Overview of Field History

Cutler Creek Field is located in the Towns of Erwin and Corning, Steuben County, New York. To date, one (1) well has been drilled and is on production.

The well is:

Well Name	PGE Well No.	A.P.I. No.	Status
Corning Game Club.	624460	31-101-22885	Producing

Total Depth and Production Dates

Well Name	PGE Well No.	Total Depth	1st Production
Corning Game Club	624460	10,179 Ft.	7/21/01

The Corning Game Club #624460 well is located in the Town of Corning, Steuben County, New York and was successfully drilled and completed in March 2001. The pipeline was completed and the well placed on production on 7/21/01. Production was encountered in the Ordovician Black River carbonates which are present throughout the southern New York area. The Trenton/Black River section regionally consists of finely crystalline medium to dark gray and brownish gray limestones interbedded and gradational with dark gray calcareous shales. However, in the Corning

Game Club well, the Black River pay section consists of very clean, light tan to light brown, partly sucrosic dolomite.

Dolomitic reservoirs in the Trenton/Black River formations which offer possible models for the Cutler Creek Field reservoir are well known and are discussed in the Analogous Production Areas portion of this report, which includes several industry publication references.

Of primary interest as models are the Wilson Hollow Field and the Quackenbush Hill Field which are located in Steuben and Chemung Counties of New York. Field-wide spacing and integration rules were established by a Final Decision and Order of DEC Commissioner Erin Crotty, dated June 21, 2001 for the Wilson Hollow Field. A Spacing Hearing was held for the Quackenbush Hill Field on January 3 & 4, 2002 and a Decision and Order by DEC Commissioner Erin Crotty was issued on January 23, 2002.

The Wilson Hollow Field was discovered in 1999 by PGE with the drilling of the Jimerson #1240 well. The Jimerson, and seven (7) subsequent Wilson Hollow Field producing wells, were drilled in a similar dolomitic reservoir in the Trenton/Black River formation to the north and east of the Cutler Creek Field. The Quackenbush Hill Field was discovered in 2000 by PGE with the drilling of the Lovell #1323 well. The Lovell and four (4)

subsequent wells were drilled in a dolomitic reservoir in the Trenton/Black River formation to the east of the Cutler Creek Field.

Besides the Wilson Hollow Field and the Quackenbush Hill Field, industry references describe similar geological features elsewhere.

C.E. Prouty's Trenton Exploration and Wrenching Tectonics – Michigan Basin and Environs, presented in the AAPG Studies in Geology #29, supplies some very succinct and to-the-point descriptions of the 'classic' Trenton/Black River dolomite reservoir.

From the Abstract: "…numerous well samples from several producing fields show a coincidence of the occurrence of epigenetically formed dolomite (porous reservoir rock) channelways along with structural features such as vertical shear faults (shear couples), shear folds, and offshoots from the fault channelways of the wrenching model."

From the description of the Albion-Scipio Trend, in Prouty's words "…Michigan's only giant oil field having produced over 123 million barrels (of oil) to 1984 from the Trenton/Black River." "The "trend" is composed actually of three pools that are related to the same basic structure. The shape of the field, only 1 mile wide in places by about 30 miles long…would suggest faulting." "The en echelon shear faults and the cross faults meet with an acute angle of roughly 60 degrees…." "As in the West Branch

structure, epigenetic dolomite has occupied the faults and has, through loss of volume, created sags (not synclines in the tectonic sense) along the fault traces."

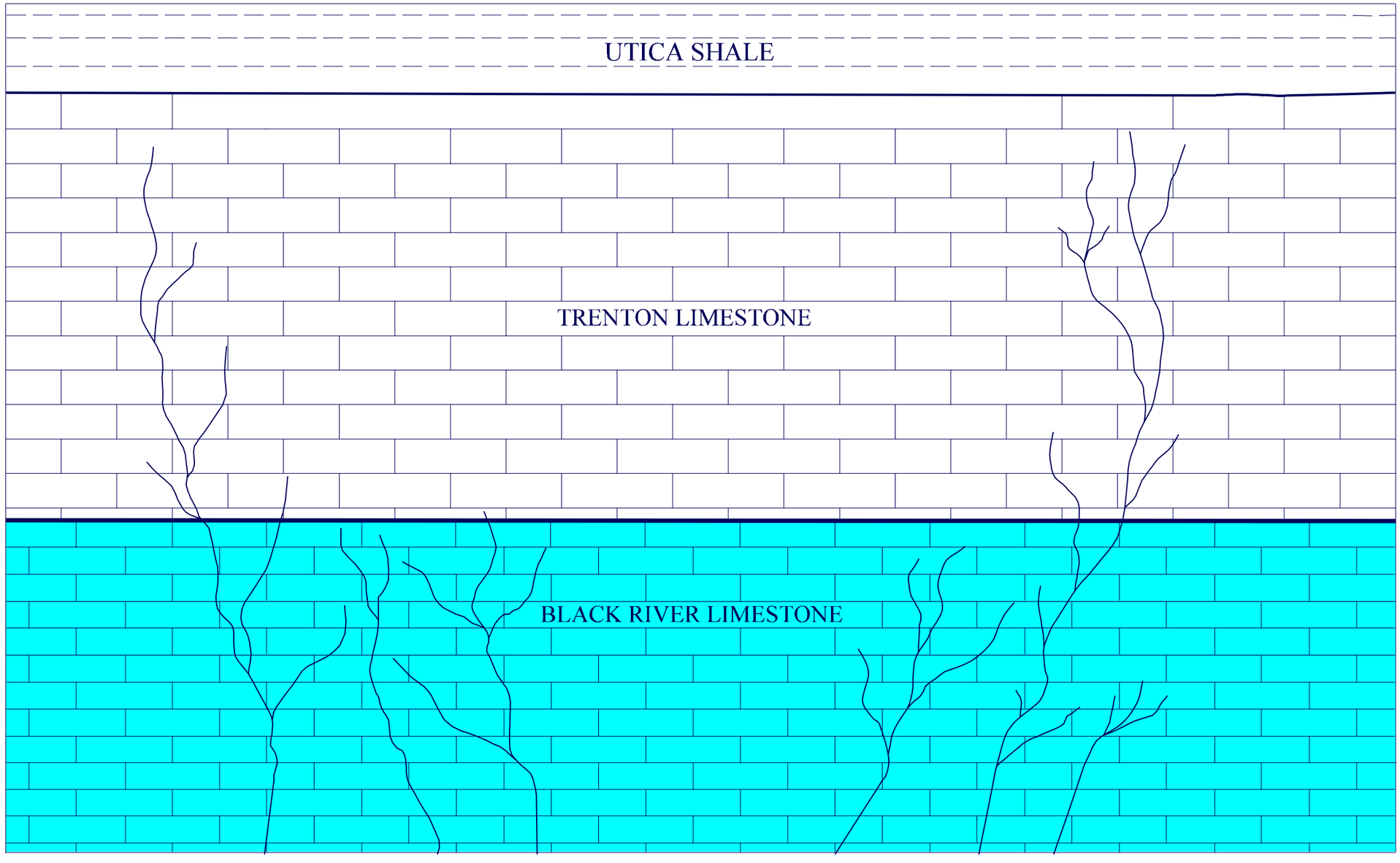
From the description of the West Branch Oil Field in Michigan: "The dolomitizing fluids followed permeable pathways along the faults." "The changing picture at each level reflects irregularities in the permeability of the fault conduits." "The lows in the Dundee are there apparently because of the partial collapse within the dolomite replacement of the limestone along the faults. The collapse may be attributed to the loss in volume and support in the area of the highly vuggy dolomite (the vuggy porosity is in the dolomite as opposed to the off-structure limestone.)" All of these quotes took on significance as PGE explored the Wilson Hollow Field, the Quackenbush Hill Field and the Cutler Creek Field.

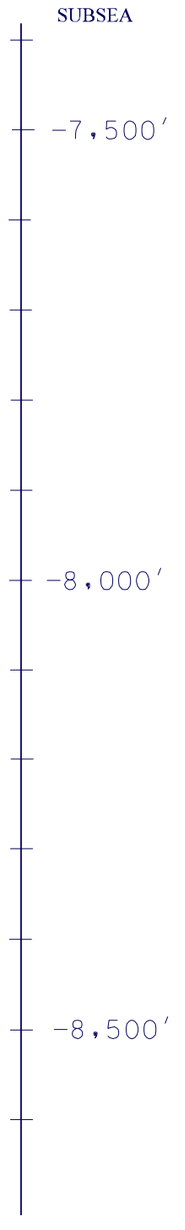
PGE has conducted an ongoing seismic program in order to delineate the precise location and orientation of the Cutler Creek production trend. Seismic lines located in the western part of the Wilson Hollow Field which showed the fault-bounded sag seismic signature found in the Trenton/Black River formation in the Wilson Hollow Field also ran southward a sufficient distance to cross an additional, separate fault-bounded sag which has been designated the Cutler Creek Field.

The attached "Generalized Geologic Profile, Pre-Dolomitization" is a representation of what PGE believes the Wilson Hollow Field reservoir looks like in cross-section, at the Howe well location, after the faulting episode but before mineralization converts the original limestone formation to dolomite. The "Generalized Geologic Profile" is a representation of the fault bounded sag and potentially gas containing reservoir which results from the dolomitization process. These processes which created the Cutler Creek Field are analogous to the processes which created the Wilson Hollow Field and the Quackenbush Hill Field.

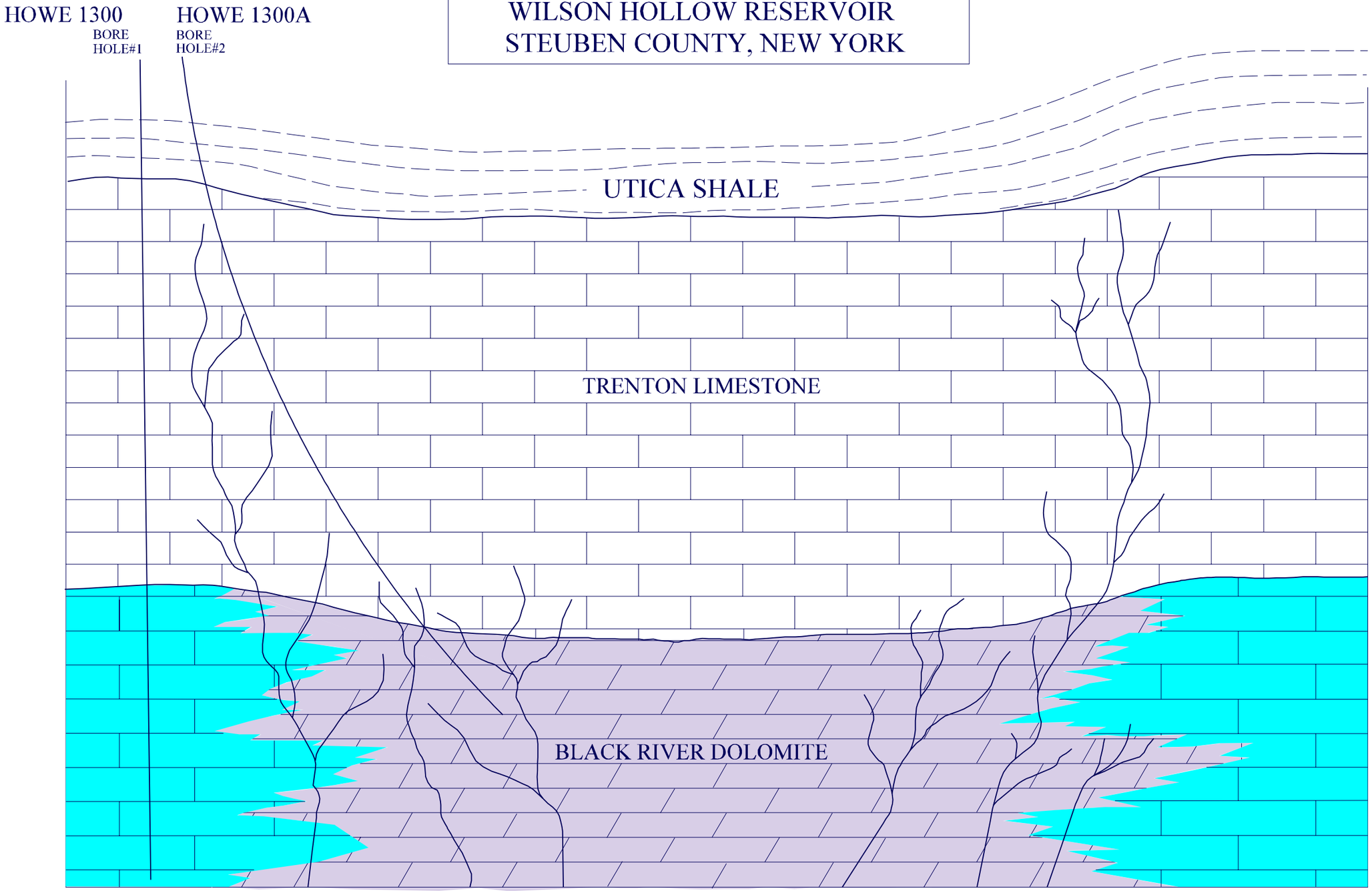
Structurally the seismic character of the Cutler Creek Field reservoir possesses the general appearance of a graben or low, bounded by walls of normal host rock limestone – the 'sag' mentioned in Prouty. It is theorized that an elongate fracture or wrench fault disturbance cut through the Black River section allowing for the percolation of magnesium rich waters which altered the limestone walls of the solution channelway (the referenced faulting, cross-faulting and dolomitization mentioned in Prouty.) Dissolution of host limestone caused collapse of overlying formations – the 'sag' again. Seismic data suggests that the collapse of the younger beds can be traced as high as the middle Devonian section.

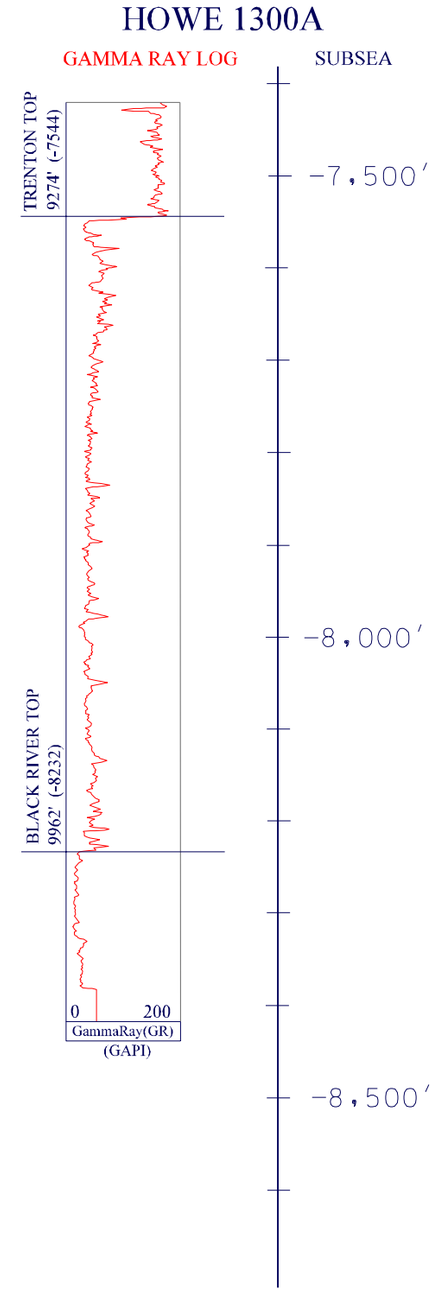
GENERALIZED GEOLOGIC PROFILE, PRE-DOLOMITIZATION
WILSON HOLLOW RESERVOIR
STEUBEN COUNTY, NEW YORK





GENERALIZED GEOLOGIC PROFILE
WILSON HOLLOW RESERVOIR
STEUBEN COUNTY, NEW YORK





To date, the series of adjacent seismic lines shown on Exhibit "E" has been used to define a linear dolomite body generally ranging in width from 1,700 to 3,500 feet wide but which extends only a very short east-west distance, as shown on Exhibit "D." The Wilson Hollow Field can be seismically identified to be at least 13 miles long and the Quackenbush Hill Field at least 8.5 miles long. Relative to these two (2) Fields, identification of the Cutler Creek feature can not be made on existing seismic lines east of Seismic Profile #V51 or west of Seismic Profile #V52, in other words, not significantly beyond the proposed unit. Seismic data does show separation between the Cutler Creek Field and both the Wilson Hollow Field and the Quackenbush Hill Field in the form of apparently unaltered tight limestone intervals separating graben-type sag features.

Prouty and the other references bring another factor to the model that may not be so apparent. One would like to visualize a simple model made up of a long, straight fault, dolomitized to the same thickness, width and extent along the entire length of fault and easily identifiable and definable.

However, the Trenton/Black River oil and gas reservoirs created by nature and described in the references are much more complex.

Main faults may start, stop, be offset and/or vary in displacement. The basic fault or faults may be cut by cross-faulting, offset by transcurrent

faults, as discussed in the Columbia Natural Resources, Inc. spacing hearing report on the Glodes Corners Road Field, and/or reflect en echelon fault patterns. Seismic information from the Wilson Hollow Field indicates a significant offset between the Jimerson and the Fratarcangelo well, as discussed in the Pennsylvania General Energy "Exhibit C" report on that field. The Hartman unit in the Quackenbush Hill Field also demonstrates the tortuous nature Trenton-Black River grabens can exhibit.

The Corning Game Club unit's shape and extent is interpreted from four (4) seismic lines, shown on Exhibit "E" as Seismic Profiles #V52, #V51, #14-99 & #S-226-W which have been presented to the DEC for their review under request for confidentiality. These seismic profiles indicate a sag feature of limited, as described above, east-west extent. The seismic profiles describe a graben feature similar to the Wilson Hollow and Quackenbush Hill Field features in terms of north-south cross section. The available seismic information indicates that the Cutler Creek Field is a single unit feature.

Dolomitization and/or collapse may sporadically develop and, where they do, occur to varying degrees along the faults. This process modifies the character of the seismic reflections needed to identify the extent of the graben and/or changing reservoir parameters that dictated the reservoir size.

Refer to the "Generalized Geologic Profile, Pre-Dolomitization" and the "Generalized Geologic Profile" representations discussed previously.

Finally, most of the references, with the exception of the work done by Columbia Natural Resources, Inc. on Glodes Corners Road Field and Muck Farm Field and done by PGE on the Wilson Hollow Field and the Quackenbush Hill Field, describe the results of after-the-fact analysis of years of exploration, development and data collection. This work on the Cutler Creek Field, so far, to assure the Field is drilled and produced "…in such a manner that a greater ultimate recovery of oil and gas may be had, and that the correlative rights of all owners and the rights of all persons including landowners and the general public may be fully protected…." (23-0301-Declaration of policy, Environmental Conservation Law, Article 23, New York State Oil, Gas and Solution Mining Law.) represents interpretation, analogy with the Wilson Hollow Field and the Quackenbush Hill Field, experimentation and testing intended to determine how to best develop the Field, before the fact.

The specific results and conclusions drawn from this testing are included in the Unit Justification section of this report and are summarized here: to optimize gas recovery, individual well economics and landowner compensation, a unit size comparable to units in the Wilson Hollow Field

and the Quackenbush Hill Field would be appropriate. For the Cutler Creek Field unit sizes between 560 acres and 640 acres are proposed. Spacing between wells along strike of a common "sag" feature is proposed to be no closer than 9,000 feet, in the event that the feature is determined to be a multi-well feature. This spacing allows units to be built which abut one another, without mandating overdrilling the field.

Analogous Production Areas

Within the State of New York there are at least four (4) recently developed Trenton/Black River production trends for which technical data is available in the public domain. Two (2) are located in northeastern Steuben County in the vicinity of Pulteney and Prattsburg. Columbia Natural Resources is the operator and developer of both fields. The third and fourth are the Wilson Hollow Field and the Quackenbush Hill Field, both discovered and operated by PGE in the Steuben County and Chemung County, NY. Field-wide spacing rules, based on a geologic interpretation very similar to that advanced here for Cutler Creek Field, have been issued by the State of New York for all four (4) fields.

The Glodes Corners Road Field was discovered by the Evangelos well in October 1985. Production was obtained in a collapsed graben-like

dolomite dissolution body within the Black River formation. To date a total of thirteen wells have been drilled in this production trend. Pertinent data for this field was submitted to the NYSDEC in the matter of proposed well spacing rules and unit boundary delineation, and the Final Order was issued by the Commissioner on May 30, 2000.

The second trend, the Muck Farm Field lies in a Trenton/Black River graben-like feature two miles south of Glodes Corners Road Field in what can be described as a companion fracture trend. The Final Order for spacing and integration in the Muck Farm Field was issued on January 31, 2000.

A Final Decision and Order for spacing and integration was dated June 21, 2001 for the Wilson Hollow Field. A DEC Spacing Hearing was held for the Quackenbush Hill Field on January 3 & 4, 2002 and an Decision and Order by DEC Commissioner Erin M. Crotty was issued on January 23, 2002.

The Wilson Hollow Field and the Quackenbush Hill Field are also Trenton/Black River graben-like features. Correcting for regional geology, the Wilson Hollow Field, the Quackenbush Hill Field and the Cutler Creek Field are at the same section in the geological column. Wireline logs across the Wilson Hollow Field, the Quackenbush Hill Field and the Cutler Creek Field, reviewed with the Department under requests for confidentiality,

demonstrate similarity of reservoir characteristics across all of the wells in the three fields. Seismic sections, also reviewed under confidentiality requests, show continuity along features, termination of features and the absence of these types of reservoirs between such features. Initial reservoir pressures, corrected for depth, are approximately equivalent. All of the seismic data, drilling samples, log information, core data, reservoir pressure data, practical drilling experience, flow tests and production information, from those wells which are on line, demonstrate these are similar reservoirs and spacing and unit size determinations for the Cutler Creek Field are similar to and supported by data presented for the Wilson Hollow Field and the Quackenbush Hill Field. (These parameters are discussed more fully in the 'Unit Justification' section.)

Elsewhere in the United States a classic look-alike development was discovered in southern Michigan in 1957. The Albion-Scipio Field yields oil and gas production from dolomitized Trenton/Black River limestone depositions along a collapse zone less than one mile wide and some 30 miles long which traverses portions of Calhoun, Jackson and Hillsdale Counties. Dissolution of the Trenton-Black River along a vertical conduit through which magnesium rich fluids migrated created an episode of dolomitization. This caused the development of a synclinal low with up to 50 feet of

negative relief (a ‘sag’) at the top of the Trenton quite similar to the circumstances encountered at Cutler Creek Field, the Wilson Hollow Field and the Quackenbush Hill Field.

Other examples of these same phenomena can be found in Ontario, Canada. The Colchester Field in Essex County yields oil production from dolomitized zones in the entire Trenton and upper portion of the Black River formations. The Dover Field in Kent County produces both oil and gas from replacement dolomite that extends vertically through the entire Trenton/Black River section.

References which discuss Trenton/Black River and similar dolomite reservoirs include:

- Prouty, C.E., Trenton Exploration and Wrenching Tectonics-Michigan Basin and Environs: AAPG Studies in Geology #29, Chapter 14.
- Titus, Robert, Facies of the Trenton Group of New York: AAPG Studies in Geology #29, Chapter 6.
- Allan, J.R. & Wiggins, W.D., 1993, Dolomite Reservoirs – Geochemical Techniques for Evaluation Origin and Distribution: American Association of Petroleum Geologists, Continuing Education Course Note Series #36.

- Schwochow, Stephen, 2000, New Gas Prospects in Ordovician Black River and Trenton Group Carbonates of the Appalachian Basin: Petroleum Frontiers, Published by HIS Energy Group, Vol. 17 No.1.
- Public Record from the Matter of the Glodes Corners Road Field, Rulings After Public Hearing, field-wide well spacing rules and the integration of interests pursuant to Environmental Conservation Law (ECL) 23-0501 and 23-0901.
- Public Record from the Matter of the Muck Farm Field, Rulings After Public Hearing, field-wide well spacing rules and the integration of interests pursuant to Environmental Conservation Law (ECL) 23-0501 and 23-0901.
- Public Record from the Matter of the Wilson Hollow Field, field-wide well spacing rules and the integration of interests pursuant to Environmental Conservation Law (ECL) 23-0501 and 23-0901.
- Public Record from the Matter of the Quackenbush Hill Field, field-wide well spacing rules and the integration of interests pursuant to Environmental Conservation Law (ECL) 23-0501 and 23-0901.

Unit Justification

The exhibit maps herewith show the location of the Corning Game Club well in the Cutler Creek Field which has been drilled.

Well site selection consists of a series of compromises incorporating seismic data availability, topographic and cultural dictates, leasehold restrictions and prior well results.

Production data for the Corning Game Club #624460 wells which has been on line for approximately six (6) months provides a basis for a preliminary material balance based plot of cumulative production versus pressure decline with which to estimate well reserves. Under proper conditions, the plot of cumulative production versus pressure decline provides an accurate estimation of ultimate gas reserves from a producing well. Plotting of successive cumulative production points and associated pressure provides an ongoing check of the validity of reserve estimates. Material balance data indicates that the Corning Game Club well will economically drain the proposed unit.

This material balance data, initial reservoir pressure data and production tests from the previously described analogous Wilson Hollow Field and Quackenbush Hill Field wells provides evidence with which to

space these Black River wells at distances greater than normally prescribed by New York State regulation and help justify unit size and shape.

Wireline logs and cores provide measurements of the physical volume of a reservoir. Logs can describe a reservoir's thickness. Both logs and cores can be used to define void space (porosity) and fluid saturations. Cores and/or flow tests can provide information about the capacity of the reservoir to allow gas to flow (permeability).

In the case of the Cutler Creek Field, PGE has collected such data on the Corning Game Club well. Wireline logs were run on the Corning Game Club well. The Corning Game Club logs and logs from the Jimerson #1240 well are currently in the public domain. Logs from the Howe #1300A well are scheduled to be released by the DEC on or about March 7, 2002. The Jimerson and the Howe logs from the Wilson Hollow Field and the Corning Game Club log show similar dolomitized and porous intervals within the Black River formation.

Initial reservoir pressures and initial openflow tests were taken. Information which is or which will be in the public domain by about March 7, 2002 show surface pressures reported on the NY State Drilling and Completion Reports on the Jimerson to be 3,625 psi, on the Howe to be 3,650 psi and Corning Game Club wells to be 3,600 psi. Bottomhole

pressures were measured at less than a 10 psi difference between all three (3) wells.

The material balance data taken on the Corning Game Club provides a number for the amount of gas that the well is predicted to produce. Volumetric data provides measurements of some of a reservoir's physical dimensions. In the case of the Cutler Creek Field, seismic analysis can provide information about reservoir width and lateral extent of the field.

Combining all of this data, an equation can be developed in which the only unknown parameter, within reasonable limitations, is the length of reservoir that is being drained by a well, which defines well spacing. For the Cutler Creek Field, using the most representative numbers from the Corning Game Club well and analogous data from the Wilson Hollow Field and the Quackenbush Hill Field, the length of reservoir drained by an average well is estimated to be similar to that of a well in the Wilson Hollow Field and the Quackenbush Hill Field, or between 9,000+/- feet in the widest parts of the reservoir up to about 15,000+/- feet in the narrowest parts.

Well spacing, in turn, is a part of determining appropriate unit size. Once again, as with modeling the reservoir, the concept is straightforward but the practice requires one leave room for some uncertainty. New York State regulation must also be considered.

The subject stipulation for the Cutler Creek Field requires Stipulation Wells, Infill Wells and Future Wells have "…the right to develop the oil and gas in a 660 foot radius of the proposed well…." (Stipulation Well & Future Well) "The infill well is a least 660 feet from all existing unit lines…." (Infill Well.)

Section 553.1, Well Spacing, as set out in the rules and regulations governing oil and gas, says "State-wide spacing. (a) Except…a well…cannot be located less than 660 feet from any boundary line of the lease, integrated leases or unit…."

So, in determining unit size and layout, first, we have to calculate, to available accuracy, the size of the reservoir we believe a well drains. Then we must provide for compliance with Section 553.1, as cited above.

Geological theory and experience predict the best flow capacity (permeability) may be located along the edges of the reservoir and one will want to be able to locate the wells as close to the edges of the graben as possible. Combining all of these factors, we have laid out the Corning Game Club well unit so that the proposed northern and southern unit lines lie at least 660 feet outside of our best estimate of the reservoir limits.

Based on the well spacing calculations and unit design considerations mentioned previously, unit sizes with a minimum set at 560 acres and a

maximum at 640 acres covered the reasonable range for units in the Cutler Creek Field considering the range of widths for the reservoir, regulatory well radius provisions and an allowance for uncertainty. Because of the broad width (3,500 feet) of this feature at its center, a unit designed with 9,000+/- feet well spacing calculates to be an approximately 640 acre unit in the defined portion of this feature. A minimum well spacing of 9,000 feet allows for wells to be drilled on longer well spacing when the larger spacing is technically appropriate, such as in a narrower portion of the feature.

A well location results as a compromise of a number of factors. First, and most important, is the apparent quality of the Black River formation at each possible location as indicated by the seismic data at that location. The seismic information across the Cutler Creek Field suggests that a dramatic difference in reservoir quality exists at various locales within the graben trend. Because the reservoir is so variable, well locations must be selected as close to seismic control as possible to assure success. The Corning Game Club was drilled at the best spot that could be identified on the seismic profiles, which crossed this feature.

The layout of seismic lines is dependent upon road location, topography, surface conditions such as glacial valley fill, buildings, and the

difference in cost and ease of seismic data acquisition (vibroseis (on roadways) vs. dynamite (cross country)), etc.

Other well site considerations include the terms of applicable lease agreements, regulatory considerations, limitations on surface access and use for building the drilling location, the road to the location and/or the related pipelines, well spacing consideration, relationship to unit boundaries, impact on adjacent units, etc.

Individual Unit Justification

CORNING GAME CLUB #624460 (31-101-22885) Unit B-1 637.27 Acs.

Northern boundary – to be at least 660 feet north of the north graben wall.

Eastern boundary – based on seismic, the feature becomes fundamentally undefinable between seismic profile #V-51 and #14-99. Its location is PGE's best estimate of the limit of production, comparing seismic signatures in the Cutler Creek Field to seismic signatures in the Wilson Hollow and in the Quackenbush Hill Field.

Southern boundary – to be at least 660 feet south of the south graben wall.

Western boundary – Seismic Profile #V52 shows a seismic anomaly which PGE has defined as the Cutler Creek Field graben which corresponds to a similar anomaly found on the more easterly profile #V51. However, seismic data to the west of #V52 does not show a similar anomaly. The western boundary of the field then was defined through a combination of Seismic Profile #V52 and a line approximately 4,500 feet west of the Corning Game Club well, to preserve a unit spacing of approximately 640 acres.

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David A. Lind, President-PGE

February 27, 2002

EXHIBIT C

CUTLER CREEK FIELD REPORT

PENNSYLVANIA GENERAL ENERGY, CORP.

February 27, 2002