

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 278979

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 30-015-46803
4. Property Code 327176	5. Property Name WEAVER 27 STATE COM	6. Well No. 121H

7. Surface Location

UL - Lot A	Section 27	Township 19S	Range 28E	Lot Idn A	Feet From 655	N/S Line N	Feet From 270	E/W Line E	County Eddy
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	------------------	---------------	----------------

8. Proposed Bottom Hole Location

UL - Lot D	Section 28	Township 19S	Range 28E	Lot Idn D	Feet From 990	N/S Line N	Feet From 10	E/W Line W	County Eddy
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	-----------------	---------------	----------------

9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569
-------------------------------	-------

Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3357
16. Multiple N	17. Proposed Depth 17563	18. Formation Bone Spring	19. Contractor	20. Spud Date 5/1/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	200	131	0
Int1	12.25	9.625	36	3050	854	0
Prod	8.75	5.5	20	17563	3758	2050

Casing/Cement Program: Additional Comments

Production casing grade is HCP-110. Fluid type: Surface - Fresh water spud mud; Int1 - Brine water; Prod - Cut brine poly-oil mud

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: 3/9/2020	Expiration Date: 3/9/2022
Date: 3/3/2020	Phone: 432-695-4272	Conditions of Approval Attached

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-	² Pool Code 97569	³ Pool Name WINCHESTER; BONE SPRING, WEST
⁴ Property Code 327176	⁵ Property Name WEAVER 27 STATE COM	⁶ Well Number 121H
⁷ OGRID No. 371449	⁸ Operator Name COLGATE OPERATING, LLC	⁹ Elevation 3357.7

¹⁰ Surface Location

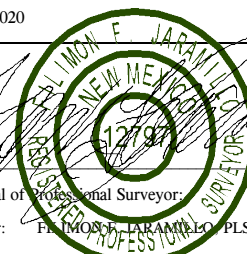
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	27	19 S	28 E		655	NORTH	270	EAST	EDDY

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
D	28	19 S	28 E		990	NORTH	10	WEST	EDDY

¹² Dedicated Acres 320.00	¹³ Joint or Infill	¹⁴ Consolidation Code C	¹⁵ Order No.
--	-------------------------------	--	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

NW CORNER SEC. 28 LAT. = 32.6388378°N LONG. = 104.1896055°W NMSP EAST (FT) N = 596170.03 E = 585579.74 N89°29'19"E 2606.17 FT N/4 CORNER SEC. 28 LAT. = 32.6388918°N LONG. = 104.1811413°W NMSP EAST (FT) N = 596193.28 E = 588185.16 N89°29'58"E 2605.52 FT NW CORNER SEC. 27 LAT. = 32.6389438°N LONG. = 104.1726792°W NMSP EAST (FT) N = 596216.04 E = 590789.95 N89°32'27"E 2596.08 FT N/4 CORNER SEC. 27 LAT. = 32.6389899°N LONG. = 104.1642476°W NMSP EAST (FT) N = 596236.84 E = 593385.32 N89°31'19"E 2599.78 FT NE CORNER SEC. 27 LAT. = 32.6390378°N LONG. = 104.1558041°W NMSP EAST (FT) N = 596258.52 E = 595984.38 S27°00'02"E 374.40 FT SHL 270'		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. 3-3-20 Signature _____ Date _____ BRIAN WOOD Printed Name _____ brian@permitswest.com E-mail Address _____ 505 466-8120	
W/4 CORNER SEC. 28 LAT. = 32.6316038°N LONG. = 104.1896802°W NMSP EAST (FT) N = 593538.21 E = 585560.31 N00°25'22"E 2632.53 FT BHL 10' LTP 990' BOTTOM OF HOLE LAT. = 32.6361172°N LONG. = 104.1896012°W NMSP EAST (FT) N = 595180.25 E = 585582.43 W/4 CORNER SEC. 27 LAT. = 32.6316984°N LONG. = 104.1727371°W NMSP EAST (FT) N = 593580.11 E = 590776.09 N00°18'04"E 2636.60 FT S/4 CORNER SEC. 28 LAT. = 32.6244127°N LONG. = 104.1812729°W NMSP EAST (FT) N = 590925.64 E = 588152.20 N00°19'47"E 2635.91 FT S/4 CORNER SEC. 27 LAT. = 32.6244929°N LONG. = 104.1643165°W NMSP EAST (FT) N = 590962.73 E = 593372.50 N00°19'47"E 2635.91 FT SW CORNER SEC. 28 LAT. = 32.6243712°N LONG. = 104.1897528°W NMSP EAST (FT) N = 590906.93 E = 585541.53 N00°24'32"E 2631.98 FT SW CORNER SEC. 27 LAT. = 32.6244550°N LONG. = 104.1727993°W NMSP EAST (FT) N = 590944.89 E = 590760.93 N00°19'47"E 2635.91 FT FIRST TAKE POINT 990' FNL, 100' FEL LAT. = 32.6363153°N LONG. = 104.1561344°W NMSP EAST (FT) N = 595267.88 E = 595884.34 S89°36'31"W 2612.27 FT SE CORNER SEC. 27 LAT. = 32.6245314°N LONG. = 104.1558342°W NMSP EAST (FT) N = 590980.97 E = 595983.91 S89°36'00"W 2612.11 FT		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: WILLIAM E. JARAMILLO PLS 12797 SURVEY NO. 7871A	

Intent ☒ YES As Drilled ☐

API #		
Operator Name: COLGATE OPERATING, LLC	Property Name: WEAVER 27 STATE COM	Well Number 121H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	27	19S	28E		655	NORTH	270	EAST	EDDY
Latitude 32.6372328					Longitude 104.1566847			NAD 83	

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	27	19S	28E		990	NORTH	100	EAST	EDDY
Latitude 32.6363153					Longitude 104.1561344			NAD 83	

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	28	19S	28E		990	NORTH	100	WEST	EDDY
Latitude 32.6361191					Longitude 104.1893088			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

☒ NO

Is this well an infill well?

☒ YES

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

API # 30-015-46768		
Operator Name: COLGATE OPERATING, LLC	Property Name: WEAVER 27 STATE COM	Well Number 131H

KZ 06/29/2018

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

GAS CAPTURE PLAN

Date: 3/9/2020

☒ 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 #121H	30-015-46803	A-27-19S-28E	0655N 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 5100' 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

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 APD Comments

Permit 278979

PERMIT COMMENTS

Operator Name and Address: COLGATE OPERATING, LLC [371449] 306 W Wall Street Midland, TX 79701		API Number: 30-015-46803
		Well: WEAVER 27 STATE COM #121H
Created By	Comment	Comment Date

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 APD Conditions
Permit 278979

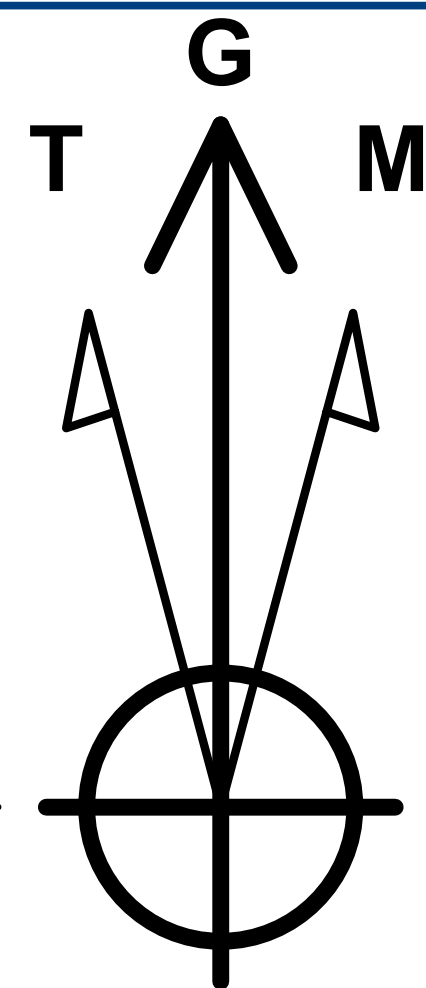
PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: COLGATE OPERATING, LLC [371449] 306 W Wall Street Midland, TX 79701		API Number: 30-015-46803
		Well: WEAVER 27 STATE COM #121H
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	
ksimmons	Operator must notify operator(s) of other well(s) in same quarter-quarter section before both drilling and completing well.	



WELL DETAILS: Weaver 27 State Com 121H

Northing 595601.37 Easting 595714.41 Latitude 32.63723277 Longitude -104.15668467 Slot 121H



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

Magnetic Field
Strength: 47815.3snT
Dip Angle: 60.23°
Date: 2/17/2020
Model: IGRF2020

PROJECT DETAILS: Eddy County, NM (N83-NME)
Well Name: Weaver 27 State Com 121H
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: 3358+25 @ 3383.00usft
Elevation: 3358.00

Site: Weaver 27 State Com
Well: Weaver 27 State Com 121H
Wellbore: 121H
Plan: Plan #1

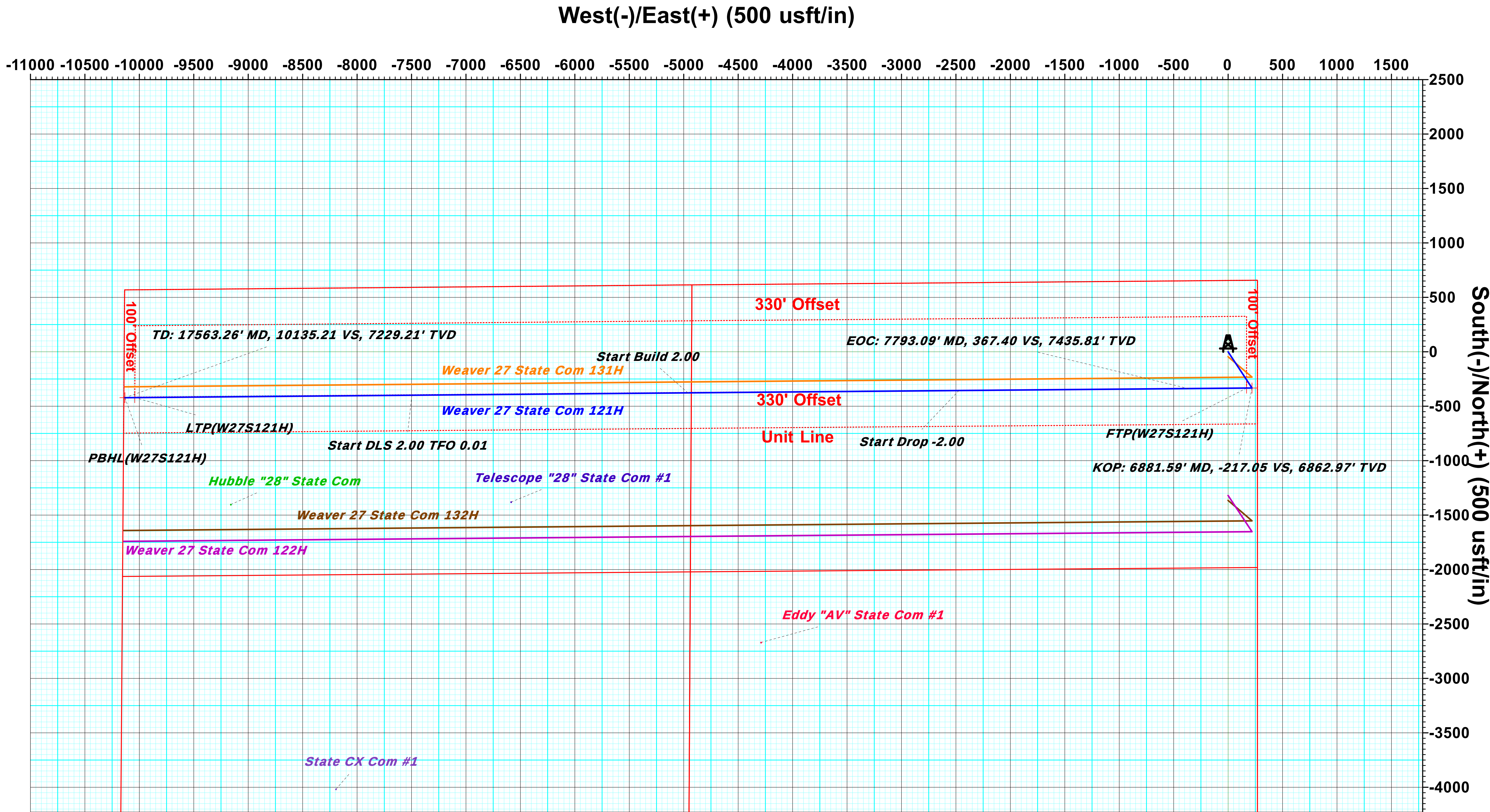
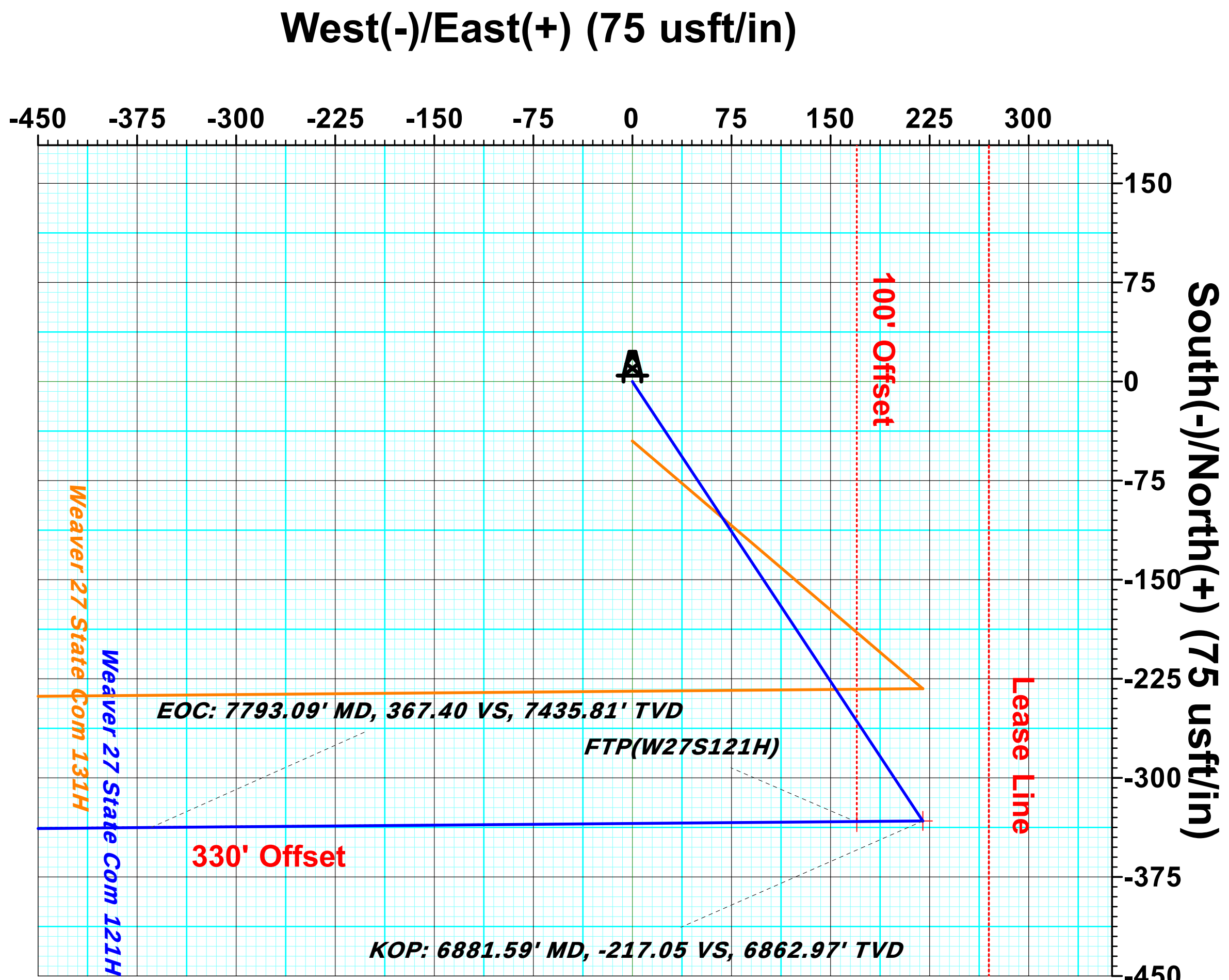
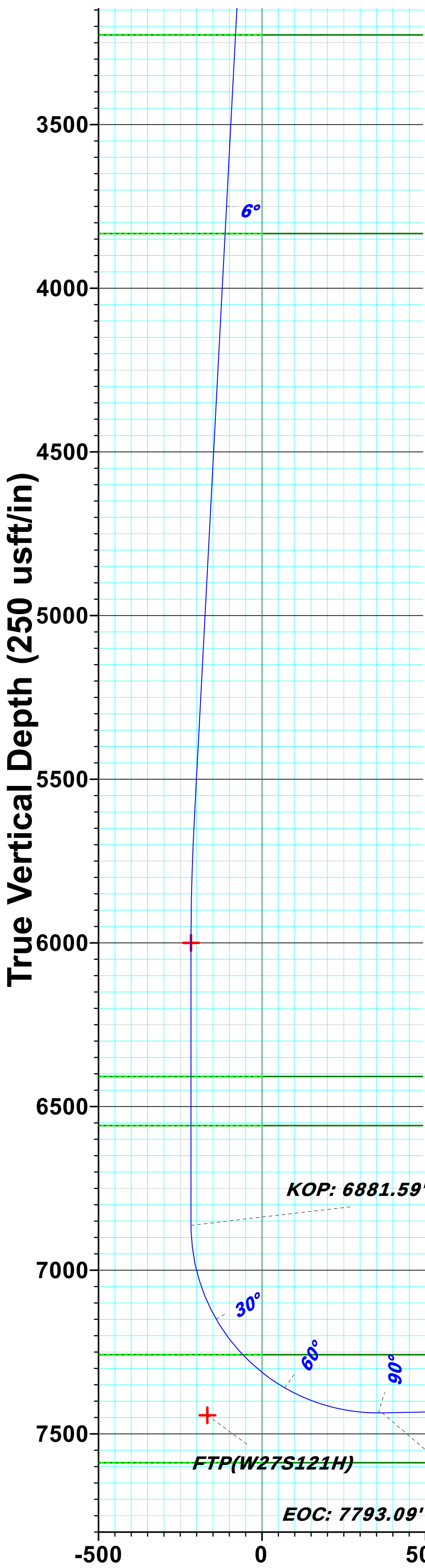
Section Details

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	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00
3	1867.42	5.51	146.53	1866.85	-14.73	9.74	1.50	146.53	-9.61
4	5651.21	5.51	146.53	5633.15	-317.86	210.17	0.00	0.00	-207.44
5	6018.62	0.00	0.00	6000.00	-332.59	219.91	1.50	180.00	-217.05
6	6881.59	0.00	0.00	6862.97	-332.59	219.91	0.00	0.00	-217.05
7	7793.09	91.15	269.51	7435.81	-337.59	-364.53	10.00	269.51	367.40
8	9901.12	91.15	269.51	7393.50	-355.61	-2472.05	0.00	0.00	2475.00
9	9924.12	90.69	269.51	7393.14	-355.81	-2495.05	2.00	180.00	2498.00
10	12391.30	90.69	269.51	7363.42	-376.91	-4961.96	0.00	0.00	4965.00
11	12425.30	91.37	269.51	7362.81	-377.20	-4995.95	2.00	0.00	4998.99
12	14927.02	91.37	269.51	7303.00	-398.59	-7496.87	0.00	0.00	7500.00
13	14938.74	91.60	269.51	7302.70	-398.69	-7508.59	2.00	0.01	7511.72
14	17563.26	91.60	269.51	7229.21	-421.12	-10131.98	0.00	0.00	10135.21

TVDPath	MDPath	Formation
160.00	160.00	Rustler
268.00	268.00	Top of Salt
600.00	600.00	Base of Salt
837.00	837.00	Yates
2103.00	2104.66	Capitan
2606.00	2610.00	DLWR Mnt. Group
3226.00	3232.88	Lower Brushy Canyon
3833.00	3842.70	Bone Spring Lime
6408.00	6426.62	1st Bone Spring SD
6558.00	6576.62	2nd Bone Spring LM
7258.00	7317.47	2nd Bone Spring SD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
EON(W27S121H)	6000.00	-332.59	219.91	595268.78	595934.32	32.63631756	-104.15597209
FTP(W27S121H)	7443.00	-333.49	169.93	595267.88	595884.34	32.63631532	-104.15613445
LTP(W27S121H)	7231.73	-420.32	-10042.00	595181.05	585672.41	32.63611908	-104.18930883
PBHL(W27S121H)	7229.21	-421.12	-10131.98	595180.25	585582.43	32.63611722	-104.18960114





Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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 121H - Slot 121H					
Well Position	+N/-S	1,364.69 usft	Northing:	595,601.37 usft	Latitude:	32.63723276
	+E/-W	0.09 usft	Easting:	595,714.41 usft	Longitude:	-104.15668467
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,358.00 usft

Wellbore	121H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/17/2020	7.00	60.23	47,815.31015775

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	2/17/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,562.81 Plan #1 (121H)	OWSG MWD Rev 4		
			OWSG MWD - Standard		



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,867.42	5.51	146.53	1,866.85	-14.73	9.74	1.50	1.50	0.00	146.53	
5,651.21	5.51	146.53	5,633.15	-317.86	210.17	0.00	0.00	0.00	0.00	
6,018.62	0.00	0.00	6,000.00	-332.59	219.91	1.50	-1.50	0.00	180.00	EON(W27S121H)
6,881.59	0.00	0.00	6,862.97	-332.59	219.91	0.00	0.00	0.00	0.00	
7,793.09	91.15	269.51	7,435.81	-337.59	-364.53	10.00	10.00	0.00	269.51	
9,901.12	91.15	269.51	7,393.50	-355.61	-2,472.05	0.00	0.00	0.00	0.00	
9,924.12	90.69	269.51	7,393.14	-355.81	-2,495.05	2.00	-2.00	0.00	180.00	
12,391.30	90.69	269.51	7,363.42	-376.91	-4,961.96	0.00	0.00	0.00	0.00	
12,425.30	91.37	269.51	7,362.81	-377.20	-4,995.95	2.00	2.00	0.00	0.00	
14,927.02	91.37	269.51	7,303.00	-398.59	-7,496.87	0.00	0.00	0.00	0.00	
14,938.74	91.60	269.51	7,302.70	-398.69	-7,508.59	2.00	2.00	0.00	0.01	
17,563.26	91.60	269.51	7,229.21	-421.12	-10,131.98	0.00	0.00	0.00	0.00	PBHL(W27S121H)



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
160.00	0.00	0.00	160.00	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
268.00	0.00	0.00	268.00	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
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
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
837.00	0.00	0.00	837.00	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	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	1.50	146.53	1,599.99	-1.09	0.72	-0.71	1.50	1.50	0.00
1,700.00	3.00	146.53	1,699.91	-4.37	2.89	-2.85	1.50	1.50	0.00
1,800.00	4.50	146.53	1,799.69	-9.82	6.49	-6.41	1.50	1.50	0.00
1,867.42	5.51	146.53	1,866.85	-14.73	9.74	-9.61	1.50	1.50	0.00
1,900.00	5.51	146.53	1,899.28	-17.34	11.46	-11.32	0.00	0.00	0.00
2,000.00	5.51	146.53	1,998.82	-25.35	16.76	-16.54	0.00	0.00	0.00
2,100.00	5.51	146.53	2,098.36	-33.36	22.06	-21.77	0.00	0.00	0.00
2,104.66	5.51	146.53	2,103.00	-33.74	22.31	-22.02	0.00	0.00	0.00
Capitan									
2,200.00	5.51	146.53	2,197.90	-41.37	27.36	-27.00	0.00	0.00	0.00
2,300.00	5.51	146.53	2,297.43	-49.38	32.65	-32.23	0.00	0.00	0.00
2,400.00	5.51	146.53	2,396.97	-57.40	37.95	-37.46	0.00	0.00	0.00
2,500.00	5.51	146.53	2,496.51	-65.41	43.25	-42.69	0.00	0.00	0.00
2,600.00	5.51	146.53	2,596.05	-73.42	48.54	-47.91	0.00	0.00	0.00
2,610.00	5.51	146.53	2,606.00	-74.22	49.07	-48.44	0.00	0.00	0.00
DLWR Mnt. Group									
2,700.00	5.51	146.53	2,695.58	-81.43	53.84	-53.14	0.00	0.00	0.00
2,800.00	5.51	146.53	2,795.12	-89.44	59.14	-58.37	0.00	0.00	0.00
2,900.00	5.51	146.53	2,894.66	-97.45	64.43	-63.60	0.00	0.00	0.00
3,000.00	5.51	146.53	2,994.20	-105.46	69.73	-68.83	0.00	0.00	0.00
3,100.00	5.51	146.53	3,093.74	-113.48	75.03	-74.06	0.00	0.00	0.00
3,200.00	5.51	146.53	3,193.27	-121.49	80.33	-79.28	0.00	0.00	0.00
3,232.88	5.51	146.53	3,226.00	-124.12	82.07	-81.00	0.00	0.00	0.00
Lower Brushy Canyon									
3,300.00	5.51	146.53	3,292.81	-129.50	85.62	-84.51	0.00	0.00	0.00
3,400.00	5.51	146.53	3,392.35	-137.51	90.92	-89.74	0.00	0.00	0.00
3,500.00	5.51	146.53	3,491.89	-145.52	96.22	-94.97	0.00	0.00	0.00
3,600.00	5.51	146.53	3,591.42	-153.53	101.51	-100.20	0.00	0.00	0.00
3,700.00	5.51	146.53	3,690.96	-161.54	106.81	-105.43	0.00	0.00	0.00
3,800.00	5.51	146.53	3,790.50	-169.55	112.11	-110.65	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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)	
3,842.70	5.51	146.53	3,833.00	-172.98	114.37	-112.89	0.00	0.00	0.00	
Bone Spring Lime										
3,900.00	5.51	146.53	3,890.04	-177.57	117.41	-115.88	0.00	0.00	0.00	
4,000.00	5.51	146.53	3,989.58	-185.58	122.70	-121.11	0.00	0.00	0.00	
4,100.00	5.51	146.53	4,089.11	-193.59	128.00	-126.34	0.00	0.00	0.00	
4,200.00	5.51	146.53	4,188.65	-201.60	133.30	-131.57	0.00	0.00	0.00	
4,300.00	5.51	146.53	4,288.19	-209.61	138.59	-136.80	0.00	0.00	0.00	
4,400.00	5.51	146.53	4,387.73	-217.62	143.89	-142.02	0.00	0.00	0.00	
4,500.00	5.51	146.53	4,487.26	-225.63	149.19	-147.25	0.00	0.00	0.00	
4,600.00	5.51	146.53	4,586.80	-233.65	154.48	-152.48	0.00	0.00	0.00	
4,700.00	5.51	146.53	4,686.34	-241.66	159.78	-157.71	0.00	0.00	0.00	
4,800.00	5.51	146.53	4,785.88	-249.67	165.08	-162.94	0.00	0.00	0.00	
4,900.00	5.51	146.53	4,885.42	-257.68	170.38	-168.17	0.00	0.00	0.00	
5,000.00	5.51	146.53	4,984.95	-265.69	175.67	-173.39	0.00	0.00	0.00	
5,100.00	5.51	146.53	5,084.49	-273.70	180.97	-178.62	0.00	0.00	0.00	
5,200.00	5.51	146.53	5,184.03	-281.71	186.27	-183.85	0.00	0.00	0.00	
5,300.00	5.51	146.53	5,283.57	-289.72	191.56	-189.08	0.00	0.00	0.00	
5,400.00	5.51	146.53	5,383.10	-297.74	196.86	-194.31	0.00	0.00	0.00	
5,500.00	5.51	146.53	5,482.64	-305.75	202.16	-199.54	0.00	0.00	0.00	
5,600.00	5.51	146.53	5,582.18	-313.76	207.45	-204.76	0.00	0.00	0.00	
5,651.21	5.51	146.53	5,633.15	-317.86	210.17	-207.44	0.00	0.00	0.00	
5,700.00	4.78	146.53	5,681.75	-321.51	212.58	-209.82	1.50	-1.50	0.00	
5,800.00	3.28	146.53	5,781.50	-327.37	216.46	-213.65	1.50	-1.50	0.00	
5,900.00	1.78	146.53	5,881.40	-331.05	218.89	-216.05	1.50	-1.50	0.00	
6,000.00	0.28	146.53	5,981.38	-332.55	219.88	-217.03	1.50	-1.50	0.00	
6,018.62	0.00	0.00	6,000.00	-332.59	219.91	-217.05	1.50	-1.50	0.00	
EON(W27S121H)										
6,100.00	0.00	0.00	6,081.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,181.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,281.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,381.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,426.62	0.00	0.00	6,408.00	-332.59	219.91	-217.05	0.00	0.00	0.00	
1st Bone Spring SD										
6,500.00	0.00	0.00	6,481.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,576.62	0.00	0.00	6,558.00	-332.59	219.91	-217.05	0.00	0.00	0.00	
2nd Bone Spring LM										
6,600.00	0.00	0.00	6,581.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,681.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,781.38	-332.59	219.91	-217.05	0.00	0.00	0.00	
6,881.59	0.00	0.00	6,862.97	-332.59	219.91	-217.05	0.00	0.00	0.00	
KOP: 6881.59' MD, -217.05 VS, 6862.97' TVD										
6,900.00	1.84	269.51	6,881.37	-332.59	219.61	-216.76	10.00	10.00	0.00	
6,950.00	6.84	269.51	6,931.21	-332.62	215.83	-212.97	10.00	10.00	0.00	
7,000.00	11.84	269.51	6,980.54	-332.69	207.72	-204.86	10.00	10.00	0.00	
7,050.00	16.84	269.51	7,028.96	-332.80	195.34	-192.48	10.00	10.00	0.00	
7,100.00	21.84	269.51	7,076.13	-332.94	178.78	-175.93	10.00	10.00	0.00	
7,150.00	26.84	269.51	7,121.67	-333.12	158.18	-155.33	10.00	10.00	0.00	
7,200.00	31.84	269.51	7,165.24	-333.33	133.69	-130.83	10.00	10.00	0.00	
7,250.00	36.84	269.51	7,206.51	-333.57	105.49	-102.64	10.00	10.00	0.00	
7,300.00	41.84	269.51	7,245.17	-333.84	73.81	-70.95	10.00	10.00	0.00	
7,317.47	43.59	269.51	7,258.00	-333.94	61.96	-59.10	10.00	10.00	0.00	
2nd Bone Spring SD										
7,350.00	46.84	269.51	7,280.92	-334.14	38.88	-36.02	10.00	10.00	0.00	



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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)
7,356.19	47.46	269.51	7,285.13	-334.18	34.34	-31.48	10.00	10.00	0.00
FTP(W27S121H)									
7,400.00	51.84	269.51	7,313.48	-334.46	0.96	1.90	10.00	10.00	0.00
7,450.00	56.84	269.51	7,342.62	-334.81	-39.65	42.51	10.00	10.00	0.00
7,500.00	61.84	269.51	7,368.11	-335.18	-82.65	85.51	10.00	10.00	0.00
7,550.00	66.84	269.51	7,389.76	-335.56	-127.70	130.57	10.00	10.00	0.00
7,600.00	71.84	269.51	7,407.39	-335.96	-174.47	177.34	10.00	10.00	0.00
7,650.00	76.84	269.51	7,420.88	-336.37	-222.60	225.46	10.00	10.00	0.00
7,700.00	81.84	269.51	7,430.13	-336.79	-271.72	274.59	10.00	10.00	0.00
7,750.00	86.84	269.51	7,435.06	-337.22	-321.45	324.33	10.00	10.00	0.00
7,793.09	91.15	269.51	7,435.81	-337.59	-364.53	367.40	10.00	10.00	0.00
EOC: 7793.09' MD, 367.40 VS, 7435.81' TVD									
7,800.00	91.15	269.51	7,435.67	-337.65	-371.43	374.31	0.01	0.01	0.00
7,900.00	91.15	269.51	7,433.67	-338.50	-471.41	474.29	0.00	0.00	0.00
8,000.00	91.15	269.51	7,431.66	-339.36	-571.39	574.27	0.00	0.00	0.00
8,100.00	91.15	269.51	7,429.65	-340.21	-671.36	674.25	0.00	0.00	0.00
8,200.00	91.15	269.51	7,427.65	-341.07	-771.34	774.23	0.00	0.00	0.00
8,300.00	91.15	269.51	7,425.64	-341.92	-871.32	874.21	0.00	0.00	0.00
8,400.00	91.15	269.51	7,423.63	-342.78	-971.29	974.19	0.00	0.00	0.00
8,500.00	91.15	269.51	7,421.62	-343.63	-1,071.27	1,074.17	0.00	0.00	0.00
8,600.00	91.15	269.51	7,419.62	-344.49	-1,171.24	1,174.15	0.00	0.00	0.00
8,700.00	91.15	269.51	7,417.61	-345.34	-1,271.22	1,274.13	0.00	0.00	0.00
8,800.00	91.15	269.51	7,415.60	-346.20	-1,371.20	1,374.11	0.00	0.00	0.00
8,900.00	91.15	269.51	7,413.60	-347.05	-1,471.17	1,474.09	0.00	0.00	0.00
9,000.00	91.15	269.51	7,411.59	-347.91	-1,571.15	1,574.07	0.00	0.00	0.00
9,100.00	91.15	269.51	7,409.58	-348.76	-1,671.12	1,674.05	0.00	0.00	0.00
9,200.00	91.15	269.51	7,407.58	-349.62	-1,771.10	1,774.03	0.00	0.00	0.00
9,300.00	91.15	269.51	7,405.57	-350.47	-1,871.08	1,874.01	0.00	0.00	0.00
9,400.00	91.15	269.51	7,403.56	-351.33	-1,971.05	1,973.99	0.00	0.00	0.00
9,500.00	91.15	269.51	7,401.56	-352.18	-2,071.03	2,073.97	0.00	0.00	0.00
9,600.00	91.15	269.51	7,399.55	-353.04	-2,171.01	2,173.95	0.00	0.00	0.00
9,700.00	91.15	269.51	7,397.54	-353.89	-2,270.98	2,273.93	0.00	0.00	0.00
9,800.00	91.15	269.51	7,395.53	-354.75	-2,370.96	2,373.91	0.00	0.00	0.00
9,901.12	91.15	269.51	7,393.50	-355.61	-2,472.05	2,475.00	0.00	0.00	0.00
Start Drop -2.00									
9,924.12	90.69	269.51	7,393.14	-355.81	-2,495.05	2,498.00	2.00	-2.00	0.00
10,000.00	90.69	269.51	7,392.22	-356.46	-2,570.92	2,573.88	0.00	0.00	0.00
10,100.00	90.69	269.51	7,391.02	-357.31	-2,670.91	2,673.87	0.00	0.00	0.00
10,200.00	90.69	269.51	7,389.81	-358.17	-2,770.90	2,773.86	0.00	0.00	0.00
10,300.00	90.69	269.51	7,388.61	-359.02	-2,870.89	2,873.85	0.00	0.00	0.00
10,400.00	90.69	269.51	7,387.40	-359.88	-2,970.88	2,973.85	0.00	0.00	0.00
10,500.00	90.69	269.51	7,386.20	-360.73	-3,070.87	3,073.84	0.00	0.00	0.00
10,600.00	90.69	269.51	7,385.00	-361.59	-3,170.86	3,173.83	0.00	0.00	0.00
10,700.00	90.69	269.51	7,383.79	-362.44	-3,270.85	3,273.83	0.00	0.00	0.00
10,800.00	90.69	269.51	7,382.59	-363.30	-3,370.83	3,373.82	0.00	0.00	0.00
10,900.00	90.69	269.51	7,381.38	-364.15	-3,470.82	3,473.81	0.00	0.00	0.00
11,000.00	90.69	269.51	7,380.18	-365.01	-3,570.81	3,573.80	0.00	0.00	0.00
11,100.00	90.69	269.51	7,378.97	-365.86	-3,670.80	3,673.80	0.00	0.00	0.00
11,200.00	90.69	269.51	7,377.77	-366.72	-3,770.79	3,773.79	0.00	0.00	0.00
11,300.00	90.69	269.51	7,376.57	-367.57	-3,870.78	3,873.78	0.00	0.00	0.00
11,400.00	90.69	269.51	7,375.36	-368.43	-3,970.77	3,973.77	0.00	0.00	0.00
11,500.00	90.69	269.51	7,374.16	-369.29	-4,070.76	4,073.77	0.00	0.00	0.00
11,600.00	90.69	269.51	7,372.95	-370.14	-4,170.75	4,173.76	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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)
11,700.00	90.69	269.51	7,371.75	-371.00	-4,270.74	4,273.75	0.00	0.00	0.00
11,800.00	90.69	269.51	7,370.55	-371.85	-4,370.73	4,373.75	0.00	0.00	0.00
11,900.00	90.69	269.51	7,369.34	-372.71	-4,470.71	4,473.74	0.00	0.00	0.00
12,000.00	90.69	269.51	7,368.14	-373.56	-4,570.70	4,573.73	0.00	0.00	0.00
12,100.00	90.69	269.51	7,366.93	-374.42	-4,670.69	4,673.72	0.00	0.00	0.00
12,200.00	90.69	269.51	7,365.73	-375.27	-4,770.68	4,773.72	0.00	0.00	0.00
12,300.00	90.69	269.51	7,364.52	-376.13	-4,870.67	4,873.71	0.00	0.00	0.00
12,391.30	90.69	269.51	7,363.42	-376.91	-4,961.96	4,965.00	0.00	0.00	0.00
Start Build 2.00									
12,400.00	90.86	269.51	7,363.31	-376.98	-4,970.66	4,973.70	2.00	2.00	0.00
12,425.30	91.37	269.51	7,362.81	-377.20	-4,995.95	4,998.99	2.00	2.00	0.00
12,500.00	91.37	269.51	7,361.03	-377.84	-5,070.63	5,073.68	0.00	0.00	0.00
12,600.00	91.37	269.51	7,358.64	-378.69	-5,170.60	5,173.65	0.00	0.00	0.00
12,700.00	91.37	269.51	7,356.25	-379.55	-5,270.57	5,273.62	0.00	0.00	0.00
12,800.00	91.37	269.51	7,353.85	-380.40	-5,370.53	5,373.59	0.00	0.00	0.00
12,900.00	91.37	269.51	7,351.46	-381.26	-5,470.50	5,473.56	0.00	0.00	0.00
13,000.00	91.37	269.51	7,349.07	-382.11	-5,570.47	5,573.53	0.00	0.00	0.00
13,100.00	91.37	269.51	7,346.68	-382.97	-5,670.44	5,673.50	0.00	0.00	0.00
13,200.00	91.37	269.51	7,344.29	-383.82	-5,770.40	5,773.48	0.00	0.00	0.00
13,300.00	91.37	269.51	7,341.90	-384.68	-5,870.37	5,873.45	0.00	0.00	0.00
13,400.00	91.37	269.51	7,339.51	-385.53	-5,970.34	5,973.42	0.00	0.00	0.00
13,500.00	91.37	269.51	7,337.12	-386.39	-6,070.31	6,073.39	0.00	0.00	0.00
13,600.00	91.37	269.51	7,334.73	-387.24	-6,170.28	6,173.36	0.00	0.00	0.00
13,700.00	91.37	269.51	7,332.34	-388.10	-6,270.24	6,273.33	0.00	0.00	0.00
13,800.00	91.37	269.51	7,329.95	-388.95	-6,370.21	6,373.30	0.00	0.00	0.00
13,900.00	91.37	269.51	7,327.55	-389.81	-6,470.18	6,473.28	0.00	0.00	0.00
14,000.00	91.37	269.51	7,325.16	-390.66	-6,570.15	6,573.25	0.00	0.00	0.00
14,100.00	91.37	269.51	7,322.77	-391.52	-6,670.11	6,673.22	0.00	0.00	0.00
14,200.00	91.37	269.51	7,320.38	-392.37	-6,770.08	6,773.19	0.00	0.00	0.00
14,300.00	91.37	269.51	7,317.99	-393.23	-6,870.05	6,873.16	0.00	0.00	0.00
14,400.00	91.37	269.51	7,315.60	-394.08	-6,970.02	6,973.13	0.00	0.00	0.00
14,500.00	91.37	269.51	7,313.21	-394.94	-7,069.99	7,073.10	0.00	0.00	0.00
14,600.00	91.37	269.51	7,310.82	-395.79	-7,169.95	7,173.08	0.00	0.00	0.00
14,700.00	91.37	269.51	7,308.43	-396.65	-7,269.92	7,273.05	0.00	0.00	0.00
14,800.00	91.37	269.51	7,306.04	-397.50	-7,369.89	7,373.02	0.00	0.00	0.00
14,900.00	91.37	269.51	7,303.65	-398.36	-7,469.86	7,472.99	0.00	0.00	0.00
14,927.02	91.37	269.51	7,303.00	-398.59	-7,496.87	7,500.00	0.00	0.00	0.00
Start DLS 2.00 TFO 0.01									
14,938.74	91.60	269.51	7,302.70	-398.69	-7,508.59	7,511.72	2.00	2.00	0.00
15,000.00	91.60	269.51	7,300.98	-399.21	-7,569.82	7,572.95	0.00	0.00	0.00
15,100.00	91.60	269.51	7,298.18	-400.06	-7,669.77	7,672.92	0.00	0.00	0.00
15,200.00	91.60	269.51	7,295.38	-400.92	-7,769.73	7,772.88	0.00	0.00	0.00
15,300.00	91.60	269.51	7,292.58	-401.77	-7,869.69	7,872.84	0.00	0.00	0.00
15,400.00	91.60	269.51	7,289.78	-402.63	-7,969.65	7,972.80	0.00	0.00	0.00
15,500.00	91.60	269.51	7,286.98	-403.48	-8,069.60	8,072.76	0.00	0.00	0.00
15,600.00	91.60	269.51	7,284.18	-404.34	-8,169.56	8,172.72	0.00	0.00	0.00
15,700.00	91.60	269.51	7,281.38	-405.19	-8,269.52	8,272.68	0.00	0.00	0.00
15,800.00	91.60	269.51	7,278.58	-406.05	-8,369.47	8,372.64	0.00	0.00	0.00
15,900.00	91.60	269.51	7,275.78	-406.90	-8,469.43	8,472.60	0.00	0.00	0.00
16,000.00	91.60	269.51	7,272.98	-407.76	-8,569.39	8,572.56	0.00	0.00	0.00
16,100.00	91.60	269.51	7,270.18	-408.61	-8,669.35	8,672.52	0.00	0.00	0.00
16,200.00	91.60	269.51	7,267.38	-409.47	-8,769.30	8,772.48	0.00	0.00	0.00
16,300.00	91.60	269.51	7,264.58	-410.32	-8,869.26	8,872.44	0.00	0.00	0.00
16,400.00	91.60	269.51	7,261.78	-411.18	-8,969.22	8,972.41	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
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)
16,500.00	91.60	269.51	7,258.98	-412.03	-9,069.17	9,072.37	0.00	0.00	0.00
16,600.00	91.60	269.51	7,256.18	-412.89	-9,169.13	9,172.33	0.00	0.00	0.00
16,700.00	91.60	269.51	7,253.38	-413.74	-9,269.09	9,272.29	0.00	0.00	0.00
16,800.00	91.60	269.51	7,250.58	-414.60	-9,369.05	9,372.25	0.00	0.00	0.00
16,900.00	91.60	269.51	7,247.78	-415.45	-9,469.00	9,472.21	0.00	0.00	0.00
17,000.00	91.60	269.51	7,244.98	-416.31	-9,568.96	9,572.17	0.00	0.00	0.00
17,100.00	91.60	269.51	7,242.18	-417.16	-9,668.92	9,672.13	0.00	0.00	0.00
17,200.00	91.60	269.51	7,239.38	-418.01	-9,768.87	9,772.09	0.00	0.00	0.00
17,300.00	91.60	269.51	7,236.58	-418.87	-9,868.83	9,872.05	0.00	0.00	0.00
17,400.00	91.60	269.51	7,233.78	-419.72	-9,968.79	9,972.01	0.00	0.00	0.00
17,473.24	91.60	269.51	7,231.73	-420.35	-10,042.00	10,045.23	0.00	0.00	0.00
LTP(W27S121H)									
17,500.00	91.60	269.51	7,230.98	-420.58	-10,068.75	10,071.97	0.00	0.00	0.00
17,562.26	91.60	269.51	7,229.24	-421.11	-10,130.98	10,134.21	0.00	0.00	0.00
TD: 17563.26' MD, 10135.21 VS, 7229.21' TVD									
17,563.26	91.60	269.51	7,229.21	-421.12	-10,131.98	10,135.21	0.00	0.00	0.00
PBHL(W27S121H)									

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
EON(W27S121H) - plan hits target center - Point	0.00	0.00	6,000.00	-332.59	219.91	595,268.78	595,934.32	32.63631756	-104.15597209
PBHL(W27S121H) - plan hits target center - Point	0.00	0.00	7,229.21	-421.12	-10,131.98	595,180.25	585,582.43	32.63611722	-104.18960114
LTP(W27S121H) - plan misses target center by 0.03usft at 17473.24usft MD (7231.73 TVD, -420.35 N, -10042.00 E) - Point	0.00	0.00	7,231.73	-420.32	-10,042.00	595,181.05	585,672.41	32.63611908	-104.18930884
FTP(W27S121H) - plan misses target center by 208.11usft at 7356.19usft MD (7285.13 TVD, -334.18 N, 34.34 E) - Point	0.00	0.01	7,443.00	-333.49	169.93	595,267.88	595,884.34	32.63631532	-104.15613445



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Weaver 27 State Com 121H - Slot 121H
Company:	Colgate Energy	TVD Reference:	3358+25 @ 3383.00usft
Project:	Eddy County, NM (N83-NME)	MD Reference:	3358+25 @ 3383.00usft
Site:	Weaver 27 State Com	North Reference:	Grid
Well:	Weaver 27 State Com 121H	Survey Calculation Method:	Minimum Curvature
Wellbore:	121H		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
160.00	160.00	Rustler		0.00		
268.00	268.00	Top of Salt		0.00		
600.00	600.00	Base of Salt		0.00		
837.00	837.00	Yates		0.00		
2,104.66	2,103.00	Capitan		0.00		
2,610.00	2,606.00	DLWR Mnt. Group		0.00		
3,232.88	3,226.00	Lower Brushy Canyon		0.00		
3,842.70	3,833.00	Bone Spring Lime		0.00		
6,426.62	6,408.00	1st Bone Spring SD		0.00		
6,576.62	6,558.00	2nd Bone Spring LM		0.00		
7,317.47	7,258.00	2nd Bone Spring SD		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
6,881.59	6,862.97	-332.59	219.91	KOP: 6881.59' MD, -217.05 VS, 6862.97' TVD	
7,793.09	7,435.81	-337.59	-364.53	EOC: 7793.09' MD, 367.40 VS, 7435.81' TVD	
9,901.12	7,393.50	-355.61	-2,472.05	Start Drop -2.00	
12,391.30	7,363.42	-376.91	-4,961.96	Start Build 2.00	
14,927.02	7,303.00	-398.59	-7,496.87	Start DLS 2.00 TFO 0.01	
17,562.26	7,229.24	-421.11	-10,130.98	TD: 17563.26' MD, 10135.21 VS, 7229.21' TVD	