		ORPORATION COMMISSI							
API NUMBER: 093 25156 B	P.O. BOX 52000		Approval Date:	08/28/2018					
		IA CITY, OK 73152-2000 (ule 165:10-3-1)	Expiration Date:	02/28/2020					
Horizontal Hole Oil & Gas									
Amend reason: OCC CORRECTION TO CORRECT WELL NUMBER AMEND PERMIT TO DRILL									
WELL LOCATION: Sec: 14 Twp: 20N Rge:	15W County: MAJOR								
SPOT LOCATION: NW NW NE NW		RTH FROM WEST							
	SECTION LINES: 260	0 1525							
Lease Name: COTTER 2015	Well No: 1-	11H	Well will be 260 feet from nearest u	init or lease boundary.					
Operator SANDRIDGE EXPLORATION & PRODUCTION LLC Telephone: 4054295610 OTC/OCC Number: 22281 0 Name:									
SANDRIDGE EXPLORATION & PRO		JAMES L.	WARNER						
123 ROBERT S KERR AVE STE 170	2								
OKLAHOMA CITY, OK	73102-6406	FAIRVIEW		37					
				-					
Formation(s) (Permit Valid for Listed F	ormations Only):								
Name	Depth	Name	Depth						
1 MISS'AN LM	8960	6							
2		7							
3		8							
4 5		9 10							
141045									
Spacing Orders: 141045	Location Exception Ord	ers:	Increased Density Orders: 68	33621					
Pending CD Numbers: 201807705			Special Orders:						
Total Depth: 13960 Ground Elevation:	1783 Surface Cas	sing: 1500	Depth to base of Treatable Water-Be	earing FM: 450					
Under Federal Jurisdiction: No	Fresh Water Su	oply Well Drilled: No	Surface Water used	to Drill: Yes					
PIT 1 INFORMATION		Approved Method for d	lisposal of Drilling Fluids:						
Type of Pit System: CLOSED Closed System Mean	ns Steel Pits								
Type of Mud System: WATER BASED D. One time land application (REQUIRES PERMIT) PERMIT NO: 18-3520									
Chlorides Max: 10000 Average: 5000		H. SEE MEMO							
Is depth to top of ground water greater than 10ft below	v base of pit? Y								
Within 1 mile of municipal water well? N									
Wellhead Protection Area? N									
Pit is located in a Hydrologically Sensitive Area	1.								
Category of Pit: C									
Liner not required for Category: C									
Pit Location is AP/TE DEPOSIT									
Pit Location Formation: TERRACE									

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
 AP/TE DEPOSIT

 Pit Location Formation:
 TERRACE

## HORIZONTAL HOLE 1

Sec	11	Twp	20N	Rge	15W	County	MAJOR
Spot Location of End Point: NW NE NW NW						NW	
Feet I	From:	NOF	RTH	1/4 Sec	ction Lin	e: 15	50
Feet I	From:	WE:	ST	1/4 Se	ction Lin	e: 88	30
Depth of Deviation: 8247							
Radius of Turn: 477							
Direction: 350							
Total Length: 4964							
Measured Total Depth: 13960							
True Vertical Depth: 9000							
End Point Location from Lease,							
Unit, or Property Line: 150							

Notes:	
Category	Description
DEEP SURFACE CASING	8/21/2018 - 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
HYDRAULIC FRACTURING	8/21/2018 - 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
INCREASED DENSITY - 683621	11/6/2018 - G58 - 11-20N-15W X141045 MPLM 1 WELL SANDRIDGE EXPLORATION AND PRODUCTION, LLC 9/24/2018
INTERMEDIATE CASING	8/21/2018 - 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

093 25156 COTTER 2015 1-11H

MEMO

## Description

8/21/2018 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

PENDING CD - 201807705

SPACING - 141045

11/6/2018 - G58 - (I.O.) 11-20N-15W X141045 MPLM COMPL. INT. NCT 150' FSL, NCT 150' FNL, NCT 560' FWL NO OP. NAMED REC 10/15/2018 (THOMAS) 8/28/2018 - G58 - (640) 11-20N-15W EXT OTHERS EST MPLM