

ELK LAKE SERVICES, LLC

280 Indian Springs Road,
Suite 123 Indiana, PA 15701
Phone: (724) 463-7303

Latitude: 40°15'00"

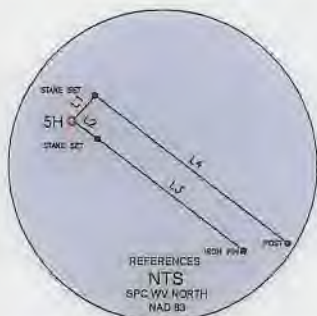
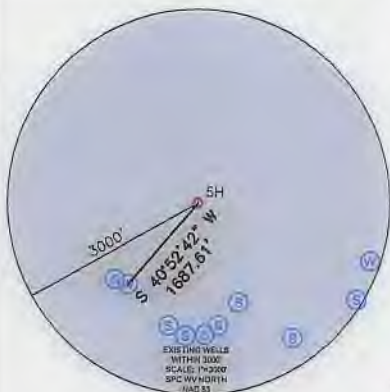
BOTTOM HOLE 7329'

Latitude: 40°12'30"

SURFACE HOLE 5419'

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,448,997.14 EASTING: 537,363.32
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,449,048.74 EASTING: 537,572.43
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,450,974.37 EASTING: 536,771.18

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



LINE	BEARING	DISTANCE
L1	N 41°29'23" E	356.30'
L2	S 55°34'17" E	318.99'
L3	S 52°36'46" E	1927.86'
L4	S 52°42'21" E	2535.38'

WELL RESTRICTIONS

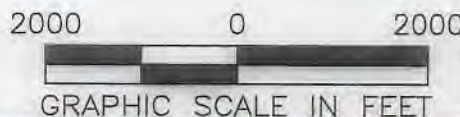
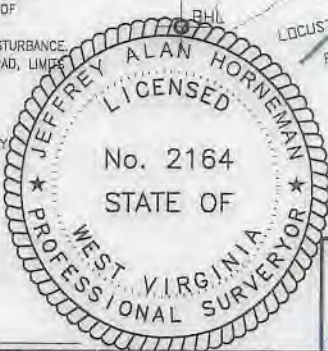
- NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
- WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 1695 FEET OF PROPOSED WELL.
- PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS ARE WITHIN THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
- NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY

- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2164



COMPANY: **SWN** Production Company, LLC

	(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS	MINIMUM DEGREE OF ACCURACY: 1/200	SAMUEL JONES BRK		
	WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	PROVEN SURVEY SOURCE OF ELEVATION: GRADE GPS (NAVD 88, US FT)	OPERATOR'S WELL #: 5H	API WELL #: 47	9

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1205.4'-PLANNED

DISTRICT: BUFFALO COUNTY: BROOKE COUNTY QUADRANGLE: BETHANY

SURFACE OWNER: JONES, SAMUEL E. AND JUDITH F. ACREAGE: ±164.70

OIL & GAS ROYALTY OWNER: JONES, SAMUEL E. AND JUDITH F. ACREAGE: ±164.70

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,116' TVD 13,431' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	DESIGNATED AGENT: DEE SOUTHALL
ADDRESS: P.O. BOX 1300	ADDRESS: P.O. BOX 1300
CITY: JANE LEW STATE: WV ZIP CODE: 26378	CITY: JANE LEW STATE: WV ZIP CODE: 26378

LEGEND:	— SURVEYED BOUNDARY	REVISIONS:	DATE: 04-12-2018
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	■ DRILLING UNIT		FILE NO: 17-02
★ EXISTING / PRODUCING WELLHEAD	--- LEASE BOUNDARY		DRAWN BY: S. DUTKO
LPL★ LANDING POINT LOCATION	— PROPOSED PATH		SCALE: 1" = 2000'
⊙ EXISTING WATER WELL			DRAWING NO: 1
⊙ EXISTING SPRING			WELL LOCATION PLAT 1

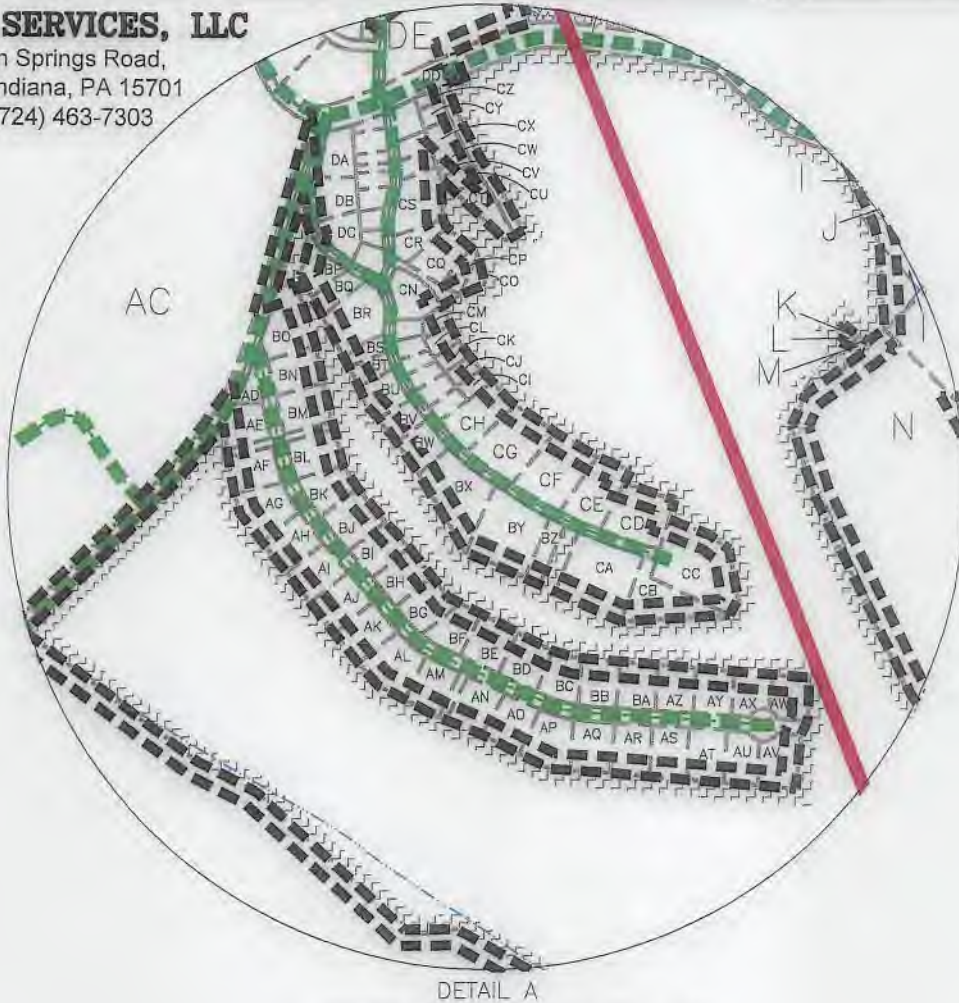
BOTTOM HOLE 15166'

SURFACE HOLE 6486'

Longitude: 80°32'30"

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DETAIL A

TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	JONES, SAMUEL E & JUDITH F	3-B43-60
TRACT	SURFACE OWNER	TAX PARCEL
2	VALENTINE GENE C TRUST 11/26/86	3-B43-33
3	BETHANY COLLEGE	3-B43-31
4	BETHANY PIKE ROAD	

TRACT	ADJOINING OWNERS TABLE SURFACE OWNER	TAX PARCEL
A	BETHANY COLLEGE	3-B38-31
B	BETHANY COLLEGE	2-B43C-03
C	BETHANY COLLEGE	2-B43C-02
D	BETHANY COLLEGE	2-B43C-01
E	PUBLIC PARCEL	1-B43B-26
F	STRAUB, TRAVIS G & GREGORY B	2-B43F-B4
G	SONNEWALD, GEORGE JR.	2-B43F-B2
H	SONNEWALD, GEORGE JR.	2-B43F-B1
I	HEIRS, WILLIAM MITCHELL	2-B43B-22
J	MITCHELL, DONALD STEVEN	2-B43F-B3
K	TOWN OF BETHANY	2-B43F-B5
L	TOWN OF BETHANY	2-B43F-B7
M	TOWN OF BETHANY	2-B43F-B8
N	TOWN OF BETHANY	3-B43-32
O	BETHANY COLLEGE	3-B43-31
P	CITY OF BETHANY	2-B43G-15
Q	BETHANY COLLEGE	3-B38-31
R	GENE C VALENTINE TRUST	3-B43-35-8
S	GENE C VALENTINE TRUST	3-B43-56
T	GENE C VALENTINE TRUST	3-B43-49-3
U	WV ST OF DEPT OF COMM DIV OF NAT RE WILDLIFE RES SEC	3-B4B-18
V	FONNER, MARY LOU	3-B43-58
W	PUSKARICH, TRACY T	3-B43-59
X	CHAMBERS, ROBERT M & CHARLOTTE A	3-B4B-24
Y	AYERS, ALBERT GLENN & REBECCA A (SURV)	3-B43-61
Z	CHAMBERS, ROBT M & CHARLOTTE A	3-B4B-23
AA	NORDEN, ANNA MAE	3-B4B-22
AB	CORWIN BRIAN DAVID	3-B43-22
AC	BETHANY COLLEGE	3-B38-31
AD	BETHANY COLLEGE	2-B43F-1
AE	DSAPLAR, WILFRID W; GUNASEGARAM, SAKUNTHALA W (SUR)	2-B43F-2
AF	RUGGIERO, RICHARD L & FELICITY	2-B43F-3
AG	D'AURORA, DOMINICK A & THERESA (SURV)	2-B43F-4
AH	GRAHAM, LINDA	2-B43F-5
AI	RAHR, ROBERT P JR & PENNY K (SURV)	2-B43F-6
AJ	REVEN, FRANK M & MARIAN	2-B43F-7
AK	PETTINI, JOSEPH P & BARBARA A (SURV)	2-B43F-8
AL	BURNS, JOHN THOMAS & ANNE E	2-B43F-9
AM	GIESMANN, JOHN C & SUSAN L	2-B43F-10
AN	DULLY, EDWARD A	2-B43F-11
AO	BOWN, ERIC H	2-B43F-12
AP	BETHANY COLLEGE	2-B43F-13
AQ	SAWTARIE, FUJIKO OGURI	2-B43F-14
AR	CUNNINGHAM, JOHN & PATRICIA	2-B43F-15
AS	DARSHAN, SHARMA R & CRYSTAL (TWS)	2-B43F-16
AT	SACHS, ANDREW C & PAULA L (SURV)	2-B43F-17
AU	BETHANY COLLEGE	2-B43F-18
AV	BETHANY COLLEGE	2-B43F-19
AW	BETHANY COLLEGE	2-B43F-20
AX	BETHANY COLLEGE	2-B43F-21
AY	BETHANY COLLEGE	2-B43F-22
AZ	BETHANY COLLEGE	2-B43F-23
BA	VALENTINE GENE CHARLES THE TRUST OF	2-B43F-24
BB	PENDON, DEBORAH C	2-B43F-25
BC	VALENTINE GENE CHARLES THE TRUST OF	2-B43F-26

TRACT	ADJOINING OWNERS TABLE SURFACE OWNER	TAX PARCEL
BD	MCVICAR, ROBERT L	2-B43F-27
BE	NEEL, CURTIS LEE & LOUANN (SURV)	2-B43F-28
BF	HOFFMAN, JOHN & CYNTHIA	2-B43F-29
BG	COBB, ROSEMARY JEANNE	2-B43F-30
BH	BUCKELEW, ALBERT R JR & SUSAN	2-B43F-31
BI	ELTRINGHAM, THOMAS L & LAURI L (SURV)	2-B43F-32
BJ	HULL, LIVING TR; JOHN & DEBRA	2-B43F-33
BK	MORGAN, KENNETH & JUDITH (SURV)	2-B43F-34
BL	FORRESTER, JAMES R JR & CAROLYN	2-B43F-35
BM	HERVEY, DOUGLAS H & HOLLY (SURV)	2-B43F-36
BN	FURBEE, THOMAS; SHELEK, KATHERINE	2-B43F-37
BO	FURBEE, THOMAS; SHELEK, KATHERINE (SURV)	2-B43F-38
BP	BETHANY COLLEGE	2-B43F-39
BQ	BETHANY COLLEGE	2-B43F-40
BR	BETHANY COLLEGE, THE TRUSTEES OF	2-B43F-41
BS	BETHANY COLLEGE	2-B43F-42
BT	BETHANY COLLEGE	2-B43F-43
BU	KEMP, SHIRLEY J	2-B43F-44
BV	BETHANY COLLEGE	2-B43F-46
BW	NIESLEN, DOUGLAS G	2-B43F-47
BX	AYERS, THOMAS M	2-B43F-48
BY	FORSTY, JANICE L (L EST-MARY J FORSTY	2-B43F-49
BZ	SYKES, JOANNE	2-B43F-50
CA	SYKES, JOANNE	2-B43F-51
CB	BOUWENS, WAYNE NEIL & JAY ALAN	2-B43F-52
CC	BOUWENS, WAYNE NEIL(TUD)JOHNSTON, GRETCHEN	2-B43F-53
CD	MOURATIDIS, KOSMAS (LC ROBERT & NECOL	2-B43F-54
CE	CUNNINGHAM, JOHN & PATRICIA L (SURV)	2-B43F-55
CF	KANOTZ, ASHLEY L & A SCOTT	2-B43F-56
CG	SMITH, RYAN & BROOKE	2-B43F-57
CH	WEPPLER, RANDALL J & CYNTHIA	2-B43F-58
CI	BETHANY COLLEGE	2-B43F-79
CJ	BETHANY COLLEGE	2-B43F-78
CK	BETHANY COLLEGE	2-B43F-77
CL	BETHANY COLLEGE	2-B43F-76
CM	BETHANY COLLEGE	2-B43F-75
CN	LOZIER, JOHN W & CORAL	2-B43F-65
CO	D'AURORA, DOMINICK A & THERESA (SURV)	2-B43F-4
CP	BETHANY COLLEGE	2-B43F-73
CQ	LYONS, THOMAS PAUL	2-B43F-72
CR	LYONS, THOMAS PAUL	2-B43F-71
CS	WILLIAMSON, GRAY; HATZOPPOULOS, SYDMA (SURV)	2-B43B-15
CT	KREISBERG, ROBERT & MELINDA (SURV)	2-B43F-80
CU	BETHANY COLLEGE	2-B43B-16
CV	BETHANY COLLEGE	2-B43B-17
CW	GROUX, HARRY W & SANDRA K (SURV)	2-B43B-18
CX	GROUX, HARRY W & SANDRA K (SURV)	2-B43F-19
CY	BETHANY COLLEGE	2-B43B-20
CZ	BETHANY COLLEGE	2-B43B-21
DA	LOVATO, DONNA SUE MARTIN	2-B43F-67
DB	FALCON, NED THOMAS & BILLIE JO	2-B43B-60
DC	KEENER, EARL R & PAMELA (SURV)	2-B43B-5
DD	MANUFACTURERS LIGHT & HEAT CO	2-B43B-27
DE	HUFF, JOHN HEIRS	2-B43B-40
DF	BETHANY COLLEGE	3-B38-31
DG	HOLLADAY, DANNY M & SANDRA L (SURV)	3-B43-3
DH	RUSCHELL, DENNIS & DERRELLE	3-B43-2

REVISIONS:	COMPANY:		
	OPERATOR'S	SAMUEL JONES BRK	
	WELL #:	5H	
	DISTRICT:	COUNTY:	STATE:
	BUFFALO	BROOKE COUNTY	WV
		DATE: 04-12-2018	FILE NO: 17-02
		DRAWN BY: S. DUTKO	SCALE: N/A
		DRAWING NO: 1	WELL LOCATION PLAT 1