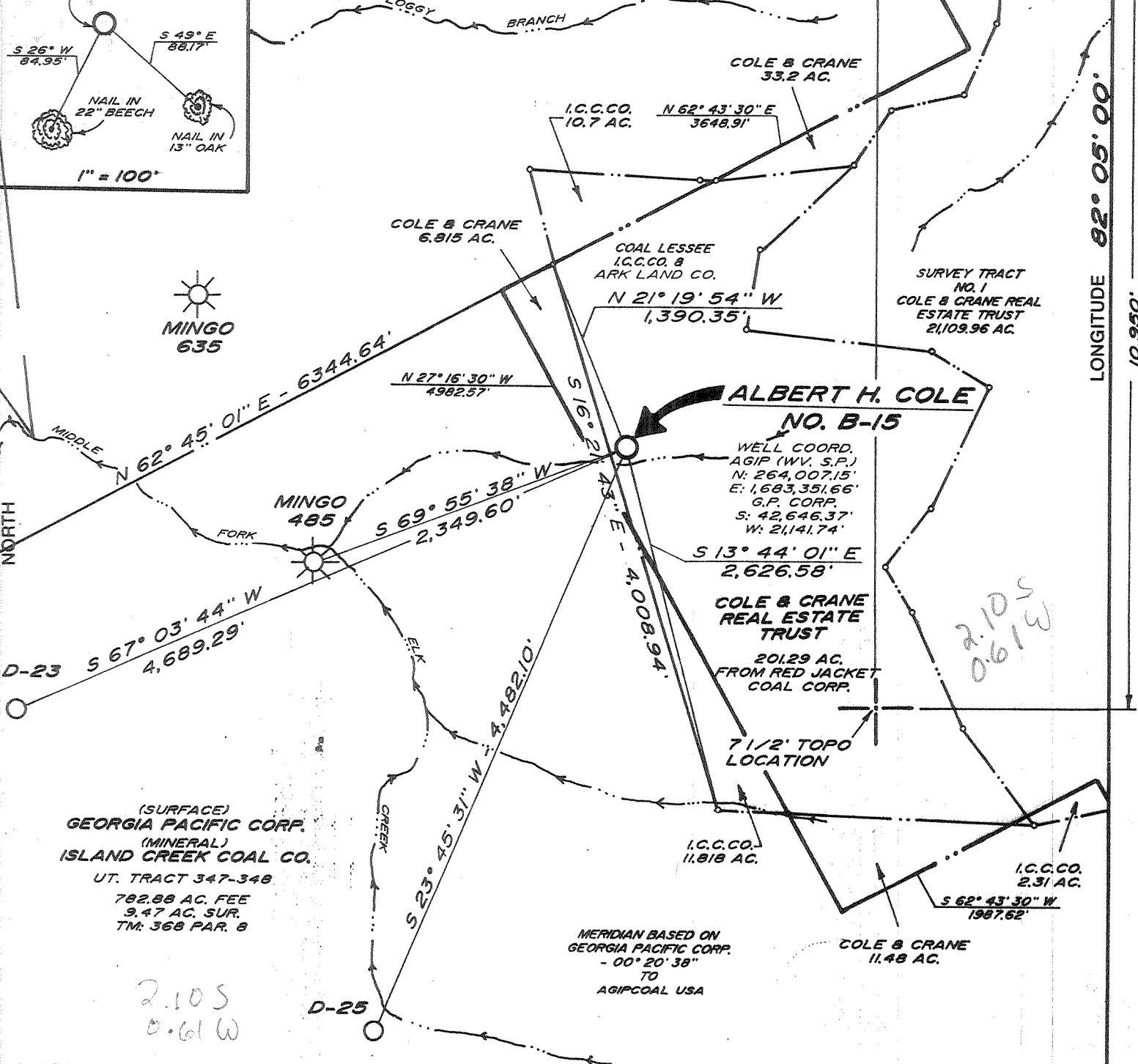


Janice
3/22/91

LATITUDE **37° 45' 00"**
N 27° 16' 30" W 197.40'

LONGITUDE **82° 50' 00"**
10,950'



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

FILE NO. _____	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) <u><i>Kenneth D. Bias</i></u> R.P.E. _____ L.L.S. 837-SU	
DRAWING NO. _____		
SCALE <u>1" = 1000'</u>		
MINIMUM DEGREE OF ACCURACY <u>1:2500</u>		
PROVEN SOURCE OF ELEVATION <u>AGIP COAL STA. 171</u> <u>ELEV. 1032.49'</u>		

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION		DATE <u>MARCH 1</u> , 19 <u>91</u> OPERATOR'S WELL NO. <u>Albert H. Cole Trustee, et al</u> API WELL NO. <u>No. B-15 S.N. 134251</u>
WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___ (IF "GAS,") PRODUCTION <u>X</u> STORAGE ___ DEEP ___ SHALLOW ___	<u>47</u> - <u>59</u> - <u>1148</u> STATE COUNTY PERMIT	COUNTY NAME PERMIT
LOCATION: ELEVATION <u>1349.04'</u> WATER SHED <u>ELK CREEK OF PIGEON CREEK OF TUG RIVER</u> DISTRICT <u>LEE 4</u> COUNTY <u>MINGO</u> QUADRANGLE <u>BARNABUS Matawan NC</u>		
SURFACE OWNER <u>COLE & CRANE REAL ESTATE TRUST</u> ACREAGE <u>201.29</u> OIL & GAS ROYALTY OWNER <u>COLE & CRANE REAL ESTATE TRUST</u> LEASE ACREAGE <u>13,292.15</u> LEASE NO. <u>080574</u>		
PROPOSED WORK: DRILL <u>X</u> CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE <u>X</u> PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____		
PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ TARGET FORMATION <u>DEVONIAN SHALE</u> ESTIMATED DEPTH <u>5220' KB</u>		
WELL OPERATOR <u>ASHLAND EXPLORATION INC.</u> DESIGNATED AGENT <u>FORREST BURKETT</u> ADDRESS <u>P.O. BOX 391 ASHLAND, KY. 41114 4130</u> ADDRESS <u>P.O. BOX 379 BRENTON, WV. 24818</u>		
APR 8 1991 DEEP WELL 6-6 Magnolia (265)		

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Division of Energy

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

AUG 12 91

Permitting
Oil and Gas

Well Operator's Report of Well Work

Farm name: COLE & CRANE REAL ESTATE Operator Well No.: B 15 S 134251

LOCATION: Elevation: 1349.04 Quadrangle: BARNABUS

District: LEE County: MINGO
Latitude: 10950 Feet South of 37 Deg. 45Min. 0 Sec.
Longitude 3280 Feet West of 82 Deg. 5 Min. 0 Sec.

Company: ASHLAND EXPLORATION, INC.
P.O. BOX 391, A1-6
ASHLAND, KY 41114-0391

Agent: FORREST BURKETT

Inspector: TIM BENNETT
Permit Issued: 04/01/91
Well work Commenced: 6/11/91
Well work Completed: 7/24/91
Verbal Plugging
Permission granted on:
Rotary X Cable _____ Rig
Total Depth (feet) 5182
Fresh water depths (ft) 100', 449'

Salt water depths (ft) 974', 1554'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 595-605 open mine

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	39'	39'	15
11 3/4"	649'	649'	374
8 5/8"	2577'	2577'	777
5 1/2"	5160'	5160'	867
1.9" @ 4992' KB w/ADL-I Pkr @ 2885' KB			
1.9" @ 2802' KB			

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth (ft) 3560-5096
Gas: Initial open flow 0/117 MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 812/1130 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 765 psig (surface pressure) after 72 Hours

Second producing formation Big Lime Pay zone depth (ft) 2792-2800
Gas: Initial open flow 119 MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 318 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 Hours
Static rock Pressure 560 psig (surface pressure) after 72 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 GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: ASHLAND EXPLORATION, INC.

By: James L. Stephens James L. Stephens, Engr. Tech.
Date: August 7, 1991

FORMATION OR ROCK TYPETOPBASE

Breathitt Formation	0	1289
Lee Formation	1289	2003
Pennington Formation	2003	2544
Little Lime	2544	2606
Big Lime	2606	2822
Borden Formatoon	2822	3400
Sunbury Shale	3400	3428
Berea Sand	3428	3441
Devonian Shale	3441	5160
Onondaga LS	5160	TD

LTD 5178

DTD 5182

WELL TREATMENT

Perf Rhinestreet 20H/4877-5096. N₂ frac using 500 gal 7 1/2% inh Fe acid, 757,0w0 SCF N₂ @ 82,000 SCF/min. BD @ 8300#, ATP 4198#, MTP 4467#, ISIP 3039#, & 15 min. 1900#

Perf Huron 23H/4327-4675. N₂ frac using 500 gal 7 1/2% inh Fe acid, 797,000 SCF N₂ @ 92,000 SCF/min. BD @ 3537#, ATP 3684#, MTP 4363#, ISIP 3537# & 15 min 1597#.

Perf Chagrin 22H/3560-3986. N₂ frac using 500 gal 7 1/2% inh Fe acid, 800,000 SCF N₂ @ 96,500 SCF/min. BD @ 2270#, ATP 3684#, MTP 4072#, ISIP 2794#, 15 min. 1267#.

Perf Big Lime 20H/2792-2800. 75 Quality foam frac using 1000 gal 15% HCl. BD @ 1773#, ISIP 1300#. Ramp frac from 4-16#/gal w/32,800# 20/40 sand, 380,000 SCF N₂ @ 12,000 SCF/min. ATP 1527# @ 30 BPM, MTP 1685#, ISIP 1142#, 15 min 935# & TF 142 bbls.

12023

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

Issued 04/01/91
Expires 04/01/93

- 1) Well Operator: ⁴³ Ashland Exploration, Inc. 2750 (4) 232
Albert H. Cole, Trustee
- 2) Operator's Well Number: B-15, Serial #134251 3) Elevation: 1349.04
- 4) Well type: (a) Oil ___ / or Gas X /
(b) If Gas: Production X / Underground Storage ___ /
Deep ___ / Shallow X /
- 5) Proposed Target Formation(s): ⁴⁴¹ Devonian Shale
- 6) Proposed Total Depth: 5220'KB feet
- 7) Approximate fresh water strata depths: 449'KB (Map WV-12)
- 8) Approximate salt water depths: 974'KB (Map WV-12)
3.5' Seam Possibly Mined Out - Lower Cedar Grove
- 9) Approximate coal seam depths: Upper Cedar Grove; Elev. 801', Mined Out; Elev. 76
- 10) Does land contain coal seams tributary to active mine? Yes ___ / No X /
- 11) Proposed Well Work: Drill & Stimulate (New Well)
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	16	LS	42.0	30	30	CTS
Fresh Water						38CSR18-11.3 38CSR18-11.5
Coal	11 3/4	H40	42.0	649	649	CTS
Intermediate	8 5/8	J55	24.0	2550	2550	CTS
Production	5 1/2	J55	15.5	5220	5220	38CSR18-11.1 As Needed
Tubing	1.9	J55	2.76	-	5170	Siphon
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

Department of Energy

MAR 15 91

506144
8

For Division of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Surety Blanket Agent
(Type)

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Division of Energy
MAR 15 91

1) Date: March 12, 1991
2) Operator's well number Albert H. Cole, Trustee, etal #B-15, #13425 Serial
3) API Well No: 47 - 045 - 1148
State - County - Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
- (a) Name Cole & Crane Real Estate Trust Address P.O. Box 610
Omar, WV 25638
 - (b) Name _____ Address _____
 - (c) Name _____ Address _____
- 5) (a) Coal Operator: Name N/A Address _____
- (b) Coal Owner(s) with Declaration Name Same as No. 4(a) Address _____
 - Name _____ Address _____
 - (c) Coal Lessee with Declaration Name Ark Land Company Address P.O. Box 70
Turtle Creek, WV 25203
- 6) Inspector Tim Bennett Address Route 2 Box 61-B
Chapmanville, WV 25508 Telephone (304)-855-7705

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

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

Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 2 on the above named parties, by:

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

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

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

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

Well Operator Ashland Exploration, Inc.
By: W. Mark Parks *W. Mark Parks DRC*
Its: Operations Manager
Address P.O. Box 391
Ashland, KY 41114
Telephone 606-329-5989

Subscribed and sworn before me this 12th day of March, 1991

Theri W. Donta Notary Public
My commission expires November 23, 1994

Schlumberger

LOG-DENSITY / TEMPERATURE / GR

COUNTY MINGO FIELD ELK CREEK LOCATION 10,950' S OF WELL ALBERT H. COLE UNIT NO. B-15 COMPANY ASHLAND EXPLORATION, INC.	COMPANY ASHLAND EXPLORATION, INC.		WELL ALBERT H. COLE UNIT NO. B-15		FIELD ELK CREEK		COUNTY MINGO		STATE WEST VIRGINIA		
	LOCATION 10,950' S OF 37-45-00 3,280' W OF 82-05-00		API SERIAL NO. 47-059-1148		SECT. -	TWP. -	RANGE -	Other Services: DIL			
	Permanent Datum		GROUND LEVEL	Elev.	1349.0 F				Elev.: K.B.1359.0 F		
	Log Measured From		KELLY BUSHING	10.0 F	above Perm. Datum			D.F.1358.0 F			
Drilling Measured From		KELLY BUSHING						G.L.1349.0 F			
Date		18-JUN-1991									
Run No.		ONE									
Depth Driller		5182.0 F									
Depth Logger (Schl)		5178.0 F									
Btm. Log Interval		5172.0 F									
Top Log Interval		2572.0 F									
Casing-Driller		8 5/8"	@2577.0 F		@			@			
Casing-Logger		2572.0 F									
Bit Size		7 7/8"									
Type Fluid in Hole		AIR/GAS									
Dens.	Visc.										
pH	Fid. Loss										
Source of Sample											
Rm @ Meas. Temp.			@					@			
Rmf @ Meas. Temp.			@					@			
Rmc @ Meas. Temp.			@					@			
Source: Rmf Rmc											
Rm @ BHT			@	112. DEGF				@			
TIME	Circulation Ended	13:15, JUNE 18									
	Logger on Bottom	19:15, JUNE 18									
Max. Rec. Temp.		112. DEGF									
Equip.	Location	8507	FAIRMONT, W.VA								
Recorded By		DAVE RAPP									
Witnessed By		MR. STEWART RHOADES									

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

