

FIGURE 9

POCOLA SECTION

ATOKA FORMATON — Road cut on Oklahoma State Route 112, 1.45 mi. north of Okla. St. Route 112 and Okla. St. Route 210. In the SW ¼ Sec. 31, T-9N, R-27E, LeFlore County, Okla. Due south of Pocola, Okla. measured March and April, 1975.

+ THIN SECTION DATA

* X RAY DIFFRACTION DATA

F MEGAFOSSILS

○ MICROFOSSILS

▣ PYRITE

Field Description

Lithology	Fe Zones	Sample #S	UNIT	Field Description
470				
460			35	SANDSTONE, N-7, well sorted, fine to medium grained, subrounded to subangular, burrows not common in lower part of unit. Only few shale laminae (N3), some sandstone beds with large scale x-bedding, most with low angle x-bedding. Two large burrowing structures recorded.
450				
440			34	SHALE, N3, with thinly interbedded sandstones (N7) fine grained, fair to good sorting, ¼" beds are non-calcareous shales, some IOR4/6shale laminae. Burrows associated with sand stringers, but also above and below a few feet, shales contain small flakes of mica.
430			33	SANDSTONE, N7, basal unit thick bedded (3 feet) grading to 2 foot beds and increasing shale laminae (N7). Ripple marked in upper surface, but burrows not observed except at base of the unit, low angle x-bedding, fine-grained, well sorted, subrounded to subangular. Fe banding is apparent near base of unit.

420	IV	PA 1 ⁺ P13 ⁺ P5b ⁺		
430			32	SANDSTONE, N7, as Unit 31, except burrows less abundant, no siderite zones.
400			31	SANDSTONE, N7, fine to medium grained, well sorted, subrounded to subangular, ripple marked upper surfaces, with large scale x-bedding in thicker beds (1 to 2 feet). Bedding thickness ranges from 4" to 6". Shale laminae between sandstone beds. Flaser bedding. Siderite zone in troughs of ripple marks and draped over crests. Massive fossil hash zone of siderite @ 394" ○ Fe clasts above siderite zones. Burrows are common within siderite zones, above and below few feet. IOR4/6 to IOR3/4 shale laminae interbedded with N2 shale, bedding tends to be wavy. All non-calcareous except in fossiliferous zones.
390	VI	PA5		
380			30	SHALE-SANDSTONE, N-3, with interbedded stringers of N7 sandstone, fine grained, well sorted, rounded to subangular, low angle x-bedding, wavy bedding in places of shale and sandstone laminae. Individual sandstone beds 1"-2" shales ¼", contains small flakes of mica parallel to bedding. Multiple shale laminae decreasing upward.
370	II			
360	IV	PA 2 ⁺ DP16 ⁺ P6 ⁺	29	SANDSTONE, N7, thin to medium bedded, (i.e. 6" to 2"), fine-grain size uniform throughout unit, well sorted, subangular to subrounded, non-calcareous cement, flaser bedding. Fe clasts angular and rounded in upper part of unit. Low to medium angle x-bedded and planar-bedded. Burrows only apparent near ripple marked upper surface of individual beds in upper part. Some Fe staining of beds apparent in planar zones. Shows minor staining. Siderite zones in ripple marked upper bed surfaces. Fe clasts are sideritic material.
350			28	SHALE, N3 to N2, with thin interbedded sandstone, fine grained, fair to good sorting, subrounded to angular. Shales are of two distinct varieties, N3-N2 and IOR4/6 to IOR3/4. Some mica flakes parallel to bedding.
340	III	P51 ⁺	27	SANDSTONE, N7, fine to medium grained, fair to good sorting, subangular to rounded, few Fe clasts (rounded) parallel to trend of large scale x-beds. One large 6" massive bed, lower beds are thin 1-2 feet in thickness, current ripple marks. Upper thin beds also have upper surface ripple marked. Bases of beds are planar with N3 grey shale laminae as coatings. Siderite zones in troughs of ripple marks and as interbands between shale laminae.

330	II	P55 ⁺ P53 ⁺		
320			26	SANDSTONE, N7, fine grain grained, subangular to rounded, Fe clasts common, usually in units above well developed siderite zones(?) Shales common as thin stringers draping ripple marked upper surface of individual sandstone beds. Sandstone beds thickness ranges from 1" to 8" IOR4/6-IOR3/4 shale interbedded with N3 shales. All non-calcareous. All siderite zones are in troughs of ripple marked upper surfaces of individual beds. (Continuous over 8 feet, grading into grey shale laminae. Individual sandstone beds 1"-3" average with occasional thicker beds.)
310			25	SHALE, purple to dark grey (6RP4/2 to N3, with silty component within shale. Interlaminated sandstone stringers ¼" to 1", low angle x-bedding with sandstone fine grained, rounded, not calcareous. Upper unit contact flat. Some IOR3/4 shale coating N3 shales as integrated part of shale, not weathering, only minor burrows. Some mica flakes parallel to bedding.
300			24	SANDSTONE, N7, subangular to rounded, fine to medium grained, low angle x-bedded. Individual beds 10" to 1". Fe clasts. Highly bioturbated, non-calcareous. N2 shale interbeds (¼").
290			23	SHALE, N2-N3, with interlaminated silts. Sandstone stringers, e.g. ¼" to 1", low angle x-bedding in sandstone intervals. Fine to medium grained, rounded to sub-angular, bed contacts flat. Some IOR3/4 shale coatings on N2-N3 shales, all non-calcareous. Bioturbated @ top of unit only noted.
280				
270				
260				
250				