U.S. Geological Survey Digital Data Series 60

U.S. Geological Survey World Petroleum Assessment 2000– Description and Results

by

USGS World Energy Assessment Team

USGS Energy Team
Box 25046 MS939
Denver, CO 80225

2000

U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY
Charles G. Groat, Director

Distributed by:

USGS Information Services
Box 25286, Building 810
Denver Federal Center
Denver, CO 80225

Call: (303) 202-4200

For more information on the USGS World Petroleum Assessment 2000 Project contact:

Thomas S. Ahlbrandt
ahlbrandt@usgs.gov
phone: 303-236-5776

Box 25046, Denver Federal Center, MS 939
Denver, CO 80225-0046

For more information on this CD-ROM contact:

Ronald R. Charpentier
charpentier@usgs.gov
phone: 303-236-5766
Box 25046 MS 939
Denver Federal Center
Denver, CO 80225-0046

Timothy R. Klett
tklett@usgs.gov
phone: 303-236-5841
Box 25046 MS 939
Denver Federal Center
Denver, CO 80225-0046

Felix M. Persits
fpersits@usgs.gov
phone: 303-236-3612
Box 25046 MS 939
Denver Federal Center
Denver, CO 80225-0046

Douglas W. Steinshouer
steinsho@usgs.gov
phone: 303-236-1555
Box 25046 MS 939
Denver Federal Center
Denver, CO 80225-0046

Ken Takahashi
kt@usgs.gov
phone: 303-236-5782
Box 25046, MS 939
Denver Federal Center,
Denver, CO 80225-0046

I. INTRODUCTION

Disc 4, the fourth CD-ROM of a four CD-ROM set documenting the U.S. Geological Survey (USGS) World Petroleum Assessment 2000. The assessment is

the result of a five year effort to estimate the quantities of conventional oil, gas, and natural gas liquids outside the United States that have the potential to be added to reserves in the 30 years from 1995 to 2025. This report spans four CD-ROM's due to the size and number of files. The first three CD-ROM's present detailed results of the assessment as well as extensive documentation of the methodology used. The background information such as, introduction, summaries, and methodological descriptions are repeated on each of the first three discs. The results and other data are presented hierarchically from the basic Assessment Unit, through the Total Petroleum System and geologic province to each region. Each CD-ROM contains the results from two or three of the eight total regions. This CD-ROM, the fourth in the set contains archival data and supporting software that permit the user to query databases and do further analysis.

Version 1.1 of DDS-60 contains revisions to the PDF files on Discs 1 through 3. These changes consist of corrections to buttons and links between some of the PDF files and revisions to correct typographical errors. The overall content of this version is the same as version 1.

Software applications used to develop this set of CD-ROM's included Adobe Acrobat 4, Adobe Illustrator 8, Adobe Photoshop 5, Microsoft Word 98, Microsoft Excel, ESRI ARC/INFO and ESRI ArcView. A wide range of computer systems including Macintosh, Windows-based systems, and Sun systems, were used over the past five years to produce the materials presented in this CD-ROM set.

II. DISCLAIMERS

This Compact Disc-Read Only Memory (CD-ROM) publication was prepared by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed in this report, or represents that its use would not infringe privately owned

rights. Reference therein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.

Although all data and software published on this CD-ROM have been used by the USGS, no warranty, expressed or implied, is made by the USGS as to the accuracy of the data and related materials and (or) the functioning of the software. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the USGS in the use of this data, software, or related materials.

III. SYSTEM REQUIREMENTS

Adobe Acrobat Reader 4 or later is required to view the interactive PDF files in this set. This software is included on *Disc 4* for Macintosh and Windows-based computers only. Requirements for this software include:

A. Macintosh computer (Macintosh II series with 68020 or greater processor, including all Power Macintosh computers), with MacOS 7.1.2 or later.

1. 4.5 MB application RAM (6.5 MB recommended).
2. 8 MB of hard-disk space.

B. Windows-based computer (i486 or Pentium® processor personal computer), with Microsoft Windows 95, Windows 98, Microsoft Windows NT 4.0 with Service Pack 3 or later.

1. 10 MB of available RAM on Windows 95 and Windows 98 (16 MB recommended)
2. 16 MB of available RAM on Windows NT (24 MB recommended)
3. 10 MB of available hard-disk space

Use of the PDF files of these CD-ROM's requires the installation of Adobe Acrobat Reader 4 which is included for Macintosh and PC systems on *Disc 4* in the *acroread* directory. Select the directory corresponding to the computer platform you are using. Copies of Acrobat Reader 4 are also available for

downloading from the Adobe web site (www.adobe.com) for the following platforms.

1. Macintosh
2. Windows
3. IBM AIX
4. DEC OSF/1
5. HP-UX
6. SGI IRIX
7. LINUX
8. Sun

The ArcExplorer project files and the Arcview projects on Disc 4 require additional software to be viewed. The ArcExplorer projects require ArcExplorer 1.1 to be viewed. ArcExplorer 1.1 requires a Pentium processor with 16 MB RAM, and Windows 95/98/NT . ArcExplorer 1.1 software is available in the *Disc4/GIS/explorer* directory. The Arcview projects require Arcview 3.x software which can be purchaesd from ESRI to be viewed. These project files are discussed in more below.

IV. INSTRUCTIONS AND DOCUMENTATION FOR Disc 4 of DDS-60

A. Instructions

This CD-ROM contains various data files supporting the *U.S. Geological Survey World Petroleum Assessment 2000–Description and Results* report. Files are included for many of the tables used in this report, most of the map data and their metadata files, and a number of ArcExplorer and Arcview projects. Most of the data table files are tab-delimited text files, usable in spreadsheet and data base software. The map data are in several formats for use in digital mapping software.

The ArcExplorer projects require ArcExplorer 1.1 to be viewed. ArcExplorer 1.1 requires a Pentium processor with 16 MB RAM, and Windows 95/98/NT . ArcExplorer 1.1 software is available in the *Disc4/GIS/explorer* directory. The Arcview projects require Arcview 3.x software purchasable from ESRI to be

viewed. The ArcExplorer and the Arcview projects allow the user to build maps interactively, selecting from sets of available data.

You must have Windows 95/98/NT to access the ArcExplorer projects on this disc. If you do not already have ArcExplorer 1.1 on your computer open the *GIS/explorer* directory and run *aeclient.exe* to install ArcExplorer 1.1. A tutorial and user guide is provided in PDF format, *explorer.pdf.* ArcExplorer is being distributed with permission of Environmental Systems Research Institute, ESRI. See directory *permssn* for details.

ArcExplorer projects

The ArcExplorer projects are in three directories in the *gis/explorer* directory. The projects in the *PROVS* directory depict summary data on the geologic province level. The *TPS* directory contains projects depicting geologic characterization data on the Total Petroleum System level, and the *AU* directory contains presentations of geologic characterization data on the Assessment Unit level. For a comprehensive discussion of the data sets and detailed definitions of the database items, please consult the metadata files in the directory *VIEWS/METADATA*.

There are four ArcExplorer projects in the *GIS/EXPLORER/PROVS* directory describing geologic province level summary data:

OIL_PRV.AEP	Oil resource summary data
GAS_PRV.AEP	Gas resource summary data
NGL_PRV.AEP	Natural gas liquids resource summary data
PET_PRV.AEP	Total petroleum resource summary data

There are four ArcExplorer projects in the *GIS/EXPLORER/TPS* directory describing Total Petroleum System level geologic characterization data:

MATURE.AEP	Timing of peak maturation of source rock
SRAGE.AEP	Generalized source rock age
SRCHAR.AEP	Source rock character (depositional environment)
TYPE.AEP	Primary commodity, oil vs. gas

There are eight ArcExplorer projects in the *GIS/EXPLORER/AU* directory describing Assessment Unit level geologic characterization data:

AU_MIGR.AEP	Scale of lateral hydrocarbon migration
AU_SEAL.AEP	Seal type
AU_TRAP.AEP	Trap type
EXP_STAT.AEP	Exploration status
RES_AGE.AEP	Generalized reservoir age
RES_ENV.AEP	Reservoir depositional environment
RLITH.AEP	Principal reservoir lithology

You can access these projects either by double clicking on the icon of the project that you wish to view, or by starting ArcExplorer: opening "FILE, OPEN PROJECT", and then browsing to the desired project.

ArcExplorer projects and viewable items in directory *PROVS*.

OIL_PRV.AEP	Oil resource summary
endo_oil	Oil endowment (MMBO)
cum_oil	Cumulative oil production (MMBO)
rem_oil	Remaining oil (MMBO)
kwn_oil	Known (discovered) oil (MMBO)
unds_oil	Undiscovered oil (MMBO)
futr_oil	Future oil (MMBO)
matr_oil	Oil discovery maturity (Percent)

GAS_PRV.AEP	Gas resource summary
endo_gas	Gas endowment (BCF)
cum_gas	Cumulative gas production (BCF)
rem_gas	Remaining gas (BCF)
kwn_gas	Known (discovered) gas (BCF)
unds_gas	Undiscovered gas (BCF)
futr_gas	Future gas (BCF)
matr_gas	Oil discovery maturity (Percent)

NGL_PRV.AEP	Natural gas liquids resource summary
endo_ngl	Natural gas liquids endowment (MMBNGL)
cum_ngl	Cumulative natural gas liquids production (MMBNGL)
rem_ngl	Remaining natural gas liquids (MMBNGL)
kwn_ngl	Known (discovered) natural gas liquids (MMBNGL)

unds_ngl	Undiscovered natural gas liquids (MMBNLG)
futr_ngl	Future natural gas liquids (MMBNLG)
matr_ngl	Natural gas liquids discovery maturity (Percent)

PET_PRV.AEP Total petroleum resource summary

endo_pet	Total petroleum endowment (MMBOE)
cum_pet	Cumulative total petroleum production (MMBOE)
rem_pet	Remaining total petroleum (MMBOE)
kwn_pet	Known total petroleum (MMBOE)
unds_pet	Unidscovered total petroleum (MMBOE)
futr_pet	Future total petroleum (MMBOE)
matr_pet	Total petroleum discovery maturity (Percent)

ArcExplorer projects and viewable items in directory *TPS*

MATURE.AEP Generalized age of peak source rock maturation. Values:

Pz	Paleozoic or earlier
PzMz	Paleozoic to Mesozoic
Pz+Mz	Paleozoic and Mesozoic (multiple episodes)
PzMzNg	Paleozoic to Neogene
Mz	Mesozoic
MzPg	Mesozoic to Paleogene
MzPgNg	Mesozoic to Neogene
Pg	Paleogene
PgNg	Paleogene to Neogene
Ng	Neogene
Ng+Not	Neogene and not mature (multiple episodes)
Not Mature	Source rock is not mature

SRAGE.AEP Generalized source rock age of total petroleum system. Values:

Pc	Precambrian
Pz	Paleozoic
Pz+Mz+Ng	Paleozoic and Mesozoic and Neogene (multiple pods)
PzMz	Paleozoic to Mesozoic
PzMzPgNg	Paleozoic to Neogene
Mz	Mesozoic
Mz+Pg	Mesozoic and Paleogene (multiple pods)
Mz+Ng	Mesozoic and Neogene (multiple pods)
MzPg	Mesozoic to Paleogene
MzPgNg	Mesozoic to Neogene
MzCz	Mesozoic to Cenozoic
Pg	Paleogene
Pg+Ng	Paleogene and Neogene (multiple pods)

PgNg	Paleogene to Neogene
Ng	Neogene

SRCHAR.AEP Source rock character (combination of depositional setting and geochemistry)

Values are a combination of the following elements:

C	Coaly, terrigenous strata
L	Lacustrine shale or carbonate
S	Shallow marine shale or carbonate
D	Deep marine shale or carbonate

type.AEP Primary commodity, oil or gas

ArcExplorer projects and viewable items in directory *AU*

au_migr.AEP Magnitude of migration paths of hydrocarbons. Values:

P	Proximal migration (no scenario of greater than 20 miles lateral migration to charge reservoirs)
PD	Proximal and distal migration (lateral migration of greater than 20 miles is possibly necessary)

au_seal.AEP Major seal lithology. Values:

sh	shale dominant seal lithology
salt	salt and evaporites major seal lithology
sh salt	shale and salt/evaporites

au_trap.AEP Major trap type. Values are a combination of these 6 elements:

C	Compressional structures
E	Extensional structures
N	Nontectonic structures
P	Paleogeomorphic traps (reefs, erosional relief, etc.)
S	Stratigraphic traps
ss	Structural-stratigraphic traps

exp_stat.AEP Exploration status. Values:

E	Established play, more than 13 fields
F	Frontier play, less than 13 fields
H	Hypothetical play, no fields present

res_age.AEP Generalized reservoir age. Values:

Pc	Precambrian
Pc+Mz	Precambrian and Mesozoic (multiple reservoirs)
PcPz	Precambrian to Paleozoic
PzMz	Paleozoic to Mesozoic
PzMzPg	Paleozoic to Paleogene
PzMzPgNg	Paleozoic to Neogene
Mz	Mesozoic
MzPg	Mesozoic to Paleogene
MzPgNg	Mesozoic to Neogene
MzCz	Mesozoic to Cenozoic
Pg	Paleogene
PgNg	Paleogene to Neogene
Ng	Neogene

res_env.AEP Reservoir depositional environment. Values are a combination of these elements:

C	Continental
P	Paralic
S	Shallow marine
D	Deep marine

Rlith.AEP Major reservoir lithology. Values:

ss	Siliciclastics
LS	Carbonates
SsLS	Siliciclastics and carbonates
ot	Other (volcanics or fractured basement)

Arcview projects

You must have Arcview 3.x installed on your computer to access the Arcview projects on this disc. There are two versions of the Arcview project found on this disk in the directory *GIS/VIEWs*.

WEP.APR can be viewed on any platform where Arcview 3.x is already installed. Some modifications to your system, explained below, are necessary.

WEP_PC.APR can be viewed on Windows 95/98/NT platforms without any modification.

If your operating system is Windows 95/98/NT, you can access the project *WEP_PC.APR* in the directory *GIS\VIEWS*. For faster performance, it is recommended that you copy the entire directory *GIS\VIEWS* to your hard drive (approximately 43 MB). This directory is designed to be self-contained and requires no other files.

If you have another operating system, you must define an environmental variable, WEPDATA, in order to access the project *WEP.APR* in the directory *GIS\VIEWS*.

On a Macintosh platform modify the "startup" file in the Preferences folder of the System folder with:

System.SetEnvVar ("WEPDATA", "disc4")

An example "startup" file, *STARTUP*, can be found in the directory *GIS/VIEWS/ETC*, which can be dragged into the system icon.

For faster performance, it is recommended that you copy the entire directory *GIS\VIEWS* to your hard drive (approximately 43 MB).

Unix users will need to define WEPDATA in their "*.cshrc*" file. An example file, *CSHRC.TXT*, can be found in the directory *GIS/VIEWS/ETC*.

Windows 95/98 users can define WEPDATA in their *autoexec.bat* file as follows:

SET WEPDATA = < CD-ROM drive letter>:

For instance if your CD-ROM drive is drive f on your computer, set this statement in your autoexec.bat:

SET WEPDATA = f:

You must restart your computer for this change to take effect.

Windows NT users can define WEPDATA by mouse clicking to START, SETTINGS, CONTROL PANEL, SYSTEM, then ENVIRONMENT and defining WEPDATA as the variable, and the CD-ROM drive letter followed by a colon as the value.

The views that comprise this project are organized according to the geographic level of the data portrayed. Data at the geologic province level are found in the Provinces object in the project window. Total petroleum system level data are found in Total Petroleum Systems and assessment unit level data are found in Assessment Units.

This Arcview project was developed in Arcview 3.0a. When opened in Arcview 3.1 or 3.2 there may be a message asking whether to upgrade to 3.1 or 3.2 tools. It is suggested that the user respond no. There will be tools and buttons that are not part of the original project, but they have no impact on the functionality of the project.

The interface has been simplified to make viewing easier. Users wishing more functionality can create a new project with the shapefiles provided.

B. Contents

Disc 1, 2, and 3

These CD-ROM's contain the interactive report for *U.S. Geological Survey World Petroleum Assessment 2000–Description and Results*. The contents of this report are placed on three discs due to the size and number of files. These are described in more detail in the readme files on *Disc 1*, *2*, and *3*

Disc 4

The data in Disc 4 are a data archive of files used in support of the U.S. Geological Survey World Petroleum Assessment 2000 project. *Disc 4* also includes installers for Adobe Acrobat Reader software in the acroread folder. Files are included for many of the tables used in this report, most of the map data and their metadata files, and a number of ArcExplorer and Arcview projects. Most of the data table files are usable in spreadsheet and data base software. The map data are in several formats for use in digital mapping software. The ArcExplorer and the Arcview projects allow the user to build maps interactively, selecting from a set of available data. They have been grouped into two directories; *Data Table*s and *GIS*. The contents of these directories is described below:

***Data Table*s**

These files are the supporting data for the assessment and were the source for the various plots, data tables, and summary tables used in the *U.S. Geological Survey World Petroleum Assessment 2000–Description and Results* report.

auvol.tab, provvol.tab, regvol.tab,* and *tpsvol.tab

Tables of volumetric data of discovered petroleum in regions, provinces, total petroleum systems, and assessment units. These volumes are the sums of volumes of individual fields reported in Petroconsultants (1996) and NRG Associates (1995). These tables contains 31 columns. NA means not applicable and is shown either in place of discovered volumes for which only one field is present, or for undiscovered volumes and values calculated from these volumes in assessment units not quantitatively assessed. Data columns for these files are:

(1) Code -- USGS-region, province, total petroleum system, or assessment unit code number.

(2) Name -- USGS-region, province, total petroleum system, or assessment unit name.

(3) Major Commodity -- primary commodity type in the region, province, total petroleum system, or assessment unit, based on the gas to oil ratio of the petroleum endowment, which includes both the discovered and undiscovered petroleum. A region, province, total petroleum system, or assessment unit is characterized as being oil prone if the gas to oil ratio is less than 20,000 cubic feet of gas per barrel of oil; otherwise, it is gas prone.

(4) Cumulative Oil (MMBO) -- reported cumulative volume of oil, in million barrels of oil, that has been produced.

(5) Remaining Oil (MMBO) -- calculated volume of oil in discovered fields that has not yet been produced, in million barrels of oil. Remaining oil volume is the difference between known oil and cumulative oil. Negative values result from inconsistent reporting of cumulative and known oil volumes.

(6) Known Oil (MMBO) -- reported volume of discovered oil, in million barrels of oil. Known oil is the volume from cumulative oil production plus remaining oil reserves.

(7) Cumulative Gas (BCFG) -- reported cumulative volume of gas, in billion cubic feet of gas, that has been produced.

(8) Remaining Gas (BCFG) -- calculated volume of gas in discovered fields that has not yet been produced, in billion cubic feet of gas. Remaining gas volume is the difference between known gas and cumulative gas. Negative values result from inconsistent reporting of cumulative and known gas volumes.

(9) Known Gas (BCFG) -- reported volume of discovered gas, in billion cubic feet of gas. Known gas is the volume from cumulative gas production plus remaining gas reserves.

(10) Cumulative NGL (MMBNGL) -- reported cumulative volume of natural gas liquids (NGL), in million barrels of natural gas liquids, that has been produced.

(11) Remaining NGL (MMBNGL) -- calculated volume of natural gas liquids (NGL) in discovered fields that has not yet been produced, in million barrels

of natural gas liquids. Remaining natural gas liquids volume is the difference between known natural gas liquids and cumulative natural gas liquids. Negative values result from inconsistent reporting of cumulative and known natural gas liquids volumes.

(12) Known NGL (MMBNGL) -- reported volume of discovered natural gas liquids (NGL), in million barrels of natural gas liquids. Known natural gas liquids is the volume from cumulative natural gas liquids production plus remaining natural gas liquids reserves.

(13) Total Cumulative Petroleum (MMBOE) -- calculated cumulative volume of total petroleum (oil, gas, plus natural gas liquids), in million barrels of oil equivalent, that has been produced. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

(14) Total Remaining Petroleum (MMBOE) -- calculated volume of total petroleum (oil plus gas plus natural gas liquids) in discovered fields that has not yet been produced, in million barrels of oil equivalent. Total remaining petroleum volume is the difference between total known petroleum and total cumulative petroleum. Negative values result from inconsistent reporting of cumulative and known petroleum volumes. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

(15) Total Known Petroleum (MMBOE) -- calculated volume of discovered total petroleum (oil plus gas plus natural gas liquids), in million barrels of oil equivalent. Total known petroleum is the volume from cumulative production plus remaining reserves. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

(16) Mean Undiscovered Oil (MMBO) -- mean volume of undiscovered oil, in million barrels of oil, estimated in World Petroleum Assessment 2000.

(17) Mean Undiscovered Gas (BCFG) -- mean volume of undiscovered gas, in billion cubic feet of gas, estimated in World Petroleum Assessment 2000.

(18) Mean Undiscovered NGL (MMBNGL) -- mean volume of undiscovered natural gas liquids in oil fields and total liquids in gas fields, in million barrels of liquids, estimated in World Petroleum Assessment 2000.

(19) Total Mean Undiscovered Petroleum (MMBOE) -- calculated mean volume of undiscovered total petroleum (oil plus gas plus natural gas liquids), in million barrels of oil equivalent, derived from the mean undiscovered oil, gas, and natural gas liquids estimated in World Petroleum Assessment 2000. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

(20) Oil Endowment (MMBO) -- oil endowment, in million barrels of oil. Oil endowment is known oil volume plus mean undiscovered oil volume, but does not include the oil volume contributed from reserve growth of existing fields.

(21) Gas Endowment (BCFG) -- gas endowment, in billion cubic feet of gas. Gas endowment is known gas volume plus mean undiscovered gas volume, but does not include the gas volume contributed from reserve growth of existing fields.

(22) NGL Endowment (MMBNGL) -- natural gas liquids (NGL) endowment, in million barrels of natural gas liquids. Natural gas liquids endowment is known natural gas liquids volume plus mean undiscovered natural gas liquids volume, but does not include the natural gas liquids volume contributed from reserve growth of existing fields.

(23) Total Petroleum Endowment (MMBOE) -- total petroleum (oil plus gas plus natural gas liquids) endowment, in million barrels of oil equivalent. Total petroleum endowment is the known plus mean undiscovered oil, gas, and natural gas liquids volumes, but does not include the volume contributed from reserve growth of existing fields. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

(24) Discovery Maturity, Oil (%) -- calculated maturity index for oil, in percent. Discovery maturity of oil is the percentage of oil discovered (known oil) with

respect to oil endowment (known oil plus mean undiscovered oil volumes); or known oil divided by oil endowment, then multiplied by 100.

(25) Discovery Maturity, Gas (%) -- calculated maturity index for gas, in percent. Discovery maturity of gas is the percentage of gas discovered (known gas) with respect to gas endowment (known gas plus mean undiscovered gas volumes); or known gas divided by gas endowment, then multiplied by 100.

(26) Discovery Maturity, NGL (%) -- calculated maturity index for natural gas liquids (NGL), in percent. Discovery maturity of natural gas liquids is the percentage of natural gas liquids discovered (known natural gas liquids)with respect to natural gas liquids endowment (known natural gas liquids plus mean undiscovered natural gas liquids volumes); or known natural gas liquids divided by natural gas liquids endowment, then multiplied by 100.

(27) Discovery Maturity, Total Petroleum (%) -- calculated maturity index for total petroleum (oil plus gas plus natural gas liquids), in percent. Discovery maturity is the percentage of total petroleum discovered (known total petroleum) with respect to total petroleum endowment (known total petroleum plus mean undiscovered total petroleum volumes); or known total petroleum divided by total petroleum endowment, then multiplied by 100. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

(28) Future Oil (MMBO) -- calculated volume of oil endowment that has not been produced, in million barrels of oil. Future oil is the calculated remaining oil volume (known oil volume minus cumulative oil volume) plus mean undiscovered oil volume. Negative values result from inconsistent reporting of cumulative and known oil volumes.

(29) Future Gas (BCFG) -- calculated volume of gas endowment that has not been produced, in billion cubic feet of gas. Future gas is the calculated remaining gas volume (known gas volume minus cumulative gas volume) plus mean undiscovered gas volume. Negative values result from inconsistent reporting of cumulative and known gas volumes.

(30) Future NGL (MMBNGL) -- calculated volume of natural gas liquids (NGL) endowment that has not been produced, in million barrels of natural gas liquids. Future natural gas liquids is the calculated remaining natural gas liquids volume (known natural gas liquids volume minus cumulative natural gas liquids volume)plus mean undiscovered natural gas liquids volume. Negative values result from inconsistent reporting of cumulative and known natural gas liquids volumes.

(31) Total Future Petroleum (MMBOE) -- calculated volume of total petroleum (oil, gas, and natural gas liquids) endowment that has not been produced, in million barrels of oil equivalent. Future total petroleum is the calculated remaining oil, gas, and natural gas liquids volumes (known volumes minus cumulative volumes) plus mean undiscovered oil, gas, and natural gas liquids volumes. Negative values result from inconsistent reporting of cumulative and known volumes. For this calculation, 6,000 cubic feet of gas equals 1 barrel of oil equivalent.

bin_au.tab

Table containing the distributions of field sizes of undiscovered fields divided into binned field-size classes, given at the assessment unit level. The class limits are in millions of barrels of oil equivalent (MMBOE), where 6000 cubic feet of gas equals one equivalent barrel. Each assessment unit is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Assessment Unit Code – USGS-assessment unit code number

(2) Assessment Unit Name – USGS-assessment unit name

(3) Field Type – oil or gas

(4) Estimated Mean Number of Undiscovered Fields – the mean (average) number of undiscovered fields larger than the minimum field size estimated for the assessment unit

(5) Units for Minimum Field Size – the unit for the size given in column 6; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields

(6) Minimum Field Size – the minimum field size considered for this assessment unit

(7) Percent of Fields in 0.5 to 1 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 0.5 MMBOE or larger, but less than 1 MMBOE

(8) Percent of Fields in 1 to 2 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 1 MMBOE or larger, but less than 2 MMBOE

(9) Percent of Fields in 2 to 4 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 2 MMBOE or larger, but less than 4 MMBOE

(10) Percent of Fields in 4 to 8 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 4 MMBOE or larger, but less than 8 MMBOE

(11) Percent of Fields in 8 to 16 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 8 MMBOE or larger, but less than 16 MMBOE

(12) Percent of Fields in 16 to 32 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 16 MMBOE or larger, but less than 32 MMBOE

(13) Percent of Fields in 32 to 64 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 32 MMBOE or larger, but less than 64 MMBOE

(14) Percent of Fields in 64 to 128 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 64 MMBOE or larger, but less than 128 MMBOE

(15) Percent of Fields in 128 to 256 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 128 MMBOE or larger, but less than 256 MMBOE

(16) Percent of Fields in 256 to 512 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 256 MMBOE or larger, but less than 512 MMBOE

(17) Percent of Fields in 512 to 1,024 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 512 MMBOE or larger, but less than 1024 MMBOE

(18) Percent of Fields in 1,024 to 2,048 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 1,024 MMBOE or larger, but less than 2,048 MMBOE

(19) Percent of Fields in 2,048 to 4,096 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 2,048 MMBOE or larger, but less than 4,096 MMBOE

(20) Percent of Fields in 4,096 to 8,192 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 4,096 MMBOE or larger, but less than 8,192 MMBOE

(21) Percent of Fields in 8,192 to 16,384 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 8,192 MMBOE or larger, but less than 16,384 MMBOE

(22) Percent of Fields in 16,384 to 32,768 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 16,384 MMBOE or larger, but less than 32,768 MMBOE

(23) Percent of Fields in 32,768 to 65,536 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 32,768 MMBOE or larger, but less than 65,536 MMBOE

(24) Percent of Fields in >65,536 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 65,536 MMBOE or larger

bin_prov.tab

Table containing the distributions of field sizes of undiscovered fields divided into binned field-size classes, given at the province level. The class limits are in millions of barrels of oil equivalent (MMBOE), where 6000 cubic feet of gas equals one equivalent barrel. Each province is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Province Code – USGS-province code number

(2) Province Name – USGS-province name

(3) Field Type – oil or gas

(4) Estimated Mean Number of Undiscovered Fields – the mean (average) number of undiscovered fields estimated for the assessed portion of the province

(5) Units for Minimum Field Size – the unit for the size given in column 6; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields

(6) Minimum Field Size – the minimum field size considered for this province

(7) Percent of Fields in 0.5 to 1 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 0.5 MMBOE or larger, but less than 1 MMBOE

(8) Percent of Fields in 1 to 2 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 1 MMBOE or larger, but less than 2 MMBOE

(9) Percent of Fields in 2 to 4 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 2 MMBOE or larger, but less than 4 MMBOE

(10) Percent of Fields in 4 to 8 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 4 MMBOE or larger, but less than 8 MMBOE

(11) Percent of Fields in 8 to 16 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 8 MMBOE or larger, but less than 16 MMBOE

(12) Percent of Fields in 16 to 32 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 16 MMBOE or larger, but less than 32 MMBOE

(13) Percent of Fields in 32 to 64 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 32 MMBOE or larger, but less than 64 MMBOE

(14) Percent of Fields in 64 to 128 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 64 MMBOE or larger, but less than 128 MMBOE

(15) Percent of Fields in 128 to 256 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 128 MMBOE or larger, but less than 256 MMBOE

(16) Percent of Fields in 256 to 512 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 256 MMBOE or larger, but less than 512 MMBOE

(17) Percent of Fields in 512 to 1,024 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 512 MMBOE or larger, but less than 1024 MMBOE

(18) Percent of Fields in 1,024 to 2,048 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 1,024 MMBOE or larger, but less than 2,048 MMBOE

(19) Percent of Fields in 2,048 to 4,096 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 2,048 MMBOE or larger, but less than 4,096 MMBOE

(20) Percent of Fields in 4,096 to 8,192 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 4,096 MMBOE or larger, but less than 8,192 MMBOE

(21) Percent of Fields in 8,192 to 16,384 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 8,192 MMBOE or larger, but less than 16,384 MMBOE

(22) Percent of Fields in 16,384 to 32,768 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 16,384 MMBOE or larger, but less than 32,768 MMBOE

(23) Percent of Fields in 32,768 to 65,536 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 32,768 MMBOE or larger, but less than 65,536 MMBOE

(24) Percent of Fields in >65,536 MMBOE – the percentage of the undiscovered fields that are estimated to fall in the size class of 65,536 MMBOE or larger

frac_au.tab

Table containing fractiles from the results of the Monte Carlo calculations, given at the assessment unit level. Each assessment unit is represented by seven rows

(distinguished by the values of columns 3 and 4): one for oil in oil fields, one for gas in oil fields, one for natural gas liquids (NGL) in oil fields, one for the largest undiscovered oil field, one for gas in gas fields, one for liquids in gas fields, and one for the largest undiscovered gas field. Data columns are:

(1) Assessment Unit Code – USGS-assessment unit code number

(2) Assessment Unit Name – USGS-assessment unit name

(3) Field Type – oil or gas

(4) Resource Type – the commodity whose results are presented in this row

(5) Units for Minimum Field Size – the unit for the size given in column 6; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields

(6) Minimum Field Size – the minimum field size considered for this assessment unit

(7) Assessment Unit Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessment unit. Assessment unit probability is given as a fractional value from 0 to 1.0.

(8) Units for Fractiles – the units used for the volumes in columns 9 through 29

(9) F100 -- the estimated value of resource such that there is a 100 percent probability that this amount or more exists in the assessment unit. This is the minimum.

(10) F95 -- the estimated value of resource such that there is a 95 percent probability that this amount or more exists in the assessment unit

(11) F90 -- the estimated value of resource such that there is a 90 percent probability that this amount or more exists in the assessment unit

(12) F85 -- the estimated value of resource such that there is a 85 percent probability that this amount or more exists in the assessment unit

(13) F80 -- the estimated value of resource such that there is a 80 percent probability that this amount or more exists in the assessment unit

(14) F75 -- the estimated value of resource such that there is a 75 percent probability that this amount or more exists in the assessment unit

(15) F70 -- the estimated value of resource such that there is a 70 percent probability that this amount or more exists in the assessment unit

(16) F65 -- the estimated value of resource such that there is a 65 percent probability that this amount or more exists in the assessment unit

(17) F60 -- the estimated value of resource such that there is a 60 percent probability that this amount or more exists in the assessment unit

(18) F55 -- the estimated value of resource such that there is a 55 percent probability that this amount or more exists in the assessment unit

(19) F50 -- the estimated value of resource such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median.

(20) F45 -- the estimated value of resource such that there is a 45 percent probability that this amount or more exists in the assessment unit

(21) F40 -- the estimated value of resource such that there is a 40 percent probability that this amount or more exists in the assessment unit

(22) F35 -- the estimated value of resource such that there is a 35 percent probability that this amount or more exists in the assessment unit

(23) F30 -- the estimated value of resource such that there is a 30 percent probability that this amount or more exists in the assessment unit

(24) F25 -- the estimated value of resource such that there is a 25 percent probability that this amount or more exists in the assessment unit

(25) F20 -- the estimated value of resource such that there is a 20 percent probability that this amount or more exists in the assessment unit

(26) F15 -- the estimated value of resource such that there is a 15 percent probability that this amount or more exists in the assessment unit

(27) F10 -- the estimated value of resource such that there is a 10 percent probability that this amount or more exists in the assessment unit

(28) F5 -- the estimated value of resource such that there is a 5 percent probability that this amount or more exists in the assessment unit

(29) F0 -- the estimated value of resource such that there is no probability that this amount or more exists in the assessment unit. This is the maximum.

gdisc.tab and *kdisc.tab*

Tables containing information regarding known and grown volumes of petroleum in an assessment unit. Grown field sizes are defined as known field sizes that were adjusted upward to account for estimated future reserve growth. These tables contain 54 columns. NA means not applicable and shown either in place of volumes for which only one field is present. Data columns for these files are:

(1) Assessment Unit Code -- USGS-assessment unit code number.

(2) Assessment Unit Name -- USGS-assessment unit name.

(3) Number of Oil Fields -- number of oil fields in the assessment unit equal to or larger than 1 million barrels of oil and having a reported discovery year.

(4) Oil Volume in Oil Fields (MMBO) -- volume of oil in oil fields equal to or larger than 1 million barrels of oil and having a reported discovery year, in million barrels of oil.

(5) Gas Volume in Oil Fields (BCFG) -- volume of gas in oil fields equal to or larger than 1 million barrels of oil and having a reported discovery year, in billion cubic feet of gas.

(6) NGL Volume in Oil Fields (MMBO) -- volume of natural gas liquids (NGL) in oil fields equal to or larger than 1 million barrels of oil and having a reported discovery year, in million barrels of natural gas liquids.

(7) Number of Gas Fields -- number of gas fields in the assessment unit equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(8) Oil Volume in Gas Fields (MMBO) -- volume of oil in gas fields equal to or larger than 6 billion cubic feet of gas and having a reported discovery year, in million barrels of oil.

(9) Gas Volume in Gas Fields (BCFG) -- volume of gas in gas fields equal to or larger than 6 billion cubic feet of gas and having a reported discovery year, in billion cubic feet of gas.

(10) NGL Volume in Gas Fields (MMBO) -- volume of natural gas liquids (NGL) in gas fields equal to or larger than 6 billion cubic feet of gas and having a reported discovery year, in million barrels of natural gas liquids.

(11) Number of N Fields -- number of fields in the assessment unit less than 1 million barrels of oil and 6 billion cubic feet of gas and having a reported discovery year.

(12) Oil Volume in N Fields (MMBO) -- volume of oil, in million barrels of oil, in fields less than 1 million barrels of oil and 6 billion cubic feet of gas and having a reported discovery year.

(13) Gas Volume in N Fields (BCFG) -- volume of gas, in billion cubic feet of gas, in fields less than 1 million barrels of oil and 6 billion cubic feet of gas and having a reported discovery year.

(14) NGL Volume in N Fields (MMBO) -- volume of natural gas liquids (NGL), in million barrels of natural gas liquids, in fields less than 1 million barrels of oil and 6 billion cubic feet of gas and having a reported discovery year.

(15) Total Number of Fields -- total number of fields having a reported discovery year in the assessment unit.

(16) Total Oil Volume (MMBO) -- total volume of oil, in million barrels of oil, in all fields having a reported discovery year in the assessment unit.

(17) Total Gas Volume (BCFG) -- total volume of gas, in billion cubic feet of gas, in all fields having a reported discovery year in the assessment unit.

(18) Total NGL Volume (MMBO) -- total volume of natural gas liquids (NGL), in million barrels of natural gas liquids, in all fields having a reported discovery year in the assessment unit.

(19) First Third or Half, Oil Fields, Year Start -- discovery year of the first oil field discovered in the assessment unit, equal to or larger than 1 million barrels of oil.

(20) First Third or Half, Oil Fields, Year End -- discovery year of the last oil field discovered in the first third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(21) First Third or Half, Number of Oil Fields -- number of oil fields in the first third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(22) First Third or Half, Oil Volume in Oil Fields (MMBO) -- volume of oil, in million barrels of oil, in oil fields in the first third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(23) First Third or Half, Mean Oil-Field Size (MMBO) -- mean oil-field size, in million barrels of oil, in the first third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(24) First Third or Half, Median Oil-Field Size (MMBO) -- median oil-field size, in million barrels of oil, in the first third or half of existing oil fields within the

assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(25) Second Third or Half, Oil Fields, Year End -- discovery year of the last oil field discovered in the second third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(26) Second Third or Half, Number of Oil Fields -- number of oil fields in the second third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(27) Second Third or Half, Oil Volume in Oil Fields (MMBO) -- volume of oil, in million barrels of oil, in oil fields in the second third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(28) Second Third or Half, Mean Oil-Field Size (MMBO) -- mean oil-field size, in million barrels of oil, in the second third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(29) Second Third or Half, Median Oil-Field Size (MMBO) -- median oil-field size, in million barrels of oil, in the second third or half of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(30) Third Third, Oil Fields, Year End -- discovery year of the last oil field discovered in the third third of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(31) Third Third, Number of Oil Fields -- number of oil fields in the third third of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(32) Third Third, Oil Volume in Oil Fields (MMBO) -- volume of oil, in million barrels of oil, in oil fields in the third third of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(33) Third Third, Mean Oil-Field Size (MMBO) -- mean oil-field size, in million barrels of oil, in the third third of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(34) Third Third, Median Oil-Field Size (MMBO) -- median oil-field size, in million barrels of oil, in the third third of existing oil fields within the assessment unit ranked according to date of discovery, all equal to or larger than 1 million barrels of oil and having a reported discovery year.

(35) Overall, Mean Oil-Field Size (MMBO) -- mean oil-field size, in million barrels of oil, of all existing oil fields within the assessment unit equal to or larger than 1 million barrels of oil and having a reported discovery year.

(36) Overall, Median Oil-Field Size (MMBO) -- median oil-field size, in million barrels of oil, of all existing oil fields within the assessment unit equal to or larger than 1 million barrels of oil and having a reported discovery year.

(37) First Third or Half, Gas Fields, Year Start -- discovery year of the first gas field discovered in the assessment unit, equal to or larger than 6 billion cubic feet of gas.

(38) First Third or Half, Gas Fields, Year End -- discovery year of the last gas field discovered in the first third or half of existing gas fields within the assessment

unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(39) First Third or Half, Number of Gas Fields -- number of gas fields in the first third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(40) First Third or Half, Gas Volume in Gas Fields (BCFG) -- volume of gas, in billion cubic feet of gas, in gas fields in the first third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(41) First Third or Half, Mean Gas-Field Size (BCFG) -- mean gas-field size, in billion cubic feet of gas, in the first third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(42) First Third or Half, Median Gas-Field Size (BCFG) -- median gas-field size, in billion cubic feet of gas, in the first third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(43) Second Third or Half, Gas Fields, Year End -- discovery year of the last gas field discovered in the second third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(44) Second Third or Half, Number of Gas Fields -- number of gas fields in the second third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(45) Second Third or Half, Gas Volume in Gas Fields (BCFG) -- volume of gas, in billion cubic feet of gas, in gas fields in the second third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(46) Second Third or Half, Mean Gas-Field Size (BCFG) -- mean gas-field size, in billion cubic feet of gas, in the second third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(47) Second Third or Half, Median Gas-Field Size (BCFG) -- median gas-field size, in billion cubic feet of gas, in the second third or half of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(48) Third Third, Gas Fields, Year End -- discovery year of the last gas field discovered in the third third of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(49) Third Third, Number of Gas Fields -- number of gas fields in the third third of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(50) Third Third, Gas Volume in Gas Fields (BCFG) -- volume of gas, in billion cubic feet of gas, in gas fields in the third third of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(51) Third Third, Mean Gas-Field Size (BCFG) -- mean gas-field size, in billion cubic feet of gas, in the third third of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(52) Third Third, Median Gas-Field Size (BCFG) -- median gas-field size, in billion cubic feet of gas, in the third third of existing gas fields within the assessment unit ranked according to date of discovery, all equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(53) Overall, Mean Gas-Field Size (BCFG) -- mean gas-field size, in billion cubic feet of gas, of all existing gas fields within the assessment unit equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

(54) Overall, Median Gas-Field Size (BCFG) -- median gas-field size, in billion cubic feet of gas, of all existing gas fields within the assessment unit equal to or larger than 6 billion cubic feet of gas and having a reported discovery year.

input.tab

Table containing input data from the Seventh Approximation World Petroleum Assessment Data Forms for Conventional Assessment Units used in this assessment. For some Canadian assessment units, pool data, rather than field data, are given. Blank cells represent no data. This table contains 147 columns. Data columns are:

(1) Date -- date of assessment.

(2) Assessment Geologist -- assessor's name.

(3) Region Code -- USGS-region code number.

(4) Region Name -- USGS-region name.

(5) Province Code -- USGS-province code number.

(6) Province Name -- USGS-province name.

(7) Assessment Type -- USGS-province status (priority or boutique) .

(8) Total Petroleum System Code -- USGS-total petroleum system code number.

(9) Total Petroleum System Name -- USGS-total petroleum system name.

(10) Assessment Unit Code -- USGS-assessment unit code number.

(11) Assessment Unit Name -- USGS-assessment unit name.

(12) Major Commodity -- primary commodity type in the assessment unit, based on the gas to oil ratio of the petroleum endowment, which includes both the discovered and undiscovered petroleum. An assessment unit is characterized as being oil prone if the gas to oil ratio is less than 20,000 cubic feet of gas per barrel of oil; otherwise, it is gas prone.

(13) Minimum Field Size (MMBOE) -- minimum field size, in million barrels of oil equivalent, considered for assessment.

(14) Number of Discovered Oil Fields -- number of oil fields equal to or larger than the minimum field size discovered in the assessment unit.

(15) Number of Discovered Gas Fields -- number of gas fields equal to or larger than the minimum field size discovered in the assessment unit.

(16) Assessment-Unit Maturity -- exploration maturity of the assessment unit. Assessment- unit maturity is classified as "established" if more than 13 fields exceeding minimum size have been discovered, "frontier" if 1 to 13 fields exceeding minimum size have been discovered, or "hypothetical" if no fields exceeding minimum size have been discovered.

(17) Median Oil Field Size of First Third or Half (MMBO) -- median size, in million barrels of oil, of the set of discovered oil fields that constitute the first third or half of the total number of oil fields ranked according to date of discovery within the assessment unit. This size is derived from known oil volumes that were adjusted upward to account for estimated future reserve growth. For this assessment, 30 years of reserve growth is considered.

(18) Median Oil Field Size of Second Third or Half (MMBO) -- median size, in million barrels of oil, of the set of discovered oil fields that constitute the second third or half of the total number of oil fields ranked according to date of discovery within the assessment unit. This size is derived from known oil

volumes that were adjusted upward to account for estimated future reserve growth. For this assessment, 30 years of reserve growth is considered.

(19) Median Oil Field Size of Third Third (MMBO) -- median size, in million barrels of oil, of the set of discovered oil fields that constitute the third third of the total number of oil fields ranked according to date of discovery within the assessment unit. This size is derived from known oil volumes that were adjusted upward to account for estimated future reserve growth. For this assessment, 30 years of reserve growth is considered.

(20) Median Gas Field Size of First Third or Half (BCFG) -- median size, in billion cubic feet of gas, of the set of discovered gas fields that constitute the first third or half of the total number of gas fields ranked according to date of discovery within the assessment unit. This size is derived from known gas volumes that were adjusted upward to account for estimated future reserve growth. For this assessment, 30 years of reserve growth is considered.

(21) Median Gas Field Size of Second Third or Half (BCFG) -- median size, in billion cubic feet of gas, of the set of discovered gas fields that constitute the second third or half of the total number of gas fields ranked according to date of discovery within the assessment unit. This size is derived from known gas volumes that were adjusted upward to account for estimated future reserve growth. For this assessment, 30 years of reserve growth is considered.

(22) Median Gas Field Size of Third Third (BCFG) -- median size, in billion cubic feet of gas, of the set of discovered gas fields that constitute the third third of the total number of gas fields ranked according to date of discovery within the assessment unit. This size is derived from known gas volumes that were adjusted upward to account for estimated future reserve growth. For this assessment, 30 years of reserve growth is considered.

(23) Charge Probability -- probability for adequate petroleum charge for at least one undiscovered field equal to or larger than the minimum field size, somewhere in the assessment unit, having the potential to be added to

reserves in the next 30 years. Charge probability is given as a fractional value from 0 to 1.0.

(24) Rocks Probability -- probability for adequate reservoirs, traps, and seals for at least one undiscovered field equal to or larger than the minimum field size, somewhere in the assessment unit, having the potential to be added to reserves in the next 30 years. Rocks probability is given as a fractional value from 0 to 1.0.

(25) Timing Probability -- probability for favorable geologic timing for at least one undiscovered field equal to or larger than the minimum field size, somewhere in the assessment unit, having the potential to be added to reserves in the next 30 years. Timing probability is given as a fractional value from 0 to 1.0.

(26) Geologic Probability -- the product of charge, rocks, and timing probabilities. Geologic probability is given as a fractional value from 0 to 1.0.

(27) Accessibility Probability -- probability for adequate location for necessary petroleum- related activities to discover at least one undiscovered field equal to or larger than the minimum field size, somewhere in the assessment unit, having the potential to be added to reserves in the next 30 years. Accessibility probability is given as a fractional value from 0 to 1.0.

(28) Minimum Number of Undiscovered Oil Fields -- estimated minimum (F_{100}) number of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(29) Median Number of Undiscovered Oil Fields -- estimated median (F_{50}) number of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(30) Maximum Number of Undiscovered Oil Fields -- estimated maximum (F_0) number of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(31) Minimum Number of Undiscovered Gas Fields -- estimated minimum (F_{100}) number of undiscovered gas fields equal to or larger than the minimum field size in the assessment unit.

(32) Median Number of Undiscovered Gas Fields -- estimated median (F_{50}) number of undiscovered gas fields equal to or larger than the minimum field size in the assessment unit.

(33) Maximum Number of Undiscovered Gas Fields -- estimated maximum (F_0) number of undiscovered gas fields equal to or larger than the minimum field size in the assessment unit.

(34) Minimum Size of Undiscovered Oil Fields (MMBO) -- estimated minimum (F_{100}) size, in million barrels of oil, of undiscovered oil fields in the assessment unit.

(35) Median Size of Undiscovered Oil Fields (MMBO) -- estimated median (F_{50}) size, in million barrels of oil, of undiscovered oil fields in the assessment unit.

(36) Maximum Size of Undiscovered Oil Fields (MMBO) -- estimated maximum (F_0) size, in million barrels of oil, of undiscovered oil fields in the assessment unit.

(37) Minimum Size of Undiscovered Gas Fields (BCFG) -- estimated minimum (F_{100}) size, in billion cubic feet of gas, of undiscovered gas fields in the assessment unit.

(38) Median Size of Undiscovered Gas Fields (BCFG) -- estimated median (F_{50}) size, in billion cubic feet of gas, of undiscovered gas fields in the assessment unit.

(39) Maximum Size of Undiscovered Gas Fields (BCFG) -- estimated maximum (F_0) size, in billion cubic feet of gas, of undiscovered gas fields in the assessment unit.

(40) Minimum GOR of Undiscovered Oil Fields (CFG/BO) -- estimated minimum (F_{100}) gas to oil ratio (GOR), in cubic feet of gas per barrel of oil, of

undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(41) Median GOR of Undiscovered Oil Fields (CFG/BO) -- estimated median (F_{50}) gas to oil ratio (GOR), in cubic feet of gas per barrel of oil, of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(42) Maximum GOR of Undiscovered Oil Fields (CFG/BO) -- estimated maximum (F_0) gas to oil ratio (GOR), in cubic feet of gas per barrel of oil, of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(43) Minimum NGL to Gas of Undiscovered Oil Fields (BNGL/MMCFG) -- estimated minimum (F_{100}) natural gas liquids (NGL) to gas ratio, in barrels of natural gas liquids per million cubic feet of gas, of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(44) Median NGL to Gas of Undiscovered Oil Fields (BNGL/MMCFG) -- estimated median (F_{50}) natural gas liquids (NGL) to gas ratio, in barrels of natural gas liquids per million cubic feet of gas, of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(45) Maximum NGL to Gas of Undiscovered Oil Fields (BNGL/MMCFG) -- estimated maximum (F_0) natural gas liquids (NGL) to gas ratio, in barrels of natural gas liquids per million cubic feet of gas, of undiscovered oil fields equal to or larger than the minimum field size in the assessment unit.

(46) Minimum LGR of Undiscovered Gas Fields (BL/MMCFG) -- estimated minimum (F_{100}) liquids (oil plus natural gas liquids) to gas ratio (LGR), in barrels of liquids per million cubic feet of gas, of undiscovered gas fields equal to or larger than the minimum field size in the assessment unit.

(47) Median LGR of Undiscovered Gas Fields (BL/MMCFG) -- estimated median (F_{50}) liquids (oil plus natural gas liquids) to gas ratio (LGR), in barrels of

liquids per million cubic feet of gas, of undiscovered gas fields equal to or larger than the minimum field size in the assessment unit.

(48) Maximum LGR of Undiscovered Gas Fields (BL/MMCFG) -- estimated maximum (F_0) liquids (oil plus natural gas liquids) to gas ratio (LGR), in barrels of liquids per million cubic feet of gas, of undiscovered gas fields equal to or larger than the minimum field size in the assessment unit.

(49) Minimum API Gravity of Undiscovered Oil Fields (degrees) -- estimated minimum (F_{100}) API gravity, in degrees, of oil in undiscovered oil fields in the assessment unit.

(50) Median API Gravity of Undiscovered Oil Fields (degrees) -- estimated median (F_{50}) API gravity, in degrees, of oil in undiscovered oil fields in the assessment unit.

(51) Maximum API Gravity of Undiscovered Oil Fields (degrees) -- estimated maximum (F_0) API gravity, in degrees, of oil in undiscovered oil fields in the assessment unit.

(52) Minimum Sulfur Content of Undiscovered Oil Fields (%) -- estimated minimum (F_{100}) sulfur content, in percent, of oil in undiscovered oil fields in the assessment unit.

(53) Median Sulfur Content of Undiscovered Oil Fields (%) -- estimated median (F_{50}) sulfur content, in percent, of oil in undiscovered oil fields in the assessment unit.

(54) Maximum Sulfur Content of Undiscovered Oil Fields (%) -- estimated maximum (F_0) sulfur content, in percent, of oil in undiscovered oil fields in the assessment unit.

(55) Minimum Drilling Depth of Undiscovered Oil Fields (m) -- estimated minimum (F_{100}) drilling depth, in meters, of undiscovered oil fields in the assessment unit.

(56) Median Drilling Depth of Undiscovered Oil Fields (m) -- estimated median (F_{50}) drilling depth, in meters, of undiscovered oil fields in the assessment unit.

(57) Maximum Drilling Depth of Undiscovered Oil Fields (m) -- estimated maximum (F_0) drilling depth, in meters, of undiscovered oil fields in the assessment unit.

(58) Minimum Water Depth of Undiscovered Oil Fields (m) -- estimated minimum (F_{100}) water depth, in meters, of undiscovered oil fields in the assessment unit (ocean, bays, or lakes; if applicable).

(59) Median Water Depth of Undiscovered Oil Fields (m) -- estimated median (F_{50}) water depth, in meters, of undiscovered oil fields in the assessment unit (ocean, bays, or lakes; if applicable).

(60) Maximum Water Depth of Undiscovered Oil Fields (m) -- estimated maximum (F_0) water depth, in meters, of undiscovered oil fields in the assessment unit (ocean, bays, or lakes; if applicable).

(61) Minimum Inert Gas Content of Undiscovered Gas Fields (%) -- estimated minimum (F_{100}) inert gas content, in percent, of gas in undiscovered gas fields in the assessment unit (nitrogen, helium, etc.).

(62) Median Inert Gas Content of Undiscovered Gas Fields (%) -- estimated median (F_{50}) inert gas content, in percent, of gas in undiscovered gas fields in the assessment unit (nitrogen, helium, etc.).

(63) Maximum Inert Gas Content of Undiscovered Gas Fields (%) -- estimated maximum (F_0) inert gas content, in percent, of gas in undiscovered gas fields in the assessment unit (nitrogen, helium, etc.).

(64) Minimum Carbon Dioxide Content of Undiscovered Gas Fields (%) -- estimated minimum (F_{100}) carbon dioxide content, in percent, of gas in undiscovered gas fields in the assessment unit.

(65) Median Carbon Dioxide Content of Undiscovered Gas Fields (%) -- estimated median (F_{50}) carbon dioxide content, in percent, of gas in undiscovered gas fields in the assessment unit.

(66) Maximum Carbon Dioxide Content of Undiscovered Gas Fields (%) -- estimated maximum (F_0) carbon dioxide content, in percent, of gas in undiscovered gas fields in the assessment unit.

(67) Minimum Hydrogen Sulfide Content of Undiscovered Gas Fields (%) -- estimated minimum (F_{100}) hydrogen sulfide content, in percent, of gas in undiscovered gas fields in the assessment unit.

(68) Median Hydrogen Sulfide Content of Undiscovered Gas Fields (%) -- estimated median (F_{50}) hydrogen sulfide content, in percent, of gas in undiscovered gas fields in the assessment unit.

(69) Maximum Hydrogen Sulfide Content of Undiscovered Gas Fields (%) -- estimated maximum (F_0) hydrogen sulfide content, in percent, of gas in undiscovered gas fields in the assessment unit.

(70) Minimum Drilling Depth of Undiscovered Gas Fields (m) -- estimated minimum (F_{100}) drilling depth, in meters, of undiscovered gas fields in the assessment unit.

(71) Median Drilling Depth of Undiscovered Gas Fields (m) -- estimated median (F_{50}) drilling depth, in meters, of undiscovered gas fields in the assessment unit.

(72) Maximum Drilling Depth of Undiscovered Gas Fields (m) -- estimated maximum (F_0) drilling depth, in meters, of undiscovered gas fields in the assessment unit.

(73) Minimum Water Depth of Undiscovered Gas Fields (m) -- estimated minimum (F_{100}) water depth, in meters, of undiscovered gas fields in the assessment unit (ocean, bays, or lakes; if applicable).

(74) Median Water Depth of Undiscovered Gas Fields (m) -- estimated median (F_{50}) water depth, in meters, of undiscovered oil fields in the assessment unit (ocean, bays, or lakes; if applicable).

(75) Maximum Water Depth of Undiscovered Gas Fields (m) -- estimated maximum (F_0) water depth, in meters, of undiscovered oil fields in the assessment unit (ocean, bays, or lakes; if applicable).

The following column headings are repeated for each of 12 undiscovered resource allocations (columns 76 to 147).

(76) Allocation 1 (through 12) -- land parcel (country or province) to which undiscovered oil or gas resources are allocated. Up to 12 allocations were made in World Petroleum Assessment 2000.

(77) Areal Percent -- areal percent of the assessment unit represented by the land parcel.

(78) Volume Percent Oil in Parcel -- volume percent of oil in undiscovered oil fields within the land parcel.

(79) Portion of Oil Volume Percent Offshore -- portion of the undiscovered oil volume that is offshore (ocean, bays, or lakes).

(80) Volume Percent Gas in Parcel -- volume percent of gas in undiscovered gas fields within the land parcel.

(81) Portion of Gas Volume Percent Offshore -- portion of the undiscovered gas volume that is offshore (ocean, bays, or lakes).

master.tab

Table of names and codes of the hierarchical structure of assessment units that were identified in World Petroleum Assessment 2000. The hierarchical structure includes USGS-regions, provinces, total petroleum systems, and assessment units. This table contains 4 columns:

(1) Sort Order -- original order of list.

(2) Code -- USGS-region, province, total petroleum system, and assessment unit code numbers.

(3) Name -- USGS-region, province, total petroleum system, and assessment unit names.

(4) Contact -- name of geologist to whom questions should be addressed. Contact is shown only for assessment units.

Sum_au.tab

Table containing a summary of results of the Monte Carlo calculations, given at the assessment unit level. Each assessment unit is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Assessment Unit Code – USGS-assessment unit code number

(2) Assessment Unit Name – USGS-assessment unit name

(3) Field Type – oil or gas

(4) Units for Minimum Field Size – the unit for the size given in column 5; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields.

(5) Minimum Field Size – the minimum field size considered for this assessment unit.

(6) Assessment Unit Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessment unit. Assessment unit probability is given as a fractional value from 0 to 1.0.

(7) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with “gas” in field type (column 3), the value of “NA” (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(8) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the assessment

unit. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(9) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(10) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(11) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(12) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(13) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(14) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(15) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(16) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(17) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(18) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(19) Units for Largest – the unit for the sizes given in columns 20 through 23; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields

(20) Largest F95 – the estimated size of the largest undiscovered field (of the type given in column 3) in the assessment unit, such that there is a 95 percent probability of that field being this amount or larger. The largest undiscovered oil field is estimated separately (in rows with "oil" in field type, column 3) from the largest undiscovered gas field (in rows with "gas" in field type, column 3). The unit of volume is given in column 19.

(21) Largest F50 – the estimated size of the largest undiscovered field (of the type given in column 3) in the assessment unit, such that there is a 50 percent probability of that field being this amount or larger. This is the median value. The largest undiscovered oil field is estimated separately (in rows with "oil" in field type, column 3) from the largest undiscovered gas field (in rows with "gas" in field type, column 3). The unit of volume is given in column 19.

(22) Largest F5 – the estimated size of the largest undiscovered field (of the type given in column 3) in the assessment unit, such that there is a 5 percent probability of that field being this amount or larger. The largest undiscovered oil field is estimated separately (in rows with "oil" in field type, column 3) from the largest undiscovered gas field (in rows with "gas" in field type, column 3). The unit of volume is given in column 19.

(23) Largest Mean – the estimated mean (average) size of the largest undiscovered field (of the type given in column 3) in the assessment unit. The largest undiscovered oil field is estimated separately (in rows with "oil" in field type, column 3) from the largest undiscovered gas field (in rows with "gas" in field type, column 3). The unit of volume is given in column 19.

sum_ca.tab

Table containing the allocations to country of the summary of results of the Monte Carlo calculations, given at the parcel level. Each parcel is identified by the assessment unit being allocated (columns 3 and 4), the country to which the allocation is made (column 1), the onshore or offshore identification (column 2), and the field type (column 5). Data columns are:

(1) Country – country name

(2) Onshore or Offshore – identification of the parcel as being offshore or onshore

(3) Assessment Unit Code – USGS-assessment unit code number

(4) Assessment Unit Name – USGS-assessment unit name

(5) Field Type – oil or gas

(6) Percent of Assessed Volume Allocated to this Area – the percentage used in the allocation for this row, ranging from 0 to 100 percent.

(7) Units for Minimum Field Size – the unit for the size given in column 9; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields

(8) Minimum Field Size – the minimum field size considered for this assessment unit.

(9) Assessment Unit Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessment unit. Assessment unit probability is given as a fractional value from 0 to 1.0.

(10) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with “gas” in field

type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(11) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(12) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(13) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(14) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(15) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(16) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(17) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(18) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(19) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(20) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(21) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

sum_ct.tab

Table containing the totals from the allocations to country of the summary of results of the Monte Carlo calculations, given at the parcel level. Each parcel is identified by the country to which the allocation is made (column 1), the summation level (column 4), and the field type (column 5). The three summation levels are onshore total, offshore total, and (grand) total. For each summation level, there are two rows; one for oil fields and one for gas fields. The structure of the country summary totals table, sum_ct.tab, is the same as the country summary allocation table, sum_ca.tab, so that these files can be appended if desired. The only columns treated differently are columns 2, 3, and 4. Data columns are:

(1) Country – country name

(2) Onshore or Offshore – identification of the parcel as being offshore or onshore. For grand totals of the assessed portion of the country the value of "NA" (not applicable) is given.

(3) Assessment Unit Code – USGS-assessment unit code number. For all rows of this table the value of "NA" (not applicable) is given.

(4) Assessment Unit Name – USGS-assessment unit name. For this table, column 4 contains the summation level: "onshore total," "offshore total," or "total."

(5) Field Type – oil or gas

(6) Percent of Assessed Volume Allocated to this Area – the percentage used in the allocation for this row, ranging from 0 to 100 percent.

(7) Units for Minimum Field Size – the unit for the size given in column 9; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields.

(8) Minimum Field Size – the minimum field size considered for this assessment unit.

(9) Assessment Unit Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessment unit. Assessment unit probability is given as a fractional value from 0 to 1.0.

(10) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(11) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(12) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(13) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 5), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(14) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(15) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(16) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(17) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). The volume is given in billions of cubic feet of gas (BCFG).

(18) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 5) and for gas fields (in rows with "gas" in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(19) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. NGL is

estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(20) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(21) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with “oil” in field type, column 5) and for gas fields (in rows with “gas” in field type, column 5). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

Sum_ctry.tab

Table containing a summary of results of the Monte Carlo calculations, given at the country level. Each country is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Country Name – country name

(2) Field Type – oil or gas

(3) Country Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessed portion of the country. Country probability is given as a fractional value from 0 to 1.0.

(4) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the assessed

portion of the country. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(5) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the assessed portion of the country. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(6) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the assessed portion of the country. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(7) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil for assessed portion of the country. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(8) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the assessed portion of the country. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(9) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the assessed portion of the country. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in

rows with “gas” in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(10) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the assessed portion of the country. Gas is estimated separately for oil fields (in rows with “oil” in field type, column 3) and for gas fields (in rows with “gas” in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(11) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas for the assessed portion of the country. Gas is estimated separately for oil fields (in rows with “oil” in field type, column 3) and for gas fields (in rows with “gas” in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(12) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the assessed portion of the country. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 3) and for gas fields (in rows with “gas” in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(13) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the assessed portion of the country. This is the median value. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 3) and for gas fields (in rows with “gas” in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(14) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the assessed portion of the country. NGL is estimated

separately for oil fields (in rows with “oil” in field type, column 3) and for gas fields (in rows with “gas” in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(15) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL) for the assessed portion of the country. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 3) and for gas fields (in rows with “gas” in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

sum_pa.tab

Table containing the allocations to province of the summary of results of the Monte Carlo calculations, given at the parcel level. Each parcel level is identified by the assessment unit being allocated (columns 4 and 5), the province to which the allocation is made (columns 1 and 2), the onshore or offshore identification (column 3), and the field type (column 6). Data columns are:

(1) Province Code – USGS-province code number

(2) Province Name – USGS-province name

(3) Onshore or Offshore – identification of the parcel as being offshore or onshore.

(4) Assessment Unit Code – USGS-assessment unit code number

(5) Assessment Unit Name – USGS-assessment unit name

(6) Field Type – oil or gas

(7) Percent of Assessed Volume Allocated to this Area – the percentage used in the allocation for this row, ranging from 0 to 100 percent.

(8) Units for Minimum Field Size – the unit for the size given in column 9; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields.

(9) Minimum Field Size – the minimum field size considered for this assessment unit.

(10) Assessment Unit Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessment unit. Assessment unit probability is given as a fractional value from 0 to 1.0.

(11) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(12) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(13) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(14) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(15) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(16) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(17) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(18) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(19) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(20) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. NGL is

estimated separately for oil fields (in rows with “oil” in field type, column 6) and for gas fields (in rows with “gas” in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(21) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with “oil” in field type, column 6) and for gas fields (in rows with “gas” in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(22) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with “oil” in field type, column 6) and for gas fields (in rows with “gas” in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

Sum_prov.tab

Table containing a summary of results of the Monte Carlo calculations, given at the province level. Each province is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Province Code – USGS-province code number

(2) Province Name – USGS-province name

(3) Field Type – oil or gas

(4) Province Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the province. Province probability is given as a fractional value from 0 to 1.0.

(5) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the province. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(6) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the province. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(7) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the province. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(8) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(9) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the province. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(10) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the province. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(11) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the province. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(12) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(13) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the province. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(14) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the province. This is the median value. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(15) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the province. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(16) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

sum_pt.tab

Table containing the totals from the allocations to provinces of the summary of results of the Monte Carlo calculations, given at the parcel level. Each parcel is identified by the province to which the allocation is made (columns 1 and 2), the summation level (column 5), and the field type (column 6). The three summation levels are onshore total, offshore total, and (grand) total. For each summation level, there are two rows; one for oil fields and one for gas fields. The structure of the province summary totals table, sum_pt.tab, is the same as the province summary allocation table, sum_pa.tab, so that these files can be appended if desired. The only columns treated differently are columns 3, 4, and 5. Data columns are:

(1) Province Code – USGS-province code number

(2) Province Name – USGS-province name

(3) Onshore or Offshore – identification of the parcel as being offshore or onshore. For grand totals of the assessed portion of the province the value of "NA" (not applicable) is given.

(4) Assessment Unit Code – USGS-assessment unit code number. For all rows of this table the value of "NA" (not applicable) is given.

(5) Assessment Unit Name – USGS-assessment unit name. For this table, column 3 contains the summation level: "onshore total," "offshore total," or "total."

(6) Field Type – oil or gas

(7) Percent of Assessed Volume Allocated to this Area – the percentage used in the allocation for this row, ranging from 0 to 100 percent.

(8) Units for Minimum Field Size – the unit for the size given in column 9; millions of barrels of oil (MMBO) for oil fields or billions of cubic feet of gas (BCFG) for gas fields.

(9) Minimum Field Size – the minimum field size considered for this assessment unit

(10) Assessment Unit Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the assessment unit. Assessment unit probability is given as a fractional value from 0 to 1.0.

(11) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(12) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(13) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the assessment unit. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(14) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 6), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(15) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(16) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(17) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the assessment unit. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(18) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). The volume is given in billions of cubic feet of gas (BCFG).

(19) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with

"gas" in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(20) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the assessment unit. This is the median value. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(21) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the assessment unit. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(22) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with "oil" in field type, column 6) and for gas fields (in rows with "gas" in field type, column 6). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

Sum_reg.tab

Table containing a summary of results of the Monte Carlo calculations, given at the region level. Each region is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Region Code – USGS- region code number

(2) Region Name – USGS- region name

(3) Field Type – oil or gas

(4) Region Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the region. Region probability is given as a fractional value from 0 to 1.0.

(5) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the region. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(6) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the region. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(7) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the region. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(8) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(9) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the region. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(10) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the region. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(11) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the region. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(12) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(13) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the region. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(14) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the region. This is the median value. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(15) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or

more exists in the region. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(16) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

Sum_tps.tab

Table containing a summary of results of the Monte Carlo calculations, given at the total petroleum system level. Each total petroleum system is represented by two rows, one for oil fields and one for gas fields. Data columns are:

(1) Total Petroleum System Code – USGS-total petroleum system code number

(2) Total Petroleum System Name – USGS-total petroleum system name

(3) Field Type – oil or gas

(4) Total Petroleum System Probability – the probability that there exists at least one undiscovered field equal to or larger than the minimum field size, in an accessible location, somewhere in the total petroleum system. Total petroleum system probability is given as a fractional value from 0 to 1.0.

(5) Oil F95 (MMBO) – the estimated value of undiscovered oil such that there is a 95 percent probability that this amount or more exists in the total petroleum system. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(6) Oil F50 (MMBO) – the estimated value of undiscovered oil such that there is a 50 percent probability that this amount or more exists in the total petroleum system. This is the median value. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(7) Oil F5 (MMBO) – the estimated value of undiscovered oil such that there is a 5 percent probability that this amount or more exists in the total petroleum system. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(8) Oil Mean (MMBO) – the estimated mean (average) value of undiscovered oil. Oil is only estimated for oil fields, and thus, for rows with "gas" in field type (column 3), the value of "NA" (for not applicable) is entered. The volume is given in millions of barrels of oil (MMBO).

(9) Gas F95 (BCFG) – the estimated value of undiscovered gas such that there is a 95 percent probability that this amount or more exists in the total petroleum system. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(10) Gas F50 (BCFG) – the estimated value of undiscovered gas such that there is a 50 percent probability that this amount or more exists in the total petroleum system. This is the median value. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(11) Gas F5 (BCFG) – the estimated value of undiscovered gas such that there is a 5 percent probability that this amount or more exists in the total petroleum system. Gas is estimated separately for oil fields (in rows with "oil" in field

type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(12) Gas Mean (BCFG) – the estimated mean (average) value of undiscovered gas. Gas is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). The volume is given in billions of cubic feet of gas (BCFG).

(13) NGL F95 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 95 percent probability that this amount or more exists in the total petroleum system. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(14) NGL F50 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 50 percent probability that this amount or more exists in the total petroleum system. This is the median value. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(15) NGL F5 (MMBNGL) – the estimated value of undiscovered natural gas liquids (NGL) such that there is a 5 percent probability that this amount or more exists in the total petroleum system. NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows with "gas" in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

(16) NGL Mean (MMBNGL) – the estimated mean (average) value of undiscovered natural gas liquids (NGL). NGL is estimated separately for oil fields (in rows with "oil" in field type, column 3) and for gas fields (in rows

with “gas” in field type, column 3). For gas fields, this estimate includes all liquids. The volume is given in millions of barrels of NGL (MMBNGL).

GIS

This directory contains the non-proprietary data files used to generate the maps used in the *U.S. Geological Survey World Petroleum Assessment 2000–Description and Results* report and also include the project files for the ArcExplorer and the Arcview interactive mapping software.

ARC-COVR	(Arc/Info coverages in Robinson projection)
AU_GEO	au geologic characterizations (Robinson projection)
AU_SUM	au summary results data (Robinson projection)
TPS_GEO	tps geologic characterizations (Robinson projection)
TPS_SUM	tps summary results data (Robinson projection)
WEP_PRV	geologic province summary results data (Robinson projection)
INFO	Info files for coverages in this directory
COVR-GEO	(Arc/Info coverages in geographic coordinates)
AU_GEOG	au geologic characterizations (geographic coordinates)
AU_SUMG	au summary results data (geographic coordinates)
TPS_GEOG	tps geologic characterizations (geographic coordinates)
TPS_SUMG	tps summary results data (geographic coordinates)
WEP_PRVG	geologic province summary results data (geographic coordinates)
INFO	Info files for coverages in this directory
EXPLORER	(ArcExplorer projects and software)
aeclient.exe	ArcExplorer 1.1 installation program
explorer.pdf	ArcExplorer tutorial

AU (ArcExplorer projects depicting assessment unit level data)

au_migr.AEP	Scale of hydrocarbon migration
au_seal.AEP	Major seal lithology
au_trap.AEP	Trap type
exp_stat.AEP	Exploration status
res_age.AEP	Generalized reservoir age
res_env.AEP	Predominant depositional environment of reservoirs
rlith.AEP	Major reservoir lithology

PERMSSN (Facsimiles of permission letters from ESRI to distribute ArcExplorer)

arcexpl.gif	gif format
arcexpl.tif	tif format

PROVS (ArcExplorer projects depicting geologic province level data)

gas_prv.AEP	Gas resource summary data
ngl_prv.AEP	Natural gas liquids resource summary data
oil_prv.AEP	Oil resource summary data
pet_prv.AEP	Total petroleum resource summary data

TPS (ArcExplorer projects depicting total petroleum system level data)

mature.AEP	Generalized age of peak source rock maturation
srage.AEP	Generalized age of source rock
srchar.AEP	Characterization of source rock deposition
type.AEP	Primary commodity, oil vs. gas

EXPORT (Arc/Info export files)

au_geo.e00	au geologic characterizations (Robinson projection)
au_geog.e00	au geologic characterization (geographic coordinates)
au_sum.e00	au summary results data (Robinson projection)

au_sumg.e00	au summary results data (geographic coordinates)
tps_geo.e00	tps geologic characterizations (Robinson projection)
tps_geog.e00	tps geologic characterizations (geographic coordinates)
tps_sum.e00	tps summary results data (Robinson projection)
tps_sumg.e00	tps summary results data (geographic coordinates)
wep_prv.e00	geologic province summary results data (Robinson projection)
wep_prvg.e00	geologic province summary results data (geographic coordinates)

METADATA (Metadata documents)

HTML (Metadata documents in HTML format)

au_geo.htm	metadata for *AU_GEO*
au_geog.htm	metadata for *AU_GEOG*
au_sum.htm	metadata for *AU_SUM*
au_sumg.htm	metadata for *AU_SUMG*
tps_geo.htm	metadata for *TPS_GEO*
tps_geog.htm	metadata for *TPS_GEOG*
tps_sum.htm	metadata for *TPS_SUM*
tps_sumg.htm	metadata for *TPS_SUMG*
wep_prv.htm	metadata for *WEP_PRV*
wep_prvg.htm	metadata for *WEP_PRVG*

TEXT (Metadata documents in Windows text format)

au_geo.met	metadata for *AU_GEO*
au_geog.met	metadata for *AU_GEOG*
au_sum.met	metadata for *AU_SUM*
au_sumg.met	metadata for *SU_SUMG*
tps_geo.met	metadata for *TPS_GEO*
tps_geog.met	metadata for *TPS_GEOG*
tps_sum.met	metadata for *TPS_SUM*

tps_sumg.met metadata for *TPS_SUMG*
wep_prv.met metadata for *WEP_PRV*
wep_prvg.met metadata for *WEP_PRVG*

PLOT (Hewlett-Packard hp2 plot files of selected maps)
asm.hp2 World assessment units map
contin.hp2 Continuous and unconventional resources map
prov.hp2 World geologic province map
tps.hp2 World total petroleum system map

SDTS (Spatial Data Transfer Standard)
FILES
MASTERDD

VIEWS
wep.apr Arcview project for all platforms
wep_pc.apr Arcview project for Windows platforms

ETC
cshrc.txt example cshrc file to enable Arcview project on Unix systems
startup example startup file to enable Arcview project on Macintosh system

SHAPES
au_geog.shp au geologic characterizations
au_sumg.shp au summary results data
tps_geog.shp tps geologic characterizations
tps_sumg.shp tps summary results data
wep_prva.shp geologic provinces (assessed only)
wep_prvg.shp geologic provinces with results data
worldg.shp world shorelines

METADATA

HTML (Metadata documents in html format)

au_geog.htm	metadata for *au_geog.shp*
au_sumg.htm	metadata for *au_sumg.shp*
tps_geog.htm	metadata for *tps_geog.shp*
tps_sumg.htm	metadata for *tps_sumg.shp*
wep_prva.htm	metadata for *wep_prva.shp*
wep_prvg.htm	metadata for *wep_prvg.shp*
worldg.htm	metadata for *worldg.shp*

TEXT (Metadata documents in Windows text format)

au_geog.met	metadata for *au_geog.shp*
au_sumg.met	metadata for *au_sumg.shp*
tps_geog.met	metadata for *tps_geog.shp*
tps_sumg.met	metadata for *tps_sumg.shp*
wep_prva.shp	metadata for *wep_prva.shp*
wep_prvg.shp	metadata for *wep_prvg.shp*
worldg.shp	metadata for *worldg.shp*

Programs

Emc2.xls and emcee.xls

These two files are the Monte Carlo programs described in chapter MC, Monte Carlo Simulation Method. Emc2.xls was the program used to calculate the estimates of undiscovered resources for the World Petroleum Assessment 2000. The emcee.xls program is a more generalized version of the program, with options for different distribution types. Directions for the use of both programs are fully documented in chapter MC.

File List for Disc 4

readme.mac documentation in Macintosh text file
readme.pdf documentation in PDF format
readme.txt documentation in Windows text file
WEReport.pdf Start with this file
acroread
- Mac
  - Reader Installer
- PC
  - AR405ENG.EXE

Data Tables
- auvol.tab
- gdisc.tab
- input.tab
- kdisc.tab
- master.tab
- provvol.tab
- regvol.tab
- tpsvol.tab
- bin_au.tab
- frac_au.tab
- sum_au.tab
- sum_ca.tab
- sum_ct.tab
- sum_ctry.tab
- sum_pa.tab
- sum_prov.tab
- sum_pt.tab
- sum_reg.tab
- sum_tps.tab
- bin_prov.tab

GIS
- Arc-covr
  - AU_GEO
    - ARC.ADF
    - ARX.ADF
    - ASM.PAL
    - ASM.PAT
    - ASM.PAX
    - ASM.RXP
    - CNT.ADF
    - CNX.ADF
    - DBLBND.ADF
    - DBLTIC.ADF
    - LAB.ADF
    - LOG
    - PAL.ADF
    - PAR.ADF
    - PAT.ADF
    - PAX.ADF

PRJ.ADF
AU_SUM
ARC.ADF
ARX.ADF
ASM.PAL
ASM.PAT
ASM.PAX
ASM.RXP
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
INFO
ARC.DIR
ARC0000.DAT
ARC0000.NIT
ARC0001.DAT
ARC0001.NIT
ARC0002.DAT
ARC0002.NIT
ARC0003.DAT
ARC0003.NIT
ARC0004.DAT
ARC0004.NIT
ARC0005.DAT
ARC0005.NIT
ARC0006.DAT
ARC0006.NIT
ARC0007.DAT
ARC0007.NIT
ARC0008.DAT
ARC0008.NIT
ARC0009.DAT
ARC0009.NIT
ARC0010.DAT
ARC0010.NIT
ARC0011.DAT
ARC0011.NIT
ARC0012.DAT
ARC0012.NIT
ARC0013.DAT
ARC0013.NIT
ARC0014.DAT
ARC0014.NIT
ARC0015.DAT
ARC0015.NIT
ARC0016.DAT

ARC0016.NIT
ARC0017.DAT
ARC0017.NIT
ARC0018.DAT
ARC0018.NIT
ARC0019.DAT
ARC0019.NIT
ARC0020.DAT
ARC0020.NIT
ARC0021.DAT
ARC0021.NIT
ARC0022.DAT
ARC0022.NIT
ARC0023.DAT
ARC0023.NIT
ARC0024.DAT
ARC0024.NIT
ARC0025.DAT
ARC0025.NIT
ARC0026.DAT
ARC0026.NIT
ARC0027.DAT
ARC0027.NIT

TPS_GEO
ARC.ADF
ARX.ADF
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
MAX.PAL
MAX.PAT
MAX.PAX
MAX.RXP
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
TXT.ADF
TXX.ADF

TPS_SUM
ARC.ADF
ARX.ADF
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
MAX.PAL
MAX.PAT

MAX.PAX
MAX.RXP
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
TXT.ADF
TXX.ADF
WEP_PRV
AAT.ADF
ARC.ADF
ARX.ADF
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
TXT.ADF
TXX.ADF
Covr-geo
AU_GEOG
ARC.ADF
ARX.ADF
ASM.PAL
ASM.PAT
ASM.PAX
ASM.RXP
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
AU_SUMG
ARC.ADF
ARX.ADF
ASM.PAL
ASM.PAT
ASM.PAX
ASM.RXP
CNT.ADF
CNX.ADF

DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
INFO
ARC.DIR
ARC0000.DAT
ARC0000.NIT
ARC0001.DAT
ARC0001.NIT
ARC0002.DAT
ARC0002.NIT
ARC0003.DAT
ARC0003.NIT
ARC0004.DAT
ARC0004.NIT
ARC0005.DAT
ARC0005.NIT
ARC0006.DAT
ARC0006.NIT
ARC0007.DAT
ARC0007.NIT
ARC0008.DAT
ARC0008.NIT
ARC0009.DAT
ARC0009.NIT
ARC0010.DAT
ARC0010.NIT
ARC0011.DAT
ARC0011.NIT
ARC0012.DAT
ARC0012.NIT
ARC0013.DAT
ARC0013.NIT
ARC0014.DAT
ARC0014.NIT
ARC0015.DAT
ARC0015.NIT
ARC0016.DAT
ARC0016.NIT
ARC0017.DAT
ARC0017.NIT
ARC0018.DAT
ARC0018.NIT
ARC0019.DAT
ARC0019.NIT
ARC0020.DAT
ARC0020.NIT
ARC0021.DAT

ARC0021.NIT
ARC0022.DAT
ARC0022.NIT
ARC0023.DAT
ARC0023.NIT
ARC0024.DAT
ARC0024.NIT
ARC0025.DAT
ARC0025.NIT
ARC0026.DAT
ARC0026.NIT
ARC0027.DAT
ARC0027.NIT
TPS_GEOG
ARC.ADF
ARX.ADF
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
MAX.PAL
MAX.PAT
MAX.PAX
MAX.RXP
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
TXT.ADF
TXX.ADF
TPS_SUMG
ARC.ADF
ARX.ADF
CNT.ADF
CNX.ADF
DBLBND.ADF
DBLTIC.ADF
LAB.ADF
LOG
MAX.PAL
MAX.PAT
MAX.PAX
MAX.RXP
PAL.ADF
PAR.ADF
PAT.ADF
PAX.ADF
PRJ.ADF
TXT.ADF
TXX.ADF
WEP_PRVG

- ARC.ADF
- ARX.ADF
- CNT.ADF
- CNX.ADF
- DBLBND.ADF
- DBLTIC.ADF
- LAB.ADF
- LOG
- PAL.ADF
- PAR.ADF
- PAT.ADF
- PAX.ADF
- PRJ.ADF
- TXT.ADF
- TXX.ADF

EXPLORER
- AECLIENT.EXE
- EXPLORER.PDF
- AU
  - AU_MIGR.AEP
  - AU_SEAL.AEP
  - AU_TRAP.AEP
  - EXP_STAT.AEP
  - RES_AGE.AEP
  - RES_ENV.AEP
  - RLITH.AEP
- PERMSSN
  - ARCEXPL.GIF
  - ARCEXPL.TIF
- PROVS
  - GAS_PRV.AEP
  - NGL_PRV.AEP
  - OIL_PRV.AEP
  - PET_PRV.AEP
- TPS
  - MATURE.AEP
  - SRAGE.AEP
  - SRCHAR.AEP
  - TYPE.AEP

Export
- AU_GEO.E00
- AU_GEOG.E00
- AU_SUM.E00
- AU_SUMG.E00
- TPS_GEO.E00
- TPS_GEOG.E00
- TPS_SUM.E00
- TPS_SUMG.E00
- WEP_PRV.E00
- WEP_PRVG.E00

METADATA
- TPS_GEO.MET
- TPS_GEOG.MET
- TPS_SUM.MET

- TPS_SUMG.MET
- WEP_PRV.MET
- WEP_PRVG.MET
- HTML
  - AU_GEO.HTM
  - AU_GEOG.HTM
  - AU_SUM.HTM
  - AU_SUMG.HTM
  - TPS_GEO.HTM
  - TPS_GEOG.HTM
  - TPS_SUM.HTM
  - TPS_SUMG.HTM
  - WEP_PRV.HTM
  - WEP_PRVG.HTM
- TEXT
  - AU_GEO.MET
  - AU_GEOG.MET
  - AU_SUM.MET
  - AU_SUMG.MET
  - TPS_GEO.MET
  - TPS_GEOG.MET
  - TPS_SUM.MET
  - TPS_SUMG.MET
  - WEP_PRV.MET
  - WEP_PRVG.MET
  - HTML
    - AU_GEO.HTM
    - AU_GEOG.HTM
    - AU_SUM.HTM
    - AU_SUMG.HTM
    - TPS_GEO.HTM
    - TPS_GEOG.HTM
    - TPS_SUM.HTM
    - TPS_SUMG.HTM
    - WEP_PRV.HTM
    - WEP_PRVG.HTM
- Plot
  - ASM.HP2
  - CONTIN.HP2
  - PROV.HP2
  - TPS.HP2
- SDTS
  - FILES
    - AGEOAF01.DDF
    - AGEOAIDF.DDF
    - AGEOAPID.DDF
    - AGEOAPNP.DDF
    - AGEOAPPC.DDF
    - AGEOAXRF.DDF
    - AGEOB001.DDF
    - AGEOB002.DDF
    - AGEOCATD.DDF
    - AGEOCATS.DDF
    - AGEOCATX.DDF

AGEODDSH.DDF
AGEODQAA.DDF
AGEODQCG.DDF
AGEODQHL.DDF
AGEODQLC.DDF
AGEODQPA.DDF
AGEOFF01.DDF
AGEOIDEN.DDF
AGEOIREF.DDF
AGEOLE01.DDF
AGEONA01.DDF
AGEONO01.DDF
AGEONP01.DDF
AGEOPC01.DDF
AGEOSPDM.DDF
AGEOSTAT.DDF
AGEOXREF.DDF
ASUMAF01.DDF
ASUMAIDF.DDF
ASUMAPID.DDF
ASUMAPNP.DDF
ASUMAPPC.DDF
ASUMAXRF.DDF
ASUMB001.DDF
ASUMB002.DDF
ASUMCATD.DDF
ASUMCATS.DDF
ASUMCATX.DDF
ASUMDDSH.DDF
ASUMDQAA.DDF
ASUMDQCG.DDF
ASUMDQHL.DDF
ASUMDQLC.DDF
ASUMDQPA.DDF
ASUMFF01.DDF
ASUMIDEN.DDF
ASUMIREF.DDF
ASUMLE01.DDF
ASUMNA01.DDF
ASUMNO01.DDF
ASUMNP01.DDF
ASUMPC01.DDF
ASUMSPDM.DDF
ASUMSTAT.DDF
ASUMXREF.DDF
PROVAIDF.DDF
PROVAPID.DDF
PROVAPNP.DDF
PROVAPPC.DDF
PROVATXT.DDF
PROVAXRF.DDF
PROVB001.DDF
PROVCATD.DDF
PROVCATS.DDF

PROVCATX.DDF
PROVDDSH.DDF
PROVDQAA.DDF
PROVDQCG.DDF
PROVDQHL.DDF
PROVDQLC.DDF
PROVDQPA.DDF
PROVIDEN.DDF
PROVIREF.DDF
PROVLE01.DDF
PROVNA01.DDF
PROVNL01.DDF
PROVNO01.DDF
PROVNP01.DDF
PROVPC01.DDF
PROVSPDM.DDF
PROVSTAT.DDF
PROVXREF.DDF
README
TGEOAF01.DDF
TGEOAIDF.DDF
TGEOAPID.DDF
TGEOAPNP.DDF
TGEOAPPC.DDF
TGEOATXT.DDF
TGEOAXRF.DDF
TGEOB001.DDF
TGEOB002.DDF
TGEOCATD.DDF
TGEOCATS.DDF
TGEOCATX.DDF
TGEODDSH.DDF
TGEODQAA.DDF
TGEODQCG.DDF
TGEODQHL.DDF
TGEODQLC.DDF
TGEODQPA.DDF
TGEOFF01.DDF
TGEOIDEN.DDF
TGEOIREF.DDF
TGEOLE01.DDF
TGEONA01.DDF
TGEONL01.DDF
TGEONO01.DDF
TGEONP01.DDF
TGEOPC01.DDF
TGEOSPDM.DDF
TGEOSTAT.DDF
TGEOXREF.DDF
TSUMAF01.DDF
TSUMAIDF.DDF
TSUMAPID.DDF
TSUMAPNP.DDF
TSUMAPPC.DDF

TSUMAXRF.DDF
TSUMB001.DDF
TSUMB002.DDF
TSUMCATD.DDF
TSUMCATS.DDF
TSUMCATX.DDF
TSUMDDSH.DDF
TSUMDQAA.DDF
TSUMDQCG.DDF
TSUMDQHL.DDF
TSUMDQLC.DDF
TSUMDQPA.DDF
TSUMFF01.DDF
TSUMIDEN.DDF
TSUMIREF.DDF
TSUMLE01.DDF
TSUMNA01.DDF
TSUMNO01.DDF
TSUMNP01.DDF
TSUMPC01.DDF
TSUMSPDM.DDF
TSUMSTAT.DDF
TSUMXREF.DDF

MASTERDD

AGEOMDEF.DDF
AGEOMDIR.DDF
AGEOMDOM.DDF
AGEOMIDE.DDF
AGEOMQCG.DDF
AGEOMQHL.DDF
ASUMMDEF.DDF
ASUMMDIR.DDF
ASUMMDOM.DDF
ASUMMIDE.DDF
ASUMMQCG.DDF
ASUMMQHL.DDF
PROVMDEF.DDF
PROVMDIR.DDF
PROVMDOM.DDF
PROVMIDE.DDF
PROVMQCG.DDF
PROVMQHL.DDF
README
TGEOMDEF.DDF
TGEOMDIR.DDF
TGEOMDOM.DDF
TGEOMIDE.DDF
TGEOMQCG.DDF
TGEOMQHL.DDF
TSUMMDEF.DDF
TSUMMDIR.DDF
TSUMMDOM.DDF

- TSUMMIDE.DDF
- TSUMMQCG.DDF
- TSUMMQHL.DDF

VIEWS
- WEP.APR
- WEP_PC.APR
- ETC
  - CSHRC.TXT
  - STARTUP
- METADATA
  - HTML
    - AU_GEOG.HTM
    - AU_SUMG.HTM
    - TPS_GEOG.HTM
    - TPS_SUMG.HTM
    - WEP_PRVA.HTM
    - WEP_PRVG.HTM
    - WORLDG.HTM
  - TEXT
    - AU_GEOG.MET
    - AU_SUMG.MET
    - TPS_GEOG.MET
    - TPS_SUMG.MET
    - WEP_PRVA.MET
    - WEP_PRVG.MET
    - WORLDG.MET
- SHAPES
  - AU_GEOG.DBF
  - AU_GEOG.SHP
  - AU_GEOG.SHX
  - AU_SUMG.DBF
  - AU_SUMG.SHP
  - AU_SUMG.SHX
  - TPS_GEOG.DBF
  - TPS_GEOG.SHP
  - TPS_GEOG.SHX
  - TPS_SUMG.DBF
  - TPS_SUMG.SHP
  - TPS_SUMG.SHX
  - WEP_PRVA.DBF
  - WEP_PRVA.SHP
  - WEP_PRVA.SHX
  - WEP_PRVG.DBF
  - WEP_PRVG.SHP
  - WEP_PRVG.SHX
  - WORLDG.DBF
  - WORLDG.SHP
  - WORLDG.SHX

Programs
- Emc2.xls
- emcee.xls