# TOBIN TDRBM I Data Distribution Format

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## ABSTRACT

The TOBIN TDRBM I Data Distribution format, as available from Tobin International, Ltd. (TOBIN), provides a graphical representation of TOBIN Survey information. This document describes the data format of the magnetic tape supplied by Tobin International, Ltd. This information is intended for a technical audience, i.e. a system analyst or experienced programmer.

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## 1. Distribution Media

TOBIN TDRBM I data sets are available on various types of magnetic media and CD-ROM for mainframe, workstation, and PC DOS systems. Refer to product literature for details.

## 2. Data Contents

TDRBM I format is available for Texas, Gulf Coast state, and Gulf of Mexico offshore The following describes the survey data layers represented in the TDRBM I format.

Spatial Data

| | |
|---|---|
| Jeffersonian | |
| | Township |
| | Section |
| | County Line (if present) |
| | State Line (if present) |
| Texas | |
| | State Line (if present) |
| | County Line (if present) |

| | |
|---|---|
| | Block |
| | Abstract |
| Offshore | |
| | Area |
| | Block |

Annotation

| | |
|---|---|
| Jeffersonian | |
| | State (if present) |
| | County (if present) |
| | Township |
| | Section |
| Texas | |
| | State (if present) |
| | County (if present) |
| | Block |
| | Grantee |
| | Section |
| | Abstract |
| Offshore | |
| | Area |
| | Block |

The TDRBM I format contains limited 1:24000 culture data, primarily hydrography.

## 3. Data Representation

TOBIN TDRBM I records are made up entirely of printable ASCII characters. Numeric fields will be filled with leading zeroes if necessary. Text fields will be blank-filled and right justified.
Lat-Lon coordinate pairs representing locations on the surface of the earth will be 15-character numeric fields of the form "YYyyyyyXXXxxxxx", where XXX.xxxxx is the longitude west, and YY.yyyyy the latitude north. So, for example, the point 88.44411 west longitude and 33.55500 north latitude would be represented "335550008844411".
X-Y coordinate pairs representing locations on the surface of the earth will be either 18-character numeric fields of the form "XXXXXXXXXYYYYYYYYY", where XXXXXXXXX is the northing and YYYYYYYYY the easting for text positioning, or 20-character numeric fields of the form "XXXXXXXXXXYYYYYYYYYY", where XXXXXXXXXX is the northing and YYYYYYYYYY the easting for line segments.
Dates will be 6-character numeric fields of the form "YYMMDD", where YY is the year, MM is the month ("01" is January, "12" is December, etc.), and DD is the day of the month from "01" to "31".

## 4. Record Formats

Each record in the TOBIN TDRBM I begins with a 1- character numeric field. In Column 1 is the Record Type. Each entity described in the TOBIN TDRBM I consists of a sequential group of records. The entire group begins with one record of Record Type 0.

4.1 Record Types

The Record Type field can take values "0", "2", and "3", and specifies what kind of information is contained in the record, and the format of the information. The valid Record Types are as follows.

Record Type 0

Each entity in the TOBIN TDRBM I consists of one record of Record Type 0, followed possibly by one or more other records of other Record Types. All records of Record Type 0 have similar formats, which differ

slightly depending on the Data Type of the record. All these formats are described in detail in the sections following.
Record Type 2 Annotation Record.
All records of Record Type 2 have the same format, which is described in detail in the sections following.
Record Type 3 Latitude-Longitude Coordinate Record.
Each Record of Record Type 3 holds the end points on one line which make up the entity. All records of Record Type 3 have the same format, which is described in detail in the sections following.
4.2 Header Records (Record Type 0)
Each entity in the TOBIN TDRBM I consists of one record of Record Type 0, followed by zero or more Annotation Records (Record Type 2), and a sufficient number of Coordinate Records (Record Type 3) to specify the boundary of the entity.
Each record of Record Type 0 has the following format.
Col 1 Data Type.
Always "0", indicating that this record contains Header Data.
Col 2-3 Logical Level.
The Logical Level describes the type of data in this entity. The following table defines the values.

| Code | Meaning |
|---|---|
| 01 | Dictionary Entry (text data only) |
| 02 | Section/Abstract |
| 03 | Township or Block |
| 04 | County |
| 05 | State |
| 06 | Process Outline |
| 07 | Municipality (may be a single point) |
| 08 | River |
| 09 | Stream |
| 10 | Island |
| 11 | Lake |
| 12 | Old Riverbed |
| 13 | Ocean Area |
| 14 | Federal Highway |
| 15 | State Highway |
| 16 | Other Travelways |
| 17 | Pipeline |
| 18 | Railroad |
| 19 | Monumented Section Corner |
| 20 | Benchmark |
| 21 | Monument |
| 22 | Federal Reservation |
| 23 | State Reservation |
| 24 | Transmission Line |
| 25 | Wells |
| 26 | Unsurveyed Area |
| 27 | Leases |
| 28 | Shot Points |
| 29 | Tracts |
| 30 | Sub-Divisions |

| | |
|---|---|
| 31 | Unused |
| 32-59 | Reserved for TOBIN future use |
| 60-99 | Reserved for customer use |

Col 4 Name Format Type.
The name format varies depending on the survey system. The following describes the various formats.

| Code | Meaning |
|---|---|
| 0 | Sub-division/Section/Township/Range |
| 1 | Abstract/Tract/Block |
| 2 | Section/Township/Range Feature |
| 3 | Abstract/Tract/Block Feature |
| 4 | State/County Feature |
| 5 | System Wide Feature |
| 6 | Block/Township-League/Labor |

Col 5-32 Variable name format data.
Format 0 is generally used with the Jeffersonian Survey System and subdivision of a section...
Col 5-6 API State Code.
Col 7-9 API County Code.
Col 10 District Code.
Col 11-13 Township Number
Col 14 Township Direction (N/S)
Col 15-17 Range Number
Col 18 Range Direction (E/W)
Col 19-21 Section Number.
Col 22-32 Unused.
Format 1 is generally used with abstract/tract/block data.
Col 5-6 API State Code.
Col 7-9 API County Code.
Col 10 Prefix
Col 11-16 Abstract/Tract/Block Number
Col 17-21 Survey Number as recorded by the GLO or Railroad Commission.
Col 22-32 Unused
Format 2 is generally used with the Jeffersonian Survey System.
Col 5-6 API State Code.
Col 7-9 API County Code.
Col 10 District Code.
Col 11-13 Township Number
Col 14 Township Direction (N/S)
Col 15-17 Range Number
Col 18 Range Direction (E/W)
Col 19-23 Alpha Name of section
Col 24-32 Unused
Format 3 is generally used with abstract data.
Col 5-6 API State Code.
Col 7-9 API County Code.
Col 10 Prefix
Col 11-16 Alpha Abstract Name
Col 18-22 Survey Number s recorded by GLO or Railroad Commission.
Col 24-32 Unused
Format 4 is used for State and County boundaries and Offshore areas.

Col 5-6 API State Code.
Col 7-9 API County Code.
Col 10-23 Alpha Abbreviation.
Col 24-32 Unused.
Format 5
Col 5-23 Alpha Name Abbreviation.
Col 24-32 Unused.
Format 6 is used for Abstract/Block/League data in Texas.
Col 5-6 API State Code.
Col 7-9 API County Code.
Col 10-12 Survey Code List Number.
Col 13 Unused.
Col 14-17 Block name. (All blanks if null) Right Justified.
Col 18-20 Texas pseudo township name. (All zeros if null) Right Justified.
Col 21 Section/Labor/Tract (S/L/T) Flag
Col 22-26 Section/Labor/Tract Number. May be alphanumeric.
Col 27 Survey/Abstract (S/A) Flag
Col 28-32 Survey/Abstract Number
Col 33-38 Revision Date.
Col 39 Source Code.
This 1-character field defines the source of the data for this entity. The following tables defines these sources.

| Code | Meaning |
|---|---|
| 0 | Tobin 1"=2000' |
| 1 | Tobin 1"=4000' |
| 2 | USGS 7 1/2 Min. Quad |
| 3 | USGS 15 Min. Quad |
| 4 | Tobin Orthophotography |
| 5 | TOBIN 1"=2000' |

Col 40-69 Polygon Range Box.
The range box contains two latitude/longitude coordinate pairs which specify the SW and NE extrema.
Col 70-73 State/Zone Code.
If the State code (2- characters) is in the range 1 to 59, then any X/Y data is in state plane coordinates for the given zone (2-characters). If the State code (2-characters) is 60, then any X/Y data is in UTM coordinates (in feet) for the given zone (2-characters).
Col 74-75 Number of polygon parts.
Col 76-80 Unused.
4.3 Annotation Records (Record Type 2)
Each record of Record Type 2 has the following format.
Col 1 Record Type.
Always "2", indicating that this record is an Annotation Record.
Col 2-16 Text Location.
A 15-character Latitude, Longitude coordinate pair specifying where the lower left corner of the annotation text is to be located.
Col 17-34 Text Location.
An 18-character XY coordinate pair specifying where the lower left corner of the annotation text is to be located.
Col 35-39 Text Angle.
A 5-character rotation angle in the form XXX.XX. The angle is specified in 100ths of a degree.
Col 40-45 Text size.
A 6-character field which specifies the text size in feet.

Col 46-47 Number of characters.
A 2-character numeric specifying the number of characters in the Text field.
Col 48 Text Font.
A 1-character numeric field, with possible values from "0" to "9", reserved for specification of the text font to be used in annotation.
Col 49-80 Text.
Up to 32 characters of annotation text, right justified within the field. All characters in the text will be printable ASCII characters.
4.4 Coordinate Records (Record Type 3)
Wherever records of Record Type 3 occur, any number can occur together.
Each record of Record Type 3 has the following format.
Col 1 Record Type.
Always "3", indicating that this record is a Coordinate Record.
Col 2-16 Line Segment Start Point (LL).
A 15-character latitude/longitude coordinate field which specifies the start point for a line segment.
Col 17-36 Line Segment Start Point (XY).
A 20-character X/Y coordinate field which specifies the start point for a line segment.
Col 37-51 Line Segment End Point (LL).
A 15-character latitude/longitude coordinate field which specifies the ending point for a line segment.
Col 52-71 Line Segment End Point (XY).
A 20-character X/Y coordinate field which specifies the ending point for a line segment.
Col 72-73 Line Code.
The following table defines the values for the line codes.

| Code | Meaning |
|---|---|
| 01 | Monument |
| 02 | Town |
| 03 | Benchmark |
| 04 | Field Identified Section Corner |
| 05 | Reserved for Well Location Symbol |
| 19 | County Boundary (Shoreline) |
| 20 | Map detail |
| 21 | Map Conflict |
| 22 | Township |
| 23 | Township Conflict |
| 24 | County Boundary |
| 25 | State Boundary |
| 26 | Federal Boundary |
| 40 | Pipeline |
| 41 | Transmission Line |
| 50 | Railroad |
| 51 | Federal Highway |
| 52 | State Highway |
| 53 | Other Travelways |
| 60-99 | Customer Assigned |

Col 74-79 Line Segment Sequence Number.
The sequence number is used to identify those co-incident arcs, with the same state and county, in TDRBM I format. This allows the elimination of line segment over plotting.
Col 80 End of Polygon flag.

This field is a "9" if this line segment is the last segment in a polygon part. The next line segment should be drawn PEN-UP at the from coordinate.

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