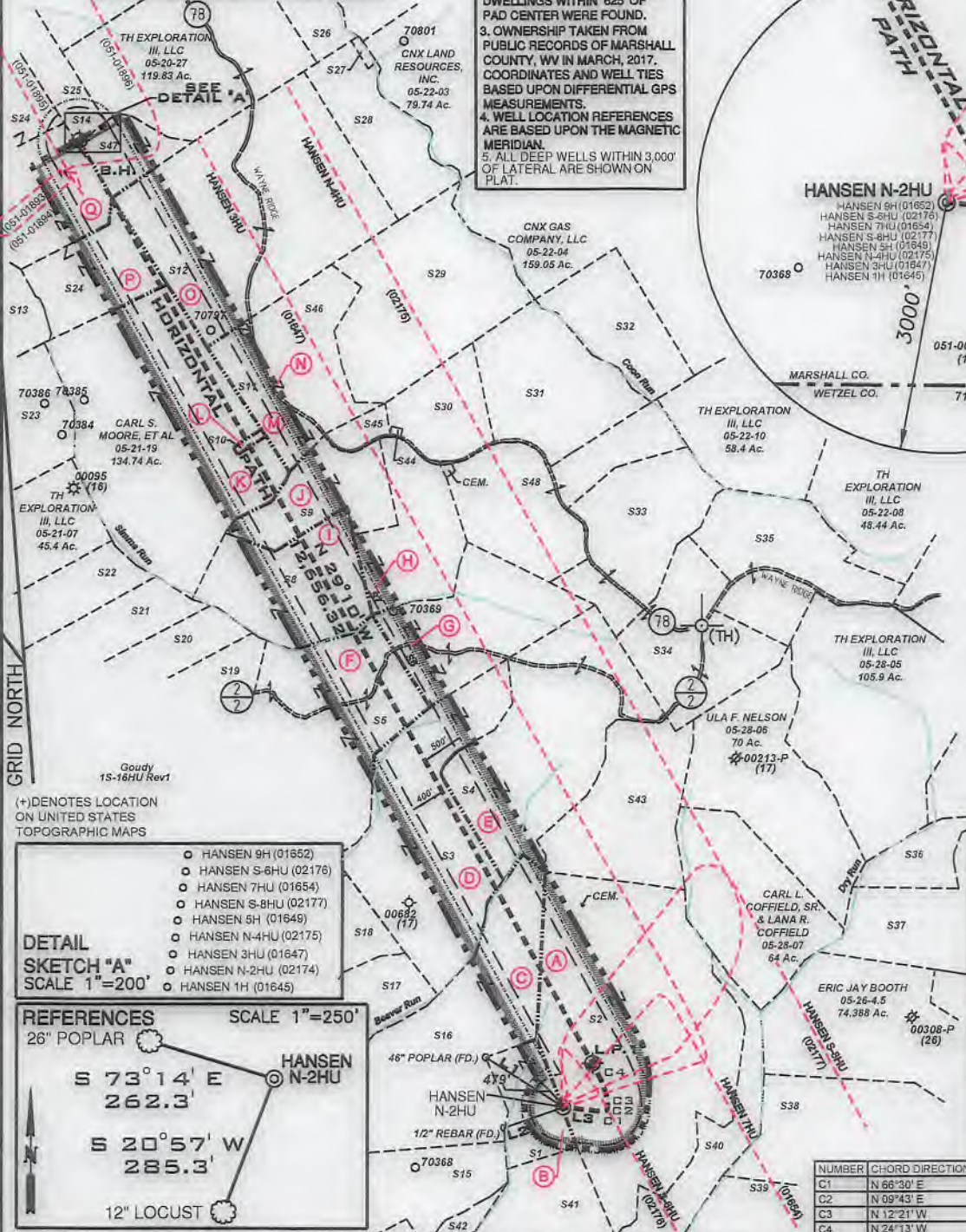


HANSEN LEASE WELL N-2HU 407.2490± ACRES

NOTES

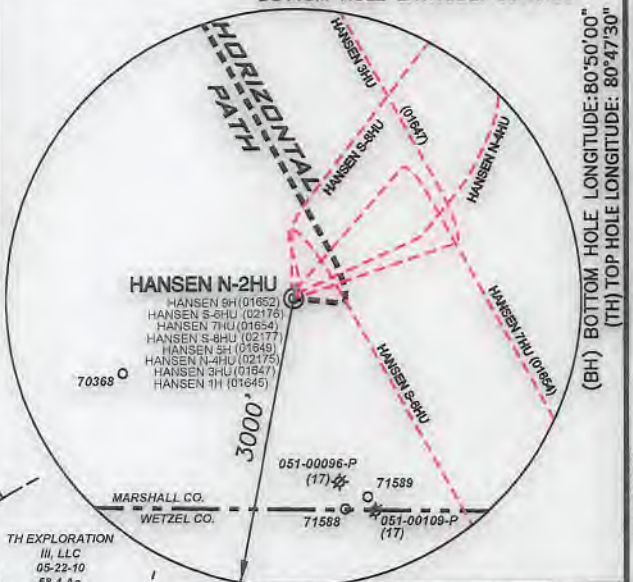
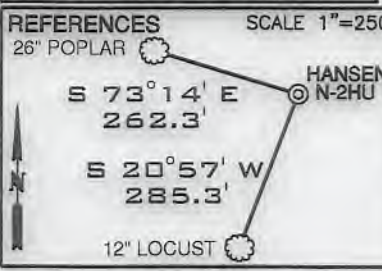
1. BORE PATH BASED ON GRID NORTH.
2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN MARCH, 2017. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
4. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
5. ALL DEEP WELLS WITHIN 3,000' OF LATERAL ARE SHOWN ON PLAN.

TOP HOLE LATITUDE: 39°45'00"
BOTTOM HOLE LATITUDE: 39°47'30"



(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

- DETAIL SKETCH "A" SCALE 1"=200'**
- HANSEN 9H (01652)
 - HANSEN S-6HU (02176)
 - HANSEN 7HU (01654)
 - HANSEN S-8HU (02177)
 - HANSEN 5H (01649)
 - HANSEN N-4HU (02175)
 - HANSEN 3HU (01647)
 - HANSEN N-2HU (02174)
 - HANSEN 1H (01645)



SURFACE HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,397,429.97
E) 515,914.75

LANDING POINT 1
UTM. NAD83, ZONE 17
IN METERS
N) 4,397,593.52
E) 516,019.74

BOTTOM HOLE
UTM. NAD83, ZONE 17
IN METERS
N) 4,400,929.16
E) 514,084.57

LEGEND

- (BH)
- LEASED TRACTS
- SURFACE TRACTS
- WELL LATERAL
- POINT PLEASANT LEGS
- 400' BORE PATH OFFSET
- 500' WELL BORE OFFSET
- UNIT BOUNDARY
- (A) LEASE # (SEE 6A1 FORM)

| LINE | BEARING | DISTANCE |
|------|------------|----------|
| L1 | N 57°21' W | 1105.27' |
| L2 | S 70°25' W | 751.48' |
| L3 | S 83°52' E | 489.87' |

| NUMBER | CHORD DIRECTION | CHORD LENGTH | RADIUS | ARC LENGTH |
|--------|-----------------|--------------|----------|------------|
| C1 | N 66°30' E | 41.63' | 38.40' | 44.00' |
| C2 | N 09°43' E | 74.98' | 123.28' | 78.19' |
| C3 | N 12°21' W | 165.05' | 702.34' | 165.43' |
| C4 | N 24°13' W | 363.48' | 1899.95' | 364.04' |

FILE NUMBER _____

DRAWING NUMBER HANSEN_N-2HU_REV4

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1/200

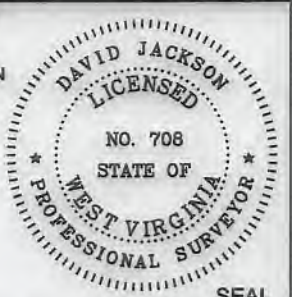
PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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 1480
Clarksburg, WV 26302
304-623-5851



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: JANUARY 26, 2019
REVISED: JULY 08, 2019

OPERATORS WELL NO. HANSEN N-2HU
API WELL NO. 47-051-02174
STATE COUNTY PERMIT WV MARSHALL

LOCATION ELEVATION 1247.0' **WATERSHED (HUC 10)** FRENCH CREEK - OHIO RIVER

DISTRICT FRANKLIN **COUNTY** MARSHALL

QUADRANGLE NEW MARTINSVILLE 7.5' **LEASE NUMBER** SEE WW-6A1 FORM

SURFACE OWNER COVESTRO, LLC **ACREAGE** 172.79

OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC. **LEASE ACREAGE** 172.79

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

PLUG & ABANDON ___ CLEAN OUT & REPLUG ___

TARGET FORMATION POINT PLEASANT **ESTIMATED DEPTH** TVD: 11,382' TMD: 24,243'

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

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

COUNTY NAME
PERMIT

form ww6

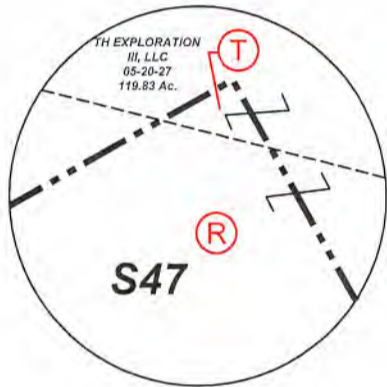
HANSEN LEASE
WELL N-2HU
407.2490± ACRES

DETAIL "A"

4705102174



DETAIL "B"



| Number | TAX MAP -PARCEL | ADJOINER OWNER | ACRES |
|--------|-----------------|--------------------------------------------------|--------|
| S1 | B 05-27-21 | COVESTRO, LLC | 22.67 |
| S2 | A 05-27-22 | COVESTRO, LLC | 172.79 |
| S3 | D 05-28-10 | CAROL MARTIN | 100.0 |
| S4 | E 05-28-9 | COVESTRO, LLC | 93.4 |
| S5 | F 05-28-2 | COVESTRO, LLC | 99.5 |
| S6 | G 05-28-3 | TH EXPLORATION III, LLC | 53.44 |
| S7 | H 05-22-13 | JOHN M. MOORE, TERESA R. MOORE & ANDREA S. MOORE | 40.57 |
| S8 | I 05-21-18 | JOHN M. MOORE, TERESA R. MOORE & ANDREA S. MOORE | 51.44 |
| S9 | J 05-21-20 | JOHN M. MOORE, TERESA R. MOORE & ANDREA S. MOORE | 31.0 |
| S10 | L 05-21-19.1 | JOHN G. MOORE, ETAL | 0.92 |
| S11 | M 05-21-22 | PEGGY LEE BOWEN, ETAL | 18.29 |
| S12 | O 05-21-24 | TH EXPLORATION III, LLC | 132.5 |
| S13 | 05-20-34 | TH EXPLORATION III, LLC | 116.7 |
| S14 | Q 05-20-33 | TH EXPLORATION III, LLC | 42.186 |
| S15 | 05-27-20.1 | APPALACHIAN POWER CO. | 43.973 |
| S16 | C 05-27-20 | COVESTRO, LLC. | 93.027 |
| S17 | 05-27-19 | COVESTRO, LLC. | 33.786 |
| S18 | 05-28-11 | CAROL A. MARTIN | 24.681 |
| S19 | 05-21-15 | TH EXPLORATION III, LLC | 52.97 |
| S20 | 05-21-16 | TH EXPLORATION III, LLC | 38.38 |
| S21 | 05-21-17 | TH EXPLORATION III, LLC | 31.68 |
| S22 | 05-21-8 | TH EXPLORATION III, LLC | 38.94 |
| S23 | 05-21-3 | TH EXPLORATION III, LLC | 146.0 |
| S24 | P 05-20-32 | TH EXPLORATION III, LLC | 28.8 |
| S25 | S 05-20-29 | TH EXPLORATION III, LLC | 30.08 |
| S26 | 05-19-23 | WSD PROPERTIES, LLC | 28.4 |
| S27 | 05-22-1 | MARY P. MASON, EST. | 2.0 |
| S28 | 05-22-2 | TH EXPLORATION III, LLC | 30.0 |
| S29 | 05-22-18 | EDWARD R. YOHO, JR. | 77.13 |
| S30 | 05-22-15 | EDWARD R. YOHO, JR. | 25.5 |
| S31 | 05-22-16 | EDWARD R. YOHO, JR. | 57.0 |
| S32 | 05-22-17 | CNX GAS COMPANY, LLC. | 37.5 |
| S33 | 05-22-11 | TH EXPLORATION III, LLC | 55.65 |
| S34 | 05-28-4 | TH EXPLORATION III, LLC | 48.44 |
| S35 | 05-28-9 | TH EXPLORATION III, LLC | 63.44 |
| S36 | 05-26-1 | EDWIN BOOTH ANDERSON & MARK W. ANDERSON | 12.94 |
| S37 | 05-26-2 | EDWIN BOOTH ANDERSON & MARK W. ANDERSON | 67.5 |
| S38 | 05-26-19 | ERIC JAY & KARROLL S. BOOTH | 50.0 |
| S39 | 05-27-24 | ROBERT F. ROTHLSBERGER | 60.10 |
| S40 | 05-27-23 | ROBERT F. ROTHLSBERGER | 35.77 |
| S41 | 05-27-26 | COVESTRO, LLC. | 39.32 |
| S42 | 05-27-27 | JAMES ANDREW & KAREN R. LYNNE RICHMOND | 8.9353 |
| S43 | 05-28-8 | COVESTRO, LLC. | 56.32 |
| S44 | 05-22-14 | CNX LAND RESOURCES, INC. | 0.30 |
| S45 | 05-21-21 | CNX LAND RESOURCES, INC. | 4.0 |
| S46 | N 05-21-23 | PEGGY LEE BROWN, ETAL | 42.62 |
| S47 | R 05-20-28 | TH EXPLORATION III, LLC | 15.34 |
| S48 | 05-22-12 | TH EXPLORATION III, LLC | 61.49 |

4705102174



P.S. 708

David L Jackson



TUG HILL
OPERATING

OPERATOR'S
WELL #: HANSEN N-2HU
DISTRICT: Franklin
COUNTY: Marshall
STATE: WV
API #: 47-051-02174

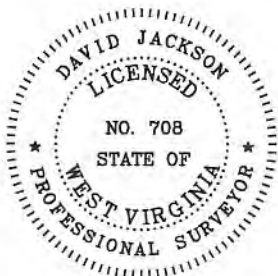
WELL PLAT
PAGE 2 OF 2
DATE: 01/26/2019
REVISED: 07/08/2019

form ww6

**HANSEN LEASE
WELL N-2HU
407.2489± ACRES**

| Lease No. | Tags | Parcel | Oil & Gas Royalty Owner | Book | Page |
|-----------|------|-----------|---------------------------------------|------|------|
| 10*14418 | A | 5-27-22 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*27022 | B | 5-27-21 | COVESTRO LLC | 1046 | 431 |
| 10*14493 | C | 5-27-20 | BETTY JEAN NEELY | 748 | 468 |
| 10*14494 | C | 5-27-20 | MARY LOU WILSON | 748 | 471 |
| 10*14495 | C | 5-27-20 | PATRICIA HARTMAN | 752 | 197 |
| 10*14496 | C | 5-27-20 | STEPHANIE L. HALL | 752 | 215 |
| 10*14497 | C | 5-27-20 | CAROL DEEN GARDNER | 752 | 212 |
| 10*22926 | C | 5-27-20 | COVESTRO LLC | 976 | 27 |
| 10*14565 | D | 5-28-10 | HARRY LEE GOUDY | 670 | 59 |
| 10*14418 | E | 5-28-9 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*27022 | F | 5-28-2 | COVESTRO LLC | 1046 | 431 |
| 10*14418 | G | 5-28-3 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*14482 | G | 5-28-3 | RALPH EARNEST | 745 | 578 |
| 10*14483 | G | 5-28-3 | CHARLES H EARNEST | 746 | 319 |
| 10*14484 | G | 5-28-3 | ARTHUR L JOSEPH | 748 | 474 |
| 10*14485 | G | 5-28-3 | LINDA K HASSLEN | 748 | 476 |
| 10*14486 | G | 5-28-3 | THOMAS ATKINSON | 754 | 248 |
| 10*14487 | G | 5-28-3 | DOUGLAS ATKINSON | 754 | 577 |
| 10*14488 | G | 5-28-3 | HEATHER GUIDRY | 754 | 244 |
| 10*14489 | G | 5-28-3 | AUGUSTA L SPIHER | 754 | 246 |
| 10*14490 | G | 5-28-3 | JAMES WELCH JR | 752 | 445 |
| 10*14491 | G | 5-28-3 | CHRISTOPHER PRICE | 752 | 208 |
| 10*14492 | G | 5-28-3 | MARJORIE A MCCLAUGHLIN | 749 | 526 |
| 10*14937 | H | 5-22-13 | JOHN M MOORE AND MELANIE A MOORE ETAL | 850 | 524 |
| 10*14937 | I | 5-21-18 | JOHN M MOORE AND MELANIE A MOORE ETAL | 850 | 524 |
| 10*14937 | J | 5-21-20 | JOHN M MOORE AND MELANIE A MOORE ETAL | 850 | 524 |
| 10*14933 | K | 5-21-19 | CLARA LOU HERRICK AND EDWIN A HERRICK | 850 | 531 |
| 10*14934 | K | 5-21-19 | GLEND A ROSE MOORE | 849 | 564 |
| 10*14935 | K | 5-21-19 | JOHN M MOORE AND MELANIE A MOORE | 849 | 562 |
| 10*14936 | K | 5-21-19 | LINDA L MOORE | 850 | 533 |
| 10*14933 | L | 5-21-19.1 | CLARA LOU HERRICK AND EDWIN A HERRICK | 850 | 531 |
| 10*14934 | L | 5-21-19.1 | GLEND A ROSE MOORE | 849 | 564 |
| 10*14947 | M | 5-21-22 | DANA SMALLWOOD | 850 | 520 |
| 10*14948 | M | 5-21-22 | PEGGY L BROWN | 850 | 522 |
| 10*14947 | N | 5-21-23 | DANA SMALLWOOD | 850 | 520 |
| 10*14948 | N | 5-21-23 | PEGGY L BROWN | 850 | 522 |
| 10*14418 | O | 5-21-24 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*14418 | P | 5-20-32 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*14312 | Q | 5-20-33 | JAMIE LU BENSON | 790 | 531 |
| 10*14313 | Q | 5-20-33 | TERRI JEAN GODDARD | 790 | 585 |
| 10*14314 | Q | 5-20-33 | RALPH BLACHLY | 790 | 529 |
| 10*14315 | Q | 5-20-33 | MARGARET ROSS | 790 | 527 |
| 10*14316 | Q | 5-20-33 | ANDREW GERST | 791 | 645 |
| 10*14317 | Q | 5-20-33 | HAROLD BLACHLY | 791 | 643 |
| 10*14318 | Q | 5-20-33 | MARTHA BLACHLY-CROSS | 792 | 112 |
| 10*14319 | Q | 5-20-33 | JACK J PFALZGRAF | 792 | 118 |
| 10*14320 | Q | 5-20-33 | SANDRA CHEYNEY | 792 | 91 |
| 10*14321 | Q | 5-20-33 | HERBERT BLACHLY | 792 | 102 |
| 10*14322 | Q | 5-20-33 | LOIS KAY MORFORD | 792 | 110 |
| 10*14327 | Q | 5-20-33 | ROBERT D OKEY | 792 | 646 |

4705102174



P.S. 708

David L Jackson

| Lease No. | Tags | Parcel | Oil & Gas Royalty Owner | Book | Page |
|-----------|------|---------|----------------------------------------------------------|------|------|
| 10*14328 | Q | 5-20-33 | RAE ELLEN STUART | 796 | 38 |
| 10*14329 | Q | 5-20-33 | TONDA ROTHENBUHLER | 796 | 40 |
| 10*14331 | Q | 5-20-33 | CHRISTINA JEAN RIOUX | 796 | 70 |
| 10*14332 | Q | 5-20-33 | MICHAEL EDWARD BARTH | 796 | 68 |
| 10*14333 | Q | 5-20-33 | DEAN ROTHENBUHLER | 796 | 42 |
| 10*14355 | Q | 5-20-33 | DEWAYNE STARKEY | 815 | 228 |
| 10*14356 | Q | 5-20-33 | FREDRIC & BETTY RICHTER | 822 | 270 |
| 10*14362 | Q | 5-20-33 | CAROLYN STARKEY | 827 | 226 |
| 10*14368 | Q | 5-20-33 | JOSEPH B LONG | 836 | 106 |
| 10*14371 | Q | 5-20-33 | THOMAS F & JENNIFER LONG | 842 | 398 |
| 10*14372 | Q | 5-20-33 | UNITED CHURCH HOMES INC | 846 | 408 |
| 10*14377 | Q | 5-20-33 | JOSEPH A LONG | 849 | 519 |
| 10*14387 | Q | 5-20-33 | JOHN F & PAM LONG | 849 | 542 |
| 10*14388 | Q | 5-20-33 | IMMANUEL CHURCH OF UNITED CC OF SALEM TWP MONROE CO., OH | 849 | 513 |
| 10*14398 | Q | 5-20-33 | MARY J KAFFENBERGER | 860 | 434 |
| 10*14399 | Q | 5-20-33 | RITA ANN & RONALD DOEBERT | 860 | 437 |
| 10*14400 | Q | 5-20-33 | COLEEN SLAGLE & FRANKLIN SLAGLE JR | 860 | 440 |
| 10*14401 | Q | 5-20-33 | IMELDA J SCURLOCK | 860 | 443 |
| 10*14402 | Q | 5-20-33 | CARDL F & RICHARD WILSON | 860 | 446 |
| 10*14403 | Q | 5-20-33 | SUE WHITE | 862 | 429 |
| 10*14404 | Q | 5-20-33 | DON FORGRAVES | 862 | 426 |
| 10*14405 | Q | 5-20-33 | JOHN WHITE | 862 | 423 |
| 10*14406 | Q | 5-20-33 | WILLIAM V BUCKNOR | 862 | 421 |
| 10*14407 | Q | 5-20-33 | LESUE F BUCKNOR | 862 | 419 |
| 10*14408 | Q | 5-20-33 | LORNA M LONG MORGAN | 864 | 323 |
| 10*14409 | Q | 5-20-33 | JAMES C LONG & PATTI LONG | 864 | 326 |
| 10*14410 | Q | 5-20-33 | HENRY T LONG | 867 | 385 |
| 10*14411 | Q | 5-20-33 | JOHN EDWARD HARRIS JR ET AL | 870 | 34 |
| 10*14412 | Q | 5-20-33 | THE VILLAGE NETWORK F/K/A BOYS VILLAGE | 872 | 203 |
| 10*14413 | Q | 5-20-33 | JUANITA SANDIFER | 872 | 206 |
| 10*14416 | Q | 5-20-33 | KATHERINE ANN WILLIAMS COTHRAN | 879 | 1 |
| 10*14418 | Q | 5-20-33 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*14419 | Q | 5-20-33 | CROSSROAD CHILD & FAMILY SERVICES, INC | 887 | 105 |
| 10*15734 | Q | 5-20-33 | GENEVIEVE L LONG | 904 | 13 |
| 10*15760 | Q | 5-20-33 | DEIRDRE L WINGER AND DANIEL W WINGER | 903 | 645 |
| 10*15761 | Q | 5-20-33 | CAMERON CEMETARY ASSOCIATION INC | 903 | 642 |
| 10*15762 | Q | 5-20-33 | DAWN PETROVICH | 904 | 4 |
| 10*15763 | Q | 5-20-33 | BONNIE J SELDERS | 904 | 34 |
| 10*15764 | Q | 5-20-33 | JAMES E BUCKNOR | 904 | 28 |
| 10*15765 | Q | 5-20-33 | JOHN A BUCKNOR AND RHONDA BUCKNOR | 904 | 16 |
| 10*15766 | Q | 5-20-33 | JOHN J POZENEL | 904 | 7 |
| 10*16220 | Q | 5-20-33 | WILLIAM LONG | 792 | 95 |
| 10*16230 | Q | 5-20-33 | JAMES BRIAN YOHO | 900 | 134 |
| 10*16355 | Q | 5-20-33 | JAMES P LONG AND LINDA L LONG | 904 | 10 |
| 10*16356 | Q | 5-20-33 | DARYL S BUCKNOR AND JOYCE T BUCKNOR | 904 | 31 |
| 10*16357 | Q | 5-20-33 | DEANNA M BONVISSUTO | 904 | 1 |
| 10*16358 | Q | 5-20-33 | ANNE MARIE KRAMER AND CHRISTOPHER E CUEVAS | 903 | 648 |
| 10*16454 | Q | 5-20-33 | CHURCH OF CHRIST OF CAMERON OHIO | 900 | 128 |
| 10*14307 | R | 5-20-28 | SALLY CYNTHIA HOPKINS | 777 | 572 |
| 10*14308 | R | 5-20-28 | MARY E BASSETT | 779 | 492 |
| 10*14309 | R | 5-20-28 | ROBERT B THOMAS | 779 | 484 |
| 10*14310 | R | 5-20-28 | JEAN C THOMAS | 781 | 614 |
| 10*14324 | R | 5-20-28 | RUTH E BASSETT MEADOWS | 792 | 100 |
| 10*14325 | R | 5-20-28 | ELIZABETH ANN STRAUSBAUGH | 792 | 104 |
| 10*14326 | R | 5-20-28 | JANET LEA BLANKENSHIP | 792 | 580 |
| 10*14418 | R | 5-20-28 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*14307 | S | 5-20-29 | SALLY CYNTHIA HOPKINS | 777 | 572 |
| 10*14308 | S | 5-20-29 | MARY E BASSETT | 779 | 492 |
| 10*14309 | S | 5-20-29 | ROBERT B THOMAS | 779 | 484 |
| 10*14310 | S | 5-20-29 | JEAN C THOMAS | 781 | 614 |
| 10*14324 | S | 5-20-29 | RUTH E BASSETT MEADOWS | 792 | 100 |
| 10*14325 | S | 5-20-29 | ELIZABETH ANN STRAUSBAUGH | 792 | 104 |
| 10*14326 | S | 5-20-29 | JANET LEA BLANKENSHIP | 792 | 580 |
| 10*14418 | S | 5-20-29 | PPG INDUSTRIES, INC. | 878 | 610 |
| 10*14307 | T | 5-20-27 | SALLY CYNTHIA HOPKINS | 777 | 572 |
| 10*14308 | T | 5-20-27 | MARY E BASSETT | 779 | 492 |
| 10*14309 | T | 5-20-27 | ROBERT B THOMAS | 779 | 484 |
| 10*14310 | T | 5-20-27 | JEAN C THOMAS | 781 | 614 |
| 10*14324 | T | 5-20-27 | RUTH E BASSETT MEADOWS | 792 | 100 |
| 10*14325 | T | 5-20-27 | ELIZABETH ANN STRAUSBAUGH | 792 | 104 |
| 10*14326 | T | 5-20-27 | JANET LEA BLANKENSHIP | 792 | 580 |
| 10*14418 | T | 5-20-27 | PPG INDUSTRIES, INC. | 878 | 610 |

OPERATOR'S
WELL #: HANSEN N-2HU WELL PLAT
DISTRICT: Franklin PAGE 3 OF 3
COUNTY: Marshall DATE: 06/27/2019
STATE: WV REVISED: 07/08/2019
API #: 47-051-02174

