

M.F. 8/25/82

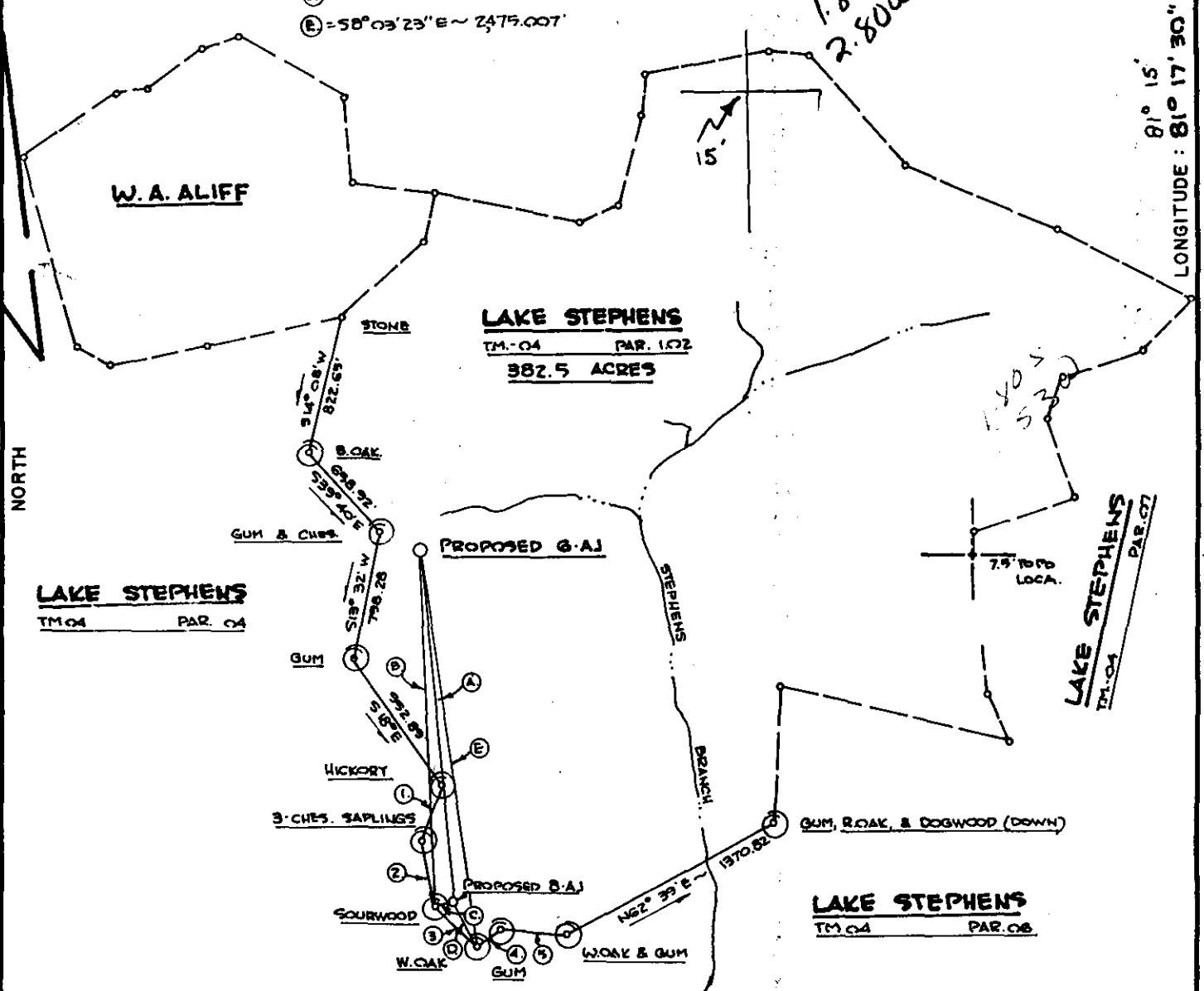
2850'

LATITUDE: 37° 50' 00"

SURVEY TIES

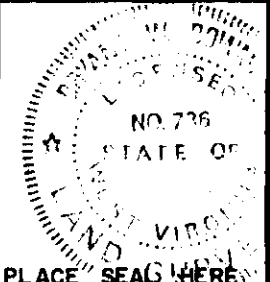
- ① = 920° 17' W ~ 348.60'
- ② = 510° 27' E ~ 394.31'
- ③ = 943° 40' E ~ 325.25'
- ④ = N 56° 45' E ~ 179.38'
- ⑤ = 583° 25' E ~ 409.44'
- A = 55° 37' E ~ 2228.918'
- B = N 3° 10' W ~ 2218.668'
- C = 588° 30' E ~ 99.85'
- D = N 28° 57' W ~ 266.0'
- E = 58° 03' 23" E ~ 2475.007'

CLEAR FORK DISTRICT



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1-2500
 PROVEN SOURCE OF ELEVATION HIGH POINT
 SOUTH OF PROPOSED WELL

CO: 081 PMT: 618
 Loc Digitized from OGIS 7.5' Mylar
 QUAD: 331 DATE: 25-MAY-90
 LAT: 37 50.0 Miles South: 1.80
 LONG: 81 17.5 Miles West: 0.54
 AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) *Raymond Bowman*
 R.P.E. _____ L.L.S. -736-



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE AUGUST 3 19 82
 OPERATOR'S WELL NO. G-AJ
 API WELL NO. 47-081-0618-Frag
 STATE COUNTY PERMIT

Department of Mines
 Oil & Gas Division

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS", PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 2310' WATER SHED STEPHENS BRANCH OF STEPHENS LAKE
 DISTRICT TRAP HILL COUNTY RALEIGH
 QUADRANGLE ECCLES 75' 331 036 5E9
 SURFACE OWNER LAKE STEPHENS ACREAGE 549
 OIL & GAS ROYALTY OWNER WESTERN POCAHONTAS CORP. LEASE ACREAGE 496.49
 LEASE NO. 31-195
 PROPOSED WORK: DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___
 PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION RAVENCLIFF ESTIMATED DEPTH 1900' APR 27 1987
 WELL OPERATOR PEAKE OPERATING CO. DESIGNATED AGENT FLOYD WILCOX
 ADDRESS 423 CHAS. NAT. PLAZA CHAS. WV ADDRESS 423 CHAS. NAT. PLAZA CHAS. WV.

M.F. 8/25/82 Plot Card CSD

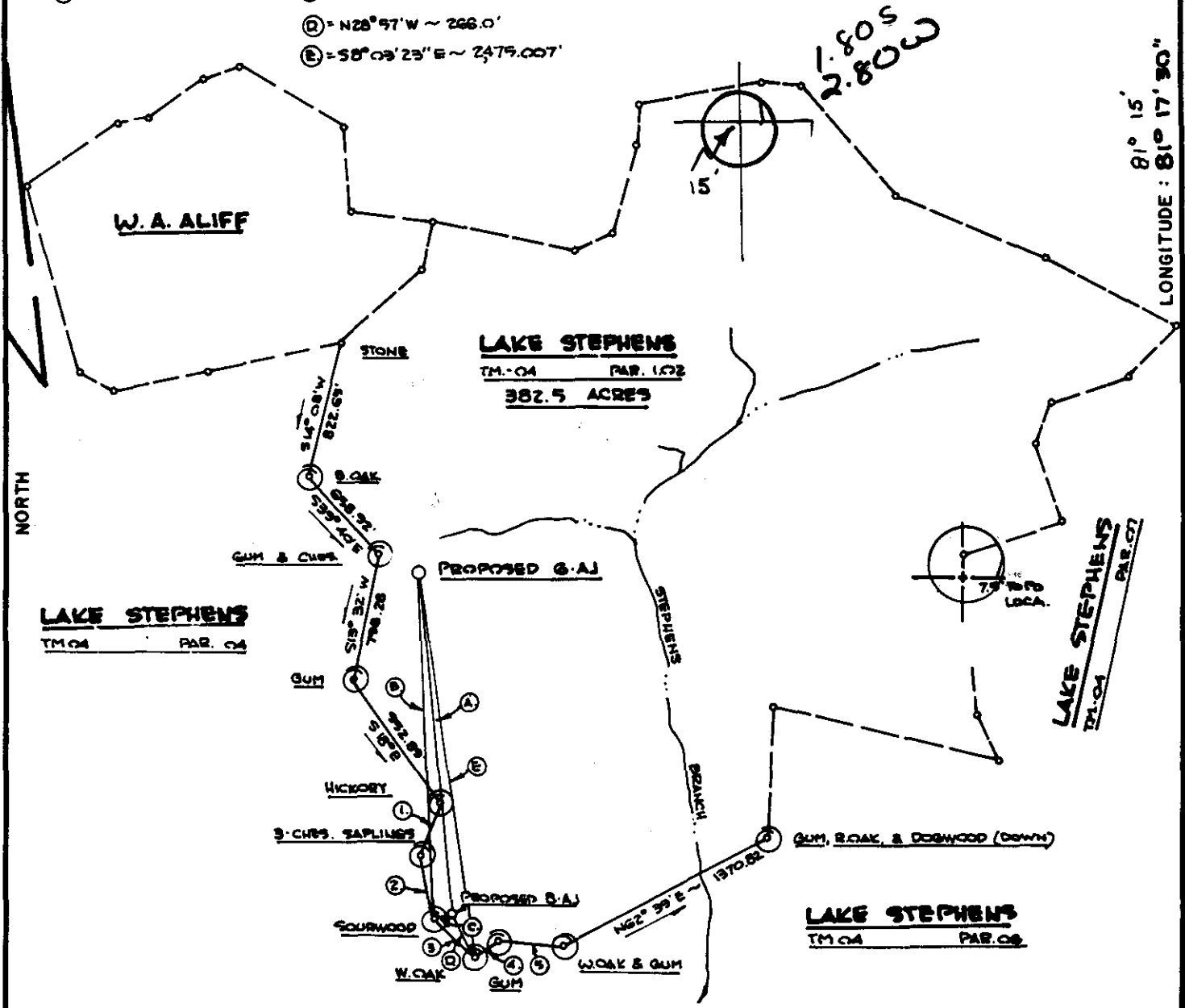
2850'

LATITUDE: 37° 50' 00"

SURVEY TIES

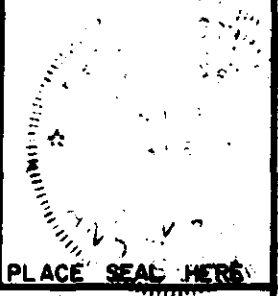
- ① - S20° 17' W ~ 348.60'
- ② - S10° 27' E ~ 394.31'
- ③ - S43° 40' E ~ 325.29'
- ④ - N56° 45' E ~ 179.38'
- ⑤ - S8° 25' E ~ 409.44'
- ⑥ - S5° 57' E ~ 2228.918'
- ⑦ - N5° 10' W ~ 2218.668'
- ⑧ - S88° 30' E ~ 95.89'
- ⑨ - N28° 57' W ~ 266.0'
- ⑩ - S8° 03' 23" E ~ 2479.007'

CLEAR FORK DISTRICT



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1-2500
 PROVEN SOURCE OF ELEVATION HIGH POINT SOUTH OF PROPOSED WELL

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) *Raymond Souman*
 R.P.E. _____ L.L.S. -736-



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)



DATE AUGUST 8 19 82
 OPERATOR'S WELL NO. G.A.
 API WELL NO. 47-081-0618
 STATE COUNTY PERMIT

Department of Mines
 Oil & Gas Division

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS", PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 2310' WATER SHED STEPHENS BRANCH OF STEPHENS LAKE
 DISTRICT TRAP HILL COUNTY RALPH
 QUADRANGLE BCCLES 75' 415' SE
 SURFACE OWNER LAKE STEPHENS ACREAGE 549
 OIL & GAS ROYALTY OWNER WESTERN FOCAUNTAS CORP. LEASE ACREAGE 496.49
 LEASE NO. 31-195
 PROPOSED WORK: DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___
 PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION RAVENCLIFF ESTIMATED DEPTH 1900' SEP 7 1982
 WELL OPERATOR PEAKE OPERATING CO. DESIGNATED AGENT FLOYD WILCOX
 ADDRESS 423 CHAS. NAT. PLAZA CHAS. WV ADDRESS 423 CHAS. NAT. PLAZA CHAS. WV
 6-6-82

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MAY 16 1989

DATE: 20-MAY-87
API # 47-081-0618-frac

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

Well Operator's Report of Well Work

Well Name: LAKE STEPHENS DEVL. Operator's Well No: JONES & GIBSON 6AJ

LOCATION: Elevation: ~~2345~~^{2310?}.00 Quadrangle: ECCLES 7.5

District: TRAP HILL County: RALEIGH
Latitude: 9600 Feet South of 37 Deg. 50 Min. 00 Sec.
Longitude: 2850 Feet West of 81 Deg. 17 Min. 30 Sec.

Company: PEAKE OPERATING COMPANY
1401 CHARLESTON NAT'L PLAZA
CHARLESTON, WV 25301

Agent: Thomas S. Liberatore

Inspector: RODNEY G. DILLON

Permit Issued: 04/23/87
All work Commenced: 05/14/87
All work Completed: 05/16/87

Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 2530'
Fresh water depths (ft) 180'
Salt water depths (ft) None

Coal being mined in area (Y/N)? N
Coal depths (ft): 655' 955'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
12 3/4"	25'	25'	3 Sks.
9 5/8"	'	'	
7"	1307'	1307'	210 Sks
4 1/2"	2893'	2893'	120 Sks

OPEN FLOW DATA

Producing formation Maxton Pay zone depth (ft) 2463'- 2529'
Gas: Initial open flow show Mcf/d Oil: Initial open flow 0 bbl/d
Final open flow 100 Mcf/d Final open flow 0 bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 205 psig (surface pressure) after 24 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow 0 bbl/d
Final open flow _____ Mcf/d Final open flow 0 bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGIC RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: Thomas S. Liberatore - Agent MAY 22 1989
PEAKE OPERATING COMPANY
By: Thomas S. Liberatore 5-12-87

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1) Date: March 31, 1987
2) Operator's Well No. Jones & Gibson #6-AJ
3) API Well No. 47 - 081 - 618 Frac.
State County Permit

STATE OF WEST VIRGINIA
DIVISION OF OIL & GAS DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
DEPARTMENT OF ENERGY
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas /
B (If "Gas", Production / Underground storage / Deep / Shallow /)
- 5) LOCATION: Elevation: 2310' / Watershed: Stephens Branch
District: Trap Hill 497 / County: Raleigh 081 / Quadrangle: Eccles 7.5 331
- 6) WELL OPERATOR Peake Operating Co CODE: 37100 7) DESIGNATED AGENT Timothy K. Wilcox
Address 423 Charleston National Plaza Address 423 Charleston National Plaza
Charleston, WV 25301 Charleston, WV 25301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Rodney Dillon
Address P. O. Box 1526
Sophia, West Virginia 25921
- 9) DRILLING CONTRACTOR: Name Unknown
Address _____
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate /
Plug off old formation / Perforate new formation /
Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Big Lime MAXON
- 12) Estimated depth of completed well, 2960 & 2000 feet
- 13) Approximate trata depths: Fresh, 50 feet; salt, 500 feet.
- 14) Approximate coal seam depths: 655, 955 Is coal being mined in the area? Yes / No /

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	13-3/8	H-40	48#	X		30	30	CTS	Kinds
Fresh water									
Coal									Sizes
Intermediate	7	J-55	17#	X		1373	1373	150 sks. Rule	15.01
Production	4-1/2	J-55	9.5#	X			2950	300 sks.	Depths set
Tubing									
Lin.									Perforations:
									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-081-0618-FRAC Date April 23, 19 87

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.
Permit expires April 23, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>6255</u> <u>191</u>	WPCP: <input checked="" type="checkbox"/>	SAE: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

John H. Johnston
Director, Division of Oil and Gas

7707

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATION, PHYSICAL CHANGE, ETC.

5-06-87 Set model T plug at 2530'

5-06-87 Perforated the Maxton from 2473'to 2483' (20 Holes) Fraced the Maxton with 75Q foam. Broke down with 500 gal 15% HCl, pumped 60,000# 20/40 sand, 271,000 SCFN2, total bbl fluid. BDP 2200#, ATP 2100#, ISIP 800#, 15 Min SIP 800#.

WELL LOG

FORMATION TYPE	TOP FEET	BASE FEET	REMARKS (water, coal, oil, gas)
Sand & Shale	0	1184	
Shale	1184	1282	<u>Fresh Water</u> @655' 5 gpm @955' 2 gpm
Sand	1282	1344	
Sand & Shale	1344	1512	<u>Salt Water</u> None
Sand	1512	1588	
Shale	1588	1708	
*Ravenclyff Sand	1708	1759	<u>Gas Checks</u>
*Red Shale	1759	1830	1708 - N/S 1787 - 298 Mcf 2630 - 239 Mcf
Sand & Shale	1830	2458	2764 - 231 Mcf 2814 - 267 Mcf 2914 - 239 Mcf
Shaly sand	2458	2536	
Sandy shale	2536	2565	
*Little Lime	2565	2644	
*Big Lime	2688	TD	
	DTD	2920	
	LTD	2919	

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

* - INDICATES ELECTRIC LOG TOPS

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated the Big Lime from 2766-2770 (8 holes), 2780-2782 (4 holes), 2801-2806 (15 holes). Acidized with 1000 gal. 28% HCl; 8000 gal. 15% HCl; 42 gal. F-78; 500# of J-360. Breakdown pressure 675, average treating pressure 350#, average rate 5 BPM.

Perforated Ravencliff 1715-1712 (4 holes); 1719-1721 (4 holes); 1734-1742 (26 holes); 1747-1750 (6 holes). Fraced Ravencliff with 15,000# 80/100; 45,000# 20/50; 256 bbls. fluid; 1000 gal. acid. Breakdown pressure at 2000#, average treating pressure 1900#, instant shut in pressure 1600#; after 15 minutes 1400#. Used 561,000 SCF N₂.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale and sand			0	264	
Sand			264	520	
Sandy shale			520	618	
Sand			618	1125	
Sand and shale			1125	1348	
Shale			1348	1505	
Princeton sand			1505	1572	
Shale			1572	1708	Gas checks:
Ravencliff			1708	1759	1708' - no gas
Red shale			1759	1830	1787' - 298 MCF
Sand and shale			1830	2536	2630' - 239 MCF
Shale			2536	2565	2764' - 231 MCF
Little Lime			2565	2644	2814' - 267 MCF
Pencil Cave			2644	2688	2914' - 239 MCF
Big Lime			2688	2914	
ID			2914		

(Attach separate sheets as necessary)

Peake Operating Company
Well Operator
By: Raymond B. Nelson
Date: December 28, 1982

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION
OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil / Gas X /
(If "Gas", Production X / Underground storage / Deep / Shallow X /)

LOCATION: Elevation: 2310 Watershed: Stephens Branch
District: Trap Hill County: Raleigh Quadrangle: Eccles 7 1/2'

WELL OPERATOR Peake Operating Company DESIGNATED AGENT Floyd B. Wilcox
Address Suite 423 Charleston National Plaza Address Suite 423 Charleston National Plaza
Charleston, West Virginia 25301 Charleston, West Virginia 25301

OIL & GAS ROYALTY OWNER Western Pocahontas Corporation COAL OPERATOR Beckley Coal Mining Company
Address P. O. Box 2827 Address Box 145
Huntington, W. Va. 25727 Glen Daniels, W. Va. 25844

ACREAGE 496.49 COAL OWNER(S) WITH DECLARATION ON RECORD:
SURFACE OWNER Stephens Lake Name Western Pocahontas Corporation
Address Route 3, Box 174 Address P. O. Box 2827
Beckley, W. Va. Huntington, W. Va. 25727

ACREAGE 54.9 Name Attn. Mr. Jose Bollar
FIELD SALE (IF MADE) TO: Address

Address Unknown

OIL & GAS INSPECTOR TO BE NOTIFIED Name Rue Schoolcraft
Address Box 706
Pineville, W. Va. 24874
732-7245

COAL LESSEE WITH DECLARATION ON RECORD:
Name Beckley Coal Mining Company
Address Box 145
Glen Daniels, W. Va. 25844
Attn. Mr. Doug Eppling

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease X
other contract / dated May 12, 1981, to the undersigned well operator from Western Pocahontas Corporation

(If said deed, lease, or other contract has been recorded);
Recorded on July 23, 1984, in the office of the Clerk of the County Commission of Raleigh County, West
Va., in Book 31 at page 195. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate X /
Plug off old formation / Perforate new formation /
Other physical change in well (specify)

—planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to
make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the
Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to
the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to
the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY
TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMIS-
SION
1615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

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OIL & GAS DIVISION
DEPT. OF MINES

BLANKET BOND

Peake Operating Company
Well Operator
By Floyd B. Wilcox
Its Attorney-in-Fact

DRILLING CONTRACTOR (IF KNOWN) Unknown

Address _____

GEOLOGICAL TARGET FORMATION, Big Lime

Estimated depth of completed well, 2960 feet Rotary X / Cable tools _____ /

Approximate water strata depths: Fresh, 50 feet; salt, 500 feet.

Approximate coal seam depths: 655, 955 Is coal being mined in the area? Yes _____ / No X /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			New	Used	FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft			For drilling	Left in well		
Conductor	13-3/8	H40	48#	X		30'	30'	To surface	Kinds
Fresh Water									
Coal									Sizes
Intermediate	7"	J-55	17#	X		1373'	1373'	150 sacks as req. rule 15.01	
Production	4-1/2"	J-55	9.5#	X		2950'	2950'	300 sacks	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE.
ALL PROVISIONS BEING IN ACCORDANCE WITH CHAPTER 22,
ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY
APPROVED FOR Drilling. THIS PERMIT SHALL EXPIRE
IF OPERATIONS HAVE NOT COMMENCED BY 4-27-83
BY [Signature]

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator _____ / owner _____ / lessee _____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: _____, 19 _____

By _____
Its _____