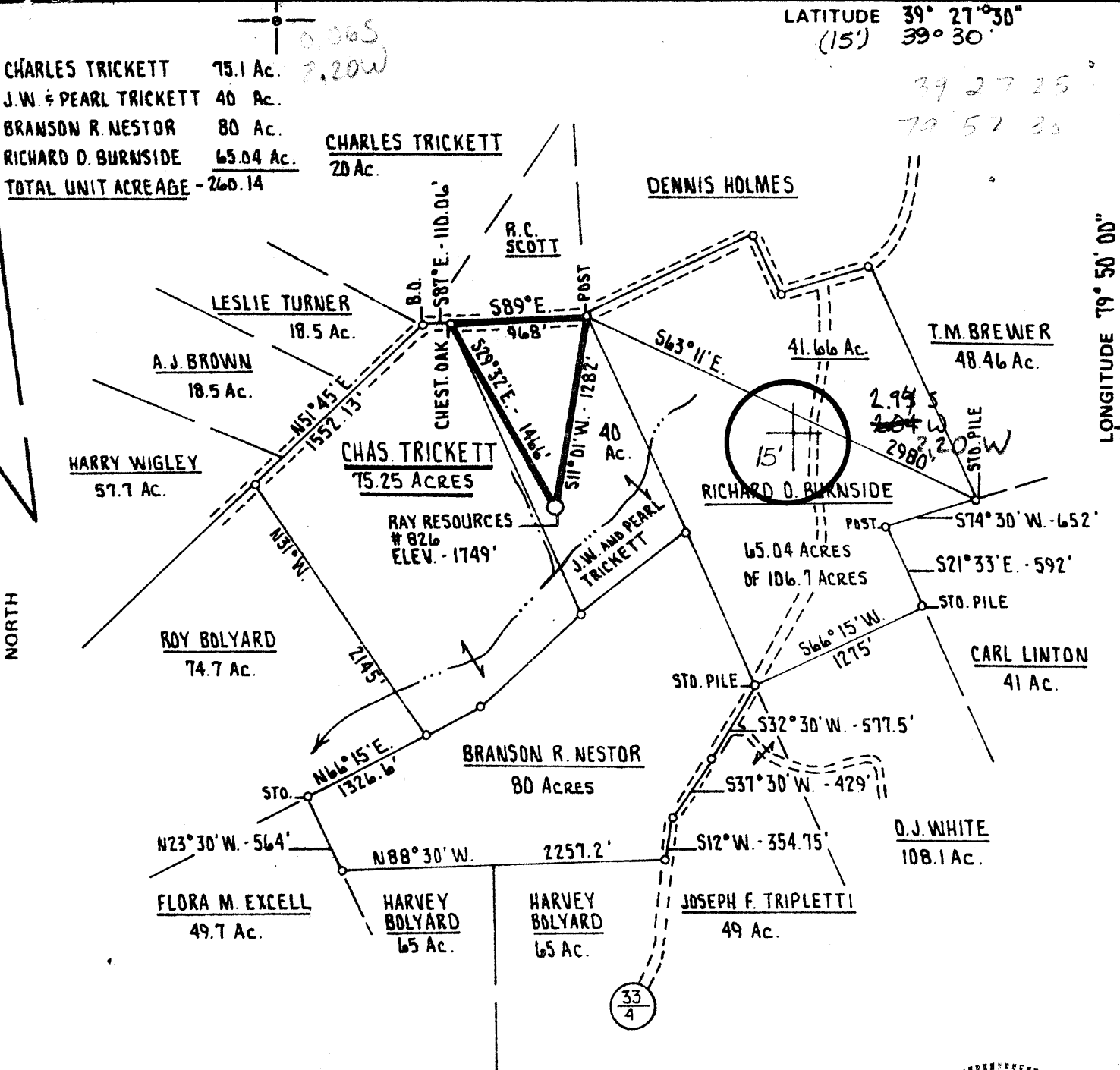
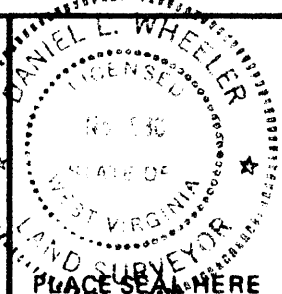


10/10/79



FILE NO. DR-27  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
 PROVEN SOURCE OF ELEVATION USGS BM # 35 RHP 1956 ELEVATION 1873'

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) Daniel L. Wheeler  
 R.P.E. \_\_\_\_\_ L.L.S. 530



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



DATE JULY 19, 19 79  
 OPERATOR'S WELL NO. 826  
 API WELL NO. \_\_\_\_\_  
47 - 077 - 0204  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE X DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 1749' WATER SHED BRAINS CREEK  
 DISTRICT LYON COUNTY PRESTON  
 QUADRANGLE NEWBURG 7.5', THORNTON 15'  
 SURFACE OWNER J.W. AND PEARL TRICKETT ACREAGE 40 Ac.  
 OIL & GAS ROYALTY OWNER J.W. AND PEARL TRICKETT LEASE ACREAGE 40 Ac.  
 LEASE NO. \_\_\_\_\_  
 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 DRISKINAY ESTIMATED DEPTH 8000' Deep Well NOV 6 1979  
 WELL OPERATOR RAY RESOURCES DIV., BVX DESIGNATED AGENT RAY RESOURCES DIV., BVX  
 ADDRESS 630 COMMERCE SQUARE ADDRESS 630 COMMERCE SQUARE  
CHARLESTON, WEST VIRGINIA 25301 CHARLESTON, WEST VIRGINIA 25301

6-6 South Durns Chapel (313)

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

WELL OPERATOR'S REPORT 12  
 37  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil \_\_\_ / Gas XX / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
 (If "Gas", Production \_\_\_ / Underground storage \_\_\_ / Deep XX / Shallow \_\_\_ /)

LOCATION: Elevation: 1749' Watershed: Brains Creek  
 District: Lyon County: Preston Quadrangle: Newburg (7.5)

WELL OPERATOR Ray Resources Division DESIGNATED AGENT SAME  
 Address 630 Commerce Square Address \_\_\_\_\_  
Charleston, W. VA. 25301

PERMITTED WORK: Drill XX / Convert \_\_\_ / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate  
 Plug off old formation \_\_\_ / Perforate new formation \_\_\_ /  
 Other physical change in well (specify) \_\_\_\_\_

PERMIT ISSUED ON 8-15-79, 19\_\_\_\_ OIL & GAS INSPECTOR FOR THIS WORK:  
 (IF APPLICABLE: FLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED) Name William Blosser  
 Address P.O. Box 1028  
Colfax, W.VA. 26566

GEOLOGICAL TARGET FORMATION: Chert Depth 7492 feet  
 Depth of completed well, 7809 feet Rotary XX / Cable Tools \_\_\_  
 Water strata depth: Fresh, 60 feet; salt, \_\_\_ feet.  
 Coal seam depths: \_\_\_\_\_ Is coal being mined in the area? \_\_\_  
 Work was commenced 10-22-, 1979, and completed 11-16-, 1979

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic Feet)	PACKERS	
	Size	Grade	Weight per ft	New	Used	For drilling			Left in well
Conductor	13-3/8			X		96	96	to surface	Rinds
Fresh water									
Coal									Sizes
Intermediate	9-5/8			X		1753.08	1753.08	to surface	
Production	4 1/2			X			7790	270 sks.	Depth set
Tubing	2-3/8			X			7496.44		
Liners									Perforations:
									Top Bottom
									7522 7652

RECEIVED  
 JAN 21 1980

OPEN FLOW DATA

~~HRV~~ OIL & GAS DIVISION  
 Producing formation Chert DEPT. OF MINES Pay zone depth 7522-7652  
 Gas: Initial open flow, none Mcf/d Oil: Initial open flow, 351/d  
 Final open flow, 1,107 Mcf/d Final open flow, 351/d  
 Time of open flow between initial and final tests, \_\_\_ hours  
 Static rock pressure, 3200# psig (surface measurement) after \_\_\_ hours shut in  
 [If applicable due to multiple completion--]  
 Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_  
 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 measurement) after \_\_\_ hours shut in

(Continued on reverse side)

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

Chert fraced with 54,000 80/100 sand, 60,000# 20/40 sand, 7,000 gals. 28% HCl, and 1,226 Bbls H2O.

Average Treatment pressure - 5,050 p.s.i., Max. pressure 6,000 p.s.i.

Average Injection Rate - 29.7 B.P.M., Max Rate 39 B.P.M.

ISIP - 3,300 p.s.i., after 15 min., 2,600 p.s.i.

HHP - 3713

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Sand			20	65	
Sand			65	80	
Black Shale			88	90	
Shale			90	133	
Black Shale			133	137	
Sand			137	197	
Shale			197	232	
Sand			232	270	
Shale			270	286	
RR			286	291	
Shale			291	332	
RR			332	339	
Sand			339	349	
Shale			349	364	
Sand			364	422	
Sand			672	830	
RR			830	848	
Sand			848	860	
RR			860	898	
Sand			898	965	
RR			965	967	
Sand			967	1002	
Sandy Shale			1002	1016	
Sand			1016	1124	
RR			1124	1154	
Sand			1154	1237	
Shale			1237	1247	
Sand			1247	1304	
Shale			1304	1388	
Sand			1388	1406	
Shale			1406	1426	
Sand			1426	1450	

(Attach separate sheets to complete as necessary)

Ray Resources Div., B.V.X.  
Well Operator  
By J. Carl  
Its Geologist

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."

Well Log Continued

FORMATION	COLOR	HARD OR SOFT	TOP <sup>12</sup> FEET	BOTTOM FEET	REMARKS
Shale			1450	7090	
Tully Lime			7090	7180	
Shale			7180	7474	
Onondaga			7474	7492	
Chert			7492	7674	
Oriskany			7674	7714	
Shale			7714	7809	
TD				7809	

Ray Resources Div., B.V.X.

Well Operator

By J. Gray Carbett

Its Geologist



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

OCT 10 1979

Oil and Gas Division

OIL & GAS DIVISION  
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,  
Charleston, W. Va.

Surface Owner J. W. & Pearl Trickett  
Address Gladesville, W. Va.  
Mineral Owner Same  
Address \_\_\_\_\_  
Coal Owner Same  
Address \_\_\_\_\_  
Coal Operator none  
Address \_\_\_\_\_

DATE October 5th, 1979  
Company Ray Resources Div., BVX  
Address Charleston, W. Va.  
Farm Trickett, et al Acres 40 of 260.1 Unit  
Location (waters) Brains Creek  
Well No. 826 Elevation 1749'  
District Lyon County Preston  
Quadrangle Newburg (7.5')

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 6-15-80.

INSPECTOR TO BE NOTIFIED William Blosser  
ADDRESS P. O. Box 1028, Colfax, W. Va. 2656  
PHONE 363-9105

Robert H. Bell  
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 title thereto, (or as the case may be) joint operating agreement dated 6-1 1979 by Consolidated Gas made to Ray Resources and recorded on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, in \_\_\_\_\_ County, Book \_\_\_\_\_ Page \_\_\_\_\_  
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 or coal owners at their above shown respective address \_\_\_\_\_ day \_\_\_\_\_ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

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

Address of Well Operator

Very truly yours, Ray Resources Div. BVX  
(Sign Name) J. W. Trickett Well Operator  
630 Commerce Sq.  
Street  
Charleston  
City or Town  
W. Va. 25301  
State

\*SECTION 3 . . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, 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.

47 - 077 - 0204

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 2-b and will carry out the specified requirements."

Signed by

J. W. Trickett

BLANKET BOND

Sanvey

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

PROPOSED WORK ORDER TO \_\_\_\_\_ DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) \_\_\_\_\_ RESPONSIBLE AGENT: \_\_\_\_\_  
 NAME Bow Valley Drilling, Inc. NAME Smokey Stover  
 ADDRESS Charleston, W. Va. ADDRESS Culloden, W. Va.  
 TELEPHONE 344-8393 TELEPHONE 743-9067  
 ESTIMATED DEPTH OF COMPLETED WELL: 7955' ROTARY XXX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Oriskany  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS XXX 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 <u>13 3/8"</u>	<u>90'</u>	<u>90'</u>	<u>to surface</u>
9 - 5/8	<u>1420'</u>	<u>1420'</u>	<u>to surface</u>
8 - 5/8			
7			
5 1/2			
4 1/2	<u>7995'</u>	<u>7995'</u>	<u>125 sks.</u>
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS \_\_\_\_\_ FEET \_\_\_\_\_ SALT WATER \_\_\_\_\_ FEET \_\_\_\_\_  
 APPROXIMATE COAL DEPTHS none  
 IS COAL BEING MINED IN THE AREA? no 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