
TABLES

GOOD TABLES ARE ESSENTIAL to scientific reports simply because some information is presented best in tabular form. This section contains recommendations for designing tables and provides examples of tables (tables 8–13) that incorporate features likely to be used by authors preparing reports for the Geological Survey. These examples are modified from tables in published Survey books. They can only hint at the diversity of formats possible. The recommendations in this section are adapted from the U.S. GPO Style Manual (1984, p. 173–199), which is the principal guide and source of detailed instructions for Survey tables but which contains more information than most authors need to know. Stratigraphic tables and measured sections are discussed in the section on “Stratigraphic Nomenclature and Description.” Table 7, from the U.S. GPO Style Manual (1984, p. 192–193), gives some terms and formats used in Survey publications; varied needs may cause minor differences.

Simplicity. Simple tables generally are more effective than complex ones. A table should deal with a single subject or should bring together related information for purposes of comparison. Several small tables generally are better than one big one. Editorial advice in the design of tables when your manuscript is still in draft may save time and effort.

Numbers and titles. Most tables are numbered and titled for ease of reference. The only tables that may be unnumbered and untitled are column-width tables that immediately follow their only citations. Such tables are not listed in the “Contents” of the report. A report may contain both numbered and unnumbered tables.

Every table, whether numbered or unnumbered, must be cited at least once in the text. Tables are numbered in the order cited, and Arabic numerals are used. The word “table” is lowercase in the text and is never abbreviated in Survey reports.

Titles of all numbered tables should be listed in the “Contents” almost exactly as they appear above the tables, but explanatory phrases in parentheses or set off by commas, such as “in weight percent,” may be omitted from the “Contents.”

Because a table should be able to stand alone, its title should be reasonably complete and should contain no unusual acronyms and abbreviations. At the same time, a title should be concise. Information that supplements a title belongs in a headnote; generally, a title should not take a footnote. Similar tables in the

same report should have similarly worded titles, but each title should be unique. A title has no concluding punctuation.

The essence of a table is the logical arrangement of its information. The columns and rows (which are usually labeled by the entries in the first column) should be in some meaningful order. This order should be reflected in the order of items in the table title.

Headnotes. A headnote (if needed) is placed below the title to provide information pertaining to the title, to the table as a whole, or to the column headings. The headnote should explain acronyms, abbreviations, and symbols used, and it is a good place to mention methods used and to credit analysts. The headnote is enclosed in square brackets unless it is very long; no period precedes the closing bracket unless the headnote ends in an abbreviation followed by a period.

Footnotes. Explanations of individual entries in the table belong in footnotes. Footnotes usually are preceded by superscript Arabic numerals, but to avoid ambiguity, symbols or lowercase letters may be used. Footnote numbering in each table begins with the numeral 1. The footnote reference numbers increase from left to right in the column headings, then in the first line of the table body, and then across each succeeding line. The superscript numerals follow words and symbols and precede figures (tables 11, 12); if they stand alone, they are enclosed in parentheses (table 8).

Column headings. Every column in a table after the first column needs a centered heading, and in many tables the first column also has a centered heading. If two or more layers of headings (stacked headings) are appropriate, as in tables 9, 11, and 12, the highest heading (spanner head) is centered above a horizontal line that spans the headings of columns to which the heading pertains. For readability, column heads usually are horizontal, but to save space, they may be turned sideways (table 9). Down rules (vertical lines) are usually avoided, but some tables, such as table 9, may need them.

Columns may be numbered for ease of reference in the text or to avoid long column heads. If columns are numbered, the Arabic numerals may be explained below the table and its footnotes.

The units of measurement used must be provided within the table. They may be in the column headings, abbreviated if necessary to save space (table 11), or in

Table 7. Definition and parts of a table

[To define and describe fully all of the many parts, terms, and details that enter into tabular presentation is difficult to explain in a few words or to understand readily without an accompanying visual example. The example shown is directed at people concerned with the construction and makeup of tables and with guidelines identifying tabular terms and details. Many of the terms can be applied to any form of tabular matter]

The panel

Head rule—usually single

Bozhead

Bozhead cutoff rule usually inferior dashes

Centerline in stub column

The line

Ditto or "do." line

Single dashline

Parallel dashline

Block or group

Total line

Quadline

Cutoff rule

Colon line

Subentry

Flush line

Runover indentation

Foot or bottom rule

Cast

Footnotes or reference lines

[Headnote or bracket line]

Spanner head¹

Subspanner head

Stubhead

Column head

Coal

Coke

Car-loads more than other years

Wood

Standard date column head

Reading column head

Units of quantity over figure columns—italic

Clear

Field or body

Leader line

Reading column..... 1

do..... 2

do..... 3

do..... 4

Same reading column..... 5

If tracer-figure (line number) column is used on right, preceding column will carry leaders to adjacent cast.

1 Reference number in boxheading.

2 Reference number followed by leaders in stub or inside reading column.

3 Reference number in figure column.

4 Reference number in date column.

5 Reference number in last or outside reading column.

6 Reference number following "do." in inside reading column.

7 Reference number following "Do." in last or outside reading column.

8 Reference number standing alone in last or outside reading column, enclosed in parentheses followed by period "(.)", and quadded out to end of line.

9 Reference number standing alone in figure column, enclosed in parentheses (°), and centered in column.

10 Reference number standing alone in inside reading column, enclosed in parentheses (10), and leaded out to cast on right.

NOTE.—If no tracer-figure column is used on the left of table and the stub or reading column is set flush, "Do." will be capitalized and leaded out to cast on right.

CENTERHEAD									
	Millions of dollars	Tons	Tons	Number	Thousands of pounds				
1	900	150	191	246	1,987	Feb. 12, 1958	4	Reading column.	5
2	189	257	260	379	1,235	May 9, 1957			
3	326	382	177	584	1,742	Dec. 31, 1957			
4	573	176	263	129	1,963	do.		Do.	7
5	Total line.....		1,988	965	881	1,338	6,927		(°).
CENTERHEAD									
6	1,057	(°)	286	2,673	1,891	July 19, 1958		Same reading column with a runover.	
7	321	156	112	1,114	3,821	May 3, 1958		Do.	
8	769								
9	258	387	596	342	2,297	June 15, 1958		Reading column.	
10	Total line.....		2,405	543	994	4,129	8,009		

2 READING COLUMNS									
(Leader from top line)									
1	Dairy products:								
2	In ctns....pounds..	1,485,692	380	462		3,264	Mar. 3, 1958	Reading column.	1
3	In cans.....do....	263,491		198	3,762	5,738	Dec. 17, 1957	Do.	2
4	Clay products boxes... (other than pottery, refractories).	325,000	621		4,111	1,926	Nov. 26, 1957	Do.	3
5	Ferrous alloys.....tons.	163,381	556	276	1,985	112,812	do.	Same reading column.	4

1 READING COLUMN									
(Leader from bottom line)									
1	A short line....boxes..	13,092	748	365	2,421	986	Jan. 6, 1958	2,163	5,137
2	A long, crowded line thousands of tons..	5,692	345	721	2,679	3,542	Apr. 17, 1958	3,596	4,728
3	A very long line that runs over.....crates..	386,591	475	582	13,563	12,297	June 6, 1958	17,364,298	18,591,763

2	12.15	5	4	4	4	5	7½	6	6
Tracer-figure (line number) column	Units of quantity in stub column—roman						Standard date column		Figure columns

the title, headnote (table 12), footnotes, or subheads between table-width cross rules (table 10).

Blank spaces and leaders. Spaces may not be left blank within the body of a table except in first or last columns containing words (reading columns). If no data are available, the space should be occupied by symbols such as leaders or suitable abbreviations such as "n.d." These symbols and abbreviations should be explained in the headnote.

Besides occupying spaces for which data are not available, leaders follow words in reading columns to guide the eye across the table; the final word of each entry in a last (far right) reading column is followed by a period or a question mark. Either dot leaders or dash leaders are acceptable, but only one style is generally used within a table and report. On word processors, dots generally are easier to type than dashes. If any entry in a reading column runs onto a second line, the overrun is indented. In tables containing a single reading column as the first column, leaders follow the bottom line of the entry consisting of words (table 12). In tables having more than one reading column, other entries align with the top lines of multiline entries in the reading columns, and the top lines are not followed by leaders (tables 11, 13). Multiline entries end with periods or question marks. Single-line entries in reading columns are followed by leaders as usual if space permits. The period is omitted immediately before the leaders (tables 9, 13).

Like leaders, double spaces at regular intervals may enhance a table's readability. A long table consisting

mostly of single-line entries may have double spaces after every five lines of type. The interval should be chosen to provide a good appearance or to group similar entries, but it should not vary within a table except to keep single lines from following a double space at the end of a table section.

Subheads between table-width cross rules.

Under the column headings, tables may be divided horizontally by subheads between pairs of lines that span columns (table 10). Each subheading pertains to all items between it and the next subhead beneath it. A table containing such subheads can be used to compare several kinds of information for the same sample, time, or area, because each column heading applies to every entry in its column, no matter which spanner head the entry is under.

General information. Manuscript tables should be submitted double spaced, and margins on all sides should be at least an inch wide to leave room for editorial marks and instructions for the typesetter. Each table should be on a separate page or group of pages. Oversize sheets are fine. If a table must continue onto a second page, the title followed by "—Continued" should appear at the top of the second page, and all column headings should be repeated. The headnote should also be repeated, if it is not too long.

Camera-ready tables are used in many Survey reports. Persons preparing camera-ready tables should seek editorial advice. The following tables illustrate most formats likely to be presented in Survey reports.

Table 8. Mineral assemblages in samples of rocks from within and around the Taconic allochthon, southwestern Massachusetts and adjacent parts of Connecticut and New York

[Sample localities are given in table 2. Sample numbers in parentheses mean that the assemblage data are based only on X-ray powder diffraction; all other data are, in addition, based on petrographic observations. Abbreviation of mineral names: Bt, biotite; Ch, chlorite; Cd, chloritoid; St, staurolite; Ga, garnet (always almandine rich); Ep, epidote; Pg, plagioclase; Ksp, potassic feldspar (microcline where the structural nature has been established); Mu, muscovite; Pa, paragonite; Q, quartz; Cc, calcite; Dol, dolomite; Ilm, ilmenite; Mt, magnetite; Tour, tourmaline; Stp, stilpnomelane. x, mineral present; query (?), identification uncertain; leaders (—), mineral not detected]

Sample number	Bt	Ch	Cd	St	Ga	Ep	Pg	Ksp	Mu	Pa	Q	Cc	Dol	Ilm	Mt	Tour	Other
3-1	?	x	x	--	--	--	--	--	x	x	x	--	--	x	--	--	
3-2	--	--	--	--	--	--	--	--	x	--	x	--	--	--	x	--	
3-3	--	x	--	--	--	--	x	--	x	x	x	--	--	--	--	--	
3-5	--	x	--	--	--	--	x	--	x	--	x	--	--	--	--	--	
(3-6)	--	x	--	--	--	--	--	--	x	--	x	--	--	--	--	--	
4-1	x	x	--	--	--	--	--	--	x	--	x	x	--	--	--	--	
14-1	x	x	(¹)	x	x	--	x	--	x	--	x	--	--	x	--	x	
15-1	--	x	--	x	x	--	x	--	x	--	x	--	--	x	x	--	
16-1	--	x	x	--	x	--	x	--	x	--	x	--	--	--	x	--	
(16-2)	--	x	--	--	--	--	--	--	x	--	x	--	--	--	x	--	
(17-1)	--	x	x	--	--	--	--	--	x	--	x	--	--	--	--	--	
18-1	x	--	--	--	--	--	x	--	x	--	x	--	--	x	--	--	
19-1	?	x	--	--	--	--	x	--	x	--	x	x	--	--	--	--	Stp?
25-1	--	--	--	--	--	--	x	x	--	--	x	x	--	--	--	--	
36-1	--	--	--	--	--	--	--	--	--	--	x	x	x	--	--	--	Palygorskite.

¹ Chloritoid in cores of garnet only.

Table 8 shows:

- ▶ Cross reference to another table instead of all information being given in one long table.
- ▶ Explanation in long bracketed headnote of (1) parentheses in first column, (2) abbreviated column headings, and (3) other abbreviations and symbols.
- ▶ No period before closing bracket of headnote.
- ▶ “Number” written out, where possible.
- ▶ Blank spaces acceptable in final reading column.
- ▶ Period or question mark at end of final reading column.
- ▶ Footnote reference number standing alone; it is superscript and is enclosed in parentheses.
- ▶ Use of blank lines for readability.

Table 9. Geographic distribution of Early Jurassic ammonites from outcrops in northern and east-central Alaska

[Quadrangle occurrences are listed in table 7. Numbers 5-15 are keyed to area numbers in figure 1. Higher numbers are U.S. Geological Survey Mesozoic locality numbers. ×, taxon present; leaders (---), taxon not found]

Genus and species	Northwestern Alaska Delong Mountains						North-central Alaska			Northeastern Alaska				East-central Alaska Old Rampart area								
	Clay shale						Claystone			Kingak Shale				Glenn Shale (in part)								
	5			6			7	8	9	10	11	12	13	14					15			
	29159	29160	29161	29163	29776	M2241	29164	29775	29774	29281	29282	23772	22081	29165	30074	29737	29738	29739	29740	29742	29743	29340
<i>Psiloceras</i> sp	---	---	---	---	---	---	---	---	---	---	---	---	---	---	×	---	---	---	---	---	---	---
<i>P.?</i> sp	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	×	---	---	×	---
<i>P. (Franciceras)</i> sp	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	×	---	---
<i>P. (F.)</i> cf. <i>P. (F.) ruidum</i> (Buckman)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	×	×	×	---	×	---	---	---
<i>Uptonia</i> cf. <i>U. jamesoni</i> (J. de C. Sowerby)	---	---	---	---	---	---	---	×	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<i>Uptonia?</i> sp	---	---	---	---	---	---	×	---	×	×	---	---	---	---	---	---	---	---	---	---	---	---
<i>Amaltheus margaritatus</i> (Montfort)	---	---	---	---	×	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<i>A. stokesi</i> (J. Sowerby)	---	---	---	---	---	---	---	---	---	---	---	---	---	×	---	---	---	---	---	---	---	×
<i>A.</i> cf. <i>A. stokesi</i> (J. Sowerby)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	×	---	---	---	---	---	---	---
<i>A.</i> sp	---	---	---	---	---	×	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<i>Dactyloceras</i> (<i>Orthodactylites</i>) cf. <i>D. (O.) directum</i> Buckman	---	---	---	×	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<i>Harpoceras</i> cf. <i>H. exaratum</i> (Young and Bird)	×	×	×	---	×	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<i>Eleganticer</i> sp. juv	---	---	---	---	×	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<i>Pseudolioceras</i> cf. <i>P. compactile</i> (Simpson)	---	---	---	---	---	---	---	---	---	---	---	---	---	×	---	---	---	---	---	---	---	---
<i>P.</i> cf. <i>P. lythense</i> (Young and Bird)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	×

Table 9 shows:

- ▶ Cross references to table and figure.
- ▶ Stacked column headings.
- ▶ Vertical and horizontal column headings.
- ▶ Down rules in column headings only; in some tables, down rules need to extend into the body.
- ▶ A heading centered over the first column.
- ▶ Use of double spaces at regular intervals for readability; blank lines are not vital in this short table but are added to serve as a model for a longer table.
- ▶ No period after “sp” and “juv” before leaders. Dot leaders would cause each abbreviation to appear to be followed by a period as usual, but because dash leaders are used in tables 8 and 10-13, table 9 must also use dash leaders for consistency.

Table 10. Major-oxide and normative mineral composition, in weight percent, of the Chopawamsic Formation, Virginia

Suite	A										B			C			
Sample number	1	3	13	10	8	4	5	14	6	7	2	11	9	17	16	15	12
Field number	P-71-9	P-70-73	P-76-142A	P-73-13	P-72-150	P-70-67	P-70-64	P-76-124	P-70-63	P-70-61	P-71-7	P-77-37	P-70-128	P-76-117	P-76-139	P-76-141	P-76-145
Major-oxide composition^{1,2}																	
SiO ₂	50.8	51.5	51.69	53.4	55.0	56.5	59.0	64.40	64.5	76.0	78.3	72.2	73.6	61.72	73.54	73.86	76.75
Al ₂ O ₃	19.2	17.0	15.20	15.6	15.3	14.6	13.8	14.72	11.4	12.7	11.6	13.17	12.7	15.90	13.38	13.56	12.40
Fe ₂ O ₃	1.4	.50	8.2	2.8	5.5	3.6	5.2	3.2	3.5	2.4	.61	1.3	1.1	2.3	1.6	1.5	1.8
FeO	8.3	10.2	6.1	10.7	7.5	7.6	6.7	4.2	6.4	.38	1.9	2.0	2.3	5.8	.16	1.1	1.0
MgO	7.1	7.0	3.18	5.4	3.9	3.5	3.0	2.11	2.6	.16	.43	.61	1.4	2.15	.00	.01	.00
CaO	4.1	4.7	7.25	3.8	6.8	6.2	2.5	2.85	3.8	1.2	.27	.19	.50	2.32	.17	.67	.34
Na ₂ O	4.9	5.0	3.40	4.8	4.1	4.4	5.7	3.26	4.6	5.6	5.2	1.43	5.7	2.41	.04	3.07	4.20
K ₂ O	.12	.25	.23	.08	.19	.15	.15	.64	.15	.80	.13	6.68	.85	2.31	8.91	3.88	1.22
H ₂ O*	3.4	2.5	1.3	2.1	.86	1.0	1.6	1.7	.80	.34	1.2	.87	1.0	1.6	.74	.58	.56
H ₂ O	.07	.14	.39	.16	.11	.07	.22	.22	.03	.03	.14	.30	.05	.37	.07	.10	.09
TiO ₂	.36	.87	2.06	1.6	1.5	1.5	1.6	1.30	1.5	.21	.14	.55	.59	.87	.24	.29	.20
P ₂ O ₅	.06	.10	.12	.25	.22	.26	.23	.18	.24	.07	.04	.07	.19	.18	.04	.06	.01
MnO	.25	.25	.19	.24	.11	.22	.30	.14	.22	.03	.03	.06	.04	.22	.02	.05	.06
CO ₂	.05	.08	.01	.04	.02	.05	.05	.01	.05	.02	.05	.01	.02	.01	.00	.01	.02
Total	100.11	100.09	99.32	100.97	101.11	99.75	100.0	98.93	99.79	99.94	100.04	99.44	100.04	98.16	98.91	98.74	98.65
Normative mineral composition																	
[Based on analyses recalculated to 100 percent water-free oxides]																	
Q			12.9	2.9	9.6	10.7	13.6	33.8	24.6	37.9	45.8	37.0	33.9	28.8	39.1	40.5	47.9
C	3.8	0.4		1.4			.3	4.1		.7	2.5	3.5	2.0	5.9	3.3	3.3	3.7
or	.7	1.5	1.4	.5	1.1	.9	.9	3.9	.9	4.7	.8	40.2	5.1	14.2	53.6	23.4	7.3
ab	42.9	43.4	29.4	41.2	34.6	37.8	49.1	28.4	39.3	47.6	44.6	12.3	48.7	21.2	1.2	26.5	36.2
an	20.7	22.7	26.1	17.2	22.7	19.9	11.1	13.3	10.1	5.4	1.1	.4	1.1	10.7	.6	2.9	1.5
wo			4.1		3.9	4.0			3.1								
en	10.3	5.3	8.1	13.6	9.7	8.8	7.6	5.4	6.5	.4	1.1	1.5	3.5	5.5		.1	
fs	8.1	5.3	1.4	15.3	7.0	9.1	6.0	3.3	6.9		2.8	1.8	2.4	8.0		.4	.1
fo	5.6	8.9															
fa	4.9	9.7															
mt	2.1	.7	12.2	4.1	8.0	5.3	7.7	4.8	5.1	.7	.9	1.9	1.6	3.5		2.2	2.7
hm										1.9					1.6		
il	.7	1.7	4.0	3.1	2.8	2.9	3.1	2.5	2.9	.4	.3	1.1	1.1	1.7	.4	.5	.4
ru															.1		
ap	.2	.2	.3	.6	.5	.6	.6	.4	.6	.2	.1	.2	.5	.4	.1	.1	.1
cc		.2	.1	.1	.1			.1		.1	.1	.1	.1	.1		.1	.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Differentiation index (DI) and normative mineral composition in terms of diopside, hypersthene, and olivine																	
DI	43.7	44.9	43.7	44.6	45.3	49.4	63.7	66.2	64.8	90.3	91.2	89.5	87.7	64.2	93.9	90.4	91.5
di			7.8		7.7	7.9			6.1								
di-wo			4.1		3.9	4.0			3.1								
di-en			3.1		2.2	1.9			1.5								
di-fs			.6		1.6	2.0			1.5								
hy	18.4	10.6	5.9	29.0	12.9	14.0	13.6	8.7	10.4	.4	3.9	3.4	6.0	13.6		.5	.1
hy-en	10.3	5.3	5.0	13.6	7.5	6.9	7.6	5.4	5.1	.4	1.1	1.6	3.5	5.6		.1	
hy-fs	8.1	5.3	.9	15.4	5.4	7.1	6.0	3.3	5.3		2.8	1.8	2.5	8.0		.4	.1
ol	10.5	18.5															
ol-fo	5.6	8.8															
ol-fa	4.9	9.7															

¹Major elements determined by--

1. X-ray spectroscopy: P-77-37, P-76-124, P-76-142A, P-76-145, P-76-117, P-76-139, P-76-141; P. Hearn and S. Wargo, analysts.

2. Rapid rock analysis:

a. P-70-64, P-70-67, P-70-63, P-71-7, and P-71-9; P. Elmore, H. Smith, and J. Kelsey, analysts;

b. P-70-61, P-70-128, P-70-73, P-72-150, and P-73-13; Lowell Artis, analyst.

H₂O, H₂O, and CO₂; N. Skinner, analyst.

DESCRIPTION OF SAMPLES

1. Metabasalt: quartz-chlorite-amphibole gneiss: Stafford quadrangle at lat 38°25'57" N. and long 77°27'45" W.
2. Metaquartz keratophyre: quartz-albite-chlorite-amphibole gneiss: Stafford quadrangle at lat 38°25'58" N. and long 77°28'02" W.
3. Metabasalt: quartz-albite-chlorite-amphibole gneiss: Storck quadrangle at lat 38°25'27" N. and long 77°30'02" W.
4. Meta-andesite: quartz-albite-amphibole gneiss: Stafford quadrangle at lat 38°25'06" N. and long 77°29'51" W.
5. Metafelsite: quartz-albite-amphibole gneiss: Stafford quadrangle at lat 38°24'58" N. and long 77°29'48" W.
6. Interior of metamorphosed pillow: Stafford quadrangle at lat 38°24'57" N. and long 77°29'48" W.
7. Metafelsite: quartz-albite gneiss: Storck quadrangle at lat 38°24'52" N. and long 77°29'44" W.
8. Meta-andesite: quartz-epidote-plagioclase-amphibole gneiss: Storck quadrangle at lat 38°23'03" N. and long 77°36'22" W.
9. Metafelsite: quartz-albite-chlorite-mica porphyritic gneiss: Storck quadrangle at lat 38°22'16" N. and long 77°37'13" W.
10. Meta-andesite: quartz-albite-amphibole gneiss: Selem Church quadrangle at lat 38°21'57" N. and long 77°36'24" W.
11. Metafelsite: muscovite-biotite-plagioclase-quartz porphyritic gneiss: Brokenburg quadrangle at lat 38°14'28" N. and long 77°44'55" W.
12. Metafelsite: muscovite-plagioclase-quartz gneiss: Belmont quadrangle at lat 38°08'36" N. and long 77°51'18" W.
13. Metafelsite: amphibole-biotite-chlorite-quartz gneiss: Belmont quadrangle at lat 38°07'49" N. and long 77°51'12" W.
14. Metabasalt: quartz-albite-amphibole gneiss: Belmont quadrangle at lat 38°08'34" N. and long 77°50'00" W.
15. Metafelsite: muscovite-biotite-potassic feldspar-quartz gneiss: Lake Anna West quadrangle at lat 38°05'47" N. and long 77°50'11" W.
16. Metafelsite: muscovite-potassic feldspar-quartz gneiss: Lake Anna West quadrangle at lat 38°05'49" N. and long 77°51'28" W.
17. Meta-epivolcaniclastic rock: garnet-biotite-feldspar-quartz gneiss: Lake Anna West quadrangle at lat 38°03'45" N. and long 77°50'46" W.

Table 10 shows:

- ▶ Subheads between table-width cross rules.
 - ▶ No zero before the decimal point; zeros preceding the decimal point would be used only in the first line of each section.
 - ▶ The word "Total" indented and followed by leaders.
 - ▶ The line separating the actual totals from the entries above.
- ▶ The basis for calculating the norms, the names of the analysts (this example shows only one initial, but the analysts' initials or full given name should be shown), the methods used, and the description of samples. Inclusion of the oxides calculated on a water-free basis would be a service to other petrologists.

Table 11. Production from medium and large oil and gas fields of Utah

[Production data from Smith and Brown (1981). MB, thousands of barrels; MMCF, millions of cubic feet; MMB, millions of barrels; BCF, billions of cubic feet; do, ditto; NA, data not available]

Number in figures 1, 2	Field	Basin or province	Year discovered	Primary reservoir age	1980 production		Cumulative production through 1980		Estimated ultimate production	
					Oil (MB)	Gas (MMCF)	Oil (MMB)	Gas (BCF)	Oil (MMB)	Gas (BCF)
1	Aneth (Greater)	Paradox	1956	Pennsylvanian	6,741	7,315	306	294	¹ 378	NA
2	Lisbon	do	1960	Mississippian	718	17,078	43	358	NA	NA
3	Ismay	do	1956	Pennsylvanian	79	91	10	17	¹ 12	21.5
4	Altamont-Bluebell	Uinta	1955-72	Eocene	8,446	12,351	132	168	² 250+	NA
5	Red Wash	do	1951	do	2,935	4,368	115	316	³ 135	NA
6	Natural Buttes	do	1951	do	140	13,093	.3	59	NA	NA
7	Ashley Valley	do	1948	Permian and Pennsylvanian	296	0	19	0	⁴ 22	0
8	San Arroyo	do	1955	Cretaceous and Jurassic	3	1,851	125	74	NA	NA
9	Clay Basin	Green River	1927	Cretaceous	5	1,836	318	139	NA	NA
10	Bridger Lake	do	1966	do	160	2,988	10	31	NA	NA
11	Pineview	Thrust Belt	1975	Jurassic	2,948	3,436	16	17	NA	NA
12	Anschutz Ranch	do	1978	do	147	7,129	.1	1	NA	NA
13	Anschutz Ranch E.	do	1979	do	278	1,245	.3	7	NA	NA
14	Clear Creek	Wasatch Plateau	1951	Cretaceous	0	103	0	135	0	⁴ 168
15	Upper Valley	Kaiparowits	1964	Permian	674	0	19	0	¹ 21	0

¹From Fassett (1978). ²From Lucas and Drexler (1976). ³From Oil and Gas Journal (1970). ⁴From Preston (1961).

Table 11 shows:

- ▶ Explanation in headnote of abbreviations and acronyms.
- ▶ Stacked column headings.
- ▶ Alignment of a table containing two reading columns that have overruns.
- ▶ Use of leaders after all one-line entries in reading columns.
- ▶ Use of a period after the last word in a multiline entry in a reading column.
- ▶ Use of "NA" to mean "data not available" (used for example purposes only; leaders would probably look better here.)
- ▶ Use of "do" for "ditto."
- ▶ Superscript footnote reference numbers to left of figures.
- ▶ Placement of short footnotes in a single line to save vertical space.

Table 12. Thickness of the three parts of the Yale Member, Ironwood Iron-Formation, Wisconsin and Michigan

[In meters]

Yale Member	Drill core from west of Upson, Wis.	North Palms drill hole 81, Bessemer, Mich. (see p. 42 for location)	Eureka Mine, Ramsay, Mich.	
			"Eureka Mine stratigraphic diagram" (unpub. data, 1918)	Old trenches and a railroad cut
Upper part	13.1	53.0	70.1	63.4
Tuffaceous layer	0	5.5	13.4	1.9
Lower part	0	4.3	15.2	12.2
Total	13.1	62.8	98.7	76.5

¹Tuffaceous layer thickness is roughly estimated from relative abundance of dump material.

Table 12 shows:

- ▶ Explanation in the headnote of measurements in the body of the table.
- ▶ Stacked column headings.
- ▶ Alignment of a table containing only one reading column.
- ▶ The word “Total” indented and followed by leaders.
- ▶ The line separating the actual totals from the entries above.
- ▶ Superscript footnote reference number to left of decimal figure.
- ▶ Position of a long footnote and indention of its first line.

Table 13. Location, stratigraphic position, and age of phytoclast samples from early Mesozoic basins in the Eastern United States

[do and Do., ditto]

Basin name and sample designation	Location and stratigraphic position	Age	Basin name and sample designation	Location and stratigraphic position	Age
Taylorsville basin: ASH-1.	146 m in core taken 1.6 km south of Taylorsville, Va.; Falling Creek Member of Doswell Formation.	Middle Carnian.	Newark basin— Continued NB584-25	Pompton Lakes, N.J.; tufa-encrusted phytoclast from the lower laminated zone of the Towaco Formation.	Hettangian.
Culpeper basin: CB785-13	Licking Creek locale, Midland, Va.; Midland Formation fish bed.	Hettangian.	26	Gill quarry, off Potshot Road near Fairview Village, Pa.; Weehawken member of Olsen (1984) of the Lockatong Formation.	Late Carnian.
Culpeper log	Millbrook quarry, Thoroughfare Gap, Va.; Waterfall Formation.	Sinemurian-Pliensbachian.	SP1	State Park quarry near Eagleville, Pa.; Gwynedd 1 member of Olsen (1984) of the Lockatong Formation.	Do.
Newark basin: NB584-14	H and K quarry near Chalfont, Pa.; Skunk Hollow member of Olsen (1984) of the Lockatong Formation.	Late Carnian.	SP3	do	Do.
16	do	Do.	Hartford basin:		
24	Pompton Lakes, N.J.; middle carbon-rich laminated zone of the Towaco Formation.	Hettangian.	Portland, Conn	Longbrook, Conn.; near the base of the Portland Formation.	Pliensbachian.
			Portland, Mass	Suffield, Mass.; middle to lower part of the Portland Formation.	Do.

Table 13 shows:

- ▶ How to double up a table under one title.
- ▶ Alignment of a table containing several reading columns that have overruns.
- ▶ Use of headings in first column followed by colons; a single entry after a colon is run in (Taylorsville basin: ASH-1), whereas several entries after a colon are placed on separate lines.
- ▶ Clearing (avoiding repetition of) the first part of a sample number containing a dash but not clearing a number that has no dash (NB584-14 as opposed to SP1).
- ▶ Use of “Continued.”
- ▶ Use of “do” and “Do.”
- ▶ Use of figures even at the beginning of a reading-column entry; “146” is not written out the way it would be at the beginning of a text sentence.
- ▶ No period after “Conn,” “Mass,” and “do” before leaders.
- ▶ A logical arrangement of data; basins are listed from south to north.