

AS 11/7/86

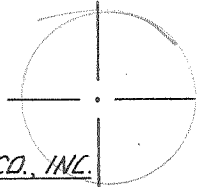
10,400'

3820

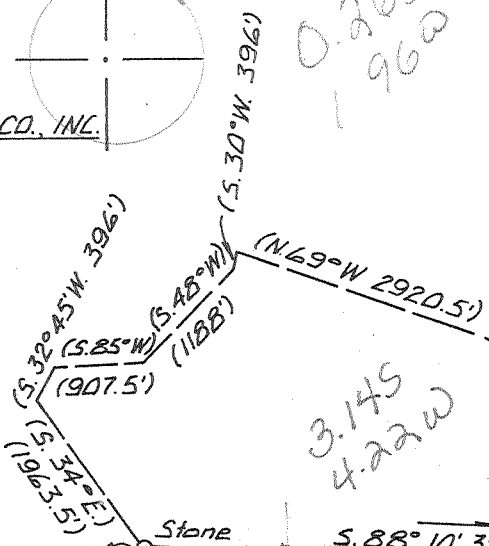
LATITUDE 38° 17' 30"

1350 5-

BLUE CREEK COAL CO., INC.



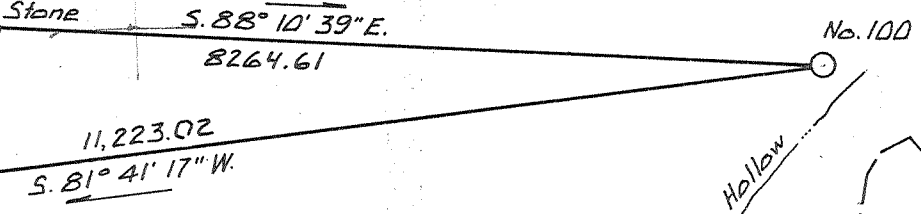
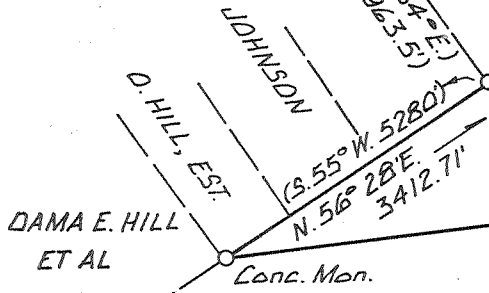
0.265
1960



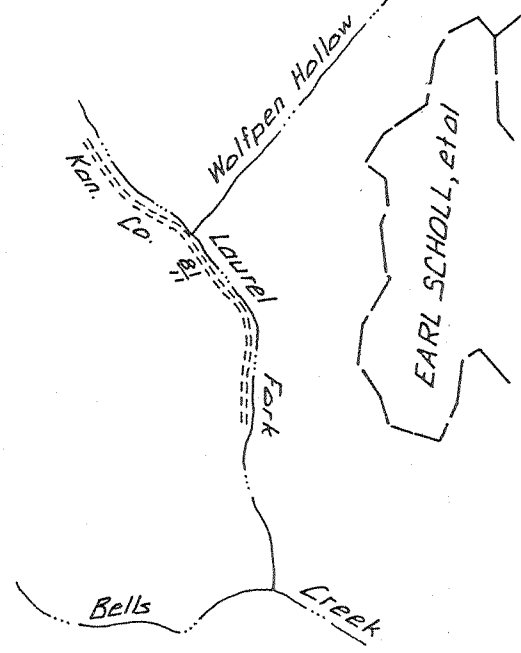
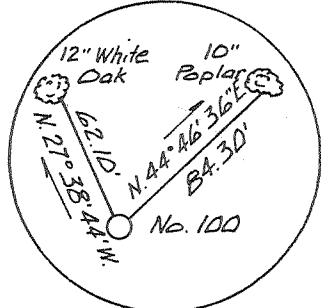
3.145
4.22W

LONGITUDE 81° 10' 30"

Blue Creek Coal Co. NORTH



BLUE CREEK COAL CO., INC.
Deed Bk. 2093 Pg. 329

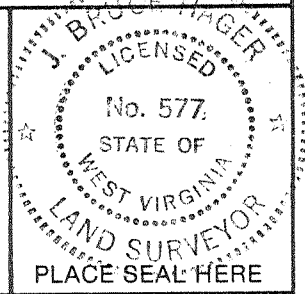


Blue Creek Coal Co. Coordinates
N. 21,071.49 E. 74,057.87

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS () Denotes Deed Calls

FILE NO. _____
DRAWING NO. 8699-6
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY 1:25,000
PROVEN SOURCE OF ELEVATION Blue Creek Coal Co. T.B.M. for Mine No. 8, 1028.53

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 ENERGY.
(SIGNED) J. Bruce Hager
R.P.E. _____ L.L.S. 577



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE October 30 1986
OPERATOR'S WELL NO. Dickinson #100
API WELL NO. _____

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW (was 039 4379)
LOCATION: ELEVATION 1264 WATERSHED Laurel Fk. of Bells Creek of Gauley River
DISTRICT Cabin Creek 2 COUNTY Kanawha
QUADRANGLE Bentree 7.5' 242 028 SW7 Clay
SURFACE OWNER Blue Creek Coal Company, Inc. ACREAGE 6350
OIL & GAS ROYALTY OWNER Dickinson Properties, Inc., et al LEASE ACREAGE 6350

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 Marcellus Shale ESTIMATED DEPTH 5290
WELL OPERATOR Allegheny & Western Energy Corp. DESIGNATED AGENT Dennis L. Mann
ADDRESS P.O. Box 2587, Charleston, W. Va. 25329 ADDRESS P.O. Box 2587, Charleston, W. Va. 25329

COUNTY NAME PERMIT

NOV 17 1986

DEEP WELL b-h Pond Fork (375)

FORM WW-2(B) FILE COPY
 RECEIVED
 NOV 07 1986



1) Date: October 30, 19 86
 2) Operator's Well No. Dickinson No. 100
 3) API Well No. 47 -039-4381
 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: 1264 Watershed: Laurel Fork of Bells Creek
 District: Cabin Creek 004 County: Kanawha Quadrangle: Bentree
 6) WELL OPERATOR A & W Energy Corp. CODE: 1100 7) DESIGNATED AGENT Dennis L. Mann
 Address P.O. Box 2587 Address P.O. Box 2587
Charleston, WV 25329 Charleston, WV 25329
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Carlos Hively Name Not Available
 Address 223 Pinch Ridge Road Address _____
Elkview, WV 25071
 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, Weir, Devonian, Shales 401
 12) Estimated depth of completed well, 5290 feet
 13) Approximate strata depths: Fresh, 50 feet; salt, 500 feet.
 14) Approximate coal seam depths: 200 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									Kinds
Fresh water	9 5/8	smls	32	x		2025 135	2025 935	300 cts	by rule 15.05
Coal	7	smls	23	x		2343	2343	200 cts	Sizes
Intermediate									
Production	4 1/2	smls	10.5	x		5290	5290	200-400 cts	Depths set or as required by rule 15.01
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-039-4381

Date November 7 19 86

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 November 7, 1988 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: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>4031</u>	WCPC: <u>AS</u>	S&E: <u>AS</u>	Other: <input type="checkbox"/>
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John J. Dickinson
 Director, Division of Oil and Gas
by Margaret J. Nass File

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.



IV-35
(Rev 8-81)

RECEIVED
AUG 06 1987

State of West Virginia
Department of Mines
Oil and Gas Division

Date Aug 3 1987
Operator's
Well No. Dickinson # 100
Farm Blue Creek Coal Co
API No. 47 - 039 - 4381

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas X / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow X /)

LOCATION: Elevation: 1264 Watershed Laurel Fork

District: Cabin Creek County Kanawha Quadrangle Bentree 7.5

COMPANY Allegheny & Western Energy Corp

ADDRESS P.O. Box 2587, Charleston, W. Va., 25329

DESIGNATED AGENT Dennis L. Mann

ADDRESS P.O. Box 2587, Charleston, W. Va., 25329

SURFACE OWNER Blue Creek Coal Co

ADDRESS Rt 2, Box 224-B, Clendenin, W. Va

MINERAL RIGHTS OWNER Dickinson Properties ET AL

ADDRESS 1401 Kanawha Valley Bldg, Charleston, W. VA

OIL AND GAS INSPECTOR FOR THIS WORK Carlos

Hivley ADDRESS 223 Pinch Ridge Rd

PERMIT ISSUED 11/7/86

DRILLING COMMENCED 11/2/86

DRILLING COMPLETED 11/10/86

IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON _____

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"	40	0	0
9 5/8	1249	1249	370 sks
8 5/8			
7	2180	2180	175 sks
5 1/2			
4 1/2	6137	6137	315 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5290 feet

Depth of completed well 6186 feet Rotary X / Cable Tools _____

Water strata depth: Fresh 50 feet; Salt 500 feet

Coal seam depths: 200 Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Big Lime/Big Injun/Weir Pay zone depth 2342 feet

Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d

Final open flow 1182 Mcf/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests 24 hours

Static rock pressure 620 psig (surface measurement) after 24 hours shut in

(If applicable due to multiple completion--)

Second producing formation Devonian Shale Pay zone depth 2791 feet

Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d

Final open flow 300 Mcf/d Oil: Final open flow _____ Bbl/d

Time of open flow between initial and final tests 24 hours

Static rock pressure 620 psig (surface measurement) after 24 hours shut in

AUG 10 1987

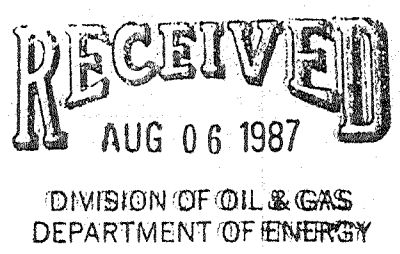
(Continue on reverse side)

1482 Mcf
PDF for
well

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

2342-2504 perf w/ 36 holes frac w/ 60,000# 20/40 sd + 1,548,000 scf n2
 2710-4390 perf w/ 50 holes frac w/ 60,000# 20/40 sd + 1,092,000 scf n2
 4443-6109 perf w/ 60 holes frac w/ 60,000# 20/40 sd + 976,000Scf 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
sandstone & shale			0	1504	 T.D. 6186 K.B.
sandstone			1504	1766	
shale			1766	1831	
sandstone			1831	2010	
shale			2010	2134	
little lime			2134	2173	
pencil cave			2173	2182	
big lime			2182	2372	
big injun			2372	2398	
shale			2398	2472	
upper weir			2472	2515	
shale			2515	2774	
sunbury shale			2774	2791	
siltstone & shale			2791	3103	
grey & brown shale			3103	5450	
rhinestreet			5450	5904	
grey shale			5904	6054	
marcellus			6054	6174	
Onondaga limestone			6174	6186	
	404	2791			
	813	3916			
	822	4791			

(Attach separate sheets as necessary)

Allegheny & Western Energy Corp

Well Operator

By: Don G. M. Vice President

Date: Aug 3, 1987

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."

8/33