

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

API NUMBER: 073 25872 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 1205

Lease Name: MISS MARY

Well No: 2H-2227X

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

Operator Name: CIMAREX ENERGY CO

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
704061
689282

Location Exception Orders: 704063

Increased Density Orders: 671412

Pending CD Numbers:

Special Orders:

Total Depth: 20001

Ground Elevation: 1210

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: 17-33116

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 SE SW SE

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 1645

Depth of Deviation: 9448

Radius of Turn: 603

Direction: 181

Total Length: 9606

Measured Total Depth: 20001

True Vertical Depth: 10128

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: OCCWEB.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

INCREASED DENSITY - 671412

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

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

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.

073 25872 MISS MARY 2H-2227X

LOCATION EXCEPTION - 704063	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, 1205' FEL 22-15N-9W COMPL INT (FIRST PERF) 180' FNL, 1636' FEL COMPL INT (LAST PERF) 0' FSL, 1646' FEL 27-15N-9W COMPL INT (FIRST PERF) 0' FNL, 1646' FEL COMPL INT (LAST PERF) 226' FSL, 1644' 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
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 - (640)(HOR) 22-15N-9W CONFIRM 652230 MSNLC FOR RESPONDENTS
SPACING - 704061	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 50.812% 22-15N-9W 49.188% 27-15N-9W CIMAREX ENERGY CO. 10/23/2019