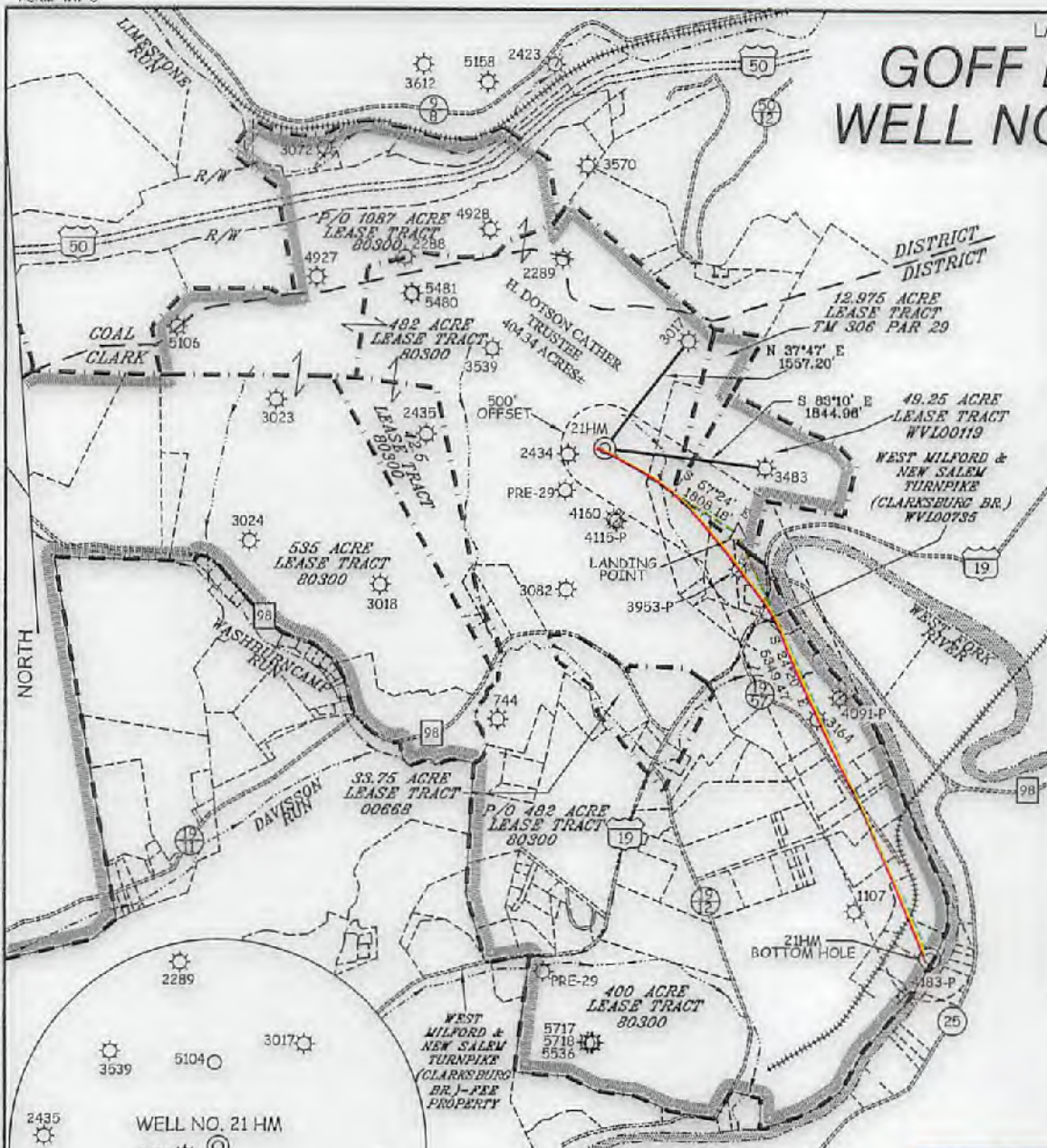


LATITUDE 39°17'30"

GOFF LEASE WELL NO. 21 HM

LONGITUDE 80°22'30"

5,104'



WELL NO. 21 HM TOP HOLE		
STATE PLANE COORDINATES (NORTH ZONE NAD '27)		
N.	284,444	
E.	1,752,147	
TOP HOLE (NAD 27)		
LAT=(N)	39°16'39.5"	
LONG=(W)	80°22'32.0"	
TOP HOLE (NAD 83)		
LAT=(N)	39°16'39.9"	
LONG=(W)	80°22'31.3"	
TOP HOLE UTM (NAD 83)		
(N)	4,347,785	
(E)	553,877	

WELL NO. 21 HM LANDING POINT		
STATE PLANE COORDINATES (NORTH ZONE NAD '27)		
N.	283,470	
E.	1,753,670	
LANDING POINT (NAD 27)		
LAT=(N)	39°16'30.1"	
LONG=(W)	80°22'12.5"	
LANDING POINT (NAD 83)		
LAT=(N)	39°16'30.4"	
LONG=(W)	80°22'11.8"	
LANDING POINT UTM (NAD 83)		
(N)	4,347,495	
(E)	554,346	

WELL NO. 21 HM BOTTOM HOLE		
STATE PLANE COORDINATES (NORTH ZONE NAD '27)		
N.	278,596	
E.	1,755,874	
BOTTOM HOLE (NAD 27)		
LAT=(N)	39°15'42.1"	
LONG=(W)	80°21'43.8"	
BOTTOM HOLE (NAD 83)		
LAT=(N)	39°15'42.4"	
LONG=(W)	80°21'43.2"	
BOTTOM HOLE UTM (NAD 83)		
(N)	4,346,022	
(E)	555,042	

LEGEND	
AS DRILLED	—
PROPOSED	- - -

NOTES ON SURVEY

1. TIES TO WELLS, REFERENCES, AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 70 PAGE 152 AND ADJOINING DEEDS.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF HARRISON COUNTY IN JULY, 2013.
4. WELL COORDINATES ESTABLISHED BY DGPS(SURVEY GRADE).
5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250'. NO APPLICABLE DWELLINGS OR BUILDINGS WITHIN 625'.
6. PLAT UPDATED 05-05-17 TO SHOW AS DRILLED DATA PROVIDED BY ARSENAL RESOURCES.

AS DRILLED COORDINATES FOR WELL NO. 21HM			
(S.P.C. NORTH ZONE) (UTM(N) ZONE 17 NORTH)			
NAD27 S.P.C.(FT)	N. 284,445.8	E. 1,752,147.4	
NAD27 GEO	LAT=(N) 39°16'39.6"	LONG=(W) 80°22'32.0"	
NAD83 GEO	LAT=(N) 39°16'39.9"	LONG=(W) 80°22'31.3"	
NAD83 UTM (M)	N. 4,347,785.0	E. 553,877.0	
BOTTOM HOLE			
NAD27 S.P.C.(FT)	N. 278,590.1	E. 1,755,832.4	
NAD27 GEO	LAT=(N) 39°15'42.0"	LONG=(W) 80°21'44.4"	
NAD83 GEO	LAT=(N) 39°15'42.4"	LONG=(W) 80°21'43.7"	
NAD83 UTM (M)	N. 4,346,019.7	E. 555,029.4	



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677
Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE MAY 21, 20 14
REVISED 06/05/14 & 05/05/17

OPERATORS WELL NO. GOFF 21HM
API WELL NO. 47-33-05823
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 8099P21R3(475-70)
PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE) SCALE 1" = 2,000'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL	<input type="checkbox"/>	GAS	<input checked="" type="checkbox"/>	LIQUID INJECTION	<input type="checkbox"/>	WASTE DISPOSAL	<input type="checkbox"/>	IF "GAS" PRODUCTION	<input checked="" type="checkbox"/>	STORAGE	<input type="checkbox"/>	DEEP	<input type="checkbox"/>	SHALLOW	<input checked="" type="checkbox"/>
LOCATION:	PRE	POST													
ELEVATION	1,126.70'	1126.30'	WATERSHED <u>WEST FORK RIVER</u>												
DISTRICT	<u>CLARK</u>		COUNTY		<u>HARRISON</u>		QUADRANGLE		<u>WOLF SUMMIT 7.5'</u>						
SURFACE OWNER	<u>H. DOTSON CATHER TRUSTEE</u>														
ROYALTY OWNER	<u>H. DOTSON CATHER TRUSTEE ETAL & STATE OF W.V.(TURNPIKE)</u>														
PROPOSED WORK:	LEASE NO. <u>80300, TM 306 P.29, WV100735, & WV100119</u>														
DRILL	<input checked="" type="checkbox"/>	CONVERT	<input type="checkbox"/>	DRILL DEEPER	<input type="checkbox"/>	REDRILL	<input type="checkbox"/>	FRACTURE OR STIMULATE	<input checked="" type="checkbox"/>	PLUG OFF OLD	<input type="checkbox"/>				
FORMATION	PERFORATE NEW FORMATION <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> OTHER <input type="checkbox"/>														
PHYSICAL CHANGE IN WELL (SPECIFY)	TARGET FORMATION <u>MARCELLUS</u>														
ESTIMATED DEPTH <u>7,089' TVD / TMD 13,897'</u>															

WELL OPERATOR PDC MOUNTAINEER, LLC DESIGNATED AGENT STEVEN P. JOHNSON
ADDRESS 120 GENESIS BOULEVARD ADDRESS 120 GENESIS BOULEVARD
BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

09/15/2017