

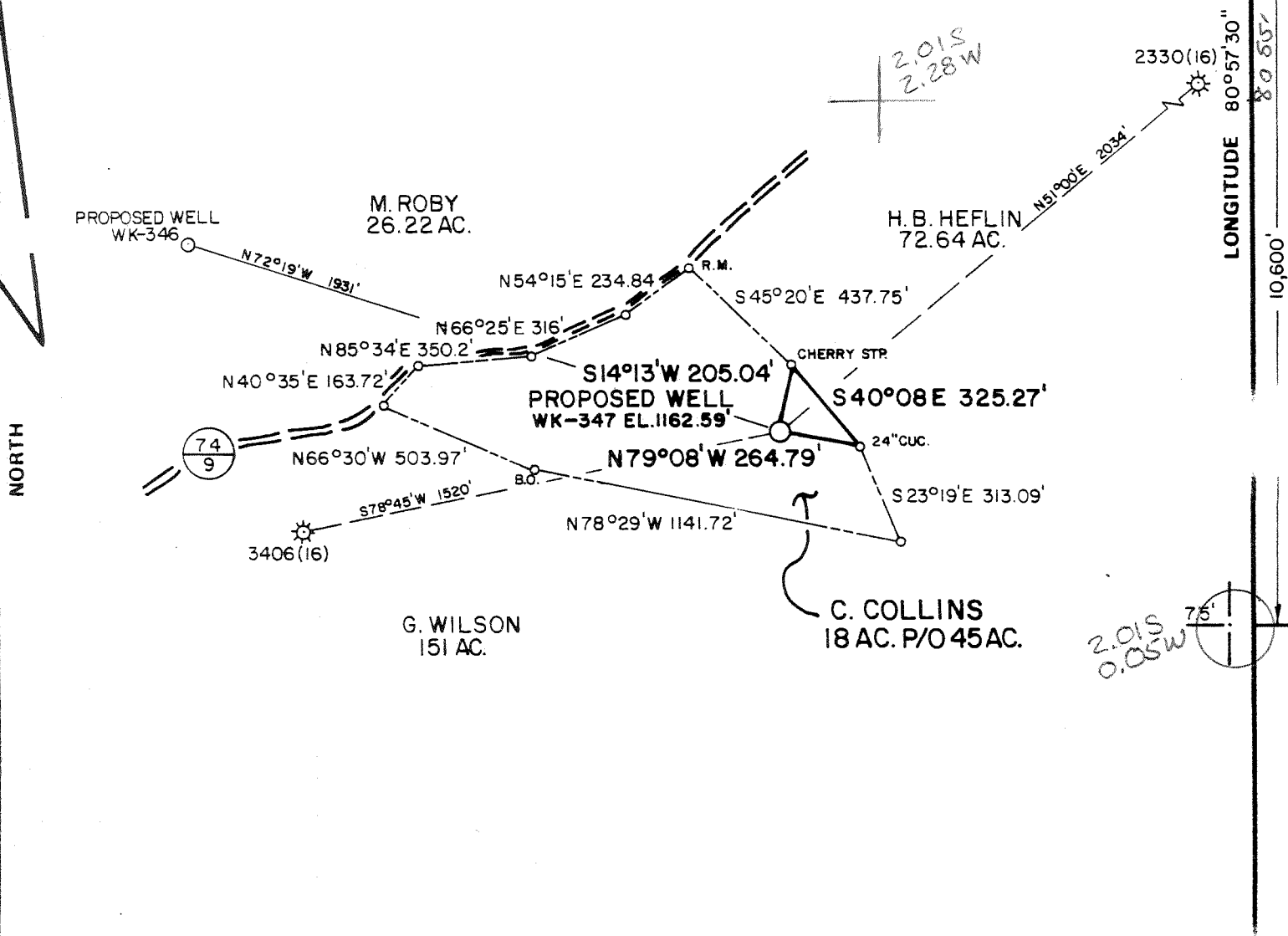
Plot Card CSD

300'

LATITUDE 39°20'00"

REFERENCE TIE LINES

PROPOSED WELL TO 14" YELLOW POPLAR S74°00'W (MAG.) 284.11'
PROPOSED WELL TO 16" HICKORY S27°15'E MAG. 247.82'



FILE NO. MSES 84-354
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION BM 1045' JCT. OF ROUTE 74 & RT. 74/9

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) John J. Bailey
 R.P.E. _____ U.L.S. 652



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

FORM IV-6 (8-78)



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE APRIL 9, 1984
 OPERATOR'S WELL NO. WK-347
 API WELL NO. _____
47 - 085 - 6986
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1162.59' WATER SHED GNAT RUN
 DISTRICT CLAY COUNTY RITCHIE
 QUADRANGLE PENNSBORO 75' (1976) 599 West 133 Union 15' SW 7
 SURFACE OWNER ROY B. GARNER ACREAGE 18
 OIL & GAS ROYALTY OWNER CARTHA COLLINS, WIDOW LEASE ACREAGE 45
 LEASE NO. KW-693

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 DEVONIAN SHALE ESTIMATED DEPTH 5995'
 WELL OPERATOR KEPCO, INC. 472 DESIGNATED AGENT E.L. STUART
 ADDRESS 436 BLVD. OF THE ALLIES ADDRESS P.O. BOX 1550
PITTSBURGH, PA. 15216 CLARKSBURG, W.V. 26301

MAY 29 1984

6-6 88



IV-35
(Rev 8-81)

Date 10-12-84
Operator's
Well No. WK-347
Farm Garner
API No. 47-085-6986

State of West Virginia
Department of Mines
Oil and Gas Division

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

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

LOCATION: Elevation: 1162.59 Watershed Gnat Run
District: Clay County Ritchie Quadrangle Pennsboro 7.5

COMPANY Kepeco, Inc.
ADDRESS 436 Blvd. of the Allies, Pitts., PA 15219
DESIGNATED AGENT E. L. Stuart
ADDRESS Box 1550 Clarksburgh, WV 26301
SURFACE OWNER Roy B. Garner
ADDRESS P.O. Box 43 Pennsboro, WV 26415
MINERAL RIGHTS OWNER Cartha Collins, widow
ADDRESS 303 1st St. Pennsboro, WV 26415
OIL AND GAS INSPECTOR FOR THIS WORK Samuel Hersman
ADDRESS P.O. Box 66 Smithville, WV 26178
PERMIT ISSUED May 24, 1984
DRILLING COMMENCED 8-16-84
DRILLING COMPLETED 8-21-84

| Casing & Tubing | Used in Drilling | Left in Well | Cement fill up Cu. ft. |
|------------------------|------------------|--------------|------------------------|
| Size 20-16 Cond. | | | |
| 13-10" | 20 | 0 | |
| 9 5/8 | | | |
| 8 5/8 | 1747 | 1747 | 400 sks Neat |
| 7 | | | |
| 5 1/2 | | | |
| 4 1/2 | 5997 | 5997 | 375 sk pozmix |
| 3 | | | |
| 2 | | | |
| Liners used | | | |

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

GEOLOGICAL TARGET FORMATION Rhinestreet Shale Depth 5896 feet
Depth of completed well 5999 feet Rotary x / Cable Tools
Water strata depth: Fresh N/A feet; Salt N/A feet
Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Shale, Alexander Benson, Riley Pay zone depth 5900, 5311 / 4909, 4665 feet
Gas: Initial open flow 0 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 575 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1400 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth 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

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

Perforate 8-29-84 Perfco Wireline Co.

4665 - 4687 Avg. Press 1900 psig Avg. Rate 25 BPM
 4909 - 5031 Avg. Press 1900 psig Avg. Rate 28 BPM
 5311 - 5317 Avg. Press 2200 psig Avg. Rate 20 BPM
 5900 - 5996 Avg. Press 2650 psig Avg. Rate 32 BPM

Riley
Benson
Ayer
Rhodes

Fractured 8-29-84 Halliburton Services - Waterfrac with Nitrogen Assist

1st stage - 17500 lbs. 20/40 Sand
 2nd stage - 27500 lbs. 20/40 Sand
 3rd stage - 30000 lbs. 20/40 Sand
 4th stage - 22500 lbs. 20/40 Sand

WELL LOG

| FORMATION | COLOR | HARD OR SOFT | TOP FEET | BOTTOM FEET | REMARKS |
|--------------------------|-------|--------------|----------|-------------|---|
| | | | | | Including indication of all fresh and salt water, coal, oil and gas |
| Fill | | | 0 | 5 | From Drillers Log |
| Sand and Shale | | | 5 | 25 | |
| Red Rock and Shale | | | 25 | 80 | |
| Sand and Shale | | | 80 | 115 | |
| Red Rock and Shale | | | 115 | 355 | |
| Sand and Shale | | | 355 | 411 | |
| Shale | | | 411 | 535 | |
| Sand | | | 535 | 560 | |
| Sand and Shale | | | 560 | 1100 | |
| Sand, Shale and Red Rock | | | 1100 | 1640 | |
| Sand | | | 1640 | 1675 | |
| Shale | | | 1675 | 1816 | |
| Sand and Shale | | | 1816 | 2034 | From Electric Log |
| Big Lime | | | 2034 | 2122 | |
| Big Injun | | | 2122 | 2217 | |
| Shale | | | 2217 | 2460 | |
| Weirsand | | | 2460 | 2550 | |
| Shale | | | 2550 | 2600 | |
| Berea Sand | | | 2600 | 2604 | |
| Shale | | | 2604 | 3010 | |
| 5th Sand | | | 3010 | 3020 | |
| Shale | | | 3020 | 3556 | |
| Speechley | | | 3556 | 3614 | |
| Shale | | | 3614 | 4665 | |
| Riley | | | 4665 | 4690 | |
| Shale | | | 4690 | 4908 | |
| Upper Benson | | | 4908 | 4914 | |
| Shale | | | 4914 | 5024 | |
| Benson | | | 5024 | 5031 | |
| Shale | | | 5031 | 5310 | |
| Alexander | | | 5310 | 5316 | |
| Shale | | | 5316 | 5896 | |
| Rhinestreet | | | 5896 | 5999' | |
| TD | | | | 5999' | |

(Attach separate sheets as necessary)

Kepeco, Inc.

Well Operator

By: Ward Benson Chief Geologist

Date: _____

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: April 9, 19 84
 2) Operator's Well No. WK-347
 3) API Well No. 47 - 085 - 6986
 State _____ County _____ Permit _____

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil _____ / Gas X /
 B (If "Gas", Production X / Underground storage _____ / Deep _____ / Shallow X /)
- 5) LOCATION: Elevation: 1162.59 Watershed: Gnat Run
 District: Clay County: Ritchie Quadrangle: Pennsboro 7.5'
- 6) WELL OPERATOR Kepeco, Inc. 7) DESIGNATED AGENT E. L. Stuart
 Address 436 Blvd. of the Allies Address P. O. Box 1550
Pittsburgh, PA 15219 Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Samuel N. Hersman Name Unknown
 Address P. O. Box 66 Address _____
Smithville, WV 26178
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate _____
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Devonian Shale
- 12) Estimated depth of completed well, 5995 feet
 13) Approximate trata depths: Fresh, 306 feet; salt, 626,1616 feet.
 14) Approximate coal seam depths: -- Is coal being mined in the area? Yes _____
- 15) CASING AND TUBING PROGRAM

RECEIVED
 APR 25 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

| CASING OR TUBING TYPE | SPECIFICATIONS | | | | FOOTAGE INTERVALS | | CEMENT FILL-UP OR SACKS (Cubic feet) | PACKERS |
|-----------------------|----------------|-------|----------------|-----|-------------------|--------------|--------------------------------------|-----------------------------|
| | Size | Grade | Weight per ft. | New | Used | For drilling | | |
| Conductor | 1-3/4 | H-40 | 42 | | X | 20 | 20 | Kinds |
| Fresh water | | | | | | 340' | 340' | CTS |
| Coal | | | | | | | | Sizes |
| Intermediate | 8-5/8 | J-55 | 23 | X | | 1790 | 1790 | CTS |
| Production | 4-1/2 | J-55 | 10.5 | X | | | 5900 | Depths set |
| Tubing | | | | | | | | Perforations: Top Bottom |
| Liners | | | | | | | | |

was req. by rule 15.01

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-085-6986 Date May 24, 19 84

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 May 24, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

| | | | | |
|----------------------|------------------|-----------------|-------------------|------------------|
| Bond: BLANKET | Agent: <u>LP</u> | Plat: <u>MW</u> | Casing: <u>MW</u> | Fee: <u>3295</u> |
|----------------------|------------------|-----------------|-------------------|------------------|

[Signature]
 Administrator, Office of Oil and Gas

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