



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Wednesday, January 31, 2018
WELL WORK PERMIT
Vertical / Rework

EAGLE NATRIUM LLC
POST OFFICE BOX 191

NEW MARTINSVILLE, WV 26155

Re: Permit approval for 28
47-051-01381-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: 28
Farm Name: PPG INDUSTRIES, INC.
U.S. WELL NUMBER: 47-051-01381-00-00
Vertical / Rework
Date Issued: 01/31/2018

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

51-01381W

WW - 2B
(Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Eagle Natrium LLC 39600 Marshall Franklin New Martinsville
Operator ID County District Quadrangle

2) Operator's Well Number: #28 well 3) Elevation: 633'

4) Well Type: (a) Oil _____ or Gas _____
(b) If Gas: Production _____ / Underground Storage _____
Deep _____ / Shallow _____

CK#
100056016
\$ 550.⁰⁰

5) Proposed Target Formation(s): Salina Proposed Target Depth: 6700

6) Proposed Total Depth: 6800 Feet Formation at Proposed Total Depth: Salina

7) Approximate fresh water strata depths: Less than 80'

8) Approximate salt water depths: N/A

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9) Approximate coal seam depths: 252 to 258 ft.

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10) Approximate void depths,(coal, Karst, other): N/A

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

The current well has a 7" liner that extends approximately 67' into the Salina formation, We believe the well is currently plugged at the bottom of the liner or the casing has been damage from shifting in the cavern. We would like to cut the bottom 65' of liner off to make room to continue injecting at the top of formation.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	30"	A53 CS	118.7 lb/ft.	100'	100'	200 CF
Fresh Water	20"	API 5L	94 lb/ft	200'	200'	200 CF
Coal						
Intermediate	13 3/8"	J-55	54.5 lb/ft	2200'	2200'	1530'
Production	9 5/8"	L-80	53.5 lb/ft	6200'	6200'	1500 CF
Tubing						
Liners	7"	L-80	32 lb/ft	1224'	1224'	N/A

Packers: Kind: 7" X 9 5/8" Model HSCP Hydraulic Liner Hanger w/intergral single element packer
Sizes: 7 1/2" ID X 6" Tie-Back Receptacle
Depths Set Approximately 5600'

No Library

57-01381W

WR-35
Rev (8-10)

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

DATE: April 8, 2011
API #: 47-051-01381

Farm name: PPG Industries, Inc. Operator Well No.: #28 Brine Well

LOCATION: Elevation: 634.0 ft. Quadrangle: New Martinsville, WV

District: Franklin County: Marshall
Latitude: 5830 Feet South of 39 Deg. 45 Min. 00 Sec.
Longitude 1500 Feet West of 80 Deg. 50 Min. 00 Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
PPG Industries, Inc., N. St. Rt. 2, New Martinsville, WV 26155	30" C.S.	67 ft.	67 ft.	316
Agent: J. Thomas Horan	20" J-55	174 ft.	174 ft.	387
Inspector: William Hendershot	13-3/8" J-55	2136 ft.	2136 ft.	2443
Date Permit Issued: September 15, 2010	9-5/8" L-80	6278 ft.	6278 ft.	1701
Date Well Work Commenced: Sept. 24, 2010	7" L-80	1289 ft.	1289 ft.	Not applic.
Date Well Work Completed: March 21, 2011				
Verbal Plugging: Not Applicable				
Date Permission granted on: Not Applicable				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6785 ft.				
Total Measured Depth (ft): 6785 ft.				
Fresh Water Depth (ft.):				
Salt Water Depth (ft.): 6683 ft. (solid)				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				
Void(s) encountered (N/Y) Depth(s)				

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APR 21 2011
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OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Not Applicable Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation Not Applicable Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

J. Thomas Horan
Signature

4/8/11
Date

Were core samples taken? Yes No

Were cuttings caught during drilling? Yes No

Were Electrical, Mechanical, or Geophysical logs recorded on this well?
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Perforation, fracturing, and stimulating not performed. Log for geological record not performed.

Formations Encountered: Top Depth / Bottom Depth
Surface:

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WW-2A
(Rev. 6-14)

1). Date: 1/17/18
2.) Operator's Well Number #28 well
State County Permit
3.) API Well No.: 47- 051 - 01381

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Eagle Natrium LLC</u>	Name _____
Address <u>PO Box 191</u>	Address _____
<u>New Martinsville, WV 26155</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector _____	(c) Coal Lessee with Declaration
Address _____	Name _____
_____	Address _____
Telephone _____	_____

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TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

OR
 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

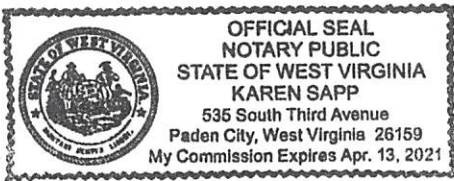
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Well Operator Eagle Natrium LLC.
By: [Signature]
Its: Manager, Environmental Control
Address: P.O. Box 191
New Martinsville, WV 26155
Telephone: 304-455-2200
Email: _____

Subscribed and sworn before me this 18 day of January 2018, Eagle Natrium LLC.

[Signature] Notary Public
My Commission Expires April 13, 2021

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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EAGLE NATRIUM LLC OWNS ALL SURFACE AND
SUBSURFACE MINERAL RIGHTS FOR THE LOCATION OF
28 BRINE WELL.

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**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By: Its:

Eagle Natrium LLC
Jim Hagan
Agent

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Eagle Natrium LLC. OP Code 39600

Watershed (HUC 10) Ohio River Quadrangle New Martinsville

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. N/A

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

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Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

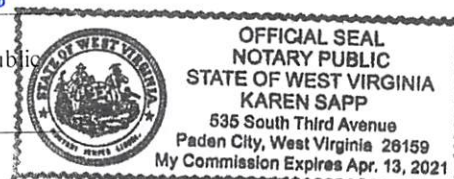
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature J.T. Horan
Company Official (Typed Name) J. Thomas Horan
Company Official Title Manager Environmental

Subscribed and sworn before me this 18 day of January, 2018

Karen Sapp Notary Public

My commission expires April 13, 2021



Proposed Revegetation Treatment: Acres Disturbed 1 acre gravel lot. Prevegetation pH _____

Lime _____ Tons/acre or to correct to pH _____

Fertilizer type _____

Fertilizer amount _____ lbs/acre

Mulch _____ Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type

lbs/acre

Seed Type

lbs/acre

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

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Title: _____ Date: _____

Field Reviewed? () Yes () No

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: Eagle Natrium LLC.
Watershed (HUC 10): Ohio River Quad: New Martinsville
Farm Name: _____

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

A coil tube unit will be used to clean the I.D. of the well casing. Any return fluid will be a brine solution. This fluid will be collected in a 200 barrel frack tank for re-injection at a later date.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

The pumps and tanks will be located in sufficient containment, and will capable to collect any lost fluid while making hose or piping connections.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Ohio River < 1/4 mile.

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4. Summarize all activities at your facility that are already regulated for groundwater protection.

The Westlake Natrium Plant is a NPDES regulated facility for discharge into the Ohio River (Permit no. WV0004359). The plant is also covered by the WV AST Rule (Registration no. 2014-0002939)

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

The ground water at the Natrium plant is contaminated due to historical operations. The plant is covered under a corrective action permit (No. WVD 004336343)

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

No waste material will be used for deicing or fill material on the property.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

Westlake supervision will provide training to employees discussing the requirement to prevent ground contamination. Training to include spill containment requirements for all oils and fuels.

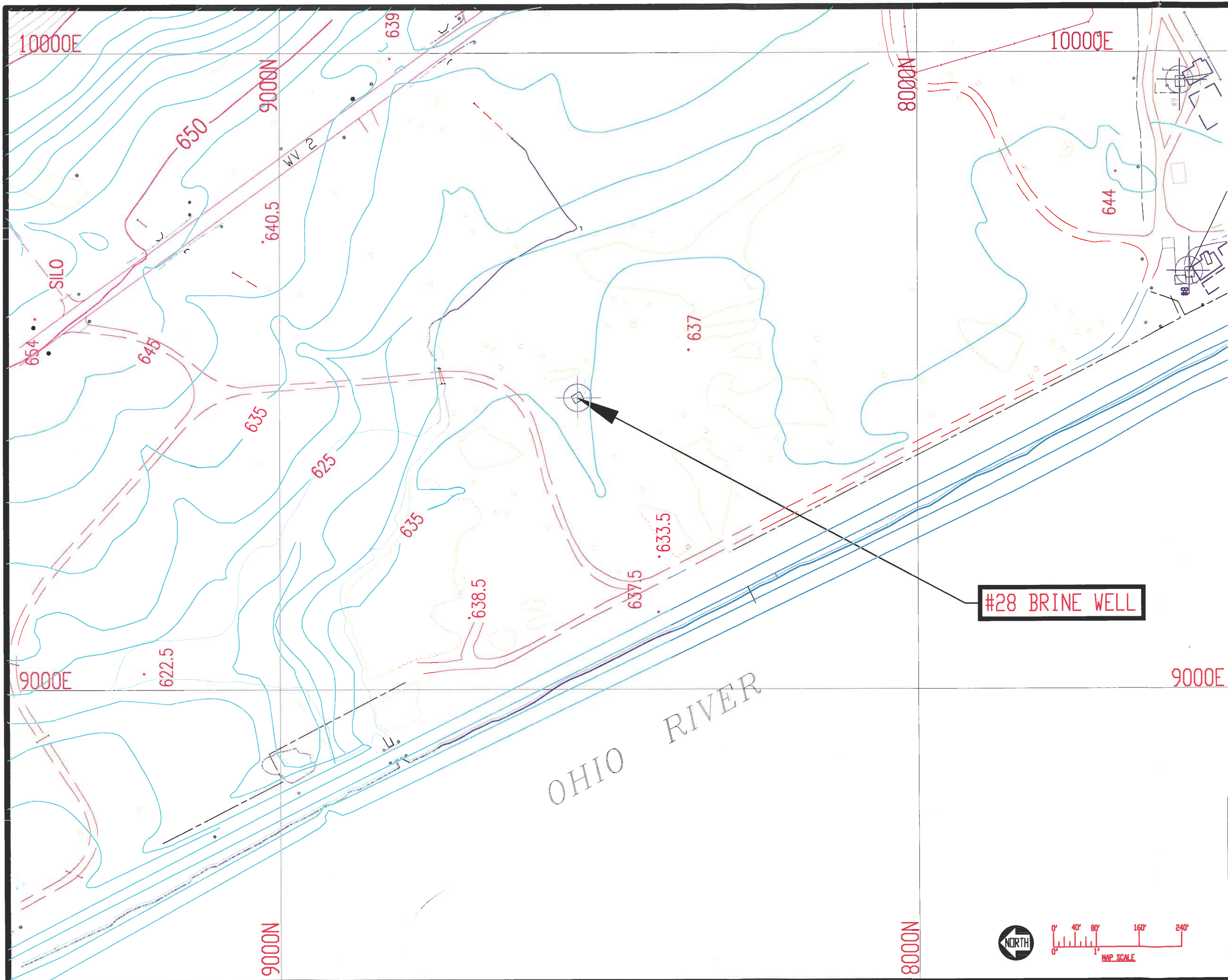
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8. Provide provisions and frequency for inspections of all GPP elements and equipment.

24/7 supervision will be required during all well work operations. On going inspections will be performed to prevent groundwater contamination.

Signature: J.T. Horan


Date: 1/18/18

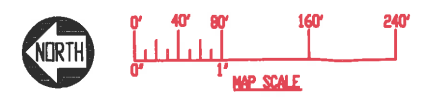


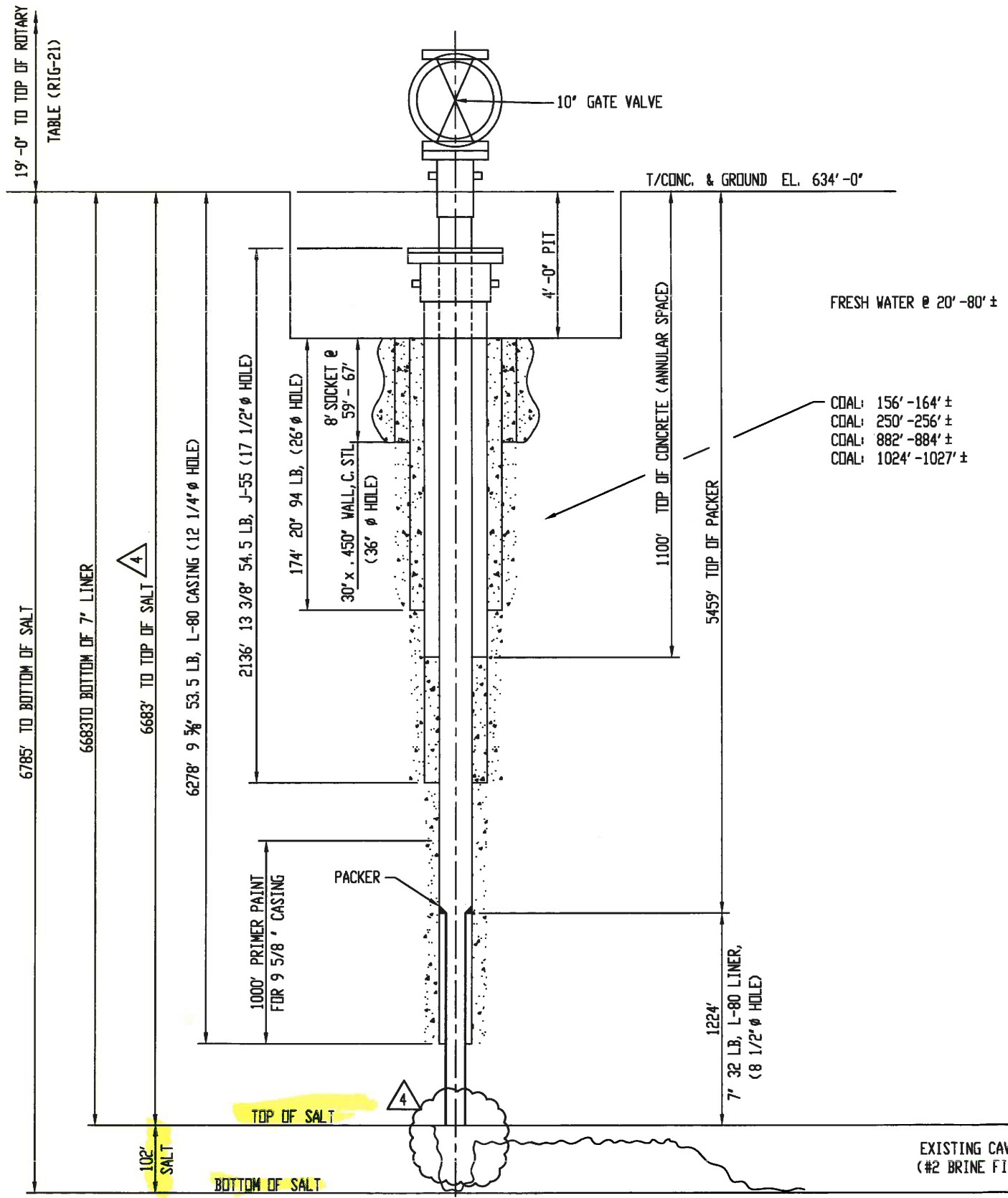
#28 BRINE WELL

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REV. BY	DATE	DESCRIPTION

DEPT: 49 - GENERAL	
TITLE: 28 BRINE WELL CONTOURS	
DRAWING TYPE: GENERAL AREA PLAN (GAP)	
EQUIPMENT No:	
 Westlake Chemical NATRIUM	DRAWN: DWS DATE: 01/18/18 CHECKED: SMC DATE: 01/18/18 APP'VD: SMC DATE: 01/18/18 SCALE: 1"=80' ACAD: YES JOB No: DWG: 49A-28BW
	REV: 0





- CONDUCTOR PIPE - 30" CARBON STEEL, 142.15 LB/FT, 67' TO BEDROCK, GROUT TO CELLAR, ERW.
- FRESH WATER PIPE - 20" Ø CASING, J-55, 94 LB/FT, BTC RANGE 3, 174' LG., CEMENTED TO CELLAR, ERW.
- INTERMEDIATE - 13 3/8" J-55, 54.5 LB/FT, 2136' CEMENTED TO CELLAR, 8 RND. THRD. & SHORT COUPLED, RANGE 3, ERW.
- PRODUCTION - 9 5/8" L-80, 53.5 LB/FT, 6278', CEMENTED TO 1000', 8 RND THRD. & LONG COUPLED, RANGE 3, SEAMLESS.
- LINER - 7' L-80, 32 LB/FT, 1224', NOT CEMENTED, HYDRIL 521 THRD, RANGE 3, SEAMLESS.
- VALVE - 10" CAMERON GATE VALVE, MODEL WKM GV-10-RJ-PRS-E1C0-T10M-BJ CLASS 900# W/ RTJ FLANGES, S/N 111811884001, WCC BODY, STEM 4130/40 EN, GATE A487/EN, SEAT CS/HF6/GF, M/N MF1C
- WELLHEAD - 13 3/8" x 9 5/8", HANGER SLIPS, TOP PACKING, & TOP PROTECTION FLG., W/TWO 2" LPO'S.
- PACKER - 7" x 9 5/8" MECHANICAL LINER HANGER/PACKER, W/ INTEGRAL SINGLE ELEMENT PACKER + 7 1/2" I. D. x 6" TIE BACK RECEPTACLE
- TOP FLANGE - 10" DIA. x ANSI CLASS 900 RTJ WELD NECK FLANGE W/ SCH. 80 BORE, AS PER ANSI B 16.5/A105-4130
- BOTTOM FLANGE - 10" DIA. x ANSI CLASS 900 RTJ COMPANION FLANGE FOR 9-5/8" X 8 ROUND LTC CASING, AS PER ANSI B 16.5/A105-4130, WITH 2 EA. 2" DIA. LPO'S
- RING JOINT GASKET - R53 CAD PLATED RING GASKET FOR 10" x ANSI CLASS 900 RTJ FLANGE.
- LPO VALVE - 2" VOGT GATE VALVE NO. 2801, CLASS 800#, OS&Y SCREWED (V-1085) - 4 REQ'D. - STORE I. D. NO. 374050026

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REV. BY	DATE	DESCRIPTION
4 DHW	01/16/18	CUT OFF 65' OF LINER LEFT IN HOLE.
3 DHW	07/05/16	REVISED/ADDED WATER AND COAL LEVELS
2 MGH	03/24/11	AS BUILT
1 MGH	03/21/11	REV FOR AS BUILT CHGS.

DEPT: 70 - BRINE	
TITLE: #28 BRINE WELL (API #47-051-1381)	
ELEVATIONAL CROSS SECTION (SCHEMATIC)	
DRAWING TYPE: MECHANICAL PROCESS EQPT	MPE
EQUIPMENT No: 7000-115-0050	
	DRAWN: M. HUSARIK DATE: 06/30/2010
	CHECKED: S. CLARK DATE: 06/30/2010
	APP'VD: S. CLARK DATE: 06/30/2011
	SCALE: NONE ACAD YES
	JOB No: P-847-G
DWG: 70-2585	REV: 4

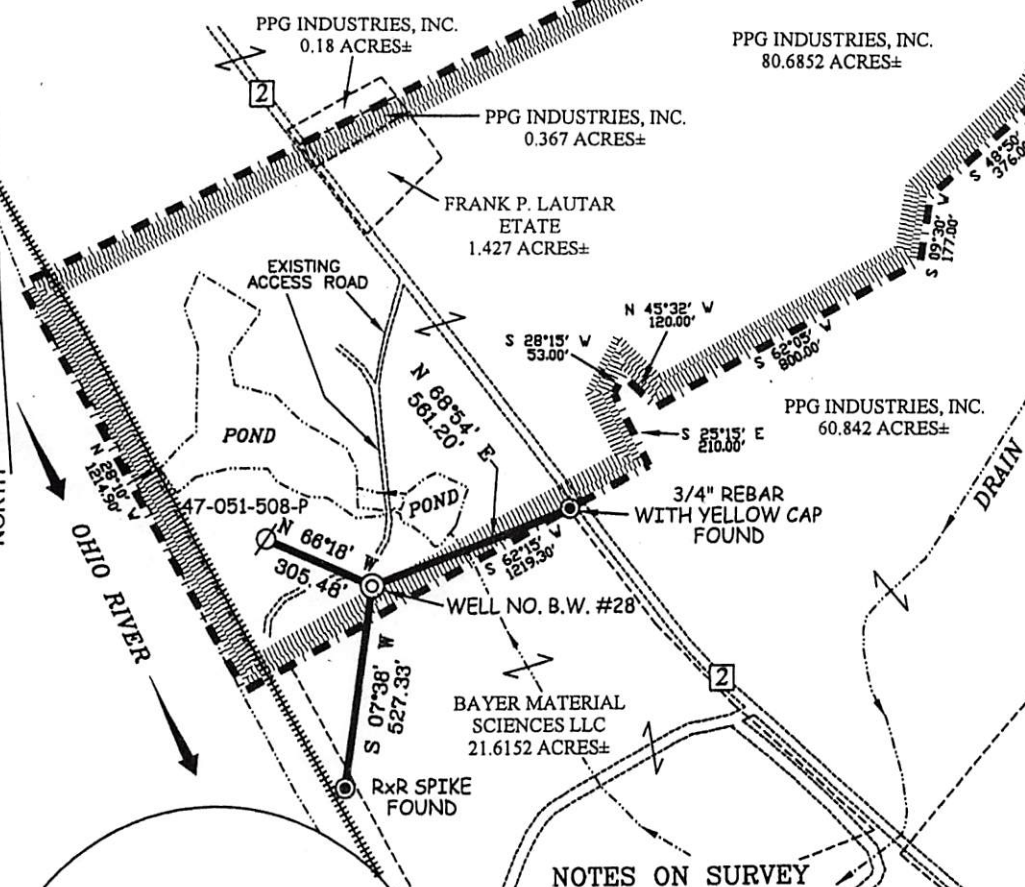
PPG LEASE WELL NO. B.W. #28

PPG INDUSTRIES, INC.
54.633 ACRES±

LATITUDE 39° 45' 00"

1,500'

LONGITUDE 80° 50' 00"

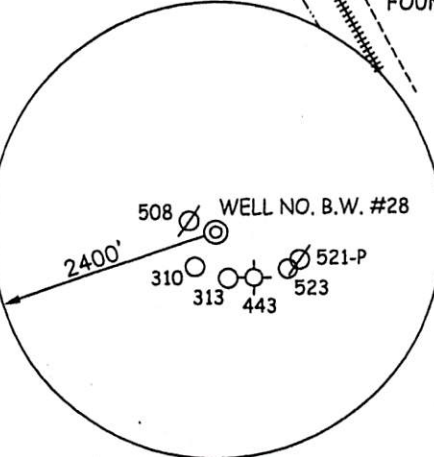


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PPG INDUSTRIES, INC.
81.368 ACRES±

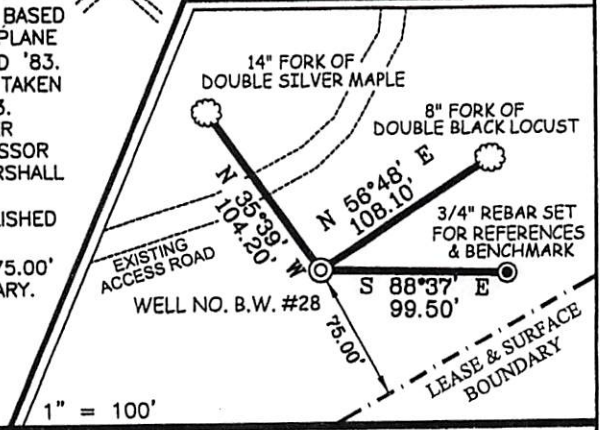
WELL NO. B.W. #28
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)
N. 452,235
E. 1,623,515
LAT=(N) 39.73394
LONG=(W) 80.83872
UTM (NAD 83)
N. 4,398,249
E. 513,836

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '83.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 169 PAGE 323.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARSHALL COUNTY IN JULY, 2010.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SURVEY GRADE).
6. WELL NO. B.W. #28 IS LOCATED 75.00' FROM LEASE AND SURFACE BOUNDARY.



REFERENCES



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 DIVISION OF ENVIRONMENTAL PROTECTION.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE SEPTEMBER 02, 20 10
OPERATORS WELL NO. B.W. #28
API WELL NO. 47-051-01381W
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 7492PBW28R (306-74)
PROVEN SOURCE OF ELEVATION DGPS SURVEY GRADE SCALE 1" = 500'

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

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

LOCATION: ELEVATION 633' WATERSHED TRIBUTARY OF OHIO RIVER
DISTRICT FRANKLIN COUNTY MARSHALL QUADRANGLE NEW MARTINSVILLE 7.5'

SURFACE OWNER PPG INDUSTRIES, INC. ACREAGE 80.6852±
ROYALTY OWNER PPG INDUSTRIES, INC. LEASE ACREAGE _____ LEASE NO. _____

PROPOSED WORK:
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) BRINE WELL AN NOT OIL & GAS WELL TARGET FORMATION SALINE ESTIMATED DEPTH 6,800'

WELL OPERATOR PPG INDUSTRIES, INC. DESIGNATED AGENT J. THOMAS HORAN
ADDRESS WV RT. 2, P.O. BOX 191 ADDRESS WV RT. 2, P.O. BOX 191
NEW MARTINSVILLE, WV 26155 NEW MARTINSVILLE, WV 26155

COUNTY NAME PERMIT