



LINE AND CURVE TABLE

LINE	BEARING	DISTANCE
L1	S 78°39' E	666.18'
L2	N 23°46' W	141.61'
L3	N 27°26' W	129.3'

CURVE	ARC LENGTH	RADIUS
C1	67.61'	45.58'
C2	63.44'	157.63'
C3	254.14'	871.36'

CHORD BEARING	CHORD LENGTH
C1	N 58°51' E 61.58'
C2	N 04°49' E 63.01'
C3	N 15°04' W 253.24'

NOTES

- BORE PATH BASED ON GRID NORTH.
- NO WATER WELLS WITHIN 250' OF WELL WERE FOUND. NO DWELLINGS WITHIN 825' OF PAD CENTER WERE FOUND.
- OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN JULY, 2016. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
- WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.

SURFACE HOLE
 UTM. NAD83, ZONE 17
 IN METERS
 N) 4,400,808.2
 E) 514,021.3

LANDING POINT 1
 UTM. NAD83, ZONE 17
 IN METERS
 N) 4,400,948.8
 E) 514,180.1

BOTTOM HOLE
 UTM. NAD83, ZONE 17
 IN METERS
 N) 4,402,980.5
 E) 513,006.3

BOTTOM HOLE
 UTM. NAD83, ZONE 17
 IN FEET
 N) 14,438,318
 E) 1,686,418

BOTTOM HOLE
 UTM. NAD83, ZONE 17
 IN FEET
 N) 14,438,840
 E) 1,686,904

BOTTOM HOLE
 UTM. NAD83, ZONE 17
 IN FEET
 N) 14,445,445
 E) 1,683,088

FILE NUMBER W0120319 (WB1-76)

DRAWING NUMBER GREER_WP_1N-9HM

SCALE 1" = 1200'

MINIMUM DEGREE OF ACCURACY 1/2500

PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.S. Jonathan N. White
 2122



WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET, SE
 CHARLESTON, WV 25304

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

DATE: OCTOBER 21, 2016

OPERATORS WELL NO. GREER 1N-9HM

API WELL NO. 47-051-0189246A

STATE COUNTY PERMIT

LOCATION ELEVATION 1251' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER (UNDEFINED)

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE ATTACHED PG 2 THROUGH 4

SURFACE OWNER PPG INDUSTRIES, INC. ACREAGE 42.18

OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC., ET AL LEASE ACREAGE 458.315

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) _____

TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,506' TMD:14,530'

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER
CT CORPORATION SYSTEM

ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD
FORT WORTH, TX 76107 CHARLESTON, WV 25313

01/20/2017

COUNTY NAME
 PERMIT

**GREER WELL NO. 1N-9HM
WELL PLAT LEASE INFORMATION**

Lease Name or No.	Tag	Parcel	GRANTOR, LESSOR, ECT.	DEED BOOK/PG	
10*14402	A	5-20-33	CAROL F WILSON AND RICHARD WILSON	860	446
10*14362	A	5-20-33	CAROLYN STARKEY	827	226
10*14400	A	5-20-33	COLEEN SLAGLE AND FRANKLIN SLAGLE	860	440
10*14419	A	5-20-33	CROSSROAD CHILD AND FAMILY SERVICES	887	105
10*14404	A	5-20-33	DON FORGRAVES	862	426
10*14410	A	5-20-33	HENRY T LONG	867	385
10*14401	A	5-20-33	IMELDA J SCURLOCK	860	443
10*14388	A	5-20-33	IMMANUEL CHURCH OF THE UNITED CHURCH OF CHRIST	849	513
10*14409	A	5-20-33	JAMES C LONG AND PATTI LONG	864	326
10*14398	A	5-20-33	JAN KAFFENBERGER	860	434
10*14387	A	5-20-33	JOHN F LONG AND PAM LONG	849	542
10*14405	A	5-20-33	JOHN WHITE	862	423
10*14377	A	5-20-33	JOSEPH A LONG	849	519
10*14368	A	5-20-33	JOSEPH LONG	836	106
10*14413	A	5-20-33	JUANITA SANDIFER	872	206
10*14416	A	5-20-33	KATHERINE ANN WILLIAMS COTHRAN	879	1
10*14394	A	5-20-33	LESLIE F BUCKNOR	862	419
10*14408	A	5-20-33	LORNA M LONG MORGAN	864	323
10*14399	A	5-20-33	RITA ANN DOEBERT AND RONALD DOEBERT	860	437
10*14403	A	5-20-33	SUE WHITE	862	429
10*14412	A	5-20-33	THE VILLAGE NETWORK	872	203
10*14371	A	5-20-33	THOMAS F LONG AND JENNIFER LONG	842	398
10*14411	A	5-20-33	THOMAS WHITE, ESQ., SPECIAL COMMISSIONER	870	34
10*14372	A	5-20-33	UNITED CHURCH HOMES INC	846	408
10*14395	A	5-20-33	WILLIAM V BUCKNOR	862	421
10*14316	A	5-20-33	ANDREW GERST	791	645
10*14331	A	5-20-33	CHRISTINA JEAN RIOUX	796	70
10*14333	A	5-20-33	DEAN ROTHENBUHLER	796	42
10*14355	A	5-20-33	DEWAYNE STARKEY	815	228
10*14356	A	5-20-33	FREDRIC RICHTER & BETTY RICHTER	822	270
10*14317	A	5-20-33	HAROLD BLACHLY	791	643
10*14321	A	5-20-33	HERBERT BLACHLY	792	102
10*14319	A	5-20-33	JACK J. PFALZGRAF	792	118
10*14312	A	5-20-33	JAMIE LU BENSON	790	531
10*14322	A	5-20-33	LOIS KAY MORFORD	792	110
10*14315	A	5-20-33	MARGARET ROSS	790	527
10*14318	A	5-20-33	MARTHA BLACHLY-CROSS	792	112
10*14332	A	5-20-33	MICHAEL EDWARD BARTH	796	68
10*14300	A	5-20-33	PPG INDUSTRIES, INC.	725	123
10*14328	A	5-20-33	RAE ELLEN STUART	796	38
10*14314	A	5-20-33	RALPH BLACHLY	790	529
10*14327	A	5-20-33	ROBERT D. OKEY	792	646
10*14320	A	5-20-33	SANDRA CHEYNEY	792	91
10*14313	A	5-20-33	TERRI JEAN GODDARD	790	585
10*14329	A	5-20-33	TONDA ROTHENBUHLER	796	40
10*16355	A	5-20-33	JAMES P. LONG AND LINDA LONG	904	10
10*15766	A	5-20-33	JOHN J. POZENEL	904	7
10*15762	A	5-20-33	DAWN PETROVICH	904	4
10*16357	A	5-20-33	DEANNA M. CAMPBELL	904	1
10*15760	A	5-20-33	DIEDRE WINGER	903	645
10*16358	A	5-20-33	ANNE MARIE KRAMER	903	648
10*15734	A	5-20-33	GENEVIEVE L. LONG	904	13
10*15761	A	5-20-33	CAMERON CEMETERY ASSOCIATION	903	642
10*16230	A	5-20-33	TH Exploration, LLC	900	134
10*15763	A	5-20-33	BONNIE J. SELDERS	904	34
10*16356	A	5-20-33	DARYL S. BUCKNOR	904	31
10*15765	A	5-20-33	JOHN A. BUCKNOR	904	16
10*15764	A	5-20-33	JAMES E. BUCKNOR	904	28
10*14381	A	5-20-33	WILLIAM LONG	792	95
10*14325	B	5-20-28	ELIZABETH ANN STRAUSBAUGH	792	104
10*14326	B	5-20-28	JANET LEA BLANKENSHIP	792	580
10*14310	B	5-20-28	JEAN C. THOMAS	781	614
10*14308	B	5-20-28	MARY E. BASSETT	779	492
10*14300	B	5-20-28	PPG INDUSTRIES, INC.	725	123
10*14309	B	5-20-28	ROBERT B. THOMAS	779	484
10*14324	B	5-20-28	RUTH E. BASSETT MEADOWS	792	100
10*14307	B	5-20-28	SALLY CYNTHIA HOPKINS	777	572
10*14325	C	5-20-29	ELIZABETH ANN STRAUSBAUGH	792	104
10*14326	C	5-20-29	JANET LEA BLANKENSHIP	792	580

01/20/2017

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ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
FORT WORTH, TX 76107

DESIGNATED AGENT DIANNA STAMPER
CT CORPORATION SYSTEM
ADDRESS 5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

**GREER WELL NO. 1N-9HM
WELL PLAT LEASE INFORMATION**

Lease Name or No.	Tag	Parcel	GRANTOR, LESSOR, ECT.	DEED BOOK/PG	
10*14310	C	5-20-29	JEAN C. THOMAS	781	614
10*14308	C	5-20-29	MARY E. BASSETT	779	492
10*14300	C	5-20-29	PPG INDUSTRIES, INC.	725	123
10*14309	C	5-20-29	ROBERT B. THOMAS	779	484
10*14324	C	5-20-29	RUTH E. BASSETT MEADOWS	792	100
10*14307	C	5-20-29	SALLY CYNTHIA HOPKINS	777	572
10*14616	D	5-20-26	ROBERT E RINE AND DONNA M RINE	708	250
10*14685	E	5-20-25	ROBERT E. RINE AND DONNA M. RINE	708	253
10*14615	F	5-20-24	ROBERT E RINE	708	251
10*14316	G	5-13-37	ANDREW GERST	849	528
10*14402	G	5-13-37	CAROL F WILSON AND RICHARD WILSON	860	446
10*14362	G	5-13-37	CAROLYN STARKEY	849	554
10*14331	G	5-13-37	CHRISTINA JEAN RIOUX	849	556
10*14400	G	5-13-37	COLEEN SLAGLE AND FRANKLIN SLAGLE	860	440
10*14419	G	5-13-37	CROSSROAD CHILD AND FAMILY SERVICES	887	105
10*14333	G	5-13-37	DEAN ROTHENBUHLER	860	430
10*14355	G	5-13-37	DEWAYNE STARKEY	849	560
10*14404	G	5-13-37	DON FORGRAVES	862	426
10*14373	G	5-13-37	FREDRIC RICHTER AND BETTY RICHTER	846	411
10*14317	G	5-13-37	HAROLD BLACHLY	849	538
10*14410	G	5-13-37	HENRY T LONG	867	385
10*14321	G	5-13-37	HERBERT BLACHLY	849	536
10*14401	G	5-13-37	IMELDA J SCURLOCK	860	443
10*14388	G	5-13-37	IMMANUEL CHURCH OF THE UNITED CHURCH OF CHRIST	849	513
10*14386	G	5-13-37	JACK J PFALZGRAF	849	540
10*14409	G	5-13-37	JAMES C LONG AND PATTI LONG	864	326
10*14312	G	5-13-37	JAMIE LU BENSON	849	526
10*14398	G	5-13-37	JAN KAFFENBERGER	860	434
10*14387	G	5-13-37	JOHN F LONG AND PAM LONG	849	542
10*14405	G	5-13-37	JOHN WHITE	862	423
10*14377	G	5-13-37	JOSEPH A LONG	849	519
10*14393	G	5-13-37	JOSEPH B LONG	854	585
10*14413	G	5-13-37	JUANITA SANDIFER	872	206
10*14416	G	5-13-37	KATHERINE ANN WILLIAMS COTHRAN	879	1
10*14394	G	5-13-37	LESLIE F BUCKNOR	860	422
10*14408	G	5-13-37	LORNA M LONG MORGAN	864	323
10*14315	G	5-13-37	MARGARET ROSS	846	402
10*14374	G	5-13-37	MARTHA BLATCHLY-CROSS	846	400
10*14332	G	5-13-37	MICHAEL EDWARD BARTH	849	524
10*14328	G	5-13-37	RAE ELLEN STUART	849	558
10*14314	G	5-13-37	RALPH BLACHLY	849	534
10*14399	G	5-13-37	RITA ANN DOEBERT AND RONALD DOEBERT	860	437
10*14415	G	5-13-37	ROBERT D OKEY	872	621
10*14320	G	5-13-37	SANDRA CHEYNEY	879	4
10*14403	G	5-13-37	SUE WHITE	862	429
10*14313	G	5-13-37	TERRI JEAN GODDARD	846	404
10*14412	G	5-13-37	THE VILLAGE NETWORK	872	203
10*14382	G	5-13-37	THOMAS LONG AND JENNIFER LONG	849	532
10*14411	G	5-13-37	THOMAS WHITE, ESQ., SPECIAL COMMISSIONER	870	34
10*14329	G	5-13-37	TONDA ROTHENBUHLER	860	432
10*14372	G	5-13-37	UNITED CHURCH HOMES INC	846	408
10*14381	G	5-13-37	WILLIAM LONG	849	530
10*14395	G	5-13-37	WILLIAM V BUCKNOR	860	424
10*14300	G	5-13-37	PPG INDUSTRIES, INC.	725	123
10*14322	G	5-13-37	LOIS KAY MORFORD	792	110
10*16355	G	5-13-37	JAMES P. LONG AND LINDA LONG	904	10
10*15766	G	5-13-37	JOHN J. POZENEL	904	7
10*15762	G	5-13-37	DAWN PETROVICH	904	4
10*16357	G	5-13-37	DEANNA M. CAMPBELL	904	1
10*15760	G	5-13-37	DIEDRE WINGER	903	645
10*16358	G	5-13-37	ANNE MARIE KRAMER	903	648
10*15734	G	5-13-37	GENEVIEVE L LONG	904	13
10*15761	G	5-13-37	CAMERON CEMETERY ASSOCIATION	903	642
10*16230	G	5-13-37	TH Exploraton, LLC	900	134
10*15763	G	5-13-37	BONNIE J. SELDERS	904	34
10*16356	G	5-13-37	DARYL S. BUCKNOR	904	31
10*15765	G	5-13-37	JOHN A. BUCKNOR	904	16
10*15764	G	5-13-37	JAMES E. BUCKNOR	904	28
10*14526	H	5-13-38	THOMAS WILLIAM BOWMAN	761	432

01/20/2017

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**GREER WELL NO. 1N-9HM
WELL PLAT LEASE INFORMATION**

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10*14527	H	5-13-38	VICTORIA BOWMAN	761	434
10*14402	I	5-13-22	CAROL F WILSON AND RICHARD WILSON	860	446
10*14362	I	5-13-22	CAROLYN STARKEY	827	226
10*14400	I	5-13-22	COLEEN SLAGLE AND FRANKLIN SLAGLE	860	440
10*14419	I	5-13-22	CROSSROAD CHILD AND FAMILY SERVICES	887	105
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10*14387	I	5-13-22	JOHN F LONG AND PAM LONG	849	542
10*14405	I	5-13-22	JOHN WHITE	862	423
10*14377	I	5-13-22	JOSEPH A LONG	849	519
10*14368	I	5-13-22	JOSEPH LONG	836	106
10*14413	I	5-13-22	JUANITA SANDIFER	872	206
10*14416	I	5-13-22	KATHERINE ANN WILLIAMS COTHRAN	879	1
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10*14355	I	5-13-22	DEWAYNE STARKEY	815	228
10*14356	I	5-13-22	FREDRIC RICHTER & BETTY RICHTER	822	270
10*14317	I	5-13-22	HAROLD BLACHLY	791	643
10*14321	I	5-13-22	HERBERT BLACHLY	792	102
10*14319	I	5-13-22	JACK J. PFALZGRAF	792	118
10*14312	I	5-13-22	JAMIE LU BENSON	790	531
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10*14300	I	5-13-22	PPG INDUSTRIES, INC.	725	123
10*14328	I	5-13-22	RAE ELLEN STUART	796	38
10*14314	I	5-13-22	RALPH BLACHLY	790	529
10*14327	I	5-13-22	ROBERT D. OKEY	792	646
10*14320	I	5-13-22	SANDRA CHEYNEY	792	91
10*14313	I	5-13-22	TERRI JEAN GODDARD	790	585
10*14329	I	5-13-22	TONDA ROTHENBUHLER	796	40
10*16355	I	5-13-22	JAMES P. LONG AND LINDA LONG	904	10
10*15766	I	5-13-22	JOHN J. POZENEL	904	7
10*15762	I	5-13-22	DAWN PETROVICH	904	4
10*16357	I	5-13-22	DEANNA M. CAMPBELL	904	1
10*15760	I	5-13-22	DIEDRE WINGER	903	645
10*16358	I	5-13-22	ANNE MARIE KRAMER	903	648
10*15734	I	5-13-22	GENEVIEVE L LONG	904	13
10*15761	I	5-13-22	CAMERON CEMETERY ASSOCIATION	903	642
10*15763	I	5-13-22	TH Exploration, LLC	904	34
10*16230	I	5-13-22	BONNIE J. SELDERS	900	134
10*16356	I	5-13-22	DARYL S. BUCKNOR	904	31
10*15765	I	5-13-22	JOHN A. BUCKNOR	904	16
10*15764	I	5-13-22	JAMES E. BUCKNOR	904	28
10*14700	J	5-13-23	DAVID J. MAST AND MIRIAM A. MAST	708	239
10*14701	J	5-13-23	ROSEITA THORNTON	885	600

01/20/2017

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