

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**

Form C-101  
August 1, 2011

Permit 398337

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

1. Operator Name and Address Civitas Permian Operating, LLC 555 17th Street Denver, CO 80202		2. OGRID Number 332195
		3. API Number 30-025-55333
4. Property Code 337810	5. Property Name Cosmo K Fee	6. Well No. 151H

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
G	33	24S	35E	G	2377	N	1775	E	Lea

**8. Proposed Bottom Hole Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
G	28	24S	35E	G	1325	N	1980	E	Lea

**9. Pool Information**

WC-025 G-07 S243517D;MIDDLE BONE SP	98294
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3289
16. Multiple N	17. Proposed Depth 18130	18. Formation 3rd Bone Spring Carbonate	19. Contractor	20. Spud Date 1/1/2026
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	11.75	47	901	499	0
Int1	10.625	8.625	32	5080	517	0
Prod	7.875	5.5	20	18130	1337	4580

**Casing/Cement Program: Additional Comments**

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**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5000	3500	
Blind	5000	5000	
Double Ram	5000	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well. <b>I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable.</b>  Signature:	<b>OIL CONSERVATION DIVISION</b>
Printed Name: Electronically filed by Nathan S Bennett	Approved By: Jeffrey Harrison
Title: Director, Permitting & Compliance	Title: Petroleum Specialist III
Email Address: nbennett@civiresources.com	Approved Date: 10/8/2025      Expiration Date: 10/8/2027
Date: 9/17/2025      Phone: 303-312-8166	Conditions of Approval Attached

<b>C-102</b> Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>	Revised July 9, 2024	
		Submittal Type:	<input checked="" type="checkbox"/> Initial Submittal
			<input type="checkbox"/> Amended Report
		<input type="checkbox"/> As Drilled	

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-025-55333</b>	Pool Code <b>98294</b> <del>98288</del>	Pool Name <del>WC-025 G-07 S243533G: Middle Bone Sp</del> <b>WC-025 G-07 S243517D:MIDDLE BONE SPRING</b>
Property Code <b>337810</b>	Property Name <b>COSMO K FEE</b>	Well Number <b>151H</b>
OGRID No. <b>332195</b>	Operator Name <b>CIVITAS PERMIAN OPERATING, LLC</b>	Ground Level Elevation <b>3289'</b>
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

**Surface Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
G	33	24-S	35-E	-	2377' N	1775' E	N 32.1747085	W 103.3696532	LEA

**Bottom Hole Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
G	28	24-S	35-E	-	1325' N	1980' E	N 32.1921132	W 103.3703298	LEA

Dedicated Acres <b>200</b>	Infill or Defining Well <b>Infill -</b>	Defining Well API <b>30-025-44969</b>	Overlapping Spacing Unit (Y/N) <b>-</b>	Consolidated Code <b>-</b>
Order Numbers <b>-</b>			Well Setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No	

**Kick Off Point (KOP)**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
G	33	24-S	35-E	-	2541' N	1980' E	N 32.1742574	W 103.3703139	LEA

**First Take Point (FTP)**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
G	33	24-S	35-E	-	2541' N	1980' E	N 32.1742574	W 103.3703139	LEA

**Last Take Point (LTP)**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
G	28	24-S	35-E	-	1420' N	1980' E	N 32.1918520	W 103.3703308	LEA

Unitized Area or Area of Uniform Interest <b>-</b>	Spacing Unity Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation <b>-</b>
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**OPERATOR CERTIFICATION**

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.

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.

	Date <b>9/15/2025</b>
Signature <b>Ally Ota</b>	Date
Print Name <b>aota@fieldinghillllc.com</b>	
E-mail Address	

**SURVEYORS CERTIFICATION**

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



7/29/2025 10:48:14 AM	
Signature and Seal of Professional Surveyor	Date
Certificate Number	Date of Survey <b>10/08/2022</b>

<b>C-102</b> Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>		Revised July 9, 2024	
			Submittal Type:	<input checked="" type="checkbox"/> Initial Submittal
				<input type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled
Property Name and Well Number <div style="text-align: center;">COSMO K FEE 151H</div>				

**SURFACE LOCATION (SHL)**

NEW MEXICO EAST  
 NAD 1983  
 X=839505 Y=428629  
 LAT.: N 32.1747085  
 LONG.: W 103.3696532  
 NAD 1927  
 X=798319 Y=428570  
 LAT.: N 32.1745825  
 LONG.: W 103.3691857  
 2377' FNL 1775' FEL

**KICK OFF POINT (KOP)/  
 FIRST TAKE POINT (FTP)**

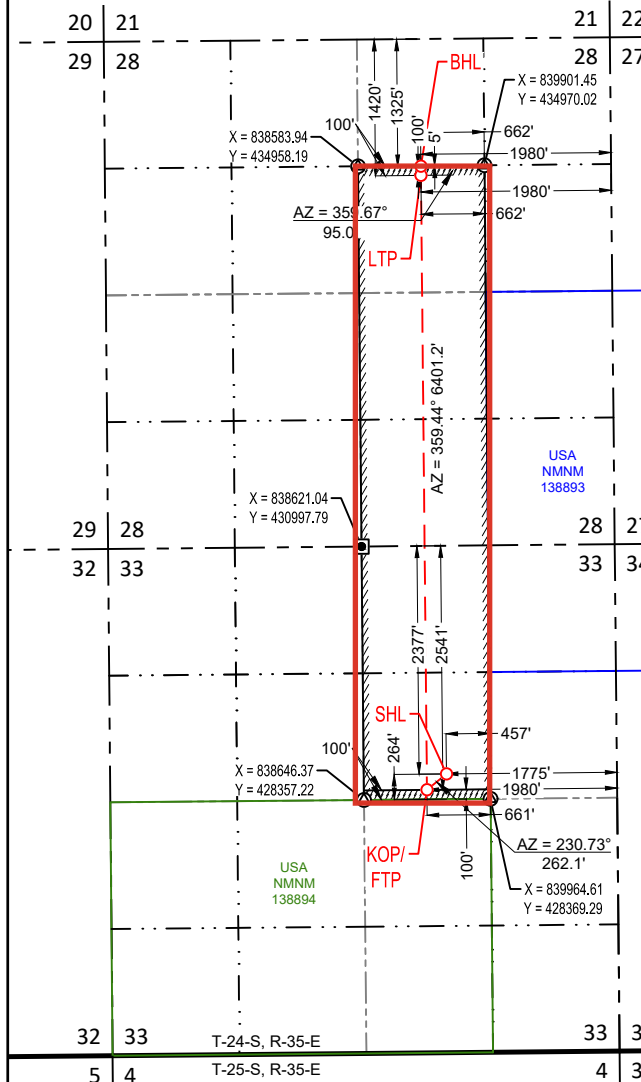
NEW MEXICO EAST  
 NAD 1983  
 X=839302 Y=428463  
 LAT.: N 32.1742574  
 LONG.: W 103.3703139  
 NAD 1927  
 X=798116 Y=428404  
 LAT.: N 32.1741314  
 LONG.: W 103.3698463  
 2541' FNL 1980' FEL

**LAST TAKE POINT (LTP)**

NEW MEXICO EAST  
 NAD 1983  
 X=839240 Y=434864  
 LAT.: N 32.1918520  
 LONG.: W 103.3703308  
 NAD 1927  
 X=798054 Y=434805  
 LAT.: N 32.1917261  
 LONG.: W 103.3698623  
 1420' FNL 1980' FEL

**BOTTOM HOLE LOCATION (BHL)**

NEW MEXICO EAST  
 NAD 1983  
 X=839239 Y=434959  
 LAT.: N 32.1921132  
 LONG.: W 103.3703298  
 NAD 1927  
 X=798053 Y=434900  
 LAT.: N 32.1919873  
 LONG.: W 103.3698613  
 1325' FNL 1980' FEL

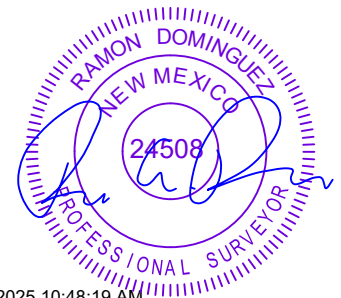
**SURVEYORS CERTIFICATION**

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

05/02/2025

Date of Survey

Signature and Seal of Professional Surveyor:



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

Form APD Comments  
Permit 398337

PERMIT COMMENTS

Operator Name and Address: Civitas Permian Operating, LLC [332195] 555 17th Street Denver, CO 80202		API Number: 30-025-55333
		Well: Cosmo K Fee #151H
Created By	Comment	Comment Date
jeffrey.harrison	Infill to 30-025-44969.	10/8/2025

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

Form APD Conditions

Permit 398337

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: Civitas Permian Operating, LLC [332195] 555 17th Street Denver, CO 80202	API Number: 30-025-55333
	Well: Cosmo K Fee #151H

OCD Reviewer	Condition
jeffrey.harrison	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.
jeffrey.harrison	All logs run on the well must be submitted to NMOCD.
jeffrey.harrison	Cement is required to circulate on both surface and intermediate1 strings of casing.
jeffrey.harrison	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
jeffrey.harrison	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.
jeffrey.harrison	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

Project: Lea County, NM (NAD 83)  
 Site: Cosmo K Fee  
 Well: Cosmo K Fee 151H  
 Wellbore: OH  
 Design: Plan #1  
 Rig:



Azimuths to Grid North  
 True North: -0.51°  
 Magnetic North: 5.55°  
 Magnetic Field  
 Strength: 47104.6nT  
 Dip Angle: 59.60°  
 Date: 8/19/2025  
 Model: HDGM2025

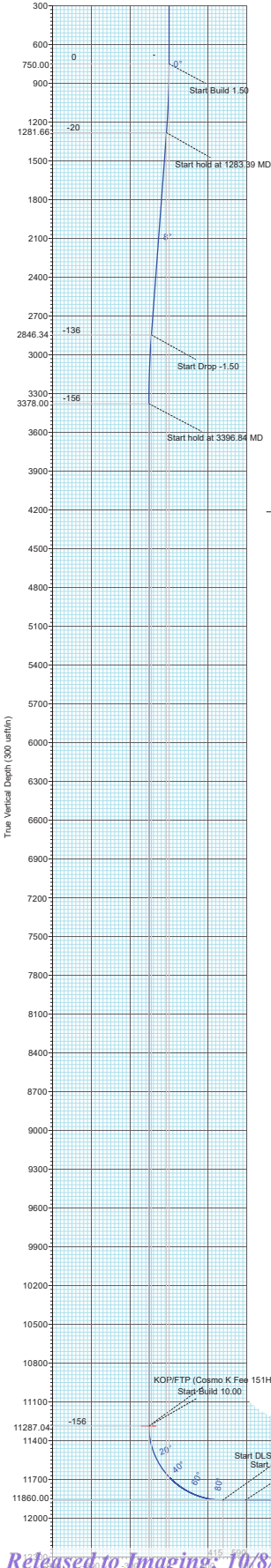


Total Magnetic Correction: 5.55°

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

Reference Datum: GE 3289° + KB 26° @ 3315.00usft



SHL  
 RKB Elevation: GE 3289° + KB 26° @ 3315.00usft

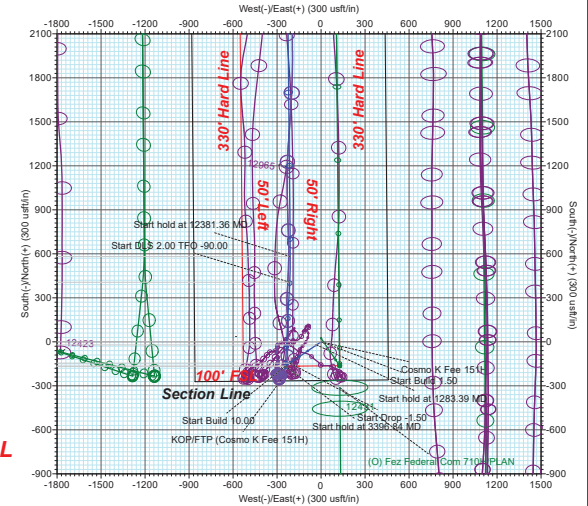
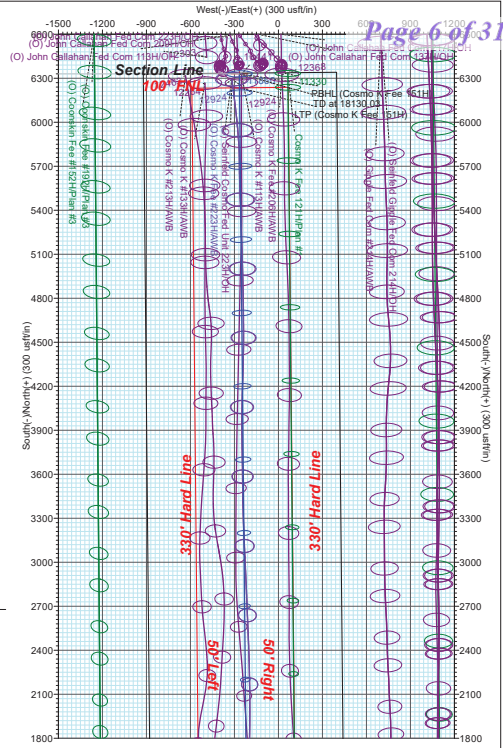
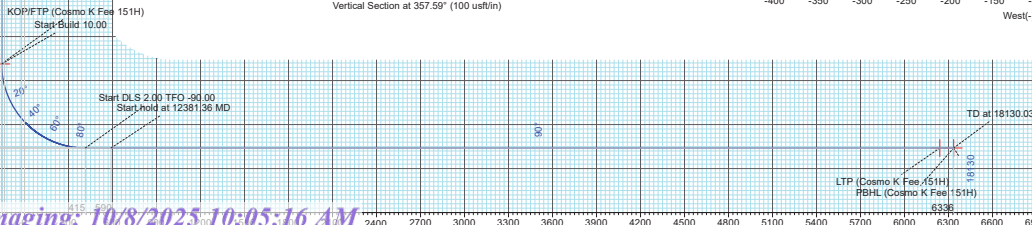
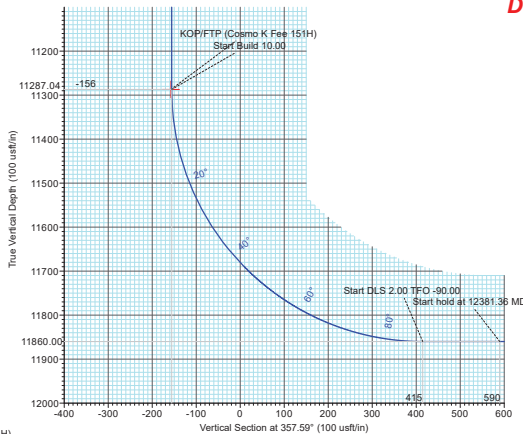
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	428629.00	839505.00	32.1747082	-103.3696537	

#### SECTION DETAILS

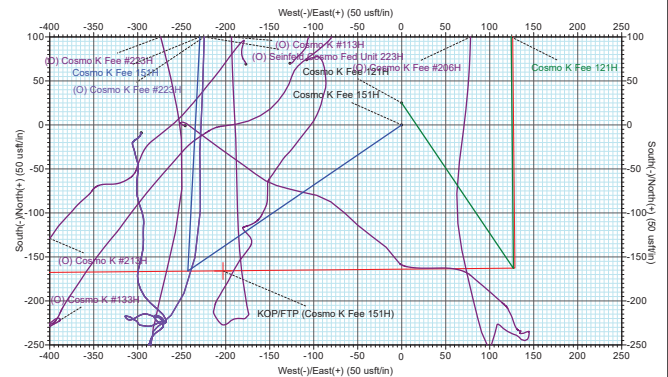
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	
1283.39	8.00	235.66	1281.66	-20.97	-30.70	1.50	235.66	-19.67	
2863.46	8.00	235.66	2846.34	-145.03	-212.30	0.00	0.00	-135.99	
3396.84	0.00	0.00	3378.00	-166.00	-243.00	1.50	180.00	-155.65	
11305.88	0.00	0.00	11287.04	-166.00	-243.00	0.00	0.00	-155.65	
12205.88	90.00	2.95	11860.00	406.20	-213.51	10.00	2.95	414.80	
12381.36	90.00	359.44	11860.00	581.61	-209.85	2.00	-90.00	589.91	
18130.03	90.00	359.44	11860.00	6330.00	-266.00	0.00	0.00	6335.59	PBHL (Cosmo K Fee 151H)

#### WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP/FTP (Cosmo K Fee 151H)	11287.04	-166.00	-203.00	428463.00	839302.00	32.1742569	-103.3703145
LTP (Cosmo K Fee 151H)	11860.00	6235.00	-265.00	434864.00	839240.00	32.1918518	-103.3703296
PBHL (Cosmo K Fee 151H)	11860.00	6330.00	-266.00	434959.00	839239.00	32.1921130	-103.3703301



Do Not Cross SL



# Civitas Resources

Lea County, NM (NAD 83)

Cosmo K Fee

Cosmo K Fee 151H

OH

Plan: Plan #1



## Standard Plan Report

19 August, 2025

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



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.Total Directional Production DB

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

<b>Site</b>	Cosmo K Fee				
<b>Site Position:</b>		<b>Northing:</b>	428,654.00 usft	<b>Latitude:</b>	32.1747769
<b>From:</b>	Map	<b>Easting:</b>	839,505.00 usft	<b>Longitude:</b>	-103.3696529
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "		

<b>Well</b>	Cosmo K Fee 151H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	428,629.00 usft	<b>Latitude:</b>	32.1747082
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	839,505.00 usft	<b>Longitude:</b>	-103.3696536
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,289.00 usft	
<b>Grid Convergence:</b>	0.51 °					

<b>Wellbore</b>	OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>	
			(°)	(°)	(nT)	
	HDGM2025	8/19/2025	6.07	59.60	47,104.60000000	

<b>Design</b>	Plan #1					
<b>Audit Notes:</b>						
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00		
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>		
	(usft)	(usft)	(usft)	(°)		
	0.00	0.00	0.00	357.59		

<b>Survey Tool Program</b>	<b>Date</b>	8/19/2025			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(usft)	(usft)				
0.00	18,129.81	Plan #1 (OH)	MWD+HRGM+SAG+FDIF OWSG MWD + HRGM + SAG + FDIR Correction		



# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.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	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,283.39	8.00	235.66	1,281.66	-20.97	-30.70	1.50	1.50	0.00	235.66	
2,863.46	8.00	235.66	2,846.34	-145.03	-212.30	0.00	0.00	0.00	0.00	
3,396.84	0.00	0.00	3,378.00	-166.00	-243.00	1.50	-1.50	0.00	180.00	
11,305.88	0.00	0.00	11,287.04	-166.00	-243.00	0.00	0.00	0.00	0.00	
12,205.88	90.00	2.95	11,860.00	406.20	-213.51	10.00	10.00	0.00	2.95	
12,381.36	90.00	359.44	11,860.00	581.61	-209.85	2.00	0.00	-2.00	-90.00	
18,130.03	90.00	359.44	11,860.00	6,330.00	-266.00	0.00	0.00	0.00	0.00	PBHL (Cosmo K Fe

## Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Geo Coordinates		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude (°)	Longitude (°)				
0.00	0.00	0.00	0.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
750.00	0.00	0.00	750.00	0.00	0.00	428,629.00	839,505.00	32.1747082	-103.3696536	0.00	0.00	0.00	0.00
800.00	0.75	235.66	800.00	-0.18	-0.27	428,628.82	839,504.73	32.1747077	-103.3696545	-0.17	1.50	1.50	0.00
900.00	2.25	235.66	899.96	-1.66	-2.43	428,627.34	839,502.57	32.1747037	-103.3696616	-1.56	1.50	1.50	0.00
1,000.00	3.75	235.66	999.82	-4.61	-6.75	428,624.39	839,498.25	32.1746957	-103.3696756	-4.33	1.50	1.50	0.00
1,100.00	5.25	235.66	1,099.51	-9.04	-13.23	428,619.96	839,491.77	32.1746837	-103.3696967	-8.48	1.50	1.50	0.00
1,200.00	6.75	235.66	1,198.96	-14.93	-21.86	428,614.07	839,483.14	32.1746677	-103.3697247	-14.00	1.50	1.50	0.00
1,283.39	8.00	235.66	1,281.66	-20.97	-30.70	428,608.03	839,474.30	32.1746513	-103.3697535	-19.67	1.50	1.50	0.00
1,300.00	8.00	235.66	1,298.11	-22.28	-32.61	428,606.72	839,472.39	32.1746478	-103.3697597	-20.89	0.00	0.00	0.00
1,400.00	8.00	235.66	1,397.13	-30.13	-44.10	428,598.87	839,460.90	32.1746265	-103.3697970	-28.25	0.00	0.00	0.00
1,500.00	8.00	235.66	1,496.16	-37.98	-55.60	428,591.02	839,449.40	32.1746052	-103.3698344	-35.61	0.00	0.00	0.00
1,600.00	8.00	235.66	1,595.19	-45.83	-67.09	428,583.17	839,437.91	32.1745839	-103.3698718	-42.97	0.00	0.00	0.00
1,700.00	8.00	235.66	1,694.21	-53.68	-78.58	428,575.32	839,426.42	32.1745626	-103.3699091	-50.34	0.00	0.00	0.00
1,800.00	8.00	235.66	1,793.24	-61.53	-90.08	428,567.47	839,414.92	32.1745413	-103.3699465	-57.70	0.00	0.00	0.00
1,900.00	8.00	235.66	1,892.27	-69.38	-101.57	428,559.62	839,403.43	32.1745200	-103.3699839	-65.06	0.00	0.00	0.00
2,000.00	8.00	235.66	1,991.29	-77.24	-113.06	428,551.76	839,391.94	32.1744987	-103.3700213	-72.42	0.00	0.00	0.00
2,100.00	8.00	235.66	2,090.32	-85.09	-124.55	428,543.91	839,380.45	32.1744774	-103.3700586	-79.78	0.00	0.00	0.00
2,200.00	8.00	235.66	2,189.35	-92.94	-136.05	428,536.06	839,368.95	32.1744561	-103.3700960	-87.14	0.00	0.00	0.00

# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.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)
2,300.00	8.00	235.66	2,288.37	-100.79	-147.54	428,528.21	839,357.46	32.1744348	-103.3701334	-94.51	0.00	0.00	0.00
2,400.00	8.00	235.66	2,387.40	-108.64	-159.03	428,520.36	839,345.97	32.1744135	-103.3701707	-101.87	0.00	0.00	0.00
2,500.00	8.00	235.66	2,486.43	-116.49	-170.53	428,512.51	839,334.47	32.1743922	-103.3702081	-109.23	0.00	0.00	0.00
2,600.00	8.00	235.66	2,585.45	-124.34	-182.02	428,504.66	839,322.98	32.1743709	-103.3702455	-116.59	0.00	0.00	0.00
2,700.00	8.00	235.66	2,684.48	-132.19	-193.51	428,496.81	839,311.49	32.1743496	-103.3702828	-123.95	0.00	0.00	0.00
2,800.00	8.00	235.66	2,783.51	-140.05	-205.01	428,488.95	839,299.99	32.1743284	-103.3703202	-131.31	0.00	0.00	0.00
2,863.46	8.00	235.66	2,846.34	-145.03	-212.30	428,483.97	839,292.70	32.1743148	-103.3703439	-135.99	0.00	0.00	0.00
2,900.00	7.45	235.66	2,882.56	-147.80	-216.36	428,481.20	839,288.64	32.1743073	-103.3703571	-138.58	1.50	-1.50	0.00
3,000.00	5.95	235.66	2,981.87	-154.38	-225.99	428,474.62	839,279.01	32.1742895	-103.3703884	-144.76	1.50	-1.50	0.00
3,100.00	4.45	235.66	3,081.45	-159.50	-233.48	428,469.50	839,271.52	32.1742756	-103.3704128	-149.55	1.50	-1.50	0.00
3,200.00	2.95	235.66	3,181.24	-163.14	-238.81	428,465.86	839,266.19	32.1742657	-103.3704301	-152.97	1.50	-1.50	0.00
3,300.00	1.45	235.66	3,281.17	-165.31	-241.99	428,463.69	839,263.01	32.1742598	-103.3704404	-155.00	1.50	-1.50	0.00
3,396.84	0.00	0.00	3,378.00	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	1.50	-1.50	0.00
3,400.00	0.00	0.00	3,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
3,500.00	0.00	0.00	3,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
3,600.00	0.00	0.00	3,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
3,700.00	0.00	0.00	3,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
3,800.00	0.00	0.00	3,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
3,900.00	0.00	0.00	3,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,000.00	0.00	0.00	3,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,100.00	0.00	0.00	4,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,200.00	0.00	0.00	4,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,300.00	0.00	0.00	4,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,400.00	0.00	0.00	4,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,500.00	0.00	0.00	4,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,600.00	0.00	0.00	4,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,700.00	0.00	0.00	4,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,800.00	0.00	0.00	4,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
4,900.00	0.00	0.00	4,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,000.00	0.00	0.00	4,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,100.00	0.00	0.00	5,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,200.00	0.00	0.00	5,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,300.00	0.00	0.00	5,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,400.00	0.00	0.00	5,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,500.00	0.00	0.00	5,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,600.00	0.00	0.00	5,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,700.00	0.00	0.00	5,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00

# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.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)
5,800.00	0.00	0.00	5,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
5,900.00	0.00	0.00	5,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,000.00	0.00	0.00	5,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,100.00	0.00	0.00	6,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,200.00	0.00	0.00	6,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,300.00	0.00	0.00	6,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,400.00	0.00	0.00	6,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,500.00	0.00	0.00	6,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,600.00	0.00	0.00	6,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,700.00	0.00	0.00	6,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,800.00	0.00	0.00	6,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
6,900.00	0.00	0.00	6,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,000.00	0.00	0.00	6,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,100.00	0.00	0.00	7,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,200.00	0.00	0.00	7,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,300.00	0.00	0.00	7,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,400.00	0.00	0.00	7,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,500.00	0.00	0.00	7,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,600.00	0.00	0.00	7,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,700.00	0.00	0.00	7,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,800.00	0.00	0.00	7,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
7,900.00	0.00	0.00	7,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,000.00	0.00	0.00	7,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,100.00	0.00	0.00	8,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,200.00	0.00	0.00	8,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,300.00	0.00	0.00	8,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,400.00	0.00	0.00	8,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,500.00	0.00	0.00	8,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,600.00	0.00	0.00	8,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,700.00	0.00	0.00	8,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,800.00	0.00	0.00	8,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
8,900.00	0.00	0.00	8,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,000.00	0.00	0.00	8,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,100.00	0.00	0.00	9,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,200.00	0.00	0.00	9,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,300.00	0.00	0.00	9,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,400.00	0.00	0.00	9,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,500.00	0.00	0.00	9,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00

# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.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)
9,600.00	0.00	0.00	9,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,700.00	0.00	0.00	9,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,800.00	0.00	0.00	9,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
9,900.00	0.00	0.00	9,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,000.00	0.00	0.00	9,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,100.00	0.00	0.00	10,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,200.00	0.00	0.00	10,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,300.00	0.00	0.00	10,281.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,400.00	0.00	0.00	10,381.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,500.00	0.00	0.00	10,481.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,600.00	0.00	0.00	10,581.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,700.00	0.00	0.00	10,681.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,800.00	0.00	0.00	10,781.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
10,900.00	0.00	0.00	10,881.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
11,000.00	0.00	0.00	10,981.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
11,100.00	0.00	0.00	11,081.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
11,200.00	0.00	0.00	11,181.16	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
11,305.88	0.00	0.00	11,287.04	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
11,305.96	0.00	2.95	11,287.12	-166.00	-243.00	428,463.00	839,262.00	32.1742579	-103.3704437	-155.65	0.00	0.00	0.00
<b>KOP/FTP (Cosmo K Fee 151H)</b>													
11,350.00	4.41	2.95	11,331.11	-164.30	-242.91	428,464.70	839,262.09	32.1742626	-103.3704434	-153.96	10.02	10.02	0.00
11,400.00	9.41	2.95	11,380.73	-158.30	-242.60	428,470.70	839,262.40	32.1742791	-103.3704422	-147.97	10.00	10.00	0.00
11,450.00	14.41	2.95	11,429.64	-147.99	-242.07	428,481.01	839,262.93	32.1743074	-103.3704402	-137.70	10.00	10.00	0.00
11,500.00	19.41	2.95	11,477.46	-133.47	-241.32	428,495.53	839,263.68	32.1743473	-103.3704374	-123.22	10.00	10.00	0.00
11,550.00	24.41	2.95	11,523.84	-114.85	-240.36	428,514.15	839,264.64	32.1743985	-103.3704337	-104.65	10.00	10.00	0.00
11,600.00	29.41	2.95	11,568.41	-92.25	-239.20	428,536.75	839,265.80	32.1744606	-103.3704293	-82.13	10.00	10.00	0.00
11,650.00	34.41	2.95	11,610.84	-65.86	-237.84	428,563.14	839,267.16	32.1745330	-103.3704242	-55.82	10.00	10.00	0.00
11,700.00	39.41	2.95	11,650.80	-35.88	-236.29	428,593.12	839,268.71	32.1746154	-103.3704183	-25.93	10.00	10.00	0.00
11,750.00	44.41	2.95	11,688.00	-2.54	-234.58	428,626.46	839,270.42	32.1747070	-103.3704118	7.31	10.00	10.00	0.00
11,800.00	49.41	2.95	11,722.15	33.91	-232.70	428,662.91	839,272.30	32.1748072	-103.3704047	43.65	10.00	10.00	0.00
11,850.00	54.41	2.95	11,752.98	73.20	-230.67	428,702.20	839,274.33	32.1749151	-103.3703970	82.82	10.00	10.00	0.00
11,900.00	59.41	2.95	11,780.27	115.03	-228.52	428,744.03	839,276.48	32.1750300	-103.3703888	124.52	10.00	10.00	0.00
11,950.00	64.41	2.95	11,803.80	159.06	-226.25	428,788.06	839,278.75	32.1751510	-103.3703802	168.42	10.00	10.00	0.00
12,000.00	69.41	2.95	11,823.40	204.98	-223.88	428,833.98	839,281.12	32.1752771	-103.3703712	214.20	10.00	10.00	0.00
12,050.00	74.41	2.95	11,838.92	252.43	-221.44	428,881.43	839,283.56	32.1754075	-103.3703619	261.51	10.00	10.00	0.00
12,100.00	79.41	2.95	11,850.24	301.06	-218.93	428,930.06	839,286.07	32.1755411	-103.3703524	309.98	10.00	10.00	0.00
12,150.00	84.41	2.95	11,857.27	350.48	-216.38	428,979.48	839,288.62	32.1756769	-103.3703428	359.25	10.00	10.00	0.00

# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.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)
12,200.00	89.41	2.95	11,859.97	400.32	-213.82	429,029.32	839,291.18	32.1758138	-103.3703330	408.95	10.00	10.00	0.00
12,205.88	90.00	2.95	11,860.00	406.20	-213.51	429,035.20	839,291.49	32.1758299	-103.3703319	414.80	10.00	10.00	0.00
12,300.00	90.00	1.07	11,860.00	500.25	-210.21	429,129.25	839,294.79	32.1760884	-103.3703185	508.64	2.00	0.00	-2.00
12,381.36	90.00	359.44	11,860.00	581.61	-209.85	429,210.61	839,295.15	32.1763120	-103.3703150	589.91	2.00	0.00	-2.00
12,400.00	90.00	359.44	11,860.00	600.25	-210.04	429,229.25	839,294.96	32.1763632	-103.3703150	608.54	0.00	0.00	0.00
12,500.00	90.00	359.44	11,860.00	700.24	-211.01	429,329.24	839,293.99	32.1766381	-103.3703153	708.49	0.00	0.00	0.00
12,600.00	90.00	359.44	11,860.00	800.24	-211.99	429,429.24	839,293.01	32.1769129	-103.3703156	808.43	0.00	0.00	0.00
12,700.00	90.00	359.44	11,860.00	900.23	-212.97	429,529.23	839,292.03	32.1771878	-103.3703158	908.38	0.00	0.00	0.00
12,800.00	90.00	359.44	11,860.00	1,000.23	-213.94	429,629.23	839,291.06	32.1774627	-103.3703161	1,008.33	0.00	0.00	0.00
12,900.00	90.00	359.44	11,860.00	1,100.22	-214.92	429,729.22	839,290.08	32.1777375	-103.3703164	1,108.28	0.00	0.00	0.00
13,000.00	90.00	359.44	11,860.00	1,200.22	-215.90	429,829.22	839,289.10	32.1780124	-103.3703166	1,208.23	0.00	0.00	0.00
13,100.00	90.00	359.44	11,860.00	1,300.21	-216.87	429,929.21	839,288.13	32.1782873	-103.3703169	1,308.17	0.00	0.00	0.00
13,200.00	90.00	359.44	11,860.00	1,400.21	-217.85	430,029.21	839,287.15	32.1785621	-103.3703171	1,408.12	0.00	0.00	0.00
13,300.00	90.00	359.44	11,860.00	1,500.21	-218.83	430,129.21	839,286.17	32.1788370	-103.3703174	1,508.07	0.00	0.00	0.00
13,400.00	90.00	359.44	11,860.00	1,600.20	-219.80	430,229.20	839,285.20	32.1791118	-103.3703177	1,608.02	0.00	0.00	0.00
13,500.00	90.00	359.44	11,860.00	1,700.20	-220.78	430,329.20	839,284.22	32.1793867	-103.3703179	1,707.97	0.00	0.00	0.00
13,600.00	90.00	359.44	11,860.00	1,800.19	-221.76	430,429.19	839,283.24	32.1796616	-103.3703182	1,807.91	0.00	0.00	0.00
13,700.00	90.00	359.44	11,860.00	1,900.19	-222.73	430,529.19	839,282.27	32.1799364	-103.3703185	1,907.86	0.00	0.00	0.00
13,800.00	90.00	359.44	11,860.00	2,000.18	-223.71	430,629.18	839,281.29	32.1802113	-103.3703187	2,007.81	0.00	0.00	0.00
13,900.00	90.00	359.44	11,860.00	2,100.18	-224.69	430,729.18	839,280.31	32.1804862	-103.3703190	2,107.76	0.00	0.00	0.00
14,000.00	90.00	359.44	11,860.00	2,200.17	-225.66	430,829.17	839,279.34	32.1807610	-103.3703193	2,207.71	0.00	0.00	0.00
14,100.00	90.00	359.44	11,860.00	2,300.17	-226.64	430,929.17	839,278.36	32.1810359	-103.3703195	2,307.65	0.00	0.00	0.00
14,200.00	90.00	359.44	11,860.00	2,400.16	-227.62	431,029.16	839,277.38	32.1813108	-103.3703198	2,407.60	0.00	0.00	0.00
14,300.00	90.00	359.44	11,860.00	2,500.16	-228.59	431,129.16	839,276.41	32.1815856	-103.3703200	2,507.55	0.00	0.00	0.00
14,400.00	90.00	359.44	11,860.00	2,600.15	-229.57	431,229.15	839,275.43	32.1818605	-103.3703203	2,607.50	0.00	0.00	0.00
14,500.00	90.00	359.44	11,860.00	2,700.15	-230.55	431,329.15	839,274.45	32.1821354	-103.3703206	2,707.45	0.00	0.00	0.00
14,600.00	90.00	359.44	11,860.00	2,800.14	-231.52	431,429.14	839,273.48	32.1824102	-103.3703208	2,807.39	0.00	0.00	0.00
14,700.00	90.00	359.44	11,860.00	2,900.14	-232.50	431,529.14	839,272.50	32.1826851	-103.3703211	2,907.34	0.00	0.00	0.00
14,800.00	90.00	359.44	11,860.00	3,000.13	-233.48	431,629.13	839,271.52	32.1829600	-103.3703214	3,007.29	0.00	0.00	0.00
14,900.00	90.00	359.44	11,860.00	3,100.13	-234.45	431,729.13	839,270.55	32.1832348	-103.3703216	3,107.24	0.00	0.00	0.00
15,000.00	90.00	359.44	11,860.00	3,200.12	-235.43	431,829.12	839,269.57	32.1835097	-103.3703219	3,207.19	0.00	0.00	0.00
15,100.00	90.00	359.44	11,860.00	3,300.12	-236.41	431,929.12	839,268.59	32.1837845	-103.3703221	3,307.13	0.00	0.00	0.00
15,200.00	90.00	359.44	11,860.00	3,400.11	-237.38	432,029.11	839,267.62	32.1840594	-103.3703224	3,407.08	0.00	0.00	0.00
15,300.00	90.00	359.44	11,860.00	3,500.11	-238.36	432,129.11	839,266.64	32.1843343	-103.3703227	3,507.03	0.00	0.00	0.00
15,400.00	90.00	359.44	11,860.00	3,600.11	-239.34	432,229.11	839,265.66	32.1846091	-103.3703229	3,606.98	0.00	0.00	0.00
15,500.00	90.00	359.44	11,860.00	3,700.10	-240.31	432,329.10	839,264.69	32.1848840	-103.3703232	3,706.93	0.00	0.00	0.00
15,600.00	90.00	359.44	11,860.00	3,800.10	-241.29	432,429.10	839,263.71	32.1851589	-103.3703235	3,806.88	0.00	0.00	0.00
15,700.00	90.00	359.44	11,860.00	3,900.09	-242.27	432,529.09	839,262.73	32.1854337	-103.3703237	3,906.82	0.00	0.00	0.00



# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.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)
15,800.00	90.00	359.44	11,860.00	4,000.09	-243.24	432,629.09	839,261.76	32.1857086	-103.3703240	4,006.77	0.00	0.00	0.00
15,900.00	90.00	359.44	11,860.00	4,100.08	-244.22	432,729.08	839,260.78	32.1859835	-103.3703243	4,106.72	0.00	0.00	0.00
16,000.00	90.00	359.44	11,860.00	4,200.08	-245.20	432,829.08	839,259.80	32.1862583	-103.3703245	4,206.67	0.00	0.00	0.00
16,100.00	90.00	359.44	11,860.00	4,300.07	-246.17	432,929.07	839,258.83	32.1865332	-103.3703248	4,306.62	0.00	0.00	0.00
16,200.00	90.00	359.44	11,860.00	4,400.07	-247.15	433,029.07	839,257.85	32.1868081	-103.3703250	4,406.56	0.00	0.00	0.00
16,300.00	90.00	359.44	11,860.00	4,500.06	-248.13	433,129.06	839,256.87	32.1870829	-103.3703253	4,506.51	0.00	0.00	0.00
16,400.00	90.00	359.44	11,860.00	4,600.06	-249.10	433,229.06	839,255.90	32.1873578	-103.3703256	4,606.46	0.00	0.00	0.00
16,500.00	90.00	359.44	11,860.00	4,700.05	-250.08	433,329.05	839,254.92	32.1876326	-103.3703258	4,706.41	0.00	0.00	0.00
16,600.00	90.00	359.44	11,860.00	4,800.05	-251.06	433,429.05	839,253.94	32.1879075	-103.3703261	4,806.36	0.00	0.00	0.00
16,700.00	90.00	359.44	11,860.00	4,900.04	-252.03	433,529.04	839,252.97	32.1881824	-103.3703264	4,906.30	0.00	0.00	0.00
16,800.00	90.00	359.44	11,860.00	5,000.04	-253.01	433,629.04	839,251.99	32.1884572	-103.3703266	5,006.25	0.00	0.00	0.00
16,900.00	90.00	359.44	11,860.00	5,100.03	-253.99	433,729.03	839,251.01	32.1887321	-103.3703269	5,106.20	0.00	0.00	0.00
17,000.00	90.00	359.44	11,860.00	5,200.03	-254.96	433,829.03	839,250.04	32.1890070	-103.3703271	5,206.15	0.00	0.00	0.00
17,100.00	90.00	359.44	11,860.00	5,300.02	-255.94	433,929.02	839,249.06	32.1892818	-103.3703274	5,306.10	0.00	0.00	0.00
17,200.00	90.00	359.44	11,860.00	5,400.02	-256.92	434,029.02	839,248.08	32.1895567	-103.3703277	5,406.04	0.00	0.00	0.00
17,300.00	90.00	359.44	11,860.00	5,500.01	-257.89	434,129.01	839,247.11	32.1898316	-103.3703279	5,505.99	0.00	0.00	0.00
17,400.00	90.00	359.44	11,860.00	5,600.01	-258.87	434,229.01	839,246.13	32.1901064	-103.3703282	5,605.94	0.00	0.00	0.00
17,500.00	90.00	359.44	11,860.00	5,700.00	-259.85	434,329.00	839,245.15	32.1903813	-103.3703285	5,705.89	0.00	0.00	0.00
17,600.00	90.00	359.44	11,860.00	5,800.00	-260.82	434,429.00	839,244.18	32.1906562	-103.3703287	5,805.84	0.00	0.00	0.00
17,700.00	90.00	359.44	11,860.00	5,900.00	-261.80	434,529.00	839,243.20	32.1909310	-103.3703290	5,905.78	0.00	0.00	0.00
17,800.00	90.00	359.44	11,860.00	5,999.99	-262.78	434,628.99	839,242.22	32.1912059	-103.3703292	6,005.73	0.00	0.00	0.00
17,900.00	90.00	359.44	11,860.00	6,099.99	-263.75	434,728.99	839,241.25	32.1914807	-103.3703295	6,105.68	0.00	0.00	0.00
18,000.00	90.00	359.44	11,860.00	6,199.98	-264.73	434,828.98	839,240.27	32.1917556	-103.3703298	6,205.63	0.00	0.00	0.00
18,035.02	90.00	359.44	11,860.00	6,235.00	-265.07	434,864.00	839,239.93	32.1918519	-103.3703299	6,240.63	0.00	0.00	0.00
<b>LTP (Cosmo K Fee 151H)</b>													
18,100.00	90.00	359.44	11,860.00	6,299.98	-265.71	434,928.98	839,239.29	32.1920305	-103.3703300	6,305.58	0.00	0.00	0.00
18,130.03	90.00	359.44	11,860.00	6,330.00	-266.00	434,959.00	839,239.00	32.1921130	-103.3703301	6,335.59	0.00	0.00	0.00
<b>PBHL (Cosmo K Fee 151H)</b>													

# Total Directional Planned Survey Report



<b>Company:</b>	Civitas Resources	<b>Local Co-ordinate Reference:</b>	Well Cosmo K Fee 151H
<b>Project:</b>	Lea County, NM (NAD 83)	<b>TVD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Site:</b>	Cosmo K Fee	<b>MD Reference:</b>	GE 3289' + KB 26' @ 3315.00usft
<b>Well:</b>	Cosmo K Fee 151H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #1	<b>Database:</b>	.Total Directional Production DB

## Design Targets

### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP/FTP (Cosmo K F - plan misses target center by 40.00usft at 11305.88usft MD (11287.04 TVD, -166.00 N, -243.00 E) - Point	0.00	0.00	11,287.04	-166.00	-203.00	428,463.00	839,302.00	32.1742570	-103.3703145
LTP (Cosmo K Fee 15 - plan misses target center by 0.07usft at 18035.02usft MD (11860.00 TVD, 6235.00 N, -265.07 E) - Point	0.00	0.00	11,860.00	6,235.00	-265.00	434,864.00	839,240.00	32.1918519	-103.3703296
PBHL (Cosmo K Fee - plan hits target center - Point	0.00	0.00	11,860.00	6,330.00	-266.00	434,959.00	839,239.00	32.1921130	-103.3703301

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

Civitas Permian Operating LLC

DRILLING AND OPERATIONS PLAN

WELL NAME & NUMBER:

Cosmo Fee 151H

LOCATION:

SECTION33

TOWNSHIP24-S

RANGE35-E

LEA COUNTY, NEW MEXICO

Section 1:

GEOLOGICAL FORMATIONS

Name of Surface Formation:

Permian

Elevation:

3289 feet

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	517	517	2772	Anhydrite/Dolomite	Brine	No
Salado	926	926	2363	Halite	Brine	No
DMG/Bell Canyon	5211	5211	-1922	Sand	Hydrocarbon	No
Cherry Canyon	6134	6134	-2845	Sand	Hydrocarbon	No
Brushy Canyon	7650	7650	-4361	Sand	Hydrocarbon	No
Brushy Canyon Lwr	8796	8796	-5507	Sand	Hydrocarbon	No
Avalon Upr	8996	8996	-5707	Limestone/Shale	Hydrocarbon	Yes
Avalon Mid	9264	9264	-5975	Limestone	Hydrocarbon	Yes
Avalon Lwr	9685	9685	-6396	Limestone/Shale	Hydrocarbon	Yes
1st Bone Spring Sand	10163	10163	-6874	Sandstone	Hydrocarbon	Yes
2nd Bone Spring Carbonate	10338	10338	-7049	Shale/Limestone	Hydrocarbon	Yes
2nd Bone Spring Sand	10955	10955	-7666	Sandstone/Shale	Hydrocarbon	Yes
3rd Bone Spring Carbonate	11258	11258	-7969	Limestone/Shale	Hydrocarbon	Yes
3rd Bone Spring Shale	11433	11433	-8144	Limestone/Shale	Hydrocarbon	Yes
3rd Bone Spring Sand	11994	11994	-8705	Sandstone	Hydrocarbon	Yes

Section 2:

BLOWOUT PREVENTER TESTING PROCEDURE

BOP installed and tested before drilling which hole	Stack Size	MAASP (psi)	Min. Required WP	Type	Test Pressure
Int 1	13-5/8"	402	5M	Annular	70% of rated working pressure
				Blind Ram	5M
				Double Pipe Ram	5M
Production	13-5/8"	2266	5M	Annular	70% of rated working pressure
				Blind Ram	5M
				Double Pipe Ram	5M

- Variance Request:
- 1

Coflex Choke Line

Variance requested to utilize a flexible choke line from the BOP to Choke Manifold (Manufacturers specification is available).
- 2

Break Testing

Variance requested for Break testing of 5M BOPE, intermediate hole sections only.
- 3

Multibowl

Variance requested to utilize a Cactus multibowl wellhead.
- 4

Offline Cementing

Variance requested for offline cementing operations on all surface and intermediate casing strings set above the WCA formation. (see attached plan)

Testing Procedure:

The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production hole sections will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise (see variance request ). Flex choke hose will be used for all wells on the pad (see variance request).



Section 3:

CASING PROGRAM

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	14.75	11.75	0	901	-	901	3,289	2,388	47	J55	BTC	1.13	1.15	BUOY	1.80	BUOY	1.80
Intermediate	10.625	8.625	0	5,080	-	5,061	3,289	(1,772)	32	HCL80	BTC	1.13	1.15	BUOY	1.80	BUOY	1.80
Production	7.875	5.5	0	18,130	-	11,860	3,289	(8,571)	20	P110RY	GBCD	1.13	1.15	BUOY	1.80	BUOY	1.80
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h												Safety Factors will Meet or Exceed					

Casing Condition:New

Casing Standard:API

Tapered String?No

Yes or No	
Is casing new? If used, attach certification as required in 43 CFR 3172.	Yes
Does casing meet API specifications? If no, attach casing specification sheet.	Yes
Is premium or uncommon casing planned? If yes attach casing specification sheet.	No
Does the above casing design meet or exceed BLM’s minimum standards? If not provide justification (loading assumptions, casing design criteria).	Yes
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Yes
Is well located within Capitan Reef?	No
If yes, does production casing cement tie back a minimum of 50’ above the Reef?	
Is proposed well within the designated four string boundary?	
Is well located in R-111-Q and SOPA?	No
Is the second string set 100’ to 600’ below the base of salt?	
Is well located in SOPA but not in R-111-Q?	No
If yes, are the first 2 strings cemented to surface and third string cement tied back 500’ into previous casing?	
Is well located in high Cave/Karst?	No
If yes, are there two strings cemented to surface?	
If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	No
If yes, are there three strings cemented to surface?	

Section 4:

CEMENT PROGRAM

String Type	Lead/Tail	Top MD	Bottom MD	Quantity (sks)	Yield (ft³/sks)	Density (ppg)	Slurry Volume (ft³)	Excess (%)	Cement Type	Additives
Surface	Lead	0	601	303	1.72	13.5	521	100	Class C	Additives + LCM
Surface	Tail	601	901	196	1.33	14.8	260	100	Class C	Additives + LCM
Intermediate	Lead	0	4080	291	3.66	10.5	1064	25	Class C	Additives + LCM
Intermediate	Tail	4080	5080	226	1.16	13.2	262	25	Class C	Additives + LCM
Production	Lead	4580	11306	352	3.93	10.5	1383	20	Class C	Additives + LCM
Production	Tail	11306	18130	985	1.44	13.2	1419	20	Class H	Fluid Loss + Dispersant + Retarder + LCM

Stage tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below the salt. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Pilot Hole?No

Pilot Hole Depth:N/A

KOP Depth:N/A

Plugging Procedure for Pilot Hole:N/A

Plug Top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft3/sks)	Water gal/sk	Slurry Description and Cement Type

Civitas Permian Operating LLC

Drilling & Operations Plan - Page 3 of 3

Section 5:CIRCULATING MEDIUM

Mud System Type: Closed

Will an air or gas system be used? No

Describe what will be on location to control well or mitigate other conditions:

The necessary mud products for additional weight and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized:

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

Circulating Medium Table:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max Weight (ppg)
0	901	Water Based Mud	8.4	8.8
901	5080	Brine or Oil Based Mud	9.2	10.2
5080	18130	Brine or Oil Based Mud	9.0	9.5

Section 6:TESTING, LOGGING, CORING

List of production tests including testing procedures, equipment and safety measures:

GR from TD to surface (horizontal well - vertical portion of hole)

List of open and cased hole logs run in the well:

GR while drilling from Intermediate casing shoe to TD.

Coring operation description for the well:

Run gamma-ray (GR) and corrected neutron log (CNL) or analogous to surface for future development of the area, one per shared well pad not to exceed 200’ radial distance.

Section 7:ANTICIPATED PRESSURE

Anticipated Bottom Hole Pressure: 5859 PSI

Anticipated Bottom Hole Temperature: 190 °F

Anticipated Abnormal Pressure? No

Anticipated Abnormal Temperature? No

Potential Hazards:

H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with 43 CFR 3176. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. See attached H2S Contingency Plan. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM.

Section 8:OTHER INFORMATION

## Hydrogen Sulfide Drilling

### Operations Plan

#### Civitas Resources

#### 1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

#### 2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

#### 3 Windssocks and / Wind Streamers:

- Windssocks at mud pit area should be high enough to be visible
- Windssock on the rig floor and / top of doghouse should be high enough to be visible

#### 4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
  - Green Flag – Normal Safe Operation Condition
  - Yellow Flag – Potential Pressure and Danger
  - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

#### 5 Well Control Equipment:

- See Drilling Operations Plan Schematics

#### 6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

**7 Drilling Stem Testing:**

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary

**11 Emergency Contacts**

<b>Emergency Contacts</b>		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121	911
Jal Fire Department	575.395.2221	911
Tap Rock - Doug Sproul - Drilling	303-653-3518	

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

Submit Electronically  
Via E-permitting

## NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

### Section 1 – Plan Description

Effective May 25, 2021

**I. Operator:** Civitas Permian Operating, LLC **OGRID:** 332195 **Date:** 09 / 15 / 2025

**II. Type:** ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: \_\_\_\_\_

**III. Well(s):** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Cosmo K Fee 151H	TBD	G-33-24S-35E	2377 FNL, 1775 FEL	675	1600	2200
Cosmo K Fee 121H	TBD	G-33-24S-35E	2352' FNL, 1775' FEL	675	1600	2200

**IV. Central Delivery Point Name:** Cosmo CTB [See 19.15.27.9(D)(1) NMAC]

**V. Anticipated Schedule:** Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Cosmo K Fee 151H	TBD	01/01/2026	01/17/2026	02/15/2026	02/21/2026	03/15/2026
Cosmo K Fee 121H	TBD	01/02/2026	01/26/2026	02/15/2026	02/21/2026	03/15/2026

**VI. Separation Equipment:** ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

**VII. Operational Practices:** ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

**VIII. Best Management Practices:** ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

## **Section 2 – Enhanced Plan**

### **EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

#### **IX. Anticipated Natural Gas Production:**

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

#### **X. Natural Gas Gathering System (NGGS):**

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

### **Section 3 - Certifications**

**Effective May 25, 2021**

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

***If Operator checks this box, Operator will select one of the following:***

**Well Shut-In.** ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.** ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

### **Section 4 - Notices**


1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Ally Ota
Title: Permitting Project Manager
E-mail Address: aota@fieldinghillllc.com
Date: 9/15/2025
Phone: 435-671-7477
<b>OIL CONSERVATION DIVISION</b> <b>(Only applicable when submitted as a standalone form)</b>
Approved By:
Title:
Approval Date:
Conditions of Approval:





### **Civitas Permian Operating Natural Gas Management Plan**

#### **VI. Separation Equipment:**

Each surface facility design includes the following process equipment: Multiphase test measurement per upstream pad, 3-phase separators, a sales gas scrubber, heater treaters, a VRU compressor, multiple water and oil tanks, as well as flare knockouts (HP & LP), and flares (HP & LP - combined). All process vessels will be sized to separate oil, water, gas based upon typical/historical & predicted well performance. Each process vessel will be fitted with an appropriately sized PSV as per ASME code requirements to mitigate vessel rupture and loss of containment. Additionally, the process vessels will be fitted with pressure transmitters tied to the facility control system which will allow operations to monitor pressures and when necessary, shut in the facility to avoid vessel over-pressure and the potential vent of natural gas. Natural gas will preferentially be sold to pipeline, and only during upset/emergency conditions will gas be directed to the flare system. Aboveground steel oil tanks & water tanks will be fitted with 32 oz thief hatches as well as PRVs to protect the tanks from rupture/collapse. Additionally, the tank vapor outlets will preferentially be directed to the VRU and the sales gas pipeline. Only during process upsets/emergency conditions will tank vapors be directed to the LP flare system.

#### **VII. Operational Practices:**

- During drilling operations, gas meters will be installed at the shakers and Volume Totalizers will be installed on the pits. In the event that elevated gas levels, or a pit gain are observed, returns will be diverted to a gas buster. Gas coming off the gas buster will be combusted at the flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During completions operations, including stimulation and frac plug drill out operations, hydrocarbon production to surface is minimized. When gas production does occur, gas will be combusted at a flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During production operations, all process vessels (separators, heater treaters, tanks) will recompress (where necessary) and route gas outlets into the natural gas gathering pipeline. Gas will preferentially be routed to natural gas gathering pipeline and the flare system will be used only during emergencies, malfunction, or if the gas does not meet pipeline specifications. In the event of flaring off-specification gas, operations will pull gas samples twice a week and will also route gas back to pipeline as soon as the gas meets specification. Exceptions to this will include only those qualified emergencies as mentioned in the BLM Waste Prevention Rule.



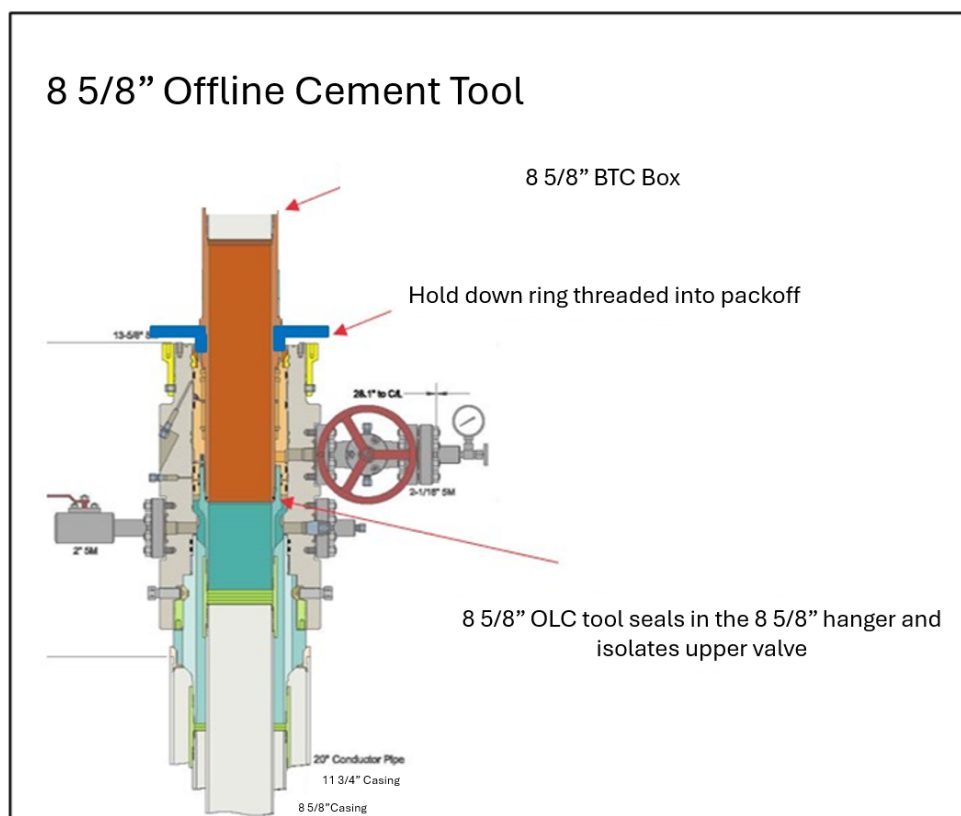
- To comply with state performance standards, separation and storage equipment will be designed to handle the maximum anticipated throughput and pressure to minimize waste and reduce the likelihood of venting gas to atmosphere. Additionally, each storage tank (Oil & Water) will be fitted with a level transmitter to facilitate gauging of the tank without opening of the thief hatch. Any gas collected through the tank vent system is expected to be recompressed and routed to sales. However, in the event of an emergency, the tank vapor system will be designed to combust the gas using a flare stack fitted with a continuous or automatic ignitor. The flare stack will be properly anchored and will be located a minimum of 100 feet from the well and storage tanks. Operators will conduct weekly AVO inspections. These AVO inspection records will be stored for the required 5-year period and will be made available upon Division request.

#### **VIII. Best Management Practices:**

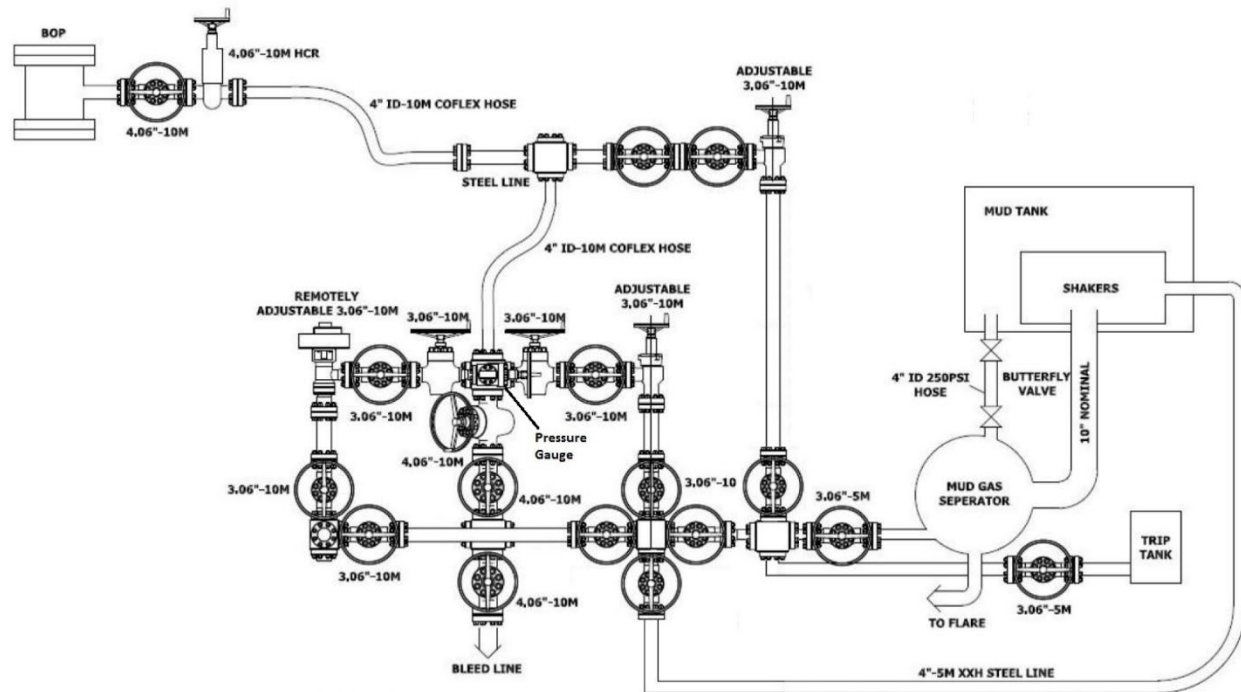
When performing routine or preventive maintenance on a vessel or tank, initially all inlet valves are closed, and the vessel or tank is allowed to depressurize through the normal outlet connections to gas sales and/or liquid tanks. Once the vessel or tank is depressurized to lowest acceptable sales outlet pressure, usually around 20 psig, a temporary low-pressure flowline is connected from the vessel or tank to the Vapor Recovery Unit (VRU) for further pressure reduction. Once depressurized to less than 1-2 psig, the remaining natural gas in the vessel or tank is vented to atmosphere through a controlled pressure relief valve. Once the vessel or tank is depressurized to atmospheric pressure, the vessel or tank can be safely opened, and maintenance performed.

**Offline Cementing:** Civitas requests a variance for the option to offline cement surface and intermediate casing strings set higher than Wolfcamp formations. To execute offline cement jobs safely, the following precautions and equipment are detailed below:

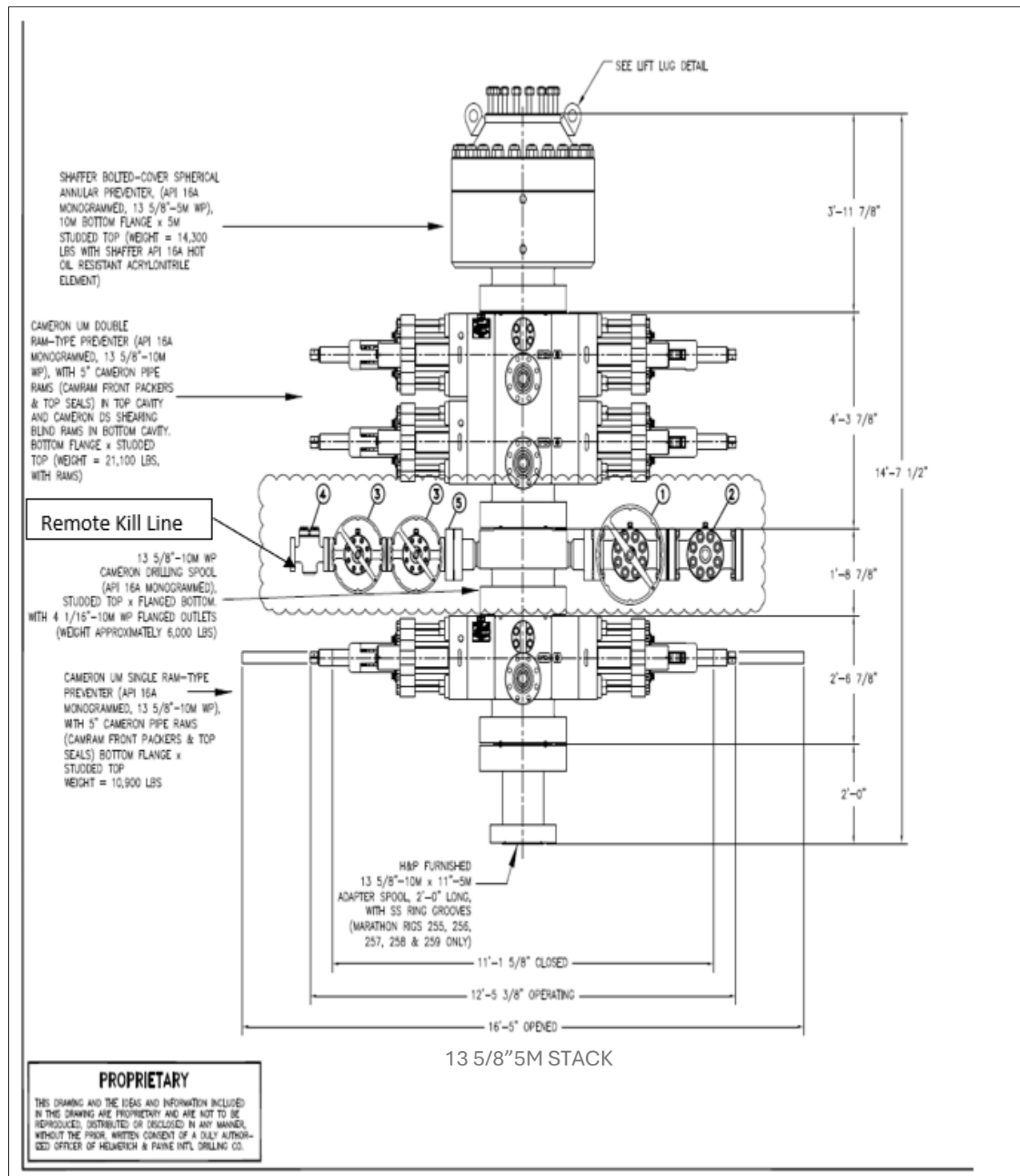
- For surface casing, no change to cement procedures to offline cement surface casing is anticipated.
- For intermediate casing, during the drilling of the 10 5/8" hole section (all intermediate strings will be TD'd above the WCA top), hole conditions will be monitored and addressed to ensure for a successful casing run. In the event hole conditions change after running casing and/or the well is not in a static state, Civitas Resources can elect to pump the cement job online.
- Equipment for the offline cement job will include a tested/charted 5M working pressure dual manifold cement head system will be used with a standard offline cement tool that is packed off and tested through a port between the upper valve and packoff assembly (diagram below). Returns from the manifold will be taken to an auxiliary mud-gas separator during cement job. The operational scope is described in the following steps: the casing will be landed on the mandrel, pull tested, packoff installed and tested to 80% of collapse of casing on the top and bottom seals, nipple down BOP and install offline cement tool/screw. The offline cement tool screws into the top of the packoff assembly. During the cement job, all returns will be taken through the A-Section valve (flanged). An example diagram of the 8-5/8" tool is shown below:

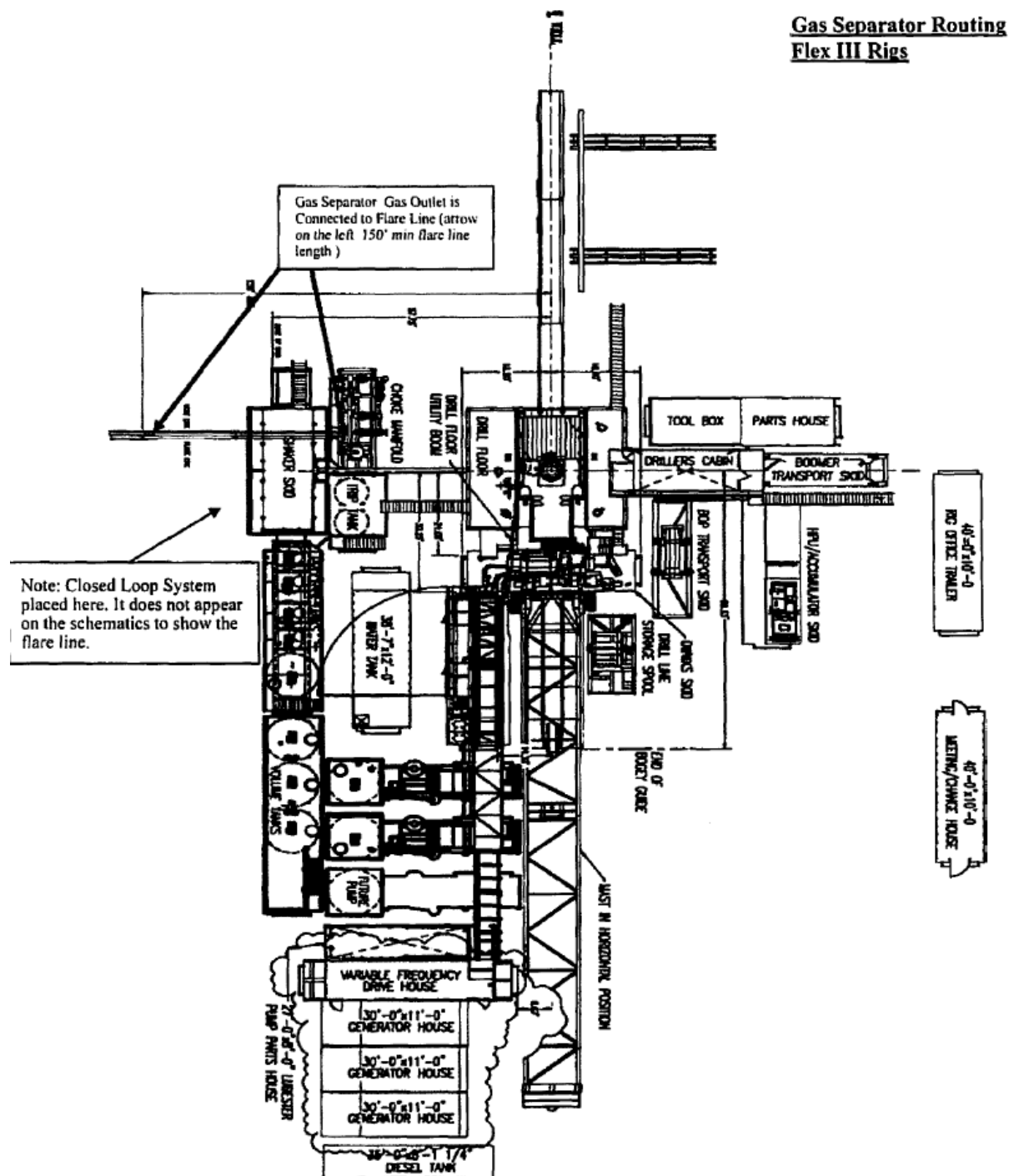


## 10M Choke Layout



## 5,000 psi BOP Stack





## Multi-bowl Wellhead Design – 5M

