

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

API 47 - 51 - 01590 County Marshall District Franklin
Quad New Martinsville 7.5' Pad Name Goudy Field/Pool Name _____
Farm name PPG Industries Inc. Well Number 9H
Operator (as registered with the OOG) Gastar Exploration Inc.
Address 229 West Main Street Suite 301 City Clarksburg State WV Zip 26301

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4398555.4 Easting 514667.0
Landing Point of Curve Northing 4398552.6 Easting 514424.7
Bottom Hole Northing 4400157.5 Easting 513422.7

Elevation (ft) 1238' 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)
Synthetic Oil Base Mud

Date permit issued January 29, 2013 Date drilling commenced 4/19/2013 Date drilling ceased 5/5/2013
Date completion activities began 1/25/2015 Date completion activities ceased 4/13/2015
Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 1155' Open mine(s) (Y/N) depths None
Salt water depth(s) ft 1670' Void(s) encountered (Y/N) depths None
Coal depth(s) ft 999'-1006' & 1221'-1245' Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) No

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Reviewed by: [Signature]
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AX 05/06/2016

API 47-51 - 01590 Farm name PPG Industries Inc. Well number 9H

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							
Surface	26"	20"	105'	New	PE / 54.5 #/ft		Yes
Coal	17.5"	13.375"	1307'	New	H-40 / 48 #/ft	83'	Yes
Intermediate 1	12.25"	9.625"	2572'	New	J-55 / 36 #/ft	85'	Yes
Intermediate 2							
Intermediate 3							
Production	8.875"	5.5"	13,111'	New	P-110 / 20 #/ft		Yes
Tubing		2.375"	6582'	New	N80/4.7#		
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	Class A	297	15.6	1.19	353	Surface	12
Coal	Type 1	925	15.2	1.26	1166	Surface	8
Intermediate 1	Type 1	880	15	1.29	1135	Surface	8
Intermediate 2							
Intermediate 3							
Production	50:50 Class H / 50:50 Type 1	1332 / 1783	14.5 / 14.5	1.18	3676	Surface	
Tubing							

Drillers TD (ft) 13,141' _____ Loggers TD (ft) N/A _____

Deepest formation penetrated Marcellus _____ Plug back to (ft) N/A _____

Plug back procedure N/A _____

Kick off depth (ft) 5988' _____

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 _____

Surface/Coal Casing - 3 Centralizers at 300' spacing _____

Intermediate Casing - 7 Centralizers at 300' Spacing _____

Production Casing - 181 Centralizers total - 1 centralizer every joint in the lateral and curve and 1 centralizer every third joint in the vertical section _____

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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Goudy #9H Perforation Information

<u>Stage</u>	<u>Date</u>	<u>Perforated interval</u>		<u>Number of Perfs</u>	<u>Formation</u>
		<u>From</u> ft	<u>To</u> ft		
1		12969	12934	36	Marcellus
2		12894	12826	39	Marcellus
3		12740	12425	40	Marcellus
4		12367	12146	41	Marcellus
5		12035	11821	40	Marcellus
6		11762	11646	36	Marcellus
7		11546	11335	40	Marcellus
8		11227	11048	40	Marcellus
9		10980	10809	41	Marcellus
10		10662	10542	36	Marcellus
11		10453	10270	40	Marcellus
12		10206	10010	40	Marcellus
13		9947	9733	41	Marcellus
14		9677	9455	40	Marcellus
15		9393	9242	36	Marcellus
16		9157	8944	40	Marcellus
17		8840	8717	36	Marcellus
18		8573	8387	40	Marcellus
19		8319	8102	40	Marcellus
20		7989	7823	40	Marcellus
21		7753	7630	36	Marcellus

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Fluid & Sand Volume Summary - Goudy #9H

<u>Stage</u>	<u>Stimulation Date</u>	<u>Avg Pump Rate (BPM)</u>	<u>Avg Pressure (PSI)</u>	<u>Max Break Pres. (PSI)</u>	<u>ISIP (PSI)</u>	<u>Sand Total (lbs)</u>	<u>Total Water (bbls)</u>
1	1/26/2015	38	7946	39	5137	1158	1886
2	1/27/2015	79	7086	7328	3396	357452	9172
3	1/27/2015	36	7696	5670	3484	18217	5174
3 B	1/30/2015	81	6708	7107	3679	372496	8117
4	1/30/2015	80	6882	7493	3560	375606	9014
5	1/30/2015	75	7402	5440	3898	361078	8232
6	2/1/2015	78	7146	5248	3605	361335	8351
7	2/1/2015	80	6580	4883	4148	359011	8279
8	2/2/2015	80	6638	5078	4017	355028	8140
9	2/3/2015	81	6934	6227	4671	362850	8338
10	2/3/2015	80	7021	5750	4453	355725	8216
11	2/4/2015	79	7008	6085	4403	362294	8108
12	2/4/2015	80	7103	6674	4096	371020	8213
13	2/5/2015	50	7980	6324	4971	5485	2707
14	2/6/2015	80	6615	0	4289	363167	7913
15	2/6/2015	78	7008	7011	4100	353560	7590
16	2/7/2015	80	6507	6195	4481	359341	8056
17	2/8/2015	80	6912	6480	3675	360485	7945
18	2/8/2015	81	6913	6515	3927	358525	7918
19	2/9/2015	77	6973	6131	4432	301194	7308
20	2/9/2015	81	6600	6453	4185	359249	7855
21	2/10/2015	81	6801	6514	3591	345096	7684

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Formations	Top TVD	Base TVD	Top MD	Base MD
SHALE	0	1000	0	1000
SEWICKLEY COAL	1000	1010	1000	1010
SHALE	1010	1220	1010	1220
PITTSBURGE COAL	1220	1230	1220	1230
SHALE AND SANDSTONE	1230	1685	1230	1685
3RD SALT SAND	1685	1740	1865	1740
SHALE	1740	1827	1740	1827
MAXTON	1827	1860	1827	1860
SHALE	1860	1883	1860	1883
BIG LIME	1883	1958	1883	1958
BIG INJUN	1958	2216	1958	2216
WEIR SILTSTONE	2216	2455	2216	2455
BEREA SILTSTONE	2455	2695	2455	2695
SAND AND SHALE	2695	3030	2695	3030
GORDON	3030	3070	3030	3070
SHALE	3070	3520	3070	3520
WARREN SANDSTONE	3520	3550	3520	3550
BRAILLER	3550	5013	3550	5014
JAVA SHALE	5013	5232	5014	5235
PIPE CREEK SHALE	5232	5432	5235	5435
SHALE	5432	5853	5435	5869
RHINESTREET	5853	6147	5869	6188
CASHAQUA	6147	6232	6188	6296
MIDDLESEX	6232	6256	6296	6331
WEST RIVER	6256	6323	6331	6440
GENESEO	6323	6347	6440	6490
TULLY LIMESTONE	6347	6378	6490	6567
HAMILTON	6378	6387	6567	6599
MARCELLUS	6387	na	6599	na
ONONDOGA	na	na	na	na

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Welcome Tracy H., Operator - OpNo. G1410907 [Log Out]

Hydraulic Fracturing DISCLOSURE



[FIND A WELL BY STATE](#)

[ABOUT PROJECT PARTNERS](#)

(Note: Clicking the FracFocus, FIND A WELL links will open a new window.)

Prepare Disclosure for FracFocus Submission

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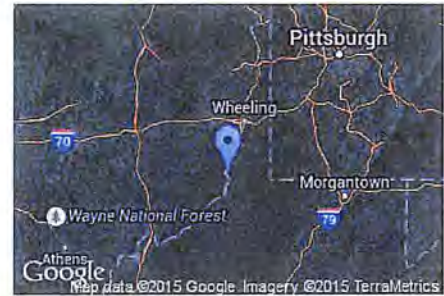
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Hydraulic Fracturing Data

[Edit](#)

Job Start Date 4/16/2014	Job End Date 2/10/2015	API Number 47-051-01590-00-00	State & County West Virginia --- Marshall
Well Name GOUDY 9H			
Longitude -80.84345	Latitude 39.75112	Datum NAD27	Federal/Tribal Well? ()
True Vertical Depth (ft) 6490	Total Water Vol (gal) 10079412	Total Non Water Vol 0	Total Mass (lbs) 91236132.9092



MSDS Chemical Ingredients

[New Additive](#) [Select Additive](#) [Add Additive](#)

Trade Name	Supplier	Purpose	Ingredients	CAS #	% High Additive	% HF Job	Comments	Ingredient Mass
Edit Water	Operator	Carrier	Water	7732-18-5	100%	92.0155609%		84040121.3736
Edit Sand, White, 40/70	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	4.92026%		4489057
Edit Sand, White, 30/50	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	1.96759%		1795155
Edit Sand, White, 100 mesh	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.409455%		373671
Edit HCl, 10.1 - 15%	Baker Hughes	Acidizing	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.378313%	SmartCare Product	345158.8
Edit GW-3LDF	Baker Hughes	Gelling Agent	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0861063%	SmartCare Product	78560.13

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345158.8

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SmartCare Product 78560.13

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<input type="button" value="Edit"/>	FRW-18	Baker Hughes	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0661477%	SmartCare Product	60350.68
<input type="button" value="Edit"/>	Calcium Chloride	Baker Hughes	Salts	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0206058%		18800
<input type="button" value="Edit"/>	Alpha 1427	Baker Hughes	Biocide	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0158435%	SmartCare Product	14455
<input type="button" value="Edit"/>	Enzyme G-NE	Baker Hughes	Breaker	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.014567%	SmartCare Product	13290.4532
<input type="button" value="Edit"/>	ScaleSorb 4, (50# bag)	Baker Hughes	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0042198%	SmartCare Product	3850
<input type="button" value="Edit"/>	Ferrotrol 300L	Baker Hughes	Iron Control	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0026023%	SmartCare Product	2374.27238
<input type="button" value="Edit"/>	CI-39	Baker Hughes	Corrosion Inhibitor	MSDS and Non-MSDS Ingredients Listed Below	N/A	0%	.0015226%		1389.2

Non-MSDS Chemical Ingredients

	Trade Name	Supplier	Purpose	Ingredients	CAS #	% High Additive	% HF Job	Comments	Ingredient Mass
<input type="button" value="Edit"/>	Ingredients in Additive(s) (MSDS and non-MSDS)	Baker Hughes	See Trade Name(s) List	Crystalline Silica (Quartz)	14808-60-7	100%	7.2896513%		6657821.5
				Water	7732-18-5	95%	.3724002%		340122.45473
				Mineral Oil	8042-47-5	70%	.0602109%		54992.091
				Hydrochloric Acid	7647-01-0	15%	.0566872%		51773.82
				Guar Gum	9000-30-0	60%	.0516093%		47136.078
				Paraffinic Petroleum Distillate	64742-55-8	30%	.0258047%		23568.039
				Petroleum Distillates	64742-47-8	30%	.0258047%		23568.039
				Calcium Chloride	10043-52-4	100%	.0205841%		18800
				Poly (acrylamide-co-acrylic acid) partial sodium salt	62649-23-4	30%	.0198234%		18105.204
				Hydrotreated Light Distillate	64742-47-8	30%	.0198234%		18105.204
				Glutaraldehyde	111-30-8	30%	.004748%		4336.5
				Sodium Chloride	7647-14-5	5%	.0043331%		3957.534
				1-butoxy-2-propanol	5131-66-8	5%	.0043008%		3928.0065
				Crystalline Silica: Quartz	14808-60-7	5%	.0043008%		3928.0065

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Isotridecanol, ethoxylated	9043-30-5	5%	.0043008%	3928.0065
Diatomaceous Earth, Calcined	91053-39-3	100%	.0042154%	3850
Ammonium Chloride	12125-02-9	3%	.0019823%	1810.5204
Didecyl Dimethyl Ammonium Chloride	7173-51-5	10%	.0015827%	1445.5
Citric Acid	77-92-9	60%	.0015598%	1424.563428
Alcohols, C12-16, ethoxylated	68551-12-2	2%	.0013216%	1207.0136
Oleamide DEA	93-83-4	2%	.0013216%	1207.0136
Potassium Chloride	7447-40-7	5%	.0010292%	940
Quaternary Ammonium Compound	68424-85-1	5%	.0008674%	792.21
Ethanol	64-17-5	5%	.0007913%	722.75
Hemicellulase Enzyme Concentrate	9025-56-3	5%	.0007276%	664.52266
Sodium chloride	7647-14-5	15%	.0006323%	577.5
Sodium Carboxymethyl inulin	430439-54-6	15%	.0006323%	577.5
Oxyalkylated Fatty Acid	61791-002	40%	.0006084%	555.68
Aldehyde	104-55-2	30%	.0004563%	416.76
Formic Acid	64-18-6	30%	.0004563%	416.76
Tar Bases, Quinoline Derivs., Benzyl Chloride-Quaternized	72480-70-7	30%	.0004563%	416.76
Sorbitan Monooleate	1338-43-8	.5%	.0003304%	301.7534
Polyoxyethylene Sorbitan Monooleate	9005-65-6	.5%	.0003304%	301.7534
Sodium glycolate	2836-32-0	5%	.0002108%	192.5
Sodium diglycolate	35249-69-5	5%	.0002108%	192.5
2-butoxy-1-propanol	15821-83-7	.1%	.000086%	78.56013
Isopropanol	67-63-0	5%	.0000761%	69.46
Sulfurized polyolefin	68037-13-8	5%	.0000761%	69.46
Crystalline Silica (Cristobalite)	14464-46-1	1%	.0000422%	38.5
Potassium Iodide	7681-11-0	2%	.0000304%	27.784
Polyaklylene	7756-94-7	1%	.0000152%	13.892
Potassium Acetate	127-08-2	.5%	.0000076%	6.946

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Goudy 9H Cement and additives

Surface: Type 1 + 2% CaCl + ¼ # per sack celloflake

Intermediate: Type 1 + 3% R-3 + 4% BA-10A + 5% SMS + ¼ per sack cello flake

Production: 50:50 Class H + .2% CD32 + 1.2% FL62 + .1% ASA301 + .4% sms

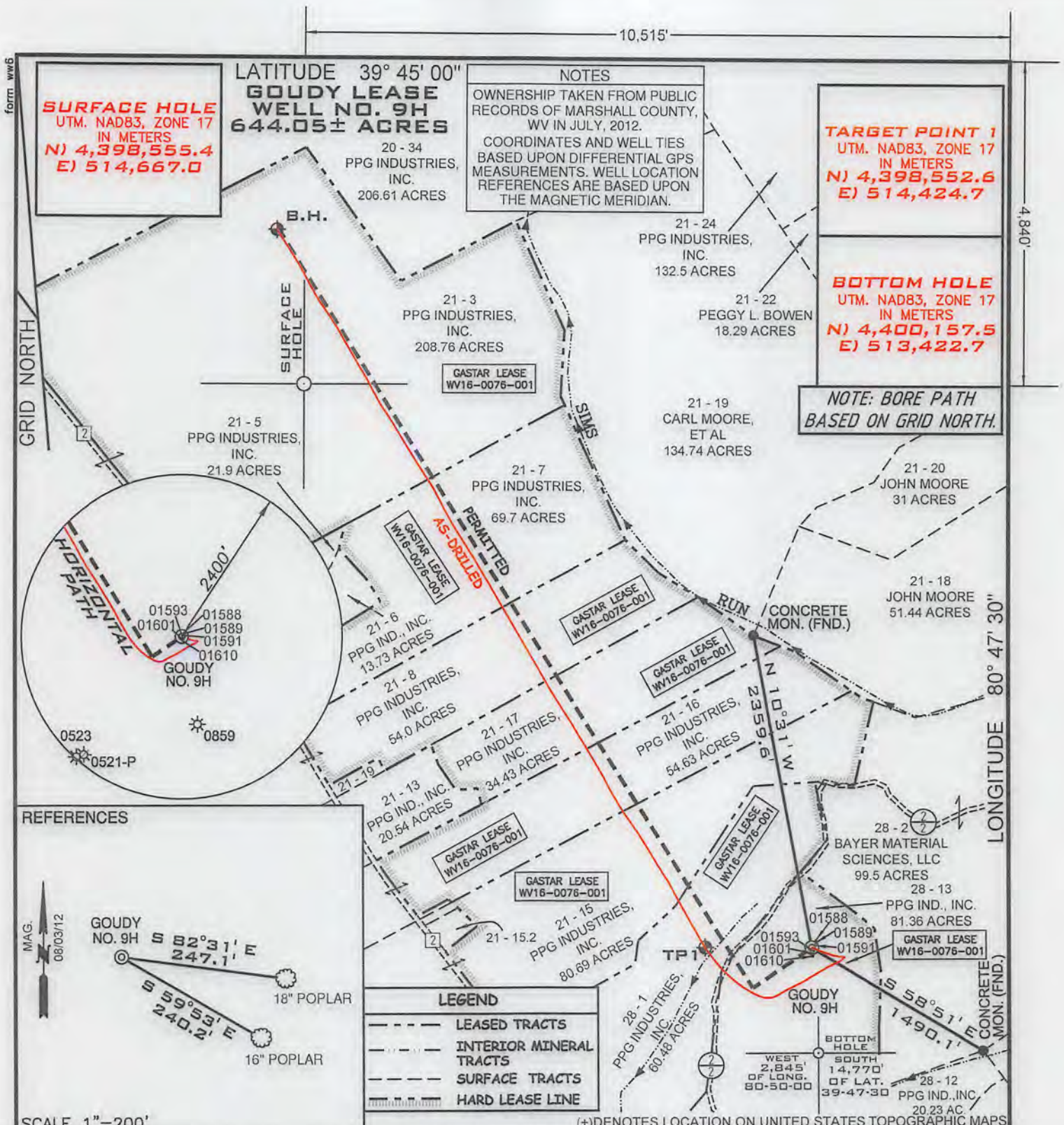
50:50 Type 1 + .4% R3 + 1% FL62 + .15% ASA301 + .3% CD32

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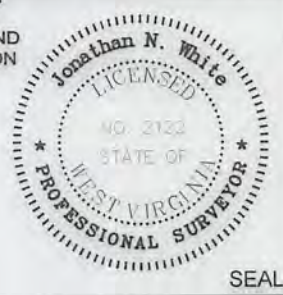
05/06/2016



FILE NUMBER W0120315 (WB1-55)
 DRAWING NUMBER GOUDY_WP_9H-WR65
 SCALE 1" = 1000'
 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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.S. 2122 *Jonathan N. White*



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

DATE: JULY 15, 2015

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

LOCATION ELEVATION 1238' WATERSHED TRIBUTARY OF THE OHIO RIVER
 DISTRICT FRANKLIN COUNTY MARSHALL
 QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER WV16-0076-001

SURFACE OWNER PPG INDUSTRIES, INC. ACREAGE 81.36
 OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC. LEASE ACREAGE 644.05

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 MARCELLUS ESTIMATED DEPTH TVD 6,416' TMD 13,141'
 WELL OPERATOR GASTAR EXPLORATION INC. DESIGNATED AGENT MICHAEL McCOWN
 ADDRESS 229 W MAIN STREET, SUITE 301 ADDRESS 229 W MAIN STREET, SUITE 301
CLARKSBURG WV, 26301 CLARKSBURG WV, 26301

05/06/2016

CITY NAME PERMIT

CLARKSBURG WV, 26301
 Address 229 W MAIN STREET, SUITE 301
 WELL OPERATOR GASTAR EXPLORATION INC.
 DESIGNATED AGENT MICHAEL McCOWN
 TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TVD 6,416', TMD 13,141',
 PERMIT CLEAN OUT & REPLUG
 PLUG & ABANDON
 PERFORMATE NEW FORMATION
 OTHER PHYSICAL CHANGE (SPECIFY)
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC.
 SURFACE OWNER PPG INDUSTRIES, INC.
 QUADRANGLE NEW MARTINSVILLE 7.5', LEASE NUMBER W18-0078-001
 COUNTY MARSHALL
 DISTRICT FRANKLIN
 LOCATION ELEVATION 1238', WATERSHED TRIBUTARY OF THE OHIO RIVER
 WELLS TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION X STORAGE DEEP SHALLOW X
 STATE COUNTY PERMIT
 47-051-01590
 API WELL NO.
 OPERATORS WELL NO. GOUDY NO. 9H AS-DRILLED
 DATE: JULY 15, 2012



GRADE GPS
OF ELEVATION SUBMETER MAPPING
PROVEN SOURCE
1/200
MINIMUM DEGREE OF ACCURACY
1" = 1000'
SCALE
DRAWING NUMBER GOUDY_WP_9H-WR65
FILE NUMBER W0120315 (WB1-25)



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 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 P. S. 2122
 Jonathan N. White

SCALE 1"=200'

REFERENCES

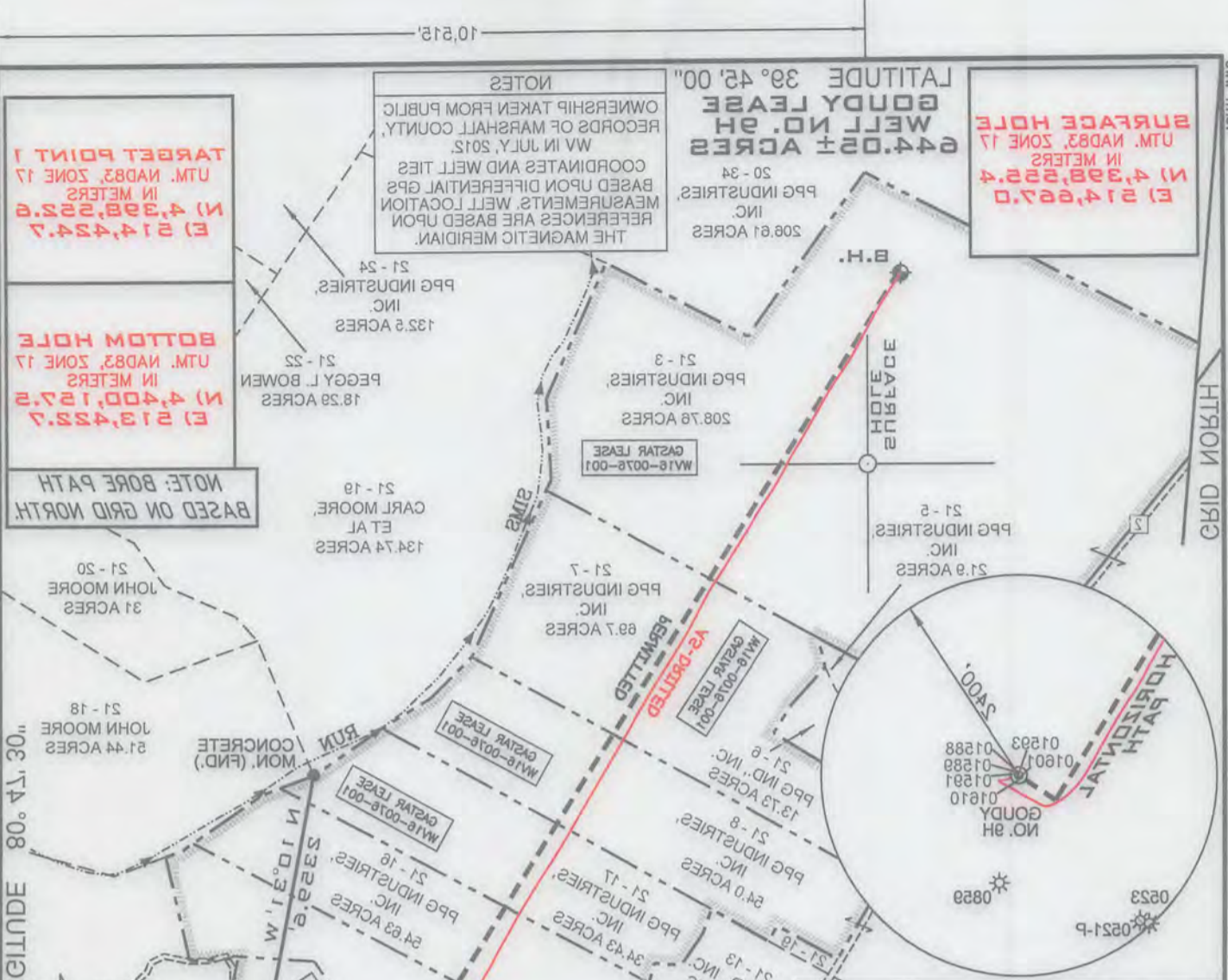
LEGEND
 HARD LEASE LINE
 SURFACE TRACTS
 TRACTS INTERIOR MINERAL
 LEASED TRACTS

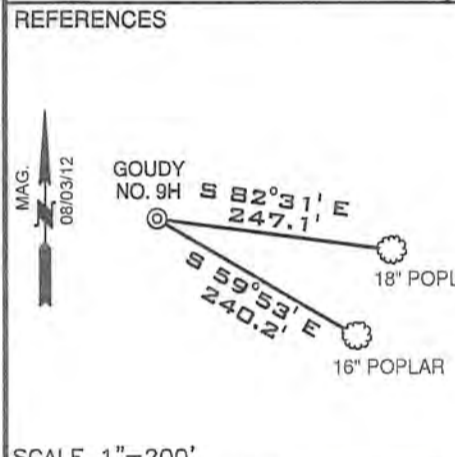
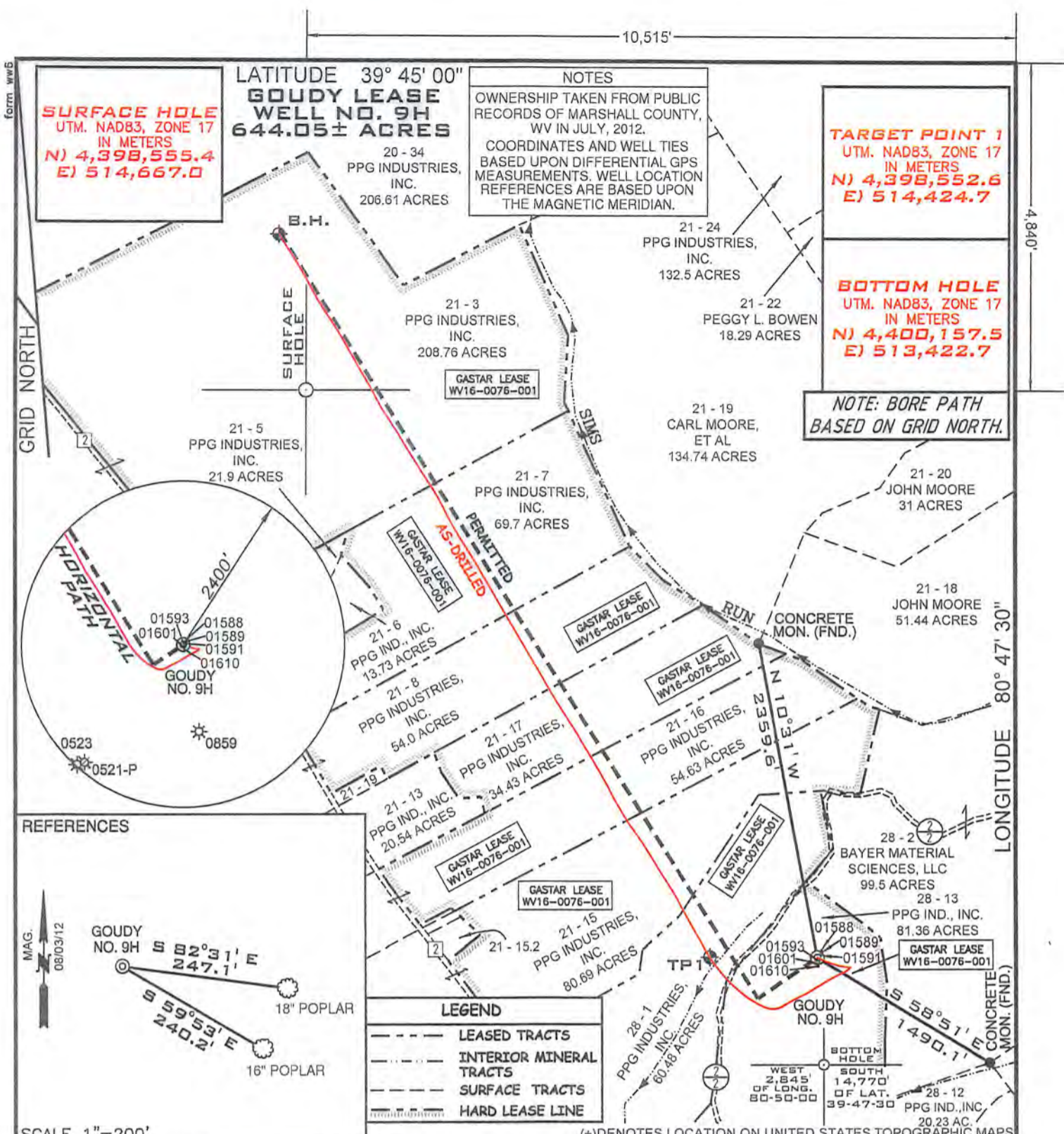
(+) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS
 80-20-00
 82-47-30
 PPG IND. INC.
 20.23 AC.
 28-15
 14,770
 2,842'
 WEST
 GONDY NO. 9H
 01610
 01589
 01588
 81.38 ACRES
 PPG IND. INC.
 28-13
 89.5 ACRES
 BAYER MATERIAL SCIENCES, LLC
 28-2
 21-18
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 21-16
 21-15
 21-14
 21-13
 20.24 ACRES
 PPG IND. INC.
 21-12
 34.43 ACRES
 PPG INDUSTRIES, INC.
 21-11
 24.0 ACRES
 PPG INDUSTRIES, INC.
 21-10
 13.73 ACRES
 PPG IND. INC.
 21-9
 21-8
 21-7
 68.7 ACRES
 PPG INDUSTRIES, INC.
 21-6
 21-5
 21.9 ACRES
 PPG INDUSTRIES, INC.
 21-4
 208.78 ACRES
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CLARKSBURG WV, 26301
 Address 229 W MAIN STREET, SUITE 301
 WELL OPERATOR GASTAR EXPLORATION INC.
 DESIGNATED AGENT MICHAEL McCOWN
 TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TVD 6,416', TMD 13,141',
 PERMIT CLEAN OUT & REPLUG
 PLUG & ABANDON
 PERFORMATE NEW FORMATION
 OTHER PHYSICAL CHANGE (SPECIFY)
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC.
 SURFACE OWNER PPG INDUSTRIES, INC.
 QUADRANGLE NEW MARTINSVILLE 7.5', LEASE NUMBER W18-0078-001
 COUNTY MARSHALL
 DISTRICT FRANKLIN
 LOCATION ELEVATION 1238', WATERSHED TRIBUTARY OF THE OHIO RIVER
 WELLS TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION X STORAGE DEEP SHALLOW X
 STATE COUNTY PERMIT
 47-051-01590
 API WELL NO.
 OPERATORS WELL NO. GOUDY NO. 9H AS-DRILLED
 DATE: JULY 15, 2012

SCALE 1"=200'
 REFERENCES

18" POPLAR
 300'
 HORIZONTAL
 SURFACE HOLE
 GONDY NO. 9H
 01610
 01581
 01588
 01593
 01601





REFERENCES

MAG. 08/03/12

GOUDY NO. 9H S 82°31' E 247.1'

S 59°53' E 240.2'

18" POPLAR

16" POPLAR

LEGEND

--- LEASED TRACTS

--- INTERIOR MINERAL TRACTS

--- SURFACE TRACTS

--- HARD LEASE LINE

SCALE 1"=200'

FILE NUMBER W0120315 (WB1-55)

DRAWING NUMBER GOUDY_WP_9H-WR65

SCALE 1" = 1000'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.S. 2122 *Jonathan N. White*



Jonathan N. White
LICENSED
110,2122
STATE OF WEST VIRGINIA
PROFESSIONAL SURVEYOR

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

DATE: JULY 15, 2015

OPERATORS WELL NO. GOUDY NO. 9H AS-DRILLED

API WELL NO. 47-051-01590

STATE COUNTY PERMIT

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

LOCATION ELEVATION 1238' WATERSHED TRIBUTARY OF THE OHIO RIVER

DISTRICT FRANKLIN COUNTY MARSHALL

QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER WV16-0076-001

SURFACE OWNER PPG INDUSTRIES, INC. ACREAGE 81.36

OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC. LEASE ACREAGE 644.05

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

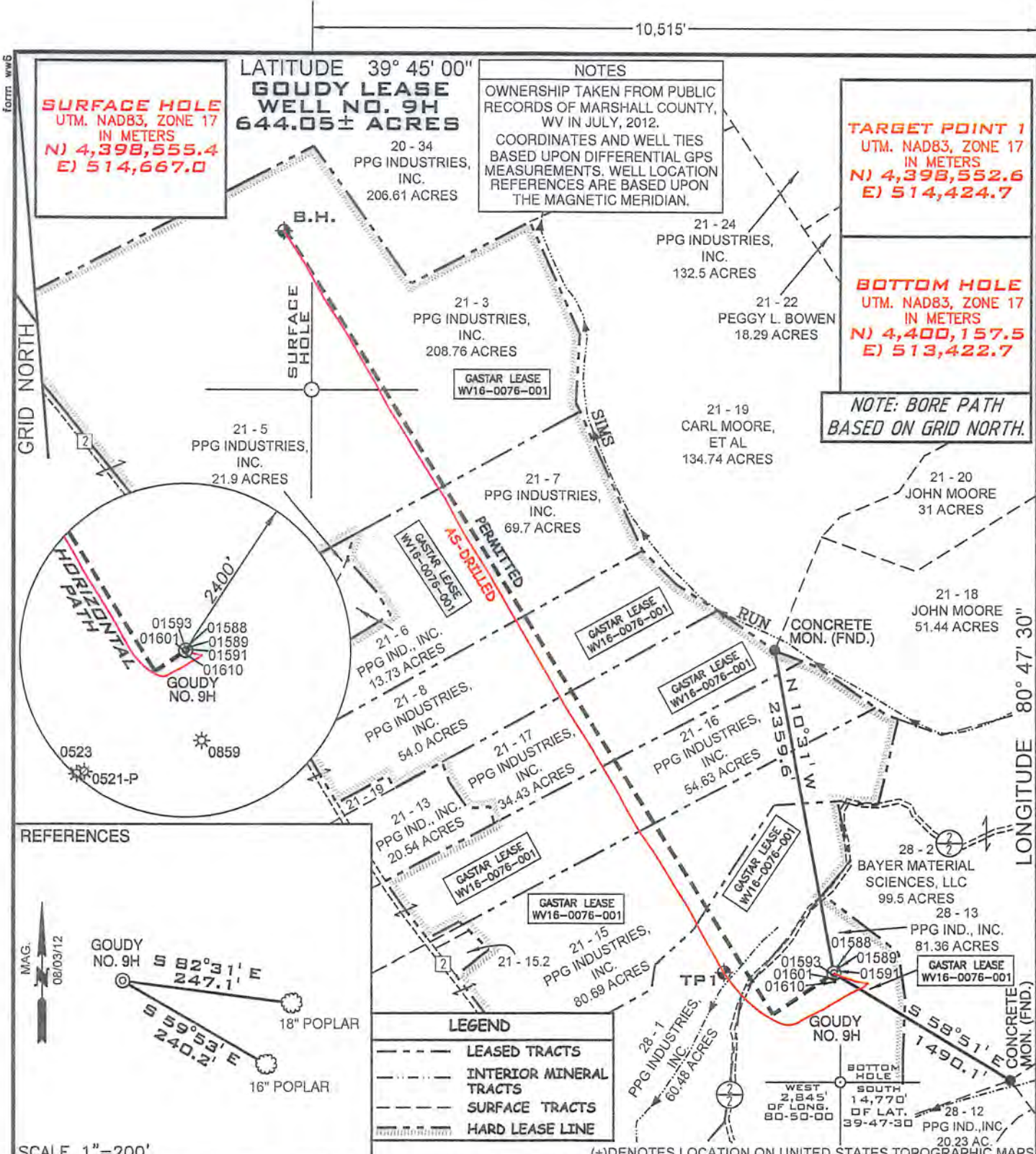
TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,416' TMD 13,141'

WELL OPERATOR GASTAR EXPLORATION INC. DESIGNATED AGENT MICHAEL McCOWN

ADDRESS 229 W MAIN STREET, SUITE 301 CLARKSBURG WV, 26301 ADDRESS 229 W MAIN STREET, SUITE 301 CLARKSBURG WV, 26301

05/06/2016

COUNTY NAME PERMIT



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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.S. 2122 *Jonathan N. White*



FILE NUMBER W0120315 (WB1-55)
 DRAWING NUMBER GOUDY_WP_9H-WR65
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
GRADE GPS

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

DATE: JULY 15, 2015

OPERATORS WELL NO. GOUDY NO. 9H AS-DRILLED
 API WELL NO. 47-051-01590

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

LOCATION ELEVATION 1238' WATERSHED TRIBUTARY OF THE OHIO RIVER
 DISTRICT FRANKLIN COUNTY MARSHALL
 QUADRANGLE NEW MARTINSVILLE 7.5' LEASE NUMBER WV16-0076-001

SURFACE OWNER PPG INDUSTRIES, INC. ACREAGE 81.36
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PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) _____

TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD 6,416' TMD 13,141'

WELL OPERATOR GASTAR EXPLORATION INC. DESIGNATED AGENT MICHAEL McCOWN
 ADDRESS 229 W MAIN STREET, SUITE 301 CLARKSBURG WV, 26301 ADDRESS 229 W MAIN STREET, SUITE 301 CLARKSBURG WV, 26301

05/06/2016

COUNTY NAME
 PERMIT