

OKLAHOMA CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION  
P.O. BOX 52000  
OKLAHOMA CITY, OK 73152-2000  
(Rule 165:10-3-1)

API NUMBER: 073 25871 A

Approval Date: 12/21/2017  
Expiration Date: 06/21/2018

Horizontal Hole Oil & Gas  
Multi Unit

Amend reason: CHANGE LE & MU, UPDATE ORDERS & BHL

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 22 Twp: 15N Rge: 9W

County: KINGFISHER

SPOT LOCATION: ☐ NW ☐ NW ☐ NE ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 275 1225

Lease Name: MISS MARY

Well No: 3H-2227X

Well will be 275 feet from nearest unit or lease boundary.

Operator CIMAREX ENERGY CO  
Name:

Telephone: 9185851100

OTC/OCC Number: 21194 0

CIMAREX ENERGY CO  
202 S CHEYENNE AVE STE 1000  
TULSA, OK 74103-3001

PATRICIA KAY SANTO  
4927 E. 870 ROAD  
OKARCHE OK 73762

Formation(s) (Permit Valid for Listed Formations Only):

	Name	Depth	Name	Depth
1	MISSISSIPPIAN (LESS CHESTER)	9638	6	
2	MISSISSIPPI SOLID	9950	7	
3			8	
4			9	
5			10	

Spacing Orders: 652230  
272944  
704060  
689282

Location Exception Orders: 704062

Increased Density Orders: 671412  
688289

Pending CD Numbers:

Special Orders:

Total Depth: 19949

Ground Elevation: 1211

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 370

Deep surface casing has been approved

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

Approved Method for disposal of Drilling Fluids:

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 5000 Average: 3000

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit is not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: CHICKASHA

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 17-33139

H. SEE MEMO

This permit does not address the right of entry or settlement of surface damages.

The duration of this permit is 18 MONTHS, except as otherwise provided by Rule 165: 10-3-1.

Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

## PIT 2 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 200000

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit is not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: CHICKASHA

## HORIZONTAL HOLE 1

Sec 27 Twp 15N Rge 9W County KINGFISHER

Spot Location of End Point: SE SW SW SE

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 2296

Depth of Deviation: 9416

Radius of Turn: 735

Direction: 181

Total Length: 9378

Measured Total Depth: 19949

True Vertical Depth: 10014

End Point Location from Lease,  
Unit, or Property Line: 150

### Notes:

#### Category

#### Description

DEEP SURFACE CASING

12/21/2017 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING

HYDRAULIC FRACTURING

12/21/2017 - G71 - OCC 165:10-3-10 REQUIRES:

1) PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE;

2) WITH NOTICE ALSO GIVEN 48 HOURS IN ADVANCE OF HYDRAULIC FRACTURING ALL WELLS TO BOTH THE OCC CENTRAL OFFICE AND LOCAL DISTRICT OFFICES, USING THE "FRAC NOTICE FORM" FOUND AT THE FOLLOWING LINK: [OCCEWEB.COM/OG/OGFORMS.HTML](http://OCCEWEB.COM/OG/OGFORMS.HTML); AND,

3) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS TO BE REPORTED TO FRACFOCUS WITHIN 60 DAYS AFTER THE CONCLUSION THE HYDRAULIC FRACTURING OPERATIONS, USING THE FOLLOWING LINK: [FRACFOCUS.ORG](http://FRACFOCUS.ORG)

INCREASED DENSITY - 671412

11/5/2019 - G56 - 27-15N-9W  
X272944 MSSSD, OTHER  
2 WELLS  
CIMAREX ENERGY CO.  
12/22/2017

INCREASED DENSITY - 688289

11/5/2019 - G56 - 22-15N-9W  
X652230 MSNLC  
1 WELL  
CIMAREX ENERGY CO.  
12/14/2018

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073 25871 MISS MARY 3H-2227X

INTERMEDIATE CASING	12/21/2017 - G71 - DUE TO THE KNOWN POTENTIAL RISK OF ENCOUNTERING AN OVER-PRESSURED ZONE IN THE MORROW SERIES IN THIS AREA, THE TECHNICAL MANAGER RECOMMENDS SETTING AN INTERMEDIATE STRING OF CASING IMMEDIATELY ABOVE THE MORROW SERIES
LOCATION EXCEPTION - 704062	11/5/2019 - G56 - (F.O.) 22 & 27-15N-9W X652230/689282 MSNLC 22-15N-9W X272944 MSSSD 27-15N-9W SHL (22-15N-9W) 275' FNL, 1225' FEL 22-15N-9W COMPL INT (FIRST PERF) 304' FNL, 2293' FEL COMPL INT (LAST PERF) 0' FSL, 2319' FEL 27-15N-9W COMPL INT (FIRST PERF) 0' FNL, 2319' FEL COMPL INT (FIRST PERF) 191' FSL, 2295' FEL CIMAREX ENERGY CO. 10/23/2019
MEMO	12/21/2017 - G75 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 2 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT
PENDING CD - 201704335	12/21/2017 - G75 - (I.O.) 27 & 22-15N-9W X272944 MSSSD 27-15N-9W X580801 WDFD 27-15N-9W X652230 MSNLC, WDFD 22-15N-9W COMPL. INT. (27-15N-9W) NCT 150' FSL, NCT 0' FNL, NCT 1320' FEL ** COMPL. INT. (22-15N-9W) NCT 0' FSL, NCT 150' FNL, NCT 1320' FEL ** NO OP. NAMED REC 8-7-2017 (DUNN)  ** ITD HAS LATERAL DRILLED IN OPPOSITE DIRECTION; TO BE CORRECTED AT HEARING FOR FINAL ORDER LOCATION EXCEPTION PER ATTORNEY FOR OPERATOR
SPACING - 272944	11/5/2019 - G56 - (640) 27-15N-9W EXT 166936 MSSSD, OTHERS EXT OTHERS
SPACING - 652230	11/5/2019 - G56 - (640)(HOR) 22-15N-9W EST 642657 MSNLC, OTHERS COMPL. INT. (MSNLC) NLT 660' FB
SPACING - 689282	11/5/2019 - G56 - CONFIRM 652230 FOR RESPONDENTS
SPACING - 704060	11/5/2019 - G56 - (F.O.) 22 & 27-15N-9W EST MULTIUNIT HORIZONTAL WELL X652230/689282 MSNLC 22-15N-9W X272944 MSSSD 27-15N-9W 49.6144 % 22-15N-9W 50.3856% 27-15N-9W CIMAREX ENERGY CO. 10/23/2019

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