

Jan 9/11/89

LATITUDE $7^{\circ} 38' 42.30''$

LONGITUDE $81^{\circ} 50' 00''$

0.02 S
0.74 W

2.90 S
0.74 W

HOWARD SCHULTZ ETAL

ERVIN BARR

CURTIS A. COSSIN
135Ac

PROPOSED LOCATION
ELEV. 763.78

Wm. WARNER HEIRS

BM 691

UNION CARBIDE

PP- Frae - 9/11/89

CERTIFICATE

"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."

Minimum degree of accuracy is one part in 200

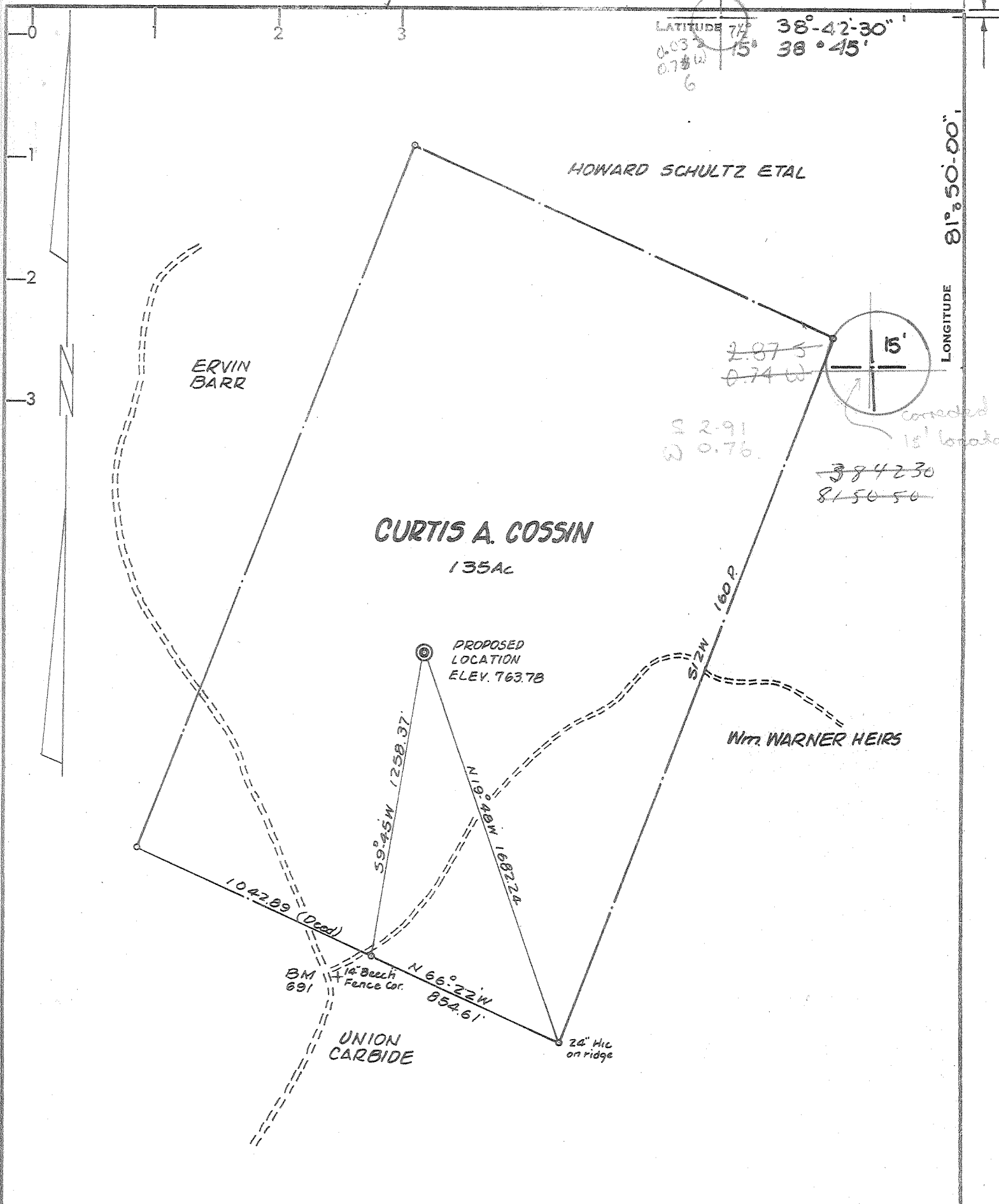
Signed Frank H. Barker LLS #289

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY DURST OIL & GAS - 3932
 ADDRESS Pt. 2, Box 538 Point Pleasant, W. 25550
 FARM CURTIS A. COSSIN
 MAP _____ ACRES 135 LEASE NO. _____
 WELL (FARM) NO. 1 SERIAL NO. REM 21
 ELEVATION (SPIRIT LEVEL) 763.78
 QUADRANGLE 7.5 ELMWOOD, WINFIELD 15'
 COUNTY MASON DISTRICT UNION 9
 POINT OF PROVEN ELEVATION USGS BM. EL. 691
Shown Above
 FILE NO. _____ DRAWING NO. _____
 DATE MARCH 5, 1979 SCALE 1" = 500 FT.

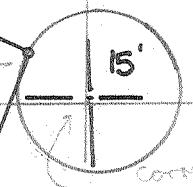
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
 WELL LOCATION MAP
 FILE NO. 47-053-0187
Plus BAK FRAC
 + DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC
 MAPS. SCALE 1 TO 62,500. LATITUDE AND LONGITUDE LINES
 BEING REPRESENTED BY BORDER LINES AS SHOWN
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL DRAWING.
 SEP 15 1989

Deep well 6-6 Rock Castle (346)



LATITUDE $7\frac{1}{2}$ 38°-42'-30"
0.03 15' 38°-45'
0.74 W
6

LONGITUDE 81°-50'-00"



S 2-91
W 0.76

384230
815050

CERTIFICATE

"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."

Minimum degree of accuracy is one part in 200

Signed Frank D. Baeken LLS #289

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY KAISER EXPLORATION & MINING COMPANY
 ADDRESS P.O. BOX 537 RIPLEY, WEST VIRGINIA
 FARM CURTIS A. COSSIN
 MAP _____ ACRES 135 LEASE NO. _____
 WELL (FARM) NO. 1 SERIAL NO. REM 21
 ELEVATION (SPIRIT LEVEL) 763.78
 QUADRANGLE ELMWOOD, WINFIELD 15' *NC*
 COUNTY MASON DISTRICT UNION
 POINT OF PROVEN ELEVATION USGS BM, EL. 691
shown Above
 FILE NO. _____ DRAWING NO. _____
 DATE MARCH 5, 1979 SCALE 1" = 500 FT.

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
WELL LOCATION MAP
 FILE NO. **47-053-0187**

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 62,500. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

Deep Well 47506-6 Rock Castle (346)

MAR 30 1979



FEB 20 1980

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

WELL RECORD 40

Quadrangle Elmwood
Permit No. 47-053-0187

Rotary X Oil _____
Cable _____ Gas X
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Company <u>Kaiser Exploration and Mining Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P. O. Box 8, Ravenswood, WV 26164</u>				
Farm <u>Curtis A Cossin</u> Acres <u>763.78</u>	Size			
Location (waters) <u>Mud Lick</u>	20-16			
Well No. <u>KEM 21</u> Elev. <u>763.78</u>	Cond.			125 sx class A (To surface) (Halliburton)
District <u>Union</u> County <u>Mason</u>	13-10" 10 3/4" 251' (KB)	Same		
The surface of tract is owned in fee by _____	9 5/8			
<u>Curtis A. Cossin</u>	8 5/8			65 sx Pozmix
Address <u>Rt. 1, Box 350, Leon, WV 25123</u>	7	2496' (KB)	Same	100 sx class A (Halliburton)
Mineral rights are owned by <u>Same</u>	5 1/2			
Address <u>Same</u>	4 1/2	4758' (KB)	Same	225 sx pozmix (Dowell)
Drilling Commenced <u>9/8/79</u>	3			
Drilling Completed <u>9/16/79</u>	2			
Initial open flow <u>3,100</u> cu. ft. -- bbls.	Liners Used			
Final production <u>2000 M</u> cu. ft. per day -- bbls.				
Well open <u>24</u> hrs. before test <u>1935</u> RP.				

Well treatment details: Attach copy of cementing record.
Perforated the Oriskany S.S. from 4690' - 4699' (K.B.) w/4 holes/ft. (9/19/79);
Dowell and Aircowell fractured the zone w/30,000# 80/100 mesh sand, 30,000# 20/40
mesh sand, 500 gal 28% HCl, 890 BBL water, 192,000 SCF nitrogen.

2,000 MCF

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet Salt Water _____ Feet
Producing Sand Oriskany Depth 4690-99

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Soil			0	9		<u>Tops from KB = 774'</u>
Shale			9	55		
Sand & Silts			55	246		
Siltstone			246	287		
Shale			282	320		
Sand			320	374		
Silt & Shale			374	525		
Sand			525	536		
Silt & Shale			536	653		
Sand			653	714		
Red Rock			714	870		
Sand			870	881		
Siltstone			881	905		
Sand			905	938		
Silt & Shale			938	995		
Sand			995	1030		
Siltstone			1030	1092		
Shale & Silt			1092	1192		
Sand			1192	1231		
Sand & Silt			1231	1378		
Siltstone			1378	1596		
Sand			1596	1604		
Siltstone			1604	1620		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet 40	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1620	1663		
Shale & Silt			1663	1711		
Maxton			1711	1826		
Big Lime			1826	1907		
Shale & Silt			1907	1972		
Big Injun			1972	2094		
Shale & Silts			2094	2342		
Shale			2342	2385		
Sand			2385	2402		
Coffee Shale			2402	2423		
Berea <i>SP log - 2423 - 2438 - 2438</i>			2423	2438		
Shale			2438	3607		
Brown Shale			3607	4049		
Shale			4049	4388		
Marcellus <i>rh</i>			4388	4605		
Onondaga			4605	4680		
Oriskany			4680	4710		
Helderberg			4710	4780		
Total Depth			4780			

GR log-2423-2438-2438

M. 2612
 I. 4047
 H. 2182
 W. 2328
 N. 2615

Date February 20, 1980

APPROVED Kaiser Exploration and Mining Company

By *Edith A. P...*
 Operations Manager



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

MAR - 7 1979

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE March 6, 1979

Face Owner	<u>Curtis A. Cossin</u>	Company	<u>Kaiser Exploration and Mining Company</u>
Address	<u>Route 1, Box 350, Leon, WV 25123</u>	Address	<u>P. O. Box 537, Ripley, WV 25271</u>
General Owner	<u>Curtis A. Cossin</u>	Farm	<u>Curtis A. Cossin Acres 135</u>
Address	<u>Route 1, Box 350, Leon, WV 25123</u>	Location (waters)	<u>Mud Lick</u>
Land Owner	<u>Same as above</u>	Well No.	<u>KEM 21</u> Elevation <u>763.78</u>
Address	<u>Same as above</u>	District	<u>Union</u> County <u>Mason</u>
Well Operator	<u>None</u>	Quadrangle	<u>Elmwood</u>
Address	<u>None</u>		

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved

for drilling. This permit shall expire TO BE NOTIFIED Kenneth Butcher INSPECTOR

operations hereby authorized by 11-8-79 ADDRESS RFD #1, Barboursville, WV 25504
Robert S. [Signature] PHONE 736-4885
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee thereunto, (or as the case may be) under grant or lease dated April 5 19 71 by Curtis A. Cossin, et al made to Union Carbide Petroleum and assigned to Kaiser Exploration & Mining Co. and recorded on the _____ day of _____ in Mason County, Book 35 Page 245

XXX NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators and coal owners at their above shown respective address _____ day _____ before, or on the _____ day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours,

(Sign Name) R. A. Pryce
R. A. Pryce Well Operator Operations Manager
P. O. Box 537
Street
Ripley
City or Town
West Virginia
State

EASE SUBMIT COPIES OF ALL
PHYSICAL LOGS DIRECTLY TO:

W. VA. OIL & GAS CONSERVATION COMMISSION
613 WASHINGTON STREET, EAST
CHARLESTON, WEST VIRGINIA 25311

*SECTION 3 . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of the plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

47-053-0187

PERMIT NUMBER

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Not known at this time NAME Robert A. Pryce
 ADDRESS _____ ADDRESS P. O. Box 537, Ripley, WV 25271
 TELEPHONE _____ TELEPHONE 372-2828 or 372-2827
 ESTIMATED DEPTH OF COMPLETED WELL: 4750 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 TYPE OF WELL: OIL _____ GAS X COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8 10 3/4	200	200	Cement to surface
8 - 5/8			
7	2450	2450	125 sks = 570 feet
6 1/2			
4 1/2	4750	4750	125 sks = 1500 feet
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET SALT WATER _____ FEET

APPROXIMATE COAL DEPTHS _____

IS COAL BEING MINED IN THE AREA? None BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title

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

- 1) Well Operator: Durst Oil and Gas ^{USS} 14680 (9) 338
- 2) Operator's Well Number: KEM-21 3) Elevation: 763.78'
- 4) Well type: (a) Oil ___ / or Gas X /
(b) If Gas: Production X / Underground Storage ___ /
Deep ___ / Shallow ___
- 5) Proposed Target Formation(s): Devonian Shale ⁴⁴¹
- 6) Proposed Total Depth: 4110' ^{Plug Back} _{TD} feet
- 7) Approximate fresh water strata depths: 200'
- 8) Approximate salt water depths: 2440'
- 9) Approximate coal seam depths: None
- 10) Does land contain coal seams tributary to active mine? Yes ___ / No X /
- 11) Proposed Well Work: ^{Jump Casing Seal on Top 2} ① Set permanent cast iron bridge plug @ 4110' ② Perforate casing 3872' to 4023 w/20 holes ③ Frac Devonian Shale w/ 75 quality foam (No sand)
- 12) ④ Spot bailer of calseal on top of perm. plug

CASING AND TUBING PROGRAM

FRAC New Formation

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	10 3/4"		32.75	251' KB	251'	125 sk Class A to Surface
Fresh Water	→					
Coal						
Intermediate	7"	J-55	20.0	2496' KB	2496'	65 sk Pozmix 100 sk Class A
Production	4 1/2"	N-80	11.60	4758' KB	4758'	225 sk pozmix
Tubing	None					Cmt top logged @ 2468'
Liners						

PACKERS : Kind None
Sizes _____
Depths set _____

RECEIVED
SEP 11 1989

For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY
WPCP

Fee(s) paid: 142 Well Work Permit 24 Reclamation Fund 142

Plat 142 WW-9 142 WW-2B 142 Bond Blanket letter Agent

(Type)

RECEIVED
SEP 11 1989

1) Date: August 31, 1989
2) Operator's well number KEM-21
3) API Well No: 47 - 053 - 0187-PP-FR
State - County - Permit

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY
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:	5) (a) Coal Operator:
(a) Name <u>Curtis A. Cossin</u>	Name <u>NA</u>
Address <u>Rt 1 Box 350</u>	Address <u>NA</u>
<u>Leon, WV 25123</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
	Address _____
(c) Name _____	Name <u>NA</u>
Address _____	Address _____
6) Inspector <u>Jerry Tephabock</u>	(c) Coal Lessee/with Declaration
Address <u>Rt 1 Box 101-A</u>	Name <u>NA</u>
<u>Ripley, WV 25271</u>	Address <u>NA</u>
Telephone (304) - <u>372-6805</u>	

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 ____ 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 Durst Oil and Gas
By: Ronald W. Durst Jr
Its: Owner
Address Rt 2 Box 538
Point Pleasant, WV 25550
Telephone (304) 675-3064

Subscribed and sworn before me this ____ day of _____, 19__

Notary Public

My commission expires _____

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

RECEIVED
Division of Energy

Well Operator's Report of Well Work

Farm name: COSSIN, CURTIS A. Operator Well No.: KEM-21

JAN 09 91

LOCATION: Elevation: 763.78 Quadrangle: ELMWOOD

Permitting
Oil and Gas Section

District: UNION County: MASON
Latitude: 150 Feet South of 38 Deg. 42Min. 30 Sec.
Longitude 3960 Feet West of 81 Deg. 50 Min. 0 Sec.

Company: DURST OIL AND GAS
ROUTE 2, BOX 538
POINT PLEASANT, WV 25550-0538

Casing | Used in | Left | Cement |
& | | | Fill Up

Agent: RONALD W. DURST, JR.

Tubing | Drilling | in Well | Cu. Ft.

Inspector: JERRY TEPHABOCK
Permit Issued: 09/11/89
Well work Commenced: 9-15-89
Well work Completed: 9-15-89
Verbal Plugging
Permission granted on: -
Rotary Cable Rig
Total Depth (feet) 4100'
Fresh water depths (ft) 200

Size	Drilling	in Well	Cu. Ft.
4 1/2"	4758	4758	225 SK per 2468' cut top
7"	2496	2496	65 SK per 100 SK Class A
10 3/4"	251	251	125 SK to Surf

Salt water depths (ft) 700

Is coal being mined in area (Y/N)? N
Coal Depths (ft):

OPEN FLOW DATA

Producing formation Brown Shale Pay zone depth (ft)
Gas: Initial open flow 100 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 75 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 1100 psig (surface pressure) after 24 Hours

Second producing formation N/A Pay zone depth (ft)
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ 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 GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: DURST OIL AND GAS

By: Ronald W. Durst JR
Date: 12-12-89

JAN 11 1991

- 1.) Set permanent cast iron bridge plug @ 4100', Cover w/ calseal
Perf Brown Shale 3850-4000' w/ 20 holes
Frac Brown Shale w/ N₂ foam 535,000 SCF Total N₂

2.) Geological Record - same as ~~before~~ previously submitted.

06/9/99