FILE FORMAT TABLES AND CORRESPONDING SAMPLE DATA FILES AS COLLECTED

Apx. No.	Section	Appendix Name	Page No.
A.01	3.2.1.3	TOWNSHIP.DEF File Format	A - 3
A.02	3.2.1.4	TOWNSHIP.CON File Format	A - 5
A.03	3.2.1.5	TOWNSHIP.RAW File Format	A - 7
A.04	3.2.1.6	TOWNSHIP.SID File Format	A - 9
A.04a	3.2.1.6	Idaho TOWNSHIP.SID File Format	A - 11
A.04b	3.2.1.6	Montana TOWNSHIP.SID File Format	A - 12
A.04c	3.2.1.6	New Mexico TOWNSHIP.SID File Format	A - 13
A.04d	3.2.1.6	Oregon and Washington TOWNSHIP.SID File Format	A - 14
A.04e	3.2.1.6	Utah TOWNSHIP.SID File Format	A - 15
A.05	3.2.1.7	TOWNSHIP.NOT File Format	A - 17
A.06	3.2.1.8	TOWNSHIP.LX File Format	A - 19
A.07	3.2.1.9	TOWNSHIP.AN File Format	A - 22
A.08	3.2.2.3	CTOWNSHIP File Format	A - 24
A.09	3.2.2.4	LXTOWNSHIP File Format	A - 26
A.10	3.2.2.5	RTOWNSHIP File Format	A - 30
A.11	3.2.2.6	QTOWNSHIP File Format	A - 32
A.12	3.2.2.7	ZTOWNSHIP File Format	A - 36
A.12b	3.2.2.7	Alternate ZTOWNSHIP File Format	A - 38
A.13	3.2.3.3	LQTOWNSHIP File Format	A - 40
A.14a	3.2.4.1	California's TOWNSHIP.AA File Format	A - 42
A.14b	3.2.4.1	Wyoming's TOWNSHIP.AA File Format	A - 44
A.15a	3.2.4.2	California's TOWNSHIP.LL File Format	A - 46
A.15b	3.2.4.2	Wyoming's TOWNSHIP.LL File Format	A - 48
A.15c	3.2.4.2	Wyoming's Other TOWNSHIP.LL File Format	A - 50
A.16a	3.2.4.3	California's TOWNSHIP.QQ File Format	A - 53
A.16b	3.2.4.3	Wyoming's TOWNSHIP.QQ File Format	A - 55

Conventions Applicable to Appendix A

A. File format tables in this appendix use the following notation in the ROW column of the ROW & ELEMENT POSITION column:

nn	Unique kind of row. nn is some number which identifies the unique type of row in the file.
M or C	Mandatory or Conditional. Default = M. Indicates whether the given type of row is always present (Mandatory), or may not be present (Conditional).
S or R	Single or Repeating. Default = S. Indicates whether the row will occur only once (Single), or may occur more than once (Repeat).
Example:	(1) A row encoding of ?2MS" indicates that this kind of row (2)must (M) be present in the file, and that it occurs only one time (S). (2) A row encoding of ?3CR" indicates that the third kind of row (3) in this file is conditional (C) and that it may occur many times (R).

B. File format tables in this appendix use the following notation in the DATA TYPE column:

A/N	The value is alphanumeric.
CHAR	The value is alphabetic.
INT	The value is an integer.
Fn.m	The value is a real number, whose length (including the decimal point symbol) is n bytes long, with m places to the right of the decimal point.
Example:	(1) ?T22NR14E" is A/N, alphanumeric.
	(2) ?ORIGIN" is CHAR, alphabetic.
	(3) ?10" is INT, an integer.
	(4) ?123.4" is F5.1, a real number, where n = 5, m = 1.

C. Other Conventions

! The question mark, ?, appearing in the ELEMENT NAME column, represents a software prompt to the user.

! The quotes, ? ", appearing in the ELEMENT NAME column, indicate a program default.

! The brackets, [ ], appearing in the ELEMENT NAME column, provides more detailed information on the data.

! A vertical dot pattern/ellipsis appearing in some sample data files implies a continuation of the

repeating row pattern within the data.

Appendix A.01 3.2.1.3 TOWNSHIP.DEF File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
[PROGRAM PROMPT: Q99]	1	1	1	A/N	1
STATE PLANE ZONE	2	2	41	A/N	40
DATUM USED; 1=NAD27, 2=NAD83	3	1	1	INT	1
COORDINATE UNITS USED; 2=FEET	4	1	1	INT	1
PROJECT ELEVATION	5	2	11	F10.3	10
READ ELEVATION FROM .LEV?	6	1	1	A/N	1
READ ERROR EST FROM.SD?	7	1	1	A/N	1
DIST ERROR EST; CONSTANT	8	2	11	F10.3	10
DIST ERROR EST; SYSTEMATIC(PPM)	8	12	21	F10.1	10
ANGLE ERROR EST	9	2	11	F10.1	10
BEARING ERROR EST	10	2	11	F10.1	10
EASTING CTL ERROR EST	11	2	11	F10.3	10
NORTHING CTL ERROR EST	12	2	11	F10.3	10
BEARING TYPE; MEAN GEODETIC	13	1	1	A/N	1
DISTANCE RESIDUAL PRINT LIMIT	14	2	11	F10.3	10
ANGLE RESIDUAL PRINT LIMIT	15	2	11	F10.1	10
AZIMUTH RESIDUAL PRINT LIMIT	16	2	11	F10.1	10
ERROR ELLIPSES COMPUTED?	17	1	1	A/N	1
READJUST W/ROBUST ERROR EST?	18	1	1	A/N	1
PRINT ADJ BEARINGS AND DIST?	19	1	1	A/N	1
PRINT .COR FILE?	20	1	1	A/N	1
TOWNSHIP AND RANGE	21	1	30	A/N	30
PRINCIPAL MERIDIAN	22	1	30	A/N	30
STATE/LOCAL DESIGNATOR	23	1	30	A/N	30
UTM ZONE	24	1	3	INT	3

TOWNSHIP.DEF File - Sample Data

```
Y
 33 NEVADA EAST MERCATOR
1
2
  6000.000
N
Y
     .100     1000.0
      4.0
    120.0
   25.000
   25.000
Y
     .000
       .0
       .0
Y
Y
N
Y
T30NR50E
14
AZ
 11
```

Appendix A.02 3.2.1.4 TOWNSHIP.CON File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
?ORIGIN"	2	2	7	CHAR	6
LATITUDE	2	12	22	F11.4	11
LONGITUDE	2	24	35	F12.4	12
ELEVATION	2	36	44	F9.3	9
?0"	2	48	48	A/N	1
?0"	2	53	53	A/N	1
?2000.0000"	2	56	64	F9.4	9
?5000.0000"	2	66	74	F9.4	9
CONTROL AVAIL/USED (*2)	3R	1	1	A/N	1
CONTROL STATION NAME	3R	2	7	INT	6
LATITUDE	3R	12	22	F11.4	11
LONGITUDE	3R	24	35	F12.4	12
STATION/PROJECT ELEVATION	3R	36	44	F9.3	9
NORTHING ERROR IN FEET	3R	45	48	INT	4
EASTING ERROR IN FEET	3R	50	53	INT	4
X-COORDINATE (*3)	3R	55	64		10
Y-COORDINATE (*3)	3R	65	74		10

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) An asterisk (*) in this field indicates that control is available but is not used.

(*3) These fields may or may not be populated.

TOWNSHIP.CON File - Sample Data

TWP 0300	RNG	0500	PM	2	CONTROL POINTS		DATE 06/29/93	
ORIGIN	402800.0000	1162000.0000		6000.000	0	0	2000.0000	5000.0000
100100	402521.8550	1162348.6430		6000.000	25	25	17195.0100	13154.4743
100200	402614.2320	1162350.3610		6000.000	25	25	17189.7266	13234.6365
100500	402851.3000	1162349.2510		6000.000	25	25	17181.2013	13475.3149
147100	402521.8780	1162308.1290		6000.000	25	25	17242.4050	13156.3907
153700	403036.6470	1162320.9650		6000.000	25	25	17207.6558	13638.0150
247100	402521.8280	1162201.9370		6000.000	25	25	17319.8433	13159.4002
*700999	402906.7890	1161705.1050		6000.000	25	25	17652.5686	13518.0532

Appendix A.03 3.2.1.5 TOWNSHIP.RAW File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
?999999"	2	1	6	INT	6
POINT FROM	3R	1	6	INT	6
POINT TO	3R	10	T15	INT	6
DISTANCE (*2)	3R	17	24	F8.3	8
QUADRANT	3R	27	27	INT	1
DIRECTION/BEARING	3R	31	38	F8.1	8
SURVEY ID	3R	40	57	A/N	18
?999998"	4	1	6	INT	6

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) The distance is in chains.

TOWNSHIP.RAW File - Sample Data

```
 TWP 30N      RNG    50E     PM      Mnt     Diablo  Nevada(NV)      DATE   93/05/13
999999
700100        700133         29.832          4               .0 R0462:0249
700133        700140         10.188          4               .0 R0462:0249
700140        700147         6.840           4               10300.0 R0498:0019
700167        700200         11.290          4               10300.0 R0498:0019
700200        700240         38.130          4               10300.0 R0498:0019
700660        700700         19.06           4               10300.0 R0498:X019
600100        600140         40.000          4               .0 R0140:0134
600140        600200         40.000          4               .0 R0140:0134
600200        600240         40.000          4               .0 R0140:0134
100657        100660         .225            4               300.0 R0414:X369
100660        100700         20.225          4       300.0 R0414:X369
107100        100100         7.405           3       900000.0 R0414:0153
700200        640200         40.090          4       895400.0 R0140:0134
640200        600200         40.090          4       895400.0 R0140:0134
600200        540200         40.040          3       900000.0 R0140:0134
140700        120700         19.336          3       895000.0 R0414:0385
120700        103700         13.712          3       895000.0 R0414:0385
103700        100700         2.840           3       895000.0 R0414:0385
999998
```

Appendix A.04 3.2.1.6 TOWNSHIP.SID File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
?S" [survey record]	1R	1	1	CHAR	1
SURVEY ID	1R	2	19	A/N	18
DISTANCE ERROR, CONSTANT	1R	20	26	F7.3	7
DISTANCE ERROR, PPM	1R	27	34	F8.1	8
BEARING ERROR EST	1R	35	42	F8.1	8
EASTING CTL ERROR EST	1R	43	51	F9.3	9
NORTHING CTL ERROR EST	1R	52	60	F9.3	9
?C" [comment record]	2CR	1	1	CHAR	1
SURVEY DESCRIPTION (*1)	2CR	2	41	A/N	40

(*1) The SURVEY DESCRIPTION field is an optional 40 character free-format comment field that may occur multiple times after each survey record in the TOWNSHIP.SID file. Some states have entered data into this comment field in consistent ways. Appendices A.04a-A.04e provide state-specific format information for any individual data elements stored consistently within the free-format comment field. Discrete data elements stored within the free-format SURVEY DESCRIPTION comment field are indented underneath the SURVEY DESCRIPTION field where they exist.

TOWNSHIP.SID File - Sample Data

SR0140:0134	0.100	30000.0	10800.0	25.000	25.000	C 1874 SKINNER, ORIG., INT.
SR0414:0153	0.100	1560.0	300.0	25.000	25.000	C 1901 MORSE, ORIG. S. BDY. SEC. 31
SR0414:0247	0.100	3125.0	600.0	25.000	25.000	C 1901 MORSE, RESURVEY, S. BDY.
SR0414:0369	0.100	1560.0	300.0	25.000	25.000	C 1901 MORSE, RESURVEY, W. BDY.
SR0414:0385	2.000	3125.0	600.0	25.000	25.000	C 1901 MORSE, RESURVEY, N. BDY. SEC. 6
SR0462:0249	0.100	3125.0	600.0	25.000	25.000	C 1909 KEARNEY, RESURVEY, E. BDY. SEC. 3
SR0414:X369	0.100	100000.0	36000.0	25.000	25.000	C 1901 MORSE COARSE ADJUSTER
SR0140:X134	0.100	100000.0	36000.0	25.000	25.000	C 1874 SKINNER COARSE ADJUSTER

Appendix A.04a 3.2.1.6 Idaho TOWNSHIP.SID File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
?S" [survey record]	1R	1	1	CHAR	1
SURVEY ID	1R	2	19	A/N	18
DISTANCE ERROR, CONSTANT	1R	20	26	F7.3	7
DISTANCE ERROR, PPM	1R	27	34	F8.1	8
BEARING ERROR EST	1R	35	42	F8.1	8
EASTING CTL ERROR EST	1R	43	51	F9.3	9
NORTHING CTL ERROR EST	1R	52	60	F9.3	9
?C" [comment record]	2CR	1	1	CHAR	1
SURVEY DESCRIPTION	2CR	2	41	A/N	40
SOURCE AGENCY (*1)	2CR	R86 3-5-5 R86	5-8	A/N	3-6
ACCEPTANCE DATE (*2)	2CR	7-10	17-20	A/N	11
FIELD NOTE SURVEY TYPE CODE (*3)	2CR	19-22	20-23	INT	2
SURVEYOR	2CR	22-25	41	A/N	17-20
?C" [comment record]	3CR	1	1	CHAR	1
SURVEY DESCRIPTION	3CR	2	41	A/N	40

The C-record for Idaho contains four elements (SOURCE AGENCY, ACCEPTANCE DATE, FIELD NOTE SURVEY TYPE CODE, and SURVEYOR). These elements are written to the C-record in the order they are listed in the table, but do not have an absolute size and location. The start column for an element is two columns after the stop column for the previous element. A space separates each element in the record.

(*1) The domain for SOURCE AGENCY is DED9125.

(*2) ACCEPTANCE DATE format should be ?DD-MMM-YYYY".

(*3) See Appendix B-14 ?PCCS CODE" for FIELD NOTE SURVEY TYPE CODE domain.

Appendix A.04b 3.2.1.6 Montana TOWNSHIP.SID File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
?S" [survey record]	1R	1	1	CHAR	1
SURVEY ID	1R	2	19	A/N	18
DISTANCE ERROR, CONSTANT	1R	20	26	F7.3	7
DISTANCE ERROR, PPM	1R	27	34	F8.1	8
BEARING ERROR EST	1R	35	42	F8.1	8
EASTING CTL ERROR EST	1R	43	51	F9.3	9
NORTHING CTL ERROR EST	1R	52	60	F9.3	9
?C" [comment record]	2CR	1	1	CHAR	1
SURVEY DESCRIPTION	2CR	2	41	A/N	40
SOURCE AGENCY (*1)	2CR	R86 3-5 R86	5-8	A/N	3-6
DOCUMENT DATE (*2)	2CR	7-10	17-20	A/N	11
SURVEY TYPE CODE (*3)	2CR	19-22	19-22	CHAR	1
SURVEYOR	2CR	21-24	41	A/N	18-21
?C" [comment record]	3CR	1	1	CHAR	1
REMARKS	3CR	2	41	A/N	40

The C-record for Montana R62 and North Dakota R62 contains four elements (SOURCE AGENCY, DOCUMENT DATE, SURVEY TYPE CODE, and SURVEYOR). These elements are written to the C-record in the order they are listed in the table, but do not have an absolute size and location. The start column for an element is two columns after the stop column for the previous element. A space separates each element in the record.

(*1) The domain for SOURCE AGENCY is Appendix A in ?GCDB Data Collection Attribute Definitions Version 2.0".

(*2) DOCUMENT DATE format should be ?DD-MMM-YYYY".

(*3) See Appendix B-14 ?Data Attribute Definition 2.0 Code" for SURVEY TYPE CODE domain.

Appendix A.04c 3.2.1.6 New Mexico TOWNSHIP.SID File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
?S" [survey record]	1R	1	1	CHAR	1
SURVEY ID	1R	2	19	A/N	18
DISTANCE ERROR, CONSTANT	1R	20	26	F7.3	7
DISTANCE ERROR, PPM	1R	27	34	F8.1	8
BEARING ERROR EST	1R	35	42	F8.1	8
EASTING CTL ERROR EST	1R	43	51	F9.3	9
NORTHING CTL ERROR EST	1R	52	60	F9.3	9
?C" [comment record] (*1)	2CR	1	1	CHAR	1
SURVEY DESCRIPTION	2CR	2	41	A/N	40
TOWNSHIP DESIGNATOR	2CR	3	11	A/N	9
COMPLETION DATE	2CR	13	16	INT	4
SURVEYOR	2CR	18	(*1)	A/N	(*1)
ORACLE COMMENT FIELD (*2)	2CR	(*1)	(*1)	A/N	(*1)

(*1) The C-record for New Mexico contains three elements: TOWNSHIP DESIGNATOR, COMPLETION DATE, and SURVEYOR. The SURVEYOR field is of indefinite size. If a comment field exists in ORACLE, it is concatenated one space after the last character in the SURVEYOR field.

(*2) This field may or may not be present.

Appendix A.04d 3.2.1.6 Oregon [R63] and Washington TOWNSHIP.SID File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
?S" [survey record]	1R	1	1	CHAR	1
SURVEY ID	1R	2	19	A/N	18
DISTANCE ERROR, CONSTANT	1R	20	26	F7.3	7
DISTANCE ERROR, PPM	1R	27	34	F8.1	8
BEARING ERROR EST	1R	35	42	F8.1	8
EASTING CTL ERROR EST	1R	43	51	F9.3	9
NORTHING CTL ERROR EST	1R	52	60	F9.3	9
?C" [comment record]	2CR	1	1	CHAR	1
SURVEY DESCRIPTION	2CR	2	41	A/N	40
SOURCE AGENCY (*1)	2CR	[R86] 3-5 [R86]	5-7	A/N	3-5
?," [element end delimiter]	2CR	6-8	6-8	CHAR	1
ACCEPTANCE DATE (*2)	2CR	7-9	17-19	A/N	11
?," [element end delimiter]	2CR	18-20	18-20	CHAR	1
SURVEY TYPE CODE (*3)	2CR	19-21	20-22	INT	2
?," [element end delimiter]	2CR	21-23	21-23	CHAR	1
SURVEYOR	2CR	22-24	41	A/N	18-20

The C-record for Oregon and Washington [R63] contains four elements (SOURCE AGENCY, ACCEPTANCE DATE, SURVEY TYPE CODE, and SURVEYOR). These elements are written to the C-record in the order they are listed in the table, but do not have an absolute size and location. The start column for an element is two columns after the stop column for the previous element. A comma separates each element in the record.

(*1) The domain for SOURCE AGENCY is ?Data Collection Attribute Definitions Version 2.0" Appendix A. [R37] A "-? may or may not exist between the state and country designator (i.e.OR-023 or OR023).[R37]

(*2 ACCEPTANCE DATE format is ?DD-MMM-YYYY".

(*3) See Appendix B-14 ?PCCS CODE" for SURVEY TYPE CODE domain. [R37] The leading zero may or may not be present (i.e. PCCS CODE ?01" may exist as "1"). [R37]

Appendix A.04e 3.2.1.6 Utah TOWNSHIP.SID File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
"S" [survey record]	1R	1	1	CHAR	1
SURVEY ID	1R	2	19	A/N	18
SURVEY TYPE CODE (*1)	1R	10	10	INT	1
DISTANCE ERROR, CONSTANT	1R	20	26	F7.3	7
DISTANCE ERROR, PPM	1R	27	34	F8.1	8
BEARING ERROR EST	1R	35	42	F8.1	8
EASTING CTL ERROR EST	1R	43	51	F9.3	9
NORTHING CTL ERROR EST	1R	52	60	F9.3	9
"C" [comment record]	2CR	1	1	CHAR	1
SURVEY DESCRIPTION	2CR	2	41	A/N	40
SOURCE AGENCY (*2)	2CR	3	8	A/N	6
"C" [comment record]	3CR	1	1	CHAR	1
SURVEY DESCRIPTION	3CR	2	41	A/N	40
SURVEYOR	3CR	3	40	A/N	38
"C" [comment record]	4CR	1	1	CHAR	1
SURVEY DESCRIPTION	4CR	2	41	A/N	40
ACCEPTANCE DATE (*3)	4CR	3	11	A/N	9
"C" [comment record]	5CR	1	1	CHAR	1
SURVEY DESCRIPTION	5CR		41	A/N	40

Utah has collected SURVEY TYPE as a one digit code in column 10 of each survey record (the code is part of the SURVEY ID). Utah has collected SOURCE AGENCY, SURVEYOR, and ACCEPTANCE DATE respectively in the first three comment records following each survey record

(*1) SURVEY TYPE CODE may have these values:

1 = original survey
2 = retracement survey
3 = dependent resurvey
4 = independent resurvey
5 = special survey
6 = mineral survey
7 = meander survey
8 = protraction diagram
9 = field control tie
0 = supplemental plat

(*2) See GCDB Data Collection Attribute Definitions Version 2.0 Appendix A for SOURCE AGENCY codes.

(*3) ACCEPTANCE DATE will usually be in the format YYYYMMDD but may sometimes be in the format YYYYMMMDD.

Appendix A.05 3.2.1.7 TOWNSHIP.NOT File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
COUNT OF UNWANTED POINTS	1C	1	6	INT	6
ID OF UNWANTED POINT	2CR	1	6	INT	6
COUNT OF UNWANTED LINES	3C	1	6	INT	6
FROM-POINT ID OF UNWANTED LINE	4CR	1	6	INT	6
TO-POINT ID OF UNWANTED LINE	4CR	8	13	INT	6

TOWNSHIP.NOT File - Sample Data

```
    1
340640
    1
911020 915010
```

Appendix A.06 3.2.1.8 TOWNSHIP.LX File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
?ORIGIN"	2	2	7	CHAR	6
LATITUDE	2	12	22	F11.4	11
LONGITUDE	2	23	35	F13.4	13
X-COORDINATE (*2)	2	54	64	F11.2	11
Y-COORDINATE (*2)	2	65	74	F10.2	10
STATION/POINT ID	3R	2	7	INT	6
LATITUDE	3R	9	19	F11.4	11
LONGITUDE	3R	20	32	F13.4	13
STATION/PROJECT ELEVATION	3R	33	41	F9.2	9
NORTHING ERROR IN FEET	3R	42	45	INT	4
EASTING ERROR IN FEET	3R	46	50	INT	5
LINE COUNT	3R	51	53	INT	3
LINE TYPE	3R	54	55	INT	2
PEN COMMAND	3R	56	57	INT	2
X-COORDINATE (*2)	3R	58	68	F11.2	11
Y-COORDINATE (*2)	3R	70	80	F11.2	11
?999999" [end S-N lines; begin W-E lines]	4	2	7	INT	6
STATION/POINT ID	5R	2	7	INT	6
LATITUDE	5R	9	19	F11.4	11
LONGITUDE	5R	20	32	F13.4	13
STATION/PROJECT ELEVATION	5R	33	41	F9.2	9
NORTHING ERROR IN FEET	5R	42	45	INT	4
EASTING ERROR IN FEET	5R	46	50	INT	5
LINE COUNT	5R	51	53	INT	3
LINE TYPE	5R	54	55	INT	2
PEN COMMAND	5R	56	57	INT	2

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
X-COORDINATE (*2)	5R	58	68	F11.2	11
Y-COORDINATE (*2)	5R	70	80	F11.2	11
?999999" [end W-E lines; begin specials] (*3)	6	2	7	INT	6
STATION/POINT ID	7CR	2	7	INT	6
LATITUDE	7CR	9	19	F11.4	11
LONGITUDE	7CR	20	32	F13.4	13
STATION/PROJECT ELEVATION	7CR	33	41	F9.2	9
NORTHING ERROR IN FEET	7CR	42	45	INT	4
EASTING ERROR IN FEET	7CR	46	50	INT	5
LINE COUNT	7CR	51	53	INT	3
LINE TYPE (*4)	7CR	54	55	INT	2
PEN COMMAND (*5)	7CR	56	57	INT	2
X-COORDINATE (*2)	7CR	58	68	F11.2	11
Y-COORDINATE (*2)	7CR	70	80	F11.2	11
?999999" [end specials]	8C	2	7	INT	6

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) X,Y COORDINATES may be UTM, State Plane, or Map inches.

(*3) The LX file may end with Row 6 if no special surveys exist for the township.

(*4) LINE TYPE may have these values:

0 = Section/Township/Special-survey line
1 = 20-Chain line
2 = 40-Chain line
3 = 60-Chain line

(*5) PEN COMMAND may have these values:

1 = Store point
2 = Pen down [begin line]
3 = Continue
4 = Pen up [end line].

TOWNSHIP.LX-File - Sample Data

```
 TWP 08S    RNG  51W    PM   Umiat Alaska(AK)            DATE 09/25/91
ORIGIN          684500.0000 1635700.000          542470.547626668.94
100100          684156.7200     1640835.8097 200.00 40 40 1 0     2          534732.28          7620871.34
100120          684209.7044     1640835.8065 200.00 40 40 1 0     3          534726.72          7621273.48
100140          684222.6888     1640835.8032 200.00 40 40 1 0     3          534726.15          7621675.62
100160          684235.6732     1640835.8000 200.00 40 40 1 0     3          534715.59          7622077.76
100200          684248.6577     1640835.7967 200.00 40 40 1 0     3          534710.02          7622479.90
100220          684301.6421     1640835.7911 200.00 40 40 1 0     3          534704.48          7622882.04
100240          684314.6265     1640835.7854 200.00 40 40 1 0     3          534698.94          7623284.18
100260          684327.6109     1640835.7798 200.00 40 40 1 0     3          534693.40          7623686.32
100300          684340.5953     1640835.7742 200.00 40 40 1 0     3          534687.86          7624088.46
100320          684353.5796     1640835.7674 200.00 40 40 1 0     3          534682.33          7624490.60
100340          684406.5640     1640835.7606 200.00 40 40 1 0     3          534676.80          7624892.74
100360          684419.5484     1640835.7537 200.00 40 40 1 0     3          534671.28          7625294.88
100400          684432.5328     1640835.7469 200.00 40 40 1 0     3          534665.75          7625697.02
100420          684445.5171     1640835.7399 200.00 40 40 1 0     3          534660.22          7626099.16
100440          684458.5015     1640835.7329 200.00 40 40 1 0     3          534654.70          7626501.30
100460          684511.4859     1640835.7260 200.00 40 40 1 0     3          534649.17          7626903.44
100500          684524.4702     1640835.7190 200.00 40 40 1 0     3          534643.64          7627305.58
100520          684537.4546     1640835.7127 200.00 40 40 1 0     3          534638.11          7627707.72
100540          684550.4389     1640835.7065 200.00 40 40 1 0     3          534632.57          7628109.86
100560          684603.4233     1640835.7003 200.00 40 40 1 0     3          534627.04          7628512.00
100600          684616.4076     1640835.6940 200.00 40 40 1 0     3          534621.50          7628914.14
100616          684627.7236     1640835.6932 200.00 40 40 1 0     3          534616.63          7629264.61
100620          684629.3919     1640835.6929 200.00 40 40 1 0     3          534615.91          7629316.28
100640          684642.3761     1640835.6917 200.00 40 40 1 0     3          534610.32          7629718.42
100646          684646.6410     1640835.6910 200.00 40 40 1 0     3          534608.48          7629850.50
100660          684655.3600     1640835.6905 200.00 40 40 1 0     3          534604.72          7630120.54
100700          684708.3445     1640835.6894 200.00 40 40 1 0     4          534599.13          7630522.69
.
700620          684629.3918     1635418.7095 200.00 40 40 25 0    3          544233.27          7629468.97
700640          684642.3761     1635418.7093 200.00 40 40 25 0    3          544226.11          7629871.09
700660          684655.3604     1635418.7092 200.00 40 40 25 0    3          544218.94          7630273.21
700700          684708.3446     1635418.7091 200.00 40 40 25 0    4          544211.78          7630675.32
999999                                       0    0   0 0  9                 0.00               0.00
100100          684156.7200     1640835.8097 200.00 40 40 1 0     2          534732.28          7620871.34
120100          684156.7200     1640800.1349 200.00 40 40 1 0     3          535134.01          7620876.97
140100          684156.7200     1640724.4601 200.00 40 40 1 0     3          535535.73          7620882.67
.
640700          684708.3446     1635530.3948 200.00 40 40 25 0    3          543407.71          7630661.13
660700          684708.3446     1635454.5519 200.00 40 40 25 0    3          543809.75          7630668.19
700700          684708.3446     1635418.7091 200.00 40 40 25 0    4          544211.78          7630675.32
999999                                       0    0   0 0  9                 0.00               0.00
100616          684627.7236     1640835.6932 200.00 40 40 1 0     2          534616.63          7629264.61
900005          684627.5713     1640834.2671 200.00 40 40 1 0     3          534632.70          7629260.12
900010          684626.8314     1640822.1296 200.00 40 40 1 0     3          534769.23          7629239.11
900020          684620.6242     1640759.3713 200.00 40 40 1 0     3          535027.36          7629050.45
900030          684618.0920     1640743.7754 200.00 40 40 1 0     3          535203.52          7628974.50
900040          684619.2968     1640741.6574 200.00 40 40 1 0     3          535226.76          7629012.15
900050          684629.8759     1640723.0592 200.00 40 40 1 0     3          535430.83          7629342.77
900060          684644.9246     1640828.2545 200.00 40 40 1 0     3          534692.67          7629798.51
```

100646	684646.6410	1640835.6910	200.00	40	40	1	0	4	534608.48	7629850.50
999999				0	0	0	0	9	0.00	0.00

Appendix A.07 3.2.1.9 TOWNSHIP.AN File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
?SEC_/Sec_"	1R	1	4	CHAR	4
SEC_NO	1R	5	7	INT	3
SEC_DUP_CD (*1)	1R	7	7	CHAR	1
NOMINAL LOCATION (*2)	1R	9	9	CHAR	1
?T_"	1R	11	12	CHAR	2
SURVEY TYPE (*6)	1R	13	13	CHAR	1
SURVEY NUMBER (*3)	1R	15	19	A/N	5
SURVEY SUFFIX (*3)	1R	20	21	A/N	2
?N_" (*3)	1R	23	24	CHAR	2
SURVEY NOTE (*3)	1R	25	25	CHAR	1
ACREAGE	1R	27	35	F9.3	9
?;"	1R	36	36	CHAR	1
?M"	1R	38	38	CHAR	1
PRINMER_CD (*4)	1R	39	40	A/N	2
?T"	1R	41	41	CHAR	1
TIER_NO	1R	42	44	A/N	3
TIER_FRAC/TIER_DUP_CD (*5)	1R	45	45	A/N	1
TIER_DIR_CD	1R	46	46	CHAR	1
?R"	1R	47	47	CHAR	1
RANGE_NO	1R	48	50	INT	3
RANGE_FRAC/RANGE_DUP_CD (*5)	1R	51	51	A/N	1
RANGE_DIR_CD	1R	52	52	CHAR	1
LATITUDE	1R	54	64	F11.4	11
LONGITUDE	1R	66	77	F12.4	12

(*1) This element exists only for values of 'A' or 'B' in column 7. For example, Section 12 = 012, and Section 12 duplicate = 12A.

(*2) See Appendix B.01, Nominal Locations.

(*3) These fields may or may not be populated.

(*4) See Appendix B.02, Principal Meridians.

(*5) See Appendix B.11, Tier/Range Codes.

(*6) See Appendix B.15, Survey Types

TOWNSHIP.AN File - Sample Data

```
SEC_031 A T_A 40.000;  MO6T0070SR0980W 394430.2829 1071155.7398
SEC_031 B T_A 40.000;  MO6T0070SR0980W 394430.2829 1071212.7398
SEC_031 C T_A 40.000;  MO6T0070SR0980W 394412.2829 1071212.7398
SEC_031 D T_A 40.000;  MO6T0070SR0980W 394412.2829 1071155.7398
SEC_031 J T_L 2        41.300;  MO6T0070SR0980W 394400.2829 1071245.7398
SEC_031 K T_L 1        41.330;  MO6T0070SR0980W 394345.2829 1071245.7398
```

Appendix A.08 3.2.2.3 CTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
?ORIGIN"	2	2	7	CHAR	6
LATITUDE	2	11	22	F12.4	12
LONGITUDE	2	23	35	F13.4	13
ELEVATION (*2)	2	36	44	F9.3	9
?0"	2	48	48	INT	1
?0"	2	53	53	INT	1
?2000.0000"	2	56	65	F10.4	10
?5000.0000"	2	66	75	F10.4	10
CONTROL POINT ID	3R	2	7	INT	6
LATITUDE	3R	11	22	F12.4	12
LONGITUDE	3R	23	35	F13.4	13
ELEVATION (*2)	3R	36	44	F9.3	9
AVERAGE RELIABILITY	3R	46	48	INT	3
MAXIMUM RELIABILITY	3R	50	53	INT	4
TANGENT PLANE X-COORDINATE	3R	55	64	F10.4	10
TANGENT PLANE Y-COORDINATE	3R	65	74	F10.4	10

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content nor format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) ELEVATION values may have only two places after the decimal point rather than the standard three places. ELEVATIONs having 2 decimal places are right-justified within the elevation field. The positions of other elements in the file are not affected.

CTOWNSHIP File - Sample Data

```
 TWP 112N  RNG 103W  PM Fairbanks              Alaska(AK)   DATE 10/26/94
ORIGIN     661500.0000    1073500.0000   5000.000   0     0 2000.0000 5000.0000
100100     661548.7630    1073724.9460   5000.000 10    25 1910.0384 5075.1329
100300     664248.2310    1074218.2450   5000.000 10    25 1732.8606 7569.6907
.
.
.
600600     665818.5640    1074224.5690  5000.000  10    25  1731.8454 9002.6111
```

Appendix A.09 3.2.2.4 LXTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
?ORIGIN"	2	2	7	CHAR	6
LATITUDE	2	12	22	F11.4	11
LONGITUDE	2	23	35	F13.4	13
GRAPHICAL X-ORIGIN OF SW CORNER	2	42	44	F3.1	3
GRAPHICAL Y-ORIGIN OF SW CORNER	2	48	53	F6.4	6
X-COORDINATE (*2)	2	54	64	F11.2	11
Y-COORDINATE (*2)	2	65	74	F10.2	10
POINT ID	3R	2	7	INT	6
LATITUDE	3R	9	19	F11.4	11
LONGITUDE	3R	20	32	F13.4	13
ELEVATION	3R	33	41	F9.2	9
AVERAGE RELIABILITY	3R	42	45	INT	4
MAXIMUM RELIABILITY	3R	46	50	INT	5
LINE COUNT	3R	51	53	INT	3
LINE TYPE	3R	54	55	INT	2
PEN COMMAND	3R	56	57	INT	2
X-COORDINATE (*2)	3R	58	68	F11.2	11
Y-COORDINATE (*2)	3R	70	80	F11.2	11
?999999" [end S-N LINES; begin W-E lines]	4	2	7	INT	6
POINT ID	5R	2	7	INT	6
LATITUDE	5R	9	19	F11.4	11
LONGITUDE	5R	20	32	F13.4	13
ELEVATION	5R	33	41	F9.2	9
AVERAGE RELIABILITY	5R	42	45	INT	4
MAXIMUM RELIABILITY	5R	46	50	INT	5
LINE COUNT	5R	52	53	INT	2
LINE TYPE	5R	55	55	INT	1
PEN COMMAND	5R	57	57	INT	1
X-COORDINATE (*2)	5R	58	68	F11.2	11
Y-COORDINATE (*2)	5R	70	80	F11.2	11
?999999" [end W-E lines; begin specials] (*3)	6	2	7	INT	6

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
POINT ID	7CR	2	7	INT	6
LATITUDE	7CR	9	19	F11.4	11
LONGITUDE	7CR	20	32	F13.4	13
ELEVATION	7CR	33	41	F9.2	9
AVERAGE RELIABILITY	7CR	42	45	INT	4
MAXIMUM RELIABILITY	7CR	46	50	INT	5
LINE COUNT	7CR	52	53	INT	2
LINE TYPE (*4)	7CR	55	55	INT	1
PEN COMMAND (*5)	7CR	57	57	INT	1
X-COORDINATE (*2)	7CR	58	68	F11.2	11
Y-COORDINATE (*2)	7CR	70	80	F11.2	11
?999999" [end specials]	8	2	7	INT	6

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) X,Y COORDINATES will be UTM with the exception of Oregon, which will be State Plane.

(*3) The LX file may end with Row 6 if no special surveys exist for the township.

(*4) LINE TYPE may have these values:

0 = Section/Township/Special-survey line
1 = 20-Chain line
2 = 40-Chain line
3 = 60-Chain line

(*5) PEN COMMAND may have these values:

1 = Store point
2 = Pen down [begin line]
3 = continue
4 = Pen up [end line]

Oregon structures their LX_TOWNSHIP file in the following format:

Header Information
999999
South to North Section Lines
999999
West to East Section Lines
999999
Section Subdivisional Lines
Special Surveys

999999
Points
999999
Points
999999

LXTOWNSHIP File - Sample Data

```
TWP T09S  RNG R90W  PM   6 th              Colorado(CO)      DATE 91/01/15
ORIGIN    391600.0000 1072700.0000      1.0   1.0000  288630.44  4349022.28
 100100 391319.6006 1072932.0156 9200.00  40  40  1 0 2  284850.78  4344176.39
 100120 391332.6281 1072932.0021 9200.00  40  55  1 0 3  284862.16  4344578.04
 100140 391345.6553 1072931.9882 9200.00  38  55  1 0 3  284873.55  4344979.68
 100160 391358.6827 1072931.9747 9200.00  38  55  1 0 3  284884.93  4345381.33
 100200 391411.7099 1072931.9608 9200.00  38  55  1 0 3  284896.32  4345782.97
 100220 391424.7372 1072931.9473 9200.00  38  55  1 0 3  284907.70  4346184.62
 100240 391437.7644 1072931.9334 9200.00  38  55  1 0 3  284919.10  4346586.26
 100260 391450.7917 1072931.9198 9200.00  38  55  1 0 3  284930.48  4346987.91
 100300 391503.8190 1072931.9059 9200.00  38  55  1 0 3  284941.88  4347389.56
 100320 391516.8463 1072931.8923 9200.00  38  55  1 0 3  284953.26  4347791.21
 100323 391522.3633 1072931.8864 9200.00  38  55  1 0 3  284958.09  4347961.30
 100340 391529.8735 1072931.8785 9200.00  38  55  1 0 3  284964.66  4348192.85
 100343 391530.9873 1072931.8773 9200.00  38  55  1 0 3  284965.63  4348227.19
 100360 391542.9008 1072931.8649 9200.00  38  55  1 0 3  284976.05  4348594.50
 100400 391555.9280 1072931.8511 9200.00  38  55  1 0 3  284987.44  4348996.14
 100420 391608.9552 1072931.8375 9200.00  38  55  1 0 3  284998.83  4349397.79
 100440 391621.9824 1072931.8237 9200.00  38  55  1 0 3  285010.23  4349799.44
 100460 391635.0096 1072931.8101 9200.00  38  55  1 0 3  285021.62  4350201.08
 100500 391648.0368 1072931.7963 9200.00  38  55  1 0 3  285033.02  4350602.73
 100520 391701.0640 1072931.7827 9200.00  38  55  1 0 3  285044.41  4351004.37
 100540 391714.0912 1072931.7688 9200.00  38  55  1 0 3  285055.82  4351406.02
 100560 391727.1183 1072931.7553 9200.00  38  55  1 0 3  285067.21  4351807.66
 100600 391740.1455 1072931.7414 9200.00  38  55  1 0 3  285078.61  4352209.31
 100620 391753.1726 1072931.7279 9200.00  38  55  1 0 3  285090.01  4352610.95
 100640 391806.1998 1072931.7140 9200.00  38  55  1 0 3  285101.41  4353012.60
 100660 391819.2270 1072931.7003 9200.00  38  55  1 0 3  285112.81  4353414.25
 100700 391833.9346 1072931.6848 9200.00  40  40  1 0 4  285125.69  4353867.71
 104100 391319.6284 1072921.1558 9200.00  24  46  1 0 1  285111.26  4344170.08
 104700 391833.8800 1072921.9845 9200.00 190 501 1 0 1  285358.00  4353859.62
 117700 391833.8300 1072913.1189 9200.00 190 501 1 0 1  285570.31  4353852.23
 120100 391319.6712 1072904.4483 9200.00  24  46  2 1 1  285511.99  4344160.39
 120700 391833.7859 1072905.2885 9200.00 190 501 2 1 1  285757.84  4353845.71
 137700 391833.7360 1072856.4230 9200.00 190 501 2 1 1  285970.16  4353838.34
 140100 391319.7140 1072847.7409 9200.00  24  46  3 2 1  285912.72  4344150.73
 140700 391833.6919 1072848.5926 9200.00 190 501 3 2 1  286157.68  4353831.83
 160700 391833.5979 1072831.8967 9200.00 190 501 4 3 1  286557.52  4353817.97
 197700 391833.5479 1072823.0311 9200.00 190 501 4 3 1  286769.84  4353810.61
 200100 391319.7995 1072814.3260 9200.00  40  40  5 0 2  286714.18  4344131.46
 200200 391411.8828 1072814.5366 9200.00 190 501 5 0 3  286752.95  4345737.42
 200300 391503.9165 1072814.6567 9200.00 190 501 5 0 3  286793.87  4347341.79
 200400 391555.9229 1072814.7695 9200.00 190 501 5 0 3  286834.95  4348945.31
 200500 391647.9036 1072814.9014 9200.00 190 501 5 0 3  286875.56  4350548.06
 200600 391739.8687 1072815.0459 9200.00 190 501 5 0 3  286915.88  4352150.34
 200700 391833.5038 1072815.2007 9200.00 190 501 5 0 4  286957.37  4353804.12
 220700 391833.4098 1072758.5048 9200.00 190 501 6 1 1  287357.21  4353790.30
 237700 391833.3599 1072749.6393 9200.00 190 501 6 1 1  287569.53  4353782.97
 240100 391319.8846 1072740.9089 9200.00  24  46  7 2 1  287515.70  4344112.26
 240700 391833.3158 1072741.8089 9200.00 190 501 7 2 1  287757.05  4353776.50
```

```
260700 391833.2217 1072725.1129 9200.00 190 501 8 3 1  288156.90  4353762.72
297700 391833.1718 1072716.2474 9200.00 190 501 8 3 1  288369.21  4353755.41
.      .
.      .
.      .
999999                                  0   0 0 0  0        9    0.000.00
100100 391319.6006 1072932.0156 9200.00   40  40 1 0 2  284850.78  4344176.39
104100 391319.6284 1072921.1558 9200.00   24  46 1 0 3  285111.26  4344170.08
120100 391319.6712 1072904.4483 9200.00   24  46 1 0 3  285511.99  4344160.39
140100 391319.7140 1072847.7409 9200.00   24  46 1 0 3  285912.72  4344150.73
200100 391319.7995 1072814.3260 9200.00   40  40 1 0 3  286714.18  4344131.46
240100 391319.8846 1072740.9089 9200.00   24  46 1 0 3  287515.70  4344112.26
300100 391319.9696 1072707.4918 9200.00   40  40 1 0 3  288317.21  4344093.14
340100 391320.0885 1072633.7267 9200.00   24  46 1 0 3  289127.09  4344074.92
400100 391320.2074 1072559.9616 9200.00   40  40 1 0 3  289936.97  4344056.78
420100 391320.2237 1072543.1881 9200.00   40  47 1 0 3  290339.26  4344046.48
440100 391320.2394 1072526.4145 9200.00   26  47 1 0 3  290741.55  4344036.19
460100 391320.2557 1072509.6409 9200.00   40  47 1 0 3  291143.84  4344025.93
500100 391320.2714 1072452.8673 9200.00   40  40 1 0 3  291546.13  4344015.68
520100 391320.3160 1072436.1064 9200.00   40  47 1 0 3  291948.14  4344006.35
540100 391320.3600 1072419.3453 9200.00   26  47 1 0 3  292350.16  4343997.02
560100 391320.4045 1072402.5844 9200.00   40  47 1 0 3  292752.16  4343987.72
600100 391320.4485 1072345.8232 9200.00   40  40 1 0 3  293154.18  4343978.43
620100 391320.4758 1072329.0497 9200.00   40  47 1 0 3  293556.47  4343968.64
640100 391320.5026 1072312.2759 9200.00   26  47 1 0 3  293958.78  4343958.85
660100 391320.5297 1072255.5023 9200.00   26  47 1 0 3  294361.07  4343949.10
700100 391320.5563 1072239.0138 9200.00   40  40 1 0 4  294756.53  4343939.53
700103 391323.2924 1072239.0567 9200.00   20  40 1 0 1  294757.72  4344023.91
100120 391332.6281 1072932.0021 9200.00   40  55 2 1 1  284862.16  4344578.04
400120 391333.2592 1072559.9719 9200.00   40  40 2 1 2  289947.54  4344459.19
420120 391333.2699 1072543.1955 9200.00   40  47 2 1 3  290349.87  4344448.72
440120 391333.2798 1072526.4191 9200.00   26  47 2 1 3  290752.21  4344438.25
460120 391333.2898 1072509.6427 9200.00   40  47 2 1 3  291154.54  4344427.80
500120 391333.2991 1072452.8663 9200.00   40  40 2 1 3  291556.87  4344417.34
520120 391333.3376 1072436.1067 9200.00   40  47 2 1 3  291958.82  4344407.82
540120 391333.3754 1072419.3472 9200.00   26  47 2 1 3  292360.77  4344398.30
560120 391333.4132 1072402.5876 9200.00   40  47 2 1 3  292762.72  4344388.80
600120 391333.4503 1072345.8280 9200.00   40  40 2 1 3  293164.67  4344379.30
620120 391333.4853 1072329.0557 9200.00   40  47 2 1 3  293566.92  4344369.74
640120 391333.5195 1072312.2835 9200.00   26  47 2 1 3  293969.17  4344360.19
660120 391333.5538 1072255.5008 9200.00   40  47 2 1 3  294371.67  4344350.65
700120 391333.5862 1072239.3916 9200.00   20  40 2 1 4  294758.02  4344341.49
700123 391336.0807 1072239.4728 9200.00   20  40 2 1 1  294758.09  4344418.45
100140 391345.6553 1072931.9882 9200.00   38  55 3 2 1  284873.55  4344979.68
.      .
.      .
.      .
999999                                  0   0  0 0 9        0.00         0.00
918010 391530.9873 1072931.8773 9200.00  38  55  1 0 2  284965.63  4348227.19
918020 391529.5996 1072928.7557 9200.00 190 501 1 0 3  285039.28  4348182.34
918030 391522.3070 1072928.9854 9200.00 190 501 1 0 3  285027.58  4347957.65
918040 391522.3633 1072931.8864 9200.00  38  55 1 0 4  284958.09  4347961.30
999999                                  0    0 0 0 9        0.00         0.00
```

Appendix A.10 3.2.2.5 RTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
CONTROL POINT ID	2CR	1	6	INT	6
LATITUDE	2CR	10	19	F10.3	10
LONGITUDE	2CR	23	33	F11.3	11
ELEVATION (*2)	2CR	37	44	F8.3	8
CONTROL SOURCE CODE [document type]	2CR	47	48	A/N	2
ONTROL RELIABILITY CODE [coord. determ. process]	2CR	50	51	A/N	2
?999999"	3	1	6	INT	6
POINT FROM	4R	1	6	INT	6
POINT TO	4R	10	15	INT	6
DISTANCE	4R	17	24	F8.3	8
QUADRANT	4R	27	27	INT	1
DIRECTION/BEARING	4R	31	37	F7.0	7
SOURCE ID (*3)	4R	40	49	A/N	10
?999998"	5	1	6	INT	6

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are notstandardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) Elevation values may have only two places after the decimal point rather than the standard three places. ELEVATIONs having two decimal places are right-justified within the elevation field. The positions of other elements in the file are not affected.

(*3) This field may or may not be populated.

RTOWNSHIP File - Sample Data

```
 TWP 112N  RNG 103W  PM Fairbanks     Alaska(AK)        DATE 9/10/94
100100   661548.763   1073724.946 5000.000 40 16
100300   664248.231   1074218.245 5000.000 40 16
   .              .                  .          .   .     .
   .              .                  .          .   .     .
   .              .                  .          .   .     .
600600   665818.564   1074224.569 5000.000 40 16
500400   665212.321   1074516.256 5000.000 40 16
999999
100100   100200   80.000   100.      0123456789
100200   100300   80.000  1 100. 0123456789
100300   100400   80.000  1 100. 0123456789
100400   100500   80.000  1 100. 0123456789
100500   100600   80.000  1 100. 0123456789
100600   100640   40.000  1 100. 0123456789
100640   100660   20.000  1 100. 0123456789
100660   100700   18.240  1 100. 0123456789
200100   200200   80.000  1 400. 2345678999
200200   200300   80.000  1 400. 2345678999
200300   200400   80.000  1 400. 2345678999
200400   200500   80.000  1 400. 2345678999
200500   200600   80.000  1 400. 2345678999
200600   200640   40.000  1 400. 2345678999
200640   200660   20.000  1 400. 2345678999
200660   200700   18.340  1 100. 2345678999
   .          .          .        .  .          .
   .          .          .        .  .          .
   .          .          .        .  .          .
700640   700660   20.000  1 400.  2345678999
700660   700700   18.340  1 100.  2345678999
999998
```

Appendix A.11 3.2.2.6 QTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
Q-FILE RECORD TYPE	2	1	1	INT	1
COORDINATE SYSTEM CODE	2	3	6	CHAR	4
COORDINATE SYSTEM DESCRIPTION	2	8	48	A/N	41
DATA ELEMENT DICTIONARY CODE	2	50	56	A/N	7
Q-FILE RECORD TYPE	3	1	1	INT	1
COORDINATE SYSTEM INDEX CODE	3	3	6	A/N	4
COORDINATE SYSTEM INDEX DESCRIPTION	3	8	48	A/N	41
DATA ELEMENT DICTIONARY CODE	3	50	56	A/N	7
Q-FILE RECORD TYPE	4	1	1	INT	1
DIRECTION/BEARING UNITS CODE	4	3	6	CHAR	4
DIRECTION/BEARING UNITS DESCRIPTION	4	8	48	CHAR	41
DATA ELEMENT DICTIONARY CODE	4	50	56	A/N	7
Q-FILE RECORD TYPE	5	1	1	INT	1
DISTANCE UNITS CODE	5	3	6	CHAR	1
DISTANCE UNITS DESCRIPTION	5	8	48	CHAR	41
DATA ELEMENT DICTIONARY CODE	5	50	56	A/N	7
Q-FILE RECORD TYPE	6	1	1	INT	1
ELEVATION DATUM CODE	6	3	6	CHAR	4
ELEVATION DATUM DESCRIPTION	6	8	48	A/N	41
DATA ELEMENT DICTIONARY CODE	6	50	56	A/N	7
Q-FILE RECORD TYPE	7	1	1	INT	1
ELEVATION DETERMINATION PROCESS CODE	7	3	6	A/N	4
ELEVATION DETERMINATION PROCESS DESCRIPTION	7	8	48	A/N	41

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
DATA ELEMENT DICTIONARY CODE	7	50	56	A/N	7
Q-FILE RECORD TYPE	8	1	1	INT	1
HORIZONTAL DETERMINATION PROCESS CODE	10	3	6	A/N	4
HORIZONTAL DETERMINATION PROCESS DESCRIPTION	10	8	48	A/N	41
DATA ELEMENT DICTIONARY CODE	10	50	56	A/N	7
Q-FILE RECORD TYPE	11	1	1	INT	1
POSITION DETERMINATION PROCESS CODE	11	3	6	A/N	4
POSITION DETERMINATION PROCESS DESCRIPTION	11	8	48	A/N	41
DATA ELEMENT DICTIONARY CODE	11	50	56	A/N	7
Q-FILE RECORD TYPE	12	1	1	INT	1
REFERENCE MERIDIAN CODE	12	3	6	CHAR	4
REFERENCE MERIDIAN DESCRIPTION	12	8	48	CHAR	41
DATA ELEMENT DICTIONARY CODE	12	50	56	A/N	7
Q-FILE RECORD TYPE	13	1	1	INT	1
TOWNSHIP	13	3	7	A/N	5
TOWNSHIP DESCRIPTION	13	9	48	A/N	40
DATA ELEMENT DICTIONARY CODE	13	50	56	A/N	7
Q-FILE RECORD TYPE	14	1	1	INT	1
RANGE	14	3	7	A/N	5
RANGE DESCRIPTION	14	9	48	A/N	40
DATA ELEMENT DICTIONARY CODE	14	50	56	A/N	7
Q-FILE RECORD TYPE	R4415CR	1	1	INT	1
PRIMARY PCCS POINT IDENTIFIER	15CR	3	8	INT	6
SECONDARY PCCS POINT IDENTIFIER	15CR	10	15	INT	6
Q-FILE RECORD TYPE	16CR	1	1	INT	1
PCCS POINT IDENTIFIER	16CR	3	8	INT	6

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
SECTION IDENTIFIER	16CR	17	19	INT	3
CORNER CLASSIFICATION [primary corner name] (*3)	16CR	21	22	INT	2
CORNER CLASSIFICATION [corner status] (*3)	16CR	23	23	A/N	1
CORNER CLASSIFICATION [qualifying corner attribute] (*3)	16CR	24	24	A/N	1
CORNER CLASSIFICATION [geopolitical boundary attribute] (*3)	16CR$_{R44}$	25	25	A/N	1

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) See Appendix B.10, Horizontal Datum Codes.

(*3) See Appendix B.12, Corner Classification Codes.

QTOWNSHIP File - Sample Data

```
 TWP 500N  RNG 052W  PM New Mexico          Colorado(CO)     DATE 1/17/92
1 C       Geographic Latitude/Longitude              DED9021
1 W       West                                       DED9022
1 A       Deg-Min-Sec DDDmmss.ss (PCCS)              DED9046
1 A       Chains - ground                            DED9049
1 A       Ntl Geodetic Vertical Datum 1929   DED9062
1 31      BLM - PCCS Program                         DED9063
1 F       Feet                                       DED9064
1 A       NAD 27                                     DED9075
1 31      BLM - PCCS Program                         DED9076
1 31      BLM - PCCS Program                         DED9107
1 I       Astronomic (true) mean from North          DED9114
1 5000N full (not a fractional) township             DED1695
1 0520W full (not a fractional) range                DED1699
2 836050 840010
2 836040 839010
2 836030 838010
2 836020 837010
2 500100 836010
2 600100 837020
2 620100 838020
2 640100 839020
2 660100 840020
2 700100 836080
3 598600      001 180C0
3 600598      001 180C0
3 600614      001 070C0
3 600620      001 210C0
3 600640      001 170C0
3 600660      001 210C0
3 600700      001 180B0
3 618600      001 210C0
3 620700      001 210B0
3 638600      001 170C0
3 640598      001 170C0
3 640700      001 170B0
3 658600      001 210C0
3 660700      001 210B0
3 700600      001 180B0
3 700606      001 070B0
3 700609      001 210B0
3 700614      001 070B0
3 700617      001 210B0
3 700620      001 210B0
3 700637      001 070B0
3 700640      001 170B0
3 700657      001 210B0
3 700660      001 210B0
3 700661      001 210B0
3 700700      001 220B0
```

3 500600 002 180C0
3 500620 002 210C0

Appendix A.12 3.2.2.7 ZTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
SOURCE ID	2R	3	12	A/N	10
SUBJECTIVE RELIABILITY REMARKS (*2)	2R	15	19	A/N	5
SOURCE DOCUMENT AGENCY (*3)	2R	22	27	A/N	6
SOURCE DOCUMENT DATE	2R	30	40	A/N	11
SURVEY PROCEDURE CODE	2R	43	44	INT	2

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) The SUBJECTIVE RELIABILITY REMARKS field may or may not be populated.

(*3) See reference document ?GCDB Attributes, Version 2.0 Appendix A".

ZTOWNSHIP File - Sample Data

```
TWP 14N   RNG 04E   PM Boise Idaho(ID)          DATE 9/10/94
        1880                                BLM     01-MAY-1880    01        Warren, Thomas L.
        1968      9999                BLM     08-JUN-1968    02        Ward, Fred W.
        1942     99999                BLM     15-DEC-1942    02        Sibley, Eldon W.
```

Appendix A.12b 3.2.2.7 Alternate ZTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILE HEADER (*1)	1				
SOURCE ID	2R	1	9	A/N	9
SUBJECTIVE RELIABILITY REMARKS (*2)	2R	10	14	A/N	5
SOURCE DOCUMENT AGENCY (*3)	2R	17	22	A/N	6
SOURCE DOCUMENT DATE	2R	25	35	A/N	11
SURVEY PROCEDURE CODE	2R	38	39	INT	2
SURVEYOR	2R	42	76	A/N	35

(*1) The first row of this file contains header information. While the file headers of PCCS and GMM files are not standardized for content or format, they typically contain values for township, range, principal meridian, name of state, and date. Because of the inconsistent nature of the data contained in these file headers, no information will be extracted from them for purposes of data conversion. This information will instead be extracted from LLD attributed files (LINK, QLINK, and GLINK).

(*2) The SUBJECTIVE RELIABILITY REMARKS field may or may not be populated.

(*3) See reference document ?GCDB Attributes, Version 2.0 Appendix A".

Alternate ZTOWNSHIP File - Sample Data

TWP 3S RNG 45E PM Willamette Oregon (OR) DATE 91/09/06

2	BLM	21-MAR-1882	01	MOORE, R & THOMPSON
1	BLM	07-FEB-1868	01	GRAY, J & ODELL
3	OR-063	01-APR-1972	02	AUGHENBAUGH, W R
5	OR-063	19-SEP-1985	02	BURRIS, J W
7	OR-063	22-NOV-1989	02	BLACKMAN, G T
4	OR-063	01-OCT-1978	02	GRIFFITH, D I
6	OR-063	26-APR-1988	02	GRIFFITH, D I
8	BLM	22-NOV-1893	02	COLE, W P
9	BLM	18-MAR-1882	02	MELDRUM, H & CAMPBELL

Appendix A.13 3.2.3.3 LQTOWNSHIP File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
FILENAME	1	1	13	A/N	13
DATE TIME STAMP	1	27	42	A/N	16
?UTM ZONE =”/?STATE PLAN”	1	45	54	CHAR	10
ZONE NUMBER (*1)	1	56	59	INT	4
?SEC_”	2R	1	4	CHAR	4
SECTION	2R	5	7	A/N	3
NOMINAL LOCATION (*2)	2R	9	9	CHAR	1
?T_”	2R	11	12	CHAR	2
SURVEY TYPE (*6)	2R	13	13	CHAR	1
SURVEY NUMBER (*3)	2R	15	19	A/N	5
SURVEY SUFFIX (*3)	2R	20	21	A/N	2
?N_” (*3)	2R	23	24	CHAR	2
SURVEY NOTE (*3)	2R	25	25	CHAR	1
ACREAGE	2R	27	35	F9.3	9
?;”	2R	36	36	CHAR	1
?M”	2R	38	38	CHAR	1
MERIDIAN (*4)	2R	39	40	A/N	2
?T”	2R	41	41	CHAR	1
TOWNSHIP (*5)	2R	42	46	A/N	5
?R”	2R	47	47	CHAR	1
RANGE (*5)	2R	48	52	A/N	5
LATITUDE	2R	54	64	F11.4	11
LONGITUDE	2R	66	77	F12.4	12

(*1) If two digits then ZONE NUMBER is a UTM ZONE. If four digits then ZONE NUMBER is a STATE PLANE ZONE.

(*2) See Appendix B.01, Nominal Locations.

(*3) These fields may or may not be populated.

(*4) See Appendix B.02, Principal Meridians.

(*5) See Appendix B.11, Tier/Range Codes.

(*6)See Appendix B.15, Survey Types

LQTOWNSHIP File - Sample Data

```
LQT0030S0870W                                   01/18/9512:17:22   UTM ZONE =   13
SEC_031 L T_L_8                                 15.630;   M06T0030SR0870W 394436.8300          1071215.8800
SEC_031 I T_L_7                                           15.640;   M06T0030SR0870W 394449.9000 1071215.8400
SEC_031 H T_L_6                                 15.660;   M06T0030SR0870W 394502.9600 1071215.7700
SEC_031 E T_L_5                                 15.670;   M06T0030SR0870W 394516.0300 1071215.7100
SEC_030 L T_L_8                                 15.650;   M06T0030SR0870W 394529.0700 1071215.6700
SEC_030 I T_L_7                                           15.590;   M06T0030SR0870W 394542.0800  1071215.6500
SEC_030  H T_L_6                                15.530;   M06T0030SR0870W 394555.0800  1071215.6600
SEC_030 E T_L_5                                 15.470;   M06T0030SR0870W 394608.1100  1071215.6500
SEC_019 L T_L_9                                 15.440;   M06T0030SR0870W 394621.1100  1071215.6600
SEC_019 I T_L_8                                           15.450;   M06T0030SR0870W 394634.1200  1071215.6500
SEC_019 H T_L_7                                 15.450;   M06T0030SR0870W 394647.1200  1071215.6300
SEC_019 E T_L_6                                 15.460;   M06T0030SR0870W 394700.1500  1071215.6200
SEC_018 L T_L_12                                12.920;   M06T0030SR0870W 394712.7600  1071216.0900
SEC_018 L T_T_43          N_A       117.120;  M06T0030SR0870W 394712.7600  1071216.0900
SEC_018 I T_L_11                                14.180;   M06T0030SR0870W 394726.5600  1071215.7900
SEC_018 I T_T_43          N_A       117.120;  M06T0030SR0870W 394726.5600  1071215.7900
SEC_018 H T_L_6                                 15.420;   M06T0030SR0870W 394739.1700  1071215.5800
SEC_018 E T_L_5                                 15.410;   M06T0030SR0870W 394752.1700  1071215.5600
SEC_007 L T_L_8                                 15.410;   M06T0030SR0870W 394805.2000  1071215.5500
SEC_007 I T_L_7                                           15.430;   M06T0030SR0870W 394818.2200  1071215.5800
SEC_007 H T_L_6                                 15.460;   M06T0030SR0870W 394831.2700  1071215.5700
SEC_007 E T_L_5                                 15.490;   M06T0030SR0870W 394844.2900  1071215.5800
SEC_006 L T_L_19                                15.510;   M06T0030SR0870W 394857.3400  1071215.6200
SEC_006 I T_L_16                                15.520;   M06T0030SR0870W 394910.3800  1071215.6300
SEC_006 H T_L_15                                15.530;   M06T0030SR0870W 394923.4200  1071215.6400
SEC_006 E T_L_10          N_X       11.430;   M06T0030SR0870W 394936.4500  1071215.6600
SEC_006 E T_L_11                                15.540;   M06T0030SR0870W  394936.4500  1071215.6600
SEC_006 E T_L_10          N_X       11.430;   M06T0030SR0870W  394947.7600  1071215.6700
SEC_006 E T_L_11                                15.540;   M06T0030SR0870W  394947.7600  1071215.6700
SEC_031 O T_A                                             40.000;   M06T0030SR0870W  394436.8200 1071204.1500
SEC_031 N T_A                                             40.000;   M06T0030SR0870W  394449.8600 1071204.0800
SEC_031 C T_A                                             40.000;   M06T0030SR0870W  394502.9300 1071204.0200
SEC_031 B T_A                                             40.000;   M06T0030SR0870W  394515.9700  1071203.9500
SEC_030 O T_A                                             40.000;   M06T0030SR0870W  394529.0200  1071203.9100
SEC_030 N T_A                                             40.000;   M06T0030SR0870W  394542.0200  1071203.9200
SEC_030 C T_A                                             40.000;   M06T0030SR0870W  394555.0300  1071203.9300
SEC_030 B T_A                                             40.000;   M06T0030SR0870W  394608.0500  1071203.9200
SEC_019 O T_A                                             40.000;   M06T0030SR0870W  394621.0800  1071203.9300
SEC_019 N T_A                                             40.000;   M06T0030SR0870W  394634.0900  1071203.9200
SEC_019 C T_A                                             40.000;   M06T0030SR0870W  394647.1100  1071203.9000
SEC_019 B T_A                                             40.000;   M06T0030SR0870W  394700.1200  1071203.9100
SEC_018 O T_L_13                                12.540;   M06T0030SR0870W  394708.6900  1071203.8700
SEC_018 O T_T_43          N_A       117.120;  M06T0030SR0870W  394708.6900  1071203.8700
SEC_018 L T_L_12                                12.920;   M06T0030SR0870W  394715.1900  1071213.1200
SEC_018 L T_T_43          N_A       117.120;  M06T0030SR0870W  394715.1900  1071213.1200
SEC_018 N T_L_10                                23.890;   M06T0030SR0870W  394722.8500  1071202.6700
SEC_018 N T_T_43          N_A       117.120;  M06T0030SR0870W  394722.8500  1071202.6700
SEC_018 I T_L_11                                14.180;   M06T0030SR0870W  394721.8700  1071213.1300
.
.
.
SEC_018 C T_L_7                                 38.630;   M06T0030SR0870W  394739.2500  1071204.1200
SEC_018 C T_T_43          N_A       117.120;  M06T0030SR0870W  394739.2500  1071204.1200
SEC_018 N T_L_10                                23.890;   M06T0030SR0870W  394728.3400  1071204.6500
SEC_018 N T_T_43          N_A       117.120;  M06T0030SR0870W  394728.3400  1071204.6500
SEC_018 B  T_A                                            40.000;   M06T0030SR0870W  394752.1000  1071203.8300
SEC_007  O  T_A                                 40.000;   M06T0030SR0870W  394805.1000  1071203.8100
SEC_007  N  T_A                                 40.000;   M06T0030SR0870W  394818.1500  1071203.8200
SEC_007  C  T_A                                 40.000;   M06T0030SR0870W  394831.2100  1071203.8300
SEC_007  B  T_A                                 40.000;   M06T0030SR0870W  394844.2600  1071203.8500
SEC_006  O  T_A                                 40.000;   M06T0030SR0870W  394857.3000  1071203.8600
```

Appendix A.14a 3.2.4.1 California's TOWNSHIP.AA File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
LINK LINE OPTION NUMBER	1R	1	1	INT	1
SURVEY NOTE (*4)	1R	3	3	CHAR	1
ROW NUMBER FROM LLD	1R	5	8	INT	4
MERIDIAN CODE (*1)	1R	10	11	A/N	2
TOWNSHIP (*2)	1R	13	17	A/N	5
RANGE (*2)	1R	19	23	A/N	5
SECTION	1R	25	27	A/N	3
ALMRS LAND UNIT TYPE	1R	29	29	CHAR	1
SURVEY NUMBER (*3)	1R	31	35	A/N	5
ALIQUOT PART	1R	37	52	CHAR	16
ACREAGE OF THE PARCEL	1R	54	60	F7.2	7
POINT ID	1R	62	67	INT	6
CORNER TYPE (*4)	1R	69	73	INT	5
LAND UNIT TYPE (*4)	1R	79	80	INT	2
COMMENT FIELD (*4)	1R	82	121	A/N	40

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) The SURVEY NUMBER field will not be populated for this file.

(*4) These fields may or may not be populated.

California's TOWNSHIP.AA File - Sample Data

```
1  4010 21 0070S 0210E 001 A     X,,,,,,,,,,,,,,,  40.00 660660
1  4010 21 0070S 0210E 001 A     X,,,,,,,,,,,,,,,  40.00 660700
1  4010 21 0070S 0210E 001 A     X,,,,,,,,,,,,,,,  40.00 700660
1  4010 21 0070S 0210E 001 A     X,,,,,,,,,,,,,,,  40.00 700700
1  4020 21 0070S 0210E 001 A     ,X,,,,,,,,,,,,,,  40.00 640660
1  4020 21 0070S 0210E 001 A     ,X,,,,,,,,,,,,,,  40.00 640700
1  4020 21 0070S 0210E 001 A     ,X,,,,,,,,,,,,,,  40.00 660660
1  4020 21 0070S 0210E 001 A     ,X,,,,,,,,,,,,,,  40.00 660700
```

Appendix A.14b 3.2.4.1 Wyoming's TOWNSHIP.AA File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
LINK LINE OPTION NUMBER	1R	1	1	INT	1
SURVEY NOTE (*4)	1R	3	3	CHAR	1
ROW NUMBER FROM LLD	1R	5	8	INT	4
MERIDIAN CODE (*1)	1R	10	11	A/N	2
TOWNSHIP (*2)	1R	13	17	A/N	5
RANGE (*2)	1R	19	23	A/N	5
SECTION	1R	25	27	A/N	3
ALMRS LAND UNIT TYPE	1R	29	29	CHAR	1
SURVEY NUMBER (*3)	1R	31	35	A/N	5
ALIQUOT PART	1R	37	52	CHAR	16
ACREAGE OF THE PARCEL	1R	54	60	F7.2	7
POINT ID	1R	62	67	INT	6
CORNER TYPE (*4)	1R	69	73	INT	5
LAND UNIT TYPE (*4)	1R	79	80	INT	2
COMMENT FIELD (*4)	1R	82	121	A/N	40

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) The SURVEY NUMBER field will not be populated for this file.

(*4) The ACREAGE OF THE PARCEL has an implied decimal place between positions 58 and 59.

(*5) These fields may or may not be populated.

Wyoming's TOWNSHIP.AA File - Sample Data

```
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,X,,,,,,, 0004000 620620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,X,,,,,,, 0004000 620640        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,X,,,,,,, 0004000 640620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,X,,,,,,, 0004000 640640        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,X,,,,,, 0004000 600620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,X,,,,,, 0004000 600640        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,X,,,,,, 0004000 620620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,X,,,,,, 0004000 620640        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,X,,,,, 0004000 600600        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,X,,,,, 0004000 600620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,X,,,,, 0004000 620600        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,X,,,,, 0004000 620620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,X,,,, 0004000 620600        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,X,,,, 0004000 620620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,X,,,, 0004000 640600        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,X,,,, 0004000 640620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,X,, 0004000 640620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,X,, 0004000 640640        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,X,, 0004000 660620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,X,, 0004000 660640        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,,X, 0004000 640600        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,,X, 0004000 640620        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,,X, 0004000 660600        01
4 000000 06 1050W 0430N 001 A ,,,,, ,,,,,,,,,,,,,,X, 0004000 660620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,X,,,,,,, 0004000 520620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,X,,,,,,, 0004000 520640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,X,,,,,,, 0004000 540620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,X,,,,,,, 0004000 540640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,X,,,,,, 0004000 500620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,X,,,,,, 0004000 500640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,X,,,,,, 0004000 520620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,X,,,,,, 0004000 520640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,X,,,,, 0004000 500600        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,X,,,,, 0004000 500620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,X,,,,, 0004000 520600        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,X,,,,, 0004000 520620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,X,,,, 0004000 520600        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,X,,,, 0004000 520620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,X,,,, 0004000 540600        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,X,,,, 0004000 540620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,X,,, 0004000 560620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,X,,, 0004000 560640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,X,,, 0004000 600620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,X,,, 0004000 600640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,,X,, 0004000 540620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,,X,, 0004000 540640        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,,X,, 0004000 560620        01
4 000000 06 1050W 0430N 002 A ,,,,, ,,,,,,,,,,,,X,, 0004000 560640        01
```

Appendix A.15a 3.2.4.2 California's TOWNSHIP.LL File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
LINK LINE OPTION NUMBER	1R	1	1	INT	1
SURVEY NOTE (*4)	1R	3	3	CHAR	1
ROW NUMBER FROM LLD	1R	5	8	INT	4
MERIDIAN CODE (*1)	1R	10	11	A/N	2
TOWNSHIP (*2)	1R	13	17	A/N	5
RANGE (*2)	1R	19	23	A/N	5
SECTION	1R	25	27	A/N	3
ALMRS LAND UNIT TYPE	1R	29	29	CHAR	1
SURVEY NUMBER (*3)	1R	31	35	A/N	5
ALIQUOT PART	1R	37	52	CHAR	16
ACREAGE OF THE PARCEL	1R	54	60	F7.2	7
POINT ID	1R	62	67	INT	6
CORNER TYPE (*4)	1R	69	73	INT	5
LAND UNIT TYPE (*4)	1R	79	80	INT	2
COMMENT FIELD (*4)	1R	82	121	A/N	40

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) These fields may or may not be populated.

California's TOWNSHIP.LL File - Sample Data

```
4  0198 21 0070S 0210E 001 L 1   X,,,,,,,,,,,,,,   51.80 660660     01
4  0198 21 0070S 0210E 001 L 1   X,,,,,,,,,,,,,,   51.80 660700     01
4  0198 21 0070S 0210E 001 L 1   X,,,,,,,,,,,,,,   51.80 700660     01
4  0198 21 0070S 0210E 001 L 1   X,,,,,,,,,,,,,,   51.80 700667     01
4  0198 21 0070S 0210E 001 L 1   X,,,,,,,,,,,,,,   51.80 700700     01
4  0198 21 0070S 0210E 001 L 2   ,X,,,,,,,,,,,,,   51.42 640660     01
4  0198 21 0070S 0210E 001 L 2   ,X,,,,,,,,,,,,,   51.42 640700     01
4  0198 21 0070S 0210E 001 L 2   ,X,,,,,,,,,,,,,   51.42 660660     01
4  0198 21 0070S 0210E 001 L 2   ,X,,,,,,,,,,,,,   51.42 660700     01
4  0198 21 0070S 0210E 001 L 3   ,,,,X,,,,,,,,,,   51.03 620660     01
4  0198 21 0070S 0210E 001 L 3   ,,,,X,,,,,,,,,,   51.03 620700     01
4  0198 21 0070S 0210E 001 L 3   ,,,,X,,,,,,,,,,   51.03 640660     01
4  0198 21 0070S 0210E 001 L 3   ,,,,X,,,,,,,,,,   51.03 640700     01
4  0198 21 0070S 0210E 001 L 4   ,,,,,X,,,,,,,,,   50.65 600660     01
4  0198 21 0070S 0210E 001 L 4   ,,,,,X,,,,,,,,,   50.65 600700     01
4  0198 21 0070S 0210E 001 L 4   ,,,,,X,,,,,,,,,   50.65 620660     01
4  0198 21 0070S 0210E 001 L 4   ,,,,,X,,,,,,,,,   50.65 620700     01
4  0198 21 0070S 0210E 002 L 1   X,,,,,,,,,,,,,,   50.13 560660     01
4  0198 21 0070S 0210E 002 L 1   X,,,,,,,,,,,,,,   50.13 560700     01
4  0198 21 0070S 0210E 002 L 1   X,,,,,,,,,,,,,,   50.13 600660     01
4  0198 21 0070S 0210E 002 L 1   X,,,,,,,,,,,,,,   50.13 600700     01
4  0198 21 0070S 0210E 002 L 2   ,X,,,,,,,,,,,,,   49.47 540660     01
4  0198 21 0070S 0210E 002 L 2   ,X,,,,,,,,,,,,,   49.47 540700     01
4  0198 21 0070S 0210E 002 L 2   ,X,,,,,,,,,,,,,   49.47 560660     01
4  0198 21 0070S 0210E 002 L 2   ,X,,,,,,,,,,,,,   49.47 560700     01
4  0198 21 0070S 0210E 002 L 3   ,,,,X,,,,,,,,,,   48.82 520660     01
4  0198 21 0070S 0210E 002 L 3   ,,,,X,,,,,,,,,,   48.82 520700     01
4  0198 21 0070S 0210E 002 L 3   ,,,,X,,,,,,,,,,   48.82 540660     01
4  0198 21 0070S 0210E 002 L 3   ,,,,X,,,,,,,,,,   48.82 540700     01
4  0198 21 0070S 0210E 002 L 4   ,,,,,X,,,,,,,,,   48.16 500660     01
4  0198 21 0070S 0210E 002 L 4   ,,,,,X,,,,,,,,,   48.16 500700     01
4  0198 21 0070S 0210E 002 L 4   ,,,,,X,,,,,,,,,   48.16 520660     01
4  0198 21 0070S 0210E 002 L 4   ,,,,,X,,,,,,,,,   48.16 520700     01
4  0198 21 0070S 0210E 003 L 1   X,,,,,,,,,,,,,,   47.07 460660     01
4  0198 21 0070S 0210E 003 L 1   X,,,,,,,,,,,,,,   47.07 460700     01
4  0198 21 0070S 0210E 003 L 1   X,,,,,,,,,,,,,,   47.07 500660     01
4  0198 21 0070S 0210E 003 L 1   X,,,,,,,,,,,,,,   47.07 500700     01
4  0198 21 0070S 0210E 003 L 2   ,X,,,,,,,,,,,,,   47.03 440660     01
4  0198 21 0070S 0210E 003 L 2   ,X,,,,,,,,,,,,,   47.03 440700     01
4  0198 21 0070S 0210E 003 L 2   ,X,,,,,,,,,,,,,   47.03 460660     01
4  0198 21 0070S 0210E 003 L 2   ,X,,,,,,,,,,,,,   47.03 460700     01
```

Appendix A.15b 3.2.4.2 Wyoming's TOWNSHIP.LL File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
LINK LINE OPTION NUMBER	1R	1	1	INT	1
SURVEY NOTE (*4)	1R	3	3	CHAR	1
ROW NUMBER FROM LLD	1R	5	8	INT	4
MERIDIAN CODE (*1)	1R	10	11	A/N	2
TOWNSHIP (*2)	1R	13	17	A/N	5
RANGE (*2)	1R	19	23	A/N	5
SECTION	1R	25	27	A/N	3
ALMRS LAND UNIT TYPE	1R	29	29	CHAR	1
SURVEY NUMBER (*3)	1R	31	35	A/N	5
ALIQUOT PART	1R	37	52	CHAR	16
ACREAGE OF THE PARCEL	1R	54	60	F7.2	7
POINT ID	1R	62	67	INT	6
CORNER TYPE (*4)	1R	69	73	INT	5
LAND UNIT TYPE (*4)	1R	79	80	INT	2
COMMENT FIELD (*4)	1R	82	121	A/N	40

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) The ACREAGE OF THE PARCEL has an implied decimal place between positions 58 and 59.

(*4) These fields may or may not be populated.

Wyoming's TOWNSHIP.LL File - Sample Data

```
4 040540 06 0880W 0430N 001 L 10,,, ,,,,,,,,,,,X,,, 0003472 660620        01
4 040540 06 0880W 0430N 001 L 10,,, ,,,,,,,,,,,X,,, 0003472 660640        01
4 040540 06 0880W 0430N 001 L 10,,, ,,,,,,,,,,,X,,, 0003472 700620        01
4 040540 06 0880W 0430N 001 L 10,,, ,,,,,,,,,,,X,,, 0003472 700637        01
4 040540 06 0880W 0430N 001 L 10,,, ,,,,,,,,,,,X,,, 0003472 700640        01
4 040550 06 0880W 0430N 001 L 11,,, ,,,,,,,,,,,,X,, 0003822 640620        01
4 040550 06 0880W 0430N 001 L 11,,, ,,,,,,,,,,,,X,, 0003822 640624        01
4 040550 06 0880W 0430N 001 L 11,,, ,,,,,,,,,,,,X,, 0003822 640640        01
4 040550 06 0880W 0430N 001 L 11,,, ,,,,,,,,,,,,X,, 0003822 660620        01
4 040550 06 0880W 0430N 001 L 11,,, ,,,,,,,,,,,,X,, 0003822 660640        01
4 040560 06 0880W 0430N 001 L 12,,, ,,,,,,,X,,,,,, 0003974 620620        01
4 040560 06 0880W 0430N 001 L 12,,, ,,,,,,,X,,,,,, 0003974 620640        01
4 040560 06 0880W 0430N 001 L 12,,, ,,,,,,,X,,,,,, 0003974 636620        01
4 040560 06 0880W 0430N 001 L 12,,, ,,,,,,,X,,,,,, 0003974 640620        01
4 040560 06 0880W 0430N 001 L 12,,, ,,,,,,,X,,,,,, 0003974 640624        01
4 040560 06 0880W 0430N 001 L 12,,, ,,,,,,,X,,,,,, 0003974 640640        01
4 040570 06 0880W 0430N 001 L 13,,, ,,,,,,,,,,X,,, 0003623 620600        01
4 040570 06 0880W 0430N 001 L 13,,, ,,,,,,,,,,X,,, 0003623 620620        01
4 040570 06 0880W 0430N 001 L 13,,, ,,,,,,,,,,X,,, 0003623 636600        01
4 040570 06 0880W 0430N 001 L 13,,, ,,,,,,,,,,X,,, 0003623 636620        01
4 040570 06 0880W 0430N 001 L 13,,, ,,,,,,,,,,X,,, 0003623 640600        01
4 040570 06 0880W 0430N 001 L 13,,, ,,,,,,,,,,X,,, 0003623 640620        01
4 040490 06 0880W 0430N 001 L  5,,, X,,,,,,,,,,,,,, 0003445 660660        01
4 040490 06 0880W 0430N 001 L  5,,, X,,,,,,,,,,,,,, 0003445 660700        01
4 040490 06 0880W 0430N 001 L  5,,, X,,,,,,,,,,,,,, 0003445 700660        01
4 040490 06 0880W 0430N 001 L  5,,, X,,,,,,,,,,,,,, 0003445 700700        01
4 040500 06 0880W 0430N 001 L  6,,, ,X,,,,,,,,,,,,, 0003951 640660        01
4 040500 06 0880W 0430N 001 L  6,,, ,X,,,,,,,,,,,,, 0003951 640700        01
4 040500 06 0880W 0430N 001 L  6,,, ,X,,,,,,,,,,,,, 0003951 657700        01
4 040500 06 0880W 0430N 001 L  6,,, ,X,,,,,,,,,,,,, 0003951 660660        01
4 040500 06 0880W 0430N 001 L  6,,, ,X,,,,,,,,,,,,, 0003951 660700        01
4 040510 06 0880W 0430N 001 L  7,,, ,,,,X,,,,,,,,,, 0003941 620660        01
4 040510 06 0880W 0430N 001 L  7,,, ,,,,X,,,,,,,,,, 0003941 620700        01
4 040510 06 0880W 0430N 001 L  7,,, ,,,,X,,,,,,,,,, 0003941 637700        01
4 040510 06 0880W 0430N 001 L  7,,, ,,,,X,,,,,,,,,, 0003941 640660        01
4 040510 06 0880W 0430N 001 L  7,,, ,,,,X,,,,,,,,,, 0003941 640700        01
4 040520 06 0880W 0430N 001 L  8,,, ,,,,,X,,,,,,,,, 0003931 600660        01
4 040520 06 0880W 0430N 001 L  8,,, ,,,,,X,,,,,,,,, 0003931 600700        01
4 040520 06 0880W 0430N 001 L  8,,, ,,,,,X,,,,,,,,, 0003931 617700        01
4 040520 06 0880W 0430N 001 L  8,,, ,,,,,X,,,,,,,,, 0003931 620660        01
4 040520 06 0880W 0430N 001 L  8,,, ,,,,,X,,,,,,,,, 0003931 620700        01
4 040530 06 0880W 0430N 001 L  9,,, ,,,X,,,,,,,,,,, 0003500 660640        01
4 040630 06 0880W 0430N 002 L  5,,, X,,,,,,,,,,,,,, 0003925 600700        01
4 040640 06 0880W 0430N 002 L  6,,, ,X,,,,,,,,,,,,, 0003921 540660        01
4 040640 06 0880W 0430N 002 L  6,,, ,X,,,,,,,,,,,,, 0003921 540700        01
4 040640 06 0880W 0430N 002 L  6,,, ,X,,,,,,,,,,,,, 0003921 557700        01
4 040640 06 0880W 0430N 002 L  6,,, ,X,,,,,,,,,,,,, 0003921 560660        01
4 040640 06 0880W 0430N 002 L  6,,, ,X,,,,,,,,,,,,, 0003921 560700        01
4 040650 06 0880W 0430N 002 L  7,,, ,,,,X,,,,,,,,,, 0003919 520660        01
4 040650 06 0880W 0430N 002 L  7,,, ,,,,X,,,,,,,,,, 0003919 520700        01
4 040650 06 0880W 0430N 002 L  7,,, ,,,,X,,,,,,,,,, 0003919 537700        01
4 040650 06 0880W 0430N 002 L  7,,, ,,,,X,,,,,,,,,, 0003919 540660        01
4 040650 06 0880W 0430N 002 L  7,,, ,,,,X,,,,,,,,,, 0003919 540700        01
.
.
.
4 041830 06 0880W 0430N 031 L  4,,, ,,,,,,,,,X,,,, 0002885 100100        01
4 041830 06 0880W 0430N 031 L  4,,, ,,,,,,,,,X,,,, 0002885 100117        01
4 041830 06 0880W 0430N 031 L  4,,, ,,,,,,,,,X,,,, 0002885 100120        01
4 041830 06 0880W 0430N 031 L  4,,, ,,,,,,,,,X,,,, 0002885 120100        01
4 041830 06 0880W 0430N 031 L  4,,, ,,,,,,,,,X,,,, 0002885 120120        01
```

Appendix A.15c 3.2.4.2 Wyoming's Other TOWNSHIP.LL File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
ROW NUMBER FROM LLD	1R	1	6	INT	6
MERIDIAN CODE (*1)	1R	8	9	A/N	2
RANGE (*2)	1R	11	15	A/N	5
TOWNSHIP (*2)	1R	17	21	A/N	5
SECTION	1R	23	25	A/N	3
ALMRS LAND UNIT TYPE	1R	27	27	CHAR	1
SURVEY NUMBER	1R	29	33	A/N	5
ALIQUOT PART	1R	38	53	CHAR	16
ACREAGE OF THE PARCEL (*3)	1R	55	61	INT	7
POINT ID	1R	63	68	INT	6

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) The ACREAGE OF THE PARCEL has an implied decimal place between positions 58 and 59.

Wyoming's Other TOWNSHIP.LL File - Sample Data

```
001700 06 0860W 0130N 001 L 10,,,   ,,,,,,,,,,,X,,, 0003302 660620
001700 06 0860W 0130N 001 L 10,,,   ,,,,,,,,,,,X,,, 0003302 660640
001700 06 0860W 0130N 001 L 10,,,   ,,,,,,,,,,,X,,, 0003302 700620
001700 06 0860W 0130N 001 L 10,,,   ,,,,,,,,,,,X,,, 0003302 700637
001700 06 0860W 0130N 001 L 10,,,   ,,,,,,,,,,,X,,, 0003302 700640
001710 06 0860W 0130N 001 L 11,,,   ,,,,,,,,,,,,,,X 0003342 660600
001710 06 0860W 0130N 001 L 11,,,   ,,,,,,,,,,,,,,X 0003342 660620
001710 06 0860W 0130N 001 L 11,,,   ,,,,,,,,,,,,,,X 0003342 700600
001710 06 0860W 0130N 001 L 11,,,   ,,,,,,,,,,,,,,X 0003342 700603
001710 06 0860W 0130N 001 L 11,,,   ,,,,,,,,,,,,,,X 0003342 700617
001710 06 0860W 0130N 001 L 11,,,   ,,,,,,,,,,,,,,X 0003342 700620
001650 06 0860W 0130N 001 L 5,,,,   X,,,,,,,,,,,,,, 0003497 660660
001650 06 0860W 0130N 001 L 5,,,,   X,,,,,,,,,,,,,, 0003497 660700
001650 06 0860W 0130N 001 L 5,,,,   X,,,,,,,,,,,,,, 0003497 700660
001650 06 0860W 0130N 001 L 5,,,,   X,,,,,,,,,,,,,, 0003497 700677
001650 06 0860W 0130N 001 L 5,,,,   X,,,,,,,,,,,,,, 0003497 700700
001660 06 0860W 0130N 001 L 6,,,,   ,X,,,,,,,,,,,,, 0004465 640660
001660 06 0860W 0130N 001 L 6,,,,   ,X,,,,,,,,,,,,, 0004465 640700
001660 06 0860W 0130N 001 L 6,,,,   ,X,,,,,,,,,,,,, 0004465 657700
001660 06 0860W 0130N 001 L 6,,,,   ,X,,,,,,,,,,,,, 0004465 660660
001660 06 0860W 0130N 001 L 6,,,,   ,X,,,,,,,,,,,,, 0004465 660700
001670 06 0860W 0130N 001 L 7,,,,   ,,,,X,,,,,,,,,, 0004462 620660
001670 06 0860W 0130N 001 L 7,,,,   ,,,,X,,,,,,,,,, 0004462 620700
001670 06 0860W 0130N 001 L 7,,,,   ,,,,X,,,,,,,,,, 0004462 637700
001670 06 0860W 0130N 001 L 7,,,,   ,,,,X,,,,,,,,,, 0004462 640660
001670 06 0860W 0130N 001 L 7,,,,   ,,,,X,,,,,,,,,, 0004462 640700
001680 06 0860W 0130N 001 L 8,,,,   ,,,,,X,,,,,,,,, 0004459 600660
001680 06 0860W 0130N 001 L 8,,,,   ,,,,,X,,,,,,,,, 0004459 600700
001680 06 0860W 0130N 001 L 8,,,,   ,,,,,X,,,,,,,,, 0004459 617700
001680 06 0860W 0130N 001 L 8,,,,   ,,,,,X,,,,,,,,, 0004459 620660
001680 06 0860W 0130N 001 L 8,,,,   ,,,,,X,,,,,,,,, 0004459 620700
001690 06 0860W 0130N 001 L 9,,,,   ,,,X,,,,,,,,,,, 0003241 660640
001690 06 0860W 0130N 001 L 9,,,,   ,,,X,,,,,,,,,,, 0003241 660660
001690 06 0860W 0130N 001 L 9,,,,   ,,,X,,,,,,,,,,, 0003241 700640
001690 06 0860W 0130N 001 L 9,,,,   ,,,X,,,,,,,,,,, 0003241 700643
001690 06 0860W 0130N 001 L 9,,,,   ,,,X,,,,,,,,,,, 0003241 700657
001690 06 0860W 0130N 001 L 9,,,,   ,,,X,,,,,,,,,,, 0003241 700660
001730 06 0860W 0130N 002 L 5,,,,   X,,,,,,,,,,,,,, 0004456 560660
001730 06 0860W 0130N 002 L 5,,,,   X,,,,,,,,,,,,,, 0004456 560700
001730 06 0860W 0130N 002 L 5,,,,   X,,,,,,,,,,,,,, 0004456 577700
001730 06 0860W 0130N 002 L 5,,,,   X,,,,,,,,,,,,,, 0004456 600660
001730 06 0860W 0130N 002 L 5,,,,   X,,,,,,,,,,,,,, 0004456 600700
001740 06 0860W 0130N 002 L 6,,,,   ,X,,,,,,,,,,,,, 0004453 540660
001740 06 0860W 0130N 002 L 6,,,,   ,X,,,,,,,,,,,,, 0004453 540700
001740 06 0860W 0130N 002 L 6,,,,   ,X,,,,,,,,,,,,, 0004453 557700
001740 06 0860W 0130N 002 L 6,,,,   ,X,,,,,,,,,,,,, 0004453 560660
001740 06 0860W 0130N 002 L 6,,,,   ,X,,,,,,,,,,,,, 0004453 560700
001750 06 0860W 0130N 002 L 7,,,,   ,,,,X,,,,,,,,,, 0004449 520660
001750 06 0860W 0130N 002 L 7,,,,   ,,,,X,,,,,,,,,, 0004449 520700
001750 06 0860W 0130N 002 L 7,,,,   ,,,,X,,,,,,,,,, 0004449 533700
001750 06 0860W 0130N 002 L 7,,,,   ,,,,X,,,,,,,,,, 0004449 537700
```

```
001750 06 0860W 0130N 002 L 7,,,,   ,,,,X,,,,,,,,,,, 0004449 540660
001750 06 0860W 0130N 002 L 7,,,,   ,,,,X,,,,,,,,,,, 0004449 540700
.
.
.
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 560100
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 560120
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 574100
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 574120
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 598120
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 600100
003530 06 0860W 0130N 035 L 7,,,,   ,,,,,,,,,,,,,,,X 0003409 600120
```

Appendix A.16a 3.2.4.3 California's TOWNSHIP.QQ File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
LINK LINE OPTION NUMBER	1R	1	1	INT	1
SURVEY NOTE (*3)	1R	3	3	CHAR	1
ROW NUMBER FROM LLD	1R	5	8	INT	4
MERIDIAN CODE (*1)	1R	10	11	A/N	2
TOWNSHIP (*2)	1R	13	17	A/N	5
RANGE (*2)	1R	19	23	A/N	5
SECTION	1R	25	27	A/N	3
ALMRS LAND UNIT TYPE	1R	29	29	CHAR	1
SURVEY NUMBER	1R	31	35	A/N	5
ALIQUOT PART	1R	37	52	CHAR	16
ACREAGE OF THE PARCEL	1R	54	60	F7.2	7
POINT ID	1R	62	67	INT	6
CORNER TYPE (*3)	R	69	73	INT	5
LAND UNIT TYPE (*3)	1R	79	80	INT	2
COMMENT FIELD (*3)	1R	82	121	A/N	40

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) These fields may or may not be populated.

California's TOWNSHIP.QQ File - Sample Data

4	0198 21 0070S 0210E 030 L 8	,,,,,,,,,,,,,,X	35.50	900010	01000		01	
4	0198 21 0070S 0210E 030 L 8	,,,,,,,,,,,,,,X	35.50	900015	01000		01	
4	0198 21 0070S 0210E 030 L 5	,,,,,,,,,,,,X,,	32.70	900015	01000		01	
4	0198 21 0070S 0210E 030 L 5	,,,,,,,,,,,,X,,	32.70	900020	01000		01	
4	0198 21 0070S 0210E 030 L 5	,,,,,,,,,,,,X,,	32.70	900028	01000		01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		900028	01000	01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		900030	01000	01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		900040	01000	01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		900042	01000	01	
4	0198 21 0070S 0210E 030 L 8	,,,,,,,,,,,,,,X	35.50	900042	01000		01	
4	0198 21 0070S 0210E 031 L 5	X,,,,,,,,,,,,,,	40.00	901010	01000		01	
4	0198 21 0070S 0210E 031 L 5	X,,,,,,,,,,,,,,	40.00	901020	01000		01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		901020	01000	01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		901030	01000	01	
4	0198 21 0070S 0210E 030 L 7	,,,,,,,,,,,,,X,	4.55		901034	01000	01	
4	0198 21 0070S 0210E 030 L 5	,,,,,,,,,,,,X,,	32.70	901034	01000		01	
4	0198 21 0070S 0210E 030 L 5	,,,,,,,,,,,,X,,	32.70	901038	01000		01	
4	0198 21 0070S 0210E 030 A	,,,,,,,X,,,,,,,	360.00	901038	01000		01	
4	0198 21 0070S 0210E 030 A	,,,,,,,X,,,,,,,	360.00	901040	01000		01	
4	0198 21 0070S 0210E 030 A	,,,,,,,X,,,,,,,	360.00	901050	01000		01	
4	0198 21 0070S 0210E 030 L 6	,,,,,,,,,,,,,X,	5.61	901058	01000		01	
4	0198 21 0070S 0210E 030 L 6	,,,,,,,,,,,,,X,	5.61	901060	01000		01	
4	0198 21 0070S 0210E 031 L 13	,X,,,,,,,,,,,,,	35.86	901070	01000		01	
4	0198 21 0070S 0210E 031 L 13	,X,,,,,,,,,,,,,	35.86	901075	01000		01	
4	0198 21 0070S 0210E 031 L 5	X,,,,,,,,,,,,,,	40.00	901075	01000		01	
4	0198 21 0070S 0210E 031 L 5	X,,,,,,,,,,,,,,	40.00	901078	01000		01	
4	0198 21 0070S 0210E 031 L 6	,,,X,,,,,,,,,,,	28.86	901078	01000		01	
4	0198 21 0070S 0210E 031 L 6	,,,X,,,,,,,,,,,	28.86	901080	01000		01	
4	0198 21 0070S 0210E 031 L 6	,,,X,,,,,,,,,,,	28.86	901084	01000		01	
4	0198 21 0070S 0210E 031 L 5	X,,,,,,,,,,,,,,	40.00	901084	01000		01	
4	0198 21 0070S 0210E 031 L 15	,,,,,,,,,,,,,,X	4.95	902010	01000		01	
4 A	0198 21 0070S 0210E 031M 4024A	,,,,,,,,,,,,,,X	47.83	902010	01000		12	TEXAS MINE
4	0198 21 0070S 0210E 031 L 10	,,,,,,,,,,,,,,X	20.00	902015	01000		01	
4	0198 21 0070S 0210E 031 L 7	,,,,,,,,,,,,X,,,	9.62	902015	01000		01	
4	0198 21 0070S 0210E 031 L 11	,,,,,,,,,,,,X,,,	22.53	902015	01000		01	
4 A	0198 21 0070S 0210E 031M 4024A	,,,,,,,,,,,,X,,,	47.83	902015	01000		12	
4	0198 21 0070S 0210E 031 L 11	,,,,,,,,,,,,X,,,	22.53	902020	01000		01	
4	0198 21 0070S 0210E 031 L 7	,,,,,,,,,,,,X,,,	9.62	902020	01000		01	
4 A	0198 21 0070S 0210E 031 M 4024A	,,,,,,,,,,,,X,,,	47.83	902020	01000		12	
4	0198 21 0070S 0210E 031 L 7	,,,,,,,,,,,,X,,,	9.62	902030	01000		01	
4 A	0198 21 0070S 0210E 031 M 4024A	,,,,,,,,,,,,X,,,	47.83	902030	01000		12	

Appendix A.16b 3.2.4.3 Wyoming's TOWNSHIP.QQ File Format

ELEMENT NAME	ROW & ELEMENT POSITION ROW	START	STOP	DATA TYPE	SIZE
LINK LINE OPTION NUMBER	1R	1	1	INT	1
SURVEY NOTE (*3)	1R	3	3	CHAR	1
ROW NUMBER FROM LLD	1R	5	8	INT	4
MERIDIAN CODE (*1)	1R	10	11	A/N	2
TOWNSHIP (*2)	1R	13	17	A/N	5
RANGE (*2)	1R	19	23	A/N	5
SECTION	1R	25	27	A/N	3
ALMRS LAND UNIT TYPE	1R	29	29	CHAR	1
SURVEY NUMBER	1R	31	35	A/N	5
ALIQUOT PART	1R	37	52	CHAR	16
ACREAGE OF THE PARCEL	1R	54	60	F7.2	7
POINT ID	1R	62	67	INT	6
CORNER TYPE (*3)	1R	69	73	INT	5
LAND UNIT TYPE (*3)	1R	79	80	INT	2
COMMENT FIELD (*3)	1R	82	121	A/N	40

(*1) See Appendix B.02, Principal Meridians.

(*2) See Appendix B.11, Tier/Range Codes.

(*3) The ACREAGE OF THE PARCEL has an implied decimal place between positions 58 and 59.

(*4) These fields may or may not be populated.

Wyoming's TOWNSHIP.QQ File - Sample Data

```
4    040920  06    0880W  0430N  006 L17,,, ,,,,,,,,,,,,X,,    0000982 837040  01000  2 01
4    040920  06    0880W  0430N  006 L17,,, ,,,,,,,,,,,,X,,    0000982 837040  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,,,,,,,,,,,X,,    0004000 837040  01000  4 17
4    040970  06    0880W  0430N  006 T38,,, ,,,,,,,,,,,,X,,    0023544 837040  01000  1 17
4    040910  06    0880W  0430N  006 L16,,, ,,X,,,,,,,,,,,,    0002032 837045  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,X,,,,,,,,,,,,    0004000 837045  01000    17
4    040920  06    0880W  0430N  006 L17,,, ,,,,,,,,,,,,X,,    0000982 837045  01000    01
4    040910  06    0880W  0430N  006 L16,,, ,,X,,,,,,,,,,,,    0002032 837110  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,X,,,,,,,,,,,,    0004000 837110  01000  1 17
4    040910  06    0880W  0430N  006 L16,,, ,,X,,,,,,,,,,,,    0002032 837115  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,X,,,,,,,,,,,,    0004000 837115  01000    17
4    040900  06    0880W  0430N  006 L15,,, ,,,,,,,X,,,,,,,    0001698 837115  01000    01
4    040900  06    0880W  0430N  006 L15,,, ,,,,,,,X,,,,,,,    0001698 837120  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,,,,,,X,,,,,,,    0004000 837120  01000  2 17
4    040900  06    0880W  0430N  006 L15,,, ,,,,,,,X,,,,,,,    0001698 837130  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,,,,,,X,,,,,,,    0004000 837130  01000  3 17
4    040970  06    0880W  0430N  006 T38,,, ,,,,,,,X,,,,,,,    0023544 837130  01000    17
4    040920  06    0880W  0430N  006 L17,,, ,,,,,,,,,,,,X,,    0000982 837140  01000    01
4    040960  06    0880W  0430N  006 T37,,, ,,,,,,,,,,,,X,,    0004000 837140  01000  4 17
4    040970  06    0880W  0430N  006 T38,,, ,,,,,,,,,,,,X,,    0023544 837140  01000  1 17
4    040970  06    0880W  0430N  006 T38,,, ,,,,,,,,,,,,X,,    0023544 837140  01000  1 17
4    999999  06    0880W  0430N  012 T39D ,,,X,,,,,,,,,,,     0000000 839130  01000 13 01  TRACT 39D
```