

form wvw6

ARMSTRONG LEASE WELL 1N-13HU 631.3104± ACRES

(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

DETAIL SKETCH "A" (01619) Armstrong 8H
SCALE 1"=200'

(01620) Armstrong 9H
(01619) Armstrong 8H
Armstrong 7H (01618)
(01617) Armstrong 6H
(01621) Armstrong 5H
(01616) Armstrong 4H
(01615) Armstrong 3H
(01614) Armstrong 2H
(01613) Armstrong 1H

(02258) S-12HU
(02257) S-11HU
(02256) S-10HU
(02260) N-14HU
(02259) N-13HU

TOP HOLE LATITUDE: 39°47'30"
BOTTOM HOLE LATITUDE: 39°47'30"

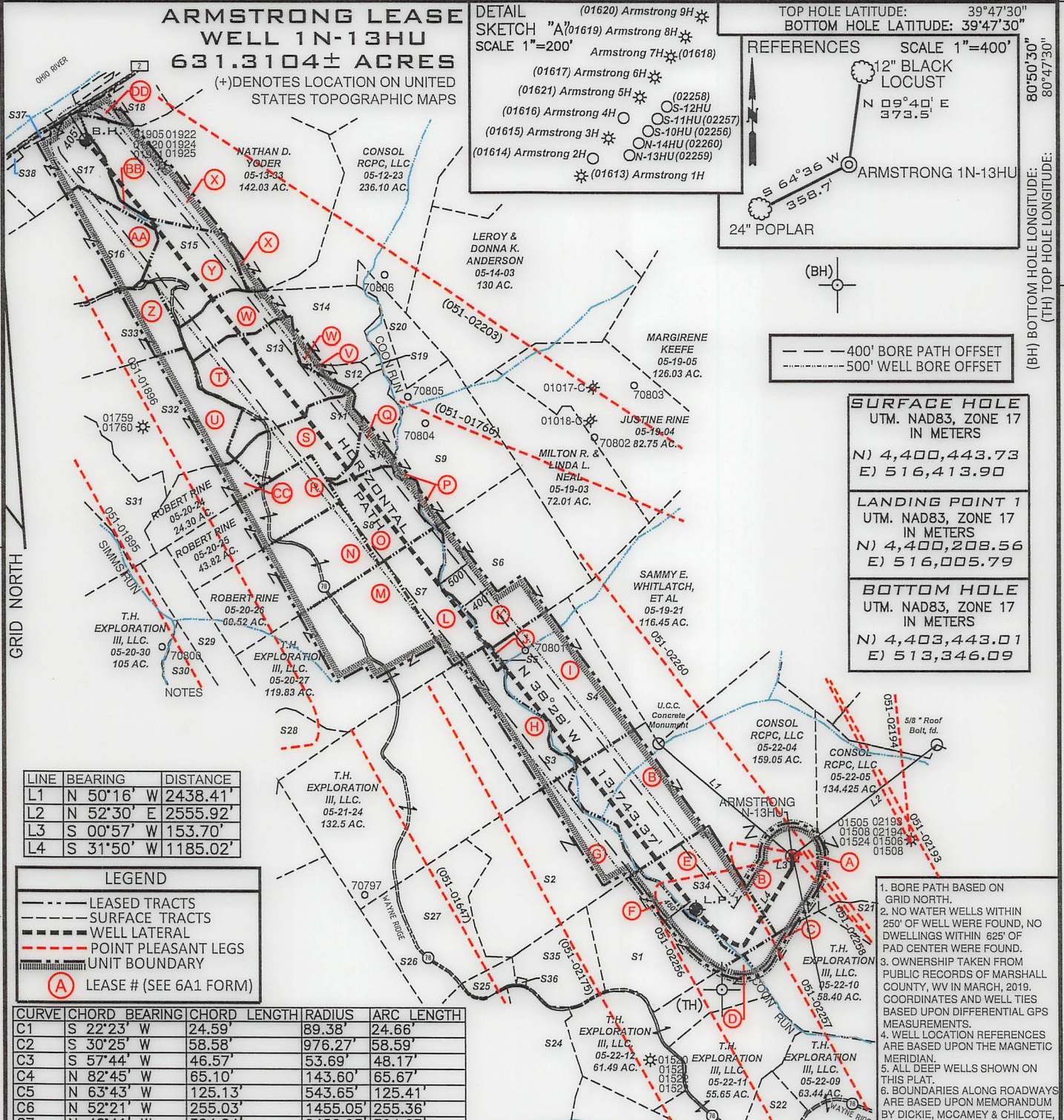
REFERENCES SCALE 1"=400'

12" BLACK LOCUST
N 09°40' E 373.5'

24" POPLAR
S 64°36' W 358.7'

(BH) 3,095'
(TH) 750'

(BH) BOTTOM HOLE LONGITUDE: 80°50'30"
(TH) TOP HOLE LONGITUDE: 80°47'30"



LINE	BEARING	DISTANCE
L1	N 50°16' W	2438.41'
L2	N 52°30' E	2555.92'
L3	S 00°57' W	153.70'
L4	S 31°50' W	1185.02'

LEGEND

- LEASED TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- UNIT BOUNDARY

(A) LEASE # (SEE 6A1 FORM)

CURVE	CHORD BEARING	CHORD LENGTH	RADIUS	ARC LENGTH
C1	S 22°23' W	24.59'	89.38'	24.66'
C2	S 30°25' W	58.58'	976.27'	58.59'
C3	S 57°44' W	46.57'	53.69'	48.17'
C4	N 82°45' W	65.10'	143.60'	65.67'
C5	N 63°43' W	125.13'	543.65'	125.41'
C6	N 52°21' W	255.03'	1455.05'	255.36'
C7	N 42°41' W	394.24'	2482.95'	394.65'

SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,400,443.73
E) 516,413.90

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,400,208.56
E) 516,005.79

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,403,443.01
E) 513,346.09

- BORE PATH BASED ON GRID NORTH.
- NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
- OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2019. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
- WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
- ALL DEEP WELLS SHOWN ON THIS PLAT.
- BOUNDARIES ALONG ROADWAYS ARE BASED UPON MEMORANDUM BY DICKIE, MCCAMEY & CHILCOTE, P.C. FILE 0058304.0401147

FILE NUMBER _____

DRAWING NUMBER: ARMSTRONG_1N-13HU_REV 2

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

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. 708 *David L Jackson*



JACKSON SURVEYING INC.
P.O. Box 1460
Clarksburg, WV 26302
304-623-5851

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

DATE: JULY 24, 2019
REVISED DATE: JANUARY 22, 2020
OPERATORS WELL NO. Armstrong 1N-13HU
API WELL NO. 47-051-02259 HGA
STATE COUNTY PERMIT MOD

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

LOCATION ELEVATION 1279.12' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER
DISTRICT FRANKLIN COUNTY MARSHALL
QUADRANGLE POWHATAN POINT 7.5' LEASE NUMBER SEE WW-6A1 Form

SURFACE OWNER CONSOL RCPC, LLC. ACREAGE 159.05
OIL & GAS ROYALTY OWNER CONSOL RCPC, LLC. LEASE ACREAGE 159.05
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___
PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE (SPECIFY) _____
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___

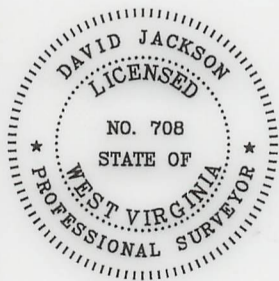
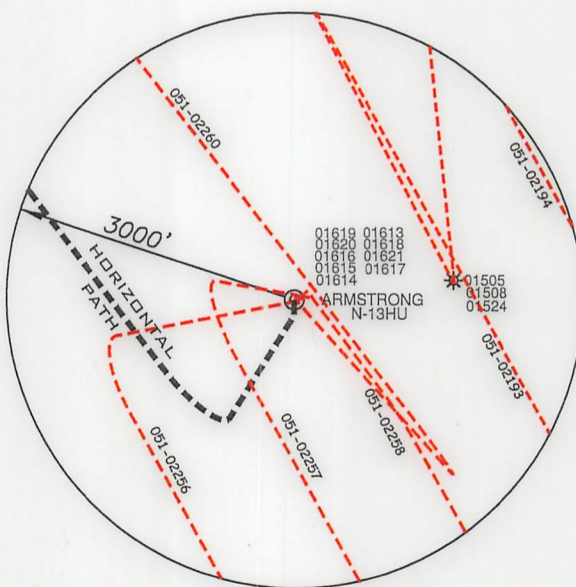
TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TVD: 11,357' TMD: 25,505'

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

COUNTY NAME PERMIT

**ARMSTRONG LEASE
WELL 1N-13HU
631.3104± ACRES**

Number	TAX MAP-PARCEL	SURFACE OWNER	ACRES
S1	F 05-22-16	Edward R. Yoho, Jr.	57.0
S2	G 05-22-18	Edward R. Yoho, Jr.	77.13
S3	H 05-22-2	T.H. Exploration III, LLC.	30.0
S4	I 05-22-3	Consol RCPC, LLC	79.74
S5	J 05-22-1	Mary P. Mason, Est.	2.0
S6	K 05-19-22	George A. Knuth & Kelly A. Knuth	71.0
S7	L 05-19-23	WSD Properties, LLC	28.4
S8	O 05-19-1	Robert Rine	30.8
S9	P 05-19-2	Milton R. Neal & Linda L. Neal	63.1
S10	Q 05-13-41A	Rodney Jackson & Rhonda Jackson	17.05
S11	S 05-13-40	Robert Rine	29.76
S12	V 05-13-41B	Larry Darrah & Judy Darrah	2.5
S13	T 05-13-39	Thomas Bowman & Victoria Bowman	46.0
S14	W 05-13-42	Thomas Bowman & Victoria Bowman	45.0
S15	Y 05-13-34	David J. Mast	40.0
S16	AA 05-13-23	David J. Mast	69.59
S17	BB 05-13-25	Aaron Paul Holdren, Et Ux	30.0
S18	DD 05-13-27	Aaron Paul Holdren, Et Ux	25.0
S19	05-13-41C	Hrs. of Benton Darrah, Lillie May Dugan, Alma Bitzer, Alberta Palmer & Audrey Howard	1.0
S20	05-14-2	John B. Williams, Et Al	20.17
S21	05-22-6	Consol RCPC, LLC	64.70
S22	05-28-4	T.H. Exploration III, LLC.	48.44
S23	05-28-3	T.H. Exploration III, LLC.	53.44
S24	05-22-13	John M. Moore, Teresa R. Moore, & Andrea S. Moore	40.57
S25	05-21-21	Consol RCPC, LLC	4.0
S26	05-21-22	Peggy Lee Bowan Brown, Et Al	18.29
S27	05-21-23	Peggy Lee Bowan Brown, Et Al	42.62
S28	05-20-28	T.H. Exploration III, LLC.	15.34
S29	05-20-29	T.H. Exploration III, LLC.	30.08
S30	05-20-32	T.H. Exploration III, LLC.	28.8
S31	05-13-37	T.H. Exploration III, LLC.	51.21
S32	U 05-13-38	Thomas Bowman & Victoria Bowman	61.0
S33	Z 05-33-35	David J. Mast	24.90
S34	E 05-22-17	CONSOL RCPC, LLC	37.5
S35	05-22-15	Edward R. Yoho, Jr.	25.5
S36	05-22-14	CONSOL RCPC, LLC	0.3
S37	05-13-26.1	Aaron Paul Holdren, Et Ux	0.61
S38	05-13-26	Aaron Paul Holdren, Et Ux	0.16



P.S. 708

David L Jackson

47-051-02259 H6A MOD



**TUG HILL
OPERATING**

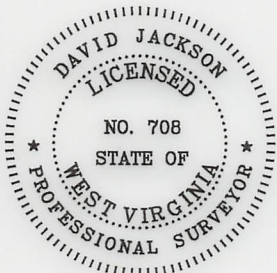
OPERATOR'S
WELL #: Armstrong 1N-13HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API: 047-051-02259 H6A

WELL PLAT
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DATE: 07/24/2019
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01/22/2020

form ww6

**ARMSTRONG LEASE
WELL 1N-13HU
631.3104± ACRES**

Lease No.	Tags	Parcel	Grantor	Book	Page
10*19529	A	5-22-5	CNX GAS COMPANY LLC	733	500
10*14033	B	5-22-4	LAMOYNE BAKER	665	554
10*14034	B	5-22-4	LAWRENCE C AND LORRAINE J MCWHORTER	665	391
10*14035	B	5-22-4	PEGGY MAE WHITE	695	446
10*14036	B	5-22-4	WILDA WINTERS	701	579
10*14037	B	5-22-4	JUDITH L CHAMBERS	701	577
10*14039	B	5-22-4	CHESTNUT HOLDINGS LLC	827	554
10*14418	C	5-22-10	PPG INDUSTRIES, INC.	878	610
10*14418	D	5-22-12	PPG INDUSTRIES, INC.	878	610
10*14507	E	5-22-17	MARY THERESA SOLEAU AND THOMAS SOLEAU	749	524
10*14508	E	5-22-17	JEAN W FOSTER	752	200
10*14509	E	5-22-17	JAMES ROBERT WELLS	752	202
10*14510	E	5-22-17	MARY AGNES CARROLL	749	528
10*14511	E	5-22-17	ELIZABETH JANE KELLER	754	242
10*14513	E	5-22-17	CAROLYN LYNN PORTER	767	256
10*14514	E	5-22-17	CHARLES ARTHUR WELLS	768	494
10*14515	E	5-22-17	JERRY TODD WELLS	773	572
10*14516	E	5-22-17	JAMES NESBITT WELLS BY JOANIE WELLS AIF	773	570
10*14517	E	5-22-17	CARL W BACH JR	852	250
10*14518	E	5-22-17	RAE ELLEN FLOYD AND KENNETH FLOYD	854	599
10*14519	E	5-22-17	DOUGLAS M BACH	854	597
10*16471	E	5-22-17	CNX GAS COMPANY LLC	905	155
10*16652	E	5-22-17	MARY JUDITH BRANSON AND MICHAEL L BRANSON	942	35
10*16674	E	5-22-17	CHARLOTTE A KASTELIC	942	37
10*26910	E	5-22-17	BRIDGET S AND DARRELL T GATES	1045	419
10*26940	E	5-22-17	PATRICK N WELLS	1045	413
10*14457	F	5-22-16	HARRY LEE GOUDY	731	140
10*14457	G	5-22-18	HARRY LEE GOUDY	731	140
10*14418	H	5-22-2	PPG INDUSTRIES, INC.	878	610
10*14608	I	5-22-3	CHESTNUT HOLDINGS INC	827	560
10*14520	J	5-22-1	BONNIE GRISELL	756	81
10*14521	J	5-22-1	ANITA MAE MASON	752	218
10*14581	K	5-19-22	CAROL BORDNER	693	609
10*14582	K	5-19-22	DALE F MCINTIRE	694	104
10*14583	K	5-19-22	BRADLEY DEMENT AKA BRADLEY F DEMENT	694	79
10*14584	K	5-19-22	RAY F MCINTIRE AKA FRANCIS RAY MCINTIRE	693	620
10*14585	K	5-19-22	WILBUR L BLAND	694	543
10*14586	K	5-19-22	CAROLYN MCINTIRE HICKERSON	694	546
10*14587	K	5-19-22	CHERYL FIDLER	694	550
10*14588	K	5-19-22	LLOYD E MCINTYRE II	694	565
10*14589	K	5-19-22	BETTY JEAN HARBOUR	694	569
10*14590	K	5-19-22	CHARLES HARBOUR AND CAROL J HARBOUR	694	540
10*14591	K	5-19-22	JUDY L MCINTIRE	694	553
10*14592	K	5-19-22	NORA JEAN TRUAX	696	639
10*14593	K	5-19-22	KEITH MCINTYRE AND TAMMY MCINTYRE	696	17
10*14594	K	5-19-22	KAREN M ECKELBERRY	696	13
10*14595	K	5-19-22	JUDY A ADAMS	696	643
10*14596	K	5-19-22	MARY LEE LOWE	696	9
10*14597	K	5-19-22	JACKIE MCINTIRE STEPHANIE A CRISS, POA	702	218
10*14598	K	5-19-22	GEORGE A KNUTH AND KELLY A KNUTH	741	523
10*14599	K	5-19-22	ESTATE OF KATHRYN G NOFFSINGER MICHAEL E MCINTIRE, GUARDIAN	839	522
10*14600	K	5-19-22	PAMELA HARTZLER	839	525
10*14601	K	5-19-22	TERRY MCINTIRE	840	158
10*14459	L	5-19-23	HELEN CROSKY & WILLIAM DENOON CO-TRUSTEES, JANIE L DENOON TRUST	731	145
10*14307	M	5-20-27	SALLY CYNTHIA HOPKINS	777	572
10*14308	M	5-20-27	MARY E BASSETT	779	492
10*14309	M	5-20-27	ROBERT B THOMAS	779	484
10*14310	M	5-20-27	JEAN C THOMAS	781	614
10*14324	M	5-20-27	RUTH E BASSETT MEADOWS	792	100
10*14325	M	5-20-27	ELIZABETH ANN STRAUSBAUGH	792	104
10*14326	M	5-20-27	JANET LEA BLANKENSHIP	792	580
10*14418	M	5-20-27	PPG INDUSTRIES, INC.	878	610
10*14616	N	5-20-26	ROBERT E RINE & DONNA M RINE	708	250
10*14614	O	5-19-1	ROBERT RINE	708	252
10*14040	P	5-19-2	MILTON R NEAL AND LINDA L NEAL	665	498
10*14041	P	5-19-2	SHIBEN ESTATES INC	718	496
10*14461	Q	5-13-41A	RODNEY & RHONDA JACKSON	739	411
10*14685	R	5-20-25	ROBERT E. RINE AND DONNA M. RINE	708	253
10*17099	R	5-20-25	ROBERT RINE	852	564
10*14502	S	5-13-40	ROBERT E RINE & DONNA M RINE	752	206
10*14529	S	5-13-40	HELEN BOWMAN	790	523
10*14530	S	5-13-40	NANCY L. VENSOSKE	790	521
10*14531	S	5-13-40	CORA A. WEST	791	641
10*14532	S	5-13-40	JOAN E MENKEMELLER	791	639
10*14533	S	5-13-40	NANCY L FEISZU	792	644
10*14535	S	5-13-40	RALPH W CONNER	794	513
10*14549	S	5-13-40	REBECCA PAUKNER	829	603
10*14550	S	5-13-40	CARRIE C WARREN	840	156
10*14551	S	5-13-40	SHARON S ANTALIS	842	392
10*14552	S	5-13-40	GLORIA J SILVERIO	844	81
10*14878	S	5-13-40	ARTHUR BRUCE COULTER	839	519
10*17099	S	5-13-40	ROBERT RINE	852	564



P.S. 708

David L Jackson

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**TUG HILL
OPERATING**

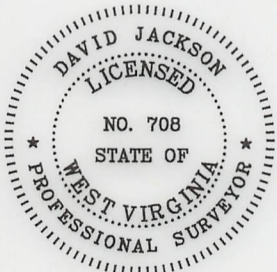
OPERATOR'S
WELL #: Armstrong 1N-13HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API: 047-051-02259

WELL PLAT
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DATE: 07/24/2019
REVISED DATE:
01/22/2020

MOD

**ARMSTRONG LEASE
WELL 1N-13HU
631.3104± ACRES**

Lease No.	Tags	Parcel	Grantor	Book	Page
10*14526	T	5-13-39	THOMAS WILLIAM BOWMAN	761	432
10*14527	T	5-13-39	VICTORIA BOWMAN	761	434
10*14529	T	5-13-39	HELEN BOWMAN	790	523
10*14530	T	5-13-39	NANCY L. VENSOSKE	790	521
10*14531	T	5-13-39	CORA A. WEST	791	641
10*14532	T	5-13-39	JOAN E MENKEMELLER	791	639
10*14533	T	5-13-39	NANCY L FEISZLI	792	644
10*14535	T	5-13-39	RALPH W CONNER	794	513
10*14549	T	5-13-39	REBECCA PAUKNER	829	603
10*14550	T	5-13-39	CARRIE C WARREN	840	156
10*14551	T	5-13-39	SHARON S ANTALIS	842	392
10*14552	T	5-13-39	GLORIA J SILVERIO	844	81
10*14878	T	5-13-39	ARTHUR BRUCE COULTER	839	519
10*17108	T	5-13-39	THOMAS WILLIAM BOWMAN	850	263
10*17109	T	5-13-39	VICTORIA BOWMAN	850	260
10*14526	U	5-13-38	THOMAS WILLIAM BOWMAN	761	432
10*14527	U	5-13-38	VICTORIA BOWMAN	761	434
10*16854	V	5-13-41B	LARRY DARRAH AND JUDY DARRAH	915	484
10*14526	W	5-13-42	THOMAS WILLIAM BOWMAN	761	432
10*14527	W	5-13-42	VICTORIA BOWMAN	761	434
10*14701	X	5-13-33	ROSEITA M THORNTON	885	600
10*14702	X	5-13-33	NATHAN D YODER	708	71
10*17627	X	5-13-33	NATHAN D YODER	917	62
10*18191	Y	5-13-34	DAVID J AND MIRIAM MAST	952	183
10*14618	Z	5-13-35	DAVID J AND MIRIAM MAST	707	645
10*14701	Z	5-13-35	ROSEITA M THORNTON	885	600
10*14700	AA	5-13-23	DAVID J AND MIRIAM MAST	708	239
10*14701	AA	5-13-23	ROSEITA M THORNTON	885	600
10*14549	BB	5-13-25	REBECCA PAUKNER	829	603
10*14748	BB	5-13-25	MARJORIE NIGHTENGALE	790	541
10*14749	BB	5-13-25	JANICE E FUTEY	792	116
10*14750	BB	5-13-25	MARY SUE ANTHONY	792	114
10*14751	BB	5-13-25	GRACE E LUIKART	792	642
10*14752	BB	5-13-25	CHARLES BOWEN	792	648
10*14753	BB	5-13-25	JERRY SMOYER	794	474
10*14754	BB	5-13-25	BERNARD KNOLLINGER	794	472
10*14755	BB	5-13-25	JUDITH A MCGRILL	794	517
10*14756	BB	5-13-25	WOODROW J. KNOLLINGER	794	515
10*14757	BB	5-13-25	DOUGLAS W. KNOLLINGER	794	487
10*14758	BB	5-13-25	GARY R KNOLLINGER	795	154
10*14759	BB	5-13-25	GLORIA J. LUIKART DECEASED BY MARK LUIKART AIF	804	245
10*14760	BB	5-13-25	JEFFREY M BROWN	809	535
10*14761	BB	5-13-25	RONALD E CLARK	809	571
10*14762	BB	5-13-25	WILLIAM CARL KNOLLINGER	815	238
10*14763	BB	5-13-25	BETTY J MCKINLEY	815	240
10*14764	BB	5-13-25	MARY B KNOLLINGER	821	40
10*14765	BB	5-13-25	RUTH A KINNEY	821	42
10*14766	BB	5-13-25	JANICE M SANDERS	827	527
10*14767	BB	5-13-25	WILLIAM J SMOYER	829	332
10*14768	BB	5-13-25	BONNIE DGINTO	844	77
10*14769	BB	5-13-25	JAYNE S KISSEL	844	79
10*14770	BB	5-13-25	MARY M HALL	846	413
10*14771	BB	5-13-25	ERIC W THORNGATE	846	464
10*14772	BB	5-13-25	GREG E THORNGATE	846	436
10*14773	BB	5-13-25	JUSTIN J ANTHONY	846	438
10*14774	BB	5-13-25	THOMAS R KNOLLINGER	846	406
10*14775	BB	5-13-25	TODD HANNIG	849	522
10*14776	BB	5-13-25	KAREN M SMOYER	876	457
10*17590	BB	5-13-25	ROBIN L KNOLLINGER	951	557
10*17591	BB	5-13-25	SHARON M MAIMONE AND ROBERT A MAIMONE	951	554
10*18219	BB	5-13-25	EUZABETH S STANFORD	929	76
10*18220	BB	5-13-25	WILLIAM S HANNIG AND BARBARA S HANNIG	929	74
10*18547	BB	5-13-25	SCOTT A HANNIG AND STACI C HANNIG	934	3
10*19847	BB	5-13-25	WILLIAM JOHN WAGNER UNKNOWN HEIRS MARY WAGNER MANN UNKNOWN HEIRS	943	450
10*26814	BB	5-13-25	EUZABETH S STANFORD	1045	422
10*26936	BB	5-13-25	WILLIAM S & BARBARA S HANNIG	1046	468
10*27060	BB	5-13-25	SCOTT A AND STACI C HANNIG	1051	240
10*27959	BB	5-13-25	STONE HILL MINERALS HOLDINGS LLC	1068	140
10*14615	CC	5-20-24	ROBERT RINE	708	251
10*16538	DD	5-13-27	AMP FUND III LP	915	187



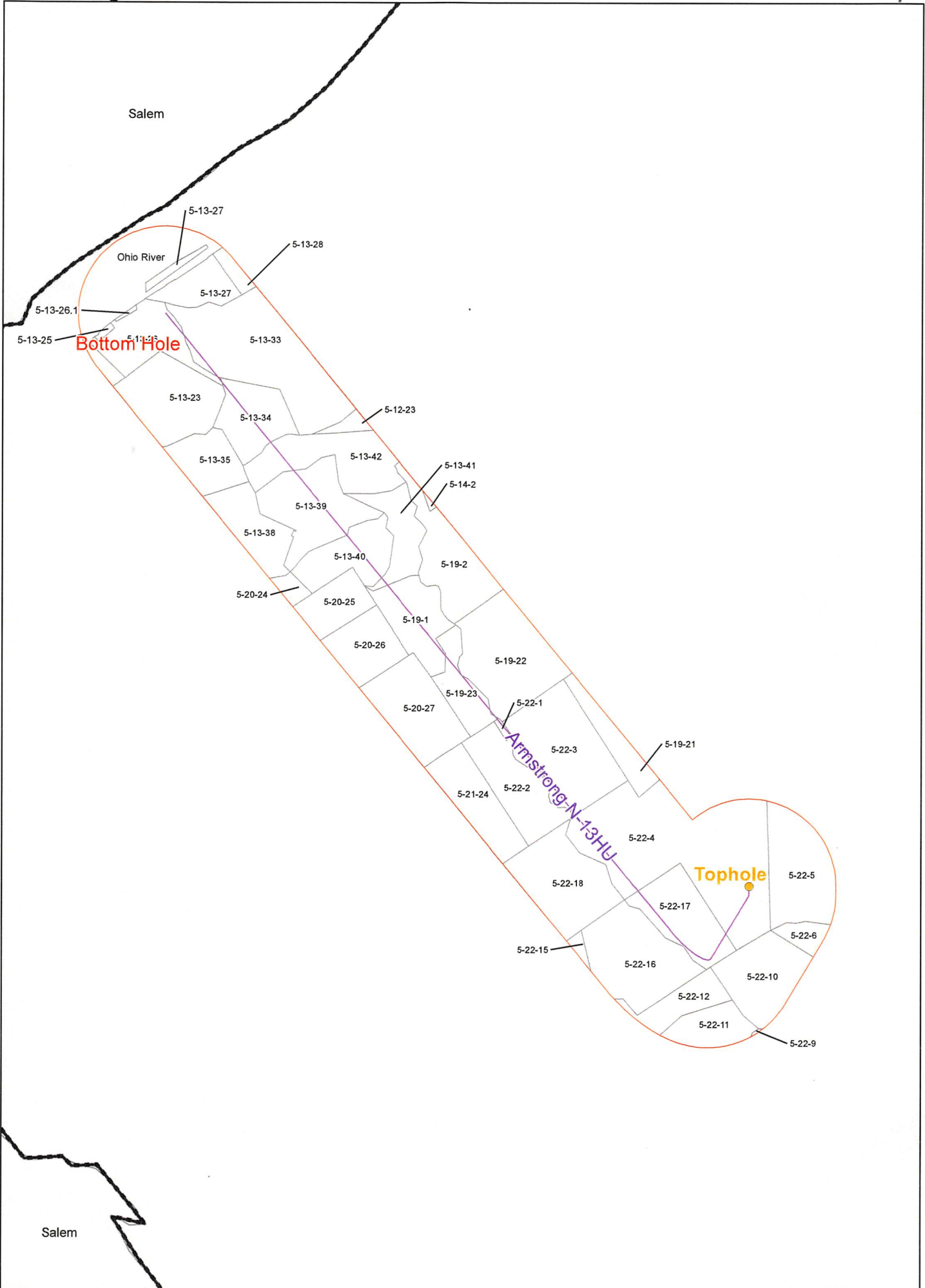
P.S. David L Jackson
708



TUG HILL
OPERATING

OPERATOR'S
WELL #: Armstrong 1N-13HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API: 047-051-02259 HWA
MOY

WELL PLAT
PAGE 4 OF 4
DATE: 07/26/2019
REVISED DATE:
01/22/2020



Coordinate System: NAD 1983 UTM Zone 17N
 Projection: Transverse Mercator
 Datum: North American 1983
 Spheroid: GRS 1980
 False easting: 1640,416,6667
 False northing: 0.0000
 Central meridian: -81.0000
 Scale factor: 0.9999
 False of origin: 0.0000
 Units: Foot US

CONFIDENTIAL



— Utica Well
 □ 1500 Foot Buffer

Armstrong N-13HU
 Operators within 1500 Feet of Well Borehole

