(4/25)

CHECKLIST FOR FILING A UIC PERMIT APPLICATION

Please utilize this checklist to ensure you have prepared, completed, and enclosed all required documentation and payment to ensure a timely review of your submittal.

Operator	David Dale DBA DD Oil Company		
Existing UIC Permit ID Number	2008 71623	UIC Well API Number	47-087-01623 2008 71623

Office of Oil and Gas Office Use Only	
Permit Reviewer	
Date Received	
Administratively Complete Date	
Approved Date	
Permit Issued	

Please check the fees and payment included.

Fees		Payment Type	
UIC Permit Fee: $500	✓	Check	✓
Groundwater Protection Plan (GPP) Fee: $50.00	✓	Electronic	
		Other	

Please check the items completed and enclosed.

- [✓] Checklist
- [ ] UIC-1
  - [ ] Section 1 – Facility Information
  - [ ] Section 2 – Operator Information
  - [ ] Section 3 – Application Information
  - [ ] Section 4 – Applicant/Activity Request and Type
  - [ ] Section 5 – Brief description of the Nature of the Business
  - [ ] CERTIFICATION
- [ ] Section 6 – Construction
  - [ ] Appendix A Injection Well Form
  - [ ] Appendix B Storage Tank Inventory
- [ ] Section 7 – Area of Review
  - [ ] Appendix C Wells Within the Area of Review

Promoting a healthy environment

dep

- ☐ Appendix D Public Service District Affidavit
- ☐ Appendix E Water Sources
- ☐ Appendix F Area Permit Wells
- ☐ Section 8 – Geological Data on Injection and Confining Zones
- ☐ Section 9 – Operating Requirements / Data
  - ☐ Appendix G Wells Serviced by Injection Well
- ☐ Section 10 – Monitoring
- ☐ Section 11 – Groundwater Protection Plan (GPP)
  - ☐ Appendix H Groundwater Protection Plan (GPP)
- ☐ Section 12 – Plugging and Abandonment
- ☐ Section 13 – Additional Bonding
- ☐ Section 14 – Financial Responsibility
  - ☐ Appendix I Financial Responsibility
- ☐ Section 15 – Site Security Plan
  - ☐ Appendix J Site Security for Commercial Wells
- ☐ Section 16 – Additional Information
  - ☐ Appendix K Other Permit Approvals

NOTE: For all 2D wells an additional bond in the amount of $5,000 is required.

Reviewed by (Print Name): _____

Reviewed by (Sign): _____

Date Reviewed: _____

FORM WW-3 (B)
1/12

1) Date: 12/17/2013
2) Operator's Well No. I.B.SUMMERS # 7
3) API Well No.: 47 - 087 - 1623
State County Permit
4) UIC Permit No. UIU 2D 087 1623

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

5) WELL TYPE: Liquid Injection [ ] / Gas Injection (not storage) [ ] / Waste Disposal [X]
6) LOCATION: Elevation: 936' Watershed: McKOWN CREEK
District: WALTON County ROANE Quadrangle WALTON
7) WELL OPERATOR: DD OIL CO.
Address PO BOX 406
SPENCER,WV. 25276
8) DESIGNATED AGENT DAVID DALE
Address PO BOX 406
SPEMNCER,WV. 25276
9) OIL & GAS INSPECTOR TO BE NOTIFIED
Name EWARD N. GAINER
Address PO BOX 821
SPENCER,WV. 25276
10) DRILLING CONTRACTOR
Name NONE
Address

11) PROPOSED WELL WORK Drill [ ] / Drill deeper [ ] / Redrill [ ] / Stimulate [ ]
Plug off old formation [ ] / Perforate new formation [ ] Convert [ ]
Other physical change in well (specify)
12) GEOLOGIC TARGET FORMATION BIG INJUN Depth 2066 Feet (top) to 2117 Feet (bottom)
13) Estimated Depth of Completed Well, (or actual depth of existing well): Feet
14) Approximate water strata depths: Fresh 220 Feet Salt 1300 Feet
15) Approximate coal seam depths: NONE
16) Is coal being mined in the area? Yes [ ] No [X]
17) Virgin reservoir pressure in target formation 550 psig Source FIELD DATE
18) Estimated reservoir fracture pressure 4500 psig (BHFP)
19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 20 Bottom hole pressure 500
20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES PRODUCED SALT WATER (brine) CORROSION, RUST, & SALT-BLOCK AGENTS
21) FILTERS (IF ANY) 10X30 MICRION FELT
22) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL SOAP, ANTI CORROSION, OIL DISPORANTS
23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS Size	Grade	Weight per ft.	New	Used	FOOTAGE INTERVALS For Drilling	Left In Well	CEMENT FILL-UP OR SACKS (CU. FT.)	PACKERS
Conductor	none								Kinds
Fresh Water	8 5/8 M		20	X		150'	150'	100 sks	HALIBURTON R-4
Coal									Sizes
Intermediate									
Production	4 1/2 J		9.5	X		2150'	2150'	455sks	Depths set
Tubing	2 7/8 J		6.2	X			2068'		
Liners									Perforations
									Top 2077 Bottom 2095

24) APPLICANT'S OPERATING RIGHTS were acquired from QUARKER STATE OIL CO. by deed [ ] / lease [X] / other contract [ ] / dated NOV. 30 1973 of record in the ROANE County Clerk's office in LEASE BOOK Book 130 Page 400

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Environmental Protection

Environmental Protection

WR-37
REV. 5/01

Date: 3/27/14
Operator's Well Number I.B. Summers 7
API Well No.: State 47- County 087 - Permit 01623

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENT-OFFICE OF OIL AND GAS
PRE-OPERATION CERTIFICATE
FOR LIQUID INJECTION OR WASTE DISPOSAL WELL

WELL OPERATOR David Dale
Address Box 406
Spencer, WV 25276

DESIGNATED AGENT Same
Address

GEOLOGICAL TARGET FORMATION Big Injun Depth 2066 feet(top) to 2117 feet(bottom)
Virgin reservoir pressure in target formation 550 psig
Source of information on virgin reservoir pressure: Field Data
Perforation intervals 2077 2095 Open-hole intervals —

MAXIMUM PERMITTED INJECTION OPERATIONS
Well head injection pressure: 620 psig Bottom hole pressure: 500 psig
Volume per hour: 50 bbls

DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED
Liquids to be injected for oil recovery: —
Wastes to be disposed of: salt water

Additives (Slurry mediums, inhibitors, solvents, oxidizers, deoxidizers, etc.)
Salt Block, Rust inhibitors, bacteria control agent

SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL Soap, anti-corrosion,

ADDITIONAL DRILLING AS PART OF THE CONVERSION (Complete form WR-35)

DETAILS ON NEW CASING AND TUBING PROGRAM AS PART OF THE CONVERSION (To be completed below unless the new casing and tubing program is described on a form WR-35, submitted in connection with the permit to which this form WR-37 relates.)

CASING OR TUBING TYPE	SIZE	GRADE	WEIGHT PER FT.	NEW	USED	FOOTAGE USED IN DRILLING	FOOTAGE LEFT IN WELL	CEMENT USED	PACKERS (KIND, SIZE, DEPTH SET)
CONDUCTOR	—								
FRESH WATER	8 5/8	M	20	X		150'	150	100 SKS	
COAL	—								
INTERMEDIATE	—								
PRODUCTION	4 1/2	J	9.5	X		2150	2150	455 SKS	
TUBING	2 3/8	J	6.2	X					Halliburton R-4
LINERS									

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WV Department of Environmental Protection

87-21623

WR37

MECHANICAL INTEGRITY TEST

Test Method: Fresh water piston pump, loaded hole with 32 gals Hooked all equipment to well head started pumping reached 920# started meter at 12:00 Noon ran 34 minutes

The undersigned certifies that the test was performed on March 19, 2014 and demonstrated mechanical integrity of the well. The test was witnessed by _____ representing the Office of Oil and Gas.

David Dale
Well Operator

3/25-14
Date

THIS WELL IS AUTHORIZED FOR INJECTION.

Signed _____ UIC PROGRAM DIRECTOR

Date 3/28/14

[NOTE: That the mechanical integrity of this well must be demonstrated again within ninety (90) days of five years from this date in order for injection to continue. Please notify the state inspector 24 hours in advance of the test].

David Dale
Well Operator

By: David Dale

Its Owner

DD OIL CO.
PO BOX 406
SPENER,WV 25276

MARCH 19 2014

MIT TEST WELL 47-087-1623:

On well location 10:15 am, loaded well with 32 gals of water. Hooked all the equipment to test with checked all connections one leaked redone ok.

Started pumping at 11:30 am reached 900 psi turned on chart at 12:00 noon run for 34 minutes

Chart enclosed.

David Dale

87-01623

GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK

CHART NO. MC MP-2000

METER

CHART PUT ON M

TAKEN OFF M

LOCATION T.B. Summers #6

REMARKS 42-022-1623

8 9 10 11 NOON 1 2 3 4 5 6 PM 7 8 9 10 11

200 400 600 800 1000 1200 1400 1600 1800

PRINTED IN U.S.A.

Form OG-10

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

14

Rotary ☑
Spudder ☐
Cable Tools ☐
Storage ☐

Quadrangle Walton

Permit No. ROA-1623

Oil or Gas Well Injection (KIND)

Company Joseph S. Gruss
Address Box 471, Spencer, W. Va.
Farm L. B. Summers Acres 105
Location (waters) McKown
Well No. 7 Elev. 936
District Walton County Roane
The surface of tract is owned in fee by George Moffatt
Address Walton, W. Va.
Mineral rights are owned by L. B. Summers, et al
Address Spencer, W. Va.
Drilling commenced 7-20-67
Drilling completed 7-29-67
Date Shot From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Cu. Ft.
Rock Pressure lbs. hrs.
Oil Injection Well bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS)

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13			
10			Size of
8¼	150	150	
6⅝			Depth set
5 3/16			
4½			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.
CASING CEMENTED 4½ SIZE 2150 No. Ft. 7-30-67 De
Amount of cement used (bags) 455 (Circulated)
Name of Service Co. Howco
COAL WAS ENCOUNTERED AT FEET INCHI
FEET INCHES FEET INCHI
FEET INCHES FEET INCHI

WELL FRACTURED (DETAILS) 30,000# 20/40 Sand and 30,000 Gallons Gelled Salt Water

RESULT AFTER TREATMENT (Initial open Flow or bbls.) Injection Test - 8 B/M @ 1250 PSI
ROCK PRESSURE AFTER TREATMENT HOURS
Fresh Water Feet Salt Water Feet
Injection Sand Big Injun Depth 2077-2095 and 2111-2115

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
			"ATTACHED"				

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DRILLER'S LOG

14

Joseph S. Gruss
Attn: Mr. Hickox
Spencer, West Virginia

I. B. SUMMERS #7 - ROANE COUNTY, WEST VIRGINIA

0	To	75	shaley sand shells
75	To	152	sand & shells
152	To	165	shale
165	To	400	shale, sandy shale & shells
400	To	490	sand
490	To	540	shale
540	To	657	sandy shale
657	To	667	lime
667	To	870	sandy shale & shale
870	To	1020	sand, shale & lime shells
1020	To	1175	sand, shaley sand
1175	To	1244	shaley sand
1244	To	1350	shaley sand
1350	To	1510	shaley sand & shale
1510	To	1555	shaley sand
1555	To	1620	shaley lime w/sand streaks
1620	To	1635	salt sand
1635	To	1885	salt sand
1885	To	1923	shale
1923	To	1927	shaley sand & sand
1927	To	1933	sand
1933	To	1965	lime
1965	To	2009	lime
2009	To	2054	lime & dolomite
2054	To	2066	dolomite
2066	To	2092	sand
2092	To	2110	sandy shale
2110	To	2117	shaley sand
2117	To	2150	silty shale
2150 T.D.			

AFFIDAVIT

STATE OF WEST VIRGINIA }
COUNTY OF WOOD } ss

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I hereby certify that the Driller's Log is correct according to the Daily Drilling Report.

MITCHELL & MITCHELL DRILLING CONTRACTORS

UIC-1
(4/25)

WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
www.dep.wv.gov/oil-and-gas

UNDERGROUND INJECTION CONTROL
(UIC)
PERMIT APPLICATION

UIC PERMIT ID # 2008716 23 API # 47-087-01623 WELL # Summers #7

Section I. Facility Information

Facility Name: DDoil Valton Disposal

Address: DDoil Co. PO Box 406

City: Spencer State: WV. Zip: 25276

County: Roane

Location description: Off Rt. 119. take existing Road through one gate 2.2 miles ~~to~~ well. tank Battery 100 ft off Rt. 119. Existing take a Mouth of McKowns Creek all water Pumped to well above.

Location of well(s) or approximate center of field/project in UTM NAD 83 (meters): SEE ATTACHED

Northing: ~~38° 38' 00" 218617.85~~ Easting: ~~81° 22' 30" 337183.35~~

Environmental Contact Information:

Name: David Dale Title: OWNER

Phone: 304-927-1147 Email: DDoil@yAHoo.com.

CELL 304-532-1147

Section 2. Operator Information

Operator Name: David Dale DBA DDoil Co.

Operator ID: 308509

Address: PO Box 406

City: Spencer State: W.V. Zip: 25276

County: Roane

Contact Name: Same Contact Title: Operator

Contact Phone: Same Contact Email: Same

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dep

2D0871623

Section 1 - Attachment

Office

Project

10 November 2015

INPUT	OUTPUT
Geographic, NAD83	UTM, NAD83 17 - 84W to 78W, Meters

SUMMERS 7

1/2

Latitude: 38 38.407
Longitude: 81 22.863

Northing/Y: 4276910.036
Easting/X: 466837.664

Convergence: -0 14 16.58378
Scale Factor: 0.999613542

Well

MCKOWN CREEK

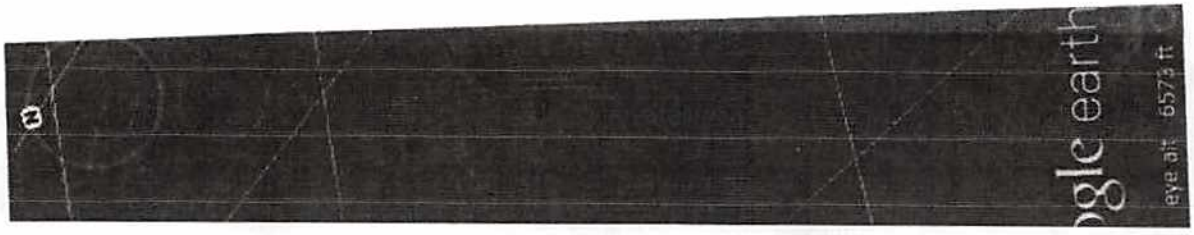
2/2

Latitude: 38 37.232
Longitude: 81 23.329

Northing/Y: 4274739.814
Easting/X: 466152.531

Convergence: -0 14 33.66949
Scale Factor: 0.999614108

Tank



UIC-1
(4/25)

Section 3. Applicant Information

Ownership Status: ☑ PRIVATE ☐ PUBLIC ☐ FEDERAL ☐ STATE
☐ OTHER (explain):

SIC code: ☑ 1311 (2D, 2H, 2R) ☐ 1479 (3S) ☐ OTHER (explain):

Section 4. Applicant / Activity Request and Type:

A. Apply for a new UIC Permit: ☐ 2D ☐ 2H ☐ 2R ☐ 3S
B. Reissue existing UIC Permit: ☑ 2D ☐ 2H ☐ 2R ☐ 3S
C. Modify existing UIC Permit: ☐ 2D ☐ 2H ☐ 2R ☐ 3S
(Submit only documentation pertaining to the modification request)
2D COMMERCIAL FACILITY: ☐ YES ☑ NO

Section 5. Briefly describe the nature of business and the activities to be conducted:

There are fourty nine producing oil wells.
and one injection Well.
This field produces @ 15 BBLS per Day oil
and fifty seven barels of water a week.
All water is reinjected in the same formation
Unyun formation

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CERTIFICATION

All permit applications must be signed by a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency, or a [1]duly authorized representative in accordance with 47CSR13-13.11.b.

A. Name and title of person applying for permit:

Print Name: David Dale

Print Title: President Aiken Dale Oil Inc.

B. Signature and Date.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document 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.

Signature: [signature]

Date: 7-14-2014

[1] A person is a duly authorized representative if:

The authorization is made in writing by a person described in subdivision 47CSR13-13.11.a.

The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of the plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility.

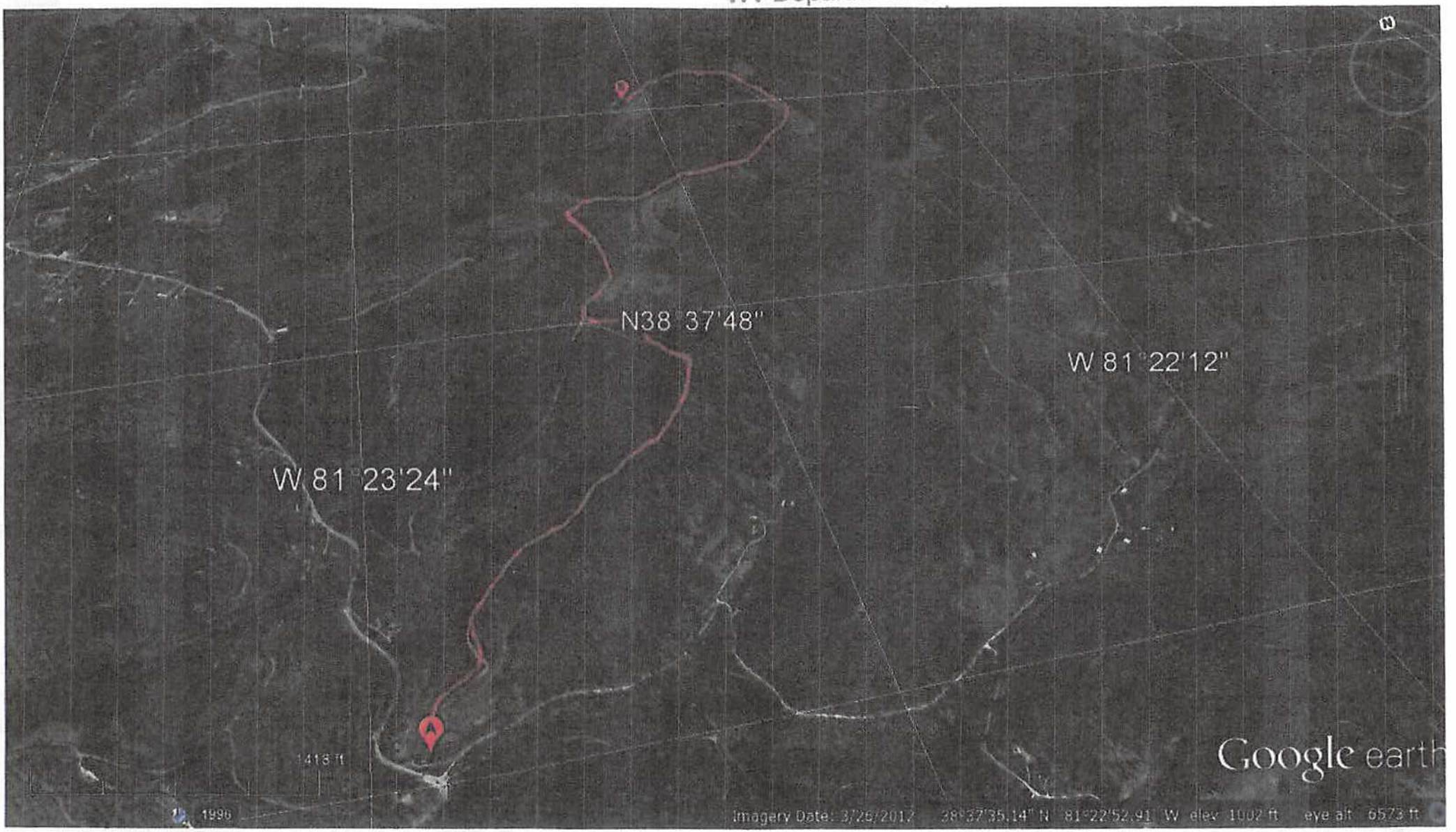
The written authorization is submitted to the Director.

DD OIL CO.
PO BOX 406
SPENCER,WV. 25276

Acknowledgment:

I, David Dale did on day 21 of December, 2013, did serve Terry A. Wright, sole owner, of surface known as I.B.Summers. Walton District, Roane County, State of West Virginia. To renew permit for Injection well 47-087-1623, for a term of (5) years from signing date.

Terry A. Wright



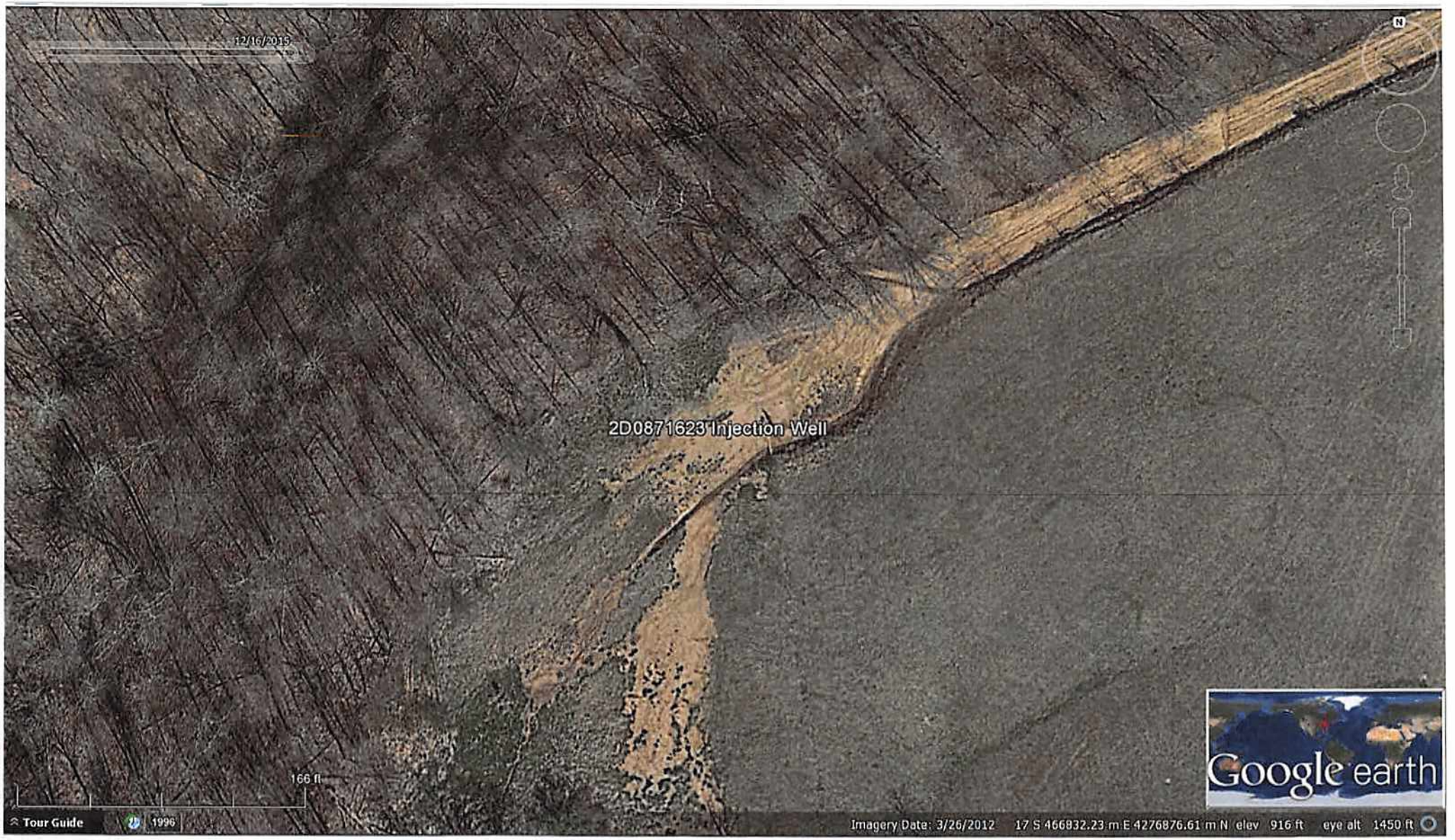
(A): intake and discharge structures, Storage, groundwater supply sources, Pump, Valves, tank, Secondary containment

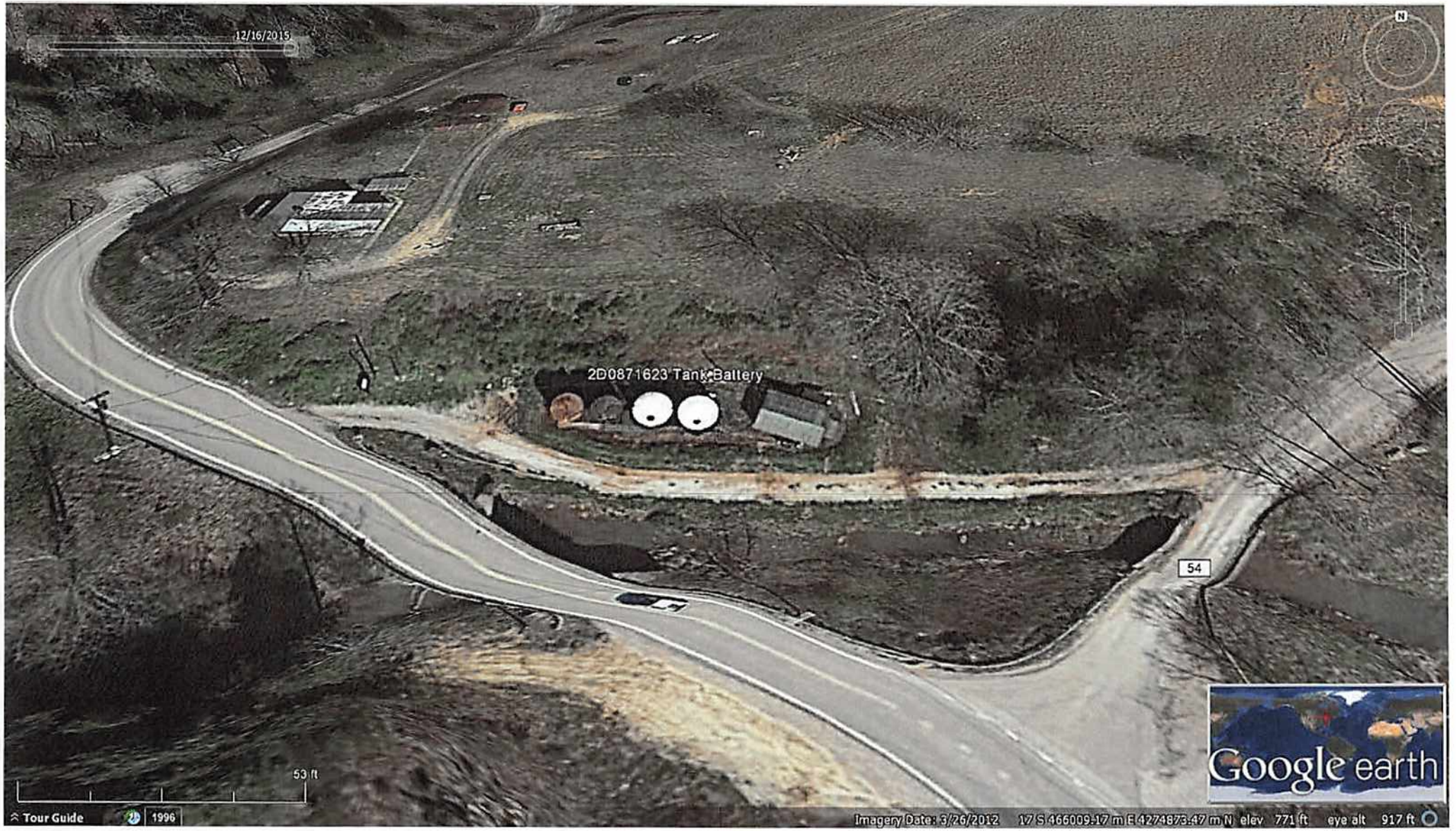
(B): Well

—— : Pipeline

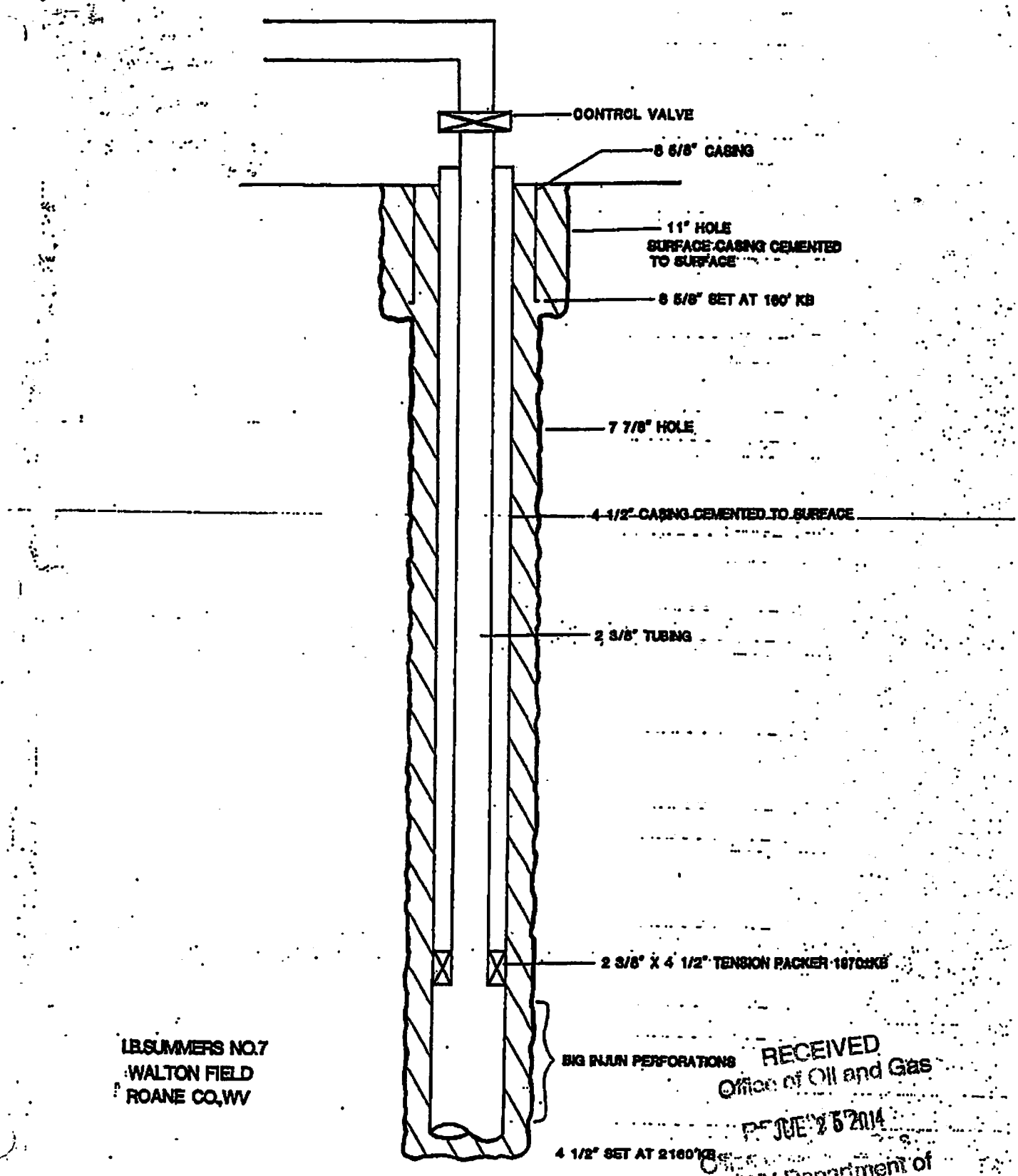

DMS
Measurement Result
Longitude: -81°22'51"
Latitude: 38°38'24"
8701623
466837.6640E, 4276910.0360N, UTM17
NAD83
20m
60ft


12/16/2015
21
N
119/12
25286 Walton
3/4
119/47
Walton-St
2D0871623 Injection Well (UTM 4276876.61N ; 466832.23E)
Charleston-Rd
Rocky-Branch
54
119/13
2272 ft
2D0871623 Tank Battery (UTM 4274873.47N ; 466009.17E)
119
Google earth
Tour Guide
1996
Imagery Date: 3/26/2012 17 S 465322.66 m E 4276246.59 m N elev 700 ft eye alt 11157 ft


12/16/2015
2D0871623 Injection Well
166 ft
Tour Guide
1996
Imagery Date: 3/26/2012 17 S 466832.23 m E 4276876.61 m N elev 916 ft eye alt 1450 ft
Google earth


12/16/2015
N
2D0871623 Tank Battery
54
53 ft
Google earth
Tour Guide
1996
Imagery Date: 3/26/2012 17 S 466009.17 m E 4274873.47 m N elev 771 ft eye alt 917 ft

2D0871623



L.B.SUMMERS NO.7
WALTON FIELD
ROANE CO,WV

(4/25)

APPENDIX A
Injection Well Form

1) GEOLOGIC TARGET FORMATION Big Injun Sand

Depth 2077' Feet (top) 2115' Feet (bottom)

2) Estimated Depth of Completed Well, (or actual depth of existing well): 2150' Feet

3) Approximate water strata depths: Fresh 120' Feet Salt 1650' Feet

4) Approximate coal seam depths: None

5) Is coal being mined in the area? Yes [ ] No [X]

6) Virgin reservoir pressure in target formation 500 psig Source WV. Geol Survey Blue Book Cir 1909

7) Estimated reservoir fracture pressure 2000 PSI. psig (BHFP)

8) MAXIMUM PROPOSED INJECTION OPERATIONS:

Injection rate (bbl/hour) 2.375 BBL/hour

Injection volume (bbl/day) 57 BBL/Day

Injection pressure (psig) 475-500 PSI

Bottom hole pressure (psig) 832 through 4.5 but through 2⅞ - 416 PSI

2077 x .8 = 1661. PSI Bottom Hole Pressure

9) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES:

produced sw. acid stick to keep iron down.
bo

Temperature of injected fluid: (°F) 60 Degrees

10) FILTERS (IF ANY)

10 micro 30 inches long 7 of them.
Nowata filters

11) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

Changed to stainless steel & fibrespar
2011. - Nov. 23. finished

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APPENDIX A (cont.)

12. Casing and Tubing Program

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor							
Fresh Water	8 5/8	New		20 lb/ft.	160'	160'	CTS
Coal							
Intermediate 1							
Intermediate 2							
Production	4.5	New	J55	9.5 lb/ft.	2160'	2160'	CTS.
Tubing	2 7/8	New	EUE	7.3	1970'	1970'	
Liners							

TYPE	Wellbore Diameter	Casing Size	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./sk)	Cement to Surface ? (Y or N)
Conductor							
Fresh Water	11'	8 5/8			CLASS A	CTS	CTS
Coal							
Intermediate 1							
Intermediate 2							
Production	7 7/8	4.5			CLASS A		CTS.
Tubing							
Liners							

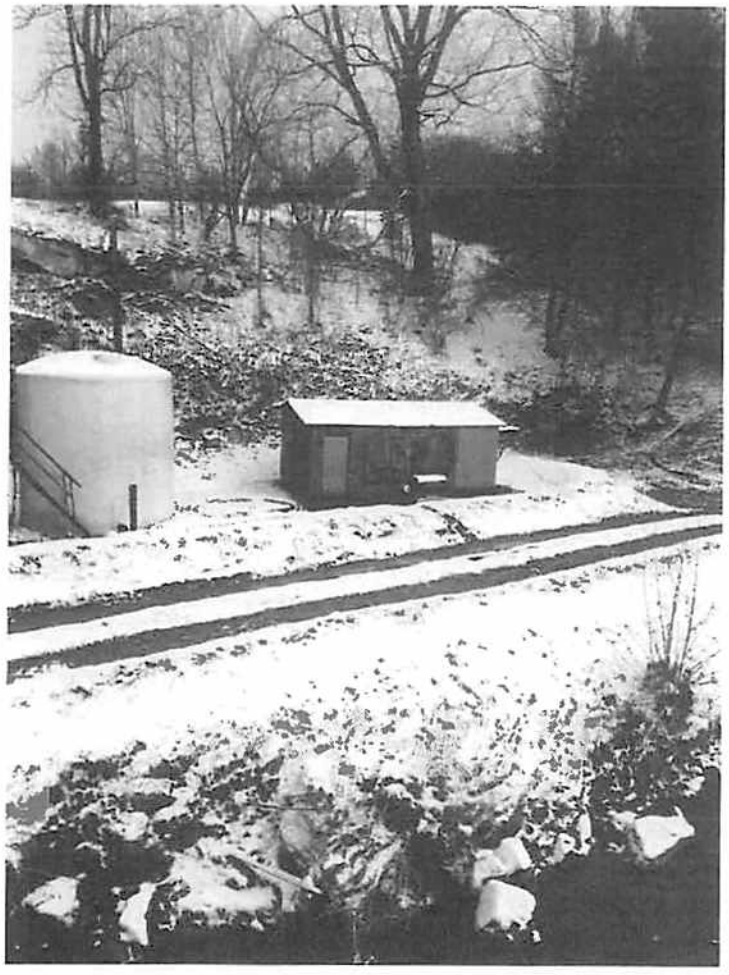
PACKERS	Packer #1	Packer #2	Packer #3	Packer #4
Kind: Tension	2 7/8 x 4 1/2			
Sizes:				
Depths Set:	1970 KB.			

RE: Underground Injection Control Permit Application for Reissuance of 2D0871623 Brine Disposal Well

- ***Images Attached***

Tank Registration Number for Tank 1 is 044-00000431 and for tank 2 is 044-00000432. The size of the dike is 100' X long, 30' X wide and 4'depth and the capacity of the salt tanks is 200 barrel per tank. Spill containment dike is two thousand barrels.

.



APPENDIX B
Storage Tank Inventory

API #	Tank ID	Tank Location (UTM NAD 83 Meters)		Installation Date	Tank Age (Months)	Construction Material (Steel, plastic, etc.)	Capacity (gallons)	Type of Fluid Stored	Volume of Fluid Stored (gallons)	Tank Type Single/Double Wall
		Northing	Easting							
	044-00000431	4276910.036	466837.664	2011	72	Plastic	8400	Brine		Single
	044-00000432	4276910.036	466837.664	2011	72	Plastic	8400	Brine		Single

To Gene Smith W.V. DEP

2-12-2016

Deficiency letter Detail

1-3-2016 D&D oil well Summers 7 API number 2D0871623

Section 6 Construction

Descriptive Report Big Injun Sand injection zone (Deficiency D)

Big Injun Top of Sand is 2066 Top 2117 Bottom.

The porosity is 21% and the Millidarcy is 20 MD.

Permeability

Smith, Gene C

From: Hugh Dale <hugh@drilcooilgas.com>
Sent: Tuesday, March 10, 2015 1:32 PM
To: Smith, Gene C
Subject: RE: Items for disposal well DD WELL, Summer 7, Permit # 47-087-01623

Gene,

I sent you the attachments earlier today.
You said your wanted us to Submit the permeability in md(millidarcy) and porosity(%) of the Big Injun Sandstone in the area of the disposal well.

DD WELL
Summer 7
Permit # 47-087-01623

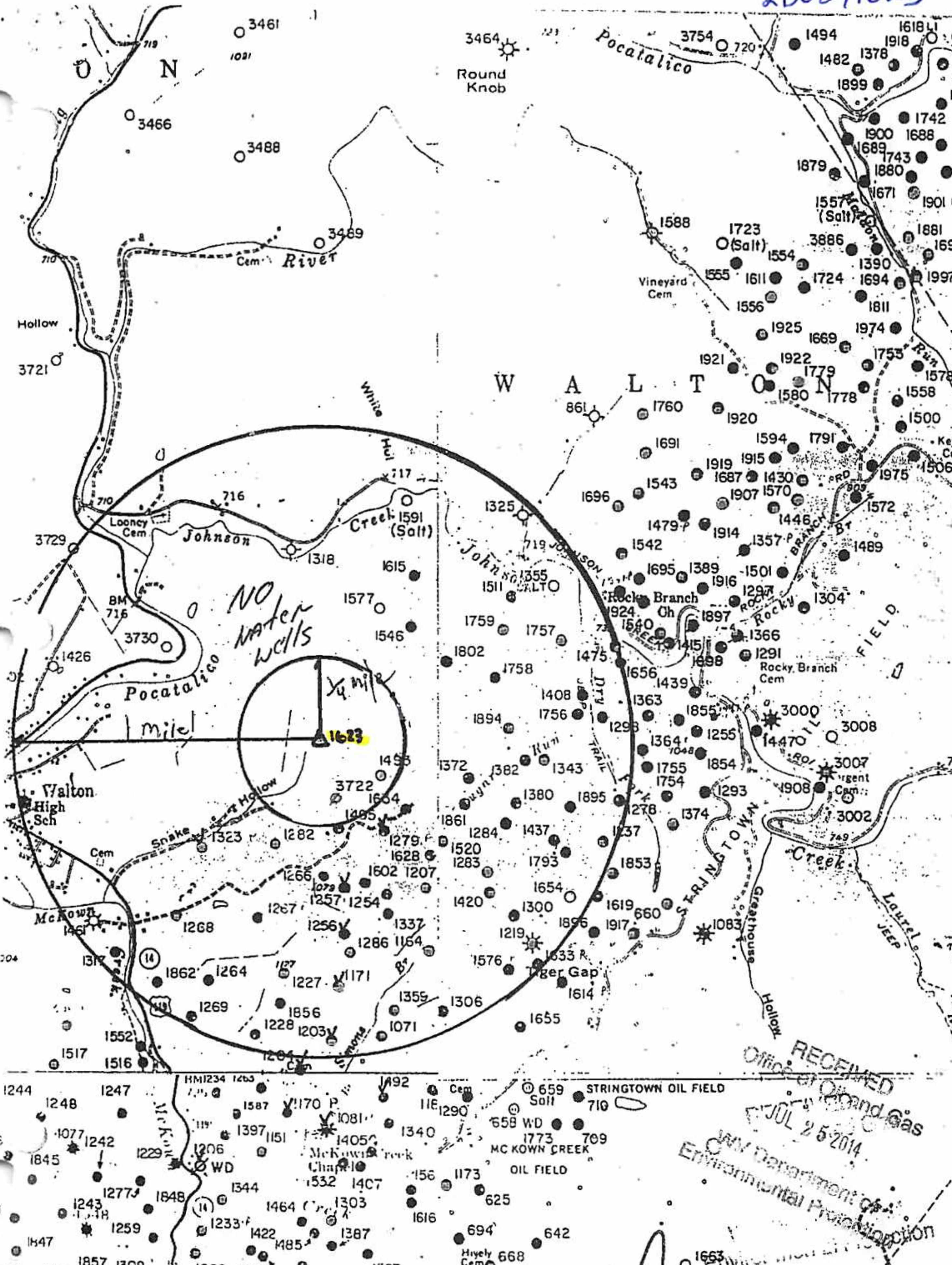
The md is 20md and the porosity 21%. The WV Oil and Gas Journal published in 1969 is where we found the information.

Like I said before the fluid samples have been sent to the lab and when we get the results we will get them to you.

Hugh Dale
President
Drilco Oil & Gas, Corp
P. 304.550.0978
E. hugh@drilcooilgas.com
W. www.drilcooilgas.com

From: Smith, Gene C [mailto:Gene.C.Smith@wv.gov]
Sent: Monday, March 2, 2015 2:50 PM
To: hugh@drilcooilgas.com
Cc: Bass, Thomas L; Stevison, Zachary G
Subject: Items for disposal well

2D0871623



Pocatalico River
Round Knob
WALTON
Johnson Creek
1591 (Salt)
Looney Cem
Hollow
Pocatalico
NO water wells
1/4 mile
1 mile
1623
3722
Snake Hollow
Walton High Sch
McKown
White Hollow
Johnson Run
Dry Fork
Rocky Branch Ch
Rocky Branch Cem
Rocky Branch
Vineyard Cem
Tiger Gap
STRINGTOWN
STRINGTOWN OIL FIELD
Greathouse Hollow
Sargent Cem
Creek
Laurel
JEEP
McKown Creek
McKown Creek Chapel
MC KOWN CREEK OIL FIELD
Hively Cem
BM 1234
WD
Salt

"Pipeline"

Select County: (087) Roane
Enter Permit #: 01623
Get Data | Reset

Select datatypes: (Check All)
Location, Production, Plugging, Owner/Completion, Stratigraphy, Sample, Pay/Show/Water, Logs, Btm Hole Loc

Table Descriptions
County Code Translations
Permit-Numbering Series
Usage Notes
Contact Information
Disclaimer
WVGES Main
"Pipeline-Plus" New

WV Geological & Economic Survey:

Well: County = 87 Permit = 01623

Report Time: Friday, February 26, 2016 3:01:56 PM

Location Information: View Map

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4708701623	Roane	1623	Walton	Walton	Walton	38.640344	-81.382614	466701.7	4276935.8

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4708701623	7/29/1967	Original Loc	Completed	George Moffatt		7	I B Summers		I B Summers et al	Gruss, Joseph S.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	G_BEF	G_
4708701623	7/29/1967	7/20/1967	936	Ground Level	Walton(Rock Ck)	Undf PRICE blw INJN	Big Injun (Price&eq)	Service Well	Unsuccessful	Salt Water Disp	Rotary	Fractured	2150		2150	0	

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4708701623	7/29/1967	Horizon	Injection	Vertical	2077	Big Injun (Price&eq)	2095	Big Injun (Price&eq)					
4708701623	7/29/1967	Horizon	Injection	Vertical	2111	Big Injun (Price&eq)	2115	Big Injun (Price&eq)					

There is no Production Gas data for this well

There is no Production Oil data for this well ** some operators may have reported NGL under Oil

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4708701623	Original Loc	1st Salt Sand	Well Record	1620	Reasonable	15	Reasonable	936	Ground Level
4708701623	Original Loc	2nd Salt Sand	Well Record	1635	Reasonable	250	Reasonable	936	Ground Level
4708701623	Original Loc	Big Lime	Past WVGES Staff Geologst	1933	Reasonable	133	Reasonable	936	Ground Level
4708701623	Original Loc	Big Injun (Price&eq)	Well Record	2066	Reasonable	26	Reasonable	936	Ground Level

Wireline (E-Log) Information:

API	LOG_TOP	LOG_BOT	DEEPEST_FML	LOGS_AVAIL	SCAN	DIGITIZED	GR_TOP	GR_BOT	D_TOP	D_BOT	N_TOP	N_BOT	I_TOP	I_BOT	T_TOP	T_BOT	S_TOP	S_BOT	O_TOP	O_BOT	INCH2	INC
4708701623			Big Injun (Price&eq)		Y	N	0	2150					1600	2150							Y	Y

Downloadable Log Images: We advise you to save the log image file to your PC for viewing. To do so, right-click the .tif image of interest and select the save option. Then you can direct the file to a location of your choice. Please note these images vary in size and some may take several minutes to download, especially if using a 56k or slower dialup connection.

FILENAME
4708701623gi.tif
4708701623go.tif

Quick Reference Guide for Log File Names For more info about WVGES scanned logs click here

geologic log types:
- d density (includes bulk density, compensated density, density, density porosity, grain density, matrix density, etc.)
- e photoelectric adsorption (PE or Pe, etc.)
- g gamma ray
- i induction (includes dual induction, medium induction, deep induction, etc.)
- l laterolog
- m dipmeter
- n neutron (includes neutron porosity, sidewall neutron--SWN, etc.)
- o other[1]
- s sonic or velocity
- t temperature (includes borehole temperature, BHT, differential temperature, etc.)
- z spontaneous potential or potential

mechanical log types:
- b cement bond
- c caliper
- o other[1]
- p perforation depth control or perforate

[1]other logs may include, but are not limited to, such curves as audio, bit size, CCL--casing collar locator, continuous meter, directional survey, gas detector, guard, NCTL--Nuclear Cement Top Locator, radioactive tracer, tension

There is no Plugging data for this well

There is no Sample data for this well

"Pipeline"

Select County: (087) Roane Select datatypes: (Check All)
Enter Permit #: 01493
Get Data | Reset
Location | Production | Plugging
Owner/Completion | Stratigraphy | Sample
Pay/Show/Water | Logs | Btm Hole Loc

Table Descriptions
County Code Translations
Permit Numbering Series
Usage Notes
Contact Information
Disclaimer
WVGES Main
"Pipeline Plus" New

WV Geological & Economic Survey

Well: County = 87 Permit = 01493

Report Time: Monday, February 29, 2016 8:08:39 AM

Location Information: View Map

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4708701493	Roane	1493	Walton	Walton	Walton	38.638167	-81.378173	467087.2	4276692.7

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4708701493	10/15/1966	Original Loc	Completed	George Moffatt 6					I B Summers 6	Gruss, Joseph S.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	G_BEF	G_AFT
4708701493	10/15/1966	10/11/1966	948	Ground Level	Walton(Rock Ck)	Undf PRICE blw INJN	Big Injun (Price&eq)	Development Well	Development Well	Oil	Rotary	unknown	2143		2143	0	0

Pay/Show/Water Information:

API	CMP_DT	ACTIVITY	PRODUCT	SECTION	DEPTH_TOP	FM_TOP	DEPTH_BOT	FM_BOT	G_BEF	G_AFT	O_BEF	O_AFT	WATER_QNTY
4708701493	10/15/1966	Pay	Oil	Vertical			2090	Big Injun (Price&eq)	0	15			

There is no Production Gas data for this well

There is no Production Oil data for this well ** some operators may have reported NGL under Oil

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

Stratigraphy Information:

API	SUFFIX	FM	FM_QUALITY	DEPTH_TOP	DEPTH_QUALITY	THICKNESS	THICKNESS_QUALITY	ELEV	DATUM
4708701493	Original Loc	Salt Sands (undiff)	Well Record	1616	Reasonable	239	Reasonable	948	Ground Level
4708701493	Original Loc	Maxton	Past WVGES Staff Geologst	1855	Reasonable	20	Reasonable	948	Ground Level
4708701493	Original Loc	Little Lime	Past WVGES Staff Geologst	1875	Reasonable	21	Reasonable	948	Ground Level
4708701493	Original Loc	Big Lime	Past WVGES Staff Geologst	1896	Reasonable	155	Reasonable	948	Ground Level
4708701493	Original Loc	Big Injun (Price&eq)	Well Record	2051	Reasonable	42	Reasonable	948	Ground Level

There is no Wireline (E-Log) data for this well

Plugging Information:

API	PLG_DT	DEPTH_PBT
4708701493	4/9/1971	0

There is no Sample data for this well

"Pipeline"

Select County: (087) Roane Select datatypes: (Check All)
Enter Permit #: 03722
Get Data | Reset
Location | Production | Plugging
Owner/Completion | Stratigraphy | Sample
Pay/Show/Water | Logs | Btm Hole Loc

Table Descriptions
County Code Translations
Permit-Numbering Series
Usage Notes
Contact Information
Disclaimer
WVGES Main
"Pipeline-Plus" New

WV Geological & Economic Survey

Well: County = 87 Permit = 03722

Report Time: Monday, February 29, 2016 8:10:08 AM

Location Information: View Map

API	COUNTY	PERMIT	TAX_DISTRICT	QUAD_75	QUAD_15	LAT_DD	LON_DD	UTME	UTMN
4708703722	Roane	3722	unknown	unknown	unknown				

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4708703722	-/-/-	Original Loc	Cancelled	George Moffatt		712				Sterling Drilling & Production Co., Inc.			

Completion Information:

API	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	G_BEF	G_AFT	O_BEF	O_AFT
4708703722	-/-/-	-/-/-				undetermined unit	undetermined unit	unclassified	unclassified	not available	unknown	unknown			0	0	0	0	0

There is no Pay data for this well

Production Gas Information: (Volumes in Mcf)

API	OPERATOR	PRD_YEAR	ANN_GAS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4708703722	Sterling Drilling & Production Co., Inc.	1984	0	0	0	0	0	0	0	0	0	0	0	0	0

Production Oil Information: (Volumes in Bbl) ** some operators may have reported NGL under Oil

API	OPERATOR	PRD_YEAR	ANN_OIL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DCM
4708703722	Sterling Drilling & Production Co., Inc.	1984	0	0	0	0	0	0	0	0	0	0	0	0	0

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well

Form OG-10

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
14
WELL RECORD

Rotary ☑
Spudder ☐
Cable Tools ☐
Storage ☐

Quadrangle Walton
Permit No. ROA-1623
Oil or Gas Well Injection (KIND)

Company Joseph S. Gruss
Address Box 471, Spencer, W. Va.
Farm J. B. Summers Acres 105
Location (waters) McKown
Well No. 7 Elev. 936
District Walton County Roane
The surface of tract is owned in fee by George Moffatt
Address Walton, W. Va.
Mineral rights are owned by I. B. Summers, et al
Address Spencer, W. Va.
Drilling commenced 7-20-67
Drilling completed 7-29-67
Date Shot ..... From ..... To .....
With .....
Open Flow /10ths Water in ..... Inch
/10ths Merc. in ..... Inch
Volume ..... Cu. Ft.
Rock Pressure ..... lbs. ..... hrs.
Oil Injection Well bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) .....
WELL FRACTURED (DETAILS) 30,000# 20/40 Sand and 30,000 Gallons Gelled Salt Water
RESULT AFTER TREATMENT (Initial open Flow or bbls.) Injection Test - 8 B/M @ 1250 PSI
ROCK PRESSURE AFTER TREATMENT ..... HOURS .....
Fresh Water ..... Feet ..... Salt Water ..... Feet
Producing Sand Injection Big Injun Depth 2077-2095 and 2111-2115

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13			
10			Size of
8¼	150	150	
6¼			Depth set
5 3/16			
4½			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.
CASING CEMENTED 4½ SIZE 2150 No. Ft. 7-30-67 Da
Amount of cement used (bags) 455 (Circulated)
Name of Service Co. Howco
COAL WAS ENCOUNTERED AT ..... FEET ..... INCHI
..... FEET ..... INCHES ..... FEET ..... INCHI
..... FEET ..... INCHES ..... FEET ..... INCHI

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
			"ATTACHED"				

DRILLER'S LOG

14

Joseph S. Gruss
Attn: Mr. Hickox
Spencer, West Virginia

I. B. SUMMERS #7 - ROANE COUNTY, WEST VIRGINIA

0	To	75	shaley sand shells
75	To	152	sand & shells
152	To	165	shale
165	To	400	shale, sandy shale & shells
400	To	490	sand
490	To	540	shale
540	To	657	sandy shale
657	To	667	lime
667	To	870	sandy shale & shale
870	To	1020	sand, shale & lime shells
1020	To	1175	sand, shaley and sand
1175	To	1244	shaley sand
1244	To	1350	shaley sand
1350	To	1510	shaley sand & shale
1510	To	1555	shaley sand
1555	To	1620	shaley lime w/sand streaks
1620	To	1635	salt sand
1635	To	1885	salt sand
1885	To	1923	shale
1923	To	1927	shaley sand & sand
1927	To	1933	sand
1933	To	1965	lime
1965	To	2009	lime
2009	To	2054	lime & dolomite
2054	To	2066	dolomite
2066	To	2092	sand
2092	To	2110	sandy shale
2110	To	2117	shaley sand
2117	To	2150	silty shale
2150 T.D.			

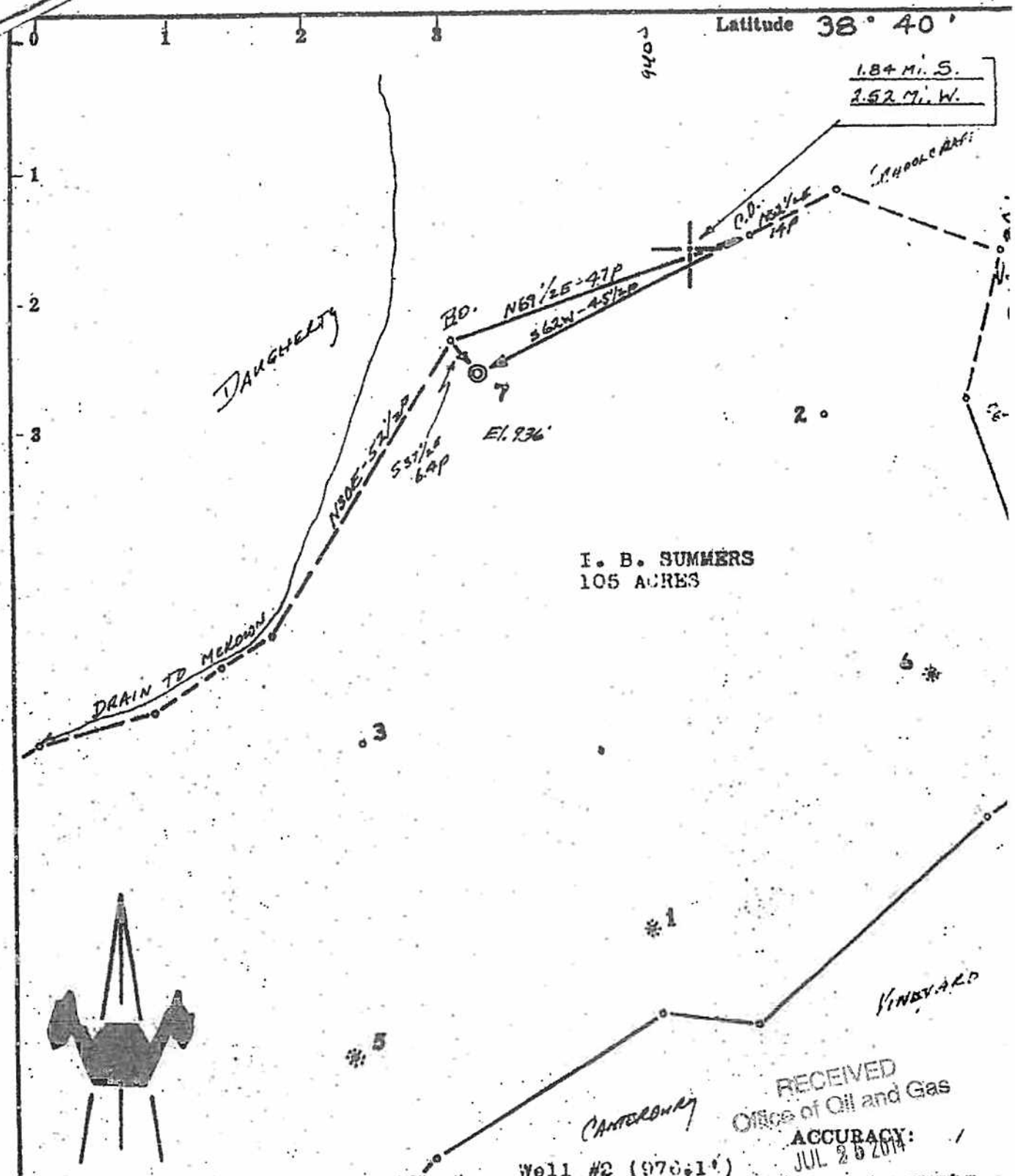
AFFIDAVIT

STATE OF WEST VIRGINIA }
COUNTY OF WOOD } ss

RECEIVED
Office of Oil and Gas
JUL 16 2014
WV Department of
Environmental Protection

I hereby certify that the Driller's Log is correct according to the Daily Drilling Report.

MITCHELL & MITCHELL DRILLING CONTRACTORS



New Location ☐
Drill Deeper ☐
Abandonment ☐
Fracture ☐
Redrill ☐

Source of Elevation Well #2 (976.1')

ACCURACY: 1

RECEIVED
Office of Oil and Gas
JUL 25 2014
WV Department of
Environmental Protection

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Company JOSEPH S. GRUSS
SPENCER, W. VA.

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

FORM OG-8

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

APR 15 1971

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE MADE IN TRIPLICATE. ONE COPY MAILED TO THE DEPARTMENT, ONE COPY TO BE RETAINED BY THE WELL OPERATOR AND THE THIRD COPY (AND EXTRA COPIES IF REQUIRED) SHOULD BE MAILED TO EACH COAL OPERATOR AT THEIR RESPECTIVE ADDRESSES.

No Coal

COAL OPERATOR OR OWNER

ADDRESS

COAL OPERATOR OR OWNER

ADDRESS

LEASE OR PROPERTY OWNER

ADDRESS

MAREVE OIL CORP.
P. O. Box 1228
Parkersburg, W. Va. 26101
COMPLETE ADDRESS

April 13, 1971

WELL AND LOCATION

Walton District

Roane County

Well No. 6

I. B. Summers Farm

STATE INSPECTOR SUPERVISING PLUGGING Fred B. Burdette, Sissonville, W.Va. 25185

AFFIDAVIT

STATE OF WEST VIRGINIA,
County of Roane } ss:

L. A. Poya and W. C. Weske

being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by Mareve Oil Corp., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 9th day of April, 1971, and that the well was plugged and filled in the following manner:

SAND OR ZONE RECORD FORMATION	FILLING MATERIAL	PLUGS USED SIZE & KIND	CASING CSG PULLED	CASING CSG LEFT IN
			-0-	8 5/8" 155'
	1750 - 1550	Cement	1050'	4½" 1090'
	1550 - 1000	Mud Laden Fluid		
	1000 - 950	Cement		
	950 - 180	Mud Laden Fluid		
	180 - 130	Cement		
	130 - 20	Mud Laden Fluid		
	20 - 0	Cement		

COAL SEAMS	DESCRIPTION OF MONUMENT
(NAME)	4½" 30" above G.L. inscribed:
(NAME)	Mareve Oil Corp.
(NAME)	ROA-1493
(NAME)	P & A: 4/9/71

and that the work of plugging and filling said well was completed on the 9th day of April, 1971.

And further deponents saith not.

L. A. Poya (L.A.Poya)

W. C. Weske (W.C.Weske)

Sworn to and subscribed before me this 12th day of April, 1971.

I. N. Hickox (I.N.Hickox)
Notary Public.

My commission expires:
11-13-77

Permit No. ROA-1493

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Rotary ☒
Spudder ☐
Cable Tools ☐
Storage ☐

Quadrangle Walton
Permit No. ROA-1493
Oil or Gas Well Oil (OWWO)

Company Joseph S. Gruss
Address 30 Broad St. N.Y., N.Y.
Farm I.B. Summers Acres 105
Location (waters) Johnson
Well No. 6 Elev. 948
District Walton County Roane
The surface of tract is owned in fee by George Moffatt
Address
Mineral rights are owned by I.B. Summers Heirs
Address
Drilling commenced 10-11-66
Drilling completed 10-15-66
Date Shot From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume Cu. Ft.
Rock Pressure lbs. hrs.
Oil Show bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS)
WELL FRACTURED (DETAILS)

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
13			
10			Size of
8¼	155	155	
6¼			Depth set
5 3/16			
4½			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.
CASING CEMENTED 4½ SIZE 2140 No. Ft. 10-15-66 Date
Amount of cement used (bags) 100
Name of Service Co. Howco
COAL WAS ENCOUNTERED AT FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 15 Bbls.
ROCK PRESSURE AFTER TREATMENT HOURS
Fresh Water Feet Salt Water Feet
Producing Sand Big Injun Depth

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
surface			0	5			
rock & clay			5	75			
shale & rock			75	135			
shale & rock			135	160			
red bed rock			160	213			
rock & sand			213	534			
shale & sand			534	815			
sand shale			815	1067			
sand with shale			1067	1322			
sand			1322	1535			
sand			1535	1616			
salt sand			1616	1690			
salt sand			1690	1855			
sand			1855	1875			

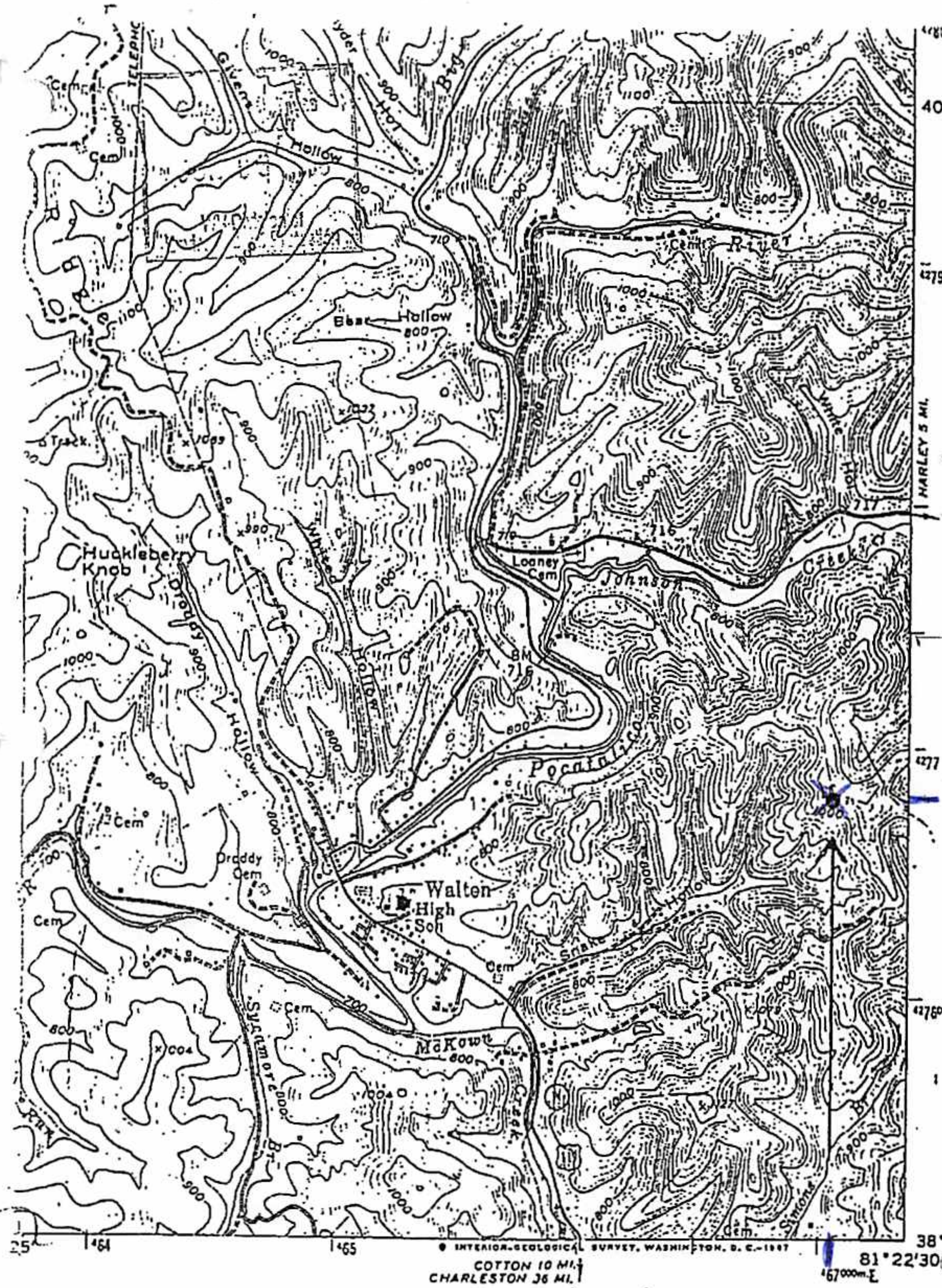
RECEIVED
NOV 1966
West Virginia
Dept. of Mines

Formation	Color	Hard or Soft	Top 31	Bottom	Oil, Gas or Water	Depth Found	Remarks
limey sand			1875	1896			
lime			1896	1955			
lime			1955	2051			
injun sand			2051	2090			
injun			2090	2093			
shale			2093	2143			

Date October 28, 1966

APPROVED Joseph S. Gruss, Owner

By L N Heath
(Title)



ROAD CLASSIFICATION

Heavy-duty ______ Light-duty ______

Medium-duty ______

U.S. Route

Location Map For

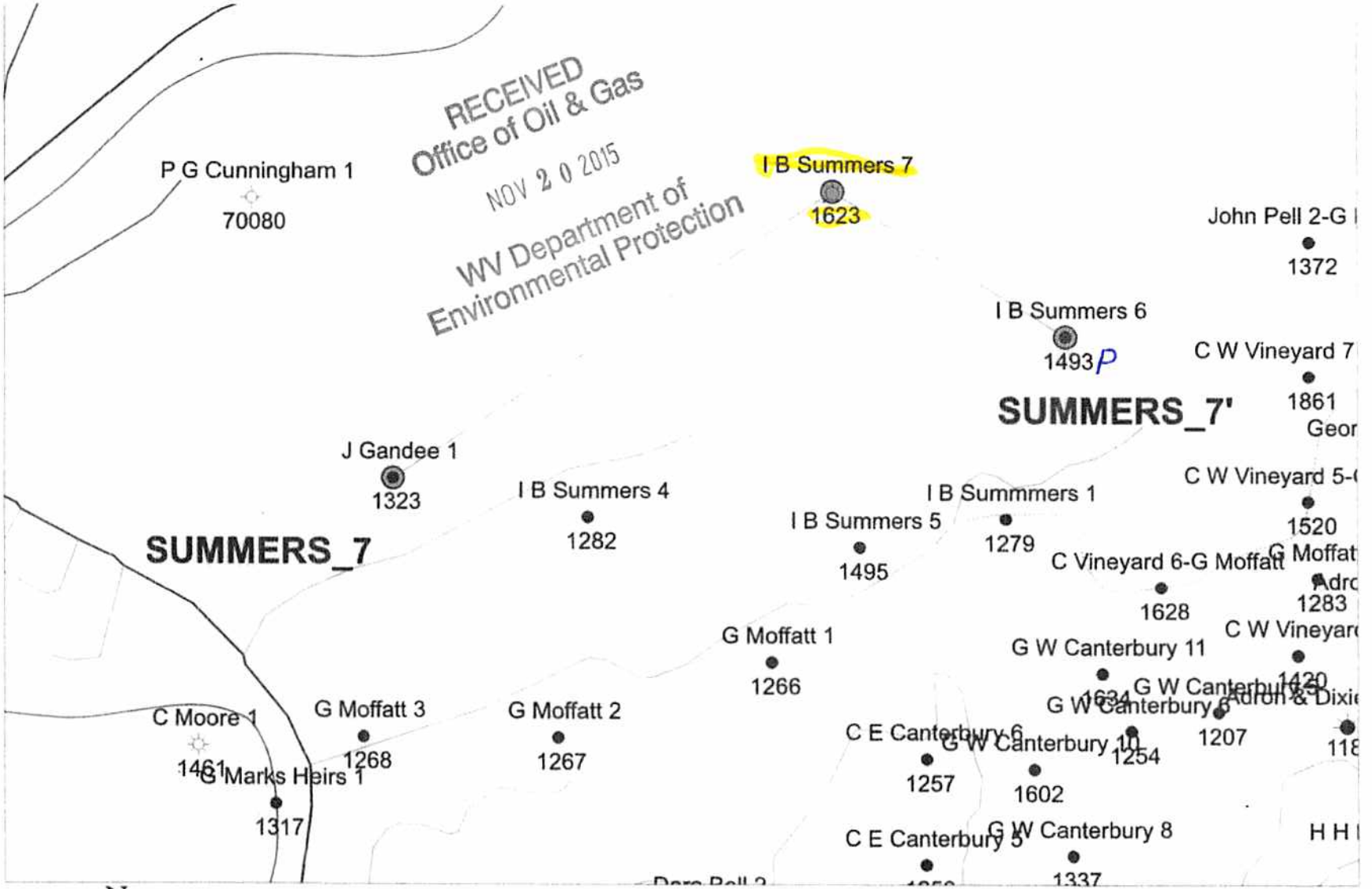
UIC Permit No. UIC2D0871623

QUADRANGLE LOCATION

WALTON, W. VA.

NW/4 WALTON 15' QUADRANGLE

N3837.5—W8122.5/7.5



D D OIL COMPANY		
I B SUMMERS CROSS SECTION LOCATION WALTON DISTRICT, ROANE COUNTY, W.VA.		
Author: MCB		Date: 24 July, 2014
	Scale: See scalebar	

N/A

(4/25)

APPENDIX C

Wells within the Area of Review

API #	Well Type	Well Status (Active, Abandoned, Shut-in, Plugged)	Northing (UTM NAD 83 Meters)	Easting (UTM NAD 83 Meters)	Penetrate Injection Zone (Y or N)	Penetrate Confining Zone (Y or N)	Total Vertical Depth	Surface Elevation
			NONE					

Make as many copies as necessary and include page numbers as appropriate.

Promoting a healthy environment.

dep

There Are no wells within The ¼ mile Radius of Injection

(4/25)

APPENDIX D

Public Service District Affidavit

Underground Injection Control Permit applicants must identify all publically recorded drinking water sources within a one (1) mile radius of the proposed injection well facility. If no drinking water sources are present within this radius a written affidavit shall be supplied by the local Public Service District (PSD) as ample verification.

"I certify under penalty of law that (state name of business)

DD Oil Company

has verified with the public service district (state name of PSD)

WALTON PUBLIC SERVICE DISTRICT

that there are no such publically recorded sources.

B. GreenHouse Field Supt.

(Signature of Authorized Representative)

Sworn and subscribed to before me this 22ND day of July, 2014.

Vickie L. Holland, my commission expires 04-22-2017

(Notary Signature)

Vickie L. Holland

OFFICIAL SEAL
NOTARY PUBLIC
VICKIE L. HOLLAND
P. O. BOX 961
SPENCER, WV 25276
My commission expires April 22, 2017

RECEIVED
Office of Oil and Gas
JUL 25 2014
WV Department of
Environmental Protection

Promoting a healthy environment.

dep

(4/25)

APPENDIX E
Water Sources

Operator: AxPoil Year: 2014 UIC Permit #: 200871623

Potatalico River Sample Take

Water Source Name		Source #	Source #	Source #	Source #
Northing					
Easting					
Parameter	Units				
TPH - GRO	mg/L				
TPH - DRO	mg/L				
TPH - ORO	mg/L				
BTEX	mg/L				
Chloride	mg/L				
Sodium	mg/L				
Total Dissolved Solids (TDS)	mg/L				
Aluminum	mg/L				
Arsenic	mg/L				
Barium	mg/L				
Iron	mg/L				
Manganese	mg/L				
pH	SU				
Calcium	mg/L				
Sulfate	mg/L				
MBAS	mg/L				
Dissolved Methane	mg/L				
Dissolved Ethane	mg/L				
Dissolved Butane	mg/L				
Dissolved Propane	mg/L				
Bacteria (Total Coliform)	c/100mL				

Promoting a healthy environment.

dep

Sample Report attached

Bio-Chem Testing, Inc. Environmental Laboratory

5 Weatheridge Drive
Hurricane, WV 25526

Phone: (304) 757-8954
Fax: (304) 757-9676

P.O. Box 634
Teays, WV 25569

Web Site: www.biochemtesting.com
e-mail: info@biochemtesting.com

CASE NARRATIVE

Date: MAR 2 2015

CLIENT: DD Oil Co.

Lab Number(s) 1501973-01; 1501974-01 to 1501974-02

Bio-Chem Testing, Inc. warrants the accuracy of analysis for the data generated and reported in this report. Procedures used by the laboratory are well documented and reviewed on a regular basis to ensure consistency and reliability. Sources for the analytical procedures are derived from EPA sources such as EPA-600/4-79-020, SW 846, and the 18th through 20th Editions of Standard Methods.

Samples were received in good condition unless otherwise noted.

This report includes a total of 13 pages. This includes:

- 1 Case Narrative
- 2 Results for analyses reported by Bio-Chem Testing, Inc.
- 8 Results for analyses that were subcontracted
- 2 Chain of Custody form and associated documents
- ____ Other: ____

The estimated uncertainty of measurement is available upon client request.

Respectfully Submitted,

Mukesh Shah
Laboratory President

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APR 0 1 2015
WV Department of
Environmental Protection

Results reviewed by:

Bio-Chem Testing, Inc. Environmental Laboratory

5 Weatheridge Drive
Hurricane, WV 25526

Phone: (304) 757-8954
Fax: (304) 757-9676

P.O. Box 634
Teays, WV 25569

Web Site: www.biochemtesting.com
e-mail: info@biochemtesting.com

LABORATORY ANALYSIS REPORT

DD Oil Co.
406 Box
Spencer, WV 25286
Attn: David Dale
DD Oil
Injection Well Brine
Injection Well Brine
DD Oil Co.

Laboratory Number:	1501973-01
Sample Identification	Injection Well Brine
Sampled By:	Client
Date/Time Sampled	03/10/2015 09:30
Date/Time Received	03/10/2015 10:47
Sample Type	GRAB
Client Information	

PARAMETER	RESULT	NOTE	MDL	UNITS	METHOD	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
Metals by EPA 200 Series Methods								
Barium	253		0.002	mg/L	EPA200.7Rev4.4-1994	03/18/2015	9:11	CW
Iron	21.6		0.02	mg/L	EPA200.7Rev4.4-1994	03/17/2015	9:24	CW
Manganese	0.757		0.003	mg/L	EPA200.7Rev4.4-1994	03/17/2015	9:24	CW
Sodium	53500		0.5	mg/L	EPA200.7Rev4.4-1994	03/18/2015	9:11	CW
Wet Chemistry								
Bromide	1380		0.025	mg/L	EPA300.0Rev2.1-1993	03/10/2015	13:37	BS
Chloride	142000		0.625	mg/L	EPA300.0Rev2.1-1993	03/10/2015	13:37	BS
Organic Carbon, Total	<50.0		50.0	mg/L	SM5310C-2000	03/12/2015	13:04	HS
pH	5.61	I-02	-	pH Units	SM4500H+-B-2000	03/19/2015	13:14	TN
Sulfate as SO4	<1200		1200	mg/L	EPA300.0Rev2.1-1993	03/10/2015	13:37	BS
Total Dissolved Solids	243000		5	mg/L	SM2540C-1997	03/11/2015	13:27	BK
Total Suspended Solids	571		2	mg/L	SM2540D-1997	03/16/2015	15:20	NM

NOTES

I-02	This analyte was analyzed outside of the EPA required holding time.
Pres/H2SO4	Sample improperly preserved; sulfuric acid added in laboratory
Pres/HCl	Sample improperly preserved; hydrochloric acid added in laboratory
Pres/HNO3	Sample improperly preserved; nitric acid added in laboratory
Temp	Sample received above 6 degrees Celsius and cannot be used for compliance reporting purposes.

Method Reference: USEPA: Methods for Chemical Analysis of Water and Waste.
SM: Standard Methods for the Examination of Water and Wastewater.
SW: Test Methods for Evaluating Solid Waste.

Respectfully Submitted:

Mukesh Shah

MAR 2 2015

BIO-CHEM TESTING, INC.
5 Weatheridge Drive
Hurricane, WV 25526
Phone: (304) 757-8954
Fax: (304) 757-9676

CLIENT: DD Oil Company
CONTACT: David Dale PHONE NO: (304) 927-1147
PROJECT: SITE:
REPORTS TO: PO Box 406 Spencer WV 25276 FAX NO: ( )
INVOICE TO: P.O. NUMBER:
E MAIL:
PAGE 1 OF 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Cl, SO4, TDS, TSS	Bromide	TOC	Mn, Na, Fe, Ca	BTEX, TMB, Naph	TPH DRO, GRO	pH	Specific Gravity	REMARKS
	Injection Well Brine	3/10/15	0930	W	9	G	X	X	X	X	X	X	X	X	1501973-01

Preservative Added
HNO_3, H_2SO_4, HCl

Collected / Relinquished By: (1)	Date	Time	Received By:
X David Dale	3/10/15	1047	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 3/10/15	Time 1047	Received For Laboratory By:

Sample Rec'd Cold? Yes ____ No ____ Temp°C 11.5
Turn Around Time

Preservative Used:
- None
- Sulfuric Acid Soln.
- Sodium Hydroxide Soln.
- Nitric Acid Soln.
- Zinc Acetate & NaOH Soln.
- Hydrochloric Acid Soln
- Other ____
- Other ____

Preservative Checked

WHITE — BIO-CHEM COPY PINK — CUSTOMER COPY

304 BioCheTesting 10:20:34 a.m. 03-23-2015 5/15

Bio-Chem Testing, Inc. Environmental Laboratory

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P.O. Box 634
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Web Site: www.biochemtesting.com
e-mail: info@biochemtesting.com

LABORATORY ANALYSIS REPORT

DD Oil Co.
406 Box
Spencer, WV 25296
Attn: David Dale
DD Oil
Snake Hollow
Snake Hollow
DD Oil Co.

Laboratory Number:	1501974-01
Sample Identification	Snake Hollow
Sampled By:	Client
Date/Time Sampled	03/10/2015 09:00
Date/Time Received	03/10/2015 10:47
Sample Type	GRAB
Client Information	

PARAMETER	RESULT	NOTE	MDL	UNITS	METHOD	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
Metals by EPA 200 Series Methods								
Barium	0.140		0.002	mg/L	EPA200.7Rev4.4-1994	03/17/2015	9:24	CW
Wet Chemistry								
Organic Carbon, Total	2.66		1.00	mg/L	SM5310C-2000	03/12/2015	13:04	HS
Total Dissolved Solids	189		5	mg/L	SM2540C-1997	03/11/2015	13:27	BK
Total Suspended Solids	50		2	mg/L	SM2540D-1997	03/18/2015	15:20	NM

NOTES

Pres/H2SO4	Sample improperly preserved; sulfuric acid added in laboratory
Pres/HCl	Sample improperly preserved; hydrochloric acid added in laboratory
Pres/HNO3	Sample improperly preserved; nitric acid added in laboratory
Temp	Sample received above 6 degrees Celsius and cannot be used for compliance reporting purposes.

Method Reference: USEPA: Methods for Chemical Analysis of Water and Waste.
SM: Standard Methods for the Examination of Water and Wastewater.
SW: Test Methods for Evaluating Solid Waste.

Respectfully Submitted:

Mukesh Shah

APR 2 2015

BIO-CHEM TESTING, INC.
5 Weatheridge Drive
Hurricane, WV 25526
Phone: (304) 757-8954
Fax: (304) 757-9676

CLIENT: DD Oil Company
CONTACT: David Dale PHONE NO: 304 927-1147
PROJECT: SITE:
REPORTS TO: FAX NO: ( )
INVOICE TO: P.O. NUMBER:
E MAIL:
PAGE 2 OF 2

LAB NO	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Specific Gravity	Barium	TOC	TDS TSS	BTEX, TRIHALOS	TPH GRO, DRO	REMARKS
	Snake Hollow Stream	3/10/15	0900	W	8	G	X	X	X	X	X	X	1501974-01
	Trip Blank	3/10/15	—	W	1	G					X		-02

Preservative Added
HNO_3, H_2SO_4, HCl

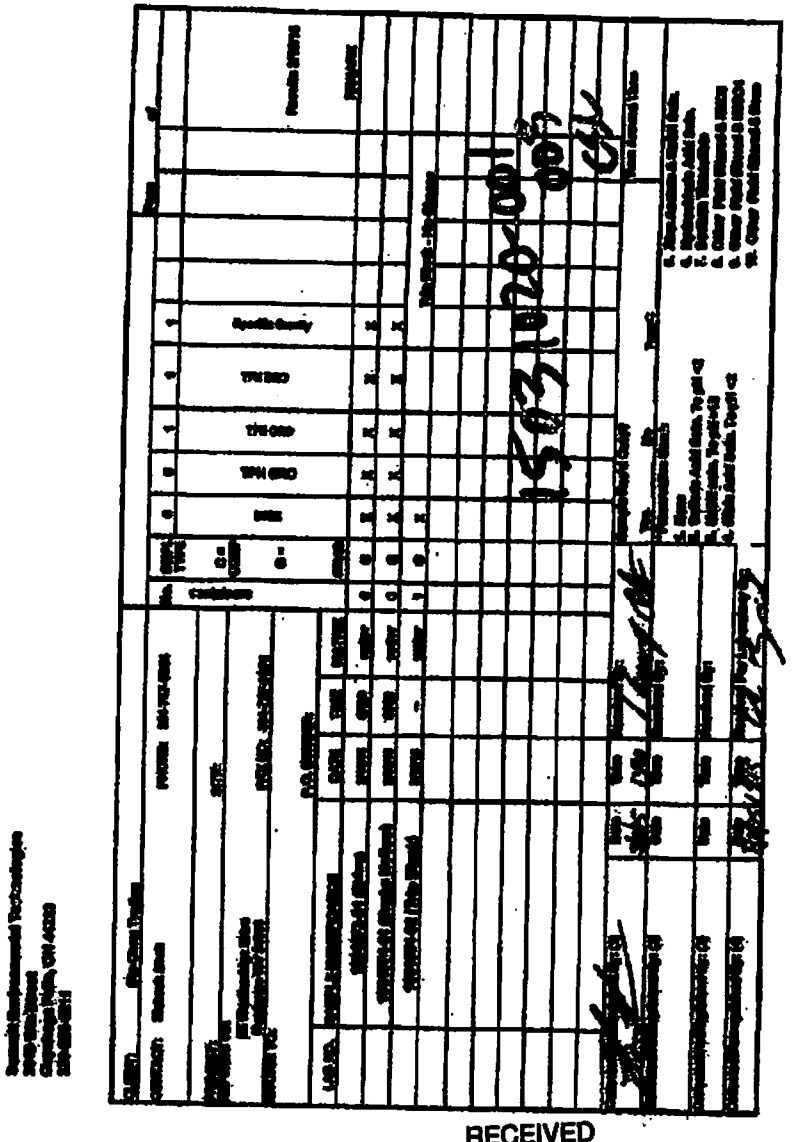
Collected / Relinquished By: (1)	Date	Time	Received By:
x David Dale	3/10/15	1047	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 3/10/15	Time 1047	Received For Laboratory By:

Sample Rec'd Cold? Yes ____ No ____ Temp°C 12.1
Turn Around Time

Preservative Used: **Preservative Checked**

① None ⑤ Zinc Acetate & NaOH Soln.
② Sulfuric Acid Soln. ⑥ Hydrochloric Acid Soln.
③ Sodium Hydroxide Soln. ⑦ Other ____
④ Nitric Acid Soln. ⑧ Other ____

WHITE — BIO-CHEM COPY PINK — CUSTOMER COPY



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Office of Oil and Gas

APR 0 1 2015

WV Department of
Environmental Protection

Rev. 12
Date: 07/27/13

Summit Environmental Technologies, Inc.
Cooler Receipt Form

Initials of person inspecting cooler and samples: ZK
Client: Bio Chem
Order Number: 15031020
Date Received: 3/11/15 Time Received: 1815 Date cooler(s) opened and samples inspected: 3/11/15
Number of Coolers/Boxes: ______ N/A

Shipper: FED EX UPS DHL Airborne US Postal Walk-in [illegible] Other: ______

Packaging: Peanuts Bubble Wrap Paper Foam None Other: ______

	Y	N	N/A
Tape on cooler/box:	Y	N	N/A
Custody Seals intact	Y	N	N/A
C-O-C in plastic	Y	N	N/A
Ice ✓ Blue Ice ______	present / absent / melted		N/A
Sample Temperature IR Gun #[illegible] CF 0.0 °C	2.6 °C		N/A
Radiological Testing Instrument serial #35127 (see page 2 for scan results)	Y	N	N/A

**Use 1 sheet per sample for Radiological Testing. If sample is HOT, the Radiological Safety Officer must be notified immediately.

	Y	N	N/A
C-O-C filled out properly	Y	N	N/A
Samples in separate bags	Y	N	N/A
Sample containers intact*	Y	N	N/A

*If no, list broken sample(s): ______

	Y	N	N/A
Sample label(s) complete (ID, date, etc.)	Y	N	N/A
Label(s) agree with C-O-C	Y	N	N/A
Correct containers used	Y	N	N/A
Sufficient sample received	Y	N	N/A
Bubbles absent from 40 mL vials**	Y	N	N/A

** Samples with bubbles <6mm are acceptable. Indicate bubble size if >6mm. ______

Was client contacted about samples Y N
Will client send new samples Y N
Client contact: ______
Date/Time: ______
Logged in by: ______
Comments: ______

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.sumet.com

March 18, 2015

Mukesh Shah
Bio-Chem Testing
#5 Weatheridge Drive
Hurricane, WV 25526
TEL: (304) 757-8954
FAX: (304) 757-9676

RE:

Dear Mukesh Shah: Order No.: 15031020

Summit Environmental Technologies, Inc. received 3 sample(s) on 3/11/2015 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Dr. Mo Osman
Project Manager
3310 Win St.
Cuyahoga Falls, Ohio 44223

Office of Oil and Gas

APR 0 1 2015

WV Department of
Environmental Protection

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.sumlab.com

Workorder Sample Summary

WO#: 15031020
18-Mar-15

CLIENT: Bio-Chem Testing
Project:

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
15031020-001	1501973-01 (Brine)		3/10/2015 9:30:00 AM	3/11/2015 6:15:00 PM	Non-Potable Water
15031020-002	1501974-01 (Snake Hollow)		3/10/2015 9:00:00 AM	3/11/2015 6:15:00 PM	Non-Potable Water
15031020-003	1501974-02 (Trip Blank)		3/10/2015	3/11/2015 6:15:00 PM	Non-Potable Water

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories
Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.sumlab.com

Case Narrative

WO#: 15031020
Date: 3/18/2015

CLIENT: Bio-Chem Testing
Project:

This report in its entirety consists of the documents listed below. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Paginated Report including Cover Letter, Case Narrative, Analytical Results, Applicable Quality Control Summary Reports, and copies of the Chain of Custody Documents are supplied with this sample set.

Concentrations reported with a J-Flag in the Qualifier Field are values below the Limit of Quantitation (LOQ) but greater than the established Method Detection Limit (MDL).

Method numbers, unless specified as SM (Standard Methods) or ASTM, are EPA methods.

Estimated uncertainty values are available upon request.

Analysis performed by DBM were performed at Summit Labs 2704 Eatonton Highway Haddock, GA 31033

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report.

Any comments or problems with the analytical events associated with this report are noted below.
Analytical Comments for VOC-MSTR_npw(8260), Sample LCSD ABS030915 2, Batch ID R33790 : TCE exceeds spike limits. There are no samples with tce as a requested analyte.
Analytical Comments for TPH-SV-DRO_NPW(8015), Sample tapMSD, Batch ID 11547 : Surrogate levels low in the blk and LCS, spike and surrogate levels normal in MS and MSD as well as surrogate levels in the samples.
Analytical Comments for TPH-SV-DRO_NPW(8015), Sample tapMS, Batch ID 11547 : Surrogate levels low in the blk and LCS, spike and surrogate levels normal in MS and MSD as well as surrogate levels in the samples.
Analytical Comments for TPH-SV-DRO_NPW(8015), Sample LCS-11547, Batch ID 11547 : Surrogate levels low in the blk and LCS, spike and surrogate levels normal in MS and MSD as well as surrogate

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories
Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.sumit.com

Case Narrative

WO#: 15031020
Date: 3/18/2015

CLIENT: Bio-Chem Testing
Project:

levels in the samples.
Analytical Comments for TPH-SV-DRO_NPW(8015). Sample MB-11547, Batch ID 11547 : Surrogate levels low in the blk and LCS, spike and surrogate levels normal in MS and MSD as well as surrogate levels in the samples.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

WO#: 15031020
Date Reported: 3/18/2015
Company: Bio-Chem Testing
Address: #5 Weatheridge Drive
Hurricane WV 25526
Received: 3/11/2015
Project#:

Client ID#	Lab ID#	Collected	Analyte	Result Units	Qual	Matrix	Method	DF	LOD	LOQ	Rpt	Analyst
1501973-01 (Brine)	001	3/10/2015	Specific Gravity	1.154 @60F		Non-Potable Water	ASTM D-4052	1			3/16/2015	TJR
1501973-01 (Brine)	001	3/10/2015	TPH-DRO	3.28 mg/L		Non-Potable Water	EPA 8015 C	1	0.100	0.100	3/18/2015	ET
1501973-01 (Brine)	001	3/10/2015	Oil Range Organics C20-C34	2.60 mg/L		Non-Potable Water	EPA 8015 C	1	0.500	0.500	3/18/2015	ET
1501973-01 (Brine)	001	3/10/2015	TPH-GRO	3.74 mg/L		Non-Potable Water	EPA 8015 B	1	0.0690	0.100	3/15/2015	JCR
1501973-01 (Brine)	001	3/10/2015	Benzene	0.710 mg/L		Non-Potable Water	EPA 8260 B	10	0.00500	0.0500	3/13/2015	MES
1501973-01 (Brine)	001	3/10/2015	Toluene	0.280 mg/L		Non-Potable Water	EPA 8260 B	10	0.00250	0.0500	3/13/2015	MES
1501973-01 (Brine)	001	3/10/2015	Ethylbenzene	ND mg/L		Non-Potable Water	EPA 8260 B	10	0.00250	0.0500	3/13/2015	MES
1501973-01 (Brine)	001	3/10/2015	m,p-Xylene	0.124 mg/L		Non-Potable Water	EPA 8260 B	10	0.00500	0.100	3/13/2015	MES
1501973-01 (Brine)	001	3/10/2015	o-Xylene	ND mg/L		Non-Potable Water	EPA 8260 B	10	0.00500	0.0500	3/13/2015	MES

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.sumet.com

WO#: 15031630
Date Reported: 3/18/2015
Company: Bio-Clean Testing
Address: #5 Weatherlidge Drive
Hurricane WV 25526
Received: 3/11/2015
Project#:

Client ID#	Lab ID#	Collected	Analyte	Result Units	Qual	Matrix	Method	DF	LOD	LOQ	Ran	Analyst
1501974-01 (Snake Hollow)	002	3/10/2015	Specific Gravity	1.004 @60F		Non-Potable Water	ASTM D-4052	1			3/16/2015	TJR
1501974-01 (Snake Hollow)	002	3/10/2015	TPH-DRO	ND mg/L	U	Non-Potable Water	EPA 8015 C	1	0.100	0.100	3/16/2015	ET
1501974-01 (Snake Hollow)	002	3/10/2015	Oil Range Organics C20-C34	ND mg/L	U	Non-Potable Water	EPA 8015 C	1	0.500	0.500	3/16/2015	ET
1501974-01 (Snake Hollow)	002	3/10/2015	TPH-GRO	ND mg/L		Non-Potable Water	EPA 8015 B	1	0.0500	0.100	3/16/2015	JCR
1501974-01 (Snake Hollow)	002	3/10/2015	Benzene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000500	0.00500	3/13/2015	MES
1501974-01 (Snake Hollow)	002	3/10/2015	Toluene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000250	0.00500	3/13/2015	MES
1501974-01 (Snake Hollow)	002	3/10/2015	Ethylbenzene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000250	0.00500	3/13/2015	MES
1501974-01 (Snake Hollow)	002	3/10/2015	m,p-Xylene	ND mg/L		Non-Potable Water	EPA 8260 B	1	0.000500	0.0100	3/13/2015	MES
1501974-01 (Snake Hollow)	002	3/10/2015	o-Xylene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000500	0.00500	3/13/2015	MES

Client ID#	Lab ID#	Collected	Analyte	Result Units	Qual	Matrix	Method	DF	LOD	LOQ	Ran	Analyst
1501974-02 (Trip Blank)	003	3/10/2015	Benzene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000500	0.00500	3/13/2015	MES
1501974-02 (Trip Blank)	003	3/10/2015	Toluene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000250	0.00500	3/13/2015	MES
1501974-02 (Trip Blank)	003	3/10/2015	Ethylbenzene	ND mg/L		Non-Potable Water	EPA 8260 B	1	0.000250	0.00500	3/13/2015	MES
1501974-02 (Trip Blank)	003	3/10/2015	m,p-Xylene	ND mg/L		Non-Potable Water	EPA 8260 B	1	0.000500	0.0100	3/13/2015	MES
1501974-02 (Trip Blank)	003	3/10/2015	o-Xylene	ND mg/L	U	Non-Potable Water	EPA 8260 B	1	0.000500	0.00500	3/13/2015	MES

Bio-Chem Testing, Inc. Environmental Laboratory

5 Weatheridge Drive
Hurricane, WV 25526

Phone: (304) 757-8954
Fax: (304) 757-9676

P.O. Box 634
Teaye, WV 25569

Web Site: www.biochemtest.ng.com
e-mail: info@biochemtesting.com

CASE NARRATIVE

Date: DEC 19 2014

CLIENT: DD Oil Company

Lab Number(s) 1409148-01; 1409149-01

Bio-Chem Testing, Inc. warrants the accuracy of analysis for the data generated and reported in this report. Procedures used by the laboratory are well documented and reviewed on a regular basis to ensure consistency and reliability. Sources for the analytical procedures are derived from EPA sources such as EPA-600/4-79-020, SW 846, and the 18th through 20th Editions of Standard Methods.

Samples were received in good condition unless otherwise noted.

This report includes a total of 4 pages. This includes:

- 1 Case Narrative
- 2 Results for analyses reported by Bio-Chem Testing, Inc.
- ____ Results for analyses that were subcontracted
- 1 Chain of Custody form and associated documents
- ____ Other: ____

The estimated uncertainty of measurement is available upon client request.

Respectfully Submitted,

Mukesh Shah
Laboratory President

Results reviewed by:

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Office of Oil and Gas
FEB 18 2015
WV Department of
Environmental Protection

Bio-Chem Testing, Inc. Environmental Laboratory

5 Weatheridge Drive
Hurricane, WV 25526

Phone: (304) 757-8954
Fax: (304) 757-9676

P.O. Box 634
Teays, WV 25569

Web Site: www.biochemtesting.com
e-mail: info@biochemtesting.com

LABORATORY ANALYSIS REPORT

DD Oil Co.
406 Box
Spencer, WV 25276
Attn: David Dale
DD Oil
Poca River
Poca River
DD Oil Co.

Laboratory Number	1409148-01
Sample Identification	Poca River
Sampled By:	Client
Date/Time Sampled	12/01/2014 10:00
Date/Time Received	12/02/2014 12:30
Sample Type	GRAB
Client Information	

PARAMETER	RESULT	NOTE	MDL	UNITS	METHOD	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
FIELD ANALYSIS								
pH	7.71		-	pH Units	SM4500H+ B	12/01/2014	10:00	CLT
Metals by EPA 200 Series Methods								
Aluminum	0.104		0.020	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Calcium	27.7		0.2	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Iron	0.46		0.02	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Magnesium	5.7		0.2	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Manganese	0.109		0.003	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Potassium	1.7		0.5	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Sodium	10.7		0.5	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Wet Chemistry								
Bromide	<0.050		0.050	mg/L	EPA300.0Rev2.1-1993	12/03/2014	13:06	BS
Chloride	13.6		0.625	mg/L	EPA300.0Rev2.1-1993	12/03/2014	13:06	BS
Specific Conductance	235		-	umhos/cm	EPA120.1Rev-1982	12/03/2014	12:30	BS
Sulfate as SO4	11.0		1.00	mg/L	EPA300.0Rev2.1-1993	12/03/2014	13:06	BS

Method Reference: USEPA: Methods for Chemical Analysis of Water and Waste.
SM: Standard Methods for the Examination of Water and Wastewater.
SW: Test Methods for Evaluating Solid Waste.

Respectfully Submitted:

Mukesh Shah

DEC 19 2014

Bio-Chem Testing, Inc. Environmental Laboratory

5 Weatheridge Drive
Hurricane, WV 25526

Phone: (304) 757-8954
Fax: (304) 757-9676

P.O. Box 634
Teays, WV 25569

Web Site: www.biochemtesting.com
e-mail: info@biochemtesting.com

LABORATORY ANALYSIS REPORT

DD Oil Co.
406 Box
Spencer, WV 25276
Attn: David Dale
DD Oil
Shake Hollow
Poca River
DD Oil Co.

Laboratory Number:	1409149-01
Sample Identification	Shake Hollow
Sampled By:	Client
Date/Time Sampled	12/01/2014 10:00
Date/Time Received	12/02/2014 12:30
Sample Type	GRAB
Client Information	

PARAMETER	RESULT	NOTE	MDL	UNITS	METHOD	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
FIELD ANALYSIS								
pH	7.77		-	pH Units	SM4500H+ B	12/01/2014	10:00	CLT
Metals by EPA 200 Series Methods								
Aluminum	0.071		0.020	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Calcium	43.9		0.2	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Iron	0.10		0.02	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Magnesium	8.0		0.2	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Manganese	0.062		0.003	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Potassium	1.8		0.5	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Sodium	26.0		0.5	mg/L	EPA200.7Rev4.4-1994	12/16/2014	8:35	CW
Wet Chemistry								
Bromide	<0.075		0.075	mg/L	EPA300.0Rev2.1-1993	12/03/2014	13:06	BS
Chloride	75.6		0.625	mg/L	EPA300.0Rev2.1-1993	12/03/2014	13:06	BS
Specific Conductance	450		-	umhos/cm	EPA120.1Rev-1982	12/03/2014	12:30	BS
Sulfate as SO4	10.5		1.00	mg/L	EPA300.0Rev2.1-1993	12/03/2014	13:06	BS

Method Reference: USEPA: Methods for Chemical Analysis of Water and Waste.
SM: Standard Methods for the Examination of Water and Wastewater.
SW: Test Methods for Evaluating Solid Waste.

Respectfully Submitted:

Mukesh Shah

DEC 19 2014

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Office of Oil & Gas

NOV 2 0 2015

WV Department of
Environmental Protection

BIO-CHEM TESTING, INC.
5 Weatheridge Drive
Hurricane, WV 25526
Phone: (304) 757-8954
Fax: (304) 757-9676

CLIENT: DD Oil Co

CONTACT: David DALE PHONE NO: (304) 927-1147

PROJECT: SITE:

REPORTS TO: DD Oil Co Box 406 Spencer, WV 25276 FAX NO: (304) 927 6519

INVOICE TO: above P.O. NUMBER:

E MAIL:

PAGE ___ OF ___

LAB NO	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Ca, Mg, K, Na, Fe, Mn, Al	Chloride, Bromide, SO4	SP. Cond.	REMARKS
1409148-01	Pocca River	12/1	10:00	Comp Water	2	G	X	X	X	pH 7.71
1409149-01	Snake Hollow	"	"	↓	2	G	X	X	X	pH 2.77 12-2-14 17:40

Preservative Added

Preservative Checked

Collected / Relinquished By: (1)	Date	Time	Received By:
David DALE	12/1/14	10:00A	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:
	12-2-14	12:30	[signature]

Sample Rec'd Cold? Yes ___ No X temp°C 16°C

Turn Around Time: Fed Ex

Preservative Used:

① None
② Sulfuric Acid Soln.
③ Sodium Hydroxide Soln.
④ Nitric Acid Soln.
⑤ Zinc Acetate & NaOH Soln
⑥ Hydrochloric Acid Soln.
⑦ Other ______
⑧ Other ______

WHITE — BIO-CHEM COPY PINK — CUSTOMER COPY

To Gene Smith W.V. DEP

2-12-2016

Deficiency Letter Detail

1-3-2016

D & D Oil Well Summers 7

API Number 2D0871623

Section 8 Geological Data and Confining Zones.

Deficiency A

There are no Geologic Anomalies known in the area.

Deficiency B

The Big Injun Sand characteristics are the shale content is less than 10% of the pore space with a permeability averaging 20 md and porosity of 21% and thickness greater than 35 Feet.

Birdwell

GR / Induction

PERMIT # ROA. 1623

COMPANY JOSEPH S. GRUSS

WELL I.B. SUMMERS #7

FIELD WALTON

COUNTY ROANE STATE W.VA.

LOCATION:

SEC. TWP. RGE.

OTHER SERVICES:

PERMANENT DATUM GROUND LEVEL ELEV. 936'

LOG MEASURED FROM K.B. FT. ABOVE PERM. DATUM

DRILLING MEASURED FROM K.B.

ELEV.: K.B.

D.F.

G.L. 936'

DATE	7-29-67	7-29-67		
RUN NO.	1	1	BEST COPY available	
DEPTH—DRILLER	2150'	2150'		
DEPTH—LOGGER	2153'	2153'		
BTM. LOG INTER.	2140'	2140'		
TOP LOG INTER.	0'	1600'		
CASING—DRILLER	@	@	@	@
CASING—LOGGER	N/A	N/A		
BIT SIZE	7 7/8"	7 7/8"		
TYPE FLUID IN HOLE	MUD	MUD		
DENS. / VISC.	N/A	N/A		
pH / FLUID LOSS	cc	cc	cc	cc
SOURCE OF SAMPLE	N/A	N/A		
Rm @ MEAS. TEMP.	@ °F	@ °F	@ °F	@ °F
Rmf @ MEAS. TEMP.	@ °F	@ °F	@ °F	@ °F
Rmc @ MEAS. TEMP.	@ °F	@ °F	@ °F	@ °F
SOURCE Rmf / Rmc				
Rm @ B.H.T.	@ °F	@ °F	@ °F	@ °F
TIME SINCE CIRC.	4 HOURS			
MAX. REC. TEMP.	°F	°F	°F	°F
EQUIP. / LOCATION	1944 / #7			
RECORDED BY	RUGH			
WITNESSED BY	PERRIN			

REMARKS NA-NOT AVAILABLE

EQUIPMENT DATA			
RUN NO.	TOOL TYPE	TOOL POSITION	OTHER
	GAMMA RAY	FREE	
	INDUCTION	FREE	

SCALE CHANGES: TYPE LOG / DEPTH / SCALE UP HOLE / SCALE DOWN HOLE

CHANGES IN MUD TYPE OR ADDITIONAL SAMPLES: DATE / SAMPLE NO. / DEPTH—DRILLER / TYPE FLUID IN HOLE / DENS. / VISC. / pH / FLUID LOSS / SOURCE OF SAMPLE / Rm @ MEAS. TEMP. / Rmf @ MEAS. TEMP. / Rmc @ MEAS. TEMP. / SOURCE Rmf / Rmc / Rm @ B.H.T. / Rmf @ B.H.T. / Rmc @ B.H.T.

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Office of Oil and Gas
JUL 25 2014
WV Department of
Environmental Protection

1800
1900
2000
INJection
Zone
Marked
2077
19 Shot
2095
2100
2111
To
2115
5
Shot
RECEIVED
Office of Oil and Gas
JUL 25 2014
WV Department of
Environmental Protection

SCHLUMBERGER PERFORATING DEPTH CONTROL

COMPANY JOSEPH S. GRUSS

WELL I. B. SUMMERS #7

FIELD WALTON

COUNTY ROANE STATE WEST VIRGINIA

COUNTY
FIELD or LOCATION
WELL
COMPANY

Location WALTON DIST.

Sec. Twp. Rge.

Other Services: SCH-H

Permanent Datum: GROUND LEVEL ; Elev.: 936
Log Measured From K.B. , * Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. N/A
D.F. -
G.L. 936

Date	8/5/67
Run No.	ONE
Type Log	PDC-GR
Depth — Driller	2150
Depth — Logger	2141
Bottom logged interval	2138
Top logged interval	1850
Type fluid in hole	FRESH WATER
Salinity, PPM Cl.	-
Density	-
Level	FULL
Max. rec. temp., deg F.	-
Operating rig time	1/2 HOUR
Recorded By	MALONE
Witnessed By	WESHE

BEST COPY available

BORE-HOLE RECORD			CASING RECORD			
Bit Size	From	To	Size	Wgt.	From	To
7 7/8	N/A	T.D.	4 1/2	-	SURF.	T.D.

RECEIVED
Office of Oil and Gas
FEB 18 2015
WV Department of Environmental Protection

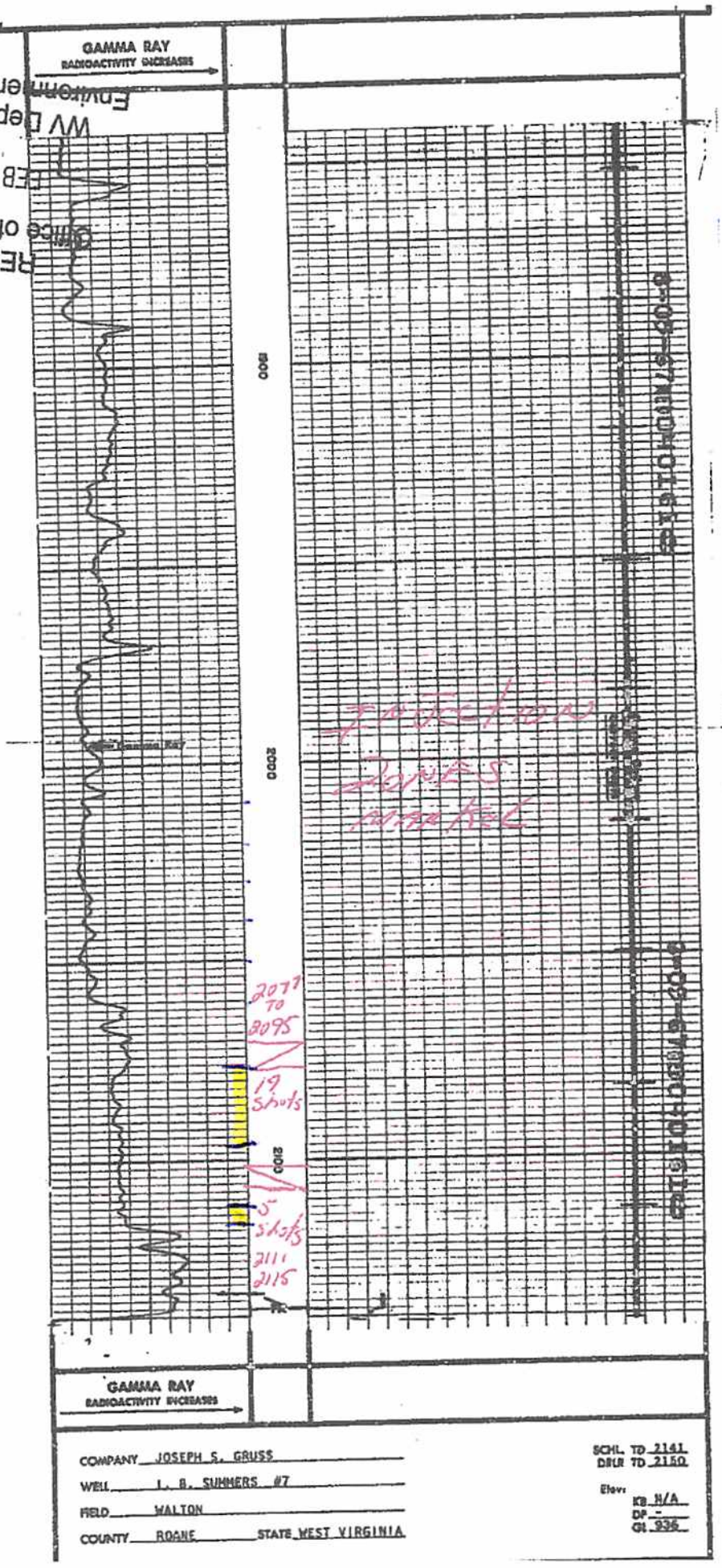
FOLD HERE

The well name, location and borehole reference data were furnished by the customer.

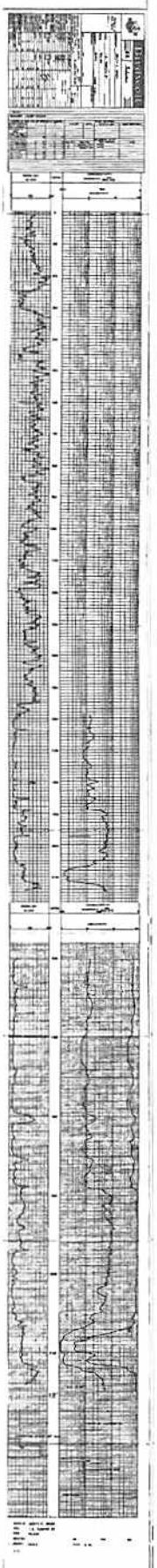
EQUIPMENT DATA

Gamma Ray	
Run No.	ONE
Tool Model No.	G
Diameter	3 5/8
Det'r Model No.	G
Type	SCINT.
Length	8"
General	
Hoist Truck No.	3016
Inst. Truck No.	3016
Tool Serial No.	260
Location	KNTG.

Remarks: WELL PERFORATED FROM 2077'-2095' 19 SHOTS
2111'-2115' 5 SHOTS
PERFORATED WITH 3 3/8" HYPER-JETS.
* K.B. TO GROUND LEVEL WAS NOT AVAILABLE FROM OPEN HOLE LOG.



ROA-1623



Roa - 1623

SCHLUMBERGER PERFORATING DEPTH CONTROL

COMPANY JOSEPH S. GRUSS
WELL I. B. SUMMERS #7
FIELD WALTON
COUNTY ROANE STATE WEST VIRGINIA
Location WALTON DIST.

BEST COPY AVAILABLE

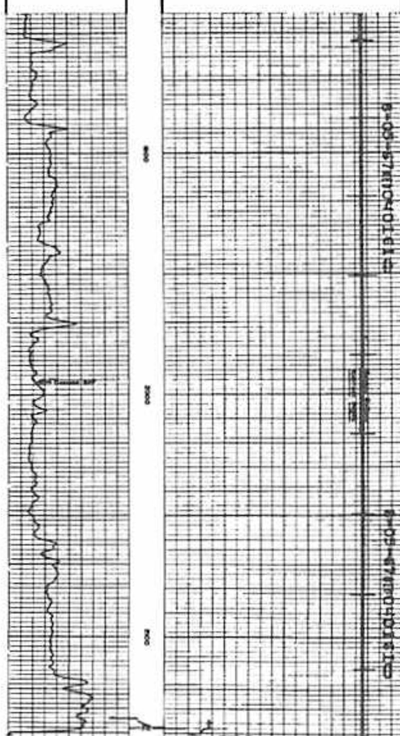
The well name, location and borehole reference data were furnished by the customer.

EQUIPMENT DATA	Gamma Ray	
Run No.	ONE	
Tool Model No.	G	
Diameter	3 5/8	
Det'r Model No.	G	
Type	SCINT.	
Length	8"	
	General	
Panel Truck No.	2016	
Inst. Truck No.	2016	
Tool Serial No.	240	
Location	HRTC.	

WELL PERFORATED FROM 2077'-2085' 16 SHOTS
2111'-2115' 8 SHOTS
PERFORATED WITH 3 3/8" HYPER-JETS.

Remarks:
* K.B. TO GROUND LEVEL WAS NOT AVAILABLE FROM OPEN HOLE LOG.

GAMMA RAY
RADIOACTIVITY INCREASES →



GAMMA RAY
RADIOACTIVITY INCREASES →

COMPANY JOSEPH S. GRUSS
WELL I. B. SUMMERS #7
FIELD WALTON
COUNTY ROANE STATE WEST VIRGINIA

SCHL TD 2181
DPLR TD 2150
Elev.: KB N/A
DF -
GL 936

To Gene Smith W.V DEP

2-12-2016

D&D Oil Well Summers 7

API Number 2D0871623

Section 8 Geological Data and Confining Zones.

Section 8 Continued

Deficiency C

The Big Lime confining layer is covering the Big Injun Sand so fluid ~~with~~ will not migrate vertically. The Big Lime depth is 1943'-2070', 127 Feet, See Brannock Resources attached dated 7-24-2014 complete geological description of Walton oil field.

Deficiency D attached is contour map of the Big Lime formation in the Walton oil field.

Deficiency E, All residents rely on city water and the Walton public service district no water wells used in the area.

BRANNOCK RESOURCES

Michael C. Brannock
Petroleum Geologist
A.A.P.G. Cert. #2878

July 24, 2014

Mr. Hugh Dale, Vice President
D D Oil Company
P.O. Box 406
Spencer, West Virginia

Re: I. B. Summers #7

Dear Hugh:

I have marked the location of your I. B. Summers #7 well on the maps that you emailed to me. Those maps are part of Bulletin 43 that covers the Rock Creek Field located in Roane County. Comparing the well spot maps with the digital data from the West Virginia Geological Survey, I feel very confident of the location of your well with regards to those shown on Figure 17, page 25. I am enclosing a map generated from the data in the survey's data base for comparison. The pattern of the well spots and well types from the bulletin maps and my digitally derived map match up very well.

I downloaded log copies from the survey's library and constructed a cross section through the Summers #7 well to show the formations directly above the Big Injun sandstone per your request. Only a gamma ray/induction open hole log was run on the Summers #7. Comparing this log with 2 other gamma ray/density logs adjacent to your well (see attached map), the log tops for the Summers #7 are:

Little Lime: 1891'-1938' (47')
Pencil Cave: 1938'-1943' (5')
Big Lime: 1943'-2070' (127')
Big Injun: 2070'-2124' (54')

The Little Lime, Big Lime and Big Injun appear to be very consistent in thickness and lithology in this area with a few minor changes at the formation contacts. The Pencil Cave sometimes does not show up very well due to pinchouts between wells. Based upon this cross section it would be reasonable to assume that there is sufficient barrier between the Big Injun and overlying formations to prevent the migration of fluids provided there is good mechanical integrity of the well and proper operational practices are followed.

If you need additional information, please feel free to call me at my office.

Sincerely yours,

Michael C. Brannock

Michael C. Brannock, Owner
BRANNOCK RESOURCES
P.O. Box 1764
Parkersburg, WV 26102
V: 304-485-2878
E: brannockres@suddenlink.net

To Gene Smith W.V. DEP

2-12-2016

API Number 2D0871623

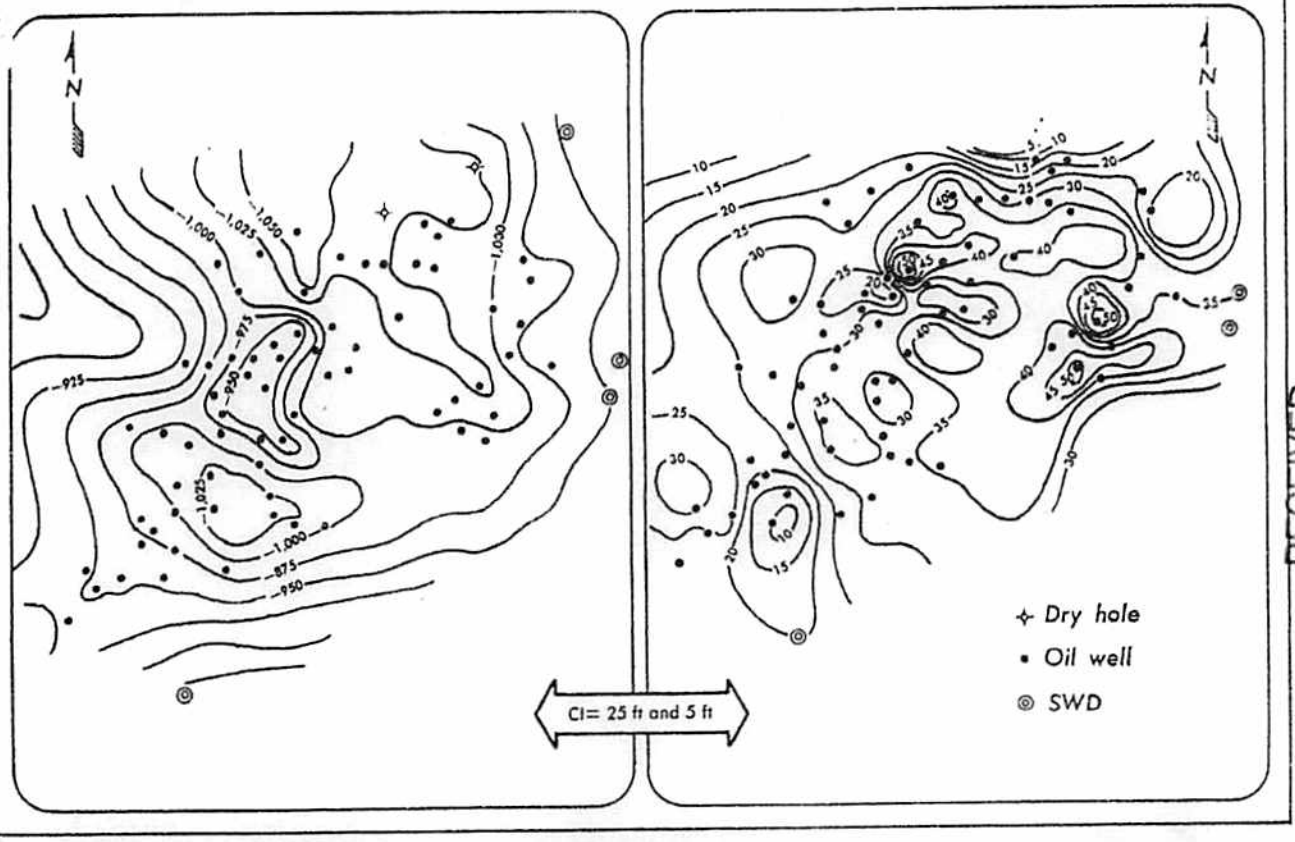
Section 8 Geological Data and Confining Zones.

Deficiency F

The Hydrostatic Fluid Level is at 2077 Feet.

Fig. 2

Structure and Isopach map on Big Injun sand



2. Primary reserves will justify the development and investment, and a good possibility that secondary may contribute as much as primary.

3. To be successful in finding reserves of more than 5 million bbl, investigation of known blanket sands is essential, and then the method of determination of the new production limits must be established.

4. A reliable and economical method for determining relative permeabilities within Blue Creek was developed and used to great success.

5. Good production practices and methods are a must, and contribute in every way to the ultimate success of the program.

Walton field. Walton field is located in Harper, Walton, and Smithfield districts, Roane County, W.Va.

The field was discovered in 1907, and approximately 9,000 acres had been developed up until 1966. Since 1966, approximately 300 wells have been drilled on 5,500 acres for an erage spacing of 18 acres per well.

Almost all the production in this field is from the Big Injun at an average depth of 1,940 ft. Fig. 1 shows this trend, old and new development, and its relation to Blue Creek field.

Blue Creek. Blue Creek field is located in Big Sandy and Elk districts of Kanawha County, W.Va.

There were eight to 10 producing wells drilled about 1920, three or four of which were still producing in the Big Injun sand in 1967.

There have been 78 wells drilled since the spring of 1967 to the summer of 1969. There now have been 67 leases validated which comprise 5,200 acres. All production from this field is from Big Injun sand at an average depth of 1,870 ft.

There is presently room for approximately 250 additional wells to be drilled on 20-acre spacing.

Reservoir and structural condition. The field is basically a syncline laying between the intersection of two major anticlines.

One anticline trending northeast-southwest known as the Arches Fork and the other trending north-south known as the Milliken.

The trap is formed by a lithology change on the north side of the field where the Big Injun sand thickness grades from 20 to 0 ft over a distance of less than 800 ft.

Within the syncline, the sand characteristics are such that shale content within the sand is less than 10% of the pore space, with permeabilities averaging 20 md, porosity 21%, and thickness greater than 35 ft.

On the other three sides of the syncline, sand thickness remains essentially constant, (about 35 ft) but as structure approaches −950 ft subsea, shale content reaches 25% of the pore space and reduces the permeability to less than 5 md., thereby effecting a permeability trap for the nonmovement of oil beyond that point of permeability reduction. The proven producible area of this field has now been determined to be 7,200 acres.

As a result of this development, application of the disposal systems, hydraulic fracturing, the concept that movable oil can be produced downdip from nonmovable oil—provided that a dispersed clay system is available to effectively reduce permeability—major reservoirs can now be found whenever reevaluation in these areas are made.

The ability, through logging-coring analysis, to determine where permeability reduction occurs can set the limits of a producible oil reserve located structurally below and connected directly to an updip movable

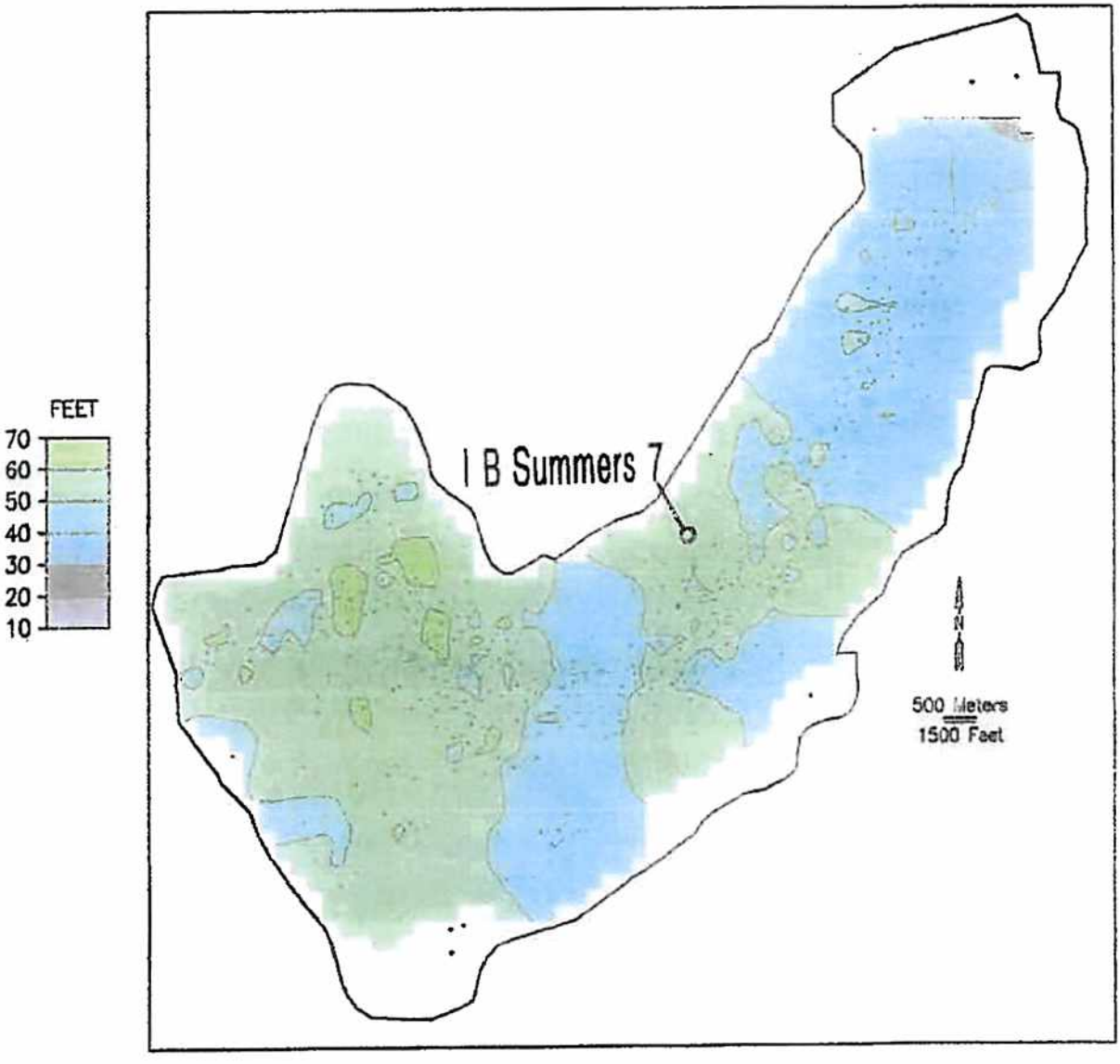


Figure 20a

Figures 20a-b. 20a. An isopach map of the stratigraphic Big Injun sandstone based on wireline log picks. Contour interval is 10 feet. 20b. An isopach map of the reservoir Big Injun sandstone based on wireline logs. Contour interval is 10 feet.

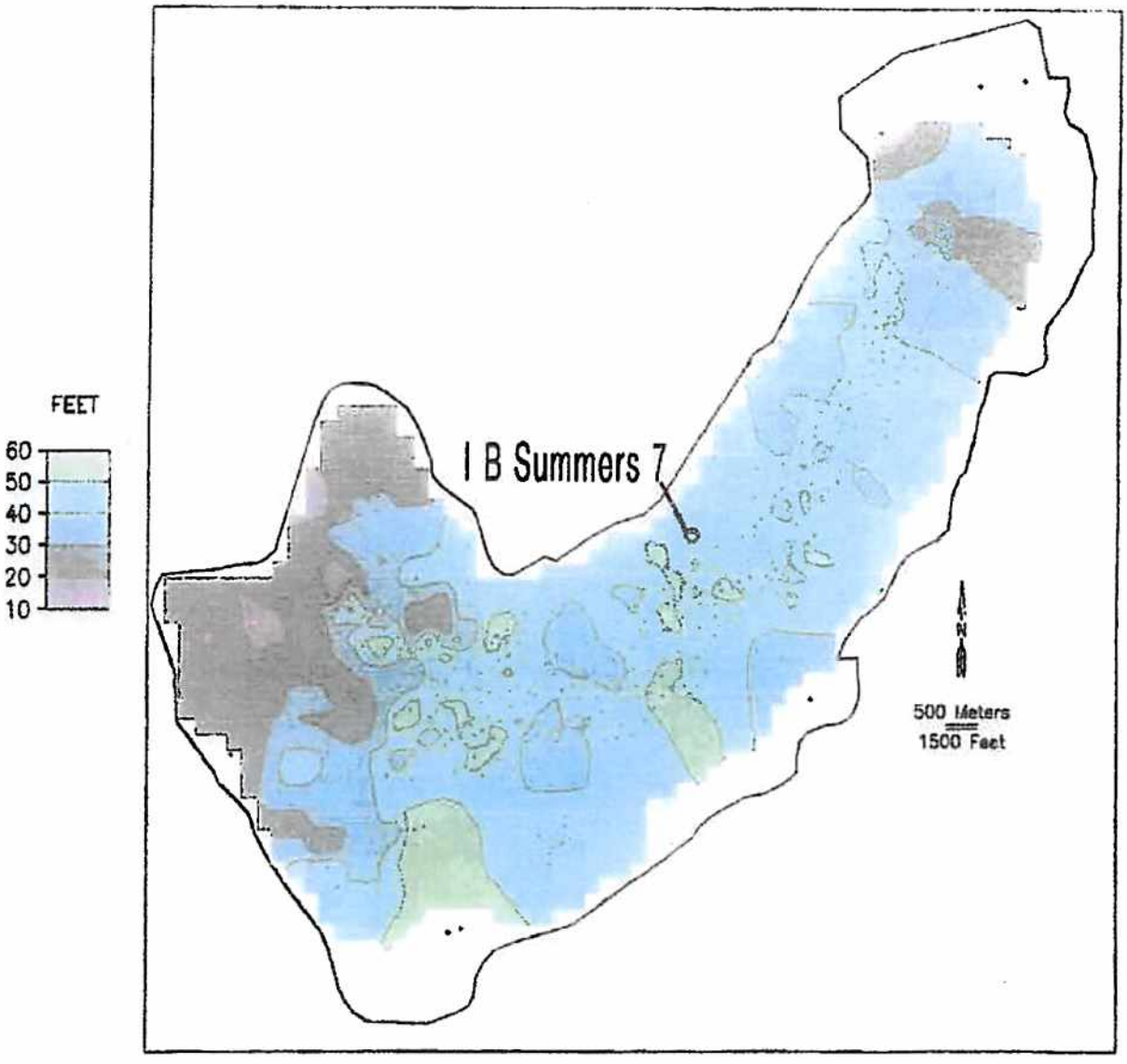


Figure 20b

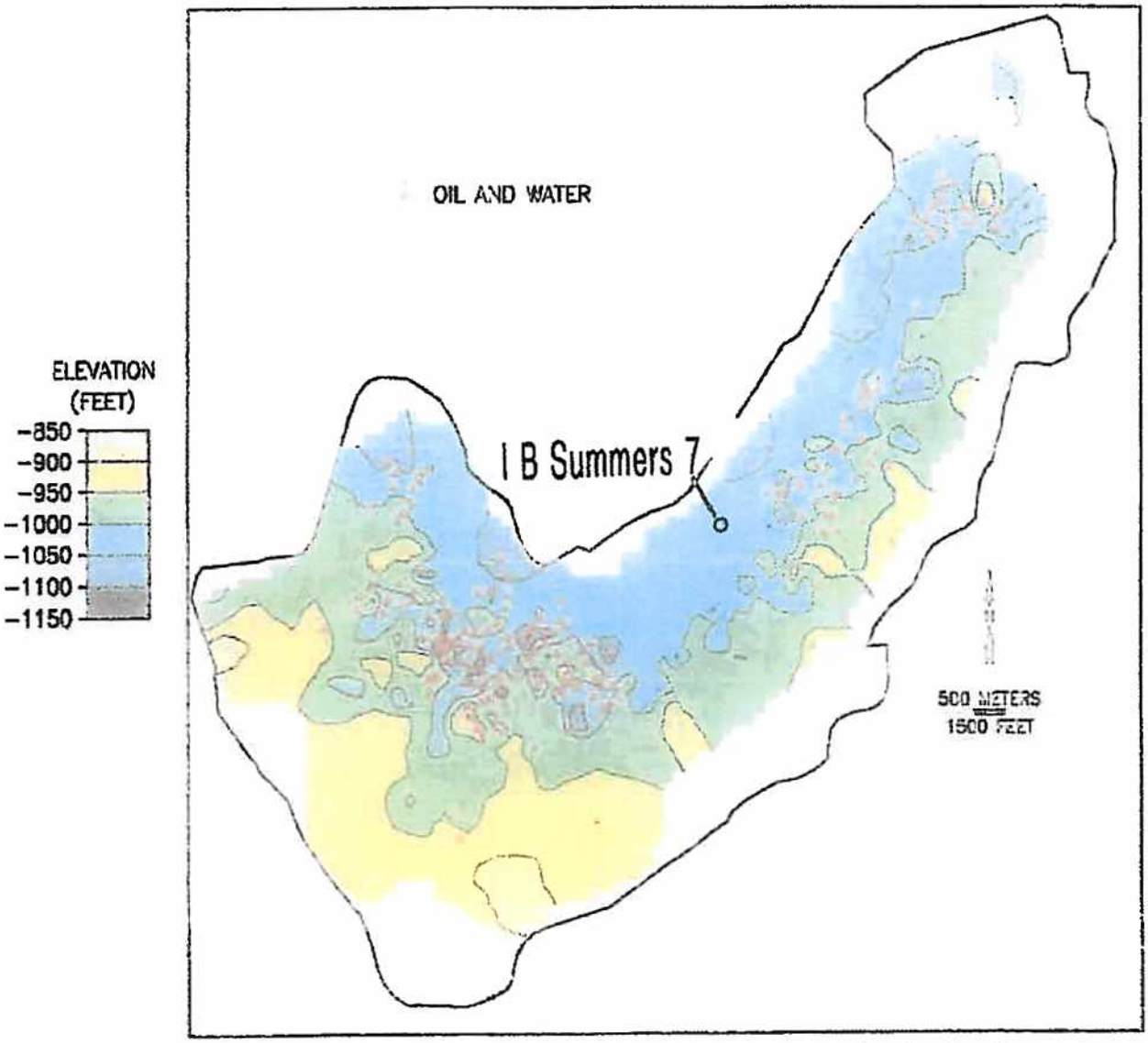


Figure 16. Geologic structure map for Rock Creek field. Datum is the top of the Loyalhanna limestone (as identified by drillers). Distribution of wells that produce oil and water parallel the field structure. Outliers may represent wells drilled into former oil-bearing strata into which water has encroached. Absence of wells reporting oil and water production in north-center of field is probably due to incomplete drillers' records. Wells in this area have produced significant amounts of water (M. Brannock, Quaker State, personal communication, 1993). Contour interval is 50 feet.

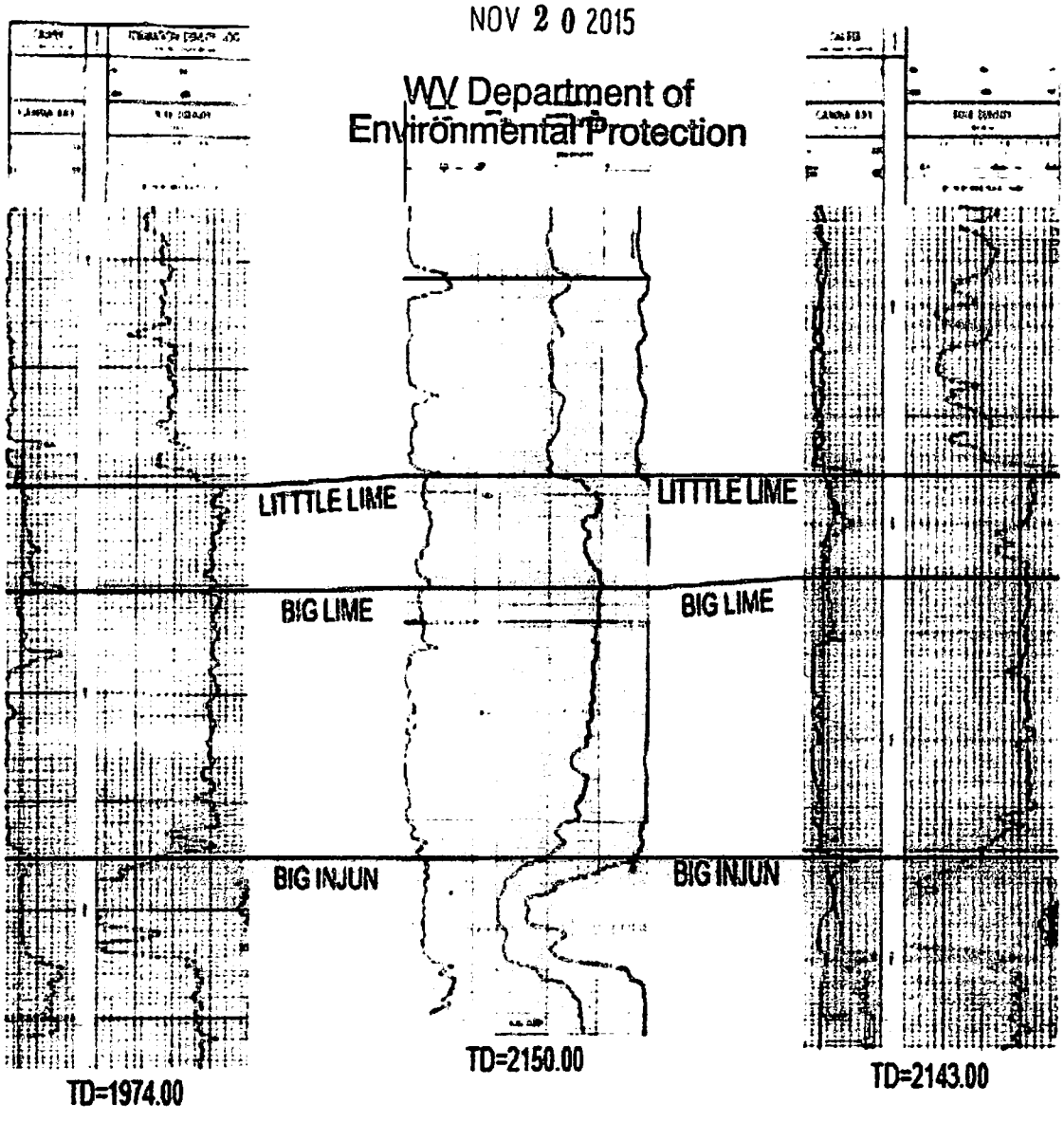
Stratigraphic Cross Section "SUMMERS_7" : Equally Spaced Logs

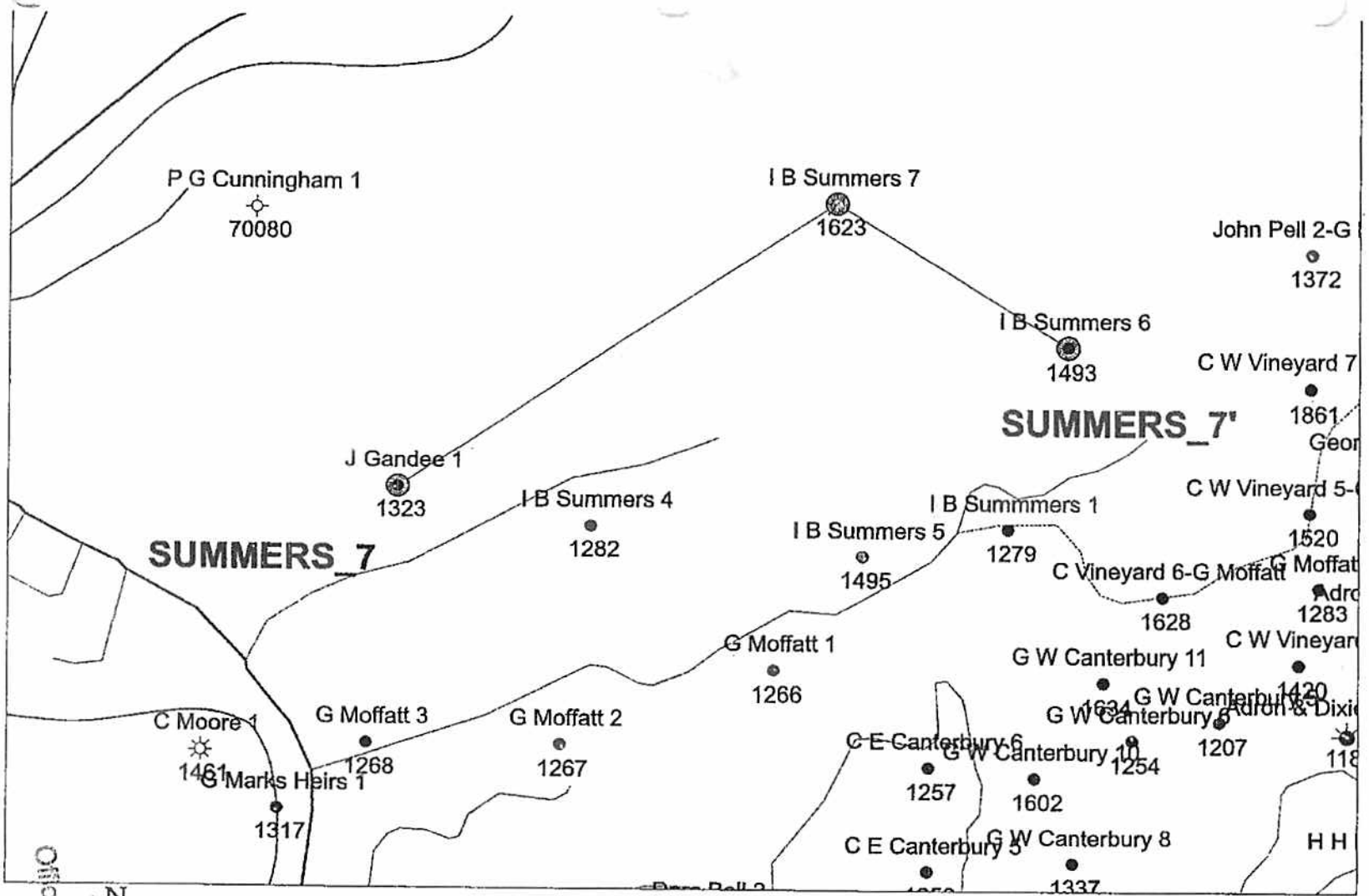
Datum = BIG INJUN

Vertical Scale = 1 in per 100 ft

SUMMERS_7.xsd; 07/23/14

SUMMERS_7	4708701323	2859 ft	4708701623	1496 ft	4708701493	SUMMERS_7'
	Gruss Joseph S J Gandee 1 County=Roane District=Walton		Gruss Joseph S I B Summers 7 County=Roane District=Walton		Gruss Joseph S I B Summers 6 County=Roane District=Walton	





D D OIL COMPANY		
I B SUMMERS CROSS SECTION LOCATION WALTON DISTRICT, ROANE COUNTY, W.VA.		
Author: MCB		Date: 24 July, 2014
	Scale: See scalebar	

To Gene Smith W.V DEP

2-12-2016

D&D Well Summers 7

API Number 2D0871623

D&D Oil

Deficiency 2D0871623

Section 9

Operating Requirements Data

Section A

The fluid between in the 4 ½ casing annulus and tubing is filled with fresh water to conduct the mechanical integrity test.

Section B

D&D Oil is operating this well and fully intend to continue operating this well in compliance with rules, regulations and with the permit. Will continue to daily monitor the injection pressure, annulus pressure and record the volume. Data will be recorded on form wr-40 and continue to be submitted to the Office of Oil and Gas monthly.

(4/25)

APPENDIX G

Wells Serviced by Injection Wells

All wells in Roane County

API #	Operator	Producing Formation
47-087-1300	D+D oil	Big Injun Sand
47-87-1219		
47-87-1183		
47-87-1245		
47-87-1422		
47-87-1860		
47-87-1382		
47-87-1307		
47-87-1309		
47-87-1310		
47-87-1558		
47-87-1857		
47-87-1311		
47-87-1859		
47-87-1421		
47-87-1420		
47-87-1520		
47-87-1861		
47-87-1283		
47-87-1284		
47-87-1552		
47-87-1242		
47-87-1243		
47-87-1259		
47-87-1847		
47-87-1848		
47-87-4048		

Make as many copies as necessary and include page numbers as appropriate.

Promoting a healthy environment.

dep

(4/25)

APPENDIX G

Wells Serviced by Injection Wells

All within Roane County

API #	Operator	Producing Formation
047-087-1516	D+D oil	Big Injun Sand
047-087-1517		
47-87-3969		
47-87-1227		
47-87-1228		
47-87-1229		
47-87-1234		
47-87-1263		
47-87-1397		
47-87-1856		
47-87-1862		
47-87-1264		
47-87-1247		
47-87-1248		
47-87-1244		
47-87-1246		
47-87-1277		
47-87-1845		
47-87-1515		
47-87-1846		
47-87-4077		
47-87-1372		
47-87-1380		
47-87 1369		

Make as many copies as necessary and include page numbers as appropriate.

Promoting a healthy environment.

dep

county_nar	permit_id	lastpermitd	responsibl	responsibl	well_farm_	well_numb	wellstatus	welltype	welldepth	WELL_HE	WELL_HEAD_UTM_NORTH
Roane	8700615	01/01/195	DALE, DA	308509	BRANNAN	1	Active Wel	Oil Well	Not Availat	474435.9	4286509
Roane	8700689	01/01/195	DALE, DA	308509	BRANNON	2	Active Wel	Oil Well	Not Availat	474777.4	4286765
Roane	8700896	07/11/196	DALE, DA	308509	BRANNON	11	Active Wel	Oil Well	Not Availat	474743	4286057
Roane	8701121	11/01/196	DALE, DA	308509	BRANNON	15	Active Wel	Oil Well	Not Availat	474581.3	4286702
Roane	8701183	07/01/196	DALE, DA	308509	WALKER,	3	Active Wel	Oil Well	Not Availat	467554.5	4276047
Roane	8701219	10/01/196	DALE, DA	308509	WALKER,	4	Active Wel	Oil Well	Not Availat	467812.3	4276062
Roane	8701227	10/01/196	DALE, DA	308509	GIBSON, I	4	Active Wel	Oil Well	Not Availat	466487.2	4275729
Roane	8701228	10/01/196	DALE, DA	308509	GIBSON, I	3	Active Wel	Oil Well	Not Availat	466276.4	4275392
Roane	8701229	10/01/196	DALE, DA	308509	GIBSON, I	1	Active Wel	Oil Well	Not Availat	466034.3	4274731
Roane	8701234	10/01/196	DALE, DA	308509	GIBSON, I	2	Active Wel	Oil Well	Not Availat	466197.2	4275213
Roane	8701242	11/01/196	DALE, DA	308509	SWINEY, I	1	Active Wel	Oil Well	Not Availat	465680.5	4274716
Roane	8701243	11/01/196	DALE, DA	308509	SWINEY, I	2	Active Wel	Oil Well	Not Availat	465352.5	4274464
Roane	8701244	11/01/196	DALE, DA	308509	CUNNINGI	3	Active Wel	Oil Well	Not Availat	465007.2	4275186
Roane	8701245	01/01/196	DALE, DA	308509	HIVELY, J.	2	Active Wel	Oil Well	Not Availat	466128.4	4274151
Roane	8701246	11/01/196	DALE, DA	308509	CUNNINGI	4	Active Wel	Oil Well	Not Availat	465005	4274687
Roane	8701247	12/01/196	DALE, DA	308509	CUNNINGI	1	Active Wel	Oil Well	Not Availat	467931.9	4276449
Roane	8701248	01/01/196	DALE, DA	308509	CUNNINGI	2	Active Wel	Oil Well	Not Availat	465376.2	4274991
Roane	8701259	11/01/196	DALE, DA	308509	SWINEY, I	3	Active Wel	Oil Well	Not Availat	465824.4	4274523
Roane	8701263	12/01/196	DALE, DA	308509	GIBSON, I	6	Active Wel	Oil Well	Not Availat	466454.5	4275212
Roane	8701264	12/01/196	DALE, DA	308509	GIBSON, I	7	Active Wel	Oil Well	Not Availat	466180.9	4275650
Roane	8701269	11/01/196	DALE, DA	308509	MOFFATT	4	Active Wel	Oil Well	Not Availat	465938.9	4275554
Roane	8701277	01/01/196	DALE, DA	308509	CUNNINGI	5	Active Wel	Oil Well	Not Availat	465752	4274761
Roane	8701283	04/01/196	DALE, DA	308509	MOFFATT	1	Active Wel	Oil Well	Not Availat	467507.2	4276288
Roane	8701284	07/01/196	DALE, DA	308509	MOFFATT	2	Active Wel	Oil Well	Not Availat	467620.8	4276497
Roane	8701300	05/24/196	DALE, DA	308509	WALKER,	5	Active Wel	Oil Well	Shallow te	467635.8	4276240
Roane	8701307	07/01/196	DALE, DA	308509	RYAN, H.	1	Active Wel	Oil Well	Not Availat	465275.9	4274122
Roane	8701309	06/01/196	DALE, DA	308509	RYAN, H.	3	Active Wel	Oil Well	Not Availat	465887.9	4274329
Roane	8701310	07/01/196	DALE, DA	308509	RYAN, H.	6	Active Wel	Oil Well	Not Availat	465274.9	4273881
Roane	8701372	07/01/196	DALE, DA	308509	PELL, J.	2	Active Wel	Oil Well	Not Availat	467493.4	4276852
Roane	8701374	11/09/197	DALE, DA	308509	BONNETT	2	Plugged	Not Availat	Not Availat	468296.9	4276430
Roane	8701380	08/01/196	DALE, DA	308509	PELL, JOH	1	Active Wel	Oil Well	Not Availat	467830.7	4276641
Roane	8701382	07/01/196	DALE, DA	308509	PELL, JOH	3	Active Wel	Oil Well	Not Availat	467718.9	4276867
Roane	8701397	07/01/196	DALE, DA	308509	GIBSON, I	8	Active Wel	Oil Well	Not Availat	466260.4	4274955
Roane	8701420	09/01/196	DALE, DA	308509	VINEYARI	4	Active Wel	Oil Well	Not Availat	467474.5	4276160
Roane	8701421	08/01/196	DALE, DA	308509	RYAN, H.	8	Active Wel	Oil Well	Not Availat	465740.6	4273734
Roane	8701422	11/01/196	DALE, DA	308509	HIVELY, J.	3	Active Wel	Oil Well	Not Availat	466241.8	4274360
Roane	8701516	10/01/196	DALE, DA	308509	ALLMAN,	1	Active Wel	Oil Well	Not Availat	465889.8	4275377
Roane	8701517	12/01/196	DALE, DA	308509	ALLMAN,	2	Active Wel	Oil Well	Not Availat	465454.5	4275282
Roane	8701520	11/01/196	DALE, DA	308509	VINEYARI	5	Active Wel	Oil Well	Not Availat	467491.6	4276417
Roane	8701551	12/01/196	DALE, DA	308509	CUNNINGI	7	Active Wel	Oil Well	Not Availat	465197.3	4274525
Roane	8701552	12/01/196	DALE, DA	308509	SWINEY, I	1	Active Wel	Oil Well	Not Availat	465905.6	4275297
Roane	8701623	07/29/196	DALE, DA	308509	Summers	Summers	Active Wel	Brine Disp	Shallow te	466837.7	4276910
Roane	8701845	06/01/197	DALE, DA	308509	CUNNINGI	6	Abandone	Oil Well	Not Availat	465358.8	4274686
Roane	8701846	06/01/197	DALE, DA	308509	CUNNINGI	8	Abandone	Oil Well	Not Availat	465150.3	4274815
Roane	8701847	06/01/197	DALE, DA	308509	SWINEY, I	5	Active Wel	Oil Well	Not Availat	465212.5	4274332
Roane	8701848	06/01/197	DALE, DA	308509	SWINEY, I	4	Active Wel	Oil Well	Not Availat	465808.8	4274635
Roane	8701856	07/01/197	DALE, DA	308509	GIBSON, I	9	Active Wel	Oil Well	Not Availat	466567.2	4275584
Roane	8701857	06/01/197	DALE, DA	308509	RYAN, H.	12	Active Wel	Oil Well	Not Availat	465550.1	4274314
Roane	8701858	06/01/197	DALE, DA	308509	RYAN, H.	9	Active Wel	Oil Well	Not Availat	465110.5	4273993
Roane	8701859	07/01/197	DALE, DA	308509	RYAN, H.	10	Active Wel	Oil Well	Not Availat	465338.2	4273655
Roane	8701860	07/01/197	DALE, DA	308509	HIVELY, J.	4	Active Wel	Oil Well	Not Availat	466065.1	4274409
Roane	8701861	07/01/197	DALE, DA	308509	VINEYARI	7	Active Wel	Oil Well	Not Availat	467492.5	4276627
Roane	8701862	07/01/197	DALE, DA	308509	GIBSON, I	10	Active Wel	Oil Well	Not Availat	465986.4	4275361
Roane	8703969	06/03/198	DALE, DA	308509	MOFFATT	MARKS 2	Active Wel	Oil Well	Not Availat	465503.9	4275540
Roane	8704048	06/28/198	DALE, DA	308509	SWINEY,	E. SWINE	Active Wel	Oil Well	Not Availat	465599	4274459
Roane	8704077	07/14/198	DALE, DA	308509	MOFFATT	CUNNINGI	Active Wel	Oil Well	Not Availat	465500.6	4274864

APPENDIX H

GROUNDWATER PROTECTION PLAN

Facility Name: D+D oil watton Field. Dispose Facilities

County: Roane

Facility Location: D+D oil watton Field

Postal Service Address:	P.O. BOX 496	Spencer W.V.
Latitude and Longitude:	81° 22' 50"	38° 38.24

Contact Information:

Person:	David Dale
Phone Number:	304-927-1147
E-mail Address:	DDoil@yahoo.Com

Date: 7-21-2014

1. A list of all operations that may contaminate the groundwater.

pumps, pipeline, Tanks, Leak AT well location, Equipment Failure

2. A description of procedures and facilities used to protect groundwater quality from the list of potential contaminant sources above.

All ~~pumps~~ Tanks ~~Are~~ New pumps New pipline New no Equipment is older Than 5 year All sources of storage Are in Dikes And Are in Containment Dike And checked Daily

3. List procedures to be used when designing and adding new equipment or operations.

All systems Are New nothing planned But All Fluid in Tanks Lines pumps That may Require Have To Be Fluid Removed By Vaccum Truck

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

All activites are ran with full compliance with all rule guidelines of permit of uic well guidelines

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

All water sources have been taken for all creeks rivers all ground water sources adjacent property

6. Provide a statement that no waste material will be used for deicing or fill material on the property unless allowed by another rule.

The Summers 7 well P&A'd API 047-087-01623 is used only for brine disposal of brine produced for P&A oil well in walton field

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.

All employees have received training by qualified environmental engineering firm all will trained to follow rules of permit conditions of uic permit + tank storage and also

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FEB 29 2016

WV Department of Environmental Protection

8. Include provisions for inspections of all GPP elements and equipment. Inspections must be made quarterly at a minimum.

All Tanks pumps pipeline and Disposal well Are Checked Daily

Signature: [signature]

Date: 7-24-2014

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FEB 12 2016
WV Department of
Environmental Protection

dep

To Gene Smith W.V DEP

2-12-2016

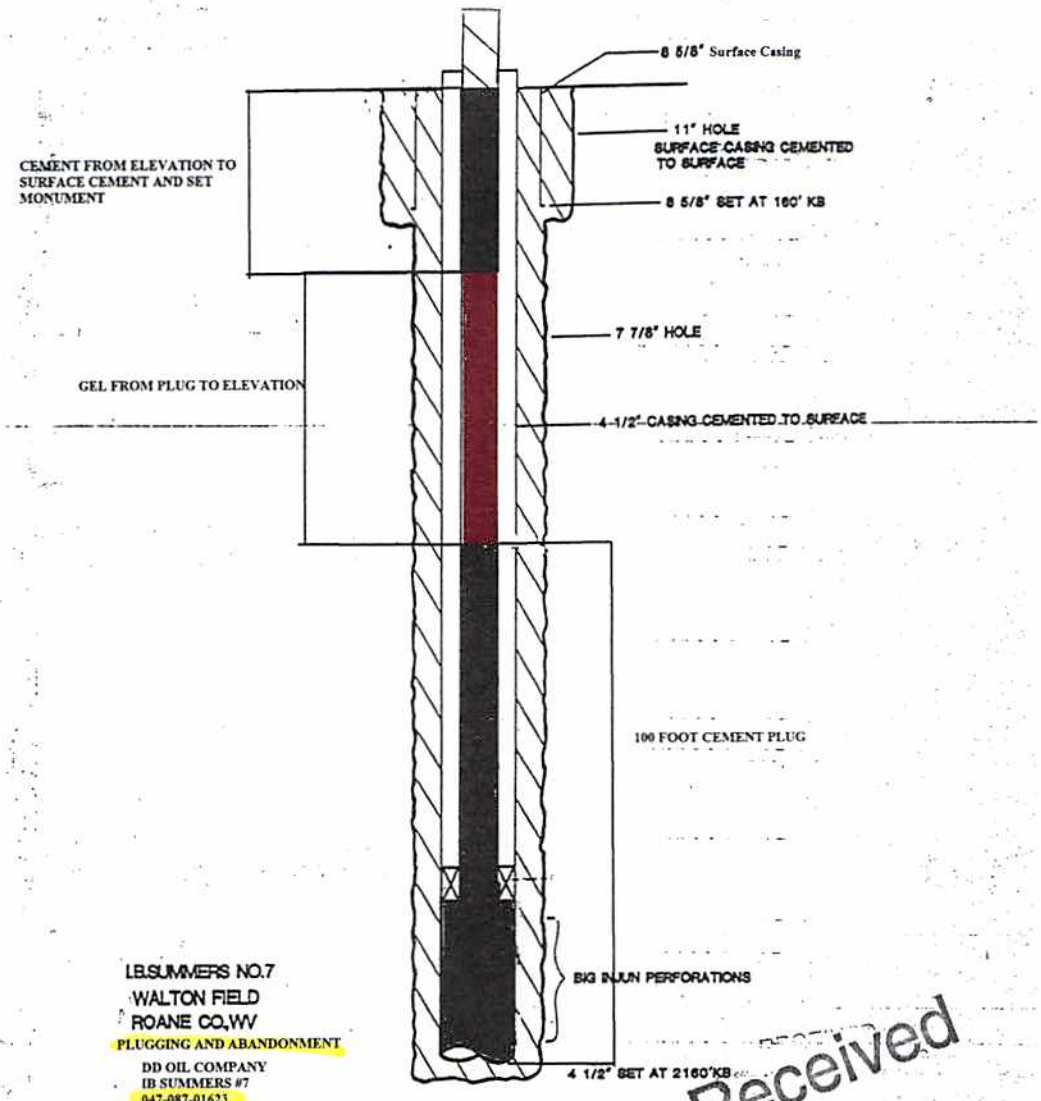
API Number 2D0871623

D&D Oil Summons 7

6- Deficiency No. 6

Attached is plugged Schematic plug and adbandment.

Procedure, fist move in service rig and all necessary equipment to preform work. First, rig up on well, and pull all injection string tubing. 2 7/8 in well, set on tension release packer and pull tubing to surface. Remove packer from tubing then run tubing back in well within 100 foot of total depth. Displace bottom plug, on perforations 100 feet at last perforation at 2077 plus A 100 plug above 2077 wait 24 hours for plug to set then pull tubing up and displace Bentonite Gel to elevation to 936 Feet. Then spot a 100 Foot cement plug. Then, pull tubing used to displace Cement Gel, wait 4 hours then set a 100 foot plug to surface set monument attach API number to monument and reclaim land and location to state spec's. Turn in to DEP plugging permit, sign Affidarit to release well from operations bond.



LB.SUMMERS NO.7
WALTON FIELD
ROANE CO,WV
PLUGGING AND ABANDONMENT

DD OIL COMPANY
IB SUMMERS #7
047-087-01623

(4/25)

APPENDIX I

Requirement for Financial Responsibility to Plug/Abandon an Injection Well

To: WV Department of Environmental Protection
Office of Oil and Gas
601 57th Street, SE
Charleston, West Virginia 25304-2345
ATTN: Underground Injection Control Program

From: D+D oil Company
P.O. BOX 406
Spencer W. VA 25276

Date: 7-21-2014

Subject: Underground Injection Control (UIC) Permit Application
2008 71623
Requirement for Financial Responsibility

I, D+D oil, verify in accordance with 47CSR13-13.7.g., that I will maintain financial responsibility and resources to close, plug, and abandon underground injection wells(s) in a manner prescribed by the Chief of the Office of Oil and Gas.

Name: David Dale

Signature: David Dale

Date: 7-21-2014

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Office of Oil and Gas
JUL 25 2014
WV Department of
Environmental Protection

APPENDIX J

Site Security for Commercial Facilities

Provide a detailed description of the method(s) utilized at the facility to restrict or prohibit illegal dumping of unauthorized waste or vandalism at the facility.

1. Complete enclosure of all wells, holding tank/pits and manifold assemblies within a chain link or other suitable fencing; and

2. Require that all gates and other entry points be locked when the facility is unattended; or

3. Providing tamper-proof seals for the master valve on each well (a "lock-out" or chain & padlock system would be more secure; however, these devices could create a potential safety hazard if the well needed to be quickly shut in due to an emergency); and

4. Installing locking caps on all valves and connections on holding tanks, unloading racks, and headers.

All Tanks locked Buildings locked at all Times
All pump's and Equipment Has safety shut Down's.
All Building are Enclosed AND locked

APPENDIX K

Identify permit or construction approvals received or applied for under the following programs:

Permit/approvals	ID Number
Hazardous Waste Management Program under RCRA	
NPDES Program	
Prevention of Significant Deterioration (PSD)	
Nonattainment Program	
Dredge or Fill	
NPDES/NPDES – Stormwater	
WVDEP – Office of Waste Management (OWM) – Solid Waste Facility	
WVDEP – OWM – RCRA (Hazardous Waste TSD or Transporter)	
WVDEP – OWM – UST	
CERCLA – Superfund	
WV Voluntary Remediation – Brownfields	
FIFRA – Federal Insecticide, Fungicide and Rodenticide Act	
Well Head Protection Program (WHPP)	
Underground Injection Control (UIC)	
Toxic Substances Control Act (TSCA)	
Best Management Plans	
Management of Used Oil	
Other Relevant Permits (Specify):	