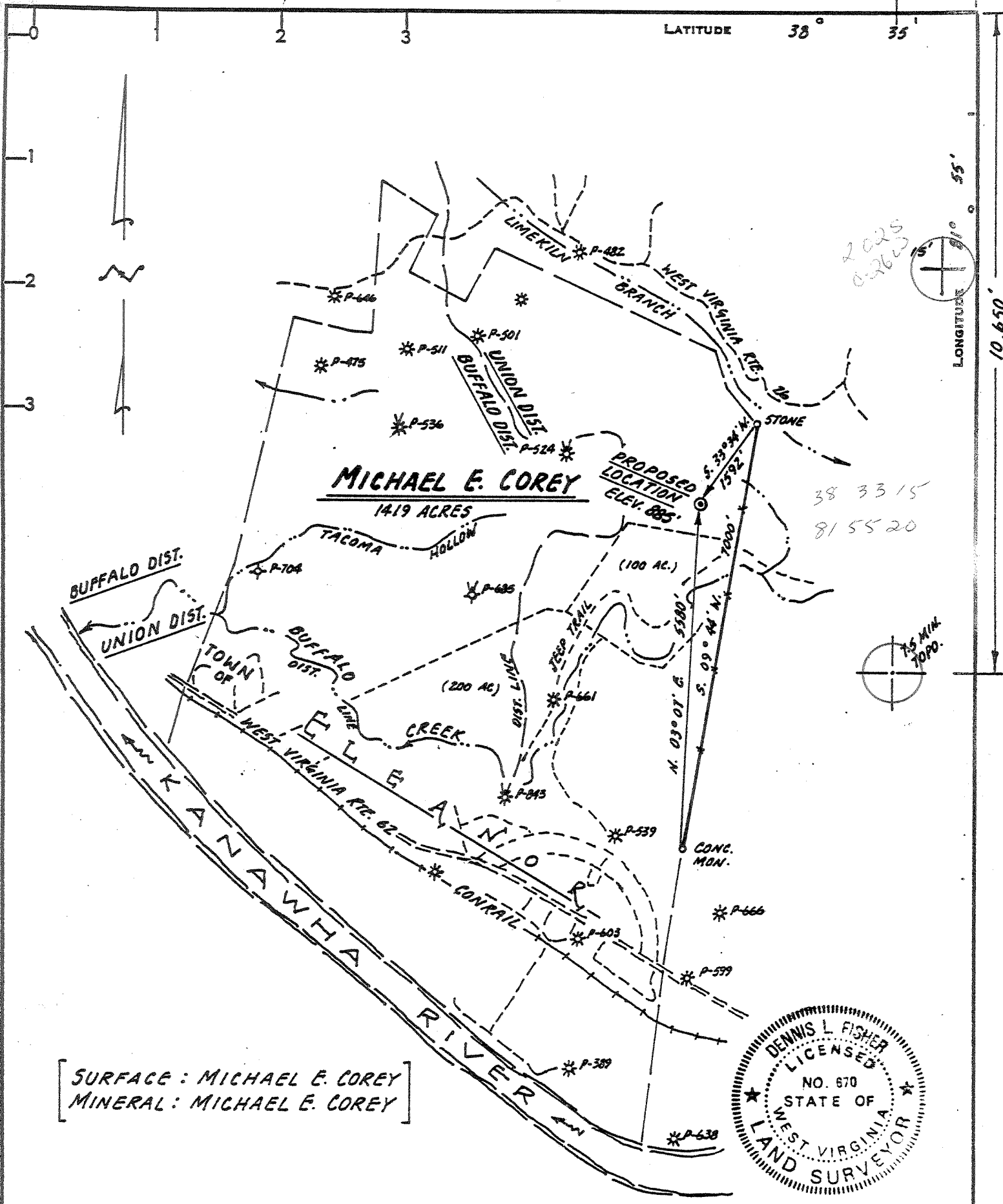
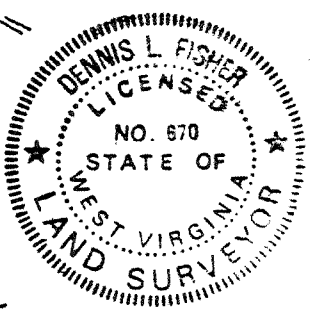


cl 4/8 Plot Card GSD

1,300'



[SURFACE : MICHAEL E. COREY
MINERAL : MICHAEL E. COREY]



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 Dennis L. Fisher LLS # 670

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY KAISER EXPLORATION AND MINING COMPANY
 ADDRESS PO BOX #8, RAVENSWOOD, WEST VIRGINIA 26164
 FARM MICHAEL E. COREY
 MAP _____ ACRES 1419 LEASE NO. _____
 WELL (FARM) NO. _____ SERIAL NO. KEM 69
 ELEVATION (SPIRIT LEVEL) 885'
 QUADRANGLE WINFIELD 712d75 SW
 COUNTY POTNAM DISTRICT UNION
 POINT OF PROVEN ELEVATION SPOT ELEV. E. RTE. 62 574,
6900' SW OF PROPOSED LOCATION
 FILE NO. _____ DRAWING NO. _____
 DATE MARCH 30, 1981 SCALE 1" = 2000'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
 WELL LOCATION MAP
 FILE No. 079-1033

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 24,000. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

MIDWAY-EXTRA Diskany 4750 APR 28 1981 278

RECEIVED

FEB 9 - 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Winfield

Permit No. PUT-1033

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

Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm Michael E. Corey Acres 1419
Location (waters) Buffalo Creek & Kanawha River
Well No. KEM #69 Elev. 385'
District Union County Putnam
The surface of tract is owned in fee by _____
Michael Corey
Address 1523 Lewis Street, Charleston, WV
Mineral rights are owned by Same
Address _____
Drilling Commenced 5/21/81
Drilling Completed 5/29/81
Initial open flow 0 cu. ft. -- bbls.
Final production 150,000 cu. ft. per day -- bbls.
Well open 8 hrs. before test 650 RP.

| Casing and Tubing | Used in Drilling | Left in Well | Cement fill up Cu. ft. (Sks.) |
|----------------------|------------------|--------------|---|
| Size 20-16 | | | |
| Cond. 13-10" 10 3/4" | 253' (KB) | 253' (KB) | 175 sks class A, calcium chloride, #/sk flocele |
| 9 5/8 | | | |
| 28 3/8 | | | |
| 7 | 2236' (KB) | 2236' (KB) | 65 sks 50/50 pozr 10% salt, 100 sks class A, 3% cal. 22k sks 50/50 pozr 10% salt, 1/4#/sk flocele |
| 5 1/2 | | | |
| 4 1/2 | 4548' (KB) | 4548' (KB) | |
| 3 | | | |
| 2 | | | |
| Liners Used | | | |

Well treatment details:

Attach copy of cementing record.

6/2/81: Perforated Marcellus Shale from 4249'-4442' (KB), 2 1/8" ceramic jets; 24 holes nitrogen fractured Marcellus on 7/17/81 w/1,200,000 SCF of N₂ and 500 g l 28% HCL: treated at 55,000 SCF/min at 2600 psi for 22 minutes. Set retrievable bridge plug at 4069' (KB).
7/31/81: Perforated Brown Shale from 3824' to 4020' (KB), 2 1/8" ceramic jets; 28 holes. Foam fractured Brown Shale on 8/1/81 w/15,000# of 80/100 sand and 45,000# of 20/40 sand, 221 bbl water, and 672,000 SCF N₂. Treated at 12.5 BPM and 3000 psi. (NOTE: Left 90' of Coal was encountered at None 2 1/8" perforating strip on top of retrievable bridge plug could not retrieve plug
Fresh water -- Feet _____ Salt Water _____ Feet _____
Producing Sand Brown Shale Depth 3823'-4020'

| Formation | Color | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | * Remarks |
|--|-------|--------------|----------|-------------|-------------------|----------------------------------|
| *All formation tops taken from electric log depths | | | | | | |
| Soil | | | 0 | 15 | | Set permanent plug at 4550' (KB) |
| Siltstone | | | 15 | 50 | | |
| Shale | | | 50 | 70 | | |
| Sand | | | 70 | 245 | | |
| Shale | | | 245 | 282 | | |
| Sand | | | 282 | 293 | | |
| Shale & Siltstone | | | 293 | 446 | | |
| Sand | | | 446 | 460 | | |
| Shale | | | 460 | 528 | | |
| Sand | | | 528 | 554 | | |
| Shale | | | 554 | 690 | | |
| Sand | | | 690 | 703 | | |
| Shale | | | 708 | 832 | | |
| Sand | | | 832 | 917 | | |
| Shale | | | 917 | 1070 | | |
| Sand | | | 1070 | 1132 | | |
| Shale | | | 1132 | 1173 | | |
| Sand | | | 1173 | 1214 | | |
| Shale | | | 1214 | 1542 | | |

(over)

* Indicates Electric Log tops in the remarks section.

JUN 22 1982

| Formation | Color | Hard or Soft | Top Feet | Bottom Feet | Oil, Gas or Water | Remarks |
|-----------------------------|-------|--------------|----------|-------------|-------------------|----------------------------|
| Sand | | | 1542 | 1613 | | |
| Shale | | | 1613 | 1654 | | |
| Sand | | | 1654 | 1724 | | |
| Siltstone | | | 1724 | 1742 | | |
| Sand | | | 1742 | 1827 | | |
| Big Lime (Greenbrier) | | | 1827 | 1950 | | |
| Shale | | | 1950 | 1984 | | |
| Big Injun | | | 1984 | 2051 | | |
| Shale | | | 2051 | 2436 | | |
| Coffee Shale (Sunbury) | | | 2436 | 2458 | | |
| Berea Sand | | | 2458 | 2483 | | |
| Shale | | | 2483 | 3627 | | |
| Brown Shale | | | 3627 | 4024 | Show/Gas | |
| Shale | | | 4024 | 4327 | | |
| Marcellus Shale | | | 4327 | 4549 | Show/Gas | |
| Onondaga Lime (Corniferous) | | | 4549 | 4618 | | |
| Oriskany Sand | | | 4618 | 4652 | | |
| <u>Helderberg Lime</u> | | | 4652 | 4750 | | Dry, Plugged back to 4550' |
| Total Depth | | | 4750 | | | |

885'

Date September 25, 1981

APPROVED

R.A.P.

Owner

By General Manager

(Title)



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

APR - 6 1981

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE April 2, 1981

Surface Owner Michael E. Corey
Address 1523 Lewis Street, Charleston, WV
General Owner Same
Address _____
Coal Owner Same
Address _____
Coal Operator None
Address _____

Company Kaiser Exploration and Mining Company
Address P. O. Box 8, Ravenswood, WV 26164
Farm Michael E. Corey Acres 1419
Location (waters) Buffalo Crk. & Kanawha River
Well No. KEM #69 Elevation 572' 885'
District Union County Putnam
Quadrangle Winfield (7.5 min)

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 12-14-81

INSPECTOR

TO BE NOTIFIED Martin Nichols

ADDRESS P. O. Box 554, Clendenin, WV 25045

PHONE 548-6993

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee there to, (or as the case may be) under grant or lease dated _____ 19____ by _____ made to Kaiser Exploration and Mining Company and recorded on the _____ day of _____, in _____ County, Book _____ Page _____

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 owners and/or operators 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)

Robert A. Pryce /dc
Well Operator
Kaiser Exploration and Mining Company
P. O. Box 8
Street
Ravenswood
City or Town
West Virginia 26164
State

Address
of
Well Operator

PLEASE SUBMIT COPIES OF ALL
PHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
304 - 292-6331

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of 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.

Survey

47-079-1033

MARKET BOND

PERMIT NUMBER

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Clint Hurt & Associates, Inc. NAME Robert A. Pryce
 ADDRESS P. O. Box 388, Elkview, WV 25071 ADDRESS P. O. Box 8, Ravenswood, WV 261
 TELEPHONE 273-5371 TELEPHONE 273-5371
 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 | 250 | 250 | 150 sks class A |
| 8 - 5/8 | | | |
| 7 | 2300 | 2300 | 65 sks 50/50 pozmix |
| 5 1/2 | | | 100 sks Class A |
| 4 1/2 | 4750 | 4750 | 250 sks 50/50 pozmix |
| 3 | | | Perf. Top |
| 2 | | 4750 | 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