

Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

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

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

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 ☒ Gas Well ☐ Other ☐		WELL API NO. 30-025-53340 5. Indicate Type of Lease STATE ☒ FEE ☐ 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
3. Address of Operator 6001 Deauville Blvd, Midland, TX 79706		8. Well Number 501H
4. Well Location Unit Letter <u>M</u> : <u>330</u> feet from the <u>S</u> line and <u>948</u> feet from the <u>FWL</u> line Section <u>30</u> Township <u>18S</u> Range <u>35E</u> NMPM SWSW County <u>Lea</u>		9. OGRID Number 215099
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3951.9		10. Pool name or Wildcat Airstrip; Bone Spring

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

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 501H:

SHL from 330 FSL 948 FWL to 330 FSL 928 FWL
 BHL from 100 FNL 800 FWL to 2546 FSL 800 FWL
 MD from 14796' to 28422'
 TVD from 9888' to 10150'
 Add pool WC-025 G-06 S183518A; Bone Spring (97930) with spacing of 381.64 acres

Spud Date:

4/9/2026

Rig Release Date:

5/9/2026

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 3/25/2026

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):

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION		Revised July 9, 2024	
			Submittal Type:	☐ Initial Submittal
				☒ Amended Report
		☐ As Drilled		

WELL LOCATION INFORMATION

API Number 30-025-53340	Pool Code ~~07030~~ 960	Pool Name ~~WC 025 G 06 S183518A, Bone Spring~~ AIRSTRIPE; BONE SPRING
Property Code 338213	Property Name ROPE STATE COM	Well Number 501H
OGRID No. 215099	Operator Name COTERRA ENERGY OPERATING CO.	Ground Level Elevation 3951.9'
Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal		Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal

Surface Location

UL M	Section 30	Township 18S	Range 35E	Lot 4	Ft. from N/S 330 SOUTH	Ft. from E/W 928 WEST	Latitude (NAD 83) 32.712428°	Longitude (NAD 83) -103.502238°	County LEA
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Bottom Hole Location

UL L	Section 7	Township 18S	Range 35E	Lot 3	Ft. from N/S 2,546 SOUTH	Ft. from E/W 800 WEST	Latitude (NAD 83) 32.762150°	Longitude (NAD 83) -103.502726°	County LEA
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Dedicated Acres 153.68	Infill or Defining Well Defining	Defining Well API 30-025-53340	Overlapping Spacing Unit (Y/N) Y	Consolidation Code C
Order Numbers. NA- JOA		Well setbacks are under Common Ownership: ☐ Yes ☐ No NA		

Kick Off Point (KOP)

UL M	Section 30	Township 18S	Range 35E	Lot 4	Ft. from N/S 100 SOUTH	Ft. from E/W 800 WEST	Latitude (NAD 83) 32.711798°	Longitude (NAD 83) -103.502653°	County LEA
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First Take Point (FTP)

UL M	Section 30	Township 18S	Range 35E	Lot 4	Ft. from N/S 100 SOUTH	Ft. from E/W 800 WEST	Latitude (NAD 83) 32.711798°	Longitude (NAD 83) -103.502653°	County LEA
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Last Take Point (LTP)

UL L	Section 7	Township 18S	Range 35E	Lot 3	Ft. from N/S 2,546 SOUTH	Ft. from E/W 800 WEST	Latitude (NAD 83) 32.762150°	Longitude (NAD 83) -103.502726°	County LEA
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Unitized Area or Area of Uniform Interest W2W2 Sec 30,19,18,7	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3591.9
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OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i> <i>Shelly Bowen</i> 3/18/2026 Signature Date Shelly Bowen Printed Name shelly.bowen@coterra.com Email Address	SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from the field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i>  Signature and Seal of Professional Surveyor 23782 November 06, 2025 Certificate Number Date of Survey
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Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION		Revised July 9, 2024	
			Submittal Type:	☐ Initial Submittal
				☒ Amended Report
		☐ As Drilled		

WELL LOCATION INFORMATION

API Number 30-025-53340	Pool Code 97930	Pool Name WC-025 G-06 S183518A; Bone Spring
Property Code	Property Name ROPE STATE COM	Well Number 501H
OGRID No. 215099	Operator Name COTERRA ENERGY OPERATING CO.	Ground Level Elevation 3951.9'
Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal		Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal

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Dedicated Acres 381.6472	Infill or Defining Well Defining	Defining Well API 30-025-53340	Overlapping Spacing Unit (Y/N) Y	Consolidation Code C
Order Numbers. NA- JOA		Well setbacks are under Common Ownership: ☐ Yes ☐ No NA		

Kick Off Point (KOP)

UL M	Section 30	Township 18S	Range 35E	Lot 4	Ft. from N/S 100 SOUTH	Ft. from E/W 800 WEST	Latitude (NAD 83) 32.711798°	Longitude (NAD 83) -103.502653°	County LEA
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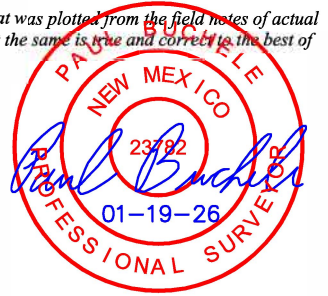
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Last Take Point (LTP)

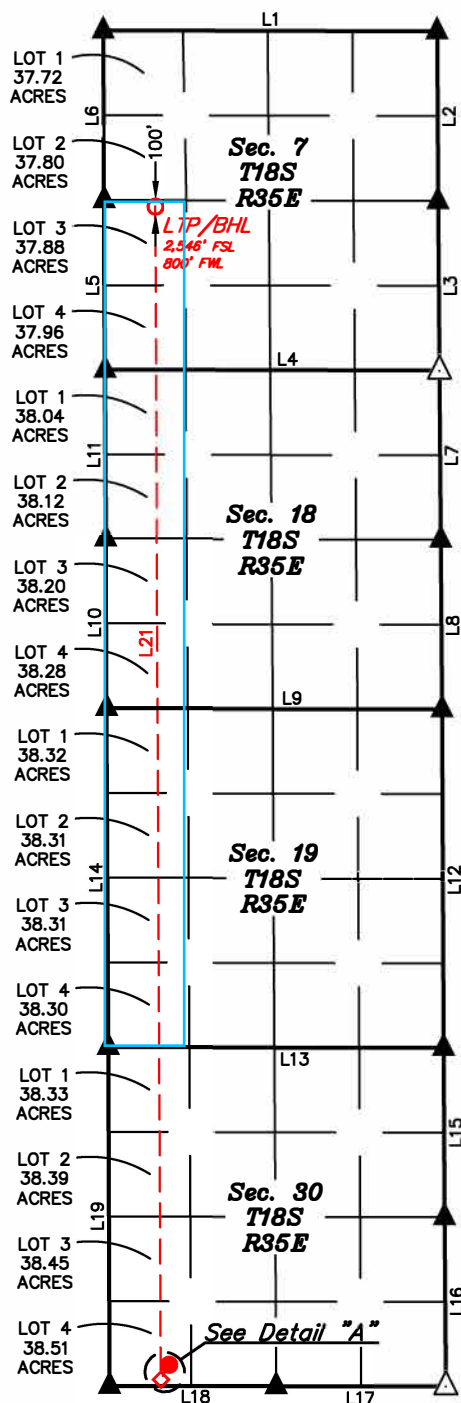
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Unitized Area or Area of Uniform Interest W2W2 Sec 30,19,18,7	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3591.9
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Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

Property Name ROPE STATE COM	Well Number 501H	Drawn By N.R. 02-21-24	Revised By REV. 3 T.I.R. 01-19-26 (UPDATE BHL)
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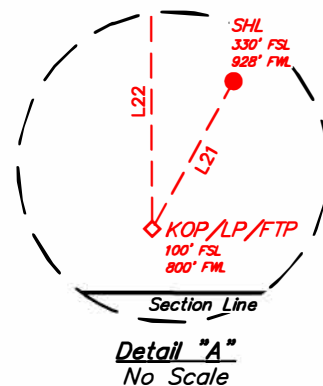


LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N89°52'35"W	5215.75'
L2	N00°20'12"W	2652.85'
L3	N00°29'20"W	2644.93'
L4	N89°50'52"W	5226.42'
L5	N00°14'19"W	2646.78'
L6	N00°21'23"W	2648.29'
L7	N00°25'18"W	2644.91'
L8	N00°27'34"W	2647.99'
L9	N89°54'23"W	5237.28'
L10	N00°17'55"W	2647.91'
L11	N00°20'48"W	2650.24'
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	S28°55'03"W	262.42'
L21	N00°16'32"W	18322.94'

NAD 83 (SURFACE HOLE LOCATION)	
LATITUDE = 32°42'44.74" (32.712428°)	
LONGITUDE = -103°30'08.06" (-103.502238°)	
NAD 27 (SURFACE HOLE LOCATION)	
LATITUDE = 32°42'44.29" (32.712304°)	
LONGITUDE = -103°30'06.28" (-103.501744°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 623914.59' E: 796958.97'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 623850.20' E: 755779.28'	

NAD 83 (KOP/LP/FTP)	
LATITUDE = 32°42'42.47" (32.711798°)	
LONGITUDE = -103°30'09.55" (-103.502653°)	
NAD 27 (KOP/LP/FTP)	
LATITUDE = 32°42'42.03" (32.711674°)	
LONGITUDE = -103°30'07.77" (-103.502159°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 623684.40' E: 796833.08'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 623620.01' E: 755653.38'	

NAD 83 (LTP/BHL)	
LATITUDE = 32°45'43.74" (32.762150°)	
LONGITUDE = -103°30'09.81" (-103.502726°)	
NAD 27 (LTP/BHL)	
LATITUDE = 32°45'43.29" (32.762026°)	
LONGITUDE = -103°30'08.03" (-103.502230°)	
STATE PLANE NAD 83 (N.M. EAST)	
N: 642003.59' E: 796667.14'	
STATE PLANE NAD 27 (N.M. EAST)	
N: 641938.66' E: 755487.95'	



- = 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.)



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 plat may be obtained from Uintah Engineering and Land Surveying.

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	1923	N/A	
Top of Salt	2201	N/A	
Base of Salt/Lamar	5810	N/A	
Top Delaware Sands/Bell Canyon	5990	N/A	
Cherry Canyon	6240	N/A	
Brushy Canyon	6640	N/A	
Basal Brushy Canyon	7414	N/A	
Bone Spring Lime	7652	N/A	
Leonard/Avalon Sand	7850	N/A	
1st Bone Spring Sand	9135	Hydrocarbons	
2nd Bone Spring Sand	9679	Hydrocarbons	
2nd Bone Spring Sand - Target	10053	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	2034	2034	13-3/8"	54.50	J-55	ST&C	1.29	3.12	4.64
12 1/4	0	5835	5835	9-5/8"	40.00	J-55	BT&C		1.26	2.70
8 1/2	0	9492	9492	7"	29.00	P-110	BT&C	1.92	2.53	5.31
8 1/2	9492	28422	7600	5-1/2"	23.00	P-110	BT&C	4.09	3.48	(16.64)
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.

Cimarex Energy Co., Rope State Com 501H

	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 ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	986	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	264	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	1093	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	200	10.30	3.64	22.18		Lead: Tuned Light + LCM
	4856	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	45
Intermediate	0	52
Production	5635	

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	50% 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 2034'	Fresh Water	7.80 - 8.30	28	N/C
2034' to 5835'	Brine Water	9.80 - 10.30	30-32	N/C
5835' to 28422'	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	
X	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.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval
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7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	3556 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	H ₂ S is present
X	H ₂ S 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 501H
Wellbore: OH
Design: Plan #4
Rig:

Formations		
TVDP	MDPath	Formation
1923.00	1923.00	Rustler
2009.00	2009.00	A3 Top
2107.00	2107.00	A3 Base (Tamarisk)
2201.00	2201.00	Top Salt/Salado
5810.00	5825.06	Base Salt/Lamar/CTRA_BASE_ANHYDRITE
5990.00	6005.18	Top Delaware Sands/Bell Canyon
6240.00	6255.18	Cherry Canyon
6640.00	6655.18	Brushy Canyon
7414.00	7429.18	Basal Brushy Canyon
7652.00	7667.18	Bone Spring Lime
7850.00	7865.18	Leonard/Avalon Sand
9135.00	9150.18	1st Bone Spring Sand
9679.00	9698.58	2nd Bone Spring Sand
10053.00	10345.06	2nd Bone Spring Sand Lower Target

SHL

330' FSL, 928' FWL
RKB Elevation: GE 3951.9' + KB 23' @ 3974.90usft

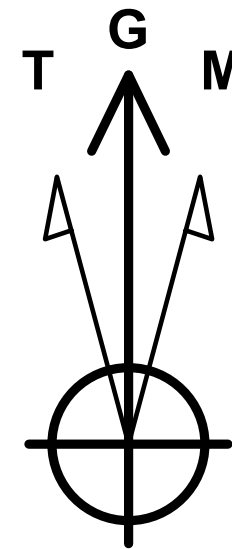
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	623914.59	796958.97	32.7124278	-103.5022379	

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	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	Nudge, Build 2.00°/100'
3850.05	7.00	208.67	3849.17	-18.74	-10.25	2.00	208.67	-18.65	Hold - 3850.05' MD/3849.18' TVD
5652.13	7.00	208.67	5637.83	-211.45	-115.64	0.00	0.00	-210.39	Drop, 2.00°/100' DLS
6002.18	0.00	0.00	5987.00	-230.19	-125.89	2.00	180.00	-229.04	Hold - 6002.18' MD/5987.00' TVD
9492.70	0.00	0.00	9477.52	-230.19	-125.89	0.00	0.00	-229.04	KOP - Start 10.00°/100' DLS
10242.70	75.00	359.48	10030.95	194.46	-129.74	10.00	359.48	195.63	75° Inc - 10242.70' MD/10030.96' TVD
10545.31	90.13	359.48	10070.00	493.64	-132.46	5.00	0.00	494.82	LP - 10545.31' MD
12300.49	90.13	359.48	10066.00	2248.75	-148.36	0.00	0.00	2250.00	Start DLS 2.00 TFO 0.02
12391.19	91.94	359.48	10064.36	2339.42	-149.18	2.00	0.02	2340.68	Hold - 12391.19' MD/10064.36' TVD
13551.17	91.94	359.48	10025.00	3498.69	-159.67	0.00	0.00	3500.00	Start DLS 2.00 TFO -0.25
13569.93	92.32	359.48	10024.30	3517.43	-159.84	2.00	-0.25	3518.74	Hold - 13569.93' MD/10024.30' TVD
15652.90	92.32	359.48	9940.00	5598.61	-178.73	0.00	0.00	5600.00	Start DLS 2.00 TFO 0.06
15744.17	94.14	359.48	9934.85	5689.73	-179.56	2.00	0.06	5691.13	Hold - 15744.17' MD/9934.85' TVD
17056.48	94.14	359.48	9840.00	6998.55	-191.39	0.00	0.00	7000.00	Start DLS 2.00 TFO -0.01
17117.05	95.36	359.48	9834.98	7058.92	-191.94	2.00	-0.01	7060.37	Hold - 17117.05' MD/9834.98' TVD
18563.00	95.36	359.48	9700.00	8498.49	-204.96	0.00	0.00	8500.00	Start DLS 2.00 TFO -178.22
18564.22	95.33	359.48	9699.89	8499.70	-204.97	2.00	-178.22	8501.21	Hold - 18564.22' MD/9699.89' TVD
20069.52	95.33	359.48	9560.00	9998.43	-218.55	0.00	0.00	10000.00	Start DLS 2.00 TFO 0.01
20181.13	97.56	359.48	9547.47	10109.32	-219.55	2.00	0.01	10110.90	Hold - 20181.13' MD/9547.47' TVD
21582.43	97.56	359.48	9363.00	11498.37	-232.13	0.00	0.00	11500.00	Start DLS 2.00 TFO -0.01
21702.77	99.97	359.48	9344.66	11617.29	-233.21	2.00	-0.01	11618.93	Hold - 21702.77' MD/9344.66' TVD
23866.52	99.97	359.48	8970.00	13748.27	-252.51	0.00	0.00	13750.00	Start DLS 2.00 TFO 0.00
24074.60	104.13	359.48	8926.56	13951.71	-254.35	2.00	0.00	13953.44	Hold - 24074.60' MD/8926.56' TVD
24896.01	104.13	359.48	8726.00	14748.23	-261.57	0.00	0.00	14750.00	Start DLS 2.00 TFO 0.00
25133.23	108.88	359.48	8658.63	14975.60	-263.63	2.00	0.00	14977.37	Hold - 25133.23' MD/8658.63' TVD
26742.40	108.88	359.48	8138.00	16498.16	-277.42	0.00	0.00	16500.00	Start DLS 2.00 TFO 0.01
26800.76	110.04	359.48	8118.56	16553.18	-277.92	2.00	0.01	16555.02	Hold - 26800.76' MD/8118.56' TVD
27540.55	110.04	359.48	7865.00	17248.13	-284.21	0.00	0.00	17250.00	Start DLS 2.00 TFO -179.99
27679.06	107.27	359.48	7820.69	17379.34	-285.40	2.00	-179.99	17381.21	Hold - 27679.06' MD/7820.69' TVD
28422.27	107.27	359.48	7600.00	18089.00	-291.83	0.00	0.00	18090.90	TD - 28422.27' MD

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LTP/PBHL - 2546' FSL, 800' FWL (RSC 501H)	7600.00	18089.00	-291.83	642003.59	796667.14	32.7621497	-103.5027256
KOP/LP/FTP (RSC 501H)	9477.54	-230.19	-125.89	623684.40	796833.08	32.7117978	-103.5026531



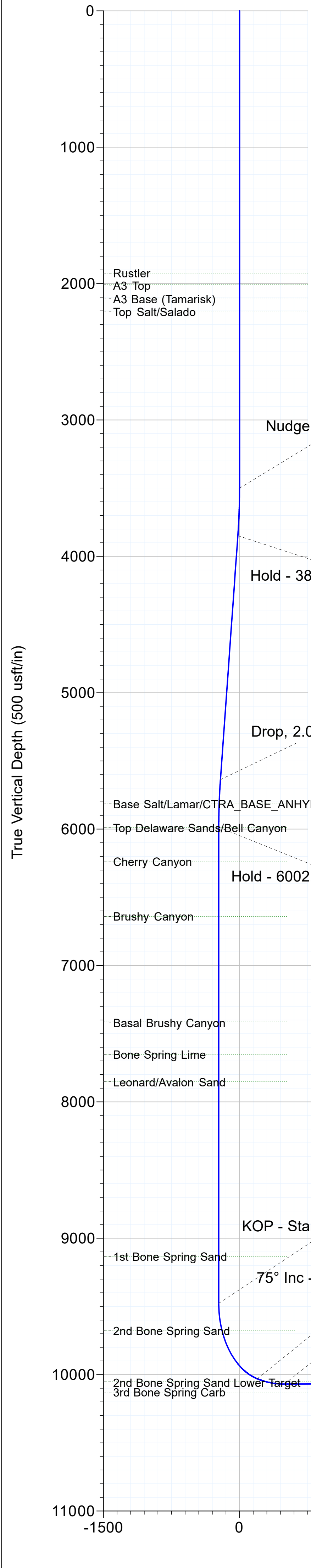
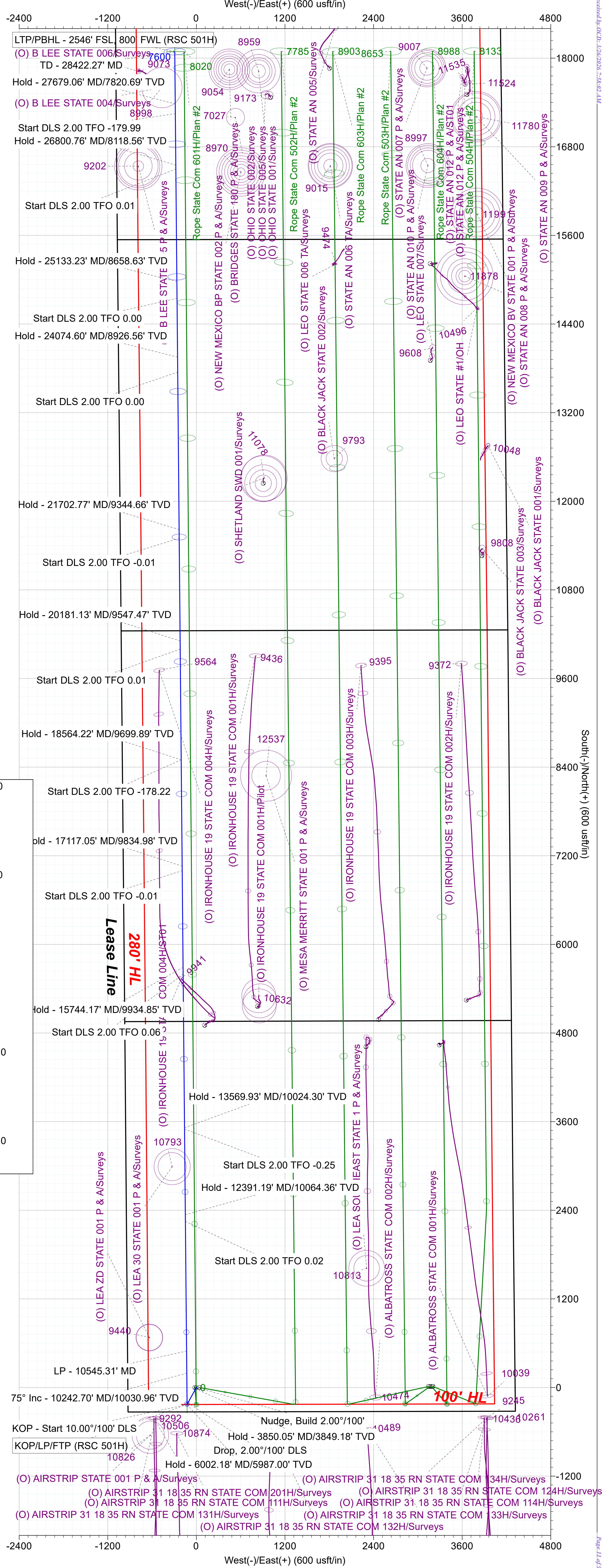
Azimuths to Grid North
True North: -0.45°
Magnetic North: 5.53°

Magnetic Field
Strength: 47291.4nT
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



Coterra Energy

Lea County, NM (NAD 83)

Rope State Com Pad

Rope State Com 501H

330' FSL, 928' FWL

OH

Plan: Plan #4



Standard Plan Report

19 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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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	Latitude:	32.7123973
From:	Map	Easting:	800,123.29 usft	Longitude:	-103.4919504
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Rope State Com 501H					
Well Position	+N/-S	0.00 usft	Northing:	623,914.59 usft	Latitude:	32.7124278
	+E/-W	0.00 usft	Easting:	796,958.97 usft	Longitude:	-103.5022379
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,951.90 usft
Grid Convergence:		0.45 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2026	3/11/2026	5.98	60.42	47,291.40000000

Design	Plan #4				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.48	

Survey Tool Program	Date	3/19/2026			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	28,422.27	Plan #4 (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,850.05	7.00	208.67	3,849.17	-18.74	-10.25	2.00	2.00	0.00	208.67	
5,652.13	7.00	208.67	5,637.83	-211.45	-115.64	0.00	0.00	0.00	0.00	
6,002.18	0.00	0.00	5,987.00	-230.19	-125.89	2.00	-2.00	0.00	180.00	
9,492.70	0.00	0.00	9,477.52	-230.19	-125.89	0.00	0.00	0.00	0.00	
10,242.70	75.00	359.48	10,030.95	194.46	-129.74	10.00	10.00	0.00	359.48	
10,545.31	90.13	359.48	10,070.00	493.64	-132.46	5.00	5.00	0.00	0.00	
12,300.49	90.13	359.48	10,066.00	2,248.75	-148.36	0.00	0.00	0.00	0.00	
12,391.19	91.94	359.48	10,064.36	2,339.42	-149.18	2.00	2.00	0.00	0.02	
13,551.17	91.94	359.48	10,025.00	3,498.69	-159.67	0.00	0.00	0.00	0.00	
13,569.93	92.32	359.48	10,024.30	3,517.43	-159.84	2.00	2.00	-0.01	-0.25	
15,652.90	92.32	359.48	9,940.00	5,598.61	-178.73	0.00	0.00	0.00	0.00	
15,744.17	94.14	359.48	9,934.85	5,689.73	-179.56	2.00	2.00	0.00	0.06	
17,056.48	94.14	359.48	9,840.00	6,998.55	-191.39	0.00	0.00	0.00	0.00	
17,117.05	95.36	359.48	9,834.98	7,058.92	-191.94	2.00	2.00	0.00	-0.01	
18,563.00	95.36	359.48	9,700.00	8,498.49	-204.96	0.00	0.00	0.00	0.00	
18,564.22	95.33	359.48	9,699.89	8,499.70	-204.97	2.00	-2.00	-0.06	-178.22	
20,069.52	95.33	359.48	9,560.00	9,998.43	-218.55	0.00	0.00	0.00	0.00	
20,181.13	97.56	359.48	9,547.47	10,109.32	-219.55	2.00	2.00	0.00	0.01	
21,582.43	97.56	359.48	9,363.00	11,498.37	-232.13	0.00	0.00	0.00	0.00	
21,702.77	99.97	359.48	9,344.66	11,617.29	-233.21	2.00	2.00	0.00	-0.01	
23,866.52	99.97	359.48	8,970.00	13,748.27	-252.51	0.00	0.00	0.00	0.00	
24,074.60	104.13	359.48	8,926.56	13,951.71	-254.35	2.00	2.00	0.00	0.00	
24,896.02	104.13	359.48	8,726.00	14,748.23	-261.57	0.00	0.00	0.00	0.00	
25,133.23	108.88	359.48	8,658.63	14,975.60	-263.63	2.00	2.00	0.00	0.00	
26,742.41	108.88	359.48	8,138.00	16,498.16	-277.42	0.00	0.00	0.00	0.00	
26,800.76	110.04	359.48	8,118.56	16,553.18	-277.92	2.00	2.00	0.00	0.01	
27,540.55	110.04	359.48	7,865.00	17,248.13	-284.21	0.00	0.00	0.00	0.00	
27,679.06	107.27	359.48	7,820.69	17,379.34	-285.40	2.00	-2.00	0.00	-179.99	
28,422.27	107.27	359.48	7,600.00	18,089.00	-291.83	0.00	0.00	0.00	0.00	LTP/PBHL - 2546' F

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)
0.00	0.00	0.00	0.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
800.00	0.00	0.00	800.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
1,923.00	0.00	0.00	1,923.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
Rustler													
2,000.00	0.00	0.00	2,000.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,009.00	0.00	0.00	2,009.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
A3 Top													
2,100.00	0.00	0.00	2,100.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,107.00	0.00	0.00	2,107.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
A3 Base (Tamarisk)													
2,200.00	0.00	0.00	2,200.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,201.00	0.00	0.00	2,201.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
Top Salt/Salado													
2,300.00	0.00	0.00	2,300.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	623,914.59	796,958.97	32.7124278	-103.5022379	0.00	0.00	0.00	0.00
Nudge, Build 2.00°/100'													
3,600.00	2.00	208.67	3,599.98	-1.53	-0.84	623,913.06	796,958.13	32.7124236	-103.5022407	-1.52	2.00	2.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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 Dogleg Section (usft)	Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,700.00	4.00	208.67	3,699.84	-6.12	-3.35	623,908.47	796,955.62	32.7124110	-103.5022490	-6.09	2.00	2.00	0.00
3,800.00	6.00	208.67	3,799.45	-13.77	-7.53	623,900.82	796,951.44	32.7123901	-103.5022627	-13.70	2.00	2.00	0.00
3,850.05	7.00	208.67	3,849.17	-18.74	-10.25	623,895.85	796,948.72	32.7123765	-103.5022717	-18.65	2.00	2.00	0.00
Hold - 3850.05' MD/3849.18' TVD													
3,900.00	7.00	208.67	3,898.76	-24.08	-13.17	623,890.51	796,945.80	32.7123619	-103.5022813	-23.96	0.00	0.00	0.00
4,000.00	7.00	208.67	3,998.01	-34.78	-19.02	623,879.81	796,939.95	32.7123326	-103.5023006	-34.60	0.00	0.00	0.00
4,100.00	7.00	208.67	4,097.27	-45.47	-24.87	623,869.12	796,934.10	32.7123034	-103.5023199	-45.24	0.00	0.00	0.00
4,200.00	7.00	208.67	4,196.52	-56.16	-30.72	623,858.43	796,928.25	32.7122741	-103.5023392	-55.88	0.00	0.00	0.00
4,300.00	7.00	208.67	4,295.77	-66.86	-36.56	623,847.73	796,922.41	32.7122448	-103.5023585	-66.52	0.00	0.00	0.00
4,400.00	7.00	208.67	4,395.03	-77.55	-42.41	623,837.04	796,916.56	32.7122156	-103.5023778	-77.16	0.00	0.00	0.00
4,500.00	7.00	208.67	4,494.28	-88.24	-48.26	623,826.35	796,910.71	32.7121863	-103.5023971	-87.80	0.00	0.00	0.00
4,600.00	7.00	208.67	4,593.54	-98.94	-54.11	623,815.65	796,904.86	32.7121570	-103.5024163	-98.44	0.00	0.00	0.00
4,700.00	7.00	208.67	4,692.79	-109.63	-59.96	623,804.96	796,899.01	32.7121278	-103.5024356	-109.08	0.00	0.00	0.00
4,800.00	7.00	208.67	4,792.05	-120.33	-65.81	623,794.26	796,893.16	32.7120985	-103.5024549	-119.72	0.00	0.00	0.00
4,900.00	7.00	208.67	4,891.30	-131.02	-71.65	623,783.57	796,887.32	32.7120692	-103.5024742	-130.36	0.00	0.00	0.00
5,000.00	7.00	208.67	4,990.56	-141.71	-77.50	623,772.88	796,881.47	32.7120400	-103.5024935	-141.00	0.00	0.00	0.00
5,100.00	7.00	208.67	5,089.81	-152.41	-83.35	623,762.18	796,875.62	32.7120107	-103.5025128	-151.64	0.00	0.00	0.00
5,200.00	7.00	208.67	5,189.06	-163.10	-89.20	623,751.49	796,869.77	32.7119815	-103.5025321	-162.28	0.00	0.00	0.00
5,300.00	7.00	208.67	5,288.32	-173.79	-95.05	623,740.80	796,863.92	32.7119522	-103.5025513	-172.92	0.00	0.00	0.00
5,400.00	7.00	208.67	5,387.57	-184.49	-100.90	623,730.10	796,858.07	32.7119229	-103.5025706	-183.56	0.00	0.00	0.00
5,500.00	7.00	208.67	5,486.83	-195.18	-106.74	623,719.41	796,852.23	32.7118937	-103.5025899	-194.20	0.00	0.00	0.00
5,600.00	7.00	208.67	5,586.08	-205.88	-112.59	623,708.71	796,846.38	32.7118644	-103.5026092	-204.85	0.00	0.00	0.00
5,652.13	7.00	208.67	5,637.83	-211.45	-115.64	623,703.14	796,843.33	32.7118491	-103.5026192	-210.39	0.00	0.00	0.00
Drop, 2.00°/100' DLS													
5,700.00	6.04	208.67	5,685.38	-216.22	-118.25	623,698.37	796,840.72	32.7118361	-103.5026279	-215.14	2.00	-2.00	0.00
5,800.00	4.04	208.67	5,784.99	-223.93	-122.47	623,690.66	796,836.50	32.7118150	-103.5026418	-222.81	2.00	-2.00	0.00
5,825.06	3.54	208.67	5,810.00	-225.39	-123.26	623,689.20	796,835.71	32.7118110	-103.5026444	-224.26	2.00	-2.00	0.00
Base Salt/Lamar/CTRA_BASE_ANHYDRITE													
5,900.00	2.04	208.67	5,884.85	-228.59	-125.02	623,686.00	796,833.95	32.7118022	-103.5026502	-227.45	2.00	-2.00	0.00
6,002.18	0.00	0.00	5,987.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	2.00	-2.00	0.00
Hold - 6002.18' MD/5987.00' TVD													
6,005.18	0.00	0.00	5,990.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
Top Delaware Sands/Bell Canyon													
6,100.00	0.00	0.00	6,084.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,200.00	0.00	0.00	6,184.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,255.18	0.00	0.00	6,240.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
Cherry Canyon													
6,300.00	0.00	0.00	6,284.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,400.00	0.00	0.00	6,384.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
6,500.00	0.00	0.00	6,484.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,600.00	0.00	0.00	6,584.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,655.18	0.00	0.00	6,640.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
Brushy Canyon													
6,700.00	0.00	0.00	6,684.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,800.00	0.00	0.00	6,784.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
6,900.00	0.00	0.00	6,884.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,000.00	0.00	0.00	6,984.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,100.00	0.00	0.00	7,084.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,200.00	0.00	0.00	7,184.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,300.00	0.00	0.00	7,284.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,400.00	0.00	0.00	7,384.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,429.18	0.00	0.00	7,414.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
Basal Brushy Canyon													
7,500.00	0.00	0.00	7,484.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,600.00	0.00	0.00	7,584.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,667.18	0.00	0.00	7,652.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
Bone Spring Lime													
7,700.00	0.00	0.00	7,684.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,800.00	0.00	0.00	7,784.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
7,865.18	0.00	0.00	7,850.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
Leonard/Avalon Sand													
7,900.00	0.00	0.00	7,884.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,000.00	0.00	0.00	7,984.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,100.00	0.00	0.00	8,084.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,200.00	0.00	0.00	8,184.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,300.00	0.00	0.00	8,284.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,400.00	0.00	0.00	8,384.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,500.00	0.00	0.00	8,484.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,600.00	0.00	0.00	8,584.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,700.00	0.00	0.00	8,684.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,800.00	0.00	0.00	8,784.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
8,900.00	0.00	0.00	8,884.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
9,000.00	0.00	0.00	8,984.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
9,100.00	0.00	0.00	9,084.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
9,150.18	0.00	0.00	9,135.00	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
1st Bone Spring Sand													
9,200.00	0.00	0.00	9,184.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
9,300.00	0.00	0.00	9,284.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
9,400.00	0.00	0.00	9,384.82	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
9,492.70	0.00	0.00	9,477.52	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
KOP - Start 10.00°/100' DLS													
9,492.72	0.00	359.48	9,477.54	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530	-229.04	0.00	0.00	0.00
KOP/LP/FTP (RSC 501H)													
9,500.00	0.73	359.48	9,484.82	-230.14	-125.89	623,684.45	796,833.08	32.7117980	-103.5026530	-228.99	10.03	10.03	0.00
9,550.00	5.73	359.48	9,534.73	-227.33	-125.92	623,687.26	796,833.05	32.7118057	-103.5026531	-226.17	10.00	10.00	0.00
9,600.00	10.73	359.48	9,584.20	-220.17	-125.98	623,694.42	796,832.99	32.7118254	-103.5026531	-219.02	10.00	10.00	0.00
9,650.00	15.73	359.48	9,632.85	-208.73	-126.08	623,705.86	796,832.89	32.7118568	-103.5026531	-207.58	10.00	10.00	0.00
9,698.58	20.59	359.48	9,679.00	-193.60	-126.22	623,720.99	796,832.75	32.7118984	-103.5026532	-192.44	10.00	10.00	0.00
2nd Bone Spring Sand													
9,700.00	20.73	359.48	9,680.33	-193.10	-126.23	623,721.49	796,832.74	32.7118998	-103.5026532	-191.94	10.00	10.00	0.00
9,750.00	25.73	359.48	9,726.26	-173.38	-126.41	623,741.21	796,832.56	32.7119540	-103.5026533	-172.23	10.00	10.00	0.00
9,800.00	30.73	359.48	9,770.30	-149.74	-126.62	623,764.85	796,832.35	32.7120190	-103.5026534	-148.58	10.00	10.00	0.00
9,850.00	35.73	359.48	9,812.11	-122.35	-126.87	623,792.24	796,832.10	32.7120943	-103.5026535	-121.19	10.00	10.00	0.00
9,900.00	40.73	359.48	9,851.37	-91.42	-127.15	623,823.17	796,831.82	32.7121793	-103.5026536	-90.26	10.00	10.00	0.00
9,950.00	45.73	359.48	9,887.79	-57.18	-127.46	623,857.41	796,831.51	32.7122734	-103.5026537	-56.03	10.00	10.00	0.00
10,000.00	50.73	359.48	9,921.09	-19.91	-127.80	623,894.68	796,831.17	32.7123758	-103.5026539	-18.75	10.00	10.00	0.00
10,050.00	55.73	359.48	9,951.01	20.13	-128.16	623,934.72	796,830.81	32.7124859	-103.5026541	21.29	10.00	10.00	0.00
10,100.00	60.73	359.48	9,977.33	62.62	-128.55	623,977.21	796,830.42	32.7126027	-103.5026542	63.79	10.00	10.00	0.00
10,150.00	65.73	359.48	9,999.84	107.25	-128.95	624,021.84	796,830.02	32.7127253	-103.5026544	108.42	10.00	10.00	0.00
10,200.00	70.73	359.48	10,018.38	153.67	-129.37	624,068.26	796,829.60	32.7128529	-103.5026546	154.84	10.00	10.00	0.00
10,242.70	75.00	359.48	10,030.95	194.46	-129.74	624,109.05	796,829.23	32.7129650	-103.5026548	195.63	10.00	10.00	0.00
75° Inc - 10242.70' MD/10030.96' TVD													
10,300.00	77.87	359.48	10,044.40	250.15	-130.25	624,164.74	796,828.72	32.7131181	-103.5026550	251.33	5.00	5.00	0.00
10,345.06	80.12	359.48	10,053.00	294.38	-130.65	624,208.97	796,828.32	32.7132397	-103.5026552	295.55	5.00	5.00	0.00
2nd Bone Spring Sand Lower Target													
10,400.00	82.87	359.48	10,061.13	348.71	-131.14	624,263.30	796,827.83	32.7133890	-103.5026554	349.88	5.00	5.00	0.00
10,500.00	87.87	359.48	10,069.21	448.35	-132.05	624,362.94	796,826.92	32.7136629	-103.5026558	449.53	5.00	5.00	0.00
10,545.31	90.13	359.48	10,070.00	493.64	-132.46	624,408.23	796,826.51	32.7137874	-103.5026560	494.82	5.00	5.00	0.00
LP - 10545.31' MD													
10,600.00	90.13	359.48	10,069.87	548.33	-132.95	624,462.92	796,826.02	32.7139377	-103.5026562	549.52	0.00	0.00	0.00
10,700.00	90.13	359.48	10,069.65	648.33	-133.86	624,562.92	796,825.11	32.7142125	-103.5026566	649.52	0.00	0.00	0.00
10,800.00	90.13	359.48	10,069.42	748.32	-134.76	624,662.91	796,824.21	32.7144874	-103.5026570	749.51	0.00	0.00	0.00
10,900.00	90.13	359.48	10,069.19	848.32	-135.67	624,762.91	796,823.30	32.7147622	-103.5026574	849.51	0.00	0.00	0.00
11,000.00	90.13	359.48	10,068.96	948.31	-136.58	624,862.90	796,822.39	32.7150371	-103.5026578	949.51	0.00	0.00	0.00
11,100.00	90.13	359.48	10,068.73	1,048.31	-137.48	624,962.90	796,821.49	32.7153119	-103.5026582	1,049.51	0.00	0.00	0.00
11,200.00	90.13	359.48	10,068.51	1,148.31	-138.39	625,062.90	796,820.58	32.7155868	-103.5026586	1,149.51	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
11,300.00	90.13	359.48	10,068.28	1,248.30	-139.30	625,162.89	796,819.67	32.7158616	-103.5026590	1,249.51	0.00	0.00	0.00
11,400.00	90.13	359.48	10,068.05	1,348.30	-140.20	625,262.89	796,818.77	32.7161365	-103.5026594	1,349.51	0.00	0.00	0.00
11,500.00	90.13	359.48	10,067.82	1,448.29	-141.11	625,362.88	796,817.86	32.7164113	-103.5026598	1,449.51	0.00	0.00	0.00
11,600.00	90.13	359.48	10,067.60	1,548.29	-142.01	625,462.88	796,816.96	32.7166862	-103.5026602	1,549.51	0.00	0.00	0.00
11,700.00	90.13	359.48	10,067.37	1,648.28	-142.92	625,562.87	796,816.05	32.7169610	-103.5026606	1,649.51	0.00	0.00	0.00
11,800.00	90.13	359.48	10,067.14	1,748.28	-143.83	625,662.87	796,815.14	32.7172359	-103.5026610	1,749.51	0.00	0.00	0.00
11,900.00	90.13	359.48	10,066.91	1,848.27	-144.73	625,762.86	796,814.24	32.7175107	-103.5026613	1,849.51	0.00	0.00	0.00
12,000.00	90.13	359.48	10,066.68	1,948.27	-145.64	625,862.86	796,813.33	32.7177856	-103.5026617	1,949.51	0.00	0.00	0.00
12,100.00	90.13	359.48	10,066.46	2,048.27	-146.54	625,962.86	796,812.43	32.7180604	-103.5026621	2,049.51	0.00	0.00	0.00
12,200.00	90.13	359.48	10,066.23	2,148.26	-147.45	626,062.85	796,811.52	32.7183353	-103.5026625	2,149.51	0.00	0.00	0.00
12,300.49	90.13	359.48	10,066.00	2,248.75	-148.36	626,163.34	796,810.61	32.7186115	-103.5026629	2,250.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.02													
12,391.19	91.94	359.48	10,064.36	2,339.42	-149.18	626,254.01	796,809.79	32.7188607	-103.5026633	2,340.68	2.00	2.00	0.00
Hold - 12391.19' MD/10064.36' TVD													
12,400.00	91.94	359.48	10,064.06	2,348.23	-149.26	626,262.82	796,809.71	32.7188849	-103.5026633	2,349.49	0.00	0.00	0.00
12,500.00	91.94	359.48	10,060.67	2,448.17	-150.16	626,362.76	796,808.81	32.7191596	-103.5026637	2,449.43	0.00	0.00	0.00
12,600.00	91.94	359.48	10,057.27	2,548.11	-151.07	626,462.70	796,807.90	32.7194343	-103.5026641	2,549.37	0.00	0.00	0.00
12,700.00	91.94	359.48	10,053.88	2,648.04	-151.97	626,562.63	796,807.00	32.7197090	-103.5026645	2,649.31	0.00	0.00	0.00
12,800.00	91.94	359.48	10,050.49	2,747.98	-152.88	626,662.57	796,806.09	32.7199836	-103.5026649	2,749.26	0.00	0.00	0.00
12,900.00	91.94	359.48	10,047.09	2,847.92	-153.78	626,762.51	796,805.19	32.7202583	-103.5026653	2,849.20	0.00	0.00	0.00
13,000.00	91.94	359.48	10,043.70	2,947.86	-154.69	626,862.45	796,804.28	32.7205330	-103.5026657	2,949.14	0.00	0.00	0.00
13,100.00	91.94	359.48	10,040.31	3,047.80	-155.59	626,962.39	796,803.38	32.7208077	-103.5026661	3,049.08	0.00	0.00	0.00
13,200.00	91.94	359.48	10,036.92	3,147.74	-156.49	627,062.33	796,802.48	32.7210824	-103.5026665	3,149.03	0.00	0.00	0.00
13,300.00	91.94	359.48	10,033.52	3,247.67	-157.40	627,162.26	796,801.57	32.7213571	-103.5026669	3,248.97	0.00	0.00	0.00
13,400.00	91.94	359.48	10,030.13	3,347.61	-158.30	627,262.20	796,800.67	32.7216318	-103.5026673	3,348.91	0.00	0.00	0.00
13,500.00	91.94	359.48	10,026.74	3,447.55	-159.21	627,362.14	796,799.76	32.7219065	-103.5026677	3,448.85	0.00	0.00	0.00
13,551.17	91.94	359.48	10,025.00	3,498.69	-159.67	627,413.28	796,799.30	32.7220470	-103.5026679	3,500.00	0.00	0.00	0.00
Start DLS 2.00 TFO -0.25													
13,569.93	92.32	359.48	10,024.30	3,517.43	-159.84	627,432.02	796,799.13	32.7220986	-103.5026679	3,518.74	2.00	2.00	-0.01
Hold - 13569.93' MD/10024.30' TVD													
13,600.00	92.32	359.48	10,023.09	3,547.48	-160.11	627,462.07	796,798.86	32.7221811	-103.5026681	3,548.79	0.00	0.00	0.00
13,700.00	92.32	359.48	10,019.04	3,647.39	-161.02	627,561.98	796,797.95	32.7224558	-103.5026685	3,648.70	0.00	0.00	0.00
13,800.00	92.32	359.48	10,014.99	3,747.31	-161.93	627,661.90	796,797.04	32.7227304	-103.5026689	3,748.62	0.00	0.00	0.00
13,900.00	92.32	359.48	10,010.94	3,847.22	-162.83	627,761.81	796,796.14	32.7230050	-103.5026693	3,848.54	0.00	0.00	0.00
14,000.00	92.32	359.48	10,006.90	3,947.14	-163.74	627,861.73	796,795.23	32.7232796	-103.5026697	3,948.46	0.00	0.00	0.00
14,100.00	92.32	359.48	10,002.85	4,047.05	-164.65	627,961.64	796,794.32	32.7235543	-103.5026701	4,048.38	0.00	0.00	0.00
14,200.00	92.32	359.48	9,998.80	4,146.96	-165.55	628,061.55	796,793.42	32.7238289	-103.5026705	4,148.30	0.00	0.00	0.00
14,300.00	92.32	359.48	9,994.75	4,246.88	-166.46	628,161.47	796,792.51	32.7241035	-103.5026709	4,248.21	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
14,400.00	92.32	359.48	9,990.71	4,346.79	-167.37	628,261.38	796,791.60	32.7243781	-103.5026713	4,348.13	0.00	0.00	0.00
14,500.00	92.32	359.48	9,986.66	4,446.71	-168.27	628,361.30	796,790.70	32.7246527	-103.5026717	4,448.05	0.00	0.00	0.00
14,600.00	92.32	359.48	9,982.61	4,546.62	-169.18	628,461.21	796,789.79	32.7249274	-103.5026721	4,547.97	0.00	0.00	0.00
14,700.00	92.32	359.48	9,978.57	4,646.53	-170.09	628,561.12	796,788.88	32.7252020	-103.5026725	4,647.89	0.00	0.00	0.00
14,800.00	92.32	359.48	9,974.52	4,746.45	-171.00	628,661.04	796,787.97	32.7254766	-103.5026729	4,747.80	0.00	0.00	0.00
14,900.00	92.32	359.48	9,970.47	4,846.36	-171.90	628,760.95	796,787.07	32.7257512	-103.5026733	4,847.72	0.00	0.00	0.00
15,000.00	92.32	359.48	9,966.42	4,946.28	-172.81	628,860.87	796,786.16	32.7260259	-103.5026737	4,947.64	0.00	0.00	0.00
15,100.00	92.32	359.48	9,962.38	5,046.19	-173.72	628,960.78	796,785.25	32.7263005	-103.5026741	5,047.56	0.00	0.00	0.00
15,200.00	92.32	359.48	9,958.33	5,146.10	-174.62	629,060.69	796,784.35	32.7265751	-103.5026745	5,147.48	0.00	0.00	0.00
15,300.00	92.32	359.48	9,954.28	5,246.02	-175.53	629,160.61	796,783.44	32.7268497	-103.5026749	5,247.39	0.00	0.00	0.00
15,400.00	92.32	359.48	9,950.24	5,345.93	-176.44	629,260.52	796,782.53	32.7271244	-103.5026753	5,347.31	0.00	0.00	0.00
15,500.00	92.32	359.48	9,946.19	5,445.84	-177.34	629,360.43	796,781.63	32.7273990	-103.5026757	5,447.23	0.00	0.00	0.00
15,600.00	92.32	359.48	9,942.14	5,545.76	-178.25	629,460.35	796,780.72	32.7276736	-103.5026761	5,547.15	0.00	0.00	0.00
15,652.90	92.32	359.48	9,940.00	5,598.61	-178.73	629,513.20	796,780.24	32.7278189	-103.5026763	5,600.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.06													
15,700.00	93.26	359.48	9,937.71	5,645.65	-179.16	629,560.24	796,779.81	32.7279482	-103.5026765	5,647.05	2.00	2.00	0.00
15,744.17	94.14	359.48	9,934.85	5,689.73	-179.56	629,604.32	796,779.41	32.7280693	-103.5026767	5,691.13	2.00	2.00	0.00
Hold - 15744.17' MD/9934.85' TVD													
15,800.00	94.14	359.48	9,930.82	5,745.41	-180.06	629,660.00	796,778.91	32.7282224	-103.5026769	5,746.81	0.00	0.00	0.00
15,900.00	94.14	359.48	9,923.59	5,845.15	-180.96	629,759.74	796,778.01	32.7284965	-103.5026773	5,846.55	0.00	0.00	0.00
16,000.00	94.14	359.48	9,916.36	5,944.88	-181.86	629,859.47	796,777.11	32.7287706	-103.5026777	5,946.29	0.00	0.00	0.00
16,100.00	94.14	359.48	9,909.13	6,044.62	-182.76	629,959.21	796,776.21	32.7290448	-103.5026781	6,046.03	0.00	0.00	0.00
16,200.00	94.14	359.48	9,901.91	6,144.35	-183.67	630,058.94	796,775.30	32.7293189	-103.5026785	6,145.76	0.00	0.00	0.00
16,300.00	94.14	359.48	9,894.68	6,244.08	-184.57	630,158.67	796,774.40	32.7295930	-103.5026789	6,245.50	0.00	0.00	0.00
16,400.00	94.14	359.48	9,887.45	6,343.82	-185.47	630,258.41	796,773.50	32.7298671	-103.5026792	6,345.24	0.00	0.00	0.00
16,500.00	94.14	359.48	9,880.22	6,443.55	-186.37	630,358.14	796,772.60	32.7301413	-103.5026796	6,444.98	0.00	0.00	0.00
16,600.00	94.14	359.48	9,872.99	6,543.29	-187.27	630,457.88	796,771.70	32.7304154	-103.5026800	6,544.72	0.00	0.00	0.00
16,700.00	94.14	359.48	9,865.77	6,643.02	-188.18	630,557.61	796,770.79	32.7306895	-103.5026804	6,644.46	0.00	0.00	0.00
16,800.00	94.14	359.48	9,858.54	6,742.76	-189.08	630,657.35	796,769.89	32.7309637	-103.5026808	6,744.19	0.00	0.00	0.00
16,900.00	94.14	359.48	9,851.31	6,842.49	-189.98	630,757.08	796,768.99	32.7312378	-103.5026812	6,843.93	0.00	0.00	0.00
17,000.00	94.14	359.48	9,844.08	6,942.22	-190.88	630,856.81	796,768.09	32.7315119	-103.5026816	6,943.67	0.00	0.00	0.00
17,056.48	94.14	359.48	9,840.00	6,998.55	-191.39	630,913.14	796,767.58	32.7316667	-103.5026818	7,000.00	0.00	0.00	0.00
Start DLS 2.00 TFO -0.01													
17,100.00	95.02	359.48	9,836.52	7,041.93	-191.78	630,956.52	796,767.19	32.7317860	-103.5026820	7,043.38	2.00	2.00	0.00
17,117.05	95.36	359.48	9,834.98	7,058.92	-191.94	630,973.51	796,767.03	32.7318326	-103.5026820	7,060.37	2.00	2.00	0.00
Hold - 17117.05' MD/9834.98' TVD													
17,200.00	95.36	359.48	9,827.24	7,141.50	-192.68	631,056.09	796,766.29	32.7320596	-103.5026824	7,142.95	0.00	0.00	0.00
17,300.00	95.36	359.48	9,817.90	7,241.06	-193.58	631,155.65	796,765.39	32.7323333	-103.5026828	7,242.52	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
17,400.00	95.36	359.48	9,808.57	7,340.62	-194.48	631,255.21	796,764.49	32.7326069	-103.5026831	7,342.08	0.00	0.00	0.00
17,500.00	95.36	359.48	9,799.23	7,440.17	-195.39	631,354.76	796,763.58	32.7328806	-103.5026835	7,441.64	0.00	0.00	0.00
17,600.00	95.36	359.48	9,789.90	7,539.73	-196.29	631,454.32	796,762.68	32.7331542	-103.5026839	7,541.21	0.00	0.00	0.00
17,700.00	95.36	359.48	9,780.56	7,639.29	-197.19	631,553.88	796,761.78	32.7334279	-103.5026843	7,640.77	0.00	0.00	0.00
17,800.00	95.36	359.48	9,771.23	7,738.85	-198.09	631,653.44	796,760.88	32.7337015	-103.5026847	7,740.33	0.00	0.00	0.00
17,900.00	95.36	359.48	9,761.89	7,838.41	-198.99	631,753.00	796,759.98	32.7339752	-103.5026851	7,839.90	0.00	0.00	0.00
18,000.00	95.36	359.48	9,752.56	7,937.97	-199.89	631,852.56	796,759.08	32.7342488	-103.5026855	7,939.46	0.00	0.00	0.00
18,100.00	95.36	359.48	9,743.22	8,037.53	-200.79	631,952.12	796,758.18	32.7345225	-103.5026859	8,039.02	0.00	0.00	0.00
18,200.00	95.36	359.48	9,733.89	8,137.09	-201.69	632,051.68	796,757.28	32.7347961	-103.5026863	8,138.58	0.00	0.00	0.00
18,300.00	95.36	359.48	9,724.55	8,236.65	-202.59	632,151.24	796,756.38	32.7350698	-103.5026867	8,238.15	0.00	0.00	0.00
18,400.00	95.36	359.48	9,715.22	8,336.21	-203.49	632,250.80	796,755.48	32.7353434	-103.5026871	8,337.71	0.00	0.00	0.00
18,500.00	95.36	359.48	9,705.88	8,435.77	-204.39	632,350.36	796,754.58	32.7356170	-103.5026874	8,437.27	0.00	0.00	0.00
18,563.00	95.36	359.48	9,700.00	8,498.49	-204.96	632,413.08	796,754.01	32.7357894	-103.5026877	8,500.00	0.00	0.00	0.00
Start DLS 2.00 TFO -178.22													
18,564.22	95.33	359.48	9,699.89	8,499.70	-204.97	632,414.29	796,754.00	32.7357928	-103.5026877	8,501.21	2.00	-2.00	-0.06
Hold - 18564.22' MD/9699.89' TVD													
18,600.00	95.33	359.48	9,696.56	8,535.33	-205.29	632,449.92	796,753.68	32.7358907	-103.5026878	8,536.84	0.00	0.00	0.00
18,700.00	95.33	359.48	9,687.27	8,634.89	-206.20	632,549.48	796,752.77	32.7361644	-103.5026882	8,636.41	0.00	0.00	0.00
18,800.00	95.33	359.48	9,677.98	8,734.45	-207.10	632,649.04	796,751.87	32.7364380	-103.5026886	8,735.97	0.00	0.00	0.00
18,900.00	95.33	359.48	9,668.68	8,834.02	-208.00	632,748.61	796,750.97	32.7367117	-103.5026890	8,835.54	0.00	0.00	0.00
19,000.00	95.33	359.48	9,659.39	8,933.58	-208.90	632,848.17	796,750.07	32.7369853	-103.5026894	8,935.11	0.00	0.00	0.00
19,100.00	95.33	359.48	9,650.10	9,033.14	-209.80	632,947.73	796,749.17	32.7372590	-103.5026898	9,034.68	0.00	0.00	0.00
19,200.00	95.33	359.48	9,640.80	9,132.71	-210.71	633,047.30	796,748.26	32.7375326	-103.5026902	9,134.24	0.00	0.00	0.00
19,300.00	95.33	359.48	9,631.51	9,232.27	-211.61	633,146.86	796,747.36	32.7378063	-103.5026906	9,233.81	0.00	0.00	0.00
19,400.00	95.33	359.48	9,622.22	9,331.83	-212.51	633,246.42	796,746.46	32.7380800	-103.5026910	9,333.38	0.00	0.00	0.00
19,500.00	95.33	359.48	9,612.93	9,431.40	-213.41	633,345.99	796,745.56	32.7383536	-103.5026914	9,432.95	0.00	0.00	0.00
19,600.00	95.33	359.48	9,603.63	9,530.96	-214.31	633,445.55	796,744.66	32.7386273	-103.5026918	9,532.51	0.00	0.00	0.00
19,700.00	95.33	359.48	9,594.34	9,630.52	-215.22	633,545.11	796,743.75	32.7389009	-103.5026922	9,632.08	0.00	0.00	0.00
19,800.00	95.33	359.48	9,585.05	9,730.09	-216.12	633,644.68	796,742.85	32.7391746	-103.5026926	9,731.65	0.00	0.00	0.00
19,900.00	95.33	359.48	9,575.75	9,829.65	-217.02	633,744.24	796,741.95	32.7394483	-103.5026930	9,831.21	0.00	0.00	0.00
20,000.00	95.33	359.48	9,566.46	9,929.21	-217.92	633,843.80	796,741.05	32.7397219	-103.5026934	9,930.78	0.00	0.00	0.00
20,069.52	95.33	359.48	9,560.00	9,998.43	-218.55	633,913.02	796,740.42	32.7399122	-103.5026936	10,000.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.01													
20,100.00	95.94	359.48	9,557.01	10,028.76	-218.82	633,943.35	796,740.15	32.7399955	-103.5026938	10,030.33	2.00	2.00	0.00
20,181.13	97.56	359.48	9,547.47	10,109.32	-219.55	634,023.91	796,739.42	32.7402170	-103.5026941	10,110.90	2.00	2.00	0.00
Hold - 20181.13' MD/9547.47' TVD													
20,200.00	97.56	359.48	9,544.98	10,128.03	-219.72	634,042.62	796,739.25	32.7402684	-103.5026942	10,129.60	0.00	0.00	0.00
20,300.00	97.56	359.48	9,531.82	10,227.15	-220.62	634,141.74	796,738.35	32.7405408	-103.5026945	10,228.73	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
20,400.00	97.56	359.48	9,518.65	10,326.28	-221.52	634,240.87	796,737.45	32.7408133	-103.5026949	10,327.86	0.00	0.00	0.00
20,500.00	97.56	359.48	9,505.49	10,425.40	-222.42	634,339.99	796,736.55	32.7410857	-103.5026953	10,426.99	0.00	0.00	0.00
20,600.00	97.56	359.48	9,492.33	10,524.53	-223.31	634,439.12	796,735.66	32.7413582	-103.5026957	10,526.12	0.00	0.00	0.00
20,700.00	97.56	359.48	9,479.16	10,623.65	-224.21	634,538.24	796,734.76	32.7416306	-103.5026961	10,625.25	0.00	0.00	0.00
20,800.00	97.56	359.48	9,466.00	10,722.78	-225.11	634,637.37	796,733.86	32.7419031	-103.5026965	10,724.38	0.00	0.00	0.00
20,900.00	97.56	359.48	9,452.84	10,821.91	-226.01	634,736.50	796,732.96	32.7421756	-103.5026969	10,823.51	0.00	0.00	0.00
21,000.00	97.56	359.48	9,439.67	10,921.03	-226.90	634,835.62	796,732.07	32.7424480	-103.5026973	10,922.64	0.00	0.00	0.00
21,100.00	97.56	359.48	9,426.51	11,020.16	-227.80	634,934.75	796,731.17	32.7427205	-103.5026977	11,021.77	0.00	0.00	0.00
21,200.00	97.56	359.48	9,413.34	11,119.28	-228.70	635,033.87	796,730.27	32.7429929	-103.5026981	11,120.90	0.00	0.00	0.00
21,300.00	97.56	359.48	9,400.18	11,218.41	-229.60	635,133.00	796,729.37	32.7432654	-103.5026984	11,220.03	0.00	0.00	0.00
21,400.00	97.56	359.48	9,387.02	11,317.53	-230.49	635,232.12	796,728.48	32.7435378	-103.5026988	11,319.16	0.00	0.00	0.00
21,500.00	97.56	359.48	9,373.85	11,416.66	-231.39	635,331.25	796,727.58	32.7438103	-103.5026992	11,418.29	0.00	0.00	0.00
21,582.43	97.56	359.48	9,363.00	11,498.37	-232.13	635,412.96	796,726.84	32.7440349	-103.5026996	11,500.00	0.00	0.00	0.00
Start DLS 2.00 TFO -0.01													
21,600.00	97.92	359.48	9,360.63	11,515.78	-232.29	635,430.37	796,726.68	32.7440827	-103.5026996	11,517.41	2.00	2.00	0.00
21,702.77	99.97	359.48	9,344.66	11,617.29	-233.21	635,531.88	796,725.76	32.7443617	-103.5027000	11,618.93	2.00	2.00	0.00
Hold - 21702.77' MD/9344.66' TVD													
21,800.00	99.97	359.48	9,327.82	11,713.05	-234.07	635,627.64	796,724.90	32.7446249	-103.5027004	11,714.69	0.00	0.00	0.00
21,900.00	99.97	359.48	9,310.51	11,811.53	-234.97	635,726.12	796,724.00	32.7448956	-103.5027008	11,813.18	0.00	0.00	0.00
22,000.00	99.97	359.48	9,293.19	11,910.02	-235.86	635,824.61	796,723.11	32.7451663	-103.5027012	11,911.67	0.00	0.00	0.00
22,100.00	99.97	359.48	9,275.88	12,008.50	-236.75	635,923.09	796,722.22	32.7454370	-103.5027016	12,010.16	0.00	0.00	0.00
22,200.00	99.97	359.48	9,258.56	12,106.99	-237.64	636,021.58	796,721.33	32.7457077	-103.5027020	12,108.65	0.00	0.00	0.00
22,300.00	99.97	359.48	9,241.25	12,205.47	-238.53	636,120.06	796,720.44	32.7459784	-103.5027023	12,207.14	0.00	0.00	0.00
22,400.00	99.97	359.48	9,223.93	12,303.96	-239.43	636,218.55	796,719.54	32.7462491	-103.5027027	12,305.63	0.00	0.00	0.00
22,500.00	99.97	359.48	9,206.62	12,402.45	-240.32	636,317.04	796,718.65	32.7465198	-103.5027031	12,404.12	0.00	0.00	0.00
22,600.00	99.97	359.48	9,189.30	12,500.93	-241.21	636,415.52	796,717.76	32.7467905	-103.5027035	12,502.61	0.00	0.00	0.00
22,700.00	99.97	359.48	9,171.99	12,599.42	-242.10	636,514.01	796,716.87	32.7470612	-103.5027039	12,601.09	0.00	0.00	0.00
22,800.00	99.97	359.48	9,154.67	12,697.90	-243.00	636,612.49	796,715.97	32.7473319	-103.5027043	12,699.58	0.00	0.00	0.00
22,900.00	99.97	359.48	9,137.36	12,796.39	-243.89	636,710.98	796,715.08	32.7476026	-103.5027047	12,798.07	0.00	0.00	0.00
23,000.00	99.97	359.48	9,120.04	12,894.87	-244.78	636,809.46	796,714.19	32.7478733	-103.5027051	12,896.56	0.00	0.00	0.00
23,100.00	99.97	359.48	9,102.72	12,993.36	-245.67	636,907.95	796,713.30	32.7481440	-103.5027055	12,995.05	0.00	0.00	0.00
23,200.00	99.97	359.48	9,085.41	13,091.84	-246.56	637,006.43	796,712.41	32.7484147	-103.5027059	13,093.54	0.00	0.00	0.00
23,300.00	99.97	359.48	9,068.09	13,190.33	-247.46	637,104.92	796,711.51	32.7486854	-103.5027062	13,192.03	0.00	0.00	0.00
23,400.00	99.97	359.48	9,050.78	13,288.81	-248.35	637,203.40	796,710.62	32.7489561	-103.5027066	13,290.52	0.00	0.00	0.00
23,500.00	99.97	359.48	9,033.46	13,387.30	-249.24	637,301.89	796,709.73	32.7492268	-103.5027070	13,389.01	0.00	0.00	0.00
23,600.00	99.97	359.48	9,016.15	13,485.79	-250.13	637,400.38	796,708.84	32.7494975	-103.5027074	13,487.50	0.00	0.00	0.00
23,700.00	99.97	359.48	8,998.83	13,584.27	-251.02	637,498.86	796,707.95	32.7497682	-103.5027078	13,585.99	0.00	0.00	0.00
23,800.00	99.97	359.48	8,981.52	13,682.76	-251.92	637,597.35	796,707.05	32.7500388	-103.5027082	13,684.48	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
23,866.52	99.97	359.48	8,970.00	13,748.27	-252.51	637,662.86	796,706.46	32.7502189	-103.5027084	13,750.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00													
23,900.00	100.64	359.48	8,964.01	13,781.21	-252.81	637,695.80	796,706.16	32.7503094	-103.5027086	13,782.93	2.00	2.00	0.00
24,000.00	102.64	359.48	8,943.83	13,879.14	-253.70	637,793.73	796,705.27	32.7505786	-103.5027090	13,880.87	2.00	2.00	0.00
24,074.60	104.13	359.48	8,926.56	13,951.71	-254.35	637,866.30	796,704.62	32.7507781	-103.5027093	13,953.44	2.00	2.00	0.00
Hold - 24074.60' MD/8926.56' TVD													
24,100.00	104.13	359.48	8,920.36	13,976.34	-254.58	637,890.93	796,704.39	32.7508458	-103.5027093	13,978.07	0.00	0.00	0.00
24,200.00	104.13	359.48	8,895.94	14,073.31	-255.45	637,987.90	796,703.52	32.7511123	-103.5027097	14,075.05	0.00	0.00	0.00
24,300.00	104.13	359.48	8,871.53	14,170.28	-256.33	638,084.87	796,702.64	32.7513788	-103.5027101	14,172.02	0.00	0.00	0.00
24,400.00	104.13	359.48	8,847.11	14,267.25	-257.21	638,181.84	796,701.76	32.7516454	-103.5027105	14,268.99	0.00	0.00	0.00
24,500.00	104.13	359.48	8,822.69	14,364.22	-258.09	638,278.81	796,700.88	32.7519119	-103.5027109	14,365.97	0.00	0.00	0.00
24,600.00	104.13	359.48	8,798.28	14,461.19	-258.97	638,375.78	796,700.00	32.7521784	-103.5027113	14,462.94	0.00	0.00	0.00
24,700.00	104.13	359.48	8,773.86	14,558.16	-259.85	638,472.75	796,699.12	32.7524450	-103.5027117	14,559.91	0.00	0.00	0.00
24,800.00	104.13	359.48	8,749.44	14,655.13	-260.73	638,569.72	796,698.24	32.7527115	-103.5027120	14,656.89	0.00	0.00	0.00
24,896.02	104.13	359.48	8,726.00	14,748.23	-261.57	638,662.82	796,697.40	32.7529674	-103.5027124	14,750.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00													
24,900.00	104.21	359.48	8,725.02	14,752.09	-261.61	638,666.68	796,697.36	32.7529780	-103.5027124	14,753.86	2.00	2.00	0.00
25,000.00	106.21	359.48	8,698.79	14,848.58	-262.48	638,763.17	796,696.49	32.7532432	-103.5027128	14,850.35	2.00	2.00	0.00
25,100.00	108.21	359.48	8,669.20	14,944.09	-263.34	638,858.68	796,695.63	32.7535057	-103.5027132	14,945.87	2.00	2.00	0.00
25,133.23	108.88	359.48	8,658.63	14,975.60	-263.63	638,890.19	796,695.34	32.7535923	-103.5027133	14,977.37	2.00	2.00	0.00
Hold - 25133.23' MD/8658.63' TVD													
25,200.00	108.88	359.48	8,637.03	15,038.77	-264.20	638,953.36	796,694.77	32.7537660	-103.5027136	15,040.55	0.00	0.00	0.00
25,300.00	108.88	359.48	8,604.67	15,133.39	-265.06	639,047.98	796,693.91	32.7540260	-103.5027139	15,135.17	0.00	0.00	0.00
25,400.00	108.88	359.48	8,572.32	15,228.01	-265.92	639,142.60	796,693.05	32.7542861	-103.5027143	15,229.79	0.00	0.00	0.00
25,500.00	108.88	359.48	8,539.96	15,322.63	-266.77	639,237.22	796,692.20	32.7545462	-103.5027147	15,324.42	0.00	0.00	0.00
25,600.00	108.88	359.48	8,507.61	15,417.24	-267.63	639,331.83	796,691.34	32.7548062	-103.5027150	15,419.04	0.00	0.00	0.00
25,700.00	108.88	359.48	8,475.26	15,511.86	-268.49	639,426.45	796,690.48	32.7550663	-103.5027154	15,513.66	0.00	0.00	0.00
25,800.00	108.88	359.48	8,442.90	15,606.48	-269.34	639,521.07	796,689.63	32.7553264	-103.5027158	15,608.28	0.00	0.00	0.00
25,900.00	108.88	359.48	8,410.55	15,701.10	-270.20	639,615.69	796,688.77	32.7555864	-103.5027162	15,702.90	0.00	0.00	0.00
26,000.00	108.88	359.48	8,378.20	15,795.71	-271.06	639,710.30	796,687.91	32.7558465	-103.5027165	15,797.52	0.00	0.00	0.00
26,100.00	108.88	359.48	8,345.84	15,890.33	-271.91	639,804.92	796,687.06	32.7561065	-103.5027169	15,892.15	0.00	0.00	0.00
26,200.00	108.88	359.48	8,313.49	15,984.95	-272.77	639,899.54	796,686.20	32.7563666	-103.5027173	15,986.77	0.00	0.00	0.00
26,300.00	108.88	359.48	8,281.13	16,079.57	-273.63	639,994.16	796,685.34	32.7566267	-103.5027177	16,081.39	0.00	0.00	0.00
26,400.00	108.88	359.48	8,248.78	16,174.19	-274.49	640,088.77	796,684.48	32.7568867	-103.5027180	16,176.01	0.00	0.00	0.00
26,500.00	108.88	359.48	8,216.43	16,268.80	-275.34	640,183.39	796,683.63	32.7571468	-103.5027184	16,270.63	0.00	0.00	0.00
26,600.00	108.88	359.48	8,184.07	16,363.42	-276.20	640,278.01	796,682.77	32.7574069	-103.5027188	16,365.25	0.00	0.00	0.00
26,700.00	108.88	359.48	8,151.72	16,458.04	-277.06	640,372.63	796,681.91	32.7576669	-103.5027192	16,459.87	0.00	0.00	0.00
26,742.41	108.88	359.48	8,138.00	16,498.16	-277.42	640,412.75	796,681.55	32.7577772	-103.5027193	16,500.00	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	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)
Start DLS 2.00 TFO 0.01													
26,800.76	110.04	359.48	8,118.56	16,553.18	-277.92	640,467.77	796,681.05	32.7579284	-103.5027195	16,555.02	2.00	2.00	0.00
Hold - 26800.76' MD/8118.56' TVD													
26,900.00	110.04	359.48	8,084.54	16,646.40	-278.76	640,560.99	796,680.21	32.7581847	-103.5027199	16,648.25	0.00	0.00	0.00
27,000.00	110.04	359.48	8,050.27	16,740.34	-279.61	640,654.93	796,679.36	32.7584429	-103.5027203	16,742.19	0.00	0.00	0.00
27,100.00	110.04	359.48	8,016.00	16,834.28	-280.46	640,748.87	796,678.51	32.7587011	-103.5027206	16,836.13	0.00	0.00	0.00
27,200.00	110.04	359.48	7,981.72	16,928.22	-281.31	640,842.81	796,677.66	32.7589593	-103.5027210	16,930.08	0.00	0.00	0.00
27,300.00	110.04	359.48	7,947.45	17,022.16	-282.16	640,936.75	796,676.81	32.7592175	-103.5027214	17,024.02	0.00	0.00	0.00
27,400.00	110.04	359.48	7,913.17	17,116.10	-283.01	641,030.69	796,675.96	32.7594757	-103.5027217	17,117.96	0.00	0.00	0.00
27,500.00	110.04	359.48	7,878.90	17,210.04	-283.87	641,124.63	796,675.10	32.7597339	-103.5027221	17,211.91	0.00	0.00	0.00
27,540.55	110.04	359.48	7,865.00	17,248.13	-284.21	641,162.72	796,674.76	32.7598386	-103.5027223	17,250.00	0.00	0.00	0.00
Start DLS 2.00 TFO -179.99													
27,600.00	108.86	359.48	7,845.20	17,304.18	-284.72	641,218.77	796,674.25	32.7599926	-103.5027225	17,306.06	2.00	-2.00	0.00
27,679.06	107.27	359.48	7,820.69	17,379.34	-285.40	641,293.93	796,673.57	32.7601992	-103.5027228	17,381.21	2.00	-2.00	0.00
Hold - 27679.06' MD/7820.69' TVD													
27,700.00	107.27	359.48	7,814.47	17,399.34	-285.58	641,313.93	796,673.39	32.7602542	-103.5027229	17,401.21	0.00	0.00	0.00
27,800.00	107.27	359.48	7,784.78	17,494.82	-286.45	641,409.41	796,672.52	32.7605166	-103.5027232	17,496.70	0.00	0.00	0.00
27,900.00	107.27	359.48	7,755.08	17,590.31	-287.31	641,504.90	796,671.66	32.7607791	-103.5027236	17,592.19	0.00	0.00	0.00
28,000.00	107.27	359.48	7,725.39	17,685.79	-288.18	641,600.38	796,670.79	32.7610415	-103.5027240	17,687.68	0.00	0.00	0.00
28,100.00	107.27	359.48	7,695.70	17,781.28	-289.04	641,695.87	796,669.93	32.7613040	-103.5027244	17,783.17	0.00	0.00	0.00
28,200.00	107.27	359.48	7,666.00	17,876.77	-289.91	641,791.35	796,669.06	32.7615664	-103.5027247	17,878.66	0.00	0.00	0.00
28,300.00	107.27	359.48	7,636.31	17,972.25	-290.77	641,886.84	796,668.20	32.7618289	-103.5027251	17,974.15	0.00	0.00	0.00
28,400.00	107.27	359.48	7,606.61	18,067.74	-291.64	641,982.33	796,667.33	32.7620913	-103.5027255	18,069.64	0.00	0.00	0.00
28,422.27	107.27	359.48	7,600.00	18,089.00	-291.83	642,003.59	796,667.14	32.7621498	-103.5027256	18,090.90	0.00	0.00	0.00
TD - 28422.27' MD - LTP/PBHL - 2546' FSL, 800' FWL (RSC 501H)													

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									
LTP/PBHL - 2546' FSL	0.00	0.00	7,600.00	18,089.00	-291.83	642,003.59	796,667.14	32.7621498	-103.5027256
- plan hits target center									
- Point									
KOP/LP/FTP (RSC 501H)	0.00	0.00	9,477.54	-230.19	-125.89	623,684.40	796,833.08	32.7117979	-103.5026530
- plan hits target center									
- Point									

Total Directional Planned Survey Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Well:	Rope State Com 501H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #4	Database:	.Total Directional Production DB

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,923.00	1,923.00	Rustler			
2,009.00	2,009.00	A3 Top			
2,107.00	2,107.00	A3 Base (Tamarisk)			
2,201.00	2,201.00	Top Salt/Salado			
5,825.06	5,810.00	Base Salt/Lamar/CTRA_BASE_ANH			
6,005.18	5,990.00	Top Delaware Sands/Bell Canyon			
6,255.18	6,240.00	Cherry Canyon			
6,655.18	6,640.00	Brushy Canyon			
7,429.18	7,414.00	Basal Brushy Canyon			
7,667.18	7,652.00	Bone Spring Lime			
7,865.18	7,850.00	Leonard/Avalon Sand			
9,150.18	9,135.00	1st Bone Spring Sand			
9,698.58	9,679.00	2nd Bone Spring Sand			
10,345.06	10,053.00	2nd Bone Spring Sand Lower Target			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3500	3500	0	0	Nudge, Build 2.00°/100'
3850	3849	-19	-10	Hold - 3850.05' MD/3849.18' TVD
5652	5638	-211	-116	Drop, 2.00°/100' DLS
6002	5987	-230	-126	Hold - 6002.18' MD/5987.00' TVD
9493	9478	-230	-126	KOP - Start 10.00°/100' DLS
10,243	10,031	194	-130	75° Inc - 10242.70' MD/10030.96' TVD
10,545	10,070	494	-132	LP - 10545.31' MD
12,300	10,066	2249	-148	Start DLS 2.00 TFO 0.02
12,391	10,064	2339	-149	Hold - 12391.19' MD/10064.36' TVD
13,551	10,025	3499	-160	Start DLS 2.00 TFO -0.25
13,570	10,024	3517	-160	Hold - 13569.93' MD/10024.30' TVD
15,653	9940	5599	-179	Start DLS 2.00 TFO 0.06
15,744	9935	5690	-180	Hold - 15744.17' MD/9934.85' TVD
17,056	9840	6999	-191	Start DLS 2.00 TFO -0.01
17,117	9835	7059	-192	Hold - 17117.05' MD/9834.98' TVD
18,563	9700	8498	-205	Start DLS 2.00 TFO -178.22
18,564	9700	8500	-205	Hold - 18564.22' MD/9699.89' TVD
20,070	9560	9998	-219	Start DLS 2.00 TFO 0.01
20,181	9547	10,109	-220	Hold - 20181.13' MD/9547.47' TVD
21,582	9363	11,498	-232	Start DLS 2.00 TFO -0.01
21,703	9345	11,617	-233	Hold - 21702.77' MD/9344.66' TVD
23,867	8970	13,748	-253	Start DLS 2.00 TFO 0.00
24,075	8927	13,952	-254	Hold - 24074.60' MD/8926.56' TVD
24,896	8726	14,748	-262	Start DLS 2.00 TFO 0.00
25,133	8659	14,976	-264	Hold - 25133.23' MD/8658.63' TVD
26,742	8138	16,498	-277	Start DLS 2.00 TFO 0.01
26,801	8119	16,553	-278	Hold - 26800.76' MD/8118.56' TVD
27,541	7865	17,248	-284	Start DLS 2.00 TFO -179.99
27,679	7821	17,379	-285	Hold - 27679.06' MD/7820.69' TVD
28,422	7600	18,089	-292	TD - 28422.27' MD

Checked By: _____ Approved By: _____ Date: _____

COMPANY Coterra Energy
 FIELD Lea County, NM (NAD 83)
 SITE Rope State Com Pad
 WELL Rope State Com 501H
 WELLPATH OH
 DESIGN Plan #4
 DEPTHUNT (usft)

WELL INFO

MAP DATUM North American Datum 1983
 MAP SYSTEM US State Plane 1983
 MAP ZONE New Mexico Eastern Zone
 WELL LAT 32.712428
 WELL LON -103.502238
 WELL EW MAI 796958.97
 WELL NS MAP 623914.59
 CONVERGENC 0.45
 MAGMODEL HDGM2026
 DECLINATION 5.98
 NORTH REF Grid
 GROUND ELE\ 3951.9
 KB ELEVN 3974.9
 VS AZI 359.48

SURVEY PROGRAM

1 0.00 - 28422.12 PLAN #4 : MWD+IFR1+MS

SURVEY LIST

Measured Depth MD	Inclination INC	Azimuth AZI	Course Length CL	True Vertical TVD	SubSea TVD SSTVD	Local N/-S NS
0.00	0.00	0.00	0.00	0.00	3974.90	0.00
100.00	0.00	0.00	100.00	100.00	3874.90	0.00
200.00	0.00	0.00	100.00	200.00	3774.90	0.00
300.00	0.00	0.00	100.00	300.00	3674.90	0.00
400.00	0.00	0.00	100.00	400.00	3574.90	0.00
500.00	0.00	0.00	100.00	500.00	3474.90	0.00
600.00	0.00	0.00	100.00	600.00	3374.90	0.00
700.00	0.00	0.00	100.00	700.00	3274.90	0.00
800.00	0.00	0.00	100.00	800.00	3174.90	0.00
900.00	0.00	0.00	100.00	900.00	3074.90	0.00
1000.00	0.00	0.00	100.00	1000.00	2974.90	0.00
1100.00	0.00	0.00	100.00	1100.00	2874.90	0.00
1200.00	0.00	0.00	100.00	1200.00	2774.90	0.00
1300.00	0.00	0.00	100.00	1300.00	2674.90	0.00

1400.00	0.00	0.00	100.00	1400.00	2574.90	0.00
1500.00	0.00	0.00	100.00	1500.00	2474.90	0.00
1600.00	0.00	0.00	100.00	1600.00	2374.90	0.00
1700.00	0.00	0.00	100.00	1700.00	2274.90	0.00
1800.00	0.00	0.00	100.00	1800.00	2174.90	0.00
1900.00	0.00	0.00	100.00	1900.00	2074.90	0.00
2000.00	0.00	0.00	100.00	2000.00	1974.90	0.00
2100.00	0.00	0.00	100.00	2100.00	1874.90	0.00
2200.00	0.00	0.00	100.00	2200.00	1774.90	0.00
2300.00	0.00	0.00	100.00	2300.00	1674.90	0.00
2400.00	0.00	0.00	100.00	2400.00	1574.90	0.00
2500.00	0.00	0.00	100.00	2500.00	1474.90	0.00
2600.00	0.00	0.00	100.00	2600.00	1374.90	0.00
2700.00	0.00	0.00	100.00	2700.00	1274.90	0.00
2800.00	0.00	0.00	100.00	2800.00	1174.90	0.00
2900.00	0.00	0.00	100.00	2900.00	1074.90	0.00
3000.00	0.00	0.00	100.00	3000.00	974.90	0.00
3100.00	0.00	0.00	100.00	3100.00	874.90	0.00
3200.00	0.00	0.00	100.00	3200.00	774.90	0.00
3300.00	0.00	0.00	100.00	3300.00	674.90	0.00
3400.00	0.00	0.00	100.00	3400.00	574.90	0.00
3500.00	0.00	0.00	100.00	3500.00	474.90	0.00
3600.00	2.00	208.67	100.00	3599.98	374.92	-1.53
3700.00	4.00	208.67	100.00	3699.84	275.06	-6.12
3800.00	6.00	208.67	100.00	3799.45	175.45	-13.77
3850.05	7.00	208.67	50.05	3849.18	125.73	-18.74
3900.00	7.00	208.67	49.96	3898.76	76.14	-24.08
4000.00	7.00	208.67	100.00	3998.01	-23.11	-34.78
4100.00	7.00	208.67	100.00	4097.27	-122.37	-45.47
4200.00	7.00	208.67	100.00	4196.52	-221.62	-56.16
4300.00	7.00	208.67	100.00	4295.78	-320.88	-66.86
4400.00	7.00	208.67	100.00	4395.03	-420.13	-77.55
4500.00	7.00	208.67	100.00	4494.28	-519.38	-88.24
4600.00	7.00	208.67	100.00	4593.54	-618.64	-98.94
4700.00	7.00	208.67	100.00	4692.79	-717.89	-109.63
4800.00	7.00	208.67	100.00	4792.05	-817.15	-120.33
4900.00	7.00	208.67	100.00	4891.30	-916.40	-131.02
5000.00	7.00	208.67	100.00	4990.56	-1015.66	-141.71
5100.00	7.00	208.67	100.00	5089.81	-1114.91	-152.41
5200.00	7.00	208.67	100.00	5189.07	-1214.17	-163.10
5300.00	7.00	208.67	100.00	5288.32	-1313.42	-173.79
5400.00	7.00	208.67	100.00	5387.57	-1412.67	-184.49
5500.00	7.00	208.67	100.00	5486.83	-1511.93	-195.18
5600.00	7.00	208.67	100.00	5586.08	-1611.18	-205.88

5652.13	7.00	208.67	52.13	5637.83	-1662.93	-211.45
5700.00	6.04	208.67	47.87	5685.38	-1710.48	-216.22
5800.00	4.04	208.67	100.00	5784.99	-1810.09	-223.93
5900.00	2.04	208.67	100.00	5884.85	-1909.95	-228.59
6002.18	0.00	0.00	102.18	5987.00	-2012.10	-230.19
6100.00	0.00	0.00	97.82	6084.82	-2109.92	-230.19
6200.00	0.00	0.00	100.00	6184.82	-2209.92	-230.19
6300.00	0.00	0.00	100.00	6284.82	-2309.92	-230.19
6400.00	0.00	0.00	100.00	6384.82	-2409.92	-230.19
6500.00	0.00	0.00	100.00	6484.82	-2509.92	-230.19
6600.00	0.00	0.00	100.00	6584.82	-2609.92	-230.19
6700.00	0.00	0.00	100.00	6684.82	-2709.92	-230.19
6800.00	0.00	0.00	100.00	6784.82	-2809.92	-230.19
6900.00	0.00	0.00	100.00	6884.82	-2909.92	-230.19
7000.00	0.00	0.00	100.00	6984.82	-3009.92	-230.19
7100.00	0.00	0.00	100.00	7084.82	-3109.92	-230.19
7200.00	0.00	0.00	100.00	7184.82	-3209.92	-230.19
7300.00	0.00	0.00	100.00	7284.82	-3309.92	-230.19
7400.00	0.00	0.00	100.00	7384.82	-3409.92	-230.19
7500.00	0.00	0.00	100.00	7484.82	-3509.92	-230.19
7600.00	0.00	0.00	100.00	7584.82	-3609.92	-230.19
7700.00	0.00	0.00	100.00	7684.82	-3709.92	-230.19
7800.00	0.00	0.00	100.00	7784.82	-3809.92	-230.19
7900.00	0.00	0.00	100.00	7884.82	-3909.92	-230.19
8000.00	0.00	0.00	100.00	7984.82	-4009.92	-230.19
8100.00	0.00	0.00	100.00	8084.82	-4109.92	-230.19
8200.00	0.00	0.00	100.00	8184.82	-4209.92	-230.19
8300.00	0.00	0.00	100.00	8284.82	-4309.92	-230.19
8400.00	0.00	0.00	100.00	8384.82	-4409.92	-230.19
8500.00	0.00	0.00	100.00	8484.82	-4509.92	-230.19
8600.00	0.00	0.00	100.00	8584.82	-4609.92	-230.19
8700.00	0.00	0.00	100.00	8684.82	-4709.92	-230.19
8800.00	0.00	0.00	100.00	8784.82	-4809.92	-230.19
8900.00	0.00	0.00	100.00	8884.82	-4909.92	-230.19
9000.00	0.00	0.00	100.00	8984.82	-5009.92	-230.19
9100.00	0.00	0.00	100.00	9084.82	-5109.92	-230.19
9200.00	0.00	0.00	100.00	9184.82	-5209.92	-230.19
9300.00	0.00	0.00	100.00	9284.82	-5309.92	-230.19
9400.00	0.00	0.00	100.00	9384.82	-5409.92	-230.19
9492.70	0.00	0.00	92.70	9477.52	-5502.62	-230.19
9500.00	0.73	359.48	7.30	9484.82	-5509.92	-230.14
9550.00	5.73	359.48	50.00	9534.73	-5559.83	-227.33
9600.00	10.73	359.48	50.00	9584.20	-5609.30	-220.17
9650.00	15.73	359.48	50.00	9632.86	-5657.96	-208.73

9700.00	20.73	359.48	50.00	9680.33	-5705.43	-193.10
9750.00	25.73	359.48	50.00	9726.26	-5751.36	-173.38
9800.00	30.73	359.48	50.00	9770.30	-5795.40	-149.74
9850.00	35.73	359.48	50.00	9812.11	-5837.21	-122.35
9900.00	40.73	359.48	50.00	9851.38	-5876.48	-91.42
9950.00	45.73	359.48	50.00	9887.79	-5912.89	-57.19
10000.00	50.73	359.48	50.00	9921.09	-5946.19	-19.91
10050.00	55.73	359.48	50.00	9951.01	-5976.11	20.13
10100.00	60.73	359.48	50.00	9977.33	-6002.43	62.63
10150.00	65.73	359.48	50.00	9999.84	-6024.94	107.25
10200.00	70.73	359.48	50.00	10018.38	-6043.48	153.67
10242.70	75.00	359.48	42.70	10030.96	-6056.06	194.46
10300.00	77.87	359.48	57.30	10044.40	-6069.50	250.15
10400.00	82.87	359.48	100.00	10061.13	-6086.23	348.71
10500.00	87.87	359.48	100.00	10069.21	-6094.31	448.35
10545.31	90.13	359.48	45.31	10070.00	-6095.10	493.64
10600.00	90.13	359.48	54.69	10069.87	-6094.97	548.33
10700.00	90.13	359.48	100.00	10069.65	-6094.75	648.33
10800.00	90.13	359.48	100.00	10069.42	-6094.52	748.32
10900.00	90.13	359.48	100.00	10069.19	-6094.29	848.32
11000.00	90.13	359.48	100.00	10068.96	-6094.06	948.31
11100.00	90.13	359.48	100.00	10068.73	-6093.83	1048.31
11200.00	90.13	359.48	100.00	10068.51	-6093.61	1148.31
11300.00	90.13	359.48	100.00	10068.28	-6093.38	1248.30
11400.00	90.13	359.48	100.00	10068.05	-6093.15	1348.30
11500.00	90.13	359.48	100.00	10067.82	-6092.92	1448.29
11600.00	90.13	359.48	100.00	10067.60	-6092.70	1548.29
11700.00	90.13	359.48	100.00	10067.37	-6092.47	1648.28
11800.00	90.13	359.48	100.00	10067.14	-6092.24	1748.28
11900.00	90.13	359.48	100.00	10066.91	-6092.01	1848.28
12000.00	90.13	359.48	100.00	10066.68	-6091.78	1948.27
12100.00	90.13	359.48	100.00	10066.46	-6091.56	2048.27
12200.00	90.13	359.48	100.00	10066.23	-6091.33	2148.26
12300.49	90.13	359.48	100.49	10066.00	-6091.10	2248.75
12391.19	91.94	359.48	90.70	10064.36	-6089.46	2339.42
12400.00	91.94	359.48	8.81	10064.06	-6089.16	2348.23
12500.00	91.94	359.48	100.00	10060.67	-6085.77	2448.17
12600.00	91.94	359.48	100.00	10057.27	-6082.37	2548.11
12700.00	91.94	359.48	100.00	10053.88	-6078.98	2648.04
12800.00	91.94	359.48	100.00	10050.49	-6075.59	2747.98
12900.00	91.94	359.48	100.00	10047.09	-6072.19	2847.92
13000.00	91.94	359.48	100.00	10043.70	-6068.80	2947.86
13100.00	91.94	359.48	100.00	10040.31	-6065.41	3047.80
13200.00	91.94	359.48	100.00	10036.92	-6062.02	3147.74

13300.00	91.94	359.48	100.00	10033.52	-6058.62	3247.67
13400.00	91.94	359.48	100.00	10030.13	-6055.23	3347.61
13500.00	91.94	359.48	100.00	10026.74	-6051.84	3447.55
13551.17	91.94	359.48	51.17	10025.00	-6050.10	3498.69
13569.93	92.32	359.48	18.76	10024.30	-6049.40	3517.43
13600.00	92.32	359.48	30.07	10023.09	-6048.19	3547.48
13700.00	92.32	359.48	100.00	10019.04	-6044.14	3647.39
13800.00	92.32	359.48	100.00	10014.99	-6040.09	3747.31
13900.00	92.32	359.48	100.00	10010.94	-6036.04	3847.22
14000.00	92.32	359.48	100.00	10006.90	-6032.00	3947.14
14100.00	92.32	359.48	100.00	10002.85	-6027.95	4047.05
14200.00	92.32	359.48	100.00	9998.80	-6023.90	4146.96
14300.00	92.32	359.48	100.00	9994.76	-6019.86	4246.88
14400.00	92.32	359.48	100.00	9990.71	-6015.81	4346.79
14500.00	92.32	359.48	100.00	9986.66	-6011.76	4446.71
14600.00	92.32	359.48	100.00	9982.61	-6007.71	4546.62
14700.00	92.32	359.48	100.00	9978.57	-6003.67	4646.53
14800.00	92.32	359.48	100.00	9974.52	-5999.62	4746.45
14900.00	92.32	359.48	100.00	9970.47	-5995.57	4846.36
15000.00	92.32	359.48	100.00	9966.42	-5991.52	4946.28
15100.00	92.32	359.48	100.00	9962.38	-5987.48	5046.19
15200.00	92.32	359.48	100.00	9958.33	-5983.43	5146.10
15300.00	92.32	359.48	100.00	9954.28	-5979.38	5246.02
15400.00	92.32	359.48	100.00	9950.24	-5975.34	5345.93
15500.00	92.32	359.48	100.00	9946.19	-5971.29	5445.85
15600.00	92.32	359.48	100.00	9942.14	-5967.24	5545.76
15652.90	92.32	359.48	52.90	9940.00	-5965.10	5598.61
15700.00	93.26	359.48	47.10	9937.71	-5962.81	5645.66
15744.17	94.15	359.48	44.17	9934.85	-5959.95	5689.73
15800.00	94.15	359.48	55.83	9930.82	-5955.92	5745.41
15900.00	94.15	359.48	100.00	9923.59	-5948.69	5845.15
16000.00	94.15	359.48	100.00	9916.36	-5941.46	5944.88
16100.00	94.15	359.48	100.00	9909.13	-5934.23	6044.62
16200.00	94.15	359.48	100.00	9901.91	-5927.01	6144.35
16300.00	94.15	359.48	100.00	9894.68	-5919.78	6244.08
16400.00	94.15	359.48	100.00	9887.45	-5912.55	6343.82
16500.00	94.15	359.48	100.00	9880.22	-5905.32	6443.55
16600.00	94.15	359.48	100.00	9872.99	-5898.09	6543.29
16700.00	94.15	359.48	100.00	9865.77	-5890.87	6643.02
16800.00	94.15	359.48	100.00	9858.54	-5883.64	6742.76
16900.00	94.15	359.48	100.00	9851.31	-5876.41	6842.49
17000.00	94.15	359.48	100.00	9844.08	-5869.18	6942.22
17056.48	94.15	359.48	56.48	9840.00	-5865.10	6998.55
17100.00	95.02	359.48	43.52	9836.52	-5861.62	7041.93

17117.05	95.36	359.48	17.05	9834.98	-5860.08	7058.92
17200.00	95.36	359.48	82.95	9827.24	-5852.34	7141.50
17300.00	95.36	359.48	100.00	9817.90	-5843.00	7241.06
17400.00	95.36	359.48	100.00	9808.57	-5833.67	7340.62
17500.00	95.36	359.48	100.00	9799.23	-5824.33	7440.18
17600.00	95.36	359.48	100.00	9789.90	-5815.00	7539.73
17700.00	95.36	359.48	100.00	9780.56	-5805.66	7639.29
17800.00	95.36	359.48	100.00	9771.23	-5796.33	7738.85
17900.00	95.36	359.48	100.00	9761.89	-5786.99	7838.41
18000.00	95.36	359.48	100.00	9752.56	-5777.66	7937.97
18100.00	95.36	359.48	100.00	9743.22	-5768.32	8037.53
18200.00	95.36	359.48	100.00	9733.89	-5758.99	8137.09
18300.00	95.36	359.48	100.00	9724.55	-5749.65	8236.65
18400.00	95.36	359.48	100.00	9715.22	-5740.32	8336.21
18500.00	95.36	359.48	100.00	9705.88	-5730.98	8435.77
18563.00	95.36	359.48	63.00	9700.00	-5725.10	8498.49
18564.22	95.33	359.48	1.22	9699.89	-5724.99	8499.70
18600.00	95.33	359.48	35.78	9696.56	-5721.66	8535.33
18700.00	95.33	359.48	100.00	9687.27	-5712.37	8634.89
18800.00	95.33	359.48	100.00	9677.98	-5703.08	8734.45
18900.00	95.33	359.48	100.00	9668.68	-5693.78	8834.02
19000.00	95.33	359.48	100.00	9659.39	-5684.49	8933.58
19100.00	95.33	359.48	100.00	9650.10	-5675.20	9033.14
19200.00	95.33	359.48	100.00	9640.80	-5665.90	9132.71
19300.00	95.33	359.48	100.00	9631.51	-5656.61	9232.27
19400.00	95.33	359.48	100.00	9622.22	-5647.32	9331.83
19500.00	95.33	359.48	100.00	9612.93	-5638.03	9431.40
19600.00	95.33	359.48	100.00	9603.63	-5628.73	9530.96
19700.00	95.33	359.48	100.00	9594.34	-5619.44	9630.52
19800.00	95.33	359.48	100.00	9585.05	-5610.15	9730.09
19900.00	95.33	359.48	100.00	9575.75	-5600.85	9829.65
20000.00	95.33	359.48	100.00	9566.46	-5591.56	9929.21
20069.52	95.33	359.48	69.52	9560.00	-5585.10	9998.43
20100.00	95.94	359.48	30.48	9557.01	-5582.11	10028.76
20181.13	97.56	359.48	81.13	9547.47	-5572.57	10109.32
20200.00	97.56	359.48	18.87	9544.98	-5570.08	10128.03
20300.00	97.56	359.48	100.00	9531.82	-5556.92	10227.15
20400.00	97.56	359.48	100.00	9518.66	-5543.76	10326.28
20500.00	97.56	359.48	100.00	9505.49	-5530.59	10425.40
20600.00	97.56	359.48	100.00	9492.33	-5517.43	10524.53
20700.00	97.56	359.48	100.00	9479.16	-5504.26	10623.66
20800.00	97.56	359.48	100.00	9466.00	-5491.10	10722.78
20900.00	97.56	359.48	100.00	9452.84	-5477.94	10821.91
21000.00	97.56	359.48	100.00	9439.67	-5464.77	10921.03

21100.00	97.56	359.48	100.00	9426.51	-5451.61	11020.16
21200.00	97.56	359.48	100.00	9413.34	-5438.44	11119.28
21300.00	97.56	359.48	100.00	9400.18	-5425.28	11218.41
21400.00	97.56	359.48	100.00	9387.02	-5412.12	11317.54
21500.00	97.56	359.48	100.00	9373.85	-5398.95	11416.66
21582.43	97.56	359.48	82.43	9363.00	-5388.10	11498.37
21600.00	97.92	359.48	17.57	9360.63	-5385.73	11515.78
21702.77	99.97	359.48	102.77	9344.66	-5369.76	11617.29
21800.00	99.97	359.48	97.23	9327.82	-5352.92	11713.05
21900.00	99.97	359.48	100.00	9310.51	-5335.61	11811.53
22000.00	99.97	359.48	100.00	9293.19	-5318.29	11910.02
22100.00	99.97	359.48	100.00	9275.88	-5300.98	12008.50
22200.00	99.97	359.48	100.00	9258.56	-5283.66	12106.99
22300.00	99.97	359.48	100.00	9241.25	-5266.35	12205.47
22400.00	99.97	359.48	100.00	9223.93	-5249.03	12303.96
22500.00	99.97	359.48	100.00	9206.62	-5231.72	12402.45
22600.00	99.97	359.48	100.00	9189.30	-5214.40	12500.93
22700.00	99.97	359.48	100.00	9171.99	-5197.09	12599.42
22800.00	99.97	359.48	100.00	9154.67	-5179.77	12697.90
22900.00	99.97	359.48	100.00	9137.36	-5162.46	12796.39
23000.00	99.97	359.48	100.00	9120.04	-5145.14	12894.87
23100.00	99.97	359.48	100.00	9102.73	-5127.83	12993.36
23200.00	99.97	359.48	100.00	9085.41	-5110.51	13091.84
23300.00	99.97	359.48	100.00	9068.09	-5093.19	13190.33
23400.00	99.97	359.48	100.00	9050.78	-5075.88	13288.82
23500.00	99.97	359.48	100.00	9033.46	-5058.56	13387.30
23600.00	99.97	359.48	100.00	9016.15	-5041.25	13485.79
23700.00	99.97	359.48	100.00	8998.83	-5023.93	13584.27
23800.00	99.97	359.48	100.00	8981.52	-5006.62	13682.76
23866.52	99.97	359.48	66.52	8970.00	-4995.10	13748.27
23900.00	100.64	359.48	33.48	8964.01	-4989.11	13781.21
24000.00	102.64	359.48	100.00	8943.83	-4968.93	13879.14
24074.60	104.13	359.48	74.60	8926.56	-4951.66	13951.71
24100.00	104.13	359.48	25.40	8920.36	-4945.46	13976.34
24200.00	104.13	359.48	100.00	8895.94	-4921.04	14073.31
24300.00	104.13	359.48	100.00	8871.53	-4896.63	14170.28
24400.00	104.13	359.48	100.00	8847.11	-4872.21	14267.25
24500.00	104.13	359.48	100.00	8822.69	-4847.79	14364.22
24600.00	104.13	359.48	100.00	8798.28	-4823.38	14461.19
24700.00	104.13	359.48	100.00	8773.86	-4798.96	14558.16
24800.00	104.13	359.48	100.00	8749.44	-4774.54	14655.13
24896.02	104.13	359.48	96.02	8726.00	-4751.10	14748.23
24900.00	104.21	359.48	3.99	8725.02	-4750.12	14752.09
25000.00	106.21	359.48	100.00	8698.79	-4723.89	14848.58

25100.00	108.21	359.48	100.00	8669.20	-4694.30	14944.09
25133.23	108.88	359.48	33.23	8658.63	-4683.73	14975.60
25200.00	108.88	359.48	66.77	8637.03	-4662.13	15038.77
25300.00	108.88	359.48	100.00	8604.67	-4629.77	15133.39
25400.00	108.88	359.48	100.00	8572.32	-4597.42	15228.01
25500.00	108.88	359.48	100.00	8539.96	-4565.06	15322.63
25600.00	108.88	359.48	100.00	8507.61	-4532.71	15417.24
25700.00	108.88	359.48	100.00	8475.26	-4500.36	15511.86
25800.00	108.88	359.48	100.00	8442.90	-4468.00	15606.48
25900.00	108.88	359.48	100.00	8410.55	-4435.65	15701.10
26000.00	108.88	359.48	100.00	8378.20	-4403.30	15795.71
26100.00	108.88	359.48	100.00	8345.84	-4370.94	15890.33
26200.00	108.88	359.48	100.00	8313.49	-4338.59	15984.95
26300.00	108.88	359.48	100.00	8281.13	-4306.23	16079.57
26400.00	108.88	359.48	100.00	8248.78	-4273.88	16174.19
26500.00	108.88	359.48	100.00	8216.43	-4241.53	16268.80
26600.00	108.88	359.48	100.00	8184.07	-4209.17	16363.42
26700.00	108.88	359.48	100.00	8151.72	-4176.82	16458.04
26742.40	108.88	359.48	42.40	8138.00	-4163.10	16498.16
26800.76	110.04	359.48	58.36	8118.56	-4143.66	16553.18
26900.00	110.04	359.48	99.24	8084.55	-4109.65	16646.40
27000.00	110.04	359.48	100.00	8050.27	-4075.37	16740.34
27100.00	110.04	359.48	100.00	8016.00	-4041.10	16834.28
27200.00	110.04	359.48	100.00	7981.72	-4006.82	16928.22
27300.00	110.04	359.48	100.00	7947.45	-3972.55	17022.16
27400.00	110.04	359.48	100.00	7913.17	-3938.27	17116.10
27500.00	110.04	359.48	100.00	7878.90	-3904.00	17210.04
27540.55	110.04	359.48	40.55	7865.00	-3890.10	17248.13
27600.00	108.86	359.48	59.45	7845.21	-3870.31	17304.18
27679.06	107.27	359.48	79.06	7820.69	-3845.79	17379.34
27700.00	107.27	359.48	20.94	7814.47	-3839.57	17399.34
27800.00	107.27	359.48	100.00	7784.78	-3809.88	17494.82
27900.00	107.27	359.48	100.00	7755.08	-3780.18	17590.31
28000.00	107.27	359.48	100.00	7725.39	-3750.49	17685.79
28100.00	107.27	359.48	100.00	7695.70	-3720.80	17781.28
28200.00	107.27	359.48	100.00	7666.00	-3691.10	17876.77
28300.00	107.27	359.48	100.00	7636.31	-3661.41	17972.25
28400.00	107.27	359.48	100.00	7606.61	-3631.71	18067.74
28422.27	107.27	359.48	22.27	7600.00	-3625.10	18089.00

Local E/-W EW	Easting X	Northing Y	Latitude LAT	Longitude LON	Dogleg Severi DLS	Build Rate BLD
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00
0.00	796958.97	623914.59	32.712428	-103.502238	0.00	0.00

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-126.23	796832.74	623721.49	32.711900	-103.502653	10.00	10.00
-126.41	796832.56	623741.21	32.711954	-103.502653	10.00	10.00
-126.62	796832.35	623764.85	32.712019	-103.502653	10.00	10.00
-126.87	796832.10	623792.24	32.712094	-103.502653	10.00	10.00
-127.15	796831.82	623823.17	32.712179	-103.502654	10.00	10.00
-127.46	796831.51	623857.41	32.712273	-103.502654	10.00	10.00
-127.80	796831.17	623894.68	32.712376	-103.502654	10.00	10.00
-128.16	796830.81	623934.72	32.712486	-103.502654	10.00	10.00
-128.55	796830.42	623977.22	32.712603	-103.502654	10.00	10.00
-128.95	796830.02	624021.84	32.712725	-103.502654	10.00	10.00
-129.37	796829.60	624068.26	32.712853	-103.502655	10.00	10.00
-129.74	796829.23	624109.05	32.712965	-103.502655	10.00	10.00
-130.25	796828.72	624164.74	32.713118	-103.502655	5.00	5.00
-131.14	796827.83	624263.30	32.713389	-103.502655	5.00	5.00
-132.05	796826.92	624362.94	32.713663	-103.502656	5.00	5.00
-132.46	796826.51	624408.23	32.713787	-103.502656	5.00	5.00
-132.95	796826.02	624462.92	32.713938	-103.502656	0.00	0.00
-133.86	796825.11	624562.92	32.714213	-103.502657	0.00	0.00
-134.77	796824.21	624662.91	32.714487	-103.502657	0.00	0.00
-135.67	796823.30	624762.91	32.714762	-103.502657	0.00	0.00
-136.58	796822.39	624862.90	32.715037	-103.502658	0.00	0.00
-137.48	796821.49	624962.90	32.715312	-103.502658	0.00	0.00
-138.39	796820.58	625062.90	32.715587	-103.502659	0.00	0.00
-139.30	796819.68	625162.89	32.715862	-103.502659	0.00	0.00
-140.20	796818.77	625262.89	32.716136	-103.502659	0.00	0.00
-141.11	796817.86	625362.88	32.716411	-103.502660	0.00	0.00
-142.01	796816.96	625462.88	32.716686	-103.502660	0.00	0.00
-142.92	796816.05	625562.87	32.716961	-103.502661	0.00	0.00
-143.83	796815.15	625662.87	32.717236	-103.502661	0.00	0.00
-144.73	796814.24	625762.87	32.717511	-103.502661	0.00	0.00
-145.64	796813.33	625862.86	32.717786	-103.502662	0.00	0.00
-146.54	796812.43	625962.86	32.718060	-103.502662	0.00	0.00
-147.45	796811.52	626062.85	32.718335	-103.502663	0.00	0.00
-148.36	796810.61	626163.34	32.718611	-103.502663	0.00	0.00
-149.18	796809.79	626254.01	32.718861	-103.502663	2.00	2.00
-149.26	796809.71	626262.82	32.718885	-103.502663	0.00	0.00
-150.17	796808.81	626362.76	32.719160	-103.502664	0.00	0.00
-151.07	796807.90	626462.70	32.719434	-103.502664	0.00	0.00
-151.97	796807.00	626562.63	32.719709	-103.502665	0.00	0.00
-152.88	796806.09	626662.57	32.719984	-103.502665	0.00	0.00
-153.78	796805.19	626762.51	32.720258	-103.502665	0.00	0.00
-154.69	796804.28	626862.45	32.720533	-103.502666	0.00	0.00
-155.59	796803.38	626962.39	32.720808	-103.502666	0.00	0.00
-156.50	796802.48	627062.33	32.721082	-103.502666	0.00	0.00

-157.40	796801.57	627162.26	32.721357	-103.502667	0.00	0.00
-158.30	796800.67	627262.20	32.721632	-103.502667	0.00	0.00
-159.21	796799.76	627362.14	32.721906	-103.502668	0.00	0.00
-159.67	796799.30	627413.28	32.722047	-103.502668	0.00	0.00
-159.84	796799.13	627432.02	32.722099	-103.502668	2.00	2.00
-160.11	796798.86	627462.07	32.722181	-103.502668	0.00	0.00
-161.02	796797.95	627561.98	32.722456	-103.502668	0.00	0.00
-161.93	796797.04	627661.90	32.722730	-103.502669	0.00	0.00
-162.83	796796.14	627761.81	32.723005	-103.502669	0.00	0.00
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0.00	11618.93
0.00	11714.69
0.00	11813.18
0.00	11911.67
0.00	12010.16
0.00	12108.65
0.00	12207.14
0.00	12305.63
0.00	12404.12
0.00	12502.61
0.00	12601.10
0.00	12699.58
0.00	12798.07
0.00	12896.56
0.00	12995.05
0.00	13093.54
0.00	13192.03
0.00	13290.52
0.00	13389.01
0.00	13487.50
0.00	13585.99
0.00	13684.48
0.00	13750.00
0.00	13782.93
0.00	13880.87
0.00	13953.44
0.00	13978.08
0.00	14075.05
0.00	14172.02
0.00	14269.00
0.00	14365.97
0.00	14462.94
0.00	14559.91
0.00	14656.89
0.00	14750.00
0.00	14753.86
0.00	14850.35

0.00	14945.87
0.00	14977.37
0.00	15040.55
0.00	15135.17
0.00	15229.79
0.00	15324.42
0.00	15419.04
0.00	15513.66
0.00	15608.28
0.00	15702.90
0.00	15797.52
0.00	15892.15
0.00	15986.77
0.00	16081.39
0.00	16176.01
0.00	16270.63
0.00	16365.25
0.00	16459.88
0.00	16500.00
0.00	16555.02
0.00	16648.25
0.00	16742.19
0.00	16836.13
0.00	16930.08
0.00	17024.02
0.00	17117.96
0.00	17211.91
0.00	17250.00
0.00	17306.06
0.00	17381.21
0.00	17401.21
0.00	17496.70
0.00	17592.19
0.00	17687.68
0.00	17783.17
0.00	17878.66
0.00	17974.15
0.00	18069.64
0.00	18090.90

Coterra Energy

Lea County, NM (NAD 83)

Rope State Com Pad

Rope State Com 501H

330' FSL, 928' FWL

OH

Plan #4



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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Reference	Plan #4		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,663.40usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Well	Rope State Com 501H					
Well Position	+N-S	0.00 usft	Northing:	623,914.59 usft	Latitude:	32.7124278
	+E-W	0.00 usft	Easting:	796,958.97 usft	Longitude:	-103.5022379
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,951.90 usft
Grid Convergence:		0.45 °				

Survey Tool Program	Date	3/18/2026			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	28,422.12	Plan #4 (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Experimental: Summary Highlights: Rope State Com 501H

At 1,897.04 MD, Rope State Com 601H - OH - Plan #2 is 19.92 usft away with a 1.48 SF.
At 1,900.00 MD, Rope State Com 601H - OH - Plan #2 is 19.92 usft away with a 1.48 SF.
At 13,043.89 MD, (O) LEA 30 STATE 001 P & A - Vertical - Surveys is 172.58 usft away with a 0.64 SF.
At 15,506.76 MD, (O) IRONHOUSE 19 STATE COM 004H - Horizontal - PRODUCING - Surveys is 32.83 usft away with a 0.49 SF.
At 15,564.40 MD, (O) IRONHOUSE 19 STATE COM 004H - ST01 - ST01 is 9.07 usft away with a 0.13 SF.
At 24,000.00 MD, Rope State Com 601H - OH - Plan #2 is 301.28 usft away with a 1.34 SF.
At 26,789.02 MD, (O) B LEE STATE 005 P & A - Vertical - Surveys is 508.04 usft away with a 1.24 SF.
At 27,912.41 MD, (O) B LEE STATE 004 - Verticals - Surveys is 178.41 usft away with a 0.47 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
(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

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	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 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 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
Rope State Com 604H -	3,939.10	3,962.10	623,928.52	800,143.29	32.7123970	-103.4918854	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

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Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
Rope State Com Pad						
(O) AIRSTRIP 31 18 35 RN STATE COM 111H - Horizontal	9,307.13	14,370.00	486.25	374.11	4.34	CC, ES, SF Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 114H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 124H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 131H - Horizontal	10,031.27	15,570.00	819.52	737.73	10.02	CC, ES, SF
(O) AIRSTRIP 31 18 35 RN STATE COM 132H - Horizontal	9,990.99	15,406.00	1,418.38	1,322.06	14.73	CC
(O) AIRSTRIP 31 18 35 RN STATE COM 132H - Horizontal	10,000.00	15,406.00	1,418.45	1,322.06	14.72	ES, SF Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 133H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 134H - Horizontal						Out of range
(O) AIRSTRIP 31 18 35 RN STATE COM 201H - Horizontal	10,047.22	15,597.00	1,132.13	1,066.49	17.25	CC, ES, SF
(O) AIRSTRIP STATE 001 P & A - Vertical - Surveys	8,941.05	8,918.36	645.84	417.35	2.83	CC
(O) AIRSTRIP STATE 001 P & A - Vertical - Surveys	9,500.00	9,477.88	647.20	404.59	2.67	ES
(O) AIRSTRIP STATE 001 P & A - Vertical - Surveys	9,600.00	9,577.25	652.98	407.92	2.66	SF
(O) ALBATROSS STATE COM 001H - Horizontal - PROD						Out of range
(O) ALBATROSS STATE COM 002H - Horizontal - PROD						Out of range
(O) B LEE STATE 004 - Verticals - Surveys	27,912.41	7,753.50	178.41	-199.66	0.47	Level 1, CC, ES, SF
(O) B LEE STATE 005 P & A - Vertical - Surveys	26,789.02	8,142.84	508.04	96.70	1.24	Level 2, CC, ES, SF
(O) B LEE STATE 006 - Verticals - Surveys	28,164.83	7,686.84	491.65	323.97	2.93	CC, ES, SF
(O) BLACK JACK STATE 001 - Verticals - Surveys						Out of range
(O) BLACK JACK STATE 002 - Verticals - Surveys						Out of range
(O) BLACK JACK STATE 003 - Verticals - Surveys						Out of range
(O) BRIDGES STATE 180 P & A - Vertical - Surveys	28,162.63	7,690.21	736.77	383.60	2.09	CC, ES, SF
(O) IRONHOUSE 19 STATE COM 001H - Horizontal - PR	16,404.44	10,633.14	892.32	798.42	9.50	CC
(O) IRONHOUSE 19 STATE COM 001H - Horizontal - PR	18,000.00	12,210.34	907.09	783.37	7.33	ES
(O) IRONHOUSE 19 STATE COM 001H - Horizontal - PR	20,100.00	14,208.72	1,033.68	866.99	6.20	SF
(O) IRONHOUSE 19 STATE COM 001H - Pilot - Pilot	15,314.23	9,961.37	1,020.76	736.40	3.59	CC, ES, SF
(O) IRONHOUSE 19 STATE COM 002H - Horizontal - PR						Out of range
(O) IRONHOUSE 19 STATE COM 003H - Horizontal - PR						Out of range
(O) IRONHOUSE 19 STATE COM 004H - Horizontal - PR	15,506.76	10,289.57	32.83	-34.18	0.49	Level 1, CC, ES, SF
(O) IRONHOUSE 19 STATE COM 004H - ST01 - ST01	15,564.40	10,330.75	9.07	-59.16	0.13	Level 1, CC, ES, SF
(O) LEA 30 STATE 001 P & A - Vertical - Surveys	13,043.90	10,048.70	172.58	-97.63	0.64	Level 1, CC, ES, SF
(O) LEA SOUTHEAST STATE 1 P & A - Vertical - Surveys						Out of range
(O) LEA ZD STATE 001 P & A - Vertical - Surveys	9,461.47	9,450.00	1,040.49	824.65	4.82	SF
(O) LEA ZD STATE 001 P & A - Vertical - Surveys	10,734.60	9,450.00	804.93	660.89	5.59	CC, ES
(O) LEO STATE #1 - OH - OH						Out of range
(O) LEO STATE 006 TA - Verticals - Surveys						Out of range
(O) LEO STATE 007 - Verticals - Surveys						Out of range
(O) MESA MERRITT STATE 001 P & A - Vertical - Surveys	18,353.64	9,723.94	1,147.73	826.28	3.57	CC, ES, SF
(O) NEW MEXICO BP STATE 002 P & A - Vertical - Surveys	26,692.00	8,175.86	880.53	468.88	2.14	CC, ES, SF
(O) NEW MEXICO BV STATE 001 P & A - Vertical - Surveys						Out of range
(O) OHIO STATE 001 - Verticals - Surveys	28,100.00	7,710.00	1,133.48	778.78	3.20	SF
(O) OHIO STATE 001 - Verticals - Surveys	28,134.42	7,699.78	1,133.01	778.49	3.20	CC, ES
(O) OHIO STATE 002 - Verticals - Surveys	27,734.15	7,040.00	1,150.90	920.44	4.99	CC, ES
(O) OHIO STATE 002 - Verticals - Surveys	27,800.00	7,040.00	1,152.78	920.96	4.97	SF
(O) OHIO STATE 005 - Verticals - Surveys	27,787.65	7,853.94	1,263.93	1,066.68	6.41	CC
(O) OHIO STATE 005 - Verticals - Surveys	27,800.00	7,850.35	1,263.99	1,066.65	6.41	ES, SF
(O) SHETLAND SWD 001 - Vertical - Surveys	22,328.44	9,245.29	1,145.18	755.30	2.94	CC, ES, SF
(O) STATE AN 005 - Verticals - Surveys						Out of range
(O) STATE AN 006 TA - Vertical - Surveys						Out of range
(O) STATE AN 007 P & A - Vertical - Surveys						Out of range

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Rope State Com Pad						
(O) STATE AN 008 P & A - Vertical - Surveys						Out of range
(O) STATE AN 009 P & A - Vertical - Surveys						Out of range
(O) STATE AN 010 P & A - Vertical - Surveys						Out of range
(O) STATE AN 012 P & A - OH - Surveys						Out of range
(O) STATE AN 012 P & A - ST01 - ST01						Out of range
Rope State Com 502H - OH - Plan #2	1,600.00	1,599.90	40.00	28.69	3.54	CC, ES
Rope State Com 502H - OH - Plan #2	1,700.00	1,698.51	41.69	29.69	3.47	SF
Rope State Com 503H - OH - Plan #2						Out of range
Rope State Com 504H - OH - Plan #2						Out of range
Rope State Com 601H - OH - Plan #2	1,897.04	1,897.26	19.92	6.50	1.48	Level 3, CC
Rope State Com 601H - OH - Plan #2	1,900.00	1,900.22	19.92	6.48	1.48	Level 3, ES
Rope State Com 601H - OH - Plan #2	24,000.00	24,500.44	301.28	76.99	1.34	Level 3, SF
Rope State Com 603H - OH - Plan #2						Out of range
Rope State Com 604H - OH - Plan #2						Out of range

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 111H - Horizontal - PRODUCING - Surveys

Survey Program: 174-MWD OWSG Rev5													Offset Site Error: 0.00 usft
Rule Assigned:													Offset Well Error: 0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset 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
7,800.00	7,784.82	14,370.00	9,291.95	27.31	85.78	-112.67	-417.59	-574.58	1,583.63	1,519.37	64.26	24.645	
7,900.00	7,884.82	14,370.00	9,291.95	27.67	85.78	-112.67	-417.59	-574.58	1,488.78	1,423.52	65.26	22.812	
8,000.00	7,984.82	14,370.00	9,291.95	28.02	85.78	-112.67	-417.59	-574.58	1,394.64	1,328.23	66.41	21.000	
8,100.00	8,084.82	14,370.00	9,291.95	28.37	85.78	-112.67	-417.59	-574.58	1,301.39	1,233.64	67.74	19.210	
8,200.00	8,184.82	14,370.00	9,291.95	28.73	85.78	-112.67	-417.59	-574.58	1,209.21	1,139.91	69.30	17.449	
8,300.00	8,284.82	14,370.00	9,291.95	29.08	85.78	-112.67	-417.59	-574.58	1,118.37	1,047.23	71.14	15.720	
8,400.00	8,384.82	14,370.00	9,291.95	29.44	85.78	-112.67	-417.59	-574.58	1,029.24	955.90	73.34	14.034	
8,500.00	8,484.82	14,370.00	9,291.95	29.79	85.78	-112.67	-417.59	-574.58	942.29	866.30	75.99	12.401	
8,600.00	8,584.82	14,370.00	9,291.95	30.15	85.78	-112.67	-417.59	-574.58	858.18	778.99	79.19	10.837	
8,700.00	8,684.82	14,370.00	9,291.95	30.50	85.78	-112.67	-417.59	-574.58	777.85	694.79	83.06	9.365	
8,800.00	8,784.82	14,370.00	9,291.95	30.86	85.78	-112.67	-417.59	-574.58	702.58	614.88	87.70	8.011	
8,900.00	8,884.82	14,370.00	9,291.95	31.21	85.78	-112.67	-417.59	-574.58	634.19	541.07	93.12	6.810	
9,000.00	8,984.82	14,370.00	9,291.95	31.57	85.78	-112.67	-417.59	-574.58	575.13	476.03	99.10	5.804	
9,100.00	9,084.82	14,370.00	9,291.95	31.92	85.78	-112.67	-417.59	-574.58	528.53	423.50	105.03	5.032	
9,200.00	9,184.82	14,370.00	9,291.95	32.28	85.78	-112.67	-417.59	-574.58	497.91	388.12	109.79	4.535	
9,300.00	9,284.82	14,370.00	9,291.95	32.63	85.78	-112.67	-417.59	-574.58	466.31	374.21	112.10	4.338	
9,307.13	9,291.96	14,370.00	9,291.95	32.66	85.78	-112.67	-417.59	-574.58	486.25	374.11	112.14	4.336	CC, ES, SF
9,400.00	9,384.82	14,370.00	9,291.95	32.99	85.78	-112.67	-417.59	-574.58	495.04	383.79	111.26	4.450	
9,500.00	9,484.82	14,370.00	9,291.95	33.34	85.78	-111.88	-417.59	-574.58	523.12	415.40	107.73	4.856	
9,600.00	9,584.20	14,370.00	9,291.95	33.69	85.78	-106.75	-417.59	-574.58	570.63	468.17	102.46	5.569	
9,700.00	9,680.33	14,370.00	9,291.95	34.02	85.78	-98.67	-417.59	-574.58	634.24	537.34	96.90	6.545	
9,800.00	9,770.30	14,370.00	9,291.95	34.32	85.78	-87.75	-417.59	-574.58	707.97	615.91	92.06	7.690	
9,900.00	9,851.37	14,370.00	9,291.95	34.58	85.78	-74.97	-417.59	-574.58	787.10	698.87	88.23	8.921	
10,000.00	9,921.09	14,370.00	9,291.95	34.82	85.78	-62.15	-417.59	-574.58	868.09	782.77	85.32	10.174	
10,100.00	9,977.33	14,370.00	9,291.95	35.01	85.78	-50.97	-417.59	-574.58	948.31	865.17	83.13	11.407	
10,200.00	10,018.38	14,370.00	9,291.95	35.17	85.78	-42.09	-417.59	-574.58	1,025.79	944.32	81.46	12.592	
10,300.00	10,044.40	14,370.00	9,291.95	35.29	85.78	-37.07	-417.59	-574.58	1,099.76	1,019.64	80.12	13.726	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 111H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Survey Program: 174-MWD OWSG Rev5

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)			
10,400.00	10,061.13	14,370.00	9,291.95	35.40	85.78	-33.97	-417.59	-574.58	1,172.81	1,093.85	78.96	14.853	
10,500.00	10,069.21	14,370.00	9,291.95	35.50	85.78	-31.17	-417.59	-574.58	1,244.91	1,167.01	77.90	15.982	
10,600.00	10,069.87	14,370.00	9,291.95	35.58	85.78	-30.00	-417.59	-574.58	1,316.51	1,239.62	76.89	17.121	
10,700.00	10,069.65	14,370.00	9,291.95	35.68	85.78	-30.00	-417.59	-574.58	1,391.12	1,315.20	75.92	18.324	
10,800.00	10,069.42	14,370.00	9,291.95	35.80	85.78	-30.00	-417.59	-574.58	1,468.76	1,393.78	74.98	19.590	
10,900.00	10,069.19	14,370.00	9,291.95	35.93	85.78	-30.00	-417.59	-574.58	1,548.96	1,474.88	74.08	20.911	
11,000.00	10,068.96	14,370.00	9,291.95	36.08	85.78	-30.00	-417.59	-574.58	1,631.34	1,558.12	73.22	22.279	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 131H - Horizontal - PRODUCING - Surveys

Survey Program: 0-MWD OWSG Rev5										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										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)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,000.00	8,984.82	15,570.00	10,505.71	31.57	86.07	-113.21	-412.03	-549.99	1,589.35	1,521.13	68.22	23.296	
9,100.00	9,084.82	15,570.00	10,505.71	31.92	86.07	-113.21	-412.03	-549.99	1,493.94	1,424.76	69.18	21.596	
9,200.00	9,184.82	15,570.00	10,505.71	32.28	86.07	-113.21	-412.03	-549.99	1,399.17	1,328.91	70.26	19.913	
9,300.00	9,284.82	15,570.00	10,505.71	32.63	86.07	-113.21	-412.03	-549.99	1,305.18	1,233.67	71.51	18.251	
9,400.00	9,384.82	15,570.00	10,505.71	32.99	86.07	-113.21	-412.03	-549.99	1,212.15	1,139.19	72.97	16.612	
9,500.00	9,484.82	15,570.00	10,505.71	33.34	86.07	-114.17	-412.03	-549.99	1,120.34	1,045.66	74.68	15.001	
9,600.00	9,584.20	15,570.00	10,505.71	33.69	86.07	-129.93	-412.03	-549.99	1,032.37	955.79	76.58	13.481	
9,700.00	9,680.33	15,570.00	10,505.71	34.02	86.07	-139.21	-412.03	-549.99	953.29	874.80	78.49	12.145	
9,800.00	9,770.30	15,570.00	10,505.71	34.32	86.07	-144.55	-412.03	-549.99	888.18	807.94	80.24	11.068	
9,900.00	9,851.37	15,570.00	10,505.71	34.58	86.07	-147.45	-412.03	-549.99	842.46	760.95	81.51	10.335	
10,000.00	9,921.09	15,570.00	10,505.71	34.82	86.07	-148.63	-412.03	-549.99	820.85	738.94	81.90	10.022	
10,031.27	9,940.21	15,570.00	10,505.71	34.88	86.07	-148.70	-412.03	-549.99	819.52	737.73	81.79	10.020	CC, ES, SF
10,100.00	9,977.33	15,570.00	10,505.71	35.01	86.07	-148.37	-412.03	-549.99	825.89	744.74	81.15	10.177	
10,200.00	10,018.38	15,570.00	10,505.71	35.17	86.07	-146.59	-412.03	-549.99	856.99	777.66	79.33	10.803	
10,300.00	10,044.40	15,570.00	10,505.71	35.29	86.07	-144.16	-412.03	-549.99	909.66	832.81	76.85	11.837	
10,400.00	10,061.13	15,570.00	10,505.71	35.40	86.07	-141.50	-412.03	-549.99	975.61	901.36	74.25	13.140	
10,500.00	10,069.21	15,570.00	10,505.71	35.50	86.07	-137.72	-412.03	-549.99	1,051.41	979.66	71.75	14.654	
10,600.00	10,069.87	15,570.00	10,505.71	35.58	86.07	-135.53	-412.03	-549.99	1,134.09	1,064.62	69.47	16.325	
10,700.00	10,069.65	15,570.00	10,505.71	35.68	86.07	-135.53	-412.03	-549.99	1,219.70	1,152.21	67.49	18.072	
10,800.00	10,069.42	15,570.00	10,505.71	35.80	86.07	-135.53	-412.03	-549.99	1,307.36	1,241.56	65.79	19.871	
10,900.00	10,069.19	15,570.00	10,505.71	35.93	86.07	-135.53	-412.03	-549.99	1,396.67	1,332.34	64.33	21.710	
11,000.00	10,068.96	15,570.00	10,505.71	36.08	86.07	-135.53	-412.03	-549.99	1,487.34	1,424.26	63.08	23.577	
11,100.00	10,068.73	15,570.00	10,505.71	36.24	86.07	-135.53	-412.03	-549.99	1,579.15	1,517.13	62.01	25.466	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 132H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Survey Program: 0-MWD OWSG Rev5

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)			
9,500.00	9,484.82	15,406.00	10,559.30	33.34	78.01	107.24	-560.08	1,018.02	1,603.71	1,516.99	86.72	18.494	
9,600.00	9,584.20	15,406.00	10,559.30	33.69	78.01	114.74	-560.08	1,018.02	1,541.13	1,451.96	89.17	17.283	
9,700.00	9,680.33	15,406.00	10,559.30	34.02	78.01	120.20	-560.08	1,018.02	1,488.81	1,397.29	91.52	16.268	
9,800.00	9,770.30	15,406.00	10,559.30	34.32	78.01	123.84	-560.08	1,018.02	1,449.51	1,355.90	93.61	15.485	
9,900.00	9,851.37	15,406.00	10,559.30	34.58	78.01	125.87	-560.08	1,018.02	1,425.55	1,330.27	95.28	14.961	
9,990.99	9,915.33	15,406.00	10,559.30	34.79	78.01	126.45	-560.08	1,018.02	1,418.38	1,322.06	96.31	14.727	CC
10,000.00	9,921.09	15,406.00	10,559.30	34.82	78.01	126.45	-560.08	1,018.02	1,418.45	1,322.06	96.39	14.716	ES, SF
10,100.00	9,977.33	15,406.00	10,559.30	35.01	78.01	125.61	-560.08	1,018.02	1,428.66	1,331.82	96.83	14.754	
10,200.00	10,018.38	15,406.00	10,559.30	35.17	78.01	123.31	-560.08	1,018.02	1,455.52	1,358.92	96.60	15.068	
10,300.00	10,044.40	15,406.00	10,559.30	35.29	78.01	120.64	-560.08	1,018.02	1,496.70	1,400.92	95.78	15.627	
10,400.00	10,061.13	15,406.00	10,559.30	35.40	78.01	118.07	-560.08	1,018.02	1,547.46	1,452.82	94.64	16.351	
10,500.00	10,069.21	15,406.00	10,559.30	35.50	78.01	114.82	-560.08	1,018.02	1,606.16	1,512.88	93.28	17.219	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) AIRSTRIP 31 18 35 RN STATE COM 201H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Survey Program: 0-MWD OWSG Rev5

Rule Assigned:

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)			
9,300.00	9,284.82	15,597.00	10,874.47	32.63	84.81	-160.34	-620.32	-265.25	1,642.74	1,578.86	63.88	25.715	
9,400.00	9,384.82	15,597.00	10,874.47	32.99	84.81	-160.34	-620.32	-265.25	1,546.18	1,481.91	64.27	24.057	
9,500.00	9,484.82	15,597.00	10,874.47	33.34	84.81	-160.64	-620.32	-265.25	1,450.09	1,385.42	64.68	22.420	
9,600.00	9,584.20	15,597.00	10,874.47	33.69	84.81	-167.26	-620.32	-265.25	1,358.06	1,292.98	65.08	20.869	
9,700.00	9,680.33	15,597.00	10,874.47	34.02	84.81	-170.13	-620.32	-265.25	1,275.86	1,210.43	65.43	19.500	
9,800.00	9,770.30	15,597.00	10,874.47	34.32	84.81	-171.60	-620.32	-265.25	1,208.24	1,142.55	65.70	18.391	
9,900.00	9,851.37	15,597.00	10,874.47	34.58	84.81	-172.38	-620.32	-265.25	1,159.97	1,094.14	65.83	17.620	
10,000.00	9,921.09	15,597.00	10,874.47	34.82	84.81	-172.71	-620.32	-265.25	1,135.04	1,069.28	65.76	17.259	
10,047.22	9,949.44	15,597.00	10,874.47	34.91	84.81	-172.75	-620.32	-265.25	1,132.13	1,066.49	65.64	17.247	CC, ES, SF
10,100.00	9,977.33	15,597.00	10,874.47	35.01	84.81	-172.70	-620.32	-265.25	1,135.77	1,070.32	65.45	17.354	
10,200.00	10,018.38	15,597.00	10,874.47	35.17	84.81	-172.35	-620.32	-265.25	1,162.07	1,097.16	64.91	17.903	
10,300.00	10,044.40	15,597.00	10,874.47	35.29	84.81	-171.82	-620.32	-265.25	1,210.36	1,146.12	64.24	18.841	
10,400.00	10,061.13	15,597.00	10,874.47	35.40	84.81	-171.24	-620.32	-265.25	1,272.21	1,208.67	63.54	20.021	
10,500.00	10,069.21	15,597.00	10,874.47	35.50	84.81	-170.40	-620.32	-265.25	1,344.71	1,281.83	62.88	21.384	
10,600.00	10,069.87	15,597.00	10,874.47	35.58	84.81	-169.90	-620.32	-265.25	1,425.00	1,362.71	62.30	22.875	
10,700.00	10,069.65	15,597.00	10,874.47	35.68	84.81	-169.90	-620.32	-265.25	1,508.14	1,446.37	61.76	24.418	
10,800.00	10,069.42	15,597.00	10,874.47	35.80	84.81	-169.90	-620.32	-265.25	1,593.21	1,531.92	61.29	25.993	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

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

Survey Program: 0-3_INC-Only												Offset Site Error:	0.00 usft
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)	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	Warning
0.00	0.00	0.00	8.90	0.00	0.00	-135.96	-644.44	-623.10	896.46				
100.00	100.00	91.10	100.00	0.28	1.56	-135.96	-644.44	-623.10	896.42	894.58	1.84	488.023	
200.00	200.00	191.10	200.00	0.63	3.27	-135.96	-644.44	-623.10	896.42	892.51	3.91	229.345	
300.00	300.00	291.10	300.00	0.99	4.99	-135.96	-644.44	-623.10	896.42	890.44	5.98	149.894	
400.00	400.00	391.10	400.00	1.35	6.70	-135.96	-644.44	-623.10	896.42	888.36	8.05	111.327	
500.00	500.00	491.10	500.00	1.71	8.47	-135.96	-644.44	-623.10	896.42	886.23	10.18	88.023	
600.00	600.00	591.10	600.00	2.07	10.35	-135.96	-644.44	-623.10	896.42	883.99	12.42	72.164	
700.00	700.00	691.10	700.00	2.43	12.23	-135.96	-644.44	-623.10	896.42	881.76	14.66	61.147	
739.73	739.73	730.67	739.57	2.57	12.98	-135.95	-644.18	-623.10	896.22	880.68	15.55	57.649	
800.00	800.00	790.60	799.50	2.79	14.10	-135.95	-644.21	-623.10	896.25	879.36	16.89	53.068	
900.00	900.00	890.04	898.94	3.14	15.97	-135.96	-644.33	-623.10	896.33	877.22	19.12	46.889	
1,000.00	1,000.00	991.13	1,000.00	3.50	17.98	-135.96	-644.44	-623.10	896.42	874.94	21.48	41.738	
1,100.00	1,100.00	1,091.13	1,100.00	3.86	20.10	-135.96	-644.44	-623.10	896.42	872.45	23.96	37.406	
1,194.07	1,194.07	1,185.20	1,194.05	4.20	22.11	-135.92	-643.42	-623.10	895.68	869.38	26.30	34.051	
1,200.00	1,200.00	1,190.99	1,199.85	4.22	22.23	-135.92	-643.42	-623.10	895.68	869.23	26.45	33.865	
1,300.00	1,300.00	1,288.67	1,297.53	4.58	24.31	-135.93	-643.62	-623.10	895.83	866.94	28.89	31.012	
1,400.00	1,400.00	1,386.36	1,395.21	4.94	26.39	-135.95	-644.17	-623.10	896.23	864.91	31.32	28.612	
1,500.00	1,500.00	1,491.23	1,500.00	5.29	28.77	-135.96	-644.44	-623.10	896.42	862.35	34.06	26.317	
1,600.00	1,600.00	1,591.23	1,600.00	5.65	31.10	-135.96	-644.44	-623.10	896.42	859.66	36.76	24.388	
1,700.00	1,700.00	1,691.23	1,700.00	6.01	33.44	-135.96	-644.44	-623.10	896.42	856.97	39.45	22.723	
1,741.35	1,741.35	1,732.05	1,740.80	6.16	34.39	-135.89	-642.87	-623.10	895.29	854.74	40.55	22.078	
1,800.00	1,800.00	1,789.32	1,798.08	6.37	35.73	-135.90	-642.98	-623.10	895.37	853.27	42.10	21.268	
1,900.00	1,900.00	1,886.99	1,895.74	6.73	38.01	-135.92	-643.45	-623.10	895.71	850.98	44.74	20.022	
2,000.00	2,000.00	1,984.67	1,993.40	7.09	40.29	-135.96	-644.28	-623.10	896.32	848.95	47.38	18.920	
2,100.00	2,100.00	2,091.39	2,100.00	7.45	42.74	-135.96	-644.44	-623.10	896.42	846.23	50.19	17.862	
2,200.00	2,200.00	2,191.39	2,200.00	7.80	45.03	-135.96	-644.44	-623.10	896.42	843.58	52.84	16.966	
2,240.00	2,240.00	2,231.01	2,239.60	7.95	45.94	-135.90	-643.00	-623.10	895.38	841.49	53.89	16.616	
2,300.00	2,300.00	2,288.83	2,297.41	8.16	47.26	-135.91	-643.13	-623.10	895.48	840.05	55.42	16.157	
2,400.00	2,400.00	2,385.21	2,393.78	8.52	49.47	-135.94	-643.79	-623.10	895.97	837.98	57.99	15.451	
2,500.00	2,500.00	2,491.50	2,500.00	8.88	52.00	-135.96	-644.44	-623.10	896.42	835.54	60.88	14.725	
2,600.00	2,600.00	2,591.50	2,600.00	9.24	54.47	-135.96	-644.44	-623.10	896.42	832.70	63.71	14.070	
2,700.00	2,700.00	2,691.50	2,700.00	9.60	56.95	-135.96	-644.44	-623.10	896.42	829.87	66.55	13.470	
2,741.55	2,741.55	2,732.82	2,741.31	9.75	57.97	-135.91	-643.23	-623.10	895.54	827.82	67.72	13.224	
2,800.00	2,800.00	2,790.12	2,798.60	9.95	59.39	-135.91	-643.30	-623.10	895.60	826.25	69.35	12.915	
2,900.00	2,900.00	2,888.16	2,896.65	10.31	61.82	-135.93	-643.66	-623.10	895.86	823.73	72.13	12.419	
3,000.00	3,000.00	2,986.22	2,994.69	10.67	64.25	-135.96	-644.33	-623.10	896.35	821.43	74.92	11.964	
3,100.00	3,100.00	3,091.70	3,100.00	11.03	67.22	-135.96	-644.44	-623.10	896.42	818.17	78.25	11.456	
3,133.23	3,133.23	3,124.93	3,133.21	11.15	68.17	-135.92	-643.35	-623.10	895.63	816.32	79.32	11.292	
3,200.00	3,200.00	3,186.23	3,194.50	11.39	69.92	-135.93	-643.61	-623.10	895.84	814.53	81.31	11.018	
3,300.00	3,300.00	3,291.85	3,300.00	11.75	72.80	-135.96	-644.44	-623.10	896.42	811.87	84.54	10.603	
3,400.00	3,400.00	3,391.85	3,400.00	12.11	75.30	-135.96	-644.44	-623.10	896.42	809.01	87.41	10.256	
3,500.00	3,500.00	3,489.32	3,497.43	12.46	77.74	-135.89	-642.83	-623.10	895.26	805.06	90.20	9.925	
3,546.72	3,546.72	3,533.54	3,541.64	12.62	78.85	15.43	-643.09	-623.10	895.09	803.62	91.47	9.786	
3,600.00	3,599.98	3,583.96	3,592.05	12.81	80.11	15.43	-643.61	-623.10	894.17	801.26	92.91	9.624	
3,700.00	3,699.84	3,691.83	3,699.84	13.13	82.51	15.52	-644.44	-623.10	889.69	794.04	95.64	9.302	
3,800.00	3,799.45	3,789.47	3,797.48	13.46	84.40	15.73	-644.02	-623.10	881.00	783.14	97.86	9.003	
3,900.00	3,898.76	3,890.77	3,898.76	13.79	86.36	15.95	-644.44	-623.10	869.98	769.84	100.14	8.687	
4,000.00	3,998.01	3,990.02	3,998.01	14.11	88.28	16.18	-644.44	-623.10	858.26	755.87	102.39	8.382	
4,100.00	4,097.27	4,089.27	4,097.27	14.44	90.21	16.41	-644.44	-623.10	846.55	741.91	104.64	8.090	
4,200.00	4,196.52	4,187.83	4,195.82	14.78	92.12	16.67	-643.92	-623.10	834.50	727.61	106.88	7.807	
4,300.00	4,295.77	4,286.14	4,294.13	15.11	94.02	16.90	-644.12	-623.10	822.96	713.84	109.12	7.542	
4,400.00	4,395.03	4,387.08	4,395.03	15.45	96.00	17.14	-644.44	-623.10	811.52	700.09	111.43	7.283	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

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

Survey Program: 0-3_INC-Only												Offset Site Error:	0.00 usft
Rule Assigned:												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)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,500.00	4,494.28	4,486.34	4,494.28	15.78	98.11	17.39	-644.44	-623.10	799.87	685.99	113.88	7.024	
4,600.00	4,593.54	4,585.59	4,593.54	16.12	100.22	17.66	-644.44	-623.10	788.24	671.92	116.33	6.776	
4,700.00	4,692.79	4,684.35	4,692.29	16.46	102.32	17.99	-643.24	-623.10	775.80	657.04	118.77	6.532	
4,800.00	4,792.05	4,782.04	4,789.97	16.80	104.40	18.26	-643.48	-623.10	764.38	643.19	121.18	6.308	
4,900.00	4,891.30	4,879.80	4,887.72	17.15	106.48	18.51	-644.02	-623.10	753.18	629.57	123.60	6.094	
5,000.00	4,990.56	4,980.86	4,988.71	17.49	108.63	18.80	-644.32	-623.10	741.82	615.73	126.09	5.883	
5,100.00	5,089.81	5,081.96	5,089.81	17.83	110.78	19.11	-644.44	-623.10	730.36	601.78	128.58	5.680	
5,200.00	5,189.06	5,181.21	5,189.06	18.18	112.89	19.42	-644.44	-623.10	718.85	587.81	131.04	5.486	
5,300.00	5,288.32	5,279.98	5,287.82	18.53	114.99	19.82	-643.37	-623.10	706.64	573.16	133.48	5.294	
5,400.00	5,387.57	5,377.70	5,385.53	18.87	117.07	20.13	-643.64	-623.10	695.36	559.45	135.91	5.116	
5,500.00	5,486.83	5,475.50	5,483.32	19.22	119.15	20.44	-644.24	-623.10	684.32	545.98	138.33	4.947	
5,600.00	5,586.08	5,578.31	5,586.08	19.57	121.34	20.80	-644.44	-623.10	673.02	532.16	140.87	4.778	
5,700.00	5,685.38	5,677.61	5,685.38	19.92	123.45	21.13	-644.44	-623.10	662.00	518.68	143.33	4.619	
5,800.00	5,784.99	5,776.75	5,784.51	20.27	125.56	21.42	-643.39	-623.10	653.13	507.35	145.78	4.480	
5,900.00	5,884.85	5,875.17	5,882.93	20.62	127.65	21.53	-643.67	-623.10	648.37	500.15	148.22	4.374	
5,987.02	5,971.85	5,960.94	5,968.69	20.92	129.48	21.54	-644.20	-623.10	647.06	496.71	150.35	4.304	
6,000.00	5,984.82	5,973.73	5,981.48	20.97	129.75	21.54	-644.31	-623.10	647.09	496.42	150.67	4.295	
6,100.00	6,084.82	6,077.12	6,084.82	21.32	131.87	-129.80	-644.44	-623.10	647.17	494.03	153.14	4.226	
6,200.00	6,184.82	6,177.12	6,184.82	21.67	133.91	-129.80	-644.44	-623.10	647.17	491.64	155.53	4.161	
6,277.85	6,262.67	6,254.97	6,262.66	21.94	135.49	-129.72	-643.29	-623.10	646.43	489.04	157.39	4.107	
6,300.00	6,284.82	6,276.83	6,284.52	22.02	135.94	-129.72	-643.29	-623.10	646.43	488.52	157.91	4.094	
6,400.00	6,384.82	6,375.50	6,383.19	22.37	137.95	-129.74	-643.52	-623.10	646.58	486.31	160.27	4.034	
6,500.00	6,484.82	6,474.19	6,481.86	22.72	139.96	-129.77	-644.08	-623.10	646.94	484.30	162.63	3.978	
6,600.00	6,584.82	6,577.19	6,584.82	23.07	142.16	-129.80	-644.44	-623.10	647.17	481.98	165.19	3.918	
6,700.00	6,684.82	6,677.19	6,684.82	23.43	144.38	-129.80	-644.44	-623.10	647.17	479.41	167.76	3.858	
6,734.92	6,719.75	6,711.76	6,719.40	23.55	145.14	-129.76	-643.89	-623.10	646.82	478.17	168.65	3.835	
6,800.00	6,784.82	6,775.83	6,783.46	23.78	146.56	-129.77	-644.03	-623.10	646.90	476.60	170.30	3.799	
6,900.00	6,884.82	6,877.25	6,884.82	24.13	148.83	-129.80	-644.44	-623.10	647.17	474.25	172.91	3.743	
7,000.00	6,984.82	6,977.25	6,984.82	24.48	151.14	-129.80	-644.44	-623.10	647.17	471.59	175.58	3.686	
7,100.00	7,084.82	7,077.25	7,084.82	24.84	153.45	-129.80	-644.44	-623.10	647.17	468.93	178.24	3.631	
7,141.04	7,125.87	7,118.12	7,125.67	24.98	154.39	-129.69	-642.81	-623.10	646.12	466.80	179.33	3.603	
7,200.00	7,184.82	7,175.85	7,183.39	25.19	155.72	-129.70	-642.92	-623.10	646.19	465.33	180.87	3.573	
7,300.00	7,284.82	7,273.78	7,281.31	25.54	157.98	-129.74	-643.51	-623.10	646.58	463.10	183.48	3.524	
7,400.00	7,384.82	7,377.37	7,384.82	25.90	160.36	-129.80	-644.44	-623.10	647.17	460.96	186.21	3.475	
7,500.00	7,484.82	7,477.37	7,484.82	26.25	162.58	-129.80	-644.44	-623.10	647.17	458.38	188.78	3.428	
7,600.00	7,584.82	7,577.37	7,584.82	26.60	164.80	-129.80	-644.44	-623.10	647.17	455.81	191.35	3.382	
7,640.94	7,625.76	7,618.18	7,625.62	26.75	165.70	-129.73	-643.36	-623.10	646.47	454.07	192.40	3.360	
7,700.00	7,684.82	7,676.41	7,683.84	26.96	166.99	-129.73	-643.44	-623.10	646.52	452.62	193.91	3.334	
7,800.00	7,784.82	7,775.00	7,782.43	27.31	169.18	-129.76	-643.84	-623.10	646.78	450.34	196.45	3.292	
7,900.00	7,884.82	7,877.47	7,884.82	27.67	171.51	-129.80	-644.44	-623.10	647.17	448.04	199.13	3.250	
8,000.00	7,984.82	7,977.47	7,984.82	28.02	174.00	-129.80	-644.44	-623.10	647.17	445.19	201.98	3.204	
8,100.00	8,084.82	8,077.47	8,084.82	28.37	176.50	-129.80	-644.44	-623.10	647.17	442.34	204.82	3.160	
8,140.63	8,125.45	8,117.86	8,125.19	28.52	177.50	-129.71	-643.10	-623.10	646.31	440.33	205.98	3.138	
8,200.00	8,184.82	8,176.18	8,183.51	28.73	178.96	-129.72	-643.21	-623.10	646.38	438.74	207.64	3.113	
8,300.00	8,284.82	8,274.41	8,281.74	29.08	181.41	-129.75	-643.74	-623.10	646.72	436.28	210.45	3.073	
8,400.00	8,384.82	8,377.64	8,384.82	29.44	184.04	-129.80	-644.44	-623.10	647.17	433.74	213.43	3.032	
8,500.00	8,484.82	8,477.64	8,484.82	29.79	186.72	-129.80	-644.44	-623.10	647.17	430.70	216.47	2.990	
8,529.73	8,514.55	8,506.50	8,513.66	29.90	187.49	-129.73	-643.42	-623.10	646.51	429.17	217.35	2.975	
8,600.00	8,584.82	8,573.70	8,580.85	30.15	189.30	-129.76	-643.82	-623.10	646.78	427.38	219.40	2.948	
8,700.00	8,684.82	8,677.77	8,684.82	30.50	191.84	-129.80	-644.44	-623.10	647.17	424.87	222.30	2.911	
8,800.00	8,784.82	8,777.77	8,784.82	30.86	194.06	-129.80	-644.44	-623.10	647.17	422.30	224.87	2.878	
8,900.00	8,884.82	8,877.77	8,884.82	31.21	196.28	-129.80	-644.44	-623.10	647.17	419.72	227.44	2.845	

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

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

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

Survey Program: 0-3_INC-Only										Rule Assigned:				Offset Site Error:
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						0.00 usft
8,941.05	8,925.87	8,918.36	8,925.38	31.36	197.18	-129.66	-642.36	-623.10	645.84	417.35	228.49	2.827	CC	
9,000.00	8,984.82	8,976.01	8,983.02	31.57	198.46	-129.67	-642.52	-623.10	645.94	415.96	229.98	2.809		
9,100.00	9,084.82	9,073.83	9,080.82	31.92	200.63	-129.72	-643.21	-623.10	646.39	413.89	232.50	2.780		
9,200.00	9,184.82	9,177.88	9,184.82	32.28	202.93	-129.80	-644.44	-623.10	647.17	412.00	235.16	2.752		
9,300.00	9,284.82	9,277.88	9,284.82	32.63	205.06	-129.80	-644.44	-623.10	647.17	409.52	237.64	2.723		
9,400.00	9,384.82	9,377.88	9,384.82	32.99	207.18	-129.80	-644.44	-623.10	647.17	407.04	240.12	2.695		
9,408.49	9,393.31	9,386.38	9,393.31	33.02	207.36	-129.28	-644.44	-623.10	647.17	406.83	240.34	2.693		
9,500.00	9,484.82	9,477.88	9,484.82	33.34	209.31	-129.28	-644.44	-623.10	647.20	404.59	242.61	2.668	ES	
9,600.00	9,584.20	9,577.25	9,584.19	33.69	211.42	-129.40	-643.56	-623.10	652.98	407.92	245.07	2.665	SF	
9,700.00	9,680.33	9,672.92	9,679.85	34.02	213.45	-129.77	-643.61	-623.10	670.71	423.28	247.43	2.711		
9,800.00	9,770.30	9,762.37	9,769.30	34.32	215.36	-129.99	-643.75	-623.10	700.39	450.76	249.62	2.806		
9,900.00	9,851.37	9,842.85	9,849.78	34.58	217.07	-129.59	-643.95	-623.10	742.47	490.89	251.58	2.951		
10,000.00	9,921.09	9,911.90	9,918.83	34.82	218.53	-127.94	-644.17	-623.10	796.89	543.64	253.25	3.147		
10,100.00	9,977.33	9,967.42	9,974.34	35.01	219.71	-124.23	-644.39	-623.10	862.82	608.25	254.57	3.389		
10,200.00	10,018.38	10,011.57	10,018.38	35.17	221.03	-117.60	-644.44	-623.10	938.48	682.50	255.98	3.666		
10,300.00	10,044.40	10,037.59	10,044.40	35.29	221.88	-110.48	-644.44	-623.10	1,021.37	764.50	256.88	3.976		
10,400.00	10,061.13	10,054.32	10,061.13	35.40	222.42	-103.77	-644.44	-623.10	1,108.32	850.86	257.45	4.305		
10,500.00	10,069.21	10,062.40	10,069.21	35.50	222.69	-94.63	-644.44	-623.10	1,198.05	940.31	257.74	4.648		
10,600.00	10,069.87	10,063.07	10,069.87	35.58	222.71	-89.69	-644.44	-623.10	1,289.56	1,031.79	257.77	5.003		
10,700.00	10,069.65	10,062.84	10,069.65	35.68	222.70	-89.66	-644.44	-623.10	1,382.25	1,124.47	257.77	5.362		
10,800.00	10,069.42	10,062.61	10,069.42	35.80	222.70	-89.64	-644.44	-623.10	1,475.89	1,218.11	257.78	5.725		
10,900.00	10,069.19	10,062.38	10,069.19	35.93	222.69	-89.61	-644.44	-623.10	1,570.33	1,312.54	257.79	6.092		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) B LEE STATE 004 - Verticals - Surveys

Survey Program: 0-2 Assumed Vertical										Rule Assigned:				Offset Site Error:
Reference										Offset Well Error:				0.00 usft
Measured	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	Offset	Toolface	+N/-S	+E/-W	Between	Between	Separation	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	Centres	Ellipses	(usft)			
26,200.00	8,313.49	8,315.59	8,313.49	130.34	252.20	-161.17	17,600.53	-465.82	1,627.08	1,328.68	298.40	5.453		
26,300.00	8,281.13	8,283.23	8,281.13	131.07	251.22	-160.09	17,600.53	-465.82	1,533.06	1,235.30	297.76	5.149		
26,400.00	8,248.78	8,250.88	8,248.78	131.81	250.23	-158.89	17,600.53	-465.82	1,439.12	1,141.94	297.18	4.843		
26,500.00	8,216.43	8,218.53	8,216.43	132.54	249.25	-157.53	17,600.53	-465.82	1,345.28	1,048.61	296.67	4.535		
26,600.00	8,184.07	8,186.17	8,184.07	133.28	248.27	-156.00	17,600.53	-465.82	1,251.56	955.31	296.25	4.225		
26,700.00	8,151.72	8,153.82	8,151.72	134.01	247.29	-154.27	17,600.53	-465.82	1,157.98	862.04	295.94	3.913		
26,800.00	8,118.82	8,120.92	8,118.82	134.75	246.29	-153.61	17,600.53	-465.82	1,064.78	769.01	295.77	3.600		
26,900.00	8,084.54	8,086.64	8,084.54	135.48	245.25	-151.43	17,600.53	-465.82	972.29	676.53	295.77	3.287		
27,000.00	8,050.27	8,052.37	8,050.27	136.21	244.21	-148.87	17,600.53	-465.82	880.11	584.07	296.05	2.973		
27,100.00	8,016.00	8,018.10	8,016.00	136.94	243.17	-145.87	17,600.53	-465.82	788.35	491.60	296.75	2.657		
27,200.00	7,981.72	7,983.82	7,981.72	137.68	242.14	-142.32	17,600.53	-465.82	697.17	399.12	298.05	2.339		
27,300.00	7,947.45	7,949.55	7,947.45	138.41	241.10	-138.09	17,600.53	-465.82	606.83	306.55	300.28	2.021		
27,400.00	7,913.17	7,915.27	7,913.17	139.14	240.06	-133.04	17,600.53	-465.82	517.78	213.83	303.95	1.703		
27,500.00	7,878.90	7,881.00	7,878.90	139.88	239.02	-126.99	17,600.53	-465.82	430.81	120.85	309.96	1.390	Level 3	
27,600.00	7,845.20	7,847.30	7,845.20	140.61	237.99	-118.36	17,600.53	-465.82	347.31	27.44	319.87	1.086	Level 2	
27,700.00	7,814.47	7,816.57	7,814.47	141.35	237.06	-108.65	17,600.53	-465.82	270.12	-66.15	336.27	0.803	Level 1	
27,800.00	7,784.78	7,786.88	7,784.78	142.09	236.16	-100.13	17,600.53	-465.82	208.21	-151.79	360.00	0.578	Level 1	
27,900.00	7,755.08	7,757.18	7,755.08	142.83	235.26	-91.13	17,600.53	-465.82	178.80	-198.98	377.78	0.473	Level 1	
27,912.41	7,751.40	7,753.50	7,751.40	142.92	235.15	-90.00	17,600.53	-465.82	178.41	-199.66	378.07	0.472	Level 1, CC, ES, SF	
28,000.00	7,725.39	7,727.49	7,725.39	143.57	234.36	-82.07	17,600.53	-465.82	197.04	-168.92	365.96	0.538	Level 1	
28,100.00	7,695.70	7,697.80	7,695.70	144.31	233.46	-73.40	17,600.53	-465.82	252.82	-87.83	340.65	0.742	Level 1	
28,200.00	7,666.00	7,668.10	7,666.00	145.05	232.56	-65.44	17,600.53	-465.82	327.49	6.65	320.84	1.021	Level 2	
28,300.00	7,636.31	7,638.41	7,636.31	145.79	231.66	-58.37	17,600.53	-465.82	410.87	103.12	307.75	1.335	Level 3	
28,400.00	7,606.61	7,608.71	7,606.61	146.53	230.76	-52.23	17,600.53	-465.82	498.61	199.56	299.05	1.667		
28,422.27	7,600.00	7,602.10	7,600.00	146.69	230.56	-50.98	17,600.53	-465.82	518.53	221.00	297.52	1.743		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) B LEE STATE 005 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
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)			
25,200.00	8,637.03	8,658.60	8,637.03	123.00	299.92	-133.75	16,537.40	-785.83	1,586.82	1,230.11	356.71	4.448	
25,300.00	8,604.67	8,626.23	8,604.67	123.74	298.45	-131.90	16,537.40	-785.83	1,497.48	1,140.59	356.90	4.196	
25,400.00	8,572.32	8,593.80	8,572.32	124.47	296.93	-129.92	16,537.40	-785.83	1,408.84	1,051.54	357.30	3.943	
25,500.00	8,539.96	8,561.38	8,539.96	125.20	295.47	-127.83	16,537.40	-785.83	1,321.03	962.96	358.07	3.689	
25,600.00	8,507.61	8,528.96	8,507.61	125.94	294.01	-125.61	16,537.40	-785.83	1,234.22	875.01	359.20	3.436	
25,700.00	8,475.26	8,496.53	8,475.26	126.67	292.44	-123.27	16,537.40	-785.83	1,148.64	787.98	360.66	3.185	
25,800.00	8,442.90	8,464.07	8,442.90	127.40	290.87	-120.79	16,537.40	-785.83	1,064.60	701.95	362.66	2.936	
25,900.00	8,410.55	8,431.69	8,410.55	128.14	289.36	-118.17	16,537.40	-785.83	982.49	617.15	365.34	2.689	
26,000.00	8,378.20	8,422.85	8,401.83	128.87	288.91	-117.44	16,537.19	-785.83	902.97	532.73	370.24	2.439	
26,100.00	8,345.84	8,371.12	8,350.14	129.61	286.69	-112.95	16,538.19	-785.83	826.95	453.50	373.45	2.214	
26,200.00	8,313.49	8,334.44	8,313.49	130.34	285.12	-109.53	16,537.40	-785.83	753.95	375.34	378.61	1.991	
26,300.00	8,281.13	8,302.08	8,281.13	131.07	283.73	-106.41	16,537.40	-785.83	687.00	302.06	384.93	1.785	
26,400.00	8,248.78	8,274.21	8,253.38	131.81	282.53	-103.67	16,537.91	-785.83	627.53	235.28	392.25	1.600	
26,500.00	8,216.43	8,237.23	8,216.43	132.54	280.94	-99.87	16,537.40	-785.83	576.84	177.44	399.41	1.444	Level 3
26,600.00	8,184.07	8,210.89	8,190.12	133.28	279.81	-97.12	16,537.37	-785.83	538.54	132.20	406.34	1.325	Level 3
26,700.00	8,151.72	8,174.52	8,153.83	134.01	278.16	-93.29	16,537.47	-785.83	514.95	104.43	410.52	1.254	Level 3
26,789.02	8,122.17	8,142.84	8,122.17	134.67	276.67	-90.00	16,537.40	-785.83	508.04	96.70	411.34	1.235	Level 2, CC, ES, SF
26,800.00	8,118.82	8,139.11	8,118.47	134.75	276.50	-89.56	16,537.49	-785.83	508.14	96.92	411.23	1.236	Level 2
26,900.00	8,084.54	8,103.84	8,083.30	135.48	274.80	-85.85	16,537.78	-785.83	518.58	110.67	407.91	1.271	Level 3
27,000.00	8,050.27	8,067.58	8,047.09	136.21	273.01	-82.05	16,537.51	-785.83	545.35	144.24	401.11	1.360	Level 3
27,100.00	8,016.00	8,036.42	8,016.00	136.94	271.40	-78.84	16,537.40	-785.83	586.12	193.73	392.39	1.494	Level 3
27,200.00	7,981.72	7,999.22	7,978.93	137.68	269.19	-75.12	16,537.50	-785.83	638.13	255.71	382.42	1.669	
27,300.00	7,947.45	7,963.89	7,943.79	138.41	266.96	-71.71	16,537.72	-785.83	698.84	326.24	372.60	1.876	
27,400.00	7,913.17	7,929.35	7,909.39	139.14	264.65	-68.48	16,537.56	-785.83	766.52	403.24	363.28	2.110	
27,500.00	7,878.90	7,891.08	7,871.42	139.88	262.23	-65.11	16,538.21	-785.83	838.68	483.86	354.82	2.364	
27,600.00	7,845.20	7,864.82	7,845.20	140.61	260.60	-64.13	16,537.40	-785.83	916.01	568.42	347.59	2.635	
27,700.00	7,814.47	7,812.85	7,793.55	141.35	257.43	-61.63	16,538.25	-785.83	996.08	655.73	340.35	2.927	
27,800.00	7,784.78	7,794.37	7,775.09	142.09	256.33	-60.12	16,538.57	-785.83	1,078.85	743.83	335.02	3.220	
27,900.00	7,755.08	7,774.29	7,755.08	142.83	255.14	-58.50	16,537.40	-785.83	1,164.96	834.81	330.15	3.529	
28,000.00	7,725.39	7,744.60	7,725.39	143.57	253.37	-56.24	16,537.40	-785.83	1,251.58	926.09	325.50	3.845	
28,100.00	7,695.70	7,693.89	7,675.00	144.31	250.32	-52.67	16,538.33	-785.83	1,338.71	1,018.18	320.53	4.177	
28,200.00	7,666.00	7,679.44	7,660.55	145.05	249.44	-51.70	16,538.48	-785.83	1,427.23	1,110.08	317.15	4.500	
28,300.00	7,636.31	7,655.14	7,636.31	145.79	247.96	-50.10	16,537.40	-785.83	1,517.85	1,204.16	313.69	4.839	
28,400.00	7,606.61	7,625.44	7,606.61	146.53	246.16	-48.27	16,537.40	-785.83	1,608.15	1,297.84	310.31	5.182	
28,422.27	7,600.00	7,594.84	7,576.29	146.69	244.35	-46.52	16,538.25	-785.83	1,627.71	1,318.92	308.78	5.271	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) B LEE STATE 006 - Verticals - Surveys

Survey Program: 45-MWD OWSG Rev5, 1647-MWD - OWSG R1										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										Offset Well Error:		0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis 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
26,500.00	8,216.43	8,285.01	8,263.56	132.54	24.96	-138.33	17,831.11	-780.43	1,642.60	1,558.99	83.61	19.646	
26,600.00	8,184.07	8,251.85	8,230.42	133.28	24.85	-136.66	17,832.08	-780.64	1,553.57	1,468.42	85.15	18.246	
26,700.00	8,151.72	8,214.14	8,192.73	134.01	24.73	-134.64	17,833.15	-780.89	1,465.08	1,378.28	86.80	16.879	
26,800.00	8,118.82	8,176.44	8,155.05	134.75	24.61	-133.98	17,834.10	-781.25	1,377.41	1,288.67	88.74	15.521	
26,900.00	8,084.54	8,140.42	8,119.03	135.48	24.50	-131.88	17,834.95	-781.69	1,291.03	1,199.93	91.10	14.172	
27,000.00	8,050.27	8,105.22	8,083.85	136.21	24.39	-129.67	17,835.78	-782.17	1,205.69	1,111.80	93.89	12.842	
27,100.00	8,016.00	8,069.02	8,047.66	136.94	24.28	-127.24	17,836.65	-782.73	1,121.62	1,024.49	97.13	11.547	
27,200.00	7,981.72	8,026.47	8,005.12	137.68	24.15	-124.17	17,837.51	-783.41	1,038.97	938.20	100.78	10.310	
27,300.00	7,947.45	7,984.66	7,963.33	138.41	24.02	-120.91	17,838.06	-784.11	958.07	852.90	105.16	9.110	
27,400.00	7,913.17	7,944.95	7,923.63	139.14	23.89	-117.59	17,838.17	-784.95	879.45	768.97	110.48	7.961	
27,500.00	7,878.90	7,903.68	7,882.36	139.88	23.76	-113.94	17,838.29	-785.49	803.95	687.26	116.69	6.889	
27,600.00	7,845.20	7,854.26	7,832.94	140.61	23.60	-108.16	17,838.30	-784.99	731.92	608.21	123.70	5.917	
27,700.00	7,814.47	7,814.84	7,793.54	141.35	23.47	-102.71	17,837.85	-784.05	664.23	532.11	132.12	5.028	
27,800.00	7,784.78	7,786.18	7,764.89	142.09	23.37	-99.66	17,837.35	-783.22	603.74	462.04	141.70	4.261	
27,900.00	7,755.08	7,763.24	7,741.97	142.83	23.29	-97.17	17,836.92	-782.70	553.53	401.90	151.63	3.651	
28,000.00	7,725.39	7,732.91	7,711.64	143.57	23.19	-93.82	17,836.33	-782.11	516.55	356.21	160.35	3.221	
28,100.00	7,695.70	7,704.43	7,683.18	144.31	23.09	-90.65	17,835.76	-781.47	495.59	329.39	166.20	2.982	
28,164.83	7,676.45	7,686.84	7,665.60	144.79	23.03	-88.68	17,835.35	-781.07	491.65	323.97	167.68	2.932	CC, ES, SF
28,200.00	7,666.00	7,677.47	7,656.24	145.05	23.00	-87.63	17,835.12	-780.86	492.81	325.20	167.61	2.940	
28,300.00	7,636.31	7,651.16	7,629.94	145.79	22.91	-84.68	17,834.43	-780.30	508.59	344.39	164.21	3.097	
28,400.00	7,606.61	7,624.89	7,603.68	146.53	22.83	-81.76	17,833.67	-779.76	541.35	384.22	157.13	3.445	
28,422.27	7,600.00	7,619.00	7,597.80	146.69	22.81	-81.11	17,833.49	-779.64	550.68	395.44	155.24	3.547	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) BRIDGES STATE 180 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										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)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
26,600.00	8,184.07	8,198.66	8,184.07	133.28	237.07	122.98	17,847.85	447.16	1,651.29	1,342.31	308.98	5.344	
26,700.00	8,151.72	8,166.17	8,151.72	134.01	235.25	121.27	17,847.85	447.16	1,567.18	1,257.30	309.88	5.057	
26,800.00	8,118.82	8,133.15	8,118.82	134.75	233.38	120.93	17,847.85	447.16	1,484.50	1,173.48	311.02	4.773	
26,900.00	8,084.54	8,098.73	8,084.54	135.48	231.35	119.07	17,847.85	447.16	1,403.72	1,091.36	312.36	4.494	
27,000.00	8,050.27	8,064.33	8,050.27	136.21	229.33	117.12	17,847.85	447.16	1,324.67	1,010.59	314.09	4.218	
27,100.00	8,016.00	8,029.94	8,016.00	136.94	227.31	115.10	17,847.85	447.16	1,247.70	931.44	316.25	3.945	
27,200.00	7,981.72	7,995.54	7,981.72	137.68	225.29	113.01	17,847.85	447.16	1,173.19	854.30	318.89	3.679	
27,300.00	7,947.45	7,961.15	7,947.45	138.41	223.28	110.86	17,847.85	447.16	1,101.67	779.64	322.03	3.421	
27,400.00	7,913.17	7,926.70	7,913.17	139.14	221.26	108.64	17,847.85	447.16	1,033.73	708.07	325.66	3.174	
27,500.00	7,878.90	7,892.34	7,878.90	139.88	219.30	106.36	17,847.85	447.16	970.15	640.35	329.80	2.942	
27,600.00	7,845.20	7,858.57	7,845.20	140.61	217.47	103.25	17,847.85	447.16	911.71	577.27	334.43	2.726	
27,700.00	7,814.47	7,827.70	7,814.47	141.35	215.79	100.10	17,847.85	447.16	859.11	519.66	339.45	2.531	
27,800.00	7,784.78	7,810.00	7,796.78	142.09	214.82	98.82	17,847.85	447.16	814.21	469.08	345.14	2.359	
27,900.00	7,755.08	7,775.08	7,762.07	142.83	212.92	96.29	17,848.10	447.16	778.43	429.35	349.08	2.230	
28,000.00	7,725.39	7,738.36	7,725.39	143.57	210.92	93.58	17,847.85	447.16	752.98	401.19	351.79	2.140	
28,100.00	7,695.70	7,708.54	7,695.70	144.31	209.35	91.38	17,847.85	447.16	739.20	385.94	353.26	2.093	
28,162.63	7,677.10	7,690.21	7,677.40	144.77	208.40	90.02	17,847.84	447.16	736.77	383.60	353.17	2.086	CC, ES, SF
28,200.00	7,666.00	7,678.79	7,666.00	145.05	207.81	89.18	17,847.85	447.16	737.63	384.95	352.68	2.091	
28,300.00	7,636.31	7,648.96	7,636.31	145.79	206.20	86.98	17,847.85	447.16	748.34	398.45	349.89	2.139	
28,400.00	7,606.61	7,619.20	7,606.61	146.53	204.58	84.78	17,847.85	447.16	770.82	425.64	345.19	2.233	
28,422.27	7,600.00	7,612.59	7,600.00	146.69	204.23	84.30	17,847.85	447.16	777.34	433.41	343.93	2.260	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 001H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program: 100-r.5 GYRO-NS, 7583-MWD OWSG Rev5

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
14,200.00	9,998.80	9,494.00	9,477.18	47.82	27.72	63.48	5,339.70	772.06	1,604.32	1,537.96	66.36	24.177	
14,300.00	9,994.75	9,494.00	9,477.18	48.35	27.72	63.48	5,339.70	772.06	1,530.68	1,463.65	67.03	22.835	
14,400.00	9,990.71	9,510.40	9,491.27	48.89	27.74	64.14	5,347.92	770.40	1,459.83	1,391.97	67.85	21.514	
14,500.00	9,986.66	9,526.00	9,504.40	49.43	27.76	64.77	5,356.21	768.90	1,392.14	1,323.37	68.77	20.243	
14,600.00	9,982.61	9,537.61	9,513.98	49.98	27.77	65.24	5,362.68	767.85	1,328.01	1,258.23	69.78	19.032	
14,700.00	9,978.57	9,557.00	9,529.61	50.53	27.79	66.02	5,374.05	766.32	1,267.95	1,197.05	70.91	17.882	
14,800.00	9,974.52	9,571.39	9,540.95	51.09	27.81	66.59	5,382.86	765.37	1,212.35	1,140.23	72.12	16.810	
14,900.00	9,970.47	9,589.00	9,554.59	51.65	27.83	67.30	5,393.96	764.46	1,161.72	1,088.29	73.43	15.821	
15,000.00	9,966.42	9,628.87	9,584.67	52.22	27.87	68.90	5,420.07	762.85	1,116.10	1,041.24	74.86	14.910	
15,100.00	9,962.38	9,665.10	9,610.92	52.80	27.92	70.34	5,445.01	761.53	1,075.76	999.45	76.31	14.097	
15,200.00	9,958.33	9,709.65	9,641.43	53.38	27.98	72.06	5,477.41	759.91	1,040.93	963.14	77.78	13.382	
15,300.00	9,954.28	9,763.51	9,676.50	53.96	28.06	74.08	5,518.24	757.94	1,011.25	932.00	79.25	12.760	
15,400.00	9,950.24	9,821.68	9,711.48	54.55	28.18	76.16	5,564.64	755.47	986.55	905.87	80.68	12.228	
15,500.00	9,946.19	9,892.13	9,748.48	55.14	28.37	78.42	5,624.42	751.49	966.28	884.23	82.05	11.777	
15,600.00	9,942.14	9,972.72	9,782.67	55.74	28.67	80.57	5,697.07	745.25	949.30	865.94	83.37	11.387	
15,700.00	9,937.71	10,066.21	9,809.14	56.34	29.11	82.49	5,786.14	735.73	934.49	849.85	84.65	11.040	
15,800.00	9,930.82	10,149.93	9,822.41	56.95	29.60	83.72	5,868.09	725.62	920.35	834.43	85.93	10.711	
15,900.00	9,923.59	10,203.11	9,823.44	57.57	29.94	83.98	5,920.93	719.96	909.63	822.52	87.11	10.442	
16,000.00	9,916.36	10,295.93	9,820.81	58.19	30.60	84.20	6,013.43	712.75	902.31	813.90	88.41	10.206	
16,100.00	9,909.13	10,367.12	9,817.96	58.81	31.14	84.32	6,084.38	707.70	896.00	806.35	89.65	9.994	
16,200.00	9,901.91	10,441.00	9,813.85	59.44	31.74	84.39	6,158.11	705.53	893.65	802.75	90.90	9.831	
16,300.00	9,894.68	10,536.00	9,808.10	60.07	32.57	84.45	6,252.92	703.83	892.65	800.30	92.35	9.666	
16,400.00	9,887.45	10,630.00	9,801.82	60.70	33.43	84.48	6,346.71	702.72	892.32	798.48	93.84	9.509	
16,404.44	9,887.13	10,633.14	9,801.61	60.73	33.46	84.48	6,349.84	702.70	892.32	798.42	93.90	9.503	CC
16,500.00	9,880.22	10,725.00	9,794.91	61.34	34.36	84.48	6,441.45	702.18	892.64	797.26	95.38	9.358	
16,600.00	9,872.99	10,820.00	9,786.90	61.98	35.33	84.41	6,536.11	701.94	893.40	796.42	96.97	9.213	
16,700.00	9,865.77	10,916.75	9,776.87	62.62	36.36	84.22	6,632.34	701.84	894.50	795.89	98.61	9.071	
16,800.00	9,858.54	11,016.87	9,765.04	63.27	37.46	83.94	6,731.76	701.88	895.92	795.60	100.33	8.930	
16,900.00	9,851.31	11,126.42	9,754.69	63.92	38.72	83.78	6,840.81	701.41	896.61	794.39	102.22	8.771	
17,000.00	9,844.08	11,223.92	9,746.77	64.57	39.88	83.73	6,937.99	700.84	897.02	793.01	104.01	8.624	
17,100.00	9,836.52	11,320.17	9,738.53	65.22	41.05	83.67	7,033.88	700.63	897.81	792.00	105.81	8.485	
17,200.00	9,827.24	11,420.14	9,729.76	65.88	42.29	83.70	7,133.46	700.63	898.65	790.94	107.71	8.343	
17,300.00	9,817.90	11,522.82	9,722.28	66.54	43.60	83.84	7,235.87	700.54	899.24	789.55	109.69	8.198	
17,400.00	9,808.57	11,620.62	9,715.17	67.21	44.87	83.98	7,333.41	700.37	899.74	788.12	111.63	8.060	
17,500.00	9,799.23	11,715.76	9,707.68	67.87	46.13	84.07	7,428.25	700.65	900.78	787.23	113.54	7.933	
17,600.00	9,789.90	11,810.98	9,699.57	68.54	47.40	84.13	7,523.12	701.29	902.27	786.79	115.47	7.814	
17,700.00	9,780.56	11,918.25	9,689.81	69.21	48.86	84.16	7,629.95	702.26	904.06	786.44	117.61	7.687	
17,800.00	9,771.23	12,019.87	9,681.89	69.89	50.26	84.26	7,731.25	702.05	904.60	784.90	119.70	7.557	
17,900.00	9,761.89	12,116.81	9,675.49	70.56	51.61	84.44	7,827.98	702.49	905.67	783.94	121.73	7.440	
18,000.00	9,752.56	12,210.34	9,668.78	71.24	52.93	84.58	7,921.27	703.17	907.09	783.37	123.72	7.332	ES
18,100.00	9,743.22	12,304.03	9,661.16	71.92	54.26	84.66	8,014.64	704.55	909.34	783.64	125.71	7.234	
18,200.00	9,733.89	12,395.25	9,652.61	72.60	55.56	84.67	8,105.44	706.45	912.32	784.67	127.65	7.147	
18,300.00	9,724.55	12,509.29	9,641.34	73.28	57.20	84.65	8,218.89	709.02	915.58	785.55	130.02	7.042	
18,400.00	9,715.22	12,610.49	9,632.38	73.96	58.68	84.70	8,319.68	709.93	917.32	785.13	132.18	6.940	
18,500.00	9,705.88	12,711.78	9,623.52	74.65	60.16	84.74	8,420.58	710.89	919.11	784.75	134.36	6.841	
18,600.00	9,696.56	12,808.00	9,615.20	75.34	61.58	84.80	8,516.43	712.04	921.13	784.67	136.46	6.750	
18,700.00	9,687.27	12,897.64	9,605.70	76.03	62.91	84.74	8,605.55	713.63	923.90	785.49	138.42	6.675	
18,800.00	9,677.98	12,980.61	9,596.96	76.72	64.14	84.69	8,688.01	716.22	928.03	787.80	140.23	6.618	
18,900.00	9,668.68	13,073.83	9,588.46	77.41	65.53	84.73	8,780.74	720.59	933.57	791.31	142.26	6.562	
19,000.00	9,659.39	13,164.24	9,579.05	78.10	66.87	84.70	8,870.53	725.33	939.80	795.58	144.22	6.517	
19,100.00	9,650.10	13,260.15	9,567.38	78.80	68.31	84.57	8,965.56	731.03	946.88	800.59	146.29	6.473	
19,200.00	9,640.80	13,370.44	9,552.02	79.49	69.96	84.30	9,074.61	737.03	953.65	804.97	148.69	6.414	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 001H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Survey Program: 100-r.5 GYRO-NS, 7583-MWD OWSG Rev5

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)			
19,300.00	9,631.51	13,467.31	9,538.65	80.19	71.42	84.07	9,170.43	741.75	959.87	809.09	150.78	6.366	
19,400.00	9,622.22	13,556.19	9,528.08	80.89	72.76	83.97	9,258.53	746.93	966.83	814.13	152.70	6.332	
19,500.00	9,612.93	13,652.86	9,517.03	81.59	74.23	83.89	9,354.35	753.36	974.57	819.75	154.82	6.295	
19,600.00	9,603.63	13,750.62	9,505.97	82.29	75.71	83.82	9,451.25	760.08	982.52	825.55	156.97	6.259	
19,700.00	9,594.34	13,843.03	9,495.44	82.99	77.12	83.75	9,542.80	766.85	990.92	831.94	158.98	6.233	
19,800.00	9,585.05	13,931.14	9,483.88	83.70	78.46	83.60	9,629.86	773.95	1,000.26	839.40	160.86	6.218	
19,900.00	9,575.75	14,023.10	9,470.04	84.40	79.86	83.36	9,720.41	782.08	1,010.60	847.79	162.81	6.207	
20,000.00	9,566.46	14,112.33	9,454.85	85.11	81.21	83.02	9,807.93	790.45	1,021.76	857.10	164.65	6.205	
20,100.00	9,557.01	14,208.72	9,437.16	85.82	82.67	82.54	9,902.20	800.05	1,033.68	866.99	166.69	6.201	SF
20,200.00	9,544.98	14,214.00	9,436.19	86.53	82.75	82.28	9,907.36	800.58	1,049.55	884.07	165.47	6.343	
20,300.00	9,531.82	14,214.00	9,436.19	87.24	82.75	82.28	9,907.36	800.58	1,074.37	911.36	163.01	6.591	
20,400.00	9,518.65	14,214.00	9,436.19	87.95	82.75	82.28	9,907.36	800.58	1,107.69	948.03	159.66	6.938	
20,500.00	9,505.49	14,214.00	9,436.19	88.67	82.75	82.28	9,907.36	800.58	1,148.78	993.12	155.66	7.380	
20,600.00	9,492.33	14,214.00	9,436.19	89.38	82.75	82.28	9,907.36	800.58	1,196.83	1,045.57	151.26	7.912	
20,700.00	9,479.16	14,214.00	9,436.19	90.10	82.75	82.28	9,907.36	800.58	1,251.05	1,104.38	146.67	8.530	
20,800.00	9,466.00	14,214.00	9,436.19	90.82	82.75	82.28	9,907.36	800.58	1,310.66	1,168.62	142.04	9.227	
20,900.00	9,452.84	14,214.00	9,436.19	91.54	82.75	82.28	9,907.36	800.58	1,374.97	1,237.47	137.50	10.000	
21,000.00	9,439.67	14,214.00	9,436.19	92.25	82.75	82.28	9,907.36	800.58	1,443.35	1,310.21	133.14	10.841	
21,100.00	9,426.51	14,214.00	9,436.19	92.97	82.75	82.28	9,907.36	800.58	1,515.25	1,386.24	129.01	11.745	
21,200.00	9,413.34	14,214.00	9,436.19	93.69	82.75	82.28	9,907.36	800.58	1,590.19	1,465.05	125.14	12.708	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 001H - Pilot - Pilot

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program: 1966-MWD OWSG Rev5				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	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,100.00	10,002.85	9,960.78	9,963.57	47.30	230.54	90.55	5,269.90	845.00	1,586.29	1,314.89	271.40	5.845	
14,200.00	9,998.80	9,960.82	9,963.62	47.82	230.54	90.56	5,269.90	845.00	1,511.11	1,238.92	272.19	5.552	
14,300.00	9,994.75	9,960.87	9,963.67	48.35	230.54	90.56	5,269.90	845.00	1,438.96	1,165.88	273.08	5.269	
14,400.00	9,990.71	9,960.92	9,963.71	48.89	230.54	90.56	5,269.91	845.00	1,370.31	1,096.25	274.06	5.000	
14,500.00	9,986.66	9,960.97	9,963.76	49.43	230.54	90.56	5,269.91	845.00	1,305.72	1,030.57	275.15	4.745	
14,600.00	9,982.61	9,961.02	9,963.81	49.98	230.54	90.57	5,269.91	845.00	1,245.82	969.49	276.33	4.508	
14,700.00	9,978.57	9,961.07	9,963.86	50.53	230.54	90.57	5,269.91	845.00	1,191.31	913.72	277.59	4.292	
14,800.00	9,974.52	9,961.12	9,963.91	51.09	230.54	90.57	5,269.91	845.00	1,142.97	864.07	278.90	4.098	
14,900.00	9,970.47	9,961.17	9,963.96	51.65	230.54	90.58	5,269.92	845.00	1,101.60	821.40	280.20	3.931	
15,000.00	9,966.42	9,961.22	9,964.01	52.22	230.54	90.58	5,269.92	845.00	1,068.03	786.57	281.46	3.795	
15,100.00	9,962.38	9,961.27	9,964.06	52.80	230.54	90.58	5,269.92	845.00	1,042.99	760.39	282.60	3.691	
15,200.00	9,958.33	9,961.32	9,964.11	53.38	230.54	90.58	5,269.92	845.00	1,027.13	743.57	283.56	3.622	
15,300.00	9,954.28	9,961.37	9,964.16	53.96	230.54	90.59	5,269.92	845.00	1,020.85	736.58	284.28	3.591	
15,314.23	9,953.71	9,961.37	9,964.17	54.04	230.54	90.59	5,269.92	845.00	1,020.76	736.40	284.36	3.590	CC, ES, SF
15,400.00	9,950.24	9,961.42	9,964.21	54.55	230.54	90.59	5,269.93	845.00	1,024.35	739.64	284.72	3.598	
15,500.00	9,946.19	9,961.47	9,964.26	55.14	230.54	90.59	5,269.93	845.00	1,037.52	752.65	284.87	3.642	
15,600.00	9,942.14	9,961.52	9,964.31	55.74	230.54	90.60	5,269.93	845.00	1,060.00	775.25	284.75	3.723	
15,700.00	9,937.71	9,961.20	9,964.00	56.34	230.54	90.24	5,269.92	845.00	1,091.22	806.82	284.40	3.837	
15,800.00	9,930.82	9,958.54	9,961.34	56.95	230.54	89.74	5,269.81	845.03	1,130.46	846.59	283.87	3.982	
15,900.00	9,923.59	9,955.54	9,958.34	57.57	230.53	89.57	5,269.69	845.06	1,176.89	893.68	283.21	4.156	
16,000.00	9,916.36	9,952.53	9,955.33	58.19	230.53	89.40	5,269.56	845.09	1,229.72	947.24	282.48	4.353	
16,100.00	9,909.13	9,949.50	9,952.31	58.81	230.53	89.23	5,269.44	845.13	1,288.15	1,006.44	281.71	4.573	
16,200.00	9,901.91	9,946.46	9,949.27	59.44	230.53	89.06	5,269.32	845.16	1,351.45	1,070.52	280.93	4.811	
16,300.00	9,894.68	9,943.41	9,946.22	60.07	230.53	88.89	5,269.19	845.20	1,418.97	1,138.80	280.18	5.065	
16,400.00	9,887.45	9,940.34	9,943.15	60.70	230.53	88.72	5,269.07	845.23	1,490.15	1,210.70	279.45	5.332	
16,500.00	9,880.22	9,937.26	9,940.07	61.34	230.53	88.55	5,268.94	845.27	1,564.47	1,285.70	278.77	5.612	
16,600.00	9,872.99	9,934.16	9,936.98	61.98	230.53	88.37	5,268.82	845.31	1,641.52	1,363.38	278.14	5.902	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 004H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Survey Program: 100-NS-GYRO-MS, 9356-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)			
13,600.00	10,023.09	9,638.00	9,642.20	44.80	23.94	48.45	5,049.72	187.23	1,588.22	1,529.37	58.84	26.990	
13,700.00	10,019.04	9,654.05	9,656.60	45.28	23.95	49.37	5,054.53	182.04	1,493.01	1,434.04	58.97	25.317	
13,800.00	10,014.99	9,669.00	9,669.83	45.78	23.96	50.23	5,059.31	176.97	1,398.34	1,339.22	59.12	23.654	
13,900.00	10,010.94	9,669.00	9,669.83	46.28	23.96	50.23	5,059.31	176.97	1,304.22	1,244.97	59.25	22.013	
14,000.00	10,006.90	9,690.85	9,688.84	46.79	23.97	51.53	5,066.77	169.20	1,210.62	1,151.15	59.47	20.358	
14,100.00	10,002.85	9,701.00	9,697.54	47.30	23.97	52.15	5,070.41	165.46	1,117.79	1,058.09	59.70	18.724	
14,200.00	9,998.80	9,724.24	9,717.11	47.82	23.99	53.58	5,079.16	156.48	1,025.70	965.69	60.00	17.094	
14,300.00	9,994.75	9,743.47	9,732.85	48.35	24.00	54.77	5,086.84	148.57	934.55	874.18	60.36	15.482	
14,400.00	9,990.71	9,763.00	9,748.34	48.89	24.01	55.98	5,095.10	139.98	844.49	783.69	60.81	13.888	
14,500.00	9,986.66	9,786.62	9,766.25	49.43	24.03	57.42	5,105.73	128.87	755.77	694.42	61.35	12.319	
14,600.00	9,982.61	9,810.39	9,783.31	49.98	24.05	58.84	5,117.22	116.96	668.72	606.68	62.03	10.780	
14,700.00	9,978.57	9,836.74	9,801.14	50.53	24.07	60.40	5,130.91	103.22	583.78	520.88	62.90	9.281	
14,800.00	9,974.52	9,867.36	9,820.45	51.09	24.10	62.21	5,148.07	86.78	501.49	437.50	63.99	7.837	
14,900.00	9,970.47	9,906.01	9,842.70	51.65	24.15	64.51	5,171.42	65.50	422.32	357.04	65.27	6.470	
15,000.00	9,966.42	9,952.00	9,865.70	52.22	24.28	67.10	5,201.05	38.93	346.25	279.47	66.77	5.186	
15,100.00	9,962.38	10,012.13	9,889.76	52.80	24.51	69.98	5,241.97	2.09	272.97	204.88	68.09	4.009	
15,200.00	9,958.33	10,070.90	9,906.52	53.38	24.80	71.76	5,283.85	-35.53	202.50	132.74	69.76	2.903	
15,300.00	9,954.28	10,136.75	9,917.61	53.96	25.18	71.42	5,333.18	-77.66	136.09	64.76	71.34	1.908	
15,400.00	9,950.24	10,208.92	9,919.75	54.55	25.66	61.39	5,388.31	-124.07	73.94	1.94	72.00	1.027	Level 2
15,500.00	9,946.19	10,284.16	9,913.79	55.14	26.23	11.53	5,447.00	-170.76	33.08	-34.14	67.22	0.492	Level 1
15,506.76	9,945.91	10,289.57	9,913.29	55.18	26.27	5.98	5,451.31	-173.97	32.83	-34.18	67.02	0.490	Level 1, CC, ES, SF
15,600.00	9,942.14	10,368.02	9,905.89	55.74	26.91	-47.35	5,515.39	-218.61	62.17	-12.64	74.81	0.831	Level 1
15,700.00	9,937.71	10,458.42	9,897.98	56.34	27.70	-63.85	5,592.22	-265.56	109.08	30.35	78.73	1.385	Level 3
15,800.00	9,930.82	10,553.66	9,890.91	56.95	28.58	-71.18	5,675.73	-310.77	153.41	72.01	81.40	1.885	
15,900.00	9,923.59	10,653.41	9,883.91	57.57	29.53	-75.37	5,765.58	-353.51	194.11	110.37	83.74	2.318	
16,000.00	9,916.36	10,759.18	9,875.11	58.19	30.57	-77.52	5,863.25	-393.06	230.15	144.14	86.00	2.676	
16,100.00	9,909.13	10,869.83	9,864.19	58.81	31.65	-78.44	5,967.80	-427.57	260.48	172.34	88.14	2.955	
16,200.00	9,901.91	10,986.72	9,854.12	59.44	32.77	-79.21	6,080.57	-456.53	284.26	194.06	90.20	3.151	
16,300.00	9,894.68	11,106.77	9,845.69	60.07	33.91	-79.97	6,198.34	-478.09	301.08	209.04	92.04	3.271	
16,400.00	9,887.45	11,227.76	9,836.19	60.70	35.01	-80.20	6,318.27	-490.70	310.56	216.99	93.57	3.319	
16,500.00	9,880.22	11,345.37	9,825.74	61.34	36.04	-79.95	6,435.31	-495.03	313.53	218.67	94.87	3.305	
16,600.00	9,872.99	11,445.37	9,815.52	61.98	36.92	-79.40	6,534.78	-495.84	313.99	217.58	96.40	3.257	
16,700.00	9,865.77	11,545.18	9,803.82	62.62	37.83	-78.59	6,633.90	-496.54	314.66	216.72	97.95	3.213	
16,800.00	9,858.54	11,646.51	9,793.31	63.27	38.78	-78.00	6,734.68	-496.91	314.77	215.26	99.51	3.163	
16,900.00	9,851.31	11,744.18	9,784.41	63.92	39.73	-77.69	6,831.93	-498.14	315.51	214.31	101.20	3.118	
17,000.00	9,844.08	11,845.93	9,774.48	64.57	40.75	-77.23	6,933.19	-499.21	316.22	213.39	102.83	3.075	
17,100.00	9,836.52	11,947.99	9,766.93	65.22	41.80	-77.27	7,034.97	-500.10	316.15	211.62	104.52	3.025	
17,200.00	9,827.24	12,049.38	9,760.28	65.88	42.86	-77.74	7,136.13	-500.65	315.20	208.89	106.31	2.965	
17,300.00	9,817.90	12,148.02	9,753.12	66.54	43.92	-78.08	7,234.52	-500.85	314.09	205.92	108.17	2.904	
17,400.00	9,808.57	12,246.25	9,745.02	67.21	45.00	-78.27	7,332.41	-501.57	313.70	203.66	110.04	2.851	
17,500.00	9,799.23	12,349.54	9,736.19	67.87	46.15	-78.40	7,435.32	-502.15	313.22	201.41	111.81	2.801	
17,600.00	9,789.90	12,447.85	9,728.69	68.54	47.26	-78.68	7,533.34	-502.22	312.06	198.34	113.72	2.744	
17,650.00	9,785.23	12,495.75	9,724.74	68.88	47.81	-78.77	7,581.07	-502.58	311.88	197.17	114.71	2.719	
17,700.00	9,780.56	12,543.43	9,720.61	69.21	48.36	-78.83	7,628.57	-503.25	312.07	196.37	115.70	2.697	
17,800.00	9,771.23	12,641.37	9,711.51	69.89	49.51	-78.88	7,726.07	-505.28	313.20	195.57	117.63	2.663	
17,900.00	9,761.89	12,748.83	9,701.36	70.56	50.79	-78.87	7,833.03	-506.61	313.57	194.20	119.36	2.627	
18,000.00	9,752.56	12,850.65	9,693.72	71.24	52.00	-79.18	7,934.57	-506.56	312.28	191.03	121.26	2.575	
18,100.00	9,743.22	12,950.32	9,686.99	71.92	53.19	-79.61	8,034.01	-506.42	310.78	187.55	123.23	2.522	
18,200.00	9,733.89	13,049.33	9,679.66	72.60	54.40	-79.92	8,132.75	-506.29	309.42	184.21	125.22	2.471	
18,300.00	9,724.55	13,148.16	9,671.82	73.28	55.61	-80.16	8,231.26	-506.71	308.70	181.49	127.21	2.427	
18,400.00	9,715.22	13,251.08	9,665.14	73.96	56.88	-80.67	8,333.97	-506.75	307.37	178.22	129.15	2.380	
18,500.00	9,705.88	13,350.25	9,658.88	74.65	58.12	-81.19	8,432.93	-506.49	305.75	174.56	131.19	2.331	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 004H - Horizontal - PRODUCING - Surveys

Offset Site Error: 0.00 usft

Survey Program: 100-NS-GYRO-MS, 9356-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)			
18,600.00	9,696.56	13,450.11	9,652.27	75.34	59.37	-81.67	8,532.58	-506.47	304.43	171.22	133.21	2.285	
18,700.00	9,687.27	13,549.06	9,645.76	76.03	60.62	-82.15	8,631.31	-506.54	303.22	167.96	135.26	2.242	
18,800.00	9,677.98	13,647.22	9,639.62	76.72	61.88	-82.70	8,729.28	-507.14	302.53	165.18	137.35	2.203	
18,900.00	9,668.68	13,749.06	9,634.62	77.41	63.19	-83.54	8,830.99	-507.98	301.92	162.54	139.38	2.166	
18,970.58	9,662.12	13,816.88	9,631.90	77.90	64.07	-84.22	8,898.75	-508.65	301.58	160.66	140.91	2.140	
19,000.00	9,659.39	13,845.21	9,630.78	78.10	64.44	-84.51	8,927.05	-509.11	301.64	160.09	141.55	2.131	
19,100.00	9,650.10	13,948.65	9,625.70	78.80	65.79	-85.38	9,030.36	-510.29	301.49	157.95	143.54	2.100	
19,200.00	9,640.80	14,052.92	9,618.68	79.49	67.14	-85.86	9,134.39	-509.77	299.88	154.41	145.47	2.061	
19,300.00	9,631.51	14,152.17	9,610.39	80.19	68.43	-86.02	9,233.29	-508.81	297.95	150.43	147.52	2.020	
19,400.00	9,622.22	14,252.89	9,601.31	80.89	69.74	-86.04	9,333.59	-507.60	295.84	146.31	149.53	1.979	
19,500.00	9,612.93	14,352.75	9,592.54	81.59	71.05	-86.12	9,433.06	-506.50	293.80	142.24	151.56	1.938	
19,600.00	9,603.63	14,453.23	9,583.47	82.29	72.36	-86.14	9,533.12	-505.12	291.52	137.93	153.59	1.898	
19,700.00	9,594.34	14,552.79	9,573.34	82.99	73.67	-85.93	9,632.15	-503.79	289.34	133.71	155.63	1.859	
19,787.35	9,586.22	14,634.00	9,564.34	83.61	74.74	-85.62	9,712.85	-502.68	287.55	129.98	157.56	1.825	
19,800.00	9,585.05	14,634.00	9,564.34	83.70	74.74	-85.62	9,712.85	-502.68	287.82	129.85	157.97	1.822	
19,900.00	9,575.75	14,634.00	9,564.34	84.40	74.74	-85.62	9,712.85	-502.68	308.82	155.81	153.01	2.018	
20,000.00	9,566.46	14,634.00	9,564.34	85.11	74.74	-85.62	9,712.85	-502.68	357.63	218.15	139.48	2.564	
20,100.00	9,557.01	14,634.00	9,564.34	85.82	74.74	-84.99	9,712.85	-502.68	424.76	299.42	125.34	3.389	
20,200.00	9,544.98	14,634.00	9,564.34	86.53	74.74	-83.02	9,712.85	-502.68	502.80	389.08	113.72	4.421	
20,300.00	9,531.82	14,634.00	9,564.34	87.24	74.74	-83.02	9,712.85	-502.68	587.47	482.60	104.86	5.602	
20,400.00	9,518.65	14,634.00	9,564.34	87.95	74.74	-83.02	9,712.85	-502.68	676.33	578.12	98.22	6.886	
20,500.00	9,505.49	14,634.00	9,564.34	88.67	74.74	-83.02	9,712.85	-502.68	767.94	674.74	93.20	8.240	
20,600.00	9,492.33	14,634.00	9,564.34	89.38	74.74	-83.02	9,712.85	-502.68	861.42	772.06	89.36	9.640	
20,700.00	9,479.16	14,634.00	9,564.34	90.10	74.74	-83.02	9,712.85	-502.68	956.22	869.84	86.38	11.070	
20,800.00	9,466.00	14,634.00	9,564.34	90.82	74.74	-83.02	9,712.85	-502.68	1,051.98	967.97	84.02	12.521	
20,900.00	9,452.84	14,634.00	9,564.34	91.54	74.74	-83.02	9,712.85	-502.68	1,148.47	1,066.34	82.12	13.985	
21,000.00	9,439.67	14,634.00	9,564.34	92.25	74.74	-83.02	9,712.85	-502.68	1,245.51	1,164.92	80.58	15.456	
21,100.00	9,426.51	14,634.00	9,564.34	92.97	74.74	-83.02	9,712.85	-502.68	1,342.98	1,263.66	79.32	16.932	
21,200.00	9,413.34	14,634.00	9,564.34	93.69	74.74	-83.02	9,712.85	-502.68	1,440.80	1,362.54	78.26	18.410	
21,300.00	9,400.18	14,634.00	9,564.34	94.42	74.74	-83.02	9,712.85	-502.68	1,538.90	1,461.52	77.38	19.888	
21,400.00	9,387.02	14,634.00	9,564.34	95.14	74.74	-83.02	9,712.85	-502.68	1,637.23	1,560.60	76.63	21.365	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) IRONHOUSE 19 STATE COM 004H - ST01 - ST01

Survey Program: 100-NS-GYRO-MS, 9253-MWD+IFR1+MS							Rule Assigned:				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)			
13,600.00	10,023.09	9,517.00	9,528.21	44.80	23.76	44.20	5,035.85	248.85	1,620.93	1,562.47	58.46	27.729	
13,700.00	10,019.04	9,517.00	9,528.21	45.28	23.76	44.20	5,035.85	248.85	1,528.63	1,470.09	58.55	26.110	
13,800.00	10,014.99	9,536.16	9,546.07	45.78	23.77	45.31	5,042.56	247.11	1,436.96	1,378.22	58.74	24.463	
13,900.00	10,010.94	9,549.00	9,557.89	46.28	23.78	46.06	5,047.39	245.80	1,346.34	1,287.40	58.95	22.840	
14,000.00	10,006.90	9,560.20	9,568.11	46.79	23.78	46.72	5,051.81	244.57	1,256.81	1,197.62	59.19	21.234	
14,100.00	10,002.85	9,580.00	9,585.94	47.30	23.79	47.91	5,060.07	242.16	1,168.55	1,109.03	59.52	19.632	
14,200.00	9,998.80	9,595.47	9,599.69	47.82	23.80	48.85	5,066.86	240.04	1,081.67	1,021.76	59.91	18.054	
14,300.00	9,994.75	9,620.93	9,621.94	48.35	23.81	50.42	5,078.55	236.05	996.33	935.91	60.42	16.489	
14,400.00	9,990.71	9,657.83	9,653.43	48.89	23.82	52.72	5,096.42	228.95	912.56	851.50	61.06	14.946	
14,500.00	9,986.66	9,727.29	9,709.28	49.43	23.86	56.87	5,131.73	207.87	829.26	767.54	61.72	13.436	
14,600.00	9,982.61	9,786.18	9,751.45	49.98	23.89	59.94	5,163.07	181.40	745.89	683.58	62.32	11.970	
14,700.00	9,978.57	9,854.18	9,794.80	50.53	23.93	63.16	5,199.46	143.77	661.82	599.05	62.77	10.544	
14,800.00	9,974.52	9,893.00	9,817.21	51.09	23.95	64.96	5,220.78	120.33	578.45	514.91	63.54	9.104	
14,900.00	9,970.47	9,925.00	9,834.15	51.65	23.97	66.43	5,239.31	100.49	497.19	432.56	64.63	7.693	
15,000.00	9,966.42	9,972.90	9,856.46	52.22	24.01	68.47	5,268.70	69.98	418.33	352.69	65.64	6.373	
15,100.00	9,962.38	10,027.52	9,877.18	52.80	24.05	70.40	5,304.04	33.88	341.83	275.22	66.61	5.132	
15,200.00	9,958.33	10,092.76	9,896.12	53.38	24.13	71.84	5,346.82	-11.55	265.99	198.80	67.19	3.959	
15,300.00	9,954.28	10,153.60	9,909.51	53.96	24.23	72.19	5,387.04	-55.17	190.73	122.69	68.04	2.803	
15,400.00	9,950.24	10,215.20	9,916.77	54.55	24.35	68.90	5,429.44	-99.22	118.56	49.61	68.95	1.719	
15,500.00	9,946.19	10,286.01	9,927.87	55.14	24.50	59.40	5,478.62	-148.92	47.09	-21.24	68.32	0.689	Level 1
15,564.40	9,943.58	10,330.75	9,934.81	55.53	24.61	-14.70	5,509.82	-180.23	9.07	-59.16	68.23	0.133	Level 1, CC, ES, SF
15,600.00	9,942.14	10,355.56	9,938.63	55.74	24.68	-77.69	5,527.13	-197.59	27.08	-45.75	72.84	0.372	Level 1
15,700.00	9,937.71	10,368.00	9,940.54	56.34	24.71	-83.09	5,535.81	-206.30	113.19	50.57	62.62	1.808	
15,800.00	9,930.82	10,368.00	9,940.54	56.95	24.71	-79.06	5,535.81	-206.30	211.46	150.07	61.39	3.445	
15,900.00	9,923.59	10,368.00	9,940.54	57.57	24.71	-79.06	5,535.81	-206.30	310.84	249.72	61.11	5.086	
16,000.00	9,916.36	10,368.00	9,940.54	58.19	24.71	-79.06	5,535.81	-206.30	410.51	349.48	61.03	6.726	
16,100.00	9,909.13	10,368.00	9,940.54	58.81	24.71	-79.06	5,535.81	-206.30	510.32	449.31	61.01	8.365	
16,200.00	9,901.91	10,368.00	9,940.54	59.44	24.71	-79.06	5,535.81	-206.30	610.19	549.17	61.02	10.000	
16,300.00	9,894.68	10,368.00	9,940.54	60.07	24.71	-79.06	5,535.81	-206.30	710.09	649.05	61.04	11.633	
16,400.00	9,887.45	10,368.00	9,940.54	60.70	24.71	-79.06	5,535.81	-206.30	810.02	748.95	61.07	13.264	
16,500.00	9,880.22	10,368.00	9,940.54	61.34	24.71	-79.06	5,535.81	-206.30	909.97	848.86	61.11	14.891	
16,600.00	9,872.99	10,368.00	9,940.54	61.98	24.71	-79.06	5,535.81	-206.30	1,009.92	948.77	61.15	16.516	
16,700.00	9,865.77	10,368.00	9,940.54	62.62	24.71	-79.06	5,535.81	-206.30	1,109.88	1,048.69	61.19	18.138	
16,800.00	9,858.54	10,368.00	9,940.54	63.27	24.71	-79.06	5,535.81	-206.30	1,209.85	1,148.62	61.24	19.757	
16,900.00	9,851.31	10,368.00	9,940.54	63.92	24.71	-79.06	5,535.81	-206.30	1,309.83	1,248.54	61.29	21.372	
17,000.00	9,844.08	10,368.00	9,940.54	64.57	24.71	-79.06	5,535.81	-206.30	1,409.81	1,348.47	61.34	22.985	
17,100.00	9,836.52	10,368.00	9,940.54	65.22	24.71	-45.10	5,535.81	-206.30	1,509.78	1,448.40	61.38	24.595	
17,200.00	9,827.24	10,368.00	9,940.54	65.88	24.71	-37.20	5,535.81	-206.30	1,609.74	1,548.31	61.43	26.205	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEA 30 STATE 001 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
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)			
11,400.00	10,068.05	10,074.54	10,068.05	36.83	228.49	-91.24	2,990.16	-327.66	1,652.53	1,388.94	263.59	6.269	
11,500.00	10,067.82	10,074.31	10,067.82	37.06	228.49	-91.17	2,990.16	-327.66	1,553.11	1,289.51	263.60	5.892	
11,600.00	10,067.60	10,074.09	10,067.60	37.30	228.48	-91.09	2,990.16	-327.66	1,453.78	1,190.15	263.62	5.515	
11,700.00	10,067.37	10,073.86	10,067.37	37.55	228.48	-91.02	2,990.16	-327.66	1,354.53	1,090.89	263.64	5.138	
11,800.00	10,067.14	10,073.63	10,067.14	37.82	228.47	-90.94	2,990.16	-327.66	1,255.41	991.75	263.67	4.761	
11,900.00	10,066.91	10,073.40	10,066.91	38.10	228.47	-90.86	2,990.16	-327.66	1,156.45	892.75	263.70	4.385	
12,000.00	10,066.68	10,073.18	10,066.68	38.40	228.46	-90.79	2,990.16	-327.66	1,057.67	793.94	263.73	4.010	
12,100.00	10,066.46	10,072.95	10,066.46	38.71	228.46	-90.71	2,990.16	-327.66	959.15	695.37	263.78	3.636	
12,200.00	10,066.23	10,072.72	10,066.23	39.03	228.45	-90.64	2,990.16	-327.66	860.97	597.13	263.84	3.263	
12,300.00	10,066.00	10,072.49	10,066.00	39.36	228.45	-90.56	2,990.16	-327.66	763.26	499.35	263.91	2.892	
12,400.00	10,064.06	10,070.55	10,064.06	39.71	228.41	-97.21	2,990.16	-327.66	666.26	402.27	263.99	2.524	
12,500.00	10,060.67	10,067.16	10,060.67	40.08	228.33	-96.10	2,990.16	-327.66	570.32	306.23	264.08	2.160	
12,600.00	10,057.27	10,063.76	10,057.27	40.46	228.26	-94.98	2,990.16	-327.66	476.02	211.74	264.28	1.801	
12,700.00	10,053.88	10,060.37	10,053.88	40.85	228.19	-93.87	2,990.16	-327.66	384.59	119.91	264.68	1.453	Level 3
12,800.00	10,050.49	10,056.98	10,050.49	41.25	228.12	-92.74	2,990.16	-327.66	298.66	33.15	265.52	1.125	Level 2
12,900.00	10,047.09	10,053.58	10,047.09	41.66	228.05	-91.62	2,990.16	-327.66	224.64	-42.57	267.21	0.841	Level 1
13,000.00	10,043.70	10,050.19	10,043.70	42.08	227.97	-90.49	2,990.16	-327.66	178.07	-91.59	269.65	0.660	Level 1
13,043.90	10,042.21	10,048.70	10,042.21	42.27	227.94	-90.00	2,990.16	-327.66	172.58	-97.63	270.21	0.639	Level 1, CC, ES, SF
13,100.00	10,040.31	10,046.80	10,040.31	42.51	227.90	-89.37	2,990.16	-327.66	181.46	-88.36	269.83	0.673	Level 1
13,200.00	10,036.92	10,043.41	10,036.92	42.95	227.83	-88.24	2,990.16	-327.66	232.65	-35.02	267.67	0.869	Level 1
13,300.00	10,033.52	10,040.01	10,033.52	43.40	227.76	-87.12	2,990.16	-327.66	308.71	42.71	266.00	1.161	Level 2
13,400.00	10,030.13	10,036.62	10,030.13	43.86	227.69	-86.00	2,990.16	-327.66	395.54	130.50	265.04	1.492	Level 3
13,500.00	10,026.74	10,033.23	10,026.74	44.32	227.61	-84.88	2,990.16	-327.66	487.42	222.93	264.49	1.843	
13,600.00	10,023.09	10,029.58	10,023.09	44.80	227.54	-82.57	2,990.16	-327.66	581.96	317.83	264.13	2.203	
13,700.00	10,019.04	10,025.53	10,019.04	45.28	227.45	-81.26	2,990.16	-327.66	678.03	414.15	263.88	2.569	
13,800.00	10,014.99	10,021.48	10,014.99	45.78	227.36	-79.95	2,990.16	-327.66	775.07	511.38	263.69	2.939	
13,900.00	10,010.94	10,017.43	10,010.94	46.28	227.28	-78.66	2,990.16	-327.66	872.76	609.22	263.55	3.312	
14,000.00	10,006.90	10,013.39	10,006.90	46.79	227.19	-77.37	2,990.16	-327.66	970.91	707.49	263.43	3.686	
14,100.00	10,002.85	10,009.34	10,002.85	47.30	227.11	-76.10	2,990.16	-327.66	1,069.38	806.06	263.32	4.061	
14,200.00	9,998.80	10,005.29	9,998.80	47.82	227.02	-74.84	2,990.16	-327.66	1,168.10	904.87	263.23	4.438	
14,300.00	9,994.75	10,001.25	9,994.75	48.35	226.94	-73.60	2,990.16	-327.66	1,267.01	1,003.86	263.15	4.815	
14,400.00	9,990.71	9,997.20	9,990.71	48.89	226.85	-72.37	2,990.16	-327.66	1,366.07	1,102.98	263.08	5.193	
14,500.00	9,986.66	9,993.15	9,986.66	49.43	226.76	-71.16	2,990.16	-327.66	1,465.24	1,202.22	263.02	5.571	
14,600.00	9,982.61	9,989.10	9,982.61	49.98	226.68	-69.97	2,990.16	-327.66	1,564.50	1,301.55	262.95	5.950	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEA ZD STATE 001 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
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)			
0.00	0.00	9.10	0.00	0.00	0.15	-43.21	676.95	-635.90	928.78				
100.00	100.00	109.10	100.00	0.28	1.85	-43.21	676.95	-635.90	928.78	926.65	2.13	437.034	
200.00	200.00	209.10	200.00	0.63	3.54	-43.21	676.95	-635.90	928.78	924.60	4.18	222.271	
300.00	300.00	309.10	300.00	0.99	5.25	-43.21	676.95	-635.90	928.78	922.54	6.24	148.802	
400.00	400.00	409.10	400.00	1.35	7.05	-43.21	676.95	-635.90	928.78	920.38	8.40	110.542	
500.00	500.00	509.10	500.00	1.71	8.85	-43.21	676.95	-635.90	928.78	918.22	10.56	87.933	
600.00	600.00	609.50	600.40	2.07	10.66	-43.20	677.20	-635.90	928.96	916.23	12.73	72.975	
700.00	700.00	710.11	701.01	2.43	12.47	-43.20	677.09	-635.90	928.88	913.98	14.90	62.336	
800.00	800.00	809.11	800.00	2.79	14.27	-43.21	676.95	-635.90	928.78	911.73	17.05	54.467	
900.00	900.00	909.11	900.00	3.14	16.11	-43.21	676.95	-635.90	928.78	909.53	19.25	48.244	
1,000.00	1,000.00	1,009.65	1,000.53	3.50	17.96	-43.19	677.35	-635.90	929.07	907.61	21.46	43.291	
1,100.00	1,100.00	1,111.25	1,102.13	3.86	19.83	-43.20	677.15	-635.90	928.92	905.23	23.69	39.212	
1,200.00	1,200.00	1,209.13	1,200.00	4.22	21.63	-43.21	676.95	-635.90	928.78	902.93	25.85	35.926	
1,300.00	1,300.00	1,309.13	1,300.00	4.58	23.48	-43.21	676.95	-635.90	928.78	900.72	28.06	33.105	
1,400.00	1,400.00	1,409.21	1,400.08	4.94	25.32	-43.19	677.47	-635.90	929.16	898.90	30.26	30.705	
1,500.00	1,500.00	1,510.47	1,501.34	5.29	27.19	-43.19	677.37	-635.90	929.08	896.59	32.49	28.598	
1,600.00	1,600.00	1,611.73	1,602.60	5.65	29.06	-43.20	677.07	-635.90	928.87	894.15	34.71	26.758	
1,695.33	1,695.33	1,704.47	1,695.33	5.99	30.77	-43.21	676.95	-635.90	928.78	892.01	36.77	25.260	
1,700.00	1,700.00	1,709.14	1,700.00	6.01	30.86	-43.21	676.95	-635.90	928.78	891.91	36.87	25.190	
1,800.00	1,800.00	1,810.00	1,800.86	6.37	32.72	-43.20	677.21	-635.90	928.97	889.88	39.09	23.764	
1,900.00	1,900.00	1,909.15	1,900.00	6.73	34.55	-43.21	676.95	-635.90	928.78	887.50	41.28	22.499	
2,000.00	2,000.00	2,009.15	2,000.00	7.09	36.40	-43.21	676.95	-635.90	928.78	885.29	43.49	21.358	
2,100.00	2,100.00	2,109.15	2,100.00	7.45	38.25	-43.21	676.95	-635.90	928.78	883.09	45.69	20.327	
2,200.00	2,200.00	2,209.97	2,200.82	7.80	40.11	-43.19	677.44	-635.90	929.13	881.22	47.91	19.392	
2,300.00	2,300.00	2,311.22	2,302.07	8.16	41.98	-43.20	677.22	-635.90	928.98	878.84	50.14	18.527	
2,400.00	2,400.00	2,409.17	2,400.00	8.52	43.79	-43.21	676.95	-635.90	928.78	876.47	52.31	17.755	
2,500.00	2,500.00	2,509.17	2,500.00	8.88	45.64	-43.21	676.95	-635.90	928.78	874.26	54.52	17.037	
2,600.00	2,600.00	2,609.92	2,600.74	9.24	47.50	-43.19	677.32	-635.90	929.05	872.31	56.74	16.375	
2,700.00	2,700.00	2,711.59	2,702.41	9.60	49.38	-43.20	677.08	-635.90	928.88	869.91	58.97	15.751	
2,800.00	2,800.00	2,809.19	2,800.00	9.95	51.21	-43.21	676.95	-635.90	928.78	867.61	61.16	15.185	
2,900.00	2,900.00	2,909.19	2,900.00	10.31	53.10	-43.21	676.95	-635.90	928.78	865.36	63.42	14.645	
3,000.00	3,000.00	3,009.28	3,000.09	10.67	55.00	-43.19	677.51	-635.90	929.19	863.51	65.67	14.149	
3,100.00	3,100.00	3,110.45	3,101.26	11.03	56.92	-43.19	677.41	-635.90	929.11	861.16	67.95	13.674	
3,200.00	3,200.00	3,211.62	3,202.43	11.39	58.84	-43.20	677.14	-635.90	928.92	858.69	70.22	13.228	
3,300.00	3,300.00	3,309.22	3,300.00	11.75	60.72	-43.21	676.95	-635.90	928.78	856.32	72.46	12.817	
3,400.00	3,400.00	3,409.22	3,400.00	12.11	62.67	-43.21	676.95	-635.90	928.78	854.01	74.77	12.421	
3,500.00	3,500.00	3,509.22	3,500.00	12.46	64.62	-43.21	676.95	-635.90	928.78	851.69	77.08	12.049	
3,600.00	3,599.98	3,609.20	3,599.98	12.81	66.57	108.21	676.95	-635.90	929.32	849.95	79.38	11.708	
3,700.00	3,699.84	3,709.05	3,699.84	13.13	68.52	108.48	676.95	-635.90	930.97	849.32	81.65	11.402	
3,800.00	3,799.45	3,808.67	3,799.45	13.46	70.46	108.94	676.95	-635.90	933.78	849.86	83.92	11.127	
3,900.00	3,898.76	3,908.37	3,899.14	13.79	72.41	109.66	678.90	-635.90	939.13	852.94	86.19	10.896	
4,000.00	3,998.01	4,008.42	3,999.18	14.11	74.36	110.35	678.79	-635.90	943.25	854.77	88.47	10.661	
4,100.00	4,097.27	4,108.49	4,099.26	14.44	76.32	111.03	678.57	-635.90	947.41	856.66	90.76	10.439	
4,200.00	4,196.52	4,208.59	4,199.35	14.78	78.27	111.71	678.24	-635.90	951.63	858.59	93.04	10.228	
4,300.00	4,295.77	4,308.72	4,299.47	15.11	80.22	112.37	677.80	-635.90	955.89	860.56	95.33	10.027	
4,400.00	4,395.03	4,408.87	4,399.62	15.45	82.18	113.02	677.25	-635.90	960.20	862.57	97.62	9.836	
4,500.00	4,494.28	4,503.60	4,494.28	15.78	84.06	113.65	676.95	-635.90	964.80	864.96	99.84	9.663	
4,600.00	4,593.54	4,602.86	4,593.54	16.12	86.06	114.30	676.95	-635.90	969.78	867.60	102.18	9.491	
4,700.00	4,692.79	4,702.11	4,692.79	16.46	88.06	114.95	676.95	-635.90	974.89	870.37	104.52	9.327	
4,800.00	4,792.05	4,802.94	4,793.62	16.80	90.09	115.63	677.74	-635.90	980.78	873.88	106.89	9.175	
4,900.00	4,891.30	4,904.25	4,894.92	17.15	92.13	116.27	677.42	-635.90	985.88	876.60	109.28	9.022	
5,000.00	4,990.56	4,999.94	4,990.56	17.49	94.07	116.86	676.95	-635.90	990.97	879.41	111.56	8.883	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEA ZD STATE 001 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only										Rule Assigned:		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)					
5,100.00	5,089.81	5,099.19	5,089.81	17.83	96.13	117.48	676.95	-635.90	996.57	882.60	113.97	8.744			
5,200.00	5,189.06	5,199.75	5,190.36	18.18	98.23	118.12	677.71	-635.90	1,002.92	886.51	116.41	8.616			
5,300.00	5,288.32	5,303.35	5,293.95	18.53	100.38	118.74	677.29	-635.90	1,008.41	889.50	118.91	8.481			
5,400.00	5,387.57	5,397.01	5,387.57	18.87	102.27	119.30	676.95	-635.90	1,014.05	892.91	121.15	8.371			
5,500.00	5,486.83	5,496.27	5,486.83	19.22	104.22	119.89	676.95	-635.90	1,020.11	896.66	123.44	8.264			
5,600.00	5,586.08	5,595.52	5,586.08	19.57	106.17	120.48	676.95	-635.90	1,026.27	900.53	125.74	8.162			
5,700.00	5,685.38	5,697.62	5,688.17	19.92	108.18	121.13	677.94	-635.90	1,033.19	905.09	128.10	8.066			
5,800.00	5,784.99	5,800.40	5,790.94	20.27	110.20	121.62	677.44	-635.90	1,037.36	906.89	130.47	7.951			
5,900.00	5,884.85	5,894.33	5,884.85	20.62	112.04	121.88	676.95	-635.90	1,039.72	907.06	132.66	7.838			
6,000.00	5,984.82	5,994.31	5,984.82	20.97	114.01	121.98	676.95	-635.90	1,040.68	905.71	134.97	7.710			
6,100.00	6,084.82	6,094.31	6,084.82	21.32	115.97	-29.35	676.95	-635.90	1,040.68	903.39	137.29	7.580			
6,200.00	6,184.82	6,195.73	6,186.25	21.67	117.97	-29.33	677.42	-635.90	1,041.08	901.45	139.63	7.456			
6,300.00	6,284.82	6,297.39	6,287.90	22.02	119.97	-29.34	677.16	-635.90	1,040.87	898.88	141.98	7.331			
6,400.00	6,384.82	6,394.35	6,384.82	22.37	121.87	-29.35	676.95	-635.90	1,040.68	896.44	144.24	7.215			
6,500.00	6,484.82	6,494.35	6,484.82	22.72	123.84	-29.35	676.95	-635.90	1,040.68	894.12	146.56	7.101			
6,600.00	6,584.82	6,594.35	6,584.82	23.07	125.80	-29.35	676.95	-635.90	1,040.68	891.80	148.88	6.990			
6,700.00	6,684.82	6,697.53	6,687.99	23.43	127.83	-29.32	677.86	-635.90	1,041.47	890.22	151.26	6.885			
6,800.00	6,784.82	6,800.87	6,791.32	23.78	129.86	-29.34	677.31	-635.90	1,041.01	887.37	153.64	6.776			
6,900.00	6,884.82	6,894.39	6,884.82	24.13	131.64	-29.35	676.95	-635.90	1,040.68	884.91	155.77	6.681			
7,000.00	6,984.82	6,994.39	6,984.82	24.48	133.48	-29.35	676.95	-635.90	1,040.68	882.71	157.97	6.588			
7,100.00	7,084.82	7,096.98	7,087.40	24.84	135.37	-29.34	677.14	-635.90	1,040.85	880.64	160.21	6.497			
7,200.00	7,184.82	7,194.41	7,184.82	25.19	137.17	-29.35	676.95	-635.90	1,040.68	878.32	162.36	6.410			
7,300.00	7,284.82	7,294.69	7,285.11	25.54	139.02	-29.34	677.24	-635.90	1,040.93	876.37	164.56	6.326			
7,400.00	7,384.82	7,397.72	7,388.13	25.90	140.91	-29.34	677.04	-635.90	1,040.76	873.95	166.81	6.239			
7,469.75	7,454.57	7,464.16	7,454.57	26.14	142.19	-29.35	676.95	-635.90	1,040.68	872.34	168.34	6.182			
7,500.00	7,484.82	7,494.42	7,484.82	26.25	142.79	-29.35	676.95	-635.90	1,040.68	871.64	169.04	6.156			
7,600.00	7,584.82	7,594.53	7,584.94	26.60	144.76	-29.34	677.32	-635.90	1,041.00	869.64	171.36	6.075			
7,700.00	7,684.82	7,696.93	7,687.34	26.96	146.77	-29.34	677.17	-635.90	1,040.87	867.15	173.73	5.991			
7,800.00	7,784.82	7,794.45	7,784.82	27.31	148.73	-29.35	676.95	-635.90	1,040.68	864.64	176.04	5.912			
7,900.00	7,884.82	7,894.45	7,884.82	27.67	150.82	-29.35	676.95	-635.90	1,040.68	862.19	178.49	5.831			
8,000.00	7,984.82	8,000.24	7,990.61	28.02	153.03	-29.34	677.24	-635.90	1,040.94	859.89	181.05	5.749			
8,100.00	8,084.82	8,094.49	8,084.82	28.37	155.01	-29.35	676.95	-635.90	1,040.68	857.30	183.38	5.675			
8,200.00	8,184.82	8,194.49	8,184.82	28.73	157.10	-29.35	676.95	-635.90	1,040.68	854.85	185.83	5.600			
8,300.00	8,284.82	8,295.32	8,285.65	29.08	159.21	-29.32	677.96	-635.90	1,041.56	853.26	188.30	5.531			
8,400.00	8,384.82	8,398.86	8,389.18	29.44	161.38	-29.33	677.66	-635.90	1,041.31	850.49	190.82	5.457			
8,500.00	8,484.82	8,502.41	8,492.72	29.79	163.55	-29.34	676.97	-635.90	1,040.72	847.38	193.34	5.383			
8,508.95	8,493.77	8,511.67	8,501.98	29.82	163.75	-29.35	676.88	-635.90	1,040.65	847.08	193.57	5.376			
8,600.00	8,584.82	8,594.56	8,584.82	30.15	165.43	-29.35	676.95	-635.90	1,040.68	845.10	195.57	5.321			
8,700.00	8,684.82	8,694.56	8,684.82	30.50	167.46	-29.35	676.95	-635.90	1,040.68	842.72	197.96	5.257			
8,800.00	8,784.82	8,794.56	8,784.82	30.86	169.49	-29.35	676.95	-635.90	1,040.68	840.33	200.35	5.194			
8,900.00	8,884.82	8,896.12	8,886.37	31.21	171.56	-29.31	678.33	-635.90	1,041.88	839.11	202.77	5.138			
9,000.00	8,984.82	8,998.62	8,988.86	31.57	173.64	-29.32	678.01	-635.90	1,041.61	836.40	205.21	5.076			
9,100.00	9,084.82	9,101.12	9,091.36	31.92	175.73	-29.33	677.42	-635.90	1,041.11	833.46	207.65	5.014			
9,200.00	9,184.82	9,194.64	9,184.82	32.28	177.61	-29.35	676.95	-635.90	1,040.68	830.79	209.88	4.958			
9,300.00	9,284.82	9,294.64	9,284.82	32.63	179.58	-29.35	676.95	-635.90	1,040.68	828.47	212.21	4.904			
9,400.00	9,384.82	9,394.64	9,384.82	32.99	181.54	-29.35	676.95	-635.90	1,040.68	826.15	214.53	4.851			
9,461.47	9,446.29	9,450.00	9,440.16	33.21	182.63	-28.83	676.95	-635.90	1,040.49	824.65	215.84	4.821	SF		
9,500.00	9,484.82	9,450.00	9,440.16	33.34	182.63	-28.81	676.95	-635.90	1,041.60	825.82	215.78	4.827			
9,600.00	9,584.20	9,450.00	9,440.16	33.69	182.63	-28.80	676.95	-635.90	1,041.92	827.57	214.35	4.861			
9,700.00	9,680.33	9,450.00	9,440.16	34.02	182.63	-29.06	676.95	-635.90	1,036.55	825.44	211.11	4.910			
9,800.00	9,770.30	9,450.00	9,440.16	34.32	182.63	-29.60	676.95	-635.90	1,025.56	819.40	206.16	4.975			
9,900.00	9,851.37	9,450.00	9,440.16	34.58	182.63	-30.43	676.95	-635.90	1,009.11	809.44	199.67	5.054			

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) LEA ZD STATE 001 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only						Rule Assigned:						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)				
10,000.00	9,921.09	9,450.00	9,440.16	34.82	182.63	-31.58	676.95	-635.90	987.45	795.53	191.92	5.145	CC, ES	
10,100.00	9,977.33	9,450.00	9,440.16	35.01	182.63	-33.05	676.95	-635.90	960.91	777.61	183.30	5.242		
10,200.00	10,018.38	9,450.00	9,440.16	35.17	182.63	-34.87	676.95	-635.90	929.91	755.56	174.34	5.334		
10,300.00	10,044.40	9,450.00	9,440.16	35.29	182.63	-36.37	676.95	-635.90	896.07	730.41	165.66	5.409		
10,400.00	10,061.13	9,450.00	9,440.16	35.40	182.63	-37.35	676.95	-635.90	864.94	707.43	157.51	5.491		
10,500.00	10,069.21	9,450.00	9,440.16	35.50	182.63	-38.21	676.95	-635.90	837.75	687.02	150.72	5.558		
10,600.00	10,069.87	9,450.00	9,440.16	35.58	182.63	-38.56	676.95	-635.90	816.11	669.91	146.19	5.582		
10,700.00	10,069.65	9,450.00	9,440.16	35.68	182.63	-38.56	676.95	-635.90	805.67	661.57	144.10	5.591		
10,734.60	10,069.57	9,450.00	9,440.16	35.72	182.63	-38.56	676.95	-635.90	804.93	660.89	144.04	5.588		
10,800.00	10,069.42	9,450.00	9,440.16	35.80	182.63	-38.56	676.95	-635.90	807.58	662.73	144.85	5.575		
10,900.00	10,069.19	9,450.00	9,440.16	35.93	182.63	-38.56	676.95	-635.90	821.75	673.45	148.30	5.541		
11,000.00	10,068.96	9,450.00	9,440.16	36.08	182.63	-38.56	676.95	-635.90	847.55	693.82	153.74	5.513		
11,100.00	10,068.73	9,450.00	9,440.16	36.24	182.63	-38.56	676.95	-635.90	883.98	723.74	160.25	5.516		
11,200.00	10,068.51	9,450.00	9,440.16	36.42	182.63	-38.56	676.95	-635.90	929.79	762.78	167.01	5.567		
11,300.00	10,068.28	9,450.00	9,440.16	36.62	182.63	-38.56	676.95	-635.90	983.66	810.18	173.48	5.670		
11,400.00	10,068.05	9,450.00	9,440.16	36.83	182.63	-38.56	676.95	-635.90	1,044.35	864.99	179.35	5.823		
11,500.00	10,067.82	9,450.00	9,440.16	37.06	182.63	-38.56	676.95	-635.90	1,110.74	926.21	184.52	6.019		
11,600.00	10,067.60	9,450.00	9,440.16	37.30	182.63	-38.56	676.95	-635.90	1,181.87	992.88	188.99	6.254		
11,700.00	10,067.37	9,450.00	9,440.16	37.55	182.63	-38.56	676.95	-635.90	1,256.94	1,064.13	192.81	6.519		
11,800.00	10,067.14	9,450.00	9,440.16	37.82	182.63	-38.56	676.95	-635.90	1,335.28	1,139.21	196.07	6.810		
11,900.00	10,066.91	9,450.00	9,440.16	38.10	182.63	-38.56	676.95	-635.90	1,416.35	1,217.52	198.83	7.123		
12,000.00	10,066.68	9,450.00	9,440.16	38.40	182.63	-38.56	676.95	-635.90	1,499.71	1,298.52	201.19	7.454		
12,100.00	10,066.46	9,450.00	9,440.16	38.71	182.63	-38.56	676.95	-635.90	1,585.00	1,381.79	203.20	7.800		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) MESA MERRITT STATE 001 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only										Rule Assigned:				Offset Site Error:
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						0.00 usft
17,200.00	9,827.24	9,841.10	9,836.53	65.88	251.78	95.79	8,299.64	944.60	1,623.21	1,317.67	305.54	5.313		
17,300.00	9,817.90	9,830.72	9,826.16	66.54	251.43	95.28	8,299.72	944.60	1,554.45	1,247.59	306.86	5.066		
17,400.00	9,808.57	9,820.39	9,815.83	67.21	251.08	94.77	8,299.80	944.60	1,489.17	1,180.87	308.30	4.830		
17,500.00	9,799.23	9,810.10	9,805.54	67.87	250.73	94.26	8,299.88	944.60	1,427.83	1,117.98	309.85	4.608		
17,600.00	9,789.90	9,799.85	9,795.29	68.54	250.38	93.76	8,299.96	944.60	1,370.98	1,059.49	311.49	4.401		
17,700.00	9,780.56	9,789.64	9,785.09	69.21	250.03	93.25	8,300.03	944.60	1,319.20	1,006.01	313.19	4.212		
17,800.00	9,771.23	9,779.48	9,774.93	69.89	249.69	92.75	8,300.10	944.60	1,273.09	958.19	314.90	4.043		
17,900.00	9,761.89	9,769.35	9,764.81	70.56	249.34	92.25	8,300.17	944.60	1,233.30	916.75	316.55	3.896		
18,000.00	9,752.56	9,759.27	9,754.73	71.24	249.00	91.75	8,300.23	944.60	1,200.46	882.37	318.09	3.774		
18,100.00	9,743.22	9,749.23	9,744.69	71.92	248.66	91.25	8,300.29	944.60	1,175.15	855.72	319.43	3.679		
18,200.00	9,733.89	9,739.23	9,734.70	72.60	248.32	90.75	8,300.36	944.60	1,157.86	837.37	320.49	3.613		
18,300.00	9,724.55	9,729.27	9,724.74	73.28	247.98	90.26	8,300.41	944.60	1,148.97	827.75	321.21	3.577		
18,353.64	9,719.54	9,723.94	9,719.42	73.65	247.80	89.99	8,300.45	944.60	1,147.73	826.28	321.44	3.571	CC, ES, SF	
18,400.00	9,715.22	9,719.35	9,714.82	73.96	247.64	89.77	8,300.47	944.60	1,148.65	827.10	321.55	3.572		
18,500.00	9,705.88	9,709.47	9,704.95	74.65	247.30	89.27	8,300.53	944.60	1,156.93	835.45	321.48	3.599		
18,600.00	9,696.56	9,699.64	9,695.13	75.34	246.97	88.79	8,300.58	944.60	1,173.62	852.60	321.02	3.656		
18,700.00	9,687.27	9,689.88	9,685.37	76.03	246.64	88.31	8,300.63	944.60	1,198.36	878.16	320.20	3.743		
18,800.00	9,677.98	9,680.16	9,675.66	76.72	246.31	87.83	8,300.67	944.60	1,230.69	911.60	319.09	3.857		
18,900.00	9,668.68	9,670.48	9,665.98	77.41	245.98	87.35	8,300.72	944.60	1,270.00	952.27	317.74	3.997		
19,000.00	9,659.39	9,660.84	9,656.34	78.10	245.65	86.87	8,300.76	944.60	1,315.69	999.47	316.22	4.161		
19,100.00	9,650.10	9,651.24	9,646.74	78.80	245.32	86.39	8,300.81	944.60	1,367.11	1,052.52	314.59	4.346		
19,200.00	9,640.80	9,641.67	9,637.18	79.49	245.00	85.92	8,300.84	944.60	1,423.64	1,110.73	312.91	4.550		
19,300.00	9,631.51	9,632.14	9,627.66	80.19	244.67	85.45	8,300.88	944.60	1,484.70	1,173.48	311.22	4.771		
19,400.00	9,622.22	9,622.66	9,618.17	80.89	244.35	84.98	8,300.92	944.60	1,549.75	1,240.21	309.54	5.007		
19,500.00	9,612.93	9,613.20	9,608.72	81.59	244.03	84.52	8,300.95	944.60	1,618.31	1,310.40	307.91	5.256		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) NEW MEXICO BP STATE 002 P & A - Vertical - Surveys

Survey Program: 0-3_INC-Only										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										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)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
25,300.00	8,604.67	8,627.86	8,604.67	123.74	305.37	115.82	16,458.44	603.51	1,584.35	1,201.00	383.35	4.133	
25,400.00	8,572.32	8,595.46	8,572.32	124.47	303.33	114.19	16,458.44	603.51	1,506.61	1,122.11	384.50	3.918	
25,500.00	8,539.96	8,562.98	8,539.96	125.20	301.36	112.51	16,458.44	603.51	1,430.90	1,044.88	386.02	3.707	
25,600.00	8,507.61	8,530.47	8,507.61	125.94	299.38	110.79	16,458.44	603.51	1,357.56	969.71	387.85	3.500	
25,700.00	8,475.26	8,498.04	8,475.26	126.67	297.38	109.03	16,458.44	603.51	1,287.01	897.00	390.01	3.300	
25,800.00	8,442.90	8,465.57	8,442.90	127.40	295.45	107.23	16,458.44	603.51	1,219.72	827.16	392.56	3.107	
25,900.00	8,410.55	8,433.11	8,410.55	128.14	293.58	105.40	16,458.44	603.51	1,156.26	760.79	395.47	2.924	
26,000.00	8,378.20	8,400.64	8,378.20	128.87	291.65	103.53	16,458.44	603.51	1,097.30	698.74	398.57	2.753	
26,100.00	8,345.84	8,368.10	8,345.84	129.61	289.65	101.63	16,458.44	603.51	1,043.61	641.87	401.74	2.598	
26,200.00	8,313.49	8,335.70	8,313.49	130.34	287.62	99.71	16,458.44	603.51	996.02	591.17	404.86	2.460	
26,300.00	8,281.13	8,308.04	8,281.13	131.07	285.86	98.08	16,459.22	603.51	955.79	547.78	408.01	2.343	
26,400.00	8,248.78	8,270.68	8,248.78	131.81	283.47	95.80	16,458.44	603.51	922.86	512.82	410.04	2.251	
26,500.00	8,216.43	8,238.19	8,216.43	132.54	281.45	93.82	16,458.44	603.51	899.08	487.44	411.64	2.184	
26,600.00	8,184.07	8,205.71	8,184.07	133.28	279.49	91.83	16,458.44	603.51	884.83	472.60	412.23	2.146	
26,692.00	8,154.31	8,175.86	8,154.31	133.95	277.70	90.00	16,458.44	603.51	880.53	468.88	411.66	2.139	CC, ES, SF
26,700.00	8,151.72	8,173.27	8,151.72	134.01	277.55	89.84	16,458.44	603.51	880.57	469.01	411.55	2.140	
26,800.00	8,118.82	8,140.27	8,118.82	134.75	275.64	87.73	16,458.44	603.51	886.42	476.88	409.55	2.164	
26,900.00	8,084.54	8,104.60	8,084.54	135.48	273.64	85.57	16,458.68	603.51	902.02	495.85	406.17	2.221	
27,000.00	8,050.27	8,071.49	8,050.27	136.21	271.79	83.56	16,458.44	603.51	927.03	525.21	401.82	2.307	
27,100.00	8,016.00	8,037.14	8,016.00	136.94	269.87	81.50	16,458.44	603.51	960.56	564.01	396.55	2.422	
27,200.00	7,981.72	8,002.75	7,981.72	137.68	267.95	79.47	16,458.44	603.51	1,001.80	611.11	390.69	2.564	
27,300.00	7,947.45	7,968.36	7,947.45	138.41	266.06	77.45	16,458.44	603.51	1,049.86	665.31	384.55	2.730	
27,400.00	7,913.17	7,933.99	7,913.17	139.14	264.22	75.47	16,458.44	603.51	1,103.83	725.50	378.33	2.918	
27,500.00	7,878.90	7,899.61	7,878.90	139.88	262.33	73.53	16,458.44	603.51	1,162.90	790.80	372.10	3.125	
27,600.00	7,845.20	7,865.83	7,845.20	140.61	260.41	72.60	16,458.44	603.51	1,226.47	860.48	365.99	3.351	
27,700.00	7,814.47	7,834.98	7,814.47	141.35	258.61	72.26	16,458.44	603.51	1,294.51	934.34	360.18	3.594	
27,800.00	7,784.78	7,805.18	7,784.78	142.09	256.88	70.60	16,458.44	603.51	1,366.06	1,011.39	354.67	3.852	
27,900.00	7,755.08	7,775.39	7,755.08	142.83	255.14	68.97	16,458.44	603.51	1,440.38	1,090.93	349.44	4.122	
28,000.00	7,725.39	7,745.56	7,725.39	143.57	253.34	67.38	16,458.44	603.51	1,517.07	1,172.64	344.43	4.405	
28,100.00	7,695.70	7,715.75	7,695.70	144.31	251.53	65.83	16,458.44	603.51	1,595.79	1,256.11	339.68	4.698	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) OHIO STATE 001 - Verticals - Surveys

Survey Program: 0-3_INC-Only										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										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)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
26,900.00	8,084.54	8,100.20	8,084.54	135.48	232.47	109.46	17,824.41	843.62	1,627.09	1,294.69	332.41	4.895	
27,000.00	8,050.27	8,065.73	8,050.27	136.21	230.31	108.00	17,824.41	843.62	1,561.04	1,226.89	334.15	4.672	
27,100.00	8,016.00	8,031.38	8,016.00	136.94	228.17	106.51	17,824.41	843.62	1,497.97	1,161.87	336.10	4.457	
27,200.00	7,981.72	7,996.98	7,981.72	137.68	226.00	105.00	17,824.41	843.62	1,438.27	1,100.09	338.18	4.253	
27,300.00	7,947.45	7,962.56	7,947.45	138.41	223.85	103.47	17,824.41	843.62	1,382.39	1,041.96	340.43	4.061	
27,400.00	7,913.17	7,941.00	7,925.97	139.14	222.57	102.50	17,824.41	843.62	1,330.85	987.18	343.68	3.872	
27,500.00	7,878.90	7,893.72	7,878.90	139.88	219.92	100.36	17,824.41	843.62	1,284.01	938.66	345.35	3.718	
27,600.00	7,845.20	7,885.35	7,870.64	140.61	219.43	99.46	17,824.08	843.62	1,242.61	893.32	349.29	3.558	
27,700.00	7,814.47	7,829.10	7,814.47	141.35	216.42	96.20	17,824.41	843.62	1,206.56	856.36	350.20	3.445	
27,800.00	7,784.78	7,808.10	7,793.61	142.09	215.31	95.21	17,824.65	843.62	1,177.25	824.49	352.76	3.337	
27,900.00	7,755.08	7,769.53	7,755.08	142.83	213.34	93.36	17,824.41	843.62	1,154.91	801.10	353.81	3.264	
28,000.00	7,725.39	7,743.31	7,728.97	143.57	212.03	92.10	17,824.60	843.62	1,140.28	785.46	354.82	3.214	
28,100.00	7,695.70	7,710.00	7,695.70	144.31	210.45	90.49	17,824.41	843.62	1,133.48	778.78	354.71	3.196	SF
28,134.42	7,685.48	7,699.78	7,685.48	144.56	209.96	90.00	17,824.41	843.62	1,133.01	778.49	354.52	3.196	CC, ES
28,200.00	7,666.00	7,679.19	7,664.98	145.05	209.01	89.01	17,824.68	843.62	1,134.72	780.89	353.84	3.207	
28,300.00	7,636.31	7,650.49	7,636.31	145.79	207.72	87.63	17,824.41	843.62	1,143.99	791.79	352.19	3.248	
28,400.00	7,606.61	7,617.70	7,603.57	146.53	206.24	86.05	17,824.62	843.62	1,161.00	811.48	349.52	3.322	
28,422.27	7,600.00	7,613.34	7,599.21	146.69	206.04	85.85	17,824.65	843.62	1,165.82	816.88	348.94	3.341	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) OHIO STATE 002 - Verticals - Surveys

Survey Program: 0-3_INC-Only										Rule Assigned:				Offset Site Error:
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						0.00 usft
26,600.00	8,184.07	7,040.00	7,026.90	133.28	122.54	44.51	17,197.57	529.75	1,638.41	1,441.70	196.72	8.329		
26,700.00	8,151.72	7,040.00	7,026.90	134.01	122.54	44.51	17,197.57	529.75	1,569.41	1,370.42	198.99	7.887		
26,800.00	8,118.82	7,040.00	7,026.90	134.75	122.54	45.21	17,197.57	529.75	1,503.58	1,302.14	201.44	7.464		
26,900.00	8,084.54	7,040.00	7,026.90	135.48	122.54	45.22	17,197.57	529.75	1,440.86	1,236.76	204.10	7.060		
27,000.00	8,050.27	7,040.00	7,026.90	136.21	122.54	45.22	17,197.57	529.75	1,382.54	1,175.57	206.96	6.680		
27,100.00	8,016.00	7,040.00	7,026.90	136.94	122.54	45.22	17,197.57	529.75	1,329.18	1,119.16	210.03	6.329		
27,200.00	7,981.72	7,040.00	7,026.90	137.68	122.54	45.22	17,197.57	529.75	1,281.43	1,068.15	213.28	6.008		
27,300.00	7,947.45	7,040.00	7,026.90	138.41	122.54	45.22	17,197.57	529.75	1,239.91	1,023.23	216.68	5.722		
27,400.00	7,913.17	7,040.00	7,026.90	139.14	122.54	45.22	17,197.57	529.75	1,205.28	985.11	220.17	5.474		
27,500.00	7,878.90	7,040.00	7,026.90	139.88	122.54	45.22	17,197.57	529.75	1,178.14	954.51	223.64	5.268		
27,600.00	7,845.20	7,040.00	7,026.90	140.61	122.54	45.08	17,197.57	529.75	1,159.46	932.57	226.89	5.110		
27,700.00	7,814.47	7,040.00	7,026.90	141.35	122.54	44.98	17,197.57	529.75	1,151.41	921.76	229.65	5.014		
27,734.15	7,804.33	7,040.00	7,026.90	141.60	122.54	44.98	17,197.57	529.75	1,150.90	920.44	230.46	4.994	CC, ES	
27,800.00	7,784.78	7,040.00	7,026.90	142.09	122.54	44.98	17,197.57	529.75	1,152.78	920.96	231.83	4.973	SF	
27,900.00	7,755.08	7,040.00	7,026.90	142.83	122.54	44.98	17,197.57	529.75	1,162.79	929.46	233.33	4.983		
28,000.00	7,725.39	7,040.00	7,026.90	143.57	122.54	44.98	17,197.57	529.75	1,181.21	947.12	234.09	5.046		
28,100.00	7,695.70	7,040.00	7,026.90	144.31	122.54	44.98	17,197.57	529.75	1,207.65	973.57	234.09	5.159		
28,200.00	7,666.00	7,040.00	7,026.90	145.05	122.54	44.98	17,197.57	529.75	1,241.61	1,008.25	233.36	5.321		
28,300.00	7,636.31	7,040.00	7,026.90	145.79	122.54	44.98	17,197.57	529.75	1,282.48	1,050.48	232.00	5.528		
28,400.00	7,606.61	7,040.00	7,026.90	146.53	122.54	44.98	17,197.57	529.75	1,329.64	1,099.50	230.13	5.778		
28,422.27	7,600.00	7,040.00	7,026.90	146.69	122.54	44.98	17,197.57	529.75	1,340.93	1,111.27	229.66	5.839		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

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

Survey Program: 197-3_INC-Only, 2196-MWD OWSG Rev5										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										Offset Well Error:		0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Major Axis 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
26,700.00	8,151.72	8,170.48	8,157.84	134.01	55.49	105.34	17,515.67	968.23	1,633.82	1,471.27	162.54	10.052	
26,800.00	8,118.82	8,145.19	8,132.56	134.75	55.47	105.10	17,515.15	968.85	1,575.24	1,408.74	166.50	9.461	
26,900.00	8,084.54	8,117.37	8,104.74	135.48	55.46	103.98	17,514.90	969.42	1,520.74	1,350.24	170.50	8.919	
27,000.00	8,050.27	8,087.50	8,074.89	136.21	55.45	102.77	17,515.02	969.89	1,470.37	1,295.87	174.50	8.426	
27,100.00	8,016.00	8,052.75	8,040.13	136.94	55.42	101.35	17,515.44	970.33	1,424.45	1,246.03	178.41	7.984	
27,200.00	7,981.72	8,017.78	8,005.17	137.68	55.39	99.90	17,515.54	970.94	1,383.34	1,201.11	182.23	7.591	
27,300.00	7,947.45	7,984.79	7,972.20	138.41	55.37	98.51	17,515.29	971.68	1,347.55	1,161.68	185.87	7.250	
27,400.00	7,913.17	7,953.64	7,941.06	139.14	55.34	97.19	17,514.74	972.52	1,317.59	1,128.38	189.22	6.963	
27,500.00	7,878.90	7,924.19	7,911.63	139.88	55.32	95.94	17,513.94	973.45	1,293.93	1,101.79	192.14	6.734	
27,600.00	7,845.20	7,896.81	7,884.29	140.61	55.30	94.57	17,512.96	974.42	1,276.93	1,082.40	194.53	6.564	
27,700.00	7,814.47	7,873.47	7,860.99	141.35	55.28	93.38	17,511.95	975.34	1,266.79	1,070.50	196.30	6.454	
27,787.65	7,788.45	7,853.94	7,841.50	142.00	55.26	92.52	17,510.97	976.17	1,263.93	1,066.68	197.25	6.408	CC
27,800.00	7,784.78	7,850.35	7,837.92	142.09	55.25	92.36	17,510.78	976.32	1,263.99	1,066.65	197.33	6.405	ES, SF
27,900.00	7,755.08	7,820.15	7,807.77	142.83	55.19	91.04	17,509.39	977.55	1,268.54	1,070.95	197.59	6.420	
28,000.00	7,725.39	7,787.83	7,775.50	143.57	55.13	89.62	17,508.19	978.75	1,280.29	1,083.16	197.13	6.495	
28,100.00	7,695.70	7,753.17	7,740.88	144.31	55.07	88.12	17,507.22	979.88	1,298.97	1,102.97	196.00	6.628	
28,200.00	7,666.00	7,715.93	7,703.65	145.05	55.02	86.51	17,506.57	980.94	1,324.20	1,129.91	194.29	6.815	
28,300.00	7,636.31	7,675.80	7,663.54	145.79	54.99	84.78	17,506.31	981.88	1,355.54	1,163.41	192.14	7.055	
28,400.00	7,606.61	7,634.38	7,622.12	146.53	54.97	83.03	17,506.52	982.65	1,392.49	1,202.85	189.63	7.343	
28,422.27	7,600.00	7,627.86	7,615.61	146.69	54.97	82.75	17,506.58	982.76	1,401.44	1,212.42	189.03	7.414	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - (O) SHETLAND SWD 001 - Vertical - Surveys

Survey Program: 357-3_INC-Only, 9770-MWD OWSG Rev5										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										Offset Well Error:		0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Reference (usft)	Major Axis 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
21,200.00	9,413.34	9,433.18	9,424.10	93.69	295.56	97.83	12,244.74	906.35	1,598.47	1,229.90	368.56	4.337	
21,300.00	9,400.18	9,412.27	9,403.19	94.42	294.74	96.81	12,244.87	906.35	1,531.01	1,160.53	370.48	4.133	
21,400.00	9,387.02	9,396.06	9,387.02	95.14	294.12	96.01	12,243.80	906.35	1,466.41	1,093.64	372.77	3.934	
21,500.00	9,373.85	9,382.89	9,373.85	95.86	293.60	95.36	12,243.80	906.35	1,406.63	1,031.34	375.29	3.748	
21,600.00	9,360.63	9,369.67	9,360.63	96.58	293.09	94.93	12,243.80	906.35	1,351.48	973.60	377.88	3.576	
21,700.00	9,345.14	9,354.18	9,345.14	97.31	292.49	95.32	12,243.80	906.35	1,301.72	921.32	380.40	3.422	
21,800.00	9,327.82	9,336.86	9,327.82	98.04	291.82	94.50	12,243.80	906.35	1,257.88	875.10	382.78	3.286	
21,900.00	9,310.51	9,319.48	9,310.51	98.76	291.14	93.65	12,243.80	906.35	1,220.43	835.44	384.99	3.170	
22,000.00	9,293.19	9,309.27	9,300.31	99.49	290.71	93.15	12,244.08	906.35	1,190.07	802.88	387.19	3.074	
22,100.00	9,275.88	9,284.81	9,275.88	100.22	289.67	91.95	12,243.80	906.35	1,167.06	778.68	388.39	3.005	
22,200.00	9,258.56	9,267.49	9,258.56	100.95	288.93	91.10	12,243.80	906.35	1,152.14	762.73	389.41	2.959	
22,300.00	9,241.25	9,250.17	9,241.25	101.68	288.19	90.24	12,243.80	906.35	1,145.52	755.67	389.85	2.938	
22,328.44	9,236.32	9,245.29	9,236.67	101.89	288.00	90.02	12,243.90	906.35	1,145.18	755.30	389.88	2.937	CC, ES, SF
22,400.00	9,223.93	9,231.52	9,222.90	102.41	287.45	89.34	12,244.17	906.35	1,147.33	757.66	389.67	2.944	
22,500.00	9,206.62	9,212.76	9,204.15	103.14	286.70	88.42	12,244.50	906.35	1,157.49	768.63	388.87	2.977	
22,600.00	9,189.30	9,194.56	9,185.96	103.87	285.97	87.53	12,244.77	906.35	1,175.81	788.31	387.50	3.034	
22,700.00	9,171.99	9,176.89	9,168.30	104.60	285.26	86.66	12,244.97	906.35	1,201.91	816.28	385.63	3.117	
22,800.00	9,154.67	9,159.74	9,151.15	105.34	284.57	85.82	12,245.13	906.35	1,235.31	851.97	383.35	3.222	
22,900.00	9,137.36	9,143.07	9,134.48	106.07	283.91	85.01	12,245.24	906.35	1,275.46	894.71	380.76	3.350	
23,000.00	9,120.04	9,126.87	9,118.29	106.80	283.26	84.22	12,245.30	906.35	1,321.75	943.80	377.95	3.497	
23,100.00	9,102.72	9,111.11	9,102.54	107.54	282.63	83.45	12,245.33	906.35	1,373.57	998.54	375.03	3.663	
23,200.00	9,085.41	9,093.95	9,085.41	108.27	281.94	82.60	12,243.80	906.35	1,431.22	1,059.26	371.95	3.848	
23,300.00	9,068.09	9,076.64	9,068.09	109.00	281.25	81.77	12,243.80	906.35	1,492.37	1,123.46	368.91	4.045	
23,400.00	9,050.78	9,059.32	9,050.78	109.74	280.55	80.93	12,243.80	906.35	1,557.36	1,191.44	365.92	4.256	
23,500.00	9,033.46	9,042.00	9,033.46	110.48	279.86	80.10	12,243.80	906.35	1,625.72	1,262.71	363.01	4.478	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 502H - OH - Plan #2

Survey Program: 0-MWD+IFR1+MS										Rule Assigned:		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)					
0.00	0.00	0.00	0.10	0.00	0.00	89.89	0.08	40.00	40.00						
100.00	100.00	99.90	100.00	0.28	0.28	89.89	0.08	40.00	40.00	39.45	0.55	72.494			
200.00	200.00	199.90	200.00	0.63	0.63	89.89	0.08	40.00	40.00	38.73	1.27	31.530			
300.00	300.00	299.90	300.00	0.99	0.99	89.89	0.08	40.00	40.00	38.01	1.99	20.145			
400.00	400.00	399.90	400.00	1.35	1.35	89.89	0.08	40.00	40.00	37.30	2.70	14.801			
500.00	500.00	499.90	500.00	1.71	1.71	89.89	0.08	40.00	40.00	36.58	3.42	11.698			
600.00	600.00	599.90	600.00	2.07	2.07	89.89	0.08	40.00	40.00	35.86	4.14	9.670			
700.00	700.00	699.90	700.00	2.43	2.43	89.89	0.08	40.00	40.00	35.15	4.85	8.242			
800.00	800.00	799.90	800.00	2.79	2.78	89.89	0.08	40.00	40.00	34.43	5.57	7.181			
900.00	900.00	899.90	900.00	3.14	3.14	89.89	0.08	40.00	40.00	33.71	6.29	6.362			
1,000.00	1,000.00	999.90	1,000.00	3.50	3.50	89.89	0.08	40.00	40.00	33.00	7.00	5.711			
1,100.00	1,100.00	1,099.90	1,100.00	3.86	3.86	89.89	0.08	40.00	40.00	32.28	7.72	5.181			
1,200.00	1,200.00	1,199.90	1,200.00	4.22	4.22	89.89	0.08	40.00	40.00	31.56	8.44	4.740			
1,300.00	1,300.00	1,299.90	1,300.00	4.58	4.58	89.89	0.08	40.00	40.00	30.85	9.16	4.369			
1,400.00	1,400.00	1,399.90	1,400.00	4.94	4.94	89.89	0.08	40.00	40.00	30.13	9.87	4.052			
1,500.00	1,500.00	1,499.90	1,500.00	5.29	5.29	89.89	0.08	40.00	40.00	29.41	10.59	3.778			
1,600.00	1,600.00	1,599.90	1,600.00	5.65	5.65	89.89	0.08	40.00	40.00	28.69	11.31	3.538	CC, ES		
1,700.00	1,700.00	1,698.51	1,698.59	6.01	6.00	90.30	-0.22	41.67	41.69	29.69	12.00	3.474	SF		
1,800.00	1,800.00	1,796.88	1,796.82	6.37	6.33	91.36	-1.11	46.66	46.78	34.10	12.68	3.690			
1,900.00	1,900.00	1,894.79	1,894.37	6.73	6.67	92.69	-2.58	54.92	55.27	41.93	13.34	4.144			
2,000.00	2,000.00	1,992.01	1,990.89	7.09	7.00	93.98	-4.62	66.36	67.15	53.16	13.98	4.802			
2,100.00	2,100.00	2,088.34	2,086.08	7.45	7.34	95.09	-7.20	80.88	82.38	67.77	14.61	5.639			
2,200.00	2,200.00	2,186.54	2,182.79	7.80	7.68	95.96	-10.18	97.60	99.63	84.33	15.29	6.514			
2,300.00	2,300.00	2,285.03	2,279.80	8.16	8.03	96.57	-13.17	114.39	116.90	100.91	15.99	7.310			
2,400.00	2,400.00	2,383.52	2,376.80	8.52	8.38	97.03	-16.17	131.18	134.19	117.50	16.69	8.039			
2,500.00	2,500.00	2,482.00	2,473.80	8.88	8.73	97.38	-19.16	147.96	151.48	134.09	17.39	8.708			
2,600.00	2,600.00	2,580.49	2,570.80	9.24	9.09	97.66	-22.15	164.75	168.78	150.68	18.10	9.325			
2,700.00	2,700.00	2,678.98	2,667.80	9.60	9.44	97.88	-25.14	181.54	186.08	167.27	18.81	9.895			
2,800.00	2,800.00	2,777.47	2,764.81	9.95	9.80	98.07	-28.13	198.33	203.38	183.87	19.51	10.423			
2,900.00	2,900.00	2,875.96	2,861.81	10.31	10.16	98.23	-31.12	215.12	220.69	200.47	20.22	10.913			
3,000.00	3,000.00	2,974.45	2,958.81	10.67	10.51	98.37	-34.12	231.91	237.99	217.06	20.93	11.369			
3,100.00	3,100.00	3,072.94	3,055.81	11.03	10.87	98.49	-37.11	248.69	255.30	233.66	21.64	11.795			
3,200.00	3,200.00	3,171.43	3,152.82	11.39	11.23	98.59	-40.10	265.48	272.61	250.25	22.36	12.193			
3,300.00	3,300.00	3,269.92	3,249.82	11.75	11.59	98.68	-43.09	282.27	289.92	266.85	23.07	12.567			
3,400.00	3,400.00	3,368.41	3,346.82	12.11	11.96	98.76	-46.08	299.06	307.23	283.44	23.78	12.917			
3,500.00	3,500.00	3,466.90	3,443.82	12.46	12.32	98.83	-49.07	315.85	324.54	300.04	24.50	13.246			
3,600.00	3,599.98	3,565.27	3,540.71	12.81	12.68	-109.72	-52.06	332.62	342.43	317.23	25.20	13.589			
3,700.00	3,699.84	3,663.34	3,637.29	13.13	13.04	-110.07	-55.04	349.33	361.51	335.63	25.88	13.968			
3,800.00	3,799.45	3,760.97	3,733.44	13.46	13.41	-110.83	-58.00	365.97	381.86	355.30	26.56	14.376			
3,900.00	3,898.76	3,858.12	3,829.13	13.79	13.77	-112.06	-60.96	382.54	403.47	376.23	27.24	14.810			
4,000.00	3,998.01	3,955.21	3,924.75	14.11	14.13	-113.40	-63.90	399.09	425.47	397.55	27.93	15.236			
4,100.00	4,097.27	4,052.29	4,020.37	14.44	14.49	-114.62	-66.85	415.63	447.67	419.06	28.61	15.647			
4,200.00	4,196.52	4,149.37	4,115.98	14.78	14.85	-115.72	-69.80	432.18	470.05	440.75	29.30	16.044			
4,300.00	4,295.77	4,246.46	4,211.60	15.11	15.21	-116.72	-72.75	448.73	492.58	462.59	29.99	16.426			
4,400.00	4,395.03	4,343.54	4,307.22	15.45	15.57	-117.63	-75.70	465.28	515.23	484.56	30.68	16.795			
4,500.00	4,494.28	4,440.62	4,402.84	15.78	15.93	-118.47	-78.65	481.83	538.01	506.63	31.37	17.150			
4,600.00	4,593.54	4,537.70	4,498.45	16.12	16.29	-119.23	-81.60	498.38	560.88	528.81	32.07	17.491			
4,700.00	4,692.79	4,634.79	4,594.07	16.46	16.66	-119.94	-84.55	514.93	583.84	551.08	32.76	17.820			
4,800.00	4,792.05	4,731.87	4,689.69	16.80	17.02	-120.60	-87.49	531.48	606.88	573.42	33.46	18.137			
4,900.00	4,891.30	4,828.95	4,785.30	17.15	17.38	-121.20	-90.44	548.02	629.99	595.83	34.16	18.442			
5,000.00	4,990.56	4,926.04	4,880.92	17.49	17.74	-121.77	-93.39	564.57	653.16	618.30	34.86	18.736			
5,100.00	5,089.81	5,023.12	4,976.54	17.83	18.11	-122.29	-96.34	581.12	676.39	640.82	35.56	19.019			

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 502H - OH - Plan #2

Survey Program: Reference		0-MWD+IFR1+MS		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance			Offset Well Error: Warning		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		
5,200.00	5,189.06	5,120.20	5,072.15	18.18	18.47	-122.79	-99.29	597.67	699.66	663.40	36.27	19.292		
5,300.00	5,288.32	5,217.29	5,167.77	18.53	18.83	-123.25	-102.24	614.22	722.99	686.02	36.97	19.555		
5,400.00	5,387.57	5,314.37	5,263.39	18.87	19.20	-123.68	-105.19	630.77	746.35	708.68	37.68	19.809		
5,500.00	5,486.83	5,411.45	5,359.00	19.22	19.56	-124.08	-108.14	647.32	769.76	731.37	38.38	20.054		
5,600.00	5,586.08	5,508.54	5,454.62	19.57	19.93	-124.46	-111.09	663.87	793.19	754.10	39.09	20.290		
5,700.00	5,685.38	5,605.69	5,550.30	19.92	20.29	-124.98	-114.04	680.43	816.44	776.64	39.80	20.513		
5,800.00	5,784.99	5,703.31	5,646.45	20.27	20.66	-125.49	-117.00	697.07	838.01	797.50	40.51	20.686		
5,900.00	5,884.85	5,801.36	5,743.02	20.62	21.03	-125.76	-119.98	713.78	857.61	816.38	41.22	20.804		
6,000.00	5,984.82	5,899.73	5,839.90	20.97	21.40	-125.80	-122.97	730.55	875.20	833.27	41.94	20.870		
6,100.00	6,084.82	5,998.22	5,936.91	21.32	21.77	83.19	-125.96	747.34	891.78	849.13	42.65	20.908		
6,200.00	6,184.82	6,096.71	6,033.91	21.67	22.14	83.51	-128.95	764.12	908.38	865.01	43.37	20.945		
6,300.00	6,284.82	6,195.20	6,130.91	22.02	22.51	83.82	-131.94	780.91	925.01	880.92	44.09	20.981		
6,400.00	6,384.82	6,293.69	6,227.91	22.37	22.88	84.11	-134.93	797.70	941.66	896.85	44.81	21.016		
6,500.00	6,484.82	6,392.18	6,324.91	22.72	23.25	84.40	-137.92	814.49	958.33	912.81	45.52	21.051		
6,600.00	6,584.82	6,490.67	6,421.92	23.07	23.62	84.67	-140.92	831.28	975.03	928.79	46.24	21.085		
6,700.00	6,684.82	6,589.15	6,518.92	23.43	23.99	84.94	-143.91	848.07	991.75	944.79	46.96	21.118		
6,800.00	6,784.82	6,687.64	6,615.92	23.78	24.36	85.19	-146.90	864.86	1,008.49	960.80	47.68	21.150		
6,900.00	6,884.82	6,786.13	6,712.92	24.13	24.73	85.44	-149.89	881.64	1,025.24	976.84	48.40	21.182		
7,000.00	6,984.82	6,884.62	6,809.92	24.48	25.10	85.68	-152.88	898.43	1,042.02	992.90	49.12	21.213		
7,100.00	7,084.82	6,983.11	6,906.93	24.84	25.47	85.92	-155.87	915.22	1,058.81	1,008.97	49.84	21.244		
7,200.00	7,184.82	7,081.60	7,003.93	25.19	25.84	86.14	-158.86	932.01	1,075.62	1,025.06	50.56	21.273		
7,300.00	7,284.82	7,180.09	7,100.93	25.54	26.21	86.36	-161.86	948.80	1,092.45	1,041.16	51.28	21.302		
7,400.00	7,384.82	7,278.58	7,197.93	25.90	26.59	86.57	-164.85	965.59	1,109.29	1,057.28	52.00	21.331		
7,500.00	7,484.82	7,377.07	7,294.93	26.25	26.96	86.78	-167.84	982.38	1,126.14	1,073.42	52.73	21.358		
7,600.00	7,584.82	7,475.56	7,391.94	26.60	27.33	86.98	-170.83	999.16	1,143.01	1,089.56	53.45	21.386		
7,700.00	7,684.82	7,574.05	7,488.94	26.96	27.70	87.17	-173.82	1,015.95	1,159.89	1,105.72	54.17	21.412		
7,800.00	7,784.82	7,672.54	7,585.94	27.31	28.07	87.36	-176.81	1,032.74	1,176.79	1,121.90	54.89	21.438		
7,900.00	7,884.82	7,771.03	7,682.94	27.67	28.44	87.55	-179.81	1,049.53	1,193.69	1,138.08	55.61	21.464		
8,000.00	7,984.82	7,869.52	7,779.95	28.02	28.82	87.72	-182.80	1,066.32	1,210.61	1,154.28	56.34	21.489		
8,100.00	8,084.82	7,968.01	7,876.95	28.37	29.19	87.90	-185.79	1,083.11	1,227.54	1,170.48	57.06	21.514		
8,200.00	8,184.82	8,066.50	7,973.95	28.73	29.56	88.07	-188.78	1,099.90	1,244.48	1,186.70	57.78	21.538		
8,300.00	8,284.82	8,164.99	8,070.95	29.08	29.93	88.23	-191.77	1,116.68	1,261.43	1,202.93	58.51	21.561		
8,400.00	8,384.82	8,263.48	8,167.95	29.44	30.30	88.39	-194.76	1,133.47	1,278.39	1,219.16	59.23	21.584		
8,500.00	8,484.82	8,361.97	8,264.96	29.79	30.68	88.54	-197.75	1,150.26	1,295.36	1,235.41	59.95	21.607		
8,600.00	8,584.82	8,460.46	8,361.96	30.15	31.05	88.70	-200.75	1,167.05	1,312.34	1,251.66	60.68	21.629		
8,700.00	8,684.82	8,558.95	8,458.96	30.50	31.42	88.84	-203.74	1,183.84	1,329.32	1,267.92	61.40	21.650		
8,800.00	8,784.82	8,657.44	8,555.96	30.86	31.79	88.99	-206.73	1,200.63	1,346.32	1,284.19	62.12	21.672		
8,900.00	8,884.82	8,755.93	8,652.96	31.21	32.16	89.13	-209.72	1,217.41	1,363.32	1,300.47	62.85	21.692		
9,000.00	8,984.82	8,854.42	8,749.97	31.57	32.54	89.26	-212.71	1,234.20	1,380.33	1,316.76	63.57	21.713		
9,100.00	9,084.82	8,952.91	8,846.97	31.92	32.91	89.40	-215.70	1,250.99	1,397.35	1,333.05	64.30	21.733		
9,200.00	9,184.82	9,051.40	8,943.97	32.28	33.28	89.53	-218.70	1,267.78	1,414.38	1,349.35	65.02	21.752		
9,300.00	9,284.82	9,149.89	9,040.97	32.63	33.65	89.65	-221.69	1,284.57	1,431.41	1,365.66	65.75	21.772		
9,400.00	9,384.82	9,248.38	9,137.97	32.99	34.03	89.78	-224.68	1,301.36	1,448.45	1,381.98	66.47	21.790		
9,500.00	9,484.82	9,415.55	9,303.04	33.34	34.65	90.30	-226.81	1,327.42	1,464.64	1,397.00	67.64	21.652		
9,600.00	9,584.20	9,697.99	9,583.05	33.69	35.63	89.66	-198.26	1,344.49	1,470.64	1,401.69	68.95	21.329		
9,700.00	9,680.33	9,796.94	9,678.37	34.02	35.94	89.70	-172.14	1,344.21	1,470.59	1,401.00	69.59	21.132		
9,800.00	9,770.30	9,896.04	9,767.90	34.32	36.24	89.74	-129.96	1,343.77	1,470.52	1,400.34	70.18	20.953		
9,900.00	9,851.37	9,995.29	9,848.97	34.58	36.49	89.79	-72.90	1,343.16	1,470.43	1,399.71	70.72	20.792		
10,000.00	9,921.09	10,094.74	9,919.10	34.82	36.71	89.84	-2.59	1,342.41	1,470.31	1,399.12	71.19	20.653		
10,100.00	9,977.33	10,194.38	9,976.14	35.01	36.87	89.90	78.96	1,341.54	1,470.18	1,398.59	71.59	20.537		
10,200.00	10,018.38	10,294.24	10,018.27	35.17	36.99	89.97	169.36	1,340.58	1,470.04	1,398.13	71.91	20.443		
10,300.00	10,044.40	10,394.29	10,045.20	35.29	37.06	90.01	265.63	1,339.55	1,469.89	1,397.73	72.16	20.370		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 502H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS		Reference		Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Offset Site Error:
Reference		Offset		Reference		Offset		+N/-S		Between		Minimum		Offset Well Error:
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	
10,400.00	10,061.13	10,494.40	10,062.57	35.40	37.11	90.05	364.18	1,338.50	1,469.73	1,397.35	72.38	20.306		
10,500.00	10,069.21	10,594.56	10,071.27	35.50	37.16	90.08	463.93	1,337.44	1,469.57	1,397.00	72.58	20.249		
10,600.00	10,069.87	10,694.71	10,071.53	35.58	37.22	90.06	564.04	1,336.37	1,469.41	1,396.65	72.76	20.196		
10,700.00	10,069.65	10,794.69	10,069.41	35.68	37.30	89.99	664.00	1,335.31	1,469.25	1,396.27	72.98	20.133		
10,800.00	10,069.42	10,894.67	10,067.29	35.80	37.42	89.92	763.95	1,334.24	1,469.09	1,395.86	73.23	20.062		
10,900.00	10,069.19	10,994.65	10,065.16	35.93	37.57	89.84	863.90	1,333.17	1,468.93	1,395.42	73.51	19.982		
11,000.00	10,068.96	11,094.63	10,063.04	36.08	37.74	89.77	963.86	1,332.11	1,468.78	1,394.95	73.83	19.895		
11,100.00	10,068.73	11,194.61	10,060.91	36.24	37.92	89.70	1,063.81	1,331.04	1,468.63	1,394.46	74.17	19.801		
11,200.00	10,068.51	11,294.60	10,058.79	36.42	38.12	89.62	1,163.77	1,329.97	1,468.48	1,393.93	74.55	19.699		
11,300.00	10,068.28	11,394.58	10,056.67	36.62	38.34	89.55	1,263.72	1,328.91	1,468.33	1,393.38	74.95	19.590		
11,400.00	10,068.05	11,494.56	10,054.54	36.83	38.57	89.47	1,363.67	1,327.84	1,468.18	1,392.80	75.39	19.475		
11,500.00	10,067.82	11,594.54	10,052.42	37.06	38.81	89.40	1,463.63	1,326.77	1,468.04	1,392.19	75.85	19.353		
11,600.00	10,067.60	11,694.52	10,050.29	37.30	39.07	89.32	1,563.58	1,325.71	1,467.90	1,391.55	76.35	19.226		
11,700.00	10,067.37	11,794.51	10,048.17	37.55	39.34	89.25	1,663.53	1,324.64	1,467.77	1,390.90	76.87	19.094		
11,800.00	10,067.14	11,894.49	10,046.05	37.82	39.62	89.18	1,763.49	1,323.58	1,467.63	1,390.21	77.42	18.957		
11,900.00	10,066.91	11,994.47	10,043.92	38.10	39.92	89.10	1,863.44	1,322.51	1,467.50	1,389.50	78.00	18.815		
12,000.00	10,066.68	12,094.45	10,041.80	38.40	40.23	89.03	1,963.39	1,321.44	1,467.37	1,388.77	78.60	18.669		
12,100.00	10,066.46	12,194.43	10,039.67	38.71	40.54	88.95	2,063.35	1,320.38	1,467.24	1,388.01	79.23	18.519		
12,200.00	10,066.23	12,294.42	10,037.55	39.03	40.87	88.88	2,163.30	1,319.31	1,467.12	1,387.23	79.88	18.366		
12,300.00	10,066.00	12,394.40	10,035.42	39.36	41.22	88.81	2,263.25	1,318.24	1,466.99	1,386.43	80.56	18.210		
12,400.00	10,064.06	12,494.39	10,033.30	39.71	41.57	88.80	2,363.22	1,317.18	1,466.84	1,385.58	81.26	18.051		
12,500.00	10,060.67	12,594.38	10,031.18	40.08	41.93	88.85	2,463.19	1,316.11	1,466.65	1,384.67	81.98	17.890		
12,600.00	10,057.27	12,693.85	10,028.65	40.46	42.30	88.88	2,562.61	1,315.05	1,466.47	1,383.74	82.73	17.727		
12,700.00	10,053.88	12,793.24	10,023.49	40.85	42.69	88.81	2,661.86	1,314.00	1,466.35	1,382.84	83.51	17.559		
12,800.00	10,050.49	12,893.21	10,017.79	41.25	43.10	88.72	2,761.67	1,312.94	1,466.24	1,381.92	84.32	17.389		
12,900.00	10,047.09	12,993.19	10,012.10	41.66	43.51	88.63	2,861.47	1,311.88	1,466.14	1,380.99	85.16	17.217		
13,000.00	10,043.70	13,093.16	10,006.41	42.08	43.94	88.54	2,961.28	1,310.82	1,466.04	1,380.03	86.01	17.045		
13,100.00	10,040.31	13,193.13	10,000.72	42.51	44.37	88.45	3,061.08	1,309.76	1,465.95	1,379.07	86.88	16.873		
13,200.00	10,036.92	13,293.11	9,995.03	42.95	44.81	88.36	3,160.89	1,308.70	1,465.86	1,378.08	87.77	16.700		
13,300.00	10,033.52	13,393.08	9,989.33	43.40	45.26	88.27	3,260.69	1,307.64	1,465.77	1,377.08	88.68	16.528		
13,400.00	10,030.13	13,493.05	9,983.64	43.86	45.72	88.18	3,360.50	1,306.59	1,465.68	1,376.07	89.61	16.356		
13,500.00	10,026.74	13,593.03	9,977.95	44.32	46.19	88.09	3,460.30	1,305.53	1,465.60	1,375.05	90.56	16.184		
13,600.00	10,023.09	13,693.01	9,972.26	44.80	46.66	88.01	3,560.12	1,304.47	1,465.52	1,374.00	91.52	16.014		
13,700.00	10,019.04	13,792.99	9,966.56	45.28	47.14	87.95	3,659.93	1,303.41	1,465.42	1,372.93	92.49	15.844		
13,800.00	10,014.99	13,892.98	9,960.87	45.78	47.63	87.88	3,759.75	1,302.35	1,465.33	1,371.85	93.48	15.675		
13,900.00	10,010.94	13,992.96	9,955.18	46.28	48.13	87.82	3,859.57	1,301.29	1,465.24	1,370.75	94.49	15.507		
14,000.00	10,006.90	14,092.95	9,949.49	46.79	48.63	87.75	3,959.39	1,300.23	1,465.15	1,369.64	95.51	15.340		
14,100.00	10,002.85	14,192.94	9,943.79	47.30	49.14	87.69	4,059.21	1,299.18	1,465.06	1,368.52	96.55	15.174		
14,200.00	9,998.80	14,292.92	9,938.10	47.82	49.66	87.63	4,159.03	1,298.12	1,464.98	1,367.38	97.60	15.010		
14,300.00	9,994.75	14,392.91	9,932.41	48.35	50.18	87.56	4,258.84	1,297.06	1,464.89	1,366.23	98.66	14.848		
14,400.00	9,990.71	14,492.90	9,926.71	48.89	50.71	87.50	4,358.66	1,296.00	1,464.81	1,365.08	99.74	14.687		
14,500.00	9,986.66	14,592.88	9,921.02	49.43	51.25	87.43	4,458.48	1,294.94	1,464.73	1,363.91	100.82	14.528		
14,600.00	9,982.61	14,692.87	9,915.33	49.98	51.79	87.37	4,558.30	1,293.88	1,464.66	1,362.73	101.92	14.370		
14,700.00	9,978.57	14,792.85	9,909.64	50.53	52.34	87.30	4,658.12	1,292.82	1,464.58	1,361.55	103.03	14.214		
14,800.00	9,974.52	14,892.84	9,903.94	51.09	52.89	87.24	4,757.94	1,291.76	1,464.51	1,360.35	104.16	14.060		
14,900.00	9,970.47	14,992.83	9,898.25	51.65	53.45	87.17	4,857.76	1,290.71	1,464.43	1,359.14	105.29	13.908		
15,000.00	9,966.42	15,092.81	9,892.56	52.22	54.01	87.11	4,957.57	1,289.65	1,464.36	1,357.93	106.44	13.758		
15,100.00	9,962.38	15,192.80	9,886.86	52.80	54.58	87.04	5,057.39	1,288.59	1,464.29	1,356.70	107.59	13.610		
15,200.00	9,958.33	15,292.79	9,881.17	53.38	55.15	86.98	5,157.21	1,287.53	1,464.23	1,355.47	108.75	13.464		
15,300.00	9,954.28	15,392.77	9,875.48	53.96	55.73	86.91	5,257.03	1,286.47	1,464.16	1,354.23	109.93	13.319		
15,400.00	9,950.24	15,492.00	9,869.09	54.55	56.31	86.82	5,356.05	1,285.42	1,464.14	1,353.03	111.11	13.177		
15,500.00	9,946.19	15,591.97	9,862.46	55.14	56.90	86.72	5,455.79	1,284.36	1,464.13	1,351.82	112.31	13.036		

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 502H - OH - Plan #2

Survey Program: 0-MWD+IFR1+MS		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)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,600.00	9,942.14	15,691.94	9,855.83	55.74	57.49	86.62	86.62	86.62	5,555.53	1,283.30	1,464.13	1,350.61	113.52	12.898	
15,700.00	9,937.71	15,791.91	9,849.21	56.34	58.09	86.53	86.53	86.53	5,655.28	1,282.25	1,464.11	1,349.38	114.73	12.761	
15,800.00	9,930.82	15,891.91	9,842.58	56.95	58.69	86.54	86.54	86.54	5,755.05	1,281.19	1,463.94	1,347.99	115.95	12.626	
15,900.00	9,923.59	15,991.91	9,835.95	57.57	59.30	86.57	86.57	86.57	5,854.82	1,280.13	1,463.75	1,346.58	117.17	12.493	
16,000.00	9,916.36	16,091.90	9,829.32	58.19	59.90	86.59	86.59	86.59	5,954.60	1,279.07	1,463.56	1,345.16	118.40	12.361	
16,100.00	9,909.13	16,191.90	9,822.69	58.81	60.52	86.61	86.61	86.61	6,054.37	1,278.01	1,463.36	1,343.73	119.63	12.232	
16,200.00	9,901.91	16,291.90	9,816.06	59.44	61.13	86.64	86.64	86.64	6,154.14	1,276.95	1,463.17	1,342.30	120.88	12.105	
16,300.00	9,894.68	16,391.90	9,809.44	60.07	61.75	86.66	86.66	86.66	6,253.91	1,275.89	1,462.98	1,340.85	122.13	11.979	
16,400.00	9,887.45	16,491.90	9,802.81	60.70	62.37	86.68	86.68	86.68	6,353.69	1,274.84	1,462.79	1,339.41	123.38	11.856	
16,500.00	9,880.22	16,591.90	9,796.18	61.34	63.00	86.71	86.71	86.71	6,453.46	1,273.78	1,462.60	1,337.95	124.65	11.734	
16,600.00	9,872.99	16,691.89	9,789.55	61.98	63.63	86.73	86.73	86.73	6,553.23	1,272.72	1,462.41	1,336.50	125.91	11.614	
16,700.00	9,865.77	16,791.89	9,782.92	62.62	64.26	86.75	86.75	86.75	6,653.00	1,271.66	1,462.22	1,335.03	127.19	11.496	
16,800.00	9,858.54	16,891.89	9,776.29	63.27	64.90	86.77	86.77	86.77	6,752.78	1,270.60	1,462.03	1,333.56	128.47	11.380	
16,900.00	9,851.31	16,991.89	9,769.66	63.92	65.54	86.80	86.80	86.80	6,852.55	1,269.54	1,461.84	1,332.08	129.75	11.266	
17,000.00	9,844.08	17,091.89	9,763.04	64.57	66.18	86.82	86.82	86.82	6,952.32	1,268.49	1,461.65	1,330.60	131.05	11.154	
17,100.00	9,836.52	17,191.88	9,756.41	65.22	66.82	86.86	86.86	86.86	7,052.09	1,267.43	1,461.44	1,329.10	132.34	11.043	
17,200.00	9,827.24	17,291.84	9,749.78	65.88	67.47	86.96	86.96	86.96	7,151.83	1,266.37	1,461.14	1,327.51	133.63	10.934	
17,300.00	9,817.90	17,391.81	9,743.15	66.54	68.11	87.07	87.07	87.07	7,251.57	1,265.31	1,460.85	1,325.92	134.93	10.827	
17,400.00	9,808.57	17,491.77	9,736.53	67.21	68.77	87.18	87.18	87.18	7,351.30	1,264.25	1,460.55	1,324.32	136.23	10.721	
17,500.00	9,799.23	17,591.73	9,729.90	67.87	69.42	87.28	87.28	87.28	7,451.04	1,263.19	1,460.27	1,322.73	137.54	10.617	
17,600.00	9,789.90	17,691.70	9,723.28	68.54	70.08	87.39	87.39	87.39	7,550.78	1,262.14	1,459.99	1,321.14	138.85	10.515	
17,700.00	9,780.56	17,791.66	9,716.65	69.21	70.73	87.49	87.49	87.49	7,650.52	1,261.08	1,459.71	1,319.55	140.16	10.415	
17,800.00	9,771.23	17,891.62	9,710.02	69.89	71.39	87.60	87.60	87.60	7,750.25	1,260.02	1,459.44	1,317.96	141.48	10.316	
17,900.00	9,761.89	17,991.59	9,703.40	70.56	72.06	87.71	87.71	87.71	7,849.99	1,258.96	1,459.17	1,316.37	142.80	10.218	
18,000.00	9,752.56	18,091.55	9,696.77	71.24	72.72	87.81	87.81	87.81	7,949.73	1,257.90	1,458.91	1,314.78	144.13	10.122	
18,100.00	9,743.22	18,191.51	9,690.14	71.92	73.39	87.92	87.92	87.92	8,049.47	1,256.85	1,458.65	1,313.19	145.46	10.028	
18,200.00	9,733.89	18,291.47	9,683.52	72.60	74.06	88.03	88.03	88.03	8,149.20	1,255.79	1,458.40	1,311.61	146.79	9.935	
18,300.00	9,724.55	18,391.44	9,676.89	73.28	74.73	88.13	88.13	88.13	8,248.94	1,254.73	1,458.15	1,310.02	148.13	9.844	
18,400.00	9,715.22	18,491.40	9,670.27	73.96	75.40	88.24	88.24	88.24	8,348.68	1,253.67	1,457.91	1,308.44	149.47	9.754	
18,500.00	9,705.88	18,591.36	9,663.64	74.65	76.07	88.34	88.34	88.34	8,448.42	1,252.61	1,457.67	1,306.86	150.81	9.665	
18,600.00	9,696.56	18,691.33	9,657.01	75.34	76.75	88.45	88.45	88.45	8,548.16	1,251.56	1,457.44	1,305.28	152.16	9.578	
18,700.00	9,687.27	18,791.29	9,650.39	76.03	77.43	88.56	88.56	88.56	8,647.89	1,250.50	1,457.22	1,303.71	153.51	9.493	
18,800.00	9,677.98	18,891.26	9,643.76	76.72	78.11	88.66	88.66	88.66	8,747.63	1,249.44	1,457.00	1,302.13	154.86	9.408	
18,900.00	9,668.68	18,991.22	9,637.13	77.41	78.79	88.77	88.77	88.77	8,847.37	1,248.38	1,456.78	1,300.56	156.22	9.325	
19,000.00	9,659.39	19,091.18	9,630.51	78.10	79.47	88.87	88.87	88.87	8,947.11	1,247.32	1,456.58	1,298.99	157.58	9.243	
19,100.00	9,650.10	19,190.84	9,623.71	78.80	80.15	88.97	88.97	88.97	9,046.53	1,246.27	1,456.37	1,297.43	158.94	9.163	
19,200.00	9,640.80	19,290.48	9,617.46	79.49	80.84	88.98	88.98	88.98	9,145.77	1,245.22	1,456.21	1,295.89	160.33	9.083	
19,300.00	9,631.51	19,390.48	9,610.70	80.19	81.53	88.99	88.99	88.99	9,245.34	1,244.16	1,456.06	1,294.34	161.71	9.004	
19,400.00	9,622.22	19,490.48	9,603.95	80.89	82.22	88.99	88.99	88.99	9,344.92	1,243.10	1,455.90	1,292.79	163.11	8.926	
19,500.00	9,612.93	19,590.48	9,597.40	81.59	82.92	89.00	89.00	89.00	9,444.49	1,242.05	1,455.74	1,291.24	164.50	8.849	
19,600.00	9,603.63	19,690.48	9,590.24	82.29	83.61	89.00	89.00	89.00	9,544.07	1,240.99	1,455.58	1,289.69	165.90	8.774	
19,700.00	9,594.34	19,790.48	9,583.09	82.99	84.31	89.01	89.01	89.01	9,643.64	1,239.93	1,455.43	1,288.13	167.30	8.700	
19,800.00	9,585.05	19,890.48	9,575.94	83.70	85.01	89.02	89.02	89.02	9,743.22	1,238.88	1,455.27	1,286.57	168.70	8.626	
19,900.00	9,575.75	19,990.48	9,568.78	84.40	85.71	89.02	89.02	89.02	9,842.79	1,237.82	1,455.11	1,285.01	170.10	8.554	
20,000.00	9,566.46	20,090.48	9,561.63	85.11	86.41	89.03	89.03	89.03	9,942.37	1,236.76	1,454.96	1,283.45	171.51	8.483	
20,100.00	9,557.01	20,190.23	9,553.36	85.82	87.11	89.03	89.03	89.03	10,041.68	1,235.71	1,454.80	1,281.89	172.92	8.413	
20,200.00	9,547.98	20,289.60	9,544.69	86.53	87.81	89.05	89.05	89.05	10,140.35	1,234.66	1,454.64	1,280.32	174.33	8.344	
20,300.00	9,538.82	20,389.60	9,537.00	87.24	88.51	89.07	89.07	89.07	10,239.53	1,233.61	1,454.48	1,278.74	175.74	8.276	
20,400.00	9,529.65	20,489.60	9,529.32	87.95	89.22	89.08	89.08	89.08	10,338.72	1,232.56	1,454.32	1,277.15	177.16	8.209	
20,500.00	9,520.49	20,589.59	9,521.64	88.67	89.93	89.10	89.10	89.10	10,437.91	1,231.51	1,454.16	1,275.57	178.58	8.143	
20,600.00	9,511.33	20,689.59	9,513.96	89.38	90.64	89.12	89.12	89.12	10,537.09	1,230.45	1,453.99	1,273.99	180.01	8.077	
20,700.00	9,502.16	20,789.59	9,505.27	90.10	91.35	89.14	89.14	89.14	10,636.28	1,229.40	1,453.83	1,272.40	181.43	8.013	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 502H - 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)			
20,800.00	9,466.00	20,889.59	9,444.59	90.82	92.06	89.16	10,735.46	1,228.35	1,453.67	1,270.81	182.86	7.950	
20,900.00	9,452.84	20,989.59	9,431.91	91.54	92.78	89.18	10,834.65	1,227.30	1,453.51	1,269.22	184.29	7.887	
21,000.00	9,439.67	21,089.59	9,419.23	92.25	93.49	89.20	10,933.83	1,226.25	1,453.35	1,267.63	185.72	7.826	
21,100.00	9,426.51	21,189.59	9,406.55	92.97	94.20	89.22	11,033.02	1,225.19	1,453.19	1,266.04	187.15	7.765	
21,200.00	9,413.34	21,289.59	9,393.86	93.69	94.92	89.24	11,132.21	1,224.14	1,453.03	1,264.44	188.58	7.705	
21,300.00	9,400.18	21,389.58	9,381.18	94.42	95.64	89.26	11,231.39	1,223.09	1,452.87	1,262.85	190.02	7.646	
21,400.00	9,387.02	21,489.20	9,367.78	95.14	96.35	89.24	11,330.09	1,222.04	1,452.72	1,261.26	191.46	7.588	
21,500.00	9,373.85	21,589.18	9,353.09	95.86	97.07	89.18	11,428.99	1,220.99	1,452.58	1,259.67	192.91	7.530	
21,600.00	9,360.63	21,689.17	9,338.41	96.58	97.79	89.13	11,527.89	1,219.94	1,452.45	1,258.08	194.37	7.473	
21,700.00	9,345.14	21,789.16	9,323.72	97.31	98.51	89.16	11,626.79	1,218.89	1,452.29	1,256.48	195.81	7.417	
21,800.00	9,327.82	21,889.13	9,309.04	98.04	99.23	89.27	11,725.66	1,217.85	1,452.10	1,254.86	197.24	7.362	
21,900.00	9,310.51	21,989.09	9,294.36	98.76	99.95	89.37	11,824.54	1,216.80	1,451.91	1,253.24	198.67	7.308	
22,000.00	9,293.19	22,089.06	9,279.68	99.49	100.68	89.48	11,923.41	1,215.75	1,451.73	1,251.63	200.10	7.255	
22,100.00	9,275.88	22,189.02	9,265.00	100.22	101.40	89.58	12,022.29	1,214.70	1,451.56	1,250.02	201.53	7.203	
22,200.00	9,258.56	22,288.99	9,250.32	100.95	102.12	89.69	12,121.16	1,213.65	1,451.38	1,248.42	202.97	7.151	
22,300.00	9,241.25	22,388.95	9,235.64	101.68	102.85	89.79	12,220.04	1,212.60	1,451.22	1,246.82	204.40	7.100	
22,400.00	9,223.93	22,488.91	9,220.95	102.41	103.57	89.90	12,318.91	1,211.55	1,451.06	1,245.22	205.84	7.050	
22,500.00	9,206.62	22,588.88	9,206.27	103.14	104.30	90.00	12,417.79	1,210.50	1,450.90	1,243.63	207.27	7.000	
22,600.00	9,189.30	22,688.85	9,191.59	103.87	105.02	90.11	12,516.66	1,209.45	1,450.75	1,242.04	208.71	6.951	
22,700.00	9,171.99	22,788.93	9,175.08	104.60	105.75	90.14	12,615.36	1,208.41	1,450.60	1,240.43	210.17	6.902	
22,800.00	9,154.67	22,888.93	9,157.34	105.34	106.48	90.12	12,713.77	1,207.36	1,450.45	1,238.82	211.63	6.854	
22,900.00	9,137.36	22,988.92	9,139.59	106.07	107.21	90.11	12,812.18	1,206.32	1,450.29	1,237.20	213.10	6.806	
23,000.00	9,120.04	23,088.92	9,121.85	106.80	107.94	90.09	12,910.58	1,205.27	1,450.14	1,235.58	214.56	6.759	
23,100.00	9,102.72	23,188.92	9,104.10	107.54	108.67	90.07	13,008.99	1,204.23	1,449.99	1,233.96	216.03	6.712	
23,200.00	9,085.41	23,288.92	9,086.36	108.27	109.40	90.05	13,107.39	1,203.19	1,449.83	1,232.34	217.50	6.666	
23,300.00	9,068.09	23,388.92	9,068.61	109.00	110.13	90.04	13,205.80	1,202.14	1,449.68	1,230.71	218.97	6.620	
23,400.00	9,050.78	23,488.92	9,050.86	109.74	110.86	90.02	13,304.21	1,201.10	1,449.53	1,229.09	220.44	6.576	
23,500.00	9,033.46	23,588.92	9,033.12	110.48	111.59	90.00	13,402.61	1,200.06	1,449.38	1,227.47	221.91	6.531	
23,600.00	9,016.15	23,688.92	9,015.37	111.21	112.33	89.98	13,501.02	1,199.01	1,449.22	1,225.84	223.38	6.488	
23,700.00	8,998.83	23,788.92	8,997.63	111.95	113.06	89.97	13,599.43	1,197.97	1,449.07	1,224.22	224.86	6.444	
23,800.00	8,981.52	23,888.92	8,979.88	112.68	113.79	89.95	13,697.83	1,196.92	1,448.92	1,222.59	226.33	6.402	
23,900.00	8,964.01	23,988.89	8,961.95	113.42	114.53	89.93	13,796.18	1,195.88	1,448.77	1,220.96	227.80	6.360	
24,000.00	8,946.83	24,088.83	8,941.45	114.16	115.26	89.92	13,893.98	1,194.84	1,448.62	1,219.34	229.28	6.318	
24,100.00	8,929.36	24,188.80	8,919.96	114.89	115.99	90.01	13,991.62	1,193.81	1,448.46	1,217.73	230.73	6.278	
24,200.00	8,895.94	24,288.76	8,898.47	115.63	116.73	90.12	14,089.23	1,192.77	1,448.32	1,216.13	232.18	6.238	
24,300.00	8,871.53	24,388.71	8,876.98	116.37	117.46	90.24	14,186.84	1,191.74	1,448.17	1,214.54	233.63	6.199	
24,400.00	8,847.11	24,488.67	8,855.50	117.11	118.20	90.36	14,284.45	1,190.70	1,448.04	1,212.96	235.08	6.160	
24,500.00	8,822.69	24,588.62	8,834.01	117.84	118.93	90.48	14,382.07	1,189.66	1,447.91	1,211.38	236.53	6.121	
24,600.00	8,798.28	24,688.58	8,812.52	118.58	119.67	90.60	14,479.68	1,188.63	1,447.79	1,209.80	237.98	6.084	
24,700.00	8,773.86	24,788.53	8,791.03	119.32	120.40	90.72	14,577.29	1,187.59	1,447.67	1,208.24	239.43	6.046	
24,800.00	8,749.44	24,888.49	8,769.55	120.06	121.14	90.84	14,674.90	1,186.56	1,447.56	1,206.67	240.88	6.009	
24,900.00	8,725.02	24,988.44	8,748.06	120.80	121.88	90.96	14,772.52	1,185.52	1,447.45	1,205.12	242.34	5.973	
25,000.00	8,698.79	25,088.32	8,726.59	121.54	122.61	91.15	14,870.05	1,184.49	1,447.39	1,203.62	243.77	5.937	
25,017.63	8,693.81	25,105.90	8,722.81	121.67	122.74	91.20	14,887.22	1,184.31	1,447.39	1,203.37	244.02	5.931	
25,100.00	8,669.20	25,187.96	8,705.17	122.27	123.35	91.48	14,967.36	1,183.46	1,447.43	1,202.26	245.18	5.904	
25,200.00	8,637.03	25,288.24	8,683.13	123.00	124.09	91.90	15,065.17	1,182.42	1,447.59	1,201.03	246.56	5.871	
25,300.00	8,604.67	25,389.76	8,657.71	123.74	124.84	92.20	15,163.46	1,181.38	1,447.72	1,199.74	247.98	5.838	
25,400.00	8,572.32	25,491.19	8,628.97	124.47	125.58	92.37	15,260.71	1,180.34	1,447.74	1,198.32	249.42	5.804	
25,500.00	8,539.96	25,591.14	8,599.67	125.20	126.32	92.50	15,356.27	1,179.33	1,447.73	1,196.87	250.86	5.771	
25,600.00	8,507.61	25,691.09	8,570.38	125.94	127.05	92.63	15,451.82	1,178.32	1,447.72	1,195.42	252.30	5.738	
25,616.63	8,502.23	25,707.71	8,565.51	126.06	127.17	92.65	15,467.72	1,178.15	1,447.72	1,195.18	252.54	5.733	
25,700.00	8,475.26	25,791.03	8,541.09	126.67	127.78	92.75	15,547.38	1,177.30	1,447.72	1,193.99	253.74	5.706	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 502H - 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	8,442.90	25,890.98	8,511.80	127.40	128.52	92.88	15,642.93	1,176.29	1,447.73	1,192.55	255.18	5.673	
25,900.00	8,410.55	25,990.93	8,482.51	128.14	129.25	93.01	15,738.49	1,175.28	1,447.75	1,191.13	256.62	5.642	
26,000.00	8,378.20	26,090.88	8,453.22	128.87	129.99	93.13	15,834.04	1,174.26	1,447.77	1,189.71	258.06	5.610	
26,100.00	8,345.84	26,190.83	8,423.93	129.61	130.72	93.26	15,929.60	1,173.25	1,447.80	1,188.30	259.50	5.579	
26,200.00	8,313.49	26,290.78	8,394.64	130.34	131.46	93.39	16,025.15	1,172.23	1,447.84	1,186.90	260.94	5.548	
26,300.00	8,281.13	26,390.73	8,365.35	131.07	132.19	93.51	16,120.71	1,171.22	1,447.89	1,185.50	262.39	5.518	
26,400.00	8,248.78	26,490.67	8,336.06	131.81	132.93	93.64	16,216.26	1,170.21	1,447.94	1,184.11	263.83	5.488	
26,500.00	8,216.43	26,590.62	8,306.77	132.54	133.66	93.77	16,311.82	1,169.19	1,448.00	1,182.73	265.27	5.459	
26,600.00	8,184.07	26,690.57	8,277.48	133.28	134.40	93.90	16,407.37	1,168.18	1,448.06	1,181.35	266.71	5.429	
26,700.00	8,151.72	26,790.52	8,248.19	134.01	135.14	94.02	16,502.93	1,167.17	1,448.14	1,179.98	268.16	5.400	
26,800.00	8,118.82	26,888.99	8,220.24	134.75	135.86	94.20	16,597.34	1,166.17	1,448.33	1,178.75	269.58	5.373	
26,900.00	8,084.54	26,988.77	8,192.33	135.48	136.60	94.47	16,693.13	1,165.15	1,448.68	1,177.69	270.99	5.346	
27,000.00	8,050.27	27,088.55	8,164.42	136.21	137.33	94.73	16,788.92	1,164.13	1,449.07	1,176.66	272.40	5.320	
27,100.00	8,016.00	27,188.33	8,136.51	136.94	138.07	94.99	16,884.71	1,163.12	1,449.48	1,175.66	273.81	5.294	
27,200.00	7,981.72	27,288.11	8,108.60	137.68	138.81	95.25	16,980.50	1,162.10	1,449.92	1,174.70	275.23	5.268	
27,300.00	7,947.45	27,387.89	8,080.69	138.41	139.54	95.51	17,076.30	1,161.08	1,450.40	1,173.76	276.64	5.243	
27,400.00	7,913.17	27,487.67	8,052.77	139.14	140.28	95.77	17,172.09	1,160.07	1,450.90	1,172.85	278.05	5.218	
27,500.00	7,878.90	27,587.45	8,024.86	139.88	141.02	96.03	17,267.88	1,159.05	1,451.43	1,171.97	279.46	5.194	
27,600.00	7,845.20	27,687.26	7,996.94	140.61	141.76	96.27	17,363.70	1,158.03	1,451.93	1,171.05	280.88	5.169	
27,700.00	7,814.47	27,787.22	7,968.98	141.35	142.50	96.39	17,459.66	1,157.02	1,452.10	1,169.77	282.33	5.143	
27,800.00	7,784.78	27,887.20	7,941.01	142.09	143.23	96.46	17,555.65	1,156.00	1,452.15	1,168.36	283.79	5.117	
27,900.00	7,755.08	27,987.18	7,913.05	142.83	143.97	96.53	17,651.64	1,154.98	1,452.21	1,166.96	285.25	5.091	
28,000.00	7,725.39	28,087.17	7,885.08	143.57	144.71	96.60	17,747.62	1,153.96	1,452.27	1,165.55	286.72	5.065	
28,100.00	7,695.70	28,187.15	7,857.11	144.31	145.45	96.67	17,843.61	1,152.94	1,452.33	1,164.15	288.18	5.040	
28,200.00	7,666.00	28,287.14	7,829.14	145.05	146.19	96.74	17,939.60	1,151.92	1,452.39	1,162.75	289.64	5.014	
28,300.00	7,636.31	28,387.12	7,801.17	145.79	146.93	96.82	18,035.58	1,150.91	1,452.46	1,161.35	291.10	4.989	
28,303.02	7,635.41	28,390.14	7,800.33	145.81	146.96	96.82	18,038.48	1,150.87	1,452.46	1,161.31	291.15	4.989	
28,400.00	7,606.61	28,444.58	7,785.10	146.53	147.36	96.86	18,090.75	1,150.32	1,453.14	1,160.79	292.36	4.970	
28,422.27	7,600.00	28,444.58	7,785.10	146.69	147.36	96.86	18,090.75	1,150.32	1,453.98	1,161.50	292.48	4.971	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 601H - OH - Plan #2

Survey Program: Reference		0-MWD+IFR1+MS Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Rule Assigned:		Offset Well Error:		0.00 usft
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	Warning			
0.00	0.00	0.20	0.00	0.00	0.00	-90.09	-0.03	-19.99	19.99							
100.00	100.00	100.20	100.00	0.28	0.28	-90.09	-0.03	-19.99	19.99	19.44	0.55	36.164				
200.00	200.00	200.20	200.00	0.63	0.64	-90.09	-0.03	-19.99	19.99	18.72	1.27	15.744				
300.00	300.00	300.20	300.00	0.99	0.99	-90.09	-0.03	-19.99	19.99	18.00	1.99	10.062				
400.00	400.00	400.20	400.00	1.35	1.35	-90.09	-0.03	-19.99	19.99	17.29	2.70	7.394				
500.00	500.00	500.20	500.00	1.71	1.71	-90.09	-0.03	-19.99	19.99	16.57	3.42	5.844				
600.00	600.00	600.20	600.00	2.07	2.07	-90.09	-0.03	-19.99	19.99	15.85	4.14	4.831				
700.00	700.00	700.20	700.00	2.43	2.43	-90.09	-0.03	-19.99	19.99	15.14	4.85	4.118				
800.00	800.00	800.20	800.00	2.79	2.79	-90.09	-0.03	-19.99	19.99	14.42	5.57	3.588				
900.00	900.00	900.20	900.00	3.14	3.14	-90.09	-0.03	-19.99	19.99	13.70	6.29	3.179				
1,000.00	1,000.00	1,000.20	1,000.00	3.50	3.50	-90.09	-0.03	-19.99	19.99	12.98	7.01	2.854				
1,100.00	1,100.00	1,100.20	1,100.00	3.86	3.86	-90.09	-0.03	-19.99	19.99	12.27	7.72	2.589				
1,200.00	1,200.00	1,200.20	1,200.00	4.22	4.22	-90.09	-0.03	-19.99	19.99	11.55	8.44	2.369				
1,300.00	1,300.00	1,300.20	1,300.00	4.58	4.58	-90.09	-0.03	-19.99	19.99	10.83	9.16	2.183				
1,400.00	1,400.00	1,400.20	1,400.00	4.94	4.94	-90.09	-0.03	-19.99	19.99	10.12	9.87	2.025				
1,500.00	1,500.00	1,500.20	1,500.00	5.29	5.30	-90.09	-0.03	-19.99	19.99	9.40	10.59	1.888				
1,600.00	1,600.00	1,600.20	1,600.00	5.65	5.65	-90.09	-0.03	-19.99	19.99	8.68	11.31	1.768				
1,700.00	1,700.00	1,700.20	1,700.00	6.01	6.01	-90.09	-0.03	-19.99	19.99	7.97	12.02	1.663				
1,800.00	1,800.00	1,800.20	1,800.00	6.37	6.37	-90.09	-0.03	-19.99	19.99	7.25	12.74	1.569				
1,897.04	1,897.04	1,897.26	1,897.04	6.72	6.70	-94.82	-1.68	-19.85	19.92	6.50	13.42	1.485	Level 3, CC Level 3, ES			
1,900.00	1,900.00	1,900.22	1,900.00	6.73	6.71	-95.12	-1.78	-19.84	19.92	6.48	13.44	1.482				
2,000.00	2,000.00	2,000.00	1,999.64	7.09	7.04	-109.80	-6.98	-19.40	20.63	6.51	14.12	1.461	Level 3			
2,100.00	2,100.00	2,099.28	2,098.54	7.45	7.36	-129.86	-15.59	-18.68	24.37	9.59	14.78	1.649				
2,200.00	2,200.00	2,198.29	2,196.86	7.80	7.69	-146.92	-27.17	-17.70	32.58	17.15	15.43	2.111				
2,300.00	2,300.00	2,297.54	2,295.37	8.16	8.02	-156.96	-39.22	-16.68	42.87	26.77	16.11	2.662				
2,400.00	2,400.00	2,396.80	2,393.89	8.52	8.35	-163.01	-51.27	-15.67	53.96	37.17	16.79	3.214				
2,500.00	2,500.00	2,496.05	2,492.40	8.88	8.68	-166.97	-63.32	-14.65	65.44	47.96	17.48	3.744				
2,600.00	2,600.00	2,595.31	2,590.92	9.24	9.02	-169.75	-75.38	-13.63	77.13	58.96	18.17	4.245				
2,700.00	2,700.00	2,694.56	2,689.44	9.60	9.36	-171.79	-87.43	-12.62	88.96	70.09	18.87	4.715				
2,800.00	2,800.00	2,793.82	2,787.95	9.95	9.70	-173.35	-99.48	-11.60	100.87	81.31	19.56	5.156				
2,900.00	2,900.00	2,893.07	2,886.47	10.31	10.05	-174.58	-111.53	-10.58	112.84	92.58	20.26	5.569				
3,000.00	3,000.00	2,992.33	2,984.98	10.67	10.39	-175.57	-123.58	-9.57	124.86	103.89	20.97	5.955				
3,100.00	3,100.00	3,091.58	3,083.50	11.03	10.74	-176.39	-135.63	-8.55	136.90	115.23	21.67	6.318				
3,200.00	3,200.00	3,190.84	3,182.01	11.39	11.09	-177.08	-147.68	-7.53	148.96	126.59	22.37	6.658				
3,300.00	3,300.00	3,290.09	3,280.53	11.75	11.44	-177.66	-159.73	-6.52	161.05	137.97	23.08	6.978				
3,400.00	3,400.00	3,389.35	3,379.04	12.11	11.79	-178.17	-171.78	-5.50	173.15	149.36	23.78	7.280				
3,500.00	3,500.00	3,488.60	3,477.56	12.46	12.14	-178.60	-183.84	-4.48	185.25	160.76	24.49	7.564				
3,600.00	3,599.98	3,588.01	3,576.23	12.81	12.49	-178.80	-195.91	-3.46	195.84	170.65	25.18	7.776				
3,700.00	3,699.84	3,687.66	3,675.13	13.13	12.85	-178.75	-208.00	-2.44	203.39	177.53	25.86	7.865				
3,800.00	3,799.45	3,794.73	3,781.60	13.46	13.23	-178.23	-219.23	-1.50	206.32	179.69	26.63	7.749				
3,900.00	3,898.76	3,902.15	3,888.76	13.79	13.61	-177.66	-226.50	-0.88	203.04	175.67	27.37	7.419				
4,000.00	3,998.01	4,009.12	3,995.68	14.11	13.99	-177.66	-229.76	-0.61	195.86	167.79	28.07	6.978				
4,100.00	4,097.27	4,110.71	4,097.27	14.44	14.34	-176.39	-229.96	-0.59	186.08	157.34	28.74	6.474				
4,200.00	4,196.52	4,209.96	4,196.52	14.78	14.68	-176.39	-229.96	-0.59	176.39	146.97	29.42	5.996				
4,300.00	4,295.77	4,309.21	4,295.77	15.11	15.02	-176.39	-229.96	-0.59	167.02	136.93	30.10	5.550				
4,400.00	4,395.03	4,408.47	4,395.03	15.45	15.36	-176.39	-229.96	-0.59	158.04	127.27	30.78	5.135				
4,500.00	4,494.28	4,507.72	4,494.28	15.78	15.71	-176.39	-229.96	-0.59	149.52	118.06	31.46	4.753				
4,600.00	4,593.54	4,606.98	4,593.54	16.12	16.05	-176.39	-229.96	-0.59	141.53	109.39	32.14	4.403				
4,700.00	4,692.79	4,706.23	4,692.79	16.46	16.39	-176.39	-229.96	-0.59	134.18	101.35	32.83	4.087				
4,800.00	4,792.05	4,805.49	4,792.05	16.80	16.74	-176.39	-229.96	-0.59	127.56	94.05	33.52	3.806				
4,900.00	4,891.30	4,904.74	4,891.30	17.15	17.08	-176.39	-229.96	-0.59	121.82	87.61	34.21	3.561				
5,000.00	4,990.56	5,003.99	4,990.56	17.49	17.43	-69.89	-229.96	-0.59	117.06	82.16	34.90	3.354				

Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 601H - OH - Plan #2

Survey Program: Reference		0-MWD+IFR1+MS Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		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		
5,100.00	5,089.81	5,103.25	5,089.81	17.83	17.78	-75.64	-229.96	-0.59	113.42	77.83	35.59	3.187			
5,200.00	5,189.06	5,202.50	5,189.06	18.18	18.12	-81.70	-229.96	-0.59	111.00	74.72	36.28	3.059			
5,300.00	5,288.32	5,301.76	5,288.32	18.53	18.47	-87.95	-229.96	-0.59	109.89	72.92	36.98	2.972			
5,332.44	5,320.52	5,333.96	5,320.52	18.64	18.58	-90.00	-229.96	-0.59	109.82	72.62	37.20	2.952			
5,400.00	5,387.57	5,401.01	5,387.57	18.87	18.82	-94.26	-229.96	-0.59	110.13	72.46	37.67	2.923			
5,500.00	5,486.83	5,500.27	5,486.83	19.22	19.16	-100.46	-229.96	-0.59	111.71	73.34	38.37	2.911			
5,600.00	5,586.08	5,599.52	5,586.08	19.57	19.51	-106.42	-229.96	-0.59	114.56	75.50	39.06	2.933			
5,700.00	5,685.38	5,698.82	5,685.38	19.92	19.86	-111.90	-229.96	-0.59	118.46	78.70	39.76	2.980			
5,800.00	5,784.99	5,798.43	5,784.99	20.27	20.21	-115.79	-229.96	-0.59	122.03	81.57	40.45	3.016			
5,900.00	5,884.85	5,898.28	5,884.85	20.62	20.56	-118.03	-229.96	-0.59	124.43	83.28	41.15	3.024			
6,000.00	5,984.82	5,998.26	5,984.82	20.97	20.91	-118.78	-229.96	-0.59	125.30	83.45	41.85	2.994			
6,100.00	6,084.82	6,098.26	6,084.82	21.32	21.26	89.89	-229.96	-0.59	125.30	82.75	42.55	2.945			
6,200.00	6,184.82	6,198.26	6,184.82	21.67	21.61	89.89	-229.96	-0.59	125.30	82.05	43.26	2.897			
6,300.00	6,284.82	6,298.26	6,284.82	22.02	21.97	89.89	-229.96	-0.59	125.30	81.34	43.96	2.850			
6,400.00	6,384.82	6,398.26	6,384.82	22.37	22.32	89.89	-229.96	-0.59	125.30	80.64	44.66	2.806			
6,500.00	6,484.82	6,498.26	6,484.82	22.72	22.67	89.89	-229.96	-0.59	125.30	79.94	45.36	2.762			
6,600.00	6,584.82	6,598.26	6,584.82	23.07	23.02	89.89	-229.96	-0.59	125.30	79.23	46.07	2.720			
6,700.00	6,684.82	6,698.26	6,684.82	23.43	23.38	89.89	-229.96	-0.59	125.30	78.53	46.77	2.679			
6,800.00	6,784.82	6,798.26	6,784.82	23.78	23.73	89.89	-229.96	-0.59	125.30	77.82	47.48	2.639			
6,900.00	6,884.82	6,898.26	6,884.82	24.13	24.08	89.89	-229.96	-0.59	125.30	77.12	48.18	2.600			
7,000.00	6,984.82	6,998.26	6,984.82	24.48	24.44	89.89	-229.96	-0.59	125.30	76.41	48.89	2.563			
7,100.00	7,084.82	7,098.26	7,084.82	24.84	24.79	89.89	-229.96	-0.59	125.30	75.71	49.60	2.526			
7,200.00	7,184.82	7,198.26	7,184.82	25.19	25.14	89.89	-229.96	-0.59	125.30	75.00	50.30	2.491			
7,300.00	7,284.82	7,298.26	7,284.82	25.54	25.50	89.89	-229.96	-0.59	125.30	74.29	51.01	2.456			
7,400.00	7,384.82	7,398.26	7,384.82	25.90	25.85	89.89	-229.96	-0.59	125.30	73.59	51.71	2.423			
7,500.00	7,484.82	7,498.26	7,484.82	26.25	26.21	89.89	-229.96	-0.59	125.30	72.88	52.42	2.390			
7,600.00	7,584.82	7,598.26	7,584.82	26.60	26.56	89.89	-229.96	-0.59	125.30	72.17	53.13	2.358			
7,700.00	7,684.82	7,698.26	7,684.82	26.96	26.91	89.89	-229.96	-0.59	125.30	71.46	53.84	2.327			
7,800.00	7,784.82	7,798.26	7,784.82	27.31	27.27	89.89	-229.96	-0.59	125.30	70.76	54.54	2.297			
7,900.00	7,884.82	7,898.26	7,884.82	27.67	27.62	89.89	-229.96	-0.59	125.30	70.05	55.25	2.268			
8,000.00	7,984.82	7,998.26	7,984.82	28.02	27.98	89.89	-229.96	-0.59	125.30	69.34	55.96	2.239			
8,100.00	8,084.82	8,098.26	8,084.82	28.37	28.33	89.89	-229.96	-0.59	125.30	68.63	56.67	2.211			
8,200.00	8,184.82	8,198.26	8,184.82	28.73	28.69	89.89	-229.96	-0.59	125.30	67.92	57.38	2.184			
8,300.00	8,284.82	8,298.26	8,284.82	29.08	29.04	89.89	-229.96	-0.59	125.30	67.21	58.09	2.157			
8,400.00	8,384.82	8,398.26	8,384.82	29.44	29.40	89.89	-229.96	-0.59	125.30	66.50	58.80	2.131			
8,500.00	8,484.82	8,498.26	8,484.82	29.79	29.75	89.89	-229.96	-0.59	125.30	65.79	59.51	2.106			
8,600.00	8,584.82	8,598.26	8,584.82	30.15	30.11	89.89	-229.96	-0.59	125.30	65.09	60.22	2.081			
8,700.00	8,684.82	8,698.26	8,684.82	30.50	30.46	89.89	-229.96	-0.59	125.30	64.38	60.92	2.057			
8,800.00	8,784.82	8,798.26	8,784.82	30.86	30.82	89.89	-229.96	-0.59	125.30	63.67	61.63	2.033			
8,900.00	8,884.82	8,898.26	8,884.82	31.21	31.17	89.89	-229.96	-0.59	125.30	62.96	62.34	2.010			
9,000.00	8,984.82	8,998.26	8,984.82	31.57	31.53	89.89	-229.96	-0.59	125.30	62.25	63.05	1.987			
9,100.00	9,084.82	9,098.26	9,084.82	31.92	31.89	89.89	-229.96	-0.59	125.30	61.54	63.77	1.965			
9,200.00	9,184.82	9,198.26	9,184.82	32.28	32.24	89.89	-229.96	-0.59	125.30	60.82	64.48	1.943			
9,300.00	9,284.82	9,298.26	9,284.82	32.63	32.60	89.89	-229.96	-0.59	125.30	60.11	65.19	1.922			
9,400.00	9,384.82	9,398.26	9,384.82	32.99	32.95	89.89	-229.96	-0.59	125.30	59.40	65.90	1.901			
9,408.56	9,393.38	9,406.82	9,393.38	33.02	32.98	90.42	-229.96	-0.59	125.30	59.34	65.96	1.900			
9,500.00	9,484.82	9,498.26	9,484.82	33.34	33.31	90.44	-229.96	-0.59	125.30	58.69	66.61	1.881			
9,503.57	9,488.39	9,501.83	9,488.39	33.36	33.32	90.46	-229.96	-0.59	125.30	58.67	66.63	1.880			
9,600.00	9,584.20	9,597.64	9,584.20	33.69	33.66	94.90	-229.96	-0.59	125.77	58.46	67.31	1.868			
9,700.00	9,680.33	9,693.77	9,680.33	34.02	34.00	105.84	-229.96	-0.59	130.93	62.94	67.99	1.926			
9,800.00	9,770.30	9,783.74	9,770.30	34.32	34.33	119.17	-229.96	-0.59	149.40	80.77	68.63	2.177			
9,900.00	9,851.37	9,864.81	9,851.37	34.58	34.61	130.19	-229.96	-0.59	187.65	118.47	69.17	2.713			

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 601H - 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)			
10,000.00	9,921.09	9,939.39	9,925.95	34.82	34.88	137.63	-229.81	-0.59	245.49	175.88	69.61	3.527	
10,100.00	9,977.33	10,056.40	10,041.84	35.01	35.29	146.97	-215.23	-0.72	312.58	243.61	68.96	4.532	
10,200.00	10,018.38	10,219.24	10,193.19	35.17	35.80	154.93	-156.64	-1.26	378.51	313.53	64.98	5.825	
10,300.00	10,044.40	10,477.62	10,382.91	35.29	36.45	161.77	15.52	-2.82	431.15	377.45	53.70	8.029	
10,400.00	10,061.13	10,748.34	10,482.66	35.40	36.85	163.71	264.90	-5.08	447.89	403.12	44.77	10.004	
10,500.00	10,069.21	10,908.83	10,503.26	35.50	37.01	163.92	423.93	-6.52	452.50	408.59	43.91	10.304	
10,600.00	10,069.87	11,046.50	10,503.73	35.58	37.14	163.89	561.54	-7.77	451.75	407.41	44.34	10.189	
10,700.00	10,069.65	11,146.46	10,500.95	35.68	37.25	163.80	661.46	-8.68	449.30	404.51	44.79	10.032	
10,800.00	10,069.42	11,246.43	10,498.17	35.80	37.37	163.71	761.38	-9.58	446.84	401.56	45.29	9.867	
10,900.00	10,069.19	11,346.40	10,495.39	35.93	37.51	163.62	861.31	-10.49	444.39	398.56	45.83	9.696	
11,000.00	10,068.96	11,446.37	10,492.61	36.08	37.66	163.52	961.23	-11.39	441.95	395.52	46.43	9.519	
11,100.00	10,068.73	11,546.33	10,489.83	36.24	37.83	163.43	1,061.16	-12.30	439.50	392.43	47.07	9.338	
11,200.00	10,068.51	11,646.30	10,487.05	36.42	38.01	163.33	1,161.08	-13.20	437.05	389.30	47.75	9.153	
11,300.00	10,068.28	11,746.27	10,484.27	36.62	38.20	163.24	1,261.01	-14.11	434.61	386.13	48.47	8.966	
11,400.00	10,068.05	11,846.24	10,481.49	36.83	38.42	163.14	1,360.93	-15.01	432.16	382.93	49.24	8.777	
11,500.00	10,067.82	11,946.20	10,478.71	37.06	38.64	163.04	1,460.86	-15.92	429.72	379.68	50.04	8.588	
11,600.00	10,067.60	12,046.17	10,475.93	37.30	38.88	162.94	1,560.78	-16.82	427.28	376.40	50.87	8.399	
11,700.00	10,067.37	12,146.14	10,473.15	37.55	39.14	162.84	1,660.71	-17.73	424.84	373.09	51.75	8.210	
11,800.00	10,067.14	12,246.10	10,470.37	37.82	39.40	162.74	1,760.63	-18.63	422.40	369.75	52.65	8.023	
11,900.00	10,066.91	12,346.07	10,467.59	38.10	39.68	162.64	1,860.56	-19.54	419.96	366.38	53.59	7.837	
12,000.00	10,066.68	12,446.04	10,464.81	38.40	39.98	162.53	1,960.48	-20.44	417.52	362.98	54.55	7.654	
12,100.00	10,066.46	12,546.01	10,462.03	38.71	40.28	162.43	2,060.40	-21.35	415.09	359.55	55.54	7.473	
12,200.00	10,066.23	12,645.97	10,459.25	39.03	40.60	162.32	2,160.33	-22.25	412.66	356.10	56.56	7.296	
12,300.00	10,066.00	12,745.94	10,456.47	39.36	40.93	162.21	2,260.25	-23.16	410.23	352.62	57.60	7.121	
12,380.12	10,064.80	12,826.06	10,454.24	39.64	41.20	162.17	2,340.33	-23.88	409.24	350.80	58.44	7.002	
12,400.00	10,064.06	12,845.93	10,453.69	39.71	41.27	162.18	2,360.20	-24.06	409.43	350.78	58.65	6.981	
12,500.00	10,060.67	12,945.93	10,450.91	40.08	41.62	162.21	2,460.16	-24.97	410.01	350.32	59.69	6.869	
12,600.00	10,057.27	13,055.42	10,447.02	40.46	42.03	162.20	2,569.57	-25.96	409.90	348.93	60.96	6.724	
12,700.00	10,053.88	13,162.53	10,439.96	40.85	42.44	162.05	2,676.44	-26.93	406.82	344.56	62.26	6.534	
12,800.00	10,050.49	13,262.46	10,432.92	41.25	42.84	161.89	2,776.12	-27.83	403.34	339.92	63.42	6.360	
12,900.00	10,047.09	13,362.40	10,425.88	41.66	43.25	161.73	2,875.80	-28.73	399.87	335.27	64.59	6.191	
13,000.00	10,043.70	13,462.33	10,418.84	42.08	43.67	161.56	2,975.48	-29.64	396.39	330.61	65.79	6.026	
13,100.00	10,040.31	13,562.26	10,411.80	42.51	44.10	161.39	3,075.17	-30.54	392.93	325.93	67.00	5.865	
13,200.00	10,036.92	13,662.20	10,404.76	42.95	44.53	161.22	3,174.85	-31.44	389.46	321.24	68.22	5.709	
13,300.00	10,033.52	13,762.13	10,397.72	43.40	44.98	161.05	3,274.53	-32.35	386.01	316.54	69.46	5.557	
13,400.00	10,030.13	13,862.06	10,390.68	43.86	45.44	160.87	3,374.21	-33.25	382.55	311.83	70.72	5.410	
13,500.00	10,026.74	13,962.00	10,383.64	44.32	45.90	160.69	3,473.89	-34.15	379.10	307.11	71.98	5.267	
13,600.00	10,023.09	14,067.84	10,375.26	44.80	46.40	160.47	3,573.39	-35.11	375.06	301.65	73.41	5.109	
13,700.00	10,019.04	14,167.73	10,366.56	45.28	46.89	160.22	3,678.90	-36.01	370.67	295.96	74.71	4.961	
13,800.00	10,014.99	14,267.62	10,357.86	45.78	47.38	159.98	3,778.41	-36.91	366.28	290.25	76.02	4.818	
13,900.00	10,010.94	14,367.51	10,349.17	46.28	47.88	159.72	3,877.92	-37.81	361.90	284.55	77.35	4.679	
14,000.00	10,006.90	14,467.40	10,340.47	46.79	48.38	159.46	3,977.42	-38.71	357.52	278.84	78.68	4.544	
14,100.00	10,002.85	14,567.29	10,331.77	47.30	48.90	159.20	4,076.93	-39.61	353.15	273.12	80.03	4.413	
14,200.00	9,998.80	14,667.19	10,323.08	47.82	49.42	158.92	4,176.44	-40.51	348.79	267.41	81.38	4.286	
14,300.00	9,994.75	14,767.08	10,314.38	48.35	49.94	158.65	4,275.95	-41.41	344.44	261.69	82.75	4.162	
14,400.00	9,990.71	14,866.97	10,305.68	48.89	50.47	158.36	4,375.45	-42.31	340.10	255.98	84.12	4.043	
14,500.00	9,986.66	14,966.86	10,296.98	49.43	51.01	158.06	4,474.96	-43.21	335.77	250.26	85.51	3.927	
14,600.00	9,982.61	15,069.71	10,287.41	49.98	51.57	157.71	4,574.36	-44.14	330.88	243.91	86.97	3.804	
14,700.00	9,978.57	15,169.55	10,277.76	50.53	52.13	157.34	4,676.73	-45.04	325.68	237.29	88.39	3.685	
14,800.00	9,974.52	15,269.39	10,268.11	51.09	52.68	156.95	4,776.10	-45.94	320.49	230.68	89.81	3.569	
14,900.00	9,970.47	15,369.23	10,258.46	51.65	53.25	156.55	4,875.47	-46.84	315.31	224.08	91.24	3.456	
15,000.00	9,966.42	15,469.07	10,248.80	52.22	53.81	156.13	4,974.84	-47.74	310.15	217.48	92.68	3.347	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 601H - 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)			
15,100.00	9,962.38	15,568.92	10,239.15	52.80	54.39	155.71	5,074.21	-48.64	305.01	210.89	94.12	3.241	
15,200.00	9,958.33	15,668.76	10,229.50	53.38	54.96	155.26	5,173.58	-49.54	299.89	204.31	95.57	3.138	
15,300.00	9,954.28	15,768.60	10,219.85	53.96	55.55	154.80	5,272.95	-50.44	294.78	197.74	97.04	3.038	
15,400.00	9,950.24	15,868.44	10,210.19	54.55	56.13	154.33	5,372.32	-51.34	289.69	191.19	98.50	2.941	
15,500.00	9,946.19	15,968.28	10,200.54	55.14	56.72	153.84	5,471.69	-52.24	284.63	184.65	99.98	2.847	
15,600.00	9,942.14	16,062.37	10,192.20	55.74	57.28	153.43	5,565.40	-53.09	280.32	179.00	101.31	2.767	
15,700.00	9,937.71	16,160.03	10,185.77	56.34	57.86	153.24	5,662.84	-53.98	278.39	175.71	102.67	2.711	
15,749.98	9,934.67	16,210.01	10,182.54	56.65	58.16	153.23	5,712.71	-54.43	278.21	174.85	103.37	2.692	
15,800.00	9,930.82	16,260.03	10,179.31	56.95	58.46	153.28	5,762.63	-54.88	278.77	174.73	104.04	2.679	
15,900.00	9,923.59	16,360.03	10,172.85	57.57	59.06	153.35	5,862.41	-55.78	279.46	174.05	105.41	2.651	
16,000.00	9,916.36	16,460.02	10,166.39	58.19	59.67	153.43	5,962.20	-56.69	280.15	173.36	106.79	2.623	
16,100.00	9,909.13	16,560.02	10,159.93	58.81	60.28	153.50	6,061.98	-57.59	280.84	172.67	108.16	2.596	
16,200.00	9,901.91	16,660.02	10,153.48	59.44	60.89	153.57	6,161.77	-58.49	281.53	171.98	109.55	2.570	
16,300.00	9,894.68	16,760.02	10,147.02	60.07	61.51	153.64	6,261.55	-59.40	282.22	171.28	110.94	2.544	
16,400.00	9,887.45	16,860.01	10,140.56	60.70	62.13	153.71	6,361.33	-60.30	282.91	170.58	112.33	2.519	
16,500.00	9,880.22	16,960.01	10,134.10	61.34	62.75	153.78	6,461.12	-61.21	283.60	169.87	113.73	2.494	
16,600.00	9,872.99	17,060.01	10,127.64	61.98	63.38	153.84	6,560.90	-62.11	284.29	169.16	115.13	2.469	
16,700.00	9,865.77	17,160.00	10,121.19	62.62	64.01	153.91	6,660.69	-63.01	284.98	168.44	116.54	2.445	
16,800.00	9,858.54	17,260.00	10,114.73	63.27	64.64	153.98	6,760.47	-63.92	285.68	167.73	117.95	2.422	
16,900.00	9,851.31	17,360.00	10,108.27	63.92	65.28	154.05	6,860.25	-64.82	286.37	167.00	119.37	2.399	
17,000.00	9,844.08	17,459.99	10,101.81	64.57	65.92	154.12	6,960.04	-65.73	287.06	166.28	120.78	2.377	
17,100.00	9,836.52	17,559.99	10,095.35	65.22	66.56	154.21	7,059.82	-66.63	288.05	165.85	122.20	2.357	
17,200.00	9,827.24	17,659.95	10,088.90	65.88	67.20	154.45	7,159.57	-67.53	290.61	167.02	123.59	2.351	
17,300.00	9,817.90	17,759.91	10,082.44	66.54	67.85	154.69	7,259.31	-68.44	293.22	168.23	124.99	2.346	
17,400.00	9,808.57	17,859.86	10,075.99	67.21	68.50	154.93	7,359.06	-69.34	295.83	169.43	126.39	2.341	
17,500.00	9,799.23	17,959.82	10,069.53	67.87	69.15	155.16	7,458.80	-70.24	298.44	170.64	127.80	2.335	
17,600.00	9,789.90	18,059.78	10,063.08	68.54	69.80	155.40	7,558.55	-71.15	301.06	171.85	129.21	2.330	
17,700.00	9,780.56	18,159.74	10,056.62	69.21	70.46	155.62	7,658.29	-72.05	303.69	173.06	130.63	2.325	
17,800.00	9,771.23	18,259.70	10,050.16	69.89	71.12	155.85	7,758.04	-72.95	306.32	174.27	132.05	2.320	
17,900.00	9,761.89	18,359.66	10,043.71	70.56	71.78	156.06	7,857.78	-73.86	308.96	175.49	133.47	2.315	
18,000.00	9,752.56	18,459.61	10,037.25	71.24	72.44	156.28	7,957.53	-74.76	311.60	176.70	134.90	2.310	
18,100.00	9,743.22	18,559.57	10,030.80	71.92	73.11	156.49	8,057.28	-75.66	314.24	177.91	136.33	2.305	
18,200.00	9,733.89	18,659.53	10,024.34	72.60	73.78	156.70	8,157.02	-76.57	316.89	179.12	137.77	2.300	
18,300.00	9,724.55	18,759.49	10,017.89	73.28	74.45	156.90	8,256.77	-77.47	319.54	180.33	139.20	2.295	
18,400.00	9,715.22	18,859.45	10,011.43	73.96	75.12	157.11	8,356.51	-78.37	322.20	181.55	140.65	2.291	
18,500.00	9,705.88	18,959.41	10,004.98	74.65	75.79	157.30	8,456.26	-79.28	324.86	182.76	142.09	2.286	
18,600.00	9,696.56	19,059.36	9,998.52	75.34	76.47	157.50	8,556.00	-80.18	327.51	183.96	143.54	2.282	
18,700.00	9,687.27	19,159.32	9,992.06	76.03	77.14	157.69	8,655.75	-81.08	330.13	185.14	144.99	2.277	
18,800.00	9,677.98	19,259.28	9,985.61	76.72	77.82	157.87	8,755.50	-81.99	332.77	186.32	146.45	2.272	
18,900.00	9,668.68	19,359.24	9,979.15	77.41	78.50	158.06	8,855.24	-82.89	335.40	187.49	147.91	2.268	
19,000.00	9,659.39	19,459.20	9,972.70	78.10	79.18	158.24	8,954.99	-83.79	338.04	188.67	149.37	2.263	
19,100.00	9,650.10	19,560.00	9,965.13	78.80	79.91	158.38	9,061.52	-84.76	340.13	189.16	150.97	2.253	
19,200.00	9,640.80	19,666.74	9,956.23	79.49	80.61	158.41	9,161.86	-85.67	340.55	188.09	152.47	2.234	
19,300.00	9,631.51	19,766.74	9,947.38	80.19	81.30	158.44	9,261.46	-86.57	340.97	187.02	153.95	2.215	
19,400.00	9,622.22	19,866.74	9,938.53	80.89	81.99	158.47	9,361.06	-87.47	341.38	185.95	155.43	2.196	
19,500.00	9,612.93	19,966.74	9,929.68	81.59	82.68	158.50	9,460.67	-88.38	341.80	184.88	156.92	2.178	
19,600.00	9,603.63	20,066.74	9,920.84	82.29	83.38	158.52	9,560.27	-89.28	342.22	183.81	158.41	2.160	
19,700.00	9,594.34	20,166.74	9,911.99	82.99	84.07	158.55	9,659.87	-90.18	342.63	182.73	159.90	2.143	
19,800.00	9,585.05	20,266.74	9,903.14	83.70	84.77	158.58	9,759.48	-91.08	343.05	181.66	161.39	2.126	
19,900.00	9,575.75	20,366.74	9,894.29	84.40	85.47	158.60	9,859.08	-91.99	343.46	180.58	162.88	2.109	
20,000.00	9,566.46	20,466.74	9,885.45	85.11	86.17	158.63	9,958.68	-92.89	343.88	179.50	164.38	2.092	
20,100.00	9,557.01	20,574.14	9,875.18	85.82	86.92	158.63	10,065.58	-93.86	343.81	177.86	165.96	2.072	

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 601H - 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)			
20,191.84	9,546.31	20,671.73	9,863.02	86.47	87.61	158.58	10,162.41	-94.73	343.09	175.73	167.35	2.050	
20,200.00	9,544.98	20,679.90	9,861.96	86.53	87.67	158.60	10,170.51	-94.81	343.34	175.87	167.47	2.050	
20,300.00	9,531.82	20,779.90	9,849.03	87.24	88.37	158.61	10,269.66	-95.71	343.56	174.60	168.96	2.033	
20,400.00	9,518.65	20,879.90	9,836.09	87.95	89.08	158.63	10,368.82	-96.60	343.77	173.32	170.45	2.017	
20,500.00	9,505.49	20,979.90	9,823.16	88.67	89.79	158.64	10,467.97	-97.50	343.99	172.05	171.94	2.001	
20,600.00	9,492.33	21,079.90	9,810.23	89.38	90.50	158.65	10,567.13	-98.40	344.21	170.77	173.44	1.985	
20,700.00	9,479.16	21,179.90	9,797.29	90.10	91.21	158.67	10,666.29	-99.30	344.42	169.49	174.93	1.969	
20,800.00	9,466.00	21,279.90	9,784.36	90.82	91.92	158.68	10,765.44	-100.20	344.64	168.21	176.43	1.953	
20,900.00	9,452.84	21,379.90	9,771.42	91.54	92.64	158.70	10,864.60	-101.10	344.85	166.93	177.92	1.938	
21,000.00	9,439.67	21,479.90	9,758.49	92.25	93.35	158.71	10,963.75	-101.99	345.07	165.65	179.42	1.923	
21,100.00	9,426.51	21,587.95	9,743.62	92.97	94.12	158.67	11,070.77	-102.96	344.54	163.66	180.88	1.905	
21,200.00	9,413.34	21,688.89	9,727.77	93.69	94.85	158.51	11,170.46	-103.87	342.15	159.77	182.38	1.876	
21,300.00	9,400.18	21,788.86	9,712.06	94.42	95.57	158.35	11,269.18	-104.76	339.75	155.86	183.89	1.848	
21,400.00	9,387.02	21,888.82	9,696.34	95.14	96.29	158.19	11,367.90	-105.65	337.35	151.95	185.40	1.820	
21,500.00	9,373.85	21,988.79	9,680.63	95.86	97.00	158.03	11,466.62	-106.55	334.96	148.04	186.91	1.792	
21,600.00	9,360.63	22,088.76	9,664.92	96.58	97.72	157.87	11,565.34	-107.44	332.62	144.19	188.43	1.765	
21,656.34	9,352.33	22,145.09	9,656.07	96.99	98.13	157.84	11,620.97	-107.94	332.10	142.83	189.27	1.755	
21,700.00	9,345.14	22,188.75	9,649.20	97.31	98.45	157.85	11,664.09	-108.33	332.41	142.49	189.93	1.750	
21,800.00	9,327.82	22,288.74	9,633.49	98.04	99.17	157.96	11,762.83	-109.23	333.91	142.50	191.41	1.744	
21,900.00	9,310.51	22,388.73	9,617.77	98.76	99.89	158.06	11,861.57	-110.12	335.41	142.52	192.90	1.739	
22,000.00	9,293.19	22,488.71	9,602.06	99.49	100.61	158.17	11,960.31	-111.01	336.92	142.53	194.38	1.733	
22,100.00	9,275.88	22,596.11	9,584.39	100.22	101.39	158.22	12,066.23	-111.97	337.76	142.03	195.74	1.726	
22,200.00	9,258.56	22,700.88	9,564.25	100.95	102.15	158.10	12,169.04	-112.90	335.94	138.83	197.11	1.704	
22,300.00	9,241.25	22,800.85	9,544.71	101.68	102.88	157.95	12,267.08	-113.79	333.83	135.22	198.61	1.681	
22,400.00	9,223.93	22,900.83	9,525.17	102.41	103.60	157.80	12,365.12	-114.68	331.73	131.61	200.12	1.658	
22,500.00	9,206.62	23,000.80	9,505.63	103.14	104.33	157.65	12,463.17	-115.57	329.63	128.01	201.63	1.635	
22,600.00	9,189.30	23,100.78	9,486.09	103.87	105.06	157.50	12,561.21	-116.46	327.54	124.40	203.13	1.612	
22,700.00	9,171.99	23,200.75	9,466.55	104.60	105.79	157.35	12,659.25	-117.35	325.44	120.80	204.64	1.590	
22,800.00	9,154.67	23,300.73	9,447.01	105.34	106.51	157.20	12,757.29	-118.23	323.35	117.20	206.15	1.569	
22,900.00	9,137.36	23,400.70	9,427.47	106.07	107.24	157.04	12,855.34	-119.12	321.26	113.60	207.66	1.547	
23,000.00	9,120.04	23,500.67	9,407.93	106.80	107.97	156.88	12,953.38	-120.01	319.18	110.01	209.17	1.526	
23,100.00	9,102.72	23,600.65	9,388.40	107.54	108.70	156.72	13,051.42	-120.90	317.09	106.41	210.68	1.505	
23,200.00	9,085.41	23,700.62	9,368.86	108.27	109.43	156.56	13,149.46	-121.79	315.01	102.82	212.19	1.485	Level 3
23,300.00	9,068.09	23,800.60	9,349.32	109.00	110.17	156.39	13,247.51	-122.68	312.93	99.22	213.71	1.464	Level 3
23,400.00	9,050.78	23,900.57	9,329.78	109.74	110.90	156.22	13,345.55	-123.56	310.85	95.63	215.22	1.444	Level 3
23,500.00	9,033.46	24,000.55	9,310.24	110.48	111.63	156.06	13,443.59	-124.45	308.78	92.04	216.74	1.425	Level 3
23,600.00	9,016.15	24,100.52	9,290.70	111.21	112.36	155.88	13,541.63	-125.34	306.71	88.46	218.25	1.405	Level 3
23,700.00	8,998.83	24,200.49	9,271.16	111.95	113.09	155.71	13,639.67	-126.23	304.64	84.87	219.77	1.386	Level 3
23,800.00	8,981.52	24,300.47	9,251.62	112.68	113.83	155.53	13,737.72	-127.12	302.58	81.29	221.28	1.367	Level 3
23,900.00	8,964.01	24,400.45	9,232.08	113.42	114.56	155.37	13,835.76	-128.01	300.69	77.89	222.80	1.350	Level 3
23,931.48	8,958.03	24,431.93	9,225.93	113.65	114.79	155.36	13,866.64	-128.29	300.53	77.26	223.27	1.346	Level 3
24,000.00	8,943.83	24,500.44	9,212.54	114.16	115.30	155.42	13,933.82	-128.89	301.28	76.99	224.29	1.343	Level 3, SF
24,100.00	8,920.36	24,600.35	9,193.01	114.89	116.03	155.71	14,031.81	-129.78	304.94	79.19	225.75	1.351	Level 3
24,200.00	8,895.94	24,700.23	9,173.49	115.63	116.76	156.09	14,129.75	-130.67	309.50	82.29	227.21	1.362	Level 3
24,300.00	8,871.53	24,800.10	9,153.97	116.37	117.50	156.46	14,227.70	-131.56	314.07	85.41	228.67	1.373	Level 3
24,400.00	8,847.11	24,899.98	9,134.45	117.11	118.23	156.82	14,325.64	-132.44	318.66	88.53	230.13	1.385	Level 3
24,500.00	8,822.69	24,999.86	9,114.93	117.84	118.97	157.17	14,423.59	-133.33	323.26	91.67	231.59	1.396	Level 3
24,600.00	8,798.28	25,102.38	9,094.79	118.58	119.72	157.51	14,524.11	-134.24	327.77	94.83	232.95	1.407	Level 3
24,700.00	8,773.86	25,214.23	9,069.84	119.32	120.55	157.67	14,633.13	-135.23	329.78	95.98	233.80	1.411	Level 3
24,800.00	8,749.44	25,320.66	9,042.52	120.06	121.33	157.58	14,735.99	-136.16	328.55	93.71	234.84	1.399	Level 3
24,900.00	8,725.02	25,420.64	9,016.27	120.80	122.06	157.45	14,832.46	-137.03	326.80	90.47	236.33	1.383	Level 3
24,950.31	8,712.24	25,470.95	9,003.07	121.17	122.43	157.43	14,881.00	-137.47	326.40	89.32	237.08	1.377	Level 3

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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Offset Design: Rope State Com Pad - Rope State Com 601H - OH - Plan #2

Survey Program:		0-MWD+IFR1+MS								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	
25,000.00	8,698.79	25,520.64	8,990.02	121.54	122.80	157.45	14,928.94	-137.91	326.79	88.99	237.81	1.374	Level 3	
25,100.00	8,669.20	25,620.57	8,963.79	122.27	123.53	157.66	15,025.37	-138.78	330.01	90.76	239.25	1.379	Level 3	
25,200.00	8,637.03	25,720.38	8,937.59	123.00	124.27	158.05	15,121.67	-139.65	335.74	95.07	240.67	1.395	Level 3	
25,300.00	8,604.67	25,820.17	8,911.39	123.74	125.00	158.45	15,217.96	-140.52	341.67	99.58	242.09	1.411	Level 3	
25,400.00	8,572.32	25,919.97	8,885.19	124.47	125.74	158.83	15,314.26	-141.39	347.62	104.10	243.51	1.427	Level 3	
25,500.00	8,539.96	26,019.77	8,859.00	125.20	126.47	159.21	15,410.55	-142.27	353.57	108.63	244.94	1.444	Level 3	
25,600.00	8,507.61	26,120.58	8,832.52	125.94	127.22	159.57	15,507.82	-143.15	359.54	113.24	246.29	1.460	Level 3	
25,700.00	8,475.26	26,231.96	8,800.91	126.67	128.04	159.83	15,614.61	-144.11	363.43	116.64	246.79	1.473	Level 3	
25,800.00	8,442.90	26,331.92	8,771.14	127.40	128.77	159.97	15,710.03	-144.98	365.96	117.74	248.22	1.474	Level 3	
25,900.00	8,410.55	26,431.89	8,741.36	128.14	129.50	160.11	15,805.45	-145.84	368.50	118.84	249.66	1.476	Level 3	
26,000.00	8,378.20	26,531.85	8,711.59	128.87	130.24	160.26	15,900.88	-146.71	371.04	119.94	251.10	1.478	Level 3	
26,100.00	8,345.84	26,631.82	8,681.81	129.61	130.97	160.40	15,996.30	-147.57	373.58	121.04	252.55	1.479	Level 3	
26,200.00	8,313.49	26,731.78	8,652.03	130.34	131.71	160.53	16,091.72	-148.44	376.13	122.14	253.99	1.481	Level 3	
26,300.00	8,281.13	26,831.74	8,622.26	131.07	132.44	160.67	16,187.14	-149.30	378.67	123.24	255.43	1.482	Level 3	
26,400.00	8,248.78	26,931.71	8,592.48	131.81	133.18	160.81	16,282.56	-150.16	381.22	124.35	256.87	1.484	Level 3	
26,500.00	8,216.43	27,031.67	8,562.70	132.54	133.92	160.94	16,377.98	-151.03	383.77	125.45	258.32	1.486	Level 3	
26,600.00	8,184.07	27,131.63	8,532.93	133.28	134.65	161.07	16,473.41	-151.89	386.33	126.56	259.76	1.487	Level 3	
26,700.00	8,151.72	27,242.29	8,498.81	134.01	135.46	161.15	16,578.66	-152.85	387.88	127.69	260.19	1.491	Level 3	
26,770.71	8,128.37	27,315.01	8,474.80	134.53	136.00	161.15	16,647.30	-153.47	387.88	128.88	261.00	1.486	Level 3	
26,800.00	8,118.82	27,344.30	8,465.12	134.75	136.21	161.15	16,674.94	-153.72	387.75	126.32	261.42	1.483	Level 3	
26,900.00	8,084.54	27,444.29	8,432.05	135.48	136.94	161.21	16,769.31	-154.57	388.96	126.09	262.86	1.480	Level 3	
27,000.00	8,050.27	27,544.28	8,398.98	136.21	137.68	161.27	16,863.67	-155.43	390.17	125.87	264.30	1.476	Level 3	
27,100.00	8,016.00	27,644.28	8,365.91	136.94	138.41	161.33	16,958.03	-156.28	391.38	125.64	265.74	1.473	Level 3	
27,200.00	7,981.72	27,744.27	8,332.85	137.68	139.14	161.39	17,052.39	-157.14	392.59	125.41	267.18	1.469	Level 3	
27,300.00	7,947.45	27,844.26	8,299.78	138.41	139.88	161.45	17,146.75	-157.99	393.80	125.18	268.62	1.466	Level 3	
27,400.00	7,913.17	27,944.25	8,266.71	139.14	140.61	161.51	17,241.12	-158.84	395.01	124.96	270.06	1.463	Level 3	
27,500.00	7,878.90	28,033.64	8,238.22	139.88	141.27	161.61	17,325.84	-159.61	397.44	124.90	272.54	1.458	Level 3	
27,600.00	7,845.20	28,121.83	8,212.71	140.61	141.92	161.83	17,410.25	-160.38	402.20	127.28	274.92	1.463	Level 3	
27,700.00	7,814.47	28,221.27	8,185.53	141.35	142.65	162.00	17,505.90	-161.24	405.58	129.16	276.42	1.467	Level 3	
27,800.00	7,784.78	28,321.24	8,158.20	142.09	143.39	162.11	17,602.06	-162.12	407.93	130.04	277.89	1.468	Level 3	
27,900.00	7,755.08	28,421.21	8,130.88	142.83	144.13	162.21	17,698.21	-162.99	410.27	130.91	279.36	1.469	Level 3	
28,000.00	7,725.39	28,521.18	8,103.56	143.57	144.87	162.32	17,794.37	-163.86	412.62	131.79	280.83	1.469	Level 3	
28,100.00	7,695.70	28,621.15	8,076.24	144.31	145.61	162.42	17,890.53	-164.73	414.97	132.67	282.30	1.470	Level 3	
28,200.00	7,666.00	28,721.12	8,048.91	145.05	146.35	162.52	17,986.69	-165.60	417.32	133.55	283.77	1.471	Level 3	
28,300.00	7,636.31	28,821.09	8,021.59	145.79	147.09	162.62	18,082.85	-166.47	419.67	134.43	285.25	1.471	Level 3	
28,400.00	7,606.61	28,921.06	8,019.80	146.53	147.14	162.63	18,089.15	-166.53	432.24	145.44	286.80	1.507	Level 3	
28,422.27	7,600.00	28,921.06	8,019.80	146.69	147.14	162.63	18,089.15	-166.53	438.10	152.69	285.41	1.535	Level 3	

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

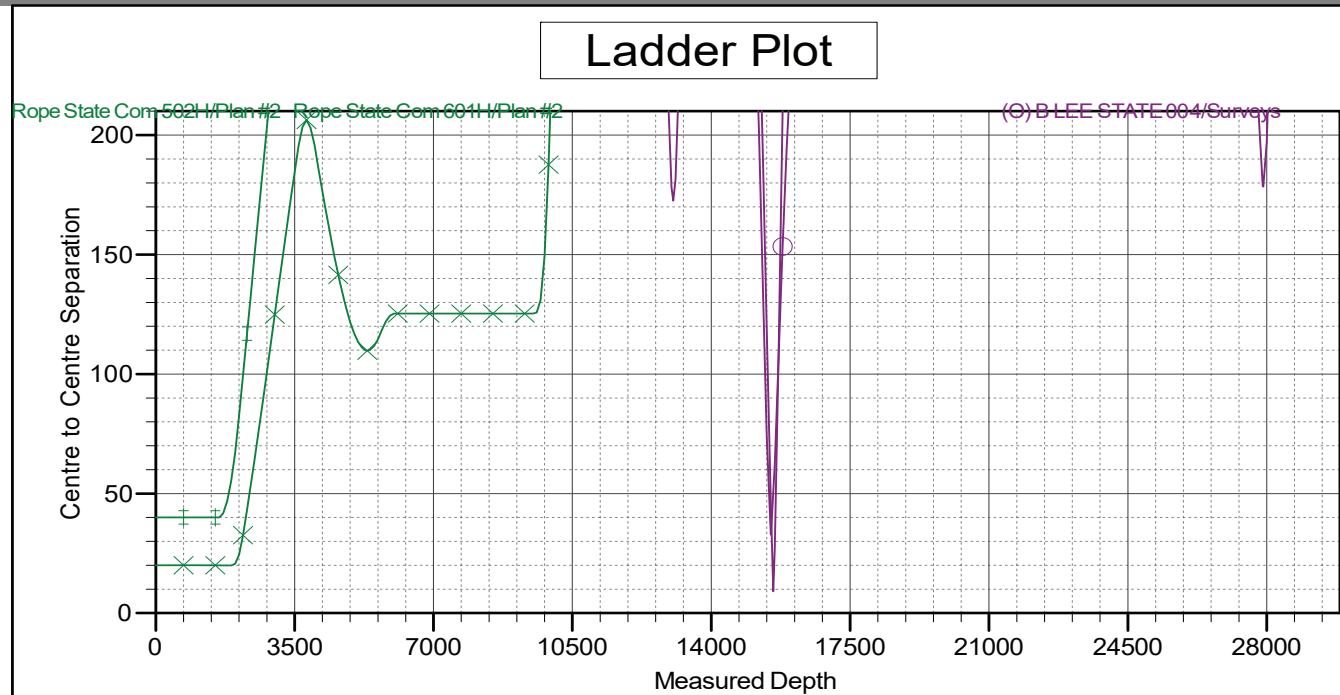
Total Directional Anticollision Report



Company:	Coterra Energy	Local Co-ordinate Reference:	Well Rope State Com 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3951.9' + KB 23' @ 3974.90usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.3333333

Coordinates are relative to Rope State Com 501H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.45°



LEGEND

STATE 002 P & A, Vertical, Surveys V0
OH, Plan #2 V0
RN STATE COM 111H, Horizontal - PRODUCING, Surveys V0
80 P & A, Vertical, Surveys V0
Verticals, Surveys V0
P & A, Vertical, Surveys V0
OH, Plan #2 V0
TATE 001 P & A, Vertical, Surveys V0

✖ (O) AIRSTRIP STATE 001 P & A, Vertical, Surveys V0
▲ (O) AIRSTRIP 31 1835 RN STATE COM 131H, Horizontal - PRODUCING, Surveys V0
■ (O) IRONHOUSE 19 STATE COM 001H, Horizontal - PRODUCING, Surveys V0
⊗ (O) IRONHOUSE 19 STATE COM 001H, Pilot, Pilot V0
⊕ (O) OHIO STATE 005, Verticals, Surveys V0
▲ (O) AIRSTRIP 31 1835 RN STATE COM 132H, Horizontal - PRODUCING, Surveys V0
⊗ (O) SHETLAND SWD 001, Vertical, Surveys V0
▲ (O) LEAZD STATE 001 P & A, Vertical, Surveys V0

⊗ (O) IRONHOUSE 19 STATE COM 004H, Horizontal - P
⊗ (O) IRONHOUSE 19 STATE COM 004H, ST01, ST01 V
⊕ (O) B LEE STATE 006, Verticals, Surveys V0
✖ (O) B LEE STATE 004, Verticals, Surveys V0
⊕ (O) OHIO STATE 002, Verticals, Surveys V0
⊕ (O) AIRSTRIP 31 1835 RN STATE COM 201H, Horizontal - PRODUCING, Surveys V0
■ (O) B LEE STATE 005 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 501H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Reference Site:	Rope State Com Pad	MD Reference:	GE 3951.9' + KB 23' @ 3974.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Rope State Com 501H	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 #4	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3951.9' + KB 23' @ 3974.90usft

Offset Depths are relative to Offset Datum

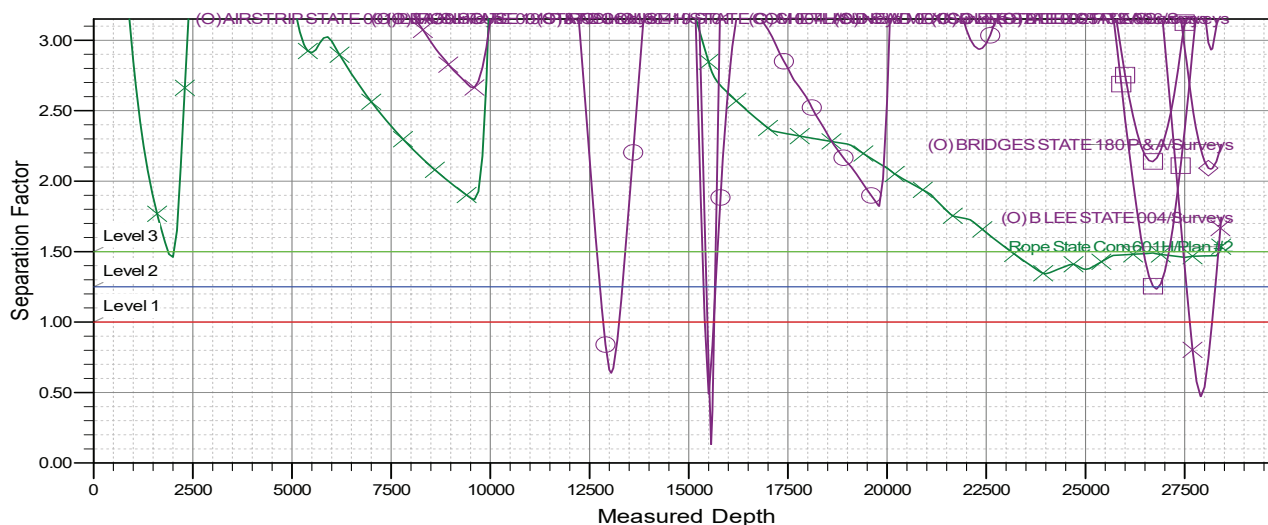
Central Meridian is -104.333333

Coordinates are relative to: Rope State Com 501H

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

Grid Convergence at Surface is: 0.45°

Separation Factor Plot



LEGEND

STATE 002 P & A, Vertical, Surveys V0
OH, Plan #2 V0
RN STATE COM 111H, Horizontal - PRODUCING, Surveys V0
180 P & A, Vertical, Surveys V0
Verticals, Surveys V0
P & A, Vertical, Surveys V0
OH, Plan #2 V0
TATE 001 P & A, Vertical, Surveys V0

✕ (O) AIRSTRIP STATE 001 P & A, Vertical, Surveys V0
▲ (O) AIRSTRIP 31 18 35 RN STATE COM 131H, Horizontal - PRODUCING, Surveys V0
◻ (O) IRONHOUSE 19 STATE COM 001H, Horizontal - PRODUCING, Surveys V0
◻ (O) IRONHOUSE 19 STATE COM 001H, Plot, Plot V0
✕ (O) OHIO STATE 005, Verticals, Surveys V0
▲ (O) AIRSTRIP 31 18 35 RN STATE COM 132H, Horizontal - PRODUCING, Surveys V0
◻ (O) SHETLAND SWD 001, Vertical, Surveys V0
▲ (O) LEAZD STATE 001 P & A, Vertical, Surveys V0

◻ (O) IRONHOUSE 19 STATE COM 004H, Horizontal - P
◻ (O) IRONHOUSE 19 STATE COM 004H, ST01, ST01 V
✕ (O) B LEE STATE 006, Verticals, Surveys V0
✕ (O) B LEE STATE 004, Verticals, Surveys V0
◻ (O) OHIO STATE 002, Verticals, Surveys V0
✕ (O) AIRSTRIP 31 18 35 RN STATE COM 201H, Horiz
◻ (O) B LEE STATE 005 P & A, Vertical, Surveys V0

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

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 565376

CONDITIONS

Operator: Coterra Energy Operating Co. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 565376
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
matthew.gomez	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.	4/7/2026
matthew.gomez	All conducted logs must be submitted to the OCD.	4/7/2026
matthew.gomez	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.	4/7/2026
matthew.gomez	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	4/8/2026
matthew.gomez	All previous COA's still apply.	4/8/2026