

**USGS WORLD PETROLEUM RESOURCES ASSESSMENT  
INPUT FORM FOR CONVENTIONAL ASSESSMENT UNITS (Version 6.0, September 2, 2008)**

**IDENTIFICATION INFORMATION**

Assessment Geologist:	<u>R.R. Charpentier</u>	Date:	<u>30-Sep-09</u>
Region:	<u>Asia Pacific</u>	Number:	<u>3</u>
Province:	<u>Songliao Basin</u>	Number:	<u>3144</u>
Total Petroleum System:	<u>Lower Cretaceous Composite</u>	Number:	<u>314401</u>
Assessment Unit:	<u>Kailu Depression</u>	Number:	<u>31440103</u>
Scenario:		Number:	
Based on Data as of:	<u>IHS Energy (2008), NRG field reserve growth factor 30 yrs.</u>		
Notes from Assessor:	<u></u>		

**CHARACTERISTICS OF ASSESSMENT UNIT**

Area of assessment unit: 57,001 square kilometers

Minimum assessed accumulation size: 1 MMBOE (grown)

No. of discovered accumulations exceeding minimum size: Oil: 6 Gas: 0

<b>Uncertainty Class:</b>	Check One	Number
Producing fields	<u>X</u>	<u>6</u>
Discoveries	<u></u>	<u></u>
Wells	<u></u>	<u></u>
Seismic	<u></u>	<u></u>
No seismic	<u></u>	<u></u>

Median size (grown) of discovered oil accumulations (MMBO):

1st 3rd	<u>16.67</u>	2nd 3rd	<u>7.60</u>	3rd 3rd	<u></u>
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Median size (grown) of discovered gas accumulations (BCFG):

1st 3rd	<u></u>	2nd 3rd	<u></u>	3rd 3rd	<u></u>
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**ANALOGS USED IN ESTIMATING INPUT**

<u>Purpose</u>	<u>Analog or Analog Set</u>
1 <u></u>	<u></u>
	<u></u>
	<u></u>
2 <u></u>	<u></u>
	<u></u>
	<u></u>
3 <u></u>	<u></u>
	<u></u>
	<u></u>
4 <u></u>	<u></u>
	<u></u>
	<u></u>

Assessment Unit (name, no.)  
Scenario (name, no.)

Kailu Depression, 31440103

Probability of occurrence (0-1.0)

Scenario Probability:

Assessment-Unit Probabilities: (Adequacy for at least one undiscovered field of minimum size)

Attribute	Probability of occurrence (0-1.0)
1. <b>CHARGE:</b> Adequate petroleum charge:	1.0
2. <b>ROCKS:</b> Adequate reservoirs, traps, and seals:	1.0
3. <b>TIMING OF GEOLOGIC EVENTS:</b> Favorable timing:	1.0
<b>Assessment-Unit GEOLOGIC Probability</b> (Product of 1, 2, and 3):	1.0

### UNDISCOVERED ACCUMULATIONS

**Number of Undiscovered Accumulations:** How many undiscovered accumulations exist that are at least the minimum size?: (uncertainty of fixed but unknown values)

Total Accumulations:	minimum (>0)	median	maximum
Oil/Gas Mix:	minimum	mode	maximum
	number of oil accumulations / number of total accumulations		
	number of oil accumulations / number of gas accumulations		
	number of gas accumulations / number of oil accumulations		
Oil Accumulations:	minimum <u>1</u>	median <u>5</u>	maximum <u>20</u>
Gas Accumulations:	minimum <u>1</u>	median <u>2</u>	maximum <u>5</u>

**Sizes of Undiscovered Accumulations:** What are the sizes (**grown**) of the above accumulations?: (variations in the sizes of undiscovered accumulations)

Oil in Oil Accumulations (MMBO):	minimum <u>1</u>	median <u>4</u>	maximum <u>300</u>
Gas in Gas Accumulations (BCFG):	minimum <u>6</u>	median <u>24</u>	maximum <u>1800</u>

### RATIOS FOR UNDISCOVERED ACCUMULATIONS, TO ASSESS COPRODUCTS

(variations in the properties of undiscovered accumulations)

<u>Oil Accumulations:</u>	minimum	median	maximum
Gas/oil ratio (CFG/BO):	<u>30</u>	<u>200</u>	<u>10000</u>
NGL/gas ratio (BNGL/MMCFG):	<u>5</u>	<u>25</u>	<u>85</u>
<u>Gas Accumulations:</u>	minimum	median	maximum
Liquids/gas ratio (BLIQ/MMCFG):	<u>5</u>	<u>25</u>	<u>75</u>

**SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS**  
 (variations in the properties of undiscovered accumulations)

<u>Oil Accumulations:</u>	minimum	median	maximum
API gravity (degrees):	<u>25</u>	<u>34</u>	<u>40</u>
Viscosity (centipoise)	<u>5</u>	<u>30</u>	<u>210</u>
Sulfur content of oil (%):	<u>0</u>	<u>0.1</u>	<u>0.7</u>
Depth (m) of water (if applicable):	<u></u>	<u></u>	<u></u>

	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>175</u>		<u>1000</u>		<u>3000</u>

<u>Gas Accumulations:</u>	minimum	median	maximum
Inert gas content (%):	<u>0</u>	<u>10</u>	<u>60</u>
Carbon dioxide content (%):	<u>0</u>	<u>1.5</u>	<u>95</u>
Hydrogen sulfide content (%):	<u>0</u>	<u>0</u>	<u>0</u>
Depth (m) of water (if applicable):	<u></u>	<u></u>	<u></u>

	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>250</u>		<u>1500</u>		<u>3700</u>

Assessment Unit (name, no.)  
Scenario (name, no.)

Kailu Depression, 31440103

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### ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO COUNTRIES

1 Offshore

0 area % of the AU

Oil in Oil Accumulations: 0 volume % of the AU

Gas in Gas Accumulations: 0 volume % of the AU

2 Onshore portion of:

China

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100 area % of the AU

Oil in Oil Accumulations: 100 volume % of the AU

Gas in Gas Accumulations: 100 volume % of the AU

3 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

4 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

5 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

6 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

Assessment Unit (name, no.)  
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**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES**

1 ONSHORE portion of: Songliao Basin, 3144

100 area % of the AU

Oil in Oil Accumulations: 100 volume % of the AU

Gas in Gas Accumulations: 100 volume % of the AU

OFFSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

2 ONSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

3 ONSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES**

4 ONSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

5 ONSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

6 ONSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU