



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

05/15/2023

Well Name: RIVERBEND 11-14 FEDERAL COM	Well Location: T25S / R28E / SEC 11 / NENW /	County or Parish/State:
Well Number: 17H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM016104	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001549512	Well Status: Approved Application for Permit to Drill	Operator: CIMAREX ENERGY COMPANY

Notice of Intent

Sundry ID: 2697269

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 10/11/2022

Time Sundry Submitted: 10:48

Date proposed operation will begin: 01/01/2023

Procedure Description: Cimarex Energy Company respectfully requests approval to make changes to the approved APD as follows: 1. The BHL will change as follows: FROM: 330' FSL & 1815' FWL (Unit N, SESW) Section 14-T25S-R28E Lat 32.123715; Long 104.060623 TO: 330' FSL & 990' FWL (Unit N, SESW) Section 14-T25S-R28E Lat 32.123679; Long 104.063287 2. The proposed TD will change as follows: FROM: 19633' MD; 9975' TVD - Wolfcamp TO: 19391' MD; 9652' TVD - Wolfcamp The pool will remain the same - Purple Sage Wolfcamp (Gas) - 98220 3. The casing and cement program will change and is shown in the updated drilling plan, as well as a separate sheet showing these changes. 4. Cimarex Energy Company respectfully requests approval for off-line cementing and approval to skid the rig to the next well on the pad to begin operations instead of waiting 8 hours for the surface casing cement to harden before skidding the rig. An updated C-102, drilling plan and directional survey are attached.

NOI Attachments

Procedure Description

Addition_to_sundry_notice_20230109061410.docx

Sundry_attachments_20221011104754.pdf

Well Name: RIVERBEND 11-14 FEDERAL COM	Well Location: T25S / R28E / SEC 11 / NENW /	County or Parish/State:
Well Number: 17H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM016104	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001549512	Well Status: Approved Application for Permit to Drill	Operator: CIMAREX ENERGY COMPANY

Conditions of Approval

Specialist Review

RIVERBEND_11_14_FED_COM_17H_COA_20230512124747.pdf

Additional

RIVERBEND_11_14_FED_COM_17H_COA_20230512111046.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: RUSTY KLEIN

Signed on: JAN 09, 2023 06:14 AM

Name: CIMAREX ENERGY COMPANY

Title: Regulatory Analyst IV

Street Address: 600 N MRIENFIELD SUITE 600

City: MIDLAND

State: TX

Phone: (432) 620-1933

Email address: RUSTY.KLEIN@COTERRA.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 05/15/2023

Signature: Chris Walls

CIMAREX ENERGY COMPANY
RIVERBEND 11-14 FEDERAL COM #17H
30-015-49512
Section 11-T25S-R28E
Eddy County, New Mexico

ADDITION TO SUNDRY NOTICE SUBMITTED 10-11-2022:

FTP will change as follows:

FROM: 390' FNL & 2009' FWL (Unit C, NENW)
Section 11-T25S-R28E
Lat 32.150883; Long 104.060697

TO: 330' FNL & 990' FWL (Unit C, NENW)
Section 11-T25S-R28E
Lat 32.151009; Long 104.063363

LTP will change as follows:

FROM: 330' FSL & 1815' FWL (Unit N, SESW)
Section 14-T25S-R28E
Lat 32.123715; Long 104.060623

TO: 330' FSL & 990' FWL (Unit N, SESW)
Section 14-T25S-R30E
Lat 32.123679; Long 104.063287

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District III
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District IIII
1000 Rio Huerfano 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 30-015-49512	² Pool Code 98220	³ Pool Name Purple Sage Wolfcamp Gas
⁴ Property Code 321641	⁵ Property Name RIVERBEND 11-14 FEDERAL COM	⁶ Well Number 17H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 2967.2

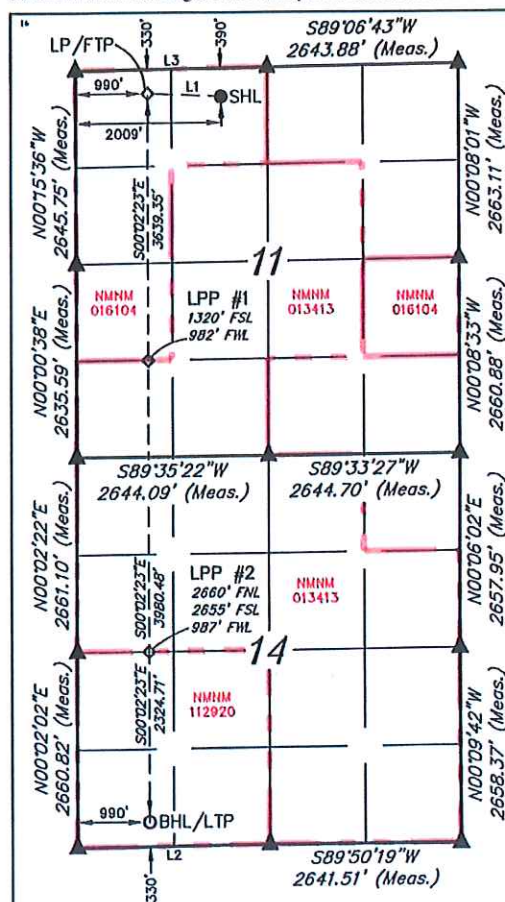
"Surface Location

UL or lot no. C	Section 11	Township 25S	Range 28E	Lot Idn	Feet from the 390	North/South line NORTH	Feet from the 2009	East/West line WEST	County EDDY
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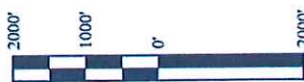
"Bottom Hole Location If Different From Surface

UL or lot no. M	Section 14	Township 25S	Range 28E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 990	East/West line WEST	County EDDY
¹⁰ Dedicated Acres 640	¹¹ Joint or Infill	¹² Consolidation Code Will be communitized	¹³ 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.



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



DRAWN BY: C.D. 07-29-20
REV: 2 09-27-22 D.M.C.
(LP & BHL MOVE)

NOTE:
• Distances referenced on plat to section lines are perpendicular.
• Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W101°53'00" (NAD 83)

LINE TABLE

LINE	DIRECTION	LENGTH
L1	N87°31'15"W	1020.43'
L2	S89°11'21"W	2653.66'
L3	S89°06'37"W	2644.09'

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°09'03.21" (32.150893°)
LONGITUDE = 104°03'36.25" (104.060069°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°09'02.77" (32.150770°)
LONGITUDE = 104°03'34.49" (104.059580°)
STATE PLANE NAD 83 (N.M. EAST)
N: 418737.47' E: 625907.22'
STATE PLANE NAD 27 (N.M. EAST)
N: 418679.29' E: 584723.12'

NAD 83 (LPP #1)
LATITUDE = 32°09'03.61" (32.151009°)
LONGITUDE = 104°03'48.11" (104.063363°)
NAD 27 (LPP #1)
LATITUDE = 32°09'03.19" (32.150887°)
LONGITUDE = 104°03'46.34" (104.062873°)
STATE PLANE NAD 83 (N.M. EAST)
N: 418777.34' E: 624887.79'
STATE PLANE NAD 27 (N.M. EAST)
N: 418719.17' E: 583703.71'

NAD 83 (LPP #2)
LATITUDE = 32°08'27.63" (32.141007°)
LONGITUDE = 104°03'48.01" (104.063355°)
NAD 27 (LPP #2)
LATITUDE = 32°08'27.18" (32.140885°)
LONGITUDE = 104°03'46.25" (104.062846°)
STATE PLANE NAD 83 (N.M. EAST)
N: 415138.83' E: 624905.51'
STATE PLANE NAD 27 (N.M. EAST)
N: 415080.73' E: 583721.36'

NAD 83 (LPP #3)
LATITUDE = 32°07'48.24" (32.130688°)
LONGITUDE = 104°03'47.90" (104.063305°)
NAD 27 (LPP #3)
LATITUDE = 32°07'47.80" (32.129945°)
LONGITUDE = 104°03'46.14" (104.062816°)
STATE PLANE NAD 83 (N.M. EAST)
N: 411159.26' E: 624924.89'
STATE PLANE NAD 27 (N.M. EAST)
N: 411101.24' E: 583740.65'

NAD 83 (BHL/LTP)
LATITUDE = 32°07'25.24" (32.123679°)
LONGITUDE = 104°03'47.83" (104.063287°)
NAD 27 (BHL/LTP)
LATITUDE = 32°07'24.80" (32.123556°)
LONGITUDE = 104°03'46.07" (104.062798°)
STATE PLANE NAD 83 (N.M. EAST)
N: 408835.09' E: 624936.21'
STATE PLANE NAD 27 (N.M. EAST)
N: 408777.11' E: 583751.91'

**"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 *Rusty Klein* Date *10-5-2022*
RUSTY KLEIN
Printed Name
rusty.klein@coterra.com
E-mail Address

**"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.

MARCH 03, 2017

Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number:

Cimarex Energy Co., Riverbend 11-14 Federal Com 17H

1. Geological Formations

TVD of target 9,652

Pilot Hole TD N/A

MD at TD 19,391

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Top of Salt	1068	N/A	
Base of Salt	2402	N/A	
Cherry Canyon	3624	Hydrocarbons	
Brushy Canyon	5198	Hydrocarbons	
Bone Spring	6361	Hydrocarbons	
1st Bone Springs	7331	Hydrocarbons	
2nd Bone Spring	7585	Hydrocarbons	
3rd Bone Spring	8414	Hydrocarbons	
Wolfcamp	9514	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	450	450	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	3.80	8.88	14.91
12 1/4	0	2580	2580	9-5/8"	36.00	J-55	LT&C	1.46	2.55	4.88
8 3/4	0	9119	9119	7"	26.00	L-80	LT&C	1.27	1.70	2.05
8 3/4	9119	10164	9609	7"	26.00	N-80	BT&C	1.20	1.61	47.41
6	8119	19391	9652	4-1/2"	11.60	P-110	BT&C	1.31	1.86	20.64
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., Riverbend 11-14 Federal Com 17H

	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.	Y
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

Cimarex Energy Co., Riverbend 11-14 Federal Com 17H

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	91	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	494	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	151	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	415	10.30	3.64	22.18		Lead: Tuned Light + LCM
	174	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Completion System	687	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	33
Intermediate	0	49
Production	2380	25
Completion System	9964	10

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.					
BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	2M
			Blind Ram		
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram	X	
			Double Ram	X	
			Other		
6	13 5/8	5M	Annular	X	5M
			Blind Ram		
			Pipe Ram	X	
			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.

X	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.
Y	Are anchors required by manufacturer?

Cimarex Energy Co., Riverbend 11-14 Federal Com 17H

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 450'	Fresh Water	7.83 - 8.33	28	N/C
450' to 2580'	Brine Water	9.80 - 10.30	30-32	N/C
2580' to 10164'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
10164' to 19391'	OBM	11.00 - 11.50	50-70	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.
X	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval
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7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	5771 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.

X	H2S is present
X	H2S 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 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 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 5000 psi.

A solid steel body pack-off will be utilized after running and cementing the production casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

All casing strings will be tested as per Onshore Order No.2 to atleast 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.

10. Other Variances

Cimarex requests to perform offline cementing. OLC procedure as follows: 1. Land casing on solid body mandrel hanger. Engage packoff and lock ring. 2. Install BPV. 3. Skid rig. 4. Check for pressure and remove BPV. 5. Circulate down casing, taking returns through casing valves. 6. Pump lead and tail cement. 7. Displace cement and bump the plug. 8. Ensure floats are holding pressure. 9. RD cement crew. 10. Install BPV and TA cap.

Cimarex requests permission to skid the rig to the next well on the pad to begin operations instead of waiting 8 hours for surface cement to harden on this 17H well. Surface cement will be pumped and we will ensure floats hold, do a green cement test and then skid to the next well on pad. We will not perform any operations on this 17H well until at least 8 hours and when both tail and lead slurry reach 500 psi. The mandrel hanger is made up on the last joint of 13 3/8" casing and then lowered down with a landing joint. It is then lowered down until the mandrel contacts the landing ring which is pre-welded to the conductor pipe. At this point the 13 3/8" casing is entirely supported by the conductor pipe via the landing ring/mandrel and is independent from the rig. This allows us to walk the rig away from the 17H well and begin work on the next well while the cement is hardening. There is no way for the casing to be moved or knocked off center since it is hanging from the landing ring.

CIMAREX ENERGY COMPANY
 RIVERBEND 11 14 FEDERAL COM #17H
 30-015-49512
 Section 11-T25S-R28E
 Eddy Co., NM

THE CASING PROGRAM WILL BE CHANGED AS FOLLOWS:

FROM:

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	450'	450'	13-3/8"	48#	H-40/J-55 hybrid	ST&C	3.80	8.88	14.91
12-1/4"	0	2450'	2450'	9-5/8"	36#	J-55	LT&C	1.54	2.68	5.14
8-3/4"	0	8575'	8575'	7"	26#	L-80	LT&C	1.35	1.81	1.97
8-3/4"	8575'	10099'	9975'	7"	26#	L-80	BT&C	1.16	1.55	16.59
6"	8475'	19634'	9975'	4-1/2"	11.6#	P-110	BT&C	1.27	1.80	21.09
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 & Gas Order #2 III.B.1.H

TO:

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	450'	450'	13-3/8"	48#	H-40/J-55 hybrid	ST&C	3.80	8.88	14.91
12-1/4"	0	2580'	2580'	9-5/8"	36#	J-55	LT&C	1.46	2.55	4.88
8-3/4"	0	9119'	9119'	7"	26#	L-80	LT&C	1.27	1.70	2.05
8-3/4"	9119'	10164'	9609'	7"	26#	N-80	BT&C	1.2	1.61	47.41
6"	8119'	19391'	9652'	4-1/2"	11.6#	P-110	BT&C	1.31	1.86	20.64
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 & Gas Order #2 III.B.1.h.

Cimarex is also requesting approval for off line cementing and request approval to skid the rig to the next well on the pad to begin operations instead of waiting 8 hours for the surface casing cement to harden before skidding the rig.

An updated drilling plan is attached.

CIMAREX ENERGY COMPANY
 RIVERBEND 11 14 FEDERAL COM #17H
 30-015-49512
 Section 11-T25S-R28E
 Eddy Co., NM

THE CEMENTING PROGRAM WILL BE CHANGED AS FOLLOWS:

FROM:

CASING	#SACKS	WEIGHT LB/GAL	YIELD FT3/SACK	H2O GAL/SACK	500# COMP STRENGTH (HOURS)	SLURRY DESCRIPTION
SURFACE	91	13.50	1.72	9.15	15.5	Lead: Class C + bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM

INTERMEDIATE	468	12.90	1.88	9.65	12	Lead: 35:65 Poz C, Salt & bentonite
	141	14.80	1.36	6.57	9.5	Tail: Class C + retarder

Production	445	10.30	3.64	22.18		Lead: Tuned Light + LCM
	109	14.20	1.30	5.86	14.30	Tail: 50:50 Poz H, Salt, Bentonite, fluid loss, dispersant & SMS

Completion System	709	14.20	1.30	5.86	14.3	Tail: 50:50 Poz H, Salt, Bentonite, fluid loss, dispersant & SMS
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CASING STRING	TOC	% EXCESS
SURFACE	0	33
INTERMEDIATE	0	49
PRODUCTION	2250	25
COMPLETION	9899	10

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

TO:

CASING	#SACKS	WEIGHT LB/GAL	YIELD FT3/SACK	H2O GAL/SACK	500# COMP STRENGTH (HOURS)	SLURRY DESCRIPTION
SURFACE	91	13.50	1.72	9.15	15.5	Lead: Class C + bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM

INTERMEDIATE	494	12.90	1.88	9.65	12	Lead: 35:65 Poz C, Salt & bentonite
	151	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	415	10.30	3.64	22.18		Lead: Tuned Light + LCM
	174	14.80	1.36	6.57	9.50	Tail: Class C + retarder
Completion System	687	14.20	1.30	5.86	14.3	Tail: 50:50 Poz H, Salt, Bentonite, fluid loss, dispersant & SMS

CASING STRING	TOC	% EXCESS
SURFACE	0	33
INTERMEDIATE	0	49
PRODUCTION	2380	25
COMPLETION	9964	10

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



Cimarex Riverbend 11-14 Federal Com 17H Rev2 kFc 03Oct22 Proposal

Geodetic Report

(Def Plan)



Report Date: October 03, 2022 - 01:51 PM
Client: Cimarex Energy
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Riverbend 11-14 Federal Com 17H / 17H
Well: Riverbend 11-14 Federal Com 17H
Borehole: Riverbend 11-14 Federal Com 17H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Riverbend 11-14 Federal Com 17H Rev2 kFc 03Oct22
Survey Date: October 06, 2020
Tort / AHD / DDI / ERD Ratio: 113.733 * / 10863.962 ft / 6.399 / 1.136
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 9' 3.21390", W 104° 3' 35.24934"
Location Grid N/E Y/X: N 418737.470 IUS, E 625907.220 IUS
CRS Grid Convergence Angle: 0.1454 *
Grid Scale Factor: 0.99991728
Version / Patch: 2.10.833.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.720 * (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 22ft
TVD Reference Elevation: 2989.200 ft above MSL
Seabed / Ground Elevation: 2987.200 ft above MSL
Magnetic Declination: 6.671 *
Total Gravity Field Strength: 998.4572mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47525.854 nT
Magnetic Dip Angle: 59.753 *
Declination Date: October 03, 2022
Magnetic Declination Model: HDGM 2022
North Reference: Grid North
Grid Convergence Used: 0.1454 *
Total Corr Mag North->Grid
North: 6.5260 *
Local Coord Referenced To: Well Head

30-015-49512

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 [390' FNL, 2009' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	418737.47	625907.22	N 32.150893	W 104.060069
	100.00	0.00	272.24	100.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	200.00	0.00	272.24	200.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	300.00	0.00	272.24	300.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	400.00	0.00	272.24	400.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	500.00	0.00	272.24	500.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	600.00	0.00	272.24	600.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	700.00	0.00	272.24	700.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	800.00	0.00	272.24	800.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	900.00	0.00	272.24	900.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	1000.00	0.00	272.24	1000.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
Salado	1068.00	0.00	272.24	1068.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	1100.00	0.00	272.24	1100.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	1200.00	0.00	272.24	1200.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	1300.00	0.00	272.24	1300.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	1400.00	0.00	272.24	1400.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
Nudge, Build 2"/100ft	1500.00	0.00	272.24	1500.00	0.00	0.00	0.00	0.00	418737.47	625907.22	N 32.150893	W 104.060069
	1600.00	2.00	272.24	1599.98	-0.08	0.07	-1.74	2.00	418737.54	625905.48	N 32.150893	W 104.060075
	1700.00	4.00	272.24	1699.84	-0.31	0.27	-6.97	2.00	418737.74	625900.25	N 32.150894	W 104.060092
	1800.00	6.00	272.24	1799.45	-0.69	0.61	-15.68	2.00	418738.08	625891.54	N 32.150895	W 104.060120
	1900.00	8.00	272.24	1898.70	-1.23	1.09	-27.86	2.00	418738.56	625879.36	N 32.150896	W 104.060159
	2000.00	10.00	272.24	1997.47	-1.91	1.70	-43.49	2.00	418739.17	625863.73	N 32.150898	W 104.060210
Hold	2099.99	12.00	272.24	2095.61	-2.75	2.45	-62.55	2.00	418739.92	625844.67	N 32.150900	W 104.060271
	2200.00	12.00	272.24	2193.44	-3.66	3.26	-83.33	0.00	418740.73	625823.90	N 32.150902	W 104.060338
	2300.00	12.00	272.24	2291.25	-4.58	4.07	-104.10	0.00	418741.54	625803.12	N 32.150905	W 104.060406
	2400.00	12.00	272.24	2389.07	-5.49	4.88	-124.88	0.00	418742.35	625782.35	N 32.150907	W 104.060473
Castile	2413.22	12.00	272.24	2402.00	-5.61	4.99	-127.63	0.00	418742.46	625779.60	N 32.150907	W 104.060482
	2500.00	12.00	272.24	2486.88	-6.41	5.69	-145.65	0.00	418743.16	625761.58	N 32.150909	W 104.060540
	2600.00	12.00	272.24	2584.70	-7.32	6.51	-166.43	0.00	418743.98	625740.80	N 32.150912	W 104.060607
Bell Canyon	2615.64	12.00	272.24	2600.00	-7.46	6.63	-169.68	0.00	418744.10	625737.55	N 32.150912	W 104.060617
	2700.00	12.00	272.24	2682.51	-8.23	7.32	-187.20	0.00	418744.79	625720.03	N 32.150914	W 104.060674
	2800.00	12.00	272.24	2780.33	-9.15	8.13	-207.98	0.00	418745.60	625699.26	N 32.150917	W 104.060741
	2900.00	12.00	272.24	2878.14	-10.06	8.94	-228.75	0.00	418746.41	625678.49	N 32.150919	W 104.060808
	3000.00	12.00	272.24	2975.96	-10.97	9.75	-249.53	0.00	418747.22	625657.71	N 32.150921	W 104.060875
	3100.00	12.00	272.24	3073.77	-11.89	10.57	-270.30	0.00	418748.04	625636.94	N 32.150924	W 104.060943
	3200.00	12.00	272.24	3171.59	-12.80	11.38	-291.08	0.00	418748.85	625616.17	N 32.150926	W 104.061010
	3300.00	12.00	272.24	3269.40	-13.72	12.19	-311.85	0.00	418749.66	625595.39	N 32.150928	W 104.061077
	3400.00	12.00	272.24	3367.22	-14.63	13.00	-332.63	0.00	418750.47	625574.62	N 32.150931	W 104.061144
	3500.00	12.00	272.24	3465.03	-15.54	13.82	-353.40	0.00	418751.28	625553.85	N 32.150933	W 104.061211
	3600.00	12.00	272.24	3562.85	-16.46	14.63	-374.18	0.00	418752.10	625533.07	N 32.150936	W 104.061278
Cherry Canyon	3662.52	12.00	272.24	3624.00	-17.03	15.14	-387.17	0.00	418752.60	625520.09	N 32.150937	W 104.061320
	3700.00	12.00	272.24	3660.66	-17.37	15.44	-394.95	0.00	418752.91	625512.30	N 32.150938	W 104.061345
	3800.00	12.00	272.24	3758.48	-18.28	16.25	-415.73	0.00	418753.72	625491.53	N 32.150940	W 104.061412
	3900.00	12.00	272.24	3856.29	-19.20	17.06	-436.50	0.00	418754.53	625470.75	N 32.150943	W 104.061479
	4000.00	12.00	272.24	3954.11	-20.11	17.88	-457.28	0.00	418755.34	625449.98	N 32.150945	W 104.061547
	4100.00	12.00	272.24	4051.92	-21.02	18.69	-478.05	0.00	418756.16	625429.21	N 32.150947	W 104.061614
	4200.00	12.00	272.24	4149.73	-21.94	19.50	-498.83	0.00	418756.97	625408.43	N 32.150950	W 104.061681
	4300.00	12.00	272.24	4247.55	-22.85	20.31	-519.60	0.00	418757.78	625387.66	N 32.150952	W 104.061748
	4400.00	12.00	272.24	4345.36	-23.77	21.12	-540.38	0.00	418758.59	625366.89	N 32.150955	W 104.061815
	4500.00	12.00	272.24	4443.18	-24.68	21.94	-561.15	0.00	418759.41	625346.11	N 32.150957	W 104.061882
	4600.00	12.00	272.24	4540.99	-25.59	22.75	-581.93	0.00	418760.22	625325.34	N 32.150959	W 104.061949
	4700.00	12.00	272.24	4638.81	-26.51	23.56	-602.70	0.00	418761.03	625304.57	N 32.150962	W 104.062016
	4800.00	12.00	272.24	4736.62	-27.42	24.37	-623.48	0.00	418761.84	625283.80	N 32.150964	W 104.062083
	4900.00	12.00	272.24	4834.44	-28.33	25.19	-644.25	0.00	418762.65	625263.02	N 32.150966	W 104.062151
	5000.00	12.00	272.24	4932.25	-29.25	26.00	-665.03	0.00	418763.47	625242.25	N 32.150969	W 104.062218
	5100.00	12.00	272.24	5030.07	-30.16	26.81	-685.80	0.00	418764.28	625221.48	N 32.150971	W 104.062285
	5200.00	12.00	272.24	5127.88	-31.07	27.62	-706.58	0.00	418765.09	625200.70	N 32.150974	W 104.062352
Brushy Canyon	5271.68	12.00	272.24	5198.00	-31.73	28.20	-721.47	0.00	418765.67	625185.81	N 32.150975	W 104.062400
	5300.00	12.00	272.24	5225.70	-31.99	28.43	-727.35	0.00	418765.90	625179.93	N 32.150976	W 104.062419
	5400.00	12.00	272.24	5323.51	-32.90	29.25	-748.13	0.00	418766.71	625159.16	N 32.150978	W 104.062486
	5500.00	12.00	272.24	5421.33	-33.82	30.06	-768.90	0.00	418767.53	625138.38	N 32.150981	W 104.062553
	5600.00	12.00	272.24	5519.14	-34.73	30.87	-789.68	0.00	418768.34	625117.61	N 32.150983	W 104.062620
	5700.00	12.00	272.24	5616.96	-35.64	31.68	-810.45	0.00	418769.15	625096.84	N 32.150985	W 104.062688
	5800.00	12.00	272.24	5714.77	-36.56	32.49	-831.23	0.00	418769.96	625076.06	N 32.150988	W 104.062755
	5900.00	12.00	272.24	5812.59	-37.47	33.31	-852.00	0.00	418770.77	625055.29	N 32.150990	W 104.062822
	6000.00	12.00	272.24	5910.40	-38.38	34.12	-872.78	0.00	418771.59	625034.52	N 32.150993	W 104.062889
	6100.00	12.00	272.24	6008.22	-39.30	34.93	-893.55	0.00	418772.40	625013.74	N 32.150995	W 104.062956
	6200.00	12.00	272.24	6106.03	-40.21	35.74	-914.33	0.00	418773.21	624992.97	N 32.150997	W 104.063023
	6300.00	12.00	272.24	6203.85	-41.12	36.56	-935.10	0.00	418774.02	624972.20	N 32.151000	W 104.063090
	6400.00	12.00	272.24	6301.66	-42.04	37.37	-955.88	0.00	418774.83	624951.42	N 32.151002	W 104.063157
	6407.42	12.00	272.24	6308.92	-42.11	37.43	-957.42	0.00	418774.89	624949.88	N 32.151002	W 104.063162
Drop 2"/100ft Top Bone Spring	6460.56	10.94	272.24	6361.00	-42.57	37.84	-967.98	2.00	418775.31	624939.33	N 32.151003	W 104.063196
	6500.00	10.15	272.24	6399.77	-42.89	38.12	-975.19	2.00	418775.59	624932.12	N 32.151004	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northling (ft)	Eastling (ft)	Latitude (N/S °)	Longitude (E/W °)
Hold	6800.00	4.15	272.24	6897.30	-44.53	39.58	-1012.47	2.00	418777.05	624889.83	N 32.151009	W 104.063340
	6900.00	2.15	272.24	6797.15	-44.77	39.79	-1017.06	2.00	418777.26	624889.35	N 32.151009	W 104.063358
	7000.00	0.15	272.24	6897.12	-44.86	39.87	-1019.96	2.00	418777.34	624887.35	N 32.151009	W 104.063364
	7007.41	0.00	272.24	6904.53	-44.86	39.87	-1019.97	2.00	418777.34	624887.34	N 32.151009	W 104.063364
	7100.00	0.00	272.24	6997.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7200.00	0.00	272.24	7097.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7300.00	0.00	272.24	7197.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7400.00	0.00	272.24	7297.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7433.88	0.00	272.24	7331.00	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7500.00	0.00	272.24	7397.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
1st BS SS	7600.00	0.00	272.24	7497.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
2nd BS Carb	7687.88	0.00	272.24	7585.00	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7700.00	0.00	272.24	7597.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7800.00	0.00	272.24	7697.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	7900.00	0.00	272.24	7797.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8000.00	0.00	272.24	7897.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8100.00	0.00	272.24	7997.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8167.88	0.00	272.24	8065.00	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8200.00	0.00	272.24	8097.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8300.00	0.00	272.24	8197.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8400.00	0.00	272.24	8297.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
3rd BS Carb	8500.00	0.00	272.24	8397.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8516.88	0.00	272.24	8414.00	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8600.00	0.00	272.24	8497.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8700.00	0.00	272.24	8597.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8800.00	0.00	272.24	8697.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8822.88	0.00	272.24	8720.00	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	8900.00	0.00	272.24	8797.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	9000.00	0.00	272.24	8897.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
	9100.00	0.00	272.24	8997.12	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
KOP, Build 10"/100ft	9119.41	0.00	272.24	9016.53	-44.86	39.87	-1019.97	0.00	418777.34	624887.34	N 32.151009	W 104.063364
3rd BS SS	9200.00	8.06	179.72	9096.86	-39.20	34.21	-1019.94	10.00	418771.68	624887.36	N 32.150994	W 104.063364
	9245.90	12.65	179.72	9142.00	-30.95	25.97	-1019.90	10.00	418763.43	624887.40	N 32.150971	W 104.063364
	9300.00	18.06	179.72	9194.15	-16.63	11.65	-1019.83	10.00	418749.12	624887.48	N 32.150932	W 104.063364
	9400.00	28.06	179.72	9266.04	22.49	-27.47	-1019.64	10.00	418710.00	624887.67	N 32.150824	W 104.063364
	9500.00	38.06	179.72	9369.74	76.97	-81.85	-1019.37	10.00	418655.53	624887.94	N 32.150675	W 104.063363
	9600.00	48.06	179.72	9442.72	145.16	-150.14	-1019.03	10.00	418587.34	624888.27	N 32.150487	W 104.063363
	9700.00	58.06	179.72	9502.74	224.98	-229.96	-1018.64	10.00	418507.53	624888.66	N 32.150268	W 104.063362
	9721.97	60.26	179.72	9514.00	243.84	-248.82	-1018.55	10.00	418488.76	624888.76	N 32.150216	W 104.063362
	9800.00	68.06	179.72	9547.99	314.02	-319.00	-1018.20	10.00	418418.50	624889.10	N 32.150023	W 104.063362
	9869.41	75.00	179.72	9589.96	379.81	-384.79	-1017.73	5.00	418323.07	624889.57	N 32.149761	W 104.063361
Build 5"/100ft	9900.00	76.53	179.72	9577.49	409.46	-414.44	-1017.25	5.00	418224.93	624890.06	N 32.149491	W 104.063360
	10000.00	81.53	179.72	9590.51	507.60	-512.58	-1016.76	5.00	418125.52	624890.54	N 32.149218	W 104.063359
	10100.00	86.53	179.72	9606.91	607.03	-612.00	-1016.45	5.00	418061.50	624890.86	N 32.149042	W 104.063359
	10164.07	89.73	179.72	9609.00	671.05	-676.03	-1016.45	0.00	418025.57	624891.04	N 32.148943	W 104.063359
	10200.00	89.73	179.72	9609.17	706.98	-711.96	-1016.27	0.00	417925.58	624891.53	N 32.148668	W 104.063358
	10300.00	89.73	179.72	9609.63	806.98	-811.96	-1015.78	0.00	417825.59	624892.02	N 32.148393	W 104.063357
	10400.00	89.73	179.72	9610.10	906.98	-911.96	-1015.29	0.00	417725.60	624892.51	N 32.148118	W 104.063356
	10500.00	89.73	179.72	9610.58	1006.98	-1011.95	-1014.80	0.00	417625.61	624893.00	N 32.147843	W 104.063355
	10600.00	89.73	179.72	9611.03	1106.98	-1111.95	-1014.30	0.00	417525.62	624893.49	N 32.147569	W 104.063355
	10700.00	89.73	179.72	9611.50	1206.98	-1211.95	-1013.81	0.00	417425.64	624893.98	N 32.147294	W 104.063354
Wolfcamp Y Sand	10800.00	89.73	179.72	9611.96	1306.98	-1311.95	-1013.32	0.00	417325.65	624894.47	N 32.147019	W 104.063353
	10900.00	89.73	179.72	9612.43	1406.98	-1411.94	-1012.83	0.00	417225.66	624894.96	N 32.146744	W 104.063352
	11000.00	89.73	179.72	9612.89	1506.98	-1511.94	-1012.34	0.00	417125.67	624895.45	N 32.146469	W 104.063352
	11100.00	89.73	179.72	9613.36	1606.98	-1611.94	-1011.85	0.00	417025.68	624895.94	N 32.146194	W 104.063351
	11200.00	89.73	179.72	9613.83	1706.97	-1711.94	-1011.36	0.00	416925.69	624896.43	N 32.145919	W 104.063350
	11300.00	89.73	179.72	9614.29	1806.97	-1811.93	-1010.86	0.00	416825.70	624896.92	N 32.145644	W 104.063349
	11400.00	89.73	179.72	9614.76	1906.97	-1911.93	-1010.37	0.00	416725.71	624897.41	N 32.145370	W 104.063348
	11500.00	89.73	179.72	9615.22	2006.97	-2011.93	-1009.88	0.00	416625.72	624897.90	N 32.145095	W 104.063348
	11600.00	89.73	179.72	9615.69	2106.97	-2111.93	-1009.39	0.00	416525.73	624898.39	N 32.144820	W 104.063347
	11666.49	89.73	179.72	9616.00	2173.46	-2178.41	-1009.06	0.00	416525.74	624898.40	N 32.144820	W 104.063347
NMNM016104 exit to NMNM013413 enter Lease Cross	11700.00	89.73	179.72	9616.16	2206.97	-2211.93	-1008.90	0.00	416525.73	624898.41	N 32.144820	W 104.063347
	11800.00	89.73	179.72	9616.62	2306.97	-2311.92	-1008.41	0.00	416425.74	624898.90	N 32.144545	W 104.063346
	11900.00	89.73	179.72	9617.09	2406.97	-2411.92	-1007.91	0.00	416325.75	624899.39	N 32.144270	W 104.063345
	12000.00	89.73	179.72	9617.55	2506.97	-2511.92	-1007.42	0.00	416225.76	624899.88	N 32.143995	W 104.063345
	12100.00	89.73	179.72	9618.02	2606.96	-2611.92	-1006.93	0.00	416125.77	624900.37	N 32.143720	W 104.063344
	12200.00	89.73	179.72	9618.49	2706.96	-2711.91	-1006.44	0.00	416025.78	624900.86	N 32.143445	W 104.063343
	12300.00	89.73	179.72	9618.95	2806.96	-2811.91	-1005.95	0.00	415925.80	624901.35	N 32.143171	W 104.063342
	12400.00	89.73	179.72	9619.42	2906.96	-2911.91	-1005.46	0.00	415825.81	624901.84	N 32.142896	W 104.063341
	12500.00	89.73	179.72	9619.88	3006.96	-3011.91	-1004.97	0.00	415725.82	624902.33	N 32.142621	W 104.063340
	12600.00	89.73	179.72	9620.35	3106.96	-3111.90	-1004.47	0.00	415625.83	624902.82	N 32.142346	W 104.063340
Section 11-14 Line Cross	12700.00	89.73	179.72	9620.82	3206.96	-3211.90	-1003.98	0.00	415525.84	624903.31	N 32.142071	W 104.063339
	12800.00	89.73	179.72	9621.28	3306.96	-3311.90	-1003.49	0.00	415425.85	624903.80	N 32.141796	W 104.063338
	12900.00	89.73	179.72	9621.75	3406.96	-3411.90	-1003.00	0.00	415325.86	624904.29	N 32.141521	W 104.063338
	13000.00	89.73	179.72	9622.21	3506.95	-3511.90	-1002.51	0.00	415225.87	624904.78	N 32.141247	W 104

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Eastings (ftUS)	Latitude (N/S °)	Longitude (E/W °)
	15600.00	89.73	179.72	9634.33	6106.93	-6111.84	-989.73	0.00	412626.15	624917.58	N 32.134100	W 104.063317
	15700.00	89.73	179.72	9634.80	6206.93	-6211.83	-989.24	0.00	412526.16	624918.07	N 32.133825	W 104.063316
	15800.00	89.73	179.72	9635.26	6306.92	-6311.83	-988.75	0.00	412426.17	624918.56	N 32.133550	W 104.063315
	15900.00	89.73	179.72	9635.73	6406.92	-6411.83	-988.25	0.00	412326.18	624919.05	N 32.133276	W 104.063314
	16000.00	89.73	179.72	9636.20	6506.92	-6511.83	-987.76	0.00	412226.19	624919.54	N 32.133001	W 104.063313
	16100.00	89.73	179.72	9636.66	6606.92	-6611.82	-987.27	0.00	412126.21	624920.03	N 32.132726	W 104.063313
	16200.00	89.73	179.72	9637.13	6706.92	-6711.82	-986.78	0.00	412026.22	624920.52	N 32.132451	W 104.063312
	16300.00	89.73	179.72	9637.59	6806.92	-6811.82	-986.29	0.00	411926.23	624921.02	N 32.132176	W 104.063311
	16400.00	89.73	179.72	9638.06	6906.92	-6911.82	-985.80	0.00	411826.24	624921.51	N 32.131901	W 104.063310
	16500.00	89.73	179.72	9638.53	7006.92	-7011.82	-985.30	0.00	411726.25	624922.00	N 32.131626	W 104.063310
	16600.00	89.73	179.72	9638.99	7106.92	-7111.81	-984.81	0.00	411626.26	624922.49	N 32.131351	W 104.063309
	16700.00	89.73	179.72	9639.46	7206.91	-7211.81	-984.32	0.00	411526.27	624922.98	N 32.131077	W 104.063308
	16800.00	89.73	179.72	9639.92	7306.91	-7311.81	-983.83	0.00	411426.28	624923.47	N 32.130802	W 104.063307
	16900.00	89.73	179.72	9640.39	7406.91	-7411.81	-983.34	0.00	411326.29	624923.96	N 32.130527	W 104.063306
	17000.00	89.73	179.72	9640.86	7506.91	-7511.80	-982.85	0.00	411226.30	624924.46	N 32.130252	W 104.063306
NMNM013413 exit to NMNM112920 enter Lease Cross												
	17067.05	89.73	179.72	9641.17	7573.96	-7578.85	-982.52	0.00	411159.26	624924.79	N 32.130068	W 104.063305
	17100.00	89.73	179.72	9641.32	7606.91	-7611.80	-982.36	0.00	411126.31	624924.95	N 32.129977	W 104.063305
	17200.00	89.73	179.72	9641.79	7706.91	-7711.80	-981.86	0.00	411026.32	624925.44	N 32.129702	W 104.063304
	17300.00	89.73	179.72	9642.25	7806.91	-7811.80	-981.37	0.00	410926.33	624925.93	N 32.129427	W 104.063303
	17400.00	89.73	179.72	9642.72	7906.91	-7911.79	-980.88	0.00	410826.35	624926.42	N 32.129153	W 104.063303
	17500.00	89.73	179.72	9643.19	8006.91	-8011.79	-980.39	0.00	410726.36	624926.91	N 32.128878	W 104.063302
	17600.00	89.73	179.72	9643.65	8106.90	-8111.79	-979.90	0.00	410626.37	624927.41	N 32.128603	W 104.063301
	17700.00	89.73	179.72	9644.12	8206.90	-8211.79	-979.41	0.00	410526.38	624927.90	N 32.128328	W 104.063300
	17800.00	89.73	179.72	9644.58	8306.90	-8311.79	-978.91	0.00	410426.39	624928.39	N 32.128053	W 104.063299
	17900.00	89.73	179.72	9645.05	8406.90	-8411.78	-978.42	0.00	410326.40	624928.88	N 32.127778	W 104.063299
	18000.00	89.73	179.72	9645.52	8506.90	-8511.78	-977.93	0.00	410226.41	624929.37	N 32.127503	W 104.063298
	18100.00	89.73	179.72	9645.98	8606.90	-8611.78	-977.44	0.00	410126.42	624929.86	N 32.127229	W 104.063297
	18200.00	89.73	179.72	9646.45	8706.90	-8711.78	-976.95	0.00	410026.43	624930.35	N 32.126954	W 104.063296
	18300.00	89.73	179.72	9646.91	8806.90	-8811.77	-976.46	0.00	409926.44	624930.85	N 32.126679	W 104.063296
	18400.00	89.73	179.72	9647.38	8906.90	-8911.77	-975.97	0.00	409826.45	624931.34	N 32.126404	W 104.063295
	18500.00	89.73	179.72	9647.85	9006.89	-9011.77	-975.47	0.00	409726.46	624931.83	N 32.126129	W 104.063294
	18600.00	89.73	179.72	9648.31	9106.89	-9111.77	-974.98	0.00	409626.47	624932.32	N 32.125854	W 104.063293
	18700.00	89.73	179.72	9648.78	9206.89	-9211.76	-974.49	0.00	409526.49	624932.81	N 32.125579	W 104.063292
	18800.00	89.73	179.72	9649.24	9306.89	-9311.76	-974.00	0.00	409426.50	624933.30	N 32.125304	W 104.063292
	18900.00	89.73	179.72	9649.71	9406.89	-9411.76	-973.51	0.00	409326.51	624933.79	N 32.125030	W 104.063291
	19000.00	89.73	179.72	9650.18	9506.89	-9511.76	-973.02	0.00	409226.52	624934.29	N 32.124755	W 104.063290
	19100.00	89.73	179.72	9650.64	9606.89	-9611.76	-972.52	0.00	409126.53	624934.78	N 32.124480	W 104.063289
	19200.00	89.73	179.72	9651.11	9706.89	-9711.75	-972.03	0.00	409026.54	624935.27	N 32.124205	W 104.063288
	19300.00	89.73	179.72	9651.57	9806.89	-9811.75	-971.54	0.00	408926.55	624935.76	N 32.123930	W 104.063288
Cimarex Riverbend 11-14 Federal Com 17H - BHL [330' FSL, 990' FWL]												
	19391.47	89.73	179.72	9652.00	9898.36	-9903.22	-971.09	0.00	408835.09	624936.21	N 32.123679	W 104.063287

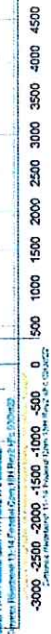
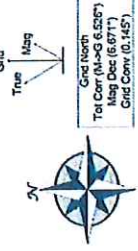
Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 3 *** 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	22.000	1/100.000	17.500	13.375		A001Mb_MWD-Depth Only	Riverbend 11-14 Federal Com 17H / Cimarex Riverbend 11-14
	1	22.000	9200.000	1/100.000	17.500	13.375		A001Mb_MWD	Riverbend 11-14 Federal Com 17H / Cimarex Riverbend 11-14
	1	9200.000	19391.470	1/100.000	17.500	13.375		A008Mb_MWD+IFR1+MS	Riverbend 11-14 Federal Com 17H / Cimarex Riverbend 11-14

Cimarex Riverbend 11-14 Federal Com 17H

Cimarex Riverbend 11-14 Federal Com 17H

[illegible]

EW (ft) Scale = 1:556.61(ft)

Drilling 6" hole
below 7" Casing

Fill Line

Flowline

5000# (5M)
BOP

Annular Preventer

SRR & A

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

Drilling
Spool

3" minimum choke line

Choke Line

2 Valves Minimum
(HCR Required)

2 Valves and a check valve

Wellhead
Assembly

11" 5000 psi x 7-1/16" 10,000 psi
Wellhead Assembly

Wellhead
Assembly

13-5/8" 3000 psi x 11" 5000 psi
Wellhead Assembly

13-5/8" 3000# psi x 13-3/8" SOW Casing Head

5000# BOP
Riverbend 11 14 Federal Com #17H
30-015-49512
Section 11-T25S-R28E
Eddy Co., NM
Cimarex Energy Co.

Drilling 6" hole
below 7" Casing

Fill Line

Flowline

5000# (5M)
BOP

Annular Preventer

SRR & A

Pipe Rams

Blind Rams

2" Minimum Kill Line

Kill Line

Drilling
Spool

3" minimum choke line

Choke Line

2 Valves and a check valve

2 Valves Minimum
(HCR Required)

Wellhead
Assembly

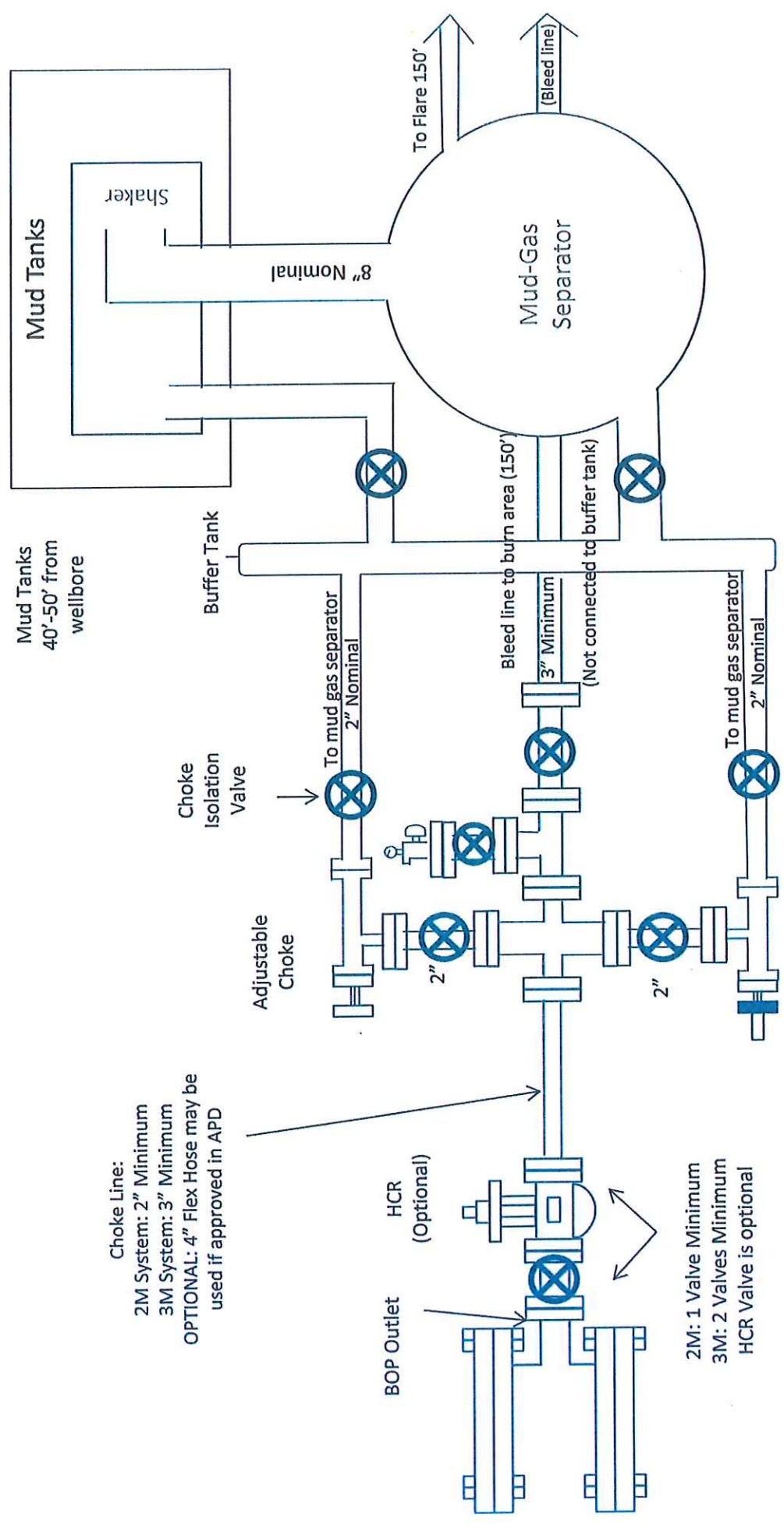
11" 5000 psi x 7-1/16" 10,000 psi
Wellhead Assembly

Wellhead
Assembly

13-5/8" 3000 psi x 11" 5000 psi
Wellhead Assembly

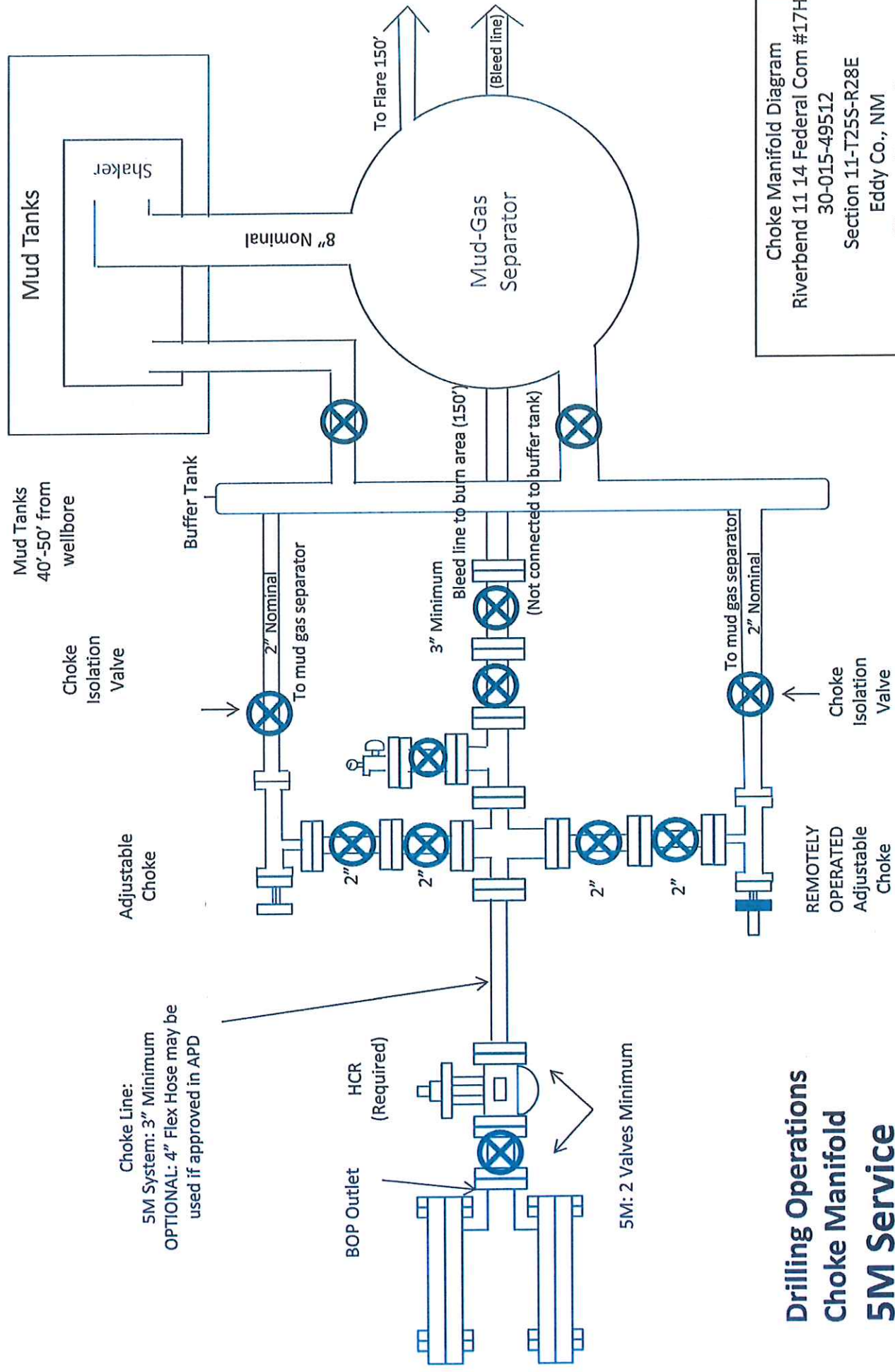
13-5/8" 3000# psi x 13-3/8" SOW Casing Head

5000# BOP
Riverbend 11 14 Federal Com #17H
30-015-49512
Section 11-T25S-R28E
Eddy Co., NM
Cimarex Energy Co.



Choke Manifold Diagram
Riverbend 11 14 Federal Com #17H
30-015-49512
Section 11-T25S-R28E
Eddy Co., NM

Drilling Operations Choke Manifold 2M/3M Service



Choke Manifold Diagram
Riverbend 11 14 Federal Com #17H
30-015-49512
Section 11-T25S-R28E
Eddy Co., NIM
Cimarex Energy Co.

Drilling Operations
Choke Manifold
5M Service

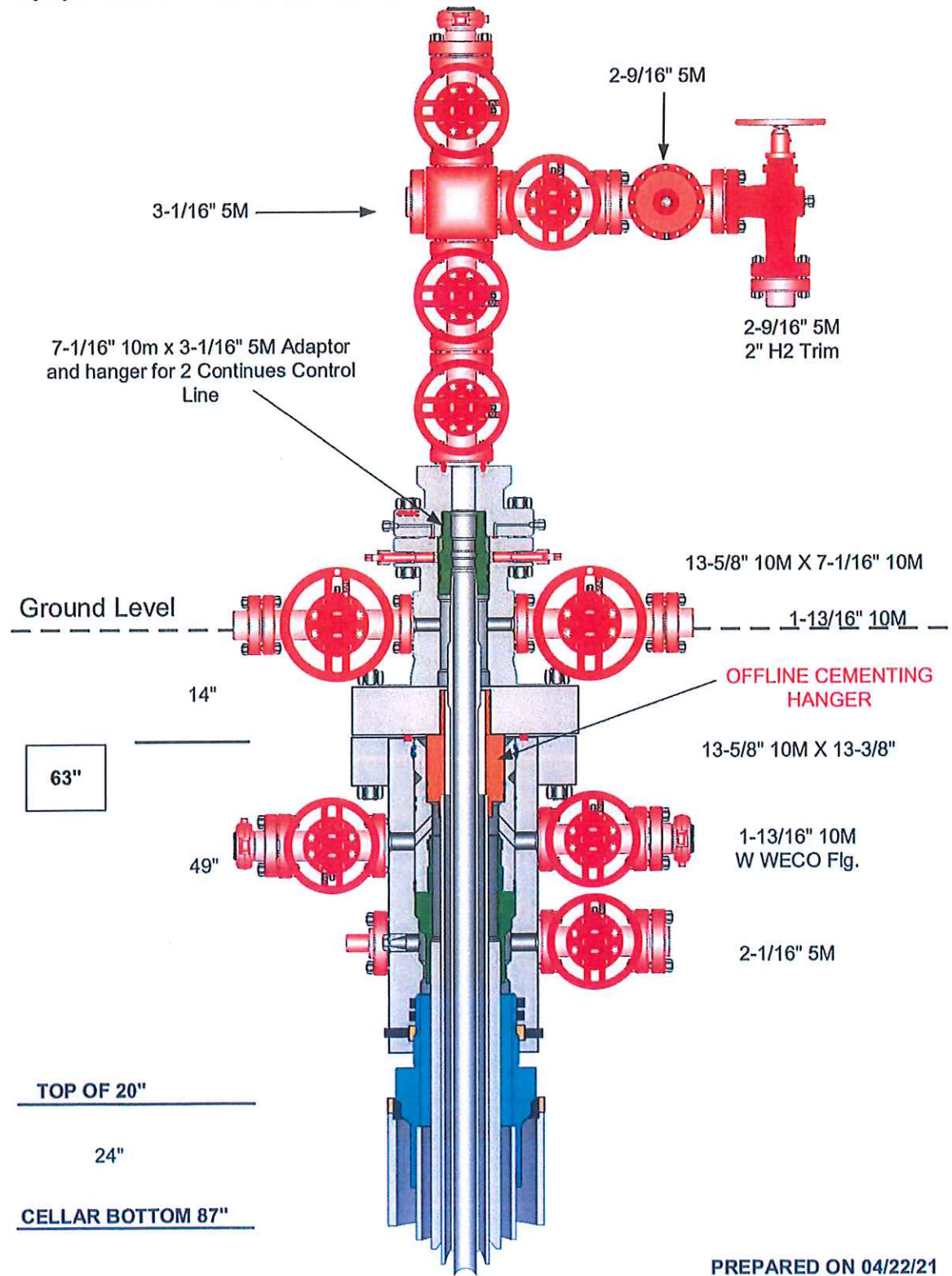


Riverbend 11 14 Federal Com #17H
30-015-49512
Section 11-T25S-R28E
Eddy Co., NM

CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

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	450	450	13-3/8"	48.00	14-40/1-55 Hybrid	ST&C	3.80	8.88	14.91
12 1/4	0	2580	2580	9-5/8"	36.00	7-55	LT&C	1.46	2.55	1.80
8 3/4	0	9119	9119	7"	26.00	L-80	LT&C	1.27	1.70	2.05
6 3/4	9119	10164	9609	7"	26.00	N-80	BT&C	1.20	1.61	17.41
6	8119	19391	9652	4-1/2"	11.60	P-110	BT&C	1.31	1.80	20.64
BLM Minimum Safety Factor								1.125	1	1.6 Dry 1.0 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



PREPARED ON 04/22/21

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

CONDITIONS

Action 222868

CONDITIONS

Operator: CIMAREX ENERGY CO. 6001 Deauville Blvd Midland, TX 79706	OGRID: 215099
	Action Number: 222868
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Original COA's still apply.	10/20/2023