

State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

API 47-009-00157 County BROOKE District BUFFALO  
Quad BETHANY Pad Name LINDA GREATHOUSE-BRK-PAD1 Field/Pool Name PANHANDLE  
Farm name GREATHOUSE, LINDA REEVES Well Number LINDA GREATHOUSE BRK 1H  
Operator (as registered with the OOG) SWN PRODUCTION COMPANY LLC  
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4450486.668 Easting 533443.815  
Landing Point of Curve Northing 4450809.461 Easting 532975.599  
Bottom Hole Northing 4452818.410 Easting 532114.936

Elevation (ft) 1138 GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
SOBM

Date permit issued 07/23/2015 Date drilling commenced 08/11/15 Date drilling ceased 09/10/15  
Date completion activities began 12/29/2015 Date completion activities ceased 01/19/16  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug.

Freshwater depth(s) ft 300' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 626' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 309.99' Cavern(s) encountered (Y/N) depths \_\_\_\_\_

**APPROVED**

NAME: Jackie Shumta  
DATE: 9/22/16

Reviewed by:

10/28/2016

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API 47-009 - 00157 Farm name GREATHOUSE, LINDA REEVES Well number LINDA GREATHOUSE BRK 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	28	20	150'	N	J-55/ 94#		Y
Surface	17.5	13.375	450'	N	J-55/ 54.50#		Y
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2075'	N	J-55/ 40#		Y
Intermediate 2							
Intermediate 3							
Production	8.75 TO 8.50	5.5	14073'	N	HCP-110/20#		Y
Tubing		2.375	6359'	N	P-110/4.70#		N
Packer type and depth set		N/A					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	A	GROUT	17.2	1.29		SURFACE	24
Surface	A	465	15.6	1.19	553.35	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	A	810	15.6	1.19	963.9	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	A	2558	15.6	1.23	3146.34	SURFACE	24
Tubing							

Drillers TD (ft) <sup>14073'</sup> \_\_\_\_\_ Loggers TD (ft) <sup>14073'</sup> \_\_\_\_\_  
 Deepest formation penetrated MARCELLUS Plug back to (ft) NA  
 Plug back procedure NA

Kick off depth (ft) <sup>5400'</sup> \_\_\_\_\_

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_  
 ALL CASING STRINGS RAN WITH A CENTRALIZER AT A MINIMUM OF 1 PER EVERY 3RD JOINT OF CASING

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WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_  
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WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_



API 47- 009 - 00157

Farm name GREATHOUSE, LINDA REEVES Well number LINDA GREATHOUSE BRK 1H

PRODUCING FORMATION(S)

DEPTHS

MARCELLUS 5829.67' TVD 6254.20' MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1250 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 2264 mcfpd Oil 548 bpd NGL \_\_\_\_\_ bpd Water 309 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
		SEE ATTACHED			

Please insert additional pages as applicable.

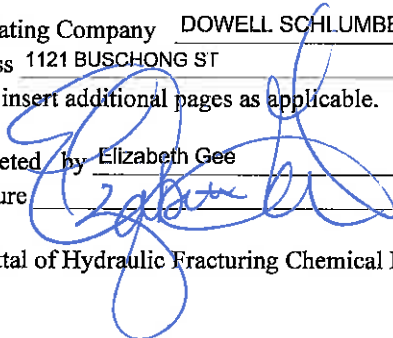
Drilling Contractor SWN DRILLING  
Address PO BOX 12359 City SPRING State TX Zip 77391-2859  
Office: Oil and Gas

Logging Company NINE ENERGY SERVICES  
Address 16945 NORTHCHASE DR, STE 1600 City HOUSTON State TX Zip 77060  
SEP 16 2016

Cementing Company SCHLUMBERGER  
Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478  
VIA Department of Environmental Protection

Stimulating Company DOWELL SCHLUMBERGER  
Address 1121 BUSCHONG ST City HOUSTON State TX Zip 77039

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-7632  
Signature  Title Sr. Regulatory Analyst Date 09/15/2016

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

10/28/2016

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date	12/29/2016
Job End Date	1/8/2016
State	West Virginia
County	Brooke
API Number	47-009-00157-00-00
Operator Name	Southwestern Energy
Well Name and Number	LINDA GREATHOUSE BRK 1H
Longitude	-80.60702830
Latitude	40.20411722
Datum	NAD83
Federal/Tribal Well	NO
True Vertical Depth	5,855
Total Base Water Volume (gall)	10,692,402
Total Base Non Water Volume	0



## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00000	72.34383	
Sand, White, 100 mesh	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		6.21168	
DustPro Chemical Coating	Baker Hughes	Dust Suppression	MSDS and Non-MSDS Ingredients Listed Below	N/A		6.21161	
HCl, 10.1 - 15%	Baker Hughes	Acidizing	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.99972	SmartCare Product
Sand, non-API, 40/70 mesh	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.43618	
MaxPerm-30	Baker Hughes	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.09545	
Alpha 1427	Baker Hughes	Biocide	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00984	SmartCare Product
Scaletrol 720	Baker Hughes	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below	N/A			



Ferrolrol 300L	Baker Hughes	Iron Control	MSDS and Non-MSDS Ingredients Listed Below	N/A	0.009555	SmartCare Product
Calcium Chloride	Baker Hughes	Salts	MSDS and Non-MSDS Ingredients Listed Below	N/A	0.00687	SmartCare Product
Ci-14	Baker Hughes	Corrosion Inhibitor	MSDS and Non-MSDS Ingredients Listed Below	N/A	0.00482	
GBW-5	Baker Hughes	Breaker	MSDS and Non-MSDS Ingredients Listed Below	N/A	0.00158	
Dustpro treated sand	Baker Hughes	Dust Suppression	MSDS and Non-MSDS Ingredients Listed Below	N/A	0.000155	SmartCare Product
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.						
Ingredients in Additive (s) (MSDS and non- MSDS)	Baker Hughes	See Trade Name(s) List				
			Non-hazardous acrylic polymer	NA	75.00000	9.61425
			Crystalline Silica	14808-60-7	100.00000	7.59450
			Crystalline Silica (Quartz)	14808-60-7	100.00000	5.59143
			Propylene glycol	57-55-6	30.00000	3.84570
			Water	7732-18-5	85.00000	0.77478
			Hydrochloric Acid	7647-01-0	15.00000	0.12614
			Acrylamide Modified Polymer	98193-60-1	60.00000	0.04817
			Petroleum Distillates	64742-47-8	30.00000	0.02408
			Calcium Chloride	10043-52-4	100.00000	0.00446
			Sodium Chloride	7647-14-5	5.00000	0.00430
			Sorbitan, mono-(9Z)- sodiadecanoate	1338-43-8	5.00000	0.00401
			Sorbitan monoolerate ethoxylate	9005-65-5	5.00000	0.00401
			Oxyalkylated alcohol	78330-21-9	5.00000	0.00401
			Ethylene Glycol	107-21-1	45.00000	0.00362
			Citric Acid	77-92-9	60.00000	0.00347
			Glutaraldehyde	111-30-8	30.00000	0.00248
			2-Propenoic, Polymer with Sodium Phosphinate, Sodium Salt	71059-62-9	20.00000	0.00161
			Methanol	67-56-1	100.00000	0.00133
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	10.00000	0.00083
			Acetic Acid, Potassium Salt	127-08-2	1.00000	0.00080
			Ethanol	64-17-5	5.00000	0.00041
			Quaternary Ammonium Compound	68424-85-1	5.00000	0.00041
			Polyoxyalkylenes	68951-67-7	30.00000	0.00040
			Potassium Chloride	7447-40-7	5.00000	0.00026
			Fatty Acids	61790-12-3	10.00000	0.00013



## LINDA GREATHOUSE BRK 1 - PERFORATION RECORD

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	12/29/2015	13,757	13,960	42
2	12/29/2015	13,497	13,700	42
3	12/30/2015	13,237	13,440	42
4	12/30/2015	12,981	13,180	42
5	12/30/2015	12,717	12,920	42
6	12/31/2015	12,457	12,660	42
7	12/31/2015	12,197	12,400	42
8	1/1/2016	11,937	12,140	42
9	1/1/2016	11,677	11,880	42
10	1/1/2016	11,417	11,620	42
11	1/2/2016	11,157	11,360	42
12	1/2/2016	10,897	11,100	42
13	1/2/2016	10,637	10,840	42
14	1/2/2016	10,377	10,580	42
15	1/5/2016	10,117	10,320	42
16	1/5/2016	9,857	10,060	42
17	1/5/2016	9,597	9,800	42
18	1/6/2016	9,337	9,540	42
19	1/6/2016	9,077	9,280	42
20	1/6/2016	8,817	9,020	42
21	1/6/2016	8,557	8,760	42
22	1/6/2016	8,297	8,500	42
23	1/7/2016	8,037	8,240	42
24	1/7/2016	7,777	7,980	42
25	1/7/2016	7,517	7,720	42
26	1/8/2016	7,257	7,460	42
27	1/8/2016	6,997	7,200	42
28	1/8/2016	6,737	6,940	43

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LINDA GREATHOUSE BRK 1 - STIMULATION INFORMATION

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/other
1	12/29/2015	2	8,287	8,659	4,081	752,347	10,758	
2	12/29/2015	2	7,804	8,567	4,013	755,206	10,244	
3	12/30/2015	2	7,961	9,080	4,309	751,793	10,508	
4	12/30/2015	2	8,062	8,440	4,078	751,850	9,948	
5	12/30/2015	2	7,978	8,961	4,237	747,910	12,338	
6	12/31/2015	2	7,764	8,546	4,376	751,999	10,448	
7	12/31/2015	2	7,915	8,267	4,396	753,738	10,310	
8	1/1/2016	2	8,240	9,273	3,933	703,406	13,544	
9	1/1/2016	2	7,663	8,805	4,515	752,997	10,496	
10	1/1/2016	2	7,664	8,117	4,535	753,123	10,204	
11	1/2/2016	2	7,027	8,052	4,289	752,554	11,627	
12	1/2/2016	2	7,901	8,883	4,191	752,193	10,272	
13	1/2/2016	2	7,752	8,608	4,217	754,365	10,566	
14	1/2/2016	2	7,516	7,716	4,476	751,056	10,167	
15	1/5/2016	1	8,282	9,200	4,015	502,756	11,073	
16	1/5/2016	2	7,261	7,901	4,395	502,913	7,423	
17	1/5/2016	2	7,170	7,593	4,293	503,915	7,108	
18	1/6/2016	2	7,038	7,501	4,148	503,680	6,990	
19	1/6/2016	2	7,268	7,662	4,338	501,306	7,038	
20	1/6/2016	2	6,915	8,039	4,054	502,191	7,207	
21	1/6/2016	2	6,549	6,891	4,197	502,932	6,983	
22	1/6/2016	2	6,557	6,843	4,135	504,668	7,044	
23	1/7/2016	2	6,656	7,003	4,391	506,119	6,882	
24	1/7/2016	2	6,588	7,357	4,413	502,640	7,143	
25	1/7/2016	2	6,805	7,220	4,452	498,233	6,770	
26	1/8/2016	2	6,444	6,928	4,440	503,421	7,550	
27	1/8/2016	2	6,821	7,158	4,178	500,462	6,864	
28	1/8/2016	2	6,821	7,158	4,137	485,247	7,076	

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LINDA GREATHOUSE BRK 1H

LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	N. A.	N. A.	300.00	300.00	
Top of Salt Water	1025.00	1025.81	N. A.	N. A.	
Pittsburgh Coal	310.00	309.99	320.00	319.99	
Big Injun (ss)	1472.00	1471.79	1609.00	1608.78	
Berea (siltstone)	2177.00	2176.69	2195.00	2194.67	
Rhinestreet (shale)	5419.65	5302.75	5704.19	5550.68	
Cashaqua (shale)	5704.19	5550.68	5762.77	5593.91	
Middlesex (shale)	5762.77	5593.91	5846.03	5650.58	
Burket (shale)	5846.03	5650.58	5880.15	5672.49	
Tully (ls)	5880.15	5672.49	5983.64	5729.30	
Mahantango (shale)	5983.64	5729.30	6254.20	5829.67	
Marcellus (shale)	6254.20	5829.67	N. A.	N. A.	

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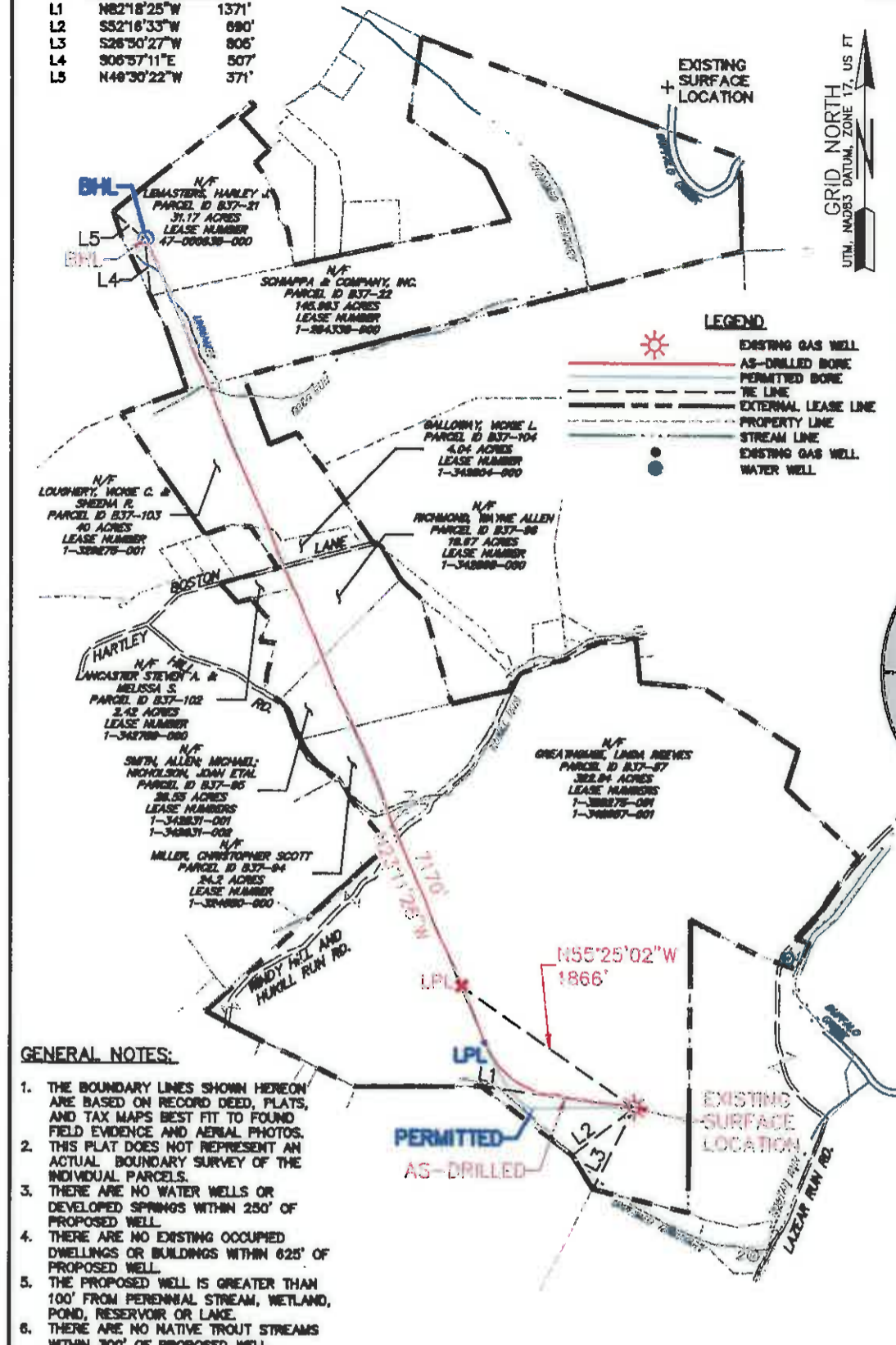
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**REFERENCE LINES**

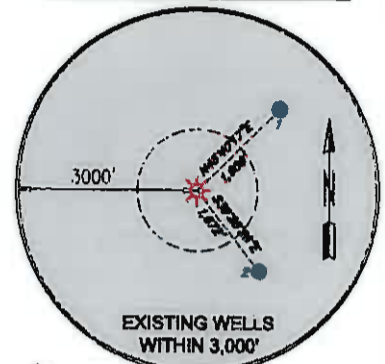
L1	N82°18'25"W	1371'
L2	S52°16'33"W	690'
L3	S26°30'27"W	806'
L4	S06°57'11"E	507'
L5	N49°30'22"W	371'

SURFACE HOLE LOCATION (BHL)	
GEOGRAPHIC (NAD83):	LATITUDE: 40.204117°
	LONGITUDE: -80.607029°
UTM (NAD83, ZONE 17, FEET):	NORTHING: 14,601,305.010
	EASTING: 1,750,140.250
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,450,486.668
	EASTING: 533,443.815
LANDING POINT LOCATION (LPL)	
GEOGRAPHIC (NAD83):	LATITUDE: 40.207044°
	LONGITUDE: -80.612514°
UTM (NAD83, ZONE 17, FEET):	NORTHING: 14,602,364.040
	EASTING: 1,748,604.110
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,450,809.461
	EASTING: 532,975.599
BOTTOM HOLE LOCATION (BBL)	
GEOGRAPHIC (NAD83):	LATITUDE: 40.225176°
	LONGITUDE: -80.622527°
UTM (NAD83, ZONE 17, FEET):	NORTHING: 14,608,955.050
	EASTING: 1,745,780.420
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,452,814.410
	EASTING: 532,114.936



**LEGEND**

- EXISTING GAS WELL
- AS-DRILLED BORE
- PERMITTED BORE
- TRAIL LINE
- EXTERNAL LEASE LINE
- PROPERTY LINE
- STREAM LINE
- EXISTING GAS WELL
- WATER WELL



- GENERAL NOTES:**
1. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON RECORD DEED, PLATS, AND TAX MAPS BEST FIT TO FOUND FIELD EVIDENCE AND AERIAL PHOTOS. THIS PLAT DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE INDIVIDUAL PARCELS.
  2. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
  3. THERE ARE NO EXISTING OCCUPIED DWELLINGS OR BUILDINGS WITHIN 625' OF PROPOSED WELL.
  4. THE PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR OR LAKE.
  5. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED WELL.

FILE#: 087569015  
 DRAWING#: 087569015-SV-1H AS-DRILL  
 SCALE: 1" = 1,400'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING SURVEY 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.

SIGNED: \_\_\_\_\_  
 R.P.E.: \_\_\_\_\_ L.L.S.: 2313



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304

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

WATERSHED: UPPER OHIO SOUTH  
 COUNTY/DISTRICT: BROOKE/ BUFFALO  
 SURFACE OWNER: GREATHOUSE, LINDA REEVES  
 OIL & GAS ROYALTY OWNER: GREATHOUSE, LINDA REEVES

CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PERFORATE NEW FORMATION  PLUG & ABANDON

DRILL  PLUG OFF OLD FORMATION  CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY): \_\_\_\_\_

TARGET FORMATION: MARCELLUS  
 WELL OPERATOR: SWM PRODUCTION COMPANY, LLC  
 ADDRESS: P.O. BOX 1300  
 CITY: JANE LEW STATE: WV ZIP CODE: 26378

DATE: MARCH 15, 2016  
 OPERATOR'S WELL #: LINDA GREATHOUSE BRK 1H  
 API WELL #: 47 09 00157  
 STATE COUNTY PERMIT

ELEVATION: 1,138'  
 QUADRANGLE: BETHANY, WV  
 ACREAGE: 322.84±  
 ACREAGE: 864.91±

ESTIMATED DEPTH: TVD: 5,856' TMD: 14.073'  
 DESIGNATED AGENT: DEE SOUTHALL  
 ADDRESS: P.O. BOX 1300  
 CITY: JANE LEW STATE: WV ZIP CODE: 26378

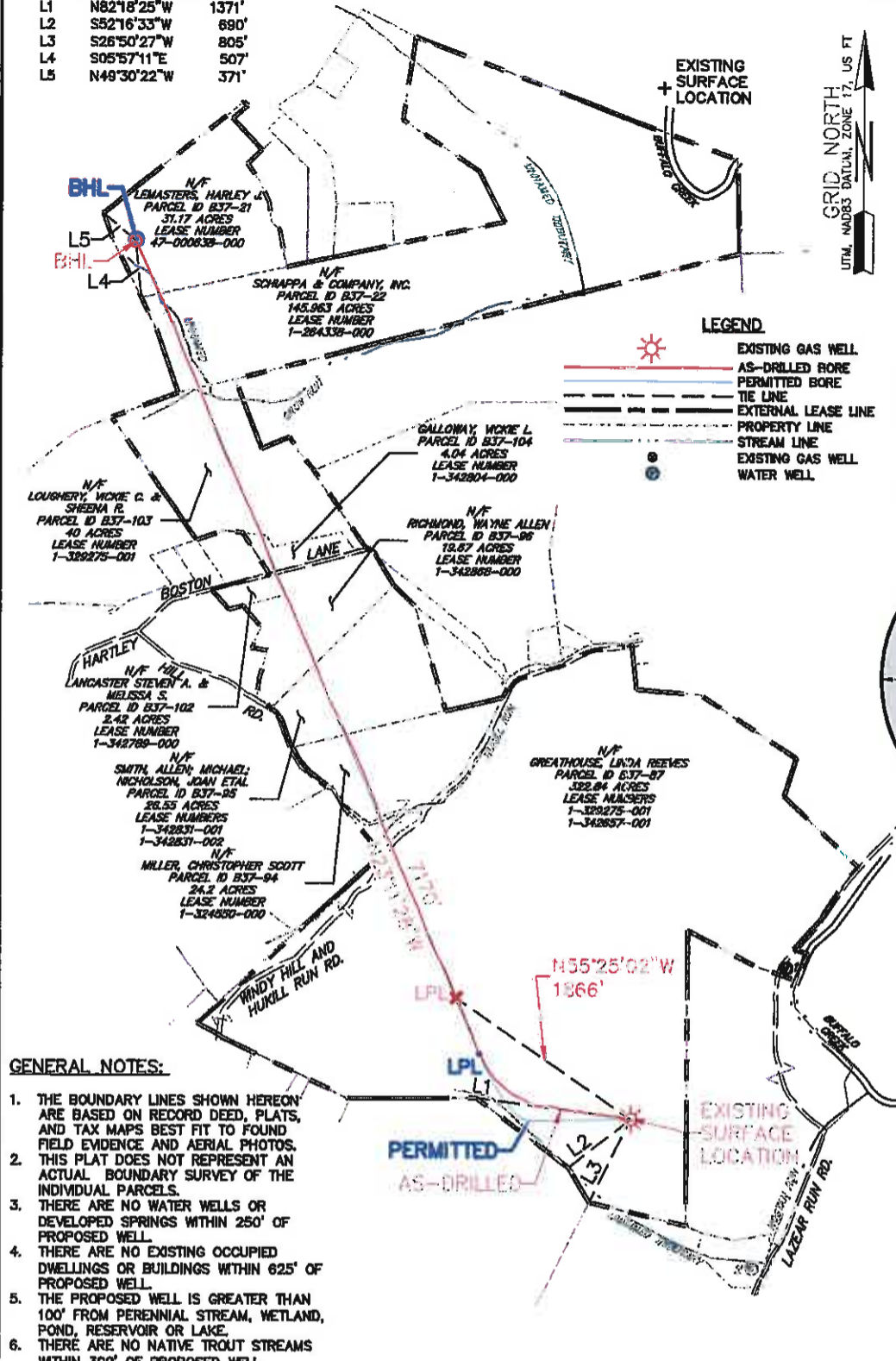
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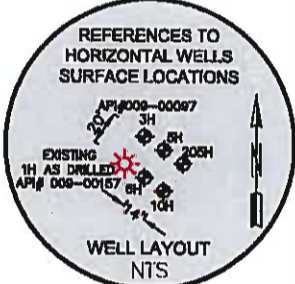
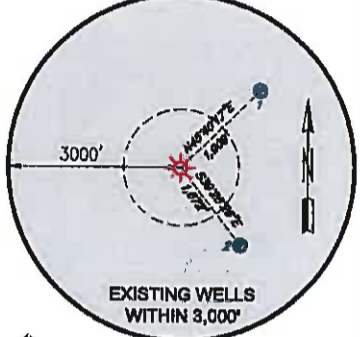
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EASTING: 532,114.936	



GENERAL NOTES:

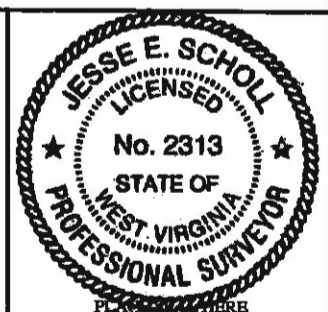
1. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON RECORD DEED, PLATS, AND TAX MAPS BEST FIT TO FOUND FIELD EVIDENCE AND AERIAL PHOTOS.
2. THIS PLAT DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE INDIVIDUAL PARCELS.
3. THERE ARE NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
4. THERE ARE NO EXISTING OCCUPIED DWELLINGS OR BUILDINGS WITHIN 625' OF PROPOSED WELL.
5. THE PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR OR LAKE.
6. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED WELL.



FILE #: 087569015  
 DRAWING #: 087569015-SV-1H AS-DRILL  
 SCALE: 1" = 1,400'  
 MINIMUM DEGREE OF ACCURACY: 1/200  
 PROVEN SOURCE: SUBMETER MAPPING  
 OF ELEVATION: SURVEY 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.

SIGNED: \_\_\_\_\_  
 R.P.E.: \_\_\_\_\_ L.L.S.: 2313



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP  
 OFFICE OF OIL & GAS  
 601 57TH STREET  
 CHARLESTON, WV 25304



DATE: MARCH 15, 2016  
 OPERATOR'S WELL #: LINDA GREATHOUSE BRK-1H  
 API WELL #: 47  
 STATE: WV  
 RECEIVED 00157  
 Office of Oil and Gas

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

WATERSHED: UPPER OHIO SOUTH  
 COUNTY/DISTRICT: BROOKE/ BUFFALO  
 SURFACE OWNER: GREATHOUSE, LINDA REEVES  
 OIL & GAS ROYALTY OWNER: GREATHOUSE, LINDA REEVES

CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PERFORATE NEW FORMATION  PLUG & ABANDON

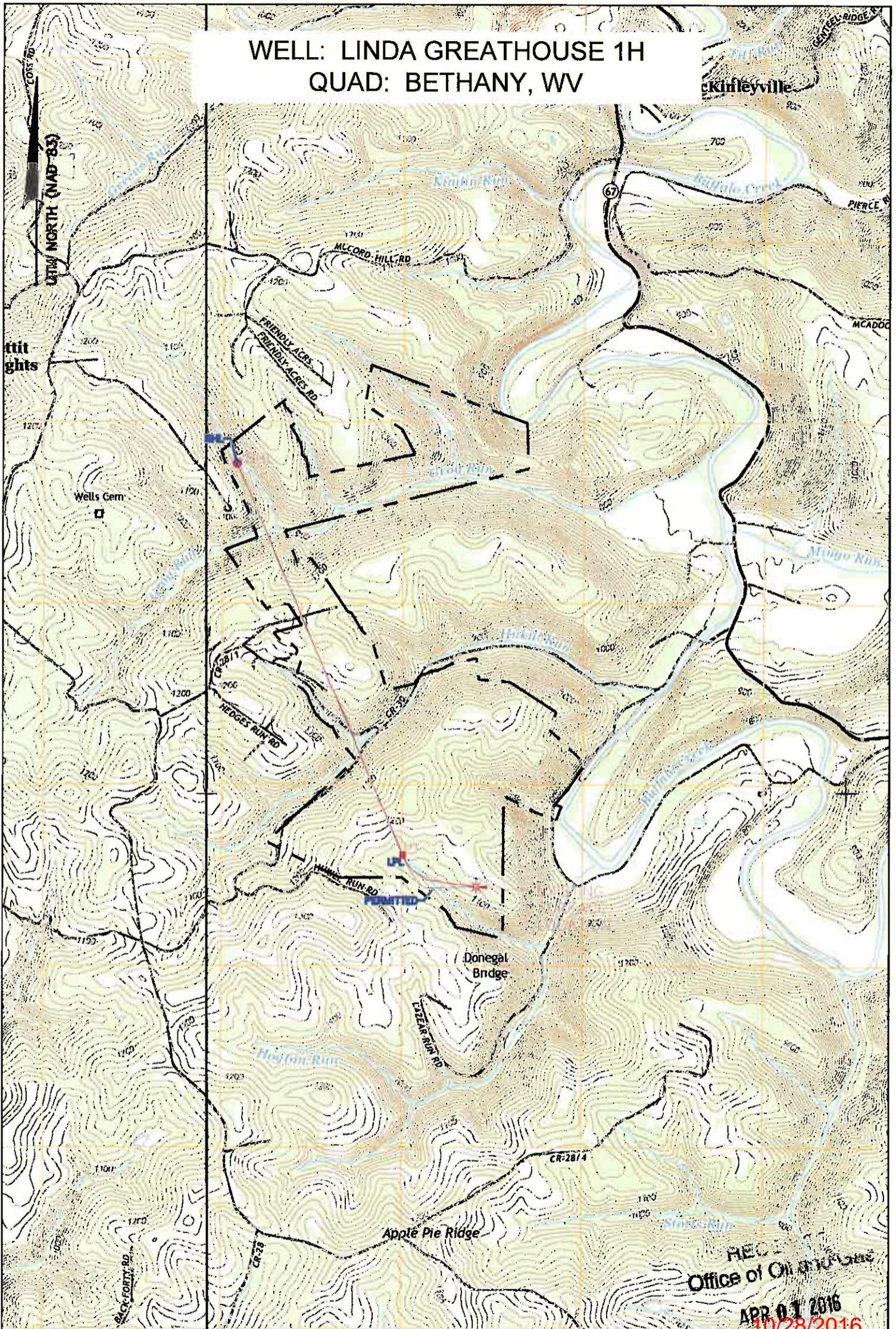
DRILL  PLUG OFF OLD FORMATION  CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY):

TARGET FORMATION: MARCELLUS  
 ESTIMATED DEPTH: TVD: 5,856' TMD: 14,073'  
 WELL OPERATOR: SWN PRODUCTION COMPANY, LLC  
 DESIGNATED AGENT: DEE SOUTHALL  
 ADDRESS: P.O. BOX 1300  
 CITY: JANE LEW STATE: WV ZIP CODE: 26378

ELEVATION: 1,138'  
 QUADRANGLE: BETHANY, WV  
 ACREAGE: 864.91±



# WELL: LINDA GREATHOUSE 1H QUAD: BETHANY, WV



NOTE:  
THE PURPOSE OF THIS PLAT IS FOR THE LOCATION OF PROPOSED GAS  
WELLS AND DOES NOT REPRESENT A CLOSED BOUNDARY SURVEY.  
PROPERTY LINES AND OWNERS WERE OBTAINED FROM VARIOUS FIELD  
EVIDENCE, TAX RECORDS AND AERIAL MAPPING.

**LEGEND**

----- EXTERNAL LEASE LINE

Applicant / Well Operator Name <b>SWN PRODUCTION COMPANY, LLC</b>	Well (Farm) Name <b>LINDA GREATHOUSE BRK</b>	Well # <b>1H</b>	Serial #
Address <b>PO BOX 1300 JANE LEW, WV 26378</b>	County - Code <b>BROOKE - 009</b>	District <b>BUFFALO</b>	
Surface Landowner / Lessor <b>LINDA GREATHOUSE</b>	USGS 71/2 Quadrangle Map Name <b>BETHANY, W.V.A.</b>		