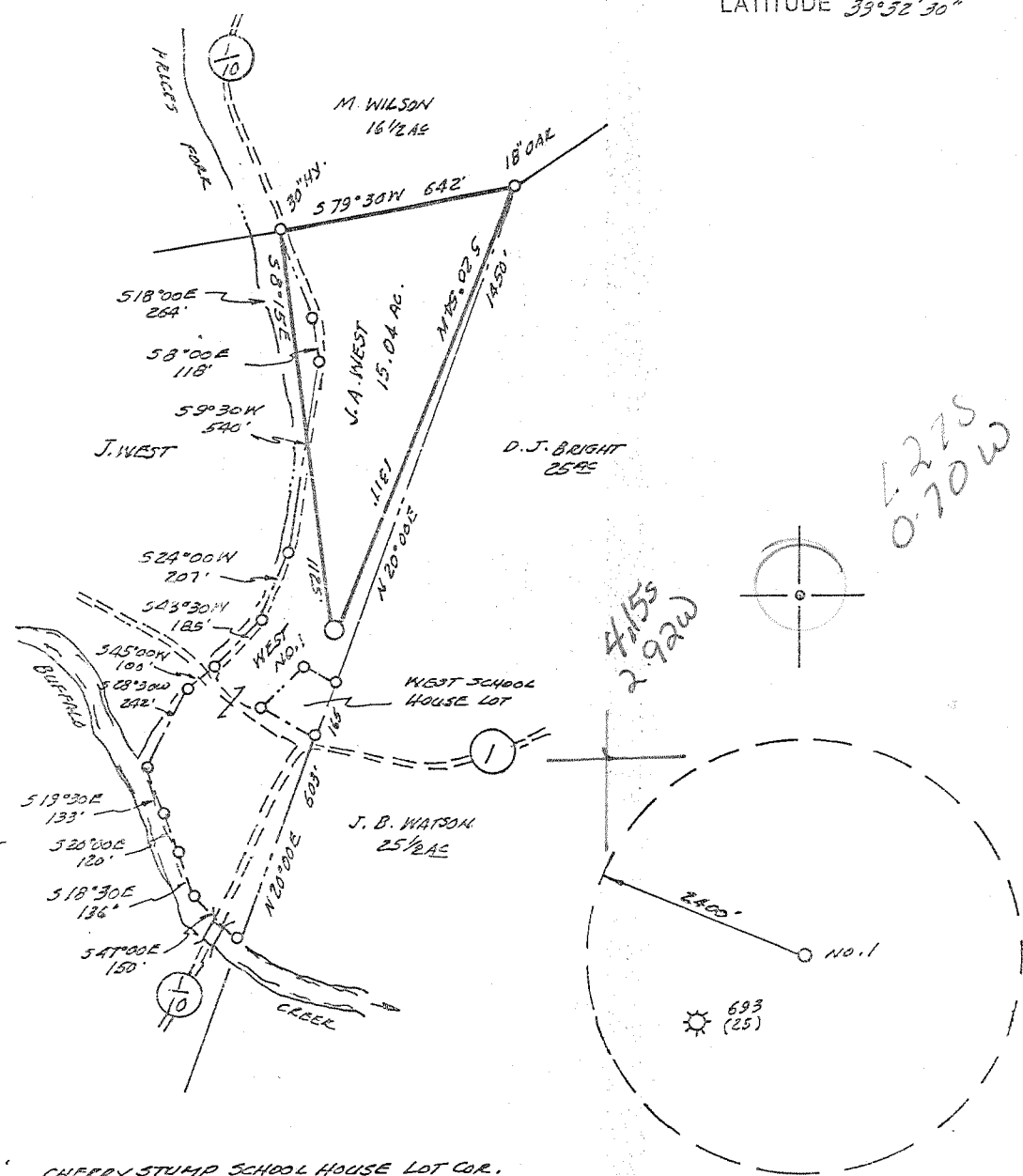


11/25/86

34 3 3160'

LATITUDE 39°52'30"

NORTH



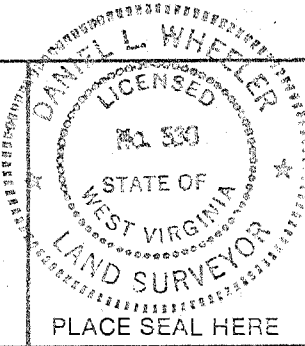
WELL REF:
 512°55'E 153' CHERRY STUMP SCHOOL HOUSE LOT COR.
 529°46'W 127' POST COR. SCHOOL HOUSE LOT

D.L. WHEELER & ASSOCIATES, INC.
 RT. 1, BOX 346
 CLARKSBURG, W.V. 26301
 PHONE: 304-623-5215

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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1"=500'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION BM BAINES EAST
55-1/10 & 1 ELEV. 988'

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) Daniel L. Wheeler
 R.P.E. _____ L.L.S. 530
 DANIEL L. WHEELER



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE NOVEMBER 18, 19 86
 OPERATOR'S WELL NO. WEST NO. 1
 API WELL NO. 47-049-0834
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS x LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION x STORAGE ___ DEEP ___ SHALLOW x
 LOCATION: ELEVATION 1035' WATER SHED BUFFALO CREEK
 DISTRICT MANNINGTON COUNTY MARION
 QUADRANGLE GLOVER GAP T.S. 374 072 SCg Mannington
 SURFACE OWNER JOHN WEST ACREAGE 15.04
 OIL & GAS ROYALTY OWNER JOHN WEST LEASE ACREAGE 15.04
 LEASE NO. _____

PROPOSED WORK: DRILL x 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 FIFTH SAND ESTIMATED DEPTH 3000'
 WELL OPERATOR WILLIAM M. COMPTON DESIGNATED AGENT WILLIAM M. COMPTON
 ADDRESS RD. BOX 569 1020 ADDRESS P.O. BOX 569
CLARKSBURG, W.V. 26301 CLARKSBURG, W.V. 26301

DEC 1 1986

00889
 00889
 00889

COUNTY NAME
 PERMIT

H.T. HALL 48673 FORM WW-6



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JUL 21 1987

State of West Virginia

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

DEPARTMENT OF ENERGY
Oil and Gas Division

Date 1/28/87
Operator's
Well No. West #1
Farm John West
API No. 47-049-0834

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1035' Watershed Buffalo Creek
District: Mannington County Marion Quadrangle Glover Gap 7.5'

COMPANY C&W Coal Company
ADDRESS P.O. Box 569, Clarksburg, WV 26301
DESIGNATED AGENT William M. Compton
ADDRESS same
SURFACE OWNER John A. West
ADDRESS Rt. 1, Box 31, Mannington, WV 26582
MINERAL RIGHTS OWNER John A. West
ADDRESS same
OIL AND GAS INSPECTOR FOR THIS WORK Donald Ellis
2604 Crab Apple Lane
Fairmont, WV 26554
PERMIT ISSUED 11/20/86
DRILLING COMMENCED 12/3/86
DRILLING COMPLETED 12/8/86
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 Coord.	20'		
13-10"		200'	95 sks.
9 5/8			
8 5/8		1892'	235 sks.
7			
5 1/2			
4 1/2		2997'	270 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Fifth Sand Depth 3000 feet
Depth of completed well 3008 feet Rotary / Cable Tools _____
Water strata depth: Fresh 35,220 feet; Salt None feet
Coal seam depths: 82', 336', 595' Is coal being mined in the area? yes

OPEN FLOW DATA
Producing formation 4th Sand, Gordon, Gordon Stray Pay zone depth 2700'-2900' feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure _____ psig (surface measurement) after _____ hours shut in
(If applicable due to multiple completion--)
Second producing formation Thirty Foot, Fifty Foot, Big Injun Pay zone depth 1960'-2670' feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1,347 Mcf/d Oil: Final open flow show _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure 675 psig (surface measurement) after 72 hours shut in

(Copy on 1200000 0420)

049
089 834

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

- Stage #1 - Gordon-Fourth Sand - 21 holes-2812'-2916', 620 bbl. 75% N₂ foam, 39,812# 20/40 sand, 500 gal. 15% HCL, Breakdown: 3400 psi, Treating pressure: 3500 psi, ISIP: 3300 psi
- Stage #2 - Thirty Foot-Gordon Stray - 20 holes-2650'-2719', 680 bbl. 75% N₂ foam, 45,000# 20/40 sand, 500 gal. 15% HCL, Breakdown: 3800 psi, Treating pressure: 3500 psi, ISIP: 3200 psi
- Stage #3 - Fifty Foot - 15 holes-2570'-2616', 422 bbl. 75% N₂ foam, 24,125# 20/40 sand, 500 gal. 15% HCL, Breakdown: 3500 psi, Treating pressure: 3600 psi, ISIP: 4000 psi
- Stage #4 - Big Injun - 17 holes-1967'-1988', 799 bbl. 75% N₂ foam, 50,000# 20/40 sand, 1000 gal. 15% HCL, Breakdown: 2300 psi, Treating pressure: 2600 psi, ISIP: 2400 psi

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh water and salt water, coal, oil and gas
<u>Driller's Tops</u>					
Clay			0	5	
Shale			5	30	
Sand			30	71	1" stream fresh H ₂ O @ 35'
Shale			71	82	
Coal			82	88	
Sand			88	149	
Shale			149	175	
Sand			175	200	
Shale			200	230	1" stream fresh H ₂ O @ 220'
Sand & Shale			230	336	
Coal			336	340	
Sand & Shale			340	595	
Coal			595	605	
Sand & Shale			605	1370	
Sand			1370	1416	
Sand & Shale			1416	1612	Hole damp @ 1444'
Sand			1612	1684	
Shale			1654	1856	
<u>Electric Log Tops</u> ✓					
Little Lime			1871	1878	
Pencil Cave			1878	1883	
Big Lime			1888	1910	
Big Injun			1966	2095	
Fifty Foot			2570	2620	
Thirty Foot			2645	2677	
Gordon Stray			2702	2740	Ck. gas @ 2663'-40/10 1" with H ₂ O
Gordon			2794	2855	
Fourth Sand			2882	2918	
T.D.				3008'	

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DEPARTMENT OF ENERGY

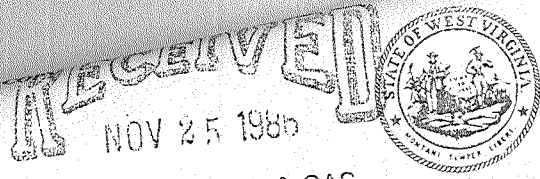
(Attach separate sheets as necessary)

C&W Coal Company
Well Operator

By: William M. Longstre
Date: 1/30/87

JUL 27 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."



1) Date: November 20, 1986
 2) Operator's Well No. West #1 049
 3) API Well No. 47 001 0834
 State County Permit

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

- 4) WELL TYPE: A Oil Gas
 B (If "Gas", Production Underground storage Deep Shallow)
- 5) LOCATION: Elevation: 1035' Watershed: Buffalo Creek
 District: Mannington County: Marion Quadrangle: Glover Gap 7.5'
- 6) WELL OPERATOR William M. Compton CODE: 1080 7) DESIGNATED AGENT William M. Compton
 Address P. O. Box 569 Address P. O. Box 569
Clarksburg, WV 26301 Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Donald Ellis Name Eastern Overthrust Drilling, Inc.
 Address 2604 Crab Apple Lane Address P. O. Box 600
Fairmont, WV 26554 Annoore, WV 26323
- 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, Fifth Sand 422
- 12) Estimated depth of completed well, 3000' feet
- 13) Approximate strata depths: Fresh, 200, 501, 798 feet; salt, 1415, 1601 feet.
- 14) Approximate coal seam depths: 648, 743, 906 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 SAUCKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		Kinds	Top
Conductor	<u>11-3/4</u>			<input checked="" type="checkbox"/>		<u>30'</u>		<u>To Sun P</u>	<u>Rule 15.05</u>	
Fresh water										
Coal		<u>Coal & Fresh Water</u>				<u>936</u>	<u>936</u>			
Intermediate	<u>8-5/8</u>		<u>24#</u>	<input checked="" type="checkbox"/>		<u>1900'</u>	<u>1900'</u>			
Production	<u>4 1/2</u>		<u>10#</u>	<input checked="" type="checkbox"/>		<u>3000'</u>	<u>3000'</u>	<u>284 sks.</u>		
Tubing										
Liners										

* 8 5/8 to be run thru pencil cave

Coal string from Marion 693

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47 - 049 - 0834 Date November 25 1986

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 25, 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>MA MA</u>	Casing	Fee <u>3923</u>	WPCP <input checked="" type="checkbox"/>	S&E <input checked="" type="checkbox"/>	Other
---	--	--------------------	--------	-----------------	--	---	-------

NOTE: Keep one copy of this permit posted at the drilling location.

John W. Johnston
 Director, Division of Oil and Gas
by J. J. Kasse File

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