

## Data Structures

---

The data files (also available as a Microsoft Excel™ (version 5.0) workbook, and as a set of four ASCII files elsewhere on this CD-ROM) are organized as follows: vitrinite-reflectance data from outcrops, vitrinite-reflectance data from wells, conodont color-alteration-index data from outcrops, and conodont color-alteration-index data from wells. The ASCII files are tab-delineated, with the first two records consisting of a title and field labels, respectively.

The file “Ro Outcrop Data” contains 3, 943 mean vitrinite-reflectance values from 2,319 localities. Each record consists of 10 fields. The first field is a record number beginning with the prefix “VO-” and ending with a four-digit number that is provided merely for cross-referencing purposes, and is unique to each record; record numbers higher than VO-3716 are additions to the data reported in Open-File Report 92-409. The second field is the 1:250,000-scale quadrangle corresponding to the sample locality; samples collected offshore are from dredge hauls. The third and fourth fields are the latitude and longitude of the sample locality, expressed in decimal degrees north and west, respectively. Sample localities from USGS and PGS sources were taken from 1:63,360- or 1:250,000-scale topographic maps by the geologist collecting the sample. Localities for data taken from the literature, if not tabulated by the authors, were determined from location maps or figures provided by the authors. Localities presented in section-township-range format were converted to decimal degrees, taking the center of the section as the sample locality; the resulting loss of precision is reflected in the data file by our reporting these data to only the nearest thousandth of a degree (three decimal places). Data provided by oil companies commonly were reported in section-township-range format. The fifth field is the sample elevation, if known, in meters above or below (-) sea level. The sixth field is the collectors’ sample number. The seventh and eighth fields are the stratigraphic age and lithologic unit from which the sample was collected, if known. Note that ages are expressed in stratigraphic terms—Lower, Middle, and Upper—and that these terms are abbreviated “L.,” “M.,” and “U.” The ninth field is the mean vitrinite reflectance in oil ( $R_o$ ), in percent. This is an interpretive value corresponding to the indigenous vitrinite population;

*(continued on next page)*



**Forward**



**Back**

**Return to  
Data Menu**

**Return to  
Main Menu**

**Quit**

## Data Structures (continued)

---

most operators, after examining the histogram of individual vitrinite-reflectance values, exclude individual values from the calculation of the mean if they could reflect nonvitrinite or recycled material. Where more than one sample was available from a single locality, the mean value was used to represent the thermal maturity at that locality. Any value lying beyond two standard deviations of the mean was excluded from the calculation. The tenth field is the source of the data; see “sources of data” for a key to sources. Samples for which the data source is followed by “[Pawlewicz]” were analyzed by M.J. Pawlewicz in USGS laboratories, and the sample preparation and analytical techniques are described in “methods.”

The file “CAI Outcrop Data” contains 1,491 conodont color-alteration-index determinations from 1,323 localities in Alaska. Each record consists of 11 fields. The first field is a record number, beginning with the prefix “CO-” and ending with a four-digit number that is a record number for cross-reference purposes; numbers higher than CO-1500 represent additions to the data reported in Open-File Report 92-409. The second field is the 1:250,000-scale quadrangle corresponding to the sample locality. The third and fourth fields are the latitude and longitude of the sample locality, expressed in decimal degrees north and west, respectively. Sample locations generally were taken from 1:63,360-scale topographic maps by the geologist collecting the sample. The fifth field is the collectors’ sample number. The sixth field is the stratigraphic age of the sample, as determined from conodont biostratigraphy. Note that ages are expressed in stratigraphic terms—Lower, Middle, and Upper—and that these terms are abbreviated “L.,” “M.,” and “U.” The seventh field is the rock unit from which the sample was collected, if known. Note that the age determination may not, in some cases, correspond to the known age of the supposed rock unit sampled. Many of the conodont samples were collected in the course of geologic mapping to help identify stratigraphic units, and if the conodont age does not match the known stratigraphic age, then the rock unit reported in field seven is suspect. The eighth and ninth fields are the minimum and maximum conodont color alteration index, respectively, observed in conodonts from the sample. Where more than one sample was available from a single locality, the mean value was used to represent the

*(continued on next page)*



**Forward**



**Back**

**Return to  
Data Menu**

**Return to  
Main Menu**

**Quit**

## Data Structures (continued)

thermal maturity at that locality. Any value lying beyond two standard deviations of the mean was excluded from the calculation. The tenth field is the individual or corporation that collected the sample, and the eleventh field is the individual who performed the CAI determination. Nearly all CAI determinations were made by A.G. Harris, and her sample preparation and analytical techniques are described in “methods.”

The file “Ro Well Data” contains 4,990 mean vitrinite reflectance values from 224 wells. Each record consists of 10 fields. The first field is a record number beginning with the prefix “VW-” and ending with a four-digit number that is provided merely for cross-referencing purposes and is unique to each record. Record numbers higher than VW-4482 are additions to the data presented in Open-File Report 92-409. The next six fields (fields 2 through 7) are identical in all records corresponding to a given well. The second field is the 1:250,000-scale quadrangle on which the well is located. The third and fourth fields are the well name and its American Petroleum Institute number, respectively. The fifth and sixth fields are the latitude and longitude of the well top, expressed in decimal degrees north and west, respectively. The seventh field is the elevation of the Kelley bushing, in meters above sea level. This value can be used in conjunction with the sample depth (the eighth field) to obtain XYZ coordinates for each sample. Latitude, longitude, and Kelley bushing elevation are from the Petroleum Information Corporation’s Well History Control System (WHCS) file. For some wells, the elevation datum was not the Kelley bushing but the ground elevation. For those wells, ground elevation is reported in field 7. The eighth field is the sample depth, uncorrected for well deviation. For cutting samples, the lower limit of the depth range corresponding to the cutting samples is reported in field 8. The ninth field is the mean vitrinite reflectance in oil ( $R_0$ ), in percent. This is an interpretive value corresponding to the indigenous vitrinite population; most operators, after examining the histogram of individual vitrinite-reflectance values, exclude individual values from the calculation of the mean if they could reflect nonvitrinite or recycled material. The tenth field is the source of the data; see “sources of data” for a key to sources. Samples for which the data source is followed by “[Pawlewicz]” were analyzed by

*(continued on next page)*



**Forward**



**Back**

**Return to  
Data Menu**

**Return to  
Main Menu**

**Quit**

## Data Structures (continued)

M.J. Pawlewicz in USGS laboratories, and the sample-preparation and analytical techniques he adopted are described in “methods.”

The file “CAI Well Data” (and its ASCII and PDF file equivalents) contains 18 conodont color-alteration-index determinations from 14 wells. Each record consists of 14 fields. The first field is a record number, beginning with the prefix “CW-” and ending with a four-digit number that corresponds to the record number in the USGS database maintained by A.G. Harris from which the data were extracted. The next six fields (fields 2 through 7) are identical in all records corresponding to a given well. The second field is the 1:250,000-scale quadrangle on which the well is located. The third and fourth fields are the well name and its American Petroleum Institute number, respectively. The fifth and sixth fields are the latitude and longitude of the well top, expressed in decimal degrees north and west, respectively. The seventh field is the elevation of the Kelley bushing, in meters above sea level. This value can be used in conjunction with the sample depth (the eighth field) to obtain XYZ coordinates for each sample. Latitude, longitude, and Kelley bushing elevation are from the Petroleum Information Corporation’s Well History Control System (WHCS) file. The eighth field is the sample depth, uncorrected for well deviation. Depth ranges correspond to the interval over which cuttings were collected. The ninth field is the stratigraphic age of the sample, as determined from conodont biostratigraphy. Note that ages are expressed in stratigraphic terms—Lower, Middle, and Upper—and that these terms are abbreviated “L.,” “M.,” and “U.” The tenth field is the rock unit from which the sample was collected, if known. The eleventh and twelfth fields are the minimum and maximum conodont color-alteration-index, respectively, observed in conodonts from the sample. The thirteenth field is the individual or corporation that collected the sample, and the fourteenth field is the individual who performed the CAI determination (A.G. Harris in all cases). Sample preparation and analytical techniques are described in “methods.”



Forward



Back

Return to  
Data Menu

Return to  
Main Menu

Quit