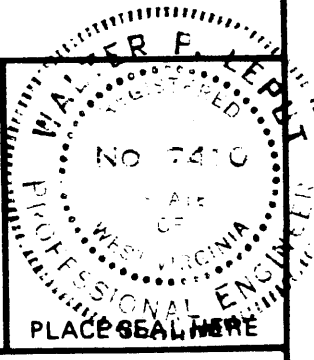


FILE NO. _____
 DRAWING NO. 4-1-1981
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION § OF ROADS
1000' EAST (918)

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) Galter P. Lepert
 R.P.E. 7410 L.L.S. _____



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



DATE _____, 19____
 OPERATOR'S WELL NO. ONE
 API WELL NO. 47 - 033 - 2644
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 991 WATER SHED MUDLUCK ROAD
 DISTRICT CLAY COUNTY HARRISON
 QUADRANGLE SHINNSTON 7 1/2 CLARKSBURG 15 EC
 SURFACE OWNER LYDA RICHARDS ACREAGE 7
 OIL & GAS ROYALTY OWNER LYDA RICHARDS LEASE ACREAGE 7
 LEASE NO. 720
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) gas seal

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION 5th SAND ESTIMATED DEPTH 2750
 WELL OPERATOR DORAN + ASSOCIATES INC DESIGNATED AGENT AL SORLAN
 ADDRESS 200 ROESSLER ROAD ADDRESS Rt 4 Box 444
PGH, PA. 15220 WHEELING WV

JUL 09 1981

WR-35

Date: 10-Feb-99
API # 47-033-02644 W

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Reviewed RB

Farm name: Richards, Jeffrey A. Operator Well No.: L. Richards #1

LOCATION: Elevation: 991' Quadrangle: Shinnston
District: Clay County: Harrison
Latitude: 8,700 feet South of 39 DEG. 25 MIN. 0 SEC.
Longitude: 10,000 feet West of 80 DEG. 15 MIN. 0 SEC.

Company: Cabot Oil & Gas Corporation
400 Fairway Drive: Suite 400
Coraopolis, PA 15108-4308

Agent: John Abshire
Inspector: Tim Bennett
Permit Issued: 4/1/98
Well Work Commenced: 5/12/98
Well Work Completed: 5/20/98
Verbal Plugging
Permission granted on:
Rotary Cable
Total Depth (feet) 2603'
Fresh Water Depths (ft)
Salt Water Depths (ft)
Is coal being mined in area (Y / N)? -N
Coal Depths (ft) 60'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
11-3/4"	30'	30'	
8-5/8"	1092'	1092'	285 sks
4-1/2"	2474'	2474'	250 sks

RECEIVED
Office of Oil & Gas
Permitting
FEB 26 1999
WV Division of
Environmental Protection

OPEN FLOW DATA

Producing formation 5th Sand (completed 1982) Pay zone depth (ft) 2492'-2532' (open hole)
Gas: Initial open flow -- MCF/d Oil: Initial open flow -- Bbl/d
Final open flow 59 MCF/d Final open flow 5 Bbl/d
Time of open flow between initial and final tests -- Hours
Static rock pressure 420 psig (surface pressure after 72 Hours

Second producing formation 30' Sand Pay zone depth (ft) 2134' - 2144'
Gas: Initial open flow -- MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 144 comm MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock pressure 575 psig (surface pressure after 24 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: CABOT OIL & GAS CORPORATION
By: Ray Prudnick, Jr. MAR 16 1999
Date: 2/11/99

HAR 2644 W

OPEN FLOW DATA

Third producing formation	50' Sand	Pay zone depth (ft)	2050' - 2062'	
Gas: Initial open flow	-- MCF/d	Oil: Initial open flow	N/A	Bbl/d
Final open flow	144 comm MCF/d	Final open flow	N/A	Bbl/d
Time of open flow between initial and final tests			7	Hours
Static rock pressure	575 psig (surface pressure after		24	Hours

Perf'd 30' Sand from 2134'-2144'. Broke down with 500 gals 15% HCl acid @ 2850 psi. ISIP: 2200 psi. Frac'd with 462 bbls of 30# linear gel with 30,000 scf N₂ and 26,600# sand. ATP: 3750 psi. MTP: 3900 psi. ATR: 10.6 bpm. ISIP: 1800 psi.

Perf'd 50' Sand from 2050-2062'. Broke down with 500 gals 15% HCl acid @ 3600 psi. ISIP: 2400 psi. Frac'd with 393 bbls of 30# linear gel with 68,000 scf N₂ and 31,000# sand. ATP: 3200 psi. MTP: 3525 psi. ATR: 13.5 bpm. ISIP: 210 psi.

FORMATION	TOP	BOTTOM	REMARKS
Substructure	0	60	
Coal	60	72	
Sand	72	145	
Sand/Shale	145	168	
Sand	168	200	
Shale	200	330	
Sand/Shale	330	405	
Red Rock/Shale	405	465	
Sand/Shale	465	585	
Sand	585	630	
Red Rock	630	640	
Sand/Shale	640	840	
Shale	840	860	
Sand/Shale	860	945	
Red Rock/Lime	945	1444	
Big Lime	1444	1500	
Big Injun	1500	1600	
Shale/Red Rock	1600	1670	
Sand/Shale	1670	1978	
Sand	1978	2028	
Sand/Shale	2028	2040	
Sand	2040	2046	
50' Sand	2046	2056	
Sand	2056	2073	
Sand/Shale	2073	2128	
30' Sand	2128	2150	
Shale	2150	2159	
Sand/Shale	2159	2392	
Shale	2392	2413	
Sand/Shale	2413	2492	
5 th Sand	2492	2532	
Sand/Shale	2532	2603 - TD	



RECEIVED

JUL 6 - 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORD

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

Quadrangle Shinnston 7½

Permit No. 47-033-2644

Company Doran & Associates, Inc.
Address 200 Roessler Road, Pgh, PA 15220
Farm Lyda Richard #1 Acres 7
Location (waters) Mudlick Run
Well No. D-A-4 Elev. 991
District Clay County Harrison
The surface of tract is owned in fee by Lyda & Meba Richards
Address 701 Clark St. Shinnston, WV 26431
Mineral rights are owned by same as above
Address _____
Drilling Commenced 5-5-82
Drilling Completed 5-8-82
Initial open flow _____ cu. ft. _____ bbls.
Final production 59 m cu. ft. per day 5 bbls.
Well open 72 hrs. before test 420 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10" 11 3/4	30	30	
9 5/8			
8 5/8	1092	1092	285 sks
7			
5 1/2			
4 1/2	2057	2057	250 sks
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

STIMULATION RECORD

DATE:	INTERVAL PERFORATED:	FROM	TO	AMT. FLUID	AMT. SAND
6-24-82	"Open Hole Completion"			760 BBLs	43,000#

Coal was encountered at 60' Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Fifth Sand Depth 2492'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Substructure			0	60		
Coal			60	72		
Sand			72	145		
Sand & Shale			145	168		
Sand			168	200		
Shale			200	330		
Sand & Shale			330	405		
Red Rock & Shale			405	465		
Sand & Shale			465	585		
Sand			585	630		
Red Rock			630	640		
Sand & Shale			640	840		
Shale			840	860		
Sand & Shale			860	945		
Red Rock & Shale			945	1444	gas @ 1230'	
Big Lime			1444	1560		
Shale & Red Rock			1560	1670	gas @ 1590', 1624'	
Sand & Shale			1670	1978		
Sand			1978	2028		
Sand & Shale			2028	2040		
Sand			2040	2073		
Sand & Shale			2073	2150	gas @ 2138'	
Shale			2150	2159		
Sand & Shale			2159	2392		

(over)

* Indicates Electric Log tops in the remarks section.

JUL 19 1982

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Shale			2392	2413		
Sand & Shale			2413	2603		
Driller's T.D.		<i>5 sh</i>		2603		gas & 2422', 2536'
Big Injun			1500	1600		
Fifty Foot Sand			2046	2056		
Thirty Foot Sand			2128	2150		
Fifth Sand			2492	2532		
Logger's T.D.				2603		

Date June 30 19 82

APPROVED Donald P. Laugel Owner

By Vice President-Operations

(Title) (Print name and title)



WELL NO. 1
Farm Lyda Richards, 720
API # 47-033-2644-Rem.
Date March 22, 1982

STATE OF WEST VIRGINIA
OFFICE OF OIL AND GAS - DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil / Gas xx /

(If "Gas", Production xx / Underground storage / Deep / Shallow /

LOCATION: Elevation: 991 Watershed: Mudlick Run
District: Clay County: Harrison Quadrangle: Shinnston 7½

WELL OPERATOR Doran & Associates, Inc.
Address 200 Roessler Road
Pittsburgh, PA 15220

DESIGNATED AGENT Charles Stimeling
Address P. O. Box 179, Rte 50E
Bridgeport, WV 26330

OIL AND GAS ROYALTY OWNER Lyda & Meba Richards
Address 701 Clark Street
Shinnston, WV 26431

COAL OPERATOR Virginia Tetrick
Address Union National Center West
Clarksburg, WV 26301

Acreage 7

COAL OWNER(S) WITH DECLARATION ON RECORD:
NAME N/A

SURFACE OWNER same as above
Address

NAME
Address

Acreage

FIELD SALE (IF MADE) TO:
NAME
Address N/A

COAL LESSEE WITH DECLARATION ON RECORD:
NAME N/A
Address

OIL AND GAS INSPECTOR TO BE NOTIFIED:
NAME Stephen Casey
Address Rte 2, Box 232-D
Jane Lew, WV 26378
Telephone

RECEIVED

MAR 24 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease xx / other contract / dated 4-1- , 1980, to the undersigned well operator from Lyda & Melba Richards.

(If said deed, lease, or other contract has been recorded:)

Recorded on April 1, 1980, in the office of the Clerk of County Commission of Harrison County, West Virginia, in 1090 Book at page 291. A permit is requested as follows:

PROPOSED WORK: Drill x / Drill Deeper / Redrill / Fracture or stimulate / 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 receipt of this Application by the Dept. 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 lessees on or before the day of the mailing or delivery of this 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 COMMISSION
1613 WASHINGTON ST., E.
CHARLESTON, WV 25311

BLANKET BOND

Doran & Associates, Inc.
Well Operator
By: Donald R. Laughlin
Its: Vice President-Operations

(Revised 3-81)

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) _____

Address _____ unknown _____

GEOLOGICAL TARGET FORMATION Fifth Sand

Estimated depth of completed well 2750 feet. Rotary xx / Cable tools /
Approximate water strata depths: Fresh, 30 195 feet; salt, _____ feet.
Approximate coal seam depths: 65, 110 230 .
Is coal being mined in this area: Yes / No X /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS Cubic ft.	PACKERS
	Size	Grade	Weight per ft	New	Used	For Drilling	Left in Well		
Conductor	11 3/4				xx	xx			Kinds
Fresh water									
Coal									Sizes
Intermed.	8 5/8		20	xx			1050	to Surface	
Production Tubing	4 1/2		9 1/2	xx			2750	250 sks	Depths set
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, renewed. THIS PERMIT SHALL EXPIRE

IF OPERATIONS HAVE NOT COMMENCED BY 11-30-82.

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:

W A I V E R

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: _____



Date: April 8 . 19 81
 Operator's Well No. One
 API Well No. 47 - 033 - 2644
 State County Permit

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

Lyda Richards #1
 OIL AND GAS WELL PERMIT

WELL TYPE: Oil XXX / Gas _____ /
 (If "Gas", Production XXX / Underground storage _____ / Deep _____ / Shallow _____ /)
 LOCATION: Elevation: 991 Watershed: Mudlick Run
 District: Clay County: Harrison Quadrangle: Shinnston 7 1/2

WELL OPERATOR Doran & Associates, Inc. DESIGNATED AGENT Al Sorcan
 Address 200 Roessler Road Address Rt. 4, Box 444
Pittsburgh, PA 15220 Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER Lyda and Meba Richards
 Address 701 Clark St.
Shinnston, WV 26431

COAL OPERATOR Virginia Tetrick
 Address Union National Center West
Clarksburg, WV 26301

Acreage 7

COAL OWNER(S) WITH DECLARATION ON RECORD:
 Name Virginia Tetrick
 Address Union National Center West
Clarksburg, WV 26301

SURFACE OWNER Lyda and Meba Richards
 Address 701 Clark St.
Shinnston, WV 26431
 Acreage 7

Name _____
 Address _____

FIELD SALE (IF MADE) TO:
 Address N/A

COAL LESSEE WITH DECLARATION ON RECORD:
 Name N/A JUN 15 1981
 Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Stephen Casey
 Address Rt. 2, Box 232-D
Jane Lew, WV 26378

RECEIVED
 OIL & GAS DIVISION
 DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed _____ / lease XXX other contract _____ / dated April 1, 19 80, to the undersigned well operator from Lyda and Meba Richards

(If said deed, lease, or other contract has been recorded:)
 Recorded on April 9, 19 80, in the office of the Clerk of the County Commission of Harrison County, West Virginia in _____ Book 1090 at page 291. A permit is requested as follows:

PROPOSED WORK: Drill XXX / Drill deeper _____ / Redrill _____ / Fracture or stimulate _____ /
 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 COMMISSION
 1615 WASHINGTON STREET EAST
 CHARLESTON, WV 25311
 TELEPHONE: (304) 348-3092

BLANKET COPY

Donald R. Langille
 Well Operator

By _____
 Its _____

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Sam Jack Drilling Co.
Address P. O. Box 697
Indiana, PA 15701

GEOLOGICAL TARGET FORMATION, 5TH SAND

Estimated depth of completed well, 2750 feet Rotary X / Cable tools /

Approximate water strata depths: Fresh, 30, 195 feet; salt, feet.

Approximate coal seam depths: 65, 110, 230 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	11 3/4				X	X			Kinds	
Fresh Water										
Coal									Sizes	
Intermediate	8 5/8		20	X			1050	To SURFACE		
Production	4 1/2		9 1/2	X			2750	250 Sks.	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, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 3-2-82.


Deputy Director - Oil & Gas Division

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