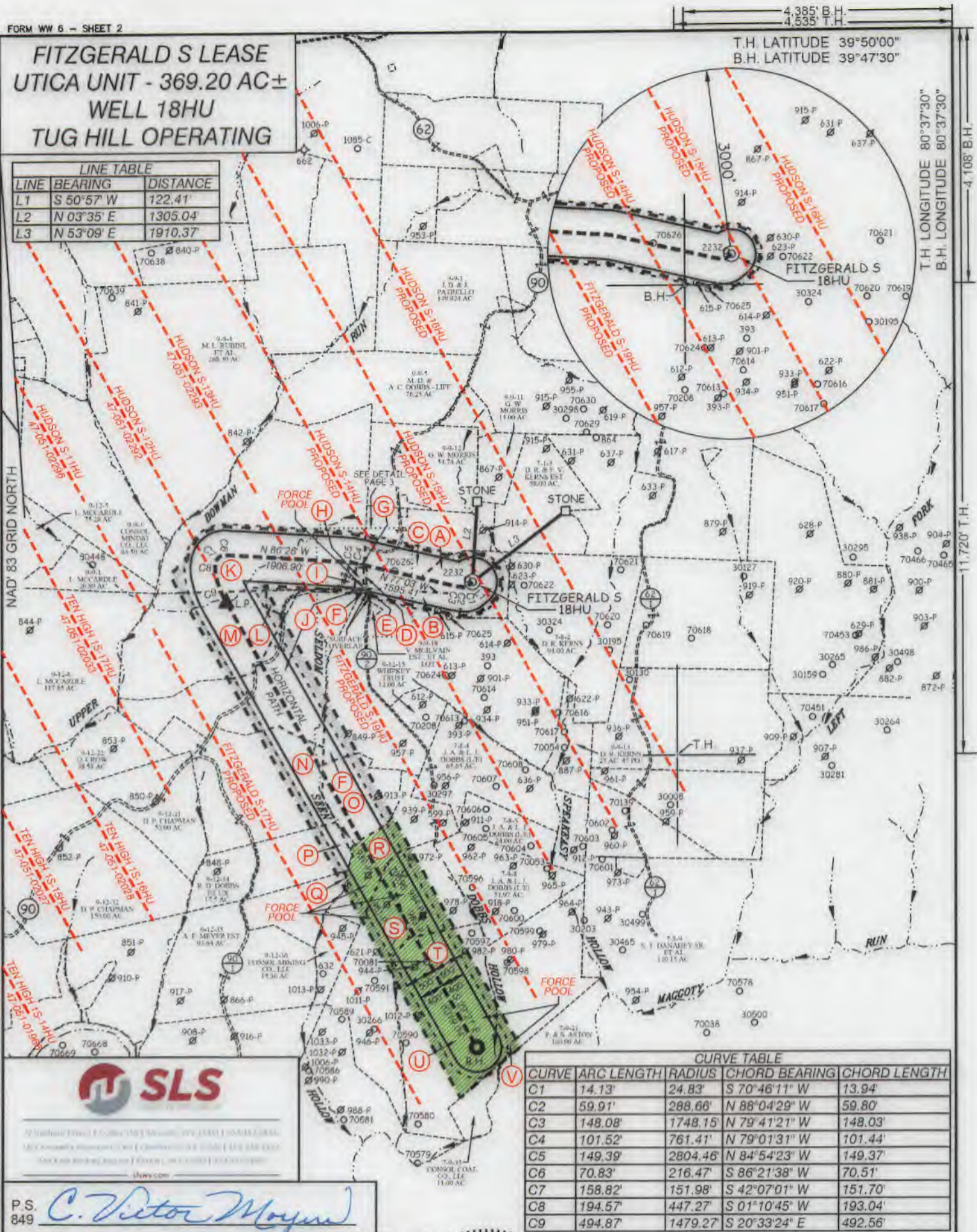


**FITZGERALD S LEASE
UTICA UNIT - 369.20 AC±
WELL 18HU
TUG HILL OPERATING**

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 50°57' W	122.41'
L2	N 03°35' E	1305.04'
L3	N 53°09' E	1910.37'

T.H. LATITUDE 39°50'00"
B.H. LATITUDE 39°47'30"

T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°37'30"



NAD'83 GRID NORTH

11,720' T.H.

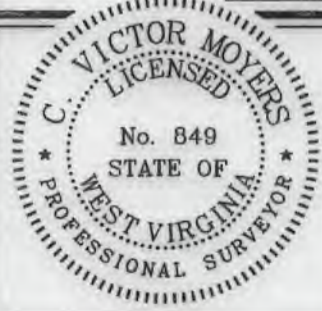
4,108' B.H.



Surveyors: [List of names and titles]

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	14.13'	24.83'	S 70°46'11" W	13.94'
C2	59.91'	288.66'	N 88°04'29" W	59.80'
C3	148.08'	1748.15'	N 79°41'21" W	148.03'
C4	101.52'	761.41'	N 79°01'31" W	101.44'
C5	149.39'	2804.46'	N 84°54'23" W	149.37'
C6	70.83'	216.47'	S 86°21'38" W	70.51'
C7	158.82'	151.98'	S 42°07'01" W	151.70'
C8	194.57'	447.27'	S 01°10'45" W	193.04'
C9	494.87'	1479.27'	S 20°33'24" E	492.56'

P.S. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

LEGEND

- UNIT BOUNDARY
- LEASED TRACTS INSIDE
- UNIT BOUNDARY
- SURFACE LINE
- PROPOSED UTICA
- WELL LATERAL
- 400' OFFSET LINE
- 500' OFFSET LINE
- TIE LINE
- CREEK
- ROAD
- FORCE POOL TRACT
- COUNTY ROUTE
- PROPOSED WELL
- EXISTING WELL
- PERMITTED WELL
- SURFACE OWNER (SEE TABLE)
- LEASE # (SEE ADDITIONAL SHEETS)

SCALE 1" = 2000' FILE NO. 8910P18HUR.dwg
 DATE MARCH 13 20 20
 REVISED APRIL 13 20 20
 OPERATORS WELL NO. FITZGERALD S-18HU
 API WELL NO. 47 - 051 - 02325
 STATE COUNTY PERMIT

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

WELL OPERATOR TUG HILL OPERATING, LLC DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500 ADDRESS 5400 D BIG TYLER ROAD
 FORT WORTH, TX 76107 CHARLESTON, WV 25313

4,385' B.H.
4,535' T.H.

**FITZGERALD S LEASE
UTICA UNIT - 369.20 AC±
WELL 18HU
TUG HILL OPERATING**

T.H. LATITUDE 39°50'00"
B.H. LATITUDE 39°47'30"

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'83 S.P.C.(FT)	N. 475,959.90	E. 1,647,895.53
NAD'83 GEO.	LAT-(N) 39.801161	LONG-(W) 80.641140
NAD'83 UTM (M)	N. 4,405,750.00	E. 530,720.88
LANDING POINT		
NAD'83 S.P.C.(FT)	N. 475,644.0	E. 1,643,872.3
NAD'83 GEO.	LAT-(N) 39.800153	LONG-(W) 80.655444
NAD'83 UTM (M)	N. 4,405,633.3	E. 529,496.8
BOTTOM HOLE		
NAD'83 S.P.C.(FT)	N. 468,393.1	E. 1,647,950.3
NAD'83 GEO.	LAT-(N) 39.780391	LONG-(W) 80.640603
NAD'83 UTM (M)	N. 4,403,445.0	E. 530,776.1

T.H. LONGITUDE 80°37'30"
B.H. LONGITUDE 80°37'30"

TAG	SURFACE OWNER	PARCEL	ACRES
A	DANNY R. & FRANCES V. KERNS ESTATE	7-8-1	27.00
B	CONSOL MINING CO., LLC	9-12-14	127.61
C	DANNY R. & FRANCES V. KERNS ESTATE	9-9-14	48.308
D	NAUVOO CEMETERY ASSOC. INC.	9-9-14.2	0.297
E	TRUSTEES OF THE REORGANIZED CHURCH OF LATTER DAY SAINTS	9-9-15	LOT
F	WHIPKEY TRUST	9-12-12	61.00
G	NAUVOO CEMETERY ASSOC. INC.	9-9-16.1	0.126
H	NAUVOO CEMETERY ASSOC. INC.	9-9-17	1.00
I	GARY W. MORRIS	9-9-22	0.15
J	WARREN BEVYLE & ELEANOR LOU CHAMBERS - LIFE	9-12-11	91.00
K	TODD L. SCHERFELT ET AL	9-9-16	168.204
L	ROBERT W. KNIGHT	9-12-10	3.00
M	CHARLES WILLIAM DOBBS, ET AL	9-12-9	87.26
N	RONALD EUGENE & MARY LEE DOBBS	9-12-20	91.00
O	VIRGINIA McIVAIN ESTATE & THE WHIPKEY TRUST	9-12-16	30.00
P	RAYMOND D. DOBBS, ET AL	9-12-19	30.00
Q	ROY ROGERS WOODS, SR.	9-12-18	30.00
R	VIRGINIA McIVAIN ESTATE & THE WHIPKEY TRUST	9-12-17	37.27
S	CONSOL MINING CO., LLC	7-9-1	59.00
T	CONSOL MINING CO., LLC	7-8-7	31.99
U	CONSOL MINING CO., LLC	7-9-22	101.36
V	JOHN ALFRED & LEORA JEAN DOBBS - LIFE	7-9-23	60.25

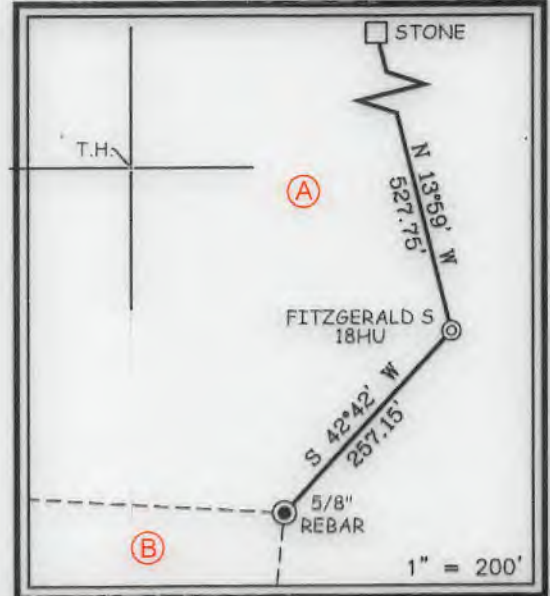
B.H.

11,720' T.H.

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- WELL SPOT CIRCLE & TOPO MARK SCALE ARE 1"=2000'
- PROPOSED LATERAL OR TOP HOLE OF FITZGERALD S-18HU IS WITHIN 3000' OF THE TOP HOLES OR LATERALS OF PROPOSED FITZGERALD S-17HU, PROPOSED FITZGERALD S-19HU, HUDSON S-11HU (47-051-02296), HUDSON S-12HU (47-051-02292), HUDSON S-13HU (47-051-02293), PROPOSED HUDSON S-14HU, PROPOSED HUDSON S-15HU, PROPOSED HUDSON S-16HU & TEN HIGH 15-17HU (47-051-02033).

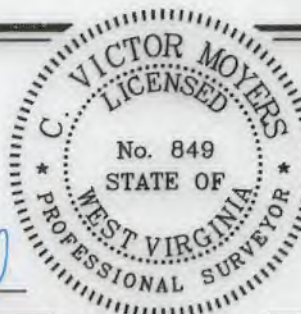
REFERENCES



11700 South Street, Suite 300, Marietta, WV 26009 304.842.8844
1612 Knauff Drive, East Charleston, WV 25301 304.846.1562
284 Kapp Drive, Wytheville, WV 26061 304.842.5298
dswv.com

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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. 849 *C. Victor Moyers*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE MARCH 13, 20 20
REVISED APRIL 13, 20 20
OPERATORS WELL NO. FITZGERALD S-18HU
API WELL NO. 47 - 051 -
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 8910P18HUR.dwg
FITZGERALD S-18HU REV10
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

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



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

LOCATION: GROUND = 1,319.10' PROPOSED = 1,344.81' WATERSHED SPEAKEASY HOLLOW OF MAGGOTY RUN
DISTRICT LIBERTY COUNTY MARSHALL QUADRANGLE GLEN EASTON 7.5'

SURFACE OWNER DANNY AND FRANCES KERNS ESTATE ACREAGE 27.00±
ROYALTY OWNER DANNY S. KERNS, ET AL ACREAGE 27.00±
PROPOSED WORK: LEASE NO. SEE WW-6A1

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION POINT PLEASANT
ESTIMATED DEPTH TVD: 12,080' / TMD: 21,657'

WELL OPERATOR TUG HILL OPERATING, LLC 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

COUNTY NAME PERMIT

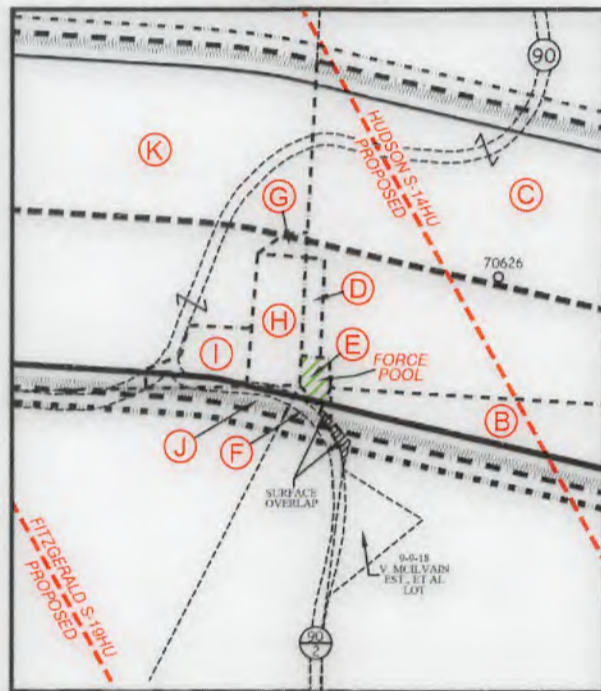
**FITZGERALD S LEASE
UTICA UNIT - 369.20 AC ±
WELL 18HU
TUG HILL OPERATING**



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26151 | 304.452.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.5952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slswv.com

NO.	Lease ID	Tags	Parcel	Grantor, Lessor, Etc.	Deed Book/Page
1	10*25518	A	7-8-1	DANNY S KFRNS, MARRIED MAN DEALING WITH HIS SOLE AND SEPARATE PROPERTY	1010 532
2	10*18339	B	9-12-14	RESOURCE MINERALS HEADWATER I LP	940 448
3	PENDING	C	9-9-14	REGINA DANETTE FIGUEROA	1075 137
4	10*27299	D	9-9-14.2	NAUVOO CEMETERY ASSOCIATION	1057 357
5	**	E	9-9-15	REORGANIZED CHURCH OF LATER DAY SAINTS	UNLEASED
6	10*19557	F	9-12-12	FERRY L BLAKE	944 649
7	10*19987	G	9-9-16.1	LESLEY D BALLA	955 103
8	10*27299	H	9-9-17	NAUVOO CEMETERY ASSOCIATION	1057 357
9	10*24535	I	9-9-22	BOARD OF EDUCATION OF MARSHALL COUNTY	1026 64
10	10*15494	J	9-12-11	CHRISTOPHER SINGER AND SHEREA SINGER	898 433
11	10*19987	K	9-9-16	LESLEY D BALLA	955 103
12	10*23656	L	9-12-10	ROBERT W KNIGHT AND BARBARA J KNIGHT	1011 504
13	10*15999	M	9-12-9	CHARLES W DOBBS AND JUDITH M DOBBS	702 171
14	10*24679	N	9-12-20	PIKEWOOD ENERGY CORPORATION AN OFCO CORPORATION	1026 149
15	10*21512	O	9-12-16	THE WHIPKEY TRUST, ACTING TRUSTEES DAVID L WHIPKEY AND CAROL J WHIPKEY	949 266
16	10*19748	P	9-12-19	ELIZABETH JANE KEILY	957 335
17	10*18073	Q	9-12-18	ROY R WOODS	927 22
18	10*21532	R	9-12-17	CHARLES E RICHARDSON AND SHIRLEY S RICHARDSON	957 327
19	10*22631	S	7-9-1	FREDA ELIZABETH BLAKE	966 632
20	10*21532	T	7-8-7	CHARLES E RICHARDSON AND SHIRLEY S RICHARDSON	1017 620
21	10*17930	U	7-9-22	BOUNTY MINERALS LLC	928 396
22	**	V	7-9-23	O E BURGE AND SARAH L BURGE ET AL	395 586

DETAIL
SCALE: 1" = 500'



FILE NO. 8910P18HUR.dwg
FITZGERALD S-18HU REV10

DATE MARCH 13, 2020

REVISED APRIL 13, 2020

OPERATORS WELL NO. FITZGERALD S-18HU

API WELL NO. 47 — 051 —
STATE COUNTY PERMIT



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



P.S.
849

C. Victor Moyers

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
FORT WORTH, TX 76107

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

COUNTY NAME

PERMIT

WW-9

PROPOSED FITZGERALD S - 18HU

SUPPLEMENT PG. 1

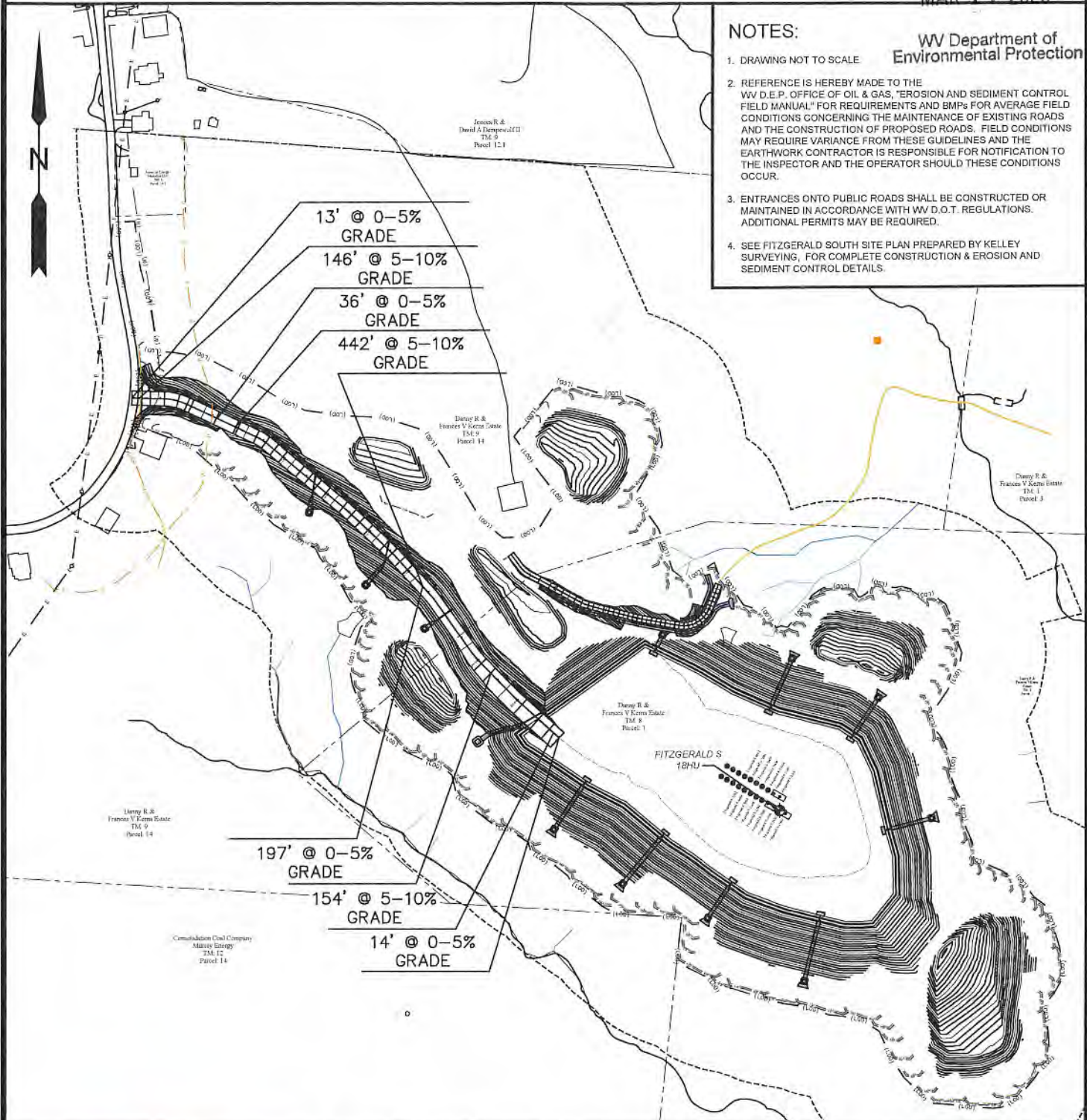
RECEIVED
Office of Oil and Gas

MAR 17 2020

NOTES:

1. DRAWING NOT TO SCALE
2. REFERENCE IS HEREBY MADE TO THE WV D.E.P. OFFICE OF OIL & GAS, "EROSION AND SEDIMENT CONTROL FIELD MANUAL" FOR REQUIREMENTS AND BMPs FOR AVERAGE FIELD CONDITIONS CONCERNING THE MAINTENANCE OF EXISTING ROADS AND THE CONSTRUCTION OF PROPOSED ROADS. FIELD CONDITIONS MAY REQUIRE VARIANCE FROM THESE GUIDELINES AND THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION TO THE INSPECTOR AND THE OPERATOR SHOULD THESE CONDITIONS OCCUR.
3. ENTRANCES ONTO PUBLIC ROADS SHALL BE CONSTRUCTED OR MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. ADDITIONAL PERMITS MAY BE REQUIRED.
4. SEE FITZGERALD SOUTH SITE PLAN PREPARED BY KELLEY SURVEYING, FOR COMPLETE CONSTRUCTION & EROSION AND SEDIMENT CONTROL DETAILS.

WV Department of
Environmental Protection




12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3352
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
sllsvv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5'		PREPARED FOR:	
COUNTY	DISTRICT	TUG HILL OPERATING, LLC	
MARSHALL	LIBERTY	380 SOUTHPOINTE BLVD	
		SUITE 200	
		CANONSBURG, PA 15317	
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8910	03/03/20	NONE

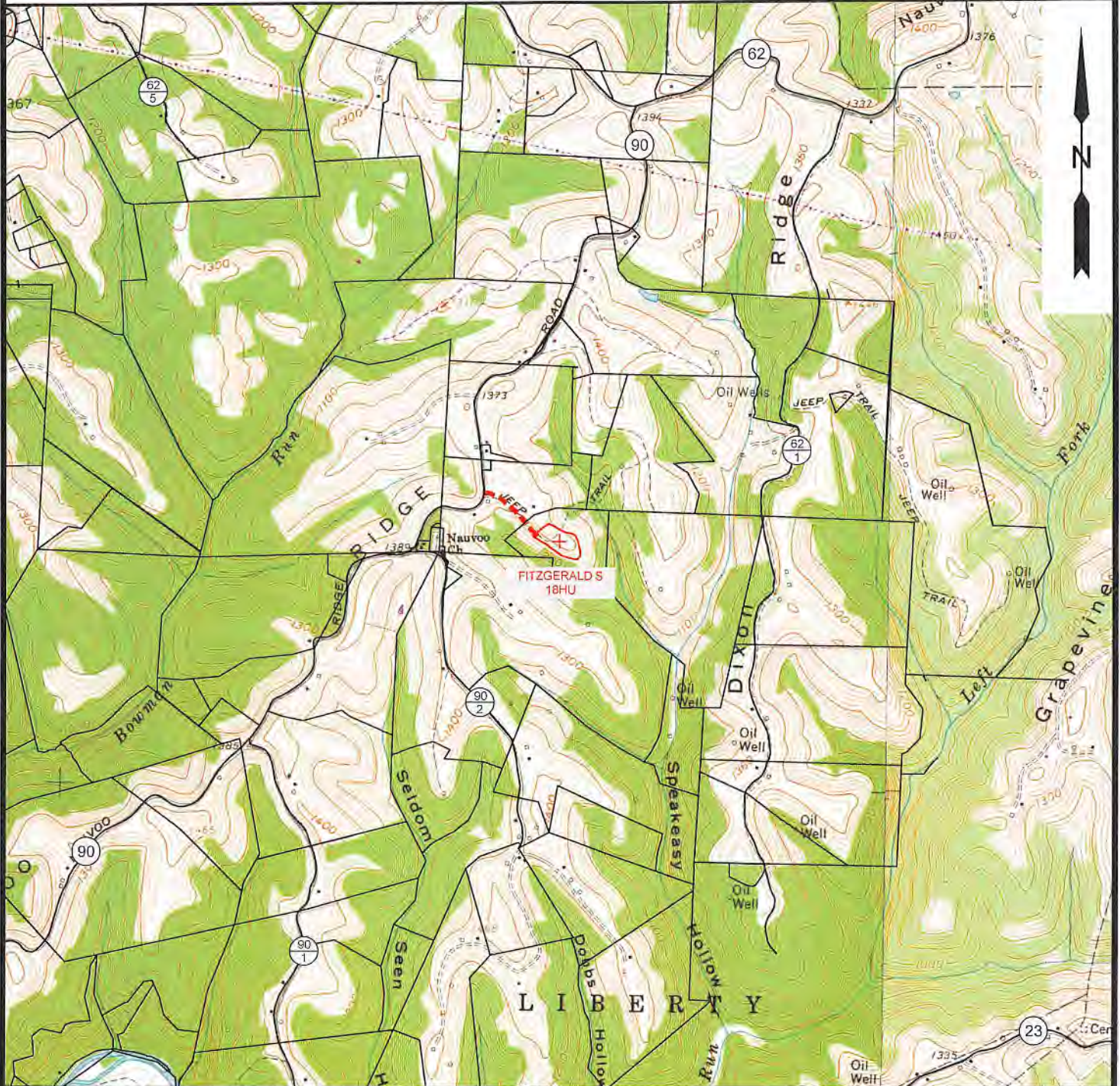


WW-9

**PROPOSED
FITZGERALD S - 18HU**

MAR 17 2020 SUPPLEMENT PG. 2

WV Department of
Environmental Protection



NOTE: CLOSEST WATER PURVEYOR
CITY OF CAMERON - FRANK WALKER RESERVOIR
CAMDEN, WV

LAT: 39.829865
LON: -80.573724
LOCATED: N 62°00'46" E AT 21,684.26' FROM THE CENTER OF FITZGERALD S WELL PAD LOCATION.



12 Vanhorn Drive | P.O. Box 150 | Glenville, WV 26351 | 304.462.5634
1412 Kanawha Boulevard, East | Charleston, WV 25301 | 304.346.3952
254 East Beckley Bypass | Beckley, WV 25801 | 304.255.5296
slswv.com

TOPO SECTION:		OPERATOR:	
GLEN EASTON 7.5' & CAMERON 7.5'		PREPARED FOR: TUG HILL OPERATING, LLC 380 SOUTHPOINTE BLVD SUITE 200 CANONSBURG, PA 15317	
COUNTY	DISTRICT		
MARSHALL	LIBERTY & MEADE		
DRAWN BY	JOB NO.	DATE	SCALE
K.G.M.	8910	03/03/2020	1" = 2000'



**TUG HILL
OPERATING**