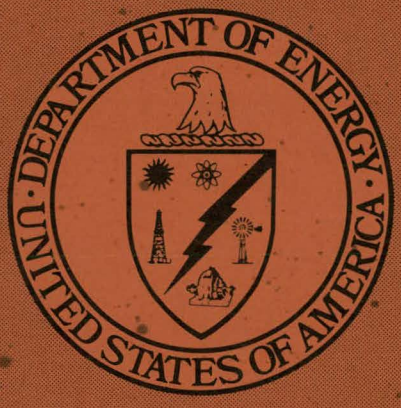

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STUDIES OF NEW ALBANY SHALE IN WESTERN KENTUCKY
FINAL REPORT

By

Howard R. Schwalb and Ronald L. Norris

February 1980

Prepared for

UNITED STATES DEPARTMENT OF ENERGY
Morgantown Energy Technology Center
Morgantown, West Virginia

Under Contract No. EW-78-S-21-8215

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of

University of Kentucky
Kentucky Geological Survey
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CONTENTS

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By

Howard R. Schwalb[1] and Ronald L. Norris[2]

ABSTRACT

The New Albany (Upper Devonian) Shale in western Kentucky can be zoned by using correlative characteristics distinguishable on wire-line logs. Wells drilled through the shale which were logged by various methods provided a basis for zonation of the subsurface members and units of the Grassy Creek, Sweetland Creek, and Blocher. Structure and isopach maps and cross sections were prepared. The Hannibal Shale and Rockford Limestone were found in limited areas; isopach maps were not made for these members. Samples of cuttings from selected wells were studied in order to identify the contact of the shale with underlying and overlying rock units. A well-site examination of cuttings through the shale section was conducted, and the presence of natural gas was observed in the field. The New Albany Shale has the potential for additional commercially marketable natural gas production. Exploratory drilling is needed to evaluate the reservoir characteristics of the New Albany Shale.

PURPOSE OF STUDY

The New Albany Shale is a formation of extremely widespread occurrence throughout the east-central United States; it crops out in a broad belt through central Kentucky. In western Kentucky the New Albany Shale underlies younger formations westward to the Jackson Purchase area, where it subcrops beneath Tertiary and Cretaceous strata. The purpose of this study is to map the occurrence of the shale in the subsurface and zone the members of the shale to conform with studies conducted by the Illinois and Indiana Geological Surveys. An examination of well records and drilling reports was made for the reported occurrence of natural gas in the New Albany Shale. Production and tests of wells with natural gas in the shale were gathered from various sources.

Maps and cross sections of the members of the shale were constructed, and individual well data for computer storage were compiled as well as data on natural-gas occurrence in the New Albany Shale. Cross sections based on geophysical well logs were prepared in east-west and north-south directions in western Kentucky.

METHODS USED TO CONDUCT STUDY

The various geophysical log characteristics that have continuity from well to well were correlated, and the upper, middle, and lower members of the shale were identified on the cross sections; also, discrete units within the members were identified by this method.

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Sample sets were examined on wells that had been reported to the scouting services with incomplete or erroneous data. The top and base of the New Albany section were occasionally misidentified on the records submitted to the commercial reporting services; when samples were available for wells suspected to be at variance with the wire-line logs, microscopic examinations of the well cuttings were made and the boundaries were corrected to conform with the logs.

Isopach maps were constructed for the three member units of the shale, and a structure map of the base of the shale was prepared. In addition, the occurrence of natural gas as reported from well records was mapped and compiled. Sample sets of well cuttings were examined in order to compare the identification of lithologies with their geophysical log characteristics.

The isopach maps were constructed on bases to which the surface fault systems had been added. The Rough Creek fault system was active during deposition of the New Albany Shale, and the growth faults caused variations in thickness of the members. Thickened sections were on the south side of the fault system.

A structure map of the basal contact of the New Albany Shale with the underlying older formations was also prepared. The New Albany Shale in western Kentucky lies on formations ranging in age from Middle Devonian to Late Ordovician. The contact is essentially conformable in the western part of the study area, but rests on a low-angle unconformity eastward near the outcrop area around the Lexington Dome. Variations were noted in the angularity of the contact north and south of the major east-west fault systems.

GEOLOGIC INTERPRETATIONS

Cross Sections

Cross Section North of Rough Creek Fault

This cross section extends approximately 135 miles. The line originates in Gallatin County, Illinois, and parallels the Ohio River to the north and the Rough Creek fault system to the south into Hardin County, Kentucky. Data were taken from geophysical logs; the western two-thirds were electrical logs, and the eastern one-third was gamma-neutron logs. These logs show the sections from the base of the Rockford Limestone or the top of the Grassy Creek Shale to a short distance below the base of the Blocher Shale.

The section was traced from west to east or from the deeper part of the Eastern Interior Basin toward the Cincinnati Arch. Several facts and suppositions may be noted.

Rockford Limestone and Hannibal Shale were only sporadically deposited in western Kentucky, and they pinch out approximately 70 miles east of the western end of the cross section. The absence of these formations to the east is interpreted to be the result of nondeposition since no erosional unconformity is recognized between the Mississippian Fort Payne Formation and the top of the New Albany Shale.

The three members of the New Albany Shale have units within them that carry eastward as distinctive characteristics on the logs. The two basal units of the

Sweetland Creek Member disappear between wells Nos. 8 and 10, indicating onlap of this member in an easterly direction. The uppermost units of the Sweetland Creek Member pinches out between wells Nos. 16 and 17; this may indicate a very slight withdrawal of the sea before deposition of the Grassy Creek Member.

The Blocher Member of the New Albany extends eastward, gradually thinning to well No. 17. It is absent in well No. 18, and probably never extends to the northern portion of the outcrop area in west-central Kentucky.

The Grassy Creek thins gradually in an eastward direction to well No. 10, and then an abrupt change is noted in well No. 11, where the lower unit of the member decreases markedly in thickness. The Grassy Creek Member continues to the eastern end of the line of section, where it is the dominant member. The outcrop of the shale occurs very close to the eastern end of the section, and the exposed shale consists almost entirely of the Grassy Creek Member, which is the most extensive member of the New Albany Shale.

The total section of New Albany Shale decreases in thickness from 400 feet in the west to 62 feet in the east; a portion was probably deposited over most of the Cincinnati Arch.

Cross Section South of Rough Creek Fault

This cross section covers a distance of 155 miles and is relatively parallel to the northern cross section. The line begins in Crittenden County, Kentucky, and ends in Taylor County, Kentucky. Data sources are the same as for the northern cross section, and the same geologic column is covered.

A comparison of the general characteristics of the two sections will show some similarities and differences. The similarities are:

(a) There are seven traceable units below the Rockford Limestone.

(b) All zones thin to the east from a total shale thickness of 405 feet to 44 feet.

(c) Gradient-of-thickness decrease is similar to the northern section.

The difference is:

(a) The Rockford Limestone and Hannibal Shale do not appear until well No. 3 and disappear by well No. 9. These units extend farther east on the south side than on the north side of the fault zone.

From the western edge of the section to well No. 11 the data points are south of the Rough Creek fault zone, and show the variations of the correlated units in the Moorman Syncline of western Kentucky. Between wells Nos. 11 and 12 the line of section crosses the Rough Creek fault zone; the marked thinning of the section and discontinuity of units is the result of growth faulting on the eastern end of the Rough Creek fault system during deposition. From well No. 12 eastward the Blocher is not recognized in any of the wells in the line section, and the Sweetland Creek rests on the various Devonian and Silurian carbonate formations of the Hunton Group. The Hunton Group was partially subareally eroded

previous to New Albany deposition; there was increased erosion to the east. The upper units of the Sweetland Creek are missing east of well No. 12, indicating a hiatus between this member and the overlying Grassy Creek Member. The hiatus may be due to offlap and withdrawal of the marine waters which deposited the shale, or upward movement on the north side of the Rough Creek fault zone with cessation of deposition and possibly some removal of section by erosion. The Grassy Creek Member then overlaps the lower portion of the Sweetland Creek, and again remains the dominant member exposed at the outcrop of the shale.

The Cincinnati Arch continued to be a positive feature although it may have been submerged by the advance of the sea which deposited the Grassy Creek Member. Whether sea level lowered toward the end of Grassy Creek deposition or the arch was further uplifted, the result was an offlap near the end of New Albany deposition. The upper unit of the Grassy Creek terminates between wells Nos. 14 and 15 of the line of section. The upper unit of the Grassy Creek seems to be the most important zone for the occurrence of natural gas; therefore, the extent of this unit is important in natural gas exploration.

Cross Section on West Side of Area

This cross section begins in Posey County, Indiana, and extends for 90 miles into Todd County, Kentucky. Shale thickness is typically thin to the east and south and thick to the west and north. Thickness gradient is not accentuated although there are two wells (9 and 11) in which there is a definite change in gradient. There are 11 distinctive units identified in the line of section. The Rockford Limestone and Hannibal Shale are not present this far west on the south side of the Rough Creek fault system. Zones of correlation diminish to only four identifiable units in the two southernmost wells. The maximum thickness of the total shale section is 405 feet in well No. 6, and the minimum thickness is 71 feet in well No. 12.

Between wells Nos. 5 and 6 the Rough Creek fault system is crossed, and there is a pronounced thickening of the Blocher Member south of the fault system in well No. 6. The Grassy Creek and Sweetland Creek Members do not show any appreciable change in total thickness across the fault.

Between wells Nos. 8 and 9 the Pennyrile fault system is crossed by the line of section, and only the lower unit of the Grassy Creek Member shows any marked thinning to the south across the fault system. From well No. 6 southward to well No. 11 the upper units of the Sweetland Creek Member are truncated at the base of the Grassy Creek Member. Whether this is the result of offlap of the Sweetland Creek or removal by erosion is not determined; however, sample studies of the shale section made for this report do not indicate any evidence of an erosional unconformity, and the offlap theory is favored to explain this condition.

Cross Section on East Side of Area

This cross section begins in Spencer County, Indiana, and extends for a distance of 90 miles into Simpson County, Kentucky. The geologic setting is the relatively shallow eastern rim of the Eastern Interior Basin. Along the section line are the following distinctive features: the Rough Creek fault system, Moorman Syncline, and Pennyrile fault system.

The Rockford is not present in this section, and only two thin areas of Hannibal Shale were found. As in the other cross sections, there are several zones which can be traced for long distances. Also, there are some very thin units which do not cover much area. The greatest number of units are south of the Rough Creek fault system and extend for 25 to 30 miles.

The maximum thickness of the shale section (213 feet) is found in the No. 14 well, which is south of the Rough Creek fault system and at the eastern end of the Moorman Syncline. The thinnest section, 54 feet, is found at the end of the section in Simpson County.

The Rough Creek fault system crosses the line of section between wells Nos. 10 and 11. There is a marked thickening of the Sweetland Creek Member south of the fault. Growth faulting along the eastern end of the Rough Creek fault system can be demonstrated to have occurred during Silurian and Lower and Middle Devonian deposition; thicker accumulations of sediment were on the south side of the fault system. The thickening of the Sweetland Creek Member is also attributed to reactivation of the fault system during the deposition of this member.

The Pennyrile fault system is crossed between wells Nos. 15 and 17, as indicated by the more than 1600 feet of variation of depth between these wells. The greatest amount of thinning to the south is in the Grassy Creek Member between wells Nos. 15 and 17. This may be an indication of movement on the fault system during deposition. The Pennyrile fault system is known to have been active during Middle Devonian time, and this activity could have continued into Late Devonian time.

Isopach Maps

The New Albany Shale is divided into three members, which are, in descending order, the Grassy Creek, Sweetland Creek, and Blocher Members. These members are fairly distinctive on geophysical logs, so an isopach map of each member was constructed within the limits of the control points.

These studies cover an approximate area of 16,000 to 18,000 square miles in western Kentucky. All units are present over 90 percent of the study area, and total thickness ranges from zero to 480 feet. Thinning occurs in an easterly direction at a fairly constant rate. Isopach contours on each member show a gentle or gradual flattening as the outcrop area is approached. The Grassy Creek is the thickest unit and is probably the dominant part of the outcrop section. The Sweetland Creek disappears before the outcrop is reached to the southeast, while the Blocher disappears before reaching any part of the outcrop area. If total acre-feet of each shale member were compiled, the Grassy Creek would almost equal the sum of the Sweetland Creek and Blocher Members. This fact is important in looking for natural gas in the New Albany Shale in western Kentucky. The reported occurrence of natural gas is predominantly in the Grassy Creek Member, and this member is considered to be the most favorable target for natural gas exploration. Another similarity on each map is that the areas of thickening and thinning generally coincide. The Rough Creek and Pennyrile faults probably have had some influence on the shale deposition since a zone of thickening occurs between the fault zones. Greater variation of member thicknesses on either side of the fault zone is noted toward the eastern end of the Rough Creek fault system than toward the western end.

The isopach maps show a thickening of the shale from east to west; the shale is thicker on the south side of the Rough Creek fault system, and the two lower units thin and may disappear to the east and southeast.

Grassy Creek Member

This is the most extensive member of the New Albany Shale, which indicates that shale deposition was most widespread toward the end of Late Devonian time. The Grassy Creek Member overlaps all the previously deposited members of the New Albany in western Kentucky. No evidence of an erosional unconformity was found at the top of the shale in the subsurface, and the overlying units are considered to be conformable.

Sweetland Creek Member

The Sweetland Creek member overlaps the Blocher Member throughout western Kentucky, and where the Blocher is not present the Sweetland Creek rests directly on the pre-New Albany unconformity. West of the outcrop areas the pre-New Albany surface had little or no erosional topographic relief developed on it, as indicated by the continuous deposition of shale from the zero edge to the 30-foot thickness line.

Blocher Member

The Blocher Member has the least extent of the three members of the New Albany Shale. It does not extend to the outcrop of the shale on the Cincinnati Arch, and is only present in the subsurface. It is conformable with the underlying Devonian in the western part of the study area, and unconformable in the eastern part.

Structure Map

Base of New Albany Shale

Structural conditions of the New Albany Shale are depicted on the map by fifty-foot contour intervals. The cross sections and isopach maps were very helpful in making the structural interpretation.

The study area is essentially the western Kentucky lobe of the Eastern Interior Basin. There are five distinctive geologic features in this section of Kentucky. They are:

(1) The Cincinnati Arch, a broad positive feature on the eastern and southeastern side of the study area.

(2) The Moorman Syncline, which trends east-west through the central part of the area.

(3) The Rough Creek fault system, which is in the north one-third of the area.

(4) The Pennyrile fault system, which is in the south one-third of the area.

(5) The extremely complex fault system of the western Kentucky fluorspar district.

Of these features, the Cincinnati Arch and Rough Creek fault system were probably the only ones that had any influence on New Albany Shale deposition.

The structure of the New Albany Shale from the Cincinnati Arch is characterized by a relatively gentle dip in a westerly direction. The average rate of dip is at times interrupted by small domes and the flattening or steepening of the regional dip. Also, the dip is interrupted and changed by the major and minor fault zones. Although the average rate of dip across the 140 to 150 miles of study area is 30 to 40 feet per mile, there are some areas adjacent to the Rough Creek fault system and in the fluorspar-faulted area where dip is at least 100 feet per mile. As shown by the structure map, the New Albany Shale ranges from surface elevations of 500 to 600 feet above sea level on the east to at least 4200 feet below sea level to the west. The deep closed basin to the west is the western extension of the Moorman Syncline.

The major faulting is integrated into three separate systems. One of the systems is the Rough Creek fault system, which trends in an east-southeast direction. The Pennyrile fault system trends in an east-northeast direction. The West Kentucky fault system trends generally in a northeast direction, but is also a hodgepodge of faults striking in all directions. The faults in these systems are generally single normal-gravity faults and normally high-angle. All systems have some high-angle reverse faulting. The majority of the faults are post-Pennsylvanian, but some movement undoubtedly took place during the deposition of the New Albany Shale in Devonian time.

In addition to the major faulting there is also some faulting on the north side of the Rough Creek fault system. These unnamed fault zones trend north-northeast and are all normal faults. One zone occurs at the western end, two zones near the center, and two near the east end of the Rough Creek fault system. There are also a few scattered faults which are not associated with any of the major fault zones.

In western Kentucky there are no significant structurally high closures such as in the Illinois Basin. There are a few structural closures mapped which may influence the accumulation of natural gas in the shale; however, drilling has not substantiated this premise. The fault systems may have influence on the conditions for natural-gas accumulation and enhance the permeability sufficiently to warrant commercial production.

The areas along or in the extremely faulted zones where fracture porosity may have developed would be likely places to explore for gas, based on structural conditions. More exploration and detailed interpretation of the present and future exploration is needed.

EXAMINATION OF WELL CUTTINGS

Sample Studies

Rock cuttings from oil and gas tests drilled through the New Albany Shale were examined with binocular microscopes to determine the lithology of the

section, and to correct some of the reported contacts of the shale with underlying and overlying formations. Where the wire-line logs did not provide clear-cut definition of the New Albany Shale the sample cuttings were examined; they provided very good identification of both the upper and lower contacts of the shale. In areas where the Hannibal Shale or Rockford Limestone were absent the basal contact of the Fort Payne Formation with the New Albany Shale was an extremely thin, highly glauconitic zone. This zone is considered to be equivalent to the Maury Shale of Tennessee which is highly glauconitic and contains phosphatic nodules. Although no phosphatic nodules were seen in the sample studies, the highly glauconitic character of the silty shale and its position in the stratigraphic sequence suggest equivalence with the Maury Shale. In Tennessee the contact of the Maury Shale and the New Albany Shale is disconformable. The cuttings from wells were also tested with dilute hydrochloric acid to check for calcareous zones in the shale; the lower part of the Sweetland Creek Member and portions of the Blocher were frequently found to contain some calcium carbonate. The Crassy Creek Member was uniformly noncalcareous in all the sample sets.

Observations on the Occurrence of Natural Gas in New Albany Shale Well Cuttings

A wildcat test well in Logan County, Kentucky, was permitted to be drilled through the New Albany Shale into the underlying Hunton carbonate section. Permission was granted by the operator of this test to examine the well cuttings recovered while drilling the New Albany Shale section. The location of the test is near a fault, and in an area where natural gas was expected to be encountered in the shale; therefore, the on-site examination of cuttings from the shale offered an opportunity to describe the occurrence of natural gas.

The Ecus Corporation No. 1 Hinton Lumber Company test in Logan County, Kentucky, Carter coordinate section 4-F-30, was 1910 feet from the south line and 900 feet from the east line of the section. Ground elevation was 731 feet, and the derrick floor elevation was 741 feet. At a drilling depth of 1975 to 1980 feet the base of the dark-gray, calcareous, heavily glauconitic Fort Payne siltstone was mixed with the uppermost black shale of the New Albany Formation. In the next five-foot sample, from 1980 to 1985 feet, the black shale was observed to be bleeding natural gas. An occasional bubble of natural gas could be detected by centering a partially wet sample in a tray under 10-power microscopic magnification if the tray was not moved. When a bubble was seen the chip on which it occurred was moved to the center of field of the microscope. Additional bubbles would then appear to be issuing from the sample chip. All the chips that were observed bleeding natural gas yielded gas on lamination planes. Where gas appeared on the flat surface of a chip with increased magnification, the point of egress for the gas was found to be at the broken featheredge of a lamination. No fractures were seen in any of the shale sample chips although the well was located within 2000 feet of an east-west trending fault to the south.

When sample cuttings of the shale were placed in a dish and water was added on a level with the upper surfaces of the chips, a ring of bubbles would form around those chips bleeding gas. The bubbles would appear within 5 minutes as a fine white line attached to the edges of the cuttings. If the water in the sample dish was agitated the gas bubbles would be dispersed, and another set of bubbles would form. Approximately 15 minutes after a sample was collected

from the well bore there was no further emission of gas from the chips, indicating that equilibrium with atmospheric pressure had been established.

The Grassy Creek Member of the New Albany Shale occurred between 1980 and 2025 feet in the drilling samples. The upper portion produced the greatest emission of natural gas; emission diminished downward to only a few chips per sample evolving bubbles. The Sweetland Creek Member of the shale occurred between 2025 and 2040 feet. It is light gray in color and there was no occurrence of natural gas in the cuttings of this member.

The Blocher Member of the shale is brownish black in wet sample cuttings. Bleeding of bubbles was noted in the chips; however, the bleeding was at a much reduced scale compared with the Grassy Creek Member. The interval of the Blocher is from 2040 to 2090 feet, and the emission of gas decreased downward. Some light-gray, dense, siliceous limestone appeared in the lower part of the Blocher between 2075 and 2085 feet. The underlying Jeffersonville Limestone was rather dense but contained many very small fracture planes which were oil stained. A drill-stem test of the Jeffersonville Limestone failed to produce any oil or gas.

The well was logged with an induction electric log and a compensated density log. The log correlations for the members of the New Albany Shale are:

	Depth	Thickness
Grassy Creek	1976 - 2016	40 feet
Sweetland Creek	2016 - 2040	24 feet
Blocher	2040 - 2090	50 feet

The thickness of the Grassy Creek and Sweetland Creek Members compares very favorably with the isopach maps prepared for this study; however, the Blocher Member is much thicker in this well than indicated on the isopach map. The control point for the isopach map may have been in the fault zone where the Blocher had been removed due to fault cutout rather than nondeposition.

CONCLUSIONS

The New Albany Shale can be effectively zoned vertically into members with internal units of varying extent. The geophysical logs of tests drilled through the shale were successfully used to effectuate the zonation and the structural configuration of the New Albany Shale in the subsurface of western Kentucky. Published reports and well records provided additional information on past production and testing of the shale for natural gas. Production of natural gas from the New Albany Shale has been as shallow as 400 feet and open-flow gauges as high as 4½ MMCF are reported.[3] Although the occurrence of natural gas in the shale has been known in western Kentucky since the late 1800's, very little exploration has been conducted since that time for additional reserves. The studies completed for this report should provide a basis for additional exploration and future development of the natural gas in the New Albany Shale of western Kentucky.

[3]Jillson, Willard Rouse, 1931, Natural gas in western Kentucky: Kentucky Geological Survey, Series VI, v. 38, 190 p.

APPENDIX

REPORTED NATURAL GAS IN NEW ALBANY SHALE

		ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
ADAIR CO. Map No. 1 Bud Radford #1 Fred Yarberry Sec. 12-F-49 1775' FNL X 2100' FWL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 11-13-69 DST:		968	356	386	384	1835
ADAIR CO. Map No. 2 Don Yates #1 Lawrence Yarberry Sec. 6-G-52 1450' FNL X 50' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 6-27-68 DST:		740	56	96	SSG 60	140

		ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
ALLEN CO.	Map No. 3					
J. T. Payne	#2 J. E. Carver					
Sec. 20-D-41	1200' FNL X 1600' FEL					
Gauge:		603	12½	57	SG 33	160
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 7-12-70					
DST:						
ALLEN CO.	Map No. 4					
J. T. Payne	#3 J. E. Carver					
Sec. 20-D-41	350' FNL X 1750' FEL					
Gauge:		607	14	60	SG 40 56	119
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 7-17-70					
DST:						
ALLEN CO.	Map No. 5					
Russell Calvert	#3 A. J. Thomas					
Sec. 15-D-42	1650' FSL X 350' FWL					
Gauge:		743	167	210	SG 168	340
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 8-12-71					
DST:						

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
BARREN CO. Map No. 6 Chandler & Chandler #4 W. T. Kinslow Sec. 6-E-43 7010' FNL X 4650' FWL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 10-21-61 DST:	703	189	229	215	301
BARREN CO. Map No. 7 Barron Kidd #1 (0) Kenneth Shirley Sec. 1-E-44 1500' FSL X 2000' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp. 7-29-66 DST:	681	132	169	136	940
BARREN CO. Map No. 8 Wood Oil Co. #1 H. C. Houchens Sec. 11-G-43 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 10-23-26 DST:		237	278	SG	393

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. GS	T.D.
BRECKINRIDGE CO. Map No. 9 Shell Oil Company #1 Quiggins Sec. 2-N-39 3650' S. of NL X 7400' WEL Q. Gauge: Treatment: Rock Pressure: Production: D&A Comp: 12-1-43 DST:	809	1215	1293	1253	1551
BRECKINRIDGE CO. Map No. 10 E. H. Ellison #1 Will Davis Sec. 3-0-38 10050' FWL X 4675' FNL Gauge: Gas 33M before shot, Gas 45M after shot Treatment: Shot with 5 qts. 1332-1337 Shot with 10 qts. 794 Production comingled-no individual gauge for N.A. Shale. Rock Pressure: Production: D&A Comp: 7-21-39 DST:	795	1331	1414	1332-1337	1470
BRECKINRIDGE CO. Map No. 11 J. A. Ford, et al #1 J. R. Mayse Sec. 9-Q-38 Gauge: Treatment: Rock Pressure: Production: D & A DST:		942	1034	GS 942-1034	1100

		ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SSG	T.D.
BUTLER CO. Map No. 12 Har-Ken Oil #1 C. L. Gabbard Sec. 20-I-36 480' FNL X 510' FWL Gauge: Treatment: Rock Pressure: Production: D & A Comp: 11-2-76 DST:		406	1637	1784	1637-1784	1788
BUTLER CO. Map No. 13 J. C. Miller #1 Minnie Embry Sec. 10-K-35 10,300' NL X 2850' EL Q. Gauge: Treatment: Rock Pressure: Production: D & A DST:		475	1700	1894	Odor 1810	2063½

CALDWELL CO. Map No. 14

Ryan Oil Co. #6 Fee (Fowler Tract)

Sec. 19-H-22 2300' NL X 1800' WL Sec.

Gauge:

Treatment:

Rock Pressure:

Production: SIGW Comp: 2-14-67

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
614	3060	3290	SG	3675

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
CHRISTIAN CO. Map No. 15 Felbush Oil & Gas Co. #1 Mrs. Mollie Davis Sec. 10-G-25 11,175' NL X 1250' EL Q. Gauge: Est. 400,000 cu. ft. Treatment: Rock Pressure: Production: D & A Comp: 9-30-20 DST:	465	2025	2285	2262-2282	2700
CHRISTIAN CO. Map No. 16 Orbit Gas Company #1 King-Badgett Unit Sec. 10-G-25 10' FSL X 120' FEL Gauge: Treatment: 500 Qt. shot 2173-2182 Rock Pressure: Comp: 1-6-77 Production: Tested 2,000 MCF 24 Hrs. Natural 71,000 MCF 24 Hrs. after shot. DST:	466	2130	2279		2520
CHRISTIAN CO. Map No. 17 Orbit Gas Company #1 J. Ray & G. M. Clark Sec. 12-G-25 650' FNL X 90' FEL Gauge: No final gauge, well being cleaned out while making some gas. Treatment: Rock Pressure: Comm: 9-7-76 Production: Remarks: Black Shale cored 2178-2326 lost 22' Perf. 1/2186, 1/2198, 1/2248, 1/2270, 1/2280, 1/2290, 1/2300, 1/2310, 1/2315, 1/2320; MCA 500; foam fract w/54,000 sd., 88 gals. detergent, 12,500 gals. wtr. 712,000 cu. ft. nitrogen. DST:	544	2175	2320		2592

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
CHRISTIAN CO. Map No. 18 Fossil Petroleum Corp. #1 Otto Corum Sec. 7-G-26 1500' FSL X 1200' FEL Gauge: 10 MCFGPD before shot 300 MCFGPD after shot Treatment: Shot with 365 qts. 2182-2326 Rock Pressure: Production: Shut In Comp: 8-16-78 DST:	520	2182	2326	2286 2320	2335
CHRISTIAN CO. Map No. 19 Ames Oil & Gas #1 Garnett Trotter Sec. 24-H-23 1200' FSL X 1000' FEL Gauge: Rate after test 3890 CFD Treatment: Rock Pressure: Production: D & A Comp: 10-19-71 DST: 3018-3315 1½ hours Recovered gas to surface in 20 minutes Initial flow 2360 CFD Final flow 3890 CFD Initial shut-in pressure 419# Final shut-in pressure 348#	530	3124	3320	SG	3748

CLINTON CO. Map No. 19a

Clarence Juist #1 Fee

Sec. 5-B-53 4700' FSL X 1360' FEL

Gauge:

Treatment:

Rock Pressure:

Production: D&A Comp: 1-26-76

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
942	300	324	305	630

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
CRITTENDEN CO. Map No. 20 Texas Gas Exploration #1 Earl Arflack Sec. 4-K-16 2220' SL X 1280' EL Sec. Gauge: Treatment: Shot 3700 lbs. gel 1184-1562, Tested slight show of gas. Rock Pressure: Production: D&A Comp: 11-8-68 DST:	463	1155	1603	SG	1715
CRITTENDEN CO. Map No. 21 Shell Oil Co. #1 M. D. Davis Sec. 17-L-16 7704' SL X 8119' WL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 1-19-56 DST:	363	1004	1450	SSG 1380-1400	8821
CRITTENDEN CO. Map No. 22 Texas Gas Exploration #1 Katherine T. Easley Sec. 17-L-16 460' SL X 1600' WL Sec. Gauge: Treatment: Perf. 1293-99, 1317-23, 1389-95 MCA 500 gal., water frac. 37,800 gals./37,800 lbs. Tested SSG. Rock Pressure: Production: D&A DST:	363	993	1435	SSG	1435

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
EDMONSON CO. Map No. 23					
James E. Smith #1 Marco Development					
Sec. 11-H-41 250' FSL X 750' FWL					
Gauge:	641	780	857	840	1747
Treatment:					
Rock Pressure:					
Production: D&A Comp: 9-10-67					
DST:					
EDMONSON CO. Map No. 24					
Illinois Mid-Continent #1 Reconstruction Finance Co.					
Sec. 18-I-38 NW Corner					
Gauge:	608	1370	1471	SG 1370	1605
Treatment:					
Rock Pressure:					
Production: D&A Comp: 2-27-51					
DST:					

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GRAYSON CO. Map No. 25 L & M Oil & Gas Co., Inc. #1 G I. D. Likens Sec. 18-K-37 2445' FSL X 2440' FWL Gauge: 146 MCF Treatment: Acidized 500 gals., fract. 12,000 gal. & 12,000 pounds Rock Pressure: Production: SIGW Comp: 3-1-73 S.I. 7-24-73 DST:	830	1820	In Sh.	1828-1864	1870
GRAYSON CO. Map No. 26 Ashland Oil & Refining Co. #1 L. D. & R. Willis Sec. 21-K-37 2490' FSL X 300' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comm: 6-10-46 DST:	739	1710	1920	SG 1865-1875	2610
GRAYSON CO. Map No. 27 L. C. Young, et al #1 William Dinwiddie Sec. 10-K-38 8820' FNL X 2700' FEL Q. Gauge: Treatment: Rock Pressure: Production: Not tested Comp: 5-27-39 DST:	776	1520	1690	SG 1540& 1625	1746

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GRAYSON CO. Map No. 28 West Gas, Inc. #1 Quincy Miller Sec. 15-K-38 2830' FNL X 1450' FEL Gauge: 100 MCF Treatment: Rock Pressure: Production: SIGW Comp: 9-5-78 DST:	690	1558		1558-1561	1561
GRAYSON CO. Map No. 29 J. W. Drilling Co. #3 Walter Phelps Sec. 18-K-38 Gauge: 800 MCF after 60 qt. shot Treatment: Rock Pressure: 225# Production: SIGW Comp: 10-22-54 DST:	615	1432	In Sh.	SG	1485
GRAYSON CO. Map No. 30 Louisville Gas & Electric Co. #1 Will F. Seaton Sec. 18-K-38 Gauge: 508,000 cu. ft. Treatment: Shot 80 qts. + 500 pound gel. Also shot Beaver Sd. 1348-1362. Prod. commingled Rock Pressure: 540# Production: Abandoned producer Comp: 6-10-31 DST:	585 (570)	1390	1552	1408-1490	1630 (1775?)

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GRAYSON CO. Map No. 31 Louisville Gas & Electric Co. #1 Roy Cockreil Sec. 5-K-39 4100' SNL X 2800' EWL Q. Gauge: 80,000 cu. ft. Treatment: Shot 30 qts. 1617-1678 Rock Pressure: Production: D&A Comp: 5-2-42 DST	658	1624	1678	1638-1645	1870
GRAYSON CO. Map No. 32 Louisville Gas & Electric Co. #1 Eli Constant Sec. 10-K-39 9350' NL X 600' EL Q. Gauge: 20,000 cu. ft. est. Treatment: Rock Pressure: Production: D&A Comp: 5-8-42 DST:	723	1533	1685	1617-1620	1730
GRAYSON CO. Map No. 33 Rex Pyramid #1 Aaron & Lloyd Tie Co. Sec. 25-K-40 Gauge: Treatment Rock Pressure: Production: D&A Comp: 3-11-39 DST:	723 (720)	1470	1605	SSG 1550	1818

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GRAYSON CO. Map No. 34 L. S. Robbins #1 Fred Green Sec. 5-L-36 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 5-21-35 DST:	590±	1160	1351½	1331½	1501
GRAYSON CO. Map No. 35 Louisville Gas & Electric Co. #1 J. E. Shain Sec. 10-L-36 Gauge: Increased from 5000 cu. ft. to 33,000 cu. ft. after shot Treatment: Shot 500 pounds gel 1440-1510 Rock Pressure: Production: D&A Comp: 5-29-31 DST:	588	1334	1560	SSG 1480-1484	1776
GRAYSON CO. Map No. 36 Mecca Oil Company #1 R. D. Rice Sec. 1-L-37 Gauge: Treatment: Rock Pressure: Production: D&A Comp: November, 1935 DST:	643	715	850	805 812	951

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GRAYSON CO. Map No. 37 E. L. Smith #1 C. Harrold Sec. 1-L-37 1800' NL X 5200' EL Q. Gauge: Treatment: Rock Pressure: Production: D&A Comm: 7-20-59 DST:	610	579	765	675-690	1149
GRAYSON CO. Map No. 38 William C. Genenwein #1 James E. Sipes Sec. 2-L-37 950' FNL X 2350' FWL Gauge: Est. IPF 100 MDFG/24 Hrs. NA Treatment: Rock Pressure: Production: SIGW Comp: 11-6-73 DST:	602	553	652	SG 563-575 590-591 617-652	690
GRAYSON CO. Map No. 39 Bill Montgomery, Jr. #2 Muffett Hrs. Sec. 2-L-37 Gauge: Domestic gas well Treatment: Shot 554' - 601' Rock Pressure: Production: Gas Well Comp: 10-13-61 DST:		554	In Sh.	554-601	601

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GRAYSON CO. Map No. 40 Atlantic Oil Prod. Co. #1 W. M. Ferry Sec. 4-L-37 Gauge: 25,000 Treatment: Rock Pressure: Production: D&A Comp: May, 1919 DST:	786	987	1168	1068'	1378
GRAYSON CO. Map No. 41 Louisville Gas & Electric Co. #1 G. W. Whitley (Ivyton Oil) Sec. 4-L-37 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 12-13-30 DST:	766	1320	1552	SSG 1444-1450	1800
GRAYSON CO. Map No. 42 Ivyton Oil & Gas Co. #1 G. Whitely (L. G. & E. Co.) Sec. 5-L-37 1700' FNL X 1400' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp. DST:	695	1320	1553	SG in Sh.	1800

		ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
GRAYSON CO.	Map No. 43					
Wright Oil Co.	#1 Shartzer					
Sec. 7-L-39	6800' SNL X 7500' EWL					
Gauge:		768	1190	1335	1309	1695
Treatment:						
Rock Pressure:						
Production: D&A						
DST:						
GRAYSON CO.	Map No. 44					
Jeff Hawks	#1 Altos Pryor					
Sec. 4-M-39	5400' NL X 6050' WL Q.					
Gauge:		720	1390	1470	1435 & 1465	1631
Treatment:						
Rock Pressure:						
Production: D&A	Comm: 8-19-59					
DST:						
GRAYSON CO.	Map No. 45					
Lewis Fentress	#1 Foy Embry					
Sec. 22-M-39	1300' WL X 2950' SL					
Gauge:		640	1460	1550	1465	1650
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 9-8-64					
DST:						

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GREEN CO. Map No. 46 H & H Minerals #1 K Woodrow Jefferies Sec. 13-I-48 1250' FSL X 100' FEL Gauge: Treatment: Rock Pressure: Production: D&A DST:	620	269	311	SG 300+ 302	2135
GREEN CO. Map No. 47 H. & H. Minerals #1 H Buford Noe Sec. 9-J-48 2900' FNL X 325' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 7-27-66 DST:	705	335	381	SG 335	445
GREEN CO. Map No. 48 Guess Drlg. Co. #2 Pauley McAfee Sec. 19-J-48 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 8-26-58 DST:		388	435	SG 365	474

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
GREEN CO. Map No. 49 Leeco Oil Co. #1 J. W. Coakley Sec. 19-J-48 Gauge: Treatment: Rock Pressure: Production: D&A Date: 7-31-58 DST:		327		SG 337	362
GREEN CO. Map No. 50 #1 Mitchell- McClintock Sec. 22-J-48 Gauge: Treatment: Rock Pressure: Production: D&A DST:	667	300	342	SG in top	408
GREEN CO. Map No. 51 Eastern Interior #8 Mitchell Sec. 22-J-48 Gauge: Treatment: Rock Pressure: Production: D&A DST:	473	428	455	SG 443	455

	ELEV.	NEW ALBANY SHALE TOP	BOTTOM	GAS REPT. SG	T.D.
GREEN CO. Map No. 52 J. M. Russell - R. L. Burning #1 Dr. Lambert (Homer Blackburn) Sec. 5-J-49 Gauge: Treatment: Rock Pressure: Production: D&A DST:		195	240	204	353
GREEN CO. Map No. 52a Rolland Engle #1 Earl Jones Sec. 18-L-47 3010' FSL X 1450' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 4-10-77 DST:	719	350	380	SG 370	765

HARDIN CO. Map No. 53

City of Elizabethtown #3 Henry Cowherd

Sec. 24-0-43 350' FNL X 1750' FWL

Gauge:

Treatment:

Rock Pressure:

Production: 2709 MCFGD in Dev. Ls. D&A in Shale

DST: Comp. 1-14-72

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
736	731	803	Top Sh.	863

		ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
HART CO.	Map No. 54					
W. C. Turner	#1 Robert Wood					
Sec. 21-J-44	200' SL X 900' EL					
Gauge:		680	720	783	SG 750	930
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 12-1-60					
DST:						
HART CO.	Map No. 55					
Pabolu Oil Co.	#2 Curtis William					
Sec. 7-J-45	2150' FEL X 2500' FNL					
Gauge:		643	720	770	SG	809
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 4-14-62					
DST:						
HART CO.	Map No. 56					
Louisville Gas & Electric Co.	#10 J. Childress					
Sec. 25-L-47	1000' FSL X 2430' FEL					
Gauge:		880	460	516	SG 510	666
Treatment:						
Rock Pressure:						
Production: Gas Injection Well	Comp: 4-22-66					
DST:						

HOPKINS CO. Map No. 57

Texas Gas Transmission #23 West Ky. Coal

Sec. 12-I-24 3070' NL X 2890' EL

Gauge:

Treatment: Shot 500 qts. 3828-4092

Rock Pressure:

Production: D&A Comp: 7-1-77

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. VSSG	T.D.
612	3828	4092	3828-4092	4550

LARUE CO. Map No. 58

Cumberland Pet. Co. & Kemrow #1 S. M. Gibson

Sec. 25-L-46

Gauge:

Treatment:

Rock Pressure:

Production: D&A

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
	479	534	529+ 534	729

		ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
LOGAN CO.	Map No. 59					
Wiser Oil	#1 Rollin Hills Farm					
Sec. 2-C-33	300' SL X 1750' WL					
Gauge:		610	748	814	SG	1273
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 6-24-74					
DST:						
LOGAN CO.	Map No. 60					
Babler Oil Co.	#1 B. D. Johnson					
Sec. 6-D-31	6620' S of NL, 3000' E of WL					
Gauge:		620	1105	1205	1107	1530
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 3-1-43					
DST:						
LOGAN CO.	Map No. 61					
W. A. Norris	#1 Willie Stratton				-	
Sec. 21-E-30	3595' NL X 4200' EL					
Gauge:		590	1107	1204	1107-1111	1375
Treatment:						
Rock Pressure:						
Production: D&A	Comp: 5-23-62					
DST:						

LOGAN CO. Map No. 62

Ecus Corporation #1 Hinton Lumber Co.

Sec. 4-F-30

Gauge:

Treatment:

Rock Pressure:

Production: Pipe set to test gas pay Comp: 10-3-78

DST: 1970'-2000' 2 hrs., Recovered 5' mud
Bottom hole pressure 27 pounds

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
	1976	2090	1976-2030 2040-2055	2265

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
MEADE CO. Map No. 63 W. O. Lucas #1 J. Burnett Sec. 8-P-41 3280' FSL X 100' FEL Gauge: Treatment: Rock Pressure: Production: Comp: 2-9-62 DST:	800	965	1050	965-984	1207
MEADE CO. Map No. 64 Louisville Gas & Electric Co. #8 Mrs. L. E. Baskett Sec. 1-R-41 300' FNL X 2200' FWL Gauge: IPF 600 MCF/24 Hrs. Natural N.A. Treatment: Rock Pressure: Production: 3IGW Comp: 5-18-76 DST:	438	366	418	SG 378-386	418
MEADE CO. Map No. 65 Louisville Gas & Electric Co. #20 L. E. Baskett Sec. 1-R-41 350' FNL X 1500' FWL Gauge: 786 MCF/Day Treatment: Rock Pressure: Production: Comp. as an observation well in NA Comp: 6-24-75 DST:	452	380	400	380-400	412

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
MEADE CO. Map No. 66 Louisville Gas & Electric Co. #9 Mrs. W. A. Baskett Sec. 1-R-41 680' FNL X 2080' FEL Gauge: IPF 500' MCF/24 Hrs. N.A. Treatment: Rock Pressure: Production: Gas Storage Project Comp: 4-6-76 DST:	426	352	403	360-372	403
MEADE CO. Map No. 67 Louisville Gas & Electric Co. #7 R. E. Lyons Sec. 1-R-41 1240' FNL X 1400' FEL Gauge: Treatment: Rock Pressure: Production: Completed in Jeffersonville Lm. (440'-449') Natural 7,000 MCF/Day Comp: 8-22-74 DST:	428	350	440	SG 352-354 434-436	449
MEADE CO. Map No. 68 Louisville Gas & Electric Co. #10 R. E. Lyons Sec. 1-R-41 1000' FNL X 1700' FEL Gauge: Flwd. 250 MCFGPD Nat., Flwd.after shot 700 MCFGPD Treatment: Shot with 12 qts. 358-364 Shot with 17 qts. 368-372 Rock Pressure: Production: Comp. as gas storage-Extraction well in N.A. Comp: 9-28-76 DST:	428	350	401	SG 358-364	401

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
MEADE CO. Map No. 69 Louisville Gas & Electric Co. #11 R. E. Lyons Sec. 1-R-41 485' FNL X 1200' FEL Sec. Gauge: Tstd. 200 MCF/24 Hrs. N.A. Treatment: Rock Pressure: Production: SIGW Comp. 8-23-77 DST:	421	341	358	SG 345-348 352-358	394
MEADE CO. Map No. 70 Louisville Gas & Electric Co. #12 R. E. Lyons Sec. 1-R-41 1200' FNL X 800' FEL Sec. Gauge: IPF 1,100 MCF/24 Hrs. - N.A. Treatment: Rock Pressure: Production: Comp. as gas extraction well in gas storage field. Comp. 5-24-77 DST:	428	350	362	SG 350-362	362
MEADE CO. Map No. 71 Louisville Gas & Electric Co. #13 Lyons Heirs Sec. 1-R-41 1795' FNL X 1180' FEL Sec. Gauge: Tstd. 200 MCF/24 Hrs. N. A. Treatment: Rock Pressure: Production: SIGW N.A. Comp. 8-23-77 DST:	437	366		SG 370-382	392

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
MEADE CO. Map No. 72 Louisville Gas & Electric Co. #1 J. E. Benham Sec. 9-R-41 3300' FNL X 1300' FWL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 5-16-69 DST:	505	450		458	468
MEADE CO. Map No. 73 Louisville Gas & Electric Co. #9 Davis McGhee Sec. 10-R-41 900' NL X 250' EL Sec. Gauge: Treatment: Rock Pressure: Production: Comp. as gas injection well Comp: 7-10-64 DST:	610	567	655	SG 570	673
MEADE CO. Map No. 74 Louisville Gas & Electric Co. #6 Doc Valley Corp. Sec. 12-R-41 2600' SL X 675' WL Sec. Gauge: Treatment: Rock Pressure: Production: Comp. as gas injection well Comp: 6-19-64 DST:	575	503	595	SSG 570	777

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
MEADE CO. Map No. 75 Louisville Gas & Electric Co. #8 Doe Valley Corp. Sec. 12-R-41 1775' SL X 1075' WL Sec. Gauge: Treatment: Rock Pressure: Production: Comp. as gas injection well Comp: 8-17-65 DST:	637	560	647	605	827
MEADE CO. Map No. 76 Louisville Gas & Electric Co. #10 E. Board Sec. 13-R-41 1675' SL X 175' EL Sec. Gauge: Treatment: Rock Pressure: Production: Comp. as gas injection well Comp: 8-10-65 DST:	610	532	620	SG 535	817
MEADE CO. Map No. 77 Louisville Gas & Electric Co. #2 Donald Vors Sec. 6-R-42 3030' SL X 200' WL Sec. Gauge: Treatment: Rock Pressure: Production: Comp. as gas injection well Comp. 9-9-64 DST:	660	600	689	605	697

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
MEADE CO. Map No. 78 W. Duchscherer, Jr. #1 Otter Creek Park Sec. 22-R-42 3300' NL X 600' WL Sec. Gauge: Treatment: Rock Pressure: Production: D&A Comp: 2-15-62 DST:	450	398	488	398	691
MEADE CO. Map No. 79 Louisville Gas & Electric Co. #1 L. E. Baskett Sec. 21-S-41 375' FSL X 1300' FEL Gauge: Treatment: Rock Pressure: Production: D&A DST: Comp: 5-9-69	422	356		368	396
MEADE CO. Map No. 80 Louisville Gas & Electric Co. #18 L. E. Baskett Sec. 21-S-41 150' FSL X 1700' FWL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 6-23-70 DST:	426				416

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
MEADE CO. Map No. 81 Louisville Gas & Electric Co. #23 L. E. Baskett Sec. 21-S-41 10' SL X 2300' WL Sec. Gauge: Treatment: Rock Pressure: Production: Comp. as gas storage well in N.A. Comp: 6-30-70 DST:	423	346	384		384
MEADE CO. Map No. 82 Louisville Gas & Electric Co. #8 Mrs. W. A. Baskett (R. E. Lyons) Sec. 21-S-41 10' SL X 1745' EL Gauge: Treatment: Rock Pressure: Production: Natural 5,500 MCF/Day After treatment 7,000 MCF/Day.Comp. in Jeffersonville 428-448 (Producing) Comp: 6-20-74 DST:	421	338	428	342 410+ 420	448

McLEAN CO. Map No. 83

J. C. Ellis #1 Guy S. Turner

Sec. 20-L-28

Gauge:

Treatment: Shot 3195-3395

Rock Pressure:

Production: D&A Comp: 11-20-30

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
439	3185	3455		3520

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
MONROE CO. Map No. 84 Carter Development Co. #1 Ottis Crowe Sec. 8-B-43 350' FNL X 25' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 5-4-67 DST:	819	135	170	SG 140-165	725
MONROE CO. Map No. 85 Russell Jacobs #1 A. T. Dickerson Sec. 8-C-45 50' FSL X 800' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 11-9-72 DST:	892	233	262	SG 233	963
MONROE CO. Map No. 86 R. H. Norris & Sons #1 Lester Coomer Sec. 13-C-45 1700' FNL X 1250' FWL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 4-11-73 DST:	804	137	165	SG 157	175

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
MONROE CO. Map No. 87 R. C. Davoust #1 George Railey Sec. 25-C-45 300' FSL X 775' FWL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 3-6-66 DST:	818	161	193	190	425
MONROE CO. Map No. 88 Duvall & McIntosh #1 Dewell Spears Sec. 25-D-46 2450' FNL X 300' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: April, 1966 DST:	848	252	277	SG	412

MUHLENBERG CO. Map No. 89

South Penn Oil Co. #2 Rogers Crescent Coal Co.

Sec. 16-J-31

Gauge:

Treatment:

Rock Pressure:

Production: D&A Comp:

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
481	3175	3365	3175-3180	3987

OHIO CO. Map No. 90

William B. Turner #1 V. F. Rice

Sec. 13-L-34 920' SL X 1140' EL

Gauge: Est. 1 MCF/24

Treatment: Shot 190 qts. 2102-2132'- No increase in gas - plugged back to shallow pay.

Rock Pressure:

Production: D&A Comp: 8-15-78

DST: 2162-2268, 1 hr., tested weak blow, est. 1 MCF/24, bottom hole pressure 18#

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
600	2126	2268	SG	3390

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
TAYLOR CO. Map No. 91 Triangle Oil Co. #10 Emmett French Sec. 3-K-49 1375' FNL X 1600' FEL Gauge: Treatment: Rock Pressure: Production: D&A Comp: DST:	806	392	450	SG 426	558
TAYLOR CO. Map No. 92 Triangle Oil Co. #11 Emmett French Sec. 3-K-49 880' NL X 12,500' WL Gauge: Treatment: Rock Pressure: Production: D&A Comp: 7-29-60 DST:	790	369	428	SG 378-388	542
TAYLOR CO. Map No. 93 Tay-Co. Oil Co. #1 W. A. Martin Sec. 4-K-49 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 5-16-33 DST:	700	291	351	SG 315	426

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
TAYLOR CO. Map No. 94 A. E. Mahan #2 Josie Johnson Sec. 11-K-49 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 11-18-43 DST:		366	384	368	402
TAYLOR CO. Map No. 95 Lockport Well Drilling Co. # R. F. Young Sec. 13-K-49 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 10-15-59 DST:					
TAYLOR CO. Map No. 96 Wm. Phillips #7 Geo. R. Gaddie "C" Sec. 13-K-49 Gauge: Treatment: Rock Pressure: Production: D&A Comp: 4-15-60 DST:	640	228	315	SG 228	467

TAYLOR CO. Map No. 97

Dane Oil Co. #2 H. Warren

Sec. 18-K-49 2250' NL X 400' WL

Gauge:

Treatment:

Rock Pressure:

Production: D&A Comp:

DST:

ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
700	320	360	SG	478

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT. SG	T.D.
TODD CO. Map No. 98 Hobson & Holman #1 Stinson Sec. 11-E-28 1800' W. EL X 6400' NSL Sec. Gauge: Treatment: Rock Pressure: Production: D&A Comp: 11-25-44 DST:	725	1535	1613	1535	1814
TODD CO. Map No. 99 Clairston & Cable #1 J. M. Hadden Sec. 22-E-29 8000' EL X 4300' SL Gauge: 158 MCF Treatment: Rock Pressure: 470# Production: D&A Comp: 4-24-46 DST:	646	1382	1470	1392-1400	1693
TODD CO. Map No. 100 A. A. Peard #1 Randolph Hadden Sec. 23-E-29 Gauge: 92 MCF Treatment: Rock Pressure: 600# Production: Domestic gas well - reported to be still producing DST:	769	1503	1575	1503-1512	1675

	ELEV.	NEW ALBANY SHALE TOP	NEW ALBANY SHALE BOTTOM	GAS REPT.	T.D.
TRIGG CO. Map No. 101 Reynolds & Vincent #1 Ira Humphries Sec. 19-E-21 380' SL X 550' EL Gauge: Tested 380 MCF after shot Treatment: Shot 274 pounds 1109-39 Rock Pressure: Production: Gas Well Comp: 11-25-76 DST: 1109-39	475	981	1217		3998
TRIGG CO. Map No. 102 George A. Hoffman #1 Eddie Majors Sec. 21-E-21 1500' NL X 1300' EL Gauge: Treatment: Shot 100 qts. 1147-97 Rock Pressure: Production: SIGW from New Albany op. hole 1147-97 after shot Comp: 10-18-77 DST:	400	1147		1147-1197	1225
TRIGG CO. Map No. 103 Reynolds & Vincent #1 J. G. Carr Sec. 25-E-21 1040' SL X 2400' WL Gauge: Treatment: Shot 70 qts. 1203-1220 Rock Pressure: Production: D&A Comp: 5-26-76 DST:	501	1203	1318?	1203-1218 1218-1220 1224-1226	1614

WARREN CO. Map No. 104

Berry Pet. #10 R. H. Runner, Sr.

Sec. 5-H-38 770' FNL X 530' FEL

Gauge:

Treatment:

Rock Pressure:

Production: Completed as gas well for domestic use
Comp: 9-19-69

DST:

ELEV.	NEW ALBANY SHALE			
	TOP	BOTTOM	GAS REPT.	T.D.
499	1340	1470	SG	1800

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