API NUMBER: 003 23371

Oil & Gas

Horizontal Hole

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

Approval Date: 04/15/2019
Expiration Date: 10/15/2020

PERMIT TO DRILL

WELL LOCATION:	Sec:	22	Twp:	27N	Rge:	11W	County:	ALFALFA
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SPOT LOCATION: NW NE NE NW FEET FROM QUARTER: FROM NORTH FROM WEST SECTION LINES: 220 2180

Lease Name: RC BROWN 22-27-11 Well No: 4H Well will be 220 feet from nearest unit or lease boundary.

OperatorBCE-MACH LLCTelephone:4052528151OTC/OCC Number:241740Name:

BCE-MACH LLC

14201 WIRELESS WAY STE 300

OKLAHOMA CITY, OK 73134-2512

RC BROWN

19235 NOBLE ROAD

ALVA OK 73717

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	5200 6		
2		7		
3		8		
4		9		
5		10		
Spacing Orders:	603257	Location Exception Orders:	Increased Density	Orders:

Pending CD Numbers: 201902179 Special Orders:

201901644

Total Depth: 10200 Ground Elevation: 1186 Surface Casing: 250 Depth to base of Treatable Water-Bearing FM: 110

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

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 D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 19-36410
Chlorides Max: 25000 Average: 5000
H. CLOSED SYSTEM = STEEL PITS PER OPERATOR REQUEST

Chlorides Max: 25000 Average: 5000

H. CLOSED SYSTEM = STEEL PITS PER OPERATOR REQUEST

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

Within 1 mile of municipal water well? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: C

Wellhead Protection Area?

Liner not required for Category: C
Pit Location is AP/TE DEPOSIT
Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 22 Twp 27N Rge 11W County ALFALFA

Spot Location of End Point: SW SE SE SW
Feet From: SOUTH 1/4 Section Line: 150
Feet From: WEST 1/4 Section Line: 2180

Depth of Deviation: 4779
Radius of Turn: 537
Direction: 180
Total Length: 4578

Measured Total Depth: 10200

True Vertical Depth: 5305

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

Notes:

Category Description

HYDRAULIC FRACTURING 4/11/2019 - 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; 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

PENDING CD - 201901644 4/15/2019 - G56 - (I.O.) 22-27N-11W

X603257 MSSF

COMPL INT NCT 150' FSL, NCT 150' FNL, NCT 1320' FWL

NO OP NAMED

REC 4/8/2019 (THOMAS)

PENDING CD - 201902179 4/15/2019 - G56 - 22-27N-11W

X603257 MSSP 1 WELL NO OP NAMED HEARING 5/6/2019

SPACING - 603257 4/15/2019 - G56 - (640) 22-27N-11W

VAC 217778 MSCT, MSSLM, OTHERS

EXT/REFORM OTHER EST MSSP, OTHERS

SURFACE CASING 4/11/2019 - G71 - MIN. 250' PER ORDER# 37123

35-003-23371

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 Wireless Way, Okla. City, OK. 73134 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

Certificate of Authorization No. 1293 L5 ALFALFA County, Oklahoma Section _ 220'FNL - 2180'FWL 22 Township 27N Range 11W I.M. X 1889384 Y 659749 X 1894703 Y 659729 2180 INFORMATION SHOWN HEREIN IS CONSTRUCTION PURPOSES ONLY SURFACE HOLE 220'FNL-2180'FWL NAD-83 LANDING POINT 36'48'40.3" N 98'22'13.4" W 2423 LANDING POINT 600'FNL-2180'FWL NAD-27 (US Feet) 36'48'36.5" N 98'22'13.4" W 36.810145215 98.370398425' W **EXISTING WELL** X 1891561 Y 659140 INFORMATION PROVIDED BY CLIENT, NOT SURVEYED 22 X 1889369 Y 657106 X 1894680 Y 657085 BOTTOM HOLE 150'FSL-2180'FWL 150 FSL-2180 FWL NAD-27 (US Feet) 36'47'51.7" N 98'22'13.6" W 36.797685623' N 98.370431015' W X 1891534 Y 654604 GRID NAD-27 OK NORTH US FEET ◉ Scale: = 1000' 654604 BOTTOM HOLE 0 1000 64 X 1894657 Y 654441 1889353 654463 LANDING POINT, BOTTOM HOLE AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED. **ELEVATION:** Operator: MACH RESOURCES 1186' Gr. at Stake NAVD88 Lease Name: RC BROWN 22-27-11 Well No.: 4H 1185' Gr. at Stake NGVD29 Topography & Vegetation Loc. fell in level field, ±130' South of E-W saltwater pipeline Reference Stakes or Alternate Location Stakes Set None Good Drill Site? __ Best Accessibility to Location From North off county road Distance & Direction From Cherokee, OK, go ±3.0 mi. North, then ±1.0 mi. West to from Hwy Jct or Town_ THO THO the NW Cor. of Sec. 22-T27N-R11W Date of Drawing: Mar. 14, 2019 Project # 123594 Date Staked: Mar. 14, 2019 NAD-27 LAT: 36'48'40.3"N LONG: 98'22'13.4"W CERTIFICATE: LAT: __36.811188961° N ,____Thornas L. Howell __an Oklahoma Licensed Land LONG: 98.370395417* W Surveyor and an authorized agent of Topographic Land STATE PLANE Surveyors of Oklahoma, do hereby certify to the COORDINATES: (US Feet) information shown herein ZONE: OK NORTH ume 1891563 OKLAHOM 659520 Oklahoma Lic. No. _ Winner of the second