

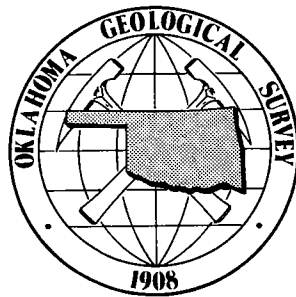
**Oklahoma Geological Survey  
Map GM-34**

**APPENDIX**

**Summary of Wells in the Anadarko Basin**

**by**

**Thomas W. Amsden**



Oklahoma Geological Survey  
Norman, Oklahoma

**1993**

# Summary of Wells in the Anadarko Basin

Thomas W. Amsden

## INTRODUCTION

This report is based on the result of intense drilling in the Anadarko basin during the late 1970s and early 1980s. New core and sample data containing lithostratigraphic and biostratigraphic information on middle Paleozoic strata in the basin indicated the need for some revision of earlier biostratigraphic interpretations, especially for Silurian strata in the western areas. For additional surface and subsurface information on these strata in the Anadarko basin, see Amsden (1960, 1975, 1980) and Amsden and Barrick (1988).

## ACKNOWLEDGMENTS

Appreciation is expressed to the following individuals for their help in supplying data and cartographic preparation of the PRE-WOODFORD SUBCROP MAP and STRATIGRAPHIC SECTIONS: coral data supplied by W. A. Oliver, Jr., U.S. Geological Survey, Washington, D.C., and P. K. Sutherland, University of Oklahoma, Norman; stromatoporoid data provided by J. A. Fagerstrom, Jamestown, Colorado; correlation of the Summary of Wells in the Anadarko Basin, PRE-WOODFORD SUBCROP MAP, and STRATIGRAPHIC SECTIONS, to the Oklahoma Geological Survey's Natural Resources Information System (NRIS) Well-Completion File, by T. Wayne Furr, manager of cartography, Oklahoma Geological Survey (OGS); cartographic preparation of the PRE-WOODFORD SUBCROP MAP and STRATIGRAPHIC SECTIONS by James H. Anderson, Charlotte Lloyd, Cynthia Howell (former employee), and T. Wayne Furr, OGS cartographic staff; edited by Frances A. Young and Christie Cooper.

## ANADARKO BASIN

The Anadarko basin is a south dipping and thickening sedimentary basin; present configuration is controlled largely by the late Paleozoic Wichita fault zone and Ouachita thrust plate (Fig. 1). Middle Paleozoic (Late Ordovician through Early Devonian) deposition occurred mainly in warm, shallow, carbonate seas supporting a rich invertebrate fauna, interrupted at times by the introduction of fine terrigenous detritus, derived mainly from the southeast. Deposition was interrupted at times by broad areas of moderate to strong uplift that exposed the sediments to subareal erosion, including considerable dissolution. These uplifts were accompanied by little or no faulting; however, their general trend is northwest-southeast, paralleling the early faulting in the aulacogen and in the later Wichita fault zone. Late Ordovician, Silurian, and Early Devonian strata with similar lithofacies/biofacies characteristics can be traced over a wide area in the southern Midcontinent region, which indicates the presence of a large epicontinental basin, or series of interconnected basins. Silurian strata of comparable facies are present in northern Kansas. A generally complete sequence of Late Ordovician through Early Devonian carbonate strata can be identified in outcrops in the Arbuckle Mountains-Criner Hills and Arkoma basin in Oklahoma, in north-central Arkansas, along the Mississippi River in eastern Missouri, and in south-

western Illinois. Strata of similar age and facies are present along the Tennessee River. The Wichita uplift south of the Anadarko basin has no middle Paleozoic strata younger than Viola, but remnants of Early Devonian Frisco and Silurian Chimneyhill strata are present in the Hollis basin, and remnants of Early Devonian carbonates are preserved in the Llano uplift. The Permian basin of West Texas has a thick sequence of Silurian-Devonian strata. Silurian strata (pre-Emsian-Sawkillian) in the western and northern part of the ancestral basin were exposed to moderate-to-intense regional dolomitization.

The maximum thickness in the northern part of this region occurs in the deep Anadarko basin where thicknesses in excess of 1,200 ft are present, which suggests that a northwest-southeast depocenter occupied the position of the present Wichita uplift. A thick zone (>1,500 ft) of Silurian-Devonian strata trending slightly east of north is present in the Permian basin, and during the middle Paleozoic these two regions may have been connected by a broadly arcuate depocenter.

Two earlier studies describe the Anadarko basin (Amsden, 1975) and its eastern extension, the Arkoma basin (Amsden, 1980). Both publications include pre-Woodford subcrop maps and isopach maps of the Hunton, Sylvan, and Woodford Formations. Subsequent studies (Amsden and others, 1980; Amsden, 1981) discuss the source and distribution of clastic sediments in the basin.

Intense drilling in the Anadarko basin in the late 1970s and early 1980s furnished new core and sample data. Study of this material, especially the cores, provided new lithostratigraphic and biostratigraphic information on middle Paleozoic strata in the basin. This has shown the need for some revision of earlier biostratigraphic interpretations, especially for Silurian strata in the western areas. These revisions appear both on the PRE-WOODFORD SUBCROP MAP (PLATE 1) and on the STRATIGRAPHIC SECTIONS (PLATES 1 and 2) (cf. Amsden, 1975, panel 11).

## WELL SUMMARY

The following wells provided core and/or sample data for the PRE-WOODFORD SUBCROP MAP and STRATIGRAPHIC SECTIONS; they are alphabetized by farm name. Brief drilling statistics are provided for each well, along with a summary of the pertinent geological information. References to earlier publications are cited where appropriate.

For each well the basic data are location, elevation, total depth/formation, and completion date. The elevation is listed as ground level (GL), derrick floor (DF), and/or kelly bushing (KB); (unk) indicates that the specific source for the elevation (GL, DF, or KB) is unknown. If the total depth (TD) is not available (Na), the total tool usage (Ttu) is used. If the completion date is not available, then a plugging date (P) or drilling finished (df) will follow the date. The sources for the basic data in the well summary are previous reports (Amsden, 1960, 1975, 1980; Amsden and Barrick, 1988) and the Oklahoma Geological Survey's Natural Resources Information System (NRIS) Well-Completion File.

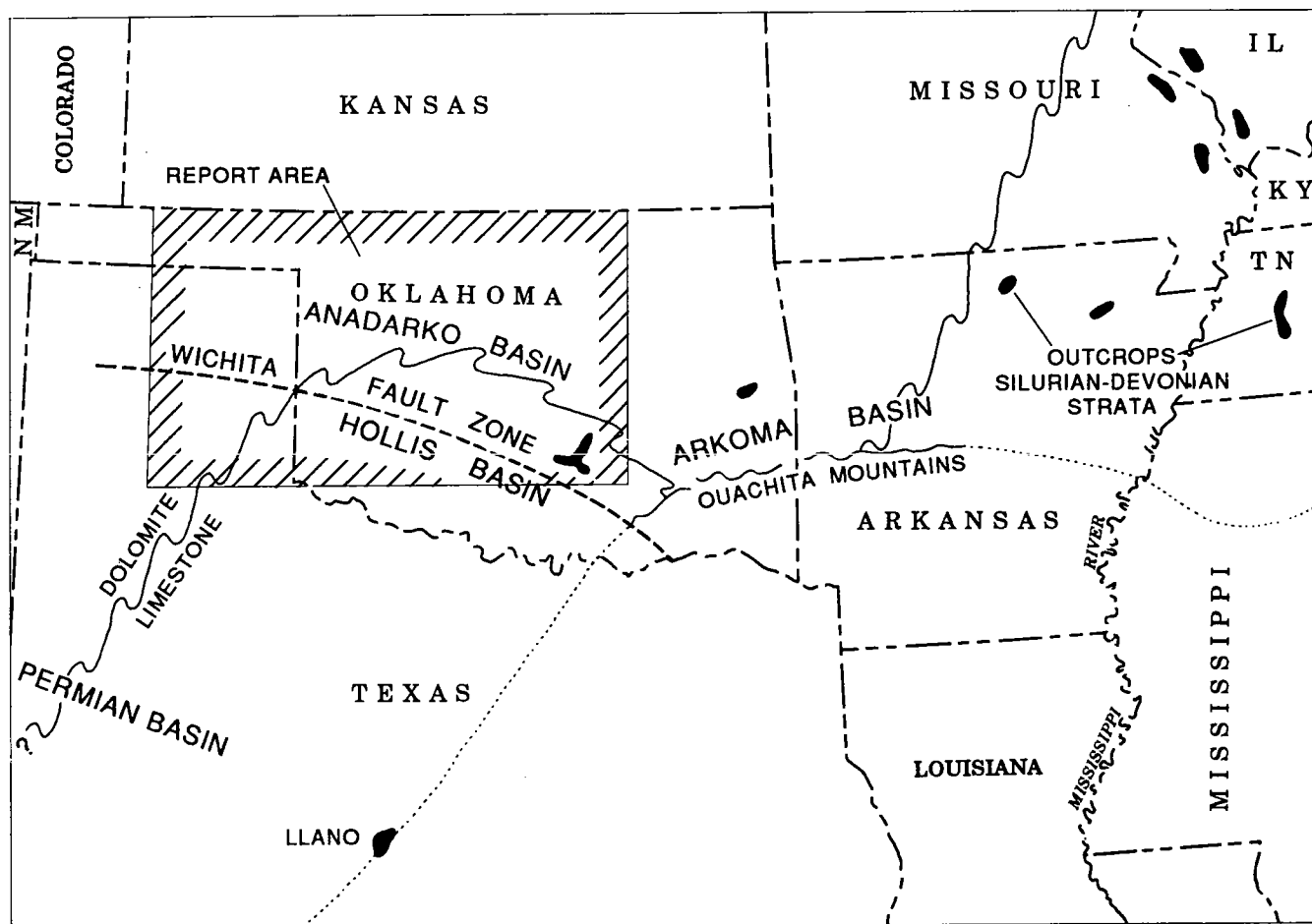


Figure 1. Map showing distribution of Silurian-Devonian outcrops in central United States.

**HELMERICH & PAYNE INC. 1 ADKERSON** — C NE¼ sec. 28, T10N, R26W, Beckham County, Oklahoma; elevation GL 2,104 ft, DF 2,128 ft; TD 18,700 ft (Arbuckle?); completion 11/5/76.

Cored Hunton (includes Keel Oolite and upper Sylvan Shale; 16,100–16,140 ft); Hunton core and samples examined by Amsden, 1978. Hunton basal oolite heavily dolomitized (34–38% MgCO<sub>3</sub>). Samples examined from 15,580 ft (Pennsylvanian?) to TD (Arbuckle); 39 thin sections; lower samples (17,300–18,700 ft) contaminated?

**GREENBRIAR OIL CO. 1 ALDRIDGE** — NE¼NE¼NE¼ sec. 34, T11N, R6E, Seminole County, Oklahoma; elevation GL 895 ft, DF 900 ft; TD 4,572 ft (Ordovician); completion 6/24/52.

Lower Woodford–Hunton–upper Sylvan. Described in Amsden (1980, p. 69); 18 thin sections.

**GRANDE CORP. 1 ANADARKO BASIN** — NW¼NW¼ SE¼ sec. 4, T9N, R12W, Caddo County, Oklahoma; elevation GL 1,527 ft, DF 1,547 ft; TD (Na), Ttu 21,016 ft (Viola); completion (Na), 7/25/59 (P).

Described in Amsden (1975, p. 106).

**EDWIN L. COX 1-A ANNIS** — C NW¼NW¼ sec. 3, T26N, R21W, Harper County, Oklahoma; elevation GL 1,749 ft, DF 1,759 ft; TD 7,365 ft (Hunton); completion (Na), 8/21/67 (P).

Cored 7,269–7,365 ft (Hunton). Described in Amsden (1975, p. 79).

**RIDDLE et al. 1 ATTERBERRY (FEE)** — C NW¼SW¼ SE¼ sec. 11, T3N, R5E, Pontotoc County, Oklahoma; elevation (Na); TD 4,490 ft; completion 2/7/38.

Cored 3,932–3,937 ft Lower Devonian; Haragan Formation; marlstone; brachiopods. Described in Amsden (1975, p. 79; 1980, p. 70).

**LONE STAR PRODUCING CO. 1 E. R. BADEN** — E½ W½SE¼ sec. 28, T10N, R22W, Beckham County, Oklahoma; elevation GL 1,953 ft, DF 1,982 ft; TD (Na) Ttu 30,050 ft (Viola); completion 9/9/72.

Samples examined: lower Woodford, ?Misener, Hunton (all low magnesium limestones and marlstones), Viola (uppermost beds are Wellington-type skeletal grainstones); 26 thin sections. Described in Amsden (1975, p. 106–107). *Illustrated on PLATE 2, STRATIGRAPHIC SECTION D–D'.*

**PHILLIPS PETROLEUM CO. 1-A BAILEY** — 1,320 ft FSL & 1,320 ft FWL, Sec. 9, Blk. A-5, H&GN Survey, Wheeler County, Texas; elevation 2,830 ft (unk); TD 13,863 ft; completion 1/19/72.

Well samples examined basal Woodford, Hunton, upper Sylvan. Described in Amsden (1975, p. 107). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTIONS D-D' and D-D''.

**GULF OIL CORP. 1 NORRIS BARTON** — SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 13, T7N, R4E, Pottawatomie County, Oklahoma; elevation GL 900 ft, DF 910 ft; TD 4,133 ft (Simpson); completion 3/7/37.

Samples examined 3,540–3,830 ft: Lower Woodford–Hunton–upper Sylvan (16 thin sections). Described in Amsden (1980, p. 70).

**HALL-JONES OIL CORP. 1 BARTOW** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, T23N, R18W, Woodward County, Oklahoma; elevation GL 1,986 ft, DF 1,999 ft; TD 9,155 ft (Sylvan); completion (Na), 4/3/68 (P).

Cored 8,852–8,907 ft (all Hunton). Described in Amsden (1975, p. 79). The 1 Bartow cored the upper 52 ft of Hunton strata comprising heavily dolomitized (9 samples average 36.5% MgCO<sub>3</sub>) skeletal carbonate with many corals, stromatoporoids, algae?, tetracorals, tabulates, crinoids, ostracodes, bryozoans, etc.; samples from the underlying Hunton beds (9 thin sections) show a moderately to heavily dolomitized fossiliferous limestone. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**AMERICANA PETROLEUM CORP. 4-A BAYNE** — C SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T5N, R6E, Pontotoc County, Oklahoma; elevation GL 958 ft, DF 962 ft; TD 2,808 ft (Sylvan); completion 8/10/70.

Cored Hunton 2,687–2,745.5 ft. Described in Amsden (1975, p. 79; 1980, p. 70).

**SINGER, KAHAN & FLEISCHAKER 6 M. BEAN** — C N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$  sec. 11, T8N, R5E, Seminole County, Oklahoma; elevation GL 960 ft, DF 966 ft; TD 4,468 ft (Wilcox); completion 12/25/65.

Described in Amsden (1975, p. 80; 1980, p. 71).

**ARKLA EXPLORATION CO. 1-21 BEAUCHAMP** — C NE $\frac{1}{4}$  sec. 21, T13N, R18W, Custer County, Oklahoma; elevation GL 1,745 ft, DF 1,770; TD 20,898 ft (Sylvan); completion 12/27/72.

Hunton samples from the 1-21 Beauchamp described in Amsden (1975, p. 107–108). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'. Parts of the Hunton strata in the 1-21 Beauchamp are heavily dolomitized; compare to the low magnesium facies in the 1-35 Nickel to the east and in the 1 Rogers to the south.

**WILSHIRE OIL CO. OF TEXAS 1 EDWARD BEJECK** — NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T11N, R6W, Canadian County, Oklahoma; elevation GL 1,329 ft, DF 1,341 ft; TD 9,403 ft; completion (Na), 10/13/78 (P).

Cored 8,894–8,853 ft (Woodford–Hunton). William Morgan (personal communication, 1981) reported the core penetrated the Frisco Formation.

**CALVERT EXPLORATION CO. 1 BERTIE** — C SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T19N, R9W, Kingfisher County, Oklahoma; elevation GL 1,100 ft, DF 1,115; TD 8,665 ft (Viola); completion (Na), 2/4/63 (df).

Described in Amsden (1975, p. 80). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**JONES & PELLOW OIL CO. 1 BEST** — NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T15N, R6W, Kingfisher County, Oklahoma; elevation GL (Na), DF 1,185 ft; TD 8,135 ft (Sylvan); completion 4/19/69.

Cored Hunton strata 7,960–8,015 ft. Described in Amsden (1975, p. 80).

**TENNECO OIL CO. 1-5 BILLER** — C SE $\frac{1}{4}$  sec. 5, T13N, R6W, Canadian County, Oklahoma; elevation GL 1,232 ft, DF 1,245 ft; TD 9,030 ft (Ordovician); completion 4/30/76.

Cored the lower Woodford Formation, Frisco Formation, and upper *Kirkidium* biofacies–Henryhouse Formation. Core examination, aided by thin section point counts, shows that both the Frisco and *Kirkidium* strata are low magnesium, richly fossiliferous skeletal grainstones; 17 thin sections (6 point-counted), chemical analyses. Described in Amsden (1980, p. 71–73, pls. 9,10). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**KIRKPATRICK OIL CO. 1 BLEVINS UNIT** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 7, T17N, R4W, Logan County, Oklahoma; elevation GL (Na), KB 1,152 ft; TD 7,090 ft (Sylvan); completion 2/21/67.

Cored the lower Chimneyhill Subgroup and the upper part of the Sylvan Shale, here strongly calcareous. The upper part of the Blevins core yields specimens of Wenlockian age trilobites; the lower part has *Stricklandia protriplesiana* (late Llandoveryan) overlying the Keel Oolite; the core ends in the Sylvan Shale, here strongly calcareous. Described in Amsden (1975, p. 80; 1980, p. 38–39, text fig. 14; pls. 7,8). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**CALVERT EXPLORATION CO. 2 BLOYD** — C W $\frac{1}{2}$ NW $\frac{1}{4}$  sec. 21, T27N, R15W, Woods County, Oklahoma; elevation GL 1,560 ft, DF 1,568 ft; TD 6,290 ft (Sylvan); completion 1/26/68.

Cored 55 ft of lower Woodford–Hunton–upper Sylvan. Described in Amsden (1975, p. 81); 8 thin sections. Reexamined, 1985; MgCO<sub>3</sub>, HCl insoluble analyses. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**SHELL PETROLEUM CORP. 1 S. BOLEY** — C SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T11N, R6E, Pottawatomie County, Oklahoma; elevation GL 995 ft, DF 999 ft; TD 4,748 ft (Second Wilcox); completion (Na), 5/21/38 (P).

Cored fossiliferous Frisco–Chimneyhill including the Keel Oolite at its base (in contact with the Sylvan Shale). Described in Amsden (1975, p. 81; 1980, p. 73).

**PHILLIPS PETROLEUM CO. 1-C BOWERS** — 1,320 ft FNL and FEL, sec. 5, B&B Survey, Hemphill County, Texas; elevation GL 2,499 ft, KB 2,521 ft; TD 20,150 ft (?Viola); completion 9/27/66.

Samples examined by Amsden, 1979; Amarillo Sample, Amarillo, Texas. 24 thin sections; last samples 20,150 ft Viola?

Tops; Hunton 19,460 ft; Sylvan 19,990 ft; Viola 20,090 ft. The lower part of the Hunton–Sylvan–Viola sequence (19,950–20,100 ft) not well defined in the sample sequence. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D'.

**TENNECO OIL CO. 1-27 M. G. BRADSHAW** — NE $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 27, T14N, R24W, Roger Mills County, Oklahoma; elevation GL 2,132 ft, DF 2,164 ft; TD 21,642 ft (Sylvan); completion 7/11/73.

Described in Amsden (1975, p. 108). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D'.

**ANADARKO PRODUCTION CO. 2-26-A BRADSHAW** — SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 26, T3N, R3W, Garvin County, Oklahoma; elevation GL 1,111 ft, DF 1,120 ft; TD 8,420 ft (Sylvan); completion 9/12/84.

Tops (samples) Hunton 7,930 ft, Sylvan 8,340 ft. Cored interval from 7,950 to 8,000 ft (Oklahoma Geological Survey Core and Sample Library). Crinoidal-skeletal grainstone with marly partings; partly silicified and with chert; glauconite; many brachiopods in certain layers, cannot be removed from the matrix except in fragments; probably represents Haragan–Bois d'Arc interval.

Samples examined from 8,000 to 8,370 ft; 9 thin sections prepared. 8,000–8,150 ft interbedded skeletal grainstone and marlstone; 8,150–8,310 ft fossiliferous marlstone, becoming increasing silty in lower part; Haragan–Henryhouse 8,310–8,340 ft crinoidal grainstone; Chimneyhill Subgroup 8,310 ft; Sylvan Shale 8,340 ft. (All Hunton Formation data provisional.) *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**AMERADA PETROLEUM CORP. 1 W. E. BRECKENRIDGE** — C NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T25N, R6W, Grant County, Oklahoma; elevation GL 1,068 ft, DF 1,078 ft; TD (Na), Ttu 6,313 ft (Sylvan); completion 5/3/64.

Cored 25 ft of the Misener and the Sylvan Shale. Described in Amsden and Klapper (1972, p. 2327–2330). Dr. Gilbert Klapper (University of Iowa) reports Late Devonian (Frasnian) conodonts from the Breckenridge core.

**PHILLIPS PETROLEUM CO. 1-B BROOKS** — SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T14N, R6W, Canadian County, Oklahoma; elevation GL 1,232 ft, DF 1,242 ft; TD 9,120 ft (Sylvan); completion 7/5/76.

Described in Amsden (1980, p. 73–74). Klapper and Barrick (in Amsden, 1980, p. 74) report a substantial conodont fauna from the lower part of the Brooks core. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**UNION OIL CO. OF CALIFORNIA 1-33 ANNIE BRUNER** — NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T11N, R25W, Beckham County, Oklahoma; elevation GL 2,055 ft, DF 2,088 ft; TD 24,548 ft (Hunton); completion 4/8/72.

Described in Amsden (1975, p. 108). This well encountered structural complications which make interpretation of the stratigraphic sequence difficult; however, it does appear to include the "birdseye" lithofacies present in the 1 Malinda Green and adjacent wells.

**SINCLAIR PRAIRIE OIL CO. 3 GEORGE W. BURRIS** — SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T2N, R7E, Pontotoc County,

Oklahoma; elevation GL (Na), DF 707 ft; TD 4,295 ft (Ordovician, Simpson); completion (Na), 3/7/36 (df).

Samples studied, 2,300–3,870 ft (Woodford–Hunton–Viola Group); 17 thin sections. Described in Amsden (1980, p. 75).

**MOBIL OIL CO. 1 LOUISE R. CARTER** — SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T15N, R16W, Custer County, Oklahoma; elevation GL 1,784 ft, DF 1,802 ft; TD 15,165 ft (Hunton); completion 10/20/59.

Described in Amsden (1975, p. 82).

**MOBIL OIL CO. 1-A CEMENT (ORDOVICIAN TEST)** — SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T5N, R8W, Grady County, Oklahoma; elevation GL 1,354 ft, DF 1,377 ft; TD 20,330 ft (Bromide); completion (Na), 9/26/69 (P).

Samples examined from 17,900 to 18,330 ft (several skips); 12 thin sections; Woodford–Hunton–Sylvan. Described in Amsden (1975, p. 109).

**CITIES SERVICE OIL CO. 1 CHALEPAH** — NW $\frac{1}{4}$ NW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 10, T5N, R12W, Caddo County, Oklahoma; elevation GL (Na), DF 1,386 ft; TD 7,200 ft (Ordovician); completion (Na), 4/3/50 (df).

Samples studied from 4,290 to 5,750 ft; lower Woodford–Hunton–Sylvan; 17 thin sections. Described in Amsden (1975, p. 109).

**AMBASSADOR OIL CORP. 1 LETA CHAPMAN** — SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T8N, R9E, Hughes County, Oklahoma; elevation GL 750 ft, DF 757 ft; TD 4,349 ft (Ordovician, Simpson); completion (Na), 10/3/57 (P).

Described in Amsden (1980, p. 76) from 3,910 to 4,230 ft (basal Woodford, Hunton, Sylvan, Welling); 15 thin sections.

**J. M. HUBER CORP. 1 CHEROKEE METHODIST CHURCH** — C S $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 21, T26N, R11W, Alfalfa County, Oklahoma; elevation GL 1,190 ft, DF 1,198 ft; TD 6,385 ft (First Wilcox Sand); completion (Na), 8/10/68 (P).

Recovered ~2 ft of oolitic core between the Woodford Shale and the Sylvan Shale. Described in Amsden (1975, p. 82).

**ATLANTIC REFINING CO. 1 CHOAT** — C SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T19N, R9W, Kingfisher County, Oklahoma; elevation GL (Na), DF 1,119 ft; TD 8,660 ft (Sylvan); completion (Na), 6/18/49 (P).

Described in Amsden (1975, p. 82).

**BURMAH OIL AND GAS CO. (SIGNAL OIL AND GAS CO.) 1 CITY OF ARDMORE** — NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T5S, R2E, Carter County, Oklahoma; elevation GL 843 ft, DF 876 ft; TD 20,997 ft (Arbuckle); completion 1/28/74.

Samples examined from 17,200 to 18,100 ft; Woodford–Hunton–Sylvan–Viola; 17 thin sections. Described in Amsden (1975, p. 109).

**ARKLA EXPLORATION CO. 1-21 CLANCY ESTATE** — C NE $\frac{1}{4}$  sec. 21, T9N, R11W, Caddo County, Oklahoma; elevation GL 1,419 ft, DF 1,445 ft; TD 19,623 ft (Viola); completion 12/17/72.

Lower Woodford, Hunton, Sylvan, upper Viola (Wellington). Samples examined; 13 thin sections. Described in Amsden (1975, p. 110).

**GETTY OIL CO. 1 COFFMAN, B UNIT** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T22N, R24W, Ellis County, Oklahoma; elevation GL 2,314 ft; TD 11,586 ft (Viola); completion (Na), 11/14/67 (P).

Amsden (1975, p. 82) reported specimens of *Pentameroides* sp. and ?*Kirkidium* sp. from the core. A restudy of this core confirms the presence of *Pentameroides* sp. but not *Kirkidium*, and accordingly the cored portion is removed from the *Kirkidium* biofacies (Ludlovian–Pridolian) and placed in the Chimneyhill Subgroup (Cochrane correlative; late Llandoveryan). See Amsden (in Amsden and Barrick, 1988, p. 41, 47). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C–C'.

**GULF OIL CORP. 1 C. E. COSTELLO** — C NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T5N, R5W, Grady County, Oklahoma; elevation GL (Na), DF 1,020 ft; TD 12,771 ft (Simpson); completion 9/27/54.

Cored Hunton 10,415–10,800 ft; Lower Devonian Hargan–Bois d'Arc brachiopods. Described in Amsden (1975, p. 83).

**KIRKPATRICK OIL CO. 1 CRONKITE** — C N $\frac{1}{2}$ NW $\frac{1}{4}$  sec. 14, T15N, R5W, Kingfisher County, Oklahoma; elevation GL 1,102 ft, DF 1,101 ft; TD 7,900 ft (Ordovician); completion 8/5/70.

Tops: Hunton 7,097 ft, Sylvan 7,370 ft, Viola (Wellington?) 7,460 ft. Cored the upper 38 ft of Hunton strata; richly fossiliferous Lower Devonian Sallisaw (Sawkillian) strata. Described in Amsden (1975, p. 83; 1980, p. 50). In 1985 core restudied and samples examined for entire Hunton–Sylvan–Viola Group interval. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**APEXCO INC. 2 CURTIS** — C SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T11N, R5W, Canadian County, Oklahoma; elevation GL 1,320 ft, DF 1,328 ft; TD 8,657 ft (Hunton); completion 9/1/73.

Cored 8,523–8,602 ft (Hunton). The upper part of the core (8,523–8,591 ft) is a low magnesium (average 0.81% MgCO<sub>3</sub>), low HCl insolubles (average 1.0% HCl insolubles), skeletal limestone with numerous corals, brachiopods (including thick-shelled large species) and snails, all suggestive of the Frisco Limestone. The lower part of the core (8,591 ft to end of core) is provisionally correlated with the Fittshugh Member of the Bois d'Arc Formation on the basis of the brachiopods *Obturementella wadei*? and *Howellella* sp.; there is also a fairly abrupt change in texture at 8,591 ft to a more marly lithofacies, and the HCl residues increase to ~5%.

This core is located at the OGS Core and Sample Library; 19 thin sections prepared; 19 spot samples analyzed for HCl residues and MgCO<sub>3</sub>. Examined by Amsden, 1978.

**UNIVERSAL RESOURCES CORP. 2-16 DANNEHL** — C NW $\frac{1}{4}$  sec. 16, T13N, R6W, Canadian County, Oklahoma; elevation GL 1,271 ft, DF 1,285 ft; TD 9,095 ft (Sylvan); completion 9/12/75.

Core starts 2 ft below the Woodford–Hunton contact and cuts 60 ft of Hunton strata. It cored the Frisco and the *Kirkidium* biofacies of the Henryhouse Formation. The Frisco (8,658–8,669 ft) is a low magnesium, crinoid/bryo-

zoan/brachiopod biosparite; the *Kirkidium* biofacies (8,669–8,718 ft [end of core]) is a low magnesium, organo-detrital coral/brachiopod/crinoid limestone in the upper part, becoming somewhat marly in the lower part. Point counts of thin sections show the texture is well over 50% skeletal debris in the upper part, decreasing to <50% in the lower part; *Kirkidium* sp. ranges throughout this unit. Core examined by Amsden, 1980. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**SUNRAY DX OIL CO. 1 C. DAVIS** — NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T5N, R8E, Pontotoc County, Oklahoma; elevation GL 764 ft, DF 770 ft; TD 4,120 ft (Simpson); completion 10/9/62.

Cored 3,818–3,842 ft. Described in Amsden (1980, p. 77).

3,818–3,830.5 ft — Core: glauconitic limestone assigned to Cochrane Formation.

3,830.5–3,842 ft — Core: oolitic limestone with some dolomite. Specimens of *Brevilamnetta thebesensis* (Amsden).

**BLACKWOOD AND NICHOLS CO. 1 MONTE DAVIS** — SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T10N, R6E, Seminole County, Oklahoma; elevation GL 936 ft, DF 943 ft; TD 4,683 ft (Ordovician); completion 8/24/53.

Described in Amsden (1980, p. 78).

**NFC PETROLEUM CORP. 6 DIETZ** — C NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 30, T23N, R13W, Woods County, Oklahoma; elevation GL 1,421 ft; TD 7,850 ft (Hunton); completion 7/27/78.

Cored 36 ft of lower Woodford–Hunton strata. Core examined, 1985; 5 thin sections and 5 samples analyzed for MgCO<sub>3</sub> and HCl-insoluble residues. Hunton strata are moderately to heavily dolomitized skeletal grainstones and marlstones; questionable representative of the brachiopod *Placotriplesia*? sp. at 7,755 ft (Chimneyhill) (Wenlockian). Dr. James E. Barrick (Texas Tech University) reports *Walliserodus* sp. and other conodonts from this core.

**SHELL OIL CO. 1-15 DILL** — SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 15, T19N, R10W, Blaine County, Oklahoma; elevation GL (Na), DF 1,211 ft; TD 8,960 ft (Hunton); completion (Na), 4/2/65 (P).

Cored the lower Woodford–upper Hunton; Hunton strata cored 8,517–8,577 ft, heavily dolomitized throughout (>35% MgCO<sub>3</sub>); upper 11 ft oolitic; *Kirkidium* brachiopods throughout. Described in Amsden (1975, p. 83, pl. 3, fig. 6).

**PAN AMERICAN PETROLEUM CORP. 1 DROKE UNIT** — NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T18N, R9W, Kingfisher County, Oklahoma; elevation GL (Na), DF 1,127 ft; TD 8,926 ft (Sylvan); completion 5/30/64.

Core was briefly discussed by Amsden (1975, p. 84) based on information supplied by Dr. Gilbert Klapper (University of Iowa). In 1980, I studied the Droke core, collected fossils, and had 30 thin sections prepared. The 1 Droke is a key core which cuts the entire Hunton from the Woodford Shale to the Sylvan Shale. Of particular importance is the presence of a number of key conodont and brachiopod species which permits Silurian–Early Devonian strata in the subsurface of north-central Oklahoma to be correlated

with considerable precision to the sequence in the Arbuckle Mountains-Criner Hills of south-central Oklahoma. The 1 Droke conodonts have been studied by Klapper and Dr. James E. Barrick (Texas Tech University); I am indebted to them for making the conodont data available to me. The conodont species are plotted on PLATE 1, STRATIGRAPHIC SECTION A-A' and can be compared with the same zones described in Barrick and Klapper (1976, p. 62-65). The brachiopod *Stricklandia protriplesiana* biozone is discussed in Amsden and Barrick (1988) and the *Kirkidium* biofacies is discussed in the present report; *Navispira saf-fordi* is discussed in Amsden (1983, p. 1253).

**TEXACO INC. 1 ELIZABETH DURSCHER** — C NW¼ SW¼ sec. 2, T16N, R8W, Kingfisher County, Oklahoma; elevation GL 1,171 ft (unk); TD 9,086 ft (Hunton); completion 7/20/66.

Described in Amsden (1975, p. 84).

**GULF OIL CORP. 1 CORA DYER** — SE¼SW¼NE¼ sec. 20, T6N, R3W, McClain County, Oklahoma; elevation GL (Na), DF 1,194 ft; TD 11,134 ft (Oil Creek); completion 5/15/56.

Described in Amsden (1975, p. 84). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**JONES & PELLOW OIL CO. 1 FARRELL** — C NE¼NE¼ sec. 14, T15N, R6W, Kingfisher County, Oklahoma; elevation GL 1,178 ft, DF 1,188 ft; TD 7,998 ft (Hunton); completion 9/8/66.

Cored the oolitic beds of the *Kirkidium* biofacies, Henryhouse Formation. Described in Amsden (1975, p. 85). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**AMERADA PETROLEUM CORP. 1 FEDERAL** — NW¼ SE¼ sec. 3, T22N, R13W, Woods County, Oklahoma; elevation GL (Na), DF 1,302 ft; TD 8,441 ft; completion (Na), 1/16/51 (P).

Samples examined by Amsden, 1976; 11 thin sections. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**ASPEN 1-A FEDERAL** — N½S½SW¼NE¼ sec. 14, T22N, R14W, Major County, Oklahoma; elevation 1,588 ft (unk); TD 8,818 ft (Sylvan); completion 3/29/68.

Described in Amsden (1975, p. 85).

**ALCO OIL AND GAS CORP. 1 FERGUSON** — C SW¼ NE¼ sec. 35, T24N, R21W, Woodward County, Oklahoma; elevation GL (Na), DF (Na), KB 2,030 ft; TD 7,897 ft (Ordovician); completion (Na), 11/12/66 (P).

This well was originally drilled by Alco Oil and Gas Corp.; completion 11/12/65. Elevations for GL, DF, or KB were not recorded; TD 7,897 ft. The well has been re-worked on two separate occasions: (1) MacKellar Drilling Co. 1 Phillip Ferguson; elevation KB 2,030 ft; top of Hunton 9,753 ft; TD 10,406 ft; completion 8/30/66. (2) P. C. Ferguson 2 Ferguson; completion 12/17/77. Recorded elevations are the same as for the MacKellar record.

Hunton strata in the 1 Ferguson are thin, comprising only 35 ft of lower Chimneyhill beds. Almost the entire Hunton was cored, and the core extended into the underlying Sylvan beds (here strongly calcareous) for a distance

of 65 ft. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C-C', and in greater detail in Amsden (1980, p. 38-41, text-fig. 15, and p. 82).

Dr. James E. Barrick (Texas Tech University) reports *Dapsilodus obliquicostatus*, *Distomodus* sp., and other conodonts (see Amsden, 1980, text-fig. 15) which indicate a Late Llandoveryan C age ranging into the basal beds of the *ranuliformis* Zone of the Clarita Formation (Prices Falls Member to lower Fitzhugh Member).

**TENNECO OIL CO. 1-11 KENNETH E. FISHER UNIT** — C S½NW¼ sec. 11, T20N, R10W, Major County, Oklahoma; elevation GL 1,142 ft, DF 1,154 ft; TD 8,364 ft (Sylvan); completion (Na), 5/14/70 (df).

Described in Amsden (1975, p. 85).

**TENNECO OIL CO. 1 LUCY FISHER UNIT** — NE¼ SW¼NE¼NE¼ sec. 21, T20N, R9W, Major County, Oklahoma; elevation GL 1,215 ft, DF 1,229 ft; TD 8,290 ft; (Sylvan); completion (Na), 12/15/66 (P).

Described in Amsden (1975, p. 85). Reexamined 1980, additional thin sections prepared.

**CRESLENN OIL CO. 1 LEE FLOYD** — C SE¼NW¼ sec. 14, T23N, R15W, Woods County, Oklahoma; elevation GL 1,408 ft, DF 1,424 ft; TD (Na), Ttu 7,960 ft; completion (Na), 1/23/78 (P).

Cored 58 ft of Hunton strata starting 71 ft below the Woodford; 12 thin sections, HCl, MgCO<sub>3</sub> analyses. Dr. James E. Barrick (Texas Tech University) reports conodonts indicating a Wenlockian or younger age at 7,778 ft. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**TEXACO INC. 2-C C. E. FOSTER** — C NE¼SE¼ sec. 13, T17N, R6W, Kingfisher County, Oklahoma; elevation GL 1,064 ft, DF 1,074; TD 7,565 ft (Sylvan); completion 12/25/74.

Studied by Amsden, 1985; 25 thin sections and spot analyses for CaCO<sub>3</sub>, MgCO<sub>3</sub>; HCl insolubles. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**PHILLIPS PETROLEUM CO. 1-D FRANKLIN** — 1,050 ft FSL & 1,000 ft FWL, sec. 53, Blk. A-6, H&GN Survey, Gray County, Texas; elevation 2,838 ft (unk), TD 13,594 ft (Ordovician); completion 8/12/72.

Tops: Hunton 11,350 ft (-8,512 ft); (Hunton overlain by Pennsylvanian); Sylvan 12,110 ft (-9,272 ft); Hunton thickness 760 ft; cored 11,457-12,036 ft. This core yields excellent specimens of *Stricklandia protriplesiana* (Amsden); see Amsden (1975, p. 86), Amsden and Barrick (1988, p. 25). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTIONS D-D' and D-D''.

The brachiopods and conodonts (Dr. James E. Barrick, Texas Tech University) from this core provide considerable control for the distribution of Llandoveryan-Wenlockian age strata. This core is also important because it furnishes conodont evidence showing the presence of late Emsian-Eifelian age strata in an area considerably removed from other known occurrences.

**SUN OIL CO., DX DIVISION, 1 M. E. FRANS UNIT** — C SW¼NW¼ sec. 3, T15N, R16W, Custer County, Oklahoma; elevation GL 1,824 ft, DF 1,843 ft; TD (Na), Ttu 14,937 ft (Sylvan); completion (Na), 12/17/69 (P).

Cored 216 ft of Hunton starting just below the Hunton-Woodford contact. The core is almost entirely crystalline dolomite, and *Kirkidium* brachiopods range through ~40 ft, starting 16 ft below the top. Described in Amsden (1975, p. 86; pl. 5, figs. 1-4; pl. 9, figs. 2,3; pl. 12, figs. 2,3).

**PURE OIL CO. 1 W. H. FUQUA INC.** — SW $\frac{1}{4}$ SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 18, T6N, R16W, Kiowa County, Oklahoma; elevation GL (Na), DF 1,460 ft; TD 2,019 ft (Viola); completion (Na), 4/13/39 (df).

Basal Pennsylvanian-Hunton-Sylvan samples examined; 23 thin sections. Described in Amsden (1975, p. 110). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**J. WALTER DUNCAN, JR., 2 GARRETT** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 22, T17N, R8W, Kingfisher County, Oklahoma; elevation GL 1,115 ft, DF 1,125 ft; TD 8,841 ft (Hunton); completion 4/6/75.

Cored 8,735-9,775 ft (lower Woodford-upper Hunton); studied by Amsden in 1986: 13 thin sections and spot samples for HCl, CaCO<sub>3</sub> and MgCO<sub>3</sub> analysis. Upper 22 ft is a heavily dolomitized skeletal limestone (41.1% MgCO<sub>3</sub>, 6.9% HCl insolubles); specimens of *Kirkidium* sp., stromatoporoids, tabulate corals, tetracorals, halysitid corals; lower 15 ft of core is a dolomitized crinoidal limestone (25.1% MgCO<sub>3</sub>; 7.2% HCl insolubles) with bryozoans, ostracodes, brachiopods, etc. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**CLEARY PETROLEUM INC. 1-21 GILBERT** — C SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 21, T17N, R6W, Kingfisher County, Oklahoma; elevation GL 1,004 ft, DF 1,012 ft; TD 7,873 ft (Sylvan); completion 9/8/67.

Described in Amsden (1975, p. 87). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**GOFF-LEPPER DRILLING CO. 1 GILES** — C NW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 15, T6N, R13W, Caddo County, Oklahoma; elevation GL 1,406 ft, DF 1,412 ft; TD 6,015 ft (Second Bromide); completion (Na), 8/11/60 (P).

Basal Woodford-Hunton-Upper Sylvan samples examined; 19 thin sections. Described in Amsden (1975, p. 110-111).

**TEXAS CO. PRODUCTION DEPT. 1 STEPHEN GIPSON** — C NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T6S, R6E, Marshall County, Oklahoma; elevation GL 697 ft, DF 707 ft; TD 4,190 ft (Sylvan); completion 5/6/57.

Cored the ?Misener-Sylvan; see Amsden (1975, p. 87; 1980, p. 83), Amsden and others (1968).

**UNION OIL CO. OF CALIFORNIA 1-29 GOODE** — C SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T11N, R25W, Beckham County, Oklahoma; elevation GL 2,094 ft, DF 2,125 ft; TD (Na), Ttu 25,655 ft (Sylvan); completion (Na), 6/8/74 (df).

Samples examined from 24,520 to 25,650 ft; 26 thin sections. Described in Amsden (1975, p. 111); additional lithostratigraphic and biostratigraphic information obtained from more recent drilling in the deep part of the basin (see especially the 1 Malinda Green and adjacent wells, this Summary and PLATE 2, STRATIGRAPHIC SECTION D-D') permit a more realistic interpretation of the Hunton sequence

in the 1 Goode:

- 24,500-24,680 ft Low magnesium, skeletal grainstone Hunton Group (overlain by Woodford Shale with a few feet of sandy-cherty beds at its base).
- 24,680-24,880 ft Pellet "birdseye" limestone (see 1 Malinda Green, this Summary and PLATE 2, STRATIGRAPHIC SECTION D-D').
- 24,880-25,200 ft (1-80 ft skip) mostly crystalline dolomite with some chert.
- 25,200-25,550 ft Slightly cherty, silty, fossiliferous marlstone; low dolomite throughout.
- 25,550-25,620 ft Mostly crystalline dolomite; ?oolites.
- 25,620 ft Sylvan Shale.

**CALIFORNIA OIL CO. 1 F. O. GOODELL UNIT** — C NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T5S, R2W, Carter County, Oklahoma; elevation GL 920 ft, DF 932 ft; TD 9,933 ft (Sylvan); completion 7/4/62.

Cored 9,456-9,506 ft, all silty, fossiliferous marlstone. The upper part of core (9,470-9,482 ft) with brachiopods indicating an Early Devonian (Helderbergian) age: *Sphaerirynchia lindenensis*. The lower part, 9,485 ft and 9,490 ft, have *Merista?* sp. and *Amsdenia* sp. suggesting a Silurian age. Earlier investigation reported in Amsden (1975, p. 87).

**CONTINENTAL OIL CO. 1 GORDON UNIT** — C SE $\frac{1}{4}$  sec. 20, T10N, R26W, Beckham County, Oklahoma; elevation GL 2,072 ft, DF 2,104 ft; TD 19,969 ft (Ordovician); completion 9/25/72.

Samples examined 16,580-18,800 ft; Pennsylvanian, Hunton, Sylvan, Viola, Simpson. 36 thin sections. Described in Amsden (1975, p. 111-112).

**NORTEX GAS AND OIL CO. 1-19 GRAHAM** — W $\frac{1}{2}$  W $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 19, T3N, R7W, Grady County, Oklahoma; elevation GL 1,319 ft, DF 1,352 ft; TD 23,914 ft (Bromide); completion 1/26/83.

Samples examined 21,900-23,914 ft (TD), Woodford; Hunton (top 21,930 ft), low magnesium, fossiliferous cherty marlstone with 20 ft of skeletal limestone at the base (Chimneyhill); Sylvan (top 22,300 ft); Viola (top 22,500 ft) with Welling(?) skeletal grainstones at the top underlain by Viola Springs Formation; TD Bromide? 33 thin sections; samples borrowed from Nortex, Tulsa, 1983; studied by Amsden.

**NATOMAS NORTH AMERICA INC. 1 MALINDA GREEN** — W $\frac{1}{2}$ W $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 31, T10N, R26W, Beckham County, Oklahoma; elevation GL 2,003 ft, DF 2,034 ft; TD 20,314 ft (Sylvan); completion (Na), 2/28/78 (P).

The 1 Malinda Green well, which is located along the structurally deep axis of the Anadarko basin, cored Hunton strata from 19,599 to 19,770 ft and from 20,230 to 20,260 ft; this core was the deepest in the basin to be examined by Amsden. Samples examined, from the lower Woodford to the upper Sylvan; 29 thin sections prepared from the samples, and 20 from the core; MgCO<sub>3</sub> and HCl-insoluble residues analyzed from core samples. The 1 Green is of particular interest because it cored a shallow-water, "birdseye" intertidal facies (Amsden, 1981, p. 159-160), a facies



which can be recognized in the nearby wells (PLATE 2, STRATIGRAPHIC SECTION D-D"); also included are ribbed pentamerids, provisionally referred to *Kirkidium* sp. Thin sections and chemical analyses show that parts of the middle and lower Hunton in the 1 Malinda Green have been intensively dolomitized. 42 thin sections were prepared from samples and 29 from the core; 29 spot samples from the core were analyzed for HCl residues and  $\text{MgCO}_3$ . Described in Amsden (1980, p. 57). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D".

**STANOLIND OIL AND GAS CO. 1 GROVES OPERATING UNIT** — SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T8N, R18W, Washita County, Oklahoma; elevation GL 1,612 ft, DF 1,625 ft; TD 5,500 ft (Bromide); completion (Na), 4/2/55 (P).

Described in Amsden (1975, p. 112). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**GULF OIL CORP. 1 HAGGARD** — Blk. 2, sec. 5, I&GN Survey, Roberts County, Texas; elevation 3,097 ft (unk); TD 12,597 ft; completion 2/21/72; cored 10,970–11,000 ft; 12,270–11,300 ft (cores not examined).

Samples borrowed from Texas Bureau of Mines, Austin; lower Woodford–Hunton–upper Viola samples examined; 20 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C-C'.

**CLARK CANADIAN EXPLORATION CO. 1 HANAN** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T20N, R23W, Ellis County, Oklahoma; elevation GL 2,483 ft, DF 2,504 ft; TD 14,149 ft (Viola); completion (Na), 9/1/70 (P).

Lower Woodford–Hunton–Sylvan–upper Viola samples examined, 1979; 14 thin sections. *Illustrated in* Amsden (1980, text-fig. 16). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C-C'.

**LONE STAR PRODUCING CO. 1 L. V. HANAN UNIT** — C NE $\frac{1}{4}$  sec. 6, T19N, R24W, Ellis County, Oklahoma; elevation GL 2,479 ft, DF 2,498 ft; TD 14,640 ft (Viola); completion (Na), 1/14/69 (P).

Amsden (1975, p. 87–88) described this core, provisionally assigning incomplete pentamerid specimens to *Kirkidium*?. A reexamination of this collection suggests that it is a species of some gypidulinid; see Amsden (1980, p. 42, text-fig. 16). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C-C'.

**SUNRAY OIL CORP. 1 RALPH HANAN** — SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T19N, R24W, Ellis County, Oklahoma; elevation GL (Na), DF 2,475 ft; TD (Na), Ttu 15,047 ft (Viola); completion (Na), 11/14/50 (P).

Lower Woodford–Hunton–Sylvan–upper Viola samples examined by Amsden; 15 thin sections. Described and illustrated in Amsden (1980, p. 42, text-fig. 16). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C-C'.

**McCULLOCH OIL CORP.–STATEX 1-35 HANEY et al.** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 35, T15N, R19W, Custer County, Oklahoma; elevation GL 1,698 ft, DF 1,721 ft; TD (Na), Ttu 18,410 ft; completion (Na), 4/7/70 (P).

Samples from the 1 Haney examined in 1979; 14 thin sections. The upper 80 ft is crystalline dolomite, underlain

by a sequence of low magnesium, fossiliferous marlstones with relatively little terrigenous detritus. The basal 50 ft is mostly crystalline dolomite with minor skeletal grainstone. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'.

**DAVID BEACH TRUSTEE 1 HARBER** — C S $\frac{1}{2}$ NE $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 3, T9N, R6E, Seminole County, Oklahoma; elevation GL 1,055 ft, DF 1,061 ft; TD 4,335 ft (Viola); completion (Na), 9/23/58.

Hunton–Sylvan, Welling samples examined by Amsden (1980, p. 86); 9 thin sections.

**ARKLA EXPLORATION CO. 1-17 HARREL** — E $\frac{1}{2}$ W $\frac{1}{2}$  SE $\frac{1}{4}$  sec. 17, T16N, R21W, Roger Mills County, Oklahoma; elevation GL 2,083 ft, DF 2,108 ft; TD 17,829 ft (Sylvan); completion (Na), 10/5/72 (P).

Described in Amsden (1975, p. 112–113). In 1975 the upper Hunton skeletal limestones were provisionally referred to the Lower Devonian Frisco and/or Fittstown Member(s) of the Bois d'Arc Formation. Present information on the distribution of Hunton strata in the basin suggests that these upper limestones are more reasonably referred to the *Kirkidium* biofacies, Henryhouse Formation.

**ANADARKO PRODUCTION CO. 1-35-A HARRIS** — NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, T3N, R3W, Garvin County, Oklahoma; elevation GL 1,255 ft, DF 1,276 ft; TD 9,520 ft (Viola); completion 4/12/84.

Tops (GR log) Hunton 9,114 ft, Sylvan 9,462 ft. Cored Hunton strata 9,750–9,798 ft; 7 thin sections (OGS Core and Sample Library). The cored interval is a low magnesium skeletal grainstone with a considerable amount of shearing and including calcite veins; glauconite common. Fossils include crinoids, ostracodes, trilobites, corals, brachiopods, the latter with kozlowskiellinids, schuchertellids, meristellids, and others; all mostly disarticulated. Poor preservation precludes precise identification, but this assemblage appears to be Helderbergian. Dr. James E. Barrick (Texas Tech University) processed samples for conodonts but recovered no diagnostic species.

Compare to the 2-26-A Bradshaw and the 1-24-A Phoenix.

**AMBASSADOR OIL CORP. 1 HAWKINS** — SE $\frac{1}{4}$ SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 26, T26N, R11W, Alfalfa County, Oklahoma; elevation GL 1,183 ft, DF 1,190 ft; TD 5,645 ft (Sylvan); completion (Na), 11/6/63 (P).

Cored 25 ft of Woodford–Hunton–Sylvan strata. Described in Amsden (1975, p. 88).

**GHK–GAS ANADARKO 1-27 WILBUR HAYES** — NW $\frac{1}{4}$  SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T12N, R14W, Custer County, Oklahoma; elevation GL 1,781 ft, DF 1,805 ft; TD 19,474 ft (Ordovician); completion 10/1/72.

Lower Woodford–Hunton–Sylvan–upper Viola samples examined; 15 thin sections (Amsden, 1975, p. 113). The stratigraphic sequence of Frisco–Henryhouse–Chimneyhill cited in the 1975 report and followed on the PRE-WOODFORD SUBCROP MAP (PLATE 1) is based on lithostratigraphic sequence, there being no biostratigraphic control available from the 1-27 Hayes or any nearby well.

**ROY G. WOODS 1 HENDERSON** — C NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 18, T4N, R6E, Pontotoc County, Oklahoma; elevation 978 ft (unk); TD 3,124 ft (Ordovician, Simpson); completion (Na), 12/9/52 (P).

Hunton-Sylvan-upper Viola (Welling) samples examined. Low magnesium limestone throughout, including the Keel Oolite; 10 thin sections. Described in Amsden (1980, p. 86-87).

**G. C. PARKER et al. 1 HENSLEY** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, T23N, R18W, Woodward County, Oklahoma; elevation 1,968 ft (unk); TD 9,266 ft (Sylvan); completion (Na), drilling started 6/3/60.

Cored 73 ft of basal Woodford and upper Hunton strata; 9 thin sections prepared; MgCO<sub>3</sub> and HCl analyses made; conodont samples sent to Dr. James E. Barrick (Texas Tech University) who reports *Walliserodus* sp., *Panderodus unicostatus* and other conodonts from the core. Samples from the underlying Hunton and upper Sylvan examined and 10 thin sections prepared. Described in Amsden (1975, p. 88). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**HUMBLE OIL AND REFINING CO., CARTER DIVISION, 1 E. S. HESTER** — SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T5N, R3W, McClain County, Oklahoma; elevation GL 1,050 ft, DF 1,056 ft; TD 7,799 ft (Sylvan); completion 1/6/60.

Cored 7,770-7,783.3 ft Hunton; Chimneyhill Subgroup (Clarita and Cochrane Formations); low magnesium limestones; *Triplesia alata*. Described in Amsden (1975, p. 88). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**AMAX PETROLEUM CORP. 1 HICKMAN** — NE $\frac{1}{4}$ SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 24, T17N, R18W, Dewey County, Oklahoma; elevation GL 1,849 ft, DF 1,859 ft; TD (Na), Ttu 13,818 ft (Sylvan); completion 1/4/76.

Cored 50 ft of Hunton, starting 130 ft below the Woodford-Hunton contact. This is a porous, crystalline dolomite with fossils, mostly preserved as molds; specimen of a calymenid trilobite at 13,500 ft. Examined by Amsden, 1976, 1981; 3 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**ANADARKO PRODUCTION CO. 1 HELEN HILPERT** — SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T14N, R4W, Oklahoma County, Oklahoma; elevation GL 1,066 ft, DF 1,079 ft; TD 6,712 ft (Sylvan); completion 8/17/66.

Cored a total of ~25 ft of low magnesium, crinoidal limestone in the lower 100 ft of the Hunton Group. See Amsden (1975, p. 88-89).

**GLOVER HEFNER KENNEDY OIL CO. 1-1 HOFFMAN** — SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T14N, R16W, Custer County, Oklahoma; elevation GL 1,688 ft, DF 1,710 ft; TD 14,905 ft (Ordovician); completion (Na), 2/14/69 (P).

Cored ~100 ft of lower Woodford-upper Hunton strata. Cored 83 ft of heavily dolomitized Hunton carbonate strata. Specimens of *Kirkidium* sp. range throughout this interval (Amsden, 1975, p. 89). Compare to Hunton cores from other wells located in Custer County (see PLATE 1, PRE-WOODFORD SUBCROP MAP; PLATE 2, STRATIGRAPHIC SECTION D-D').

**GULF OIL CORP. 1 M. HOLTZSCHUE** — NW $\frac{1}{4}$ NW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 8, T12N, R2W, Oklahoma County, Oklahoma; elevation GL (Na), DF 1,151 ft; TD 6,505 ft (Hunton); completion (Na), 11/6/49 (df).

This core brings fossiliferous Frisco into direct contact with fossiliferous *Kirkidium* biofacies, Henryhouse Formation. Described in Amsden (1975, p. 89). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**SINCLAIR OIL AND GAS CO. 1 FRANK HORLIVY, JR.** — SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, T11N, R5W, Canadian County, Oklahoma; elevation GL 1,376 ft; TD 9,788 ft (Hunton); completion (Na), 2/4/65 (P).

This core yields the Frisco brachiopods, *Costispirifer arenosus* and *Rensselaeria* sp. Amsden (1975, p. 89-90).

**PHILLIPS 1-A HORN** — 1,980 ft FS & WL Sec. 81, Blk. A-5; H&GN Survey, Wheeler County, Texas; elevation 2,696 ft (unk); TD (Na).

Cored 15,775-15,875 ft. Basal Hunton strata are represented by high-magnesium dolomite. Described by Amsden (1975, p. 103). (See Mobil 1 Walker.)

**MOBIL OIL CO. 1 MATTIE E. HORTON** — SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T15N, R15W, Custer County, Oklahoma; elevation GL 1,765 ft, DF 1,783 ft; TD 14,869 ft (lower Hunton); completion 3/28/61.

Cored almost the entire Hunton, ending just a few feet above the Sylvan contact. It is moderately to heavily dolomitized in the upper and lower part, with the rest of the Hunton low magnesium marlstones and skeletal grainstones. The upper Hunton beds have *Kirkidium* brachiopods associated with various colonial corals, halysitid corals, tabulates, stromatoporoids, and others. Described in Amsden (1975, p. 90). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'.

**W. C. PAYNE 1 HOUCK** — C SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 36, T17N, R5W, Kingfisher County, Oklahoma; elevation GL 1,058 ft, DF 1,067 ft; TD 7,140 ft (Sylvan); completion 3/26/66.

Described in Amsden (1975, p. 90-91). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**MIDWEST OIL CORP. 1 HUGHES UNIT** — C SW $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 4, T20N, R10W, Major County, Oklahoma; elevation GL 1,146 ft, DF 1,157 ft; TD 8,272 ft (Sylvan); completion 6/27/68.

Described in Amsden (1975, p. 91). Reexamined, 1980. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**TENNECO OIL CO. 1 B. F. HUNTZINGER** — N $\frac{1}{2}$ S $\frac{1}{2}$  NE $\frac{1}{4}$  sec. 24, T27N, R21W, Harper County, Oklahoma; elevation GL 1,831 ft, DF 1,840 ft; TD 7,500 ft (Viola); completion (Na), 3/19/68 (P).

Described in Amsden (1975, p. 91).

**PAN AMERICAN PETROLEUM CORP. 1 INMAN UNIT J** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 31, T23N, R14W, Major County, Oklahoma; elevation GL 1,335 ft; TD 8,225 ft; completion 7/7/69.

Cored the upper 70 ft of Hunton strata; only core chips

available. Samples from the underlying Hunton strata and upper Sylvan examined; 18 thin sections. Hunton strata from this well *illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**CHEVRON OIL CORP. 1 JAMES** — 1,867 ft FSL, 773 ft FEL, sec. 20, Blk. L, S. M. Lindsay Survey, Wheeler County, Texas; elevation GL 2,186 ft, KB 2, 219 ft; TD 24,405 ft; completion 12/29/75.

Samples (Amarillo Sample, Amarillo, Texas) examined by Amsden, 1979; 20,300–21,600 ft (Woodford–Hunton–Sylvan–upper Viola Group); 29 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'.

**WILLIAM H. PINE 1 S. JOHNSON** — NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T3N, R7E, Pontotoc County, Oklahoma; elevation GL 850 ft, DF 854 ft; TD 2,288 ft (Ordovician, Simpson); completion (Na), 4/17/51 (P).

Samples described, Misener, Hunton, Sylvan, upper Viola (Welling); 25 thin sections. Described in Amsden (1980, p. 87–88).

**TIDE WATER ASSOCIATED OIL CO. 1 COLLIN JOHNSON** — NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T3N, R23W, Jackson County, Oklahoma; elevation GL 1,487 ft, DF 1,498 ft; TD 8,032 ft (Arbuckle); completion (Na), 2/8/50 (P).

Cored 7,514–7,565 ft; Frisco Formation–Viola Group (Welling Formation?). Described in Amsden (1975, p. 92).

**MOBIL OIL CO. 1 FLOYD JONES UNIT** — NE $\frac{1}{4}$  sec. 21, T15N, R16W, Custer County, Oklahoma; elevation GL 1,854 ft, DF 1,873 ft; TD 15,003 ft (Sylvan); completion 7/26/63.

Cored the upper 180 ft of the Hunton. The entire core is a high magnesium dolomite; analyses of 4 spot samples averaged 33.9% MgCO<sub>3</sub>. Specimens of *Kirkidium* sp. at 14,521 ft and 14,584 ft. Described in Amsden (1975, p. 92). In 1979, samples from the 1 Jones were examined from the cored portion down to the upper Sylvan; 13 thin sections prepared. These show that the dolomite sequence is underlain by low magnesium, fossiliferous marlstones; the basal 60 ft of the Hunton is low magnesium marlstones interbedded with crinoidal-skeletal grainstones (?Chimneyhill Subgroup). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'.

**TENNECO OIL CO. 1-A JAY JORDAN UNIT** — S $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T21N, R14W, Major County, Oklahoma; elevation GL 1,473 ft, DF 1,487 ft; TD (Na), Ttu 8,920 ft (Sylvan); completion 8/21/67.

Described in Amsden (1975, p. 92). In 1985 the core was reexamined and the samples from 8,570 to 8,860 ft were examined; 11 thin sections. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**TENNECO OIL CO. 1-34 JAY JORDAN UNIT** — C NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T22N, R14W, Major County, Oklahoma; elevation GL 1,452 ft; TD 8,930 ft (Hunton); completion 10/19/68.

Core 8,454–8,466 ft. Described in Amsden (1975, p. 92).

**TENNECO OIL CO. 2-34 JAY JORDAN** — SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T22N, R14W, Major County, Oklahoma; ele-

vation GL (Na), DF 1,489 ft; TD (Na), Ttu 8,882 ft (Hunton Group); completion 3/25/68.

Described in Amsden (1975, p. 93). Reexamined 1985 and samples examined from bottom of core to TD; 11 thin sections. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**ALLIED et al. 1-D KEEGAN** — SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 5, T12N, R5E, Lincoln County, Oklahoma; elevation 841 ft (unk); TD 4,900 ft (Ordovician).

Samples described in Amsden (1980, p. 89).

**INEXCO OIL CO. 1 KENDALL** — NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 14, T15N, R24W, Roger Mills County, Oklahoma; elevation GL 2,257 ft, KB 2,285 ft; TD 19,926 ft (Ordovician–?Sylvan); completion (Na), 11/10/71 (P).

Hunton strata with considerable dolomite throughout; the lower 100 ft is almost entirely crystalline dolomite, including the Keel Oolite. Described in Amsden (1975, p. 113).

**A. C. ALLYN, JR., 1 KIKER** — NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T10N, R7E, Seminole County, Oklahoma; elevation GL 924 ft, DF 931 ft; TD 4,517 ft (Ordovician); completion (Na), 4/7/50 (df).

Described in Amsden (1980, p. 90).

**CLEARY PETROLEUM INC. 1-20 KINNEY** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T25N, R21W, Harper County, Oklahoma; elevation GL (Na), DF 2,139 ft; TD 8,996 ft; completion (Na), 11/11/67 (P).

Cored 59 ft of Hunton, starting a foot or so below the Woodford. Described in Amsden (1975, p. 93).

**MRT EXPLORATION CO. 1 KIRTLEY UNIT** — NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T10N, R24W, Beckham County, Oklahoma; elevation GL 1,974 ft, DF 2,003 ft; TD 25,320 ft (Sylvan); completion 3/20/76. (Workover by Champlin Petroleum Co. 11/28/78 to a TD of 25,445 ft.)

Lower Woodford–Hunton–upper Sylvan samples studied; 34 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'. Compare to nearby 1 Sanders Unit from which it differs in having a reduced "birdseye" facies and reduced dolomite. See also Ampexco 1 Green.

**MOHAWK DRILLING CO.-C. R. COLPITT 1 KOLAR** — C NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, T12N, R6E, Lincoln County, Oklahoma; elevation GL 996 ft, DF 1,001 ft; TD 4,665 ft (Ordovician); completion (Na), 7/5/59 (P).

Hunton and upper Viola (Welling) samples described in Amsden (1980, p. 91); 6 thin sections.

**CLEARY PETROLEUM INC. 1-24 KRAMP-COBB** — W $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T19N, R10W, Blaine County, Oklahoma; elevation GL 1,179 ft, DF 1,188 ft; TD 8,570 ft (Hunton); completion 2/21/66.

Cored the upper 37 ft of Hunton, starting ~7 ft below the Woodford and including one small skip. It is similar to the nearby 1-15 Dill, being oolitic in the upper part and heavily dolomitized throughout; *Kirkidium* brachiopods range throughout the core. Described in Amsden (1975, p. 93).

**APEXCO 1 KRUG** — C SW $\frac{1}{4}$  sec. 20, Blk. A-7, H&GN Survey, Wheeler County, Texas; elevation GL 2,093 ft, KB 2,125 ft; TD 20,320 ft (Sylvan); completion (Na).

Samples examined by Amsden, 1979 (lower Woodford–Sylvan); 39 thin sections. Tops (samples) Hunton 19,350 ft; Sylvan 20,320 ft; 39 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D’.

**CARTER OIL CO. 1 ANNA KURZ** — C SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T1S, R17N, Tillman County, Oklahoma (Hollis basin); elevation GL (Na), DF 1,197 ft; TD 6,360 ft (Arbuckle); completion (Na), 9/8/51 (P).

Samples studied 4,600 ft (Pennsylvanian) to 6,360 ft (Arbuckle); 49 thin sections. Tops: Hunton (Chimneyhill Subgroup) 5,220–5,260 ft, pink crinoidal, skeletal grainstone, glauconitic in lower 10 ft; Sylvan Shale 5,260 ft; Viola Group (Welling Formation) 5,350 ft; Arbuckle Group? 6,160 ft. Sample: Oklahoma Well Sample Service, Shawnee, Oklahoma. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B–B’.

**SMITH BROTHERS DRILLING CO. 1 KYTLE–RAY** — SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T8N, R2E, Pottawatomie County, Oklahoma; elevation GL 971 ft, DF 975 ft; TD 5,490 ft; completion (Na), 11/27/47 (P).

Cored Frisco Formation. Described in Amsden (1975, p. 93).

**PHILLIPS PETROLEUM CO. 1-C LEE** — 1,980 ft FS & EL, sec. 80, Blk. M-1 H&GN Survey, Wheeler County, Texas; elevation 2,773 ft (unk); TD 17,098 ft; completion 9/14/64.

Woodford–Hunton contact 14,973 ft (samples), Hunton–Sylvan contact 15,330 ft (–12,557 ft) samples; Hunton thickness 357 ft. Described in Amsden (1975, p. 93–94).

Amsden (1975, p. 93–94) assigned the cored interval in the 1-C Lee well to the Late Silurian *Kirkidium* biofacies of the Henryhouse Formation. A subsequent restudy of the brachiopod faunas by Amsden and an investigation of the 1-C Lee coral faunas by Dr. W. A. Oliver, Jr. (USGS, Washington, D.C.) indicate that these strata are of Early rather than Late Silurian age (Amsden in Amsden and Barrick, 1988, p. 48). Accordingly, these strata are assigned to the Chimneyhill Subgroup and correlated with the Cochrane Formation of the Arbuckle outcrop area. See PLATE 2, STRATIGRAPHIC SECTIONS D–D’ and D–D’; PLATE 1, PRE-WOODFORD SUBCROP MAP.

**ANDERSON–PRICHARD OIL CORP. 1 LEON** — NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, T8N, R2W, Cleveland County, Oklahoma; elevation GL (Na), DF 1,168 ft; TD 8,807 ft (Arbuckle); completion 8/28/59.

A fossiliferous fragment of core with specimens of *Kirkidium* sp. Described in Amsden (1975, p. 94). In 1980 a complete set of core chips and samples representing basal Woodford, Hunton, Sylvan, and upper Viola (Welling Formation) were borrowed from the Oklahoma Well Sample Service, Shawnee, Oklahoma, and a description prepared. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A’.

**TEXAS PACIFIC OIL CO. INC. 1-33 NELLIE B. LIBBY** — C E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$  sec. 33, T14N, R26W, Roger Mills County,

Oklahoma; elevation GL 2,511 ft, DF 2,539 ft; TD 22,450 ft (Sylvan); completion 4/30/73.

Samples described in Amsden (1975, p. 113–114); 14 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D’.

**PHILLIPS PETROLEUM CO. 1-C LINA** — Sec. 570, Blk. 43, H&TC Survey, Ochiltree County, Texas; elevation 2,879 ft (unk); TD 11,906 ft; completion 2/27/68.

Cored 11,070–11,139 ft. Described in Amsden (1975, p. 94). Core yields *Amphigenia* sp. and other(?) late Early Devonian brachiopods. See also Amsden (1980, p. 50); Amsden in Amsden and Barrick (1988, p. 50).

**SINCLAIR OIL AND GAS CO. 1 LIPS** — Sec. 135, Blk. C, G&M Survey, Roberts County, Texas; elevation 2,805 ft (unk); TD 10,706 ft; completion 4/27/49.

Core Texas Bureau of Mines, Austin, examined by Amsden, 1979, Austin, Texas; 9,680–9,730 ft; Woodford–Hunton 9,686–9,725 ft, upper Sylvan. Hunton strata comprise fossiliferous limestones and dolomitic limestones; brachiopods include a nearly complete dorsal valve of *Amphigenia* sp. and shells provisionally assigned to *Hysterolites worthenanus* (Amsden in Amsden and Barrick, 1988, p. 50). These beds correlated with the *Amphigenia* bearing beds of the 1-C Lina (see PLATE 1, PRE-WOODFORD SUBCROP MAP).

**INEXCO OIL CO. 1 LOVETT** — NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 21, T14N, R24W, Roger Mills County, Oklahoma; elevation GL 2,068 ft; TD 21,276 ft (Sylvan); completion 8/18/71.

Samples described in Amsden (1975, p. 114). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D’.

**GETTY OIL CO. 1 LUETKEMEYER UNIT** — C SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24, T19N, R11W, Blaine County, Oklahoma; elevation GL 1,222 ft, DF 1,234 ft; TD 9,254 ft (Sylvan); completion (Na), 12/22/67 (P).

Cored the upper 25 ft of Hunton (starting ~7 ft below the Woodford); this is heavily dolomitized fossiliferous strata including 7 ft of dolomitized oolites (Amsden, 1975, p. 94–95, pl. 3, fig. 4; see analytical data, appendix 1975 report). *Kirkidium* ranges throughout this interval including the oolites. This well also cored the lower 60 ft of Hunton and uppermost Sylvan Shale. The lower 3 ft of Hunton is a moderately dolomitized oolite (Keel). (Amsden, 1975, pl. 12, fig. 5; 11.9% MgCO<sub>3</sub>.)

**GULF OIL CORP. 1 MAINKA RING UNIT** — SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T5N, R5W, Grady County, Oklahoma; elevation GL (Na), DF 1,160 ft; TD 13,651 ft (Ordovician); completion 4/24/51.

Cored lower Woodford–upper Hunton, latter with Helderbergian brachiopods. Described in Amsden (1975, p. 95).

**CONTINENTAL OIL CO. 1 J. MARUSKA** — SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, T10N, R4W, Cleveland County, Oklahoma; elevation 1,248 ft (unk); TD 9,098 ft (Hunton); completion 8/2/48.

Penetrated the Woodford–Hunton contact at 8,214 ft, ending at 8,350 ft in the Hunton. Cored the Hunton

(Frisco-Kirkidium biofacies) from 8,220 to 8,326 ft; the Frisco-Kirkidium biofacies contact is a sharply defined surface of truncation at 8,301 ft, and specimens of the Frisco brachiopod *Costispirifer* sp. are present immediately above the contact and specimens of *Kirkidium* sp. can be observed just below the contact. See Morgan and Schneider (1981). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**GULF OIL CORP. 1 A. O. MAY** — SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T19N, R9W, Kingfisher County, Oklahoma; elevation GL (Na), DF 1,131 ft; TD 8,749 ft (Sylvan); completion 9/24/62. Described in Amsden (1975, p. 95).

**W. R. YINGER 1 MAYES** — C NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T17N, R7W, Kingfisher County, Oklahoma; elevation GL 1,071 ft, DF 1,079 ft; TD 8,106 ft (Sylvan); completion 9/21/69.

Described in Amsden (1975, p. 95); 1 thin section, chemical analyses.

**BLACKWELL ZINC CO. INC. 1 McBRIDE** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T23N, R14W, Woods County, Oklahoma; elevation GL 1,467 ft, DF 1,477 ft; TD 8,100 ft (Ordovician); completion (Na), 8/28/61 (df).

Hunton-Sylvan-upper Viola samples examined by Amsden; 16 thin sections. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**NFC PETROLEUM CORP. 1-19 McBRIDE** — C SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T23N, R13W, Woods County, Oklahoma; elevation GL 1,462 ft; TD 7,975 ft (Sylvan); completion 5/31/78.

Cored 43 ft of lower Woodford-Hunton strata; core examined 1980, 6 thin sections chemical analyses. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**S. C. YINGLING OIL OPERATIONS 1 McCURDY** — C SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 15, T5N, R4E, Pontotoc County, Oklahoma; elevation 1,044 ft (unk); TD 2,690 ft (Viola Group); completion (Na), drilling started 12/21/52.

Samples described; 9 thin sections. Described in Amsden (1980, p. 92).

**WOODS PETROLEUM CORP. 1-25 McDANNALD** — E $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T18N, R19W, Dewey County, Oklahoma; elevation GL 2,180 ft, DF 2,199 ft; TD 14,390 ft (Sylvan); completion (Na), 8/25/83 (P).

*Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**BUNKER EXPLORATION CO. 2 McELVANEY** — C S $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 10, T12N, R5E, Lincoln County, Oklahoma; elevation GL 876 ft, DF 883 ft; TD 4,592 ft (Ordovician); completion 1/9/76.

Cored 4,305-4,328 ft (Woodford-Hunton); 19 thin sections. Core and samples described in Amsden (1980, p. 92).

**GULF OIL CORP. 1 MELVIN-HELTON** — 1,867 ft FNL, 1,867 ft FWL, sec. 21, Blk. M1, H&GN Survey; Hemphill County, Texas, elevation GL 2,552 ft; TD 20,110 ft (samples); completion (Na).

Well samples; Amarillo Sample, Amarillo, Texas; examined by Amsden, 1979; 32 thin sections; lower Woodford, Hunton top 19,730 ft, Sylvan top 19,980 ft. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'.

**TRIGG DRILLING CO. 1 MEYER** — C SW $\frac{1}{4}$  sec. 8, T11N, R7W, Canadian County, Oklahoma; elevation GL 1,372 ft; TD 11,350 ft (Sylvan); completion (Na), 6/1/77 (P).

Samples examined 10,840 (lower Woodford) to 11,310 ft (upper Sylvan). The interval from 10,900 to 11,290 ft comprises low magnesium Hunton carbonates of which the upper 20 ft are skeletal grainstones (?Frisco) and the lower 20 ft are crinoidal limestones (?Chimneyhill); the intervening strata are fossiliferous marlstones (Henryhouse Formation); 13 thin sections. See Morgan and Schneider (1981, fig. 6).

**CALIFORNIA OIL CO. 1 J. S. MULLEN et al.** — C SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T5S, R2W, Carter County, Oklahoma; elevation GL 929 ft, DF 943 ft; TD 9,615 ft (Sylvan); completion 2/27/62.

Cored 9,019-9,332 ft (Woodford-Hunton); Hunton low magnesium silty marlstone. Described in Amsden (1975, p. 95-96).

**GARR-WOOLLEY CO. 1 JOHN NEAL** — SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T5N, R4E, Pottawatomie County, Oklahoma; elevation GL 922 ft, DF 929 ft; TD 3,934 ft (Viola Group); completion (Na), 4/23/55 (P).

Samples examined from 3,580 to 3,934 ft (TD); lower Woodford-Hunton-Sylvan-upper Viola Group; 14 thin sections. Described in Amsden (1980, p. 94-95).

**WOODS PETROLEUM CORP. 1-35 NICKEL** — SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 35, T13N, R16W, Custer County, Oklahoma; elevation GL 1,682 ft, DF 1,702 ft; TD 21,054 ft (Ordovician); completion 11/19/70.

Lower Woodford, Hunton, Sylvan and upper Viola (Welling? skeletal grainstone at top) samples studied; 24 thin sections. Hunton strata are 460 ft thick and entirely in a low magnesium facies. They are divisible into an upper marlstone sequence (?Henryhouse) which is 380 ft thick, and a lower Chimneyhill organo-detrital limestone with the Keel Oolite at its base (80 ft thick). 24 thin sections.

**KIRKPATRICK OIL CO. 1 NICKEL** — C NW $\frac{1}{4}$  sec. 34, T22N, R12W, Major County, Oklahoma; elevation GL 1,274 ft, DF 1,284 ft; TD (Na), Ttu 8,147 ft; completion 5/30/66.

Described in Amsden (1975, p. 96).

**WOODS PETROLEUM CORP. 1 OBLANDER** — C SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 27, T20N, R25W, Ellis County, Oklahoma; elevation GL (Na), DF 2,493 ft, KB 2,495 ft; TD 14,422 ft (Viola Group); completion (Na), 8/24/67 (P).

Lower Woodford-Hunton-Sylvan-upper Viola samples, examined by Amsden, 1979; 12 thin sections. Described in Amsden (1980, p. 42, text-fig. 16). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C-C'.

**GETTY RESERVE OIL INC. 1-9 OSBORN** — C NW $\frac{1}{4}$  sec. 9, T9N, R7W, Grady County, Oklahoma; elevation GL 1,365 ft, DF 1,381 ft; TD 12,750 ft; completion 10/16/79.

Hunton-Woodford contact 12,010 ft; Hunton-Sylvan contact 12,680 ft (GR log). Hunton strata cored from 12,120 to 12,132 ft (OGS Core and Sample Library), all low magnesium, skeletal grainstone; 10 spot samples analyzed: <2.2% MgCO<sub>3</sub>, and <2% HCl insolubles; 7 thin sections. Dr.

James E. Barrick (Texas Tech University) reports Frisco type conodonts from this core.

**COBRA OIL AND GAS CORP. 1-4 PARRY** — C SW $\frac{1}{4}$  sec. 4, T19N, R18W, Dewey County, Oklahoma; elevation GL 1,889 ft, KB 1,905 ft; TD 12,190 ft (Sylvan); completion (Na), 2/8/81 (P).

Cored Hunton strata from 11,980 to 12,030 ft. Conodonts recovered by Dr. James E. Barrick (Texas Tech University). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'.

**O. N. SELLERS 1 PAYNE** — SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T12N, R5E, Lincoln County, Oklahoma; elevation GL (Na), DF 1,055 ft; TD 4,941 ft (Wilcox); completion (Na), 12/5/60 (P).

Hunton and upper Viola (Welling?) samples; 9 thin sections. Described in Amsden (1980, p. 95).

**ANADARKO PRODUCTION CO. 1-24-A PHOENIX** — W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T3N, R3W, Garvin County, Oklahoma; elevation GL 1,035 ft, DF 1,048 ft; TD 8,320 ft; completion 3/20/85.

Tops (geophysical logs) Hunton 7,154 ft; Sylvan 7,571 ft; Viola 7,808 ft. Cored Hunton strata from 7,400 to 7,460 ft (OGS Core and Sample Library); 8 samples taken from this interval. Splits from these samples sent to Dr. James E. Barrick (Texas Tech University) for conodont processing; 8 to the Oklahoma Geological Survey Analytical Chemistry Laboratory for rock analyses: 8 specimens were used for thin sections. This interval is a typical low magnesium (5–10% MgCO<sub>3</sub>) fossiliferous marlstone with crinoid plates, brachiopods, trilobites and other representatives of the sessile and vagrant benthos. Identifiable brachiopods include *Nanospira* sp. and *Amphistrophella* (*Amsdenostrophella*) *prolongata*. According to Barrick the conodonts include *Ozarkodina eosteinhornensis*, a species with a known range of Ludlovian to Pridolian. This faunal data indicates a correlation with the Henryhouse Formation, and the lithofacies represented is similar to that exposed in the Arbuckle Mountains ~40 miles to the east. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

I was unable to obtain satisfactory samples of the uncored portion of the Hunton. This well can be compared to the nearby Anadarko 1-35-A Harris and the Anadarko 2-26-A Bradshaw. Examined by Amsden, 1985.

**EL PASO NATURAL GAS CO. 1 PIERCE** — C SW $\frac{1}{4}$  sec. 9, T13N, R25W, Roger Mills County, Oklahoma; elevation GL 2,378 ft; TD 23,447 ft (Viola); completion 5/29/74.

Hunton samples from the 1 Pierce described in Amsden (1975, p. 114). Hunton strata in the 1 Pierce are moderately to heavily dolomitized throughout.

**PAN AMERICAN PETROLEUM CORP. 1 POST UNIT** — C NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T16N, R7W, Kingfisher County, Oklahoma; elevation GL 1,071 ft, DF 1,086 ft; TD 9,274 ft (Ordovician); completion (Na), 12/27/63 (P).

Samples and core (core chips only) examined by Amsden in 1980 for lower Woodford, Hunton, upper Viola; 21 thin sections (samples) and 9 thin sections (core). No diagnostic brachiopods observed; however, Dr. Gilbert Klapper (University of Iowa) reports *Polygnathoides siluricus*

from the core at 8,325 ft (Amsden, 1975, p. 96). Hunton strata in the 1 Post include substantial dolomite throughout. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**MICHIGAN-WISCONSIN PIPE LINE CO. 1 PRICE** — NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T15N, R21W, Roger Mills County, Oklahoma; elevation GL 1,794 ft, DF 1,815 ft; TD 19,980 ft (Sylvan); completion (Na), 8/28/74 (P).

Hunton cored from 19,472 to 19,484 ft; Hunton top (PI card) reported at 19,460 ft. This is a high magnesium dolomite; analysis of three spot samples averaged 42.4% MgCO<sub>3</sub>. No fossils observed. Samples not examined. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D-D'.

**BASS ENTERPRISES PRODUCING CO. 1 PRITCHARD** — C NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T12N, R4E, Lincoln County, Oklahoma; elevation GL (Na), KB 868 ft; TD 5,470 ft (Ordovician); completion (Na), 12/22/82 (P).

Cored from 5,104 to 5,196 ft (lower Woodford, Hunton, upper Sylvan Shale); 11 thin sections and spot samples for MgCO<sub>3</sub> and HCl analysis; Hunton strata cored from 5,173 to 5,186 ft of which the upper 11 ft (5,173–5,184 ft) are heavily dolomitized skeletal grainstone (?Chimneyhill Subgroup); analysis of spot samples range from 14 to 31% MgCO<sub>3</sub>; from 5,184 to 5,186 ft oolitic beds (Keel Oolite) in part heavily dolomitized and silicified; Sylvan Shale at 5,186 ft. Core examined by Amsden, 1985.

**COLUMBIA FUEL 2 RAINY MOUNTAIN** — Sec. 14, T6N, R15W, Kiowa County, Oklahoma; elevation (Na); TD (Na); completion (Na).

Cored 623–633 ft. See Amsden (1975, p. 96). Surface geologic examination in 1986 suggests that neither the 2 Rainy Mountain nor the 3 Rainy Mountain cores cut Hunton strata.

**COLUMBIA FUEL 3 RAINY MOUNTAIN** — Sec. 22, T6N, R15W, Kiowa County, Oklahoma; elevation (Na); TD (Na); completion (Na).

Cored 757–761 ft. See Amsden (1975, p. 96). Surface geologic examination in 1986 suggests that neither the 3 Rainy Mountain nor the 2 Rainy Mountain cores cut Hunton strata.

**UNIVERSAL RESOURCES CORP. 1-20-C RALPH** — C SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 20, T13N, R6W, Canadian County, Oklahoma; elevation GL 1,328 ft, DF 1,342 ft; TD 9,450 ft (Sylvan); completion 12/3/80.

Cored the lower 54 ft of Hunton and upper 26 ft of the Sylvan. Hunton strata are referred to the Chimneyhill Subgroup divisible into Clarita, Cochrane, and Keel Formations based on lithostratigraphy. These are all very low magnesium strata except for the basal 10 ft of the Hunton and upper Sylvan which average ~10% MgCO<sub>3</sub>. 28 thin sections and spot chemical analyses. Core examined 1984–85. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**FALCON-SEABOARD DRILLING CO. 1 REED** — NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, T9N, R7E, Seminole County, Oklahoma; elevation GL 1,004 ft, DF 1,009 ft; TD 4,459 ft (Ordovician); completion (Na), 10/28/52 (P).

Described in Amsden (1980, p. 96); 13 thin sections.

**PAN AMERICAN PETROLEUM CORP. 1 REEVES UNIT** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T20N, R23W, Ellis County, Oklahoma; elevation GL (Na), DF 2,474 ft; TD 14,125 ft (Viola Group); completion 4/4/67.

Lower Woodford–Hunton–Sylvan–upper Viola samples examined by Amsden, 1978; 25 thin sections. Illustrated in Amsden (1980, p. 42, text-fig. 16).

**JONES AND PELLOW OIL CO. 1 REHERMAN** — NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, T15N, R6W, Kingfisher County, Oklahoma; elevation GL 1,164 ft, DF 1,174 ft; TD 7,989 ft (Hunton); completion 12/23/67.

Cored 56 ft of Hunton strata starting 147 ft below the Woodford–Hunton contact. It cuts a fossiliferous section of low magnesium marlstones and skeletal grainstones with several brachiopods in the lower part. Point counts of thin sections in the lower part of the core show: 61% micrite matrix, 18% pelmatozoan plates, 1.6% ostracodes, 5.2% trilobites, 3.9% bryozoans, 4.5% brachiopods. Described in Amsden (1975, p. 96). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A' (which includes a list of brachiopods).

**SUNRAY DX OIL CO. 10-A RENTIE** — NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T9N, R6E, Seminole County, Oklahoma; elevation GL 966 ft, DF 974 ft; TD 4,413 ft (Simpson); completion 6/15/66.

Cored 4,030–4,110 ft (Hunton, upper Sylvan). Described in Amsden (1975, p. 95; 1980, p. 97–98).

**SHERROD & APPERSON 3 J. RICHARDSON** — SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 17, T7N, R4E, Pottawatomie County, Oklahoma; elevation GL (Na), DF 981 ft; TD 4,002 ft (Sylvan); completion (Na), 12/17/51 (df).

Samples examined from 2,750 to 4,003 ft; Woodford–Hunton–Sylvan. Described in Amsden (1980, p. 98).

**AMERADA PETROLEUM CORP. 1 W. A. RICHEY** — N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T25N, R6W, Grant County, Oklahoma; elevation GL 1,072 ft, DF 1,082 ft; TD 6,331 ft (Viola); completion 11/30/64.

Misener Formation cored; conodonts recovered from this core. Described in Amsden and Klapper (1972, p. 2323–2334).

**SAMEDAN 2 RIO BRAVO** — 1,980 ft FSL & 1,980 ft FEL, sec. 23, Blk. 42, H&TC Survey, Hemphill County, Texas; elevation GL 2,546 ft, KB 2,564 ft; TD 15,655 ft (last sample) (Viola Group); completion 3/22/68.

Cored 15,250–15,280 ft (Hunton), 15,460–15,490 ft (Viola). Described in Amsden (1975, p. 97). Reexamined in 1979 and the samples studied from lower Woodford to TD (Viola Group); 19 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C–C'.

**PAN AMERICAN PETROLEUM CORP. 1 ROETZEL UNIT** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 18, T19N, R9W, Kingfisher County, Oklahoma; elevation GL 1,136 ft, DF 1,152 ft; TD 8,825 ft (Hunton); completion 12/19/63.

Hunton core 3,056–8,106 ft, 8,293–8,444 ft. Described in Amsden (1975, p. 97).

**PAN AMERICAN PETROLEUM CORP. 1-B ROETZEL UNIT** — NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 13, T19N, R10W, Blaine County, Oklahoma; elevation GL 1,155 ft, DF 1,170 ft; TD 8,500 ft (Hunton); completion (Na), 12/7/64 (P).

Tops: Woodford 8,407 ft (–7,237 ft), Hunton 8,434 ft (–7,264 ft). Cored 8,414–8,470 ft, (Woodford–Hunton); 5 thin sections; chemical analysis. Described in Amsden (1975, p. 97).

**ROBERT R. BINKLEY, JR., 1 ROGERS** — NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T9N, R8E, Hughes County, Oklahoma; elevation GL 849 ft, DF 854 ft; TD 4,392 ft (Ordovician), completion (Na), 6/4/65 (P).

Lower Woodford–Hunton–Sylvan–Welling samples described in Amsden (1980, p. 98); 11 thin sections.

**LONE STAR PRODUCING CO. 1 B. ROGERS** — C SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T10N, R19W, Washita County, Oklahoma; elevation GL 1,893 ft, DF 1,922 ft; TD 31,441 ft (Arbuckle); completion 7/21/74.

Lower Woodford, Hunton (entire Hunton sequence in a low magnesium lithofacies); Sylvan, Viola (uppermost Viola beds comprise Welling-type skeletal grainstones), Simpson, Arbuckle samples examined; 56 thin sections prepared by Amsden (1975, p. 114–115). *Illustrated on* PLATE 2, STRATIGRAPHIC SECTIONS B–B' and D–D'.

**TEXAS CO. 1 E. D. ROLLS** — C SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T3N, R10W, Comanche County, Oklahoma; elevation GL 1,230 ft, DF 1,241 ft; TD 8,078 ft (Oil Creek); completion (Na), 9/15/42 (df).

Hunton samples, 2,290–3,440 ft. Described in Amsden (1975, p. 115).

**HOROWITZ 1 ROSE** — NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 10, T11N, R7E, Seminole County, Oklahoma; elevation GL (Na), DF 851 ft; TD 4,629 ft (Ordovician); completion 5/21/52.

Lower Woodford–Hunton (base 16,120 ft) Sylvan–upper Viola samples; 9 thin sections. Described in Amsden (1980, p. 99).

**CLEARY PETROLEUM INC. 1-12 ROSE** — E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T22N, R12W, Major County, Oklahoma; elevation GL 1,275 ft, DF 1,285 ft; TD (Na), Ttu 7,794 ft (Viola?); completion 5/30/66.

Described in Amsden (1975, p. 98). Reexamined 1986; numerous fossils including questionable specimen of *Kirkidium* sp. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**J. C. BARNES OIL CO. 1 CECIL ROUNDS** — NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 6, T15N, R18W, Custer County, Oklahoma; elevation GL 1,879 ft, DF 1,900 ft; TD 18,289 ft (Arbuckle); completion (Na), 5/15/68 (df).

Cored Hunton 15,320–15,407 ft. Described in Amsden (1975, p. 98).

**CONTINENTAL OIL CO. 3 E. S. ROWLAND** — C NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 21, T10N, R4W, Cleveland County, Oklahoma; elevation GL (Na), KB 1,189 ft; TD 8,586 ft; completion 6/1/55.



Samples examined from 8,080–8,350 ft (Woodford–Hunton contact 8,140 ft). Core examined from 8,350 to 8,488 ft; 8,560 to 8,590 ft; 8,533 to 8,586 ft (TD). 7 thin sections prepared from the samples and 17 from the core. *Kirkidium*? at 8,352 ft and a pentamerid brachiopod, probably *Kirkidium*, at 8,434 ft. Hunton strata in the 3 Rowland are in a low magnesium facies throughout. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**CHAMPLIN PETROLEUM CO. 1 D. L. SANDERS UNIT** — NE¼NW¼SE¼ sec. 24, T10N, R25W, Beckham County, Oklahoma; elevation GL 1,989 ft, DF 2,017 ft; TD 24,924 ft (Sylvan); completion 2/20/79.

Lower Woodford–Hunton–upper Sylvan samples studied; 44 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D'. Compare to the nearby 1 Kirtley Unit from which it differs mainly in having increased dolomite and increased "birdseye" facies.

**INEXCO OIL CO. 1 SANVE** — C SE¼NW¼ sec. 4, T14N, R22W, Roger Mills County, Oklahoma; elevation 2,149 ft (unk); TD 20,922 ft (Sylvan); completion (Na), 11/25/72 (P).

Samples studied by Amsden, 1979; 20,250–20,922 ft; lower Woodford–Hunton, 20,330 ft (–18,181 ft); Sylvan 20,860 ft (–18,711 ft); TD 20,922 ft (–18,773 ft), Sylvan. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D'.

**DENVER PRODUCTION AND REFINING CO. 1-A SCHOOL LAND** — C SE¼SW¼ sec. 16, T10N, R9W, Caddo County, Oklahoma; elevation GL 1,535 ft; TD 17,094 ft (Arbuckle); completion 9/13/48.

Lower Woodford, Hunton, upper Sylvan samples described; 17 thin sections. Described in Amsden (1975, p. 116).

**GULF OIL CORP. 1 RAY SCHROEDER** — C SW¼NE¼ sec. 3, T12N, R2W, Oklahoma County, Oklahoma; elevation GL (Na), DF 1,193 ft; TD 6,336 ft (Hunton); completion 1/23/50.

Cored the lower Frisco and upper *Kirkidium* biofacies of the Henryhouse Formation. Both formations are fossiliferous and Frisco brachiopods can be observed within a few inches of *Kirkidium* brachiopods. Described in Amsden (1975, p. 98). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**GULF OIL CORP. 1 SHADDIX** — NW¼NE¼ sec. 29, T6N, R3W, McClain County, Oklahoma; elevation GL (Na), DF 1,191 ft; TD 9,312 ft; completion 7/15/57.

Cored 48 ft of fossiliferous Hunton (Frisco Formation). Described in Amsden (1975, p. 98). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**GULF OIL CORP. 1 SHADE** — C SE¼SW¼ sec. 31, T25N, R14W, Woods County, Oklahoma; elevation GL 1,587 ft, DF 1,596 ft; TD 8,000 ft (Arbuckle); completion 1/10/57.

Cored Chimneyhill strata. Described in Amsden (1975, p. 98). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'. Core may have been mixed, after examination for 1975 study.

**GULF OIL CORP. 1-23 SHAFFER** — C SE¼SW¼ sec. 23, T16N, R10W, Blaine County, Oklahoma; elevation GL 1,232 ft; TD 10,785 ft (Sylvan); completion 12/2/80.

Cored Hunton strata from 10,400 to 10,485 ft; 10,600 to 10,673 ft; and 10,684 to 10,700 ft. 25 thin sections prepared and 25 spot samples analyzed for CaCO<sub>3</sub>, MgCO<sub>3</sub>, and HCl insolubles. Conodont samples were sent to Dr. James E. Barrick (Texas Tech University) and the core was examined by Amsden for megafossils. The following is a brief summary of this core.

10,400–10,402 ft Low magnesium fossiliferous oolite; 2 thin sections.

10,402–10,420 ft Crystalline dolomite; 2 spot samples average 37.7% MgCO<sub>3</sub>, 2 thin sections.

10,420–10,485 ft Moderately dolomitic, fossiliferous marlstone; moderately large pentamerid fragments, probably *Kirkidium* sp. 6 thin sections; MgCO<sub>3</sub> average 13.8%; 9.1% HCl insolubles (*Kirkidium* biofacies).

10,485–10,600 ft No core.

10,600–10,638 ft Skeletal grainstone; 4 samples average 3.5% MgCO<sub>3</sub>, 9.1% HCl insolubles. Dr. James E. Barrick (Texas Tech University) identifies specimens of *Belodella silurica* at 10,626 ft indicating a late Wenlockian age in Chimneyhill Subgroup (Barrick and Klapper, 1976, p. 66).

10,638–10,673 ft Marlstone grading into skeletal grainstone in the lower part; 4 spot samples averaging 6.5% MgCO<sub>3</sub> and 8.5% HCl insolubles. Specimens of the conodont

10,673–10,684 ft (no core) *Kockelella* sp. at 10,692 ft; small brachiopods at 10,695 ft include *Orthostrophella*, sp., *Acutilineolus* sp., *Merista* sp. *Nanospira* sp. The lower beds are slightly glauconitic (Chimneyhill Subgroup).

10,684–10,700 ft

**MOBIL OIL CO. 1 SHARP-HUNT UNIT** — E½E½NW¼ sec. 26, T15N, R16W, Custer County, Oklahoma; elevation GL 1,740 ft, DF 1,758 ft; TD 10,343 ft (Sylvan); completion 12/21/64.

This well was reworked by Mobil Oil Co., designated as the 1-DD Sharp-Hunt Unit; TD 14,790 ft (Sylvan); completion 2/26/66.

Cored the upper 198 ft of Hunton of which the uppermost 50 ft is high magnesium dolomite; two spot samples average 29.4% MgCO<sub>3</sub> (Amsden, 1975, p. 98–99). Samples from this well were examined in 1979 and 16 thin sections prepared. This part of the Hunton is mostly a low magnesium marlstone interbedded with some skeletal grainstones. The basal 50 ft of the Hunton included interbeds of crystalline dolomite. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D'.

**KIRKPATRICK OIL CO. 1 SHEWEY UNIT** — C SW¼NE¼ sec. 28, T22N, R12W, Major County, Oklahoma; elevation GL 1,255 ft, DF 1,266 ft; TD 8,080 ft (Sylvan); completion 6/12/66.

Described in Amsden (1975, p. 99). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.



**KIRKPATRICK OIL CO. 1-A SHEWEY** — C NW¼ sec. 27, T22N, R12W, Major County, Oklahoma; elevation GL 1,247 ft, DF 1,258 ft; TD (Na), Ttu 8,070 ft (Hunton Group); completion 6/13/66.

Described in Amsden (1975, p. 99). Reexamined 1986, and a specimen of *Acutilineolus* sp. recovered. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

**FLEET DRILLING CO. 1 SINCLAIR** — C NE¼NE¼ sec. 14, T4N, R8E, Pontotoc County, Oklahoma; elevation GL 883 ft, DF 892 ft; TD 6,202 ft (Arbuckle); completion 11/22/57.

Hunton, Sylvan, Welling, Bromide samples examined; 19 thin sections. Described in Amsden (1980, p. 101-102).

**MAGNOLIA PETROLEUM CO. 1 H. TROY SMITH** — SW¼NW¼ sec. 12, T11N, R11W, Caddo County, Oklahoma; elevation GL 1,670 ft, DF 1,686 ft; TD 15,500 ft (Hunton); completion (Na), 8/9/59 (P).

Core (chips only available) 15,256-15,276 ft (Woodford); 15,295-15,433 ft (Hunton; Henryhouse); samples 15,433-15,500 ft (TD). 50 thin sections; samples and core examined by Amsden, 1981. Entire Hunton interval is a fossiliferous marlstone, moderately silty and dolomitic in upper part, with reduced silt and dolomite in the lower part. A well-preserved specimen of *Coelospira saffordi* at 15,361 ft; based on this brachiopod the Hunton strata are referred to the Late Silurian Henryhouse Formation.

**HUMBLE OIL AND REFINING CO. 1 STATE** — C NE¼ NW¼ sec. 16, T18N, R7W, Kingfisher County, Oklahoma; elevation GL 1,120 ft, DF 1,131 ft; TD 8,295 ft (Sylvan); completion 2/10/69.

Core was first examined in 1970 and a description of the lithostratigraphy and faunal characteristics are given in Amsden (1975, p. 99). Reexamined 1986. The core is divisible into two parts, an upper, heavily dolomitized skeletal carbonate averaging 37.15% MgCO<sub>3</sub>, and a lower fossiliferous marlstone with greatly reduced dolomitization averaging 16.6% MgCO<sub>3</sub>. The upper dolomite has numerous corals, both solitary and colonial, tetracorals, tabulates, haly-sitids. Brachiopods are present including some pentamerids, most of which are smooth; the ribbed ones are all small, and the presence of *Kirkidium* cited in 1975 cannot be established with certainty. The stratigraphic position of the upper dolomite with respect to other cored wells in this region which do yield unquestioned *Kirkidium* would suggest, however, that this is the equivalent horizon. See PLATE 1, PRE-WOODFORD SUBCROP MAP.

**CARTER OIL CO. et al. 1 STATE-TAYLOR** — C SW¼ SW¼ sec. 31, T9N, R21W, Beckham County, Oklahoma; elevation 1,861 ft (unk); TD 10,450 ft (Ordovician); completion (Na), drilling started 11/14/51.

Samples examined from base of Pennsylvanian: Hunton, upper Sylvan; 13 thin sections. Described in Amsden (1975, p. 116).

**JAMES G. GLASS 1 STEWART** — C SE¼NW¼NW¼ sec. 32, T12N, R6E, Lincoln County, Oklahoma; elevation GL 971 ft, DF 977 ft; TD 4,739 ft; (Ordovician); completion (Na), 12/20/61 (P).

Samples described: Misener-Hunton-Sylvan-Viola (Welling?); 12 thin sections. Described in Amsden (1980, p. 102).

**FERGUSON OIL CO. INC. 1 STINSON** — NE¼NE¼ SE¼ sec. 21, T18N, R7W, Kingfisher County, Oklahoma; elevation GL 1,098 ft, DF 1,105 ft; TD 8,160 ft (Sylvan); completion 2/3/73.

Described in Amsden (1975, p. 99).

**SHELL OIL CO. 1-32 STOCKING** — SE¼NW¼ sec. 32, T22N, R19W, Woodward County, Oklahoma; elevation GL 1,971 ft, DF 1,981 ft; TD 11,300 ft (Ordovician); completion (Na), 7/5/67 (P).

Described in Amsden (1975, p. 100); core restudied, 1985; 6 additional thin sections prepared from the cored portion, and well samples examined from end of core to base of the Hunton; 11 thin sections prepared. The upper part of the cored portion has a rich benthic fauna with a number of corals including *Halysites* sp., tetracorals, tabulates, stromatoporoids and other shelly fossils. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B-B'. Conodonts reported from this core by Dr. James E. Barrick (Texas Tech University) include *Walliserodus* sp.

**GULF OIL CORP. 1 STREETER** — C SE¼SE¼ sec. 20, T13N, R4W, Oklahoma County, Oklahoma; elevation GL (Na), DF 1,189 ft; TD 7,308 ft (Sylvan); completion 5/21/45.

The Gulf 1 Streeter provides an important stratigraphic core which cuts a complete sequence of Hunton in a fossiliferous limestone facies: lower Woodford-Hunton Group; Frisco Formation, *Kirkidium* biofacies of the Henryhouse Formation, Chimneyhill Subgroup-Sylvan Shale. Described in Amsden (1975, p. 100-101; pls. 2,7,14,15). *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A-A'.

The Gulf 1 Streeter core was examined by Amsden (1975, p. 100-101) and reexamined by Amsden in 1981 at which time a specimen of the St. Clair Limestone (Chimneyhill Subgroup) brachiopod *Hirciniscia havliceki* Amsden (1968, p. 60) was recovered at 7,290 ft. Core samples were sent to Dr. James E. Barrick (Texas Tech University) for conodont analysis. In a letter dated Aug. 11, 1989, he makes the following observations regarding conodonts from the Streeter core: the base of the Clarita-Wenlockian sequence is at 7,292 ft (*Pterospiriferus amorphognathoides*); at 7,284 ft an early Wenlockian age is indicated by the presence of *Kockelella ranuliformis*. He does not think that Wenlockian strata extend much above 7,270 ft.

This data base indicates a very thin Wenlockian-Llando-verian sequence in the 1 Streeter. The 1 Streeter core has been examined many times since it was first described by Amsden in 1975, and the possibility of some core mixing cannot be eliminated. However, the data are internally consistent, and the overall thickness is not significantly different from other Llando-verian-Wenlockian penetrations in this general area (see PLATE 1, STRATIGRAPHIC SECTION A-A').

**NONDORF OIL AND GAS INC. 1-25 SULLIVAN** — C SW¼SE¼NW¼ sec. 25, T5S, R2W, Carter County, Oklahoma; elevation GL 897 ft; TD 9,786 ft; completion 6/9/82. Misener Formation cored.

**TEXAS PACIFIC OIL CO. INC. 1-17 SULLIVAN** — C SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, T5S, R3W, Carter County, Oklahoma; elevation GL 912 ft, DF 923 ft; TD 9,520 ft (Sylvan); completion 2/18/71.

Cored ~10 ft of upper Hunton marlstone (top of core ~10 ft below Woodford contact); three spot samples average 10.3% HCl insolubles, 4.1% MgCO<sub>3</sub>. Sample examination shows low magnesium marlstone extends down to top of Chimneyhill Subgroup at 9,430 ft; upper 50 ft of marlstone is low in terrigenous detritus, but from 9,200 to 9,430 ft (top of Chimneyhill) the terrigenous detritus increases sharply and red beds are present. Chimneyhill skeletal limestone from 9,430 to 9,460 ft; 9,460–9,490 ft much glauconite (Cochrane?); 9,490–9,500 ft Keel Oolite. 17 thin sections; core and samples examined by Amsden, 1986; chemical analyses of core samples, OGS Chemistry Laboratory.

Dr. James E. Barrick (Texas Tech University) recovered conodonts from the core at 9,015 ft; elements of *Bellodella* sp. suggest a late Ludlovian or younger age.

**HELMERICH & PAYNE INC. 1 SUTTON UNIT** — C SW $\frac{1}{4}$  sec. 23, T10N, R26W, Beckham County, Oklahoma; elevation GL 2,141 ft, DF 2,165 ft; TD 17,305 ft; completion 10/26/77.

Samples examined from 15,300 to 17,300 ft (TD). Hunton strata appear to have been exposed to considerable structural deformation, and no recognizable sequence could be identified.

**TEXACO INC. 1 THEO THOMSEN** — C SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T17N, R8W, Kingfisher County, Oklahoma; elevation 1,193 ft (unk); TD 9,130 ft; completion 10/14/69.

Cored 8,867–8,904 ft (Hunton). Described in Amsden (1975, p. 101).

**RODEN OIL CO. 1-12 THRASHER** — C SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 12, T19N, R8W, Kingfisher County, Oklahoma; elevation GL 1,235 ft, DF 1,244 ft; TD 8,290 ft (Sylvan); completion 4/27/69.

Described in Amsden (1975, p. 101).

**CALIFORNIA OIL CO. 1 N. E. TICER et al., 1 UNIT** — C NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 33, T5S, R2W, Carter County, Oklahoma; elevation GL 879 ft, DF 892 ft; TD 9,636 ft (Sylvan); completion 4/22/62.

Described in Amsden (1975, p. 101).

**FRANK A. KING 1 TIGER** — NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 3, T8N, R5E, Seminole County, Oklahoma; elevation GL (Na), DF 909 ft; TD 4,292 ft (Simpson Group); completion 2/12/69.

Cored 3,921–3,960 ft (Hunton–Sylvan). Described in Amsden (1975, p. 102).

**GULF OIL CORP. 1 TRIPLET** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 8, T15N, R5W, Kingfisher County, Oklahoma; elevation 1,096 ft (unk); TD 7,692 ft (Sylvan); completion (Na), 6/28/45 (P).

Cored 7,406–7,411 ft (Hunton). Described in Amsden (1975, p. 102).

**PAN AMERICAN PETROLEUM CORP. 1 TSAUBY** — NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T7N, R13W, Caddo County, Oklahoma; elevation GL 1,433 ft, DF 1,447 ft; TD 8,478 ft (Simpson Group); completion (Na), 5/11/64 (P).

Cored 9 ft of cherty limestone. Described in Amsden (1975, p. 102).

**CALVERT EXPLORATION CO. 1 USA** — C NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T23N, R13W, Woods County, Oklahoma; elevation GL 1,441 ft, DF 1,451 ft; TD 8,394 ft (Wilcox Sand); completion 11/7/62.

Lower Woodford–Hunton–Sylvan–upper Viola samples examined in 1976; 13 thin sections. *Illustrated on* PLATE 1, STRATIGRAPHIC SECTION A–A'.

**KEITH F. WALKER 1 CHAN RIX VICTORY** — C W $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 32, T3S, R2W, Carter County, Oklahoma; elevation 935 ft (unk); TD 9,473 ft (Sylvan); completion 4/20/81.

Samples examined 9,000–9,473 ft (TD). Upper part (9,000–9,150 ft) appears mixed (faulted?), but from 9,200 ft to TD appears to be an uninterrupted sequence of low magnesium marlstone (9,150–9,380 ft) underlain by low magnesium skeletal grainstones, glauconitic in the lower part (Chimneyhill); Sylvan Shale 9,430–9,473 ft (TD). Samples examined by Amsden, 1987; 13 thin sections.

**GENERAL AMERICAN OIL CO. OF TEXAS, CLARK CANADIAN EXPLORATION CO. 1 VIERSEN UNIT** — NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T15N, R22W, Roger Mills County, Oklahoma; elevation GL 2,140 ft, DF 2,158 ft; TD (Na), Ttu 19,244 ft (Viola); completion 4/19/72.

Basal Woodford–Hunton–upper Sylvan samples described; 14 thin sections. Described in Amsden (1975, p. 116).

**MOBIL OIL CO. 1 WALKER** — 1,980 ft FNL & 660 ft FWL sec. 5, J. Poitevent Survey, Wheeler County, Texas; elevation 2,365 ft (unk); TD 17,772 ft; completion 1969.

Cored 14,970–15,029 ft. Described by Amsden (1975, p. 102). Referred cored interval to Late Silurian based on spiriferoid brachiopods, but W. A. M. Jenkins (personal communication, 1969) assigned the cored interval to Lower Devonian (Helderbergian) based on the ostracodes *Moelleritia canadensis* and *Eukloedenella* sp. and the spores *Emphanisporitus* and *Retusotriteles* sp. Hunton–Viola samples examined by Amsden, 1979. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D'.

**CHAMPLAIN 1 WATERFIELD–HELTON** — 2,300 ft FNL, 2,200 ft FWL, sec. 25, Blk. A1, H&GN Survey, Hemphill County, Texas; elevation GL 2,466 ft, KB 2,493 ft; TD 19,880 ft (Sylvan); completion 6/3/69.

Well samples, Amarillo Sample, Amarillo, Texas. Samples examined by Amsden. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION C–C'.

**PHILLIPS PETROLEUM CO. 1-A WESNER** — C SW $\frac{1}{4}$  sec. 35, T9N, R17W, Washita County, Oklahoma; elevation GL 1,543 ft, KB 1,573 ft; TD 23,534 ft (Hunton); completion (Na), 4/16/68 (P).

Samples examined: lower Woodford, Hunton ending in

the Chimneyhill Subgroup; 15 thin sections. Described in Amsden (1975, p. 117).

**STANDARD OIL CO. OF TEXAS 1 WHEELER UNIT** — 2,470 ft FNL & 1,980 ft FWL, sec. 25, Blk. A-4 H&GN Survey, Wheeler County, Texas; elevation GL 2,451 ft, KB 2,478 ft; TD 18,438 ft; completion 2/4/69.

Tops: Hunton 15,910 ft (−13,459 ft); Sylvan (GR log) 16,627 ft (−14,176 ft); Hunton thickness 717 ft; cored 15,592–15,943 ft. Described in Amsden (1975, p. 103). Well samples borrowed from Chevron, 1979, examined by Amsden for this report; 31 thin sections. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D’.

Amsden (1975, p. 103) tentatively identified *Amphigenia* sp. from the core, but a re-study of this specimen suggests a representative of *Rensselaeria* sp. and a Frisco, rather than a Sallisaw, correlation.

The study of Hunton cores in western Oklahoma and the Texas Panhandle shows the local presence of Early Devonian strata representing Helderbergian, Deerparkian, and Sawkillian Stages. These appear to be erosional remnants preserved beneath the Woodford Shale.

**TEXACO INC. 1 L. O. WHEELER UNIT** — C SW¼NE¼ sec. 25, T25N, R18W, Woodward County, Oklahoma; elevation GL 1,780 ft, DF 1,788 ft; TD 7,810 ft; completion 8/20/66.

Cored 7,730–7,775 ft, examined by Amsden, 1985; conodont samples sent to Dr. James E. Barrick (Texas Tech University). Core from 7,730 to 7,755 ft, low magnesium, cherty, glauconitic limestone; some shelly fossils; Barrick (personal communication) reports Llandoveryan C<sub>5</sub> age conodonts; from 7,755 to 7,775 ft, heavily to moderately dolomitized limestone; glauconitic in lower part. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B–B’.

**JONES-SHELBURNE INC. 1 WHITWORTH** — C SW¼ SE¼SW¼ sec. 2, T5N, R5E, Seminole County, Oklahoma; elevation 916 ft (unk); TD 2,824 ft (Sylvan); completion 7/15/52.

Samples described in Amsden (1980, p. 105); lower Woodford, Hunton, Sylvan shale; 13 thin sections.

**NATO PETROEUM CORP. 1 WICHERT** — NW¼SE¼ NW¼ sec. 26, T22N, R12W, Major County, Oklahoma; elevation GL 1,220 ft, DF 1,230 ft; TD 8,001 ft (Sylvan); completion 4/22/67.

Described in Amsden (1975, p. 103–104).

**GETTY OIL CO. 1 WILLIAMS** — 1,324 ft FSL, 1,328 ft FEL, sec. 2, Blk. E, T&NO Survey, Wheeler County, Texas; elevation GL 2,545 ft, KB 2,574 ft; TD (Na); completion 9/8/74.

Tops: (well samples) Hunton 14,490 ft (−11,916 ft), Sylvan 15,220 ft (−12,646 ft). Samples (Amarillo Sample, Amarillo, Texas) examined from lower Woodford to TD (Arbuckle Group); 53 thin sections. *Hunton illustrated on* PLATE 2, STRATIGRAPHIC SECTION D–D’.

**W. C. PAYNE 1 WILLMS** — C NW¼SE¼ sec. 11, T15N, R5W, Kingfisher County, Oklahoma; elevation GL 1,092 ft, DF 1,103 ft; TD 7,116 ft (Hunton), completion 1/11/67.

Cored Woodford–Hunton 7,068–7,095 ft. Described in Amsden (1975, p. 104).

**S. D. JOHNSON 1 WILLIAMSON** — SE¼NW¼SE¼ sec. 1, T3S, R17W, Tillman County, Oklahoma (Hollis basin); elevation 1,179 ft (unk); TD (Na), Ttu 6,241 ft (Arbuckle Group); completion (Na), 7/31/56 (P).

Samples examined 5,000–6,241 ft (TD). 5,000–5,500 ft, Pennsylvanian, mixed fusulinid limestone, sandstone, chert, limestone with rounded quartz grains; 5,500–5,560 ft, Hunton–Chimneyhill Subgroup, low magnesium, pink crinoidal limestone; bryozoans; 5,560–5,610 ft, Sylvan Shale; 5,610–5,710 ft, Viola Group (Welling Formation), organo-detrital limestone; minor chert, no dolomite; 5,700 ft, organo-detrital sparite with rounded quartz grains; 5,770–6,140 ft, Bromide–Simpson Formations(?); 6,140–6,241 ft, Arbuckle Group dolomite(?). 38 thin sections examined by Amsden. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTION B–B’.

**HELMERICH & PAYNE INC. 1-2 WILLINGHAM** — C SE¼ sec. 2, T7N, R17W, Kiowa County, Oklahoma; elevation GL 1,524 ft, DF 1,541 ft; TD 11,500 ft (Arbuckle); completion (Na), 7/7/85 (P).

Amsden examined the 1-2 Willingham samples from 5,700 to 9,800 ft (Woodford to Arbuckle); 50 thin sections prepared. A brief summary of Hunton strata follows:

to 5,980 ft	Woodford: dark shale with much chert.
5,980–7,510 ft	Hunton Group.
5,980–6,430 ft	Low magnesium skeletal grainstones with chert (Frisco?).
6,430–7,100 ft	Low magnesium, fossiliferous marlstone with some silt.
7,100–7,300 ft	Low magnesium marlstone with increased silt-clay and with some mottled red beds.
7,300–7,510 ft	Chimneyhill organo-detrital limestones; low magnesium except for bottom 50 ft which has some dolomite beds; some chert present throughout.
7,510–7,690 ft	Sylvan Shale.

**GULF OIL CORP. 1 WILLIS** — SW¼NW¼SE¼ sec. 20, T8N, R2E, Pottawatomie County, Oklahoma; elevation 1,098 ft (unk); TD 6,315 ft; completion 10/14/53.

Cored 5,403–5,477 ft (Hunton; Frisco Formation). Core with Frisco brachiopods described in Amsden (1975, p. 104).

**FEDERAL PETROLEUM INC. 1 WOLLESON** — N½ NW¼NE¼ sec. 22, T21N, R2W, Noble County, Oklahoma; elevation GL 1,048 ft, DF 1,056 ft; TD 5,250 ft (Ordovician); completion (Na), 4/25/69 (P).

Tops: Misener 5,077 ft (−4,021 ft), Ordovician. Described in Amsden (1975, p. 104); see also Amsden and Klapper (1972).

**CONOCO INC. 1 WOODRUFF** — C SE¼ sec. 16, T16N, R10W, Blaine County, Oklahoma; elevation GL 1,256 ft, DF 1,274 ft; TD 10,889 ft (Sylvan); completion 1/6/81.

Cored the Hunton from 10,447 to 10,490 ft; core examined by Amsden, 1985; 14 thin sections, (2 point counted); 13 spot samples for chemical analyses. A brief summary of

the cored interval follows:

- (Woodford–Hunton contact, 10,420 ft)
- 10,447–10,460 ft Crystalline dolomite; average of 5 spot samples, 38.9% MgCO<sub>3</sub>. Some shelly debris and pelmatozoan plates preserved in spar.
- 10,460–10,488 ft Heavily dolomitized skeletal limestone; 3 spot samples average 33.4% MgCO<sub>3</sub>. Mostly shell debris and pelmatozoan plates in a dolomite matrix and including specimens of *Kirkidium* sp. including nearly intact valves >100 mm long. Two thin sections point counted: W6 – 51% matrix (crystalline dolomite), 3.2% crinoids, 37.9% brachiopods; rest unidentified; W8 – 53% matrix (crystalline dolomite), 23% crinoids, 17% brachiopods; remainder unidentified.
- 10,488–10,490 ft Crystalline dolomite. Spot sample 33.8% MgCO<sub>3</sub>.

**ARKLA EXPLORATION CO. 1-4 WRIGHT** — NE $\frac{1}{4}$  SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 4, T14N, R17W, Custer County, Oklahoma; elevation GL 1,774 ft, DF 1,793 ft; TD 16,700 ft (Viola); completion 4/27/72.

Lower Woodford–Hunton–Sylvan and upper Viola samples (15,900–16,700 ft) examined; 22 thin sections. Hunton strata are largely in a heavily dolomitized (much crystalline dolomite) facies. *Illustrated on* PLATE 2, STRATIGRAPHIC SECTIONS B–B' and D–D'.

**R. H. VISE 2-A WRIGHT** — SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 3, T8N, R4E, Pottawatomie County, Oklahoma; elevation GL 989 ft, DF 994 ft; TD 4,365 ft (Viola Group); completion (Na), 7/4/59 (df).

Described in Amsden (1980, p. 105).

**GULF OIL CORP. 1 WRIGHT HEIRS** — NW $\frac{1}{4}$ SW $\frac{1}{4}$  NW $\frac{1}{4}$  sec. 5, T12N, R2W, Oklahoma County, Oklahoma; elevation GL 1,109 ft, DF 1,116 ft; TD 6,345 ft (Hunton); completion 10/16/48.

Cored Woodford–Misener–Hunton. Described in Amsden (1975, p. 105).

**USSRAM EXPLORATION CO. 1 GLEN O. YOUNG** — C NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 13, T13N, R5E, Lincoln County, Oklahoma; elevation GL 795 ft, DF 801 ft; TD 4,959 ft (Arbuckle); completion 4/15/59.

Cored all of the Hunton (core chips only examined by Amsden) which is represented almost entirely by crystalline dolomite; 10 thin sections. Samples of Ordovician strata down to the Arbuckle also studied; 13 thin sections. Described in Amsden (1980, p. 105).

**CALIFORNIA OIL CO. 1 L. A. ZELLERS et al.** — C SE $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 28, T5S, R2W, Carter County, Oklahoma; elevation GL 941 ft, DF 956 ft; TD 9,956 ft (Sylvan); completion 6/21/62.

Cored 9,825–9,875 ft (Hunton); Chimneyhill Subgroup; 4 thin sections; brachiopod *Triplesia alata* at 9,869 ft. Described in Amsden (1975, p. 105).

## REFERENCES CITED

- Amsden, T. W., 1960, Hunton stratigraphy, *part 6 of Stratigraphy and paleontology of the Hunton Group in the Arbuckle Mountain region*: Oklahoma Geological Survey Bulletin 84, 311 p., 17 pls.
- , 1968, Articulate brachiopods of the St. Clair Limestone (Silurian), Arkansas, and the Clarita Formation (Silurian), Oklahoma: Paleontological Society Memoir 1 (Journal of Paleontology, v. 42, no. 3, supp.), 117 p., 20 pls.
- , 1975, Hunton Group (Late Ordovician, Silurian, and Early Devonian) in the Anadarko basin of Oklahoma: Oklahoma Geological Survey Bulletin 121, 214 p., 15 pls.
- , 1980, Hunton Group (Late Ordovician, Silurian, and Early Devonian) in the Arkoma basin of Oklahoma: Oklahoma Geological Survey Bulletin 129, 136 p., 12 pls.
- , 1981, Biostratigraphic and paleoenvironmental relations: a Late Silurian example, in Broadhead, T. W. (ed.) Lophophorates, notes for a short course organized by J. T. Dutro, Jr., and R. S. Boardman: University of Tennessee, Department of Geological Sciences, Studies in Geology 5, p. 154–169.
- , 1983, *Coelospira concava* (Hall) from the Pinetop Chert (Early Devonian), Ouachita Mountains, Oklahoma: Journal of Paleontology, v. 57, p. 1244–1260.
- Amsden, T. W.; and Barrick, J. E., 1988, Late Ordovician through Early Devonian annotated correlation chart and brachiopod range charts for the southern Midcontinent region, U.S.A., with a discussion of Silurian and Devonian conodont faunas: Oklahoma Geological Survey Bulletin 143, 66 p., 7 pls.
- Amsden, T. W.; and Kapper, Gilbert, 1972, Misener Sandstone (Middle–Upper Devonian), north-central Oklahoma: American Association of Petroleum Geologists Bulletin, v. 56, p. 2323–2334.
- Amsden, T. W.; Klapper, Gilbert; and Ormiston, A. R., 1968, Lower Devonian limestone of post-Hunton age, Turkey Creek inlier, Marshall County, south-central Oklahoma: American Association of Petroleum Geologists Bulletin, v. 52, p. 162–166.
- Amsden, T. W.; Toomey, D. F.; and Barrick, J. E., 1980, Paleoenvironment of Fitzhugh Member of Clarita Formation (Silurian, Wenlockian), southern Oklahoma: Oklahoma Geological Survey Circular 83, 54 p., 7 pls.
- Barrick, J. E.; and Klapper, Gilbert, 1976, Multielement Silurian (late Llandoveryan–Wenlockian) conodonts of the Clarita Formation, Arbuckle Mountains, Oklahoma, and phylogeny of *Kockelella*: *Geologica et Palaeontologia*, v. 10, p. 59–99.
- Morgan, W. A.; and Schneider, R. E., 1981, Subtle porosity and traps within Frisco Formation (Devonian, Hunton Group): geologic–seismic waveform approach, example from West El Reno field, Canadian County, Oklahoma [abstract]: American Association of Petroleum Geologists Bulletin, v. 65, p. 960–961.