

How to use the digital database

Introduction

This document describes the digital files that are included in this publication; they are included in the digital_files folder on this CD-ROM and available for downloading at <http://pubs.usgs.gov/mf/2003/2428/> where any updates to them can also be found. These data include both a set of Arc/Info geospatial databases containing the geographic information and an Adobe Acrobat PDF map display, as well as the accompanying pamphlet describing the indications of petroleum in the area. The map display and pamphlet can be viewed using the bookmarks in the left margin of this document. Tip: It is best to keep PDFs open while you view others so you can go back and forth between and among PDFs without having to open them more than once. If your copy of Acrobat has "Preferences" "General..." "Open cross-document links In same window" selected, you should deselect it now.

This map publication, compiled from previously published and unpublished data, describes historical and modern occurrences of petroleum in wells and natural seeps in Central Alaska. This database was developed for the US Geological Survey's petroleum assessment of Central Alaska. The report is intended to provide information on historical and modern indications of petroleum within the Central Alaska Province boundaries. The scale of the source maps limits the spatial resolution (scale) of the database to (1:2,500,000) or smaller. The content and character of the digital publication, as well as methods of obtaining the digital files, are described below.

Converting ARC export files

ARC export files are converted to ARC coverages using the ARC command IMPORT with the option COVER. To ease conversion and maintain naming conventions, we have included an ASCII text file in ARC Macro Language that will convert all of the export files in the database into coverages and create the associated INFO directory. From the ARC command line type:

```
Arc: &run import.aml
import cover iop.e00 iop
import cover seds_basins.e00 seds_basins
import cover faults.e00 faults
```

ARC export files can also be read by some other Geographic Information Systems. Please consult your GIS documentation to see if you can use ARC export files and the procedure to import them.

Digital database

The database and digital maps, or coverages, along with their associated INFO directory have been converted to uncompressed ARC/INFO export files. ARC export files promote ease of data handling, and are usable by some Geographic Information Systems in addition to ARC/INFO. The ARC export files and the associated ARC/INFO coverages and directories, as well as the additional digital material included in the database, are described below:

ARC/INFO export file	Resultant Coverage	Description of Coverage
ak_boundary.e00	ak_boundary	Line coverage showing state boundary of Alaska
ak_interior.e00	ak_interior	Line coverage showing boundary of interior province of Alaska using the 3-mile state limit along the coastline
pipeline.e00	pipeline	Line coverage showing location of Alaska pipeline
glaciers.e00	glaciers	Polygon coverage showing major glaciers in Alaska
maj_rivers.e00	maj_rivers	Polygon and line coverage showing major rivers in Alaska
iop.e00	iop	Point coverage showing indications of petroleum within the central Alaska province boundaries. This coverage has an associated Point Attribute Table (PAT)

seds_basins.e00	seds_basins	Polygon coverage of Sedimentary basins in Alaska. This coverage has an associated Arc Attribute Table (AAT), which contains no data, and Polygon Attribute Table (PAT).
faults.e00	faults	Line coverage showing major faults and geologic structures in Alaska. This coverage has an associated Arc Attribute Table (AAT).

The coverages iop, seds_basins, and faults were digitized for this report and are accompanied by metadata. The remaining coverages were downloaded from government archives, maintained at <http://www.nationalatlas.gov> Metadata for these coverages can be found at that site.

Other files included in this digital report are:

IOP_Central_Alaska.PDF	PDF display of map and text information
IOP_explan_notes.txt	Text document containing explanatory notes as included in the PDF map display
IOP_catalog.txt	Text document containing table of indications petroleum as included in the PDF map display

Database specifics

What follows is a brief description of the databases included in this report and the data in them. For a comprehensive look at the database structure and content, please see the FGDC metadata files of the individual coverages included in the database package and available separately at the publication web page. The map databases consist of ARC coverages and supporting INFO files, which are stored in a Albers Equal Area projection.

Map Projection

The maps are stored in Albers Equal Area projection. The following is an annotated projection file of the type used in Arc/Info.

Map_Projection:

```
Map_Projection_Name: Albers Conical Equal Area
Standard_Parallel: 55.000000
Standard_Parallel: 65.000000
Longitude_of_Central_Meridian: -154.000000
Latitude_of_Projection_Origin: 50.000000
False_Easting: 0.000000
False_Northing: 0.000000
```

iop

The following data are included in the PAT database:

VICINITY:

Bethel -	Data point is located in the vicinity of Bethel Basin
Bristol Bay -	Data point is located in the vicinity of Bristol Bay basin
Innoko -	Data point is located in the vicinity of Innoko basin
Kandik -	Data point is located in the Kandik Basin region
Kobuk -	Data point is located in the vicinity of the Kobuk flysch belt
Kotzebue -	Data point is located in the vicinity of Kotzebue Basin
Kuskokwim -	Data point is located in the vicinity of Kuskokwim flysch belt
Nenana -	Data point is located in the vicinity of Nenana basin
Northway -	Data point is located in the vicinity of Northway lowlands
Norton -	Data point is located in the vicinity of Norton basin
Yukon Flats -	Data point is located in the vicinity of Yukon Flats basin
Yukon-Koyukuk -	Data point is located in the vicinity of Yukon-Koyukuk flysch belt

IOP_CODE

- 1 = Well with oil show(s)
- 2 = Well with gas show(s)
- 3 = Well with no oil or gas shows
- 4 = Oil seep, confirmed
- 5 = Oil seep, reported but unconfirmed
- 6 = Oil seep, reported but doubtful or disproved
- 7 = Gas seep, confirmed
- 8 = Gas seep, reported but unconfirmed
- 9 = Gas seep, reported but doubtful or disproved
- 10 = Outcrop of oil shale or oil-bearing rock

Note: At this time, there are no confirmed oil seeps within the central Alaska province boundary.

ID_ID

Unique number ranging from 1 to 95 which correlates to information in table 1. Points are numbered from northwest to southeast.

segs_basins

Arcs in the segs_basins coverage are not tagged and the associated AAT database contains only information generated by the software in the digitizing process.

The following information is included in the PAT database for the segs_basins coverage:

AGE

Definition: enumerated domain data indicating age of rocks present. Null values indicates age information is not present or not well defined in original published data.

Late Tertiary and Quaternary
Lower Tertiary

Mesozoic
Paleozoic-Mesozoic

MAP_UNIT

basement -	Metamorphic and igneous terranes of all ages
flysch 1 -	Fold belts of the Colville foredeep, Eagle basin, Alaska Peninsula, Cook Inlet and Copper River basins
flysch 2 -	Complexly deformed and locally metamorphosed flysch basins of interior Alaska
flysch 3 -	Pervasively deformed and metamorphosed flysch belts
fold and thrust belt -	Terrane includes the Cordilleran Fold and Thrust belt, Hearld arch, Lisburne Hills, Northern Brooks Range, Romanzof Mountains and Kandik (hinterland) segment in Alaska. Davidson Mountains, Eagle basin, Richardson Mountains, and Northern Ogilvie Mountains in Yukon Territory, Canada.
gas field -	Producing gas field
oil field -	Producing oil field
older sedimentary -	Older sedimentary basins, Lower Tertiary in age, are present as remnants of older basins. These rocks are moderately to strongly deformed and locally metamorphosed.
sedimentary basin -	Late Tertiary and Quaternary basin fill
volcanic rock cover -	Upper Mesozoic to Cenozoic volcanic rock cover
water -	polygon created in digitizing process that contains no lithology, but only water.

THICKNESS

Basin depth as determined by C. Kirschner, between 0 and 14 km.

GRAVITY

Indicates presence of Bouguer gravity anomaly. Interpreted to represent Cenozoic basin fill in 1 to 3 km range. Null value indicates no gravity anomaly present.

GRAV_DEPTH

Value of Bouguer gravity low measured in milligals.

STATUS

Indicates if rocks are present in outcrop or inferred from regional geology. Null value indicates lithology is not present at the surface.

faults

This coverage contains all structural information from the original paper map of Kirschner, 1988. The following information is included in the AAT database for the faults coverage:

LTYPE

Definition: Type of fault, fold axis, or other structural linear feature.

anticline	gravity high	syncline
anticlinorium	gravity low	synclinorium
anticlinorium inferred	normal	synclinorium inferred
fault	normal inferred	thrust
fault – inferred	strike slip right	thrust inferred
fold	strike slip right inferred	

This report was compiled and digitized from previously published and unpublished sources. Coverages were compiled in ArcInfo, a commercial Geographic Information System produced by ESRI (Environmental Systems Research Institute, Redlands, California), version 8.2.0. The files are coverage (ArcInfo vector data) format. Coverages are stored in uncompressed ARC export format (ArcInfo version 8.2.0). ArcInfo export files (files with .e00 extensions) can be converted into ArcInfo coverages in ArcInfo and can be read by some other Geographic Information Systems, such as MapInfo and ESRI's ArcView (limited versions of this software are available for free from ESRI's web site: <http://www.esri.com>).

Uses of this digital coverage should not violate the spatial resolution of the data. Although the digital form of the data removes the constraint imposed by the scale of a paper map, the detail and accuracy inherent in map scale are also present in the digital data. The fact that this database was edited for a scale of 1:2,500,000 means that higher resolution information is not present in the dataset. Plotting at scales larger than 1:2,500,000 will not yield greater real detail, although it may reveal fine-scale irregularities below the intended resolution of the database.