

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2		5. Lease Serial No.
1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit of CA/Agreement, Name and/or No.
3a. Address	3b. Phone No. (include area code)	8. Well Name and No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		9. API Well No. 30-025-50749 132H
		10. Field and Pool or Exploratory Area WC-025 G-08 S253235G;LWR BS
		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)		
	Title	
Signature	Date	

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Additional Remarks

to begin operations prior to waiting 8 hours for the surface casing cement to harden before skidding the rig.

Attached is an updated drilling plan, casing and cement changes and an updated directional survey.

Location of Well

0. SHL: NWNW / 330 FNL / 390 FWL / TWSP: 25S / RANGE: 33E / SECTION: 32 / LAT: 32.093413 / LONG: -103.601596 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 1320 FNL / 330 FWL / TWSP: 26S / RANGE: 33E / SECTION: 5 / LAT: 32.076161 / LONG: -103.60175 (TVD: 10950 feet, MD: 16899 feet)

PPP: NWNW / 0 FNL / 330 FWL / TWSP: 26S / RANGE: 33E / SECTION: 5 / LAT: 32.079797 / LONG: -103.601789 (TVD: 10950 feet, MD: 15576 feet)

PPP: NWNW / 330 FNL / 330 FWL / TWSP: 25S / RANGE: 33E / SECTION: 32 / LAT: 32.093413 / LONG: -103.60179 (TVD: 10564 feet, MD: 10572 feet)

BHL: SWSW / 100 FSL / 330 FWL / TWSP: 26S / RANGE: 33E / SECTION: 5 / LAT: 32.065573 / LONG: -103.601786 (TVD: 10950 feet, MD: 20751 feet)

CONFIDENTIAL

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

Correct Operator

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-025- <i>50749</i>	2 Pool Code 97903	3 Well Name WC-025 G-08 S253235G; LWR Bone Spring
4 Property Code <i>330240</i>	5 Property Name RED HILLS 32-5 Federal Com	6 Well Number 132H
7 Operator Name <i>215099</i>	8 Operator Name CIMAREX ENERGY <i>Company</i>	9 Elevation 3396.0'

"Surface Location

UL or lot no. D	Section 32	Township 25S	Range 33E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 330	East/West line WEST	County LEA
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"Bottom Hole Location If Different From Surface

UL or lot no. M	Section 5	Township 26S	Range 33E	Lot Idn	Feet from the 100	North/South line SOUTH	Feet from the 330	East/West line WEST	County LEA
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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.

NOTE:

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

LINE	DIRECTION	LENGTH
L1	S89°53'08"W	2643.77'
L2	S89°53'08"W	60.04'
L3	S89°47'46"W	2645.73'

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°05'36.29" (32.093413°)
LONGITUDE = 103°36'05.74" (103.601596°)

NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°05'35.84" (32.093288°)
LONGITUDE = 103°36'04.05" (103.601125°)

STATE PLANE NAD 83 (N.M. EAST)
N: 398489.28' E: 767939.85'

STATE PLANE NAD 27 (N.M. EAST)
N: 398431.64' E: 726753.43'

NAD 83 (LP/FTP)
LATITUDE = 32°05'36.29" (32.093413°)
LONGITUDE = 103°36'06.44" (103.601790°)

NAD 27 (LP/FTP)
LATITUDE = 32°05'35.84" (32.093288°)
LONGITUDE = 103°36'04.75" (103.601318°)

STATE PLANE NAD 83 (N.M. EAST)
N: 398488.91' E: 767879.82'

STATE PLANE NAD 27 (N.M. EAST)
N: 398431.27' E: 726693.40'

NAD 83 (BHL/LTP)
LATITUDE = 32°03'56.06" (32.065573°)
LONGITUDE = 103°36'06.43" (103.601786°)

NAD 27 (BHL/LTP)
LATITUDE = 32°03'55.61" (32.065448°)
LONGITUDE = 103°36'04.74" (103.601316°)

STATE PLANE NAD 83 (N.M. EAST)
N: 388360.92' E: 767949.75'

STATE PLANE NAD 27 (N.M. EAST)
N: 388303.53' E: 726762.86'

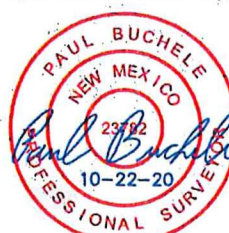
● = SURFACE HOLE LOCATION
◆ = LANDING POINT/FIRST TAKE POINT
○ = BOTTOM HOLE LOCATION/LAST TAKE POINT
▲ = SECTION CORNER LOCATED

SCALE
DRAWN BY: T.A. 02-12-20
REV: 1 10-22-20 E.C. (BOTTOM HOLE MOVE)

"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.

Rusty Klein 10/13/2022
Signature Date
Printed Name
E-mail Address
rusty.klein@coke.com

"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.

May 01, 2018
Date of Survey
Signature and Seal of Professional Surveyor:

Certificate Number:

Cimarex Energy Co., Red Hills 32-5 Federal Com 132H

1. Geological Formations

TVD of target 10,920

Pilot Hole TD N/A

MD at TD 21,165

Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	850	Useable Water	
Top of Salt	1200	N/A	
Base of Salt	4890	N/A	
Bell Canyon	4920	N/A	
Cherry Canyon	5940	N/A	
Brushy Canyon	7495	Hydrocarbons	
Bone Spring	9050	Hydrocarbons	
Avalon	9320	Hydrocarbons	
Bone Spring 1st	10045	Hydrocarbons	
Bone Spring 2nd	10580	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	900	900	13-3/8"	48.00	H-40	ST&C	1.91	4.45	7.45
12 1/4	0	4970	4970	9-5/8"	40.00	HCK-55	LT&C	1.43	1.48	2.82
8 3/4	0	10431	10431	7"	29.00	L-80	LT&C	1.44	1.67	1.85
8 3/4	10431	11181	10960	7"	29.00	P-110	BT&C	1.66	2.19	60.56
6	9431	21165	10920	4-1/2"	11.60	P-110	BT&C	1.48	2.10	21.25
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 Ill.B.1.h

Cimarex Energy Co., Red Hills 32-5 Federal Com 132H

	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., Red Hills 32-5 Federal Com 132H

3. Cementing Program

Casing	# Sk	Wt. lb/gal	Yld ft ³ /sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	364	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	949	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	291	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	347	10.30	3.64	22.18		Lead: Tuned Light + LCM
	125	14.80	1.36	6.57	9.5	Tail: Class C + Retarder
Completion System	740	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	42
Intermediate	0	49
Production	4770	25
Completion System	10981	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	3M	Annular	X	3M
			Blind Ram		
			Pipe Ram		
			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.				
N	Are anchors required by manufacturer?				

Cimarex Energy Co., Red Hills 32-5 Federal Com 132H

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 900'	Fresh Water	7.80 - 8.30	28	N/C
900' to 4970'	Brine Water	9.80 - 10.30	30-32	N/C
4970' to 11181'	Cut Brine or OBM	8.50 - 9.00	27-70	N/C
11181' to 21165'	OBM	8.50 - 9.00	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	5110 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 working pressure, or a maximum test pressure of 5000 psi. 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 132H 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 132H 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 132H 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
 RED HILLS 32 5 FEDERAL COM #132H
 30-025-50749
 Section 32-T25S-R33E
 Lea 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	1009'	1009'	13-3/8"	48#	H-40/J-55 hybrid	ST&C	1.70	3.97	6.65
12-1/4"	0	4900'	4900'	9-5/8"	40#	J-55	LT&C	1.31	1.51	2.65
8-3/4"	0	10430'	10430'	5-1/2"	17#	L-80	LT&C	1.29	1.59	1.54
8-3/4"	10430'	20751'	10950'	5-1/2"	20#	L-80	BT&C	1.72	1.75	44.81
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	900'	900'	13-3/8"	48#	H-40	ST&C	1.91	4.45	7.45
12-1/4"	0	4970'	4970'	9-5/8"	40#	HCK-55	LT&C	1.43	1.48	2.82
8-3/4"	0	10431'	10431'	7"	29#	L-80	LT&C	1.44	1.67	1.85
8-3/4"	10431'	11181'	10960'	7"	29#	P-110	BT&C	1.66	2.19	60.56
6"	9431'	21165'	10920'	4-1/2"	11.6#	P-110	BT&C	1.48	2.10	21.25
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 and directional survey is attached.

CIMAREX ENERGY COMPANY
RED HILLS 32 5 FEDERAL COM #132H

30-025-50749

Section 32- T25S-R33E

Lea 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	489	13.50	1.72	9.15	15.5	Lead: Class C + bentonite
	131	14.80	1.34	6.32	9.5	Tail: Class C + LCM
INTERMEDIATE	930	12.90	1.88	9.65	12	Lead: 35:65 Poz C, Salt & bentonite
	282	14.80	1.36	6.57	9.5	Tail: Class C + retarder
Production	596	10.30	3.64	22.18		Lead: Tuned Light + LCM
	2994	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	45
INTERMEDIATE	0	49
PRODUCTION	4700	25

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	364	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	949	12.90	1.88	9.65	12	Lead: 35:65 Poz C, Salt & bentonite
	291	14.80	1.34	6.32	9.5	Tail: Class C + LCM

Production	347	10.30	3.64	22.18		Lead: Tuned Light + LCM
	125	14.80	1.36	6.57	9.50	Tail: Class C + retarder
Completion System	740	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	42
INTERMEDIATE	0	49
PRODUCTION	4770	25
COMPLETION	10981	10

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



Cimarex Red Hills 32-5 Fed Com 132H Rev2 kFc 01Sep22 Proposal
Geodetic Report
(Def Plan)



Report Date: September 02, 2022 - 02:54 PM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Red Hills 32-5 Fed Com 132H / 132H
Well: Red Hills 32-5 Fed Com 132H
Borehole: Red Hills 32-5 Fed Com 132H
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Red Hills 32-5 Fed Com 132H Rev2 kFc 01Sep22
Survey Date: September 01, 2022
Tort / AHD / DDI / ERD Ratio: 119.473 * / 10802.153 ft / 6.395 / 0.982
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 5' 36.28695", W 103° 36' 5.74468"
Location Grid N/E Y/X: N 398489.280 ftUS, E 767939.850 ftUS
CRS Grid Convergence Angle: 0.3888 *
Grid Scale Factor: 0.9999679
Version / Patch: 2.10.832.2

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.600 * (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 22ft
TVD Reference Elevation: 3418.000 ft above MSL
Seabed / Ground Elevation: 3396.000 ft above MSL
Magnetic Declination: 6.309 *
Total Gravity Field Strength: 998.4295mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47436.745 nT
Magnetic Dip Angle: 59.650 *
Declination Date: September 01, 2022
Magnetic Declination Model: HDGM 2022
North Reference: Grid North
Grid Convergence Used: 0.3888 *
Total Corr Mag North->Grid North: 5.9206 *
Local Coord Referenced To: Well Head

30-025-50749

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 [330' FSL, 390' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	398489.28	767939.85	N 32.093413	W 103.601596
	100.00	0.00	54.32	100.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	200.00	0.00	54.32	200.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	300.00	0.00	54.32	300.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	400.00	0.00	54.32	400.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	500.00	0.00	54.32	500.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	600.00	0.00	54.32	600.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	700.00	0.00	54.32	700.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	800.00	0.00	54.32	800.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
Rustler	850.00	0.00	54.32	850.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	900.00	0.00	54.32	900.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1000.00	0.00	54.32	1000.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1100.00	0.00	54.32	1100.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
Top of Salt	1200.00	0.00	54.32	1200.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1300.00	0.00	54.32	1300.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1400.00	0.00	54.32	1400.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1500.00	0.00	54.32	1500.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1600.00	0.00	54.32	1600.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1700.00	0.00	54.32	1700.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1800.00	0.00	54.32	1800.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	1900.00	0.00	54.32	1900.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2000.00	0.00	54.32	2000.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2100.00	0.00	54.32	2100.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2200.00	0.00	54.32	2200.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2300.00	0.00	54.32	2300.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2400.00	0.00	54.32	2400.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2500.00	0.00	54.32	2500.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2600.00	0.00	54.32	2600.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
Nudge, Build 2"/100ft	2700.00	0.00	54.32	2700.00	0.00	0.00	0.00	0.00	398489.28	767939.85	N 32.093413	W 103.601596
	2800.00	2.00	54.32	2799.98	-1.01	1.02	1.42	2.00	398490.30	767941.27	N 32.093416	W 103.601591
	2900.00	4.00	54.32	2899.84	-4.03	4.07	5.67	2.00	398493.35	767945.52	N 32.093424	W 103.601577
	3000.00	6.00	54.32	2899.45	-9.06	9.15	12.75	2.00	398498.43	767952.60	N 32.093438	W 103.601554
Hold	3050.00	7.00	54.32	3049.13	-12.33	12.45	17.35	2.00	398501.73	767957.20	N 32.093447	W 103.601539
	3100.00	7.00	54.32	3098.76	-15.85	16.01	22.30	0.00	398505.29	767962.15	N 32.093457	W 103.601523
	3200.00	7.00	54.32	3198.01	-22.89	23.11	32.20	0.00	398512.39	767972.04	N 32.093476	W 103.601491
	3300.00	7.00	54.32	3297.27	-29.93	30.22	42.10	0.00	398519.50	767981.94	N 32.093495	W 103.601459
	3400.00	7.00	54.32	3396.52	-36.97	37.33	51.99	0.00	398526.61	767991.84	N 32.093515	W 103.601427
	3500.00	7.00	54.32	3495.78	-44.00	44.44	61.89	0.00	398533.72	768001.74	N 32.093534	W 103.601395
	3600.00	7.00	54.32	3595.03	-51.04	51.55	71.79	0.00	398540.82	768011.64	N 32.093553	W 103.601363
	3700.00	7.00	54.32	3694.29	-58.08	58.65	81.69	0.00	398547.93	768021.54	N 32.093573	W 103.601331
	3800.00	7.00	54.32	3793.54	-65.12	65.76	91.59	0.00	398555.04	768031.44	N 32.093592	W 103.601299
	3900.00	7.00	54.32	3892.79	-72.16	72.87	101.49	0.00	398562.15	768041.34	N 32.093611	W 103.601266
	4000.00	7.00	54.32	3992.05	-79.20	79.98	111.39	0.00	398569.25	768051.24	N 32.093631	W 103.601234
	4100.00	7.00	54.32	4091.30	-86.23	87.08	121.29	0.00	398576.36	768061.14	N 32.093650	W 103.601202
	4200.00	7.00	54.32	4190.56	-93.27	94.19	131.19	0.00	398583.47	768071.04	N 32.093669	W 103.601170
	4300.00	7.00	54.32	4289.81	-100.31	101.30	141.09	0.00	398590.57	768080.94	N 32.093689	W 103.601138
	4400.00	7.00	54.32	4389.07	-107.35	108.41	150.99	0.00	398597.68	768090.84	N 32.093708	W 103.601106
	4500.00	7.00	54.32	4488.32	-114.39	115.51	160.89	0.00	398604.79	768100.74	N 32.093728	W 103.601074
	4600.00	7.00	54.32	4587.58	-121.42	122.62	170.79	0.00	398611.90	768110.63	N 32.093747	W 103.601042
	4700.00	7.00	54.32	4686.83	-128.46	129.73	180.69	0.00	398619.00	768120.53	N 32.093766	W 103.601009
	4800.00	7.00	54.32	4786.09	-135.50	136.84	190.59	0.00	398626.11	768130.43	N 32.093786	W 103.600977
	4900.00	7.00	54.32	4885.34	-142.54	143.94	200.49	0.00	398633.22	768140.33	N 32.093805	W 103.600945
Base of Salt	4904.69	7.00	54.32	4890.00	-142.87	144.28	200.95	0.00	398633.55	768140.80	N 32.093806	W 103.600944
Beil Canyon	4934.92	7.00	54.32	4920.00	-145.00	146.42	203.95	0.00	398635.70	768143.79	N 32.093812	W 103.600934
	5000.00	7.00	54.32	4984.60	-149.58	151.05	210.39	0.00	398640.33	768150.23	N 32.093824	W 103.600913
	5100.00	7.00	54.32	5083.85	-156.62	158.16	220.29	0.00	398647.43	768160.13	N 32.093844	W 103.600891
	5200.00	7.00	54.32	5183.10	-163.65	165.27	230.19	0.00	398654.54	768170.03	N 32.093863	W 103.600869
	5300.00	7.00	54.32	5282.36	-170.69	172.37	240.09	0.00	398661.65	768179.93	N 32.093882	W 103.600847
	5400.00	7.00	54.32	5381.61	-177.73	179.48	249.99	0.00	398668.75	768189.83	N 32.093902	W 103.600825
	5500.00	7.00	54.32	5480.87	-184.77	186.59	259.89	0.00	398675.86	768199.73	N 32.093921	W 103.600803
	5600.00	7.00	54.32	5580.12	-191.81	193.70	269.79	0.00	398682.97	768209.63	N 32.093940	W 103.600781
	5700.00	7.00	54.32	5679.38	-198.85	200.80	279.69	0.00	398690.08	768219.53	N 32.093960	W 103.600759
	5800.00	7.00	54.32	5778.63	-205.88	207.91	289.59	0.00	398697.18	768229.43	N 32.093979	W 103.600737
	5900.00	7.00	54.32	5877.89	-212.92	215.02	299.49	0.00	398704.29	768239.33	N 32.093998	W 103.600715
Drop 2"/100ft Cherry Canyon	5962.31	7.00	54.32	5939.73	-217.31	219.45	305.65	0.00	398708.72	768245.49	N 32.094011	W 103.600693
	5962.58	6.99	54.32	5940.00	-217.33	219.47	305.67	2.00	398708.74	768245.52	N 32.094011	W 103.600694
	6000.00	6.25	54.32	5977.17	-219.82	221.98	309.19	2.00	398711.25	768249.02	N 32.094017	W 103.600693
	6100.00	4.25	54.32	6076.75	-225.10	227.31	316.61	2.00	398716.59	768256.45	N 32.094032	W 103.600681
	6200.00	2.25	54.32	6176.58	-228.37	230.62	321.21	2.00	398719.89	768261.05	N 32.094041	W 103.600670
	6300.00	0.25	54.32	6276.55	-229.62	231.88	322.98	2.00	398721.16	768262.82	N 32.094044	W 103.600658
Hold	6312.31	0.00	54.32	6288.86	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600654
	6400.00	0.00	54.32	6376.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600654
	6500.00	0.00	54.32	6476.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600654
	6600.00	0.00	54.32	6576.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600654
	6700.00	0.00	54.32	6676.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 1

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S °)	Longitude (E/W °)
	6900.00	0.00	54.32	6876.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7000.00	0.00	54.32	6976.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7100.00	0.00	54.32	7076.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7200.00	0.00	54.32	7176.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7300.00	0.00	54.32	7276.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7400.00	0.00	54.32	7376.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7500.00	0.00	54.32	7476.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
Brushy Canyon	7518.45	0.00	54.32	7495.00	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7600.00	0.00	54.32	7576.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7700.00	0.00	54.32	7676.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7800.00	0.00	54.32	7776.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	7900.00	0.00	54.32	7876.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8000.00	0.00	54.32	7976.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8100.00	0.00	54.32	8076.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8200.00	0.00	54.32	8176.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8300.00	0.00	54.32	8276.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8400.00	0.00	54.32	8376.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8500.00	0.00	54.32	8476.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8600.00	0.00	54.32	8576.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8700.00	0.00	54.32	8676.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8800.00	0.00	54.32	8776.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	8900.00	0.00	54.32	8876.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9000.00	0.00	54.32	8976.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
BS/BS Lime	9073.45	0.00	54.32	9050.00	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9100.00	0.00	54.32	9076.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
Leonard	9103.45	0.00	54.32	9080.00	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9200.00	0.00	54.32	9176.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9300.00	0.00	54.32	9276.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
Avalon	9343.45	0.00	54.32	9320.00	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9400.00	0.00	54.32	9376.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9500.00	0.00	54.32	9476.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9600.00	0.00	54.32	9576.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9700.00	0.00	54.32	9676.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9800.00	0.00	54.32	9776.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	9900.00	0.00	54.32	9876.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	10000.00	0.00	54.32	9976.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
1st BS Sand	10068.45	0.00	54.32	10045.00	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	10100.00	0.00	54.32	10076.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	10200.00	0.00	54.32	10176.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	10300.00	0.00	54.32	10276.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	10400.00	0.00	54.32	10376.55	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
KOP, Build 10°/100ft	10431.01	0.00	54.32	10407.56	-229.64	231.90	323.00	0.00	398721.17	768262.84	N 32.094044	W 103.600548
	10500.00	6.90	194.60	10476.39	-225.63	227.89	321.95	10.00	398717.16	768261.79	N 32.094033	W 103.600551
	10600.00	16.90	194.60	10574.11	-205.74	207.96	316.76	10.00	398697.23	768256.60	N 32.093979	W 103.600568
2nd BS Sand	10606.16	17.52	194.60	10580.00	-203.98	206.19	316.30	10.00	398695.47	768256.14	N 32.093974	W 103.600570
	10700.00	26.90	194.60	10666.78	-169.76	171.91	307.37	10.00	398661.19	768247.21	N 32.093880	W 103.600600
	10800.00	36.90	194.60	10751.57	-118.78	120.84	294.06	10.00	398610.12	768233.90	N 32.093740	W 103.600644
	10900.00	46.90	194.60	10825.91	-54.36	56.30	277.25	10.00	398545.58	768217.09	N 32.093563	W 103.600699
	11000.00	56.90	194.60	10887.53	21.55	-19.76	257.43	10.00	398469.52	768197.27	N 32.093354	W 103.600765
	11100.00	66.90	194.60	10934.58	106.65	-105.01	235.22	10.00	398384.27	768175.06	N 32.093120	W 103.600839
Build 5°/100ft	11181.01	75.00	194.60	10960.99	180.55	-179.05	215.93	10.00	398310.24	768155.77	N 32.092917	W 103.600902
	11200.00	75.95	194.60	10965.79	198.31	-196.84	211.29	5.00	398292.45	768151.13	N 32.092868	W 103.600918
	11300.00	80.95	194.60	10985.77	292.91	-291.62	186.60	5.00	398197.67	768126.44	N 32.092608	W 103.601000
	11400.00	85.95	194.60	10997.18	388.84	-387.72	161.55	5.00	398101.57	768101.40	N 32.092344	W 103.601083
2nd BS Sand target	11471.33	89.52	194.60	11000.00	457.67	-456.68	143.59	5.00	398032.61	768083.43	N 32.092155	W 103.601142
Landing Point 2nd BS Sand target	11490.49	90.47	194.60	11000.00	476.18	-475.22	138.76	5.00	398014.07	768078.60	N 32.092104	W 103.601158
	11490.69	90.47	194.60	11000.00	476.37	-475.41	138.71	0.00	398013.88	768078.55	N 32.092104	W 103.601158
	11500.00	90.47	194.60	10999.92	485.37	-484.43	136.36	0.00	398004.87	768076.20	N 32.092079	W 103.601166
	11600.00	90.47	194.60	10999.10	581.95	-581.19	111.14	0.00	397908.11	768050.99	N 32.091813	W 103.601250
	11700.00	90.47	194.60	10998.27	678.54	-677.96	85.93	0.00	397811.35	768025.78	N 32.091548	W 103.601333
	11800.00	90.47	194.60	10997.44	775.13	-774.72	60.72	0.00	397714.58	768000.57	N 32.091282	W 103.601417
Turn 2°/100ft	11868.99	90.47	194.60	10996.87	841.76	-841.48	43.33	0.00	397647.83	767983.17	N 32.091099	W 103.601474
	11900.00	90.47	193.98	10996.61	871.76	-871.53	35.67	2.00	397617.78	767975.52	N 32.091017	W 103.601500
	12000.00	90.48	191.98	10995.78	969.03	-968.97	13.20	2.00	397520.35	767953.05	N 32.090749	W 103.601574
	12100.00	90.48	189.98	10994.95	1067.06	-1067.13	-5.85	2.00	397422.19	767934.00	N 32.090480	W 103.601638
	12200.00	90.48	187.98	10994.12	1165.71	-1165.89	-21.46	2.00	397323.43	767918.39	N 32.090209	W 103.601691
	12300.00	90.48	185.98	10993.28	1264.87	-1265.14	-33.62	2.00	397224.18	767906.23	N 32.089936	W 103.601732
	12400.00	90.48	183.98	10992.45	1364.43	-1364.75	-42.30	2.00	397124.57	767897.55	N 32.089663	W 103.601762
	12500.00	90.48	181.98	10991.62	1464.24	-1464.61	-47.51	2.00	397024.72	767892.34	N 32.089388	W 103.601781
Hold	12600.00	90.47	179.98	10990.79	1564.20	-1564.59	-49.22	2.00	396924.75	767890.63	N 32.089113	W 103.601789
	12618.96	90.47	179.60	10990.63	1583.16	-1583.55	-49.16	2.00	396905.79	767890.70	N 32.089061	W 103.601789
	12700.00	90.47	179.60	10989.96	1684.20	-1684.58	-48.60	0.00	396824.76	767891.26	N 32.088839	W 103.601789
	12800.00	90.47	179.60	10989.14	1784.20	-1784.58	-47.91	0.00	396724.76	767891.95	N 32.088564	W 103.601789
	12900.00	90.47	179.60	10988.31	1884.19	-1884.57	-47.21	0.00	396624.77	767892.64	N 32.088289	W 103.601789
	13000.00	90.47	179.60	10987.48	1984.19	-1984.56	-46.52	0.00	396524.78	767893.33	N 32.088014	W 103.601789
	13100.00	90.47	179.60	10986.66	2084.19	-2084.56	-45.83	0.00	396424.79	767894.02	N 32.087739	W 103.601789
	13200.00	90.47	179.60	10985.83	2184.18	-2184.55	-45.14	0.00	396324.80	767894.71	N 32.087464	W 103.601789
	13300.00	90.47	179.60	10985.00	2284.18	-2284.5						

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 °)
Section 32-5 Line, State exit to Fee enter Lease Cross	15989.76	90.47	179.60	10962.77	4953.85	-4954.15	-25.86	0.00	393535.30	767913.99	N 32.079796	W 103.601788
	16000.00	90.47	179.60	10962.69	4964.09	-4964.39	-25.79	0.00	393525.06	767914.06	N 32.079768	W 103.601788
	16100.00	90.47	179.60	10961.86	5064.09	-5064.38	-25.10	0.00	393425.07	767914.75	N 32.079493	W 103.601788
	16200.00	90.47	179.60	10961.03	5164.08	-5164.38	-24.41	0.00	393325.08	767915.44	N 32.079218	W 103.601788
	16300.00	90.47	179.60	10960.21	5264.08	-5264.37	-23.72	0.00	393225.09	767916.13	N 32.078944	W 103.601788
	16400.00	90.47	179.60	10959.38	5364.07	-5364.37	-23.03	0.00	393125.10	767916.82	N 32.078669	W 103.601788
	16500.00	90.47	179.60	10958.55	5464.07	-5464.36	-22.34	0.00	393025.11	767917.52	N 32.078394	W 103.601788
	16600.00	90.47	179.60	10957.73	5564.07	-5564.35	-21.64	0.00	392925.11	767918.21	N 32.078119	W 103.601787
	16700.00	90.47	179.60	10956.90	5664.06	-5664.35	-20.95	0.00	392825.12	767918.90	N 32.077844	W 103.601787
	16800.00	90.47	179.60	10956.08	5764.06	-5764.34	-20.26	0.00	392725.13	767919.59	N 32.077569	W 103.601787
	16900.00	90.47	179.60	10955.25	5864.06	-5864.34	-19.57	0.00	392625.14	767920.28	N 32.077294	W 103.601787
	17000.00	90.47	179.60	10954.42	5964.05	-5964.33	-18.88	0.00	392525.15	767920.97	N 32.077020	W 103.601787
	17100.00	90.47	179.60	10953.60	6064.05	-6064.33	-18.19	0.00	392425.16	767921.66	N 32.076745	W 103.601787
	17200.00	90.47	179.60	10952.77	6164.05	-6164.32	-17.50	0.00	392325.17	767922.35	N 32.076470	W 103.601787
	17300.00	90.47	179.60	10951.94	6264.04	-6264.31	-16.81	0.00	392225.18	767923.04	N 32.076195	W 103.601787
Fee exit to NMNM0106040 4 enter lease Cross	17312.34	90.47	179.60	10951.84	6276.38	-6276.65	-16.72	0.00	392212.84	767923.13	N 32.076161	W 103.601787
	17400.00	90.47	179.60	10951.12	6364.04	-6364.31	-16.12	0.00	392125.19	767923.73	N 32.075920	W 103.601787
	17500.00	90.47	179.60	10950.29	6464.04	-6464.30	-15.42	0.00	392025.20	767924.43	N 32.075645	W 103.601787
	17600.00	90.47	179.60	10949.46	6564.03	-6564.30	-14.73	0.00	391925.21	767925.12	N 32.075370	W 103.601787
	17700.00	90.47	179.60	10948.64	6664.03	-6664.29	-14.04	0.00	391825.22	767925.81	N 32.075096	W 103.601787
	17800.00	90.47	179.60	10947.81	6764.03	-6764.29	-13.35	0.00	391725.23	767926.50	N 32.074821	W 103.601787
	17900.00	90.47	179.60	10946.98	6864.02	-6864.28	-12.66	0.00	391625.23	767927.19	N 32.074546	W 103.601787
	18000.00	90.47	179.60	10946.16	6964.02	-6964.27	-11.97	0.00	391525.24	767927.88	N 32.074271	W 103.601787
	18100.00	90.47	179.60	10945.33	7064.02	-7064.27	-11.28	0.00	391425.25	767928.57	N 32.073996	W 103.601787
	18200.00	90.47	179.60	10944.50	7164.01	-7164.26	-10.59	0.00	391325.26	767929.26	N 32.073721	W 103.601787
	18300.00	90.47	179.60	10943.68	7264.01	-7264.26	-9.90	0.00	391225.27	767929.95	N 32.073446	W 103.601787
	18400.00	90.47	179.60	10942.85	7364.01	-7364.25	-9.21	0.00	391125.28	767930.65	N 32.073171	W 103.601787
	18500.00	90.47	179.60	10942.02	7464.00	-7464.24	-8.51	0.00	391025.29	767931.34	N 32.072897	W 103.601787
	18600.00	90.47	179.60	10941.20	7564.00	-7564.24	-7.82	0.00	390925.30	767932.03	N 32.072622	W 103.601787
NMNM0106040 4 exit to NMNM0160973 enter lease Cross	18634.91	90.47	179.60	10940.91	7598.91	-7599.15	-7.58	0.00	390890.39	767932.27	N 32.072526	W 103.601787
	18700.00	90.47	179.60	10940.37	7664.00	-7664.23	-7.13	0.00	390825.31	767932.72	N 32.072347	W 103.601787
	18800.00	90.47	179.60	10939.54	7763.99	-7764.23	-6.44	0.00	390725.32	767933.41	N 32.072072	W 103.601787
	18900.00	90.47	179.60	10938.72	7863.99	-7864.22	-5.75	0.00	390625.33	767934.10	N 32.071797	W 103.601787
	19000.00	90.47	179.60	10937.89	7963.99	-7964.22	-5.06	0.00	390525.34	767934.79	N 32.071522	W 103.601786
	19100.00	90.47	179.60	10937.06	8063.98	-8064.21	-4.37	0.00	390425.35	767935.48	N 32.071247	W 103.601786
	19200.00	90.47	179.60	10936.24	8163.98	-8164.20	-3.68	0.00	390325.35	767936.17	N 32.070973	W 103.601786
	19300.00	90.47	179.60	10935.41	8263.98	-8264.20	-2.99	0.00	390225.36	767936.86	N 32.070698	W 103.601786
	19400.00	90.47	179.60	10934.59	8363.97	-8364.19	-2.29	0.00	390125.37	767937.55	N 32.070423	W 103.601786
	19500.00	90.47	179.60	10933.76	8463.97	-8464.19	-1.60	0.00	390025.38	767938.25	N 32.070148	W 103.601786
	19600.00	90.47	179.60	10932.93	8563.97	-8564.18	-0.91	0.00	389925.39	767938.94	N 32.069873	W 103.601786
	19700.00	90.47	179.60	10932.11	8663.96	-8664.17	-0.22	0.00	389825.40	767939.63	N 32.069598	W 103.601786
	19800.00	90.47	179.60	10931.28	8763.96	-8764.17	0.47	0.00	389725.41	767940.32	N 32.069323	W 103.601786
	19900.00	90.47	179.60	10930.45	8863.96	-8864.16	1.16	0.00	389625.42	767941.01	N 32.069049	W 103.601786
	20000.00	90.47	179.60	10929.63	8963.95	-8964.16	1.85	0.00	389525.43	767941.70	N 32.068774	W 103.601786
	20100.00	90.47	179.60	10928.80	9063.95	-9064.15	2.54	0.00	389425.44	767942.39	N 32.068499	W 103.601786
	20200.00	90.47	179.60	10927.97	9163.95	-9164.15	3.23	0.00	389325.45	767943.08	N 32.068224	W 103.601786
	20300.00	90.47	179.60	10927.15	9263.94	-9264.14	3.93	0.00	389225.46	767943.78	N 32.067949	W 103.601786
	20400.00	90.47	179.60	10926.32	9363.94	-9364.13	4.62	0.00	389125.47	767944.47	N 32.067674	W 103.601786
	20500.00	90.47	179.60	10925.49	9463.93	-9464.13	5.31	0.00	389025.47	767945.16	N 32.067399	W 103.601786
	20600.00	90.47	179.60	10924.67	9563.93	-9564.12	6.00	0.00	388925.48	767945.85	N 32.067124	W 103.601786
	20700.00	90.47	179.60	10923.84	9663.93	-9664.12	6.69	0.00	388825.49	767946.54	N 32.066850	W 103.601786
	20800.00	90.47	179.60	10923.01	9763.92	-9764.11	7.38	0.00	388725.50	767947.23	N 32.066575	W 103.601786
	20900.00	90.47	179.60	10922.19	9863.92	-9864.11	8.07	0.00	388625.51	767947.92	N 32.066300	W 103.601786
	21000.00	90.47	179.60	10921.36	9963.92	-9964.10	8.76	0.00	388525.52	767948.61	N 32.066025	W 103.601786
	21100.00	90.47	179.60	10920.53	10063.91	-10064.09	9.45	0.00	388425.53	767949.30	N 32.065750	W 103.601786
Cimarex Red Hills 32-5 Fed Com 132H - PBHL [100' FSL, 330' FWL]	21164.62	90.47	179.60	10920.00	10128.53	-10128.71	9.90	0.00	388360.92	767949.75	N 32.065573	W 103.601786

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	Red Hills 32-5 Fed Com 132H / Cimarex Red Hills 32-5 Fed Com
	1	22.000	21164.616	1/100.000	17.500	13.375		A001Mb_MWD	Red Hills 32-5 Fed Com 132H / Cimarex Red Hills 32-5 Fed Com



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

Fill Line

Flowline

2000# (2M)
BOP

SRR & A

Annular Preventer

Pipe Rams

Blind Rams

Drilling Spool

Kill Line

2" Minimum Kill Line

1 Kill Line Valve
(Minimum)

2" Minimum Choke Line

Choke Line

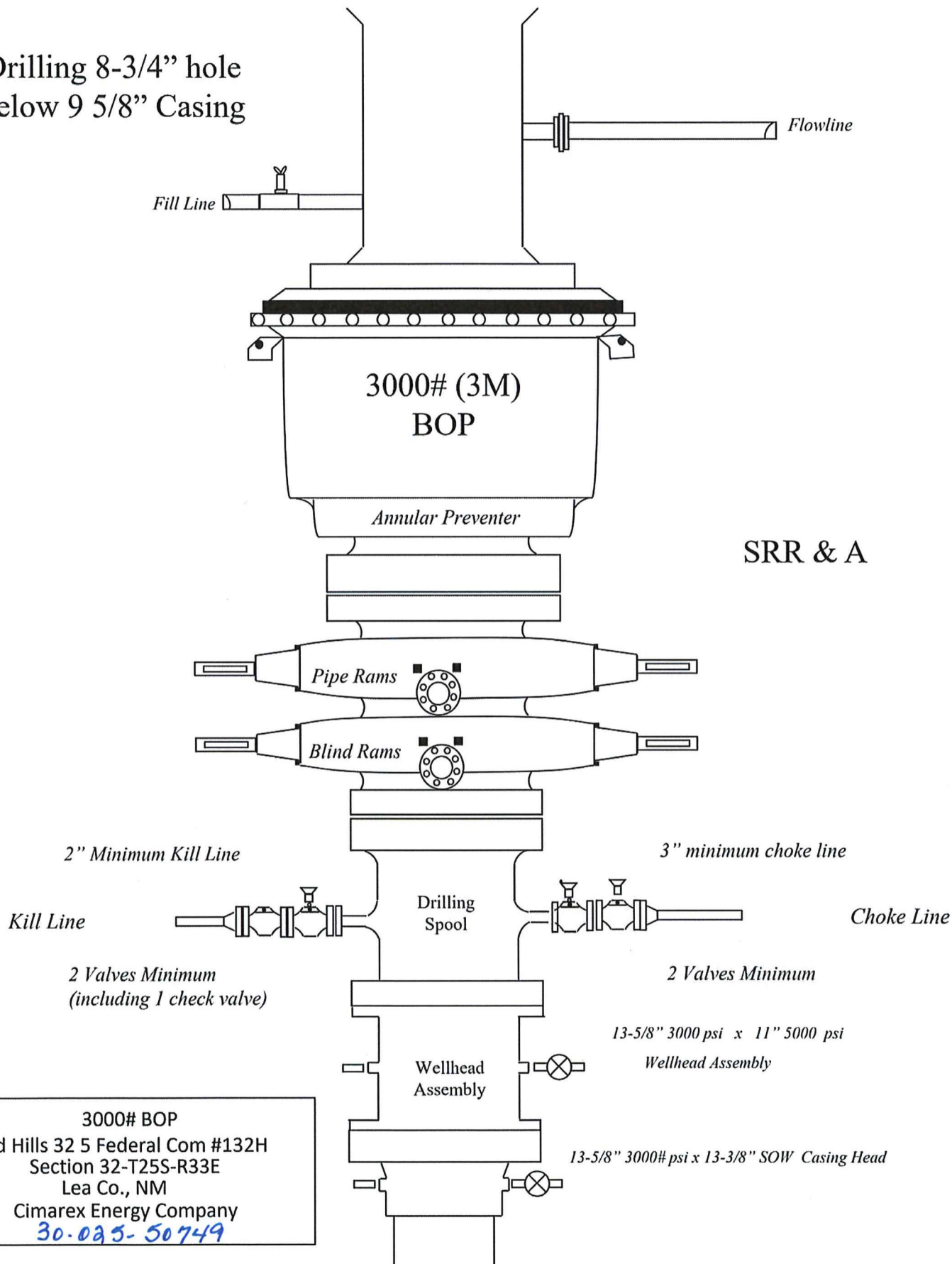
1 Choke Line Valve
(Minimum)

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

2000# BOP
RED HILLS 32 5 FEDERAL COM
#132H
Section 32-T25S-R33E
Lea Co., NM
Cimarex Energy Company

30-025-50749

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



SRR & A

3000# BOP
Red Hills 32 5 Federal Com #132H
Section 32-T25S-R33E
Lea Co., NM
Cimarex Energy Company
30-025-50749

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

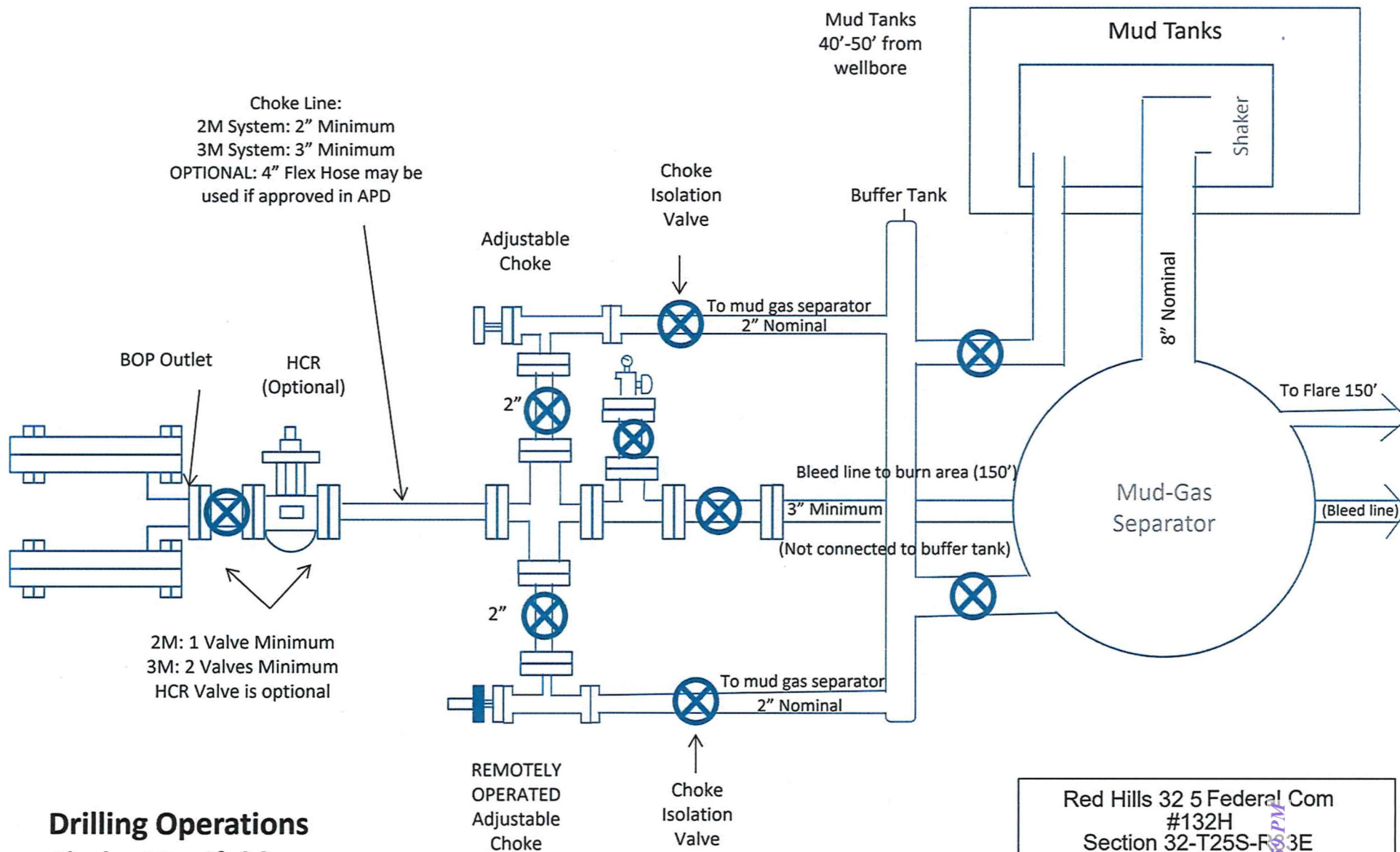
Wellhead
Assembly

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
Red Hills 32 5 Federal Com #132H
Section 32-T25S-R33E
Lea Co., NM
Cimarex Energy Company

30-025-50749

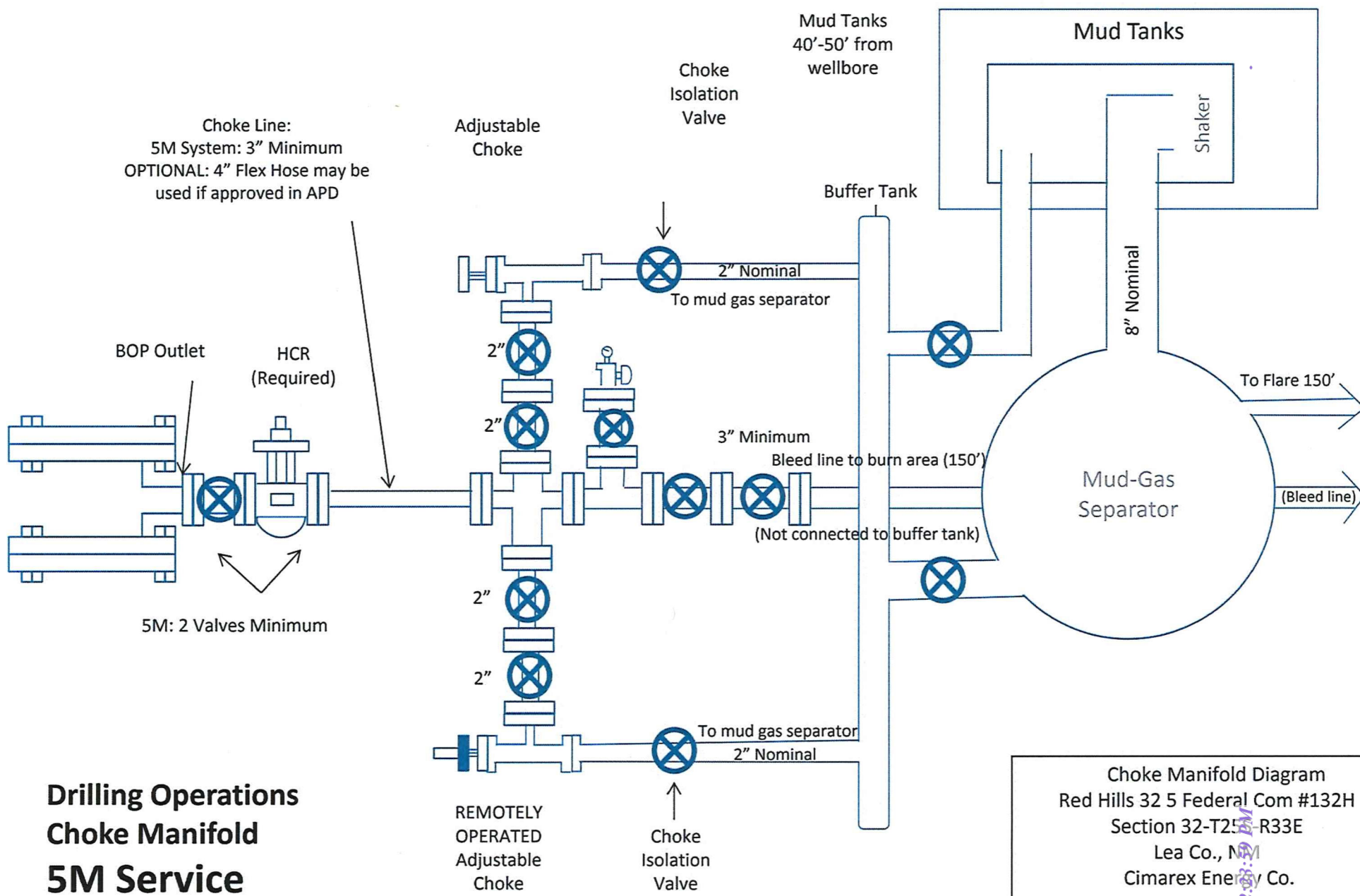


Drilling Operations Choke Manifold 2M/3M Service

Red Hills 32.5 Federal Com
 #132H
 Section 32-T25S-F-3E
 Lea Co., NM
 Cimarex Energy Company

30-025-5019

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Drilling Operations Choke Manifold 5M Service

Choke Manifold Diagram
Red Hills 32 5 Federal Com #132H
Section 32-T2-R33E
Lea Co., NM
Cimarex Energy Co.

30-025-0749

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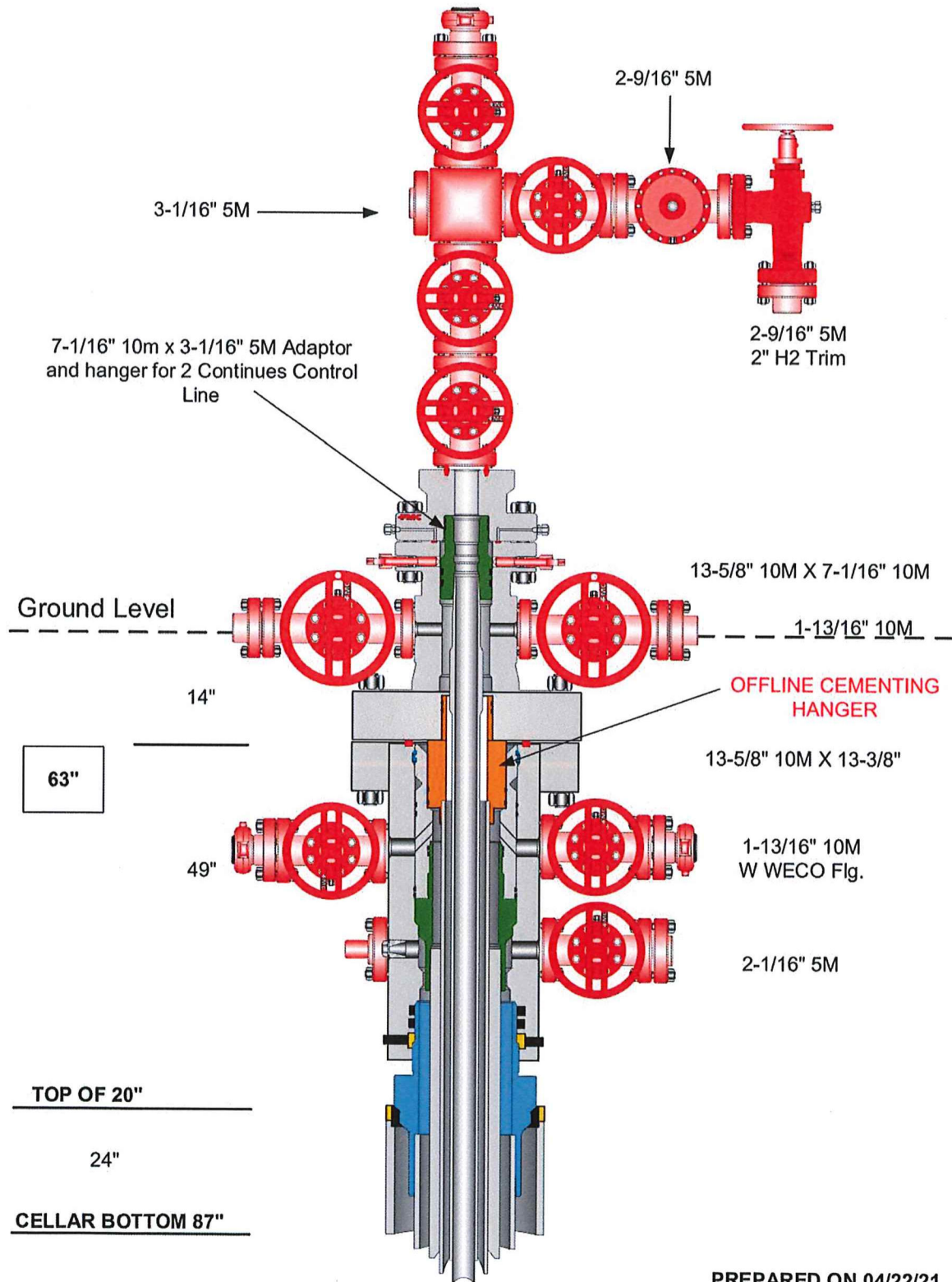
Red Hills 32 5 Federal Com #132H - 30-025-50749

CACTUS FOR SERVICE
WEARBUSHING
IN CASING HEAD &
CASING SPOOL

LEA CO., NM

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	900	900	13-3/8"	48.00	H-40	ST&C	1.91	4.45	7.45
12 1/4	0	4970	4970	9-5/8"	40.00	HCK-55	LT&C	1.43	1.40	2.82
8 3/4	0	10431	10431	7"	29.00	L-80	LT&C	1.44	1.67	1.85
8 3/4	10431	11181	10960	7"	29.00	P-110	BT&C	1.66	2.19	60.56
6	9431	21165	10920	4-1/2"	11.60	P-110	BT&C	1.48	2.10	21.25
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



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 186688

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 186688
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	2/15/2023