources. Total Directional Services cannot guarantee the accuracy of all offset data, which should be verified for accuracy by the Operator.

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference	Plan #2
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum centre distance of 1,663.40usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Well	Rope State Com 604H				
Well Position	+N/-S	0.00 usft	Northing:	623,928.52 usft	Latitude: 32.7123970
	+E/-W	0.00 usft	Easting:	800,143.29 usft	Longitude: -103.4918854
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level: 3,939.10 usft
Grid Convergence:		0.45 °			

Survey Tool Program	Date	3/18/2026			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	28,563.18	Plan #2 (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Experimental: Summary Highlights: Rope State Com 604H

- At 1,600.00 MD, Rope State Com 503H - OH - Plan #2 is 20.00 usft away with a 1.77 SF.
- At 1,700.00 MD, Rope State Com 503H - OH - Plan #2 is 21.19 usft away with a 1.77 SF.
- At 1,855.71 MD, Rope State Com 504H - OH - Plan #2 is 15.50 usft away with a 1.19 SF.
- At 24,525.11 MD, (O) LEO STATE 007 - Verticals - Surveys is 49.60 usft away with a 0.32 SF.
- At 25,503.97 MD, (O) NEW MEXICO BV STATE 001 P & A - Vertical - Surveys is 402.97 usft away with a 1.03 SF.
- At 26,344.57 MD, (O) STATE AN 008 P & A - Vertical - Surveys is 581.15 usft away with a 1.56 SF.
- At 27,021.46 MD, (O) STATE AN 010 P & A - Vertical - Surveys is 142.17 usft away with a 0.48 SF.
- At 27,100.00 MD, (O) STATE AN 010 P & A - Vertical - Surveys is 162.42 usft away with a 0.48 SF.
- At 27,668.77 MD, (O) STATE AN 009 P & A - Vertical - Surveys is 582.66 usft away with a 1.53 SF.
- At 28,336.16 MD, (O) STATE AN 007 P & A - Vertical - Surveys is 77.07 usft away with a 0.19 SF.

Offset Listing							
Offset Customer - Project - Site Name	Map Coordinates		Geographical Coordinates		Surface Uncertainty		
	Offset Well	Ground Level KB Height	Northing	Easting	Latitude	Longitude	Site Well
- - Rope State Com Pad							
(O) AIRSTRIP 31 18 35 RN STATE COM 111H -	3,948.00	3,977.00	618,499.40	796,383.01	32.6975570	-103.5042480	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 114H -	3,931.00	3,960.00	618,609.72	800,455.74	32.6977720	-103.4910070	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 124H -	3,930.00	3,959.00	618,639.91	800,455.51	32.6978550	-103.4910070	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 131H -	3,948.00	3,977.00	618,499.27	796,413.16	32.6975560	-103.5041500	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 132H -	3,937.00	3,955.00	619,144.37	797,713.76	32.6993010	-103.4999060	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 133H -	3,940.00	3,969.00	618,487.04	799,023.98	32.6974660	-103.4956640	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 134H -	3,930.00	3,959.00	618,639.68	800,425.66	32.6978550	-103.4911040	0.00 0.00
(O) AIRSTRIP 31 18 35 RN STATE COM 201H -	3,948.00	3,977.00	618,510.02	796,391.85	32.6975860	-103.5042190	0.00 0.00
(O) AIRSTRIP STATE 001 P & A -	3,951.00	3,966.00	623,270.15	796,335.87	32.7106700	-103.5042800	0.00 0.00
(O) ALBATROSS STATE COM 001H -	3,937.00	3,954.00	628,551.33	800,248.81	32.7251000	-103.4914230	0.00 0.00
(O) ALBATROSS STATE COM 002H -	3,949.00	3,967.00	628,528.18	799,256.51	32.7250580	-103.4946500	0.00 0.00

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Listing								
Offset Customer - Project - Site Name Offset Well	Ground Level KB Height		Map Coordinates		Geographical Coordinates		Surface Uncertainty	
			Northing	Easting	Latitude	Longitude	Site	Well
- - Rope State Com Pad								
(O) B LEE STATE 004 -	3,965.00	3,977.00	641,515.13	796,493.15	32.7608110	-103.5033040	0.00	0.00
(O) B LEE STATE 005 P & A -	3,967.00	3,985.00	640,452.00	796,173.13	32.7578960	-103.5043720	0.00	0.00
(O) B LEE STATE 006 -	3,976.00	3,993.00	641,668.68	796,262.29	32.7612380	-103.5040510	0.00	0.00
(O) BLACK JACK STATE 001 -	3,956.00	3,974.00	636,473.15	800,806.97	32.7468600	-103.4894030	0.00	0.00
(O) BLACK JACK STATE 002 -	3,964.00	3,981.00	636,492.36	798,826.94	32.7469560	-103.4958420	0.00	0.00
(O) BLACK JACK STATE 003 -	3,956.00	3,973.00	635,178.36	800,826.82	32.7433010	-103.4893720	0.00	0.00
(O) BRIDGES STATE 180 P & A -	3,970.00	3,983.00	641,762.44	797,406.13	32.7614710	-103.5003280	0.00	0.00
(O) IRONHOUSE 19 STATE COM 001H -	3,952.00	3,970.00	629,074.37	797,787.93	32.7265910	-103.4994110	0.00	0.00
(O) IRONHOUSE 19 STATE COM 002H -	3,932.00	3,950.00	629,159.32	800,614.89	32.7267630	-103.4902170	0.00	0.00
(O) IRONHOUSE 19 STATE COM 003H -	3,946.00	3,964.00	628,897.40	799,429.51	32.7260690	-103.4940780	0.00	0.00
(O) IRONHOUSE 19 STATE COM 004H -	3,954.00	3,958.00	628,819.14	797,072.11	32.7259050	-103.5017450	0.00	0.00
(O) LEA 30 STATE 001 P & A -	3,966.00	3,979.00	626,904.76	796,631.31	32.7206530	-103.5032270	0.00	0.00
(O) LEA SOUTHEAST STATE 1 P & A -	3,947.00	3,959.00	625,529.41	799,265.47	32.7168160	-103.4946980	0.00	0.00
(O) LEA ZD STATE 001 P & A -	3,971.00	3,984.00	624,591.55	796,323.07	32.7143020	-103.5042880	0.00	0.00
(O) LEO STATE #1 -	3,961.00	3,978.00	639,133.16	800,128.00	32.7541856	-103.4915424	0.00	0.00
(O) LEO STATE 006 TA -	3,963.00	3,981.00	639,316.50	798,957.11	32.7547150	-103.4953460	0.00	0.00
(O) LEO STATE 007 -	3,961.00	3,978.00	637,821.27	800,127.79	32.7505800	-103.4915770	0.00	0.00
(O) MESA MERRITT STATE 001 P & A -	3,959.00	3,976.00	632,198.92	797,903.57	32.7351760	-103.4989550	0.00	0.00
(O) NEW MEXICO BP STATE 002 P & A -	3,972.00	3,986.00	640,373.03	797,562.48	32.7576490	-103.4998550	0.00	0.00
(O) NEW MEXICO BV STATE 001 P & A -	3,945.00	3,968.00	638,963.09	800,592.51	32.7537080	-103.4900360	0.00	0.00
(O) OHIO STATE 001 -	3,969.00	3,985.00	641,739.00	797,802.59	32.7613980	-103.4990390	0.00	0.00
(O) OHIO STATE 002 -	3,969.00	3,988.00	641,112.16	797,488.72	32.7596820	-103.5000760	0.00	0.00
(O) OHIO STATE 005 -	3,969.00	3,986.00	641,383.71	797,964.95	32.7604180	-103.4985200	0.00	0.00
(O) SHETLAND SWD 001 -	3,964.00	3,976.00	636,158.39	797,865.31	32.7460590	-103.4989780	0.00	0.00
(O) STATE AN 005 -	3,977.00	3,995.00	641,777.14	798,761.78	32.7614820	-103.4959180	0.00	0.00
(O) STATE AN 006 TA -	3,966.00	3,972.00	640,457.55	798,774.37	32.7578550	-103.4959110	0.00	0.00
(O) STATE AN 007 P & A -	3,970.00	3,984.00	641,780.69	800,082.17	32.7614630	-103.4916230	0.00	0.00
(O) STATE AN 008 P & A -	3,950.00	3,970.00	639,802.75	800,761.69	32.7560120	-103.4894640	0.00	0.00
(O) STATE AN 009 P & A -	3,955.00	3,976.00	641,122.70	800,749.01	32.7596400	-103.4894710	0.00	0.00
(O) STATE AN 010 P & A -	3,966.00	3,980.00	640,460.74	800,095.13	32.7578350	-103.4916150	0.00	0.00
(O) STATE AN 012 P & A -	3,961.00	3,984.00	641,422.62	800,624.57	32.7604670	-103.4898680	0.00	0.00
Rope State Com 501H -	3,951.90	3,974.90	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00
Rope State Com 502H -	3,951.80	3,974.80	623,914.67	796,998.97	32.7124272	-103.5021079	0.00	0.00
Rope State Com 503H -	3,939.20	3,962.20	623,928.44	800,123.29	32.7123973	-103.4919504	0.00	0.00
Rope State Com 504H -	3,939.00	3,962.00	623,928.60	800,163.28	32.7123968	-103.4918204	0.00	0.00
Rope State Com 601H -	3,952.10	3,975.10	623,914.56	796,938.98	32.7124281	-103.5023029	0.00	0.00
Rope State Com 603H -	3,939.30	3,962.30	623,928.37	800,103.29	32.7123975	-103.4920155	0.00	0.00

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Total Directional Anticollision Report

Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Rope State Com Pad						
(O) AIRSTRIP 31 18 35 RN STATE COM 111H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 114H - Horizontal	9,245.34	14,300.00	568.73	453.14	4.92	CC, ES
(O) AIRSTRIP 31 18 35 RN STATE COM 114H - Horizontal	9,300.00	14,300.00	571.35	454.94	4.91	SF
(O) AIRSTRIP 31 18 35 RN STATE COM 124H - Horizontal	10,136.66	15,150.00	580.55	469.08	5.21	CC, ES, SF
(O) AIRSTRIP 31 18 35 RN STATE COM 131H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 132H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 133H - Horizontal	10,200.00	15,366.00	1,209.23	1,095.23	10.61	SF
(O) AIRSTRIP 31 18 35 RN STATE COM 133H - Horizontal	10,209.20	15,366.00	1,209.17	1,095.21	10.61	CC, ES
(O) AIRSTRIP 31 18 35 RN STATE COM 134H - Horizontal	10,229.36	15,475.00	666.22	559.04	6.22	CC, ES
(O) AIRSTRIP 31 18 35 RN STATE COM 134H - Horizontal	10,300.00	15,475.00	672.44	563.80	6.19	SF
(O) AIRSTRIP 31 18 35 RN STATE COM 201H - Horizontal						Out of range
(O) AIRSTRIP STATE 001 P & A - Vertical - Surveys						Out of range
(O) ALBATROSS STATE COM 001H - Horizontal - PROD	10,068.29	14,469.00	552.47	432.81	4.62	SF
(O) ALBATROSS STATE COM 001H - Horizontal - PROD	14,566.29	10,185.13	285.90	227.04	4.86	CC, ES
(O) ALBATROSS STATE COM 002H - Horizontal - PROD	10,400.00	14,906.11	986.96	873.49	8.70	SF
(O) ALBATROSS STATE COM 002H - Horizontal - PROD	10,462.87	14,838.64	986.48	873.36	8.72	ES
(O) ALBATROSS STATE COM 002H - Horizontal - PROD	10,600.87	14,660.93	986.22	874.76	8.85	CC
(O) B LEE STATE 004 - Verticals - Surveys						Out of range
(O) B LEE STATE 005 P & A - Vertical - Surveys						Out of range
(O) B LEE STATE 006 - Verticals - Surveys						Out of range
(O) BLACK JACK STATE 001 - Verticals - Surveys	23,181.74	9,408.69	682.87	548.64	5.09	CC, ES, SF
(O) BLACK JACK STATE 002 - Verticals - Surveys	23,043.39	9,451.95	1,389.05	1,114.51	5.06	CC, ES, SF
(O) BLACK JACK STATE 003 - Verticals - Surveys	21,792.38	9,540.23	594.70	451.53	4.15	CC
(O) BLACK JACK STATE 003 - Verticals - Surveys	21,800.00	9,539.75	594.75	451.53	4.15	ES, SF
(O) BRIDGES STATE 180 P & A - Vertical - Surveys						Out of range
(O) IRONHOUSE 19 STATE COM 001H - Horizontal - PR						Out of range
(O) IRONHOUSE 19 STATE COM 001H - Pilot - Pilot						Out of range
(O) IRONHOUSE 19 STATE COM 002H - Horizontal - PR	20,265.41	13,836.00	429.61	282.52	2.92	CC, ES, SF
(O) IRONHOUSE 19 STATE COM 003H - Horizontal - PR	16,300.92	10,065.91	802.45	714.61	9.14	CC, ES
(O) IRONHOUSE 19 STATE COM 003H - Horizontal - PR	20,300.00	13,989.55	1,095.29	939.03	7.01	SF
(O) IRONHOUSE 19 STATE COM 004H - Horizontal - PR						Out of range
(O) IRONHOUSE 19 STATE COM 004H - ST01 - ST01						Out of range
(O) LEA 30 STATE 001 P & A - Vertical - Surveys						Out of range
(O) LEA SOUTHEAST STATE 1 P & A - Vertical - Surveys	12,038.45	10,344.68	1,068.33	799.63	3.98	CC, ES, SF
(O) LEA ZD STATE 001 P & A - Vertical - Surveys						Out of range
(O) LEO STATE #1 - OH - OH	25,063.12	9,402.64	574.63	434.09	4.09	CC, ES, SF
(O) LEO STATE 006 TA - Verticals - Surveys	25,683.04	9,291.18	1,343.06	1,204.91	9.72	CC
(O) LEO STATE 006 TA - Verticals - Surveys	25,700.00	9,289.83	1,343.17	1,204.90	9.71	ES, SF
(O) LEO STATE 007 - Verticals - Surveys	24,525.11	9,329.87	49.60	-107.79	0.32	Level 1, CC, ES, SF
(O) MESA MERRITT STATE 001 P & A - Vertical - Surveys						Out of range
(O) NEW MEXICO BP STATE 002 P & A - Vertical - Surve						Out of range
(O) NEW MEXICO BV STATE 001 P & A - Vertical - Surve	25,503.97	9,241.81	402.97	11.28	1.03	Level 2, CC, ES, SF
(O) OHIO STATE 001 - Verticals - Surveys						Out of range
(O) OHIO STATE 002 - Verticals - Surveys						Out of range
(O) OHIO STATE 005 - Verticals - Surveys						Out of range
(O) SHETLAND SWD 001 - Vertical - Surveys						Out of range
(O) STATE AN 005 - Verticals - Surveys	28,563.28	9,462.86	1,344.40	1,191.27	8.78	CC, ES, SF
(O) STATE AN 006 TA - Vertical - Surveys	27,030.98	9,023.00	1,402.62	966.86	3.22	CC, ES, SF
(O) STATE AN 007 P & A - Vertical - Surveys	28,336.16	9,021.68	77.07	-322.94	0.19	Level 1, CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (usft)	Measured Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
Offset Well - Wellbore - Design						
Rope State Com Pad						
(O) STATE AN 008 P & A - Vertical - Surveys	26,344.57	9,171.78	581.15	209.30	1.56	CC, ES, SF
(O) STATE AN 009 P & A - Vertical - Surveys	27,668.77	9,068.45	582.66	202.99	1.53	CC, ES, SF
(O) STATE AN 010 P & A - Vertical - Surveys	27,021.46	9,012.00	142.17	-156.87	0.48	Level 1, CC, SF
(O) STATE AN 010 P & A - Vertical - Surveys	27,100.00	9,012.00	162.42	-173.48	0.48	Level 1, ES
(O) STATE AN 012 P & A - OH - Surveys	28,346.64	9,018.88	467.00	294.46	2.71	CC, ES, SF
(O) STATE AN 012 P & A - ST01 - ST01	28,346.64	9,018.88	467.00	294.46	2.71	CC, ES, SF
Rope State Com 501H - OH - Plan #3						Out of range
Rope State Com 502H - OH - Plan #2						Out of range
Rope State Com 503H - OH - Plan #2	1,600.00	1,600.10	20.00	8.69	1.77	CC, ES
Rope State Com 503H - OH - Plan #2	1,700.00	1,700.08	21.19	9.19	1.77	SF
Rope State Com 504H - OH - Plan #2	1,855.71	1,855.10	15.50	2.43	1.19	Level 2, CC, ES, SF
Rope State Com 601H - OH - Plan #2						Out of range
Rope State Com 603H - OH - Plan #2	1,516.60	1,516.80	40.00	29.29	3.74	CC
Rope State Com 603H - OH - Plan #2	1,600.00	1,600.00	40.00	28.69	3.54	ES, SF

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 114H - Horizontal - PRODUCING - Surveys														Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG Rev5														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Reference Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Separation Factor	Warning	
				Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
7,700.00	7,886.47	14,300.00	9,231.82	26.99	85.77	109.25	-424.78	747.31	1,646.68	1,585.68	61.00	26.996			
7,800.00	7,786.47	14,300.00	9,231.82	27.33	85.77	109.25	-424.78	747.31	1,553.21	1,491.22	61.99	25.056			
7,900.00	7,886.47	14,300.00	9,231.82	27.68	85.77	109.25	-424.78	747.31	1,460.62	1,397.47	63.14	23.131			
8,000.00	7,986.47	14,300.00	9,231.82	28.03	85.77	109.25	-424.78	747.31	1,369.06	1,304.56	64.50	21.225			
8,100.00	8,086.47	14,300.00	9,231.82	28.38	85.77	109.25	-424.78	747.31	1,278.77	1,212.66	66.11	19.342			
8,200.00	8,186.47	14,300.00	9,231.82	28.73	85.77	109.25	-424.78	747.31	1,190.04	1,122.00	68.04	17.490			
8,300.00	8,286.47	14,300.00	9,231.82	29.08	85.77	109.25	-424.78	747.31	1,103.23	1,032.87	70.36	15.680			
8,400.00	8,386.47	14,300.00	9,231.82	29.43	85.77	109.25	-424.78	747.31	1,018.85	945.69	73.17	13.925			
8,500.00	8,486.47	14,300.00	9,231.82	29.78	85.77	109.25	-424.78	747.31	937.54	860.98	76.56	12.246			
8,600.00	8,586.47	14,300.00	9,231.82	30.13	85.77	109.25	-424.78	747.31	860.19	779.53	80.65	10.665			
8,700.00	8,686.47	14,300.00	9,231.82	30.48	85.77	109.25	-424.78	747.31	787.94	702.41	85.53	9.213			
8,800.00	8,786.47	14,300.00	9,231.82	30.84	85.77	109.25	-424.78	747.31	722.35	631.15	91.19	7.921			
8,900.00	8,886.47	14,300.00	9,231.82	31.19	85.77	109.25	-424.78	747.31	665.37	567.88	97.49	6.825			
9,000.00	8,986.47	14,300.00	9,231.82	31.54	85.77	109.25	-424.78	747.31	619.39	515.41	103.98	5.957			
9,100.00	9,086.47	14,300.00	9,231.82	31.89	85.77	109.25	-424.78	747.31	587.01	477.09	109.92	5.340			
9,200.00	9,186.47	14,300.00	9,231.82	32.24	85.77	109.25	-424.78	747.31	570.53	456.21	114.33	4.990			
9,245.34	9,231.81	14,300.00	9,231.82	32.40	85.77	109.25	-424.78	747.31	568.73	453.14	115.59	4.920	CC, ES		
9,300.00	9,286.47	14,300.00	9,231.82	32.59	85.77	109.25	-424.78	747.31	571.35	454.94	116.41	4.908	SF		
9,400.00	9,386.47	14,300.00	9,231.82	32.95	85.77	109.25	-424.78	747.31	589.38	473.40	115.99	5.081			
9,500.00	9,486.47	14,300.00	9,231.82	33.30	85.77	109.25	-424.78	747.31	623.14	509.61	113.53	5.489			
9,600.00	9,586.47	14,300.00	9,231.82	33.65	85.77	109.25	-424.78	747.31	670.25	560.40	109.85	6.101			
9,700.00	9,686.47	14,300.00	9,231.82	34.00	85.77	109.25	-424.78	747.31	728.12	622.41	105.71	6.888			
9,800.00	9,786.47	14,300.00	9,231.82	34.35	85.77	109.25	-424.78	747.31	794.42	692.79	101.62	7.817			
9,900.00	9,886.43	14,300.00	9,231.82	34.71	85.77	105.12	-424.78	747.31	867.54	769.67	97.87	8.864			
10,000.00	9,984.97	14,300.00	9,231.82	35.05	85.77	91.89	-424.78	747.31	947.60	852.96	94.64	10.013			
10,100.00	10,079.19	14,300.00	9,231.82	35.37	85.77	76.64	-424.78	747.31	1,031.43	939.39	92.04	11.206			
10,200.00	10,166.23	14,300.00	9,231.82	35.65	85.77	61.92	-424.78	747.31	1,115.91	1,025.87	90.04	12.393			
10,300.00	10,243.43	14,300.00	9,231.82	35.91	85.77	49.77	-424.78	747.31	1,198.62	1,110.06	88.56	13.535			
10,400.00	10,308.47	14,300.00	9,231.82	36.13	85.77	40.64	-424.78	747.31	1,277.62	1,190.15	87.48	14.605			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 114H - Horizontal - PRODUCING - Surveys

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation Factor	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)		Between Centres (usft)	Between Ellipses (usft)					
10,500.00	10,359.35	14,300.00	9,231.82	36.31	85.77	34.02	-424.78	747.31	1,351.37	1,264.67	86.70	15.586			
10,600.00	10,394.53	14,300.00	9,231.82	36.45	85.77	29.26	-424.78	747.31	1,418.60	1,332.44	86.16	16.465			
10,700.00	10,416.72	14,300.00	9,231.82	36.57	85.77	27.25	-424.78	747.31	1,480.98	1,395.24	85.74	17.272			
10,800.00	10,430.32	14,300.00	9,231.82	36.67	85.77	25.56	-424.78	747.31	1,541.44	1,456.08	85.36	18.058			
10,900.00	10,435.22	14,300.00	9,231.82	36.76	85.77	24.05	-424.78	747.31	1,599.76	1,514.77	84.99	18.823			
11,000.00	10,431.41	14,300.00	9,231.82	36.87	85.77	22.71	-424.78	747.31	1,655.75	1,571.14	84.60	19.570			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 124H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG Rev5											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,700.00	8,686.47	15,150.00	10,248.68	30.48	87.01	110.01	-421.07	714.98	1,651.94	1,586.95	64.99	25.418		
8,800.00	8,786.47	15,150.00	10,248.68	30.84	87.01	110.01	-421.07	714.98	1,557.71	1,491.84	65.87	23.649		
8,900.00	8,886.47	15,150.00	10,248.68	31.19	87.01	110.01	-421.07	714.98	1,464.25	1,397.36	66.89	21.891		
9,000.00	8,986.47	15,150.00	10,248.68	31.54	87.01	110.01	-421.07	714.98	1,371.70	1,303.62	68.09	20.147		
9,100.00	9,086.47	15,150.00	10,248.68	31.89	87.01	110.01	-421.07	714.98	1,280.29	1,210.78	69.51	18.420		
9,200.00	9,186.47	15,150.00	10,248.68	32.24	87.01	110.01	-421.07	714.98	1,190.25	1,119.04	71.21	16.715		
9,300.00	9,286.47	15,150.00	10,248.68	32.59	87.01	110.01	-421.07	714.98	1,101.93	1,028.65	73.27	15.038		
9,400.00	9,386.47	15,150.00	10,248.68	32.95	87.01	110.01	-421.07	714.98	1,015.78	939.98	75.80	13.401		
9,500.00	9,486.47	15,150.00	10,248.68	33.30	87.01	110.01	-421.07	714.98	932.40	853.51	78.89	11.819		
9,600.00	9,586.47	15,150.00	10,248.68	33.65	87.01	110.01	-421.07	714.98	852.60	769.91	82.69	10.311		
9,700.00	9,686.47	15,150.00	10,248.68	34.00	87.01	110.01	-421.07	714.98	777.49	690.17	87.32	8.904		
9,800.00	9,786.47	15,150.00	10,248.68	34.35	87.01	110.01	-421.07	714.98	708.55	615.70	92.85	7.632		
9,900.00	9,886.43	15,150.00	10,248.68	34.71	87.01	113.45	-421.07	714.98	648.28	549.11	99.17	6.537		
10,000.00	9,984.97	15,150.00	10,248.68	35.05	87.01	117.90	-421.07	714.98	604.20	498.73	105.47	5.729		
10,100.00	10,079.19	15,150.00	10,248.68	35.37	87.01	119.89	-421.07	714.98	582.29	471.96	110.33	5.278		
10,136.66	10,112.08	15,150.00	10,248.68	35.47	87.01	120.04	-421.07	714.98	580.55	469.08	111.47	5.208	CC, ES, SF	
10,200.00	10,166.23	15,150.00	10,248.68	35.65	87.01	119.58	-421.07	714.98	585.73	473.27	112.46	5.208		
10,300.00	10,243.43	15,150.00	10,248.68	35.91	87.01	116.97	-421.07	714.98	613.98	502.39	111.59	5.502		
10,400.00	10,308.47	15,150.00	10,248.68	36.13	87.01	111.80	-421.07	714.98	663.12	554.55	108.57	6.108		
10,500.00	10,359.35	15,150.00	10,248.68	36.31	87.01	103.72	-421.07	714.98	727.62	623.07	104.54	6.960		
10,600.00	10,394.53	15,150.00	10,248.68	36.45	87.01	92.65	-421.07	714.98	802.09	701.76	100.33	7.995		
10,700.00	10,416.72	15,150.00	10,248.68	36.57	87.01	85.56	-421.07	714.98	882.22	785.84	96.38	9.154		
10,800.00	10,430.32	15,150.00	10,248.68	36.67	87.01	78.05	-421.07	714.98	965.70	872.85	92.85	10.401		
10,900.00	10,435.22	15,150.00	10,248.68	36.76	87.01	70.14	-421.07	714.98	1,051.18	961.47	89.71	11.717		
11,000.00	10,431.41	15,150.00	10,248.68	36.87	87.01	62.28	-421.07	714.98	1,137.63	1,050.70	86.92	13.088		
11,100.00	10,423.12	15,150.00	10,248.68	37.00	87.01	62.17	-421.07	714.98	1,225.27	1,140.82	84.45	14.509		
11,200.00	10,414.83	15,150.00	10,248.68	37.15	87.01	62.17	-421.07	714.98	1,314.68	1,232.40	82.28	15.979		
11,300.00	10,406.54	15,150.00	10,248.68	37.31	87.01	62.17	-421.07	714.98	1,405.52	1,325.16	80.36	17.490		
11,400.00	10,398.24	15,150.00	10,248.68	37.49	87.01	62.17	-421.07	714.98	1,497.52	1,418.85	78.67	19.036		
11,500.00	10,389.95	15,150.00	10,248.68	37.68	87.01	62.17	-421.07	714.98	1,590.49	1,513.32	77.17	20.611		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 133H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG Rev5													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
9,300.00	9,286.47	15,366.00	10,476.59	32.59	86.59	-107.11	-571.57	-875.72	1,645.52	1,549.46	96.06	17.130		
9,400.00	9,386.47	15,366.00	10,476.59	32.95	86.59	-107.11	-571.57	-875.72	1,574.71	1,476.27	98.44	15.997		
9,500.00	9,486.47	15,366.00	10,476.59	33.30	86.59	-107.11	-571.57	-875.72	1,507.22	1,406.30	100.92	14.935		
9,600.00	9,586.47	15,366.00	10,476.59	33.65	86.59	-107.11	-571.57	-875.72	1,443.50	1,340.03	103.46	13.952		
9,700.00	9,686.47	15,366.00	10,476.59	34.00	86.59	-107.11	-571.57	-875.72	1,384.07	1,278.03	106.04	13.052		
9,800.00	9,786.47	15,366.00	10,476.59	34.35	86.59	-107.11	-571.57	-875.72	1,329.52	1,220.94	108.59	12.244		
9,900.00	9,886.43	15,366.00	10,476.59	34.71	86.59	-108.67	-571.57	-875.72	1,280.91	1,169.91	111.00	11.540		
10,000.00	9,984.97	15,366.00	10,476.59	35.05	86.59	-112.52	-571.57	-875.72	1,242.96	1,130.09	112.87	11.012		
10,100.00	10,079.19	15,366.00	10,476.59	35.37	86.59	-114.83	-571.57	-875.72	1,218.54	1,104.62	113.92	10.696		
10,200.00	10,166.23	15,366.00	10,476.59	35.65	86.59	-115.68	-571.57	-875.72	1,209.23	1,095.23	114.00	10.607	SF	
10,209.20	10,173.77	15,366.00	10,476.59	35.68	86.59	-115.69	-571.57	-875.72	1,209.17	1,095.21	113.95	10.611	CC, ES	
10,300.00	10,243.43	15,366.00	10,476.59	35.91	86.59	-115.10	-571.57	-875.72	1,215.66	1,102.59	113.07	10.751		
10,400.00	10,308.47	15,366.00	10,476.59	36.13	86.59	-113.06	-571.57	-875.72	1,237.40	1,126.14	111.26	11.122		
10,500.00	10,359.35	15,366.00	10,476.59	36.31	86.59	-109.50	-571.57	-875.72	1,273.01	1,164.24	108.77	11.704		
10,600.00	10,394.53	15,366.00	10,476.59	36.45	86.59	-104.35	-571.57	-875.72	1,320.36	1,214.49	105.87	12.471		
10,700.00	10,416.72	15,366.00	10,476.59	36.57	86.59	-100.86	-571.57	-875.72	1,376.30	1,273.47	102.83	13.384		
10,800.00	10,430.32	15,366.00	10,476.59	36.67	86.59	-96.96	-571.57	-875.72	1,438.29	1,338.48	99.82	14.409		
10,900.00	10,435.22	15,366.00	10,476.59	36.76	86.59	-92.47	-571.57	-875.72	1,505.15	1,408.24	96.91	15.531		
11,000.00	10,431.41	15,366.00	10,476.59	36.87	86.59	-87.48	-571.57	-875.72	1,575.78	1,481.61	94.17	16.733		
11,100.00	10,423.12	15,366.00	10,476.59	37.00	86.59	-87.41	-571.57	-875.72	1,649.41	1,557.79	91.62	18.003		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 134H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG Rev5													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,900.00	8,886.47	15,475.00	10,423.03	31.19	87.43	108.49	-419.93	756.49	1,640.92	1,576.95	63.97	25.652		
9,000.00	8,986.47	15,475.00	10,423.03	31.54	87.43	108.49	-419.93	756.49	1,547.68	1,482.68	65.00	23.810		
9,100.00	9,086.47	15,475.00	10,423.03	31.89	87.43	108.49	-419.93	756.49	1,455.33	1,389.13	66.21	21.981		
9,200.00	9,186.47	15,475.00	10,423.03	32.24	87.43	108.49	-419.93	756.49	1,364.07	1,296.43	67.64	20.168		
9,300.00	9,286.47	15,475.00	10,423.03	32.59	87.43	108.49	-419.93	756.49	1,274.12	1,204.78	69.34	18.375		
9,400.00	9,386.47	15,475.00	10,423.03	32.95	87.43	108.49	-419.93	756.49	1,185.77	1,114.39	71.39	16.610		
9,500.00	9,486.47	15,475.00	10,423.03	33.30	87.43	108.49	-419.93	756.49	1,099.43	1,025.56	73.87	14.884		
9,600.00	9,586.47	15,475.00	10,423.03	33.65	87.43	108.49	-419.93	756.49	1,015.60	938.72	76.88	13.211		
9,700.00	9,686.47	15,475.00	10,423.03	34.00	87.43	108.49	-419.93	756.49	934.95	854.41	80.54	11.609		
9,800.00	9,786.47	15,475.00	10,423.03	34.35	87.43	108.49	-419.93	756.49	858.38	773.42	84.96	10.103		
9,900.00	9,886.43	15,475.00	10,423.03	34.71	87.43	112.97	-419.93	756.49	787.51	697.30	90.21	8.730		
10,000.00	9,984.97	15,475.00	10,423.03	35.05	87.43	119.57	-419.93	756.49	728.41	632.39	96.02	7.586		
10,100.00	10,079.19	15,475.00	10,423.03	35.37	87.43	123.50	-419.93	756.49	686.80	585.10	101.70	6.753		
10,200.00	10,166.23	15,475.00	10,423.03	35.65	87.43	125.16	-419.93	756.49	667.30	561.08	106.22	6.282		
10,229.36	10,190.02	15,475.00	10,423.03	35.73	87.43	125.24	-419.93	756.49	666.22	559.04	107.17	6.216	CC, ES	
10,300.00	10,243.43	15,475.00	10,423.03	35.91	87.43	124.73	-419.93	756.49	672.44	563.80	108.64	6.190	SF	
10,400.00	10,308.47	15,475.00	10,423.03	36.13	87.43	122.17	-419.93	756.49	701.53	592.85	108.68	6.455		
10,500.00	10,359.35	15,475.00	10,423.03	36.31	87.43	117.20	-419.93	756.49	750.99	644.15	106.83	7.030		
10,600.00	10,394.53	15,475.00	10,423.03	36.45	87.43	109.34	-419.93	756.49	815.78	711.91	103.88	7.853		
10,700.00	10,416.72	15,475.00	10,423.03	36.57	87.43	103.67	-419.93	756.49	890.28	789.71	100.57	8.852		
10,800.00	10,430.32	15,475.00	10,423.03	36.67	87.43	97.04	-419.93	756.49	970.56	873.20	97.36	9.969		
10,900.00	10,435.22	15,475.00	10,423.03	36.76	87.43	89.24	-419.93	756.49	1,054.77	960.44	94.33	11.181		
11,000.00	10,431.41	15,475.00	10,423.03	36.87	87.43	80.58	-419.93	756.49	1,141.47	1,049.94	91.53	12.471		
11,100.00	10,423.12	15,475.00	10,423.03	37.00	87.43	80.45	-419.93	756.49	1,229.96	1,140.96	89.00	13.820		
11,200.00	10,414.83	15,475.00	10,423.03	37.15	87.43	80.45	-419.93	756.49	1,320.09	1,233.32	86.77	15.213		
11,300.00	10,406.54	15,475.00	10,423.03	37.31	87.43	80.45	-419.93	756.49	1,411.55	1,326.74	84.81	16.644		
11,400.00	10,398.24	15,475.00	10,423.03	37.49	87.43	80.45	-419.93	756.49	1,504.11	1,421.03	83.08	18.105		
11,500.00	10,389.95	15,475.00	10,423.03	37.68	87.43	80.45	-419.93	756.49	1,597.55	1,516.02	81.54	19.593		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) ALBATROSS STATE COM 001H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS, 7863-MWD OWSG Rev5											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
				(usft)	(usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,500.00	8,486.47	14,469.00	10,026.54	29.78	84.49	79.14	-132.21	757.94	1,637.89	1,571.58	66.31	24.701		
8,600.00	8,586.47	14,469.00	10,026.54	30.13	84.49	79.14	-132.21	757.94	1,544.23	1,476.61	67.63	22.835		
8,700.00	8,686.47	14,469.00	10,026.54	30.48	84.49	79.14	-132.21	757.94	1,451.43	1,382.30	69.13	20.997		
8,800.00	8,786.47	14,469.00	10,026.54	30.84	84.49	79.14	-132.21	757.94	1,359.64	1,288.80	70.85	19.191		
8,900.00	8,886.47	14,469.00	10,026.54	31.19	84.49	79.14	-132.21	757.94	1,269.10	1,196.27	72.83	17.425		
9,000.00	8,986.47	14,469.00	10,026.54	31.54	84.49	79.14	-132.21	757.94	1,180.09	1,104.95	75.14	15.705		
9,100.00	9,086.47	14,469.00	10,026.54	31.89	84.49	79.14	-132.21	757.94	1,092.97	1,015.13	77.84	14.041		
9,200.00	9,186.47	14,469.00	10,026.54	32.24	84.49	79.14	-132.21	757.94	1,008.25	927.25	81.01	12.447		
9,300.00	9,286.47	14,469.00	10,026.54	32.59	84.49	79.14	-132.21	757.94	926.59	841.86	84.72	10.936		
9,400.00	9,386.47	14,469.00	10,026.54	32.95	84.49	79.14	-132.21	757.94	848.85	759.78	89.07	9.530		
9,500.00	9,486.47	14,469.00	10,026.54	33.30	84.49	79.14	-132.21	757.94	776.23	682.15	94.08	8.251		
9,600.00	9,586.47	14,469.00	10,026.54	33.65	84.49	79.14	-132.21	757.94	710.29	610.60	99.70	7.125		
9,700.00	9,686.47	14,469.00	10,026.54	34.00	84.49	79.14	-132.21	757.94	653.07	547.39	105.68	6.180		
9,800.00	9,786.47	14,469.00	10,026.54	34.35	84.49	79.14	-132.21	757.94	607.03	495.54	111.50	5.444		
9,900.00	9,886.43	14,469.00	10,026.54	34.71	84.49	81.04	-132.21	757.94	574.60	458.29	116.31	4.940		
10,000.00	9,984.97	14,469.00	10,026.54	35.05	84.49	82.90	-132.21	757.94	556.19	437.00	119.19	4.666		
10,068.29	10,049.96	14,469.00	10,026.54	35.27	84.49	83.27	-132.21	757.94	552.47	432.81	119.66	4.617	SF	
10,100.00	10,079.19	14,469.00	10,026.54	35.37	84.49	83.19	-132.21	757.94	553.27	433.84	119.43	4.633		
10,200.00	10,166.23	14,456.71	10,026.05	35.65	84.29	80.83	-119.94	757.42	566.03	449.08	116.95	4.840		
10,300.00	10,243.43	14,398.82	10,023.65	35.91	83.36	73.89	-62.15	755.03	589.08	476.31	112.77	5.224		
10,400.00	10,308.47	14,333.04	10,020.09	36.13	82.29	66.94	3.48	752.54	616.37	508.16	108.21	5.696		
10,500.00	10,359.35	14,256.00	10,014.46	36.31	81.05	60.66	80.27	749.89	643.33	539.39	103.95	6.189		
10,600.00	10,394.53	14,166.19	10,006.88	36.45	79.60	55.71	169.70	746.56	665.42	565.09	100.32	6.633		
10,700.00	10,416.72	14,052.33	9,998.85	36.57	77.76	52.54	283.14	741.06	679.87	582.55	97.31	6.986		
10,800.00	10,430.32	13,956.85	9,993.04	36.67	76.21	50.75	378.31	736.11	688.94	594.01	94.93	7.257		
10,900.00	10,435.22	13,837.62	9,986.54	36.76	74.28	49.57	497.16	729.23	692.08	599.21	92.87	7.452		
11,000.00	10,431.41	13,686.48	9,983.24	36.87	71.78	49.26	647.39	713.32	683.82	593.01	90.81	7.530		
11,100.00	10,423.12	13,585.15	9,982.73	37.00	70.10	49.03	747.69	698.95	668.84	579.39	89.45	7.477		
11,200.00	10,414.83	13,482.67	9,982.04	37.15	68.40	48.72	849.01	683.57	653.37	565.33	88.05	7.421		
11,300.00	10,406.54	13,384.56	9,982.07	37.31	66.77	48.46	946.04	669.07	637.63	550.86	86.77	7.349		
11,400.00	10,398.24	13,290.13	9,980.68	37.49	65.21	48.08	1,039.36	654.73	622.57	537.11	85.47	7.284		
11,500.00	10,389.95	13,182.23	9,978.46	37.68	63.43	47.47	1,145.71	636.62	606.76	522.90	83.86	7.235		
11,600.00	10,381.66	13,087.06	9,977.67	37.89	61.85	47.01	1,239.59	621.02	590.49	507.93	82.56	7.152		
11,700.00	10,373.37	13,001.60	9,975.85	38.12	60.45	46.54	1,323.99	607.79	575.82	494.40	81.42	7.072		
11,800.00	10,365.07	12,919.21	9,971.66	38.35	59.10	45.97	1,405.42	595.95	563.98	483.74	80.24	7.029		
11,900.00	10,356.78	12,823.77	9,965.49	38.60	57.55	45.23	1,499.78	583.08	553.84	474.98	78.86	7.023		
12,000.00	10,348.49	12,738.55	9,958.73	38.87	56.17	44.52	1,584.04	572.31	545.44	467.82	77.62	7.027		
12,100.00	10,340.20	12,624.81	9,950.33	39.15	54.33	43.62	1,696.61	558.36	536.99	460.94	76.05	7.061		
12,200.00	10,331.90	12,523.57	9,944.26	39.44	52.68	42.86	1,796.84	545.44	527.31	452.61	74.71	7.058		
12,300.00	10,323.61	12,416.99	9,938.07	39.74	50.95	41.98	1,902.28	531.21	517.23	443.94	73.29	7.057		
12,400.00	10,315.32	12,304.50	9,935.82	40.06	49.15	41.36	2,013.75	516.37	504.44	432.42	72.02	7.004		
12,500.00	10,307.03	12,202.37	9,935.31	40.39	47.52	40.85	2,114.94	502.57	490.42	419.43	70.99	6.909		
12,600.00	10,298.73	12,105.84	9,935.07	40.73	45.99	40.36	2,210.59	489.54	476.26	406.19	70.07	6.797		
12,700.00	10,290.44	12,010.86	9,934.01	41.08	44.50	39.81	2,304.74	477.02	463.00	393.82	69.18	6.693		
12,800.00	10,282.15	11,914.20	9,932.29	41.45	42.99	39.20	2,400.58	464.59	450.49	382.21	68.28	6.597		
12,900.00	10,273.86	11,811.80	9,930.17	41.82	41.39	38.46	2,502.06	451.09	438.08	370.77	67.31	6.509		
13,000.00	10,265.56	11,711.65	9,928.18	42.21	39.84	37.57	2,601.15	436.68	424.93	358.60	66.33	6.406		
13,100.00	10,257.27	11,620.85	9,925.58	42.61	38.45	36.65	2,690.97	423.69	412.65	347.14	65.51	6.299		
13,200.00	10,248.98	11,527.41	9,920.12	43.01	37.03	35.35	2,783.20	409.73	402.51	337.95	64.56	6.235		
13,300.00	10,240.69	11,425.21	9,912.86	43.43	35.49	33.60	2,883.79	393.21	393.00	329.59	63.41	6.198		
13,400.00	10,232.40	11,314.30	9,906.06	43.85	33.84	31.34	2,992.56	372.60	381.76	319.70	62.06	6.151		
13,500.00	10,224.10	11,214.75	9,901.59	44.29	32.38	29.19	3,090.10	353.23	369.19	308.16	61.03	6.049		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) ALBATROSS STATE COM 001H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 100-NS-GYRO-MS, 7863-MWD OWSG Rev5											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Offset Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
13,600.00	10,215.81	11,115.84	9,897.76	44.73	30.96	27.03	3,187.15	334.51	356.87	296.72	60.15	5.933		
13,700.00	10,207.52	11,018.23	9,894.40	45.19	29.58	24.91	3,283.09	316.88	345.06	285.63	59.43	5.806		
13,800.00	10,199.23	10,922.57	9,891.20	45.65	28.27	22.92	3,377.37	301.02	334.25	275.33	58.92	5.673		
13,900.00	10,190.93	10,828.06	9,886.99	46.12	27.02	20.89	3,470.59	286.04	325.17	266.63	58.54	5.555		
14,000.00	10,182.64	10,727.47	9,882.64	46.60	25.73	18.79	3,569.97	271.12	316.77	258.58	58.19	5.443		
14,100.00	10,174.35	10,629.81	9,879.13	47.08	24.53	16.88	3,666.64	257.69	308.44	250.39	58.04	5.314		
14,200.00	10,166.06	10,538.36	9,874.37	47.58	23.47	15.17	3,757.27	246.48	302.38	244.27	58.11	5.204		
14,300.00	10,157.76	10,440.59	9,867.94	48.08	22.39	13.60	3,854.31	236.51	298.45	240.25	58.20	5.128		
14,400.00	10,149.47	10,332.24	9,863.11	48.58	21.27	12.28	3,962.16	227.39	293.06	234.85	58.21	5.035		
14,500.00	10,141.18	10,240.00	9,859.53	49.10	20.42	11.25	4,054.06	220.24	287.41	228.81	58.60	4.905		
14,566.29	10,135.68	10,185.13	9,855.54	49.44	19.96	10.50	4,108.59	215.74	285.90	227.04	58.86	4.857	CC, ES	
14,600.00	10,132.89	10,158.01	9,852.60	49.62	19.74	10.06	4,135.44	213.36	286.29	227.29	59.00	4.853		
14,700.00	10,124.59	10,067.69	9,840.07	50.15	19.07	8.61	4,224.57	205.84	290.66	231.24	59.42	4.892		
14,800.00	10,116.30	9,997.96	9,826.71	50.68	18.64	7.69	4,292.83	201.41	301.01	240.92	60.09	5.009		
14,900.00	10,108.01	9,935.81	9,808.41	51.22	18.33	6.82	4,352.09	197.83	322.03	261.38	60.65	5.309		
15,000.00	10,099.72	9,894.00	9,791.21	51.77	18.15	6.04	4,390.03	194.68	355.77	294.82	60.95	5.837		
15,100.00	10,091.42	9,842.13	9,763.86	52.32	17.97	4.91	4,433.79	189.84	401.19	340.12	61.07	6.569		
15,200.00	10,083.13	9,800.00	9,738.16	52.87	17.86	4.04	4,466.92	185.80	455.44	394.39	61.04	7.461		
15,300.00	10,074.84	9,749.61	9,704.53	53.44	17.76	3.06	4,504.08	180.72	515.96	454.88	61.07	8.448		
15,400.00	10,066.55	9,705.00	9,672.41	54.00	17.70	2.33	4,534.73	176.46	581.81	520.76	61.05	9.529		
15,500.00	10,058.26	9,673.00	9,647.99	54.57	17.66	1.92	4,555.25	173.96	652.17	591.27	60.90	10.709		
15,600.00	10,049.96	9,641.00	9,622.38	55.15	17.63	1.61	4,574.33	171.98	726.57	665.79	60.77	11.956		
15,700.00	10,041.67	9,619.56	9,604.62	55.73	17.61	1.45	4,586.28	170.93	804.21	743.67	60.54	13.283		
15,800.00	10,033.38	9,594.11	9,582.97	56.32	17.60	1.29	4,599.64	169.92	884.60	824.20	60.40	14.645		
15,900.00	10,025.09	9,577.00	9,568.15	56.91	17.59	1.20	4,608.15	169.32	967.22	907.03	60.19	16.069		
16,000.00	10,016.79	9,545.00	9,539.85	57.51	17.57	1.06	4,623.06	168.31	1,051.57	991.38	60.19	17.471		
16,100.00	10,008.50	9,528.73	9,525.22	58.10	17.56	0.99	4,630.13	167.80	1,137.53	1,077.50	60.03	18.950		
16,200.00	10,000.21	9,513.00	9,510.90	58.71	17.55	0.92	4,636.64	167.26	1,224.87	1,164.98	59.89	20.452		
16,300.00	9,991.92	9,494.98	9,494.33	59.31	17.55	0.84	4,643.69	166.60	1,313.40	1,253.59	59.80	21.962		
16,400.00	9,983.62	9,482.00	9,482.28	59.92	17.54	0.78	4,648.47	166.11	1,402.99	1,343.30	59.68	23.508		
16,500.00	9,975.33	9,466.79	9,468.04	60.54	17.54	0.71	4,653.78	165.49	1,493.48	1,433.88	59.61	25.056		
16,600.00	9,967.04	9,450.00	9,452.19	61.16	17.53	0.63	4,659.28	164.76	1,584.79	1,525.23	59.56	26.608		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) ALBATROSS STATE COM 002H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 100-r.5 GYRO-NS, 9783-3_MWD+HRGM													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
9,200.00	9,186.47	14,962.00	10,460.78	32.24	79.12	-84.76	-148.54	-757.18	1,602.47	1,520.01	82.46	19.433		
9,300.00	9,286.47	14,962.00	10,460.78	32.59	79.12	-84.76	-148.54	-757.18	1,524.15	1,439.34	84.82	17.970		
9,400.00	9,386.47	14,962.00	10,460.78	32.95	79.12	-84.76	-148.54	-757.18	1,448.51	1,361.14	87.37	16.579		
9,500.00	9,486.47	14,962.00	10,460.78	33.30	79.12	-84.76	-148.54	-757.18	1,375.98	1,285.85	90.13	15.266		
9,600.00	9,586.47	14,962.00	10,460.78	33.65	79.12	-84.76	-148.54	-757.18	1,307.08	1,213.99	93.09	14.042		
9,700.00	9,686.47	14,962.00	10,460.78	34.00	79.12	-84.76	-148.54	-757.18	1,242.42	1,146.21	96.21	12.914		
9,800.00	9,786.47	14,962.00	10,460.78	34.35	79.12	-84.76	-148.54	-757.18	1,182.68	1,083.23	99.45	11.892		
9,900.00	9,886.43	14,962.00	10,460.78	34.71	79.12	-86.83	-148.54	-757.18	1,128.54	1,025.79	102.75	10.984		
10,000.00	9,984.97	14,962.00	10,460.78	35.05	79.12	-92.33	-148.54	-757.18	1,080.37	974.38	105.99	10.193		
10,100.00	10,079.19	14,962.00	10,460.78	35.37	79.12	-96.70	-148.54	-757.18	1,040.26	931.29	108.96	9.547		
10,200.00	10,166.23	14,962.00	10,460.78	35.65	79.12	-99.80	-148.54	-757.18	1,010.43	899.02	111.41	9.069		
10,300.00	10,243.43	14,962.00	10,460.78	35.91	79.12	-101.57	-148.54	-757.18	992.76	879.68	113.08	8.779		
10,400.00	10,308.47	14,906.11	10,458.85	36.13	78.38	-100.00	-92.99	-763.01	986.96	873.49	113.47	8.698	SF	
10,462.87	10,342.22	14,838.64	10,458.28	36.24	77.49	-97.90	-25.80	-769.08	986.48	873.36	113.12	8.721	ES	
10,500.00	10,359.35	14,784.82	10,459.91	36.31	76.78	-96.52	27.87	-772.76	986.60	873.91	112.68	8.755		
10,600.00	10,394.53	14,661.84	10,466.48	36.45	75.19	-94.34	150.58	-777.27	986.22	874.75	111.47	8.847		
10,600.87	10,394.77	14,660.93	10,466.54	36.46	75.18	-94.33	151.49	-777.29	986.22	874.76	111.46	8.848	CC	
10,700.00	10,416.72	14,557.30	10,471.30	36.57	73.84	-93.26	254.97	-779.81	986.41	876.08	110.33	8.941		
10,800.00	10,430.32	14,456.69	10,470.22	36.67	72.55	-92.37	355.53	-782.16	986.95	877.76	109.18	9.039		
10,900.00	10,435.22	14,388.37	10,467.23	36.76	71.67	-91.87	423.73	-784.64	989.28	880.90	108.38	9.128		
11,000.00	10,431.41	14,317.25	10,464.84	36.87	70.76	-91.58	494.61	-789.93	995.54	888.05	107.48	9.262		
11,100.00	10,423.12	14,224.24	10,460.35	37.00	69.57	-91.75	587.14	-798.18	1,003.43	897.03	106.39	9.431		
11,200.00	10,414.83	14,126.31	10,452.33	37.15	68.32	-91.74	684.31	-807.39	1,011.77	906.48	105.29	9.610		
11,300.00	10,406.54	14,018.22	10,443.31	37.31	66.95	-91.72	791.57	-817.29	1,019.87	915.75	104.11	9.796		
11,400.00	10,398.24	13,909.66	10,435.01	37.49	65.59	-91.74	899.46	-825.96	1,026.78	923.82	102.96	9.973		
11,500.00	10,389.95	13,811.83	10,427.75	37.68	64.37	-91.78	996.73	-833.53	1,033.48	931.55	101.93	10.139		
11,600.00	10,381.66	13,701.39	10,421.66	37.89	63.01	-91.94	1,106.68	-841.90	1,040.10	939.29	100.80	10.318		
11,700.00	10,373.37	13,569.52	10,415.68	38.12	61.40	-92.20	1,238.22	-848.95	1,044.55	945.06	99.48	10.500		
11,800.00	10,365.07	13,431.62	10,411.46	38.35	59.75	-92.59	1,376.02	-851.37	1,045.41	947.32	98.09	10.658		
11,900.00	10,356.78	13,322.22	10,408.40	38.60	58.46	-92.93	1,485.37	-850.57	1,043.85	946.81	97.04	10.757		
12,000.00	10,348.49	13,231.86	10,404.97	38.87	57.41	-93.15	1,575.67	-850.10	1,042.50	946.25	96.25	10.831		
12,086.63	10,341.31	13,153.20	10,402.65	39.11	56.50	-93.39	1,654.29	-850.44	1,042.21	946.64	95.57	10.905		
12,100.00	10,340.20	13,140.83	10,402.31	39.15	56.36	-93.42	1,666.65	-850.54	1,042.21	946.75	95.46	10.917		
12,200.00	10,331.90	13,037.68	10,398.87	39.44	55.18	-93.71	1,769.74	-851.44	1,042.33	947.76	94.57	11.022		
12,300.00	10,323.61	12,923.00	10,392.29	39.74	53.88	-93.87	1,884.23	-851.48	1,041.46	947.89	93.57	11.130		
12,400.00	10,315.32	12,827.00	10,386.26	40.06	52.82	-93.98	1,980.04	-851.06	1,040.10	947.27	92.83	11.205		
12,435.96	10,312.34	12,803.63	10,384.90	40.18	52.56	-94.02	2,003.37	-851.15	1,039.90	947.21	92.69	11.220		
12,500.00	10,307.03	12,760.13	10,382.29	40.39	52.09	-94.07	2,046.78	-851.98	1,040.53	948.13	92.40	11.261		
12,600.00	10,298.73	12,674.77	10,377.43	40.73	51.16	-94.18	2,131.94	-855.37	1,043.56	951.76	91.80	11.368		
12,700.00	10,290.44	12,566.13	10,373.33	41.08	49.99	-94.44	2,240.41	-859.61	1,046.73	955.75	90.99	11.504		
12,800.00	10,282.15	12,455.74	10,368.83	41.45	48.84	-94.68	2,350.67	-862.65	1,048.74	958.55	90.20	11.627		
12,900.00	10,273.86	12,349.65	10,365.06	41.82	47.75	-94.95	2,456.67	-864.72	1,050.01	960.53	89.48	11.735		
13,000.00	10,265.56	12,248.05	10,363.75	42.21	46.74	-95.34	2,558.24	-866.12	1,050.95	962.12	88.84	11.830		
13,100.00	10,257.27	12,144.36	10,362.89	42.61	45.73	-95.76	2,661.93	-867.28	1,051.72	963.51	88.21	11.923		
13,200.00	10,248.98	12,030.62	10,358.60	43.01	44.66	-96.04	2,775.58	-867.95	1,051.71	964.18	87.53	12.015		
13,300.00	10,240.69	11,905.63	10,351.23	43.43	43.52	-96.22	2,900.34	-866.65	1,049.90	963.09	86.81	12.094		
13,400.00	10,232.40	11,803.34	10,345.95	43.85	42.63	-96.42	3,002.45	-863.78	1,046.37	960.03	86.34	12.120		
13,500.00	10,224.10	11,714.90	10,343.87	44.29	41.89	-96.72	3,090.83	-861.59	1,043.53	957.51	86.02	12.132		
13,600.00	10,215.81	11,637.34	10,342.90	44.73	41.26	-97.03	3,168.38	-860.73	1,042.25	956.44	85.81	12.147		
13,601.76	10,215.66	11,636.06	10,342.89	44.74	41.25	-97.04	3,169.67	-860.74	1,042.25	956.45	85.80	12.147		
13,700.00	10,207.52	11,562.58	10,342.14	45.19	40.66	-97.33	3,243.13	-861.79	1,043.48	957.85	85.63	12.186		
13,800.00	10,199.23	11,480.32	10,340.46	45.65	40.03	-97.59	3,325.31	-864.87	1,046.90	961.48	85.42	12.256		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) ALBATROSS STATE COM 002H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 100-r.5 GYRO-NS, 9783-3_MWD+HRGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
13,900.00	10,190.93	11,367.90	10,335.37	46.12	39.21	-97.79	3,437.51	-869.61	1,050.54	965.46	85.08	12.347		
14,000.00	10,182.64	11,247.41	10,326.57	46.60	38.40	-97.84	3,557.63	-873.04	1,052.42	967.65	84.77	12.415		
14,100.00	10,174.35	11,143.63	10,318.02	47.08	37.74	-97.84	3,661.04	-874.75	1,053.00	968.38	84.62	12.444		
14,200.00	10,166.06	11,047.30	10,311.90	47.58	37.18	-97.94	3,757.17	-876.27	1,053.76	969.22	84.55	12.464		
14,300.00	10,157.76	10,954.80	10,307.92	48.08	36.69	-98.13	3,849.56	-877.92	1,055.03	970.50	84.53	12.481		
14,400.00	10,149.47	10,858.68	10,304.09	48.58	36.21	-98.34	3,945.57	-880.23	1,056.97	972.41	84.56	12.500		
14,500.00	10,141.18	10,762.59	10,300.50	49.10	35.79	-98.57	4,041.57	-882.75	1,059.17	974.53	84.63	12.515		
14,600.00	10,132.89	10,658.24	10,295.79	49.62	35.39	-98.76	4,145.76	-885.74	1,061.52	976.77	84.75	12.525		
14,700.00	10,124.59	10,512.66	10,283.31	50.15	34.93	-98.74	4,290.62	-887.59	1,061.80	976.94	84.86	12.512		
14,800.00	10,116.30	10,354.10	10,232.19	50.68	34.59	-96.69	4,440.30	-886.43	1,056.45	971.29	85.16	12.405		
14,900.00	10,108.01	10,248.15	10,175.70	51.22	34.48	-94.04	4,529.63	-885.42	1,049.49	963.85	85.65	12.254		
15,000.00	10,099.72	10,174.90	10,126.44	51.77	34.45	-91.61	4,583.79	-885.14	1,044.43	958.27	86.16	12.122		
15,057.28	10,094.97	10,137.20	10,099.10	52.08	34.44	-90.23	4,609.74	-885.44	1,043.64	957.21	86.43	12.075		
15,100.00	10,091.42	10,108.18	10,076.89	52.32	34.43	-89.10	4,628.41	-885.73	1,044.09	957.49	86.60	12.056		
15,200.00	10,083.13	10,035.78	10,017.51	52.87	34.41	-86.04	4,669.74	-886.03	1,048.84	961.95	86.89	12.071		
15,300.00	10,074.84	9,990.70	9,977.87	53.44	34.39	-83.98	4,691.17	-885.50	1,059.48	972.40	87.08	12.167		
15,400.00	10,066.55	9,961.43	9,950.86	54.00	34.39	-82.57	4,702.40	-885.03	1,077.68	990.55	87.13	12.369		
15,500.00	10,058.26	9,943.00	9,933.41	54.57	34.38	-81.66	4,708.31	-884.66	1,103.67	1,016.64	87.03	12.681		
15,600.00	10,049.96	9,920.69	9,911.95	55.15	34.38	-80.53	4,714.39	-884.17	1,137.20	1,050.43	86.77	13.106		
15,700.00	10,041.67	9,909.00	9,900.59	55.73	34.38	-79.93	4,717.14	-883.92	1,177.86	1,091.46	86.40	13.633		
15,800.00	10,033.38	9,892.54	9,884.49	56.32	34.37	-79.09	4,720.50	-883.52	1,224.99	1,139.06	85.93	14.255		
15,900.00	10,025.09	9,878.00	9,870.16	56.91	34.37	-78.34	4,722.99	-883.13	1,277.99	1,192.58	85.41	14.963		
16,000.00	10,016.79	9,878.00	9,870.16	57.51	34.37	-78.34	4,722.99	-883.13	1,336.20	1,251.35	84.86	15.747		
16,100.00	10,008.50	9,861.93	9,854.26	58.10	34.37	-77.51	4,725.28	-882.64	1,398.93	1,314.64	84.29	16.597		
16,200.00	10,000.21	9,846.00	9,838.45	58.71	34.37	-76.69	4,727.12	-882.12	1,465.76	1,382.03	83.73	17.506		
16,300.00	9,991.92	9,846.00	9,838.45	59.31	34.37	-76.69	4,727.12	-882.12	1,536.00	1,452.81	83.18	18.465		
16,400.00	9,983.62	9,846.00	9,838.45	59.92	34.37	-76.69	4,727.12	-882.12	1,609.39	1,526.73	82.66	19.471		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) BLACK JACK STATE 001 - Verticals - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG Rev5													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside Tooface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
21,700.00	9,544.13	9,472.50	9,457.45	95.66	34.27	93.02	12,724.64	755.82	1,630.57	1,542.01	88.56	18.413		
21,800.00	9,535.84	9,467.22	9,452.18	96.37	34.26	92.58	12,724.41	755.64	1,540.41	1,450.17	90.24	17.070		
21,900.00	9,527.54	9,462.12	9,447.08	97.09	34.24	92.16	12,724.19	755.45	1,451.52	1,359.37	92.16	15.751		
22,000.00	9,519.25	9,457.17	9,442.15	97.80	34.23	91.74	12,723.97	755.28	1,364.16	1,269.82	94.34	14.460		
22,100.00	9,510.96	9,452.38	9,437.36	98.52	34.22	91.34	12,723.76	755.10	1,278.64	1,181.80	96.83	13.205		
22,200.00	9,502.67	9,447.73	9,432.72	99.23	34.21	90.95	12,723.55	754.93	1,195.35	1,095.68	99.67	11.993		
22,300.00	9,494.37	9,443.23	9,428.23	99.95	34.20	90.58	12,723.34	754.77	1,114.80	1,011.91	102.89	10.835		
22,400.00	9,486.08	9,438.86	9,423.86	100.67	34.19	90.21	12,723.14	754.60	1,037.62	931.11	106.51	9.742		
22,500.00	9,477.79	9,434.61	9,419.63	101.39	34.18	89.86	12,722.94	754.44	964.62	854.09	110.53	8.727		
22,600.00	9,469.50	9,430.49	9,415.51	102.11	34.16	89.51	12,722.74	754.29	896.83	781.92	114.91	7.805		
22,700.00	9,461.20	9,426.49	9,411.51	102.83	34.15	89.18	12,722.55	754.13	835.52	716.01	119.51	6.991		
22,800.00	9,452.91	9,422.59	9,407.63	103.55	34.15	88.85	12,722.36	753.98	782.21	658.10	124.11	6.303		
22,900.00	9,444.62	9,418.81	9,403.85	104.27	34.14	88.53	12,722.17	753.83	738.64	610.31	128.33	5.756		
23,000.00	9,436.33	9,415.13	9,400.18	104.99	34.13	88.22	12,721.99	753.69	706.61	574.90	131.71	5.365		
23,100.00	9,428.04	9,411.55	9,396.60	105.72	34.12	87.92	12,721.81	753.55	687.73	553.97	133.76	5.141		
23,181.74	9,421.26	9,408.69	9,393.75	106.31	34.11	87.68	12,721.67	753.44	682.87	548.64	134.22	5.088	CC, ES, SF	
23,200.00	9,419.74	9,408.06	9,393.12	106.44	34.11	87.63	12,721.63	753.41	683.11	548.94	134.17	5.091		
23,300.00	9,411.45	9,408.00	9,393.07	107.17	34.11	87.63	12,721.63	753.41	693.03	560.13	132.90	5.215		
23,400.00	9,403.16	9,401.85	9,386.93	107.89	34.09	87.11	12,721.32	753.17	716.86	586.61	130.26	5.504		
23,500.00	9,394.87	9,398.55	9,383.63	108.62	34.09	86.83	12,721.16	753.04	753.32	626.65	126.67	5.947		
23,600.00	9,386.57	9,395.10	9,380.19	109.34	34.08	86.54	12,721.00	752.91	800.66	678.05	122.62	6.530		
23,700.00	9,378.28	9,391.48	9,376.58	110.07	34.07	86.24	12,720.83	752.77	857.09	738.63	118.46	7.235		
23,800.00	9,369.99	9,387.69	9,372.80	110.80	34.06	85.92	12,720.65	752.63	920.94	806.47	114.46	8.046		
23,900.00	9,361.70	9,383.72	9,368.83	111.53	34.05	85.59	12,720.47	752.48	990.77	880.01	110.75	8.946		
24,000.00	9,353.40	9,379.55	9,364.67	112.26	34.04	85.24	12,720.28	752.33	1,065.40	958.01	107.39	9.921		
24,100.00	9,345.11	9,375.16	9,360.29	112.99	34.03	84.88	12,720.09	752.18	1,143.90	1,039.50	104.40	10.957		
24,200.00	9,336.82	9,370.55	9,355.68	113.72	34.02	84.49	12,719.89	752.02	1,225.52	1,123.77	101.75	12.045		
24,300.00	9,328.53	9,365.68	9,350.82	114.45	34.01	84.08	12,719.69	751.85	1,309.68	1,210.26	99.42	13.173		
24,400.00	9,320.23	9,360.55	9,345.69	115.18	33.99	83.65	12,719.48	751.68	1,395.91	1,298.53	97.38	14.335		
24,500.00	9,311.94	9,355.12	9,340.27	115.91	33.98	83.20	12,719.27	751.51	1,483.85	1,388.26	95.59	15.523		
24,600.00	9,303.65	9,349.37	9,334.53	116.64	33.97	82.72	12,719.05	751.32	1,573.22	1,479.20	94.03	16.732		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) BLACK JACK STATE 002 - Verticals - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-3_INC-Only													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
22,200.00	9,502.67	9,521.89	9,502.67	99.23	171.00	-92.87	12,563.83	-1,316.34	1,623.53	1,364.62	258.91	6.271		
22,300.00	9,494.37	9,513.60	9,494.37	99.95	170.79	-92.53	12,563.83	-1,316.34	1,574.25	1,312.83	261.42	6.022		
22,400.00	9,486.08	9,505.31	9,486.08	100.67	170.58	-92.19	12,563.83	-1,316.34	1,529.89	1,265.99	263.90	5.797		
22,500.00	9,477.79	9,497.01	9,477.79	101.39	170.37	-91.85	12,563.83	-1,316.34	1,490.87	1,224.60	266.26	5.599		
22,600.00	9,469.50	9,488.72	9,469.50	102.11	170.16	-91.51	12,563.83	-1,316.34	1,457.63	1,189.17	268.47	5.429		
22,700.00	9,461.20	9,480.43	9,461.20	102.83	169.95	-91.17	12,563.83	-1,316.34	1,430.58	1,160.14	270.43	5.290		
22,800.00	9,452.91	9,472.14	9,452.91	103.55	169.74	-90.83	12,563.83	-1,316.34	1,410.06	1,137.97	272.10	5.182		
22,900.00	9,444.62	9,463.84	9,444.62	104.27	169.53	-90.49	12,563.83	-1,316.34	1,396.38	1,122.98	273.40	5.107		
23,000.00	9,436.33	9,455.55	9,436.33	104.99	169.32	-90.15	12,563.83	-1,316.34	1,389.72	1,115.43	274.29	5.067		
23,043.39	9,432.73	9,451.95	9,432.73	105.31	169.23	-90.00	12,563.83	-1,316.34	1,389.05	1,114.51	274.53	5.060	CC, ES, SF	
23,100.00	9,428.04	9,447.26	9,428.04	105.72	169.11	-89.81	12,563.83	-1,316.34	1,390.19	1,115.46	274.73	5.060		
23,200.00	9,419.74	9,438.97	9,419.74	106.44	168.90	-89.47	12,563.83	-1,316.34	1,397.79	1,123.07	274.72	5.088		
23,300.00	9,411.45	9,430.67	9,411.45	107.17	168.69	-89.13	12,563.83	-1,316.34	1,412.39	1,138.12	274.27	5.150		
23,400.00	9,403.16	9,418.73	9,399.57	107.89	168.42	-88.64	12,563.93	-1,316.34	1,433.77	1,160.42	273.35	5.245		
23,500.00	9,394.87	9,410.17	9,391.01	108.62	168.23	-88.29	12,564.01	-1,316.34	1,461.63	1,189.48	272.15	5.371		
23,600.00	9,386.57	9,401.89	9,382.73	109.34	168.04	-87.95	12,564.07	-1,316.34	1,495.62	1,224.96	270.66	5.526		
23,700.00	9,378.28	9,393.86	9,374.71	110.07	167.87	-87.62	12,564.12	-1,316.34	1,535.34	1,266.41	268.92	5.709		
23,800.00	9,369.99	9,386.09	9,366.93	110.80	167.70	-87.30	12,564.15	-1,316.34	1,580.35	1,313.33	267.01	5.919		
23,900.00	9,361.70	9,378.55	9,359.39	111.53	167.53	-86.99	12,564.18	-1,316.34	1,630.21	1,365.23	264.98	6.152		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) BLACK JACK STATE 003 - Verticals - Surveys

Survey Program: 243-3_INC-Only, 1797-MWD OWSG Rev5, 4047-INC-ONLY, 4548-MWD OWSG Rev5											Rule Assigned:		Offset Site Error:
													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,300.00	9,660.22	9,626.94	9,614.05	85.78	47.34	97.40	11,339.56	682.07	1,603.86	1,507.93	95.94	16.718	
20,400.00	9,651.93	9,621.68	9,608.79	86.48	47.34	96.90	11,339.43	681.97	1,511.61	1,414.45	97.16	15.558	
20,500.00	9,643.64	9,616.34	9,603.45	87.17	47.33	96.40	11,339.30	681.88	1,420.38	1,321.80	98.58	14.409	
20,600.00	9,635.34	9,610.92	9,598.04	87.88	47.32	95.88	11,339.18	681.79	1,330.38	1,230.15	100.23	13.273	
20,700.00	9,627.05	9,605.43	9,592.55	88.58	47.32	95.36	11,339.06	681.70	1,241.89	1,139.73	102.17	12.155	
20,800.00	9,618.76	9,599.85	9,586.97	89.28	47.31	94.83	11,338.93	681.60	1,155.26	1,050.81	104.44	11.061	
20,900.00	9,610.47	9,594.19	9,581.32	89.99	47.30	94.29	11,338.81	681.51	1,070.92	963.80	107.11	9.998	
21,000.00	9,602.18	9,588.45	9,575.58	90.69	47.30	93.75	11,338.69	681.41	989.46	879.21	110.25	8.975	
21,100.00	9,593.88	9,582.62	9,569.75	91.40	47.29	93.19	11,338.56	681.31	911.67	797.76	113.91	8.004	
21,200.00	9,585.59	9,576.71	9,563.84	92.11	47.28	92.62	11,338.44	681.21	838.56	720.43	118.12	7.099	
21,300.00	9,577.30	9,570.70	9,557.83	92.81	47.28	92.05	11,338.32	681.12	771.45	648.58	122.87	6.278	
21,400.00	9,569.01	9,564.60	9,551.73	93.52	47.27	91.46	11,338.21	681.02	712.05	584.03	128.01	5.562	
21,500.00	9,560.71	9,558.41	9,545.54	94.23	47.26	90.87	11,338.09	680.91	662.43	529.20	133.23	4.972	
21,600.00	9,552.42	9,554.00	9,541.14	94.95	47.26	90.44	11,338.01	680.84	624.93	486.95	137.98	4.529	
21,700.00	9,544.13	9,546.00	9,533.14	95.66	47.25	89.68	11,337.86	680.72	601.81	460.28	141.53	4.252	
21,792.38	9,536.47	9,540.23	9,527.37	96.32	47.24	89.12	11,337.76	680.63	594.70	451.53	143.17	4.154	CC
21,800.00	9,535.84	9,539.75	9,526.89	96.37	47.24	89.07	11,337.75	680.62	594.75	451.53	143.23	4.153	ES, SF
21,900.00	9,527.54	9,533.42	9,520.56	97.09	47.24	88.47	11,337.65	680.53	604.32	461.55	142.78	4.233	
22,000.00	9,519.25	9,527.00	9,514.15	97.80	47.23	87.85	11,337.54	680.43	629.76	489.34	140.42	4.485	
22,100.00	9,510.96	9,520.50	9,507.65	98.52	47.22	87.22	11,337.43	680.34	669.26	532.50	136.76	4.894	
22,200.00	9,502.67	9,513.92	9,501.06	99.23	47.21	86.59	11,337.33	680.26	720.50	588.03	132.47	5.439	
22,300.00	9,494.37	9,507.24	9,494.39	99.95	47.21	85.95	11,337.23	680.17	781.19	653.10	128.09	6.099	
22,400.00	9,486.08	9,500.48	9,487.63	100.67	47.20	85.31	11,337.13	680.09	849.29	725.35	123.94	6.853	
22,500.00	9,477.79	9,493.62	9,480.78	101.39	47.19	84.65	11,337.03	680.01	923.16	802.98	120.18	7.681	
22,600.00	9,469.50	9,486.68	9,473.83	102.11	47.19	83.99	11,336.93	679.93	1,001.54	884.67	116.87	8.570	
22,700.00	9,461.20	9,479.64	9,466.79	102.83	47.18	83.32	11,336.84	679.85	1,083.44	969.44	113.99	9.505	
22,800.00	9,452.91	9,472.50	9,459.65	103.55	47.17	82.64	11,336.74	679.78	1,168.11	1,056.61	111.51	10.476	
22,900.00	9,444.62	9,465.26	9,452.41	104.27	47.16	81.95	11,336.65	679.71	1,255.00	1,145.64	109.37	11.475	
23,000.00	9,436.33	9,457.92	9,445.08	104.99	47.15	81.26	11,336.56	679.64	1,343.68	1,236.15	107.53	12.496	
23,100.00	9,428.04	9,450.48	9,437.63	105.72	47.15	80.56	11,336.48	679.58	1,433.82	1,327.86	105.95	13.533	
23,200.00	9,419.74	9,442.93	9,430.09	106.44	47.14	79.86	11,336.40	679.52	1,525.14	1,420.55	104.59	14.582	
23,300.00	9,411.45	9,435.28	9,422.43	107.17	47.13	79.14	11,336.32	679.46	1,617.46	1,514.05	103.41	15.641	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 002H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft		
Survey Program: 100-r.5 GYRO-NS, 9214-MWD OWSG Rev5													Offset Well Error:	0.00 usft		
Reference													Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Tooflance (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
14,500.00	10,141.18	9,402.00	9,396.20	49.10	32.70	38.74	5,467.56	651.77	1,661.07	1,593.75	67.33	24.671				
14,600.00	10,132.89	9,402.00	9,396.20	49.62	32.70	38.74	5,467.56	651.77	1,574.29	1,506.84	67.45	23.339				
14,700.00	10,124.59	9,414.40	9,407.04	50.15	32.71	39.29	5,473.56	652.33	1,488.94	1,421.23	67.71	21.989				
14,800.00	10,116.30	9,433.00	9,422.95	50.68	32.72	40.11	5,483.16	653.08	1,405.34	1,337.26	68.08	20.643				
14,900.00	10,108.01	9,433.00	9,422.95	51.22	32.72	40.11	5,483.16	653.08	1,323.45	1,255.08	68.37	19.357				
15,000.00	10,099.72	9,450.14	9,437.23	51.77	32.74	40.86	5,492.62	653.69	1,243.80	1,174.93	68.88	18.059				
15,100.00	10,091.42	9,465.00	9,449.30	52.32	32.75	41.52	5,501.27	654.15	1,166.71	1,097.24	69.47	16.795				
15,200.00	10,083.13	9,481.01	9,461.94	52.87	32.76	42.23	5,511.09	654.58	1,092.58	1,022.40	70.19	15.567				
15,300.00	10,074.84	9,496.00	9,473.40	53.44	32.77	42.89	5,520.74	654.89	1,021.95	950.91	71.04	14.386				
15,400.00	10,066.55	9,528.00	9,496.53	54.00	32.79	44.25	5,542.84	655.13	955.41	883.25	72.16	13.240				
15,500.00	10,058.26	9,544.63	9,507.79	54.57	32.81	44.93	5,555.08	655.01	893.29	819.94	73.35	12.179				
15,600.00	10,049.96	9,575.84	9,527.55	55.15	32.83	46.16	5,579.22	654.39	836.38	761.61	74.78	11.185				
15,700.00	10,041.67	9,611.10	9,548.05	55.73	32.85	47.49	5,607.88	653.28	784.83	708.46	76.38	10.276				
15,800.00	10,033.38	9,654.00	9,570.32	56.32	32.87	49.05	5,644.52	652.40	739.72	661.58	78.14	9.467				
15,900.00	10,025.09	9,686.00	9,585.21	56.91	32.89	50.20	5,672.84	652.36	701.34	621.35	80.00	8.767				
16,000.00	10,016.79	9,754.97	9,613.02	57.51	32.92	52.44	5,735.91	651.04	668.56	586.65	81.91	8.162				
16,100.00	10,008.50	9,812.00	9,631.29	58.10	33.03	54.00	5,789.87	648.83	641.17	557.40	83.77	7.654				
16,200.00	10,000.21	9,875.00	9,647.16	58.71	33.23	55.53	5,850.81	647.09	619.84	534.28	85.56	7.245				
16,300.00	9,991.92	9,957.63	9,662.81	59.31	33.56	57.19	5,931.86	644.14	602.44	515.22	87.22	6.907				
16,400.00	9,983.62	10,025.43	9,669.89	59.92	33.86	58.10	5,999.20	641.03	599.37	500.60	88.77	6.639				
16,500.00	9,975.33	10,096.27	9,670.96	60.54	34.22	58.57	6,069.95	638.14	581.59	491.45	90.14	6.452				
16,600.00	9,967.04	10,189.11	9,667.71	61.16	34.76	58.82	6,162.66	634.69	576.84	485.46	91.37	6.313				
16,700.00	9,958.75	10,296.07	9,661.63	61.78	35.46	58.83	6,269.30	629.06	571.90	479.32	92.58	6.178				
16,800.00	9,950.45	10,398.22	9,654.80	62.40	36.19	58.68	6,371.00	622.47	566.46	472.67	93.80	6.039				
16,900.00	9,942.16	10,503.96	9,646.43	63.03	37.02	58.29	6,476.01	613.28	559.76	464.77	94.99	5.893				
17,000.00	9,933.87	10,599.97	9,637.67	63.66	37.82	57.78	6,571.19	604.37	553.24	457.02	96.21	5.750				
17,100.00	9,925.58	10,695.86	9,628.39	64.30	38.68	57.25	6,666.26	595.87	547.42	449.95	97.46	5.617				
17,200.00	9,917.29	10,791.34	9,618.84	64.93	39.58	56.71	6,760.94	588.05	542.38	443.64	98.75	5.493				
17,300.00	9,908.99	10,886.93	9,609.09	65.57	40.52	56.19	6,855.77	581.02	538.20	438.13	100.07	5.378				
17,400.00	9,900.70	10,984.81	9,598.85	66.22	41.52	55.67	6,952.88	574.42	534.72	433.30	101.42	5.273				
17,500.00	9,892.41	11,082.69	9,588.40	66.86	42.56	55.12	7,049.98	567.85	531.44	428.66	102.78	5.171				
17,600.00	9,884.12	11,183.41	9,577.58	67.51	43.67	54.58	7,149.92	561.57	528.64	424.47	104.17	5.075				
17,700.00	9,875.82	11,282.50	9,568.35	68.16	44.80	54.19	7,248.42	555.86	525.42	419.77	105.65	4.973				
17,800.00	9,867.53	11,376.63	9,559.55	68.81	45.90	53.88	7,342.03	551.34	523.02	415.86	107.16	4.881				
17,900.00	9,859.24	11,479.07	9,549.80	69.47	47.12	53.57	7,443.92	547.16	521.33	412.61	108.72	4.795				
18,000.00	9,850.95	11,589.95	9,540.16	70.13	48.49	53.21	7,554.21	541.17	518.11	407.81	110.30	4.697				
18,100.00	9,842.65	11,688.49	9,532.28	70.79	49.73	52.89	7,662.24	534.97	513.76	401.87	111.89	4.592				
18,200.00	9,834.36	11,788.88	9,524.35	71.45	51.01	52.60	7,752.14	529.04	509.68	396.17	113.51	4.490				
18,300.00	9,826.07	11,886.00	9,516.83	72.11	52.28	52.34	7,848.81	523.55	505.72	390.56	115.15	4.392				
18,400.00	9,817.78	11,984.95	9,509.48	72.78	53.59	52.15	7,947.37	518.73	502.18	385.33	116.85	4.298				
18,500.00	9,809.48	12,090.96	9,501.35	73.45	55.02	51.85	8,052.88	512.47	497.98	379.46	118.52	4.202				
18,600.00	9,801.19	12,186.15	9,493.16	74.12	56.31	51.45	8,147.51	506.27	493.91	373.79	120.12	4.112				
18,700.00	9,792.90	12,284.70	9,483.93	74.79	57.67	50.97	8,245.43	499.96	490.43	368.73	121.70	4.030				
18,800.00	9,784.61	12,383.63	9,475.06	75.47	59.05	50.56	8,343.79	494.19	487.17	363.86	123.31	3.951				
18,900.00	9,776.31	12,481.35	9,465.89	76.14	60.42	50.11	8,440.91	488.56	484.26	359.36	124.90	3.877				
19,000.00	9,768.02	12,578.91	9,455.83	76.82	61.80	49.57	8,537.78	482.83	481.90	355.46	126.44	3.811				
19,100.00	9,759.73	12,679.34	9,444.76	77.50	63.24	48.93	8,637.41	476.70	479.87	351.95	127.92	3.751				
19,200.00	9,751.44	12,778.20	9,435.51	78.18	64.66	48.51	8,735.70	471.58	477.50	347.97	129.53	3.686				
19,300.00	9,743.15	12,879.94	9,425.12	78.86	66.14	48.03	8,836.79	466.62	475.96	344.85	131.11	3.630				
19,400.00	9,734.85	12,986.10	9,416.64	79.55	67.69	47.70	8,942.46	461.05	472.63	339.83	132.80	3.559				
19,500.00	9,726.56	13,094.01	9,409.07	80.23	69.28	47.42	9,049.93	455.05	468.48	333.97	134.51	3.483				
19,600.00	9,718.27	13,197.91	9,403.93	80.92	70.82	47.31	9,153.52	448.82	462.59	326.27	136.32	3.393				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 002H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft
Survey Program: 100-r.5 GYRO-NS, 9214-MWD OWSG Rev5													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
19,700.00	9,709.98	13,296.71	9,399.06	81.61	72.30	47.18	9,252.00	442.64	456.50	318.36	138.13	3.305		
19,800.00	9,701.68	13,396.94	9,393.56	82.30	73.81	46.96	9,351.86	436.00	450.53	310.65	139.88	3.221		
19,900.00	9,693.39	13,493.52	9,387.61	82.99	75.27	46.66	9,448.03	429.38	444.85	303.26	141.59	3.142		
20,000.00	9,685.10	13,589.34	9,380.70	83.69	76.73	46.28	9,543.40	423.00	440.06	296.83	143.23	3.072		
20,100.00	9,676.81	13,689.54	9,372.57	84.38	78.25	45.74	9,643.01	415.87	435.60	290.85	144.75	3.009		
20,200.00	9,668.51	13,785.92	9,363.95	85.08	79.73	45.13	9,738.74	408.90	431.66	285.47	146.19	2.953		
20,265.41	9,663.09	13,836.00	9,359.31	85.54	80.49	44.80	9,788.48	405.35	429.61	282.52	147.09	2.921	CC, ES, SF	
20,300.00	9,660.22	13,836.00	9,359.31	85.78	80.49	44.80	9,788.48	405.35	431.00	283.97	147.03	2.931		
20,400.00	9,651.93	13,836.00	9,359.31	86.48	80.49	44.80	9,788.48	405.35	450.20	307.05	143.14	3.145		
20,500.00	9,643.64	13,836.00	9,359.31	87.17	80.49	44.80	9,788.48	405.35	489.49	353.97	135.51	3.612		
20,600.00	9,635.34	13,836.00	9,359.31	87.88	80.49	44.80	9,788.48	405.35	544.53	417.87	126.66	4.299		
20,700.00	9,627.05	13,836.00	9,359.31	88.58	80.49	44.80	9,788.48	405.35	611.09	492.80	118.29	5.166		
20,800.00	9,618.76	13,836.00	9,359.31	89.28	80.49	44.80	9,788.48	405.35	685.82	574.72	111.10	6.173		
20,900.00	9,610.47	13,836.00	9,359.31	89.99	80.49	44.80	9,788.48	405.35	766.34	661.14	105.20	7.285		
21,000.00	9,602.18	13,836.00	9,359.31	90.69	80.49	44.80	9,788.48	405.35	850.99	750.56	100.43	8.473		
21,100.00	9,593.88	13,836.00	9,359.31	91.40	80.49	44.80	9,788.48	405.35	938.67	842.06	96.61	9.716		
21,200.00	9,585.59	13,836.00	9,359.31	92.11	80.49	44.80	9,788.48	405.35	1,028.60	935.06	93.54	10.996		
21,300.00	9,577.30	13,836.00	9,359.31	92.81	80.49	44.80	9,788.48	405.35	1,120.24	1,029.18	91.06	12.302		
21,400.00	9,569.01	13,836.00	9,359.31	93.52	80.49	44.80	9,788.48	405.35	1,213.20	1,124.16	89.04	13.625		
21,500.00	9,560.71	13,836.00	9,359.31	94.23	80.49	44.80	9,788.48	405.35	1,307.20	1,219.82	87.38	14.959		
21,600.00	9,552.42	13,836.00	9,359.31	94.95	80.49	44.80	9,788.48	405.35	1,402.03	1,316.02	86.02	16.300		
21,700.00	9,544.13	13,836.00	9,359.31	95.66	80.49	44.80	9,788.48	405.35	1,497.54	1,412.66	84.88	17.643		
21,800.00	9,535.84	13,836.00	9,359.31	96.37	80.49	44.80	9,788.48	405.35	1,593.59	1,509.66	83.93	18.988		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 003H - Horizontal - PRODUCING - Surveys														Offset Site Error:	0.00 usft
Survey Program: 100-r-5 GYRO-NS, 8272-3_MWD+HRGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
14,500.00	10,141.18	9,405.84	9,380.09	49.10	29.59	-47.67	5,304.82	-568.50	1,628.62	1,563.21	65.42	24.897			
14,600.00	10,132.89	9,422.00	9,394.03	49.62	29.60	-48.36	5,312.90	-569.74	1,549.41	1,483.55	65.86	23.526			
14,700.00	10,124.59	9,433.36	9,403.70	50.15	29.61	-48.84	5,318.81	-570.58	1,472.30	1,405.96	66.34	22.193			
14,800.00	10,116.30	9,453.00	9,420.14	50.68	29.62	-49.68	5,329.46	-571.94	1,397.62	1,330.65	66.97	20.870			
14,900.00	10,108.01	9,471.29	9,435.17	51.22	29.63	-50.46	5,339.83	-573.10	1,325.58	1,257.89	67.69	19.584			
15,000.00	10,099.72	9,485.00	9,446.28	51.77	29.65	-51.04	5,347.81	-573.90	1,256.52	1,188.04	68.48	18.350			
15,100.00	10,091.42	9,517.00	9,471.52	52.32	29.67	-52.40	5,367.40	-575.55	1,190.72	1,121.19	69.52	17.127			
15,200.00	10,083.13	9,548.00	9,494.94	52.87	29.70	-53.71	5,387.65	-577.01	1,128.96	1,058.28	70.68	15.973			
15,300.00	10,074.84	9,569.02	9,510.30	53.44	29.73	-54.60	5,401.97	-578.01	1,071.37	999.47	71.91	14.900			
15,400.00	10,066.55	9,611.00	9,540.21	54.00	29.78	-56.38	5,431.35	-580.13	1,018.25	944.85	73.40	13.872			
15,500.00	10,058.26	9,644.00	9,563.45	54.57	29.83	-57.84	5,454.69	-582.22	969.71	894.73	74.98	12.933			
15,600.00	10,049.96	9,675.00	9,584.53	55.15	29.88	-59.22	5,477.26	-584.73	927.16	850.50	76.65	12.096			
15,700.00	10,041.67	9,707.00	9,604.74	55.73	29.94	-60.61	5,501.87	-587.84	891.71	813.34	78.37	11.378			
15,800.00	10,033.38	9,757.21	9,633.45	56.32	30.05	-62.68	5,542.75	-592.88	863.25	783.06	80.20	10.764			
15,900.00	10,025.09	9,828.50	9,670.11	56.91	30.22	-65.41	5,603.65	-597.91	839.39	757.32	82.07	10.228			
16,000.00	10,016.79	9,874.92	9,690.41	57.51	30.35	-66.99	5,645.28	-600.77	821.28	737.59	83.69	9.813			
16,100.00	10,008.50	9,929.00	9,708.26	58.10	30.52	-68.52	5,696.16	-604.42	809.98	724.81	85.17	9.510			
16,200.00	10,000.21	9,992.00	9,723.72	58.71	30.75	-69.99	5,757.03	-609.24	804.17	717.64	86.53	9.293			
16,300.00	9,991.92	10,055.00	9,734.38	59.31	31.00	-71.15	5,818.91	-614.20	802.53	714.77	87.76	9.145			
16,300.92	9,991.84	10,065.91	9,735.75	59.32	31.05	-71.32	5,829.70	-615.07	802.45	714.61	87.83	9.136	CC, ES		
16,400.00	9,983.62	10,149.00	9,741.44	59.92	31.42	-72.29	5,912.30	-621.64	804.13	715.09	89.04	9.031			
16,500.00	9,975.33	10,234.06	9,742.41	60.54	31.86	-72.96	5,997.08	-628.41	807.83	717.59	90.23	8.953			
16,600.00	9,967.04	10,314.89	9,740.99	61.16	32.31	-73.44	6,077.59	-635.26	813.08	721.69	91.38	8.898			
16,700.00	9,958.75	10,398.09	9,735.49	61.78	32.81	-73.67	6,160.24	-643.16	820.68	728.16	92.52	8.871			
16,800.00	9,950.45	10,490.42	9,727.19	62.40	33.42	-73.80	6,251.68	-652.78	829.86	736.12	93.74	8.853			
16,900.00	9,942.16	10,588.68	9,717.81	63.03	34.11	-73.89	6,348.94	-663.18	839.36	744.31	95.06	8.830			
17,000.00	9,933.87	10,687.71	9,708.42	63.66	34.86	-73.99	6,446.95	-673.80	848.98	752.55	96.43	8.804			
17,100.00	9,925.58	10,805.26	9,696.31	64.30	35.79	-74.02	6,563.30	-685.20	857.90	759.86	98.03	8.751			
17,200.00	9,917.29	10,910.50	9,683.04	64.93	36.68	-73.85	6,667.43	-692.83	865.05	765.54	99.51	8.693			
17,300.00	9,908.99	11,010.75	9,669.47	65.57	37.56	-73.62	6,766.51	-699.66	872.05	771.09	100.96	8.637			
17,400.00	9,900.70	11,128.69	9,654.26	66.22	38.64	-73.37	6,883.29	-705.98	877.42	774.80	102.62	8.550			
17,500.00	9,892.41	11,238.85	9,639.77	66.86	39.68	-73.11	6,992.38	-711.02	882.25	778.02	104.23	8.465			
17,600.00	9,884.12	11,356.82	9,627.92	67.51	40.83	-73.02	7,109.70	-714.43	884.44	778.48	105.96	8.347			
17,700.00	9,875.82	11,451.02	9,620.36	68.16	41.78	-73.07	7,203.56	-717.27	886.23	778.67	107.56	8.239			
17,800.00	9,867.53	11,535.93	9,612.57	68.81	42.66	-73.07	7,288.04	-720.63	889.26	780.18	109.08	8.152			
17,900.00	9,859.24	11,640.43	9,602.40	69.47	43.77	-73.05	7,391.91	-725.83	893.45	782.64	110.81	8.063			
18,000.00	9,850.95	11,744.71	9,593.88	70.13	44.90	-73.12	7,495.74	-730.31	896.50	783.91	112.59	7.963			
18,100.00	9,842.65	11,848.16	9,584.90	70.79	46.03	-73.15	7,598.72	-734.32	899.29	784.93	114.36	7.864			
18,200.00	9,834.36	11,954.42	9,576.93	71.45	47.23	-73.25	7,704.61	-738.16	901.50	785.30	116.20	7.758			
18,300.00	9,826.07	12,043.00	9,572.07	72.11	48.24	-73.45	7,792.99	-741.68	903.54	785.62	117.92	7.663			
18,400.00	9,817.78	12,138.00	9,567.70	72.78	49.34	-73.74	7,887.74	-746.95	906.80	787.07	119.73	7.573			
18,500.00	9,809.48	12,214.26	9,564.00	73.45	50.24	-73.99	7,963.68	-752.79	912.10	790.78	121.32	7.518			
18,600.00	9,801.19	12,316.08	9,557.77	74.12	51.46	-74.25	8,064.95	-761.32	918.55	795.30	123.24	7.453			
18,700.00	9,792.90	12,416.10	9,550.38	74.79	52.67	-74.41	8,164.41	-768.92	924.60	799.46	125.14	7.389			
18,800.00	9,784.61	12,499.98	9,543.91	75.47	53.70	-74.54	8,247.74	-775.95	931.50	804.70	126.80	7.346			
18,900.00	9,776.31	12,574.19	9,539.12	76.14	54.62	-74.74	8,321.35	-784.05	940.56	812.27	128.29	7.332			
19,000.00	9,768.02	12,651.29	9,535.19	76.82	55.59	-75.04	8,397.56	-794.97	952.38	822.57	129.81	7.337			
19,100.00	9,759.73	12,736.59	9,529.84	77.50	56.67	-75.33	8,481.64	-808.36	966.04	834.56	131.48	7.348			
19,200.00	9,751.44	12,828.81	9,522.81	78.18	57.86	-75.57	8,572.33	-823.47	980.74	847.45	133.29	7.358			
19,300.00	9,743.15	12,922.56	9,514.82	78.86	59.07	-75.76	8,664.44	-839.01	995.87	860.72	135.15	7.369			
19,400.00	9,734.85	13,011.94	9,506.36	79.55	60.23	-75.90	8,752.07	-854.45	1,011.91	875.03	136.89	7.392			
19,500.00	9,726.56	13,128.42	9,494.43	80.23	61.76	-76.03	8,866.19	-874.45	1,028.16	888.85	139.31	7.381			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 003H - Horizontal - PRODUCING - Surveys													Offset Site Error:	0.00 usft		
Survey Program: 100-r.5 GYRO-NS, 8272-3_MWD+HRGM													Offset Well Error:	0.00 usft		
Reference													Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
19,600.00	9,718.27	13,273.91	9,480.03	80.92	63.67	-76.14	9,009.68	-893.71	1,040.26	897.97	142.29	7.311				
19,700.00	9,709.98	13,394.98	9,470.26	81.61	65.27	-76.30	9,129.69	-906.23	1,049.18	904.48	144.70	7.251				
19,800.00	9,701.68	13,490.15	9,461.46	82.30	66.53	-76.35	9,224.02	-915.21	1,057.54	910.93	146.61	7.213				
19,900.00	9,693.39	13,595.30	9,449.27	82.99	67.92	-76.28	9,328.00	-925.09	1,066.46	917.78	148.68	7.173				
20,000.00	9,685.10	13,715.76	9,435.19	83.69	69.51	-76.15	9,447.32	-933.64	1,073.04	922.07	150.97	7.108				
20,100.00	9,676.81	13,806.76	9,422.69	84.38	70.71	-75.96	9,537.27	-939.42	1,079.51	926.74	152.77	7.066				
20,200.00	9,668.51	13,897.17	9,408.17	85.08	71.91	-75.66	9,626.29	-945.60	1,087.04	932.52	154.52	7.035				
20,300.00	9,660.22	13,989.55	9,391.03	85.78	73.14	-75.24	9,716.85	-951.93	1,095.29	939.03	156.26	7.009	SF			
20,400.00	9,651.93	14,036.00	9,381.86	86.48	73.75	-75.01	9,762.27	-955.11	1,105.18	948.10	157.07	7.036				
20,500.00	9,643.64	14,036.00	9,381.86	87.17	73.75	-75.01	9,762.27	-955.11	1,122.95	966.70	156.25	7.187				
20,600.00	9,635.34	14,036.00	9,381.86	87.88	73.75	-75.01	9,762.27	-955.11	1,149.18	994.64	154.54	7.436				
20,700.00	9,627.05	14,036.00	9,381.86	88.58	73.75	-75.01	9,762.27	-955.11	1,183.31	1,031.20	152.11	7.779				
20,800.00	9,618.76	14,036.00	9,381.86	89.28	73.75	-75.01	9,762.27	-955.11	1,224.67	1,075.53	149.14	8.211				
20,900.00	9,610.47	14,036.00	9,381.86	89.99	73.75	-75.01	9,762.27	-955.11	1,272.57	1,126.75	145.81	8.727				
21,000.00	9,602.18	14,036.00	9,381.86	90.69	73.75	-75.01	9,762.27	-955.11	1,326.29	1,184.01	142.28	9.322				
21,100.00	9,593.88	14,036.00	9,381.86	91.40	73.75	-75.01	9,762.27	-955.11	1,385.15	1,246.49	138.66	9.989				
21,200.00	9,585.59	14,036.00	9,381.86	92.11	73.75	-75.01	9,762.27	-955.11	1,448.53	1,313.46	135.07	10.724				
21,300.00	9,577.30	14,036.00	9,381.86	92.81	73.75	-75.01	9,762.27	-955.11	1,515.86	1,384.29	131.58	11.521				
21,400.00	9,569.01	14,036.00	9,381.86	93.52	73.75	-75.01	9,762.27	-955.11	1,586.65	1,458.43	128.22	12.374				
21,500.00	9,560.71	14,036.00	9,381.86	94.23	73.75	-75.01	9,762.27	-955.11	1,660.44	1,535.40	125.04	13.279				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEA SOUTHEAST STATE 1 P & A - Vertical - Surveys

Survey Program:		0-3_INC-Only		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Offset	Reference	Offset	+N/-S (usft)	+E/-W (usft)		Between Centres (usft)	Between Ellipses (usft)					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,800.00	10,430.32	10,429.70	10,430.32	36.67	232.10	-83.89	1,600.88	-877.81	1,632.68	1,364.24	268.44	6.082	
10,900.00	10,435.22	10,434.61	10,435.22	36.76	232.23	-89.67	1,600.88	-877.81	1,558.54	1,289.90	268.65	5.801	
11,000.00	10,431.41	10,430.79	10,431.41	36.87	232.13	-94.52	1,600.88	-877.81	1,487.38	1,218.75	268.63	5.537	
11,100.00	10,423.12	10,422.50	10,423.12	37.00	231.90	-94.15	1,600.88	-877.81	1,419.85	1,151.34	268.52	5.288	
11,200.00	10,414.83	10,414.21	10,414.83	37.15	231.67	-93.71	1,600.88	-877.81	1,356.29	1,087.85	268.43	5.053	
11,300.00	10,406.54	10,405.92	10,406.54	37.31	231.44	-93.27	1,600.88	-877.81	1,297.27	1,028.89	268.38	4.834	
11,400.00	10,398.24	10,397.62	10,398.24	37.49	231.20	-92.83	1,600.88	-877.81	1,243.45	975.09	268.35	4.634	
11,500.00	10,389.95	10,389.33	10,389.95	37.68	230.97	-92.39	1,600.88	-877.81	1,195.52	927.16	268.36	4.455	
11,600.00	10,381.66	10,381.04	10,381.66	37.89	230.74	-91.94	1,600.88	-877.81	1,154.23	885.83	268.40	4.300	
11,700.00	10,373.37	10,372.75	10,373.37	38.12	230.51	-91.50	1,600.88	-877.81	1,120.31	851.85	268.46	4.173	
11,800.00	10,365.07	10,364.45	10,365.07	38.35	230.28	-91.06	1,600.88	-877.81	1,094.44	825.90	268.54	4.076	
11,900.00	10,356.78	10,356.16	10,356.78	38.60	230.05	-90.61	1,600.88	-877.81	1,077.21	808.59	268.62	4.010	
12,000.00	10,348.49	10,347.87	10,348.49	38.87	229.82	-90.17	1,600.88	-877.81	1,069.02	800.34	268.69	3.979	
12,038.45	10,345.30	10,344.68	10,345.30	38.98	229.73	-90.00	1,600.88	-877.81	1,068.33	799.63	268.70	3.976	CC, ES, SF
12,100.00	10,340.20	10,339.58	10,340.20	39.15	229.59	-89.73	1,600.88	-877.81	1,070.09	801.37	268.72	3.982	
12,200.00	10,331.90	10,331.29	10,331.90	39.44	229.36	-89.28	1,600.88	-877.81	1,080.40	811.68	268.72	4.021	
12,300.00	10,323.61	10,322.99	10,323.61	39.74	229.12	-88.84	1,600.88	-877.81	1,099.67	831.00	268.67	4.093	
12,400.00	10,315.32	10,314.70	10,315.32	40.06	228.89	-88.40	1,600.88	-877.81	1,127.45	858.89	268.56	4.198	
12,500.00	10,307.03	10,306.41	10,307.03	40.39	228.66	-87.96	1,600.88	-877.81	1,163.14	894.73	268.41	4.333	
12,600.00	10,298.73	10,298.12	10,298.73	40.73	228.43	-87.51	1,600.88	-877.81	1,206.03	937.81	268.22	4.496	
12,700.00	10,290.44	10,289.82	10,290.44	41.08	228.20	-87.07	1,600.88	-877.81	1,255.38	987.38	267.99	4.684	
12,800.00	10,282.15	10,281.53	10,282.15	41.45	227.97	-86.63	1,600.88	-877.81	1,310.46	1,042.72	267.74	4.894	
12,900.00	10,273.86	10,273.24	10,273.86	41.82	227.74	-86.19	1,600.88	-877.81	1,370.58	1,103.11	267.47	5.124	
13,000.00	10,265.56	10,264.95	10,265.56	42.21	227.51	-85.75	1,600.88	-877.81	1,435.11	1,167.93	267.18	5.371	
13,100.00	10,257.27	10,256.65	10,257.27	42.61	227.27	-85.31	1,600.88	-877.81	1,503.49	1,236.59	266.89	5.633	
13,200.00	10,248.98	10,248.36	10,248.98	43.01	227.04	-84.87	1,600.88	-877.81	1,575.20	1,308.60	266.60	5.909	
13,300.00	10,240.69	10,240.07	10,240.69	43.43	226.81	-84.43	1,600.88	-877.81	1,649.82	1,383.51	266.30	6.195	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEO STATE #1 - OH - OH													Offset Site Error:	0.00 usft		
Survey Program: 34-MWD OWSG Rev5													Offset Well Error:	0.00 usft		
Reference													Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
23,500.00	9,394.87	9,520.66	9,389.74	108.62	22.69	102.18	14,598.91	626.19	1,661.79	1,585.60	76.19	21.812				
23,600.00	9,386.57	9,512.46	9,381.55	109.34	22.69	101.40	14,598.86	626.23	1,568.65	1,490.98	77.67	20.197				
23,700.00	9,378.28	9,503.97	9,373.05	110.07	22.69	100.59	14,598.83	626.24	1,476.36	1,397.00	79.37	18.602				
23,800.00	9,369.99	9,495.16	9,364.25	110.80	22.69	99.74	14,598.81	626.20	1,385.10	1,303.76	81.33	17.030				
23,900.00	9,361.70	9,486.02	9,355.11	111.53	22.69	98.86	14,598.80	626.12	1,295.07	1,211.45	83.62	15.488				
24,000.00	9,353.40	9,476.54	9,345.62	112.26	22.69	97.94	14,598.80	625.99	1,206.54	1,120.26	86.28	13.984				
24,100.00	9,345.11	9,466.70	9,335.78	112.99	22.69	96.98	14,598.82	625.81	1,119.88	1,030.48	89.40	12.527				
24,200.00	9,336.82	9,457.56	9,326.65	113.72	22.69	96.09	14,598.83	625.64	1,035.54	942.48	93.06	11.127				
24,300.00	9,328.53	9,449.21	9,318.30	114.45	22.69	95.27	14,598.81	625.52	954.17	856.79	97.38	9.799				
24,400.00	9,320.23	9,441.55	9,310.64	115.18	22.69	94.51	14,598.76	625.44	876.58	774.16	102.41	8.559				
24,500.00	9,311.94	9,434.49	9,303.58	115.91	22.70	93.81	14,598.69	625.40	803.88	695.67	108.21	7.429				
24,600.00	9,303.65	9,427.98	9,297.07	116.64	22.70	93.17	14,598.61	625.39	737.54	622.83	114.72	6.429				
24,700.00	9,295.36	9,421.94	9,291.03	117.37	22.70	92.57	14,598.53	625.40	679.43	557.72	121.72	5.582				
24,800.00	9,287.07	9,416.33	9,285.43	118.11	22.70	92.01	14,598.43	625.42	631.83	503.12	128.72	4.909				
24,900.00	9,278.77	9,411.11	9,280.20	118.84	22.70	91.49	14,598.33	625.46	597.26	462.38	134.88	4.428				
25,000.00	9,270.48	9,406.68	9,275.78	119.57	22.70	91.05	14,598.23	625.50	578.07	438.89	139.18	4.153				
25,063.12	9,265.25	9,402.64	9,271.74	120.04	22.70	90.65	14,598.14	625.55	574.63	434.09	140.54	4.089	CC, ES, SF			
25,100.00	9,262.19	9,400.25	9,269.34	120.31	22.71	90.41	14,598.08	625.58	575.80	435.03	140.78	4.090				
25,200.00	9,253.90	9,393.63	9,262.72	121.04	22.72	89.75	14,597.94	625.65	590.64	451.23	139.41	4.237				
25,300.00	9,245.60	9,386.81	9,255.91	121.78	22.73	89.07	14,597.79	625.72	621.35	485.76	135.59	4.583				
25,400.00	9,237.31	9,379.78	9,248.88	122.51	22.75	88.38	14,597.65	625.78	665.75	535.49	130.25	5.111				
25,500.00	9,229.02	9,372.54	9,241.64	123.25	22.76	87.66	14,597.51	625.84	721.29	596.98	124.31	5.802				
25,600.00	9,220.73	9,365.07	9,234.18	123.99	22.78	86.92	14,597.37	625.90	785.63	667.22	118.42	6.634				
25,700.00	9,212.43	9,357.37	9,226.48	124.72	22.79	86.15	14,597.24	625.94	856.78	743.84	112.94	7.586				
25,800.00	9,204.14	9,349.43	9,218.54	125.46	22.81	85.37	14,597.11	625.99	933.18	825.14	108.04	8.637				
25,900.00	9,195.85	9,341.23	9,210.34	126.20	22.82	84.56	14,596.99	626.02	1,013.64	909.89	103.75	9.770				
26,000.00	9,187.56	9,332.78	9,201.89	126.94	22.83	83.73	14,596.87	626.06	1,097.27	997.24	100.03	10.969				
26,100.00	9,179.26	9,323.89	9,193.00	127.68	22.85	82.86	14,596.76	626.09	1,183.39	1,086.55	96.84	12.221				
26,200.00	9,170.97	9,314.51	9,183.62	128.42	22.86	81.94	14,596.67	626.13	1,271.49	1,177.39	94.09	13.513				
26,300.00	9,162.68	9,304.61	9,173.73	129.15	22.87	80.98	14,596.59	626.17	1,361.18	1,269.43	91.75	14.836				
26,400.00	9,154.39	9,294.15	9,163.26	129.89	22.89	79.97	14,596.53	626.21	1,452.17	1,362.43	89.74	16.182				
26,500.00	9,146.09	9,283.07	9,152.18	130.63	22.91	78.91	14,596.48	626.26	1,544.22	1,456.20	88.02	17.545				
26,600.00	9,137.80	9,280.00	9,149.11	131.38	22.91	78.62	14,596.48	626.27	1,637.16	1,550.77	86.39	18.952				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEO STATE 006 TA - Verticals - Surveys

Survey Program:		0-MWD OWSG Rev5		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Vertical	Measured	Vertical	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)								
24,700.00	9,295.36	9,373.57	9,339.61	117.37	13.54	-95.36	15,199.19	-1,295.03	1,662.64	1,550.46	112.18	14.821	
24,800.00	9,287.07	9,364.85	9,330.90	118.11	13.54	-94.99	15,199.11	-1,295.36	1,605.90	1,490.35	115.55	13.898	
24,900.00	9,278.77	9,356.21	9,322.27	118.84	13.54	-94.63	15,199.03	-1,295.69	1,553.49	1,434.54	118.95	13.060	
25,000.00	9,270.48	9,347.65	9,313.71	119.57	13.54	-94.26	15,198.95	-1,296.01	1,505.85	1,383.54	122.31	12.312	
25,100.00	9,262.19	9,339.17	9,305.24	120.31	13.55	-93.90	15,198.87	-1,296.32	1,463.47	1,337.90	125.57	11.654	
25,200.00	9,253.90	9,330.76	9,296.83	121.04	13.55	-93.54	15,198.79	-1,296.62	1,426.81	1,298.15	128.66	11.090	
25,300.00	9,245.60	9,322.42	9,288.51	121.78	13.55	-93.19	15,198.70	-1,296.91	1,396.31	1,264.84	131.46	10.621	
25,400.00	9,237.31	9,314.17	9,280.25	122.51	13.55	-92.84	15,198.61	-1,297.19	1,372.39	1,238.48	133.91	10.249	
25,500.00	9,229.02	9,305.98	9,272.07	123.25	13.55	-92.49	15,198.52	-1,297.47	1,355.41	1,219.51	135.90	9.973	
25,600.00	9,220.73	9,297.87	9,263.96	123.99	13.55	-92.14	15,198.43	-1,297.74	1,345.61	1,208.24	137.37	9.795	
25,683.04	9,213.84	9,291.18	9,257.29	124.60	13.56	-91.86	15,198.36	-1,297.96	1,343.06	1,204.91	138.16	9.721	CC
25,700.00	9,212.43	9,289.83	9,255.93	124.72	13.56	-91.80	15,198.34	-1,298.00	1,343.17	1,204.90	138.27	9.714	ES, SF
25,800.00	9,204.14	9,281.87	9,247.98	125.46	13.56	-91.46	15,198.25	-1,298.25	1,348.12	1,209.55	138.57	9.729	
25,900.00	9,195.85	9,273.79	9,239.91	126.20	13.56	-91.12	15,198.15	-1,298.50	1,360.38	1,222.09	138.28	9.838	
26,000.00	9,187.56	9,265.79	9,231.91	126.94	13.56	-90.78	15,198.05	-1,298.75	1,379.75	1,242.30	137.45	10.039	
26,100.00	9,179.26	9,257.87	9,223.99	127.68	13.56	-90.44	15,197.94	-1,298.98	1,405.95	1,269.83	136.12	10.329	
26,200.00	9,170.97	9,250.03	9,216.15	128.42	13.57	-90.11	15,197.84	-1,299.21	1,438.59	1,304.22	134.38	10.706	
26,300.00	9,162.68	9,242.26	9,208.39	129.15	13.57	-89.78	15,197.73	-1,299.43	1,477.26	1,344.96	132.30	11.166	
26,400.00	9,154.39	9,234.57	9,200.70	129.89	13.57	-89.45	15,197.63	-1,299.64	1,521.50	1,391.52	129.98	11.705	
26,500.00	9,146.09	9,226.95	9,193.08	130.63	13.57	-89.13	15,197.52	-1,299.84	1,570.83	1,443.33	127.49	12.321	
26,600.00	9,137.80	9,219.40	9,185.54	131.38	13.58	-88.81	15,197.41	-1,300.04	1,624.79	1,499.88	124.90	13.008	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEO STATE 007 - Verticals - Surveys

Survey Program:		305-3_INC-Only, 1741-OWSG (Rev2) MWD		Rule Assigned:		Offset Site Error:		0.00 usft					
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Offset Well Error:		0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
22,900.00	9,444.62	9,413.10	9,394.57	104.27	41.44	-151.12	14,057.46	10.05	1,623.62	1,540.06	83.57	19.429	
23,000.00	9,436.33	9,408.21	9,389.69	104.99	41.43	-149.56	14,057.30	9.87	1,523.80	1,440.14	83.66	18.214	
23,100.00	9,428.04	9,403.29	9,384.78	105.72	41.42	-147.85	14,057.14	9.69	1,423.99	1,340.24	83.76	17.001	
23,200.00	9,419.74	9,398.35	9,379.83	106.44	41.41	-145.96	14,056.98	9.51	1,324.19	1,240.33	83.86	15.790	
23,300.00	9,411.45	9,393.37	9,374.86	107.17	41.40	-143.87	14,056.83	9.33	1,224.40	1,140.43	83.97	14.581	
23,400.00	9,403.16	9,388.36	9,369.86	107.89	41.39	-141.55	14,056.67	9.15	1,124.62	1,040.53	84.09	13.374	
23,500.00	9,394.87	9,383.32	9,364.83	108.62	41.37	-138.98	14,056.51	8.97	1,024.87	940.64	84.22	12.168	
23,600.00	9,386.57	9,378.25	9,359.76	109.34	41.36	-136.12	14,056.35	8.79	925.13	840.76	84.38	10.964	
23,700.00	9,378.28	9,373.16	9,354.67	110.07	41.35	-132.93	14,056.19	8.61	825.43	740.87	84.56	9.762	
23,800.00	9,369.99	9,368.02	9,349.55	110.80	41.34	-129.38	14,056.03	8.44	725.77	640.99	84.78	8.561	
23,900.00	9,361.70	9,362.86	9,344.39	111.53	41.33	-125.43	14,055.87	8.26	626.18	541.10	85.08	7.360	
24,000.00	9,353.40	9,357.67	9,339.20	112.26	41.31	-121.07	14,055.72	8.09	526.69	441.19	85.50	6.160	
24,100.00	9,345.11	9,352.44	9,333.98	112.99	41.30	-116.27	14,055.56	7.92	427.38	341.19	86.19	4.958	
24,200.00	9,336.82	9,347.19	9,328.73	113.72	41.29	-111.04	14,055.40	7.74	328.40	240.92	87.48	3.754	
24,300.00	9,328.53	9,341.90	9,323.44	114.45	41.28	-105.43	14,055.24	7.57	230.18	139.72	90.46	2.545	
24,400.00	9,320.23	9,336.58	9,318.13	115.18	41.26	-99.51	14,055.08	7.40	134.40	34.19	100.21	1.341	Level 3
24,500.00	9,311.94	9,331.22	9,312.78	115.91	41.25	-93.37	14,054.92	7.23	55.57	-91.27	146.84	0.378	Level 1
24,525.11	9,309.86	9,329.87	9,311.43	116.09	41.25	-91.82	14,054.88	7.19	49.60	-107.79	157.38	0.315	Level 1, CC, ES, SF
24,600.00	9,303.65	9,325.83	9,307.39	116.64	41.24	-87.17	14,054.76	7.06	89.74	-25.03	114.77	0.782	Level 1
24,700.00	9,295.36	9,320.41	9,301.97	117.37	41.22	-81.03	14,054.60	6.90	181.55	87.88	93.68	1.938	
24,800.00	9,287.07	9,314.95	9,296.52	118.11	41.21	-75.09	14,054.44	6.73	278.95	190.13	88.81	3.141	
24,900.00	9,278.77	9,309.46	9,291.04	118.84	41.20	-69.47	14,054.28	6.57	377.63	290.49	87.14	4.334	
25,000.00	9,270.48	9,303.93	9,285.51	119.57	41.19	-64.23	14,054.12	6.40	476.79	390.38	86.41	5.518	
25,100.00	9,262.19	9,298.37	9,279.96	120.31	41.17	-59.42	14,053.96	6.24	576.20	490.13	86.07	6.695	
25,200.00	9,253.90	9,292.78	9,274.37	121.04	41.16	-55.04	14,053.80	6.08	675.73	589.84	85.89	7.867	
25,300.00	9,245.60	9,287.14	9,268.74	121.78	41.15	-51.08	14,053.64	5.92	775.34	689.53	85.81	9.035	
25,400.00	9,237.31	9,281.48	9,263.08	122.51	41.13	-47.51	14,053.48	5.76	875.01	789.22	85.79	10.200	
25,500.00	9,229.02	9,275.77	9,257.38	123.25	41.12	-44.31	14,053.32	5.60	974.71	888.92	85.79	11.361	
25,600.00	9,220.73	9,270.03	9,251.64	123.99	41.11	-41.44	14,053.16	5.44	1,074.44	988.62	85.82	12.520	
25,700.00	9,212.43	9,264.25	9,245.87	124.72	41.09	-38.85	14,053.00	5.29	1,174.19	1,088.33	85.86	13.675	
25,800.00	9,204.14	9,258.44	9,240.05	125.46	41.08	-36.53	14,052.84	5.13	1,273.95	1,188.04	85.91	14.828	
25,900.00	9,195.85	9,252.58	9,234.20	126.20	41.07	-34.43	14,052.68	4.98	1,373.72	1,287.75	85.97	15.979	
26,000.00	9,187.56	9,246.69	9,228.32	126.94	41.05	-32.53	14,052.52	4.83	1,473.51	1,387.47	86.04	17.127	
26,100.00	9,179.26	9,240.76	9,222.39	127.68	41.04	-30.81	14,052.36	4.68	1,573.29	1,487.19	86.10	18.272	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) NEW MEXICO BV STATE 001 P & A - Vertical - Surveys

Survey Program:		0-3_INC-Only		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Vertical	Measured	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)								
23,900.00	9,361.70	9,375.11	9,361.70	111.53	274.84	108.20	15,034.56	449.22	1,647.98	1,323.14	324.85	5.073	
24,000.00	9,353.40	9,366.82	9,353.40	112.26	274.43	107.14	15,034.56	449.22	1,551.54	1,226.14	325.40	4.768	
24,100.00	9,345.11	9,358.52	9,345.11	112.99	274.02	106.06	15,034.56	449.22	1,455.54	1,129.42	326.12	4.463	
24,200.00	9,336.82	9,357.00	9,343.59	113.72	273.94	105.86	15,034.56	449.22	1,360.07	1,032.60	327.47	4.153	
24,300.00	9,328.53	9,357.00	9,343.59	114.45	273.94	105.86	15,034.56	449.22	1,265.31	936.13	329.18	3.844	
24,400.00	9,320.23	9,333.48	9,320.23	115.18	272.81	102.75	15,034.56	449.22	1,171.18	841.45	329.73	3.552	
24,500.00	9,311.94	9,361.38	9,348.11	115.91	274.15	106.45	15,034.41	449.22	1,078.62	744.70	333.92	3.230	
24,600.00	9,303.65	9,327.75	9,314.51	116.64	272.53	101.98	15,035.21	449.22	987.08	652.32	334.76	2.949	
24,700.00	9,295.36	9,308.56	9,295.36	117.37	271.60	99.36	15,034.56	449.22	896.39	559.21	337.19	2.658	
24,800.00	9,287.07	9,300.27	9,287.07	118.11	271.20	98.21	15,034.56	449.22	808.62	467.47	341.15	2.370	
24,900.00	9,278.77	9,291.97	9,278.77	118.84	270.80	97.05	15,034.56	449.22	723.92	377.73	346.19	2.091	
25,000.00	9,270.48	9,283.68	9,270.48	119.57	270.40	95.89	15,034.56	449.22	643.53	290.95	352.57	1.825	
25,100.00	9,262.19	9,275.39	9,262.19	120.31	270.00	94.73	15,034.56	449.22	569.26	208.79	360.47	1.579	
25,200.00	9,253.90	9,267.10	9,253.90	121.04	269.60	93.56	15,034.56	449.22	503.83	134.07	369.76	1.363	Level 3
25,300.00	9,245.60	9,265.72	9,252.61	121.78	269.54	93.38	15,034.54	449.22	451.15	71.20	379.95	1.187	Level 2
25,400.00	9,237.31	9,252.62	9,239.53	122.51	268.92	91.53	15,034.89	449.22	416.04	28.07	387.97	1.072	Level 2
25,500.00	9,229.02	9,242.18	9,229.10	123.25	268.43	90.06	15,035.05	449.22	402.99	11.32	391.67	1.029	Level 2
25,503.97	9,228.69	9,241.81	9,228.73	123.28	268.41	90.01	15,035.05	449.22	402.97	11.28	391.69	1.029	Level 2, CC, ES, SF
25,600.00	9,220.73	9,233.68	9,220.60	123.99	268.03	88.85	15,035.09	449.22	414.17	24.92	389.25	1.064	Level 2
25,700.00	9,212.43	9,225.50	9,212.43	124.72	267.65	87.69	15,034.56	449.22	448.03	66.23	381.81	1.173	Level 2
25,800.00	9,204.14	9,217.20	9,204.14	125.46	267.26	86.52	15,034.56	449.22	499.70	127.44	372.26	1.342	Level 3
25,900.00	9,195.85	9,208.91	9,195.85	126.20	266.87	85.35	15,034.56	449.22	564.38	201.56	362.83	1.556	
26,000.00	9,187.56	9,200.62	9,187.56	126.94	266.48	84.19	15,034.56	449.22	638.14	283.63	354.51	1.800	
26,100.00	9,179.26	9,183.39	9,170.43	127.68	265.65	81.80	15,034.98	449.22	717.89	370.57	347.32	2.067	
26,200.00	9,170.97	9,178.03	9,165.08	128.42	265.39	81.06	15,035.04	449.22	802.23	460.56	341.66	2.348	
26,300.00	9,162.68	9,173.33	9,160.39	129.15	265.16	80.41	15,035.07	449.22	889.76	552.71	337.05	2.640	
26,400.00	9,154.39	9,167.32	9,154.39	129.89	264.87	79.58	15,034.56	449.22	980.10	646.88	333.22	2.941	
26,500.00	9,146.09	9,159.02	9,146.09	130.63	264.47	78.45	15,034.56	449.22	1,071.73	741.72	330.01	3.248	
26,600.00	9,137.80	9,150.73	9,137.80	131.38	264.08	77.33	15,034.56	449.22	1,164.68	837.36	327.32	3.558	
26,700.00	9,129.51	9,142.44	9,129.51	132.12	263.68	76.21	15,034.56	449.22	1,258.65	933.61	325.04	3.872	
26,800.00	9,121.22	9,120.92	9,108.11	132.86	262.64	73.39	15,035.01	449.22	1,353.07	1,030.36	322.71	4.193	
26,900.00	9,112.93	9,117.17	9,104.36	133.60	262.46	72.91	15,035.04	449.22	1,448.44	1,127.30	321.14	4.510	
27,000.00	9,104.63	9,113.74	9,100.93	134.34	262.30	72.47	15,035.06	449.22	1,544.38	1,224.58	319.80	4.829	
27,100.00	9,096.34	9,109.13	9,096.34	135.08	262.07	71.87	15,034.56	449.22	1,641.26	1,322.67	318.59	5.152	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 005 - Verticals - Surveys

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation Factor	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)		Between Centres (usft)	Between Ellipses (usft)					
28,000.00	9,021.71	8,864.58	8,548.09	141.78	30.71	-73.39	18,346.97	-1,337.47	1,659.21	1,507.43	151.78	10.932			
28,100.00	9,013.42	8,963.76	8,515.45	142.52	31.09	-71.62	18,420.96	-1,280.07	1,606.08	1,453.77	152.31	10.545			
28,200.00	9,005.12	9,005.50	8,500.98	143.27	31.28	-70.81	18,451.68	-1,255.80	1,553.87	1,398.91	154.96	10.027			
28,300.00	8,996.83	9,241.00	8,456.49	144.01	32.71	-67.40	18,637.08	-1,120.52	1,502.33	1,352.01	150.32	9.994			
28,400.00	8,988.54	9,382.85	8,469.39	144.76	33.83	-66.86	18,753.05	-1,040.10	1,443.24	1,294.43	148.81	9.699			
28,500.00	8,980.25	9,440.90	8,478.61	145.50	34.34	-66.81	18,800.14	-1,007.42	1,381.95	1,230.96	151.00	9.152			
28,563.28	8,975.00	9,462.86	8,481.86	145.98	34.53	-66.79	18,818.30	-995.51	1,344.40	1,191.27	153.13	8.779	CC, ES, SF		

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 006 TA - Vertical - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-3_INC-Only													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
26,200.00	9,170.97	9,023.00	9,001.89	128.42	302.11	-85.89	16,529.03	-1,368.92	1,630.30	1,217.07	413.23	3.945		
26,300.00	9,162.68	9,023.00	9,001.89	129.15	302.11	-85.89	16,529.03	-1,368.92	1,581.67	1,164.80	416.87	3.794		
26,400.00	9,154.39	9,023.00	9,001.89	129.89	302.11	-85.89	16,529.03	-1,368.92	1,538.01	1,117.58	420.44	3.658		
26,500.00	9,146.09	9,023.00	9,001.89	130.63	302.11	-85.89	16,529.03	-1,368.92	1,499.76	1,075.92	423.84	3.539		
26,600.00	9,137.80	9,023.00	9,001.89	131.38	302.11	-85.89	16,529.03	-1,368.92	1,467.34	1,040.34	427.00	3.436		
26,700.00	9,129.51	9,023.00	9,001.89	132.12	302.11	-85.89	16,529.03	-1,368.92	1,441.14	1,011.31	429.83	3.353		
26,800.00	9,121.22	9,023.00	9,001.89	132.86	302.11	-85.89	16,529.03	-1,368.92	1,421.51	989.28	432.23	3.289		
26,900.00	9,112.93	9,023.00	9,001.89	133.60	302.11	-85.89	16,529.03	-1,368.92	1,408.72	974.59	434.13	3.245		
27,000.00	9,104.63	9,023.00	9,001.89	134.34	302.11	-85.89	16,529.03	-1,368.92	1,402.96	967.49	435.47	3.222		
27,030.98	9,102.06	9,023.00	9,001.89	134.57	302.11	-85.89	16,529.03	-1,368.92	1,402.62	966.86	435.76	3.219	CC, ES, SF	
27,100.00	9,096.34	9,023.00	9,001.89	135.08	302.11	-85.89	16,529.03	-1,368.92	1,404.32	968.11	436.20	3.219		
27,200.00	9,088.05	9,023.00	9,001.89	135.82	302.11	-85.89	16,529.03	-1,368.92	1,412.77	976.44	436.33	3.238		
27,300.00	9,079.76	9,023.00	9,001.89	136.57	302.11	-85.89	16,529.03	-1,368.92	1,428.18	992.32	435.86	3.277		
27,400.00	9,071.46	9,023.00	9,001.89	137.31	302.11	-85.89	16,529.03	-1,368.92	1,450.35	1,015.50	434.85	3.335		
27,500.00	9,063.17	9,023.00	9,001.89	138.05	302.11	-85.89	16,529.03	-1,368.92	1,478.96	1,045.61	433.35	3.413		
27,600.00	9,054.88	9,023.00	9,001.89	138.80	302.11	-85.89	16,529.03	-1,368.92	1,513.64	1,082.20	431.44	3.508		
27,700.00	9,046.59	9,023.00	9,001.89	139.54	302.11	-85.89	16,529.03	-1,368.92	1,554.00	1,124.79	429.21	3.621		
27,800.00	9,038.29	9,023.00	9,001.89	140.29	302.11	-85.89	16,529.03	-1,368.92	1,599.60	1,172.86	426.74	3.748		
27,900.00	9,030.00	9,023.00	9,001.89	141.03	302.11	-85.89	16,529.03	-1,368.92	1,650.01	1,225.91	424.10	3.891		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 007 P & A - Vertical - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-3_INC-Only													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
26,700.00	9,129.51	9,022.00	8,994.01	132.12	255.74	-90.13	17,852.17	-61.11	1,637.96	1,338.03	299.94	5.461		
26,800.00	9,121.22	9,022.00	8,994.01	132.86	255.74	-90.13	17,852.17	-61.11	1,538.08	1,237.99	300.08	5.125		
26,900.00	9,112.93	9,022.00	8,994.01	133.60	255.74	-90.13	17,852.17	-61.11	1,438.21	1,137.96	300.25	4.790		
27,000.00	9,104.63	9,022.00	8,994.01	134.34	255.74	-90.13	17,852.17	-61.11	1,338.37	1,037.94	300.43	4.455		
27,100.00	9,096.34	9,022.00	8,994.01	135.08	255.74	-90.13	17,852.17	-61.11	1,238.55	937.92	300.63	4.120		
27,200.00	9,088.05	9,022.00	8,994.01	135.82	255.74	-90.13	17,852.17	-61.11	1,138.76	837.89	300.86	3.785		
27,300.00	9,079.76	9,022.00	8,994.01	136.57	255.74	-90.13	17,852.17	-61.11	1,039.01	737.87	301.14	3.450		
27,400.00	9,071.46	9,022.00	8,994.01	137.31	255.74	-90.13	17,852.17	-61.11	939.31	637.84	301.47	3.116		
27,500.00	9,063.17	9,022.00	8,994.01	138.05	255.74	-90.13	17,852.17	-61.11	839.69	537.79	301.90	2.781		
27,600.00	9,054.88	9,022.00	8,994.01	138.80	255.74	-90.13	17,852.17	-61.11	740.17	437.71	302.46	2.447		
27,700.00	9,046.59	9,022.00	8,994.01	139.54	255.74	-90.13	17,852.17	-61.11	640.80	337.55	303.25	2.113		
27,800.00	9,038.29	9,022.00	8,994.01	140.29	255.74	-90.13	17,852.17	-61.11	541.66	237.22	304.44	1.779		
27,900.00	9,030.00	9,022.00	8,994.01	141.03	255.74	-90.13	17,852.17	-61.11	442.90	136.52	306.38	1.446	Level 3	
28,000.00	9,021.71	9,022.00	8,994.01	141.78	255.74	-90.13	17,852.17	-61.11	344.87	34.95	309.92	1.113	Level 2	
28,100.00	9,013.42	9,022.00	8,994.01	142.52	255.74	-90.13	17,852.17	-61.11	248.40	-68.98	317.38	0.783	Level 1	
28,200.00	9,005.12	9,022.00	8,994.01	143.27	255.74	-90.13	17,852.17	-61.11	156.45	-180.12	336.56	0.465	Level 1	
28,300.00	8,996.83	9,022.00	8,994.01	144.01	255.74	-90.13	17,852.17	-61.11	85.12	-302.50	387.63	0.220	Level 1	
28,336.16	8,993.83	9,021.68	8,993.83	144.28	255.73	-90.00	17,852.17	-61.11	77.07	-322.94	400.01	0.193	Level 1, CC, ES, SF	
28,400.00	8,988.54	9,016.39	8,988.54	144.76	255.53	-86.08	17,852.17	-61.11	99.94	-271.00	370.94	0.269	Level 1	
28,500.00	8,980.25	9,008.10	8,980.25	145.50	255.22	-80.04	17,852.17	-61.11	180.55	-150.15	330.70	0.546	Level 1	
28,563.28	8,975.00	9,002.85	8,975.00	145.98	255.03	-76.31	17,852.17	-61.11	239.10	-81.16	320.26	0.747	Level 1	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 008 P & A - Vertical - Surveys													Offset Site Error:	0.00 usft
Survey Program: 0-3_INC-Only													Offset Well Error:	0.00 usft
Reference				Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
24,800.00	9,287.07	9,299.85	9,287.07	118.11	246.84	102.38	15,874.23	618.40	1,644.93	1,339.55	305.38	5.387		
24,900.00	9,278.77	9,291.56	9,278.77	118.84	246.55	101.60	15,874.23	618.40	1,552.10	1,245.21	306.89	5.058		
25,000.00	9,270.48	9,322.18	9,309.37	119.57	247.61	104.46	15,873.90	618.40	1,460.39	1,149.95	310.44	4.704		
25,100.00	9,262.19	9,300.01	9,287.23	120.31	246.84	102.40	15,874.44	618.40	1,369.75	1,057.84	311.91	4.392		
25,200.00	9,253.90	9,281.08	9,268.30	121.04	246.19	100.62	15,874.75	618.40	1,280.34	966.45	313.90	4.079		
25,300.00	9,245.60	9,264.71	9,251.94	121.78	245.63	99.06	15,874.90	618.40	1,192.47	876.03	316.45	3.768		
25,400.00	9,237.31	9,250.43	9,237.67	122.51	245.14	97.69	15,874.95	618.40	1,106.54	786.92	319.62	3.462		
25,500.00	9,229.02	9,241.77	9,229.02	123.25	244.84	96.84	15,874.23	618.40	1,022.48	698.76	323.72	3.159		
25,600.00	9,220.73	9,233.47	9,220.73	123.99	244.56	96.04	15,874.23	618.40	942.19	613.68	328.51	2.868		
25,700.00	9,212.43	9,225.18	9,212.43	124.72	244.27	95.23	15,874.23	618.40	865.93	531.85	334.08	2.592		
25,800.00	9,204.14	9,216.89	9,204.14	125.46	243.98	94.42	15,874.23	618.40	794.87	454.43	340.44	2.335		
25,900.00	9,195.85	9,208.60	9,195.85	126.20	243.70	93.61	15,874.23	618.40	730.52	383.04	347.48	2.102		
26,000.00	9,187.56	9,200.30	9,187.56	126.94	243.41	92.80	15,874.23	618.40	674.81	319.93	354.88	1.902		
26,100.00	9,179.26	9,192.01	9,179.26	127.68	243.13	91.99	15,874.23	618.40	630.04	268.04	362.00	1.740		
26,200.00	9,170.97	9,187.56	9,174.99	128.42	242.97	91.57	15,874.26	618.40	598.67	230.69	367.98	1.627		
26,300.00	9,162.68	9,176.53	9,163.96	129.15	242.55	90.49	15,874.53	618.40	582.84	211.51	371.33	1.570		
26,344.57	9,158.98	9,171.78	9,159.22	129.48	242.37	90.02	15,874.64	618.40	581.15	209.30	371.86	1.563	CC, ES, SF	
26,400.00	9,154.39	9,166.03	9,153.47	129.89	242.16	89.46	15,874.76	618.40	583.76	212.16	371.60	1.571		
26,500.00	9,146.09	9,156.02	9,143.47	130.63	241.78	88.48	15,874.95	618.40	601.37	232.62	368.75	1.631		
26,600.00	9,137.80	9,146.48	9,133.93	131.38	241.42	87.54	15,875.11	618.40	634.28	270.80	363.48	1.745		
26,700.00	9,129.51	9,137.36	9,124.83	132.12	241.07	86.65	15,875.25	618.40	680.29	323.45	356.84	1.906		
26,800.00	9,121.22	9,128.65	9,116.12	132.86	240.74	85.80	15,875.36	618.40	736.96	387.20	349.76	2.107		
26,900.00	9,112.93	9,120.32	9,107.79	133.60	240.43	84.99	15,875.44	618.40	802.03	459.15	342.88	2.339		
27,000.00	9,104.63	9,112.33	9,099.81	134.34	240.13	84.21	15,875.51	618.40	873.64	537.11	336.53	2.596		
27,100.00	9,096.34	9,104.68	9,092.16	135.08	239.84	83.47	15,875.56	618.40	950.32	619.47	330.85	2.872		
27,200.00	9,088.05	9,097.34	9,084.82	135.82	239.56	82.76	15,875.59	618.40	1,030.94	705.09	325.85	3.164		
27,300.00	9,079.76	9,090.29	9,077.78	136.57	239.29	82.08	15,875.62	618.40	1,114.65	793.17	321.48	3.467		
27,400.00	9,071.46	9,083.52	9,071.01	137.31	239.04	81.43	15,875.62	618.40	1,200.80	883.13	317.68	3.780		
27,500.00	9,063.17	9,075.65	9,063.17	138.05	238.74	80.67	15,874.23	618.40	1,290.15	975.86	314.29	4.105		
27,600.00	9,054.88	9,067.36	9,054.88	138.80	238.43	79.88	15,874.23	618.40	1,379.86	1,068.49	311.37	4.432		
27,700.00	9,046.59	9,059.06	9,046.59	139.54	238.11	79.09	15,874.23	618.40	1,470.84	1,162.04	308.80	4.763		
27,800.00	9,038.29	9,050.77	9,038.29	140.29	237.80	78.30	15,874.23	618.40	1,562.88	1,256.35	306.53	5.099		
27,900.00	9,030.00	9,042.48	9,030.00	141.03	237.49	77.53	15,874.23	618.40	1,655.81	1,351.29	304.52	5.437		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 009 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Site Error:
Reference	Vertical	Measured	Vertical	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				Offset Well Error:
26,200.00	9,170.97	9,190.25	9,170.97	128.42	245.25	101.77	17,194.18	605.73	1,575.39	1,266.74	308.65	5.104		0.00 usft
26,300.00	9,162.68	9,181.95	9,162.68	129.15	244.94	100.99	17,194.18	605.73	1,483.26	1,172.70	310.56	4.776		0.00 usft
26,400.00	9,154.39	9,173.66	9,154.39	129.89	244.62	100.20	17,194.18	605.73	1,392.17	1,079.37	312.80	4.451		
26,500.00	9,146.09	9,165.37	9,146.09	130.63	244.31	99.41	17,194.18	605.73	1,302.33	986.89	315.44	4.129		
26,600.00	9,137.80	9,157.08	9,137.80	131.38	243.99	98.62	17,194.18	605.73	1,214.02	895.47	318.55	3.811		
26,700.00	9,129.51	9,148.78	9,129.51	132.12	243.68	97.82	17,194.18	605.73	1,127.61	805.39	322.22	3.500		
26,800.00	9,121.22	9,140.41	9,121.22	132.86	243.34	97.02	17,194.18	605.73	1,043.56	717.05	326.51	3.196		
26,900.00	9,112.93	9,132.11	9,112.93	133.60	242.99	96.22	17,194.18	605.73	962.49	630.96	331.54	2.903		
27,000.00	9,104.63	9,140.48	9,121.29	134.34	243.34	97.03	17,194.38	605.73	885.54	547.30	338.25	2.618		
27,100.00	9,096.34	9,120.87	9,101.70	135.08	242.53	95.14	17,194.72	605.73	813.26	468.92	344.34	2.362		
27,200.00	9,088.05	9,107.20	9,088.05	135.82	241.96	93.80	17,194.18	605.73	746.80	395.23	351.57	2.124		
27,300.00	9,079.76	9,098.90	9,079.76	136.57	241.62	92.99	17,194.18	605.73	688.86	329.34	359.52	1.916		
27,400.00	9,071.46	9,090.61	9,071.46	137.31	241.28	92.18	17,194.18	605.73	641.26	273.93	367.34	1.746		
27,500.00	9,063.17	9,082.32	9,063.17	138.05	240.94	91.37	17,194.18	605.73	606.44	232.39	374.06	1.621		
27,600.00	9,054.88	9,074.03	9,054.88	138.80	240.59	90.56	17,194.18	605.73	586.67	208.19	378.48	1.550		
27,668.77	9,049.18	9,068.45	9,049.44	139.31	240.36	90.03	17,194.22	605.73	582.66	202.99	379.67	1.535	CC, ES, SF	
27,700.00	9,046.59	9,065.03	9,046.02	139.54	240.22	89.69	17,194.31	605.73	583.49	203.87	379.62	1.537		
27,800.00	9,038.29	9,054.77	9,035.77	140.29	239.78	88.69	17,194.55	605.73	597.09	219.88	377.22	1.583		
27,900.00	9,030.00	9,045.45	9,026.45	141.03	239.39	87.78	17,194.72	605.73	626.40	254.42	371.98	1.684		
28,000.00	9,021.71	9,036.93	9,017.95	141.78	239.02	86.95	17,194.84	605.73	669.37	304.39	364.98	1.834		
28,100.00	9,013.42	9,029.13	9,010.15	142.52	238.69	86.19	17,194.91	605.73	723.59	366.30	357.30	2.025		
28,200.00	9,005.12	9,021.96	9,002.98	143.27	238.39	85.49	17,194.95	605.73	786.75	437.07	349.69	2.250		
28,300.00	8,996.83	9,015.34	8,996.36	144.01	238.11	84.84	17,194.97	605.73	856.89	514.29	342.59	2.501		
28,400.00	8,988.54	9,007.49	8,988.54	144.76	237.78	84.08	17,194.18	605.73	933.03	596.92	336.11	2.776		
28,500.00	8,980.25	8,999.20	8,980.25	145.50	237.43	83.28	17,194.18	605.73	1,012.78	682.37	330.41	3.065		
28,563.28	8,975.00	8,993.95	8,975.00	145.98	237.20	82.77	17,194.18	605.73	1,064.98	737.81	327.17	3.255		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 010 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Site Error:
Reference	Vertical	Measured	Vertical	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)									0.00 usft
25,400.00	9,237.31	9,012.00	8,984.59	122.51	297.39	-33.42	16,532.22	-48.16	1,627.68	1,289.80	337.89	4.817		
25,500.00	9,229.02	9,012.00	8,984.59	123.25	297.39	-33.42	16,532.22	-48.16	1,528.09	1,190.21	337.88	4.523		
25,600.00	9,220.73	9,012.00	8,984.59	123.99	297.39	-33.42	16,532.22	-48.16	1,428.55	1,090.69	337.87	4.228		
25,700.00	9,212.43	9,012.00	8,984.59	124.72	297.39	-33.42	16,532.22	-48.16	1,329.09	991.24	337.84	3.934		
25,800.00	9,204.14	9,012.00	8,984.59	125.46	297.39	-33.42	16,532.22	-48.16	1,229.71	891.90	337.81	3.640		
25,900.00	9,195.85	9,012.00	8,984.59	126.20	297.39	-33.42	16,532.22	-48.16	1,130.44	792.67	337.77	3.347		
26,000.00	9,187.56	9,012.00	8,984.59	126.94	297.39	-33.42	16,532.22	-48.16	1,031.31	693.59	337.72	3.054		
26,100.00	9,179.26	9,012.00	8,984.59	127.68	297.39	-33.42	16,532.22	-48.16	932.36	594.71	337.66	2.761		
26,200.00	9,170.97	9,012.00	8,984.59	128.42	297.39	-33.42	16,532.22	-48.16	833.67	496.09	337.59	2.470		
26,300.00	9,162.68	9,012.00	8,984.59	129.15	297.39	-33.42	16,532.22	-48.16	735.34	397.83	337.50	2.179		
26,400.00	9,154.39	9,012.00	8,984.59	129.89	297.39	-33.42	16,532.22	-48.16	637.52	300.11	337.41	1.889		
26,500.00	9,146.09	9,012.00	8,984.59	130.63	297.39	-33.42	16,532.22	-48.16	540.49	203.21	337.28	1.603		
26,600.00	9,137.80	9,012.00	8,984.59	131.38	297.39	-33.42	16,532.22	-48.16	444.79	107.77	337.02	1.320	Level 3	
26,700.00	9,129.51	9,012.00	8,984.59	132.12	297.39	-33.42	16,532.22	-48.16	351.50	15.27	336.22	1.045	Level 2	
26,800.00	9,121.22	9,012.00	8,984.59	132.86	297.39	-33.42	16,532.22	-48.16	263.17	-69.87	333.04	0.790	Level 1	
26,900.00	9,112.93	9,012.00	8,984.59	133.60	297.39	-33.42	16,532.22	-48.16	186.99	-132.94	319.93	0.584	Level 1	
27,000.00	9,104.63	9,012.00	8,984.59	134.34	297.39	-33.42	16,532.22	-48.16	143.78	-152.15	295.93	0.486	Level 1	
27,021.46	9,102.85	9,012.00	8,984.59	134.50	297.39	-33.42	16,532.22	-48.16	142.17	-156.87	299.04	0.475	Level 1, CC, SF	
27,100.00	9,096.34	9,012.00	8,984.59	135.08	297.39	-33.42	16,532.22	-48.16	162.42	-173.48	335.90	0.484	Level 1, ES	
27,200.00	9,088.05	9,012.00	8,984.59	135.82	297.39	-33.42	16,532.22	-48.16	228.23	-128.90	357.13	0.639	Level 1	
27,300.00	9,079.76	9,012.00	8,984.59	136.57	297.39	-33.42	16,532.22	-48.16	312.72	-45.23	357.95	0.874	Level 1	
27,400.00	9,071.46	9,012.00	8,984.59	137.31	297.39	-33.42	16,532.22	-48.16	404.36	48.88	355.48	1.138	Level 2	
27,500.00	9,063.17	9,012.00	8,984.59	138.05	297.39	-33.42	16,532.22	-48.16	499.21	146.10	353.11	1.414	Level 3	
27,600.00	9,054.88	9,012.00	8,984.59	138.80	297.39	-33.42	16,532.22	-48.16	595.75	244.47	351.29	1.696		
27,700.00	9,046.59	9,012.00	8,984.59	139.54	297.39	-33.42	16,532.22	-48.16	693.27	343.36	349.92	1.981		
27,800.00	9,038.29	9,012.00	8,984.59	140.29	297.39	-33.42	16,532.22	-48.16	791.41	442.52	348.89	2.268		
27,900.00	9,030.00	9,012.00	8,984.59	141.03	297.39	-33.42	16,532.22	-48.16	889.97	541.85	348.11	2.557		
28,000.00	9,021.71	9,012.00	8,984.59	141.78	297.39	-33.42	16,532.22	-48.16	988.81	641.30	347.52	2.845		
28,100.00	9,013.42	9,012.00	8,984.59	142.52	297.39	-33.42	16,532.22	-48.16	1,087.87	740.82	347.05	3.135		
28,200.00	9,005.12	9,012.00	8,984.59	143.27	297.39	-33.42	16,532.22	-48.16	1,187.08	840.40	346.69	3.424		
28,300.00	8,996.83	9,012.00	8,984.59	144.01	297.39	-33.42	16,532.22	-48.16	1,286.42	940.02	346.40	3.714		
28,400.00	8,988.54	9,012.00	8,984.59	144.76	297.39	-33.42	16,532.22	-48.16	1,385.85	1,039.68	346.17	4.003		
28,500.00	8,980.25	9,007.38	8,980.25	145.50	297.15	-32.48	16,532.22	-48.16	1,485.35	1,139.49	345.86	4.295		
28,563.28	8,975.00	9,002.14	8,975.00	145.98	296.89	-31.41	16,532.22	-48.16	1,548.33	1,202.70	345.63	4.480		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 012 P & A - OH - Surveys													Offset Site Error:	0.00 usft		
Survey Program: 100-r.5 GYRO-NS, 7960-MWD OWSG Rev5													Offset Well Error:	0.00 usft		
Reference													Rule Assigned:			
Measured	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Depth	Depth	Depth	Depth	Reference	Offset		+N/-S	+E/-W	Between	Between				Separation	Factor	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(")	(usft)	(usft)	(usft)	(usft)	(usft)					
26,800.00	9,121.22	9,294.81	9,257.99	132.86	28.22	119.15	17,851.20	486.94	1,600.97	1,511.14	89.83	17.823				
26,900.00	9,112.93	9,251.83	9,215.17	133.60	28.21	115.09	17,854.90	486.55	1,507.07	1,416.36	90.71	16.614				
27,000.00	9,104.63	9,249.53	9,212.89	134.34	28.21	114.87	17,855.26	486.50	1,413.78	1,320.88	92.90	15.218				
27,100.00	9,096.34	9,216.80	9,180.27	135.08	28.21	111.55	17,857.79	486.23	1,321.05	1,226.46	94.59	13.966				
27,200.00	9,088.05	9,188.98	9,152.50	135.82	28.20	108.60	17,859.59	486.04	1,229.09	1,132.29	96.80	12.698				
27,300.00	9,079.76	9,170.42	9,133.97	136.57	28.20	106.57	17,860.65	485.91	1,138.19	1,038.46	99.73	11.413				
27,400.00	9,071.46	9,153.82	9,117.39	137.31	28.20	104.72	17,861.57	485.73	1,048.72	945.42	103.30	10.152				
27,500.00	9,063.17	9,127.46	9,091.07	138.05	28.21	101.71	17,862.86	485.32	961.03	853.67	107.35	8.952				
27,600.00	9,054.88	9,110.37	9,074.00	138.80	28.21	99.72	17,863.56	484.97	875.65	763.10	112.55	7.780				
27,700.00	9,046.59	9,096.05	9,059.70	139.54	28.21	98.03	17,864.11	484.63	793.46	674.56	118.90	6.674				
27,800.00	9,038.29	9,083.73	9,047.39	140.29	28.21	96.56	17,864.57	484.32	715.59	589.04	126.55	5.655				
27,900.00	9,030.00	9,072.80	9,036.47	141.03	28.21	95.26	17,865.01	484.03	643.65	508.08	135.57	4.748				
28,000.00	9,021.71	9,061.34	9,025.03	141.78	28.21	93.88	17,865.50	483.73	579.85	434.14	145.71	3.980				
28,100.00	9,013.42	9,049.70	9,013.40	142.52	28.21	92.47	17,866.04	483.43	527.14	370.90	156.24	3.374				
28,200.00	9,005.12	9,037.70	9,001.42	143.27	28.21	91.01	17,866.62	483.14	489.09	323.51	165.59	2.954				
28,300.00	8,996.83	9,025.13	8,988.87	144.01	28.21	89.49	17,867.27	482.84	469.28	297.77	171.51	2.736				
28,346.64	8,992.96	9,018.88	8,982.63	144.36	28.21	88.73	17,867.60	482.70	467.00	294.46	172.54	2.707	CC, ES, SF			
28,400.00	8,988.54	9,011.67	8,975.43	144.76	28.21	87.85	17,867.99	482.54	469.98	297.77	172.21	2.729				
28,500.00	8,980.25	8,998.03	8,961.81	145.50	28.22	86.20	17,868.73	482.24	491.09	323.44	167.65	2.929				
28,563.28	8,975.00	8,990.45	8,954.25	145.98	28.22	85.28	17,869.15	482.08	513.95	351.18	162.78	3.157				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) STATE AN 012 P & A - ST01 - ST01													Offset Site Error:	0.00 usft		
Survey Program: 100-r.5 GYRO-NS, 7960-MWD OWSG Rev5, 11516-MWD+IFR1+MS													Offset Well Error:	0.00 usft		
Reference													Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
26,800.00	9,121.22	9,294.81	9,257.99	132.86	28.22	119.15	17,851.20	486.94	1,600.97	1,511.14	89.83	17.823				
26,900.00	9,112.93	9,251.83	9,215.17	133.60	28.21	115.09	17,854.90	486.55	1,507.07	1,416.36	90.71	16.614				
27,000.00	9,104.63	9,249.53	9,212.89	134.34	28.21	114.87	17,855.26	486.50	1,413.78	1,320.88	92.90	15.218				
27,100.00	9,096.34	9,216.80	9,180.27	135.08	28.21	111.55	17,857.79	486.23	1,321.05	1,226.46	94.59	13.966				
27,200.00	9,088.05	9,188.98	9,152.50	135.82	28.20	108.60	17,859.59	486.04	1,229.09	1,132.29	96.80	12.698				
27,300.00	9,079.76	9,170.42	9,133.97	136.57	28.20	106.57	17,860.65	485.91	1,138.19	1,038.46	99.73	11.413				
27,400.00	9,071.46	9,153.82	9,117.39	137.31	28.20	104.72	17,861.57	485.73	1,048.72	945.42	103.30	10.152				
27,500.00	9,063.17	9,127.46	9,091.07	138.05	28.21	101.71	17,862.86	485.32	961.03	853.67	107.35	8.952				
27,600.00	9,054.88	9,110.37	9,074.00	138.80	28.21	99.72	17,863.56	484.97	875.65	763.10	112.55	7.780				
27,700.00	9,046.59	9,096.05	9,059.70	139.54	28.21	98.03	17,864.11	484.63	793.46	674.56	118.90	6.674				
27,800.00	9,038.29	9,083.73	9,047.39	140.29	28.21	96.56	17,864.57	484.32	715.59	589.04	126.55	5.655				
27,900.00	9,030.00	9,072.80	9,036.47	141.03	28.21	95.26	17,865.01	484.03	643.65	508.08	135.57	4.748				
28,000.00	9,021.71	9,061.34	9,025.03	141.78	28.21	93.88	17,865.50	483.73	579.85	434.14	145.71	3.980				
28,100.00	9,013.42	9,049.70	9,013.40	142.52	28.21	92.47	17,866.04	483.43	527.14	370.90	156.24	3.374				
28,200.00	9,005.12	9,037.70	9,001.42	143.27	28.21	91.01	17,866.62	483.14	489.09	323.51	165.59	2.954				
28,300.00	8,996.83	9,025.13	8,988.87	144.01	28.21	89.49	17,867.27	482.84	469.28	297.77	171.51	2.736				
28,346.64	8,992.96	9,018.88	8,982.63	144.36	28.21	88.73	17,867.60	482.70	467.00	294.46	172.54	2.707	CC, ES, SF			
28,400.00	8,988.54	9,011.67	8,975.43	144.76	28.21	87.85	17,867.99	482.54	469.98	297.77	172.21	2.729				
28,500.00	8,980.25	8,998.03	8,961.81	145.50	28.22	86.20	17,868.73	482.24	491.09	323.44	167.65	2.929				
28,563.28	8,975.00	8,990.45	8,954.25	145.98	28.22	85.28	17,869.15	482.08	513.95	351.18	162.78	3.157				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 503H - OH - Plan #2													Offset Site Error:	0.00 usft				
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:	0.00 usft				
Reference													Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
0.00	0.00	0.10	0.00	0.00	0.00	-90.23	-0.08	-20.00	20.00	19.45	0.55	36.206						
100.00	100.00	100.10	100.00	0.28	0.28	-90.23	-0.08	-20.00	20.00	18.73	1.27	15.756						
200.00	200.00	200.10	200.00	0.63	0.63	-90.23	-0.08	-20.00	20.00	18.01	1.99	10.069						
300.00	300.00	300.10	300.00	0.99	0.99	-90.23	-0.08	-20.00	20.00	17.30	2.70	7.399						
400.00	400.00	400.10	400.00	1.35	1.35	-90.23	-0.08	-20.00	20.00	16.58	3.42	5.848						
500.00	500.00	500.10	500.00	1.71	1.71	-90.23	-0.08	-20.00	20.00	15.86	4.14	4.834						
600.00	600.00	600.10	600.00	2.07	2.07	-90.23	-0.08	-20.00	20.00	15.15	4.85	4.120						
700.00	700.00	700.10	700.00	2.43	2.43	-90.23	-0.08	-20.00	20.00	14.43	5.57	3.590						
800.00	800.00	800.10	800.00	2.79	2.79	-90.23	-0.08	-20.00	20.00	13.71	6.29	3.181						
900.00	900.00	900.10	900.00	3.14	3.14	-90.23	-0.08	-20.00	20.00	13.00	7.00	2.855						
1,000.00	1,000.00	1,000.10	1,000.00	3.50	3.50	-90.23	-0.08	-20.00	20.00	12.28	7.72	2.590						
1,100.00	1,100.00	1,100.10	1,100.00	4.22	4.22	-90.23	-0.08	-20.00	20.00	11.56	8.44	2.370						
1,200.00	1,200.00	1,200.10	1,200.00	4.58	4.58	-90.23	-0.08	-20.00	20.00	10.84	9.16	2.184						
1,300.00	1,300.00	1,300.10	1,300.00	4.94	4.94	-90.23	-0.08	-20.00	20.00	10.13	9.87	2.026						
1,400.00	1,400.00	1,400.10	1,400.00	5.29	5.29	-90.23	-0.08	-20.00	20.00	9.41	10.59	1.889						
1,500.00	1,500.00	1,500.10	1,500.00	5.65	5.65	-90.23	-0.08	-20.00	20.00	8.69	11.31	1.769	CC, ES					
1,600.00	1,600.00	1,600.10	1,600.00	6.00	6.01	134.86	-0.08	-20.00	21.19	9.19	12.01	1.765	SF					
1,700.00	1,699.98	1,700.08	1,699.98	6.33	6.37	143.29	-0.08	-20.00	25.16	12.47	12.69	1.982						
1,800.00	1,799.84	1,799.94	1,799.84	6.66	6.71	149.59	-1.07	-21.39	33.18	19.81	13.37	2.482						
1,900.00	1,899.49	1,898.93	1,898.81	7.00	7.04	149.91	-4.03	-25.55	43.76	29.74	14.02	3.121						
2,000.00	1,999.11	1,997.59	1,997.34	7.33	7.37	147.30	-8.93	-32.42	56.41	41.74	14.67	3.846						
2,100.00	2,098.73	2,095.72	2,095.10	7.68	7.70	144.49	-14.92	-40.84	70.33	55.00	15.33	4.588						
2,200.00	2,198.35	2,194.65	2,193.49	8.02	8.04	142.60	-20.92	-49.26	84.37	68.37	16.00	5.273						
2,300.00	2,297.97	2,293.63	2,291.92	8.36	8.38	141.25	-26.93	-57.68	98.48	81.80	16.68	5.904						
2,400.00	2,397.59	2,392.61	2,390.36	8.71	8.72	140.24	-32.93	-66.10	112.62	95.26	17.36	6.487						
2,500.00	2,497.21	2,491.58	2,488.79	9.06	9.06	139.45	-38.93	-74.53	126.79	108.75	18.05	7.026						
2,600.00	2,596.83	2,590.56	2,587.23	9.41	9.41	138.83	-44.93	-82.95	140.98	122.25	18.73	7.526						
2,700.00	2,696.45	2,689.54	2,685.66	9.76	9.75	138.32	-50.93	-91.37	155.19	135.76	19.42	7.989						
2,800.00	2,796.07	2,788.52	2,784.10	10.11	10.10	137.89	-56.93	-99.80	169.40	149.28	20.12	8.420						
2,900.00	2,895.69	2,887.49	2,882.54	10.46	10.45	137.53	-62.93	-108.22	183.62	162.81	20.81	8.822						
3,000.00	2,995.31	2,986.47	2,980.97	10.81	10.80	137.22	-68.93	-116.64	197.85	176.34	21.51	9.197						
3,100.00	3,094.93	3,085.45	3,079.41	11.17	11.14	136.95	-74.93	-125.06	212.08	189.87	22.21	9.548						
3,200.00	3,194.55	3,184.43	3,177.84	11.52	11.50	136.72	-80.93	-133.49	226.32	203.40	22.91	9.877						
3,300.00	3,294.17	3,283.40	3,276.28	11.88	11.85	136.51	-86.93	-141.91	240.55	216.94	23.62	10.186						
3,400.00	3,393.79	3,382.38	3,374.72	12.23	12.20	136.33	-92.93	-150.33	254.80	230.48	24.32	10.477						
3,500.00	3,493.41	3,481.36	3,473.15	12.59	12.55	136.17	-98.93	-158.75	269.04	244.01	25.03	10.751						
3,600.00	3,593.02	3,580.34	3,571.59	12.95	12.91	136.02	-104.93	-167.18	283.29	257.55	25.73	11.009						
3,700.00	3,692.64	3,679.32	3,670.02	13.30	13.26	135.89	-110.93	-175.60	297.53	271.09	26.44	11.253						
3,800.00	3,792.26	3,778.29	3,768.46	13.66	13.61	135.77	-116.93	-184.02	311.78	284.63	27.15	11.484						
3,900.00	3,891.88	3,877.27	3,866.89	14.02	13.97	135.66	-122.93	-192.45	326.03	298.17	27.86	11.703						
4,000.00	3,991.50	3,976.25	3,965.33	14.38	14.32	135.56	-128.93	-200.87	340.28	311.71	28.57	11.911						
4,100.00	4,091.12	4,075.23	4,063.77	14.74	14.68	135.46	-134.93	-209.29	354.54	325.26	29.28	12.108						
4,200.00	4,190.74	4,174.20	4,162.20	15.10	15.04	135.38	-140.94	-217.71	368.79	338.80	29.99	12.296						
4,300.00	4,290.36	4,273.18	4,260.64	15.45	15.39	135.30	-146.94	-226.14	383.04	352.34	30.71	12.474						
4,400.00	4,389.98	4,372.16	4,359.07	15.81	15.75	135.23	-152.94	-234.56	397.30	365.88	31.42	12.645						
4,500.00	4,489.60	4,471.14	4,457.51	16.17	16.11	135.16	-158.94	-242.98	411.55	379.42	32.13	12.807						
4,600.00	4,589.22	4,570.11	4,555.95	16.53	16.47	135.09	-164.94	-251.41	425.81	392.96	32.85	12.963						
4,700.00	4,688.84	4,669.09	4,654.38	16.90	16.82	135.03	-170.94	-259.83	440.07	406.50	33.56	13.111						
4,800.00	4,788.46	4,768.07	4,752.82	17.26	17.18	134.98	-176.94	-268.25	454.32	420.04	34.28	13.253						
4,900.00	4,888.08	4,867.05	4,851.25	17.62	17.54	134.92	-182.94	-276.67	468.58	433.58	35.00	13.390						
5,000.00	4,987.70	4,966.02	4,949.69	17.98	17.90	134.87	-188.94	-285.10	482.84	447.12	35.71	13.520						

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 503H - OH - Plan #2

Survey Program: 0-MWD+IFR1+MS		Offset		Semi Major Axis		Highside Tooface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Site Error:
Reference	Reference	Reference	Reference	Reference	Reference		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)									0.00 usft
5,200.00	5,186.94	5,163.98	5,146.56	18.34	18.26	134.83	-194.94	-293.52	497.09	460.66	36.43	13.645		
5,300.00	5,286.61	5,263.02	5,245.06	18.70	18.62	134.85	-200.94	-301.95	510.89	473.75	37.15	13.753		
5,400.00	5,386.49	5,362.29	5,343.79	19.06	18.98	134.67	-206.96	-310.39	522.44	484.58	37.86	13.799		
5,500.00	5,486.47	5,461.72	5,442.67	19.40	19.34	-87.37	-212.99	-318.86	531.60	493.03	38.57	13.784		
5,600.00	5,586.47	5,561.17	5,541.58	19.74	19.70	-88.06	-219.02	-327.32	539.88	500.61	39.26	13.750		
5,700.00	5,686.47	5,660.62	5,640.49	20.08	20.06	-88.72	-225.05	-335.78	548.23	508.27	39.96	13.718		
5,800.00	5,786.47	5,765.48	5,744.79	20.42	20.44	-89.38	-231.29	-344.54	556.51	515.81	40.71	13.672		
5,900.00	5,886.47	5,864.02	5,863.01	20.77	20.87	-89.89	-236.23	-351.48	562.35	520.82	41.53	13.542		
6,000.00	5,986.47	6,003.05	5,981.98	21.11	21.29	-90.11	-238.34	-354.44	564.84	522.53	42.31	13.350		
6,100.00	6,086.47	6,107.54	6,086.47	21.45	21.65	-90.12	-238.42	-354.55	564.93	521.93	43.01	13.136		
6,200.00	6,186.47	6,207.54	6,186.47	21.79	21.99	-90.12	-238.42	-354.55	564.93	521.24	43.69	12.931		
6,300.00	6,286.47	6,307.54	6,286.47	22.14	22.33	-90.12	-238.42	-354.55	564.93	520.56	44.37	12.732		
6,400.00	6,386.47	6,407.54	6,386.47	22.48	22.67	-90.12	-238.42	-354.55	564.93	519.88	45.05	12.539		
6,500.00	6,486.47	6,507.54	6,486.47	22.82	23.01	-90.12	-238.42	-354.55	564.93	519.19	45.74	12.351		
6,600.00	6,586.47	6,607.54	6,586.47	23.17	23.36	-90.12	-238.42	-354.55	564.93	518.51	46.42	12.169		
6,700.00	6,686.47	6,707.54	6,686.47	23.51	23.70	-90.12	-238.42	-354.55	564.93	517.82	47.11	11.991		
6,800.00	6,786.47	6,807.54	6,786.47	23.86	24.04	-90.12	-238.42	-354.55	564.93	517.13	47.80	11.819		
6,900.00	6,886.47	6,907.54	6,886.47	24.21	24.39	-90.12	-238.42	-354.55	564.93	516.44	48.49	11.651		
7,000.00	6,986.47	7,007.54	6,986.47	24.55	24.73	-90.12	-238.42	-354.55	564.93	515.75	49.18	11.488		
7,100.00	7,086.47	7,107.54	7,086.47	24.90	25.08	-90.12	-238.42	-354.55	564.93	515.06	49.87	11.329		
7,200.00	7,186.47	7,207.54	7,186.47	25.25	25.42	-90.12	-238.42	-354.55	564.93	514.37	50.56	11.174		
7,300.00	7,286.47	7,307.54	7,286.47	25.59	25.77	-90.12	-238.42	-354.55	564.93	513.68	51.25	11.023		
7,400.00	7,386.47	7,407.54	7,386.47	25.94	26.11	-90.12	-238.42	-354.55	564.93	512.99	51.94	10.876		
7,500.00	7,486.47	7,507.54	7,486.47	26.29	26.46	-90.12	-238.42	-354.55	564.93	512.30	52.63	10.733		
7,600.00	7,586.47	7,607.54	7,586.47	26.64	26.80	-90.12	-238.42	-354.55	564.93	511.60	53.33	10.594		
7,700.00	7,686.47	7,707.54	7,686.47	26.99	27.15	-90.12	-238.42	-354.55	564.93	510.91	54.02	10.457		
7,800.00	7,786.47	7,807.54	7,786.47	27.33	27.50	-90.12	-238.42	-354.55	564.93	510.21	54.72	10.325		
7,900.00	7,886.47	7,907.54	7,886.47	27.68	27.85	-90.12	-238.42	-354.55	564.93	509.52	55.41	10.195		
8,000.00	7,986.47	8,007.54	7,986.47	28.03	28.19	-90.12	-238.42	-354.55	564.93	508.82	56.11	10.069		
8,100.00	8,086.47	8,107.54	8,086.47	28.38	28.54	-90.12	-238.42	-354.55	564.93	508.13	56.80	9.945		
8,200.00	8,186.47	8,207.54	8,186.47	28.73	28.89	-90.12	-238.42	-354.55	564.93	507.43	57.50	9.825		
8,300.00	8,286.47	8,307.54	8,286.47	29.08	29.24	-90.12	-238.42	-354.55	564.93	506.73	58.20	9.707		
8,400.00	8,386.47	8,407.54	8,386.47	29.43	29.59	-90.12	-238.42	-354.55	564.93	506.03	58.90	9.592		
8,500.00	8,486.47	8,507.54	8,486.47	29.78	29.94	-90.12	-238.42	-354.55	564.93	505.34	59.59	9.480		
8,600.00	8,586.47	8,607.54	8,586.47	30.13	30.29	-90.12	-238.42	-354.55	564.93	504.64	60.29	9.370		
8,700.00	8,686.47	8,707.54	8,686.47	30.48	30.64	-90.12	-238.42	-354.55	564.93	503.94	60.99	9.262		
8,800.00	8,786.47	8,807.54	8,786.47	30.84	30.99	-90.12	-238.42	-354.55	564.93	503.24	61.69	9.157		
8,900.00	8,886.47	8,907.54	8,886.47	31.19	31.34	-90.12	-238.42	-354.55	564.93	502.54	62.39	9.054		
9,000.00	8,986.47	9,007.54	8,986.47	31.54	31.69	-90.12	-238.42	-354.55	564.93	501.84	63.09	8.954		
9,100.00	9,086.47	9,107.54	9,086.47	31.89	32.04	-90.12	-238.42	-354.55	564.93	501.14	63.79	8.856		
9,200.00	9,186.47	9,207.54	9,186.47	32.24	32.39	-90.12	-238.42	-354.55	564.93	500.44	64.49	8.759		
9,300.00	9,286.47	9,307.54	9,286.47	32.59	32.74	-90.12	-238.42	-354.55	564.93	499.74	65.20	8.665		
9,400.00	9,386.47	9,407.54	9,386.47	32.95	33.09	-90.12	-238.42	-354.55	564.93	499.03	65.90	8.573		
9,410.78	9,397.26	9,418.33	9,397.26	32.98	33.13	-90.12	-238.42	-354.55	564.93	498.96	65.97	8.563		
9,500.00	9,486.47	9,507.41	9,486.34	33.30	33.44	-90.10	-238.22	-354.55	564.93	498.33	66.60	8.483		
9,600.00	9,586.47	9,605.07	9,583.27	33.65	33.78	-88.99	-227.35	-354.67	565.15	497.86	67.29	8.399		
9,700.00	9,686.47	9,696.57	9,671.19	34.00	34.07	-86.47	-202.37	-354.94	566.60	498.67	67.93	8.341		
9,800.00	9,786.47	9,778.40	9,745.58	34.35	34.32	-83.06	-168.44	-355.31	571.33	502.89	68.44	8.348		
9,900.00	9,886.43	9,850.00	9,806.13	34.71	34.51	-78.28	-130.31	-355.72	581.36	512.70	68.66	8.467		
10,000.00	9,984.97	9,917.61	9,858.53	35.05	34.68	-73.73	-87.65	-356.18	595.07	526.53	68.54	8.683		
10,100.00	10,079.19	9,983.14	9,904.18	35.37	34.82	-69.58	-40.69	-356.69	610.53	542.45	68.08	8.967		
10,200.00	10,166.23	10,050.00	9,944.92	35.65	34.95	-65.84	12.27	-357.26	626.36	558.93	67.43	9.289		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 503H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	Offset Site Error:
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)	(")	(usft)	(usft)	(usft)	(usft)	(usft)			
10,300.00	10,243.43	10,109.99	9,976.00	35.91	35.06	-62.86	63.54	-357.82	641.29	574.76	66.53	9.639		
10,400.00	10,308.47	10,171.98	10,002.31	36.13	35.15	-60.39	119.64	-358.42	654.37	588.70	65.67	9.965		
10,500.00	10,359.35	10,233.37	10,022.24	36.31	35.24	-58.55	177.67	-359.05	664.81	599.89	64.92	10.240		
10,600.00	10,394.53	10,300.00	10,038.14	36.45	35.31	-57.40	242.36	-359.75	671.30	606.82	64.49	10.410		
10,700.00	10,416.72	10,382.65	10,052.56	36.57	35.40	-56.96	323.72	-360.63	674.05	609.61	64.44	10.460		
10,800.00	10,430.32	10,458.24	10,060.57	36.67	35.47	-56.73	398.87	-361.44	675.70	611.25	64.45	10.484		
10,900.00	10,435.22	10,533.77	10,063.62	36.76	35.54	-56.66	474.32	-362.25	676.18	611.59	64.59	10.469		
11,000.00	10,431.41	10,609.30	10,061.69	36.87	35.62	-56.76	549.81	-363.07	675.49	610.60	64.89	10.410		
11,100.00	10,423.12	10,701.00	10,054.56	37.00	35.74	-56.79	641.22	-364.05	675.17	609.95	65.22	10.352		
11,200.00	10,414.83	10,801.00	10,046.48	37.15	35.88	-56.81	740.89	-365.12	675.05	609.49	65.56	10.296		
11,300.00	10,406.54	10,901.00	10,038.39	37.31	36.05	-56.82	840.56	-366.19	674.94	609.00	65.94	10.236		
11,400.00	10,398.24	11,001.00	10,030.30	37.49	36.22	-56.84	940.22	-367.26	674.83	608.48	66.35	10.171		
11,500.00	10,389.95	11,101.00	10,022.22	37.68	36.42	-56.85	1,039.89	-368.33	674.71	607.92	66.79	10.101		
11,600.00	10,381.66	11,201.00	10,014.13	37.89	36.63	-56.87	1,139.56	-369.40	674.60	607.33	67.27	10.028		
11,700.00	10,373.37	11,301.00	10,006.05	38.12	36.85	-56.88	1,239.22	-370.47	674.49	606.71	67.78	9.951		
11,800.00	10,365.07	11,401.00	9,997.96	38.35	37.09	-56.90	1,338.89	-371.55	674.37	606.06	68.32	9.871		
11,900.00	10,356.78	11,501.00	9,989.88	38.60	37.34	-56.91	1,438.56	-372.62	674.26	605.37	68.89	9.788		
12,000.00	10,348.49	11,601.00	9,981.79	38.87	37.61	-56.93	1,538.22	-373.69	674.15	604.66	69.49	9.701		
12,100.00	10,340.20	11,701.00	9,973.70	39.15	37.89	-56.94	1,637.89	-374.76	674.04	603.92	70.12	9.613		
12,200.00	10,331.90	11,801.00	9,965.62	39.44	38.19	-56.96	1,737.56	-375.83	673.92	603.15	70.78	9.522		
12,300.00	10,323.61	11,901.00	9,957.53	39.74	38.50	-56.97	1,837.22	-376.90	673.81	602.35	71.46	9.429		
12,400.00	10,315.32	12,001.00	9,949.45	40.06	38.82	-56.98	1,936.89	-377.97	673.70	601.52	72.17	9.334		
12,500.00	10,307.03	12,101.00	9,941.36	40.39	39.15	-57.00	2,036.56	-379.04	673.58	600.67	72.91	9.238		
12,600.00	10,298.73	12,201.00	9,933.28	40.73	39.50	-57.01	2,136.22	-380.11	673.47	599.80	73.67	9.141		
12,700.00	10,290.44	12,301.00	9,925.19	41.08	39.86	-57.03	2,235.89	-381.18	673.36	598.90	74.46	9.043		
12,800.00	10,282.15	12,401.00	9,917.10	41.45	40.22	-57.04	2,335.56	-382.26	673.24	597.97	75.27	8.944		
12,900.00	10,273.86	12,501.00	9,909.02	41.82	40.61	-57.06	2,435.22	-383.33	673.13	597.03	76.10	8.845		
13,000.00	10,265.56	12,601.00	9,900.93	42.21	41.00	-57.07	2,534.89	-384.40	673.02	596.06	76.96	8.745		
13,100.00	10,257.27	12,701.00	9,892.85	42.61	41.40	-57.09	2,634.56	-385.47	672.91	595.07	77.84	8.645		
13,200.00	10,248.98	12,801.00	9,884.76	43.01	41.81	-57.10	2,734.22	-386.54	672.79	594.06	78.73	8.545		
13,300.00	10,240.69	12,901.00	9,876.68	43.43	42.23	-57.12	2,833.89	-387.61	672.68	593.03	79.65	8.445		
13,400.00	10,232.40	13,001.00	9,868.59	43.85	42.67	-57.13	2,933.56	-388.68	672.57	591.98	80.59	8.346		
13,500.00	10,224.10	13,101.00	9,860.50	44.29	43.11	-57.15	3,033.22	-389.75	672.46	590.92	81.54	8.247		
13,600.00	10,215.81	13,201.00	9,852.42	44.73	43.56	-57.16	3,132.89	-390.82	672.34	589.83	82.51	8.148		
13,700.00	10,207.52	13,301.00	9,844.33	45.19	44.02	-57.18	3,232.56	-391.89	672.23	588.73	83.51	8.050		
13,800.00	10,199.23	13,401.00	9,836.25	45.65	44.49	-57.19	3,332.22	-392.96	672.12	587.61	84.51	7.953		
13,900.00	10,190.93	13,501.00	9,828.16	46.12	44.96	-57.21	3,431.89	-394.04	672.01	586.47	85.54	7.856		
14,000.00	10,182.64	13,601.00	9,820.08	46.60	45.45	-57.22	3,531.56	-395.11	671.90	585.32	86.57	7.761		
14,100.00	10,174.35	13,701.00	9,811.99	47.08	45.94	-57.24	3,631.22	-396.18	671.78	584.16	87.63	7.666		
14,200.00	10,166.06	13,801.00	9,803.90	47.58	46.44	-57.25	3,730.89	-397.25	671.67	582.97	88.70	7.573		
14,300.00	10,157.76	13,901.00	9,795.82	48.08	46.95	-57.27	3,830.56	-398.32	671.56	581.78	89.78	7.480		
14,400.00	10,149.47	14,001.00	9,787.73	48.58	47.46	-57.28	3,930.22	-399.39	671.45	580.57	90.87	7.389		
14,500.00	10,141.18	14,101.00	9,779.65	49.10	47.98	-57.30	4,029.89	-400.46	671.33	579.35	91.98	7.299		
14,600.00	10,132.89	14,201.00	9,771.56	49.62	48.51	-57.31	4,129.56	-401.53	671.22	578.12	93.10	7.209		
14,700.00	10,124.59	14,301.00	9,763.47	50.15	49.04	-57.33	4,229.22	-402.60	671.11	576.87	94.24	7.122		
14,800.00	10,116.30	14,401.00	9,755.39	50.68	49.59	-57.34	4,328.89	-403.67	671.00	575.62	95.38	7.035		
14,900.00	10,108.01	14,501.00	9,747.30	51.22	50.13	-57.36	4,428.56	-404.75	670.89	574.35	96.54	6.950		
15,000.00	10,099.72	14,601.00	9,739.22	51.77	50.68	-57.37	4,528.22	-405.82	670.78	573.07	97.70	6.865		
15,100.00	10,091.42	14,701.00	9,731.13	52.32	51.24	-57.39	4,627.89	-406.89	670.66	571.78	98.88	6.783		
15,200.00	10,083.13	14,800.99	9,723.05	52.87	51.81	-57.40	4,727.56	-407.96	670.55	570.48	100.07	6.701		
15,300.00	10,074.84	14,900.99	9,714.96	53.44	52.37	-57.42	4,827.22	-409.03	670.44	569.17	101.27	6.621		
15,400.00	10,066.55	15,000.99	9,706.87	54.00	52.95	-57.43	4,926.89	-410.10	670.33	567.86	102.47	6.542		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 503H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	Offset Site Error:
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)	(")	(usft)	(usft)	(usft)	(usft)	(usft)			
15,500.00	10,058.26	15,100.99	9,698.79	54.57	53.53	-57.45	5,026.56	-411.17	670.22	566.53	103.69	6.464		
15,600.00	10,049.96	15,200.99	9,690.70	55.15	54.11	-57.46	5,126.22	-412.24	670.11	565.19	104.91	6.387		
15,700.00	10,041.67	15,300.99	9,682.62	55.73	54.70	-57.48	5,225.89	-413.31	669.99	563.85	106.14	6.312		
15,800.00	10,033.38	15,400.99	9,674.53	56.32	55.29	-57.49	5,325.56	-414.38	669.88	562.50	107.38	6.238		
15,900.00	10,025.09	15,500.99	9,666.45	56.91	55.89	-57.51	5,425.22	-415.45	669.77	561.14	108.63	6.165		
16,000.00	10,016.79	15,600.99	9,658.36	57.51	56.49	-57.52	5,524.89	-416.53	669.66	559.77	109.89	6.094		
16,100.00	10,008.50	15,700.99	9,650.27	58.10	57.10	-57.54	5,624.55	-417.60	669.55	558.40	111.15	6.024		
16,200.00	10,000.21	15,800.99	9,642.19	58.71	57.70	-57.55	5,724.22	-418.67	669.44	557.01	112.42	5.955		
16,300.00	9,991.92	15,900.99	9,634.10	59.31	58.32	-57.56	5,823.89	-419.74	669.33	555.63	113.70	5.887		
16,400.00	9,983.62	16,000.99	9,626.02	59.92	58.93	-57.58	5,923.55	-420.81	669.22	554.23	114.98	5.820		
16,500.00	9,975.33	16,100.99	9,617.93	60.54	59.55	-57.59	6,023.22	-421.88	669.10	552.83	116.27	5.755		
16,600.00	9,967.04	16,200.99	9,609.85	61.16	60.18	-57.61	6,122.89	-422.95	668.99	551.42	117.57	5.690		
16,700.00	9,958.75	16,300.99	9,601.76	61.78	60.81	-57.62	6,222.55	-424.02	668.88	550.01	118.87	5.627		
16,800.00	9,950.45	16,400.99	9,593.67	62.40	61.44	-57.64	6,322.22	-425.09	668.77	548.59	120.18	5.565		
16,900.00	9,942.16	16,500.99	9,585.59	63.03	62.07	-57.65	6,421.89	-426.16	668.66	547.16	121.50	5.504		
17,000.00	9,933.87	16,600.99	9,577.50	63.66	62.71	-57.67	6,521.55	-427.24	668.55	545.73	122.81	5.444		
17,100.00	9,925.58	16,700.99	9,569.42	64.30	63.35	-57.68	6,621.22	-428.31	668.44	544.30	124.14	5.385		
17,200.00	9,917.29	16,800.99	9,561.33	64.93	63.99	-57.70	6,720.89	-429.38	668.33	542.86	125.47	5.327		
17,300.00	9,908.99	16,900.99	9,553.25	65.57	64.63	-57.71	6,820.55	-430.45	668.22	541.41	126.80	5.270		
17,400.00	9,900.70	17,000.99	9,545.16	66.22	65.28	-57.73	6,920.22	-431.52	668.11	539.96	128.14	5.214		
17,500.00	9,892.41	17,100.99	9,537.07	66.86	65.93	-57.75	7,019.89	-432.59	668.00	538.51	129.49	5.159		
17,600.00	9,884.12	17,200.99	9,528.99	67.51	66.59	-57.76	7,119.55	-433.66	667.89	537.05	130.84	5.105		
17,700.00	9,875.82	17,300.99	9,520.90	68.16	67.24	-57.78	7,219.22	-434.73	667.77	535.59	132.19	5.052		
17,800.00	9,867.53	17,400.99	9,512.82	68.81	67.90	-57.79	7,318.89	-435.80	667.66	534.12	133.54	5.000		
17,900.00	9,859.24	17,500.99	9,504.73	69.47	68.56	-57.81	7,418.55	-436.87	667.55	532.65	134.91	4.948		
18,000.00	9,850.95	17,600.99	9,496.65	70.13	69.22	-57.82	7,518.22	-437.94	667.44	531.17	136.27	4.898		
18,100.00	9,842.65	17,700.99	9,488.56	70.79	69.89	-57.84	7,617.89	-439.02	667.33	529.69	137.64	4.848		
18,200.00	9,834.36	17,800.99	9,480.47	71.45	70.56	-57.85	7,717.55	-440.09	667.22	528.21	139.01	4.800		
18,300.00	9,826.07	17,900.99	9,472.39	72.11	71.23	-57.87	7,817.22	-441.16	667.11	526.72	140.39	4.752		
18,400.00	9,817.78	18,000.99	9,464.30	72.78	71.90	-57.88	7,916.89	-442.23	667.00	525.23	141.77	4.705		
18,500.00	9,809.48	18,100.99	9,456.22	73.45	72.57	-57.90	8,016.55	-443.30	666.89	523.74	143.15	4.659		
18,600.00	9,801.19	18,200.99	9,448.13	74.12	73.25	-57.91	8,116.22	-444.37	666.78	522.24	144.54	4.613		
18,700.00	9,792.90	18,300.99	9,440.04	74.79	73.92	-57.93	8,215.89	-445.44	666.67	520.75	145.93	4.569		
18,800.00	9,784.61	18,400.99	9,431.96	75.47	74.60	-57.94	8,315.55	-446.51	666.56	519.24	147.32	4.525		
18,900.00	9,776.31	18,500.99	9,423.87	76.14	75.28	-57.96	8,415.22	-447.58	666.45	517.74	148.71	4.481		
19,000.00	9,768.02	18,600.99	9,415.79	76.82	75.96	-57.97	8,514.89	-448.65	666.34	516.23	150.11	4.439		
19,100.00	9,759.73	18,700.99	9,407.70	77.50	76.65	-57.99	8,614.55	-449.73	666.23	514.72	151.52	4.397		
19,200.00	9,751.44	18,800.99	9,399.62	78.18	77.33	-58.00	8,714.22	-450.80	666.12	513.20	152.92	4.356		
19,300.00	9,743.15	18,900.99	9,391.53	78.86	78.02	-58.02	8,813.89	-451.87	666.01	511.69	154.33	4.316		
19,400.00	9,734.85	19,000.99	9,383.44	79.55	78.71	-58.03	8,913.55	-452.94	665.90	510.17	155.74	4.276		
19,500.00	9,726.56	19,100.99	9,375.36	80.23	79.40	-58.05	9,013.22	-454.01	665.79	508.64	157.15	4.237		
19,600.00	9,718.27	19,200.99	9,367.27	80.92	80.09	-58.06	9,112.89	-455.08	665.68	507.12	158.56	4.198		
19,700.00	9,709.98	19,300.99	9,359.19	81.61	80.79	-58.08	9,212.55	-456.15	665.57	505.59	159.98	4.160		
19,800.00	9,701.68	19,400.99	9,351.10	82.30	81.48	-58.09	9,312.22	-457.22	665.46	504.06	161.40	4.123		
19,900.00	9,693.39	19,500.99	9,343.02	82.99	82.18	-58.11	9,411.89	-458.29	665.35	502.53	162.82	4.086		
20,000.00	9,685.10	19,600.99	9,334.93	83.69	82.87	-58.12	9,511.55	-459.36	665.25	501.00	164.25	4.050		
20,100.00	9,676.81	19,700.99	9,326.84	84.38	83.57	-58.14	9,611.22	-460.43	665.14	499.46	165.67	4.015		
20,200.00	9,668.51	19,800.99	9,318.76	85.08	84.27	-58.15	9,710.89	-461.51	665.03	497.93	167.10	3.980		
20,300.00	9,660.22	19,900.99	9,310.67	85.78	84.97	-58.17	9,810.55	-462.58	664.92	496.39	168.53	3.945		
20,400.00	9,651.93	20,000.99	9,302.59	86.48	85.68	-58.18	9,910.22	-463.65	664.81	494.84	169.96	3.911		
20,500.00	9,643.64	20,100.99	9,294.50	87.17	86.38	-58.20	10,009.89	-464.72	664.70	493.30	171.40	3.878		
20,600.00	9,635.34	20,200.99	9,286.42	87.88	87.08	-58.21	10,109.55	-465.79	664.59	491.76	172.83	3.845		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 503H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,700.00	9,627.05	20,300.98	9,278.33	88.58	87.79	-58.23	10,209.22	-466.86	664.48	490.21	174.27	3.813	
20,800.00	9,618.76	20,400.98	9,270.24	89.28	88.50	-58.24	10,308.89	-467.93	664.37	488.66	175.71	3.781	
20,900.00	9,610.47	20,500.98	9,262.16	89.99	89.20	-58.26	10,408.55	-469.00	664.26	487.11	177.15	3.750	
21,000.00	9,602.18	20,600.98	9,254.07	90.69	89.91	-58.27	10,508.22	-470.07	664.15	485.56	178.60	3.719	
21,100.00	9,593.88	20,700.98	9,245.99	91.40	90.62	-58.29	10,607.88	-471.14	664.04	484.00	180.04	3.688	
21,200.00	9,585.59	20,800.98	9,237.90	92.11	91.33	-58.30	10,707.55	-472.22	663.94	482.45	181.49	3.658	
21,300.00	9,577.30	20,900.98	9,229.82	92.81	92.05	-58.32	10,807.22	-473.29	663.83	480.89	182.94	3.629	
21,400.00	9,569.01	21,000.98	9,221.73	93.52	92.76	-58.34	10,906.88	-474.36	663.72	479.33	184.39	3.600	
21,500.00	9,560.71	21,100.98	9,213.64	94.23	93.47	-58.35	11,006.55	-475.43	663.61	477.77	185.84	3.571	
21,600.00	9,552.42	21,200.98	9,205.56	94.95	94.19	-58.37	11,106.22	-476.50	663.50	476.21	187.29	3.543	
21,700.00	9,544.13	21,300.98	9,197.47	95.66	94.90	-58.38	11,205.88	-477.57	663.39	474.64	188.75	3.515	
21,800.00	9,535.84	21,400.98	9,189.39	96.37	95.62	-58.40	11,305.55	-478.64	663.28	473.08	190.20	3.487	
21,900.00	9,527.54	21,500.98	9,181.30	97.09	96.34	-58.41	11,405.22	-479.71	663.17	471.51	191.66	3.460	
22,000.00	9,519.25	21,600.98	9,173.22	97.80	97.05	-58.43	11,504.88	-480.78	663.07	469.95	193.12	3.433	
22,100.00	9,510.96	21,700.98	9,165.13	98.52	97.77	-58.44	11,604.55	-481.85	662.96	468.38	194.58	3.407	
22,200.00	9,502.67	21,800.98	9,157.04	99.23	98.49	-58.46	11,704.22	-482.92	662.85	466.81	196.04	3.381	
22,300.00	9,494.37	21,900.98	9,148.96	99.95	99.21	-58.47	11,803.88	-484.00	662.74	465.24	197.50	3.356	
22,400.00	9,486.08	22,000.98	9,140.87	100.67	99.93	-58.49	11,903.55	-485.07	662.63	463.66	198.97	3.330	
22,500.00	9,477.79	22,100.98	9,132.79	101.39	100.66	-58.50	12,003.22	-486.14	662.52	462.09	200.43	3.305	
22,600.00	9,469.50	22,200.98	9,124.70	102.11	101.38	-58.52	12,102.88	-487.21	662.42	460.51	201.90	3.281	
22,700.00	9,461.20	22,300.98	9,116.61	102.83	102.10	-58.53	12,202.55	-488.28	662.31	458.94	203.37	3.257	
22,800.00	9,452.91	22,400.98	9,108.53	103.55	102.83	-58.55	12,302.22	-489.35	662.20	457.36	204.84	3.233	
22,900.00	9,444.62	22,500.98	9,100.44	104.27	103.55	-58.56	12,401.88	-490.42	662.09	455.78	206.31	3.209	
23,000.00	9,436.33	22,600.98	9,092.36	104.99	104.28	-58.58	12,501.55	-491.49	661.98	454.21	207.78	3.186	
23,100.00	9,428.04	22,700.98	9,084.27	105.72	105.00	-58.59	12,601.22	-492.56	661.87	452.62	209.25	3.163	
23,200.00	9,419.74	22,800.98	9,076.19	106.44	105.73	-58.61	12,700.88	-493.63	661.77	451.04	210.72	3.140	
23,300.00	9,411.45	22,900.98	9,068.10	107.17	106.46	-58.63	12,800.55	-494.71	661.66	449.46	212.20	3.118	
23,400.00	9,403.16	23,000.98	9,060.01	107.89	107.18	-58.64	12,900.22	-495.78	661.55	447.88	213.67	3.096	
23,500.00	9,394.87	23,100.98	9,051.93	108.62	107.91	-58.66	12,999.88	-496.85	661.44	446.29	215.15	3.074	
23,600.00	9,386.57	23,200.98	9,043.84	109.34	108.64	-58.67	13,099.55	-497.92	661.34	444.71	216.63	3.053	
23,700.00	9,378.28	23,300.98	9,035.76	110.07	109.37	-58.69	13,199.22	-498.99	661.23	443.12	218.10	3.032	
23,800.00	9,369.99	23,400.98	9,027.67	110.80	110.10	-58.70	13,298.88	-500.06	661.12	441.54	219.58	3.011	
23,900.00	9,361.70	23,500.98	9,019.59	111.53	110.83	-58.72	13,398.55	-501.13	661.01	439.95	221.06	2.990	
24,000.00	9,353.40	23,600.98	9,011.50	112.26	111.56	-58.73	13,498.22	-502.20	660.90	438.36	222.54	2.970	
24,100.00	9,345.11	23,700.98	9,003.41	112.99	112.29	-58.75	13,597.88	-503.27	660.80	436.77	224.02	2.950	
24,200.00	9,336.82	23,800.98	8,995.33	113.72	113.03	-58.76	13,697.55	-504.34	660.69	435.18	225.51	2.930	
24,300.00	9,328.53	23,900.98	8,987.24	114.45	113.76	-58.78	13,797.22	-505.41	660.58	433.59	226.99	2.910	
24,400.00	9,320.23	24,000.98	8,979.16	115.18	114.49	-58.79	13,896.88	-506.49	660.47	432.00	228.47	2.891	
24,500.00	9,311.94	24,100.98	8,971.07	115.91	115.23	-58.81	13,996.55	-507.56	660.37	430.41	229.96	2.872	
24,600.00	9,303.65	24,200.98	8,962.99	116.64	115.96	-58.83	14,096.22	-508.63	660.26	428.81	231.45	2.853	
24,700.00	9,295.36	24,300.97	8,954.90	117.37	116.70	-58.84	14,195.88	-509.70	660.15	427.22	232.93	2.834	
24,800.00	9,287.07	24,400.97	8,946.81	118.11	117.43	-58.86	14,295.55	-510.77	660.05	425.63	234.42	2.816	
24,900.00	9,278.77	24,500.97	8,938.73	118.84	118.17	-58.87	14,395.22	-511.84	659.94	424.03	235.91	2.797	
25,000.00	9,270.48	24,600.97	8,930.64	119.57	118.90	-58.89	14,494.88	-512.91	659.83	422.44	237.40	2.779	
25,100.00	9,262.19	24,700.97	8,922.56	120.31	119.64	-58.90	14,594.55	-513.98	659.72	420.84	238.89	2.762	
25,200.00	9,253.90	24,800.97	8,914.47	121.04	120.38	-58.92	14,694.22	-515.05	659.62	419.24	240.38	2.744	
25,300.00	9,245.60	24,900.97	8,906.39	121.78	121.11	-58.93	14,793.88	-516.12	659.51	417.64	241.87	2.727	
25,400.00	9,237.31	25,000.97	8,898.30	122.51	121.85	-58.95	14,893.55	-517.20	659.40	416.05	243.36	2.710	
25,500.00	9,229.02	25,100.97	8,890.21	123.25	122.59	-58.96	14,993.22	-518.27	659.30	414.45	244.85	2.693	
25,600.00	9,220.73	25,200.97	8,882.13	123.99	123.33	-58.98	15,092.88	-519.34	659.19	412.85	246.34	2.676	
25,700.00	9,212.43	25,300.97	8,874.04	124.72	124.07	-58.99	15,192.55	-520.41	659.08	411.25	247.84	2.659	
25,800.00	9,204.14	25,400.97	8,865.96	125.46	124.81	-59.01	15,292.22	-521.48	658.98	409.65	249.33	2.643	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 503H - OH - Plan #2

Survey Program: 0-MWD+IFR1+MS		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
25,900.00	9,195.85	25,500.97	8,857.87	126.20	125.55	-59.03	15,391.88	-522.55	658.87	408.04	250.82	2.627	
26,000.00	9,187.56	25,600.97	8,849.78	126.94	126.29	-59.04	15,491.55	-523.62	658.76	406.44	252.32	2.611	
26,100.00	9,179.26	25,700.97	8,841.70	127.68	127.03	-59.06	15,591.21	-524.69	658.66	404.84	253.82	2.595	
26,200.00	9,170.97	25,800.97	8,833.61	128.42	127.77	-59.07	15,690.88	-525.76	658.55	403.24	255.31	2.579	
26,300.00	9,162.68	25,900.97	8,825.53	129.15	128.51	-59.09	15,790.55	-526.83	658.44	401.63	256.81	2.564	
26,400.00	9,154.39	26,000.97	8,817.44	129.89	129.25	-59.10	15,890.21	-527.90	658.34	400.03	258.31	2.549	
26,500.00	9,146.09	26,100.97	8,809.36	130.63	129.99	-59.12	15,989.88	-528.98	658.23	398.42	259.81	2.534	
26,600.00	9,137.80	26,200.97	8,801.27	131.38	130.73	-59.13	16,089.55	-530.05	658.12	396.82	261.30	2.519	
26,700.00	9,129.51	26,300.97	8,793.18	132.12	131.48	-59.15	16,189.21	-531.12	658.02	395.21	262.80	2.504	
26,800.00	9,121.22	26,400.97	8,785.10	132.86	132.22	-59.17	16,288.88	-532.19	657.91	393.61	264.30	2.489	
26,900.00	9,112.93	26,500.97	8,777.01	133.60	132.96	-59.18	16,388.55	-533.26	657.81	392.00	265.80	2.475	
27,000.00	9,104.63	26,600.97	8,768.93	134.34	133.71	-59.20	16,488.21	-534.33	657.70	390.39	267.30	2.460	
27,100.00	9,096.34	26,700.97	8,760.84	135.08	134.45	-59.21	16,587.88	-535.40	657.59	388.79	268.81	2.446	
27,200.00	9,088.05	26,800.97	8,752.76	135.82	135.19	-59.23	16,687.55	-536.47	657.49	387.18	270.31	2.432	
27,300.00	9,079.76	26,900.97	8,744.67	136.57	135.94	-59.24	16,787.21	-537.54	657.38	385.57	271.81	2.419	
27,400.00	9,071.46	27,000.97	8,736.58	137.31	136.68	-59.26	16,886.88	-538.61	657.27	383.96	273.31	2.405	
27,500.00	9,063.17	27,100.97	8,728.50	138.05	137.43	-59.27	16,986.55	-539.69	657.17	382.35	274.82	2.391	
27,600.00	9,054.88	27,200.97	8,720.41	138.80	138.17	-59.29	17,086.21	-540.76	657.06	380.74	276.32	2.378	
27,700.00	9,046.59	27,300.97	8,712.33	139.54	138.92	-59.30	17,185.88	-541.83	656.96	379.13	277.82	2.365	
27,800.00	9,038.29	27,400.97	8,704.24	140.29	139.66	-59.32	17,285.55	-542.90	656.85	377.52	279.33	2.352	
27,900.00	9,030.00	27,500.97	8,696.16	141.03	140.41	-59.34	17,385.21	-543.97	656.75	375.91	280.83	2.339	
28,000.00	9,021.71	27,600.97	8,688.07	141.78	141.16	-59.35	17,484.88	-545.04	656.64	374.30	282.34	2.326	
28,100.00	9,013.42	27,700.97	8,679.98	142.52	141.90	-59.37	17,584.55	-546.11	656.53	372.69	283.84	2.313	
28,200.00	9,005.12	27,800.97	8,671.90	143.27	142.65	-59.38	17,684.21	-547.18	656.43	371.08	285.35	2.300	
28,300.00	8,996.83	27,900.97	8,663.81	144.01	143.40	-59.40	17,783.88	-548.25	656.32	369.47	286.86	2.288	
28,400.00	8,988.54	28,000.97	8,655.73	144.76	144.15	-59.41	17,883.55	-549.32	656.22	367.85	288.36	2.276	
28,500.00	8,980.25	28,100.97	8,647.64	145.50	144.89	-59.43	17,983.21	-550.39	656.11	366.24	289.87	2.263	
28,563.28	8,975.00	28,164.24	8,642.52	145.98	145.37	-59.44	18,046.28	-551.07	656.05	365.22	290.83	2.256	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 504H - OH - Plan #2														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS														Offset Well Error:	0.00 usft
Reference														Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft) Offset (usft)		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft) +E/-W (usft)		Distance Between Centres (usft) Between Ellipses (usft)		Minimum Separation (usft)	Separation Factor	Warning		
0.00	0.00	0.00	0.10	0.00	0.00	89.77	0.08	19.99	19.99						
100.00	100.00	99.90	100.00	0.28	0.28	89.77	0.08	19.99	19.99	19.44	0.55	36.229			
200.00	200.00	199.90	200.00	0.63	0.63	89.77	0.08	19.99	19.99	18.72	1.27	15.757			
300.00	300.00	299.90	300.00	0.99	0.99	89.77	0.08	19.99	19.99	18.00	1.99	10.068			
400.00	400.00	399.90	400.00	1.35	1.35	89.77	0.08	19.99	19.99	17.29	2.70	7.397			
500.00	500.00	499.90	500.00	1.71	1.71	89.77	0.08	19.99	19.99	16.57	3.42	5.846			
600.00	600.00	599.90	600.00	2.07	2.07	89.77	0.08	19.99	19.99	15.85	4.14	4.833			
700.00	700.00	699.90	700.00	2.43	2.43	89.77	0.08	19.99	19.99	15.14	4.85	4.119			
800.00	800.00	799.90	800.00	2.79	2.78	89.77	0.08	19.99	19.99	14.42	5.57	3.589			
900.00	900.00	899.90	900.00	3.14	3.14	89.77	0.08	19.99	19.99	13.70	6.29	3.179			
1,000.00	1,000.00	999.90	1,000.00	3.50	3.50	89.77	0.08	19.99	19.99	12.99	7.00	2.854			
1,100.00	1,100.00	1,099.90	1,100.00	3.86	3.86	89.77	0.08	19.99	19.99	12.27	7.72	2.589			
1,200.00	1,200.00	1,199.90	1,200.00	4.22	4.22	89.77	0.08	19.99	19.99	11.55	8.44	2.369			
1,300.00	1,300.00	1,299.90	1,300.00	4.58	4.58	89.77	0.08	19.99	19.99	10.84	9.16	2.184			
1,400.00	1,400.00	1,399.90	1,400.00	4.94	4.94	89.77	0.08	19.99	19.99	10.12	9.87	2.025			
1,500.00	1,500.00	1,499.90	1,500.00	5.29	5.29	89.77	0.08	19.99	19.99	9.40	10.59	1.888			
1,600.00	1,600.00	1,599.90	1,600.00	5.65	5.65	89.77	0.08	19.99	19.99	8.68	11.31	1.768			
1,700.00	1,699.98	1,699.88	1,699.98	6.00	6.01	-52.66	0.08	19.99	18.88	6.88	12.01	1.573			
1,800.00	1,799.84	1,799.74	1,799.84	6.33	6.37	-67.53	0.08	19.99	16.25	3.56	12.69	1.280	Level 3		
1,855.71	1,855.39	1,855.10	1,855.19	6.51	6.56	-80.64	-0.06	20.50	15.50	2.43	13.07	1.186	Level 2, CC, ES, SF		
1,900.00	1,899.49	1,899.13	1,899.21	6.66	6.71	-92.11	-0.38	21.64	15.95	2.58	13.37	1.193	Level 2		
2,000.00	1,999.11	1,998.76	1,998.70	7.00	7.05	-104.71	-1.79	26.62	19.39	5.35	14.04	1.381	Level 3		
2,100.00	2,098.73	2,098.41	2,097.97	7.33	7.39	-105.14	-4.13	34.94	24.28	9.56	14.72	1.650			
2,200.00	2,198.35	2,197.86	2,196.68	7.68	7.73	-99.17	-7.39	46.54	30.38	14.99	15.39	1.974			
2,300.00	2,297.97	2,296.85	2,294.46	8.02	8.08	-90.67	-11.56	61.36	38.41	22.37	16.04	2.395			
2,400.00	2,397.59	2,395.16	2,390.99	8.36	8.42	-82.05	-16.61	79.29	49.15	32.49	16.66	2.951			
2,500.00	2,497.21	2,493.67	2,487.20	8.71	8.77	-74.91	-22.34	99.67	62.48	45.19	17.29	3.613			
2,600.00	2,596.83	2,592.52	2,583.70	9.06	9.12	-70.23	-28.14	120.26	76.57	58.60	17.96	4.263			
2,700.00	2,696.45	2,691.36	2,680.20	9.41	9.47	-67.02	-33.94	140.86	90.99	72.35	18.64	4.881			
2,800.00	2,796.07	2,790.21	2,776.70	9.76	9.83	-64.68	-39.73	161.45	105.63	86.29	19.33	5.464			
2,900.00	2,895.69	2,889.05	2,873.20	10.11	10.18	-62.92	-45.53	182.05	120.39	100.36	20.03	6.011			
3,000.00	2,995.31	2,987.90	2,969.70	10.46	10.54	-61.54	-51.33	202.64	135.24	114.51	20.73	6.524			
3,100.00	3,094.93	3,086.74	3,066.21	10.81	10.91	-60.44	-57.12	223.24	150.15	128.71	21.43	7.005			
3,200.00	3,194.55	3,185.59	3,162.71	11.17	11.27	-59.54	-62.92	243.83	165.10	142.96	22.14	7.457			
3,300.00	3,294.17	3,284.43	3,259.21	11.52	11.63	-58.78	-68.71	264.43	180.09	157.24	22.85	7.880			
3,400.00	3,393.79	3,383.27	3,355.71	11.88	12.00	-58.14	-74.51	285.02	195.10	171.53	23.57	8.278			
3,500.00	3,493.41	3,482.12	3,452.21	12.23	12.37	-57.60	-80.31	305.62	210.14	185.85	24.28	8.653			
3,600.00	3,593.02	3,580.96	3,548.71	12.59	12.74	-57.12	-86.10	326.22	225.19	200.18	25.00	9.006			
3,700.00	3,692.64	3,679.81	3,645.21	12.95	13.11	-56.71	-91.90	346.81	240.25	214.53	25.72	9.339			
3,800.00	3,792.26	3,778.65	3,741.72	13.30	13.48	-56.34	-97.70	367.41	255.33	228.88	26.45	9.654			
3,900.00	3,891.88	3,877.50	3,838.22	13.66	13.85	-56.02	-103.49	388.00	270.41	243.24	27.17	9.952			
4,000.00	3,991.50	3,976.34	3,934.72	14.02	14.22	-55.73	-109.29	408.60	285.50	257.60	27.90	10.234			
4,100.00	4,091.12	4,075.19	4,031.22	14.38	14.59	-55.46	-115.08	429.19	300.60	271.97	28.62	10.501			
4,200.00	4,190.74	4,174.03	4,127.72	14.74	14.97	-55.23	-120.88	449.79	315.70	286.35	29.35	10.755			
4,300.00	4,290.36	4,272.88	4,224.22	15.10	15.34	-55.01	-126.68	470.38	330.81	300.73	30.08	10.997			
4,400.00	4,389.98	4,371.72	4,320.73	15.45	15.72	-54.82	-132.47	490.98	345.92	315.11	30.81	11.226			
4,500.00	4,489.60	4,470.57	4,417.23	15.81	16.09	-54.64	-138.27	511.57	361.04	329.49	31.54	11.445			
4,600.00	4,589.22	4,569.41	4,513.73	16.17	16.47	-54.47	-144.07	532.17	376.16	343.88	32.28	11.654			
4,700.00	4,688.84	4,668.26	4,610.23	16.53	16.84	-54.32	-149.86	552.76	391.28	358.27	33.01	11.853			
4,800.00	4,788.46	4,767.10	4,706.73	16.90	17.22	-54.18	-155.66	573.36	406.41	372.66	33.74	12.044			
4,900.00	4,888.08	4,865.95	4,803.23	17.26	17.60	-54.05	-161.46	593.96	421.53	387.05	34.48	12.226			
5,000.00	4,987.70	4,964.79	4,899.73	17.62	17.97	-53.93	-167.25	614.55	436.66	401.45	35.21	12.400			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 504H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,087.32	5,063.64	4,996.24	17.98	18.35	-53.81	-173.05	635.15	451.79	415.84	35.95	12.567		
5,200.00	5,186.94	5,162.48	5,092.74	18.34	18.73	-53.70	-178.84	655.74	466.92	430.24	36.69	12.727		
5,300.00	5,286.61	5,261.26	5,189.17	18.70	19.11	-53.70	-184.64	676.32	482.44	445.02	37.42	12.892		
5,400.00	5,386.49	5,359.65	5,285.23	19.06	19.49	-53.53	-190.41	696.82	499.87	461.71	38.15	13.102		
5,500.00	5,486.47	5,457.51	5,380.77	19.40	19.86	85.36	-196.14	717.21	519.37	480.50	38.87	13.363		
5,600.00	5,586.47	5,555.14	5,476.09	19.74	20.24	86.16	-201.87	737.56	539.77	500.20	39.57	13.641		
5,700.00	5,686.47	5,652.77	5,571.40	20.08	20.61	86.90	-207.60	757.90	560.27	519.99	40.28	13.911		
5,800.00	5,786.47	5,750.40	5,666.72	20.42	20.99	87.58	-213.32	778.24	580.85	539.86	40.98	14.173		
5,900.00	5,886.47	5,858.83	5,772.69	20.77	21.40	88.28	-219.54	800.36	601.11	559.31	41.80	14.382		
6,000.00	5,986.47	5,982.43	5,894.33	21.11	21.87	88.89	-225.47	821.40	618.04	575.33	42.72	14.468		
6,100.00	6,086.47	6,107.73	6,018.49	21.45	22.33	89.34	-230.01	837.56	630.89	587.32	43.58	14.478		
6,200.00	6,186.47	6,234.28	6,144.51	21.79	22.78	89.63	-233.11	848.56	639.57	595.20	44.37	14.415		
6,300.00	6,286.47	6,361.60	6,271.69	22.14	23.23	89.77	-234.70	854.20	644.00	598.91	45.09	14.283		
6,400.00	6,386.47	6,476.40	6,386.47	22.48	23.62	89.79	-234.92	854.99	644.61	598.86	45.75	14.089		
6,500.00	6,486.47	6,576.40	6,486.47	22.82	23.95	89.79	-234.92	854.99	644.61	598.19	46.43	13.884		
6,600.00	6,586.47	6,676.40	6,586.47	23.17	24.29	89.79	-234.92	854.99	644.61	597.51	47.10	13.685		
6,700.00	6,686.47	6,776.40	6,686.47	23.51	24.62	89.79	-234.92	854.99	644.61	596.83	47.78	13.491		
6,800.00	6,786.47	6,876.40	6,786.47	23.86	24.96	89.79	-234.92	854.99	644.61	596.16	48.46	13.302		
6,900.00	6,886.47	6,976.40	6,886.47	24.21	25.29	89.79	-234.92	854.99	644.61	595.48	49.14	13.119		
7,000.00	6,986.47	7,076.40	6,986.47	24.55	25.63	89.79	-234.92	854.99	644.61	594.80	49.82	12.940		
7,100.00	7,086.47	7,176.40	7,086.47	24.90	25.97	89.79	-234.92	854.99	644.61	594.12	50.50	12.765		
7,200.00	7,186.47	7,276.40	7,186.47	25.25	26.31	89.79	-234.92	854.99	644.61	593.43	51.18	12.595		
7,300.00	7,286.47	7,376.40	7,286.47	25.59	26.65	89.79	-234.92	854.99	644.61	592.75	51.86	12.429		
7,400.00	7,386.47	7,476.40	7,386.47	25.94	26.98	89.79	-234.92	854.99	644.61	592.07	52.55	12.267		
7,500.00	7,486.47	7,576.40	7,486.47	26.29	27.32	89.79	-234.92	854.99	644.61	591.38	53.23	12.109		
7,600.00	7,586.47	7,676.40	7,586.47	26.64	27.66	89.79	-234.92	854.99	644.61	590.70	53.92	11.956		
7,700.00	7,686.47	7,776.40	7,686.47	26.99	28.01	89.79	-234.92	854.99	644.61	590.01	54.60	11.805		
7,800.00	7,786.47	7,876.40	7,786.47	27.33	28.35	89.79	-234.92	854.99	644.61	589.32	55.29	11.659		
7,900.00	7,886.47	7,976.40	7,886.47	27.68	28.69	89.79	-234.92	854.99	644.61	588.64	55.98	11.515		
8,000.00	7,986.47	8,076.40	7,986.47	28.03	29.03	89.79	-234.92	854.99	644.61	587.95	56.67	11.375		
8,100.00	8,086.47	8,176.40	8,086.47	28.38	29.37	89.79	-234.92	854.99	644.61	587.26	57.36	11.239		
8,200.00	8,186.47	8,276.40	8,186.47	28.73	29.72	89.79	-234.92	854.99	644.61	586.57	58.05	11.105		
8,300.00	8,286.47	8,376.40	8,286.47	29.08	30.06	89.79	-234.92	854.99	644.61	585.88	58.74	10.974		
8,400.00	8,386.47	8,476.40	8,386.47	29.43	30.40	89.79	-234.92	854.99	644.61	585.19	59.43	10.847		
8,500.00	8,486.47	8,576.40	8,486.47	29.78	30.75	89.79	-234.92	854.99	644.61	584.49	60.12	10.722		
8,600.00	8,586.47	8,676.40	8,586.47	30.13	31.09	89.79	-234.92	854.99	644.61	583.80	60.81	10.600		
8,700.00	8,686.47	8,776.40	8,686.47	30.48	31.43	89.79	-234.92	854.99	644.61	583.11	61.51	10.481		
8,800.00	8,786.47	8,876.40	8,786.47	30.84	31.78	89.79	-234.92	854.99	644.61	582.41	62.20	10.364		
8,900.00	8,886.47	8,976.40	8,886.47	31.19	32.12	89.79	-234.92	854.99	644.61	581.72	62.89	10.249		
9,000.00	8,986.47	9,076.40	8,986.47	31.54	32.47	89.79	-234.92	854.99	644.61	581.03	63.59	10.137		
9,100.00	9,086.47	9,176.40	9,086.47	31.89	32.82	89.79	-234.92	854.99	644.61	580.33	64.28	10.028		
9,200.00	9,186.47	9,276.40	9,186.47	32.24	33.16	89.79	-234.92	854.99	644.61	579.64	64.98	9.920		
9,300.00	9,286.47	9,376.40	9,286.47	32.59	33.51	89.79	-234.92	854.99	644.61	578.94	65.67	9.815		
9,400.00	9,386.47	9,476.40	9,386.47	32.95	33.85	89.79	-234.92	854.99	644.61	578.24	66.37	9.712		
9,500.00	9,486.47	9,577.13	9,487.21	33.30	34.20	89.77	-234.70	854.98	644.61	577.54	67.07	9.611		
9,600.00	9,586.47	9,680.32	9,589.55	33.65	34.56	88.70	-222.63	854.43	644.23	576.46	67.76	9.507		
9,658.46	9,644.93	9,737.62	9,644.93	33.86	34.74	87.40	-208.06	853.77	644.05	575.88	68.18	9.447		
9,700.00	9,686.47	9,776.31	9,681.38	34.00	34.86	86.25	-195.12	853.18	644.20	575.73	68.47	9.408		
9,800.00	9,786.47	9,861.18	9,757.76	34.35	35.11	82.98	-158.34	851.51	646.61	577.45	69.16	9.349		
9,900.00	9,886.43	9,934.55	9,818.80	34.71	35.30	79.76	-117.75	849.67	653.59	583.90	69.69	9.379		
10,000.00	9,984.97	10,000.00	9,868.47	35.05	35.45	75.79	-75.24	847.74	663.94	594.03	69.91	9.497		
10,100.00	10,079.19	10,069.73	9,915.69	35.37	35.58	71.85	-24.04	845.41	676.02	606.14	69.89	9.673		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 504H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Site Error:
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)									0.00 usft
10,200.00	10,166.23	10,134.35	9,953.59	35.65	35.68	68.45	28.21	843.04	688.63	619.07	69.57	9.899		
10,300.00	10,243.43	10,200.00	9,985.82	35.91	35.76	65.48	85.30	840.45	700.66	631.57	69.09	10.141		
10,400.00	10,308.47	10,259.95	10,009.37	36.13	35.82	63.15	140.34	837.95	711.14	642.66	68.48	10.385		
10,500.00	10,359.35	10,323.87	10,028.06	36.31	35.86	61.29	201.38	835.18	719.32	651.37	67.95	10.586		
10,600.00	10,394.53	10,400.00	10,044.50	36.45	35.90	60.09	275.62	831.81	723.35	655.64	67.71	10.683		
10,700.00	10,416.72	10,475.51	10,055.89	36.57	35.94	59.58	350.17	828.42	724.01	656.39	67.63	10.706		
10,800.00	10,430.32	10,551.17	10,062.36	36.67	35.97	59.23	425.46	824.99	723.62	655.99	67.63	10.699		
10,900.00	10,435.22	10,626.69	10,063.84	36.76	36.01	59.04	500.87	821.56	722.16	654.42	67.74	10.661		
11,000.00	10,431.41	10,705.24	10,060.10	36.87	36.07	58.99	579.24	817.99	719.61	651.63	67.98	10.586		
11,100.00	10,423.12	10,801.08	10,052.26	37.00	36.18	58.86	674.66	813.64	716.57	648.27	68.30	10.492		
11,200.00	10,414.83	10,901.02	10,044.08	37.15	36.32	58.73	774.16	809.10	713.55	644.90	68.65	10.394		
11,300.00	10,406.54	11,000.96	10,035.91	37.31	36.48	58.59	873.66	804.57	710.53	641.50	69.03	10.292		
11,400.00	10,398.24	11,100.90	10,027.73	37.49	36.66	58.45	973.16	800.04	707.52	638.07	69.45	10.187		
11,500.00	10,389.95	11,200.84	10,019.55	37.68	36.86	58.31	1,072.66	795.50	704.51	634.61	69.90	10.079		
11,600.00	10,381.66	11,300.78	10,011.38	37.89	37.07	58.17	1,172.17	790.97	701.51	631.13	70.38	9.968		
11,700.00	10,373.37	11,400.72	10,003.20	38.12	37.29	58.03	1,271.67	786.43	698.51	627.62	70.89	9.854		
11,800.00	10,365.07	11,500.66	9,995.02	38.35	37.54	57.88	1,371.17	781.90	695.51	624.08	71.43	9.737		
11,900.00	10,356.78	11,600.60	9,986.85	38.60	37.79	57.74	1,470.67	777.36	692.52	620.52	72.00	9.619		
12,000.00	10,348.49	11,700.54	9,978.67	38.87	38.06	57.59	1,570.17	772.83	689.53	616.94	72.59	9.498		
12,100.00	10,340.20	11,800.48	9,970.49	39.15	38.34	57.44	1,669.67	768.29	686.55	613.33	73.22	9.377		
12,200.00	10,331.90	11,900.42	9,962.32	39.44	38.64	57.30	1,769.17	763.76	683.57	609.70	73.87	9.253		
12,300.00	10,323.61	12,000.36	9,954.14	39.74	38.95	57.15	1,868.68	759.23	680.60	606.05	74.55	9.129		
12,400.00	10,315.32	12,100.30	9,945.96	40.06	39.27	56.99	1,968.18	754.69	677.63	602.38	75.26	9.004		
12,500.00	10,307.03	12,190.40	9,938.59	40.39	39.57	56.88	2,057.91	751.04	675.10	599.10	76.01	8.882		
12,600.00	10,298.73	12,280.69	9,931.21	40.73	39.88	56.86	2,147.88	749.65	674.61	597.80	76.82	8.782		
12,700.00	10,290.44	12,380.69	9,923.04	41.08	40.23	56.87	2,247.54	748.58	674.54	596.90	77.64	8.688		
12,800.00	10,282.15	12,480.69	9,914.87	41.45	40.60	56.88	2,347.20	747.50	674.48	595.99	78.49	8.593		
12,900.00	10,273.86	12,580.69	9,906.70	41.82	40.98	56.89	2,446.86	746.43	674.41	595.05	79.36	8.498		
13,000.00	10,265.56	12,680.69	9,898.53	42.21	41.36	56.90	2,546.52	745.36	674.34	594.09	80.25	8.403		
13,100.00	10,257.27	12,780.69	9,890.36	42.61	41.76	56.91	2,646.18	744.29	674.28	593.11	81.16	8.308		
13,200.00	10,248.98	12,880.69	9,882.19	43.01	42.17	56.92	2,745.84	743.22	674.21	592.12	82.09	8.213		
13,300.00	10,240.69	12,980.69	9,874.02	43.43	42.59	56.93	2,845.50	742.15	674.14	591.10	83.04	8.118		
13,400.00	10,232.40	13,080.69	9,865.85	43.85	43.02	56.93	2,945.16	741.08	674.08	590.07	84.01	8.024		
13,500.00	10,224.10	13,180.69	9,857.68	44.29	43.45	56.94	3,044.82	740.01	674.01	589.02	84.99	7.930		
13,600.00	10,215.81	13,280.69	9,849.51	44.73	43.90	56.95	3,144.48	738.94	673.94	587.95	85.99	7.837		
13,700.00	10,207.52	13,380.69	9,841.34	45.19	44.35	56.96	3,244.14	737.87	673.88	586.87	87.01	7.745		
13,800.00	10,199.23	13,480.69	9,833.17	45.65	44.82	56.97	3,343.80	736.80	673.81	585.77	88.04	7.654		
13,900.00	10,190.93	13,580.69	9,825.00	46.12	45.29	56.98	3,443.46	735.73	673.74	584.66	89.08	7.563		
14,000.00	10,182.64	13,680.69	9,816.83	46.60	45.77	56.99	3,543.12	734.66	673.68	583.53	90.14	7.473		
14,100.00	10,174.35	13,780.69	9,808.66	47.08	46.26	57.00	3,642.78	733.58	673.61	582.39	91.22	7.384		
14,200.00	10,166.06	13,880.69	9,800.49	47.58	46.75	57.00	3,742.44	732.51	673.54	581.23	92.31	7.297		
14,300.00	10,157.76	13,980.69	9,792.32	48.08	47.26	57.01	3,842.10	731.44	673.48	580.07	93.41	7.210		
14,400.00	10,149.47	14,080.69	9,784.15	48.58	47.77	57.02	3,941.76	730.37	673.41	578.89	94.52	7.124		
14,500.00	10,141.18	14,180.69	9,775.98	49.10	48.28	57.03	4,041.42	729.30	673.34	577.69	95.65	7.040		
14,600.00	10,132.89	14,280.69	9,767.81	49.62	48.81	57.04	4,141.08	728.23	673.28	576.49	96.79	6.956		
14,700.00	10,124.59	14,380.69	9,759.64	50.15	49.34	57.05	4,240.74	727.16	673.21	575.27	97.94	6.874		
14,800.00	10,116.30	14,480.69	9,751.47	50.68	49.87	57.06	4,340.40	726.09	673.14	574.05	99.10	6.793		
14,900.00	10,108.01	14,580.69	9,743.30	51.22	50.42	57.07	4,440.06	725.02	673.08	572.81	100.27	6.713		
15,000.00	10,099.72	14,680.69	9,735.13	51.77	50.96	57.07	4,539.72	723.95	673.01	571.56	101.45	6.634		
15,100.00	10,091.42	14,780.69	9,726.96	52.32	51.52	57.08	4,639.38	722.88	672.94	570.30	102.64	6.556		
15,200.00	10,083.13	14,880.69	9,718.79	52.87	52.08	57.09	4,739.04	721.81	672.88	569.04	103.84	6.480		
15,300.00	10,074.84	14,980.69	9,710.62	53.44	52.64	57.10	4,838.70	720.74	672.81	567.76	105.05	6.405		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 504H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum Separation		Separation		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
15,400.00	10,066.55	15,080.69	9,702.45	54.00	53.21	57.11	4,938.36	719.66	672.74	566.48	106.27	6.331					
15,500.00	10,058.26	15,180.69	9,694.28	54.57	53.79	57.12	5,038.02	718.59	672.68	565.18	107.49	6.258					
15,600.00	10,049.96	15,280.69	9,686.11	55.15	54.36	57.13	5,137.68	717.52	672.61	563.88	108.73	6.186					
15,700.00	10,041.67	15,380.69	9,677.94	55.73	54.95	57.14	5,237.34	716.45	672.54	562.57	109.97	6.116					
15,800.00	10,033.38	15,480.69	9,669.77	56.32	55.54	57.15	5,337.00	715.38	672.48	561.26	111.22	6.046					
15,900.00	10,025.09	15,580.69	9,661.60	56.91	56.13	57.15	5,436.66	714.31	672.41	559.93	112.48	5.978					
16,000.00	10,016.79	15,680.69	9,653.43	57.51	56.73	57.16	5,536.32	713.24	672.34	558.60	113.74	5.911					
16,100.00	10,008.50	15,780.69	9,645.26	58.10	57.33	57.17	5,635.98	712.17	672.28	557.26	115.02	5.845					
16,200.00	10,000.21	15,880.69	9,637.09	58.71	57.94	57.18	5,735.64	711.10	672.21	555.92	116.30	5.780					
16,300.00	9,991.92	15,980.69	9,628.92	59.31	58.54	57.19	5,835.30	710.03	672.14	554.56	117.58	5.716					
16,400.00	9,983.62	16,080.69	9,620.75	59.92	59.16	57.20	5,934.96	708.96	672.08	553.21	118.87	5.654					
16,500.00	9,975.33	16,180.69	9,612.58	60.54	59.77	57.21	6,034.62	707.89	672.01	551.84	120.17	5.592					
16,600.00	9,967.04	16,280.69	9,604.41	61.16	60.39	57.22	6,134.28	706.82	671.95	550.47	121.47	5.532					
16,700.00	9,958.75	16,380.69	9,596.24	61.78	61.02	57.22	6,233.94	705.74	671.88	549.10	122.78	5.472					
16,800.00	9,950.45	16,480.69	9,588.07	62.40	61.65	57.23	6,333.60	704.67	671.81	547.72	124.10	5.414					
16,900.00	9,942.16	16,580.69	9,579.90	63.03	62.28	57.24	6,433.26	703.60	671.75	546.33	125.42	5.356					
17,000.00	9,933.87	16,680.69	9,571.73	63.66	62.91	57.25	6,532.92	702.53	671.68	544.94	126.74	5.300					
17,100.00	9,925.58	16,780.69	9,563.56	64.30	63.54	57.26	6,632.58	701.46	671.61	543.54	128.07	5.244					
17,200.00	9,917.29	16,880.69	9,555.39	64.93	64.18	57.27	6,732.24	700.39	671.55	542.14	129.41	5.189					
17,300.00	9,908.99	16,980.69	9,547.22	65.57	64.83	57.28	6,831.90	699.32	671.48	540.73	130.75	5.136					
17,400.00	9,900.70	17,080.69	9,539.05	66.22	65.47	57.29	6,931.56	698.25	671.42	539.32	132.09	5.083					
17,500.00	9,892.41	17,180.69	9,530.88	66.86	66.12	57.29	7,031.22	697.18	671.35	537.91	133.44	5.031					
17,600.00	9,884.12	17,280.69	9,522.71	67.51	66.77	57.30	7,130.88	696.11	671.28	536.49	134.80	4.980					
17,700.00	9,875.82	17,380.69	9,514.54	68.16	67.42	57.31	7,230.54	695.04	671.22	535.06	136.15	4.930					
17,800.00	9,867.53	17,480.69	9,506.37	68.81	68.08	57.32	7,330.20	693.97	671.15	533.64	137.51	4.881					
17,900.00	9,859.24	17,580.69	9,498.20	69.47	68.73	57.33	7,429.86	692.90	671.08	532.20	138.88	4.832					
18,000.00	9,850.95	17,680.69	9,490.03	70.13	69.39	57.34	7,529.52	691.83	671.02	530.77	140.25	4.784					
18,100.00	9,842.65	17,780.69	9,481.86	70.79	70.06	57.35	7,629.17	690.75	670.95	529.33	141.62	4.738					
18,200.00	9,834.36	17,880.69	9,473.69	71.45	70.72	57.36	7,728.83	689.68	670.89	527.89	143.00	4.692					
18,300.00	9,826.07	17,980.69	9,465.52	72.11	71.39	57.37	7,828.49	688.61	670.82	526.44	144.38	4.646					
18,400.00	9,817.78	18,080.69	9,457.35	72.78	72.06	57.37	7,928.15	687.54	670.75	524.99	145.76	4.602					
18,500.00	9,809.48	18,180.69	9,449.18	73.45	72.73	57.38	8,027.81	686.47	670.69	523.54	147.15	4.558					
18,600.00	9,801.19	18,280.69	9,441.01	74.12	73.40	57.39	8,127.47	685.40	670.62	522.08	148.54	4.515					
18,700.00	9,792.90	18,380.69	9,432.84	74.79	74.07	57.40	8,227.13	684.33	670.56	520.62	149.93	4.472					
18,800.00	9,784.61	18,480.69	9,424.67	75.47	74.75	57.41	8,326.79	683.26	670.49	519.16	151.33	4.431					
18,900.00	9,776.31	18,580.69	9,416.50	76.14	75.43	57.42	8,426.45	682.19	670.42	517.70	152.73	4.390					
19,000.00	9,768.02	18,680.69	9,408.33	76.82	76.11	57.43	8,526.11	681.12	670.36	516.23	154.13	4.349					
19,100.00	9,759.73	18,780.69	9,400.16	77.50	76.79	57.44	8,625.77	680.05	670.29	514.76	155.53	4.310					
19,200.00	9,751.44	18,880.69	9,391.99	78.18	77.47	57.44	8,725.43	678.98	670.23	513.29	156.94	4.271					
19,300.00	9,743.15	18,980.69	9,383.82	78.86	78.16	57.45	8,825.09	677.91	670.16	511.81	158.35	4.232					
19,400.00	9,734.85	19,080.69	9,375.65	79.55	78.84	57.46	8,924.75	676.83	670.09	510.33	159.76	4.194					
19,500.00	9,726.56	19,180.69	9,367.48	80.23	79.53	57.47	9,024.41	675.76	670.03	508.85	161.18	4.157					
19,600.00	9,718.27	19,280.69	9,359.31	80.92	80.22	57.48	9,124.07	674.69	669.96	507.37	162.60	4.120					
19,700.00	9,709.98	19,380.69	9,351.14	81.61	80.91	57.49	9,223.73	673.62	669.90	505.88	164.02	4.084					
19,800.00	9,701.68	19,480.69	9,342.97	82.30	81.60	57.50	9,323.39	672.55	669.83	504.39	165.44	4.049					
19,900.00	9,693.39	19,580.69	9,334.80	82.99	82.30	57.51	9,423.05	671.48	669.76	502.90	166.86	4.014					
20,000.00	9,685.10	19,680.69	9,326.63	83.69	82.99	57.52	9,522.71	670.41	669.70	501.41	168.29	3.979					
20,100.00	9,676.81	19,780.69	9,318.46	84.38	83.69	57.52	9,622.37	669.34	669.63	499.92	169.72	3.946					
20,200.00	9,668.51	19,880.69	9,310.29	85.08	84.39	57.53	9,722.03	668.27	669.57	498.42	171.15	3.912					
20,300.00	9,660.22	19,980.69	9,302.12	85.78	85.09	57.54	9,821.69	667.20	669.50	496.92	172.58	3.879					
20,400.00	9,651.93	20,080.69	9,293.95	86.48	85.79	57.55	9,921.35	666.13	669.44	495.42	174.02	3.847					
20,500.00	9,643.64	20,180.69	9,285.78	87.17	86.49	57.56	10,021.01	665.06	669.37	493.92	175.45	3.815					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 504H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Site Error:	
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	+N/-S	+E/-W	Between	Between	Minimum	Separation	Warning
Depth	Depth	Depth	Depth	(usft)	(usft)	Toolface	(usft)	(usft)	Centres	Ellipses	Separation	Factor	
(usft)	(usft)	(usft)	(usft)			(")			(usft)	(usft)	(usft)		
20,600.00	9,635.34	20,280.69	9,277.61	87.88	87.19	57.57	10,120.67	663.99	669.30	492.41	176.89	3.784	
20,700.00	9,627.05	20,380.69	9,269.44	88.58	87.89	57.58	10,220.33	662.91	669.24	490.91	178.33	3.753	
20,800.00	9,618.76	20,480.69	9,261.26	89.28	88.60	57.59	10,319.99	661.84	669.17	489.40	179.78	3.722	
20,900.00	9,610.47	20,580.69	9,253.09	89.99	89.31	57.60	10,419.65	660.77	669.11	487.89	181.22	3.692	
21,000.00	9,602.18	20,680.69	9,244.92	90.69	90.01	57.60	10,519.31	659.70	669.04	486.38	182.67	3.663	
21,100.00	9,593.88	20,780.69	9,236.75	91.40	90.72	57.61	10,618.97	658.63	668.98	484.86	184.11	3.634	
21,200.00	9,585.59	20,880.69	9,228.58	92.11	91.43	57.62	10,718.63	657.56	668.91	483.35	185.56	3.605	
21,300.00	9,577.30	20,980.69	9,220.41	92.81	92.14	57.63	10,818.29	656.49	668.85	481.83	187.01	3.576	
21,400.00	9,569.01	21,080.69	9,212.24	93.52	92.85	57.64	10,917.95	655.42	668.78	480.31	188.47	3.549	
21,500.00	9,560.71	21,180.69	9,204.07	94.23	93.56	57.65	11,017.61	654.35	668.71	478.79	189.92	3.521	
21,600.00	9,552.42	21,280.69	9,195.90	94.95	94.28	57.66	11,117.27	653.28	668.65	477.27	191.37	3.494	
21,700.00	9,544.13	21,380.69	9,187.73	95.66	94.99	57.67	11,216.93	652.21	668.58	475.75	192.83	3.467	
21,800.00	9,535.84	21,480.69	9,179.56	96.37	95.70	57.68	11,316.59	651.14	668.52	474.23	194.29	3.441	
21,900.00	9,527.54	21,580.69	9,171.39	97.09	96.42	57.68	11,416.25	650.07	668.45	472.70	195.75	3.415	
22,000.00	9,519.25	21,680.69	9,163.22	97.80	97.14	57.69	11,515.91	649.00	668.39	471.18	197.21	3.389	
22,100.00	9,510.96	21,780.69	9,155.05	98.52	97.85	57.70	11,615.57	647.92	668.32	469.65	198.67	3.364	
22,200.00	9,502.67	21,880.69	9,146.88	99.23	98.57	57.71	11,715.23	646.85	668.26	468.12	200.14	3.339	
22,300.00	9,494.37	21,980.69	9,138.71	99.95	99.29	57.72	11,814.89	645.78	668.19	466.59	201.60	3.314	
22,400.00	9,486.08	22,080.69	9,130.54	100.67	100.01	57.73	11,914.55	644.71	668.12	465.06	203.07	3.290	
22,500.00	9,477.79	22,180.69	9,122.37	101.39	100.73	57.74	12,014.21	643.64	668.06	463.53	204.53	3.266	
22,600.00	9,469.50	22,280.69	9,114.20	102.11	101.45	57.75	12,113.87	642.57	667.99	461.99	206.00	3.243	
22,700.00	9,461.20	22,380.69	9,106.03	102.83	102.17	57.76	12,213.53	641.50	667.93	460.46	207.47	3.219	
22,800.00	9,452.91	22,480.69	9,097.86	103.55	102.89	57.76	12,313.19	640.43	667.86	458.92	208.94	3.196	
22,900.00	9,444.62	22,580.69	9,089.69	104.27	103.62	57.77	12,412.85	639.36	667.80	457.38	210.41	3.174	
23,000.00	9,436.33	22,680.68	9,081.52	104.99	104.34	57.78	12,512.51	638.29	667.73	455.84	211.89	3.151	
23,100.00	9,428.04	22,780.68	9,073.35	105.72	105.07	57.79	12,612.17	637.22	667.67	454.31	213.36	3.129	
23,200.00	9,419.74	22,880.68	9,065.18	106.44	105.79	57.80	12,711.83	636.15	667.60	452.77	214.84	3.107	
23,300.00	9,411.45	22,980.68	9,057.01	107.17	106.52	57.81	12,811.49	635.08	667.54	451.22	216.31	3.086	
23,400.00	9,403.16	23,080.68	9,048.84	107.89	107.24	57.82	12,911.15	634.00	667.47	449.68	217.79	3.065	
23,500.00	9,394.87	23,180.68	9,040.67	108.62	107.97	57.83	13,010.81	632.93	667.41	448.14	219.27	3.044	
23,600.00	9,386.57	23,280.68	9,032.50	109.34	108.70	57.84	13,110.47	631.86	667.34	446.59	220.75	3.023	
23,700.00	9,378.28	23,380.68	9,024.33	110.07	109.43	57.84	13,210.13	630.79	667.28	445.05	222.23	3.003	
23,800.00	9,369.99	23,480.68	9,016.16	110.80	110.16	57.85	13,309.79	629.72	667.21	443.50	223.71	2.983	
23,900.00	9,361.70	23,580.68	9,007.99	111.53	110.89	57.86	13,409.45	628.65	667.15	441.96	225.19	2.963	
24,000.00	9,353.40	23,680.68	8,999.82	112.26	111.61	57.87	13,509.11	627.58	667.08	440.41	226.67	2.943	
24,100.00	9,345.11	23,780.68	8,991.65	112.99	112.35	57.88	13,608.77	626.51	667.01	438.86	228.16	2.924	
24,200.00	9,336.82	23,880.68	8,983.48	113.72	113.08	57.89	13,708.43	625.44	666.95	437.31	229.64	2.904	
24,300.00	9,328.53	23,980.68	8,975.31	114.45	113.81	57.90	13,808.09	624.37	666.88	435.76	231.13	2.885	
24,400.00	9,320.23	24,080.68	8,967.14	115.18	114.54	57.91	13,907.75	623.30	666.82	434.21	232.61	2.867	
24,500.00	9,311.94	24,180.68	8,958.97	115.91	115.27	57.92	14,007.41	622.23	666.75	432.66	234.10	2.848	
24,600.00	9,303.65	24,280.68	8,950.80	116.64	116.01	57.92	14,107.07	621.16	666.69	431.10	235.59	2.830	
24,700.00	9,295.36	24,380.68	8,942.63	117.37	116.74	57.93	14,206.73	620.08	666.62	429.55	237.07	2.812	
24,800.00	9,287.07	24,480.68	8,934.46	118.11	117.47	57.94	14,306.39	619.01	666.56	428.00	238.56	2.794	
24,900.00	9,278.77	24,580.68	8,926.29	118.84	118.21	57.95	14,406.05	617.94	666.49	426.44	240.05	2.776	
25,000.00	9,270.48	24,680.68	8,918.12	119.57	118.94	57.96	14,505.71	616.87	666.43	424.88	241.54	2.759	
25,100.00	9,262.19	24,780.68	8,909.95	120.31	119.68	57.97	14,605.37	615.80	666.36	423.33	243.04	2.742	
25,200.00	9,253.90	24,880.68	8,901.78	121.04	120.41	57.98	14,705.03	614.73	666.30	421.77	244.53	2.725	
25,300.00	9,245.60	24,980.68	8,893.61	121.78	121.15	57.99	14,804.69	613.66	666.23	420.21	246.02	2.708	
25,400.00	9,237.31	25,080.68	8,885.44	122.51	121.89	58.00	14,904.34	612.59	666.17	418.66	247.51	2.691	
25,500.00	9,229.02	25,180.68	8,877.27	123.25	122.62	58.01	15,004.00	611.52	666.10	417.10	249.01	2.675	
25,600.00	9,220.73	25,280.68	8,869.10	123.99	123.36	58.01	15,103.66	610.45	666.04	415.54	250.50	2.659	
25,700.00	9,212.43	25,380.68	8,860.93	124.72	124.10	58.02	15,203.32	609.38	665.97	413.98	252.00	2.643	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 504H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
25,800.00	9,204.14	25,480.68	8,852.76	125.46	124.84	58.03	15,302.98	608.31	665.91	412.42	253.49	2.627	
25,900.00	9,195.85	25,580.68	8,844.59	126.20	125.58	58.04	15,402.64	607.24	665.84	410.85	254.99	2.611	
26,000.00	9,187.56	25,680.68	8,836.42	126.94	126.32	58.05	15,502.30	606.16	665.78	409.29	256.49	2.596	
26,100.00	9,179.26	25,780.68	8,828.25	127.68	127.06	58.06	15,601.96	605.09	665.72	407.73	257.99	2.580	
26,200.00	9,170.97	25,880.68	8,820.08	128.42	127.80	58.07	15,701.62	604.02	665.65	406.17	259.49	2.565	
26,300.00	9,162.68	25,980.68	8,811.91	129.15	128.54	58.08	15,801.28	602.95	665.59	404.60	260.98	2.550	
26,400.00	9,154.39	26,080.68	8,803.74	129.89	129.28	58.09	15,900.94	601.88	665.52	403.04	262.48	2.535	
26,500.00	9,146.09	26,180.68	8,795.57	130.63	130.02	58.10	16,000.60	600.81	665.46	401.47	263.98	2.521	
26,600.00	9,137.80	26,280.68	8,787.40	131.38	130.76	58.10	16,100.26	599.74	665.39	399.91	265.48	2.506	
26,700.00	9,129.51	26,380.68	8,779.23	132.12	131.50	58.11	16,199.92	598.67	665.33	398.34	266.99	2.492	
26,800.00	9,121.22	26,480.68	8,771.06	132.86	132.24	58.12	16,299.58	597.60	665.26	396.77	268.49	2.478	
26,900.00	9,112.93	26,580.68	8,762.89	133.60	132.98	58.13	16,399.24	596.53	665.20	395.21	269.99	2.464	
27,000.00	9,104.63	26,680.68	8,754.72	134.34	133.73	58.14	16,498.90	595.46	665.13	393.64	271.49	2.450	
27,100.00	9,096.34	26,780.68	8,746.55	135.08	134.47	58.15	16,598.56	594.39	665.07	392.07	273.00	2.436	
27,200.00	9,088.05	26,880.68	8,738.38	135.82	135.21	58.16	16,698.22	593.32	665.00	390.50	274.50	2.423	
27,300.00	9,079.76	26,980.68	8,730.21	136.57	135.96	58.17	16,797.88	592.25	664.94	388.93	276.00	2.409	
27,400.00	9,071.46	27,080.68	8,722.04	137.31	136.70	58.18	16,897.54	591.17	664.87	387.36	277.51	2.396	
27,500.00	9,063.17	27,180.68	8,713.87	138.05	137.44	58.18	16,997.20	590.10	664.81	385.79	279.01	2.383	
27,600.00	9,054.88	27,280.68	8,705.70	138.80	138.19	58.19	17,096.86	589.03	664.74	384.22	280.52	2.370	
27,700.00	9,046.59	27,380.68	8,697.53	139.54	138.93	58.20	17,196.52	587.96	664.68	382.65	282.03	2.357	
27,800.00	9,038.29	27,480.68	8,689.36	140.29	139.68	58.21	17,296.18	586.89	664.62	381.08	283.53	2.344	
27,900.00	9,030.00	27,580.68	8,681.19	141.03	140.42	58.22	17,395.84	585.82	664.55	379.51	285.04	2.331	
28,000.00	9,021.71	27,680.68	8,673.02	141.78	141.17	58.23	17,495.50	584.75	664.49	377.94	286.55	2.319	
28,100.00	9,013.42	27,780.68	8,664.85	142.52	141.91	58.24	17,595.16	583.68	664.42	376.37	288.06	2.307	
28,200.00	9,005.12	27,880.68	8,656.68	143.27	142.66	58.25	17,694.82	582.61	664.36	374.79	289.56	2.294	
28,300.00	8,996.83	27,980.68	8,648.51	144.01	143.41	58.26	17,794.48	581.54	664.29	373.22	291.07	2.282	
28,400.00	8,988.54	28,080.68	8,640.34	144.76	144.15	58.27	17,894.14	580.47	664.23	371.65	292.58	2.270	
28,500.00	8,980.25	28,180.68	8,632.17	145.50	144.90	58.27	17,993.80	579.40	664.16	370.07	294.09	2.258	
28,563.28	8,975.00	28,243.96	8,627.00	145.98	145.30	58.28	18,056.86	578.72	664.12	369.18	294.94	2.252	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 603H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum Separation		Separation		Warning	
Measured	Vertical	Measured	Vertical	Reference	Offset	Toolface		+N/-S	+E/-W	Between	Between	Separation	Factor				
Depth	Depth	Depth	Depth	(usft)	(usft)	(°)		(usft)	(usft)	Centres	Ellipses	(usft)					
(usft)	(usft)	(usft)	(usft)							(usft)	(usft)						
0.00	0.00	0.20	0.00	0.00	0.00	-90.21		-0.15	-40.00	40.00							
100.00	100.00	100.20	100.00	0.28	0.28	-90.21		-0.15	-40.00	40.00	39.45	0.55	72.364				
200.00	200.00	200.20	200.00	0.63	0.64	-90.21		-0.15	-40.00	40.00	38.73	1.27	31.504				
300.00	300.00	300.20	300.00	0.99	0.99	-90.21		-0.15	-40.00	40.00	38.01	1.99	20.135				
400.00	400.00	400.20	400.00	1.35	1.35	-90.21		-0.15	-40.00	40.00	37.30	2.70	14.795				
500.00	500.00	500.20	500.00	1.71	1.71	-90.21		-0.15	-40.00	40.00	36.58	3.42	11.694				
600.00	600.00	600.20	600.00	2.07	2.07	-90.21		-0.15	-40.00	40.00	35.86	4.14	9.668				
700.00	700.00	700.20	700.00	2.43	2.43	-90.21		-0.15	-40.00	40.00	35.15	4.85	8.240				
800.00	800.00	800.20	800.00	2.79	2.79	-90.21		-0.15	-40.00	40.00	34.43	5.57	7.180				
900.00	900.00	900.20	900.00	3.14	3.14	-90.21		-0.15	-40.00	40.00	33.71	6.29	6.361				
1,000.00	1,000.00	1,000.20	1,000.00	3.50	3.50	-90.21		-0.15	-40.00	40.00	33.00	7.01	5.710				
1,100.00	1,100.00	1,100.20	1,100.00	3.86	3.86	-90.21		-0.15	-40.00	40.00	32.28	7.72	5.180				
1,200.00	1,200.00	1,200.20	1,200.00	4.22	4.22	-90.21		-0.15	-40.00	40.00	31.56	8.44	4.740				
1,300.00	1,300.00	1,300.20	1,300.00	4.58	4.58	-90.21		-0.15	-40.00	40.00	30.84	9.16	4.369				
1,400.00	1,400.00	1,400.20	1,400.00	4.94	4.94	-90.21		-0.15	-40.00	40.00	30.13	9.87	4.051				
1,500.00	1,500.00	1,500.20	1,500.00	5.29	5.30	-90.21		-0.15	-40.00	40.00	29.41	10.59	3.777				
1,516.60	1,516.60	1,516.80	1,516.60	5.35	5.35	-90.21		-0.15	-40.00	40.00	29.29	10.71	3.735	CC			
1,600.00	1,600.00	1,600.00	1,599.80	5.65	5.65	-90.21		-0.15	-40.00	40.00	28.69	11.31	3.538	ES, SF			
1,700.00	1,699.98	1,698.76	1,698.54	6.00	6.00	132.55		-0.52	-41.66	42.85	30.86	11.99	3.575				
1,800.00	1,799.84	1,796.80	1,796.45	6.33	6.33	135.34		-1.61	-46.60	51.47	38.84	12.63	4.074				
1,900.00	1,899.49	1,893.87	1,893.15	6.66	6.66	138.18		-3.40	-54.71	65.63	52.36	13.27	4.947				
2,000.00	1,999.11	1,989.93	1,988.53	7.00	6.99	139.44		-5.86	-65.87	83.34	69.45	13.89	6.000				
2,100.00	2,098.73	2,087.70	2,085.35	7.33	7.33	139.86		-8.79	-79.16	102.93	88.38	14.55	7.073				
2,200.00	2,198.35	2,185.76	2,182.45	7.68	7.68	140.15		-11.74	-92.50	122.54	107.31	15.23	8.048				
2,300.00	2,297.97	2,283.82	2,279.55	8.02	8.02	140.35		-14.68	-105.84	142.15	126.25	15.90	8.938				
2,400.00	2,397.59	2,381.88	2,376.65	8.36	8.37	140.51		-17.63	-119.18	161.76	145.18	16.59	9.752				
2,500.00	2,497.21	2,479.93	2,473.75	8.71	8.71	140.63		-20.57	-132.53	181.38	164.10	17.27	10.501				
2,600.00	2,596.83	2,577.99	2,570.85	9.06	9.06	140.73		-23.52	-145.87	200.99	183.03	17.96	11.190				
2,700.00	2,696.45	2,676.05	2,667.95	9.41	9.41	140.81		-26.46	-159.21	220.61	201.95	18.65	11.826				
2,800.00	2,796.07	2,774.10	2,765.05	9.76	9.77	140.88		-29.41	-172.55	240.22	220.88	19.35	12.416				
2,900.00	2,895.69	2,872.16	2,862.15	10.11	10.12	140.94		-32.35	-185.89	259.84	239.79	20.04	12.963				
3,000.00	2,995.31	2,970.22	2,959.25	10.46	10.47	140.99		-35.29	-199.24	279.46	258.71	20.74	13.472				
3,100.00	3,094.93	3,068.27	3,056.35	10.81	10.83	141.03		-38.24	-212.58	299.07	277.63	21.44	13.947				
3,200.00	3,194.55	3,166.33	3,153.45	11.17	11.18	141.07		-41.18	-225.92	318.69	296.54	22.15	14.391				
3,300.00	3,294.17	3,264.39	3,250.55	11.52	11.54	141.10		-44.13	-239.26	338.31	315.46	22.85	14.806				
3,400.00	3,393.79	3,362.44	3,347.65	11.88	11.89	141.13		-47.07	-252.60	357.92	334.37	23.55	15.196				
3,500.00	3,493.41	3,460.50	3,444.75	12.23	12.25	141.16		-50.02	-265.94	377.54	353.28	24.26	15.563				
3,600.00	3,593.02	3,558.56	3,541.86	12.59	12.61	141.18		-52.96	-279.29	397.16	372.19	24.97	15.908				
3,700.00	3,692.64	3,656.61	3,638.96	12.95	12.96	141.21		-55.91	-292.63	416.77	391.10	25.67	16.233				
3,800.00	3,792.26	3,754.67	3,736.06	13.30	13.32	141.23		-58.85	-305.97	436.39	410.01	26.38	16.540				
3,900.00	3,891.88	3,852.73	3,833.16	13.66	13.68	141.24		-61.80	-319.31	456.01	428.91	27.09	16.831				
4,000.00	3,991.50	3,950.79	3,930.26	14.02	14.04	141.26		-64.74	-332.65	475.62	447.82	27.80	17.106				
4,100.00	4,091.12	4,048.84	4,027.36	14.38	14.40	141.28		-67.69	-346.00	495.24	466.72	28.52	17.367				
4,200.00	4,190.74	4,146.90	4,124.46	14.74	14.76	141.29		-70.63	-359.34	514.86	485.63	29.23	17.615				
4,300.00	4,290.36	4,244.96	4,221.56	15.10	15.12	141.30		-73.58	-372.68	534.48	504.53	29.94	17.850				
4,400.00	4,389.98	4,343.01	4,318.66	15.45	15.48	141.31		-76.52	-386.02	554.09	523.44	30.66	18.075				
4,500.00	4,489.60	4,441.07	4,415.76	15.81	15.84	141.33		-79.47	-399.36	573.71	542.34	31.37	18.289				
4,600.00	4,589.22	4,539.13	4,512.86	16.17	16.20	141.34		-82.41	-412.71	593.33	561.24	32.08	18.493				
4,700.00	4,688.84	4,637.18	4,609.96	16.53	16.56	141.35		-85.35	-426.05	612.94	580.14	32.80	18.687				
4,800.00	4,788.46	4,735.24	4,707.06	16.90	16.92	141.36		-88.30	-439.39	632.56	599.05	33.52	18.874				
4,900.00	4,888.08	4,833.30	4,804.16	17.26	17.28	141.36		-91.24	-452.73	652.18	617.95	34.23	19.052				
5,000.00	4,987.70	4,931.35	4,901.26	17.62	17.64	141.37		-94.19	-466.07	671.80	636.85	34.95	19.222				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 603H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (")	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,087.32	5,029.41	4,998.36	17.98	18.00	141.38	-97.13	-479.42	691.41	655.75	35.67	19.386		
5,200.00	5,186.94	5,127.47	5,095.46	18.34	18.37	141.39	-100.08	-492.76	711.03	674.65	36.38	19.543		
5,300.00	5,286.61	5,225.62	5,192.66	18.70	18.73	141.51	-103.03	-506.11	730.14	693.04	37.10	19.680		
5,400.00	5,386.49	5,324.20	5,290.27	19.06	19.09	141.54	-105.99	-519.53	746.77	708.95	37.82	19.747		
5,500.00	5,486.47	5,423.12	5,388.22	19.40	19.46	-80.21	-108.96	-532.98	760.73	722.20	38.52	19.746		
5,600.00	5,586.47	5,522.14	5,486.28	19.74	19.82	-80.60	-111.93	-546.46	773.66	734.43	39.23	19.723		
5,700.00	5,686.47	5,621.16	5,584.34	20.08	20.19	-80.97	-114.90	-559.93	786.63	746.70	39.93	19.700		
5,800.00	5,786.47	5,720.19	5,682.40	20.42	20.56	-81.34	-117.88	-573.41	799.63	758.99	40.63	19.679		
5,900.00	5,886.47	5,819.21	5,780.46	20.77	20.92	-81.69	-120.85	-586.88	812.66	771.32	41.34	19.659		
6,000.00	5,986.47	5,918.24	5,878.52	21.11	21.29	-82.03	-123.82	-600.35	825.72	783.68	42.04	19.640		
6,100.00	6,086.47	6,017.26	5,976.58	21.45	21.65	-82.37	-126.80	-613.83	838.81	796.06	42.75	19.622		
6,200.00	6,186.47	6,116.29	6,074.63	21.79	22.02	-82.69	-129.77	-627.30	851.92	808.47	43.45	19.605		
6,300.00	6,286.47	6,215.31	6,172.69	22.14	22.39	-83.00	-132.75	-640.77	865.06	820.90	44.16	19.589		
6,400.00	6,386.47	6,314.34	6,270.75	22.48	22.75	-83.30	-135.72	-654.25	878.23	833.36	44.87	19.573		
6,500.00	6,486.47	6,413.36	6,368.81	22.82	23.12	-83.59	-138.69	-667.72	891.42	845.84	45.58	19.558		
6,600.00	6,586.47	6,512.38	6,466.87	23.17	23.49	-83.88	-141.67	-681.19	904.63	858.34	46.29	19.544		
6,700.00	6,686.47	6,611.41	6,564.93	23.51	23.85	-84.16	-144.64	-694.67	917.86	870.86	47.00	19.531		
6,800.00	6,786.47	6,710.43	6,662.98	23.86	24.22	-84.43	-147.61	-708.14	931.11	883.41	47.70	19.518		
6,900.00	6,886.47	6,809.46	6,761.04	24.21	24.59	-84.69	-150.59	-721.61	944.38	895.97	48.41	19.506		
7,000.00	6,986.47	6,908.48	6,859.10	24.55	24.96	-84.94	-153.56	-735.09	957.67	908.55	49.13	19.495		
7,100.00	7,086.47	7,007.51	6,957.16	24.90	25.32	-85.19	-156.54	-748.56	970.98	921.15	49.84	19.483		
7,200.00	7,186.47	7,106.53	7,055.22	25.25	25.69	-85.43	-159.51	-762.04	984.31	933.76	50.55	19.473		
7,300.00	7,286.47	7,205.56	7,153.28	25.59	26.06	-85.66	-162.48	-775.51	997.65	946.39	51.26	19.463		
7,400.00	7,386.47	7,304.58	7,251.34	25.94	26.43	-85.89	-165.46	-788.98	1,011.01	959.04	51.97	19.453		
7,500.00	7,486.47	7,403.61	7,349.39	26.29	26.79	-86.11	-168.43	-802.46	1,024.39	971.70	52.68	19.444		
7,600.00	7,586.47	7,502.63	7,447.45	26.64	27.16	-86.33	-171.40	-815.93	1,037.77	984.38	53.40	19.435		
7,700.00	7,686.47	7,601.65	7,545.51	26.99	27.53	-86.54	-174.38	-829.40	1,051.18	997.07	54.11	19.427		
7,800.00	7,786.47	7,700.68	7,643.57	27.33	27.90	-86.74	-177.35	-842.88	1,064.59	1,009.77	54.82	19.418		
7,900.00	7,886.47	7,799.70	7,741.63	27.68	28.26	-86.94	-180.33	-856.35	1,078.02	1,022.49	55.54	19.411		
8,000.00	7,986.47	7,898.73	7,839.69	28.03	28.63	-87.14	-183.30	-869.82	1,091.47	1,035.21	56.25	19.403		
8,100.00	8,086.47	7,997.75	7,937.75	28.38	29.00	-87.33	-186.27	-883.30	1,104.92	1,047.95	56.97	19.396		
8,200.00	8,186.47	8,096.78	8,035.80	28.73	29.37	-87.52	-189.25	-896.77	1,118.39	1,060.71	57.68	19.389		
8,300.00	8,286.47	8,195.80	8,133.86	29.08	29.74	-87.70	-192.22	-910.24	1,131.87	1,073.47	58.40	19.382		
8,400.00	8,386.47	8,294.83	8,231.92	29.43	30.10	-87.88	-195.19	-923.72	1,145.35	1,086.24	59.11	19.376		
8,500.00	8,486.47	8,393.85	8,329.98	29.78	30.47	-88.05	-198.17	-937.19	1,158.85	1,099.03	59.83	19.370		
8,600.00	8,586.47	8,492.87	8,428.04	30.13	30.84	-88.22	-201.14	-950.67	1,172.36	1,111.82	60.54	19.364		
8,700.00	8,686.47	8,591.90	8,526.10	30.48	31.21	-88.38	-204.12	-964.14	1,185.88	1,124.62	61.26	19.358		
8,800.00	8,786.47	8,690.92	8,624.15	30.84	31.58	-88.54	-207.09	-977.61	1,199.41	1,137.43	61.98	19.353		
8,900.00	8,886.47	8,789.95	8,722.21	31.19	31.94	-88.70	-210.06	-991.09	1,212.95	1,150.26	62.69	19.348		
9,000.00	8,986.47	8,888.97	8,820.27	31.54	32.31	-88.86	-213.04	-1,004.56	1,226.49	1,163.08	63.41	19.342		
9,100.00	9,086.47	8,988.00	8,918.33	31.89	32.68	-89.01	-216.01	-1,018.03	1,240.05	1,175.92	64.13	19.338		
9,200.00	9,186.47	9,087.02	9,016.39	32.24	33.05	-89.16	-218.98	-1,031.51	1,253.61	1,188.77	64.84	19.333		
9,300.00	9,286.47	9,186.05	9,114.45	32.59	33.42	-89.30	-221.96	-1,044.98	1,267.18	1,201.62	65.56	19.328		
9,400.00	9,386.47	9,285.07	9,212.51	32.95	33.79	-89.44	-224.93	-1,058.45	1,280.76	1,214.49	66.28	19.324		
9,500.00	9,486.47	9,384.09	9,310.56	33.30	34.15	-89.58	-227.91	-1,071.93	1,294.35	1,227.35	67.00	19.320		
9,600.00	9,586.47	9,483.12	9,408.62	33.65	34.52	-89.72	-230.88	-1,085.40	1,307.95	1,240.23	67.72	19.315		
9,700.00	9,686.47	9,582.14	9,506.68	34.00	34.89	-89.85	-233.85	-1,098.87	1,321.55	1,253.11	68.43	19.311		
9,800.00	9,786.47	9,681.17	9,604.74	34.35	35.26	-89.98	-236.83	-1,112.35	1,335.15	1,266.00	69.15	19.308		
9,900.00	9,886.43	9,857.70	9,780.02	34.71	35.91	-89.11	-237.31	-1,132.59	1,347.16	1,276.84	70.33	19.155		
10,000.00	9,984.97	10,060.83	9,981.82	35.05	36.60	-89.27	-217.04	-1,139.79	1,349.99	1,278.65	71.34	18.923		
10,100.00	10,079.19	10,158.25	10,075.62	35.37	36.91	-89.56	-191.18	-1,140.07	1,349.92	1,277.95	71.97	18.758		
10,200.00	10,166.23	10,256.84	10,164.71	35.65	37.20	-89.87	-149.22	-1,140.53	1,349.88	1,277.34	72.54	18.608		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 603H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Site Error:
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)									0.00 usft
10,241.00	10,199.21	10,297.62	10,199.21	35.76	37.31	-90.00	-127.51	-1,140.76	1,349.88	1,277.12	72.76	18.552		
10,300.00	10,243.43	10,356.68	10,246.25	35.91	37.46	-90.18	-91.83	-1,141.15	1,349.88	1,276.82	73.06	18.476		
10,400.00	10,308.47	10,457.84	10,317.44	36.13	37.68	-90.49	-20.16	-1,141.92	1,349.93	1,276.41	73.51	18.363		
10,500.00	10,359.35	10,560.31	10,375.60	36.31	37.85	-90.79	64.04	-1,142.84	1,350.01	1,276.12	73.89	18.271		
10,600.00	10,394.53	10,664.08	10,418.27	36.45	37.97	-91.06	158.47	-1,143.86	1,350.11	1,275.93	74.18	18.201		
10,700.00	10,416.72	10,767.42	10,444.81	36.57	38.05	-91.22	258.27	-1,144.94	1,350.18	1,275.77	74.41	18.145		
10,800.00	10,430.32	10,870.11	10,461.45	36.67	38.11	-91.33	359.56	-1,146.03	1,350.24	1,275.62	74.62	18.095		
10,900.00	10,435.22	10,973.03	10,468.96	36.76	38.18	-91.43	462.16	-1,147.14	1,350.30	1,275.50	74.80	18.052		
11,000.00	10,431.41	11,076.17	10,467.23	36.87	38.26	-91.52	565.25	-1,148.25	1,350.36	1,275.35	75.01	18.003		
11,100.00	10,423.12	11,177.19	10,458.62	37.00	38.38	-91.51	665.89	-1,149.33	1,350.35	1,275.08	75.27	17.940		
11,200.00	10,414.83	11,277.19	10,449.65	37.15	38.53	-91.48	765.48	-1,150.40	1,350.33	1,274.76	75.57	17.869		
11,300.00	10,406.54	11,377.18	10,440.67	37.31	38.70	-91.45	865.07	-1,151.47	1,350.31	1,274.42	75.90	17.792		
11,400.00	10,398.24	11,477.18	10,431.70	37.49	38.89	-91.43	964.66	-1,152.54	1,350.30	1,274.04	76.26	17.708		
11,500.00	10,389.95	11,577.18	10,422.73	37.68	39.09	-91.40	1,064.24	-1,153.61	1,350.28	1,273.63	76.64	17.618		
11,600.00	10,381.66	11,677.18	10,413.75	37.89	39.31	-91.37	1,163.83	-1,154.68	1,350.26	1,273.20	77.06	17.522		
11,700.00	10,373.37	11,777.17	10,404.78	38.12	39.54	-91.34	1,263.42	-1,155.75	1,350.24	1,272.74	77.51	17.421		
11,800.00	10,365.07	11,877.17	10,395.81	38.35	39.78	-91.31	1,363.01	-1,156.82	1,350.23	1,272.25	77.98	17.315		
11,900.00	10,356.78	11,977.17	10,386.84	38.60	40.04	-91.28	1,462.60	-1,157.89	1,350.21	1,271.73	78.48	17.204		
12,000.00	10,348.49	12,077.17	10,377.86	38.87	40.31	-91.25	1,562.19	-1,158.96	1,350.20	1,271.19	79.01	17.089		
12,100.00	10,340.20	12,177.16	10,368.89	39.15	40.60	-91.22	1,661.78	-1,160.03	1,350.18	1,270.62	79.57	16.969		
12,200.00	10,331.90	12,277.16	10,359.92	39.44	40.89	-91.19	1,761.36	-1,161.10	1,350.17	1,270.02	80.15	16.846		
12,300.00	10,323.61	12,377.16	10,350.94	39.74	41.20	-91.16	1,860.95	-1,162.17	1,350.15	1,269.40	80.75	16.719		
12,400.00	10,315.32	12,477.16	10,341.97	40.06	41.52	-91.14	1,960.54	-1,163.23	1,350.14	1,268.75	81.39	16.590		
12,500.00	10,307.03	12,577.15	10,333.00	40.39	41.85	-91.11	2,060.13	-1,164.30	1,350.13	1,268.09	82.04	16.457		
12,600.00	10,298.73	12,677.15	10,324.03	40.73	42.20	-91.08	2,159.72	-1,165.37	1,350.11	1,267.39	82.72	16.322		
12,700.00	10,290.44	12,777.15	10,315.05	41.08	42.55	-91.05	2,259.31	-1,166.44	1,350.10	1,266.68	83.42	16.184		
12,800.00	10,282.15	12,877.15	10,306.08	41.45	42.91	-91.02	2,358.90	-1,167.51	1,350.09	1,265.94	84.15	16.044		
12,900.00	10,273.86	12,977.15	10,297.11	41.82	43.29	-90.99	2,458.48	-1,168.58	1,350.07	1,265.18	84.89	15.903		
13,000.00	10,265.56	13,077.14	10,288.13	42.21	43.67	-90.96	2,558.07	-1,169.65	1,350.06	1,264.40	85.66	15.761		
13,100.00	10,257.27	13,177.14	10,279.16	42.61	44.07	-90.93	2,657.66	-1,170.72	1,350.05	1,263.60	86.45	15.617		
13,200.00	10,248.98	13,277.14	10,270.19	43.01	44.47	-90.90	2,757.25	-1,171.79	1,350.04	1,262.78	87.26	15.472		
13,300.00	10,240.69	13,377.14	10,261.22	43.43	44.88	-90.87	2,856.84	-1,172.86	1,350.03	1,261.94	88.09	15.326		
13,400.00	10,232.40	13,477.13	10,252.24	43.85	45.31	-90.85	2,956.43	-1,173.93	1,350.02	1,261.08	88.94	15.180		
13,500.00	10,224.10	13,577.13	10,243.27	44.29	45.74	-90.82	3,056.01	-1,175.00	1,350.01	1,260.21	89.80	15.033		
13,600.00	10,215.81	13,677.13	10,234.30	44.73	46.18	-90.79	3,155.60	-1,176.07	1,350.00	1,259.31	90.69	14.887		
13,700.00	10,207.52	13,777.13	10,225.32	45.19	46.63	-90.76	3,255.19	-1,177.14	1,349.99	1,258.40	91.59	14.740		
13,800.00	10,199.23	13,877.12	10,216.35	45.65	47.08	-90.73	3,354.78	-1,178.21	1,349.98	1,257.47	92.51	14.593		
13,900.00	10,190.93	13,977.12	10,207.38	46.12	47.55	-90.70	3,454.37	-1,179.28	1,349.97	1,256.53	93.44	14.447		
14,000.00	10,182.64	14,077.12	10,198.41	46.60	48.02	-90.67	3,553.96	-1,180.35	1,349.96	1,255.57	94.39	14.301		
14,100.00	10,174.35	14,177.12	10,189.43	47.08	48.50	-90.64	3,653.55	-1,181.42	1,349.95	1,254.59	95.36	14.156		
14,200.00	10,166.06	14,277.12	10,180.46	47.58	48.99	-90.61	3,753.13	-1,182.49	1,349.95	1,253.60	96.34	14.012		
14,300.00	10,157.76	14,377.11	10,171.49	48.08	49.48	-90.58	3,852.72	-1,183.56	1,349.94	1,252.60	97.34	13.868		
14,400.00	10,149.47	14,477.11	10,162.51	48.58	49.98	-90.56	3,952.31	-1,184.63	1,349.93	1,251.58	98.35	13.726		
14,500.00	10,141.18	14,577.11	10,153.54	49.10	50.49	-90.53	4,051.90	-1,185.70	1,349.93	1,250.55	99.37	13.584		
14,600.00	10,132.89	14,677.11	10,144.57	49.62	51.01	-90.50	4,151.49	-1,186.77	1,349.92	1,249.51	100.41	13.444		
14,700.00	10,124.59	14,777.10	10,135.59	50.15	51.53	-90.47	4,251.08	-1,187.84	1,349.91	1,248.45	101.46	13.304		
14,800.00	10,116.30	14,877.10	10,126.62	50.68	52.05	-90.44	4,350.67	-1,188.91	1,349.91	1,247.38	102.53	13.166		
14,900.00	10,108.01	14,977.10	10,117.65	51.22	52.59	-90.41	4,450.25	-1,189.98	1,349.90	1,246.30	103.60	13.030		
15,000.00	10,099.72	15,077.10	10,108.68	51.77	53.13	-90.38	4,549.84	-1,191.05	1,349.90	1,245.21	104.69	12.894		
15,100.00	10,091.42	15,177.09	10,099.70	52.32	53.67	-90.35	4,649.43	-1,192.12	1,349.89	1,244.10	105.79	12.760		
15,200.00	10,083.13	15,277.09	10,090.73	52.87	54.22	-90.32	4,749.02	-1,193.19	1,349.89	1,242.99	106.90	12.628		
15,300.00	10,074.84	15,377.09	10,081.76	53.44	54.77	-90.29	4,848.61	-1,194.26	1,349.88	1,241.87	108.02	12.497		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 603H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)								
15,400.00	10,066.55	15,477.09	10,072.78	54.00	55.33	-90.27	4,948.20	-1,195.33	1,349.88	1,240.73	109.15	12.368	
15,500.00	10,058.26	15,577.08	10,063.81	54.57	55.90	-90.24	5,047.79	-1,196.40	1,349.88	1,239.59	110.29	12.240	
15,600.00	10,049.96	15,677.08	10,054.84	55.15	56.47	-90.21	5,147.37	-1,197.47	1,349.87	1,238.44	111.44	12.113	
15,700.00	10,041.67	15,777.08	10,045.87	55.73	57.04	-90.18	5,246.96	-1,198.54	1,349.87	1,237.27	112.60	11.988	
15,800.00	10,033.38	15,877.08	10,036.89	56.32	57.62	-90.15	5,346.55	-1,199.61	1,349.87	1,236.10	113.77	11.865	
15,900.00	10,025.09	15,977.08	10,027.92	56.91	58.21	-90.12	5,446.14	-1,200.68	1,349.87	1,234.92	114.94	11.744	
16,000.00	10,016.79	16,077.07	10,018.95	57.51	58.79	-90.09	5,545.73	-1,201.75	1,349.87	1,233.73	116.13	11.624	
16,100.00	10,008.50	16,177.07	10,009.97	58.10	59.39	-90.06	5,645.32	-1,202.82	1,349.86	1,232.54	117.33	11.505	
16,200.00	10,000.21	16,277.07	10,001.00	58.71	59.98	-90.03	5,744.91	-1,203.89	1,349.86	1,231.33	118.53	11.388	
16,300.00	9,991.92	16,377.07	9,992.03	59.31	60.58	-90.00	5,844.49	-1,204.96	1,349.86	1,230.12	119.74	11.273	
16,400.00	9,983.62	16,477.06	9,983.06	59.92	61.19	-89.98	5,944.08	-1,206.03	1,349.86	1,228.91	120.96	11.160	
16,401.32	9,983.52	16,478.38	9,982.94	59.93	61.19	-89.98	5,945.39	-1,206.04	1,349.86	1,228.89	120.97	11.158	
16,500.00	9,975.33	16,577.06	9,974.08	60.54	61.79	-89.95	6,043.67	-1,207.10	1,349.86	1,227.68	122.18	11.048	
16,600.00	9,967.04	16,677.06	9,965.11	61.16	62.40	-89.92	6,143.26	-1,208.17	1,349.86	1,226.45	123.42	10.938	
16,700.00	9,958.75	16,777.06	9,956.14	61.78	63.02	-89.89	6,242.85	-1,209.24	1,349.86	1,225.21	124.66	10.829	
16,800.00	9,950.45	16,877.05	9,947.16	62.40	63.64	-89.86	6,342.44	-1,210.31	1,349.87	1,223.96	125.90	10.722	
16,900.00	9,942.16	16,977.05	9,938.19	63.03	64.26	-89.83	6,442.03	-1,211.38	1,349.87	1,222.71	127.16	10.616	
17,000.00	9,933.87	17,077.05	9,929.22	63.66	64.88	-89.80	6,541.61	-1,212.45	1,349.87	1,221.45	128.41	10.512	
17,100.00	9,925.58	17,177.05	9,920.25	64.30	65.51	-89.77	6,641.20	-1,213.52	1,349.87	1,220.19	129.68	10.409	
17,200.00	9,917.29	17,277.05	9,911.27	64.93	66.14	-89.74	6,740.79	-1,214.58	1,349.87	1,218.92	130.95	10.308	
17,300.00	9,908.99	17,377.04	9,902.30	65.57	66.77	-89.71	6,840.38	-1,215.65	1,349.88	1,217.65	132.23	10.209	
17,400.00	9,900.70	17,477.04	9,893.33	66.22	67.41	-89.69	6,939.97	-1,216.72	1,349.88	1,216.37	133.51	10.111	
17,500.00	9,892.41	17,577.04	9,884.35	66.86	68.05	-89.66	7,039.56	-1,217.79	1,349.88	1,215.08	134.80	10.014	
17,600.00	9,884.12	17,677.04	9,875.38	67.51	68.69	-89.63	7,139.14	-1,218.86	1,349.89	1,213.79	136.09	9.919	
17,700.00	9,875.82	17,777.03	9,866.41	68.16	69.33	-89.60	7,238.73	-1,219.93	1,349.89	1,212.50	137.39	9.825	
17,800.00	9,867.53	17,877.03	9,857.44	68.81	69.98	-89.57	7,338.32	-1,221.00	1,349.90	1,211.20	138.70	9.733	
17,900.00	9,859.24	17,977.03	9,848.46	69.47	70.63	-89.54	7,437.91	-1,222.07	1,349.90	1,209.90	140.01	9.642	
18,000.00	9,850.95	18,077.03	9,839.49	70.13	71.28	-89.51	7,537.50	-1,223.14	1,349.91	1,208.59	141.32	9.552	
18,100.00	9,842.65	18,177.02	9,830.52	70.79	71.93	-89.48	7,637.09	-1,224.21	1,349.91	1,207.27	142.64	9.464	
18,200.00	9,834.36	18,277.02	9,821.54	71.45	72.59	-89.45	7,736.68	-1,225.28	1,349.92	1,205.96	143.96	9.377	
18,300.00	9,826.07	18,377.02	9,812.57	72.11	73.25	-89.42	7,836.26	-1,226.35	1,349.92	1,204.64	145.29	9.291	
18,400.00	9,817.78	18,477.02	9,803.60	72.78	73.91	-89.40	7,935.85	-1,227.42	1,349.93	1,203.31	146.62	9.207	
18,500.00	9,809.48	18,577.01	9,794.63	73.45	74.57	-89.37	8,035.44	-1,228.49	1,349.94	1,201.98	147.96	9.124	
18,600.00	9,801.19	18,677.01	9,785.65	74.12	75.23	-89.34	8,135.03	-1,229.56	1,349.95	1,200.65	149.29	9.042	
18,700.00	9,792.90	18,777.01	9,776.68	74.79	75.90	-89.31	8,234.62	-1,230.63	1,349.95	1,199.32	150.64	8.962	
18,800.00	9,784.61	18,877.01	9,767.71	75.47	76.57	-89.28	8,334.21	-1,231.70	1,349.96	1,197.98	151.99	8.882	
18,900.00	9,776.31	18,977.01	9,758.73	76.14	77.24	-89.25	8,433.80	-1,232.77	1,349.97	1,196.63	153.34	8.804	
19,000.00	9,768.02	19,077.00	9,749.76	76.82	77.91	-89.22	8,533.38	-1,233.84	1,349.98	1,195.29	154.69	8.727	
19,100.00	9,759.73	19,177.00	9,740.79	77.50	78.59	-89.19	8,632.97	-1,234.91	1,349.99	1,193.94	156.05	8.651	
19,200.00	9,751.44	19,277.00	9,731.82	78.18	79.26	-89.16	8,732.56	-1,235.98	1,350.00	1,192.59	157.41	8.576	
19,300.00	9,743.15	19,377.00	9,722.84	78.86	79.94	-89.13	8,832.15	-1,237.05	1,350.01	1,191.23	158.78	8.503	
19,400.00	9,734.85	19,476.99	9,713.87	79.55	80.62	-89.11	8,931.74	-1,238.12	1,350.02	1,189.87	160.14	8.430	
19,500.00	9,726.56	19,576.99	9,704.90	80.23	81.30	-89.08	9,031.33	-1,239.19	1,350.03	1,188.51	161.52	8.358	
19,600.00	9,718.27	19,676.99	9,695.92	80.92	81.98	-89.05	9,130.92	-1,240.26	1,350.04	1,187.15	162.89	8.288	
19,700.00	9,709.98	19,776.99	9,686.95	81.61	82.67	-89.02	9,230.50	-1,241.33	1,350.05	1,185.78	164.27	8.219	
19,800.00	9,701.68	19,876.98	9,677.98	82.30	83.35	-88.99	9,330.09	-1,242.40	1,350.06	1,184.41	165.65	8.150	
19,900.00	9,693.39	19,976.98	9,669.01	82.99	84.04	-88.96	9,429.68	-1,243.47	1,350.07	1,183.04	167.03	8.083	
20,000.00	9,685.10	20,076.98	9,660.03	83.69	84.73	-88.93	9,529.27	-1,244.54	1,350.09	1,181.67	168.42	8.016	
20,100.00	9,676.81	20,176.98	9,651.06	84.38	85.42	-88.90	9,628.86	-1,245.61	1,350.10	1,180.29	169.81	7.951	
20,200.00	9,668.51	20,276.98	9,642.09	85.08	86.11	-88.87	9,728.45	-1,246.68	1,350.11	1,178.91	171.20	7.886	
20,300.00	9,660.22	20,376.97	9,633.11	85.78	86.80	-88.84	9,828.04	-1,247.75	1,350.13	1,177.53	172.59	7.823	
20,400.00	9,651.93	20,476.97	9,624.14	86.48	87.50	-88.82	9,927.62	-1,248.82	1,350.14	1,176.15	173.99	7.760	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 603H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Site Error:
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)									0.00 usft
20,500.00	9,643.64	20,576.97	9,615.17	87.17	88.19	-88.79	10,027.21	-1,249.89	1,350.15	1,174.76	175.39	7.698		
20,600.00	9,635.34	20,676.97	9,606.20	87.88	88.89	-88.76	10,126.80	-1,250.96	1,350.17	1,173.38	176.79	7.637		
20,700.00	9,627.05	20,776.96	9,597.22	88.58	89.58	-88.73	10,226.39	-1,252.03	1,350.18	1,171.99	178.19	7.577		
20,800.00	9,618.76	20,876.96	9,588.25	89.28	90.28	-88.70	10,325.98	-1,253.10	1,350.20	1,170.60	179.60	7.518		
20,900.00	9,610.47	20,976.96	9,579.28	89.99	90.98	-88.67	10,425.57	-1,254.17	1,350.21	1,169.20	181.01	7.459		
21,000.00	9,602.18	21,076.96	9,570.30	90.69	91.68	-88.64	10,525.16	-1,255.24	1,350.23	1,167.81	182.42	7.402		
21,100.00	9,593.88	21,176.95	9,561.33	91.40	92.39	-88.61	10,624.74	-1,256.31	1,350.24	1,166.41	183.83	7.345		
21,200.00	9,585.59	21,276.95	9,552.36	92.11	93.09	-88.58	10,724.33	-1,257.38	1,350.26	1,165.01	185.25	7.289		
21,300.00	9,577.30	21,376.95	9,543.39	92.81	93.79	-88.56	10,823.92	-1,258.45	1,350.28	1,163.61	186.67	7.234		
21,400.00	9,569.01	21,476.95	9,534.41	93.52	94.50	-88.53	10,923.51	-1,259.52	1,350.29	1,162.21	188.08	7.179		
21,500.00	9,560.71	21,576.94	9,525.44	94.23	95.20	-88.50	11,023.10	-1,260.59	1,350.31	1,160.81	189.51	7.125		
21,600.00	9,552.42	21,676.94	9,516.47	94.95	95.91	-88.47	11,122.69	-1,261.66	1,350.33	1,159.40	190.93	7.072		
21,700.00	9,544.13	21,776.94	9,507.49	95.66	96.62	-88.44	11,222.27	-1,262.73	1,350.35	1,158.00	192.35	7.020		
21,800.00	9,535.84	21,876.94	9,498.52	96.37	97.33	-88.41	11,321.86	-1,263.80	1,350.37	1,156.59	193.78	6.969		
21,900.00	9,527.54	21,976.94	9,489.55	97.09	98.04	-88.38	11,421.45	-1,264.87	1,350.39	1,155.18	195.21	6.918		
22,000.00	9,519.25	22,076.93	9,480.58	97.80	98.75	-88.35	11,521.04	-1,265.93	1,350.40	1,153.77	196.64	6.867		
22,100.00	9,510.96	22,176.93	9,471.60	98.52	99.46	-88.32	11,620.63	-1,267.00	1,350.42	1,152.35	198.07	6.818		
22,200.00	9,502.67	22,276.93	9,462.63	99.23	100.17	-88.29	11,720.22	-1,268.07	1,350.44	1,150.94	199.50	6.769		
22,300.00	9,494.37	22,376.93	9,453.66	99.95	100.89	-88.27	11,819.81	-1,269.14	1,350.46	1,149.53	200.94	6.721		
22,400.00	9,486.08	22,476.92	9,444.68	100.67	101.60	-88.24	11,919.39	-1,270.21	1,350.48	1,148.11	202.38	6.673		
22,500.00	9,477.79	22,576.92	9,435.71	101.39	102.32	-88.21	12,018.98	-1,271.28	1,350.51	1,146.69	203.81	6.626		
22,600.00	9,469.50	22,676.92	9,426.74	102.11	103.03	-88.18	12,118.57	-1,272.35	1,350.53	1,145.27	205.25	6.580		
22,700.00	9,461.20	22,776.92	9,417.77	102.83	103.75	-88.15	12,218.16	-1,273.42	1,350.55	1,143.85	206.70	6.534		
22,800.00	9,452.91	22,876.91	9,408.79	103.55	104.47	-88.12	12,317.75	-1,274.49	1,350.57	1,142.43	208.14	6.489		
22,900.00	9,444.62	22,976.91	9,399.82	104.27	105.19	-88.09	12,417.34	-1,275.56	1,350.59	1,141.01	209.58	6.444		
23,000.00	9,436.33	23,076.91	9,390.85	104.99	105.91	-88.06	12,516.93	-1,276.63	1,350.62	1,139.59	211.03	6.400		
23,100.00	9,428.04	23,176.91	9,381.87	105.72	106.63	-88.03	12,616.51	-1,277.70	1,350.64	1,138.16	212.48	6.357		
23,200.00	9,419.74	23,276.91	9,372.90	106.44	107.35	-88.00	12,716.10	-1,278.77	1,350.66	1,136.74	213.92	6.314		
23,300.00	9,411.45	23,376.90	9,363.93	107.17	108.07	-87.98	12,815.69	-1,279.84	1,350.69	1,135.31	215.37	6.271		
23,400.00	9,403.16	23,476.90	9,354.95	107.89	108.79	-87.95	12,915.28	-1,280.91	1,350.71	1,133.88	216.83	6.229		
23,500.00	9,394.87	23,576.90	9,345.98	108.62	109.51	-87.92	13,014.87	-1,281.98	1,350.73	1,132.46	218.28	6.188		
23,600.00	9,386.57	23,676.90	9,337.01	109.34	110.23	-87.89	13,114.46	-1,283.05	1,350.76	1,131.03	219.73	6.147		
23,700.00	9,378.28	23,776.89	9,328.04	110.07	110.96	-87.86	13,214.05	-1,284.12	1,350.78	1,129.60	221.19	6.107		
23,800.00	9,369.99	23,876.89	9,319.06	110.80	111.68	-87.83	13,313.63	-1,285.19	1,350.81	1,128.17	222.64	6.067		
23,900.00	9,361.70	23,976.89	9,310.09	111.53	112.41	-87.80	13,413.22	-1,286.26	1,350.83	1,126.73	224.10	6.028		
24,000.00	9,353.40	24,076.89	9,301.12	112.26	113.13	-87.77	13,512.81	-1,287.33	1,350.86	1,125.30	225.56	5.989		
24,100.00	9,345.11	24,176.88	9,292.14	112.99	113.86	-87.74	13,612.40	-1,288.40	1,350.89	1,123.87	227.02	5.951		
24,200.00	9,336.82	24,276.88	9,283.17	113.72	114.59	-87.71	13,711.99	-1,289.47	1,350.91	1,122.43	228.48	5.913		
24,300.00	9,328.53	24,376.88	9,274.20	114.45	115.31	-87.69	13,811.58	-1,290.54	1,350.94	1,121.00	229.94	5.875		
24,400.00	9,320.23	24,476.88	9,265.23	115.18	116.04	-87.66	13,911.17	-1,291.61	1,350.97	1,119.56	231.40	5.838		
24,500.00	9,311.94	24,576.88	9,256.25	115.91	116.77	-87.63	14,010.75	-1,292.68	1,351.00	1,118.13	232.87	5.802		
24,600.00	9,303.65	24,676.87	9,247.28	116.64	117.50	-87.60	14,110.34	-1,293.75	1,351.02	1,116.69	234.33	5.765		
24,700.00	9,295.36	24,776.87	9,238.31	117.37	118.23	-87.57	14,209.93	-1,294.82	1,351.05	1,115.25	235.80	5.730		
24,800.00	9,287.07	24,876.87	9,229.33	118.11	118.96	-87.54	14,309.52	-1,295.89	1,351.08	1,113.82	237.27	5.694		
24,900.00	9,278.77	24,976.87	9,220.36	118.84	119.69	-87.51	14,409.11	-1,296.96	1,351.11	1,112.38	238.73	5.659		
25,000.00	9,270.48	25,076.86	9,211.39	119.57	120.42	-87.48	14,508.70	-1,298.03	1,351.14	1,110.94	240.20	5.625		
25,100.00	9,262.19	25,176.86	9,202.42	120.31	121.15	-87.45	14,608.29	-1,299.10	1,351.17	1,109.50	241.67	5.591		
25,200.00	9,253.90	25,276.86	9,193.44	121.04	121.88	-87.43	14,707.87	-1,300.17	1,351.20	1,108.06	243.14	5.557		
25,300.00	9,245.60	25,376.86	9,184.47	121.78	122.62	-87.40	14,807.46	-1,301.24	1,351.23	1,106.62	244.62	5.524		
25,400.00	9,237.31	25,476.85	9,175.50	122.51	123.35	-87.37	14,907.05	-1,302.31	1,351.26	1,105.17	246.09	5.491		
25,500.00	9,229.02	25,576.85	9,166.52	123.25	124.08	-87.34	15,006.64	-1,303.38	1,351.29	1,103.73	247.56	5.458		
25,600.00	9,220.73	25,676.85	9,157.55	123.99	124.82	-87.31	15,106.23	-1,304.45	1,351.32	1,102.29	249.04	5.426		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 603H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
25,700.00	9,212.43	25,776.85	9,148.58	124.72	125.55	-87.28	15,205.82	-1,305.52	1,351.36	1,100.85	250.51	5.394	
25,800.00	9,204.14	25,876.84	9,139.61	125.46	126.29	-87.25	15,305.40	-1,306.59	1,351.39	1,099.40	251.99	5.363	
25,900.00	9,195.85	25,976.84	9,130.63	126.20	127.02	-87.22	15,404.99	-1,307.66	1,351.42	1,097.96	253.46	5.332	
26,000.00	9,187.56	26,076.84	9,121.66	126.94	127.76	-87.19	15,504.58	-1,308.73	1,351.45	1,096.51	254.94	5.301	
26,100.00	9,179.26	26,176.84	9,112.69	127.68	128.49	-87.16	15,604.17	-1,309.80	1,351.49	1,095.07	256.42	5.271	
26,200.00	9,170.97	26,276.84	9,103.71	128.42	129.23	-87.14	15,703.76	-1,310.87	1,351.52	1,093.62	257.90	5.240	
26,300.00	9,162.68	26,376.83	9,094.74	129.15	129.96	-87.11	15,803.35	-1,311.94	1,351.56	1,092.18	259.38	5.211	
26,400.00	9,154.39	26,476.83	9,085.77	129.89	130.70	-87.08	15,902.94	-1,313.01	1,351.59	1,090.73	260.86	5.181	
26,500.00	9,146.09	26,576.83	9,076.80	130.63	131.44	-87.05	16,002.52	-1,314.08	1,351.62	1,089.28	262.34	5.152	
26,600.00	9,137.80	26,676.83	9,067.82	131.38	132.18	-87.02	16,102.11	-1,315.15	1,351.66	1,087.84	263.82	5.123	
26,700.00	9,129.51	26,776.82	9,058.85	132.12	132.92	-86.99	16,201.70	-1,316.22	1,351.70	1,086.39	265.31	5.095	
26,800.00	9,121.22	26,876.82	9,049.88	132.86	133.65	-86.96	16,301.29	-1,317.28	1,351.73	1,084.94	266.79	5.067	
26,900.00	9,112.93	26,976.82	9,040.90	133.60	134.39	-86.93	16,400.88	-1,318.35	1,351.77	1,083.49	268.27	5.039	
27,000.00	9,104.63	27,076.82	9,031.93	134.34	135.13	-86.90	16,500.47	-1,319.42	1,351.80	1,082.04	269.76	5.011	
27,100.00	9,096.34	27,176.81	9,022.96	135.08	135.87	-86.88	16,600.06	-1,320.49	1,351.84	1,080.59	271.25	4.984	
27,200.00	9,088.05	27,276.81	9,013.99	135.82	136.61	-86.85	16,699.64	-1,321.56	1,351.88	1,079.15	272.73	4.957	
27,300.00	9,079.76	27,376.81	9,005.01	136.57	137.35	-86.82	16,799.23	-1,322.63	1,351.91	1,077.70	274.22	4.930	
27,400.00	9,071.46	27,476.81	8,996.04	137.31	138.09	-86.79	16,898.82	-1,323.70	1,351.95	1,076.25	275.71	4.904	
27,500.00	9,063.17	27,576.81	8,987.07	138.05	138.83	-86.76	16,998.41	-1,324.77	1,351.99	1,074.80	277.19	4.877	
27,600.00	9,054.88	27,676.80	8,978.09	138.80	139.58	-86.73	17,098.00	-1,325.84	1,352.03	1,073.35	278.68	4.851	
27,700.00	9,046.59	27,776.80	8,969.12	139.54	140.32	-86.70	17,197.59	-1,326.91	1,352.07	1,071.90	280.17	4.826	
27,800.00	9,038.29	27,876.80	8,960.15	140.29	141.06	-86.67	17,297.18	-1,327.98	1,352.11	1,070.44	281.66	4.800	
27,900.00	9,030.00	27,976.80	8,951.18	141.03	141.80	-86.64	17,396.76	-1,329.05	1,352.15	1,068.99	283.15	4.775	
28,000.00	9,021.71	28,076.79	8,942.20	141.78	142.54	-86.62	17,496.35	-1,330.12	1,352.19	1,067.54	284.64	4.750	
28,100.00	9,013.42	28,176.79	8,933.23	142.52	143.29	-86.59	17,595.94	-1,331.19	1,352.23	1,066.09	286.14	4.726	
28,200.00	9,005.12	28,276.79	8,924.26	143.27	144.03	-86.56	17,695.53	-1,332.26	1,352.27	1,064.64	287.63	4.701	
28,300.00	8,996.83	28,376.79	8,915.28	144.01	144.77	-86.53	17,795.12	-1,333.33	1,352.31	1,063.19	289.12	4.677	
28,400.00	8,988.54	28,476.78	8,906.31	144.76	145.52	-86.50	17,894.71	-1,334.40	1,352.35	1,061.73	290.61	4.653	
28,500.00	8,980.25	28,576.78	8,897.34	145.50	146.26	-86.47	17,994.30	-1,335.47	1,352.39	1,060.28	292.11	4.630	
28,563.28	8,975.00	28,640.06	8,891.66	145.98	146.73	-86.45	18,057.31	-1,336.15	1,352.42	1,059.36	293.05	4.615	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

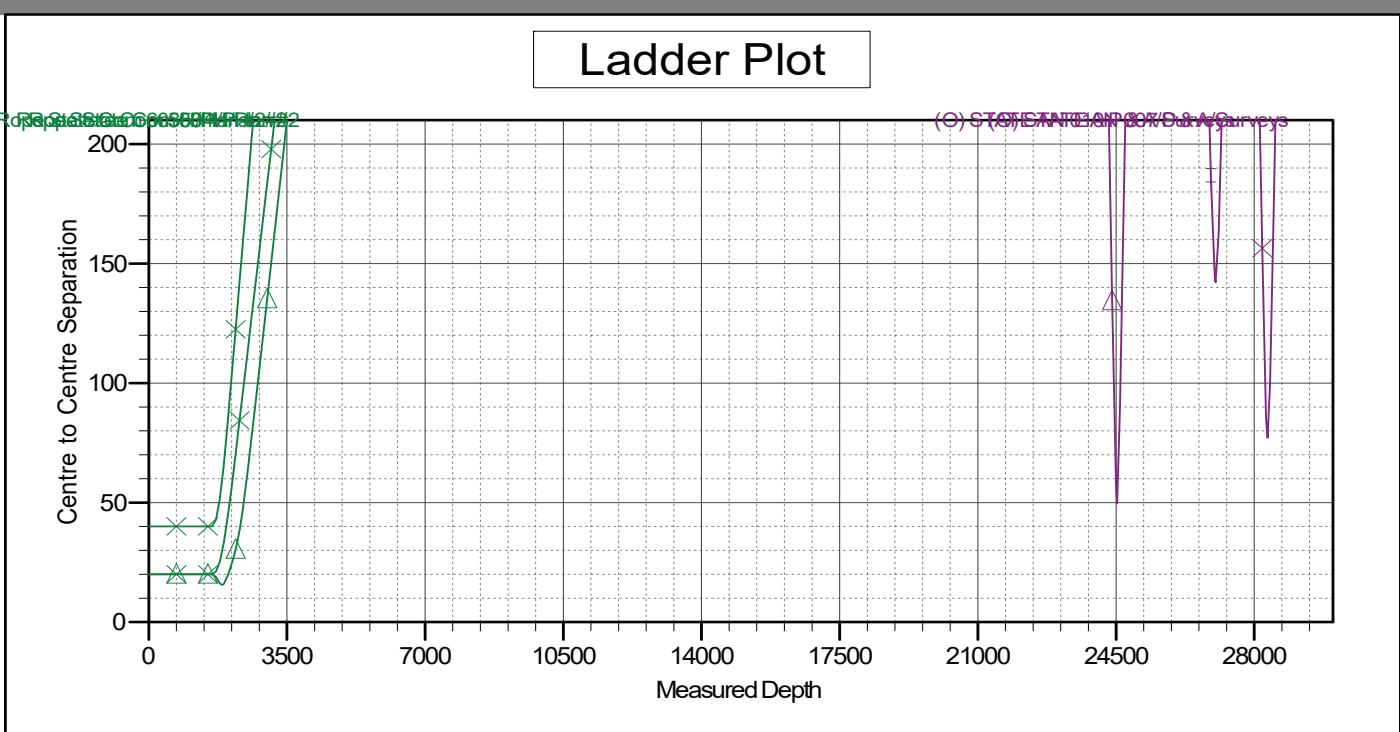
Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3939.1' + KB 23' @ 3962.10usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.3333333

Coordinates are relative to: Rope State Com 604H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.45°



LEGEND

(O) STATE COM 134H, Horizontal - PRODUCING, Surveys V0	(O) NEWMEXICO BV STATE 001 P & A, Vertical, Surveys V0	(O) BLACK JACK STATE 002, Verticals, Surveys V0
(O) STATE COM 133H, Horizontal - PRODUCING, Surveys V0	(O) BLACK JACK STATE 001, Verticals, Surveys V0	(O) STATE AN 009 P & A, Vertical, Surveys V0
(O) STATE COM 114H, Horizontal - PRODUCING, Surveys V0	(O) STATE AN 007 P & A, Vertical, Surveys V0	(O) ALBATROSS STATE COM001H, Horizontal - PRODUCING, Surveys V0
(O) STATE COM 124H, Horizontal - PRODUCING, Surveys V0	(O) LEO STATE 006 TA, Verticals, Surveys V0	(O) STATE AN 012 P & A, ST01, ST01 V0
(O) LEA SOUTHEAST STATE 1 P & A, Vertical, Surveys V0	(O) IRONHOUSE 19 STATE COM002H, Horizontal - PRODUCING, Surveys V0	(O) STATE AN 012 P & A, OH, Surveys V0
(O) LEO STATE #1, OH, OH V0	(O) LEA SOUTHEAST STATE 1 P & A, Vertical, Surveys V0	(O) BLACK JACK STATE 003, Verticals, Surveys V0
(O) STATE AN 006 TA, Vertical, Surveys V0	(O) LEO STATE #1, OH, OH V0	(O) LEO STATE 007, Verticals, Surveys V0
(O) ALBATROSS STATE COM002H, Horizontal - PRODUCING, Surveys V0	(O) STATE AN 006 TA, Vertical, Surveys V0	(O) IRONHOUSE 19 STATE COM003H, Horizontal - PRODUCING, Surveys V0
	(O) ALBATROSS STATE COM002H, Horizontal - PRODUCING, Surveys V0	(O) STATE AN 008 P & A, Vertical, Surveys V0

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 604H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3939.1' + KB 23' @ 3962.10usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 604H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3939.1' + KB 23' @ 3962.10usft

Coordinates are relative to: Rope State Com 604H

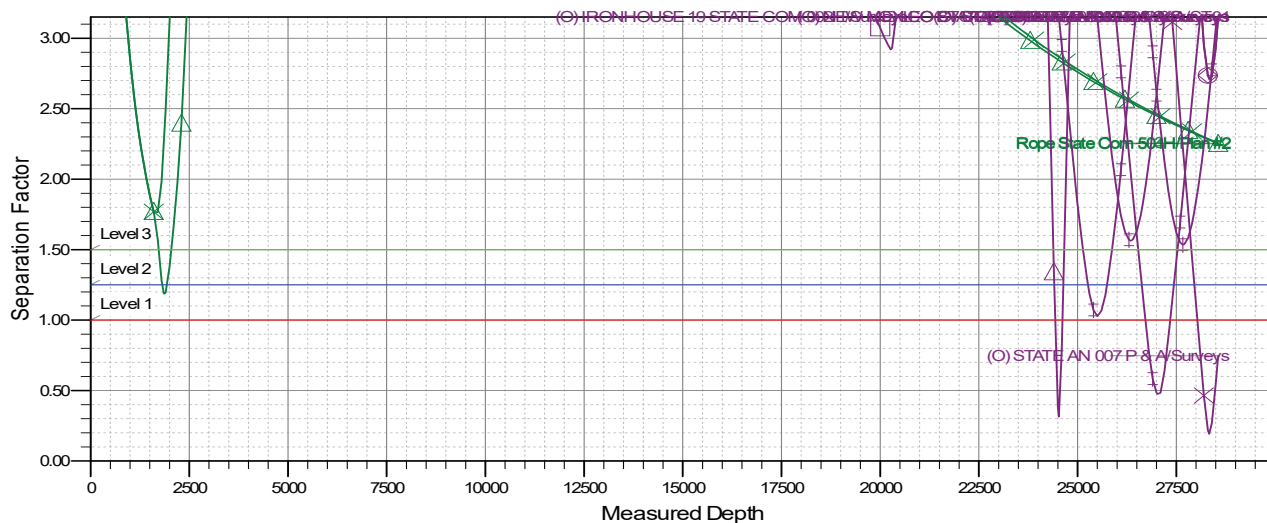
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Central Meridian is -104.333333

Grid Convergence at Surface is: 0.45°

Separation Factor Plot



LEGEND

STATE COM 134H, Horizontal - PRODUCING, Surveys V0	(O) NEW MEXICO BV STATE 001 P & A, Vertical, Surveys V0	(X) (O) BLACK JACK STATE 002, Verticals, Surveys V0
STATE COM 133H, Horizontal - PRODUCING, Surveys V0	(O) BLACK JACK STATE 001, Verticals, Surveys V0	(X) (O) STATE AN 009 P & A, Vertical, Surveys V0
STATE COM 114H, Horizontal - PRODUCING, Surveys V0	(O) STATE AN 007 P & A, Vertical, Surveys V0	(X) (O) ALBATROSS STATE COM 001H, Horizontal - PRODUCING, Surveys V0
STATE COM 124H, Horizontal - PRODUCING, Surveys V0	(O) LEO STATE 006 TA, Verticals, Surveys V0	(X) (O) STATE AN 012 P & A, ST01, ST01 V0
I, Plan #2 V0	(O) IRONHOUSE 19 STATE COM 002H, Horizontal - PRODUCING, Surveys V0	(X) (O) STATE AN 012 P & A, OH, Surveys V0
I, Plan #2 V0	(O) LEA SOUTHEAST STATE 1 P & A, Vertical, Surveys V0	(X) (O) BLACK JACK STATE 003, Verticals, Surveys V0
Vertical, Surveys V0	(O) LEO STATE #1, OH, OH V0	(X) (O) LEO STATE 007, Verticals, Surveys V0
I, Plan #2 V0	(O) STATE AN 006 TA, Vertical, Surveys V0	(X) (O) IRONHOUSE 19 STATE COM 003H, Horizontal - PRODUCING, Surveys V0
	(O) ALBATROSS STATE COM 002H, Horizontal - PRODUCING, Surveys V0	(X) (O) STATE AN 008 P & A, Vertical, Surveys V0

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Coterra Energy Inc.
Permian Business Unit
6001 Deauville Blvd.
Suite 300N
Midland, TX 79706

T 432.571.7800
coterra.com

April 24, 2026

State of New Mexico
Energy, Minerals, and Natural
Resources Department
Attn: Matthew Gomez

Via E-Mail

**Re: Rope State 503H, 504H, 603H, 604H
Mack Energy Corporation's Consent to Overlap (Case No. 24459)**

Dear Mr. Gomez,

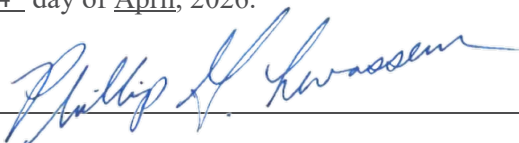
On November 13, 2024, Mack Energy Corporation, operator of their vertical wells located in Section 18, Township 18 South, Range 35 East, waived their objection of the overlapping spacing units of Case No. 24459. Case No. 24459 covered the Bone Spring Formation in the E/2 of Sections 18, 19, and 30, Township 18 South, Range 35 East, Lea County, New Mexico and included the application of Rope State Com 303H, Rope State Com 304H, and Rope State Com 604H.

Coterra is requesting sundries on all three wells listed in Case No. 24459:

**Rope State Com 504H (FKA Rope State Com 304H)
Rope State Com 603H (FKA Rope State Com 603H)
Rope State Com 604H**

including an additional well, **Rope State Com 503H**, all within the proposed unit of SE/4 of Section 7 and the E/2 of Sections 18, 19, and 30, Township 18 South, Range 35 East, Lea County, New Mexico, which includes all lands and the Bone Spring Formation under Case No. 24459.

Dated this 24th day of April, 2026.

Signature: 

Name: Phillip G. Levasseur

Title: Regulatory Compliance Manager, Attorney-in-Fact



Coterra Energy Inc.
Permian Business Unit
6001 Deauville Blvd.
Suite 300N
Midland, TX 79706

T 432.571.7800
coterra.com

April 24, 2026

State of New Mexico
Energy, Minerals, and Natural
Resources Department
Attn: Matthew Gomez

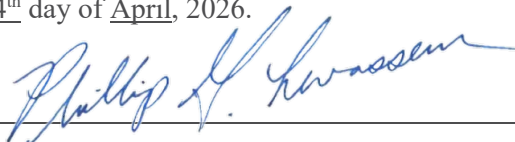
Via E-Mail

**Re: Rope State 503H, 504H, 603H, 604H
 Rope State JOA Statement
 Consent to Overlap**

Dear Mr. Gomez,

MorningStar Operating LLC (“MorningStar”), operator of the State AN 005 (API No. 30-025-03105), located in the NW/4 SE/4 of Section 7, Township 18 South, Range 35 East, Lea County, New Mexico, hereby waived any objection to the drilling of the **Rope State Com 503H, Rope State Com 504H, Rope State Com 603H, and the Rope State Com 604H**, within the proposed unit (SE/4 of Section 7 and the E/2 of Sections 18, 19, and 30, Township 18 South, Range 35 East, Lea County, New Mexico, whose completed interval will partially overlap the existing spacing unit of the State AN 005, when MorningStar executed the Rope State JOA covering the Bone Spring Formation on February 20, 2026 as a participating partner in the aforementioned Rope State wells.

Dated this 24th day of April, 2026.

Signature: 

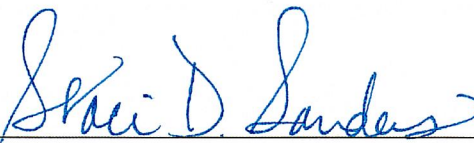
Name: Phillip G. Levasseur

Title: Regulatory Compliance Manager, Attorney-in-Fact

WAIVER

Mack Energy Corporation, operator of certain existing vertical wells located in Section 18, Township 18 South, Range 35 East, hereby waives any requirement to receive notice by certified mail of Franklin Mountain Energy 3's application seeking approval, to the extent necessary, of overlapping spacing units in Case No. 24459. Mack Energy Corporation also does not object to Franklin Mountain Energy 3's application in Case No. 24459.

Dated: 11/13/2024


(signature)

Name: Staci D. Sanders

Title: Vice President



Coterra Energy Inc.
Permian Business Unit
6001 Deauville Blvd.
Suite 300N
Midland, TX 79706

T 432.571.7800
coterra.com

February 12, 2026

MorningStar Operating, LLC
400 W 7th Street
Fort Worth, TX 76102

RECEIVED

FEB 26 2026

COTERRA ENERGY-PBU

Re: **Revised Exhibit "A"**
Rope State Com 501H, 502H & 604H
Sections 7, 18 19 & 30-T18S-R35E
Lea County, New Mexico

To Whom It May Concern,

Enclosed for your execution are signature pages for the above-referenced Operating Agreement associated with the above described lands and wells.

We have revised the Rope State JOA's Exhibit A to include the below OGL which was unintentionally left off the original Exhibit A:

- 2. Lessor: State of New Mexico VB-1313
Lessee: Chase Oil Corporation
Date: January 1, 2008
Description: T18S, R35E, N.M.P.M., Lea County, NM
Section 18: SE4
Recorded: Book 2232, Page 544

Please review and execute the enclosed signature pages at your convenience. Should you have any questions, please contact Landman Blair Nutter at blair.nutter@coterra.com

Respectfully,

Gena Hale
Coterra Energy Inc.
Land Department
Gena.Hale@Coterra.com

A.A.P.L. FORM 610-E - GAS BALANCING AGREEMENT - 1992

1 15. COUNTERPARTS

2 This Agreement may be executed in counterparts, each of which when taken with all other counterparts shall constitute
3 a binding agreement between the Parties hereto; provided, however, that if a Party or Parties owning a Percentage Interest in
4 the Balancing Area equal to or greater than a one hundred percent (100 %) therein fail(s) to execute this
5 Agreement on or before _____, this Agreement shall not be binding upon any Party and shall be of
6 no further force and effect.

7 IN WITNESS WHEREOF, this Agreement shall be effective as of the 1st day of January, 2026.

10 ATTEST OR WITNESS:

OPERATOR

11 Coterra Energy Operating Co.

12 _____ By _____

13 Bradley Cantrell
Type or print name

14 Title Attorney-In-Fact

15 Date _____

16 Tax ID or S.S. No. _____

18 NON-OPERATORS

20 MRC Permian Company

21 _____ By _____

22 _____
Type or print name

23 Title _____

24 Date _____

25 Tax ID or S.S. No. _____

27 Axis Energy Corporation

28 _____ By _____

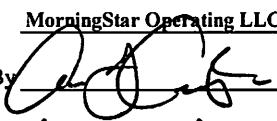
29 _____
Type or print name

30 Title _____

31 Date _____

32 Tax ID or S.S. No. _____

33 MorningStar Operating LLC

34 _____ By 

35 Allen L. Armstrong, Jr.
Type or print name

36 Title Vice President - Land

37 Date 2-20-2026

38 Tax ID or S.S. No. _____

A.A.P.L. FORM 610-E - GAS BALANCING AGREEMENT - 1992

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
APPROVED FORM A.A.P.L. NO. 610-E

ACKNOWLEDGMENTS

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Acknowledgment in representative capacity:

State of TEXAS §

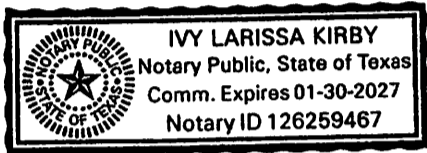
§ ss.

County of TARRANT §

This instrument was acknowledged before me on 20TH DAY OF FEBRUARY, 2026

by ALLEN L. ARMSTRONG, JR AS VICE PRESIDENT-LAND, OF MORNING STAR OPERATING LLC

(Seal, if any)



Ivy Kirby

Title (and Rank) _____

My commission expires: 1.30.2027

State of _____ §

§ ss.

County of _____ §

This instrument was acknowledged before me on _____

by _____

(Seal, if any)

Title (and Rank) _____

My commission expires: _____

State of _____ §

§ ss.

County of _____ §

This instrument was acknowledged before me on _____

by _____

(Seal, if any)

Title (and Rank) _____

My commission expires: _____

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989

1 IN WITNESS WHEREOF, this agreement shall be effective as of the 1 day of January, 2026.

2 _____, who has prepared and circulated this form for execution, represents and warrants

3 that the form was printed from and, with the exception(s) listed below, is identical to the AAPL Form 610-1989 Model Form

4 Operating Agreement, as published in computerized form by Forms On A Disk, Inc. No changes, alterations, or

modifications, other than those made by strikethrough and/or insertion and that are clearly recognizable as changes in

Articles _____, have been made to the form.

ATTEST OR WITNESS:

OPERATOR

Coterra Energy Operating Co.

6 _____

7 _____

By: _____

Bradley Cantrell

Type or print name

Title Attorney-in-Fact

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

MRC Permian Company

15 _____

16 _____

17 _____

By: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

Axis Energy Corporation

23 _____

24 _____

25 _____

By: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

MorningStar Operating LLC

30 _____

31 _____

32 _____

By: 

Allen L. Armstrong, Jr.

Type or print name

Title Vice President - Land

Date 2-20-2024

Tax ID or S.S. No. _____

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989

ACKNOWLEDGMENTS

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Note: The following forms of acknowledgment are the short forms approved by the Uniform Law on Notarial Acts.
The validity and effect of these forms in any state will depend upon the statutes of that state.

Individual acknowledgment:

State of _____)

_____) ss.

County of _____)

— This instrument was acknowledged before me on

_____ by _____

(Seal, if any) _____

_____ Title (and Rank) _____

_____ My commission expires: _____

Acknowledgment in representative capacity:

STATE OF TEXAS §
§
COUNTY OF MIDLAND §

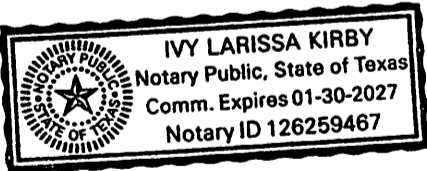
This instrument was acknowledged before me on this _____ day of _____, 2026, by Bradley Cantrell, acting as Attorney-in-Fact for Coterra Energy Operating Co., a Delaware corporation, on behalf of said corporation.

Notary Public in and for the State of Texas

My Commission Expires: _____

STATE OF TEXAS §
§
COUNTY OF TARRANT §

This instrument was acknowledged before me on this 20TH day of FEBRUARY, 2026 by ALEX L. ARMSTRONG, JR., as VICE PRESIDENT - LAND of MIDLAND STAR OPERATING LLC, a DELAWARE LLC, on behalf of said company.



Ivy Larissa Kirby
Notary Public in and for the State of TX

My Commission Expires: 1.30.2027

Axis Energy Corporation

By: [Signature]
Name

Print Name: KENNETH BARBE JR

Title: PRESIDENT

Date: 2/3/2024

Tax ID or S.S. NO. 76-0359824

MorningStar Operating LLC

By: _____
Name

Print Name: _____

Title: _____

Date: _____

Tax ID or S.S. NO. _____

ACKNOWLEDGEMENTS

STATE OF _____)
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2025, by Brad Cantrell as Attorney-in-Fact of Coterra Energy Operating Co. on behalf of said corporations.

Notary Public in and for the State of Texas

My commission expires: _____

State of _____)
County of _____) ss.

This instrument was acknowledged before me on _____ day of _____, 2025 by _____ as _____ of MRC Permian Company, a _____.

(Seal, if any)

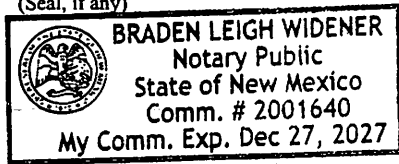
Notary Public in and for the State of Texas

My commission expires: _____

State of New Mexico)
County of Chaves) ss.

This instrument was acknowledged before me on 3rd day of February, 2025 by Verneth Barc, Jr as President of Axis Energy Corporation, a Texas Corp.

(Seal, if any)



Braden Widener
Notary Public in and for the State of Texas New Mexico

My commission expires: 12-27-2027

State of _____)
County of _____) ss.

This instrument was acknowledged before me on _____ day of _____, 2025 by _____ as _____ of MorningStar Operating LLC, a _____.

(Seal, if any)

Notary Public in and for the State of Texas

My commission expires: _____

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989

1 IN WITNESS WHEREOF, this agreement shall be effective as of the 1 day of January, 2026.

2 _____, who has prepared and circulated this form for execution, represents and warrants

3 ~~that the form was printed from and, with the exception(s) listed below, is identical to the A.A.P.L. Form 610-1989 Model Form~~

4 ~~Operating Agreement, as published in computerized form by Forms On A Disk, Inc. No changes, alterations, or~~

5 ~~modifications, other than those made by strikethrough and/or insertion and that are clearly recognizable as changes in~~

6 ~~Articles _____, have been made to the form.~~

ATTEST OR WITNESS:

OPERATOR

Coterra Energy Operating Co.

By: _____

Bradley Cantrell

Type or print name

Title Attorney-in-Fact

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

MRC Permian Company

By: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

Axis Energy Corporation

By: [Signature]

KENNETH BARBE JR

Type or print name

Title PRESIDENT

Date 2/3/2026

Tax ID or S.S. No. 76-0359826

MorningStar Operating LLC

By: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989

1 services necessary to secure regulatory permits and approvals for drilling wells, laying pipelines, collecting and discharging
2 water and any other matters related to the Contract Area

3 **W. PRODUCED WATER**

4 It is hereby expressly agreed that, for the disposal of produced water from the Contract Area, the Parties shall be charged a rate
5 at or below the then currently prevailing rate in the area.

6 **X. FORCE MAJEURE (NM)**

7 The Parties recognize that due to environmental concerns relating to the Contract Area, there may be limited drilling windows
8 during which Operator will be permitted to drill, and that consequently a force majeure preventing drilling during one window may require
9 that Operator defer drilling until the next available window, even though the force majeure that originally prevented the drilling terminates
10 earlier. In that event, the force majeure shall be considered to continue until Operator, with reasonable diligence, is able to commence or
11 resume drilling in the next available drilling window. If the force majeure ends while the drilling window is open but without sufficient time
12 within that window to allow the well to be drilled to the authorized depth. Operator may defer commencement or resumption of drilling until
13 the next available window.

14 **Y. DE-SPACED AND RE-SPACED UNIT(S)**

15 If a proration or spacing unit comprising all or part of the Contract Area is reduced in size by a governmental agency, or by court
16 order, or by the terms of the applicable Oil and Gas Lease(s) which have been contributed to the unit, or by agreement of the parties hereto,
17 or by completion of a unit well in a formation different than that originally contemplated by the Consenting Parties when the well was
18 commenced, then the parties' interests in the Contract Area, as shown on Exhibit "A", will remain unchanged, subject to the payment of
19 royalties as follows: The parties agree to pay their share of all royalties, overriding royalties, production payments and all other burdens not
20 excepted by Article III.C herein, in proportion to their interests as shown in Exhibit "A", regardless of which party(s) contributed the Oil and
21 Gas Lease(s) on which the royalty and other burdens are due.

22 **Z. MISCELLANEOUS**

23 *Conflict of Terms.* In the event of a conflict between the typewritten portions and printed portions of this agreement, the typewritten
24 portions shall prevail. In the event of a conflict between the terms of this Article XVI and any other portion of this agreement, the terms of
25 Article XVI shall govern, control and prevail.

26 *Invalid Provisions.* In the event any provision contained in this agreement is contrary to any law, rule, regulation or order and is
27 held to be invalid, void, illegal or unenforceable in any respect, the parties shall either modify the provision to properly conform with such
28 law, rule, regulation or order or delete such provision from this agreement, and in either case the remaining provisions hereof shall remain
29 unaffected and will continue in full force and effect. Furthermore, in lieu of such invalid, void, illegal or unenforceable provision there
30 automatically shall be added as part of this agreement a provision as closely resembling such provision as shall then be valid, legal and
31 enforceable so long as such provision does not have a material adverse effect on the rights of any party to this agreement.

32 *COPAS Interpretation.* The provisions of Exhibit "C" attached hereto shall be interpreted as recommended by the Council of
33 Petroleum Accountants Societies of North America, Accounting Procedure for Joint Operations, after giving effect to special changes and
34 provisions noted herein and in the provisions of Exhibit "C", if any.

35 *JOA Preparation.* Each party acknowledges and agrees that such party has been represented or had the opportunity to be
36 represented by attorneys of its own choosing and therefore, for the purposes of construing this agreement, each party shall be deemed to have
37 participated equally in the preparation and drafting of this agreement. If any ambiguity is contained in this agreement, no weight shall be
38 given in favor or against any party in resolving that ambiguity on account of that party's drafting of this agreement.

39 **AA. PRODUCTION SHARING AGREEMENT**

40 ~~This JOA is being executed concurrently with two Production Sharing Agreements, both dated April 1, 2024, with Cimarex Energy
41 Co. as Operator. Non-Operator(s) acknowledge that they have reviewed the terms of such Production Sharing Agreements, and in the event
42 of a conflict of the provisions of this Operating Agreement and the Production Sharing Agreements, the provisions of the Production Sharing
43 Agreements shall control and prevail. Furthermore, additional Production Sharing Agreements, containing substantially the same terms, may
44 be executed in the future covering alternative depths and Sharing Areas located within the Contract Area.~~

45 **BB. RENEWAL OR EXTENSION OF LEASES**

46 Notwithstanding anything herein to the contrary, each party committing any Lease or Leases or any undivided interest therein or
47 portion thereof to this agreement shall have the sole option prior to the expiration of each such Lease to renew or extend such Lease with
48 respect to all of such party's interest therein and to bear the renewal or extension costs and expenses incurred in connection therewith and
49 thereby retain its interest and title in said Lease. If any such party does not timely exercise its option and procure a renewal or extension of its
50 interest in such Lease, then any replacement Lease taken covering such interest will thereafter be subject to the terms of Article VIII.B. The
51 provisions of this section shall only apply to Leases or portions of Leases located in the Contract Area.

52 **CC. HEADINGS**

53 All headings in this agreement are for reference purposes only and have no binding effect on the terms, conditions, or provisions
54 of this agreement.

55 **DD. ADDITIONAL LANGUAGE TO ARTICLE V.A - OPERATOR**

56 THE FOLLOWING PROVISIONS SHALL BE DEEMED CLEAR AND CONSPICUOUS AND SATISFY THE EXPRESS
57 NEGLIGENCE RULE. ANYTHING TO THE CONTRARY NOTWITHSTANDING, OPERATOR SHALL HAVE NO LIABILITY FOR
58 ORDINARY NEGLIGENCE ARISING UNDER OR IN CONNECTION WITH THIS AGREEMENT (INCLUDING WITHOUT
59 LIMITATION THE ADMINISTRATION OF THIS AGREEMENT OR OPERATIONS HEREUNDER), EXCEPT FOR THE GROSS
60 NEGLIGENCE OR WILLFUL MISCONDUCT OF OPERATOR.

61 **EE. ADDITIONAL LANGUAGE TO ARTICLE VII.A - LIABILITIES OF PARTIES**

62 NO PARTY SHALL BE LIABLE TO ANY OTHER PARTY HERETO FOR ANY LOST OR PROSPECTIVE PROFITS OR
63 ANY OTHER SPECIAL, PUNITIVE, EXEMPLARY, CONSEQUENTIAL, INCIDENTAL OR INDIRECT LOSSES OR DAMAGES (IN
64 TORT, CONTRACT OR OTHERWISE) UNDER OR IN RESPECT OF THIS AGREEMENT OR FOR ANY FAILURE OF
65 PERFORMANCE RELATED HERETO HOWSOEVER CAUSED, WHETHER OR NOT ARISING FROM SUCH PARTY'S SOLE,
66 JOINT OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR OTHER FAULT OR
67 RESPONSIBILITY. For purposes of the foregoing, actual damages may, however, include indirect, special, consequential, incidental or
68 indirect losses or exemplary or punitive damages to the extent (i) the injuries or losses resulting in or giving rise to such damages are incurred
69 or suffered by a third party which is not a party to this agreement and (ii) such damages are recovered against such party by a third party
70 which is not a party hereto. This Article XVI.I shall operate only to limit a party's liability and shall not operate to increase or expand any
71 contractual obligation of a party hereunder.

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989

1 IN WITNESS WHEREOF, this agreement shall be effective as of the 1 day of January, 2026.

2 _____, who has prepared and circulated this form for execution, represents and warrants

3 that the form was printed from and, with the exception(s) listed below, is identical to the A.A.P.L. Form 610-1989 Model Form

4 Operating Agreement, as published in computerized form by FormS On A Disk. No changes, alterations, or

5 modifications, other than those made by ~~strike through and/or insertion~~ and that are clearly recognizable as changes in

6 Articles _____, have been made to the form.

ATTEST OR WITNESS:

OPERATOR

Coterra Energy Operating Co.

By: _____

Bradley Cantrell
Type or print name

Title Attorney-in-Fact

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

MRC Pennian Company

By: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

Axis Energy Corporation

By: [Signature]

KENNETH BARBE JR
Type or print name

Title PRESIDENT

Date 2/3/2026

Tax ID or S.S. No. 76-0359826

MorningStar Operating LLC

By: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989

ACKNOWLEDGMENTS

Note: The following forms of acknowledgment are the short forms approved by the Uniform Law on Notarial Acts. The validity and effect of these forms in any state will depend upon the statutes of that state.

Individual acknowledgment:

State of _____

County of _____

This instrument was acknowledged before me on

_____ by _____

(Seal, if any) _____

_____ Title (and Rank) _____

_____ My commission expires: _____

Acknowledgment in representative capacity:

STATE OF TEXAS §

COUNTY OF MIDLAND §

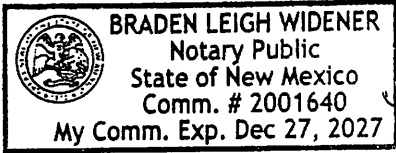
This instrument was acknowledged before me on this _____ day of _____, 2026, by Bradley Cantrell, acting as Attorney-in-Fact for Coterra Energy Operating Co., a Delaware corporation, on behalf of said corporation.

Notary Public in and for the State of Texas

My Commission Expires: _____

STATE OF New Mexico §
COUNTY OF Chaves §

This instrument was acknowledged before me on this 3rd day of February, 2026, by Kenneth Bate, Jr., as President of Axis Energy Corporation, on behalf of said company.



Braden Widener
Notary Public in and for the State of New Mexico
My Commission Expires: 12-27-2027

A.A.P.L. FORM 610-E - GAS BALANCING AGREEMENT - 1992

1 15. COUNTERPARTS

2 This Agreement may be executed in counterparts, each of which when taken with all other counterparts shall constitute
 3 a binding agreement between the Parties hereto; provided, however, that if a Party or Parties owning a Percentage Interest in
 4 the Balancing Area equal to or greater than a one hundred percent (100%) therein fail(s) to execute this
 5 Agreement on or before _____, this Agreement shall not be binding upon any Party and shall be of
 6 no further force and effect.
 7 IN WITNESS WHEREOF, this Agreement shall be effective as of the 1st day of January, 2026.

10 ATTEST OR WITNESS:

OPERATOR

Coterra Energy Operating Co.

By _____

Bradley Cantrell
Type or print name

Title Attorney-In-Fact

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

MRC Permian Company

By _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

Axis Energy Corporation

By [Signature]

KENNETH BARBE JR
Type or print name

Title PRESIDENT

Date 2/3/2026

Tax ID or S.S. No. 76-0359826

MorningStar Operating LLC

By _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

A.A.P.L. FORM 610-E - GAS BALANCING AGREEMENT - 1992

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
APPROVED FORM A.A.P.L. NO. 610-E

ACKNOWLEDGMENTS

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Acknowledgment in representative capacity:

State of _____ §
§ ss.
County of _____ §

This instrument was acknowledged before me on _____

by _____

(Seal, if any)

Title (and Rank) _____

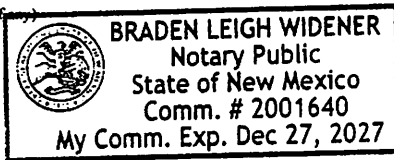
My commission expires: _____

State of New Mexico §
§ ss.
County of Chaves §

This instrument was acknowledged before me on February 3, 2026

by Kenneth Barbe, III, President Axis Energy Corporation

(Seal, if any)



Braden Widener
Title (and Rank) Notary Public

My commission expires: 12-27-2027

State of _____ §
§ ss.
County of _____ §

This instrument was acknowledged before me on _____

by _____

(Seal, if any)

Title (and Rank) _____

My commission expires: _____

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

COMMENTS

Action 578269

COMMENTS

Operator: Coterra Energy Operating Co. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 578269
	Action Type: [C-103A] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
jeffrey.harrison	Infill to well API 30-025-53337.	4/27/2026

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 578269

CONDITIONS

Operator: Coterra Energy Operating Co. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 578269
	Action Type: [C-103A] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
jeffrey.harrison	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	4/27/2026
jeffrey.harrison	All previous COA's not addressed within the updated COA's still apply.	4/27/2026
jeffrey.harrison	All conducted logs must be submitted to the OCD.	4/27/2026
jeffrey.harrison	If cement does not circulate to surface on any string, a Cement Bond Log (CBL) is required for that string of casing. If strata isolation is not achieved, remediation will be required before further operations may commence.	4/27/2026
jeffrey.harrison	Cement must be in place for at least eight hours AND achieve a minimum compressive strength of 500 PSI before performing any further operations on the well.	4/27/2026