RAILROAD COMMISSION OF TEXAS

INFORMATION TECHNOLOGY SERVICES DIVISION

USER'S GUIDE

DIGITAL MAP INFORMATION

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The Information Technology Services Division (ITS) developed this publication for the general public in response to inquiries concerning the availability of digital map data. Any request for assistance with using the manual will be given every consideration.

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Revised: January 2005
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Revised: June 2017

Publication Number: OGA094

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GENERAL INFORMATION

IDENTIFICATION

Developed For:	Users of RRC Mapping Information
By:	RRC of Texas, Information Technology Services Division

OUTPUT MEDIA

The Digital Well Location Mapping information is available for output onto the following mediums:

- **CD-ROM (Compact Disk)**
- **FTP (File Transfer Protocol–Binary Transfer)**

ZIP

The Railroad Commission uses the zip file format on all GIS export files. Zip is commonly used to combine – or "archive" -- two or more files for storage or distribution.

RRC GIS data files can be unarchived using many file archiver software packages.

The Railroad Commission has successfully uncompressed and unarchived GIS export files using 7-Zip 15.12 on Windows 7. It is assumed more recent versions of 7-Zip will retain their previous extract capabilities.

Once the original RRC GIS digital data file is unarchived, the user will have all requested data layers in the appropriate format for a particular county.

DISK SIZE REQUIREMENTS

The amount of compression obtained depends on the size of the input and the distribution of common substrings. Therefore, users should expect and plan for uncompressed RRC GIS export files to occupy anywhere from 1.5 to twice the disk space of the compressed files.

SYSTEM DESCRIPTION

The Railroad Commission of Texas exports double-precision map data from ARCSDE version 10.2. Exports are to Environmental Systems Research Institute's (ESRI) shapefile (.SHP) format.

Shapefiles, developed by ESRI for use with its ArcMap software, store a feature's geographic location and attribute information. The shapefile format is a collection of different files listed under the File Naming Conventions (II.3).

COORDINATE SYSTEM

The Railroad Commission exports all map data to the Geographic projection (Latitude/Longitude). The following parameters define the Geographic projection:

Projection:	Geographic
Units:	Decimal Degrees
Datum:	NAD27

DISCLAIMER

The digital mapping data described in this manual were generated by the Geographic Information System of the Railroad Commission of Texas and are provided for informational purposes only. Base map information was obtained directly from U.S. Geological Survey 7.5 minute quadrangle maps. Patent Survey lines from Texas General Land Office maps were interpreted as accurately as possible over the U.S. Geological Survey base. Oil and gas well data or pipeline data (if included) were obtained from public records of the Railroad Commission. The mapping system from which this data was extracted is currently under development and is continually being updated and refined. These data are intended solely for the internal use of the Railroad Commission, which makes no claim as to its accuracy or completeness. Users are responsible for checking the accuracy, completeness, currency, and/or suitability of this data.

DISCUSSION OF FILES

AVAILABLE MAP DATA

****
Please note that GIS feature layers may not necessarily exist in all counties. If a GIS feature layer - such as ship channels or government lands - does not exist in a particular county, you will not receive a file for that feature layer. The absence of feature layers in particular counties are already accounted for in the data pricing.
****

The digital data used to create the files was taken from the forms system within the RRC, from the General Land Office (GLO) county survey maps, and, United States Geological Survey (USGS) quadrangle maps.

ESRI's shapefile format is recognized and accepted industry-wide and is easily imported to and used in many GIS and CAD software packages. However, the user is responsible for confirming that their specific GIS or CAD software fully supports the importation and use of shapefiles.

Available digital map data layers include:

1. Basemap:
    a. Airports
    b. Cemeteries
    c. Cities
    d. Government Lands
    e. Political Boundaries (Includes, where applicable, county, state, coastal and gulf area boundaries.)
    f. Railroads
    g. Roads
    h. Ship Channels
    i. Subdivisions
    j. Water Features
    k. Offshore Surveys (where applicable)
2. Wells:
    a. Surface Well Locations
    b. Bottom Well Locations
    c. For horizontal and directional wells, arcs connecting surface and bottom locations.
3. Surveys:
    a. lines, polygons, baytracts (where applicable)
4. Pipelines:
    a. Pipelines – Abandoned
    b. Pipelines – Liquid
    c. Pipelines – Gas

FILE NAMING CONVENTIONS

The archived shapefile(s) you will receive from the Railroad Commission are named as follows:

When ordering **ALL DATA**:

1. The 1st three letters are "Shp"
2. The county FIPS code follows the "Shp"
3. All files have the suffix ".zip"
   Example:
   a. County FIPS code 307 exported: Shp307.zip

When ordering **BASEMAP DATA** only:

1. The 1st seven letters are "Basemap"
2. The county FIPS code follows the "Basemap"
3. All files have the suffix ".zip"
   Example:
   a. County FIPS code 307 exported: Basemap307.zip

When ordering **PIPELINE DATA** only:

1. The 1st eight letters are "pipeline"
2. The county FIPS code follows the "pipeline"
3. All files have the suffix ".zip"
   Example:
   a. County FIPS code 307 exported: pipeline307.zip

When ordering **SURVEY DATA** only:

1. The 1st four letters are "surv"
2. The county FIPS code follows the "surv"
3. All files have the suffix ".zip"
   Example:
   a. County FIPS code 307 exported: surv307.zip

When ordering **WELL DATA** only:

1. The 1st four letters are "well"
2. The county FIPS code follows the "well"
3. All files have the suffix ".zip"
   Example:
   a. County FIPS code 307 exported: well307.zip

A. Exports by *County FIPS Code* to ArcView Shapefiles:
Each shapefiles will contain the following extensions (ext):
<shapefile>.cpg - contains the code page information for the attributes.
<shapefile>.dbf - contains a feature's dBase attribute information.
<shapefile>.prj - contains the feature's projection file.
<shapefile>.sbn - contains the feature's spatial index format
<shapefile>.sbx - contains the feature's spatial index format
<shapefile>.shp - contains a feature's geometry.
<shapefile>.shp.xml - contains a feature's metadata.
<shapefile>.shx - contains a feature's geometry index.

1. Airport lines: air<fips_number>l.<ext>
2. Cemetery lines: cem<fips_number>l.<ext>
   polygons: cem<fips_number>p.<ext>
3. City polygons: cit<fips_number>p.<ext>
4. County Boundary
   coastal polygons: cty<fips_number>g.<ext>
   gulf areas polygons: cty<fips_number>i.<ext>
   state polygons: cty<fips_number>k.<ext>
5. Government Land lines: gov<fips_number>l.<ext>
6. Railroad lines: rail<fips_number>l.<ext>
7. Road lines: road<fips_number>l.<ext>
8. Ship Channel lines: ship<fips_number>l.<ext>
9. Subdivision lines subd<fips_number>l.<ext>
   label points: subd <fips_number>Labpt.<ext>
10. Survey lines: surv<fips_number>l.<ext>
    polygons: surv<fips_number>p.<ext>
    baytract polygons: surv<fips_number>b.<ext>
    abstract points: surv<fips_number>Abspt.<ext>
    label points: surv<fips_number>Labpt.<ext>
11. Water lines: watr<fips_number>l.<ext>
    polygons: watr<fips_number>a.<ext>
12. Wells:
    Surface Well points: well<fips_number>s.<ext>
    Bottom Well points: well<fips_number>b.<ext>
    Surface/Bottom lines: well<fips_number>l.<ext>
13. Pipelines lines: pipe<fips_number>l.<ext>
14. Offshore Survey polys: offs<fips_number>a.<ext>

RAILROAD COMMISSION MAPPING TERMS

Survey
A survey is a certified measured description of a piece of land. The term sometimes refers to the land itself. In Texas, original surveys were performed as part of the patenting process whereby land was transferred from the public domain. These "*patent surveys*," recorded at the Texas General Land Office, constitute an official land grid for the State and are the basis for subsequent land surveys.

Block
A block is a defined set of original land surveys. A block has an identifying name and/or number, and surveys within it are usually consecutively numbered, mile-square sections. Land grants from the State of Texas to railroad companies were often patented in blocks and sections. The term block is also used as a unit of a subdivision, i.e., subdivision/block/lot.

Section
A section refers to a square land survey measuring exactly one mile on each side. Some of the land transferred from the public domain by the state of Texas was surveyed and patented in units of square miles. The Texas General Land Office officially considers these units sections. Also, it was common that larger land grants, such as school lands and capitol lands, were subsequently surveyed into square mile units for the convenience of sale; these surveys are also called sections. In addition, the term "*section*" is commonly used to describe surveys in a group that have been assigned consecutive survey numbers, even though some of them do not have the proper shape or size to truly be sections.

Abstract
In Texas, the term abstract refers to an original land survey describing an area transferred from the public domain by either the Republic of Texas or the State of Texas. These surveys are recorded in the "*State Abstract of Land Titles*," which is maintained by the Texas General Land Office. Each survey so recorded is assigned an abstract number, which is unique within the county in which the survey falls. Because Texas has never performed a uniform statewide land survey, these original surveys called "*Patent Surveys*" constitute the State's Official Land Survey System.

FILE LAYOUT AND DATA DICTIONARY

FILE LAYOUT

This data dictionary defines unique RRC map attribute items and is structured as follows:

For attribute items with a DATA TYPE of text:
<ITEM NAME> <DATA TYPE> <LENGTH>

Item Name:
The name of an attribute item in a data file.

Data Type:
Type of data (Text).

Length:
Number of spaces for text data types.

For attribute items with a DATA TYPE of numeric, double, or float:
<ITEM NAME> <DATA TYPE> <PRECISION> <SCALE>

Item Name:
The name of an attribute item in a data file.

Data Type:
Type of data (Numeric, Double, Float, etc.).

Precision:
Field length – for double, float, and numeric data types.

Scale:
Decimal places – for double, float, and numeric data types.

DATA DICTIONARY

ATTRIBUTE INFORMATION

DATA ITEMS IN THE CTY<FIPS>G:

FIPS: TEXT 3
Federal Information Processing Standard code (FIPS) is a three character county code. FIPS codes are listed in Appendix B.

COUNTY_NAM: TEXT 14
The county name is in upper case letters.

DATA ITEMS IN THE CTY<FIPS>I:

FIPS: TEXT 3
Federal Information Processing Standard code (FIPS) is a three character county code. FIPS codes are listed in Appendix B.

AREANAME: TEXT 50
County name for a gulf area. County names are listed in Appendix B.

RAILROAD ATTRIBUTE INFORMATION

QUAD15M: TEXT 6
15 Minute Quadrangle number the rail line is in.

SUBDIVISION ATTRIBUTE INFORMATION

DATA ITEMS IN THE SUBD<FIPS>L:

QUAD15M_N: TEXT 6
Quad number for subdivision – unused.

LTYPE_N: SMALLINT 4, 4
Line type. All line types are listed in Appendix A.

DATA ITEMS IN THE SUBD<FIPS>Labpt:(use an invisible symbol to hide the pt)

TEXTSTRING: STRING 254
Name of the subdivision.

FONTNAME: STRING 254
Font used to label.

FONTSIZE: DOUBLE 19, 8
Size of the font.

ANGLE: DOUBLE 19, 8
Angle used to label the point on.

JUST: STRING 2
Justification of the label position.

NAME: STRING 60
Subdivision name to label on.

ID: DOUBLE 10, 0
ID number of the point.

QUAD15M_N: TEXT 6
Quad number for subdivision – unused.

SYMBOL: DOUBLE 10, 0
Symbol number for the point.

SURVEY ATTRIBUTE INFORMATION

DATA ITEMS IN THE SURV<FIPS>P:

ABSTRACT_N: TEXT 12
Abstract number. The Anum is comprised of the county FIPS code and the abstract number. Assigned to the surveyed parcel by the General Land Office at the time of patenting. If the abstract number field contains a "?" or is blank, then no abstract number was found.

LEVEL1_SUR: TEXT 32
Survey name. The name of the original grantee or the name of the company, individual or eleemosynary institution that is common among a formed group of surveys as shown on the General Land Office (GLO) county patent survey map or the GLO State Abstract of Land Titles.

LEVLE2_BLO: TEXT 10
Block Number. The number or letter used in description of a group of surveys identified as a Block on the GLO map. Example: 101

LEVEL3_SUR: TEXT 8
Section number. Further describes an abstracted surveyed parcel. Or, when preceded by "SUR", a surveyed parcel further divided into numbered abstracted areas. Example: SUR 101

LEVEL4_SUR: TEXT 32
Sub-Survey name of the grantee when the survey is a part of a larger refined area surveyed by a common party, and is only added if it is shown on the GLO map. A scrap file number corresponding to GLO records may also appear in the field.

ABSTRACT_L: TEXT 11
Abstract label. Label for the abstract number.

SCRAP_FILE: TEXT 9
Scrap or mineral file number from the GLO Abstract of Land Titles.

DATA ITEMS IN THE SURV<FIPS>B:

BAYNUM: TEXT 9
Bay number provided by the General Land Office.

BAYID: TEXT 3
Bay area name abbreviations.

TRACTNUM: TEXT 6
Provided by the General Land Office.

DATA ITEMS IN THE SURV<FIPS>L:

LTYPE: SHORT NUMERIC
Line type, all line types are given in Appendix A.

QUAD15M: TEXT 6
15 Minute Quadrangle number the survey is in.

DATA ITEMS IN THE SURV<FIPS>Abspt: (use an invisible symbol to hide the pt)

SYMBOLID: DOUBLE 10, 0
Symbol ID of the symbol.

TEXTSTRING: STRING 254
Survey abstract number.

FONTNAME: STRING 254
Font used to label.

FONTSIZE: DOUBLE 19, 8
Size of the font.

ANGLE: DOUBLE 19, 8
Angle used to label the point on.

JUST: STRING 2
Justification of the label position.

NAME: STRING 10
Survey abstract number to label on.

ID: DOUBLE 10, 0
ID number of the point.

SYMBOL: DOUBLE 10, 0
Symbol number for the point.

DATA ITEMS IN THE SURV<FIPS>Labpt: (use an invisible symbol to hide the pt)

TEXTSTRING: STRING 254
Survey abstract name.

FONTNAME: STRING 254
Font used to label.

FONTSIZE: DOUBLE 19, 8
Size of the font.

ANGLE: DOUBLE 19, 8
Angle used to label the point on.

JUST: STRING 2
Justification of the label position.

NAME: STRING 10
Survey abstract name to label on.

ID: DOUBLE 10, 0
ID number of the point.

SYMBOL: DOUBLE 10, 0
Symbol number for the point.

WATER ATTRIBUTE INFORMATION

DATA ITEMS IN THE WATR<FIPS>L:

QUAD15M: TEXT 6
15 Minute Quadrangle number the water is in.

DATA ITEMS IN THE WATR<FIPS>A:

LW_CODE: TEXT 1
Identifies a polygon water (W).

WELL ATTRIBUTE INFORMATION

****
For some historical wells, APINUM field may be blank due to the limited amount of research time to capture this information.
****

BOTTOM WELLS - *DATA ITEMS IN THE WELL<FIPS>B*:

API: TEXT 8
Three character county code with 5 character American Petroleum Institute (API) number. FIPS codes are listed in Appendix B.

API10: TEXT 10
Ten character field equivalent to APINUM minus the 2 digit STATE Code.

APINUM: TEXT 12
The American Petroleum Institute (API) number of the wellbore in which the well is located. This 12-digit number includes a two-digit state code (Texas=42), an eight-digit API code, and a two-digit sidetrack code. (A sidetrack code identifies wells drilled from within a wellbore.)

BOTTOM-ID: DOUBLE 10 0
Bottom well identification number.

CWELLNUM: TEXT 6
Current well number as assigned by the operator.

OUT_FIPS: TEXT 1
If given the value "Y", indicates a bottom well location in a county other than that indicated by the FIPS code portion of the API number.

LAT27: DOUBLE 18 8
Latitudinal position of the well. Datum is 1927.

LONG27: DOUBLE 18 8
Longitudinal position of the well. Datum is 1927.

LAT83: DOUBLE 18 8
Latitudinal position of the well. Datum is 1983.

LONG83: DOUBLE 18 8
Longitudinal position of the well. Datum is 1983+.

RADIOACT: TEXT 1
Whether the well is radioactive (if the bore contains any known radioactive material).

Y - well is radioactive.
N - well is not radioactive.

RELIAB: TEXT 2
Indicates the reliability of the well spot (the accuracy of the location of the well). Valid reliability codes are listed in Appendix C.

STCODE: TEXT 2
Side Track Code. Side tracks are numbered incrementally from 1 to 9, then from A through Z.

POSITION 1:1	POSITION 2:2
D = Directional	1 to 9 or,
H = Horizontal	A to Z
W = Well	

SURFACE-ID: DOUBLE 10 0
Surface well identification number.

SYMNUM: LONG NUMERIC
Indicates the type of well under Datatype 50 in Appendix A.

WELLID: TEXT 5
Character field equal to APINUM's last five digits.

SURFACE WELLS - *DATA ITEMS IN THE WELL<FIPS>S*:

API: TEXT 8
Three character county code with 5 character American Petroleum Institute (API) number. FIPS codes are listed in Appendix B.

LAT27: DOUBLE 18 8
Latitudinal position of the well. Datum is 1927.

LONG27: DOUBLE 18 8
Longitudinal position of the well. Datum is 1927.

LAT83: DOUBLE 18 8
Latitudinal position of the well. Datum is 1983.

LONG83: DOUBLE 18 8
Longitudinal position of the well. Datum is 1983.

RELIAB: TEXT 2
Indicates the reliability of the well spot (the accuracy of the location of the well). Valid reliability codes are listed in Appendix C.

SURFACE-ID: DOUBLE 10 0
Surface well identification number.

SYMNUM: LONG NUMERIC
Indicates the type of well under Data type 50 in Appendix A.

WELLID: TEXT 5
Character field equal to APINUM's last five digits.

WELL SURFACE/BOTTOM LINES - *DATA ITEMS IN THE WELL<FIPS>L*:

API: TEXT 8
Three character county code with 5 character American Petroleum Institute (API) number. FIPS codes are listed in Appendix B.

API10: TEXT 10
The American Petroleum Institute (API) number of the wellbore in which the well is located. This 10-digit number is an eight-digit API code and a two-digit sidetrack code. (A sidetrack code identifies wells drilled from within a wellbore.)

BOTTOM-ID: DOUBLE 10 0
Bottom well identification number.

SURFACE-ID: DOUBLE 10 0
Surface well identification number.

STCODE: TEXT 2
Side Track Code. Side tracks are numbered incrementally from 1 to 9, then from A through Z.

POSITION 1:1	POSITION 2:2
D = Directional	1 to 9 or,
H = Horizontal	A to Z
W = Well	

PIPELINE ATTRIBUTE INFORMATION

****
The Texas Railroad Commission is currently in the process of modifying and updating pipeline attributes to conform to the National Pipeline Mapping System (NPMS). Users of RRC pipeline data can expect specific items within the pipeline attribute table to be updated at any time.
****

TPMS_ID: DOUBLE 10 0
Texas Pipeline Mapping System id.

OPS_ID: LONG NUMERIC
Accounting number assigned by the U.S. Department of Transportation Office of Pipeline Safety to the company that physically operates the pipeline system.

P5_NUM: TEXT 6
P5 number - A six-digit number generated and used by the RRC to identify a pipeline operator.

OPER_NM: TEXT 40
Operator Name – Name of the firm that operates the facility.

SYS_NM: TEXT 40
System Name – Name of a single pipeline system.

SUBSYS_NM: TEXT 40
Subsystem Name - A unique name for a smaller sub-section of a pipeline system. A subset of SYS_NM

PLINE_ID: TEXT 20
Pipeline ID - This is an identifier for a specific section of the pipeline within a pipeline system.

DIAMETER: FLOAT 5 2
Nominal diameter of the pipeline segment, in inches.

COMMODITY1: TEXT 3
Abbreviation for the primary commodity carried by the pipeline system.

- HG = Hydrogen gas
- CRD = Crude Oil
- LPG = Liquid Petroleum Gas
- NG = Natural Gas
- PRD = Product
- AA = Anhydrous Ammonia
- CO2 = Carbon Dioxide
- NGL = Natural Gas Liquids
- HVL = Highly Volatile Liquid
- EMT = Empty

COMMODITY2: TEXT 3
Abbreviation for the secondary commodity carried by the pipeline system. Same as Commodity1, except EMT is not valid.

COMMODITY3: TEXT 3
Abbreviation for the tertiary commodity carried by the pipeline system. Same as Commodity1 except EMT is not valid.

CMDTY_DESC: TEXT 40
Commodity Description - Descriptive information of the commodities carried by the pipeline system. Appendix D has a complete listing of specific products within the commodity categories.

INTERSTATE: TEXT 1
Designates a pipeline as either inter or intrastate. "Y" indicates an interstate pipeline, "N" indicates an intrastate pipeline.

STATUS_CD: TEXT 1
Status Code - Identifies the current status of the pipeline segment. "I" = in service, "B" = abandoned, "R" = retired.

QUALITY_CD: TEXT 1
Quality Code - Operator's estimate of the positional accuracy of the submitted pipeline segment. "E"=excellent: within 50 feet, "V"=very good: 50-300 feet, "G"=good: 301-500 feet, "P"=poor: 501-1000 feet, "U"=unknown.

T4PERMIT: TEXT 5
RRC assigned five-digit pipeline permit number.

SYSTYPE: TEXT 1
Abbreviation for the system type description.

G = Gas Gathering
K = Carbon Dioxide
L = Crude Gathering
O = Crude Transmission
P = Non_HVL Liquid Products
Q = HVL Products
T = Gas Transmission

See Appendix D for full listing of systypes.

COUNTY: TEXT 3
The County FIPS code. FIPS codes are listed in Appendix B.

COM_CARRIER: TEXT 1
Common Carrier - Declaration of common carrier or gas utility status.
Y = it is a common carrier OR gas utility
N = it is neither

SYS_ID: TEXT 6
System ID - A six-digit RRC-generated system identifier. This item may not be present in all pipeline attribute files. The first number is the region number. Second is the system-type number. A four digit RRC assigned sequence number completes the item.

Region Numbers	Region Name
1	Amarillo
2	Midland
3	Kilgore
4	Austin
5	Houston
6	Dallas
7	Corpus Christi
8&9	Multi-Regional

System Type Number	System Type Name
3	Gas
4	Liquid
5	

NPMS_SYS_I: LONG NUMERIC
National Pipeline Mapping System (System ID) - Unique ID for the pipeline system to which the segment belongs, assigned by the National Repository.

ALBERS_MILES: DOUBLE 18 10
Mileage of the pipeline segment calculated using the Albers projection.

APPENDIX A: LINE TYPES AND WELL SYMBOLOGY

LINE TYPE ASSIGNMENTS

This appendix lists the line types. Line types are RRC defined data categories relevant to RRC mapping.

ORIGINAL LAND SURVEYS

3 - County Boundary
5 - Block Line
6 - Overlap Block Lines
7 - Survey, Section Lines
8 - Abstract Division Lines
10 - Creek
11 - Coastline
27 - River or Small Lake
28 - Offshore Abstract Division
29 - Offshore Tract, Survey Line
30 - Offshore Block Line
31 - Lake
32 - Offshore Overlap Tract, Survey Line
77 - Annotation Outline Arrow
113 - Overlap Survey, Section Lines
126 - Survey Annotation Outline

SUBDIVISION LINES

9 - Subdivision Lot Line
124 - Subdivision Outline
125 - Subdivision Labor Line

OIL & GAS WELLS (SYMNUM)

2	Permitted Location
3	Dry Hole
4	Oil Well
5	Gas Well
6	Oil/Gas Well
7	Plugged Oil Well
8	Plugged Gas Well
9	Canceled Location
10	Plugged Oil/Gas Well
11	Injection/Disposal Well
12	Core Test
13	Directional Surface Location
15	Radioactive Well
16	Sulfur Core Test
17	Storage from Oil
18	Storage from Gas
19	Shut-In Well (Oil)
20	Shut-In Well (Gas)
21	Injection/Disposal From Oil
22	Injection/Disposal From Gas
23	Injection/Disposal From Oil/Gas
24	Offshore Platform
36	Geothermal Well
73	Brine Mining Well
74	Water Supply Well
75	Water Supply from Oil
76	Water Supply from Gas
77	Water Supply from Oil/Gas
78	Observation Well
79	Observation from Oil
80	Observation from Gas
81	Observation from Oil/Gas
86	Horizontal Drainhole
87	Sidetrack Well Surface Location
88	Storage Well
89	Service Well
90	Service from Oil
91	Service from Gas
92	Service from Oil/Gas
103	Storage from Oil/Gas
104	Injection/Disposal from Storage
105	Injection/Disposal from Storage/Oil
106	Injection/Disposal from Storage/Gas
107	Injection/Disposal from Storage/Oil/Gas
108	Observation from Storage
109	Observation from Storage/Oil
110	Observation from Storage/Gas
111	Observation from Storage/Oil/Gas
112	Service from Storage
113	Service from Storage/Oil
114	Service from Storage/Gas
115	Service from Storage/Oil/Gas

116 Plugged Storage
117 Plugged Storage/Oil
118 Plugged Storage/Gas
119 Plugged Storage/Oil/Gas
121 Brine Mining from Oil
122 Brine Mining from Gas
123 Brine Mining from Oil/Gas
124 Injection/Disposal from Brine Mining
125 Injection/Disposal from Brine Mining/Oil
126 Injection/Disposal from Brine Mining/Gas
127 Injection/Disposal from Brine Mining/Oil/Gas
128 Observation from Brine Mining
129 Observation from Brine Mining/Oil
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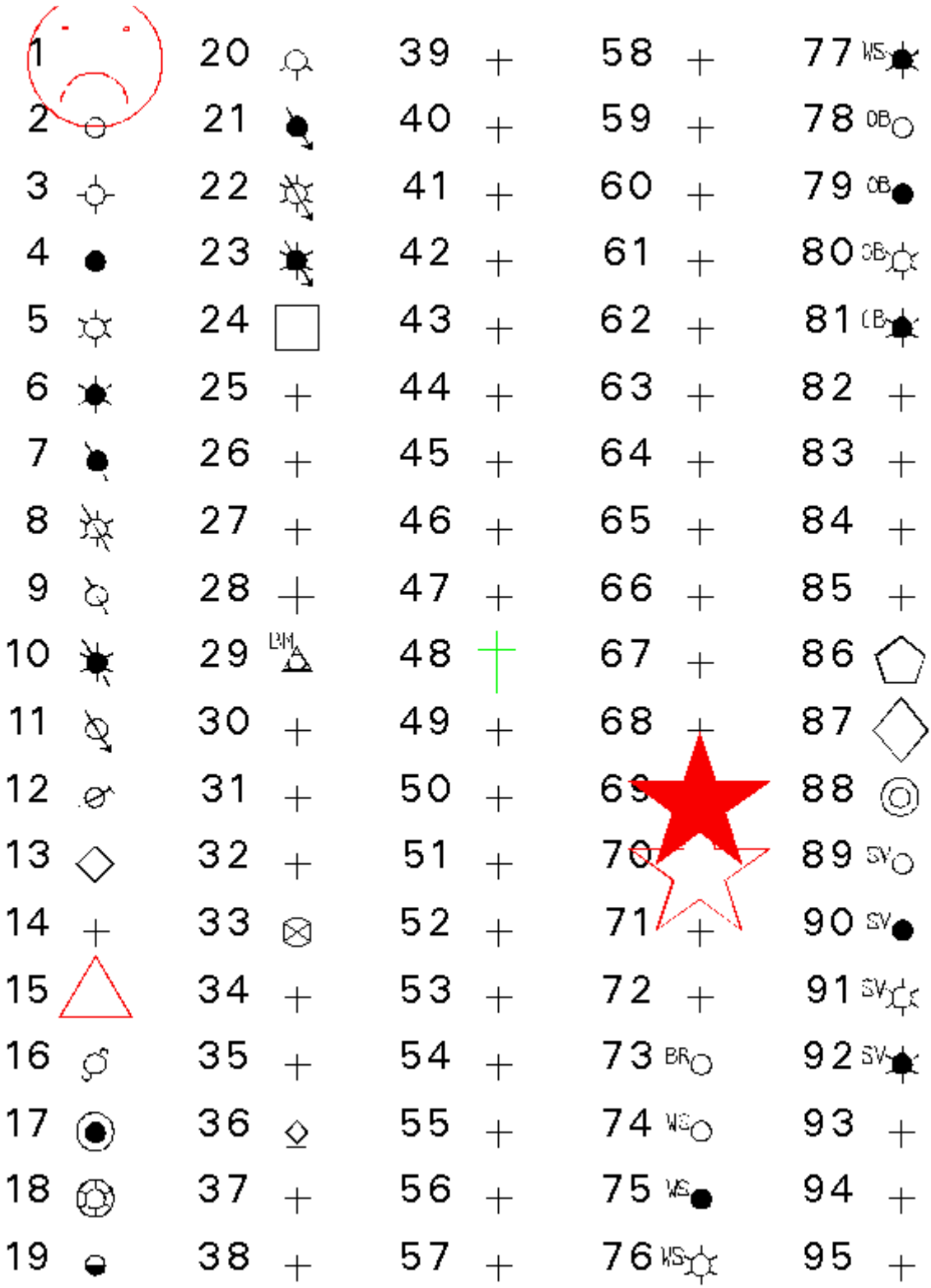
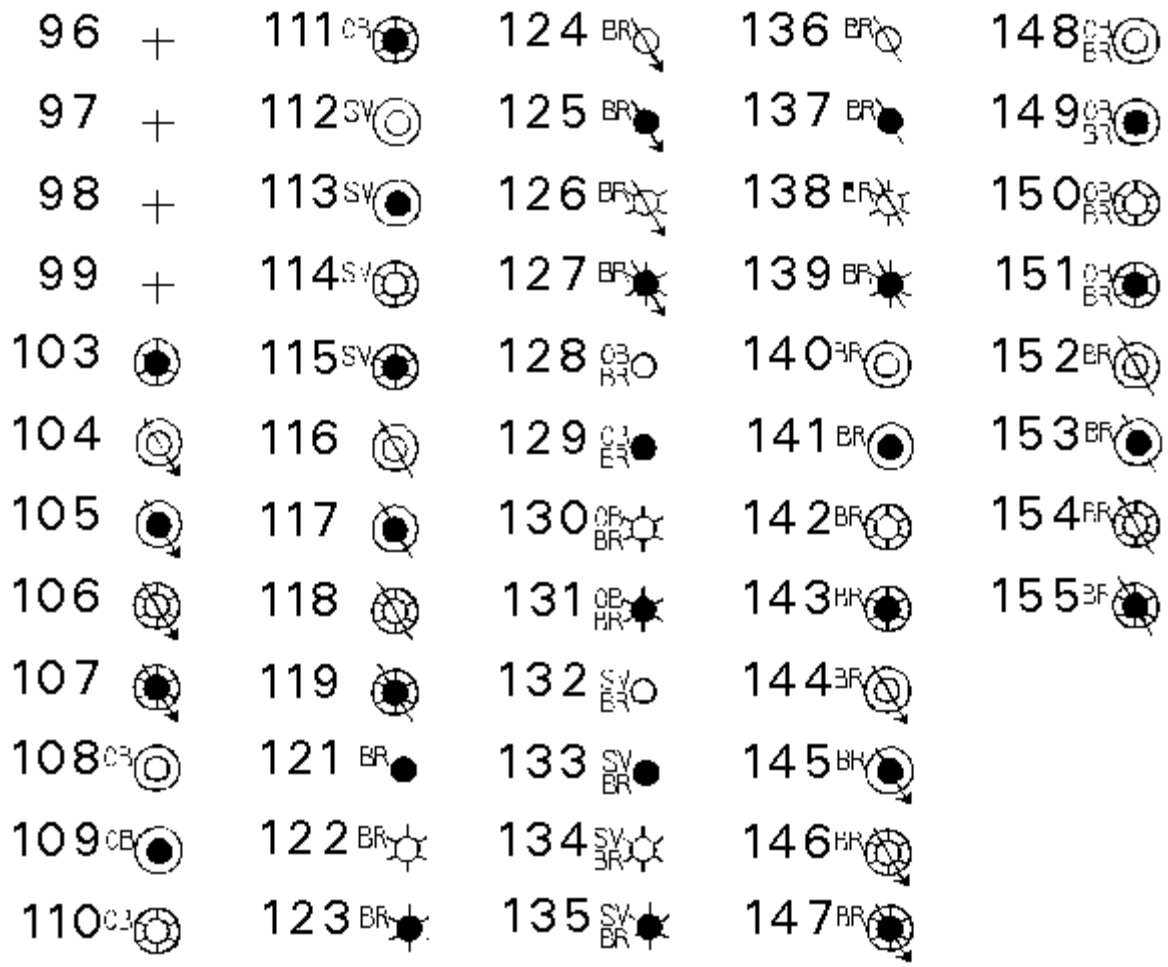
135 Service from Brine Mining/Oil/Gas
136 Plugged Brine Mining
137 Plugged Brine Mining/Oil
138 Plugged Brine Mining/Gas
139 Plugged Brine Mining/Oil/Gas
140 Storage/Brine Mining
141 Storage/Brine Mining/Oil
142 Storage/Brine Mining/Gas
143 Storage/Brine Mining/Oil/Gas
144 Inj/Disposal from Storage/Brine Mining
145 Inj/Disposal from Storage/Brine Mining/Oil
146 Inj/Disposal from Storage/Brine Mining/Gas
147 Inj/Disposal from Storage/Brine Mining/Oil/Gas
148 Observation from Storage/Brine Mining
149 Observation from Storage/Brine Mining/Oil
150 Observation from Storage/Brine Mining/Gas
151 Observation from Storage/Brine Mining/Oil/Gas
152 Plugged Storage/Brine Mining
153 Plugged Storage/Brine Mining/Oil
154 Plugged Storage/Brine Mining/Gas
155 Plugged Storage/Brine Mining/Oil/Gas

DIRECTIONAL DRILL LINES

25 - Horizontal Drainhole Line
42 - Directional Well Line

OIL & GAS WELLS SYMBOLOGY
GRAPHICAL REPRESENTATION OF SYMNUM




96
97
98
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103
104
105
106
107
108 CB
109 CB
110 CJ
111 CB
112 SV
113 SV
114 SV
115 SV
116
117
118
119
121 BR
122 BR
123 BR
124 BR
125 BR
126 BR
127 BR
128 CB BR
129 CJ ER
130 CB BR
131 CB HR
132 SV ER
133 SV BR
134 SV 3R
135 SV BR
136 BR
137 BR
138 BR
139 BR
140 HR
141 BR
142 BR
143 HR
144 3R
145 BH
146 HR
147 BR
148 CB ER
149 CB 3R
150 CB BR
151 CB BR
152 BR
153 BR
154 BR
155 3R

APPENDIX B: FIPS CODES

COUNTY FIPS CODES

COUNTY	FIPS Code
Anderson	001
Andrews	003
Angelina	005
Aransas	007
Archer	009
Armstrong	011
Atascosa	013
Austin	015
Bailey	017
Bandera	019
Bastrop	021
Baylor	023
Bee	025
Bell	027
Bexar	029
Blanco	031
Borden	033
Bosque	035
Bowie	037
Brazoria	039
Brazos	041
Brewster	043
Briscoe	045
Brooks	047
Brown	049
Burleson	051
Burnet	053
Caldwell	055
Calhoun	057
Callahan	059
Cameron	061
Camp	063
Carson	065
Cass	067
Castro	069
Chambers	071
Cherokee	073
Childress	075
Clay	077
Cochran	079
Coke	081
Coleman	083
Collin	085
Collingsworth	087
Colorado	089
Comal	091
Comanche	093

Concho	095
Cooke	097
Coryell	099
Cottle	101
Crane	103
Crockett	105
Crosby	107
Culberson	109
Dallam	111
Dallas	113
Dawson	115
Deaf Smith	117
Delta	119
Denton	121
Dewitt	123
Dickens	125
Dimmitt	127
Donley	129
Duval	131
Eastland	133
Ector	135
Edwards	137
Ellis	139
El Paso	141
Erath	143
Falls	145
Fannin	147
Fayette	149
Fisher	151
Floyd	153
Foard	155
Fort Bend	157
Franklin	159
Freestone	161
Frio	163
Gaines	165
Galveston	167
Garza	169
Gillespie	171
Glasscock	173
Goliad	175
Gonzales	177
Gray	179
Grayson	181
Gregg	183
Grimes	185
Guadalupe	187
Hale	189
Hall	191
Hamilton	193
Hansford	195
Hardeman	197
Hardin	199

Harris	201
Harrison	203
Hartley	205
Haskell	207
Hays	209
Hemphill	211
Henderson	213
Hidalgo	215
Hill	217
Hockley	219
Hood	221
Hopkins	223
Houston	225
Howard	227
Hudspeth	229
Hunt	231
Hutchinson	233
Irion	235
Jack	237
Jackson	239
Jasper	241
Jeff Davis	243
Jefferson	245
Jim Hogg	247
Jim Wells	249
Johnson	251
Jones	253
Karnes	255
Kaufman	257
Kendall	259
Kenedy	261
Kent	263
Kerr	265
Kimble	267
King	269
Kinney	271
Kleberg	273
Knox	275
Lamar	277
Lamb	279
Lampasas	281
La Salle	283
Lavaca	285
Lee	287
Leon	289
Liberty	291
Limestone	293
Lipscomb	295
Live Oak	297
Llano	299
Loving	301
Lubbock	303
Lynn	305

McCulloch	307
McLennan	309
McMullen	311
Madison	313
Marion	315
Martin	317
Mason	319
Matagorda	321
Maverick	323
Medina	325
Menard	327
Midland	329
Milam	331
Mills	333
Mitchell	335
Montague	337
Montgomery	339
Moore	341
Morris	343
Motley	345
Nacogdoches	347
Navarro	349
Newton	351
Nolan	353
Nueces	355
Ochiltree	357
Oldham	359
Orange	361
Palo Pinto	363
Panola	365
Parker	367
Parmer	369
Pecos	371
Polk	373
Potter	375
Presidio	377
Rains	379
Randall	381
Reagan	383
Real	385
Red River	387
Reeves	389
Refugio	391
Roberts	393
Robertson	395
Rockwall	397
Runnels	399
Rusk	401
Sabine	403
San Augustine	405
San Jacinto	407
San Pactricio	409
San Saba	411

Schleicher	413
Scurry	415
Shakelford	417
Shelby	419
Sherman	421
Smith	423
Somervell	425
Starr	427
Stephens	429
Sterling	431
Stonewall	433
Sutton	435
Swisher	437
Tarrant	439
Taylor	441
Terrell	443
Terry	445
Throckmorton	447
Titus	449
Tom Green	451
Travis	453
Trinity	455
Tyler	457
Upshur	459
Upton	461
Uvalde	463
Val Verde	465
Van Zandt	467
Victoria	469
Walker	471
Waller	473
Ward	475
Washington	477
Webb	479
Wharton	481
Wheeler	483
Wichita	485
Wilbarger	487
Willacy	489
Williamson	491
Wilson	493
Winkler	495
Wise	497
Wood	499
Yoakum	501
Young	503
Zapata	505
Zavala	507

GULF COUNTY AREAS FIPS CODES

GULF COUNTY AREAS	FIPS CODE
South Padre Island-SB	600
North Padre Island-SB	601
Mustang Island-SB	602
Matagorda Island-SB	603
Brazos-SB	604
Galveston-SB	605
High Island-SB	606
South Padre Island-LB	700
North Padre Island-LB	701
Mustang Island-LB	702
Matagorda Island-LB	703
Brazos-LB	704
Brazos-S	705
Galveston-LB	706
Galveston-S	707
High Island-LB	708
High Island-S	709
High Island-E	710
High Island-E-S	711
Mustang Island-E	712
North Padre Island-E	713
South Padre Island-E	714
Sabine Pass	715

APPENDIX C: WELL RELIABILITY CODES

The reliability of a well's location is determined by the source used to spot the well into the Well Location Database. Valid codes are:

RELIAB CODES

10 Historic Map (non-RRC)
15 RRC Hardcopy Map
16 Spotted from Reliability Code 15 wells
17 Location adjusted during survey maintenance
20 WELLBORE Distances
25 Unit or hearing plat, plat with form for another well, or form for this well without a plat.
30 Operator reported location (distances without plat or plat without distances).
40 Operator reported location (distances and plat).
45 Field Inspection by RRC personnel.
48 Spotted from Reliability Code 50 wells
50 U.S.G.S. 7.5 minute quad or aerial photograph.
55 Coordinates from operator.
59 Coordinates – RRC personnel reported 2D GPS (Accuracy of 200 - 300 feet.)
60 Coordinates – RRC personnel reported 3D GPS (Accuracy of about 15 feet.)

Appendix D: COMMODITY DESCRIPTIONS and Systypes

COMMODITY DESCRIPTION	COMMODITY	SYSTYPE
Acetylene	PRD	Q
Acetylene Off Gas	PRD	T
Alcohols	PRD	P
Ammonia	AA	P
Anhydrous Ammonia	AA	P
Anhydrous HCL	PRD	P
Benzenes	PRD	P
Brine	PRD	Y
Butanes	HVL	Q
Butadiene		
Butane/Butylene		
Butane/Distillates		
Butane/Pentane		
Butylene		
Iso-Butane		
Isobutane		
Carbon Dioxide	CO2	K
Chemical Grade Propylene	HVL	Q
Chlorine Gas	PRD	Q
Condensate	NGL	Q
Slop Oil Water		
Crude	CRD	L (Gathering)
Crude	CRD	O (Transmission)
O/G		
Oil		
Petroleum		
Cyclohexane	PRD	P
Diesels	PRD	P
Dripolene	HVL	Q
Ethanes	HVL	Q
Ethlyene	HVL	Q
Ethylene (Gas)	PRD	T
E/P Mix	LPG	Q
E/P Propane		
Ethane/Propane		
Ethane/Propane Mix		
P/P Mix		
EPBC		
Feedstock	HVL	P

Fuel Oil	PRD	P	
Bistone			
Fuel Gas			
Fuel Oil/Natural Gas			
Fuel Oils/Gas			
Fuel Residum			
Gasoline	PRD	P	
Gasoline/Diesel/Jet			
Gasoline/Fuel Oils			
High Purity Ethane	HVL	Q	
Hydrogen Chloride	PRD	T	
Hydrogen Gas	HG	T	
Liquid Hydrogen			
Pure H2			
Raw H2			
Isobutane	HVL	Q	
Jet Fuel	PRD	P	
Kerosene	PRD	P	
LPG	LPG	Q	
Raw LPG			
Methanol/MTBE	PRD	P	
MTBE	PRD	P	
Natural Gas	NG	T	(Transmission)
Natural Gas	NG	G	(Gathering)
Dry Gas			
Natural			
Natural Gas/Cond			
Sweet Gas			
Synthesis			
Natural Gas Liquids	NGL	Q	
Refinery Off Gas			
Nitrogen	PRD	P	
Oxygen	PRD	T	
Oxygen/Nit.			
Pentanes	HVL	Q	
Propane	HVL	Q	
Methyl Propane			
Propadiene			
Propane/Butane			
Propane/LPG			
Propane/Propylene			
Propyne			
Propylene	HVL	Q	

Propylene Oxide	PRD	P
Refined Products	PRD	P
Acnylonitrile		
Cutter Stock		
Cyclohexane		
Deisohex Stock		
Distillates		
Dripoline		
Feed Gas		
HCL Acid Anhydrous		
Hexene		
HPG		
Isoprene		
Methanol		
MTBE		
Naptha		
Products		
Raffinate		
RPG		
Tertiary Butyl Alcohol		
Toluene		
TBA	PRD	P

SYSTYPES

A = Offshore (Liquids)
B = Apartment Complexes
C = Compressor Station
D = Distribution
E = Interstate Transmission Gas
F = Non-Jurisdictional Gathering
G = Gas Gathering
H = Government (Housing Authority)
I = LP Gas Distribution
J = Direct Sales Customer
K = Carbon Dioxide Pipelines
O = Crude Transmission
M = Municipal Distribution
N = City Not Served
L = Crude Gathering
P = Product Lines (NOT Highly Volatile)
Q = Other Liquid Lines (Highly Volatile)
S = Municipal Supply Line
T = Transmission
U = Underground Liquid Storage
V = Underground Gas Storage
W = Mobile Home Parks
X = Liquefied Natural Gas
Y = Brine
Z = Offshore (Gas) Gathering

APPENDIX E: 8.3 NAMING CONVENTIONS

The 8.3 naming convention stipulates that, exclusive of the filename suffix, a digital filename cannot be more than 8 characters long.

Although some computer operating systems and software programs accept file names longer than 8 characters, the Railroad Commission adheres to the 8.3 naming convention for a number of reasons.

1. ESRI, the manufacturer of ArcMap, suggests that their users adhere to the 8.3 naming convention for shapefiles. ESRI, in various ways and to various extents, codes its software to enforce compliance with the 8.3 naming convention.
2. All RRC GIS data are compressed. Unfortunately, some decompression software packages truncate long filenames such as, “county203l.shp” to meaningless names like, “county2~1.shp”
3. The Railroad Commission is committed to making its digital data accessible and usable to as wide an audience as possible. Adherence to the 8.3 naming convention ensures that at least one major hurdle of data portability is cleared.