

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 286535

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

1. Operator Name and Address COLGATE OPERATING, LLC 300 North Marienfeld Street Midland, TX 79701		2. OGRID Number 371449
		3. API Number 30-015-47456
4. Property Code 329347	5. Property Name Rincon 22 State	6. Well No. 123H

7. Surface Location

UL - Lot L	Section 22	Township 19S	Range 28E	Lot Idn L	Feet From 1335	N/S Line S	Feet From 263	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot I	Section 22	Township 19S	Range 28E	Lot Idn I	Feet From 1650	N/S Line S	Feet From 10	E/W Line E	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 3397
16. Multiple N	17. Proposed Depth 12273	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date 11/1/2020
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	139	0
Int1	12.25	9.625	36	2790	778	0
Prod	8.75	5.5	20	12273	2474	2050

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	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.

Signature:

Printed Name: Electronically filed by Mikah Thomas

Title: Operations Tech

Email Address: mthomas@colgateenergy.com

Date: 9/16/2020

Phone: 432-695-4272

OIL CONSERVATION DIVISION

Approved By: Scott Cox

Title: Petroleum Engineer Supervisor

Approved Date: 9/29/2020

Expiration Date: 9/29/2022

Conditions of Approval Attached

DISTRICT I1825 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720**DISTRICT II**811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720**DISTRICT III**1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170**DISTRICT IV**1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 478-3460 Fax: (505) 478-3482State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 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 Rincon 22 State	⁶ Well Number 123H
⁷ GRID No. 371449	⁸ Operator Name Colgate Operating, LLC	⁹ Elevation 3397

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
L	22	19 S	28 E		1335	South	263	West	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
I	22	19 S	28 E		1650	South	10	East	Eddy

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code F	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

16

SURFACE LOCATION
NAD 83 NMSPC ZONE 3001
Y= 597553.14 N
X= 591051.49 E
LAT.= 32.6426180° N
LONG.= 104.1718229° W

SURFACE LOCATION
NAD 27 NMSPC ZONE 3001
Y= 597491.20 N
X= 549871.64 E
LAT.= 32.6425011° N
LONG.= 104.1713145° W

BOTTOM HOLE LOCATION
NAD 83 NMSPC ZONE 3001
Y= 597908.74 N
X= 595973.89 E
LAT.= 32.6435739° N
LONG.= 104.1558292° W

BOTTOM HOLE LOCATION
NAD 27 NMSPC ZONE 3001
Y= 597846.76 N
X= 554794.04 E
LAT.= 32.6434568° N
LONG.= 104.1553211° W

FIRST TAKE POINT
NAD 83 NMSPC ZONE 3001
1650' FSL, 100' FWL
SEC. 22, T19S, R28E
Y= 597867.22 N
X= 590888.21 E
LAT.= 32.6434820° N
LONG.= 104.1723518° W

FIRST TAKE POINT
NAD 27 NMSPC ZONE 3001
1650' FSL, 100' FWL
SEC. 22, T19S, R28E
Y= 597805.28 N
X= 549708.36 E
LAT.= 32.6433651° N
LONG.= 104.1718434° W

LAST TAKE POINT
NAD 83 NMSPC ZONE 3001
1650' FSL, 100' FEL
SEC. 22, T19S, R28E
Y= 597907.99 N
X= 595883.89 E
LAT.= 32.6435722° N
LONG.= 104.1561216° W

LAST TAKE POINT
NAD 27 NMSPC ZONE 3001
1650' FSL, 100' FEL
SEC. 22, T19S, R28E
Y= 597846.01 N
X= 554704.04 E
LAT.= 32.6434551° N
LONG.= 104.1556135° W

Legend:

- = Surface Location
- = Bottom Hole Location
- △ = First Take Point (FTP)
- = Last Take Point (LTP)
- ⊙ = Found 1941 USGLO Brass Cap

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.

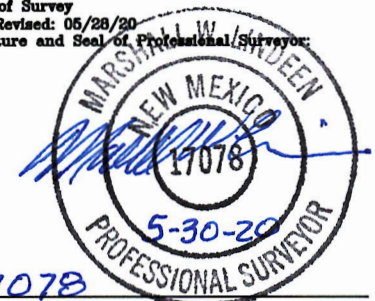
[Signature] 09.08.2020
Signature Date
Mikah Thomas
Printed Name
mthomas@colgateenergy.com
E-mail Address

18 SURVEYOR CERTIFICATION

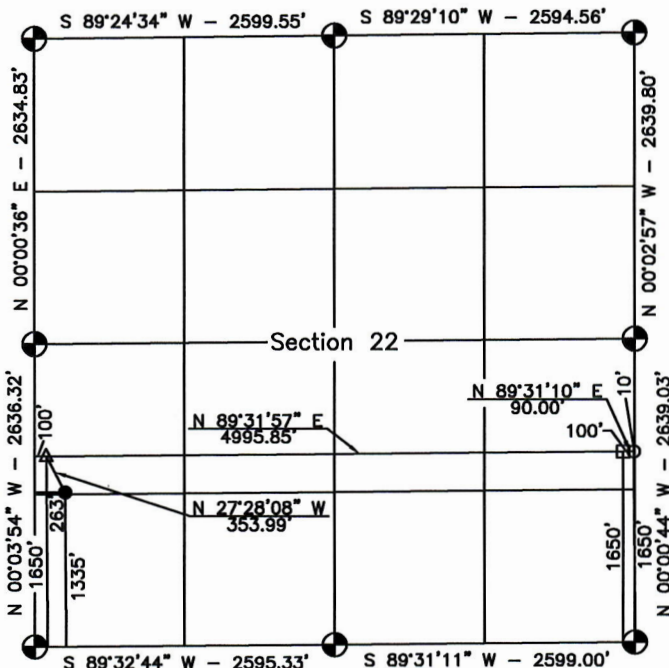
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

1/27/20

Date of Survey
Plat Revised: 06/28/20
Signature and Seal of Professional Surveyor:



17078
Certificate Number



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GAS CAPTURE PLAN

Date: 9/29/2020

☒ 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
Rincon 22 State #123H	30-015-47456	L-22-19S-28E	1335S 0263W	500	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 LM Touchdown LLC and will be connected to LM Touchdown LLC High/Low Pressure gathering system located in Eddy County, New Mexico. It will require 10' of pipeline to connect the facility to High/Low Pressure gathering system. COLGATE OPERATING, LLC provides (periodically) to LM Touchdown LLC 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 LM Touchdown LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at LM Touchdown LLC Processing Plant located in Sec. 22, 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 LM Touchdown LLC 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 286535

PERMIT COMMENTS

Operator Name and Address: COLGATE OPERATING, LLC [371449] 300 North Marienfeld Street Midland, TX 79701		API Number: 30-015-47456
		Well: Rincon 22 State #123H

Created By	Comment	Comment Date
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Form APD Conditions

Permit 286535

PERMIT CONDITIONS OF APPROVAL

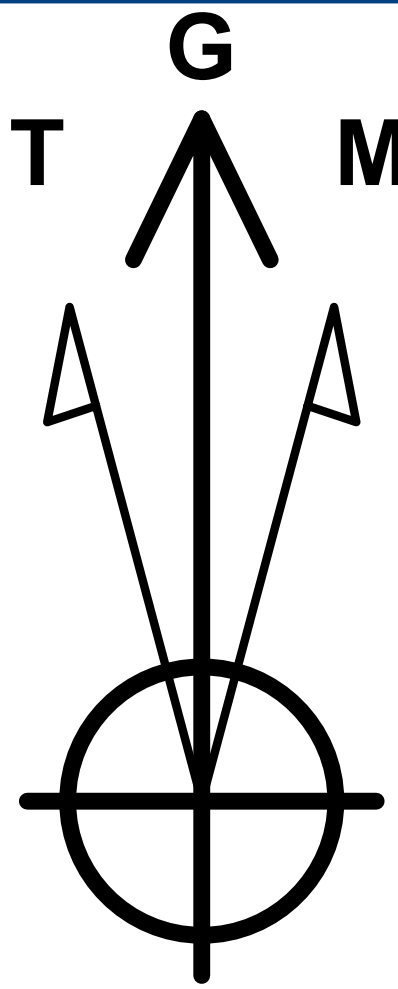
Operator Name and Address: COLGATE OPERATING, LLC [371449] 300 North Marienfeld Street Midland, TX 79701	API Number: 30-015-47456
	Well: Rincon 22 State #123H

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
kpickford	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
kpickford	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.
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days



WELL DETAILS: Rincon 22 State 123H

Northing	Easting	Latitude	Longitude
597553.14	591051.49	32.64261802	-104.17182292



Azimuths to Grid North
True North: -0.09°
Magnetic North: 6.89°

Magnetic Field
Strength: 47790.5snT
Dip Angle: 60.23°
Date: 5/19/2020
Model: IGRF2020

PROJECT DETAILS: Eddy County, NM (N83-NME)
Well Name: Rincon 22 State 123H
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: RKB @ 3423.00usft (Permit)
Elevation: 3397.00

Site: Rincon 22 State
Well: Rincon 22 State 123H
Wellbore: 123H
Plan: Plan #2

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	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00
3	2341.49	8.12	325.79	2339.68	31.69	-21.54	1.50	325.79	-21.28
4	4483.62	8.12	325.79	4460.32	281.98	-191.70	0.00	0.00	-189.38
5	5025.11	0.00	0.00	5000.00	313.67	-213.24	1.50	180.00	-210.66
6	6810.25	0.00	0.00	6785.14	313.67	-213.24	0.00	0.00	-210.66
7	7702.25	89.20	89.53	7358.04	318.30	351.70	10.00	89.53	354.30
8	9848.16	89.20	89.53	7388.00	335.91	2497.33	0.00	0.00	2500.00
9	9871.28	88.74	89.53	7388.42	336.09	2520.44	2.00	179.42	2523.11
10	12273.90	88.74	89.53	7441.35	355.60	4922.40	0.00	0.00	4925.15

FORMATION TOP DETAILS

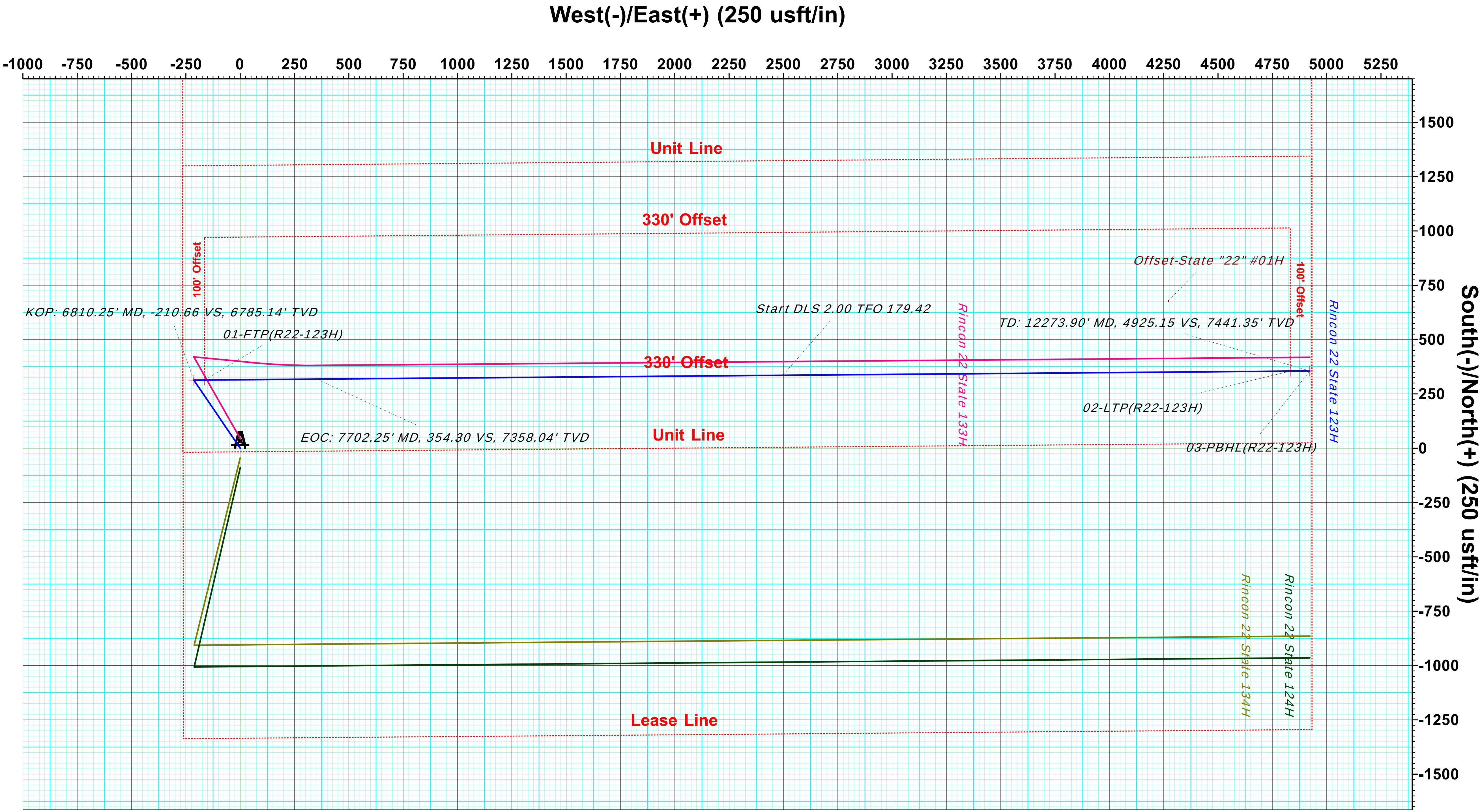
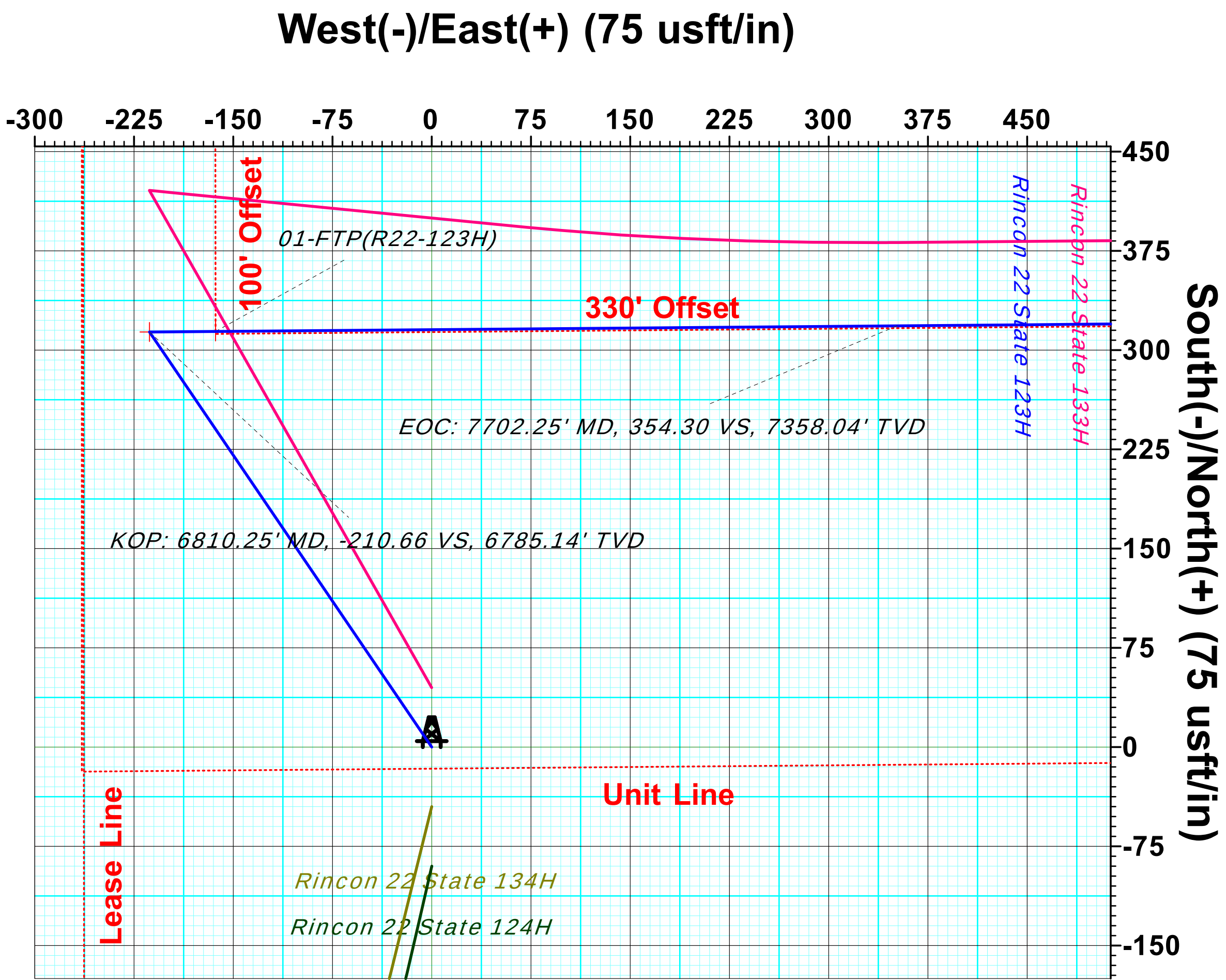
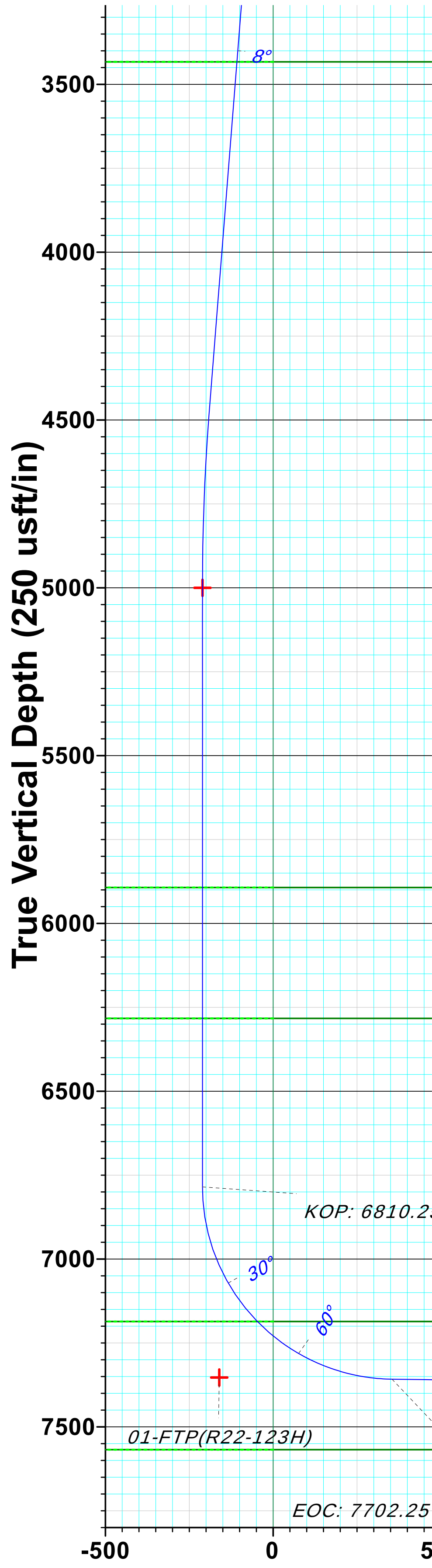
TVDPPath	MDPath	Formation
173.00	173.00	Rustler
243.00	243.00	Top of Salt
573.00	573.00	Base of Salt
773.00	773.00	Yates
2113.00	2113.35	Capitan
2873.00	2880.22	DLWR Mnt. Group
3233.00	3243.86	Lower Brushy Canyon
3433.00	3445.89	Bone Spring Lime
5893.00	5918.11	1st Bone Spring SD
6283.00	6308.11	2nd Bone Spring LM
7186.00	7254.23	2nd Bone Spring SD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
00-EON(R22-123H)	5000.00	313.67	-213.24	597866.81	590838.25	32.64348110	-104.17251415
01-FTP(R22-123H)	7353.00	314.08	-163.28	597867.22	590888.21	32.64348202	-104.17235184
02-LTP(R22-123H)	7439.37	354.85	4832.40	597907.99	595883.89	32.64357222	-104.15612160
03-PBHL(R22-123H)	7441.35	355.60	4922.40	597908.74	595973.89	32.64357387	-104.15582920

CASING DETAILS

No casing data is available



Vertical Section at 89.53° (250 usft/in)





Colgate Energy

Eddy County, NM (N83-NME)

Rincon 22 State

Rincon 22 State 123H

Permit

123H

Plan: Plan #2

Standard Planning Report

01 June, 2020



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Rincon 22 State 123H
Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

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	Rincon 22 State				
Site Position:		Northing:	597,553.14 usft	Latitude:	32.64261802
From:	Map	Easting:	591,051.49 usft	Longitude:	-104.17182293
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	Rincon 22 State 123H					
Well Position	+N/-S	0.00 usft	Northing:	597,553.14 usft	Latitude:	32.64261802
	+E/-W	0.00 usft	Easting:	591,051.49 usft	Longitude:	-104.17182293
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,397.00 usft

Wellbore	123H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/19/2020	6.98	60.23	47,790.48087252

Design	Plan #2			
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	89.53

Plan Survey Tool Program	Date	6/1/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	12,273.89 Plan #2 (123H)	OWSG MWD Rev 4	
			OWSG MWD - Standard	



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Rincon 22 State 123H
Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

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	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,341.49	8.12	325.79	2,339.68	31.69	-21.54	1.50	1.50	0.00	325.79	
4,483.62	8.12	325.79	4,460.32	281.98	-191.70	0.00	0.00	0.00	0.00	
5,025.11	0.00	0.00	5,000.00	313.67	-213.24	1.50	-1.50	0.00	180.00	00-EON(R22-123H)
6,810.25	0.00	0.00	6,785.14	313.67	-213.24	0.00	0.00	0.00	0.00	
7,702.25	89.20	89.53	7,358.04	318.30	351.70	10.00	10.00	0.00	89.53	
9,848.16	89.20	89.53	7,388.00	335.91	2,497.33	0.00	0.00	0.00	0.00	
9,871.28	88.74	89.53	7,388.42	336.09	2,520.44	2.00	-2.00	0.02	179.42	
12,273.90	88.74	89.53	7,441.35	355.60	4,922.40	0.00	0.00	0.00	0.00	03-PBHL(R22-123H)



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Rincon 22 State 123H
Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

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
173.00	0.00	0.00	173.00	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
243.00	0.00	0.00	243.00	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
573.00	0.00	0.00	573.00	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
773.00	0.00	0.00	773.00	0.00	0.00	0.00	0.00	0.00	0.00
Yates									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	1.50	325.79	1,899.99	1.08	-0.74	-0.73	1.50	1.50	0.00
2,000.00	3.00	325.79	1,999.91	4.33	-2.94	-2.91	1.50	1.50	0.00
2,100.00	4.50	325.79	2,099.69	9.74	-6.62	-6.54	1.50	1.50	0.00
2,113.35	4.70	325.79	2,113.00	10.62	-7.22	-7.13	1.50	1.50	0.00
Capitan									
2,200.00	6.00	325.79	2,199.27	17.30	-11.76	-11.62	1.50	1.50	0.00
2,300.00	7.50	325.79	2,298.57	27.02	-18.37	-18.15	1.50	1.50	0.00
2,341.49	8.12	325.79	2,339.68	31.69	-21.54	-21.28	1.50	1.50	0.00
2,400.00	8.12	325.79	2,397.60	38.52	-26.19	-25.87	0.00	0.00	0.00
2,500.00	8.12	325.79	2,496.60	50.21	-34.13	-33.72	0.00	0.00	0.00
2,600.00	8.12	325.79	2,595.60	61.89	-42.08	-41.57	0.00	0.00	0.00
2,700.00	8.12	325.79	2,694.59	73.58	-50.02	-49.41	0.00	0.00	0.00
2,800.00	8.12	325.79	2,793.59	85.26	-57.96	-57.26	0.00	0.00	0.00
2,880.22	8.12	325.79	2,873.00	94.63	-64.33	-63.56	0.00	0.00	0.00
DLWR Mnt. Group									
2,900.00	8.12	325.79	2,892.59	96.95	-65.91	-65.11	0.00	0.00	0.00
3,000.00	8.12	325.79	2,991.58	108.63	-73.85	-72.96	0.00	0.00	0.00
3,100.00	8.12	325.79	3,090.58	120.31	-81.79	-80.80	0.00	0.00	0.00
3,200.00	8.12	325.79	3,189.58	132.00	-89.74	-88.65	0.00	0.00	0.00
3,243.86	8.12	325.79	3,233.00	137.12	-93.22	-92.09	0.00	0.00	0.00
Lower Brushy Canyon									
3,300.00	8.12	325.79	3,288.57	143.68	-97.68	-96.50	0.00	0.00	0.00
3,400.00	8.12	325.79	3,387.57	155.37	-105.62	-104.34	0.00	0.00	0.00
3,445.89	8.12	325.79	3,433.00	160.73	-109.27	-107.95	0.00	0.00	0.00
Bone Spring Lime									
3,500.00	8.12	325.79	3,486.57	167.05	-113.57	-112.19	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Rincon 22 State 123H
Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

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)	
3,600.00	8.12	325.79	3,585.56	178.74	-121.51	-120.04	0.00	0.00	0.00	
3,700.00	8.12	325.79	3,684.56	190.42	-129.45	-127.89	0.00	0.00	0.00	
3,800.00	8.12	325.79	3,783.56	202.11	-137.40	-135.73	0.00	0.00	0.00	
3,900.00	8.12	325.79	3,882.55	213.79	-145.34	-143.58	0.00	0.00	0.00	
4,000.00	8.12	325.79	3,981.55	225.47	-153.28	-151.43	0.00	0.00	0.00	
4,100.00	8.12	325.79	4,080.55	237.16	-161.23	-159.27	0.00	0.00	0.00	
4,200.00	8.12	325.79	4,179.54	248.84	-169.17	-167.12	0.00	0.00	0.00	
4,300.00	8.12	325.79	4,278.54	260.53	-177.11	-174.97	0.00	0.00	0.00	
4,400.00	8.12	325.79	4,377.54	272.21	-185.06	-182.82	0.00	0.00	0.00	
4,483.62	8.12	325.79	4,460.32	281.98	-191.70	-189.38	0.00	0.00	0.00	
4,500.00	7.88	325.79	4,476.54	283.87	-192.98	-190.64	1.50	-1.50	0.00	
4,600.00	6.38	325.79	4,575.77	294.13	-199.95	-197.53	1.50	-1.50	0.00	
4,700.00	4.88	325.79	4,675.28	302.23	-205.47	-202.98	1.50	-1.50	0.00	
4,800.00	3.38	325.79	4,775.02	308.19	-209.51	-206.98	1.50	-1.50	0.00	
4,900.00	1.88	325.79	4,874.91	311.98	-212.09	-209.52	1.50	-1.50	0.00	
5,000.00	0.38	325.79	4,974.89	313.60	-213.19	-210.61	1.50	-1.50	0.00	
5,025.11	0.00	0.00	5,000.00	313.67	-213.24	-210.66	1.50	-1.50	0.00	
00-EON(R22-123H)										
5,100.00	0.00	0.00	5,074.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,174.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,274.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,374.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,474.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,574.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,674.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,774.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,874.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
5,918.11	0.00	0.00	5,893.00	313.67	-213.24	-210.66	0.00	0.00	0.00	
1st Bone Spring SD										
6,000.00	0.00	0.00	5,974.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,074.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,174.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,274.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,308.11	0.00	0.00	6,283.00	313.67	-213.24	-210.66	0.00	0.00	0.00	
2nd Bone Spring LM										
6,400.00	0.00	0.00	6,374.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,474.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,574.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,674.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,774.89	313.67	-213.24	-210.66	0.00	0.00	0.00	
6,810.25	0.00	0.00	6,785.14	313.67	-213.24	-210.66	0.00	0.00	0.00	
KOP: 6810.25' MD, -210.66 VS, 6785.14' TVD										
6,850.00	3.97	89.53	6,824.86	313.68	-211.86	-209.28	10.00	10.00	0.00	
6,900.00	8.97	89.53	6,874.52	313.73	-206.23	-203.65	10.00	10.00	0.00	
6,950.00	13.97	89.53	6,923.51	313.81	-196.28	-193.70	10.00	10.00	0.00	
7,000.00	18.97	89.53	6,971.44	313.93	-182.11	-179.53	10.00	10.00	0.00	
7,050.00	23.97	89.53	7,017.95	314.08	-163.81	-161.23	10.00	10.00	0.00	
7,100.00	28.97	89.53	7,062.70	314.26	-141.53	-138.94	10.00	10.00	0.00	
7,150.00	33.97	89.53	7,105.33	314.47	-115.43	-112.85	10.00	10.00	0.00	
7,200.00	38.97	89.53	7,145.52	314.72	-85.72	-83.13	10.00	10.00	0.00	
7,250.00	43.97	89.53	7,182.97	314.99	-52.61	-50.03	10.00	10.00	0.00	
7,254.23	44.40	89.53	7,186.00	315.01	-49.67	-47.08	10.00	10.00	0.00	
2nd Bone Spring SD										
7,286.13	47.59	89.53	7,208.16	315.20	-26.73	-24.14	10.00	10.00	0.00	



Planning Report

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Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

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)
01-FTP(R22-123H)									
7,300.00	48.97	89.53	7,217.39	315.28	-16.37	-13.79	10.00	10.00	0.00
7,350.00	53.97	89.53	7,248.52	315.61	22.73	25.32	10.00	10.00	0.00
7,400.00	58.97	89.53	7,276.13	315.95	64.40	66.99	10.00	10.00	0.00
7,450.00	63.97	89.53	7,300.00	316.31	108.31	110.90	10.00	10.00	0.00
7,500.00	68.97	89.53	7,319.95	316.68	154.14	156.73	10.00	10.00	0.00
7,550.00	73.97	89.53	7,335.83	317.07	201.53	204.13	10.00	10.00	0.00
7,600.00	78.97	89.53	7,347.52	317.47	250.13	252.73	10.00	10.00	0.00
7,650.00	83.97	89.53	7,354.93	317.88	299.56	302.16	10.00	10.00	0.00
7,702.25	89.20	89.53	7,358.04	318.30	351.70	354.30	10.00	10.00	0.00
EOC: 7702.25' MD, 354.30 VS, 7358.04' TVD									
7,800.00	89.20	89.53	7,359.41	319.11	449.43	452.04	0.00	0.00	0.00
7,900.00	89.20	89.53	7,360.80	319.93	549.42	552.03	0.00	0.00	0.00
8,000.00	89.20	89.53	7,362.20	320.75	649.41	652.02	0.00	0.00	0.00
8,100.00	89.20	89.53	7,363.60	321.57	749.39	752.01	0.00	0.00	0.00
8,200.00	89.20	89.53	7,364.99	322.39	849.38	852.00	0.00	0.00	0.00
8,300.00	89.20	89.53	7,366.39	323.21	949.37	951.99	0.00	0.00	0.00
8,400.00	89.20	89.53	7,367.78	324.03	1,049.36	1,051.98	0.00	0.00	0.00
8,500.00	89.20	89.53	7,369.18	324.85	1,149.34	1,151.97	0.00	0.00	0.00
8,600.00	89.20	89.53	7,370.58	325.67	1,249.33	1,251.96	0.00	0.00	0.00
8,700.00	89.20	89.53	7,371.97	326.49	1,349.32	1,351.95	0.00	0.00	0.00
8,800.00	89.20	89.53	7,373.37	327.31	1,449.30	1,451.94	0.00	0.00	0.00
8,900.00	89.20	89.53	7,374.77	328.13	1,549.29	1,551.93	0.00	0.00	0.00
9,000.00	89.20	89.53	7,376.16	328.95	1,649.28	1,651.92	0.00	0.00	0.00
9,100.00	89.20	89.53	7,377.56	329.77	1,749.26	1,751.91	0.00	0.00	0.00
9,200.00	89.20	89.53	7,378.95	330.59	1,849.25	1,851.90	0.00	0.00	0.00
9,300.00	89.20	89.53	7,380.35	331.41	1,949.24	1,951.89	0.00	0.00	0.00
9,400.00	89.20	89.53	7,381.75	332.23	2,049.22	2,051.88	0.00	0.00	0.00
9,500.00	89.20	89.53	7,383.14	333.05	2,149.21	2,151.87	0.00	0.00	0.00
9,600.00	89.20	89.53	7,384.54	333.87	2,249.20	2,251.86	0.00	0.00	0.00
9,700.00	89.20	89.53	7,385.94	334.69	2,349.19	2,351.85	0.00	0.00	0.00
9,800.00	89.20	89.53	7,387.33	335.51	2,449.17	2,451.84	0.00	0.00	0.00
9,848.16	89.20	89.53	7,388.00	335.91	2,497.33	2,500.00	0.00	0.00	0.00
Start DLS 2.00 TFO 179.42									
9,871.28	88.74	89.53	7,388.42	336.09	2,520.44	2,523.11	2.00	-2.00	0.02
9,900.00	88.74	89.53	7,389.05	336.33	2,549.15	2,551.83	0.00	0.00	0.00
10,000.00	88.74	89.53	7,391.26	337.14	2,649.13	2,651.80	0.00	0.00	0.00
10,100.00	88.74	89.53	7,393.46	337.95	2,749.10	2,751.78	0.00	0.00	0.00
10,200.00	88.74	89.53	7,395.66	338.76	2,849.07	2,851.75	0.00	0.00	0.00
10,300.00	88.74	89.53	7,397.86	339.57	2,949.04	2,951.73	0.00	0.00	0.00
10,400.00	88.74	89.53	7,400.07	340.39	3,049.02	3,051.70	0.00	0.00	0.00
10,500.00	88.74	89.53	7,402.27	341.20	3,148.99	3,151.68	0.00	0.00	0.00
10,600.00	88.74	89.53	7,404.47	342.01	3,248.96	3,251.66	0.00	0.00	0.00
10,700.00	88.74	89.53	7,406.68	342.82	3,348.93	3,351.63	0.00	0.00	0.00
10,800.00	88.74	89.53	7,408.88	343.63	3,448.91	3,451.61	0.00	0.00	0.00
10,900.00	88.74	89.53	7,411.08	344.45	3,548.88	3,551.58	0.00	0.00	0.00
11,000.00	88.74	89.53	7,413.29	345.26	3,648.85	3,651.56	0.00	0.00	0.00
11,100.00	88.74	89.53	7,415.49	346.07	3,748.82	3,751.54	0.00	0.00	0.00
11,200.00	88.74	89.53	7,417.69	346.88	3,848.79	3,851.51	0.00	0.00	0.00
11,300.00	88.74	89.53	7,419.89	347.69	3,948.77	3,951.49	0.00	0.00	0.00
11,400.00	88.74	89.53	7,422.10	348.51	4,048.74	4,051.46	0.00	0.00	0.00
11,500.00	88.74	89.53	7,424.30	349.32	4,148.71	4,151.44	0.00	0.00	0.00
11,600.00	88.74	89.53	7,426.50	350.13	4,248.68	4,251.41	0.00	0.00	0.00



Planning Report

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Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

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	88.74	89.53	7,428.71	350.94	4,348.66	4,351.39	0.00	0.00	0.00	
11,800.00	88.74	89.53	7,430.91	351.75	4,448.63	4,451.37	0.00	0.00	0.00	
11,900.00	88.74	89.53	7,433.11	352.56	4,548.60	4,551.34	0.00	0.00	0.00	
12,000.00	88.74	89.53	7,435.32	353.38	4,648.57	4,651.32	0.00	0.00	0.00	
12,100.00	88.74	89.53	7,437.52	354.19	4,748.55	4,751.29	0.00	0.00	0.00	
12,183.88	88.74	89.53	7,439.37	354.87	4,832.40	4,835.15	0.00	0.00	0.00	
02-LTP(R22-123H)										
12,200.00	88.74	89.53	7,439.72	355.00	4,848.52	4,851.27	0.00	0.00	0.00	
12,273.90	88.74	89.53	7,441.35	355.60	4,922.40	4,925.15	0.00	0.00	0.00	
TD: 12273.90' MD, 4925.15 VS, 7441.35' TVD - 03-PBHL(R22-123H)										

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
00-EON(R22-123H) - plan hits target center - Point	0.00	0.00	5,000.00	313.67	-213.24	597,866.81	590,838.25	32.64348110	-104.17251415
01-FTP(R22-123H) - plan misses target center by 199.06usft at 7286.13usft MD (7208.16 TVD, 315.20 N, -26.73 E) - Point	0.00	0.00	7,353.00	314.08	-163.28	597,867.22	590,888.21	32.64348202	-104.17235184
02-LTP(R22-123H) - plan misses target center by 0.02usft at 12183.88usft MD (7439.37 TVD, 354.87 N, 4832.40 E) - Point	0.00	0.00	7,439.37	354.85	4,832.40	597,907.99	595,883.89	32.64357222	-104.15612160
03-PBHL(R22-123H) - plan hits target center - Point	0.00	0.00	7,441.35	355.60	4,922.40	597,908.74	595,973.89	32.64357387	-104.15582921

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
173.00	173.00	Rustler		0.00		
243.00	243.00	Top of Salt		0.00		
573.00	573.00	Base of Salt		0.00		
773.00	773.00	Yates		0.00		
2,113.35	2,113.00	Capitan		0.00		
2,880.22	2,873.00	DLWR Mnt. Group		0.00		
3,243.86	3,233.00	Lower Brushy Canyon		0.00		
3,445.89	3,433.00	Bone Spring Lime		0.00		
5,918.11	5,893.00	1st Bone Spring SD		0.00		
6,308.11	6,283.00	2nd Bone Spring LM		0.00		
7,254.23	7,186.00	2nd Bone Spring SD		0.00		



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Rincon 22 State 123H
Company:	Colgate Energy	TVD Reference:	RKB @ 3423.00usft (Permit)
Project:	Eddy County, NM (N83-NME)	MD Reference:	RKB @ 3423.00usft (Permit)
Site:	Rincon 22 State	North Reference:	Grid
Well:	Rincon 22 State 123H	Survey Calculation Method:	Minimum Curvature
Wellbore:	123H		
Design:	Plan #2		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
6,810.25	6,785.14	313.67	-213.24	KOP: 6810.25' MD, -210.66 VS, 6785.14' TVD	
7,702.25	7,358.04	318.30	351.70	EOC: 7702.25' MD, 354.30 VS, 7358.04' TVD	
9,848.16	7,388.00	335.91	2,497.33	Start DLS 2.00 TFO 179.42	
12,273.90	7,441.35	355.60	4,922.40	TD: 12273.90' MD, 4925.15 VS, 7441.35' TVD	