

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>500</u> | <u>1000</u> | <u>1500</u> |
| NGL/gas ratio (bngl/mmcf) | <u>20</u> | <u>40</u> | <u>60</u> |
| | | | |
| <u>Gas Accumulations:</u> | minimum | mode | maximum |
| Liquids/gas ratio (bliq/mmcf) | <u>15</u> | <u>30</u> | <u>60</u> |
| Oil/gas ratio (bo/mmcf) | <u> </u> | <u> </u> | <u> </u> |

SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS

(variations in the properties of undiscovered accumulations)

| <u>Oil Accumulations:</u> | minimum | mode | maximum | | |
|------------------------------------|-------------------|-------------------|-------------------|-----|-------------|
| API gravity (degrees) | <u>12</u> | <u>27</u> | <u>48</u> | | |
| Sulfur content of oil (%) | <u>0</u> | <u>1.8</u> | <u>5</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>5000</u> |
| | | | | | |
| <u>Gas Accumulations:</u> | minimum | mode | maximum | | |
| Inert gas content (%) | <u>0</u> | <u>0.3</u> | <u>12</u> | | |
| CO ₂ content (%) | <u>0</u> | <u>0.5</u> | <u>12</u> | | |
| Hydrogen-sulfide content (%) | <u>0</u> | <u>0.3</u> | <u>40</u> | | |
| Depth (m) of water (if applicable) | <u> </u> | <u> </u> | <u> </u> | | |
| | | | | | |
| Drilling Depth (m) | minimum | F75 | mode | F25 | maximum |
| | <u>2000</u> | | <u>4000</u> | | <u>7000</u> |

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

| | | | |
|----------------------------------|------------|--------------|------------------|
| 1. <u>Wyoming</u> | represents | <u>90.80</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>99</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>99</u> | _____ |
| 2. <u>Montana</u> | represents | <u>9.20</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> | _____ |
| 3. _____ | 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. _____ | 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 | _____ | _____ | _____ |

| | | | | |
|----------------------------------|---------|------------|-------|------------------|
| 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 | _____ | | _____ | _____ |

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

| | | | |
|----------------------------------|------------|--------------|------------------|
| <u>1. Federal Lands</u> | represents | <u>57.54</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>75</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>75</u> | _____ |
| <u>2. Private Lands</u> | represents | <u>32.96</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>20</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>20</u> | _____ |
| <u>3. Tribal Lands</u> | represents | <u>2.93</u> | 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 | _____ | _____ | _____ |
| <u>4. Other Lands</u> | represents | <u>0.20</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> | _____ |
| <u>5. WY State Lands</u> | represents | <u>5.98</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>5</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>5</u> | _____ |
| <u>6. MT State Lands</u> | represents | <u>0.40</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>0.1</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>0.1</u> | _____ |

Assessment Unit (name, no.)
Paleozoic-Mesozoic Conventional Oil and Gas, 50340101

| | | | | |
|----------------------------------|---------|------------|-------|------------------|
| 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 | _____ | | _____ | _____ |

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>49.58</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>74</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>74</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>0.19</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 | _____ | _____ | _____ |

Assessment Unit (name, no.)
Paleozoic-Mesozoic Conventional Oil and Gas, 50340101

| | | | |
|---|------------|-------------|------------------|
| 7. <u>US Forest Service (FS)</u> | represents | <u>6.41</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> | _____ |
| 8. <u>USFS Wilderness Areas (FSW)</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 | _____ | _____ | _____ |
| 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 | _____ | 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. <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 | _____ | _____ | _____ |

Assessment Unit (name, no.)
Paleozoic-Mesozoic Conventional Oil and Gas, 50340101

| | | | |
|---|------------|-------|------------------|
| <u>13. USFWS Protected Withdrawals (FWSP)</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 | _____ | _____ | _____ |
| <u>14. Wilderness Study Areas (WS)</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 | _____ | _____ | _____ |
| <u>15. Department of Energy (DOE)</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 | _____ | _____ | _____ |
| <u>16. Department of Defense (DOD)</u> | represents | 0.05 | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | 0 | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | 0 | _____ |
| <u>17. Bureau of Reclamation (BOR)</u> | represents | 1.30 | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | 1 | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | 1 | _____ |
| <u>18. Tennessee Valley Authority (TVA)</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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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>Bighorn Basin (BHBA)</u> | represents | <u>70.32</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>90</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>90</u> | _____ |
| 2. <u>Bighorn Mountains (BHMT)</u> | represents | <u>5.12</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> | _____ |
| 3. <u>Central Basin and Hills (CNBH)</u> | represents | <u>2.64</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> | _____ |
| 4. <u>Powder River Basin (PRBA)</u> | represents | <u>1.15</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>Yellowstone Highlands (YSHL)</u> | represents | <u>20.76</u> | area % of the AU |
| <u>Oil in Oil Accumulations:</u> | minimum | mode | maximum |
| Volume % in entity | _____ | <u>10</u> | _____ |
| <u>Gas in Gas Accumulations:</u> | | | |
| Volume % in entity | _____ | <u>10</u> | _____ |
| 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 | _____ | _____ | _____ |

| | | | | |
|----------------------------------|---------|------------|-------|------------------|
| 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 | _____ | | _____ | _____ |