

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

API NUMBER: 051 24670

Approval Date: 07/02/2019

Expiration Date: 01/02/2021

Horizontal Hole
Multi Unit

Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 21 Twp: 6N Rge: 5W

County: GRADY

SPOT LOCATION: ☐ NE ☐ SW ☐ SE ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 2150 945

Lease Name: UMBACH

Well No: 6-21-28-33XHW

Well will be 945 feet from nearest unit or lease boundary.

Operator Name: CONTINENTAL RESOURCES INC

Telephone: 4052349020; 4052349

OTC/OCC Number: 3186 0

CONTINENTAL RESOURCES INC
PO BOX 269000
OKLAHOMA CITY, OK 73126-9000

SHARON MARIE SHOEMAKER
2185 COUNTY ROAD 1400
OKLAHOMA CITY OK 73002

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	11972	6	
2	WOODFORD	12519	7	
3	HUNTON	12664	8	
4			9	
5			10	

Spacing Orders: 610650
106361
630983
153801
617568
131103

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201903104
201903105
201903106
201903114
201903115

Special Orders:

Total Depth: 23875

Ground Elevation: 1160

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 330

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 19-36699

H. SEE MEMO

This permit does not address the right of entry or settlement of surface damages.
The duration of this permit is SIX 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 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 3000 Average: 2000

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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: DUNCAN

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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: DUNCAN

HORIZONTAL HOLE 1

Sec 33 Twp 6N Rge 5W County GRADY

Spot Location of End Point: NE NE SW SE

Feet From: SOUTH 1/4 Section Line: 1150

Feet From: EAST 1/4 Section Line: 1518

Depth of Deviation: 10537

Radius of Turn: 477

Direction: 185

Total Length: 12588

Measured Total Depth: 23875

True Vertical Depth: 13101

End Point Location from Lease,
Unit, or Property Line: 1150

Notes:

Category

Description

DEEP SURFACE CASING

6/14/2019 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING

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

The duration of this permit is SIX 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.

051 24670 UMBACH 6-21-28-33XHW

Category	Description
HYDRAULIC FRACTURING	<p>6/14/2019 - G71 - OCC 165:10-3-10 REQUIRES:</p> <p>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;</p> <p>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,</p> <p>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</p>
MEMO	<p>6/14/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT</p>
PENDING CD - 201903104	<p>6/20/2019 - G58 - 28-6N-5W X610650 WDFD 5 WELLS NO OP. NAMED REC 7/2/2019 (NORRIS)</p>
PENDING CD - 201903105	<p>6/20/2019 - G58 - 33-6N-5W X630983 WDFD 5 WELLS NO OP. NAMED REC 7/2/2019 (NORRIS)</p>
PENDING CD - 201903106	<p>6/20/2019 - G58 - 21-6N-5W X617568 WDFD 4 WELLS NO OP. NAMED REC 7/2/2019 (NORRIS)</p>
PENDING CD - 201903114	<p>6/20/2019 - G58 - (I.O.) 21, 28, & 33-6N-5W EST MULTIUNIT HORIZONTAL WELL X610650 MSSP, WDFD X106361 HNTN X630983 MSSP, WDFD, HNTN X153801 MSSP X617568 WDFD X131103 HNTN (MSSP, HNTN ARE ADJACENT CSS TO WDFD) 19% 21-6N-5W 45% 28-6N-5W 36% 33-6N-5W NO OP. NAMED REC 7/2/2019 (NORRIS)</p>
PENDING CD - 201903115	<p>6/20/2019 - G58 - (I.O.) 21, 28, & 33-6N-5W X610650 MSSP, WDFD X106361 HNTN X630983 MSSP, WDFD, HNTN X153801 MSSP X617568 WDFD X131103 HNTN X165:10-3-28(C)(2)(B) MAY BE CLOSER THAN 600' TO THE MAY 5-21-16XH WELL & THE MAY 6-21-16XH COMPL. INT. 21-6N-5W NCT 2640' FNL, NCT 0' FSL, NCT 660' FEL COMPL. INT. 28-6N-5W NCT 0' FNL, NCT 0' FSL, NCT 660' FEL COMPL. INT. 33-6N-5W NCT 0' FNL, NCT 150' FSL, NCT 660' FEL NO OP. NAMED REC 7/2/2019 (NORRIS)</p>
SPACING - 106361	<p>6/20/2019 - G58 - (640) 28 & 33-6N-5W EST HNTN, OTHERS (VAC SEC 33 BY SP. ORDER 315866)</p>
SPACING - 131103	<p>6/20/2019 - G58 - (640) 21-6N-5W EXT 106361 HNTN, OTHERS</p>

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

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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.

Category	Description
SPACING - 153801	6/20/2019 - G58 - (640) 21-6N-5W EXT 147146 MSSP, OTHERS EXT OTHER
SPACING - 610650	6/20/2019 - G58 - (640) 28-6N-5W EXT 595406 MSSP, WDFD, OTHERS EXT OTHER EST OTHERS
SPACING - 617568	6/20/2019 - G58 - (640) 21-6N-5W EXT 587940 WDFD, OTHERS
SPACING - 630983	6/20/2019 - G58 - (640)(HOR) 33-6N-5W VAC 315866 HNTN, OTHERS EXT (640) 106361/595406 HNTN, OTHERS EST (640) OTHERS EST (640)(HOR) MSSP, WDFD POE TO BHL (MSSP) NLT 660' FB POE TO BHL (WDFD) NLT 165' FNL & FSL, NLT 330' FEL & FWL

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

EXHIBIT: A (1 of 3)
SHEET: 8.5x14
SHL: 21-6N-5W
BHL-6 33-6N-5W
BHL-8 33-6N-5W



051-24670

COVER SHEET

CONTINENTAL RESOURCES, INC.

P.O. BOX 26900 OKLAHOMA CITY, OK 73126 * (T) 1-800-256-8955 (F) 405-234-9253

Section 21 Township 6N Range 5W I.M. Well: UMBACH 6-21-28-33XHW
County GRADY State OK Well: UMBACH 8-21-28-33XHW
Operator CONTINENTAL RESOURCES, INC.

NAD-83							
POINT	WELL NAME	NORTHING	EASTING	LATITUDE LONGITUDE	LATITUDE LONGITUDE	EXISTING ELEVATION	DESIGN ELEVATION
W6	UMBACH 6-21-28-33XHW	599417	2050375	34° 58' 48.40" -97° 43' 36.06"	34.980112 -97.726882	2150' FNL / 945' FEL (NE/4 SEC 21)	1169.77'
LP-6	LANDING POINT	599415	2049802	34° 58' 48.40" -97° 43' 42.94"	34.980111 -97.726896	2150' FNL / 1518' FEL (NE/4 SEC 21)	---
BHL-6	BOTTOM HOLE LOCATION	588827	2049835	34° 58' 43.89" -97° 43' 42.95"	34.945525 -97.726598	1150' FSL / 1518' FEL (SE/4 SEC 33)	---
W8	UMBACH 8-21-28-33XHW	599447	2050375	34° 58' 48.70" -97° 43' 36.06"	34.980194 -97.726882	2120' FNL / 945' FEL (NE/4 SEC 21)	1169.50'
LP-8	LANDING POINT	599448	2050660	34° 58' 48.70" -97° 43' 32.63"	34.980194 -97.725731	2120' FNL / 660' FEL (NE/4 SEC 21)	---
BHL-8	BOTTOM HOLE LOCATION	588180	2050688	34° 58' 57.25" -97° 43' 32.67"	34.949236 -97.725741	2500' FSL / 660' FEL (SE/4 SEC 33)	---
X-1	MITCHELL #1-21	600900	2050799	34° 58' 03.06" -97° 43' 30.91"	34.984184 -97.725254	21-6N-5W: TD: 14,050' 668' FNL / 521' FEL	---
X-2	MAY #7-21-16XH	599110	2050927	34° 58' 45.35" -97° 43' 29.43"	34.979263 -97.724843	21-6N-5W: TD: 19,875' 2,459' FNL / 393' FEL	---
X-3	MAY #3-21-16XH	598589	2047717	34° 58' 40.09" -97° 44' 08.03"	34.977802 -97.735563	21-6N-5W: TD: 20,573' 2,310' FSL / 1,700' FWL	---
X-4	MAY #5-21-16XH	598567	2049358	34° 58' 40.02" -97° 43' 48.33"	34.977784 -97.730092	21-6N-5W: TD: 20,475' 2,301' FSL / 1,964' FEL	---
X-5	MAY #2-21H	598508	2046861	34° 58' 19.70" -97° 44' 18.38"	34.972138 -97.738440	21-6N-5W: TD: 17,575' 250' FSL / 845' FWL	---
X-6	MAY #4-21-16XH	598589	2047782	34° 58' 40.09" -97° 44' 07.49"	34.977802 -97.735413	21-6N-5W: TD: 20,542' 2,310' FSL / 1,745' FWL	---
X-7	MAY #6-21-16XH	598567	2049401	34° 58' 40.02" -97° 43' 47.79"	34.977785 -97.729942	21-6N-5W: TD: 20,398' 2,301' FSL / 1,919' FEL	---
X-8	MAY #1-21-16XH	598505	2046816	34° 58' 19.70" -97° 44' 18.93"	34.972138 -97.738590	21-6N-5W: TD: 22,925' 250' FSL / 800' FWL	---
X-9	PIPKIN #1-28H	591359	2048238	34° 57' 28.81" -97° 44' 26.05"	34.958002 -97.740570	28-6N-5W: TD: 17,430' 400' FSL / 200' FWL	---

NAD-27							
POINT	WELL NAME	NORTHING	EASTING	LATITUDE LONGITUDE	LATITUDE LONGITUDE	EXISTING ELEVATION	DESIGN ELEVATION
W6	UMBACH 6-21-28-33XHW	599375	2081972	34° 58' 48.15" -97° 43' 34.92"	34.980043 -97.726366	2150' FNL / 945' FEL (NE/4 SEC 21)	1169.77'
LP-6	LANDING POINT	599373	2081399	34° 58' 48.15" -97° 43' 41.81"	34.980043 -97.728280	2150' FNL / 1518' FEL (NE/4 SEC 21)	---
BHL-6	BOTTOM HOLE LOCATION	586785	2081432	34° 58' 43.64" -97° 43' 41.82"	34.945458 -97.726283	1150' FSL / 1518' FEL (SE/4 SEC 33)	---
W8	UMBACH 8-21-28-33XHW	599405	2081972	34° 58' 48.45" -97° 43' 34.92"	34.980125 -97.726366	2120' FNL / 945' FEL (NE/4 SEC 21)	1169.50'
LP-8	LANDING POINT	599406	2082257	34° 58' 48.45" -97° 43' 31.50"	34.980128 -97.725415	2120' FNL / 660' FEL (NE/4 SEC 21)	---
BHL-8	BOTTOM HOLE LOCATION	588138	2082284	34° 58' 57.00" -97° 43' 31.53"	34.949167 -97.725426	2500' FSL / 660' FEL (SE/4 SEC 33)	---
X-1	MITCHELL #1-21	600858	2082396	34° 58' 02.82" -97° 43' 29.78"	34.984115 -97.724938	21-6N-5W: TD: 14,050' 668' FNL / 521' FEL	---
X-2	MAY #7-21-16XH	599068	2082524	34° 58' 45.10" -97° 43' 28.30"	34.979194 -97.724527	21-6N-5W: TD: 19,875' 2,459' FNL / 393' FEL	---
X-3	MAY #3-21-16XH	598527	2079314	34° 58' 39.84" -97° 44' 08.89"	34.977733 -97.735247	21-6N-5W: TD: 20,573' 2,310' FSL / 1,700' FWL	---
X-4	MAY #5-21-16XH	598525	2080953	34° 58' 39.78" -97° 43' 47.19"	34.977716 -97.729776	21-6N-5W: TD: 20,475' 2,301' FSL / 1,964' FEL	---
X-5	MAY #2-21H	596464	2078457	34° 58' 19.45" -97° 44' 17.25"	34.972070 -97.738124	21-6N-5W: TD: 17,575' 250' FSL / 845' FWL	---
X-6	MAY #4-21-16XH	598528	2079359	34° 58' 39.84" -97° 44' 08.35"	34.977733 -97.735097	21-6N-5W: TD: 20,542' 2,310' FSL / 1,745' FWL	---
X-7	MAY #6-21-16XH	598525	2080998	34° 58' 39.78" -97° 43' 46.65"	34.977716 -97.729626	21-6N-5W: TD: 20,398' 2,301' FSL / 1,919' FEL	---
X-8	MAY #1-21-16XH	596464	2078412	34° 58' 19.45" -97° 44' 17.79"	34.972069 -97.738274	21-6N-5W: TD: 22,925' 250' FSL / 800' FWL	---
X-9	PIPKIN #1-28H	591317	2077833	34° 57' 28.56" -97° 44' 24.91"	34.957933 -97.740254	28-6N-5W: TD: 17,430' 400' FSL / 200' FWL	---

Certificate of Authorization No. 7318

Date Staked: **--19
Date Drawn: 5-30-19



Prepared By:
Petro Land Services South
10400 Vineyard Blvd.
Suite C
Oklahoma City, OK 73120

REVISIONS

No.	DATE	BY	DESCRIPTION	COMMENTS
00	5-30-19	HOG	ISSUED FOR APPROVAL	---

EXHIBIT: A (2 of 3)
 SHEET: 8.5x14
 SHL: 21-6N-5W
 BHL-6 33-6N-5W

PETRO LAND SERVICES SOUTH, LLC

10400 VINEYARD BLVD, SUITE C, OKLA. CITY, OKLA. 73120 * OFFICE (405) 212-3108
 Certificate of Authorization No. 7318



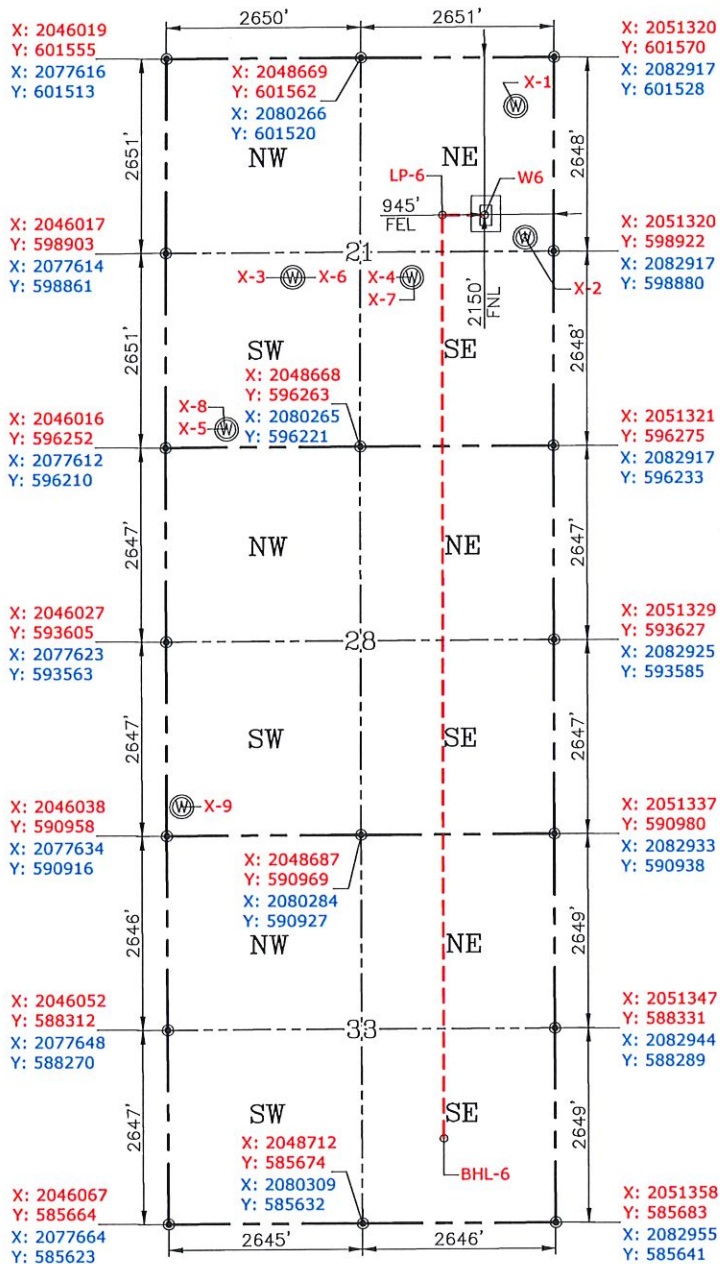
CONTINENTAL
 RESOURCES, INC
 (OPERATOR)

GRADY

County Oklahoma

2150' FNL-945' FEL Section 21 Township 6N Range 5W I.M.

WELL: UMBACH
 6-21-28-33XHW



GPS DATUM
 NAD-83
 NAD-27
 OK SOUTH ZONE
 US FEET
 SCALE:
 1" = 2000'

CURRENT REV.: 0

Date Drawn: 5-30-19

Please note that this location was staked on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed. Please contact PLS promptly if any inconsistency is determined. GPS data is observed from RTK-GPS. NOTE: X and Y data shown hereon for Section Corners may NOT have been surveyed on-the-ground, and further, does NOT represent a true Boundary Survey. Quarter Section distances may be assumed from a Government Survey Plat or assumed at a proportionate distance from opposing section corners, or occupation thereof, and may not have been measured on-the-ground, and further, does not represent a true Boundary Survey.

CERTIFICATE:

I, RANDALL J. BILYEU an Oklahoma Licensed Land Surveyor and an authorized agent of Petro Land Services South, LLC, do hereby certify to the information shown herein.



Randall J. Bilyeu

Oklahoma PLS No.1196 DATE