

QUARTERLY REPORT OF TECHNICAL PROGRESS  
D.O.E. Eastern Gas Shale Project  
April, May, June, 1978

MASTER

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SUMMARY

NOTICE  
This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.

The Penetration and Show Map (Task 3200-1-2) and the Drilling Depth Map (Task 3200-5-3) both at a scale of 1:250,000 have been accepted by DOE, Morgantown, WV and are currently on open file. Eight stratigraphic cross sections (Task 2100-1-1) have been completed and camera ready copies sent to DOE, Morgantown, WV. The final stratigraphic cross section has been completed, but the final copy has not yet been sent to DOE. A Structure Map on Top of the Onondaga Group at a scale of 1:250,000 had to be redone because of errors found while constructing a similar map at a scale of 1:1,000,000. This 1:250,000 scale map has been completed and is awaiting drafting. Data collection for the 1:1,000,000 maps has been completed and most of the maps have been constructed. The breakdown on these maps is as follows: thirty-four Isopach Maps (Task 2100-1-2) have been completed; six Structure Maps (Task 2100-2-1) have been completed; and thirty-five Lithofacies Maps (Task 2100-3-1) have been completed. Eleven lithofacies maps have yet to be constructed. Three college students were hired in June to encode the data collected during this project. The encoding is 67% complete. Delays in delivery of products have been due to problems which resulted from lack of drafting formats for the cross sections and maps from DOE. Thus, drafting and reproduction of the Structure Map on Top of the Onondaga Group at a scale of 1:250,000 was put off until the cross sections and the Isopach, Structure, and Lithofacies Maps at a scale of 1:1,000,000 are completed. All other work is on schedule.

CONTRACT OBJECTIVES

1. Identify all wells in Pennsylvania which penetrate the Devonian shale sequence and indicate all gas production and shows from shales (Production Map, Task 3200-5-3).
2. Provide a preliminary stratigraphic framework for the clastic sediments between the Berea-Cussewago-Murrysville sand interval (approximate Mississippian-Devonian boundary) and the Onondaga Group of Middle Devonian age, using gamma ray data with supplementary lithologic logs (Cross Sections, Task 2100-1-1).
3. Provide a preliminary structural picture for the black shale facies and related rocks in Pennsylvania (Structure Maps, Task 2100-2-1).
4. Define and map the black shale facies and related rocks within this sequence in order to understand their sedimentological history and to help in predicting and evaluating potential gas resources in the Devonian shales (Subsurface Geology, Task 3200-1-2; Isopach Maps, Task 2100-1-2; and Lithofacies Map, Task 2100-3-1).

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5. Provide and maintain a storage site for all data and cores obtained in Pennsylvania for the Devonian Black Shale Project.
6. Encode data in a computer retrieval format.

#### TECHNICAL PROGRESS

##### TASK 2100-1-1 CROSS SECTIONS

Work Status: All nine of the stratigraphic cross sections have been drafted in camera ready form. Eight of these sections have so far been forwarded to DOE, Morgantown. The final section is waiting to be reviewed in this office before it is sent to DOE. Except for this review, the cross sections are 100% complete.

Problem Areas: The stratigraphic cross sections are behind schedule due to drafting delays. These delays were the result of a lack of drafting formats for maps and cross sections from DOE.

##### TASK 2100-1-2 ISOPACH MAPS

Work Status: Thirty-four isopach maps at a scale of 1:1,000,000 have been constructed. Twenty-one of these maps are of the shale units and the remaining thirteen are of the Upper Devonian sand units. The shale isopach maps have been reviewed and narrowed to nine which will be drafted and sent to DOE, Morgantown, WV. The sand isopach maps have not yet been reviewed.

Work Plan: Begin drafting of the shale isopach maps, and review and select the pertinent sand isopach maps.

##### TASK 2100-2-1 STRUCTURE MAPS

Work Status: Six structure maps at a scale of 1:1,000,000 have been constructed. They have been reviewed and are now waiting to be drafted.

Problem Areas: The Structure Map on the Top of the Onondaga Group at a scale of 1:250,000 is behind schedule. The delay in drafting is due to the lack of map formats from DOE which also delayed the cross sections and the other two 1:250,000 scale maps. Drafting of the structure map is being put off until the cross sections and the 1:1,000,000 scale maps are completed.

Work Plan: Begin drafting on the structure maps.

##### TASK 2100-3-1 LITHOFACIES MAPS

Work Status: Thirty-five lithofacies maps at a scale of 1:1,000,000 have been constructed. Thirteen of these maps are of the shale units and the remaining twenty-two are of the Upper Devonian sand units. The shale lithofacies maps have been reviewed and narrowed to seven which will be drafted and sent to DOE, Morgantown, WV. The sand lithofacies maps have not yet been reviewed. Eleven sand lithofacies maps have yet to be constructed.

Work Plan: Begin drafting of the shale lithofacies maps. Continue construction of remaining sand lithofacies maps and begin review and selection of the pertinent maps.

TASK 3200-1-2 SUBSURFACE GEOLOGY

Work Status: The Drilling Depth Map has been completed and sent to DOE, Morgantown, WV. Task 3200-1-2 is complete. Delivery of this map was behind schedule due to lack of drafting formats from DOE.

TASK 3200-5-3 PRODUCTION MAP

Work Status: The Penetration and Show Map has been completed and was sent to DOE, Morgantown, WV. Task 3200-5-3 is complete. Delivery of this map was behind schedule due to lack of drafting formats from DOE.

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