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

IDENTIFICATION INFORMATION

Assessment Geologist:	T.S. Dyman and S.M. Condon	Date:	4/18/2005
Region:	North America	Number:	5
Province:	Hanna, Laramie, Shirley Basins	Number:	5030
Total Petroleum System:	Mowry-Hanna Composite	Number:	503002
Assessment Unit:	Mesozoic-Cenozoic Conventional Oil and Gas	Number:	50300201
Based on Data as of:	PI/Dwights 4/2004, NRG 2003 (data current through 2001)		
Notes from Assessor:	NRG reservoir growth function, 30 years		

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 mmboe grown
(the smallest accumulation that has potential to be added to reserves)

No. of discovered accumulations exceeding minimum size: Oil: 9 Gas: 2
Established (>13 accums.) _____ Frontier (1-13 accums.) X Hypothetical (no accums.) _____

Median size (grown) of discovered oil accumulations (mmbo):
1st 3rd 5.2 2nd 3rd 1 3rd 3rd _____
Median size (grown) of discovered gas accumulations (bcfg):
1st 3rd 5.1 2nd 3rd 15.2 3rd 3rd _____

Assessment-Unit Probabilities:

Attribute	Probability of occurrence (0-1.0)
1. **CHARGE:** Adequate petroleum charge for an undiscovered accum. ≥ minimum size:	1.0
2. **ROCKS:** Adequate reservoirs, traps, and seals for an undiscovered accum. ≥ minimum size:	1.0
3. **TIMING OF GEOLOGIC EVENTS:** Favorable timing for an undiscovered accum. ≥ minimum siz	1.0

Assessment-Unit GEOLOGIC Probability (Product of 1, 2, and 3): 1.0

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)	1	mode	7	maximum	30
Gas Accumulations:	minimum (>0)	1	mode	5	maximum	15

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

Oil in Oil Accumulations (mmbo):	minimum	0.5	median	1.5	maximum	60
Gas in Gas Accumulations (bcfg):	minimum	3	median	9	maximum	360

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AVERAGE RATIOS FOR UNDISCOVERED ACCUMS., TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Accumulations:	minimum	mode	maximum
Gas/oil ratio (cfg/bo)	1250	2500	3750
NGL/gas ratio (bngl/mmcfg)	50	100	150

Gas Accumulations:	minimum	mode	maximum
Liquids/gas ratio (bliq/mmcfg)	10	20	30
Oil/gas ratio (bo/mmcfg)			

SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS

(variations in the properties of undiscovered accumulations)

Oil Accumulations:	minimum	mode	maximum
API gravity (degrees)	25	35	55
Sulfur content of oil (%)	0	0.2	0.5
Depth (m) of water (if applicable)			

	minimum	F75	mode	F25	maximum
Drilling Depth (m)	450		1500		6000

Gas Accumulations:	minimum	mode	maximum
Inert gas content (%)	0.1	1.5	20
CO_2 content (%)	0.1	1	10
Hydrogen-sulfide content (%)	0	0.1	1
Depth (m) of water (if applicable)			

	minimum	F75	mode	F25	maximum
Drilling Depth (m)	450		4500		6000

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

1. Wyoming represents 100 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		100	
Gas in Gas Accumulations: Volume % in entity		100	

2. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

3. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

4. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

5. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

6. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

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7. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

8. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

9. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

10. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

11. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

12. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

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

1. Federal Lands represents 30.39 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		50	
Gas in Gas Accumulations: Volume % in entity		50	

2. Private Lands represents 60.97 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		41	
Gas in Gas Accumulations: Volume % in entity		41	

3. Tribal Lands represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

4. Other Lands represents 1.3 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		1	
Gas in Gas Accumulations: Volume % in entity		1	

5. WY State Lands represents 7.34 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		8	
Gas in Gas Accumulations: Volume % in entity		8	

6. Unknown/Water represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

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7. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

8. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

9. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

10. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

11. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

12. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

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

1. Bureau of Land Management (BLM) represents 29.57 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		49	
Gas in Gas Accumulations: Volume % in entity		49	

2. BLM Wilderness Areas (BLMW) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

3. BLM Roadless Areas (BLMR) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

4. National Park Service (NPS) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

5. NPS Wilderness Areas (NPSW) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

6. NPS Protected Withdrawals (NPSP) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

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7. US Forest Service (FS) represents 0.19 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		0	
Gas in Gas Accumulations: Volume % in entity		0	

8. USFS Wilderness Areas (FSW) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

9. USFS Roadless Areas (FSR) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

10. USFS Protected Withdrawals (FSP) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

11. US Fish and Wildlife Service (FWS) represents 0.15 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		0.5	
Gas in Gas Accumulations: Volume % in entity		0.5	

12. USFWS Wilderness Areas (FWSW) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

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13. USFWS Protected Withdrawals (FWSP) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

14. Wilderness Study Areas (WS) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

15. Department of Energy (DOE) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

16. Department of Defense (DOD) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

17. Bureau of Reclamation (BOR) represents 0.49 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		0.5	
Gas in Gas Accumulations: Volume % in entity		0.5	

18. Tennessee Valley Authority (TVA) represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

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19. Other Federal _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

20. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

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

1. Central Basin and Hills (CNBH) represents 89.21 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		86	
Gas in Gas Accumulations: Volume % in entity		90	

2. Greater Green River Basin (GGRV) represents 2.76 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		7	
Gas in Gas Accumulations: Volume % in entity		5	

3. Northern Parks and Ranges (NPRN) represents 8.04 area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity		7	
Gas in Gas Accumulations: Volume % in entity		5	

4. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

5. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

6. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity			
Gas in Gas Accumulations: Volume % in entity			

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7. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

8. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

9. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

10. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

11. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

12. _____ represents _____ area % of the AU

	minimum	mode	maximum
Oil in Oil Accumulations: Volume % in entity	_____	_____	_____
Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

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