BEDROCK GEOLOGY OF CRAB ORCHARD QUADRANGLE
WILLIAMSON COUNTY, ILLINOIS

Illinois Department of Natural Resources
ILLINOIS STATE GEOLOGICAL SURVEY
William W. Shilts, Chief

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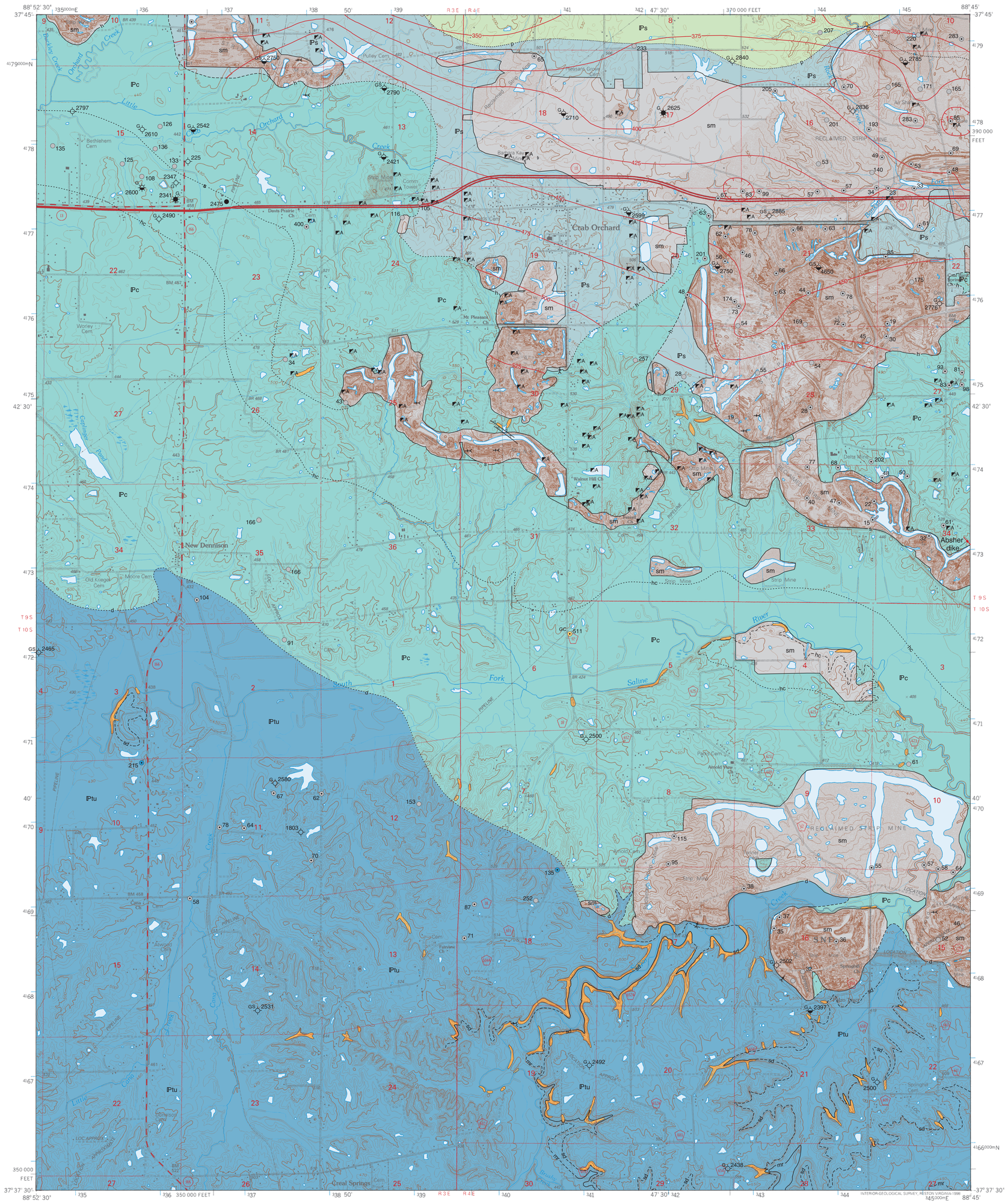
2007

Illinois Geologic Quadrangle Map
IGQ Crab Orchard-BG



EXPLANATION

- sm — Surface mine
- IPs — Shelburn Formation
  - p, Piasa Limestone Member
- IPc — Carbondale Formation
  - h, Herrin Coal Member
  - s, Springfield Coal Member
  - hc, Houchin Creek Coal Member
  - d, Davis Coal Member
- IPtu — Tradewater Formation, upper part
  - sd, base of sub-Davis Sandstone
  - mr, Mt. Rorah Coal Member

Pennsylvanian — Desmoinesian

Symbols

- Abandoned drift mine
- Abandoned shaft mine
- Abandoned slope mine
- Bedrock outcrop

Drill Holes
from which subsurface data were obtained

- Water well
- Stratigraphic boring
- Coal boring
- Oil well
- Dry hole
- Dry hole - show of oil
- Gas well - show of oil
- Oil and gas well
- CSG 2625 — Numeric label indicates total depth of boring in feet. Boring with samples (s), geophysical log (G), or core (c). Dot indicates location accurate within 100 feet.

Line Symbols
dashed where inferred, dotted where concealed

- Contact or bed subcrop
- High-angle reverse fault: sawteeth on upthrown block
- 425 — Elevation of top of Herrin Coal; contour interval 25 feet
- Igneous dike

Note: This subcrop map shows the bedrock surface with all Quaternary deposits removed. Geology shown as it was prior to surface mining. Well and boring records are on file at the ISGS Geological Records Unit and are available online from the ISGS Web site.

Base map compiled by Illinois State Geological Survey from digital data provided by the United States Geological Survey. Topography compiled 1963. Planimetry derived from imagery taken 1993. PLSS and survey control current as of 1996. Partial field check by U.S. Forest Service 1996.

North American Datum of 1927 (NAD 27)
Projection: Transverse Mercator
10,000-foot ticks: Illinois State Plane Coordinate system, east zone (Transverse Mercator)
1,000-meter ticks: Universal Transverse Mercator grid system, zone 16

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SCALE 1:24,000

1 — 1/2 — 0 — 1 MILE
1000 — 0 — 1000 — 2000 — 3000 — 4000 — 5000 — 6000 — 7000 FEET
1 — .5 — 0 — 1 KILOMETER

BASE MAP CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Released by the authority of the State of Illinois: 2007

Geology based on field work and data analysis by W.J. Nelson, 2001–2003.

Digital cartography and graphics by J. Domier, S. Geegan, M. Widener T. Goeppinger, M. Jones, and L. Verhelst, Illinois State Geological Survey.

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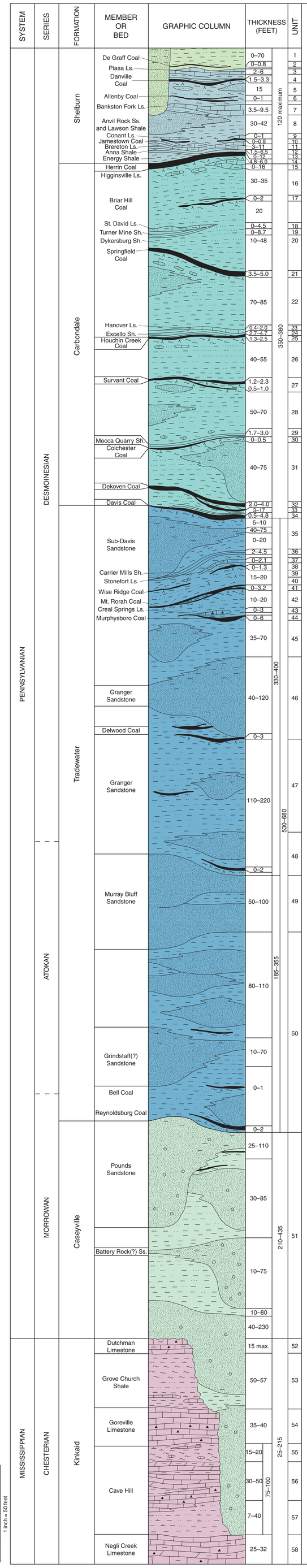
ADJOINING QUADRANGLES
1 Johnston City
2 Pittsburg
3 Harco
4 Marion
5 Carrier Mills
6 Goreville
7 Creal Springs
8 Stonefort

1½° TRUE NORTH MAGNETIC NORTH

APPROXIMATE MEAN DECLINATION, 2007

ROAD CLASSIFICATION

- Primary highway, hard surface
- Secondary highway, hard surface
- Light-duty road, hard or improved surface
- Unimproved road
- State Route
- County Route



Shelburn Formation

1 Clastic interval Overlying the De Graff Coal is 20 to 30 feet of shale and siltstone that coarsens upward. Thin dark gray to black shale at the base is calcareous and contains marine fossils. This shale grades upward to dark gray clay and shale, which in turn grades upward to medium gray silty shale and siltstone containing laminae and lenses of sandstone. Locally sandstone that fines upward fills channels scoured through the Bankston Fork Limestone Member of the Carbondale Formation.

2 De Graff Coal Member Dull shaly coal. Thin mudstone (underclay) beneath the coal contains fossil root casts.

3 Piasa Limestone Member Light gray to buff and greenish gray, argillaceous, probably lime mudstone to packstone. Fossils, which are most common near the base, include echinoderm fragments, brachiopods, and fusulinids. Underlying the limestone is shale that is dark gray and fissile to black and "slaty."

4 Danville (No. 7) Coal Member Bright-banded, bituminous coal. Danville Coal was locally recovered by surface mining in the AMAX Delta Mine in conjunction with mining the thicker, underlying Herrin Coal.

5 Clastic interval Directly below the coal is gray mudstone (underclay) that is slickensided and contains fossil root casts, underlain by thin but persistent sandstone that is very fine to fine-grained and argillaceous.

6 Allenby Coal Member From one to three thin, shaly, lenticular coal beds that grade laterally to carbonaceous shale and are separated by massive to blocky, rooted mudstone. Below the coal (or its position) is greenish gray mudstone (underclay) containing limestone nodules and fossil root casts.

7 Bankston Fork Limestone Member Light gray to buff and yellowish gray, dense lime mudstone to crinoidal wackestone that varies from massive to nodular-bedded with wavy streaks of shale.

8 Anvil Rock Sandstone and Lawson Shale Members Lateral equivalents. The interval tends to coarsen upward, containing very fine- to fine-grained sandstone in the upper part, grading downward through siltstone and silty shale to dark gray clay shale in the lower part. The sandstone is shaly, carbonaceous, and displays planar and ripple lamination.

9 Conant Limestone Member Dark gray, very argillaceous lime mudstone to wackestone with echinoderm and brachiopod fragments, grading laterally to dark gray or black, calcareous shale.

10 Jamestown Coal Member Thin and shaly coal is underlain by mudstone (underclay) that contains stigmarian root casts.

11 Brereton Limestone Member Generally dark gray, micritic limestone (fossiliferous lime mudstone to wackestone) that is argillaceous and may be massive or have nodular, "bouldery" bedding outlined by ragged dark gray shale laminae and partings. Fossils include echinoderm fragments, brachiopods, and fusulinids.

12 Anna Shale Member Black, highly carbonaceous, thinly fissile or "slaty," well jointed, contains phosphatic lenses and pyrite. Fossils include pectenoid pelecypods, orbiculoid brachiopods, and gastropods. Gamma-ray readings are very high. The lower contact is erosional.

13 Energy Shale Member Light to medium gray, silty, indistinctly bedded shale (or mudstone) that contains siderite nodules and fossil plants.

Carbondale Formation

14 Herrin (No. 6) Coal Member Bright-banded bituminous coal containing several shale and pyrite partings, of which the "blue band" is thickest and most continuous. The "blue band" is generally less than 0.2 feet thick and lies 1 to 2 feet above the base of the seam. The coal is generally underlain by several feet of gray, massive, slickensided, and rooted mudstone (underclay).

15 Higginsville Limestone Member Light gray to brownish gray, micritic, nodular bedding with streaks of greenish gray shale; lower part contains marine fossils. The limestone grades laterally to mudstone containing scattered carbonate nodules.

16 Clastic interval Gray shale, siltstone, and fine-grained sandstone that may either fine upward or coarsen upward. Shale contains linguloid brachiopods and pectenoid pelecypods.

17 Briar Hill (No. 5A) Coal Member Generally shaly; in places consists of two thin coal layers or laminae separated by carbonaceous shale.

18 St. David Limestone Member Dark gray and olive-gray, fossiliferous lime mudstone and crinoidal wackestone with common brachiopods. Limestone is argillaceous and grades laterally to calcareous shale. This unit is absent where the Dykersburg Shale is thickest.

19 Turner Mine Shale Member Black, highly carbonaceous, thinly fissile or "slaty," pyritic shale that produces very high gamma-ray readings. Absent where the Dykersburg Shale is thickest.

20 Dykersburg Shale Member Medium gray, silty, and indistinctly bedded shale that contains siderite nodules, plant fossils, and pyrite crystals. It generally coarsens upward, grading to siltstone and very fine sandstone in the upper part where the unit is thick.

21 Springfield (No. 5) Coal Member Bright-banded bituminous coal, containing pyrite laminae, lenses, and cleat facings, but lacking continuous mudstone partings.

22 Clastic interval Generally a gray, rooted massive mudstone (underclay) directly underlies the Springfield Coal. This is locally underlain by nodules and lenses of silty or sandy limestone. The remainder of the interval coarsens upward from gray shale at the base to gray siltstone or fine-grained, shaly sandstone in the upper part.

23 Hanover Limestone Member Dark gray, argillaceous, fossiliferous lime mudstone to wackestone.

24 Excello Shale Member Black, hard, highly carbonaceous, thinly fissile shale that contains large limestone concretions. Fossils include conodonts and fish scales. This shale produces very high gamma-ray readings.

25 Houchin Creek (No. 4) Coal Member Bright-banded bituminous coal. This coal has been surface-mined in several places, the largest mine being Will Scarlet Pit 16 in Sec. 4, T10S, R4E.

26 Clastic interval Generally a gray, rooted massive mudstone (underclay) directly underlies the coal. This mudstone is locally underlain by nodules and lenses of sandy, nodular, iron-rich limestone. The remainder of the interval coarsens upward from gray shale at the base to gray siltstone or fine-grained, shaly sandstone in the upper part. Shale directly overlying the Survant Coal contains siderite nodules, fossil plants, the brachiopods *Productus cora* and *Marginifera muricata*; the pelecypods *Aviculopecten* sp., *Acanthopecten* sp., *Entolium* sp., *Schizodus*(?), and *Phanerotrema* sp. plus fish remains (H.R. Wanless 1933, unpublished field notes, ISGS library).

27 Survant Coal Member Bright-banded bituminous coal. In places the Survant is split into two coal benches separated by up to 10 feet of strata that comprise dark gray silty shale grading upward to sandstone and topped by rooted mudstone (underclay).

28 Clastic interval Gray, silty mudstone containing fossil roots directly underlies the Survant Coal. The remainder of the interval comprises either one or two upward-coarsening sequences, sandstone or siltstone grading downward to silty shale and finally dark gray clay shale. The basal 4 to 5 feet is nearly black, hard, very fissile, calcareous shale that contains limestone concretions and the pelecypods *Nucula* sp. *and Pecten* sp.

29 Mecca Quarry Shale Member Black, highly carbonaceous, thinly fissile shale that contains pyritized pelecypods and produces very high gamma-ray readings.

30 Colchester Coal Member Bright-banded bituminous coal.

31 Clastic interval Massive, rooted gray claystone or siltstone containing black nodules directly underlies the Colchester Coal. The remainder of the interval either fines or coarsens upward. Where the interval fines upward, silty shale or siltstone at the top grades downward to medium-grained sandstone (micaceous lithic arenite) having a basal conglomerate and erosional lower contact. Where the interval coarsens upward, siltstone at the top grades downward to dark gray, silty, weakly fissile shale.

32 Dekoven Coal Member Bright-banded bituminous coal, which is split into two benches in most of the map area. The upper coal bench is 1.9 to 2.5 feet thick while the lower is 1.2 to 1.8 feet thick. The parting, which varies from a feather-edge to more than 10 feet thick, consists of dark gray, carbonaceous mudstone or weakly fissile shale that is rooted at the top and contains pyritized pelecypods in the lower part. The Dekoven and Davis Coals were surface-mined extensively in the southern part of the map area.

33 Clastic interval Gray, massive, rooted claystone or siltstone directly underlies the Dekoven Coal. Where the interval is less than 5 feet thick, the underclay rests upon shale that is black, hard, highly fissile, well jointed, and contains limestone concretions. Where the interval is thicker than 5 feet, gray silty shale intervenes between the underclay and the black shale.

34 Davis Coal Member Bright-banded bituminous coal; a single bench of coal having thin laminae or partings of claystone, fusain, and pyrite. Extensively surface-mined.

Tradewater Formation

35 Clastic interval Gray, massive, rooted mudstone (underclay) directly underlies the Davis Coal. The remainder of the interval is dominantly sandstone that forms bluffs along Sugar Creek. This rock (sub-Davis sandstone) is light to medium gray, fine- to coarse-grained lithic arenite that is rich in mica and carbonaceous debris. Sedimentary structures include planar and wavy lamination, cross-lamination and cross-bedding, massive bedding, and cut-and-fill structures marked by shale and coal rip-up clasts. The lower contact is erosional but not deeply incised.

36 Carrier Mills Shale Member Black, hard, highly carbonaceous, thinly fissile, pyritic shale. This shale is the oldest black, "hot" (high gamma-ray readings) Pennsylvanian shale in the map area. Below the Carrier Mills is 5 to 7 feet of soft, slickensided green to gray claystone that contains lenses of argillaceous sandstone.

37 Stonefort Limestone Member Gray to greenish or brownish gray, argillaceous lime mudstone and wackestone that is massive to nodular. Brachiopods are common. In places, the limestone is dolomitic and weathers yellowish orange.

38 Clastic interval Directly below the Stonefort is claystone that is mottled dark gray and greenish gray, soft, and massive to weakly fissile. Below this is 1 to 8 feet of dark gray to black, thinly fissile shale.

39 Wise Ridge Coal Bed Bright-banded bituminous coal having blocky fracture.

40 Clastic interval At the top is massive, rooted olive-gray to greenish gray mudstone, which grades downward to very fine sandstone having a sharp lower contact. Below this is a thin black, carbonaceous shale and another rooted mudstone, which grades downward to shale that is dark gray to black, silty, well laminated, sideritic, and contains fossil plants.

41 Mt. Rorah Coal Member Bright-banded bituminous coal, commonly split into two benches by black claystone 0.5 to 0.8 feet thick. The upper coal bench is 1.2 to 1.5 feet thick; the lower is 0.6 to 0.8 feet thick. This coal was mined in a number of local drifts and small-scale surface mines.

42 Clastic interval Claystone or silty mudstone at the top is olive-gray to greenish gray, slickensided, and rooted. Below this are shale and siltstone that are dark gray to greenish gray and exhibit planar and wavy lamination.

43 Creal Springs Limestone Member Brownish gray, argillaceous, nodular lime mudstone and wackestone containing productid brachiopods. It is siliceous and weathers to a porous, cherty residuum. One of the few places to see the limestone is the type locality, an abandoned quarry in the NE SE SE of Sec. 25, T10S, R4E. In places, the limestone overlies black, canneloid shale that grades into the Murphysboro Coal.

44 Murphysboro Coal Member Dull to bright-banded, bituminous coal; lenticular.

45 Clastic Interval Gray shale, siltstone, and sandstone interbedded, commonly forming either an upward-coarsening succession or an upward-fining channel-fill succession.

46 Granger Sandstone Member Light gray to buff, very fine- to coarse-grained lithic arenite to sublitharenite, with abundant mica and carbonaceous debris. In outcrops, the lower part is cross-bedded, and the upper part thinly bedded and shaly. The sandstone generally fines upward from an erosional lower contact, but at least two superimposed upward-fining sequences may be present.

47 Shaly interval Dominantly shale and siltstone, with lesser sandstone and thin, lenticular coal. Several fining- and coarsening-upward sequences are present but not readily correlated from well to well. As many as four thin coal beds are present in this interval, the most persistent being near the top of the interval, where they are locally truncated by the Granger Sandstone.

48 Unnamed sandstones At the stratigraphic position of "golden sandstone" of Nelson et al. (1991) and Bethlehem sandstone lentil of Jacobson (1992). Sandstones are similar lithologically to the Granger Sandstone above but are discontinuous, commonly forming upward-fining sequences and having erosional lower contacts. Sandstone grades laterally to shale and siltstone. A thin coal bed occurs locally just above the Murray Bluff Sandstone.

49 Murray Bluff Sandstone Member Light gray, very fine- to medium-grained, sublitharenite with less mica and carbonaceous debris than younger sandstones. The sandstone typically exhibits either "blocky" or upward-fining profile on wireline logs. On many electric logs, the Murray Bluff exhibits low spontaneous potential and very high resistivity readings (higher than any other sandstone). This unit may comprise two or more stacked sandstones and can be difficult to differentiate from adjacent sandstones.

50 Lower Tradewater strata Sandstone, siltstone, shale, thin local coal. The succession is highly variable vertically and laterally. Sandstone generally prevails; it is light gray, very fine- to medium-grained (rarely coarse), sublitharenite to borderline quartz arenite with a small amount of mica and plenty of iron oxide. Shale and siltstone are generally medium to very dark gray, sideritic, micaceous, and commonly are interlaminated. The most widespread, thick shale interval occurs at the base of the Tradewater. In general, the upper part of this interval appears to be a series of amalgamated sandstone bodies, whereas the lower part contains more shale and the sandstone bodies are better defined individually. A persistent sandstone, thought to be the Grindstaff, exhibits a coarsening-upward profile where thin and massive character where it is thick, filling incised valleys. This interval thickens toward the southeast, where the proportion of sandstone increases to 90% or more. Local, thin Bell Coal occurs directly above and below the Grindstaff(?) Sandstone; the most persistent seam is at the base of the interval and is thought to be the Reynoldsburg Coal bed.

Caseyville Formation

51 Caseyville Formation Roughly half sandstone, half shale and siltstone, rare coal. The sandstone is white to light gray, very fine- to coarse-grained quartz arenite. In contrast to younger Pennsylvanian sandstones, mica, clay matrix, and other impurities are inconspicuous or absent. Small quartz pebbles are common; lenses of conglomerate are present. Shale and siltstone are medium gray to nearly black, micaceous, carbonaceous, and laminated. Plant foliage and roots are the only fossils. Thin, local coal beds are identified on wireline logs. The Caseyville comprises a series of upward-coarsening sequences that change laterally to upward-fining channel-fill or incised-valley sequences. Five or six depositional sequences are commonly identifiable on wireline logs. The lower contact is a regional unconformity. A paleochannel 200 feet deep, the Harco Valley of Bristol and Howard (1971), trends southwest across the map area from Sec. 36, T9S, R4E to Sec. 29, T10S, R4E (and presumably beyond).

Kinkaid Formation

52 Dutchman Limestone Member Limestone and dolomite; mostly limestone that is light to dark brownish gray lime mudstone and cri-noidal wackestone, slightly argillaceous and containing a little chert. Unit also contains sublithographic dolomite and dolomitic limestone.

53 Grove Church Shale Member Shale, claystone, thin limestone beds. Shale is mottled, largely greenish and olive-gray along with reddish gray, soft, thinly fissile, calcareous, and slightly silty (in part). Fossils are common and include brachiopods, bryozoans, and conodonts. Dark gray shale containing plant fragments occurs in the lower Grove Church. Claystone is variegated in greenish gray, dark gray, and brick red or maroon; it is blocky, slickensided, and has a waxy luster. Limestone is brown crinoidal grainstone near the base of the unit. Both contacts are sharp.

54 Goreville Limestone Member Limestone changes from medium to dark brownish gray lime mudstone and crinoidal wackestone in the upper part to light gray, coarse crinoidal grainstone in the lower part. Chert nodules are present. The Goreville lacks shale interbeds.

55 Cave Hill Member, upper part Shale and mudstone. The upper part is shale that is dark gray to black and calcareous, having thin interbeds of micritic limestone. The remainder is variegated red, purple, greenish gray, and dark gray calcareous, blocky to weakly fissile, silty mudstone.

56 Cave Hill Member, middle part Limestone, minor shale and dolomite. Limestone varies from lime mudstone to coarse crinoidal grainstone, but lime mudstone is predominant. It is light to medium gray and brownish gray, dolomitic, and commonly has sublithographic texture. Chert is common, particularly in the lower part. Thin interbeds of dark gray and greenish gray shale are present.

57 Cave Hill Member, lower part Shale is medium to dark olive-gray to greenish gray, moderately fissile, calcareous, sideritic, and silty, grading to siltstone in the upper part. Bryozoans are common.

58 Negli Creek Limestone Member Limestone, typically coarsens upward; light gray, crinoidal and oolitic grainstone occurs at the top. The remainder is mostly medium brownish gray skeletal wackestone and lime mudstone, becoming dolomitic and sublithographic in the lower part.

Introduction

This map shows the distribution of bedrock formations that underlie Quaternary surficial deposits in the Crab Orchard Quadrangle. Quaternary sediments ranging from a few inches to more than 100 feet thick blanket nearly the entire quadrangle. These deposits consist chiefly of Illinoian glacial drift, Illinoian and Wisconsinan wind-blown silt or loess, and Pleistocene to Holocene stream deposits. Rock outcrops, dominantly sandstone, mostly occur along streams in the southeastern quarter of the map area. Author's observations are heavily supplemented by field notes and sketches made by previous Illinois State Geological Survey (ISGS) geologists. These include numerous descriptions of coal-bearing strata visible in surface and underground mines while they were active.

Logs of wells and test holes, on file at the ISGS, supplement information from outcrops. These include electric logs and sample studies from oil and gas test holes and drillers' logs and core descriptions from test borings for coal. Drillers' logs of water wells are generally less reliable. The ISGS drilled a continuously cored stratigraphic test hole 511 feet deep in the NE¼ Sec. 6, T10S, R4E. This hole bottomed in the middle part of the Tradewater Formation. However, bedrock geology is poorly known in the southwest quarter of the map area, where glacial deposits are thick, outcrops few, and drilling information meager.

Geologic Structure

The Crab Orchard Quadrangle is situated near the southern margin of the Illinois Basin. Bedrock strata dip slightly east of north at an average rate of about 90 feet per mile, or 1 foot in 55, which amounts to a dip of slightly less than 1°. Structure of the Mississippian Kinkaid Limestone appears to be essentially the same as that of outcropping Pennsylvanian rocks.

An igneous dike, named the Absher dike, was encountered in coal mines at the eastern edge of the quadrangle (Sec. 34, T9S, R4E). According to Clegg (1955), there were two closely spaced parallel dikes that ranged in width from 18 inches to 17 feet. The dikes were linear, with strike of N 40° W and vertical dip, and they were composed of mica peridotite, an ultramafic rock. In all aspects, the Absher dike was similar to other igneous intrusions of southeastern Illinois.

Two reverse faults were observed in a ravine above a surface (strip) mine in the SW¼ of Sec. 30, T9S, R4E. Both had strike trends of N 40° W and dipped 45° northeast, with the northeast side upthrown 5 to 10 feet (E.T. Benson and H.R. Wanless 1932, unpublished field notes, ISGS library).

Economic Geology

Coal

Coal mining was an important industry in the map area from the late nineteenth to the end of the twentieth century. No mines were active at the time of mapping, but coal resources remain.

The Herrin Coal, about 5 to 6 feet thick, has been extensively surface-mined. Unmined coal, accessible by underground mining, remains north of the area of surface mining. The Springfield Coal has been removed by surface and underground mining from large portions of the map area. Unmined Springfield Coal remains in the northernmost tier of sections and also in nearly all of Secs. 16, 21, and 28 of T9S, R4E. The Springfield thickens from about 3.5 feet in the western part of the quadrangle to 5 feet in the eastern part. Coal in the eastern part of the quadrangle is overlain by thick gray Dykersburg Shale and is likely to have a low sulfur content.

The Houchin Creek Coal has been surface-mined near the South Fork Saline River in the east-central area of the quadrangle. This seam is commonly 1.3 to 2.5 feet thick. The Survant Coal, below the Houchin Creek, has not been mined. The Survant is 2 to 3 feet thick in most places, but commonly is split into two benches separated by as much as 10 feet of shale or claystone.

The Dekoven and Davis Coals were mined at the surface in the southeastern part of the map area. The Dekoven is as much as 4 feet thick and the Davis nearly 5 feet thick, although both are normally thinner. West of the old surface mines, the glacial overburden thickens, and there is almost no information on coal thickness, depth, or quality. Aside from a few "dogholes" along the outcrop, neither Davis nor Dekoven has been mined underground.

The Mt. Rorah Coal, which ranges up to a little over 3 feet thick but is commonly split by claystone, was formerly mined in small open pits and "doghole" drift mines in the southern part of the Crab Orchard and northern Creal Springs Quadrangle.

Coal bed methane is currently being extracted from wells drilled a few miles east of the northeastern corner of the map area. These wells represent the first commercial development of methane from virgin coal in Illinois. There is good potential for coal bed methane in the Crab Orchard Quadrangle, especially the northern area, where the largest number of coal seams are present. Recovering methane from abandoned underground mines in the Springfield Coal also may be feasible.

Oil and Gas

Two wells in the Marion East Oil Field, Secs. 14 and 15, T9S, R3E, produced oil from the Bethel Sandstone (Upper Mississippian; formation not shown on map) at a depth of about 2,300 feet. These wells yielded about 4,100 barrels of oil from 1959 to 1963, but one well was returned to production in 2004. In addition to oil, the western well produced gas from the Aux Vases Formation (Upper Mississippian; formation not shown on map) at a depth of 2,406 feet.

The Corinth South oil field consists of a single well located near the center of Sec. 17, T9S, R4E. This well was drilled in 1972 and plugged in 1975 after producing about 11,700 barrels of oil from the Cypress Formation (formation not shown on map) at a depth of 2,350 feet.

Several other test holes within the map area yielded shows of oil, but no commercial production. The deepest formation tested to date is the St. Louis Limestone (Middle Mississippian; formation not shown on map).

Acknowledgments

I extend gratitude to the numerous landowners who granted me property access and verified the locations of wells. Special thanks are extended to G.R. Morris for allowing the ISGS to drill a cored test hole on his property.

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