

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

IDENTIFICATION INFORMATION

Assessment Geologist:	<u>C.J. Wandrey</u>	Date:	<u>20-Dec-11</u>
Region:	<u>Asia Pacific</u>	Number:	<u>3</u>
Province:	<u>Taranaki Basin</u>	Number:	<u>3031</u>
Total Petroleum System:	<u>Cretaceous-Cenozoic</u>	Number:	<u>303101</u>
Assessment Unit:	<u>Taranaki Basin</u>	Number:	<u>30310101</u>
Scenario:	<u></u>	Number:	<u></u>
Based on Data as of:	<u>IHS (2009)</u>		
Notes from Assessor:	<u>NRG Field Reserve Growth Function, 30 years</u>		

CHARACTERISTICS OF ASSESSMENT UNIT

Area of assessment unit: 152,887 square kilometers

Minimum assessed accumulation size: 5 MMBOE (grown)

No. of discovered accumulations exceeding minimum size: Oil: 8 Gas: 12

Uncertainty Class:	Check One	Number
Producing fields	<u>X</u>	<u></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>31</u>	2nd 3rd	<u>2.6</u>	3rd 3rd	<u>9.3</u>
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Median size (grown) of discovered gas accumulations (BCFG):

1st 3rd	<u>253</u>	2nd 3rd	<u>150</u>	3rd 3rd	<u>32</u>
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ANALOGS USED IN ESTIMATING INPUT

<u>Purpose</u>	<u>Analog or Analog Set</u>
1 <u>Sizes, Numbers</u>	<u>Compression</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.)

Taranaki Basin, 30310101

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. CHARGE: Adequate petroleum charge:	1.0
2. ROCKS: Adequate reservoirs, traps, and seals:	1.0
3. TIMING OF GEOLOGIC EVENTS: Favorable timing:	1.0
Assessment-Unit GEOLOGIC Probability (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>30</u>	maximum <u>75</u>
Gas Accumulations:	minimum <u>1</u>	median <u>70</u>	maximum <u>175</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>5</u>	median <u>12</u>	maximum <u>125</u>
Gas in Gas Accumulations (BCFG):	minimum <u>30</u>	median <u>72</u>	maximum <u>2500</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>400</u>	<u>1100</u>	<u>3300</u>
NGL/gas ratio (BNGL/MMCFG):	<u>0.3</u>	<u>20</u>	<u>65</u>
<u>Gas Accumulations:</u>	minimum	median	maximum
Liquids/gas ratio (BLIQ/MMCFG):	<u>2</u>	<u>42</u>	<u>80</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>30</u>		<u>40</u>		<u>46</u>
Viscosity (centipoise)					
Sulfur content of oil (%):	<u>0.01</u>		<u>0.1</u>		<u>0.24</u>
Depth (m) of water (if applicable):	<u>0</u>		<u>500</u>		<u>3000</u>

Drilling Depth (m):	minimum	F75	median	F25	maximum
	<u>600</u>		<u>3000</u>		<u>6000</u>

<u>Gas Accumulations:</u>	minimum		median		maximum
Inert gas content (%):	<u>0</u>		<u>0.42</u>		<u>3</u>
Carbon dioxide content (%):	<u>2</u>		<u>13</u>		<u>50</u>
Hydrogen sulfide content (%):	<u>0</u>		<u>0.5</u>		<u>3.5</u>
Depth (m) of water (if applicable):	<u>0</u>		<u>500</u>		<u>3000</u>

Drilling Depth (m):	minimum	F75	median	F25	maximum
	<u>600</u>		<u>4000</u>		<u>6000</u>

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO COUNTRIES

1 Offshore

79.20 area % of the AU

Oil in Oil Accumulations: 50.00 volume % of the AU

Gas in Gas Accumulations: 80.00 volume % of the AU

2 Onshore portion of:

New Zealand

20.80 area % of the AU

Oil in Oil Accumulations: 50.00 volume % of the AU

Gas in Gas Accumulations: 20.00 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

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES

1 ONSHORE portion of: New Zealand Orogenic Belt, 3021
5.10 area % of the AU
Oil in Oil Accumulations: 10.00 volume % of the AU
Gas in Gas Accumulations: 4.00 volume % of the AU

OFFSHORE portion of: New Zealand Orogenic Belt, 3021
2.61 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: _____
_____ area % of the AU
Oil in Oil Accumulations: _____ volume % of the AU
Gas in Gas Accumulations: _____ volume % of the AU

OFFSHORE portion of: Northland Basin, 3023
0.24 area % of the AU
Oil in Oil Accumulations: 0 volume % of the AU
Gas in Gas Accumulations: 0 volume % of the AU

3 ONSHORE portion of: Waikato Basin, 3029
0.93 area % of the AU
Oil in Oil Accumulations: 5.00 volume % of the AU
Gas in Gas Accumulations: 1.00 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

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

Taranaki Basin, 30310101

4 ONSHORE portion of: Wanganui Basin, 3030

11.78 area % of the AU

Oil in Oil Accumulations: 20.00 volume % of the AU
Gas in Gas Accumulations: 10.00 volume % of the AU

OFFSHORE portion of: Wanganui Basin, 3030

5.40 area % of the AU

Oil in Oil Accumulations: 5.00 volume % of the AU
Gas in Gas Accumulations: 10.00 volume % of the AU

5 ONSHORE portion of: Taranaki Basin, 3031

2.99 area % of the AU

Oil in Oil Accumulations: 15.00 volume % of the AU
Gas in Gas Accumulations: 5.00 volume % of the AU

OFFSHORE portion of: Taranaki Basin, 3031

21.40 area % of the AU

Oil in Oil Accumulations: 10.00 volume % of the AU
Gas in Gas Accumulations: 20.00 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: Challenger Plateau, 3918

49.55 area % of the AU

Oil in Oil Accumulations: 35.00 volume % of the AU
Gas in Gas Accumulations: 50.00 volume % of the AU