

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 279533

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

1. Operator Name and Address CIMAREX ENERGY CO. OF COLORADO 600 N. Marienfeld Street Midland, TX 79701		2. OGRID Number 162683
4. Property Code 327338		3. API Number 30-015-46917
5. Property Name PARKWAY 16 17 STATE COM		6. Well No. 001H

7. Surface Location

UL - Lot A	Section 16	Township 19S	Range 29E	Lot Idn A	Feet From 1208	N/S Line N	Feet From 806	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot D	Section 17	Township 19S	Range 29E	Lot Idn D	Feet From 821	N/S Line N	Feet From 100	E/W Line W	County Eddy
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9. Pool Information

SCANLON DRAW;BONE SPRING	55510
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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 3349
16. Multiple N	17. Proposed Depth 18319	18. Formation 3rd Bone Spring Sand	19. Contractor	20. Spud Date 4/1/2020
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	48	260	168	0
Int1	12.25	9.625	36	3110	792	0
Prod	8.75	7	29	8383	303	2800
Prod	8.75	5.5	17	18319	1437	2800

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	2000	2000	Cameran
Annular	3000	3000	Cameran

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 <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. Signature:	OIL CONSERVATION DIVISION	
	Printed Name: Electronically filed by Terri Stathem	Approved By: Raymond Podany
	Title: Coord. Regulatory Compl	Title: Geologist
	Email Address: tstathem@cimarex.com	Approved Date: 3/24/2020 Expiration Date: 3/24/2022
	Date: 3/23/2020 Phone: 918-295-1763	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

30-015- ¹ API Number	55510 ² Pool Code	Scanlon Draw; Bone Spring ³ Pool Name
⁴ Property Code	⁵ Property Name PARKWAY 16-17 STATE COM	
⁷ OGRID No. 162683	⁸ Operator Name Cimarex Energy Co. of Colorado	
		⁶ Well Number 1H
		⁹ Elevation 3349.4'

¹⁰ Surface Location

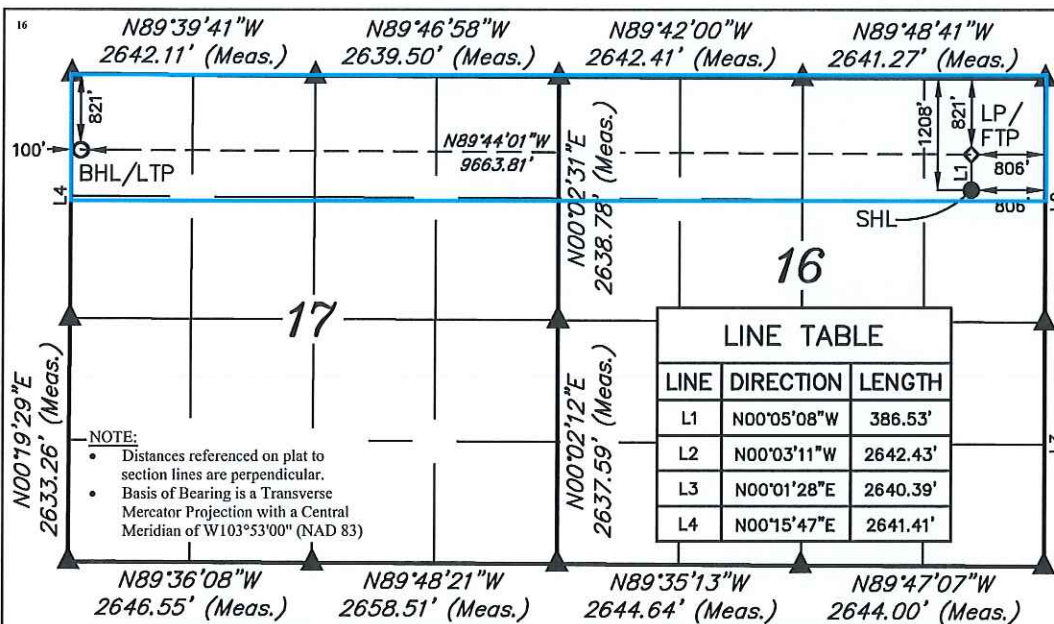
UL or lot no. A	Section 16	Township 19S	Range 29E	Lot Idn	Feet from the 1208	North/South line NORTH	Feet from the 806	East/West line EAST	County EDDY
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. D	Section 17	Township 19S	Range 29E	Lot Idn	Feet from the 821	North/South line NORTH	Feet from the 100	East/West line WEST	County EDDY
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¹² Dedicated Acres 320.0	¹³ Joint or Infill	¹⁴ Consolidation Code	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: *[Signature]* Date: 03/11/2020
Printed Name: Fatima Vasquez
E-mail Address: fvasquez@cimarex.com

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.

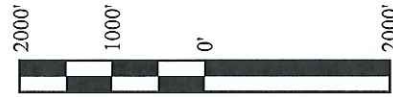
Date of Survey: November 21, 2018
Signature and Seal of Professional Surveyor:



Certificate Number:

NAD 83 (SURFACE HOLE LOCATION) LATITUDE = 32°39'53.07" (32.664742°) LONGITUDE = 104°04'25.78" (104.073828°)	NAD 83 (LP/FTP) LATITUDE = 32°39'56.90" (32.665804°) LONGITUDE = 104°04'25.80" (104.073832°)	NAD 83 (BHL/LTP) LATITUDE = 32°39'57.15" (32.665876°) LONGITUDE = 104°06'18.82" (104.105229°)
NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 32°39'52.65" (32.664624°) LONGITUDE = 104°04'23.96" (104.073321°)	NAD 27 (LP/FTP) LATITUDE = 32°39'56.47" (32.665687°) LONGITUDE = 104°04'23.97" (104.073325°)	NAD 27 (BHL/LTP) LATITUDE = 32°39'56.73" (32.665759°) LONGITUDE = 104°06'17.00" (104.104721°)
STATE PLANE NAD 83 (N.M. EAST) N: 605661.86' E: 621195.43'	STATE PLANE NAD 83 (N.M. EAST) N: 606048.30' E: 621193.21'	STATE PLANE NAD 83 (N.M. EAST) N: 606052.26' E: 611531.54'
STATE PLANE NAD 27 (N.M. EAST) N: 605599.52' E: 580015.72'	STATE PLANE NAD 27 (N.M. EAST) N: 605985.95' E: 580013.51'	STATE PLANE NAD 27 (N.M. EAST) N: 605989.99' E: 570351.84'

- = SURFACE HOLE LOCATION
- ◆ = LANDING POINT/FIRST TAKE POINT
- = BOTTOM HOLE LOCATION/ LAST TAKE POINT
- ▲ = SECTION CORNER LOCATED



SCALE
DRAWN BY: C.M.T. 11-30-18
REV:2 03-05-20 S.T.O. (WELLBORE CHANGE)

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GAS CAPTURE PLAN

Date: 3/24/2020

Original Operator & OGRID No.: [162683] CIMAREX ENERGY CO. OF COLORADO
 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, recomplete 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
PARKWAY 16 17 STATE COM #001H	30-015-46917	A-16-19S-29E	1208N 0806E	3	None	

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 Low Pressure gathering system located in Eddy County, New Mexico. It will require 4000' of pipeline to connect the facility to Low Pressure gathering system. CIMAREX ENERGY CO. OF COLORADO 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, CIMAREX ENERGY CO. OF COLORADO 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. 19, Twn. 19S, Rng. 32E, Lea 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 CIMAREX ENERGY CO. OF COLORADO'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 279533

PERMIT COMMENTS

Operator Name and Address: CIMAREX ENERGY CO. OF COLORADO [162683] 600 N. Marienfeld Street Midland, TX 79701	API Number: 30-015-46917
	Well: PARKWAY 16 17 STATE COM #001H

Created By	Comment	Comment Date
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Form APD Conditions
 Permit 279533

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: CIMAREX ENERGY CO. OF COLORADO [162683] 600 N. Marienfeld Street Midland, TX 79701	API Number: 30-015-46917
	Well: PARKWAY 16 17 STATE COM #001H

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 shall notify other operators of wells in the same quarter-quarter section before commencing both drilling and completing operations.

1. Geological Formations

TVD of target 8,840
MD at TD 18,319

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	210	N/A	
Top Salt	300	N/A	
Base Salt	1000	N/A	
Capitan	2600	N/A	
Delaware	3220	N/A	
Bone Spring	4370	N/A	
1st Bone Spring SS	6947	Hydrocarbons	
2nd Bone Spring	7715	Hydrocarbons	
3rd Bone Spring Carb	8048	Hydrocarbons	
3rd Bone Spring SS	8651	Hydrocarbons	
Wolfcamp	8998	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Setting Depth TVD	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	260	260	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	6.36	14.88	25.80
12 1/4	0	3110	3110	9-5/8"	36.00	J-55	LT&C	1.25	2.18	4.05
8 3/4	0	8383	8383	7"	29.00	L-80	LT&C	1.75	2.03	3.91
8 3/4	8383	18319	8840	5-1/2"	17.00	L-80	BT&C	1.49	1.83	51.10
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Cimarex Energy Co., Parkway 16-17 State Com 1H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	N
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N
Is AC Report included?	Y

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	168	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	610	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	182	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	303	10.50	3.45	22.18	N/A	Lead: NeoCem
	1437	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	25
Intermediate	0	47
Production	2800	25

Cimarex request the ability to perform casing integrity tests after plug bump of cement job.

4. Pressure Control Equipment

	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 260'	FW Spud Mud	8.10 - 8.60	30-32	N/C
260' to 3110'	Brine Water	9.50 - 10.00	30-32	N/C
3110' to 18319'	Cut Brine or OBM	8.70 - 9.20	27-70	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing	
	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	4229 psi
Abnormal Temperature	No

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

	H ₂ S is present
	H ₂ S plan is attached

8. Other Facets of Operation**9. Wellhead**

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

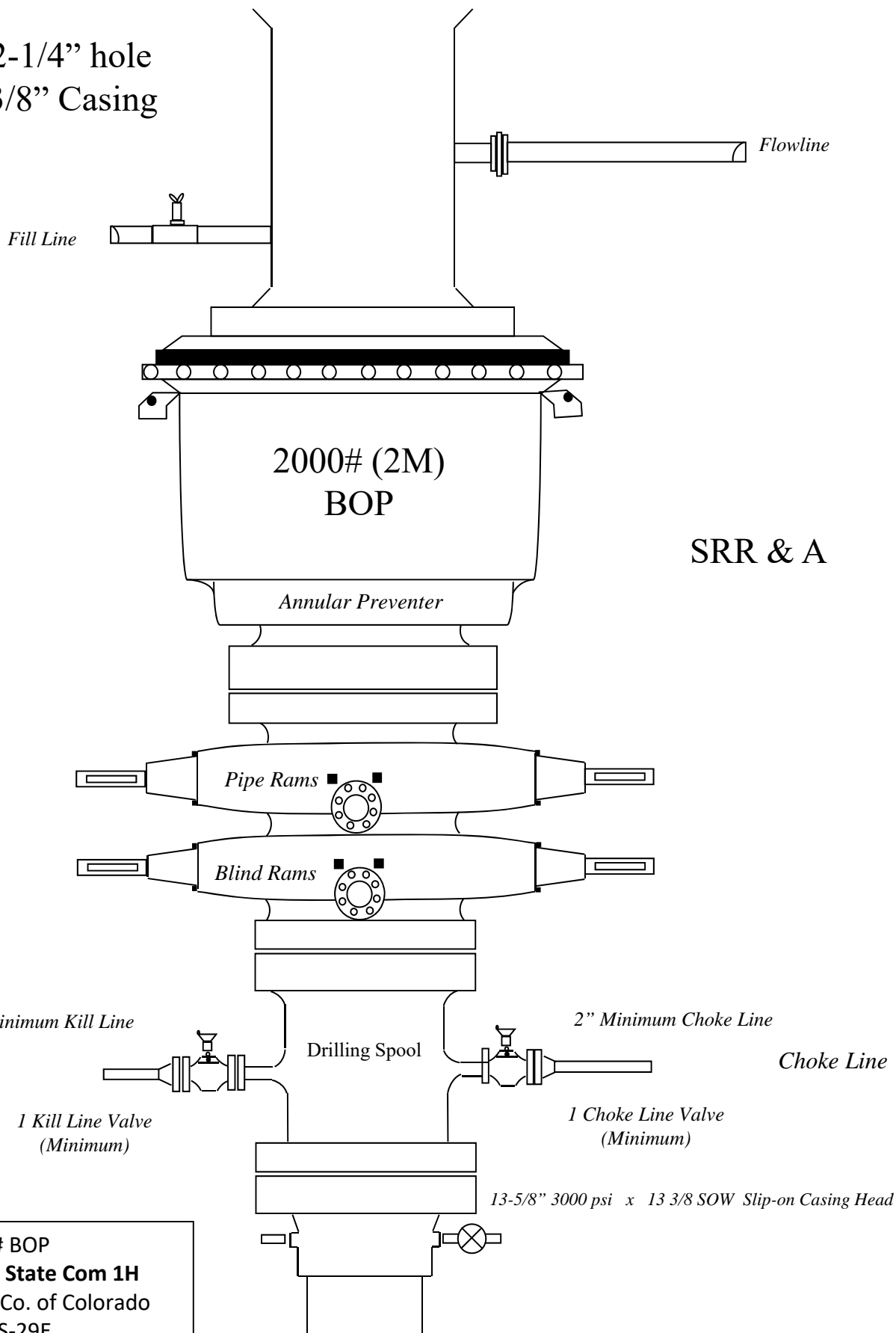
All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi.

All casing strings will be tested as per Onshore Order No.2 to at least 0.22 psi/ft or 1,500 whichever is greater and not to exceed 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

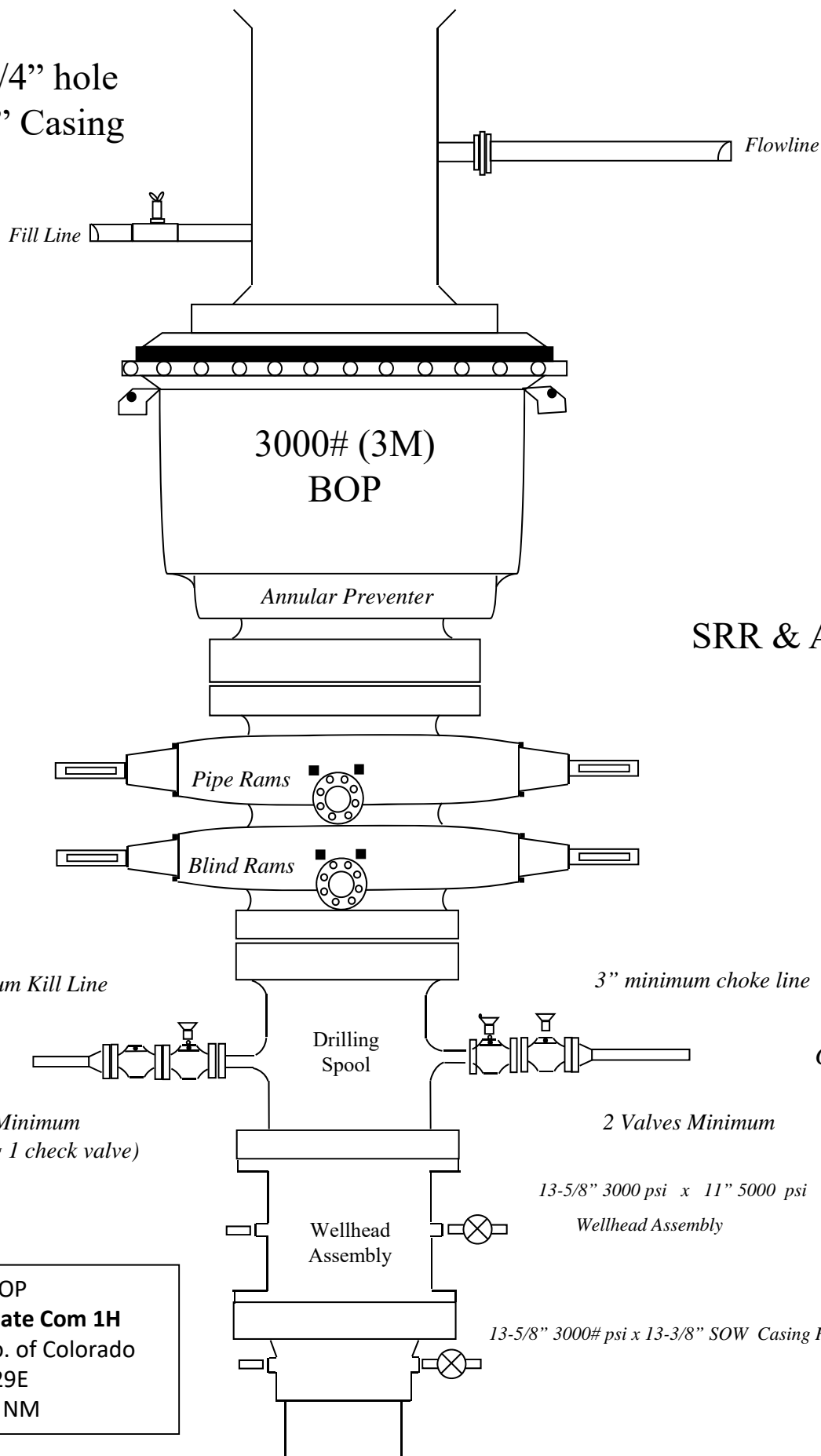
Drilling 12-1/4" hole
below 13-3/8" Casing



SRR & A

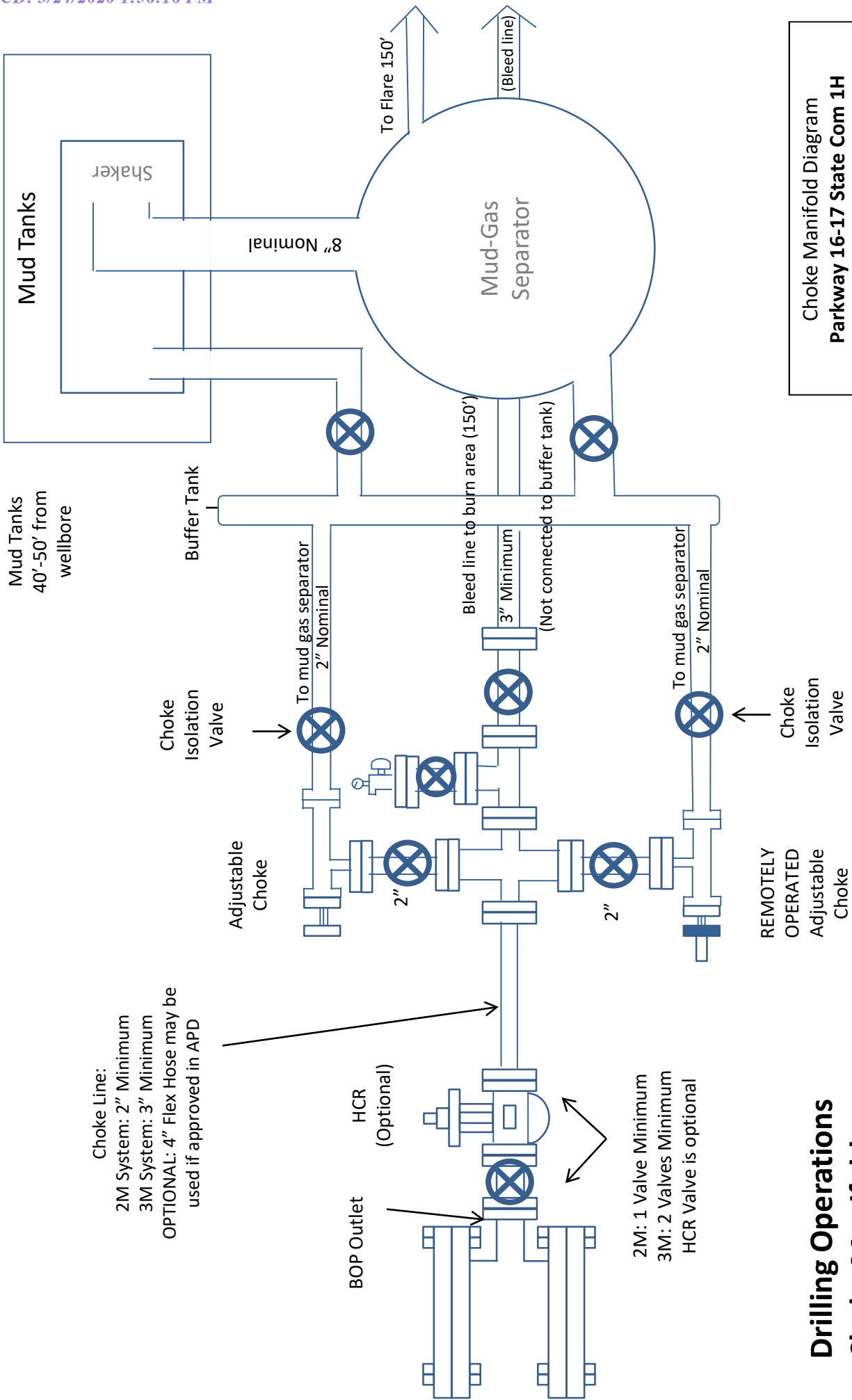
2000# BOP
Parkway 16-17 State Com 1H
 Cimarex Energy Co. of Colorado
 16-19S-29E
 Eddy Co., NM

Drilling 8-3/4" hole
below 9-5/8" Casing



SRR & A

3000# BOP
Parkway 16-17 State Com 1H
 Cimarex Energy Co. of Colorado
 16-19S-29E
 Eddy Co., NM



Choke Line:
 2M System: 2" Minimum
 3M System: 3" Minimum
 OPTIONAL: 4" Flex Hose may be used if approved in APD

2M: 1 Valve Minimum
 3M: 2 Valves Minimum
 HCR Valve is optional

**Drilling Operations
 Choke Manifold
 2M/3M Service**

Choke Manifold Diagram
Parkway 16-17 State Com 1H
 Cimarex Energy Co. of Colorado
 16-19S-29E
 Eddy Co., NM



**Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20 Proposal
Geodetic Report
(Def Plan)**



Report Date: March 10, 2020 - 10:22 AM
Client: Cimarex Energy
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Parkway 16-17 State Com #1H / New Slot
Well: Parkway 16-17 State Com #1H
Borehole: Parkway 16-17 State Com #1H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20
Survey Date: February 21, 2020
Tort / AHD / DDI / ERD Ratio: 102.636 ° / 10050.127 ft / 6.330 / 1.137
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 39' 53.07195", W 104° 4' 25.78030"
Location Grid N/E Y/X: N 605661.860 ftUS, E 621195.430 ftUS
CRS Grid Convergence Angle: 0.1401 °
Grid Scale Factor: 0.99991639
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 270.180 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3375.400 ft above MSL
Seabed / Ground Elevation: 3349.400 ft above MSL
Magnetic Declination: 7.204 °
Total Gravity Field Strength: 998.5137mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47918.865 nT
Magnetic Dip Angle: 60.411 °
Declination Date: February 21, 2020
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.1401 °
Total Corr Mag North->Grid North: 7.0640 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (*/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [1208' FNL, 806' FEL]	0.00	0.00	271.85	0.00	0.00	0.00	0.00	N/A	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Nudge 2"/100' DLS	1500.00	0.00	359.70	1500.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Hold Nudge	1815.90	6.32	359.70	1815.26	0.14	17.40	-0.09	2.00	605679.26	621195.34	N 32 39 53.24	W 104 4 25.78
Drop to Vertical 2"/100' DLS	5020.10	6.32	359.70	5000.00	3.07	370.01	-1.91	0.00	606031.83	621193.52	N 32 39 56.73	W 104 4 25.79
Hold Vertical	5336.00	0.00	359.70	5315.26	3.22	387.41	-2.00	2.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
KOP - Build 12"/100' DLS	8383.28	0.00	359.70	8362.54	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
Landing Point	9133.28	90.00	270.02	8840.00	480.68	387.55	-479.47	12.00	606049.38	620716.00	N 32 39 56.92	W 104 4 31.38
Cimarex Parkway 16-17 State Com #1H - PBHL [821' FNL, 100' FWL]	18318.53	90.00	270.02	8840.00	9665.90	390.43	-9664.72	0.00	606052.26	611531.54	N 32 39 57.15	W 104 6 18.82

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Parkway 16-17 State Com #1H / Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20
	1	26.000	18318.527	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Parkway 16-17 State Com #1H / Cimarex Parkway 16-17 State



Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20 Proposal Geodetic Report (Def Plan)

Report Date: March 10, 2020 - 10:21 AM
Client: Cimarex Energy
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Parkway 16-17 State Com #1H / New Slot
Well: Parkway 16-17 State Com #1H
Borehole: Parkway 16-17 State Com #1H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20
Survey Date: February 21, 2020
Tort / AHD / DDI / ERD Ratio: 102.636 ° / 10050.127 ft / 6.330 / 1.137
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 39' 53.07195", W 104° 4' 25.78030"
Location Grid N/E Y/X: N 605661.860 ftUS, E 621195.430 ftUS
CRS Grid Convergence Angle: 0.1401 °
Grid Scale Factor: 0.99991639
Version / Patch: 2.10.787.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 270.180 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3375.400 ft above MSL
Seabed / Ground Elevation: 3349.400 ft above MSL
Magnetic Declination: 7.204 °
Total Gravity Field Strength: 998.5137mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47918.865 nT
Magnetic Dip Angle: 60.411 °
Declination Date: February 21, 2020
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.1401 °
Total Corr Mag North->Grid North: 7.0640 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [1208' FNL, 806' FEL]	0.00	0.00	271.85	0.00	0.00	0.00	0.00	N/A	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	100.00	0.00	359.70	100.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	200.00	0.00	359.70	200.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Rustler	300.00	0.00	359.70	300.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Top Salt	340.00	0.00	359.70	340.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	400.00	0.00	359.70	400.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	500.00	0.00	359.70	500.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	600.00	0.00	359.70	600.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	700.00	0.00	359.70	700.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	800.00	0.00	359.70	800.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	900.00	0.00	359.70	900.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Base Salt	930.00	0.00	359.70	930.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	1000.00	0.00	359.70	1000.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	1100.00	0.00	359.70	1100.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Yates	1200.00	0.00	359.70	1200.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	1300.00	0.00	359.70	1300.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	1400.00	0.00	359.70	1400.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
Nudge 2"/100' DLS	1500.00	0.00	359.70	1500.00	0.00	0.00	0.00	0.00	605661.86	621195.43	N 32 39 53.07	W 104 4 25.78
	1600.00	2.00	359.70	1599.98	0.01	1.75	-0.01	2.00	605663.60	621195.42	N 32 39 53.09	W 104 4 25.78
	1700.00	4.00	359.70	1699.84	0.06	6.98	-0.04	2.00	605668.84	621195.39	N 32 39 53.14	W 104 4 25.78
	1800.00	6.00	359.70	1799.45	0.13	15.69	-0.08	2.00	605677.55	621195.35	N 32 39 53.23	W 104 4 25.78
Hold Nudge	1815.90	6.32	359.70	1815.26	0.14	17.40	-0.09	2.00	605679.26	621195.34	N 32 39 53.24	W 104 4 25.78
	1900.00	6.32	359.70	1898.85	0.22	26.65	-0.14	0.00	605688.51	621195.29	N 32 39 53.34	W 104 4 25.78

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	2000.00	6.32	359.70	1998.24	0.31	37.66	-0.19	0.00	605699.52	621195.24	N 32 39 53.44	W 104 4 25.78
	2100.00	6.32	359.70	2097.63	0.40	48.66	-0.25	0.00	605710.52	621195.18	N 32 39 53.55	W 104 4 25.78
Queen	2142.62	6.32	359.70	2140.00	0.44	53.35	-0.28	0.00	605715.21	621195.15	N 32 39 53.60	W 104 4 25.78
	2200.00	6.32	359.70	2197.03	0.50	59.67	-0.31	0.00	605721.52	621195.12	N 32 39 53.66	W 104 4 25.78
	2300.00	6.32	359.70	2296.42	0.59	70.67	-0.37	0.00	605732.53	621195.06	N 32 39 53.77	W 104 4 25.78
	2400.00	6.32	359.70	2395.81	0.68	81.68	-0.42	0.00	605743.53	621195.01	N 32 39 53.88	W 104 4 25.78
	2500.00	6.32	359.70	2495.21	0.77	92.68	-0.48	0.00	605754.53	621194.95	N 32 39 53.99	W 104 4 25.78
	2600.00	6.32	359.70	2594.60	0.86	103.69	-0.54	0.00	605765.54	621194.89	N 32 39 54.10	W 104 4 25.78
	2700.00	6.32	359.70	2693.99	0.95	114.69	-0.59	0.00	605776.54	621194.84	N 32 39 54.21	W 104 4 25.78
	2800.00	6.32	359.70	2793.38	1.04	125.69	-0.65	0.00	605787.54	621194.78	N 32 39 54.32	W 104 4 25.78
	2900.00	6.32	359.70	2892.78	1.14	136.70	-0.71	0.00	605798.55	621194.72	N 32 39 54.42	W 104 4 25.78
	3000.00	6.32	359.70	2992.17	1.23	147.70	-0.76	0.00	605809.55	621194.67	N 32 39 54.53	W 104 4 25.79
	3100.00	6.32	359.70	3091.56	1.32	158.71	-0.82	0.00	605820.55	621194.61	N 32 39 54.64	W 104 4 25.79
Capitan	3103.46	6.32	359.70	3095.00	1.32	159.09	-0.82	0.00	605820.94	621194.61	N 32 39 54.65	W 104 4 25.79
	3200.00	6.32	359.70	3190.95	1.41	169.71	-0.88	0.00	605831.56	621194.55	N 32 39 54.75	W 104 4 25.79
	3300.00	6.32	359.70	3290.35	1.50	180.72	-0.93	0.00	605842.56	621194.50	N 32 39 54.86	W 104 4 25.79
Delaware	3360.02	6.32	359.70	3350.00	1.56	187.32	-0.97	0.00	605849.17	621194.46	N 32 39 54.93	W 104 4 25.79
	3400.00	6.32	359.70	3389.74	1.59	191.72	-0.99	0.00	605853.57	621194.44	N 32 39 54.97	W 104 4 25.79
	3500.00	6.32	359.70	3489.13	1.68	202.73	-1.05	0.00	605864.57	621194.38	N 32 39 55.08	W 104 4 25.79
	3600.00	6.32	359.70	3588.52	1.78	213.73	-1.10	0.00	605875.57	621194.33	N 32 39 55.19	W 104 4 25.79
	3700.00	6.32	359.70	3687.92	1.87	224.74	-1.16	0.00	605886.58	621194.27	N 32 39 55.30	W 104 4 25.79
	3800.00	6.32	359.70	3787.31	1.96	235.74	-1.22	0.00	605897.58	621194.21	N 32 39 55.40	W 104 4 25.79
	3900.00	6.32	359.70	3886.70	2.05	246.74	-1.27	0.00	605908.58	621194.16	N 32 39 55.51	W 104 4 25.79
	4000.00	6.32	359.70	3986.09	2.14	257.75	-1.33	0.00	605919.59	621194.10	N 32 39 55.62	W 104 4 25.79
	4100.00	6.32	359.70	4085.49	2.23	268.75	-1.39	0.00	605930.59	621194.04	N 32 39 55.73	W 104 4 25.79
	4200.00	6.32	359.70	4184.88	2.32	279.76	-1.45	0.00	605941.59	621193.98	N 32 39 55.84	W 104 4 25.79
	4300.00	6.32	359.70	4284.27	2.42	290.76	-1.50	0.00	605952.60	621193.93	N 32 39 55.95	W 104 4 25.79
	4400.00	6.32	359.70	4383.67	2.51	301.77	-1.56	0.00	605963.60	621193.87	N 32 39 56.06	W 104 4 25.79
	4500.00	6.32	359.70	4483.06	2.60	312.77	-1.62	0.00	605974.60	621193.81	N 32 39 56.17	W 104 4 25.79
	4600.00	6.32	359.70	4582.45	2.69	323.78	-1.67	0.00	605985.61	621193.76	N 32 39 56.28	W 104 4 25.79
	4700.00	6.32	359.70	4681.84	2.78	334.78	-1.73	0.00	605996.61	621193.70	N 32 39 56.38	W 104 4 25.79
	4800.00	6.32	359.70	4781.24	2.87	345.78	-1.79	0.00	606007.62	621193.64	N 32 39 56.49	W 104 4 25.79
	4900.00	6.32	359.70	4880.63	2.96	356.79	-1.84	0.00	606018.62	621193.59	N 32 39 56.60	W 104 4 25.79
	5000.00	6.32	359.70	4980.02	3.06	367.79	-1.90	0.00	606029.62	621193.53	N 32 39 56.71	W 104 4 25.79
Drop to Vertical 2°/100' DLS	5020.10	6.32	359.70	5000.00	3.07	370.01	-1.91	0.00	606031.83	621193.52	N 32 39 56.73	W 104 4 25.79
	5100.00	4.72	359.70	5079.53	3.14	377.69	-1.95	2.00	606039.52	621193.48	N 32 39 56.81	W 104 4 25.79
	5200.00	2.72	359.70	5179.31	3.19	384.18	-1.98	2.00	606046.00	621193.45	N 32 39 56.87	W 104 4 25.79
	5300.00	0.72	359.70	5279.26	3.22	387.18	-2.00	2.00	606049.01	621193.43	N 32 39 56.90	W 104 4 25.79
Hold Vertical	5336.00	0.00	359.70	5315.26	3.22	387.41	-2.00	2.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	5400.00	0.00	359.70	5379.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	5500.00	0.00	359.70	5479.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	5600.00	0.00	359.70	5579.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	5700.00	0.00	359.70	5679.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	5800.00	0.00	359.70	5779.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	5900.00	0.00	359.70	5879.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6000.00	0.00	359.70	5979.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6100.00	0.00	359.70	6079.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6200.00	0.00	359.70	6179.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6300.00	0.00	359.70	6279.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6400.00	0.00	359.70	6379.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6500.00	0.00	359.70	6479.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6600.00	0.00	359.70	6579.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79
	6700.00	0.00	359.70	6679.26	3.22	387.41	-2.00	0.00	606049.23	621193.43	N 32 39 56.91	W 104 4 25.79

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	17000.00	90.00	270.02	8840.00	8347.37	390.02	-8346.19	0.00	606051.85	612849.95	N 32 39 57.12 W 104 6 3.40	
	17100.00	90.00	270.02	8840.00	8447.37	390.05	-8446.19	0.00	606051.88	612749.96	N 32 39 57.12 W 104 6 4.57	
	17200.00	90.00	270.02	8840.00	8547.37	390.08	-8546.19	0.00	606051.91	612649.97	N 32 39 57.13 W 104 6 5.74	
	17300.00	90.00	270.02	8840.00	8647.37	390.11	-8646.19	0.00	606051.94	612549.98	N 32 39 57.13 W 104 6 6.91	
	17400.00	90.00	270.02	8840.00	8747.37	390.15	-8746.19	0.00	606051.97	612449.99	N 32 39 57.13 W 104 6 8.08	
	17500.00	90.00	270.02	8840.00	8847.37	390.18	-8846.19	0.00	606052.00	612350.00	N 32 39 57.13 W 104 6 9.25	
	17600.00	90.00	270.02	8840.00	8947.37	390.21	-8946.19	0.00	606052.03	612250.01	N 32 39 57.14 W 104 6 10.42	
	17700.00	90.00	270.02	8840.00	9047.37	390.24	-9046.19	0.00	606052.07	612150.01	N 32 39 57.14 W 104 6 11.59	
	17800.00	90.00	270.02	8840.00	9147.37	390.27	-9146.19	0.00	606052.10	612050.02	N 32 39 57.14 W 104 6 12.76	
	17900.00	90.00	270.02	8840.00	9247.37	390.30	-9246.19	0.00	606052.13	611950.03	N 32 39 57.14 W 104 6 13.93	
	18000.00	90.00	270.02	8840.00	9347.37	390.33	-9346.19	0.00	606052.16	611850.04	N 32 39 57.15 W 104 6 15.10	
	18100.00	90.00	270.02	8840.00	9447.37	390.36	-9446.19	0.00	606052.19	611750.05	N 32 39 57.15 W 104 6 16.27	
	18200.00	90.00	270.02	8840.00	9547.37	390.40	-9546.19	0.00	606052.22	611650.06	N 32 39 57.15 W 104 6 17.44	
	18300.00	90.00	270.02	8840.00	9647.37	390.43	-9646.19	0.00	606052.25	611550.07	N 32 39 57.15 W 104 6 18.61	
Cimarex Parkway 16-17 State Com #1H - PBHL [821' FNL, 100' FWL]	18318.53	90.00	270.02	8840.00	9665.90	390.43	-9664.72	0.00	606052.26	611531.54	N 32 39 57.15 W 104 6 18.82	

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
 Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS-Depth Only	Parkway 16-17 State Com #1H / Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20
	1	26.000	18318.527	1/100.000	17.500	13.375		NAL_MWD_IFR1+MS	Parkway 16-17 State Com #1H / Cimarex Parkway 16-17 State



Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20 Anti-Collision Summary Report

Analysis Date-24hr Time: March 10, 2020 - 10:22
Client: Cimarex Energy
Field: NM Eddy County (NAD 83)
Structure: Cimarex Parkway 16-17 State Com #1H
Slot: New Slot
Well: Parkway 16-17 State Com #1H
Borehole: Parkway 16-17 State Com #1H
Scan MD Range: 0.00ft - 18318.53ft

Analysis Method: 3D Least Distance
Reference Trajectory: Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20 (Def Plan)
Depth Interval: Every 10.00 Measured Depth (ft)
Rule Set: NAL Procedure: D&M AntiCollision Standard S002
Min Pts: All local minima indicated.
Version / Patch: 2.10.787.0
Database \ Project: us1153APP452.DIR.SLB.COMDRILLING-NM Eddy County 2.10

Trajectory Error Model: ISCWSA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.
Offset Trajectories Summary

Offset Selection Criteria
Wellhead distance scan: Not performed!
Selection filters: Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans
- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Table with 13 columns: Offset Trajectory, Separation (Ct-Ct (ft), MAS (ft), EOU (ft)), Allow (Dev. (ft)), Sep. (Fact.), Controlling Rule, Reference Trajectory (MD (ft), TVD (ft)), Risk Level (Alert, Minor, Major), Alert, Status

Results highlighted: Sep-Factor separation <= 1.50 ft

Table for Hondo Drilling Exon-State Com 1 (Offset) Plugged Oil Inc Only. Contains 13 columns and multiple rows of trajectory data with highlighted values and status indicators.

Table for Cimarex Magnum 16 State #3 (Offset) ST01 MWD Off-12340ft. Contains 13 columns and multiple rows of trajectory data with highlighted values and status indicators.

Table for Cimarex Parkway 16-17 State Com #2H Rev1 RM 10Mar20 (Def Plan). Contains 13 columns and multiple rows of trajectory data with highlighted values and status indicators.

Table for Cimarex Magnum 16 State #2 (Offset) Gas Off-11555ft (Def Survey). Contains 13 columns and multiple rows of trajectory data with highlighted values and status indicators.

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Ct-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		
Pronghorn Hannafin State #1 (Offset) Plugged Oil Blind Off-2112ft (Def Survey)													Pass
9748.98	32.81	9747.89	9716.17	N/A		MAS = 10.00 (m)	0.00	0.00					Surface
9748.98	32.81	9745.53	9716.17	4117.03		MAS = 10.00 (m)	26.00	26.00					WRP
9748.98	392.15	9487.22	9356.83	37.38		OSF1.50	1500.00	1500.00					MinPt-CtCt
9761.48	583.50	9372.15	9177.98	25.13		OSF1.50	2120.00	2117.51					MinPts
9110.71	402.50	8842.05	8708.21	34.03		OSF1.50	12630.00	8840.00					MinPt-O-SF
7288.37	309.80	7081.51	6978.57	35.40		OSF1.50	18100.00	8840.00					MinPt-CtCt
7288.74	310.87	7081.16	6977.67	35.28		OSF1.50	18170.00	8840.00					MINPT-O-EOU
7289.41	311.68	7081.30	6977.73	35.19		OSF1.50	18220.00	8840.00					MinPt-O-ADP
7291.74	313.39	7082.49	6978.35	35.01		OSF1.50	18318.53	8840.00					MinPt-O-SF
Pronghorn Skivley State #1 (Offset) Plugged Blind Off-2048ft (Def Survey)													Pass
10157.04	32.81	10155.76	10124.24	N/A		MAS = 10.00 (m)	0.00	0.00					Surface
10157.03	32.81	10154.53	10124.23	8356.72		MAS = 10.00 (m)	26.00	26.00					WRP
10157.03	452.84	9854.71	9704.20	33.74		OSF1.50	1500.00	1500.00					MinPt-CtCt
10173.61	629.64	9753.42	9543.97	24.28		OSF1.50	2070.00	2067.82					MinPts
7937.13	396.61	7672.30	7540.53	30.11		OSF1.50	18100.00	8840.00					MinPt-CtCt
7937.48	397.52	7672.04	7539.96	30.04		OSF1.50	18170.00	8840.00					MINPT-O-EOU
7937.95	398.06	7672.15	7539.89	30.00		OSF1.50	18210.00	8840.00					MinPt-O-ADP
7940.26	399.62	7673.41	7540.64	29.90		OSF1.50	18318.53	8840.00					MinPt-O-SF

Borehole: Parkway 16-17 State Com #1H	Well: Parkway 16-17 State Com #1H	Field: NM Eddy County (NAD 83)	Structure: Cimarex Parkway 16-17 State Com #1H
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Gravity & Magnetic Parameters Model: HDGM 2020 MagDec: 7.204°	Dip: 60.411° FS: 47916.865mT	Date: 21-Feb-2020 Gravity FS: 990.514mgn (9.80665 Based)	Surface Location Lat: N 32 39 53.07 Lon: W 104 4 25.76	NAD83 New Mexico State Plane, Eastern Zone, US Feet Northing: 605661.86HUS Easting: 621195.43HUS	Grid Conv: Scale Fact: 0.1401° 0.99991639	Miscellaneous Slot: New Slot Plan: Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20	TVD Ref: RKB(3375.4ft above MSL)
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Critical Point	Critical Points							
	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [1208' FNL, 806' FEL]	0.00	0.00	271.85	0.00	0.00	0.00	0.00	0.00
Rustler	300.00	0.00	359.70	300.00	0.00	0.00	0.00	0.00
Top Salt	340.00	0.00	359.70	340.00	0.00	0.00	0.00	0.00
Base Salt	930.00	0.00	359.70	930.00	0.00	0.00	0.00	0.00
Yates	1200.00	0.00	359.70	1200.00	0.00	0.00	0.00	0.00
Nudge 2'/100' DLS	1500.00	0.00	359.70	1500.00	0.00	0.00	0.00	0.00
Hold Nudge	1815.90	6.32	359.70	1815.26	0.14	17.40	-0.09	2.00
Queen	2142.62	6.32	359.70	2140.00	0.44	53.35	-0.28	0.00
Captain	3103.46	6.32	359.70	3095.00	1.32	159.09	-0.82	0.00
Delaware	3360.02	6.32	359.70	3350.00	1.56	187.32	-0.97	0.00
Drop to Vertical 2'/100' DLS	5020.10	6.32	359.70	5000.00	3.07	370.01	-1.91	0.00
Hold Vertical	5336.00	0.00	359.70	5315.26	3.22	387.41	-2.00	2.00
1st BS Sand	6970.74	0.00	359.70	6950.00	3.22	387.41	-2.00	0.00
2nd BS Sand	7730.74	0.00	359.70	7710.00	3.22	387.41	-2.00	0.00
KOP - Build 12'/100' DLS	8383.28	0.00	359.70	8362.54	3.22	387.41	-2.00	0.00
3rd BS Sand	8758.06	44.97	270.02	8700.00	142.91	387.45	-141.69	12.00
Landing Point Cimarex Parkway 16-17 State Com #1H - PBHL [821' FNL, 100' FWL]	9133.28	90.00	270.02	8840.00	480.68	387.55	-479.47	12.00
Wolfcamp	NaN		270.02	8840.00	9665.90	390.43	-9664.72	0.00

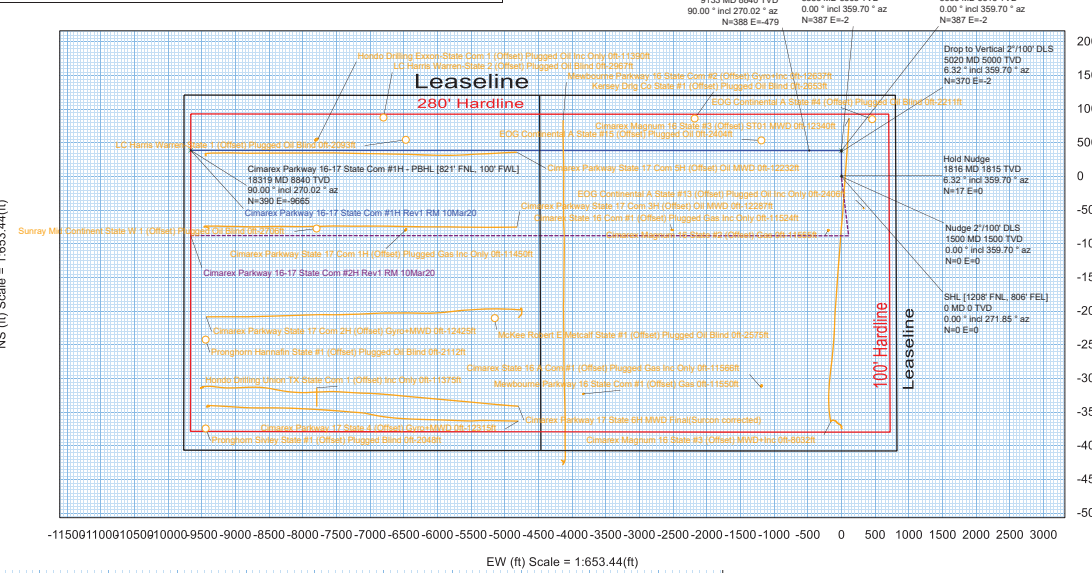
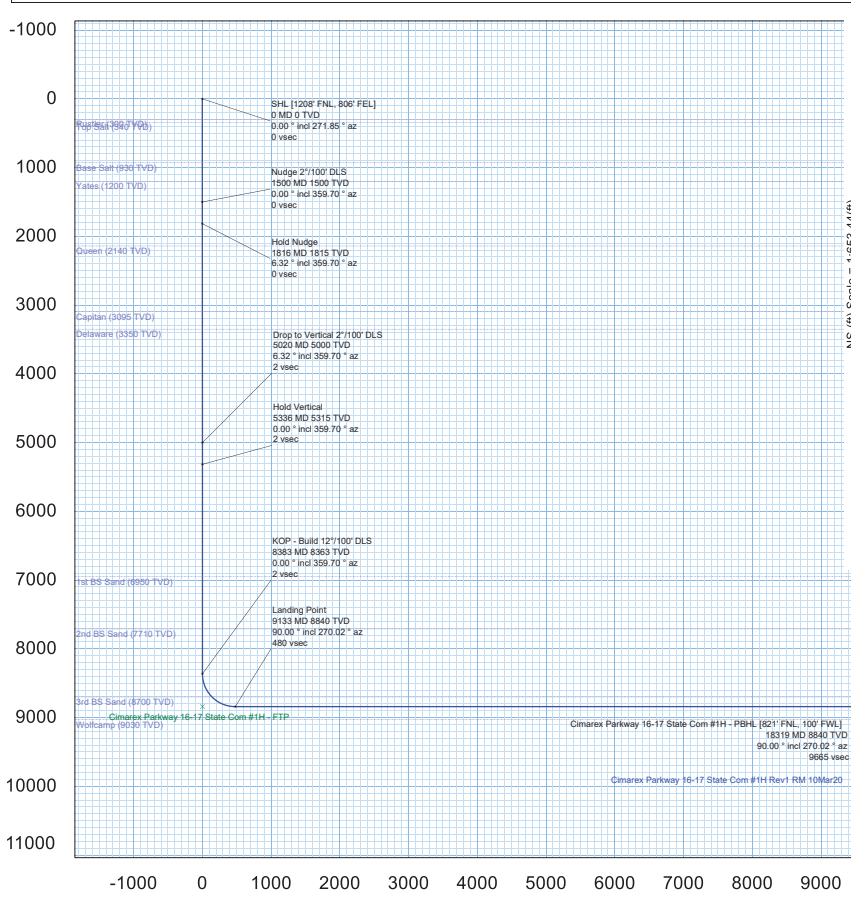
CONTROLLED

Plan of
Drawing of
Copy number
Date

Cimarex Parkway 16-17 State Com #1H Rev1 RM 10Mar20
of 1
10-Mar-2020

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for



Interval	Start TVD (ft)	End TVD (ft)	Interval Length (ft)
SHL	0	0	0
Rustler	300	300	0
Yates	1200	1200	0
Queen	2143	2143	0
Captain	3103	3103	0
Delaware	3360	3360	0
Drop to Vertical	5020	5020	0
Hold Vertical	5336	5336	0
1st BS Sand	6971	6971	0
2nd BS Sand	7731	7731	0
KOP - Build	8383	8383	0
3rd BS Sand	8758	8758	0
Landing Point	9133	9133	0
Wolfcamp	9666	9666	0

Vertical Section (ft) Azim = 270.02° Scale = 1:640.00(ft) Origin = 0N/-S, 0E/-W

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:

- A. Characteristics of H₂S
- B. Physical effects and hazards
- C. Principal and operation of H₂S detectors, warning system and briefing areas.
- D. Evacuation procedure, routes and first aid.
- E. Proper use of safety equipment & life support systems
- F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

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	<u>H₂S DETECTION AND ALARM SYSTEMS.</u>		

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

3 Windsock and/or wind streamers:

- A. Windsock at mudpit area should be high enough to be visible.
- B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.

4 Condition Flags and Signs

- A. Warning sign on access road to location.
- B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only H₂S trained and certified personnel admitted to location.

5 Well control equipment:

- A. See exhibit "E-1"

6 Communication:

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

7 Drillstem Testing:

No DSTs r cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

H₂S Contingency Plan
Parkway 16-17 State Com 1H
Cimarex Energy Co.
UL: A, Sec. 16, T19S, R29E
Eddy Co., NM

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H₂S monit: Direc. of Drilling & Comp.Manag.
- « Use the "buddy system" to e Drilling Manager 432-620-1975
- Spencer Bryant Drilling Superintendent 432-620-7885 580-603-2611
- « Take precautions to avoid personal injury during this operation.

- « Have received training in the:
 - Detection of H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Please see attached International Chemical Safety Cards.

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts
Parkway 16-17 State Com 1H
 Cimarex Energy Co.
 UL: A, Sec. 16, T19S, R29E
 Eddy Co., NM

Company Office			
Cimarex Energy Co. of Colorado		800-969-4789	
Co. Office and After-Hours Menu			
Key Personnel			
Name	Title	Office	Mobile
Larry Seigrist	Dirac. of Drilling & Comp.Manag.	432-620-1934	580-243-8485
Charlie Pritchard	Drilling Manager	432-620-1975	432-238-7084
Spencer Bryant	Drilling Superintendent	432-620-7885	580-603-2611
Roy Shirley	Construction Superintendent		432-634-2136
Artesia			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		575-746-2701	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
Carlsbad			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		575-887-3798	
Local Emergency Planning Committee		575-887-6544	
US Bureau of Land Management		575-887-6544	
Santa Fe			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
National			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
Medical			
Flight for Life - 4000 24th St.; Lubbock, TX		806-743-9911	
Aerocare - R3, Box 49F; Lubbock, TX		806-747-8923	
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM		505-842-4433	
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM		505-842-4949	
Other			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Halliburton		575-746-2757	
B.J. Services		575-746-3569	

Intent As Drilled

API #									
Operator Name:					Property Name:				Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

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

Is this well an infill well?

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