

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 278733

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

1. Operator Name and Address COLGATE OPERATING, LLC 306 W Wall Street Midland, TX 79701		2. OGRID Number 371449
		3. API Number 30-015-46769
4. Property Code 327176	5. Property Name Weaver 27 State Com	6. Well No. 132H

7. Surface Location

UL - Lot H	Section 27	Township 19S	Range 28E	Lot Idn	Feet From 2020	N/S Line N	Feet From 270	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot E	Section 28	Township 19S	Range 28E	Lot Idn E	Feet From 2210	N/S Line N	Feet From 10	E/W Line W	County Eddy
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9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3343
16. Multiple N	17. Proposed Depth 18788	18. Formation Bone Spring	19. Contractor	20. Spud Date 3/6/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	200	131	0
Int1	12.25	9.625	36	3050	854	0
Prod	8.75	5.5	20	18788	4058	2050

Casing/Cement Program: Additional Comments

Fluid Types: Surface - Fresh water spud mud; Int1 - Brine Water; Prod - Cut-brine poly-oil mud Casing Grade for Production is HCP-110

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	10000	5000	Shaffer
Double Ram	10000	5000	Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Mikah Thomas	Approved By: Raymond Podany	
Title: Operations Tech	Title: Geologist	
Email Address: mthomas@colgateenergy.com	Approved Date: 2/25/2020	Expiration Date: 2/25/2022
Date: 2/21/2020	Phone: 432-695-4272	Conditions of Approval Attached

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State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-	² Pool Code 97569	³ Pool Name WINCHESTER; BONE SPRING, WEST
⁴ Property Code	⁵ Property Name WEAVER 27 STATE COM	
⁷ OGRID No. 371449	⁸ Operator Name COLGATE OPERATING, LLC	⁶ Well Number 132H
		⁹ Elevation 3343.9

¹⁰ Surface Location

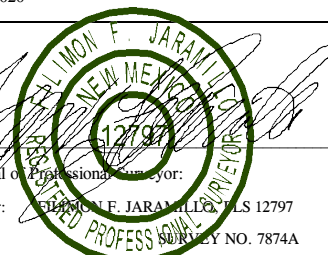
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	19 S	28 E		2020	NORTH	270	EAST	EDDY

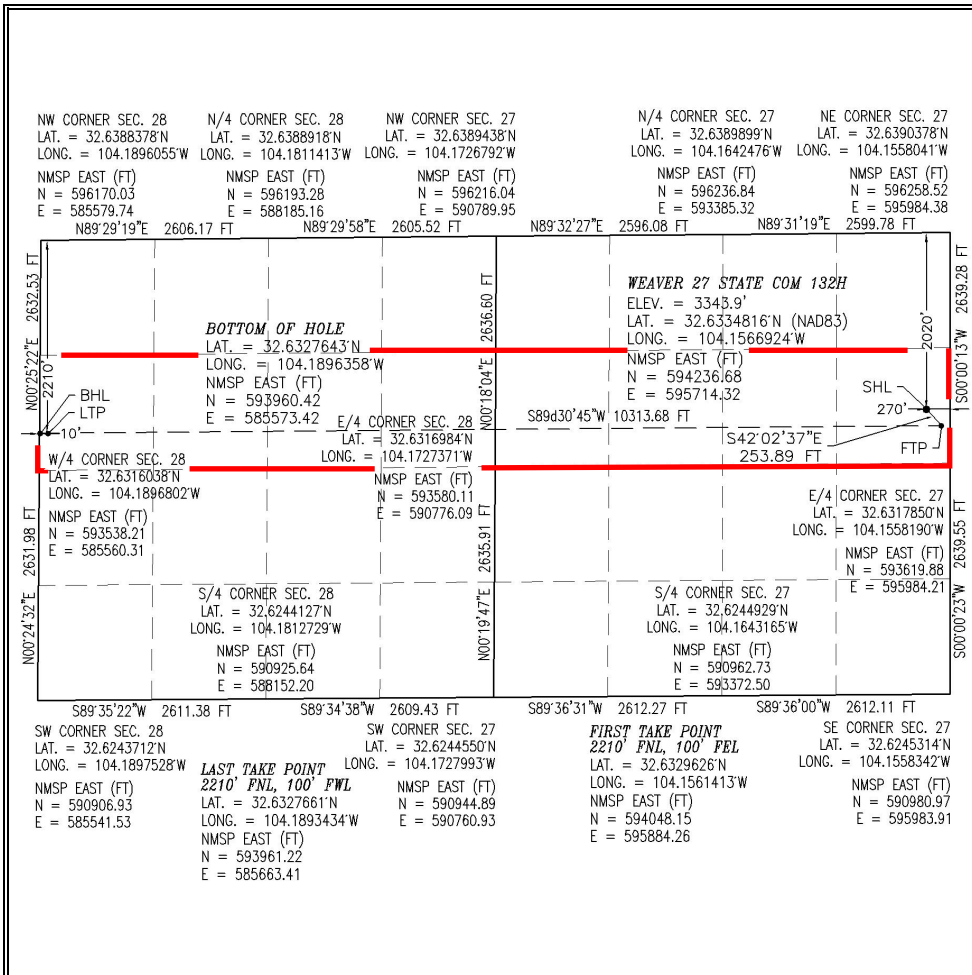
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	28	19 S	28 E		2210	NORTH	10	WEST	EDDY

¹² Dedicated Acres 320.00	¹³ Joint or Infill	¹⁴ Consolidation Code C	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.			
Signature BRIAN WOOD		Date 2-21-20	
Printed Name brian@permitswest.com		E-mail Address 505 466-8120	
¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.			
JANUARY 28, 2020			
Date of Survey			
Signature and Seal of Professional Surveyor:		Certificate Number: 12797	
		SURVEY NO. 7874A	



Intent **YES** As Drilled ☐

API #

Operator Name:	Property Name:	Well Number
COLGATE ENERGY LLC	WEAVER 27 STATE COM	132H

Kick Off Point (KOP)

UL H	Section 27	Township 19S	Range 28E	Lot	Feet 2020	From N/S NORTH	Feet 270	From E/W EAST	County EDDY
Latitude 32.6334816					Longitude 104.1566924			NAD 83	

First Take Point (FTP)

UL H	Section 27	Township 19S	Range 28E	Lot	Feet 2210	From N/S NORTH	Feet 100	From E/W EAST	County EDDY
Latitude 32.6329626					Longitude 104.1561413			NAD 83	

Last Take Point (LTP)

UL E	Section 28	Township 19S	Range 28E	Lot	Feet 2210	From N/S NORTH	Feet 100	From E/W WEST	County EDDY
Latitude 32.6327661					Longitude 104.1893434			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? **YES**Is this well an infill well? **NO**

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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GAS CAPTURE PLAN

Date: 2/25/2020

☒ Original

Operator & OGRID No.: [371449] COLGATE OPERATING, LLC

☐ Amended - Reason for
Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Weaver 27 State Com #132H	30-015-46769	H-27-19S-28E	2020N 0270E	3000	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP High Pressure gathering system located in Eddy County, New Mexico. It will require 4600' of pipeline to connect the facility to High Pressure gathering system. COLGATE OPERATING, LLC provides (periodically) to DCP OPERATING COMPANY, LP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COLGATE OPERATING, LLC and DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP Processing Plant located in Sec. 27, Twn. 19S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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Form APD Comments

Permit 278733

PERMIT COMMENTS

Operator Name and Address: COLGATE OPERATING, LLC [371449] 306 W Wall Street Midland, TX 79701		API Number: 30-015-46769
		Well: Weaver 27 State Com #132H
Created By	Comment	Comment Date

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Form APD Conditions

Permit 278733

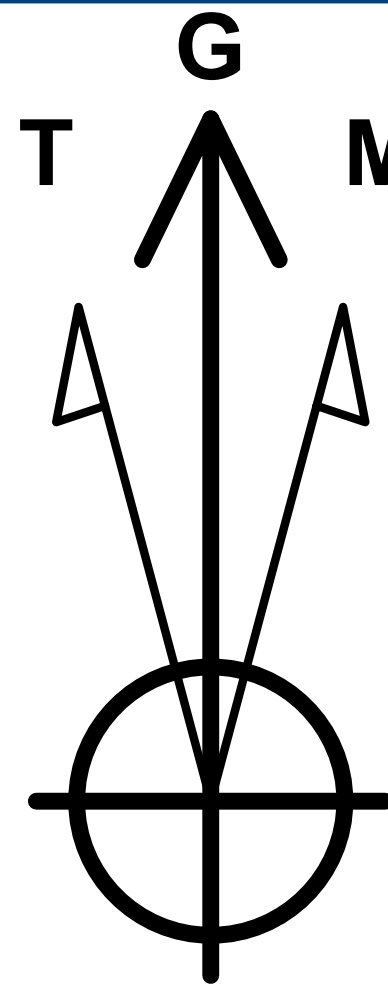
PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:		API Number:
COLGATE OPERATING, LLC [371449]		30-015-46769
306 W Wall Street		Well:
Midland, TX 79701		Weaver 27 State Com #132H
OCD Reviewer	Condition	
ksimmons	Will require a directional survey with the C-104	
ksimmons	Cement is required to circulate on both surface and intermediate1 strings of casing	



WELL DETAILS: Weaver 27 State Com 132H

Northing	Easting	Latitude	Longitude	Slot
594236.68	595714.32	32.63348162	-104.15669233	



Azimuths to Grid North
True North: -0.10°
Magnetic North: 6.91°

Magnetic Field
Strength: 47817.3snT
Dip Angle: 60.23°
Date: 2/3/2020
Model: IGRF2020

PROJECT DETAILS: Eddy County, NM (N83-NME)
Well Name: Weaver 27 State Com 132H
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid
KB Elevation: 3344+25 @ 3369.00usft (KB=25)
Elevation: 3344.00

Site: Weaver 27 State Com
Well: Weaver 27 State Com 132H
Wellbore: 132H
Plan: Plan #1

FORMATION TOP DETAILS

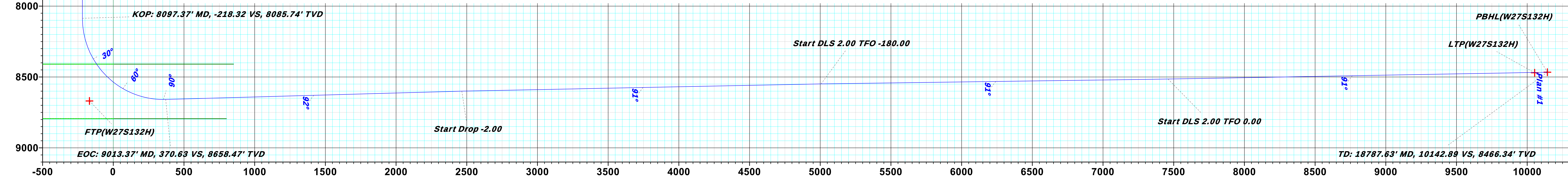
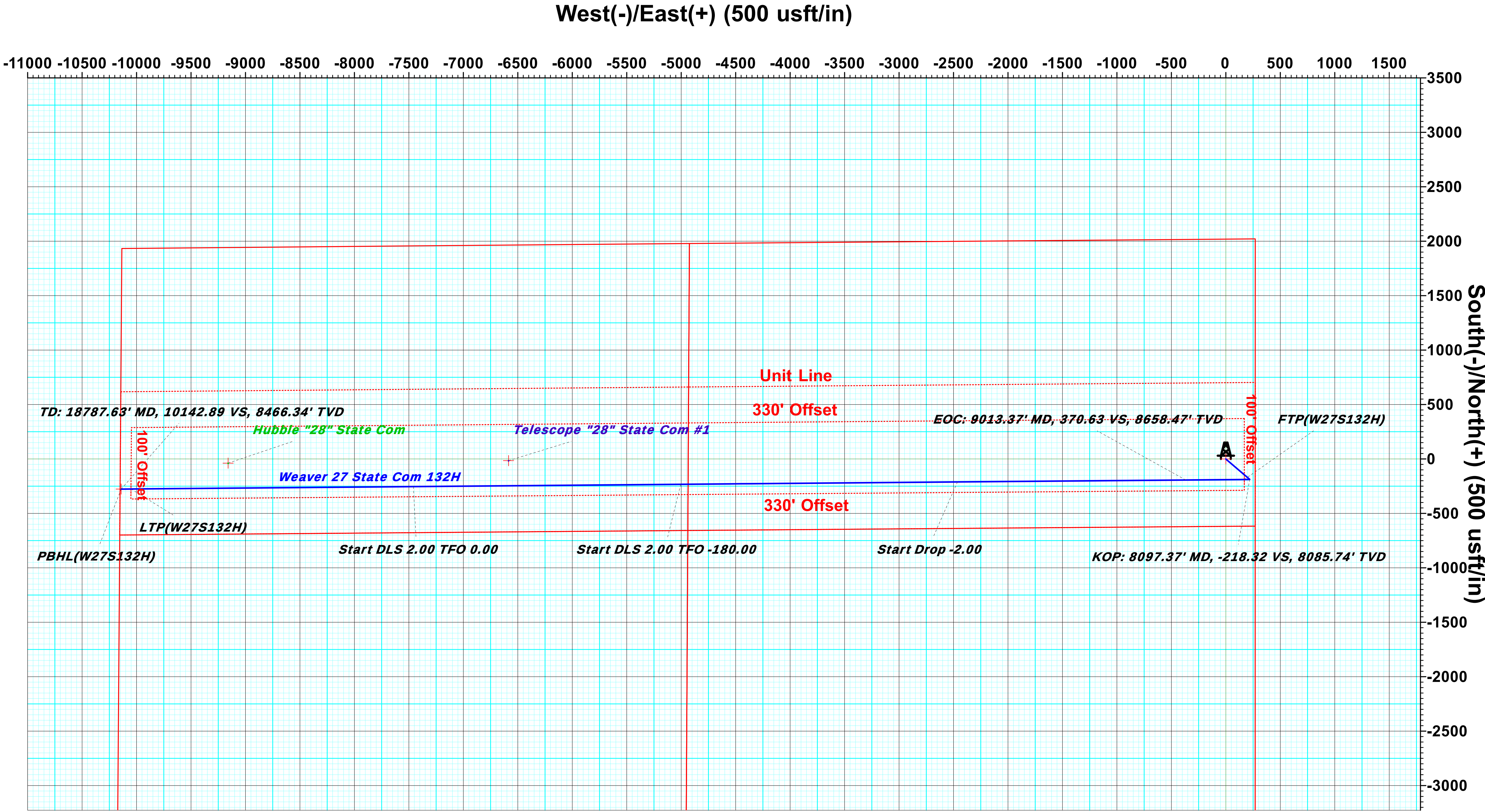
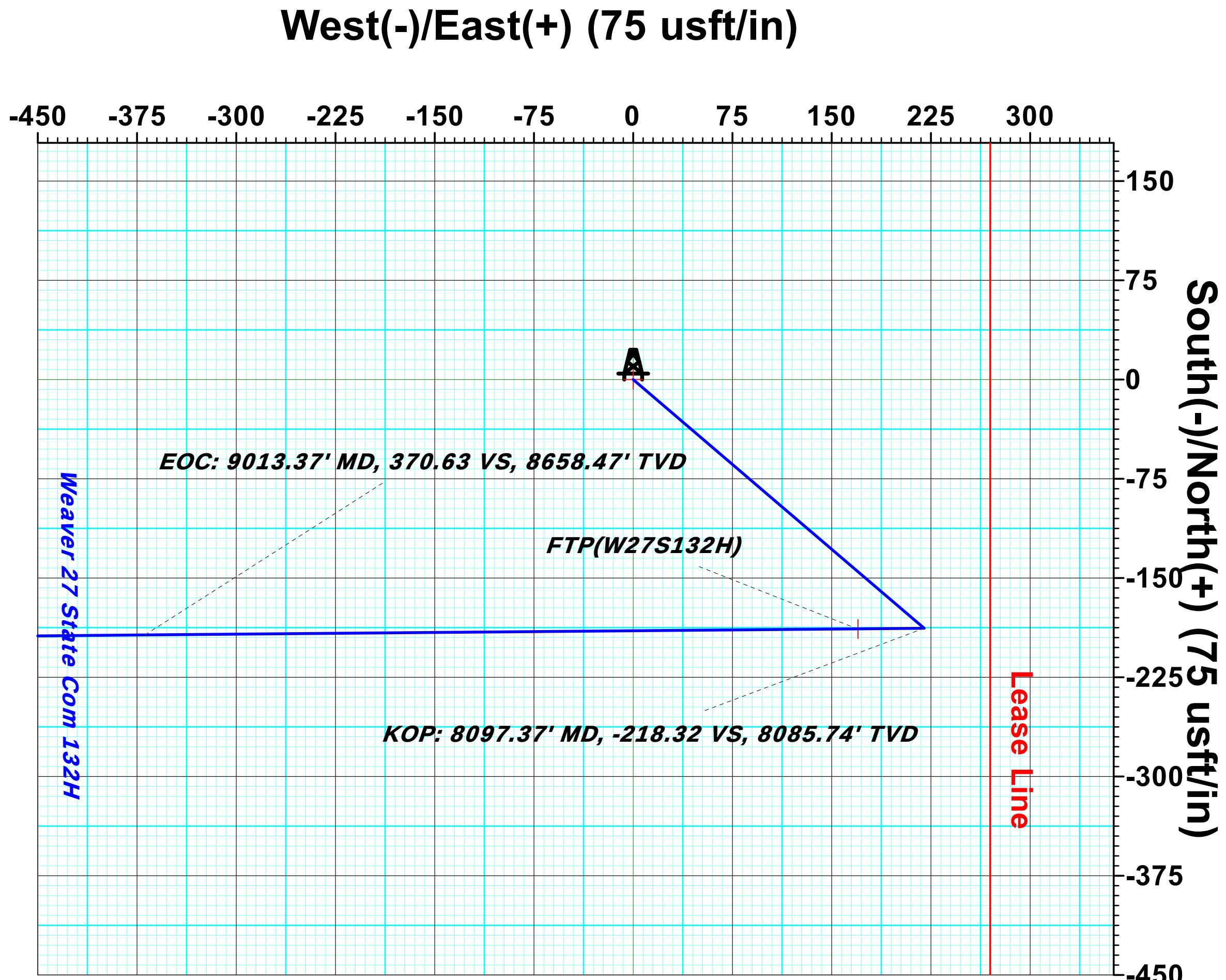
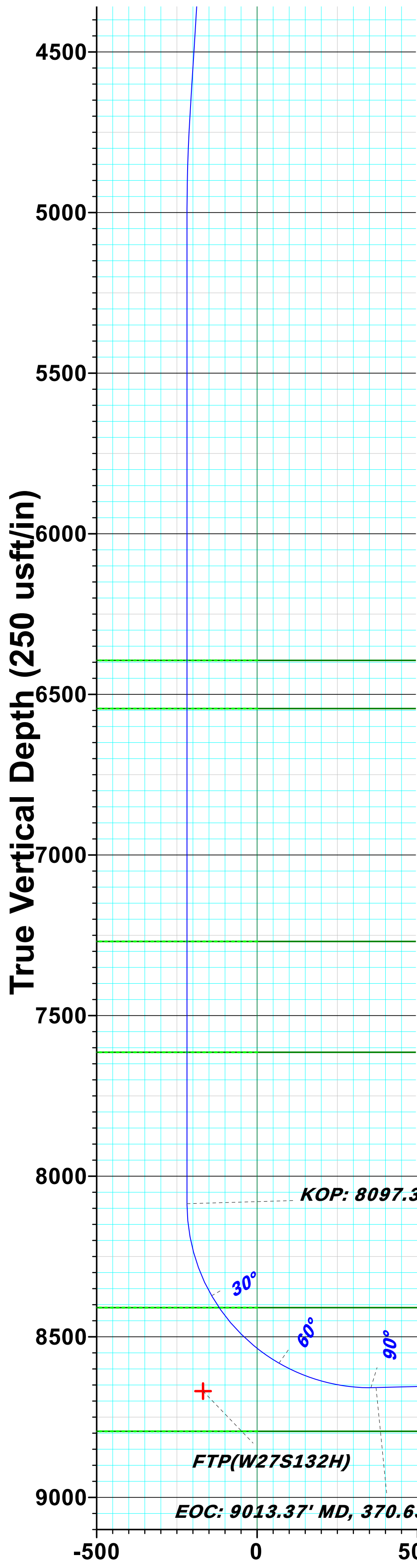
TVDPath	MDPath	Formation
146.00	146.00	Rustler
254.00	254.00	Top of Salt
586.00	586.00	Base of Salt
823.00	823.00	Yates
2089.00	2091.33	Capitan
2592.00	2596.07	DLWR Mnt Group
3212.00	3218.20	Lower Brushy Canyon
3819.00	3827.29	Bone Spring Lime
6394.00	6405.63	1st Bone Spring SD
6544.00	6555.63	2nd Bone Spring LM
7269.00	7280.63	2nd Bone Spring SD
7614.00	7625.63	3rd Bone Spring LM
8409.00	8440.83	3rd Bone Spring SD

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00
3	1516.51	4.75	130.51	1516.15	-8.51	9.96	1.50	130.51	-9.89
4	4695.12	4.75	130.51	4683.85	-179.42	209.98	0.00	0.00	-208.43
5	5011.63	0.00	0.00	5000.00	-187.93	219.94	1.50	180.00	-218.32
6	8097.37	0.00	0.00	8085.74	-187.93	219.94	0.00	0.00	-218.32
7	9013.37	91.60	269.51	8658.47	-192.97	-368.99	10.00	269.51	370.63
8	11108.56	91.60	269.51	8599.97	-210.88	-2463.29	0.00	0.00	2465.00
9	11131.06	91.15	269.51	8599.43	-211.07	-2485.78	2.00	180.00	2487.49
10	13650.07	91.15	269.51	8548.88	-232.61	-5004.19	0.00	0.00	5006.00
11	13667.57	90.80	269.51	8548.58	-232.76	-5021.69	2.00	-180.00	5023.50
12	16104.31	90.80	269.51	8514.56	-253.60	-7458.10	0.00	0.00	7460.00
13	16115.81	91.03	269.51	8514.37	-253.69	-7469.60	2.00	0.00	7471.50
14	18644.72	91.03	269.51	8468.91	-275.32	-9998.01	0.00	0.00	10000.00
15	18787.63	91.03	269.51	8466.34	-276.54	-10140.90	0.00	0.00	10142.89

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP(W27S132H)	8669.00	-188.53	169.94	594048.15	595884.26	32.63296263	-104.15614131
LTP(W27S132H)	8470.00	-275.46	-10050.91	593961.22	585663.41	32.63276615	-104.18934344
Offset-Hubble "28"	-35.00	-38.02	-9159.11	594198.66	586555.21	32.63341544	-104.18644542
Offset-Telescope "28" #1	-40.00	-15.22	-6584.88	594221.46	589129.44	32.63346805	-104.17808306
PBHL(W27S132H)	8466.43	-276.26	-10140.90	593960.42	585573.42	32.63276428	-104.18963577
SHL(W27S132H)	25.00	0.00	0.00	594236.68	595714.32	32.63348162	-104.15669233





Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 132H
Company:	Colgate Energy	TVD Reference:	3344+25 @ 3369.00usft (KB=25)
Project:	Eddy County, NM (N83-NME)	MD Reference:	3344+25 @ 3369.00usft (KB=25)
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Project	Eddy County, NM (N83-NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Weaver 27 State Com					
Site Position:		Northing:	594,236.68 usft	Latitude:	32.63348162	
From:	Map	Easting:	595,714.32 usft	Longitude:	-104.15669234	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.10 °

Well	Weaver 27 State Com 132H					
Well Position	+N/-S	0.00 usft	Northing:	594,236.68 usft	Latitude:	32.63348162
	+E/-W	0.00 usft	Easting:	595,714.32 usft	Longitude:	-104.15669234
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,344.00 usft

Wellbore	132H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/3/2020	7.01	60.23	47,817.25121227

Design	Plan #1				
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	269.51	

Plan Survey Tool Program	Date	2/1/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	18,787.63 Plan #1 (132H)	OWSG MWD Rev 4		
			OWSG MWD - Standard		



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Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,516.51	4.75	130.51	1,516.15	-8.51	9.96	1.50	1.50	0.00	130.51	
4,695.12	4.75	130.51	4,683.85	-179.42	209.98	0.00	0.00	0.00	0.00	
5,011.63	0.00	0.01	5,000.00	-187.93	219.94	1.50	-1.50	0.00	180.00	
8,097.37	0.00	0.01	8,085.74	-187.93	219.94	0.00	0.00	0.00	0.01	
9,013.37	91.60	269.51	8,658.47	-192.97	-368.99	10.00	10.00	0.00	269.51	
11,108.56	91.60	269.51	8,599.97	-210.88	-2,463.29	0.00	0.00	0.00	0.00	
11,131.06	91.15	269.51	8,599.43	-211.07	-2,485.78	2.00	-2.00	0.00	180.00	
13,650.07	91.15	269.51	8,548.88	-232.61	-5,004.19	0.00	0.00	0.00	0.00	
13,667.57	90.80	269.51	8,548.58	-232.76	-5,021.69	2.00	-2.00	0.00	-180.00	
16,104.31	90.80	269.51	8,514.56	-253.60	-7,458.10	0.00	0.00	0.00	0.00	
16,115.81	91.03	269.51	8,514.37	-253.69	-7,469.60	2.00	2.00	0.00	0.00	
18,644.72	91.03	269.51	8,468.91	-275.32	-9,998.01	0.00	0.00	0.00	0.00	
18,787.64	91.03	269.51	8,466.35	-276.54	-10,140.90	0.00	0.00	0.00	0.00	PBHL(W27S132H)



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Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offset-Telescope "28" State Com #1										
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL(W27S132H)										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
146.00	0.00	0.00	146.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler										
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
254.00	0.00	0.00	254.00	0.00	0.00	0.00	0.00	0.00	0.00	
Top of Salt										
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
586.00	0.00	0.00	586.00	0.00	0.00	0.00	0.00	0.00	0.00	
Base of Salt										
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
823.00	0.00	0.00	823.00	0.00	0.00	0.00	0.00	0.00	0.00	
Yates										
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	1.50	130.51	1,299.99	-0.85	1.00	-0.99	1.50	1.50	0.00	
1,400.00	3.00	130.51	1,399.91	-3.40	3.98	-3.95	1.50	1.50	0.00	
1,500.00	4.50	130.51	1,499.69	-7.65	8.95	-8.89	1.50	1.50	0.00	
1,516.51	4.75	130.51	1,516.15	-8.51	9.96	-9.89	1.50	1.50	0.00	
1,600.00	4.75	130.51	1,599.35	-13.00	15.22	-15.11	0.00	0.00	0.00	
1,700.00	4.75	130.51	1,699.01	-18.38	21.51	-21.35	0.00	0.00	0.00	
1,800.00	4.75	130.51	1,798.67	-23.76	27.80	-27.60	0.00	0.00	0.00	
1,900.00	4.75	130.51	1,898.32	-29.13	34.09	-33.84	0.00	0.00	0.00	
2,000.00	4.75	130.51	1,997.98	-34.51	40.39	-40.09	0.00	0.00	0.00	
2,091.33	4.75	130.51	2,089.00	-39.42	46.13	-45.80	0.00	0.00	0.00	
Capitan										
2,100.00	4.75	130.51	2,097.64	-39.89	46.68	-46.34	0.00	0.00	0.00	
2,200.00	4.75	130.51	2,197.29	-45.26	52.97	-52.58	0.00	0.00	0.00	
2,300.00	4.75	130.51	2,296.95	-50.64	59.26	-58.83	0.00	0.00	0.00	
2,400.00	4.75	130.51	2,396.61	-56.02	65.56	-65.08	0.00	0.00	0.00	
2,500.00	4.75	130.51	2,496.26	-61.39	71.85	-71.32	0.00	0.00	0.00	
2,596.07	4.75	130.51	2,592.00	-66.56	77.89	-77.32	0.00	0.00	0.00	
DLWR Mnt Group										
2,600.00	4.75	130.51	2,595.92	-66.77	78.14	-77.57	0.00	0.00	0.00	
2,700.00	4.75	130.51	2,695.58	-72.15	84.43	-83.81	0.00	0.00	0.00	
2,800.00	4.75	130.51	2,795.23	-77.52	90.73	-90.06	0.00	0.00	0.00	
2,900.00	4.75	130.51	2,894.89	-82.90	97.02	-96.31	0.00	0.00	0.00	
3,000.00	4.75	130.51	2,994.55	-88.28	103.31	-102.55	0.00	0.00	0.00	
3,100.00	4.75	130.51	3,094.20	-93.65	109.60	-108.80	0.00	0.00	0.00	
3,200.00	4.75	130.51	3,193.86	-99.03	115.90	-115.05	0.00	0.00	0.00	
3,218.20	4.75	130.51	3,212.00	-100.01	117.04	-116.18	0.00	0.00	0.00	
Lower Brushy Canyon										
3,300.00	4.75	130.51	3,293.52	-104.41	122.19	-121.29	0.00	0.00	0.00	
3,400.00	4.75	130.51	3,393.18	-109.78	128.48	-127.54	0.00	0.00	0.00	



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 132H
Company:	Colgate Energy	TVD Reference:	3344+25 @ 3369.00usft (KB=25)
Project:	Eddy County, NM (N83-NME)	MD Reference:	3344+25 @ 3369.00usft (KB=25)
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,500.00	4.75	130.51	3,492.83	-115.16	134.77	-133.78	0.00	0.00	0.00
3,600.00	4.75	130.51	3,592.49	-120.54	141.07	-140.03	0.00	0.00	0.00
3,700.00	4.75	130.51	3,692.15	-125.91	147.36	-146.28	0.00	0.00	0.00
3,800.00	4.75	130.51	3,791.80	-131.29	153.65	-152.52	0.00	0.00	0.00
3,827.29	4.75	130.51	3,819.00	-132.76	155.37	-154.23	0.00	0.00	0.00
Bone Spring Lime									
3,900.00	4.75	130.51	3,891.46	-136.67	159.94	-158.77	0.00	0.00	0.00
4,000.00	4.75	130.51	3,991.12	-142.04	166.24	-165.02	0.00	0.00	0.00
4,100.00	4.75	130.51	4,090.77	-147.42	172.53	-171.26	0.00	0.00	0.00
4,200.00	4.75	130.51	4,190.43	-152.80	178.82	-177.51	0.00	0.00	0.00
4,300.00	4.75	130.51	4,290.09	-158.17	185.11	-183.75	0.00	0.00	0.00
4,400.00	4.75	130.51	4,389.74	-163.55	191.41	-190.00	0.00	0.00	0.00
4,500.00	4.75	130.51	4,489.40	-168.93	197.70	-196.25	0.00	0.00	0.00
4,600.00	4.75	130.51	4,589.06	-174.30	203.99	-202.49	0.00	0.00	0.00
4,695.12	4.75	130.51	4,683.85	-179.42	209.98	-208.43	0.00	0.00	0.00
4,700.00	4.67	130.51	4,688.72	-179.68	210.28	-208.74	1.50	-1.50	0.00
4,800.00	3.17	130.51	4,788.48	-184.12	215.48	-213.90	1.50	-1.50	0.00
4,900.00	1.67	130.51	4,888.39	-186.87	218.70	-217.09	1.50	-1.50	0.00
5,000.00	0.17	130.51	4,988.37	-187.92	219.93	-218.31	1.50	-1.50	0.00
5,011.63	0.00	0.01	5,000.00	-187.93	219.94	-218.32	1.50	-1.50	0.00
5,100.00	0.00	0.00	5,088.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,200.00	0.00	0.00	5,188.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,300.00	0.00	0.00	5,288.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,400.00	0.00	0.00	5,388.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,500.00	0.00	0.00	5,488.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,600.00	0.00	0.00	5,588.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,700.00	0.00	0.00	5,688.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,800.00	0.00	0.00	5,788.37	-187.93	219.94	-218.32	0.00	0.00	0.00
5,900.00	0.00	0.00	5,888.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,000.00	0.00	0.00	5,988.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,100.00	0.00	0.00	6,088.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,200.00	0.00	0.00	6,188.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,300.00	0.00	0.00	6,288.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,400.00	0.00	0.00	6,388.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,405.63	0.00	0.00	6,394.00	-187.93	219.94	-218.32	0.00	0.00	0.00
1st Bone Spring SD									
6,500.00	0.00	0.00	6,488.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,555.63	0.00	0.00	6,544.00	-187.93	219.94	-218.32	0.00	0.00	0.00
2nd Bone Spring LM									
6,600.00	0.00	0.00	6,588.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,700.00	0.00	0.00	6,688.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,800.00	0.00	0.00	6,788.37	-187.93	219.94	-218.32	0.00	0.00	0.00
6,900.00	0.00	0.00	6,888.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,000.00	0.00	0.00	6,988.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,100.00	0.00	0.00	7,088.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,200.00	0.00	0.00	7,188.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,280.63	0.00	0.00	7,269.00	-187.93	219.94	-218.32	0.00	0.00	0.00
2nd Bone Spring SD									
7,300.00	0.00	0.00	7,288.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,400.00	0.00	0.00	7,388.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,500.00	0.00	0.00	7,488.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,600.00	0.00	0.00	7,588.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,625.63	0.00	0.00	7,614.00	-187.93	219.94	-218.32	0.00	0.00	0.00



Planning Report

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Company:	Colgate Energy	TVD Reference:	3344+25 @ 3369.00usft (KB=25)
Project:	Eddy County, NM (N83-NME)	MD Reference:	3344+25 @ 3369.00usft (KB=25)
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3rd Bone Spring LM									
7,700.00	0.00	0.00	7,688.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,800.00	0.00	0.00	7,788.37	-187.93	219.94	-218.32	0.00	0.00	0.00
7,900.00	0.00	0.00	7,888.37	-187.93	219.94	-218.32	0.00	0.00	0.00
8,000.00	0.00	0.00	7,988.37	-187.93	219.94	-218.32	0.00	0.00	0.00
8,097.37	0.00	0.00	8,085.74	-187.93	219.94	-218.32	0.00	0.00	0.00
KOP: 8097.37' MD, -218.32 VS, 8085.74' TVD									
8,100.00	0.26	269.51	8,088.37	-187.93	219.93	-218.32	10.00	10.00	0.00
8,150.00	5.26	269.51	8,138.30	-187.95	217.52	-215.91	10.00	10.00	0.00
8,200.00	10.26	269.51	8,187.82	-188.01	210.77	-209.16	10.00	10.00	0.00
8,250.00	15.26	269.51	8,236.57	-188.10	199.73	-198.12	10.00	10.00	0.00
8,300.00	20.26	269.51	8,284.17	-188.23	184.48	-182.87	10.00	10.00	0.00
8,350.00	25.26	269.51	8,330.26	-188.40	165.14	-163.53	10.00	10.00	0.00
8,400.00	30.26	269.51	8,374.49	-188.60	141.86	-140.24	10.00	10.00	0.00
8,440.83	34.35	269.51	8,409.00	-188.78	120.04	-118.42	10.00	10.00	0.00
3rd Bone Spring SD									
8,450.00	35.26	269.51	8,416.53	-188.83	114.81	-113.19	10.00	10.00	0.00
8,500.00	40.26	269.51	8,456.04	-189.09	84.20	-82.58	10.00	10.00	0.00
8,550.00	45.26	269.51	8,492.74	-189.38	50.27	-48.65	10.00	10.00	0.00
8,579.89	48.25	269.51	8,513.21	-189.57	28.50	-26.88	10.00	10.00	0.00
FTP(W27S132H)									
8,600.00	50.26	269.51	8,526.34	-189.70	13.26	-11.64	10.00	10.00	0.00
8,650.00	55.26	269.51	8,556.58	-190.04	-26.53	28.16	10.00	10.00	0.00
8,700.00	60.26	269.51	8,583.25	-190.40	-68.81	70.43	10.00	10.00	0.00
8,750.00	65.26	269.51	8,606.12	-190.78	-113.25	114.88	10.00	10.00	0.00
8,800.00	70.26	269.51	8,625.04	-191.18	-159.51	161.14	10.00	10.00	0.00
8,850.00	75.26	269.51	8,639.85	-191.58	-207.25	208.88	10.00	10.00	0.00
8,900.00	80.26	269.51	8,650.44	-192.00	-256.10	257.73	10.00	10.00	0.00
8,950.00	85.26	269.51	8,656.74	-192.43	-305.68	307.32	10.00	10.00	0.00
9,000.00	90.26	269.51	8,658.69	-192.85	-355.63	357.26	10.00	10.00	0.00
9,013.37	91.60	269.51	8,658.47	-192.97	-368.99	370.63	10.00	10.00	0.00
EOC: 9013.37' MD, 370.63 VS, 8658.47' TVD									
9,100.00	91.60	269.51	8,656.06	-193.71	-455.59	457.23	0.00	0.00	0.00
9,200.00	91.60	269.51	8,653.26	-194.56	-555.54	557.19	0.00	0.00	0.00
9,300.00	91.60	269.51	8,650.47	-195.42	-655.50	657.15	0.00	0.00	0.00
9,400.00	91.60	269.51	8,647.68	-196.27	-755.46	757.11	0.00	0.00	0.00
9,500.00	91.60	269.51	8,644.89	-197.13	-855.42	857.07	0.00	0.00	0.00
9,600.00	91.60	269.51	8,642.09	-197.98	-955.37	957.03	0.00	0.00	0.00
9,700.00	91.60	269.51	8,639.30	-198.84	-1,055.33	1,056.99	0.00	0.00	0.00
9,800.00	91.60	269.51	8,636.51	-199.69	-1,155.29	1,156.95	0.00	0.00	0.00
9,900.00	91.60	269.51	8,633.72	-200.55	-1,255.25	1,256.92	0.00	0.00	0.00
10,000.00	91.60	269.51	8,630.93	-201.40	-1,355.20	1,356.88	0.00	0.00	0.00
10,100.00	91.60	269.51	8,628.13	-202.26	-1,455.16	1,456.84	0.00	0.00	0.00
10,200.00	91.60	269.51	8,625.34	-203.11	-1,555.12	1,556.80	0.00	0.00	0.00
10,300.00	91.60	269.51	8,622.55	-203.97	-1,655.08	1,656.76	0.00	0.00	0.00
10,400.00	91.60	269.51	8,619.76	-204.82	-1,755.03	1,756.72	0.00	0.00	0.00
10,500.00	91.60	269.51	8,616.97	-205.68	-1,854.99	1,856.68	0.00	0.00	0.00
10,600.00	91.60	269.51	8,614.17	-206.53	-1,954.95	1,956.64	0.00	0.00	0.00
10,700.00	91.60	269.51	8,611.38	-207.39	-2,054.90	2,056.60	0.00	0.00	0.00
10,800.00	91.60	269.51	8,608.59	-208.24	-2,154.86	2,156.56	0.00	0.00	0.00
10,900.00	91.60	269.51	8,605.80	-209.09	-2,254.82	2,256.53	0.00	0.00	0.00
11,000.00	91.60	269.51	8,603.00	-209.95	-2,354.78	2,356.49	0.00	0.00	0.00
11,108.56	91.60	269.51	8,599.97	-210.88	-2,463.29	2,465.00	0.00	0.00	0.00



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Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start Drop -2.00									
11,131.06	91.15	269.51	8,599.43	-211.07	-2,485.78	2,487.49	2.00	-2.00	0.00
11,200.00	91.15	269.51	8,598.05	-211.66	-2,554.71	2,556.42	0.00	0.00	0.00
11,300.00	91.15	269.51	8,596.04	-212.51	-2,654.68	2,656.40	0.00	0.00	0.00
11,400.00	91.15	269.51	8,594.04	-213.37	-2,754.66	2,756.38	0.00	0.00	0.00
11,500.00	91.15	269.51	8,592.03	-214.22	-2,854.64	2,856.36	0.00	0.00	0.00
11,600.00	91.15	269.51	8,590.02	-215.08	-2,954.61	2,956.34	0.00	0.00	0.00
11,700.00	91.15	269.51	8,588.01	-215.93	-3,054.59	3,056.32	0.00	0.00	0.00
11,800.00	91.15	269.51	8,586.01	-216.79	-3,154.56	3,156.30	0.00	0.00	0.00
11,900.00	91.15	269.51	8,584.00	-217.64	-3,254.54	3,256.28	0.00	0.00	0.00
12,000.00	91.15	269.51	8,581.99	-218.50	-3,354.52	3,356.26	0.00	0.00	0.00
12,100.00	91.15	269.51	8,579.99	-219.35	-3,454.49	3,456.24	0.00	0.00	0.00
12,200.00	91.15	269.51	8,577.98	-220.21	-3,554.47	3,556.22	0.00	0.00	0.00
12,300.00	91.15	269.51	8,575.97	-221.06	-3,654.45	3,656.20	0.00	0.00	0.00
12,400.00	91.15	269.51	8,573.97	-221.92	-3,754.42	3,756.18	0.00	0.00	0.00
12,500.00	91.15	269.51	8,571.96	-222.78	-3,854.40	3,856.16	0.00	0.00	0.00
12,600.00	91.15	269.51	8,569.95	-223.63	-3,954.37	3,956.14	0.00	0.00	0.00
12,700.00	91.15	269.51	8,567.95	-224.49	-4,054.35	4,056.12	0.00	0.00	0.00
12,800.00	91.15	269.51	8,565.94	-225.34	-4,154.33	4,156.10	0.00	0.00	0.00
12,900.00	91.15	269.51	8,563.93	-226.20	-4,254.30	4,256.08	0.00	0.00	0.00
13,000.00	91.15	269.51	8,561.92	-227.05	-4,354.28	4,356.06	0.00	0.00	0.00
13,100.00	91.15	269.51	8,559.92	-227.91	-4,454.25	4,456.04	0.00	0.00	0.00
13,200.00	91.15	269.51	8,557.91	-228.76	-4,554.23	4,556.02	0.00	0.00	0.00
13,300.00	91.15	269.51	8,555.90	-229.62	-4,654.21	4,656.00	0.00	0.00	0.00
13,400.00	91.15	269.51	8,553.90	-230.47	-4,754.18	4,755.98	0.00	0.00	0.00
13,500.00	91.15	269.51	8,551.89	-231.33	-4,854.16	4,855.96	0.00	0.00	0.00
13,600.00	91.15	269.51	8,549.88	-232.18	-4,954.14	4,955.94	0.00	0.00	0.00
13,650.07	91.15	269.51	8,548.88	-232.61	-5,004.19	5,006.00	0.00	0.00	0.00
Start DLS 2.00 TFO -180.00									
13,667.57	90.80	269.51	8,548.58	-232.76	-5,021.69	5,023.50	2.00	-2.00	0.00
13,700.00	90.80	269.51	8,548.13	-233.04	-5,054.12	5,055.92	0.00	0.00	0.00
13,800.00	90.80	269.51	8,546.73	-233.89	-5,154.10	5,155.91	0.00	0.00	0.00
13,900.00	90.80	269.51	8,545.33	-234.75	-5,254.09	5,255.90	0.00	0.00	0.00
14,000.00	90.80	269.51	8,543.94	-235.60	-5,354.08	5,355.90	0.00	0.00	0.00
14,100.00	90.80	269.51	8,542.54	-236.46	-5,454.06	5,455.89	0.00	0.00	0.00
14,200.00	90.80	269.51	8,541.15	-237.31	-5,554.05	5,555.88	0.00	0.00	0.00
14,300.00	90.80	269.51	8,539.75	-238.17	-5,654.04	5,655.87	0.00	0.00	0.00
14,400.00	90.80	269.51	8,538.35	-239.02	-5,754.02	5,755.86	0.00	0.00	0.00
14,500.00	90.80	269.51	8,536.96	-239.88	-5,854.01	5,855.85	0.00	0.00	0.00
14,600.00	90.80	269.51	8,535.56	-240.73	-5,954.00	5,955.84	0.00	0.00	0.00
14,700.00	90.80	269.51	8,534.16	-241.59	-6,053.98	6,055.83	0.00	0.00	0.00
14,800.00	90.80	269.51	8,532.77	-242.44	-6,153.97	6,155.82	0.00	0.00	0.00
14,900.00	90.80	269.51	8,531.37	-243.30	-6,253.96	6,255.81	0.00	0.00	0.00
15,000.00	90.80	269.51	8,529.98	-244.15	-6,353.94	6,355.80	0.00	0.00	0.00
15,100.00	90.80	269.51	8,528.58	-245.01	-6,453.93	6,455.79	0.00	0.00	0.00
15,200.00	90.80	269.51	8,527.18	-245.86	-6,553.92	6,555.78	0.00	0.00	0.00
15,300.00	90.80	269.51	8,525.79	-246.72	-6,653.90	6,655.77	0.00	0.00	0.00
15,400.00	90.80	269.51	8,524.39	-247.57	-6,753.89	6,755.76	0.00	0.00	0.00
15,500.00	90.80	269.51	8,522.99	-248.43	-6,853.88	6,855.75	0.00	0.00	0.00
15,600.00	90.80	269.51	8,521.60	-249.28	-6,953.86	6,955.74	0.00	0.00	0.00
15,700.00	90.80	269.51	8,520.20	-250.14	-7,053.85	7,055.73	0.00	0.00	0.00
15,800.00	90.80	269.51	8,518.81	-250.99	-7,153.83	7,155.72	0.00	0.00	0.00
15,900.00	90.80	269.51	8,517.41	-251.85	-7,253.82	7,255.71	0.00	0.00	0.00
16,000.00	90.80	269.51	8,516.01	-252.70	-7,353.81	7,355.70	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 132H
Company:	Colgate Energy	TVD Reference:	3344+25 @ 3369.00usft (KB=25)
Project:	Eddy County, NM (N83-NME)	MD Reference:	3344+25 @ 3369.00usft (KB=25)
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,104.31	90.80	269.51	8,514.56	-253.60	-7,458.10	7,460.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00									
16,115.81	91.03	269.51	8,514.37	-253.69	-7,469.60	7,471.50	2.00	2.00	0.00
16,200.00	91.03	269.51	8,512.86	-254.41	-7,553.78	7,555.68	0.00	0.00	0.00
16,300.00	91.03	269.51	8,511.06	-255.27	-7,653.76	7,655.66	0.00	0.00	0.00
16,400.00	91.03	269.51	8,509.27	-256.12	-7,753.74	7,755.64	0.00	0.00	0.00
16,500.00	91.03	269.51	8,507.47	-256.98	-7,853.72	7,855.63	0.00	0.00	0.00
16,600.00	91.03	269.51	8,505.67	-257.83	-7,953.70	7,955.61	0.00	0.00	0.00
16,700.00	91.03	269.51	8,503.87	-258.69	-8,053.68	8,055.59	0.00	0.00	0.00
16,800.00	91.03	269.51	8,502.07	-259.54	-8,153.66	8,155.58	0.00	0.00	0.00
16,900.00	91.03	269.51	8,500.28	-260.40	-8,253.64	8,255.56	0.00	0.00	0.00
17,000.00	91.03	269.51	8,498.48	-261.25	-8,353.62	8,355.55	0.00	0.00	0.00
17,100.00	91.03	269.51	8,496.68	-262.11	-8,453.60	8,455.53	0.00	0.00	0.00
17,200.00	91.03	269.51	8,494.88	-262.96	-8,553.58	8,555.51	0.00	0.00	0.00
17,300.00	91.03	269.51	8,493.09	-263.82	-8,653.56	8,655.50	0.00	0.00	0.00
17,400.00	91.03	269.51	8,491.29	-264.67	-8,753.54	8,755.48	0.00	0.00	0.00
17,500.00	91.03	269.51	8,489.49	-265.53	-8,853.52	8,855.47	0.00	0.00	0.00
17,600.00	91.03	269.51	8,487.69	-266.38	-8,953.50	8,955.45	0.00	0.00	0.00
17,700.00	91.03	269.51	8,485.90	-267.24	-9,053.48	9,055.43	0.00	0.00	0.00
17,800.00	91.03	269.51	8,484.10	-268.09	-9,153.46	9,155.42	0.00	0.00	0.00
17,900.00	91.03	269.51	8,482.30	-268.95	-9,253.44	9,255.40	0.00	0.00	0.00
17,956.82	91.03	269.51	8,481.28	-269.44	-9,310.25	9,312.21	0.00	0.00	0.00
Offset-Hubble "28" State Com									
18,000.00	91.03	269.51	8,480.50	-269.80	-9,353.42	9,355.38	0.00	0.00	0.00
18,100.00	91.03	269.51	8,478.71	-270.66	-9,453.40	9,455.37	0.00	0.00	0.00
18,200.00	91.03	269.51	8,476.91	-271.51	-9,553.38	9,555.35	0.00	0.00	0.00
18,300.00	91.03	269.51	8,475.11	-272.37	-9,653.36	9,655.34	0.00	0.00	0.00
18,400.00	91.03	269.51	8,473.31	-273.22	-9,753.34	9,755.32	0.00	0.00	0.00
18,500.00	91.03	269.51	8,471.52	-274.08	-9,853.32	9,855.30	0.00	0.00	0.00
18,600.00	91.03	269.51	8,469.72	-274.93	-9,953.30	9,955.29	0.00	0.00	0.00
18,644.72	91.03	269.51	8,468.91	-275.32	-9,998.01	10,000.00	0.00	0.00	0.00
18,697.59	91.03	269.51	8,467.96	-275.77	-10,050.87	10,052.86	0.00	0.00	0.00
LTP(W27S132H)									
18,700.00	91.03	269.51	8,467.92	-275.79	-10,053.28	10,055.27	0.00	0.00	0.00
18,787.63	91.03	269.51	8,466.35	-276.54	-10,140.89	10,142.89	0.00	0.00	0.00
TD: 18787.63' MD, 10142.89 VS, 8466.34' TVD - PBHL(W27S132H)									



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 132H
Company:	Colgate Energy	TVD Reference:	3344+25 @ 3369.00usft (KB=25)
Project:	Eddy County, NM (N83-NME)	MD Reference:	3344+25 @ 3369.00usft (KB=25)
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 132H	Survey Calculation Method:	Minimum Curvature
Wellbore:	132H		
Design:	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
SHL(W27S132H)	0.00	0.01	25.00	0.00	0.00	594,236.68	595,714.32	32.63348162	-104.15669234
- plan hits target center									
- Point									
Offset-Hubble "28" State	0.00	0.00	-35.00	-38.02	-9,159.11	594,198.66	586,555.22	32.63341544	-104.18644542
- plan misses target center by 8520.76usft at 17956.82usft MD (8481.28 TVD, -269.44 N, -9310.25 E)									
- Point									
Offset-Telescope "28" St	0.00	0.00	-40.00	-15.22	-6,584.88	594,221.46	589,129.44	32.63346804	-104.17808307
- plan misses target center by 6585.02usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL(W27S132H)	0.00	0.00	8,466.43	-276.26	-10,140.90	593,960.42	585,573.42	32.63276428	-104.18963577
- plan misses target center by 0.29usft at 18787.63usft MD (8466.34 TVD, -276.54 N, -10140.89 E)									
- Point									
LTP(W27S132H)	0.00	0.00	8,470.00	-275.46	-10,050.91	593,961.22	585,663.41	32.63276615	-104.18934344
- plan misses target center by 2.06usft at 18697.59usft MD (8467.96 TVD, -275.77 N, -10050.87 E)									
- Point									
FTP(W27S132H)	0.00	0.00	8,669.00	-188.53	169.94	594,048.15	595,884.26	32.63296263	-104.15614132
- plan misses target center by 210.42usft at 8579.89usft MD (8513.21 TVD, -189.57 N, 28.50 E)									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
146.00	146.00	Rustler				
254.00	254.00	Top of Salt				
586.00	586.00	Base of Salt				
823.00	823.00	Yates				
2,091.33	2,089.00	Capitan				
2,596.07	2,592.00	DLWR Mnt Group				
3,218.20	3,212.00	Lower Brushy Canyon				
3,827.29	3,819.00	Bone Spring Lime				
6,405.63	6,394.00	1st Bone Spring SD				
6,555.63	6,544.00	2nd Bone Spring LM				
7,280.63	7,269.00	2nd Bone Spring SD				
7,625.63	7,614.00	3rd Bone Spring LM				
8,440.83	8,409.00	3rd Bone Spring SD				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
8,097.37	8,085.74	-187.93	219.94	KOP: 8097.37' MD, -218.32 VS, 8085.74' TVD
9,013.37	8,658.47	-192.97	-368.99	EOC: 9013.37' MD, 370.63 VS, 8658.47' TVD
11,108.56	8,599.97	-210.88	-2,463.29	Start Drop -2.00
13,650.07	8,548.88	-232.61	-5,004.19	Start DLS 2.00 TFO -180.00
16,104.31	8,514.56	-253.60	-7,458.10	Start DLS 2.00 TFO 0.00
18,787.63	8,466.35	-276.54	-10,140.89	TD: 18787.63' MD, 10142.89 VS, 8466.34' TVD