Appendix 2.   Basic Input Data for the Updip Albian Clastic Assessment Unit

Basic input data form in appendix 2 for the Updip Albian Clastic Assessment Unit (50490126). SEVENTH APPROXIMATION DATA FORM (NOGA, Version 6, 4–09–03). [Abbreviations: accums., accumulations; AU, assessment unit; bcfg, billion cubic feet of gas; bliq/mmcfg, barrels of liquid per million cubic feet of gas; bngl/mmcfg, barrels of natural gas liquids per million cubic feet of gas; bo/mmcfg, barrels of oil per million cubic feet of gas; cfg/bo, cubic feet of gas per barrel of oil; F, fractile (in percent); m, meters; min., minimum; mmboe, million barrels of oil equivalent; mmbo, million barrels of oil; NGL, natural gas liquids, no., number.]

IDENTIFICATION INFORMATION

Assessment Geologist: M. Merrill   Date: 27-Apr-10
Region: North America   Number: 5
Province: Gulf Coast Mesozoic   Number: 5049
Total Petroleum System: Upper Jurassic-Cretaceous-Tertiary Composite   Number: 504901
Assessment Unit: Updip Albian Clastic   Number: 50490126
Based on Data as of: NRG (2009, data current through 2007), IHS (2009)
Notes from Assessor:

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: 1   Gas: 0
Established (>13 accums.) _____ Frontier (1-13 accums.)   X   Hypothetical (no accums.) _____

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

Assessment-Unit Probabilities:

 Attribute   Probability of occurrence (0-1.0)
1. **CHARGE:** Adequate petroleum charge for an undiscovered accum. ≥ minimum size: 0.5
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 size   1.0

Assessment-Unit GEOLOGIC Probability (Product of 1, 2, and 3):   0.5

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	1	maximum	3
Gas Accumulations:	minimum (>0)	1	mode	1	maximum	2

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	maximum	5
Gas in Gas Accumulations (bcfg):	minimum	3	median	6	maximum	30

AVERAGE RATIOS FOR UNDISCOVERED ACCUMS., TO ASSESS COPRODUCTS
(uncertainty of fixed but unknown values)

Oil Accumulations:	minimum	mode	maximum
Gas/oil ratio (cfg/bo)	450	900	1350
NGL/gas ratio (bngl/mmcfg)	21	42	63

Gas Accumulations:	minimum	mode	maximum
Liquids/gas ratio (bliq/mmcfg)	13	26	39
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)	15	40	55
Sulfur content of oil (%)	0.2	0.4	4
Depth (m) of water (if applicable)	0	10	20

	minimum	F75	mode	F25	maximum
Drilling Depth (m)	10		900		2600

Gas Accumulations:	minimum	mode	maximum
Inert gas content (%)	0	0	6
CO_2 content (%)	0	2.5	7
Hydrogen-sulfide content (%)	0	0	0
Depth (m) of water (if applicable)	0	10	20

	minimum	F75	mode	F25	maximum
Drilling Depth (m)	300		1500		2600

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

1. Alabama _____ represents __21.69__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		5.00	

Gas in Gas Accumulations:			
Volume % in entity		5.00	

2. Arkansas _____ represents __2.89__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		10.00	

Gas in Gas Accumulations:			
Volume % in entity		10.00	

3. Florida _____ represents __29.57__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		3.00	

Gas in Gas Accumulations:			
Volume % in entity		3.00	

4. Georgia _____ represents __7.89__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		0.00	

Gas in Gas Accumulations:			
Volume % in entity		0.00	

5. Mississippi _____ represents __16.21__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		30.00	

Gas in Gas Accumulations:			
Volume % in entity		30.00	

6. Oklahoma _____ represents __1.44__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		2.00	

Gas in Gas Accumulations:			
Volume % in entity		2.00	

7. Texas _____ represents __20.31__ area % of the AU

Oil in Oil Accumulations: Volume % in entity	minimum _____	mode 50.00	maximum _____

Gas in Gas Accumulations: Volume % in entity	_____	50.00	_____

8. _____ represents _____ area % of the AU

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

Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

9. _____ represents _____ area % of the AU

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

Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

10. _____ represents _____ area % of the AU

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

Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

11. _____ represents _____ area % of the AU

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

Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

12. _____ represents _____ area % of the AU

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

Gas in Gas Accumulations: Volume % in entity	_____	_____	_____

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

1. Federal Lands _____ represents __3.82__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		3.82	

Gas in Gas Accumulations:			
Volume % in entity		3.82	

2. Private Lands _____ represents __87.32__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		87.32	

Gas in Gas Accumulations:			
Volume % in entity		87.32	

3. Tribal Lands _____ represents _____ area % of the AU

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

Gas in Gas Accumulations:			
Volume % in entity			

4. Other Lands _____ represents __0.68__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		0.68	

Gas in Gas Accumulations:			
Volume % in entity		0.68	

5. AR State Lands _____ represents __0.02__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		0.02	

Gas in Gas Accumulations:			
Volume % in entity		0.02	

6. FL State Lands _____ represents __1.82__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		1.82	

Gas in Gas Accumulations:			
Volume % in entity		1.82	

7. GA State Lands   represents ___0.07___ area % of the AU

Oil in Oil Accumulations: minimum   mode   maximum
    Volume % in entity   0.07

Gas in Gas Accumulations:
    Volume % in entity   0.07

8. MS State Lands   represents ___0.09___ area % of the AU

Oil in Oil Accumulations: minimum   mode   maximum
    Volume % in entity   0.09

Gas in Gas Accumulations:
    Volume % in entity   0.09

9. TX State Lands   represents ___0.04___ area % of the AU

Oil in Oil Accumulations: minimum   mode   maximum
    Volume % in entity   0.04

Gas in Gas Accumulations:
    Volume % in entity   0.04

10. FL Offshore   represents ___6.13___ area % of the AU

Oil in Oil Accumulations: minimum   mode   maximum
    Volume % in entity   6.13

Gas in Gas Accumulations:
    Volume % in entity   6.13

11. _____   represents _____ area % of the AU

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

Gas in Gas Accumulations:
    Volume % in entity

12. _____   represents _____ area % of the AU

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

Gas in Gas Accumulations:
    Volume % in entity

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

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

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

Gas in Gas Accumulations:
    Volume % in entity   _____   _____   _____

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

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

Gas in Gas Accumulations:
    Volume % in entity   _____   _____   _____

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

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

Gas in Gas Accumulations:
    Volume % in entity   _____   _____   _____

4. National Park Service (NPS) _____ represents   0.30   area % of the AU

Oil in Oil Accumulations: minimum   mode   maximum
    Volume % in entity   _____   0.30   _____

Gas in Gas Accumulations:
    Volume % in entity   _____   0.30   _____

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

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

Gas in Gas Accumulations:
    Volume % in entity   _____   _____   _____

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

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

Gas in Gas Accumulations:
    Volume % in entity   _____   _____   _____

7. US Forest Service (FS) represents 0.66 area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		0.66	

Gas in Gas Accumulations:			
Volume % in entity		0.66	

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:			
Volume % in entity			

11. US Fish and Wildlife Service (FWS) represents 1.50 area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		1.50	

Gas in Gas Accumulations:			
Volume % in entity		1.50	

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:			
Volume % in entity			

16. Department of Defense (DOD) _____ represents __1.36__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		1.36	

Gas in Gas Accumulations:			
Volume % in entity		1.36	

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:			
Volume % in entity			

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

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

Gas in Gas Accumulations:
    Volume % in entity
        _____   _____   _____

20. _____ represents _____ area % of the AU

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

Gas in Gas Accumulations:
    Volume % in entity
        _____   _____   _____

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

1. Blackland Prairies (BLPR) _____ represents __10.69__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		20.00	

Gas in Gas Accumulations:			
Volume % in entity		20.00	

2. Coastal Plains and Flatwoods, Lower (CPFL) _____ represents __25.43__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		6.00	

Gas in Gas Accumulations:			
Volume % in entity		6.00	

3. Coastal Plains, Middle (CPMD) _____ represents __29.92__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		20.00	

Gas in Gas Accumulations:			
Volume % in entity		20.00	

4. Cross Timbers and Prairie (CRTP) _____ represents __6.93__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		3.00	

Gas in Gas Accumulations:			
Volume % in entity		3.00	

5. Edwards Plateau (EDPT) _____ represents __0.04__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		0.00	

Gas in Gas Accumulations:			
Volume % in entity		0.00	

6. Florida Coastal Lowlands (Western) (FCLW) _____ represents __11.33__ area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		3.00	

Gas in Gas Accumulations:			
Volume % in entity		3.00	

7.   Mid Coastal Plains, Western (MCPW)   represents   3.94   area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		20.00	

Gas in Gas Accumulations:			
Volume % in entity		20.00	

8.   Mississippi Alluvial Basin (MABA)   represents   2.68   area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		1.87	

Gas in Gas Accumulations:			
Volume % in entity		1.87	

9.   Oak Woods and Prairies (OWPR)   represents   2.91   area % of the AU

Oil in Oil Accumulations:	minimum	mode	maximum
Volume % in entity		20.00	

Gas in Gas Accumulations:			
Volume % in entity		20.00	

10.   _____   represents _____ area % of the AU

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

Gas in Gas Accumulations:			
Volume % in entity			

11.   _____   represents _____ area % of the AU

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

Gas in Gas Accumulations:			
Volume % in entity			

12.   _____   represents _____ area % of the AU

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

Gas in Gas Accumulations:			
Volume % in entity			