PI NUMBER: 063 24847	OKLAHOMA CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION P.O. BOX 52000			Approval Date: 08/28/2018	
izontal Hole Oil & Gas	OKLAH	OMA CITY, OK 73152 (Rule 165:10-3-1)	-2000	Expiration Date: 02/28/2019	
		PERMIT TO DRILL			
WELL LOCATION: Sec: 03 Twp: 8N Rge:	12E County: HUG	HES			
SPOT LOCATION: SW NE NW NW	FEET FROM QUARTER: FROM	NORTH FROM WEST			
	SECTION LINES:	583 960			
Lease Name: HANS	Well No:	3427-1HXW	Well will be	583 feet from neares	st unit or lease boundary.
Operator ANTIOCH OPERATING LLC Name:		Telephone: 405236008		OTC/OCC Number:	23947 0
ANTIOCH OPERATING LLC					
PO BOX 1557	MIDDLE CREEK RANCH, LLC				
OKLAHOMA CITY, OK 73101-1557			98 NORTH 394 RD		
		DL	JSTIN	OK 7	4839
2 WOODFORD 3 SYLVAN 4 5 Specing Orders: 679808	4665 4710	7 8 9 10			
Spacing Orders: 678043	Location Exception	Orders:	Ir	ncreased Density Orders:	
Pending CD Numbers: 201800430 201800431			s	Special Orders:	
Total Depth: 15000 Ground Elevation:	744 Surface	Casing: 210	Depth	to base of Treatable Water	-Bearing FM: 150
Under Federal Jurisdiction: No	Fresh Water	Supply Well Drilled: No		Surface Water u	sed to Drill: Yes
PIT 1 INFORMATION		Approved M	ethod for disposal of Drilli	ng Fluids:	
Type of Pit System: CLOSED Closed System Mean	s Steel Pits				
Type of Mud System: WATER BASED			e land application (REQ	UIRES PERMIT)	PERMIT NO: 18-3490
		H. SEE ME	MO		
Chlorides Max: 8000 Average: 5000					
Is depth to top of ground water greater than 10ft below	base of pit? Y				
Is depth to top of ground water greater than 10ft below. Within 1 mile of municipal water well? N	base of pit? Y				
Is depth to top of ground water greater than 10ft below					
Is depth to top of ground water greater than 10ft below Within 1 mile of municipal water well? N Wellhead Protection Area? N					
Is depth to top of ground water greater than 10ft below Within 1 mile of municipal water well? N Wellhead Protection Area? N Pit is located in a Hydrologically Sensitive Area					
Is depth to top of ground water greater than 10ft below Within 1 mile of municipal water well? N Wellhead Protection Area? N Pit is located in a Hydrologically Sensitive Area Category of Pit: C					

 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
 C

 Pit Location is
 BED AQUIFER

 Pit Location Formation:
 SENORA

HORIZONTAL HOLE 1

HUGHES Sec 27 Twp 9N Rge 12E County Spot Location of End Point: NE NW NW NW Feet From: NORTH 1/4 Section Line: 165 Feet From: WEST 1/4 Section Line: 440 Depth of Deviation: 4031 Radius of Turn: 477 Direction: 358 Total Length: 10220 Measured Total Depth: 15000 True Vertical Depth: 4710 End Point Location from Lease, Unit, or Property Line: 165

Notes:	Description
Category	Description
BOTTOM-HOLE LOCATION	8/23/2018 - G75 - 165' FNL, 440' FWL NW4 27-9N-12E PER STAKING PLAT
HYDRAULIC FRACTURING	8/1/2018 - G71 - OCC 165:10-3-10 REQUIRES:
	 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; 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 WEDDO NOTICE FORM FOUND AT THE FOLL OWING LINK.
	"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
МЕМО	8/1/2018 - G71 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 2 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT

Category	Description
PENDING CD - 201800430	8/23/2018 - G75 - (I.O.) 34 & 27-9N-12E EST MULTIUNIT HORIZONTAL WELL X679808 MYES, WDFD, SLVN 34-9N-12E X678043 MYES, WDFD, SLVN 27-9N-12E (MYES, SLVN ADJACENT COMMON SOURCES OF SUPPLY TO WDFD) 50% 34-9N-12E 50% 27-9N-12E NO OP. NAMED REC 4-19-2018 (MINMIER)
PENDING CD - 201800431	8/23/2018 - G75 - (I.O.) 34 & 27-9N-12E X679808 MYES, WDFD, SLVN, OTHER 34-9N-12E X678043 MYES, WDFD, SLVN, OTHER 27-9N-12E SHL (34-9N-12E) SW4 ** COMPL. INT. (34-9N-12E) NCT 165' FSL, NCT 0' FNL, NCT 330' FWL COMPL. INT. (27-9N-12E) NCT 0' FSL, NCT 165' FNL, NCT 330' FWL NO OP. NAMED REC 4-19-2018 (MINMIER) ** ITD HAS SHL AS 583' FNL, 960' FWL NW4 3-8N-12E; TO BE CORRECTED AT HEARING FOR
SPACING - 678043	FINAL ORDER LOCATION EXCEPTION PER OPERATOR 8/23/2018 - G75 - (640)(HOR) 27-9N-12E VAC OTHERS VAC 488826 MSSP, WDFD EXT 674927 MYES, WDFD, SLVN, OTHER POE TO BHL (MYES) NCT 660' FB POE TO BHL (MYES) NCT 660' FB POE TO BHL (SLVN) NCT 330' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL
SPACING - 679808	8/23/2018 - G75 - (640)(HOR) 34-9N-12E VAC 492355 MSSP, WDFD EXT 678043 MYES, WDFD, SLVN, OTHER POE TO BHL (MYES) NCT 660' FB POE TO BHL (SLVN) NCT 330' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL
SURFACE LOCATION	8/23/2018 - G75 - 583' FNL, 960' FWL NW4 3-8N-12E PER STAKING PLAT
TOTAL DEPTH	8/23/2018 - G75 - 15,000' PER OPERATOR

