

**SEVENTH APPROXIMATION  
DATA FORM FOR CONVENTIONAL ASSESSMENT UNITS (Version 6, 9 April 2003)**

**IDENTIFICATION INFORMATION**

Assessment Geologist:	<u>L.O. Anna</u>	Date:	<u>14-Dec-04</u>
Region:	<u>North America</u>	Number:	<u>5</u>
Province:	<u>Eastern Great Basin</u>	Number:	<u>5019</u>
Total Petroleum System:	<u>Paleozoic-Tertiary Composite</u>	Number:	<u>501901</u>
Assessment Unit:	<u>Ranges and Other Structures</u>	Number:	<u>50190102</u>
Based on Data as of:	<u></u>		
Notes from Assessor:	<u></u>		

**CHARACTERISTICS OF ASSESSMENT UNIT**

Oil (<20,000 cfg/bo overall) or Gas (≥20,000 cfg/bo overall): Oil

What is the minimum accumulation size? 0.5 mmboc grown  
(the smallest accumulation that has potential to be added to reserves)

No. of discovered accumulations exceeding minimum size: Oil: 0 Gas: 0  
Established (>13 accums.)                      Frontier (1-13 accums.)                      Hypothetical (no accums.) X

Median size (grown) of discovered oil accumulations (mmboc):  
1st 3rd                      2nd 3rd                      3rd 3rd                       
Median size (grown) of discovered gas accumulations (bcfg):  
1st 3rd                      2nd 3rd                      3rd 3rd                     

**Assessment-Unit Probabilities:**

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

**UNDISCOVERED ACCUMULATIONS**

**No. of Undiscovered Accumulations:** How many undiscovered accums. exist that are ≥ min. size?:  
(uncertainty of fixed but unknown values)

Oil Accumulations:	minimum (>0) <u>1</u>	mode <u>5</u>	maximum <u>50</u>
Gas Accumulations:	minimum (>0) <u>1</u>	mode <u>3</u>	maximum <u>30</u>

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

Oil in Oil Accumulations (mmboc):	minimum <u>0.5</u>	median <u>8</u>	maximum <u>1000</u>
Gas in Gas Accumulations (bcfg):	minimum <u>3</u>	median <u>40</u>	maximum <u>3000</u>

**AVERAGE RATIOS FOR UNDISCOVERED ACCUMS., TO ASSESS COPRODUCTS**

(uncertainty of fixed but unknown values)

<u>Oil Accumulations:</u>	minimum	mode	maximum
Gas/oil ratio (cfg/bo)	<u>65</u>	<u>130</u>	<u>195</u>
NGL/gas ratio (bngl/mmcf)	<u>30</u>	<u>60</u>	<u>90</u>
<u>Gas Accumulations:</u>	minimum	mode	maximum
Liquids/gas ratio (bliq/mmcf)	<u>22</u>	<u>44</u>	<u>66</u>
Oil/gas ratio (bo/mmcf)	<u>          </u>	<u>          </u>	<u>          </u>

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**SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS**

(variations in the properties of undiscovered accumulations)

<u>Oil Accumulations:</u>	minimum	mode	maximum		
API gravity (degrees)	<u>10</u>	<u>23</u>	<u>48</u>		
Sulfur content of oil (%)	<u>0.1</u>	<u>1.3</u>	<u>4.7</u>		
Depth (m) of water (if applicable)	<u>          </u>	<u>          </u>	<u>          </u>		
Drilling Depth (m)	minimum	F75	mode	F25	maximum
	<u>1000</u>		<u>2500</u>		<u>4600</u>

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<u>Gas Accumulations:</u>	minimum	mode	maximum		
Inert gas content (%)	<u>          </u>	<u>          </u>	<u>          </u>		
CO <sub>2</sub> content (%)	<u>          </u>	<u>          </u>	<u>          </u>		
Hydrogen-sulfide content (%)	<u>          </u>	<u>          </u>	<u>          </u>		
Depth (m) of water (if applicable)	<u>          </u>	<u>          </u>	<u>          </u>		
Drilling Depth (m)	minimum	F75	mode	F25	maximum
	<u>1000</u>		<u>3500</u>		<u>6000</u>

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**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO STATES**  
**Surface Allocations** (uncertainty of a fixed value)

1. <u>Utah</u>	represents	<u>23.14</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>10.5</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>10.5</u>	_____
2. <u>Nevada</u>	represents	<u>73.23</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>89</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>89</u>	_____
3. <u>Idaho</u>	represents	<u>3.62</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>0.5</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>0.5</u>	_____
4. _____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
5. _____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
6. _____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____

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7.	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
8.	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
9.	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
10.	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
11.	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
12.	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____

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**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO LAND ENTITIES**  
**Surface Allocations** (uncertainty of a fixed value)

<u>1. Federal Lands</u>	represents	<u>82.02</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>83</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>83</u>	_____
<u>2. Private Lands</u>	represents	<u>13.82</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>13</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>13</u>	_____
<u>3. Tribal Lands</u>	represents	<u>0.77</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>1</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>1</u>	_____
<u>4. Offshore</u>	represents	<u>1.54</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>1</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>1</u>	_____
<u>5. UT State Lands</u>	represents	<u>1.68</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>1</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>1</u>	_____
<u>6. NV State Lands</u>	represents	<u>0.06</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>0.5</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>0.5</u>	_____



**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO FEDERAL LAND SUBDIVISIONS**  
**Surface Allocations** (uncertainty of a fixed value)

1. <u>Bureau of Land Management (BLM)</u>	represents	<u>61.48</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>70</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>70</u>	_____
2. <u>BLM Wilderness Areas (BLMW)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
3. <u>BLM Roadless Areas (BLMR)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
4. <u>National Park Service (NPS)</u>	represents	<u>0.31</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>0</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>0</u>	_____
5. <u>NPS Wilderness Areas (NPSW)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
6. <u>NPS Protected Withdrawals (NPSP)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____

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7. <u>US Forest Service (FS)</u>	represents	<u>7.97</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>8</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>8</u>	_____
8. <u>USFS Wilderness Areas (FSW)</u>	represents	<u>0.04</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>0</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>0</u>	_____
9. <u>USFS Roadless Areas (FSR)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
10. <u>USFS Protected Withdrawals (FSP)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____
11. <u>US Fish and Wildlife Service (FWS)</u>	represents	<u>1.28</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>0</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>0</u>	_____
12. <u>USFWS Wilderness Areas (FWSW)</u>	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____

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<u>13. USFWS Protected Withdrawals (FWSP)</u>	represents	<u>          </u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	<u>          </u>	<u>          </u>	<u>          </u>
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	<u>          </u>	<u>          </u>	<u>          </u>
<u>14. Wilderness Study Areas (WS)</u>	represents	<u>          </u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	<u>          </u>	<u>          </u>	<u>          </u>
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	<u>          </u>	<u>          </u>	<u>          </u>
<u>15. Department of Energy (DOE)</u>	represents	<u>  1.71  </u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	<u>          </u>	<u>          0          </u>	<u>          </u>
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	<u>          </u>	<u>          0          </u>	<u>          </u>
<u>16. Department of Defense (DOD)</u>	represents	<u>  9.16  </u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	<u>          </u>	<u>          5          </u>	<u>          </u>
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	<u>          </u>	<u>          5          </u>	<u>          </u>
<u>17. Bureau of Reclamation (BOR)</u>	represents	<u>  0.07  </u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	<u>          </u>	<u>          0          </u>	<u>          </u>
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	<u>          </u>	<u>          0          </u>	<u>          </u>
<u>18. Tennessee Valley Authority (TVA)</u>	represents	<u>          </u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	<u>          </u>	<u>          </u>	<u>          </u>
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	<u>          </u>	<u>          </u>	<u>          </u>

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19. Other Federal represents \_\_\_\_\_ area % of the AU

<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____

<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____

20. \_\_\_\_\_ represents \_\_\_\_\_ area % of the AU

<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	_____	_____

<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	_____	_____

**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ECOSYSTEMS**  
**Surface Allocations** (uncertainty of a fixed value)

1. <u>Bonneville Basin (BNBA)</u>	represents	<u>19.93</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>17</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>17</u>	_____
2. <u>Central Great Basin Mountains (CGBM)</u>	represents	<u>25.83</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>29</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>29</u>	_____
3. <u>Lahontan Basin (LHBA)</u>	represents	<u>4.79</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>3</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>3</u>	_____
4. <u>Mojave Desert (MODT)</u>	represents	<u>4.84</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>3</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>3</u>	_____
5. <u>Northeastern Great Basin (NEGB)</u>	represents	<u>16.42</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>15</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>15</u>	_____
6. <u>Northwestern Basin and Range (NWBR)</u>	represents	<u>12.14</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum	mode	maximum
Volume % in entity	_____	<u>15</u>	_____
<u>Gas in Gas Accumulations:</u>			
Volume % in entity	_____	<u>15</u>	_____

7. <u>Owyhee Uplands (OWUP)</u>	_____	represents	<u>1.98</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		<u>1</u>	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		<u>1</u>	_____
8. <u>Snake River Basalts (SRBT)</u>	_____	represents	<u>0.26</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		<u>1</u>	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		<u>1</u>	_____
9. <u>Southeastern Great Basin (SEGB)</u>	_____	represents	<u>13.83</u>	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		<u>15</u>	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		<u>15</u>	_____
10. _____	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
11. _____	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____
12. _____	_____	represents	_____	area % of the AU
<u>Oil in Oil Accumulations:</u>	minimum		mode	maximum
Volume % in entity	_____		_____	_____
<u>Gas in Gas Accumulations:</u>				
Volume % in entity	_____		_____	_____

