

3.0 RESULTS

The results of the analyses are presented below where they are summarized by access category for land area and resources. Table 3a shows the results for the combined study areas and Tables 3b through 3f show the results for individual study areas. These tables show the results for land access categorization for land area, total liquids (oil, NGLs and liquids associated with gas reservoirs), and total natural gas (associated and non-associated). Total liquids and total natural gas comprise undiscovered technically recoverable resources and proved reserves. Matching charts depicting the access categorization are shown in figures 3a through 3f. Federal land access categorization maps for each study area are shown in figures 3g through 3k.

Corresponding maps showing the accessibility of undiscovered liquids resources on Federal lands for each study area are shown in figures 3l through 3p. Maps showing the accessibility of undiscovered natural gas resources on Federal lands for each study area are shown in figures 3q through 3ad. Note that, by way of example, figures 3s through 3ab show the GGRB Study Area where, in a sequence of the ten maps, the undiscovered natural gas resources available at each of the land access hierarchy levels are presented. This represents a sample of what can be derived from the GIS data that can be found on the CD-ROM.

For the remainder of Section 3 the term “resources” is used to denote “undiscovered technically recoverable resources and proved reserves.”

3.1 STUDY AREA FEATURES

Each of the study areas is unique in terms of its Federal lands, resources and reserves accessibility. Noted features are presented below:

3.1.1 Paradox/San Juan Basin

- Approximately 34 percent (5.96 million acres) of the Federal land in the basin is available for oil and gas leasing with standard stipulations (Figure 3b, “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 52 percent (224 million barrels) of the technically recoverable oil and 79 percent (28.9 trillion cubic feet) of the technically recoverable gas in the basin.
- Approximately 9 percent (1.62 million acres) of the Federal land is available for leasing with restrictions on oil and gas operations beyond standard stipulations (Figure 3b, all other “Leasing” categories except “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 16 percent (68 million barrels) of the technically recoverable oil and 17 percent (6.28 trillion cubic feet) of the technically recoverable gas in the basins.
- Approximately 57 percent (10 million acres) of the Federal land in the basin is not available for leasing (Figure 3b, 3 “No Leasing” categories). Based on resource estimates, these lands contain about 32 percent (138 million barrels) of the technically recoverable oil and 3 percent (1.18 trillion cubic feet) of the technically recoverable natural gas in the basins.
- The estimated volume of oil under all lands within the basin ranges from 174 to 1,319 million barrels, with a mean estimate of 660 million barrels¹.

¹USGS reports the volume of undiscovered oil and natural using a range of likelihoods (or percentage) that a certain volume of oil and natural gas is present. These estimates range from a 5 percent chance for a

Section 3 Results

- The estimated volume of natural gas under all lands within the basin ranges from 41 to 64 trillion cubic feet, with a mean estimate of 52 trillion cubic feet.
- Most of the undiscovered natural gas (approximately 95 percent) is found widely dispersed in continuous² deposits rather than distinct structural traps.
- Most of the oil (52 percent) and natural gas (79 percent) are available under standard lease terms.
- Among the five study areas in the inventory, this area has the greatest proportion of proved natural gas reserves (28 percent) relative to undiscovered resources.

3.1.2 Uinta/Piceance Basin

- Approximately 45 percent (6.23 million acres) of the Federal land in the basin is available for oil and gas leasing with standard stipulations (Figure 3c, “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 85 percent (186 million barrels) of the technically recoverable oil and 57 percent (9.26 trillion cubic feet) of the technically recoverable gas in the basin.
- Approximately 35 percent (4.74 million acres) of the Federal land is available for leasing with restrictions on oil and gas operations beyond standard stipulations (Figure 3c, all other “Leasing” categories except “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 9 percent (19 million barrels) of the technically recoverable oil and 37 percent (5.99 trillion cubic feet) of the technically recoverable gas in the basins.
- Approximately 20 percent (2.72 million acres) of the Federal land in the basin is not available for leasing (Figure 3c, 3 “No Leasing” categories). Based on resource estimates, these lands contain about 7 percent (14 million barrels) of the technically recoverable oil and 6 percent (0.89 trillion cubic feet) of the technically recoverable natural gas in the basins.
- The estimated volume of oil under all lands within the basin ranges from 61 to 296 million barrels, with a mean estimate of 149 million barrels.
- The estimated volume of natural gas under all lands within the basin ranges from 12 to 35 trillion cubic feet, with a mean estimate of 22 trillion cubic feet.
- Most of the undiscovered natural gas (greater than 95 percent) is found widely dispersed in continuous deposits rather than distinct structural traps.
- Among the five study areas, this area has the highest percentage of oil (85 percent) available under standard lease terms. This is partly because most of the oil (63 percent) is proved reserves.
- Compared to the other four areas in this inventory, this area has the highest percentage of federal lands (9 percent), as well as the natural gas (15 percent) resources designated within the “no surface occupancy” category.

3.1.3 Greater Green River Basin

large volume to a 95 percent chance for a small volume of oil and natural gas to occur. This inventory used the mean or the average of all the possible likelihoods and volumes. For the Paradox/San Juan Basin, there is a 5 percent likelihood that 1,319 million barrels of oil and a 95 percent likelihood that 174 million barrels of oil could occur. However, the average estimate for the area is 600 million barrels of oil.

² A continuous accumulation of oil or natural gas is one that is located throughout a large area and lacks a discrete border or structural trap.

- Approximately 45 percent (5.12 million acres) of the Federal land in the basin is available for oil and gas leasing with standard stipulations (Figure 3d, “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 57 percent (1,162 million barrels) of the technically recoverable oil and 61 percent (43.6 trillion cubic feet) of the technically recoverable gas in the basin.
- Approximately 37 percent (4.24 million acres) of the Federal land is available for leasing with restrictions on oil and gas operations beyond standard stipulations (Figure 3d, all other “Leasing” categories except “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 31 percent (635 million barrels) of the technically recoverable oil and 29 percent (20.6 trillion cubic feet) of the technically recoverable gas in the basins.
- Approximately 19 percent (2.16 million acres) of the Federal land in the basin is not available for leasing (Figure 3d, 3 “No Leasing” categories). Based on resource estimates, these lands contain about 13 percent (259 million barrels) of the technically recoverable oil and 10 percent (7.35 trillion cubic feet) of the technically recoverable natural gas in the basins.
- The estimated volume of oil under all lands within the basin ranges from 1,367 to 4,724 million barrels, with a mean estimate of 2,709 million barrels.
- The estimated volume of natural gas under all lands within the basin ranges from 53 to 127 trillion cubic feet, with a mean estimate of 85 trillion cubic feet.
- Almost all of the undiscovered natural gas (97 percent) is widely dispersed in continuous deposits rather than distinct structural traps.
- A relatively large portion of the federal land (29 percent of the surface area) and, 27 percent of the oil and 25 percent of the natural gas are under timing limitations of 3 to 9 months.
- Among the five inventory areas, this area has the greatest volume of oil (2.1 billion barrels) and natural gas (72 trillion cubic feet) under federal lands.
- The land ownership pattern is highly complex due a checkerboard pattern of ownership resulting from railroad grants.

3.1.4 Powder River Basin

- Approximately 52 percent (5.51 million acres) of the Federal land in the basin is available for oil and gas leasing with standard stipulations (Figure 3e, “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 63 percent (620 million barrels) of the technically recoverable oil and 59 percent (4.82 trillion cubic feet) of the technically recoverable gas in the basin.
- Approximately 35 percent (3.73 million acres) of the Federal land is available for leasing with restrictions on oil and gas operations beyond standard stipulations (Figure 3e, all other “Leasing” categories except “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 33 percent (324 million barrels) of the technically recoverable oil and 32 percent (2.57 trillion cubic feet) of the technically recoverable gas in the basins.
- Approximately 14 percent (1.45 million acres) of the Federal land in the basin is not available for leasing (Figure 3e, 3 “No Leasing” categories). Based on resource estimates, these lands contain about 4 percent (36 million barrels) of the technically recoverable oil and 9 percent (0.76 trillion cubic feet) of the technically recoverable natural gas in the basins.

Section 3 Results

- The estimated volume of oil under all lands within the basin ranges from 350 to 3,345 million barrels, with a mean estimate of 1,642 million barrels.
- The estimated volume of natural gas under all lands within the basin ranges from 9 to 27 trillion cubic feet, with a mean estimate of 16 trillion cubic feet.
- Almost all undiscovered natural gas is continuous coalbed natural gas (98 percent).
- Most of the federal land (52 percent) and 63 percent of the oil and 59 percent of the natural gas are available under standard lease terms.
- Among the five inventory areas, this area has the highest proportion of federal land (10 percent) and 12 percent of the oil, and 11 percent of the natural gas available under the controlled surface use category.
- Among the five inventory areas, this area has the highest proportion of split estate lands³ (60 percent of federal lands).

3.1.5 Montana Thrust Belt

- Approximately 4 percent (0.23 million acres) of the Federal land in the basin is available for oil and gas leasing with standard stipulations (Figure 3f, “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 3 percent (6 million barrels) of the technically recoverable oil and 1 percent (0.05 trillion cubic feet) of the technically recoverable gas in the basin.
- Approximately 14 percent (0.83 million acres) of the Federal land is available for leasing with restrictions on oil and gas operations beyond standard stipulations (Figure 3f, all other “Leasing” categories except “Leasing, Standard Lease Terms”). Based on resource estimates, these lands contain 9 percent (15 million barrels) of the technically recoverable oil and 8 percent (0.52 trillion cubic feet) of the technically recoverable gas in the basins.
- Approximately 82 percent (4.79 million acres) of the Federal land in the basin is not available for leasing (Figure 3f, 3 “No Leasing” categories). Based on resource estimates, these lands contain about 88 percent (149 million barrels) of the technically recoverable oil and 91 percent (5.73 trillion cubic feet) of the technically recoverable natural gas in the basins.
- The estimated volume of oil under all lands within the area ranges from 55 to 843 million barrels, with a mean estimate of 348 million barrels.
- The estimated volume of natural gas under all lands within the area ranges from 1.1 to 21 trillion cubic feet, with a mean estimate of 8.6 trillion cubic feet.
- The area contains the smallest volume of resource of all five-inventory areas (oil, 348 million barrels; natural gas, 8.6 trillion cubic feet).
- A high percentage of the federal land (82 percent) and 88 percent of the oil and 91 percent of the natural gas are currently “closed” to leasing.
- The USDA-Forest Service is the primary federal land manager in the area (69 percent of the area of which almost half is currently “closed” to leasing while undergoing new land use planning).

³ Split estate lands are those lands where the surface rights belong to private individuals but the subsurface mineral rights are publicly held, and managed by the federal government.

Level	Access Category	Area		Resources			
		(acres x1000)	Percent of Federal	Total Liquids* (MMBbl)***	Percent of Federal	Total Natural Gas** (Bcf)****	Percent of Federal
1.	No Leasing (Statutory/Executive Order)	10,068	17%	298	8%	9,035	7%
2.	No Leasing (Administrative, Pending Land Use Plan)	6,007	10%	116	3%	3,690	3%
3.	No Leasing (Administrative)	5,098	9%	182	5%	3,185	2%
4.	Leasing, No Surface Occupancy	2,714	5%	50	1%	3,120	2%
5.	Leasing, Cumulative Timing Limitations on Drilling >9 Months	25	0%	3	0%	114	0%
6.	Leasing, Cumulative Timing Limitations on Drilling 6-9 Months	2,521	4%	250	6%	5,549	4%
7.	Leasing, Cumulative Timing Limitations on Drilling 3-6 Months	5,442	9%	528	14%	20,401	15%
8.	Leasing, Cumulative Timing Limitations on Drilling <3 Months	697	1%	8	0%	733	1%
9.	Leasing, Controlled Surface Use	3,753	6%	221	6%	6,080	4%
10.	Leasing, Standard Lease Terms	23,091	39%	2,198	57%	86,566	63%
Total, Federal Lands Including Split Estate		59,416	100%	3,854	100%	138,472	100%
Total Non-Federal		44,256		2,455		87,668	
Total Study Area		103,672		6,309		226,141	

More
Constrained
↑
Less
Constrained

* Comprising oil, NGLs and liquids associated with natural gas reservoirs

** Comprising associated dissolved and nonassociated natural gas

***MMBbl -- Millions of Barrels

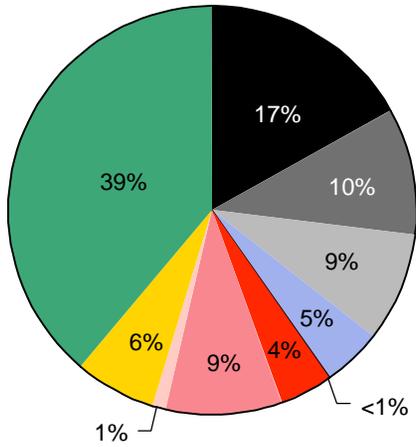
****Bcf -- Billion cubic feet

Small rounding errors may be present

Closed to leasing	21,173	36%	596	15%	15,910	11%
Leasing with restrictions	15,152	26%	1,060	28%	35,997	26%
Leasing with standard lease terms	23,091	39%	2,198	57%	86,566	63%

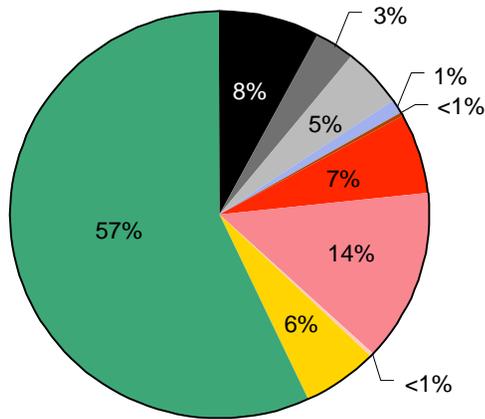
Table 3a Summary of All EPCA Inventory Areas – Oil and Natural Gas Resources Affected by Access Categories

Percent of Federal and Split Estate Lands



- No Leasing (Statutory/Executive Order)
- No Leasing (Administrative, Pending Land Use Plan)
- No Leasing (Administrative)
- Leasing, No Surface Occupancy
- Leasing, Cumulative Timing Limitations on Drilling >9 Months
- Leasing, Cumulative Timing Limitations on Drilling 6-9 Months
- Leasing, Cumulative Timing Limitations on Drilling 3-6 Months
- Leasing, Cumulative Timing Limitations on Drilling <3 Months
- Leasing, Controlled Surface Use
- Leasing, Standard Lease Terms

Percent of Oil Resources



Percent of Natural Gas Resources

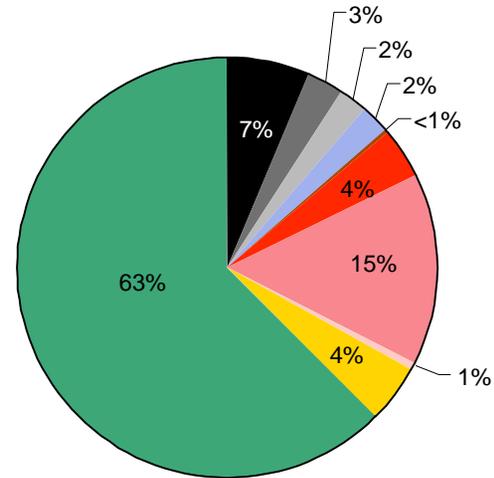


Figure 3a Summary of All EPCA Inventory Areas – Oil and Natural Gas Resources Affected by Access Categories

Level	Access Category	Area		Resources			
		(acres x1000)	Percent of Federal	Total Liquids* (MMBbl)***	Percent of Federal	Total Natural Gas** (Bcf)****	Percent of Federal
1.	No Leasing (Statutory/Executive Order), (NLS)	5,309	30%	66	15%	540	1%
2.	No Leasing (Administrative), (NLA/LUP)	2,050	12%	4	1%	1	0%
3.	No Leasing (Administrative), (NLA)	2,690	15%	68	16%	647	2%
4.	Leasing, No Surface Occupancy (NSO)	196	1%	6	1%	67	0%
5.	Leasing, Cumulative Timing Limitations on Drilling >9 Months (TLs >9)	0	0%	0	0%	0	0%
6.	Leasing, Cumulative Timing Limitations on Drilling 6-9 Months (TLs 6-9)	95	1%	4	1%	402	1%
7.	Leasing, Cumulative Timing Limitations on Drilling 3-6 Months (TLs 3-6)	764	4%	33	8%	4,015	11%
8.	Leasing, Cumulative Timing Limitations on Drilling <3 Months (TLs <3)	23	0%	1	0%	10	0%
9.	Leasing, Controlled Surface Use (CSU)	542	3%	23	5%	1,789	5%
10.	Leasing, Standard Lease Terms (SLTs)	5,960	34%	224	52%	28,869	79%
Total, Federal Lands Including Split Estate		17,628	100%	430	100%	36,340	100%
Total Non-Federal		11,040		404		36,142	
Total Study Area		28,669		834		72,482	

* Comprising oil, NGLs and liquids associated with natural gas reservoirs

** Comprising associated dissolved and nonassociated natural gas

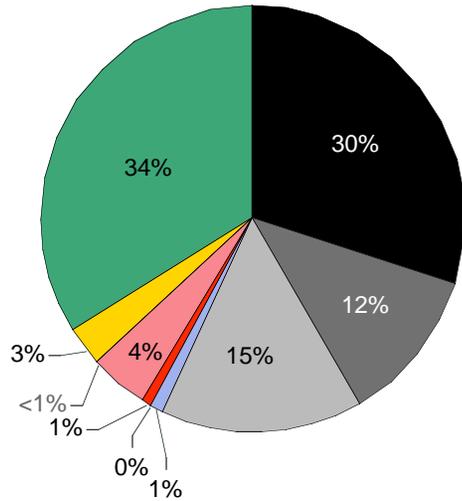
***MMBbl -- Millions of Barrels

****Bcf -- Billion cubic feet

Closed to leasing	10,048	57%	138	32%	1,187	3%
Leasing with restrictions	1,620	9%	68	16%	6,283	17%
Leasing with standard lease terms	5,960	34%	224	52%	28,869	79%

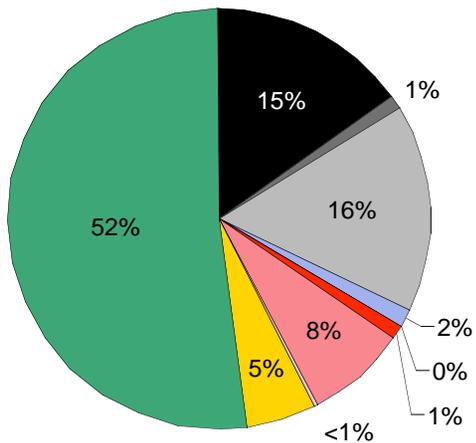
Table 3b Results—Land and Resources Categorization, Paradox/San Juan Study Areas

Percent of Federal and Split Estate Lands



- No Leasing (Statutory/Executive Order)
- No Leasing (Administrative, Pending Land Use Plan)
- No Leasing (Administrative)
- Leasing, No Surface Occupancy
- Leasing, Cumulative Timing Limitations on Drilling >9 Months
- Leasing, Cumulative Timing Limitations on Drilling 6-9 Months
- Leasing, Cumulative Timing Limitations on Drilling 3-6 Months
- Leasing, Cumulative Timing Limitations on Drilling <3 Months
- Leasing, Controlled Surface Use
- Leasing, Standard Lease Terms

Percent of Oil Resources



Percent of Natural Gas Resources

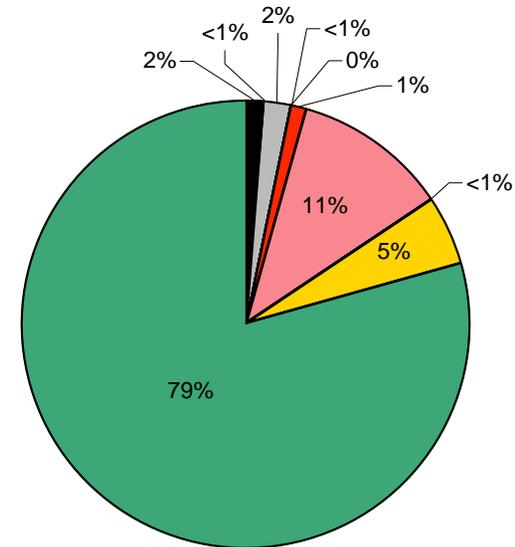


Figure 3b Chart of Results—Land and Resources Categorization, Paradox/San Juan Study Area

Level	Access Category	Area		Resources			
		(acres x1000)	Percent of Federal	Total Liquids*		Total Natural Gas**	
				(MMBbl)***	Percent of Federal	(Bcf)****	Percent of Federal
1.	No Leasing (Statutory/Executive Order), (NLS)	1,661	12.1%	13	5.8%	661	4.1%
2.	No Leasing (Administrative), (NLA/LUP)	644	4.7%	1	0.6%	149	0.9%
3.	No Leasing (Administrative), (NLA)	419	3.1%	0	0.2%	81	0.5%
4.	Leasing, No Surface Occupancy (NSO)	1,268	9.3%	8	3.6%	2,433	15.1%
5.	Leasing, Cumulative Timing Limitations on Drilling >9 Months (TLs >9)	0	0.0%	0	0.0%	0	0.0%
6.	Leasing, Cumulative Timing Limitations on Drilling 6-9 Months (TLs 6-9)	238	1.7%	1	0.5%	86	0.5%
7.	Leasing, Cumulative Timing Limitations on Drilling 3-6 Months (TLs 3-6)	1,314	9.6%	4	2.0%	1,652	10.2%
8.	Leasing, Cumulative Timing Limitations on Drilling <3 Months (TLs <3)	538	3.9%	2	0.8%	585	3.6%
9.	Leasing, Controlled Surface Use (CSU)	1,381	10.1%	4	1.7%	1,232	7.6%
10.	Leasing, Standard Lease Terms (SLTs)	6,231	45.5%	186	84.8%	9,255	57.4%
Total, Federal Lands Including Split Estate		13,694	100.0%	220	100.0%	16,135	100.0%
Total Non-Federal		5,252		184		12,708	
Total Study Area		18,945		404		28,843	

* including oil, NGLs and liquids associated with natural gas reservoirs

** including associated dissolved and nonassociated natural gas

***MMBbl -- Millions of Barrels

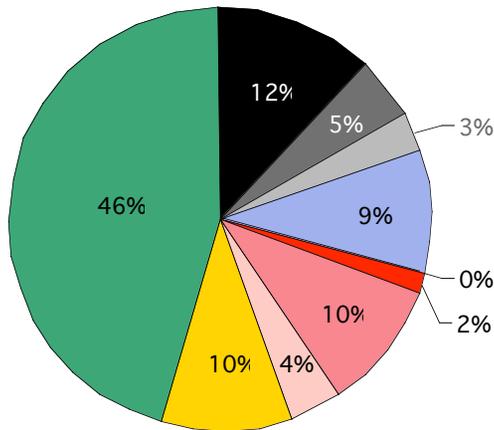
****Bcf -- Billion cubic feet

Small rounding errors

may be present

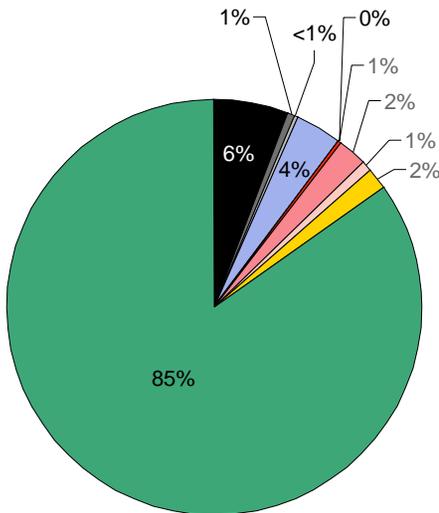
Table 3c Results—Land and Resources Categorization, Uinta/Piceance Study Area

Percent of Federal and Split Estate Lands



- No Leasing (Statutory/Executive Order)
- No Leasing (Administrative, Pending Land Use Plan)
- No Leasing (Administrative)
- Leasing, No Surface Occupancy
- Leasing, Cumulative Timing Limitations on Drilling >9 Months
- Leasing, Cumulative Timing Limitations on Drilling 6-9 Months
- Leasing, Cumulative Timing Limitations on Drilling 3-6 Months
- Leasing, Cumulative Timing Limitations on Drilling <3 Months
- Leasing, Controlled Surface Use
- Leasing, Standard Lease Terms

Percent of Oil Resources



Percent of Natural Gas Resources

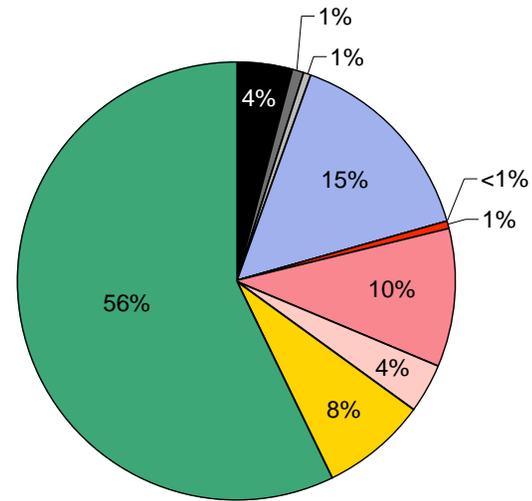


Figure 3c

Chart of Results—Land and Resources Categorization, Uinta/Piceance Study Area

Level	Access Category	Area		Resources			
		(acres x1000)	Percent of Federal	Total Liquids* (MMBbl)***	Percent of Federal	Total Natural Gas** (Bcf)****	Percent of Federal
1.	No Leasing (Statutory/Executive Order), (NLS)	638	5.5%	135	6.6%	4,598	6.4%
2.	No Leasing (Administrative), (NLA/LUP)	461	4.0%	37	1.8%	702	1.0%
3.	No Leasing (Administrative), (NLA)	1,058	9.2%	86	4.2%	2,046	2.9%
4.	Leasing, No Surface Occupancy (NSO)	266	2.3%	12	0.6%	175	0.2%
5.	Leasing, Cumulative Timing Limitations on Drilling >9 Months (TLs >9)	8	0.1%	3	0.1%	107	0.1%
6.	Leasing, Cumulative Timing Limitations on Drilling 6-9 Months (TLs 6-9)	992	8.6%	110	5.3%	4,055	5.7%
7.	Leasing, Cumulative Timing Limitations on Drilling 3-6 Months (TLs 3-6)	2,369	20.5%	437	21.3%	14,117	19.7%
8.	Leasing, Cumulative Timing Limitations on Drilling <3 Months (TLs <3)	64	0.6%	4	0.2%	104	0.1%
9.	Leasing, Controlled Surface Use (CSU)	536	4.6%	69	3.4%	2,076	2.9%
10.	Leasing, Standard Lease Terms (SLTs)	5,159	44.7%	1,162	56.5%	43,565	60.9%
Total, Federal Lands Including Split Estate		11,551	100.0%	2,055	100.0%	71,546	100.0%
Total Non-Federal		5,033		832		25,747	
Total Study Area		16,583		2,887		97,293	

* including oil, NGLs and liquids associated with natural gas reservoirs

** including associated dissolved and nonassociated natural gas

***MMBbl -- Millions of Barrels

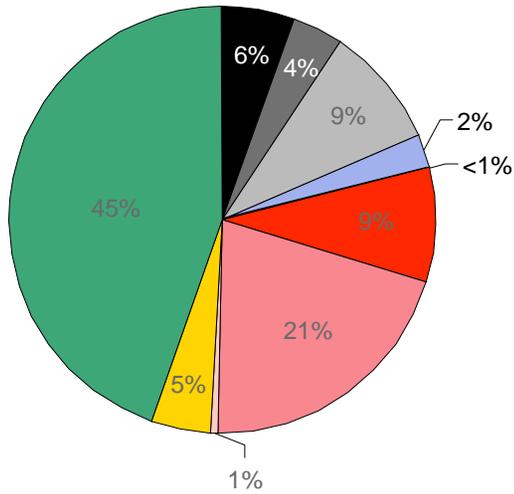
****Bcf -- Billion cubic feet

Small rounding errors

may be present

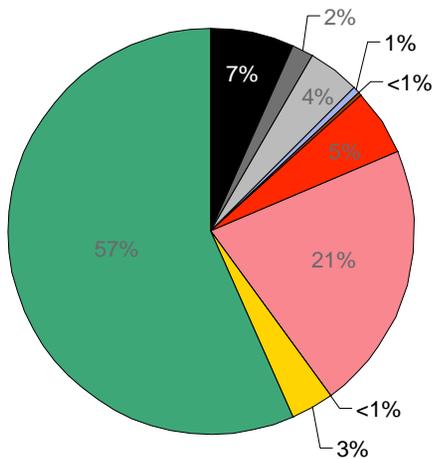
Table 3d Results—Land and Resources Categorization, Greater Green River Study Area

Percent of Federal and Split Estate Lands



- No Leasing (Statutory/Executive Order)
- No Leasing (Administrative, Pending Land Use Plan)
- No Leasing (Administrative)
- Leasing, No Surface Occupancy
- Leasing, Cumulative Timing Limitations on Drilling >9 Months
- Leasing, Cumulative Timing Limitations on Drilling 6-9 Months
- Leasing, Cumulative Timing Limitations on Drilling 3-6 Months
- Leasing, Cumulative Timing Limitations on Drilling <3 Months
- Leasing, Controlled Surface Use
- Leasing, Standard Lease Terms

Percent of Oil Resources



Percent of Natural Gas Resources

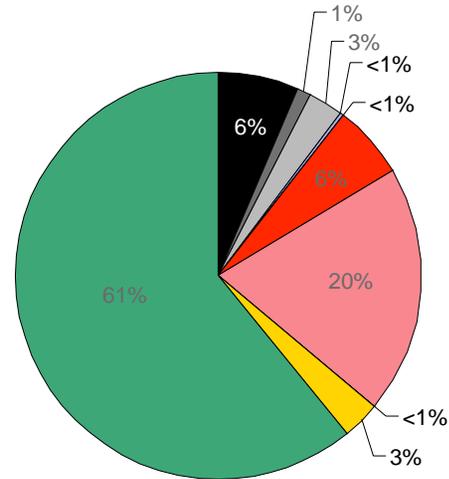


Figure 3d Chart of Results—Land and Resources Categorization, Greater Green River Study Area

Level	Access Category	Area		Resources			
		(acres x1000)	Percent of Federal	Total Liquids* (MMBbl)***	Percent of Federal	Total Natural Gas** (Bcf)****	Percent of Federal
1.	No Leasing (Statutory/Executive Order), (NLS)	109	1%	0	0.0%	26	0.3%
2.	No Leasing (Administrative), (NLA/LUP)	1,006	9%	17	1.7%	570	7.0%
3.	No Leasing (Administrative), (NLA)	335	3%	18	1.9%	165	2.0%
4.	Leasing, No Surface Occupancy (NSO)	644	6%	17	1.7%	178	2.2%
5.	Leasing, Cumulative Timing Limitations on Drilling >9 Months (TLs >9)	1	0%	0	0.0%	1	0.0%
6.	Leasing, Cumulative Timing Limitations on Drilling 6-9 Months (TLs 6-9)	1,122	10%	133	13.6%	961	11.8%
7.	Leasing, Cumulative Timing Limitations on Drilling 3-6 Months (TLs 3-6)	870	8%	52	5.3%	545	6.7%
8.	Leasing, Cumulative Timing Limitations on Drilling <3 Months (TLs <3)	3	0%	1	0.1%	4	0.1%
9.	Leasing, Controlled Surface Use (CSU)	1,092	10%	121	12.4%	884	10.8%
10.	Leasing, Standard Lease Terms (SLTs)	5,511	52%	620	63.3%	4,824	59.1%
Total, Federal Lands Including Split Estate		10,693	100%	979	100%	8,157	100%
Total Non-Federal		17,102		856		10,728	
Total Study Area		27,796		1,835		18,885	

* Comprising oil, NGLs and liquids associated with natural gas reservoirs

** Comprising associated dissolved and nonassociated natural gas

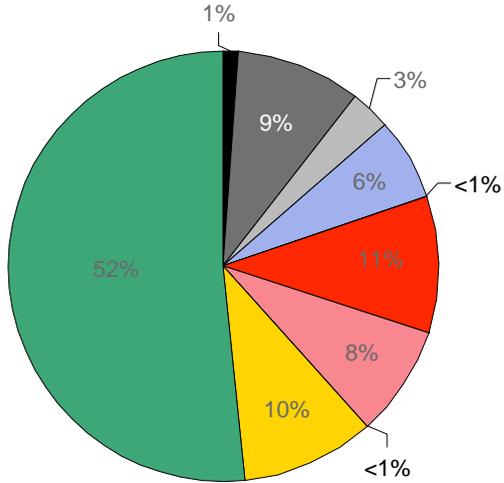
***MMBbl -- Millions of Barrels

****Bcf -- Billion cubic feet

Closed to leasing	1,450	14%	36	4%	761	9%
Leasing with restrictions	3,733	35%	324	33%	2,572	32%
Leasing with standard lease terms	5,511	52%	620	63%	4,824	59%

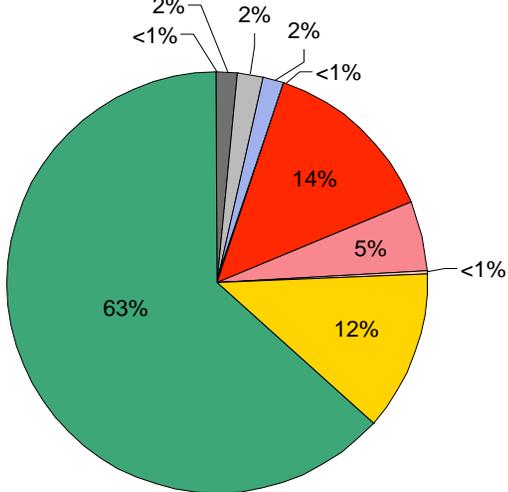
Table 3e. Results—Land and Resources Categorization, Powder River Study Area

Percent of Federal and Split Estate Lands



- No Leasing (Statutory/Executive Order)
- No Leasing (Administrative, Pending Land Use Plan)
- No Leasing (Administrative)
- Leasing, No Surface Occupancy
- Leasing, Cumulative Timing Limitations on Drilling >9 Months
- Leasing, Cumulative Timing Limitations on Drilling 6-9 Months
- Leasing, Cumulative Timing Limitations on Drilling 3-6 Months
- Leasing, Cumulative Timing Limitations on Drilling <3 Months
- Leasing, Controlled Surface Use
- Leasing, Standard Lease Terms

Percent of Oil Resources



Percent of Natural Gas Resources

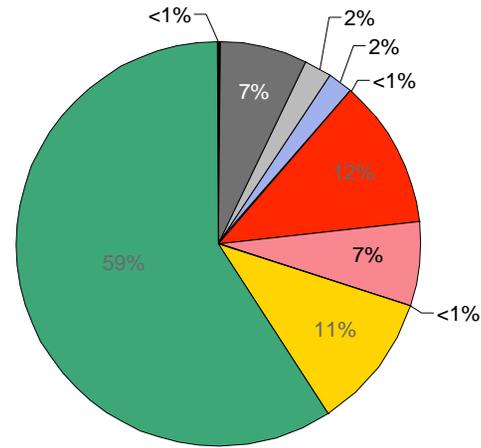


Figure 3e. Chart of Results—Land and Resources Categorization, Powder River Study Area

Level	Access Category	Area		Resources			
		(acres x1000)	Percent of Federal	Total Liquids* (MMBbl)***	Percent of Federal	Total Natural Gas** (Bcf)****	Percent of Federal
1.	No Leasing (Statutory/Executive Order), (NLS)	2,351	40.2%	83	49.2%	3,210	51.0%
2.	No Leasing (Administrative), (NLA/LUP)	1,846	31.6%	57	33.4%	2,269	36.0%
3.	No Leasing (Administrative), (NLA)	597	10.2%	9	5.2%	247	3.9%
4.	Leasing, No Surface Occupancy (NSO)	340	5.8%	7	3.9%	266	4.2%
5.	Leasing, Cumulative Timing Limitations on Drilling >9 Months (TLs >9)	16	0.3%	0	0.1%	6	0.1%
6.	Leasing, Cumulative Timing Limitations on Drilling 6-9 Months (TLs 6-9)	74	1.3%	1	0.6%	45	0.7%
7.	Leasing, Cumulative Timing Limitations on Drilling 3-6 Months (TLs 3-6)	124	2.1%	3	1.5%	72	1.1%
8.	Leasing, Cumulative Timing Limitations on Drilling <3 Months (TLs <3)	69	1.2%	1	0.4%	29	0.5%
9.	Leasing, Controlled Surface Use (CSU)	203	3.5%	4	2.3%	99	1.6%
10.	Leasing, Standard Lease Terms (SLTs)	230	3.9%	6	3.4%	52	0.8%
Total, Federal Lands Including Split Estate		5,849	100.0%	170	100.0%	6,294	100.0%
Total Non-Federal		5,829		179		2,344	
Total Study Area		11,678		348		8,638	

* including oil, NGLs and liquids associated with natural gas reservoirs

** including associated dissolved and nonassociated natural gas

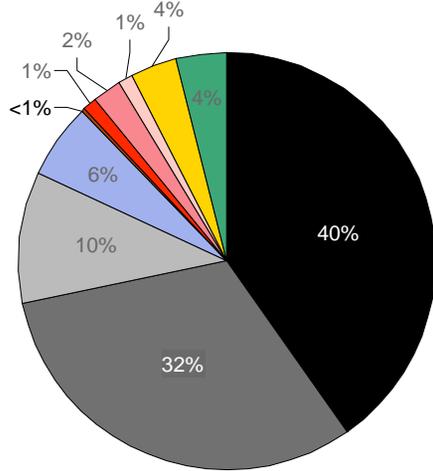
***MMBbl -- Millions of Barrels

****Bcf -- Billion cubic feet

Small rounding errors may be present

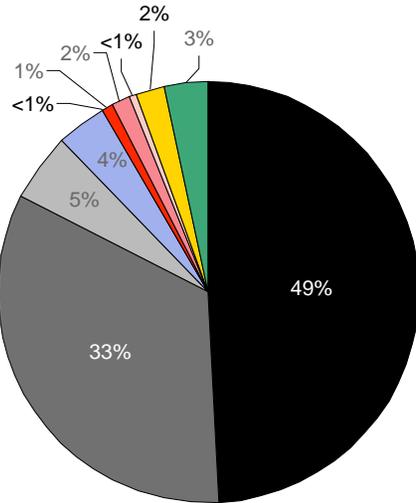
Table 3f. Results—Land and Resources Categorization, Montana Thrust Belt Study Area

Percent of Federal and Split Estate Lands



- No Leasing (Statutory/Executive Order)
- No Leasing (Administrative, Pending Land Use Plan)
- No Leasing (Administrative)
- Leasing, No Surface Occupancy
- Leasing, Cumulative Timing Limitations on Drilling >9 Months
- Leasing, Cumulative Timing Limitations on Drilling 6-9 Months
- Leasing, Cumulative Timing Limitations on Drilling 3-6 Months
- Leasing, Cumulative Timing Limitations on Drilling <3 Months
- Leasing, Controlled Surface Use
- Leasing, Standard Lease Terms

Percent of Oil Resources



Percent of Natural Gas Resources

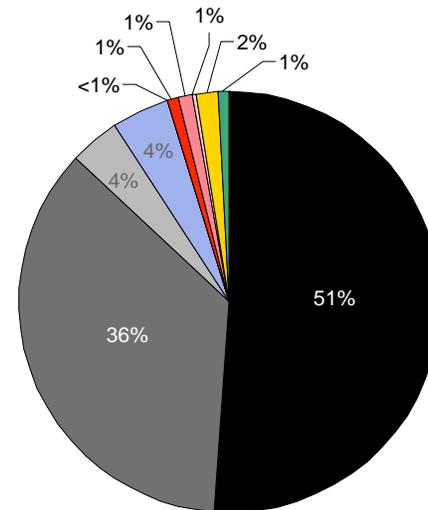


Figure 3f. Chart of Results—Land and Resources Categorization, Montana Thrust Belt Study Area

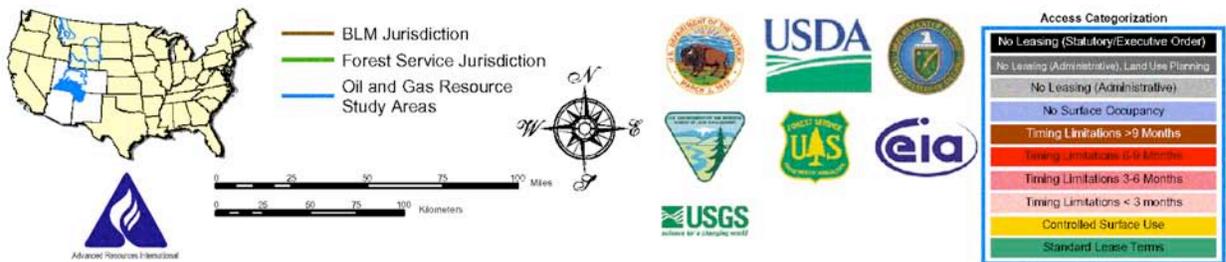
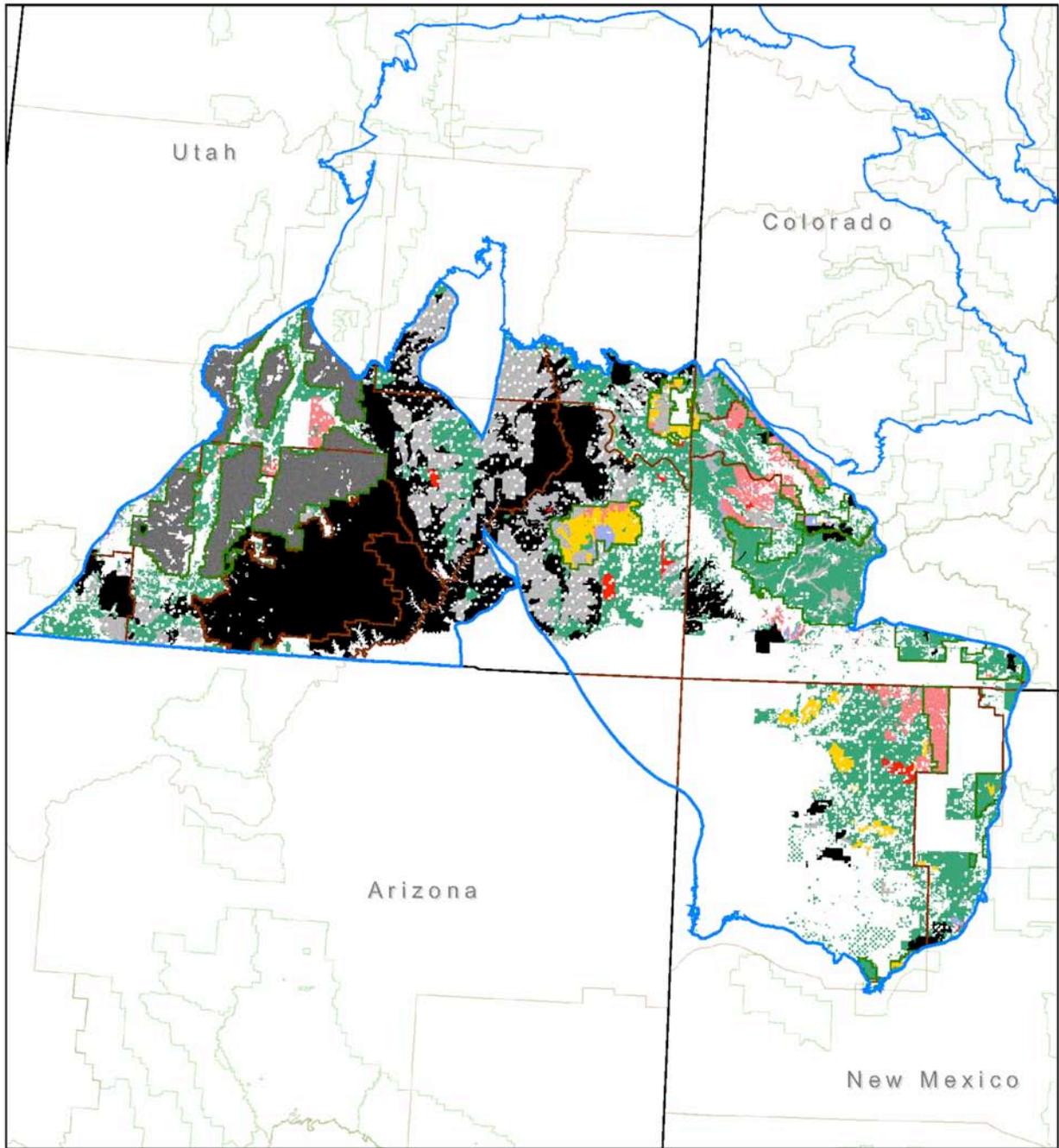
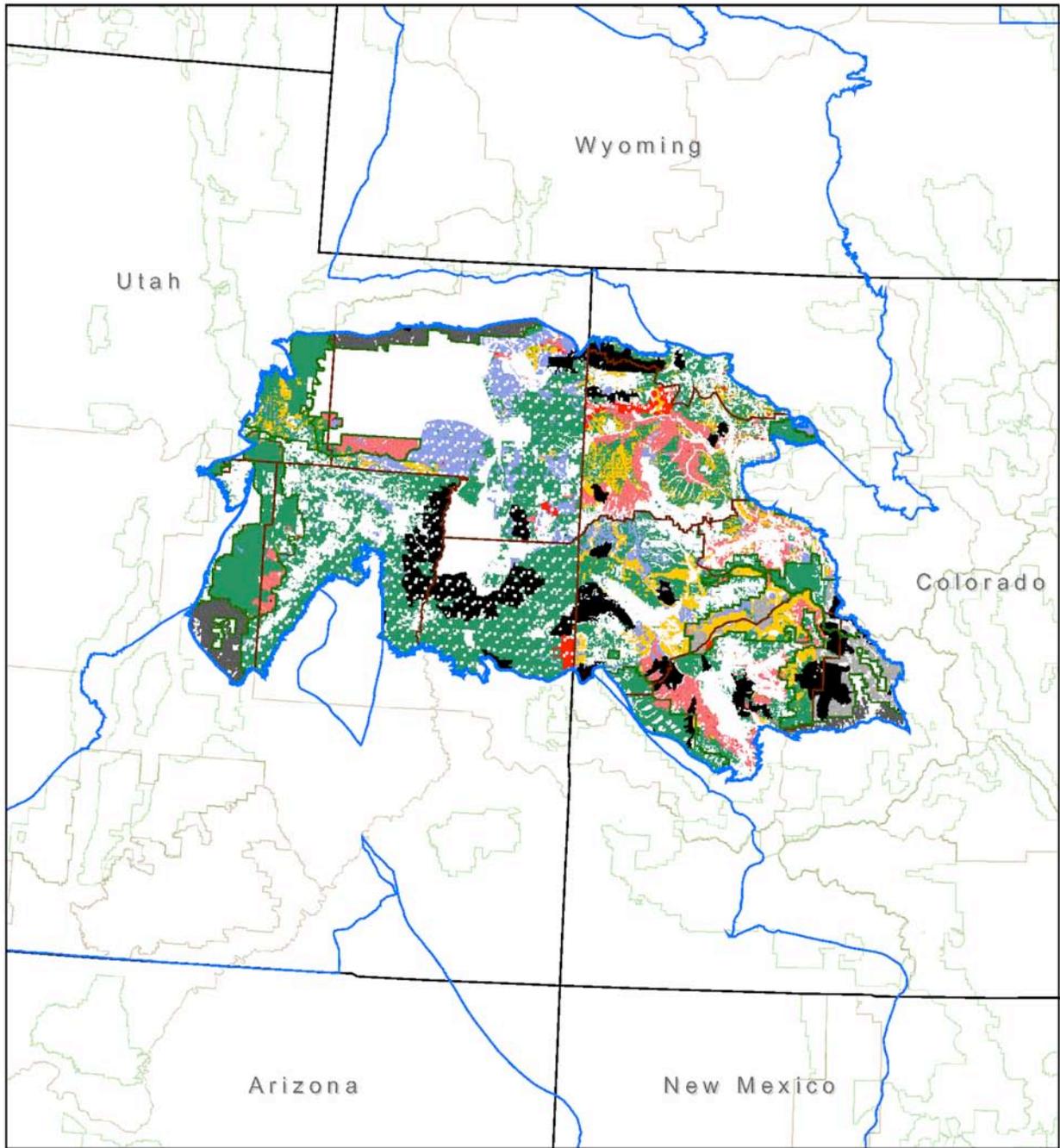
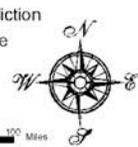


Figure 3g Land Access Categorization Map – Paradox/San Juan Study Areas

Section 3
Results



- BLM Jurisdiction
- Forest Service Jurisdiction
- Oil and Gas Resource Study Areas



Access Categorization	
No Leasing (Statutory/Executive Order)	
No Leasing (Administrative), Land Use Planning	
No Leasing (Administrative)	
No Surface Occupancy	
Timing Limitations >9 Months	
Timing Limitations 6-9 Months	
Timing Limitations 3-6 Months	
Timing Limitations < 3 months	
Controlled Surface Use	
Standard Lease Terms	

Figure 3h Land Access Categorization – Uinta/Piceance Study Areas

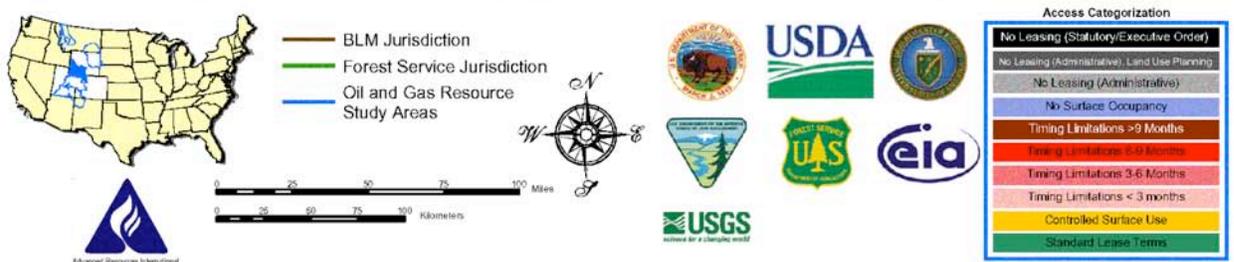
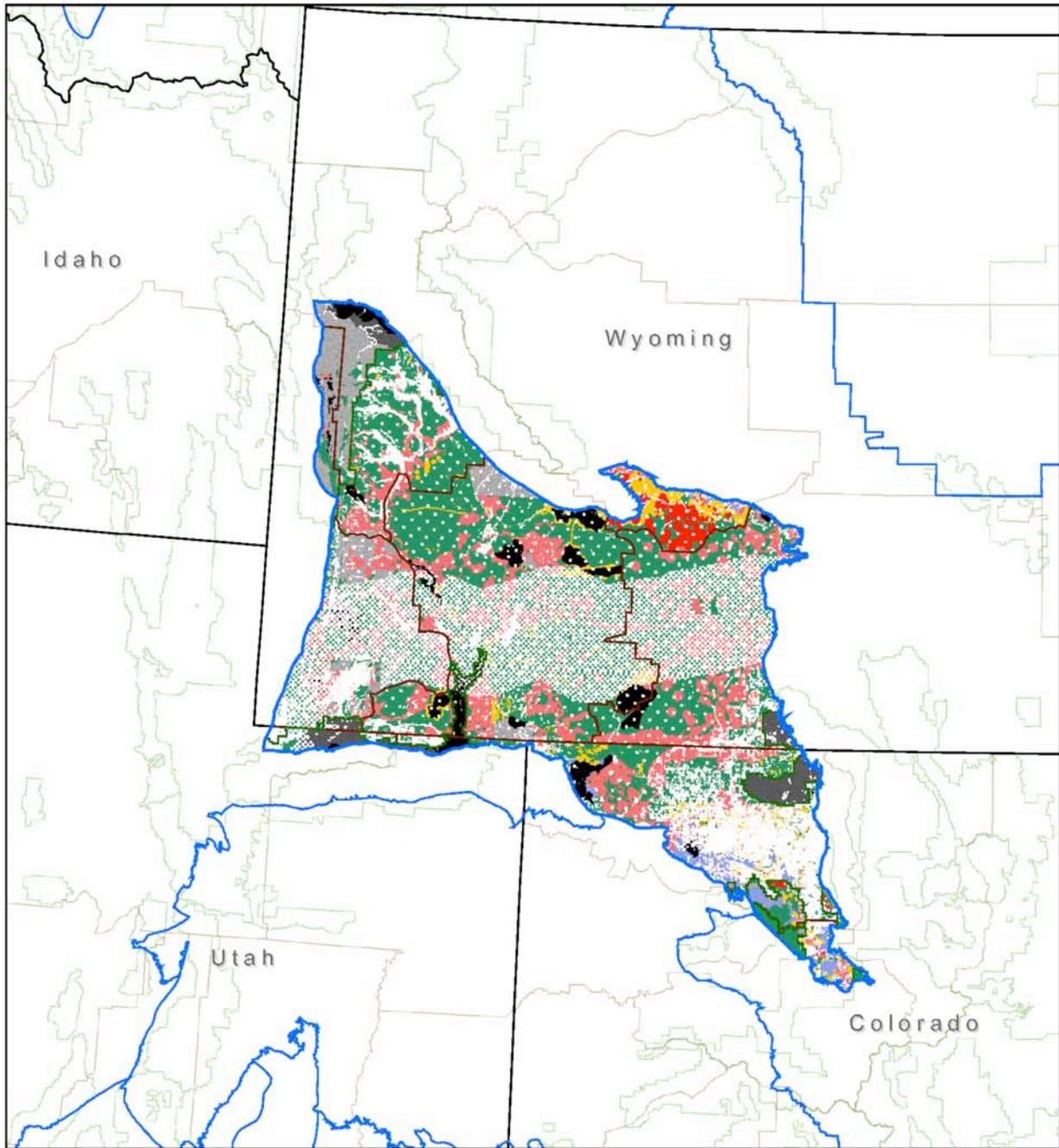


Figure 3i Land Access Categorization – Greater Green River Study Area

Section 3
Results

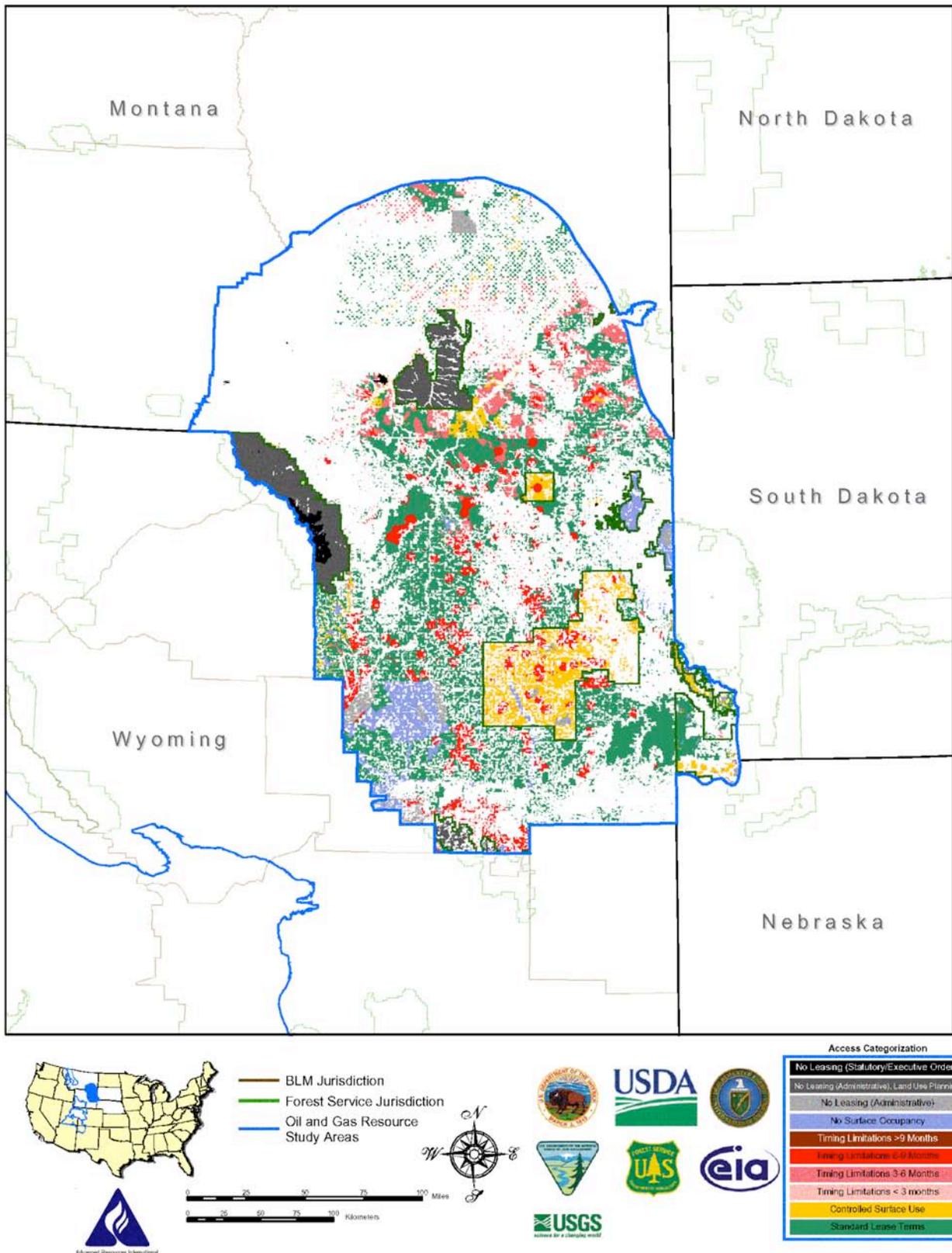


Figure 3j Land Access Categorization – Powder River Study Area

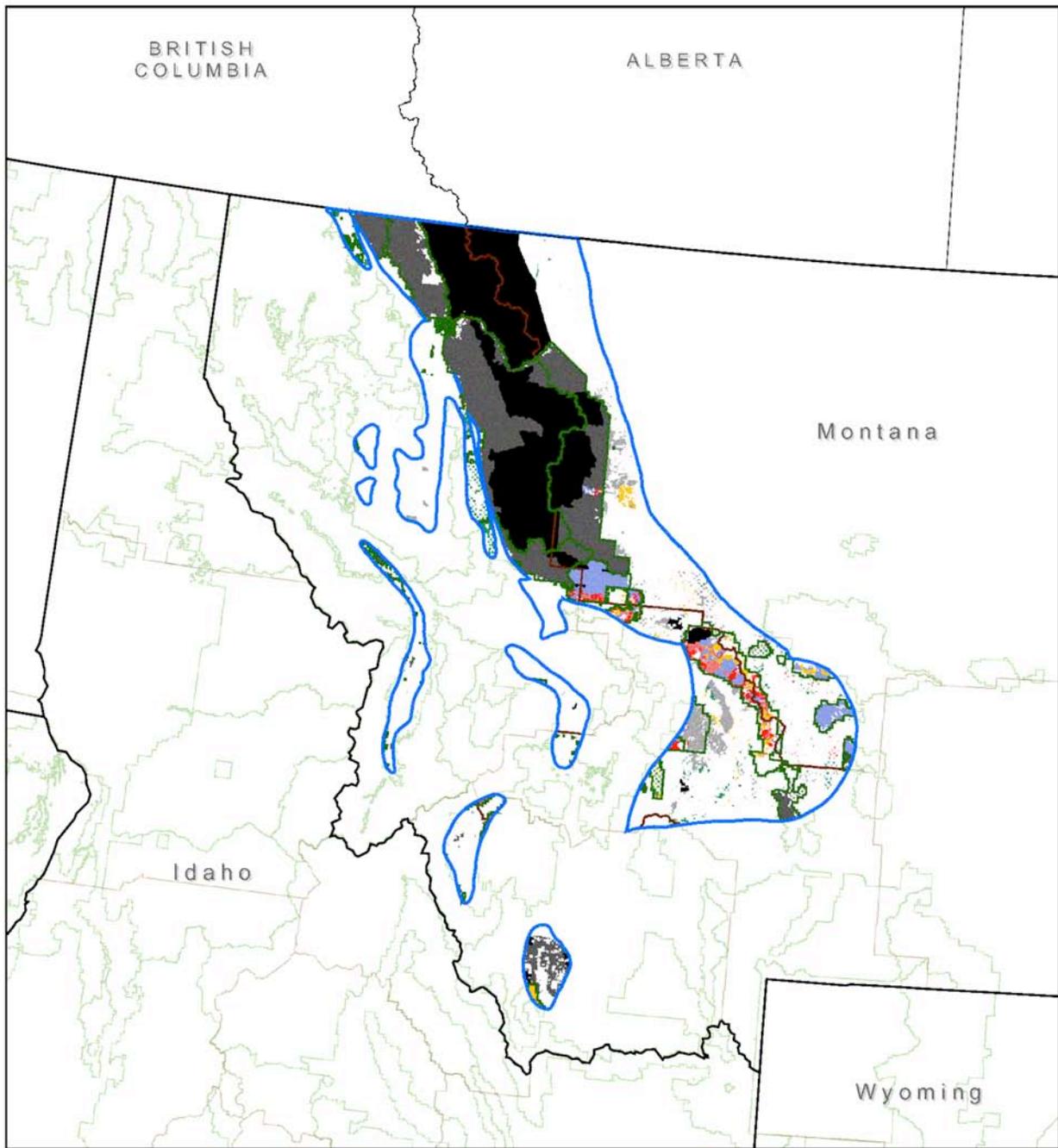
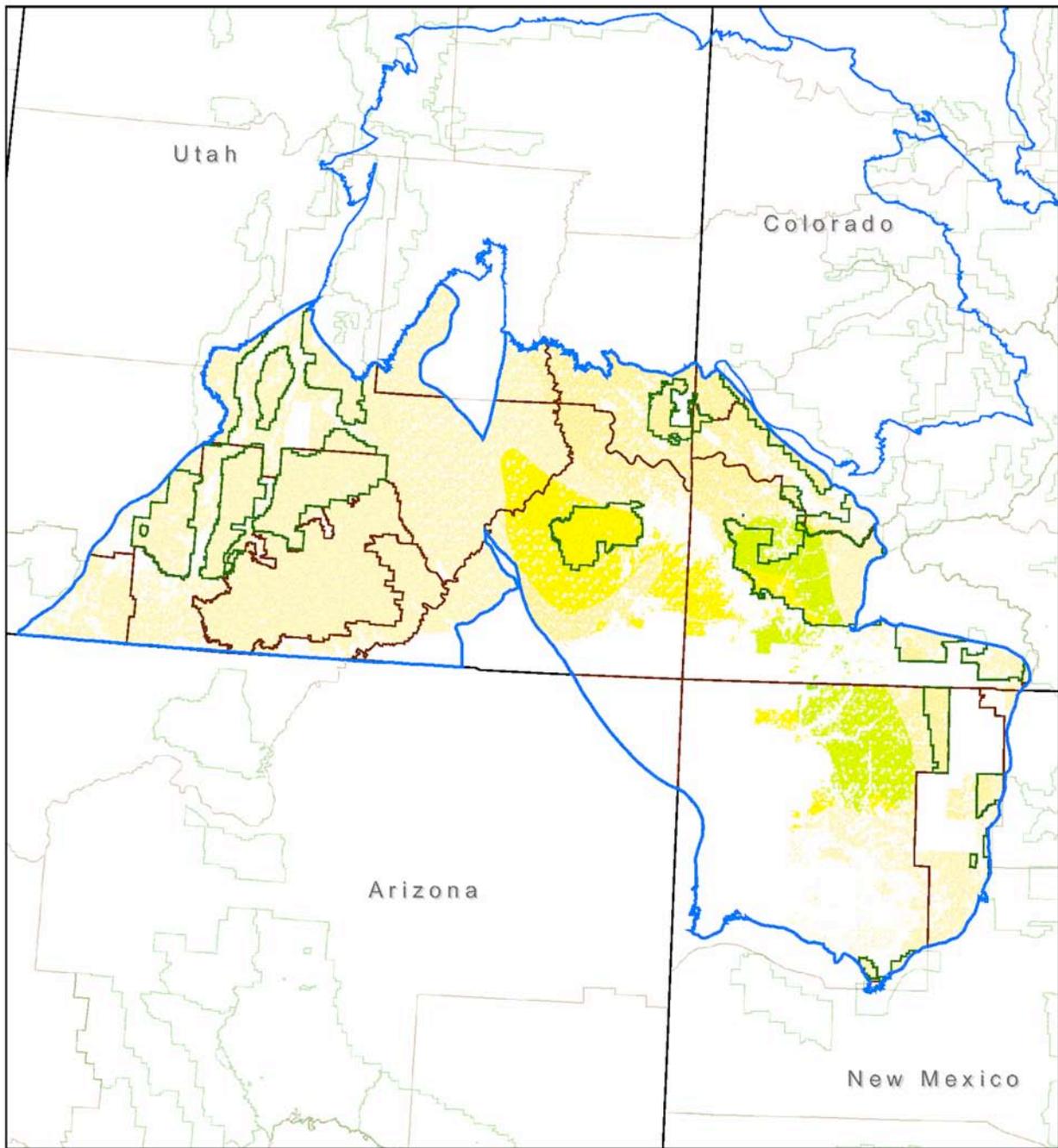


Figure 3k Land Access Categorization – Montana Thrust Belt Study Area

Section 3
Results



- BLM Jurisdiction
- Forest Service Jurisdiction
- Oil and Gas Resource Study Areas

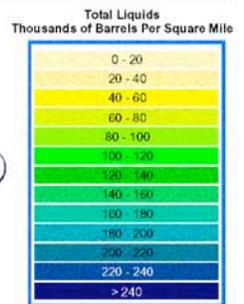


Figure 31 Access Map, Total Liquids – Paradox/San Juan Study Areas – Categories 1-10

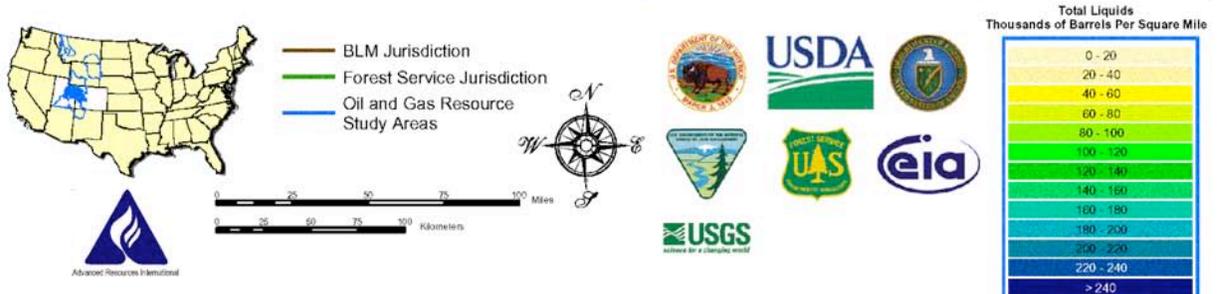
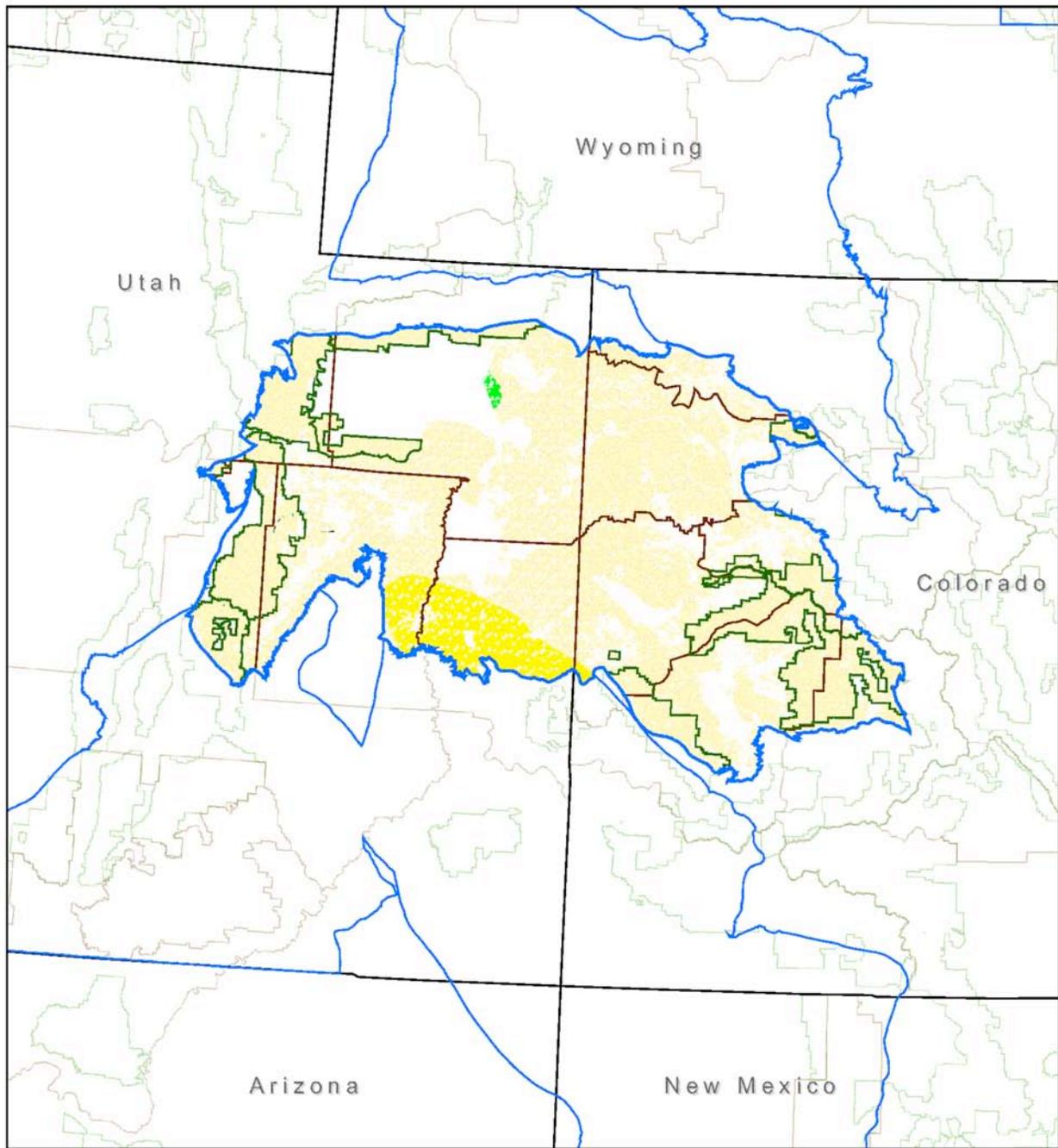
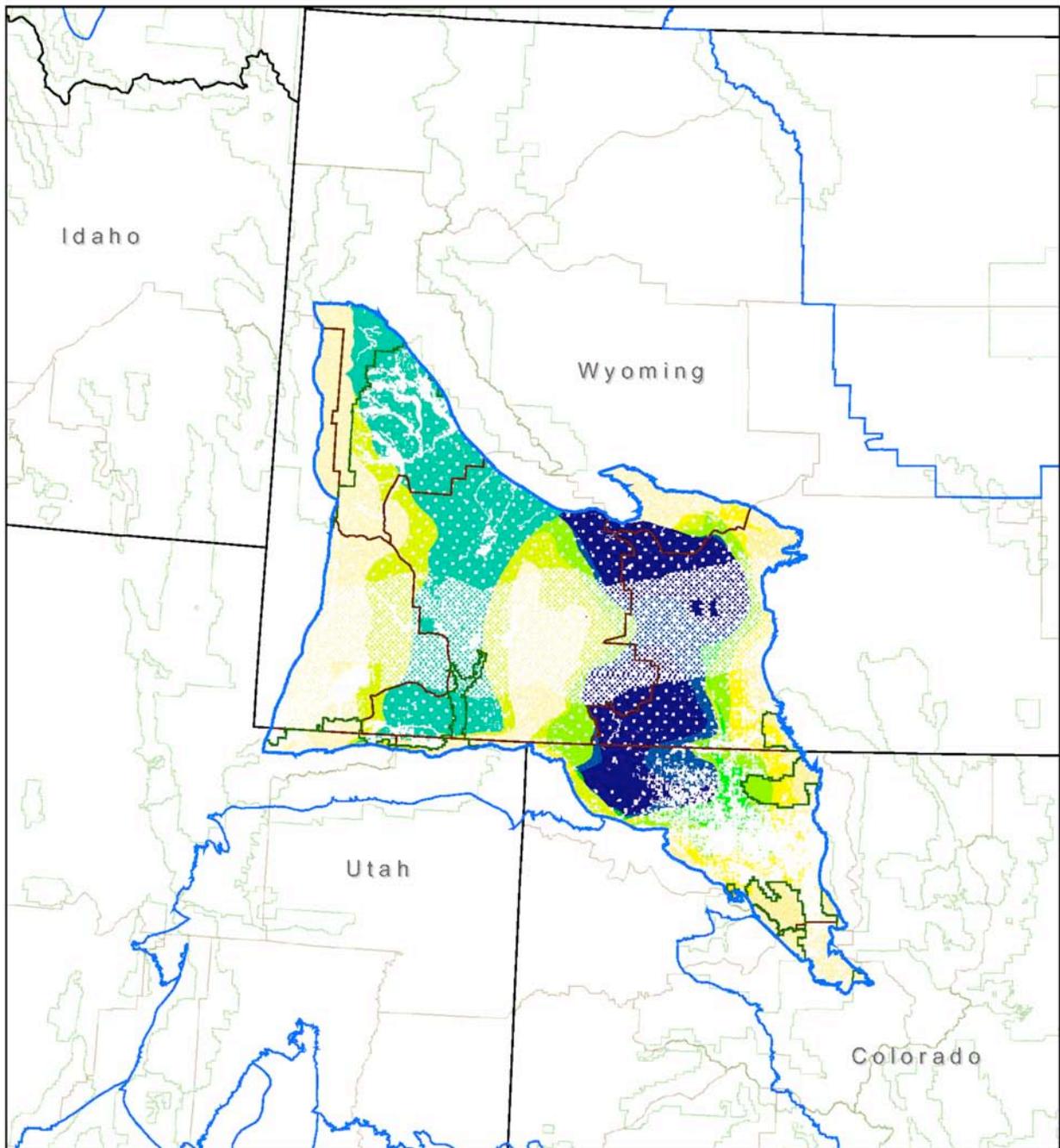
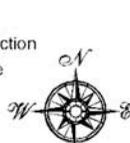


Figure 3m Access Map, Total Liquids – Uinta/Piceance Study Areas - Categories 1-10

Section 3
Results



-  BLM Jurisdiction
-  Forest Service Jurisdiction
-  Oil and Gas Resource Study Areas



Total Liquids
Thousands of Barrels Per Square Mile

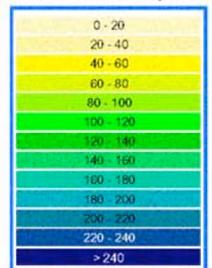


Figure 3n Access Map, Total Liquids – Greater Green River Study Area- Categories 1-10

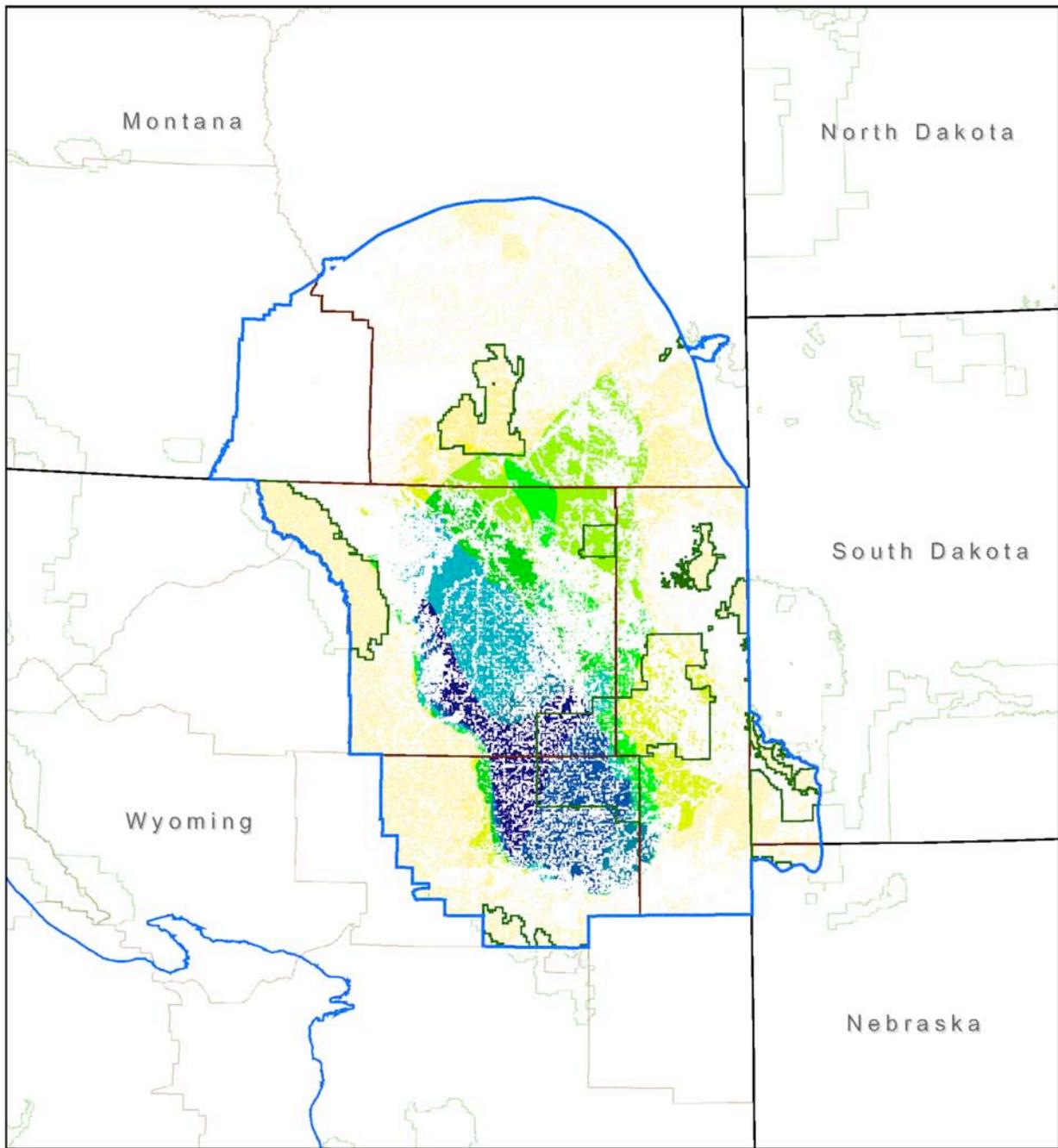


Figure 30 Access Map, Total Liquids – Powder River Study Area - Categories 1-10

**Section 3
Results**

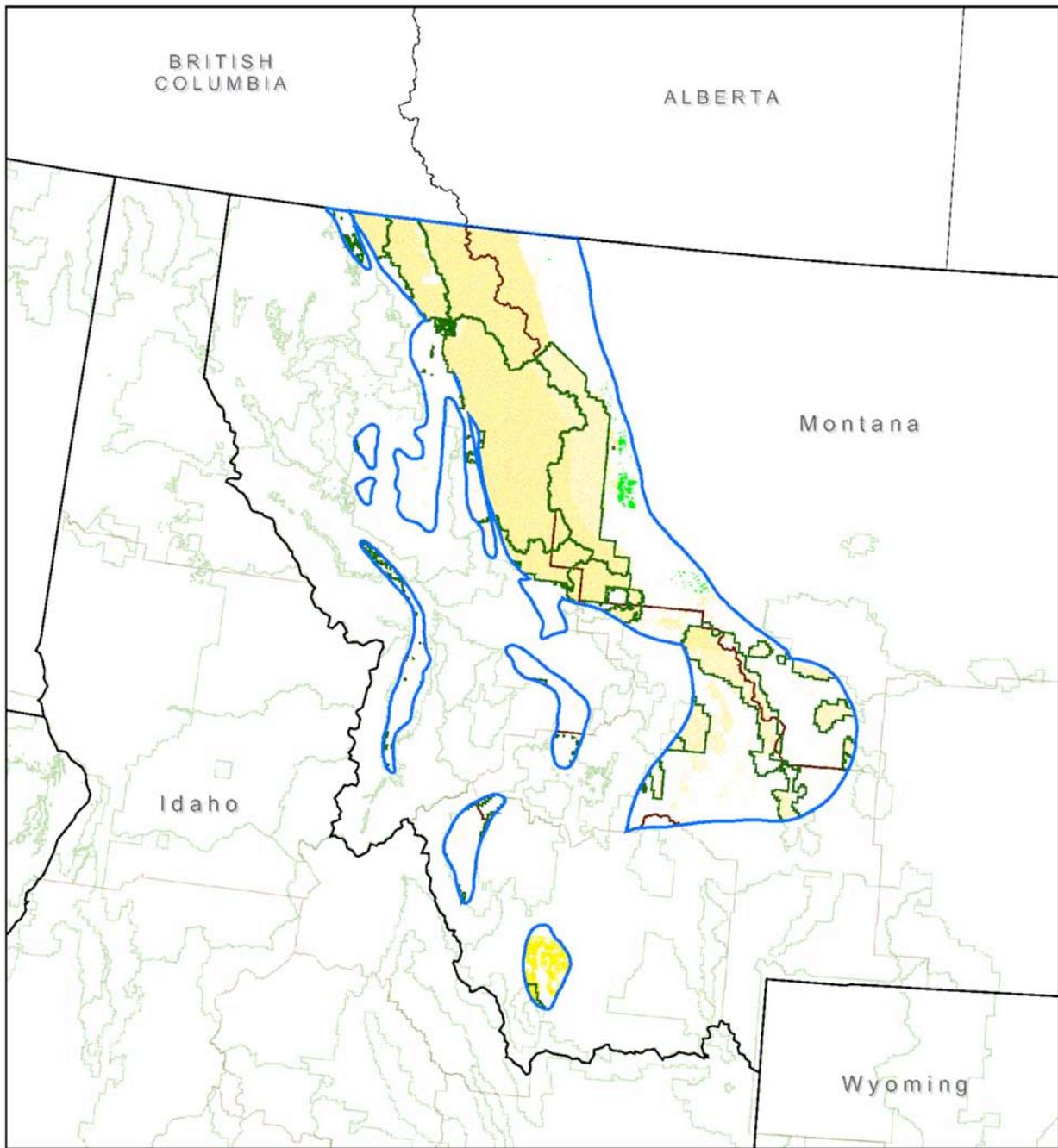
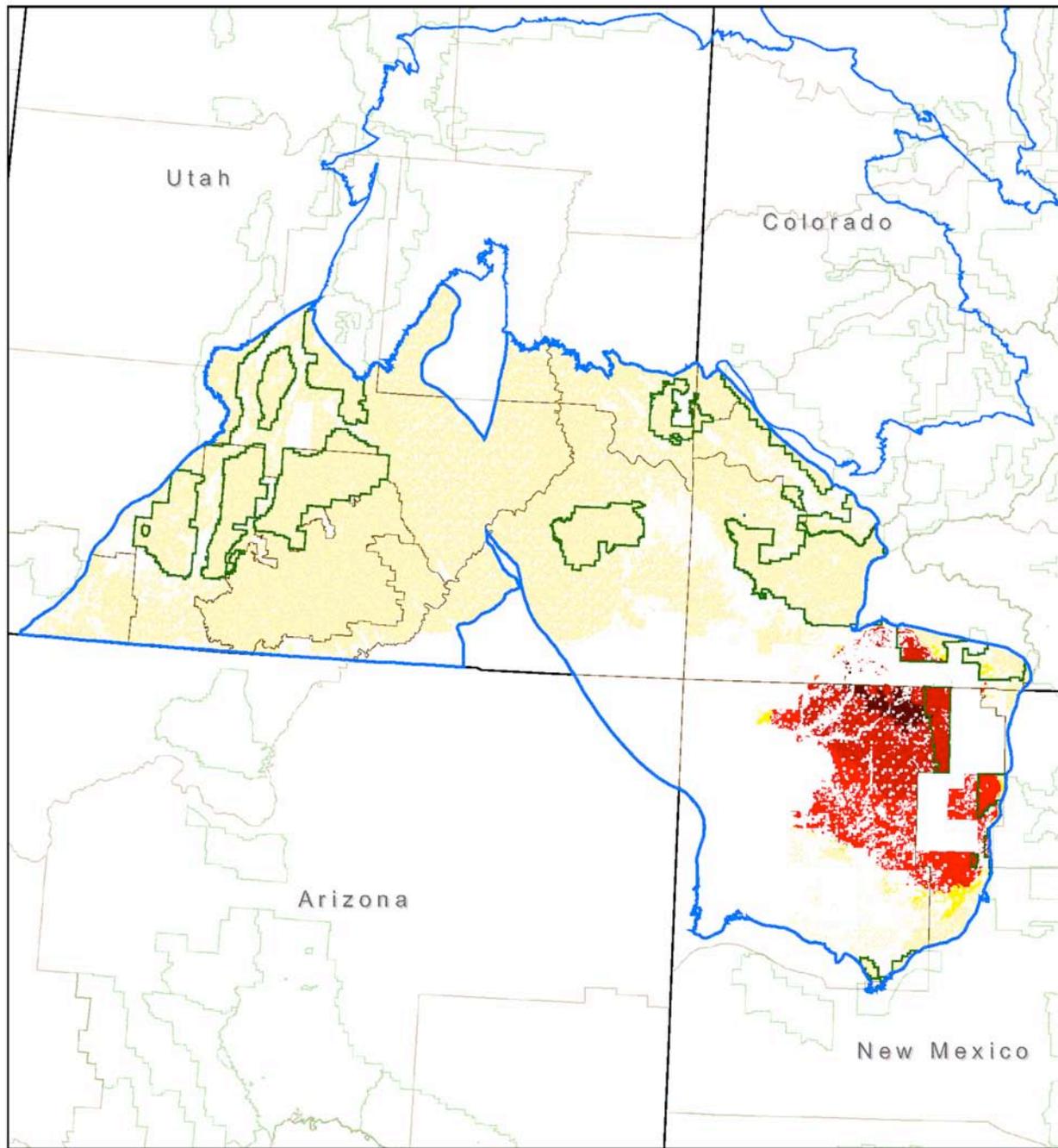
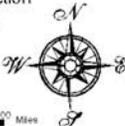


Figure 3p Access Map, Total Liquids – Montana Thrust Belt Study Area - Categories 1-10



- BLM Jurisdiction
- Forest Service Jurisdiction
- Oil and Gas Resource Study Areas



Total Gas
Millions of Cubic Feet Per Square Mile

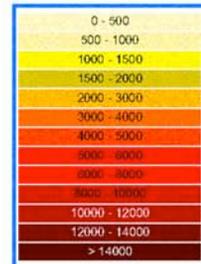


Figure 3q Access Map, Total Gas – Paradox/San Juan Study Areas - Categories 1-10

**Section 3
Results**

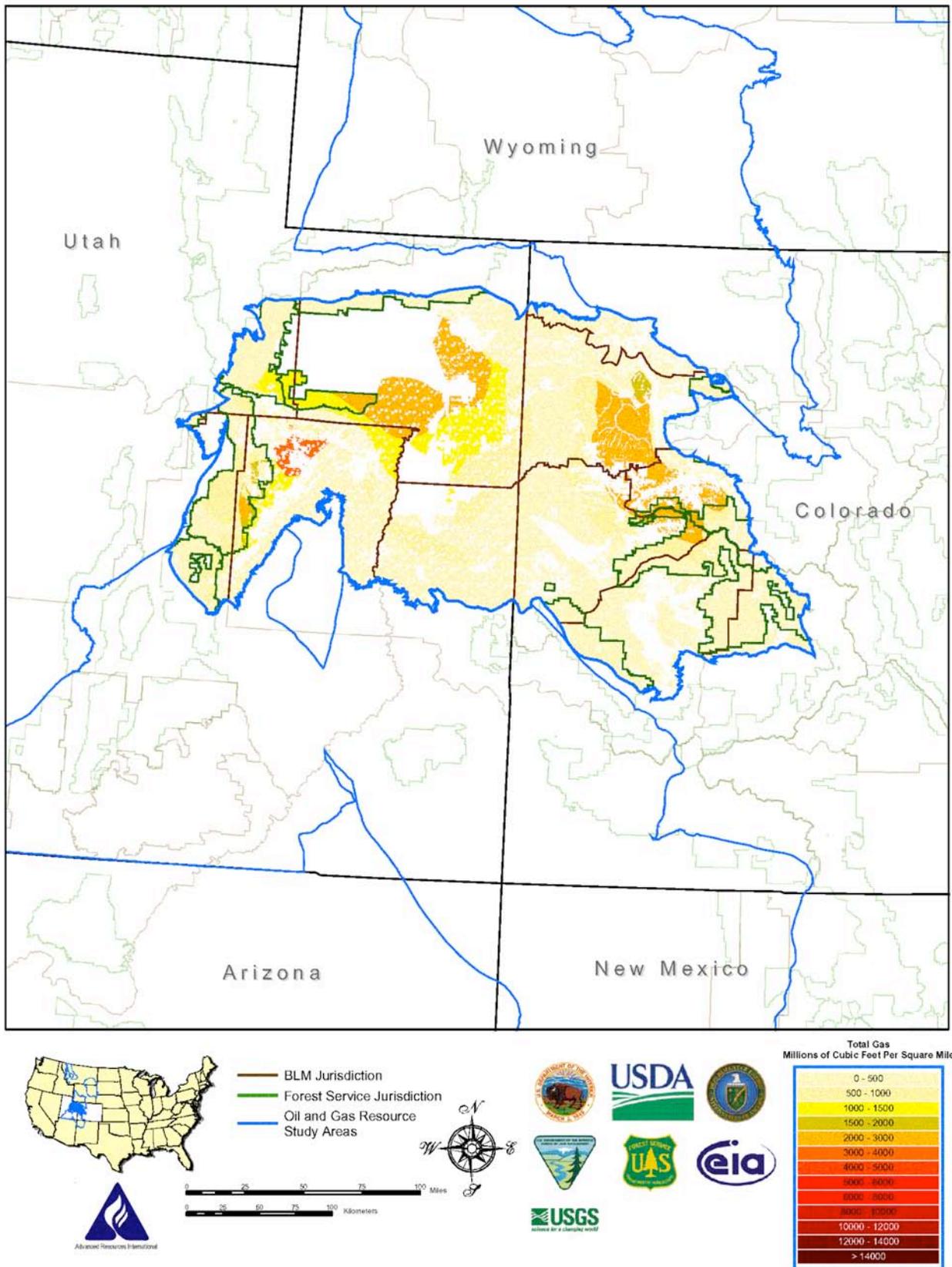
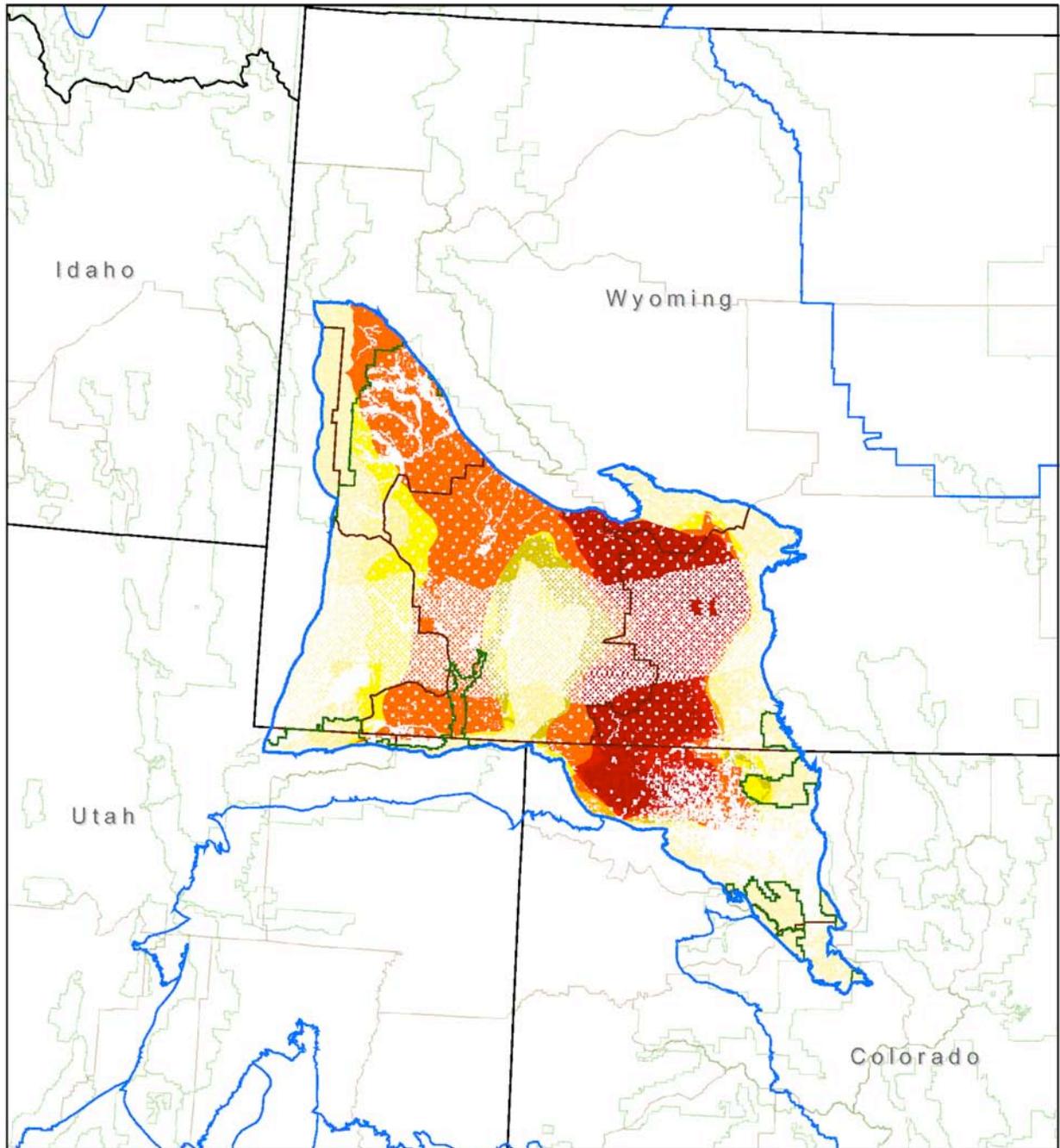


Figure 3r Access Map, Total Gas – Uinta/Piceance Study Areas - Categories 1-10



- BLM Jurisdiction
- Forest Service Jurisdiction
- Oil and Gas Resource Study Areas

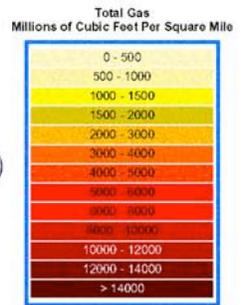
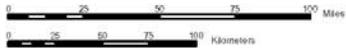
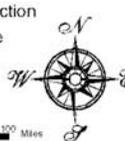
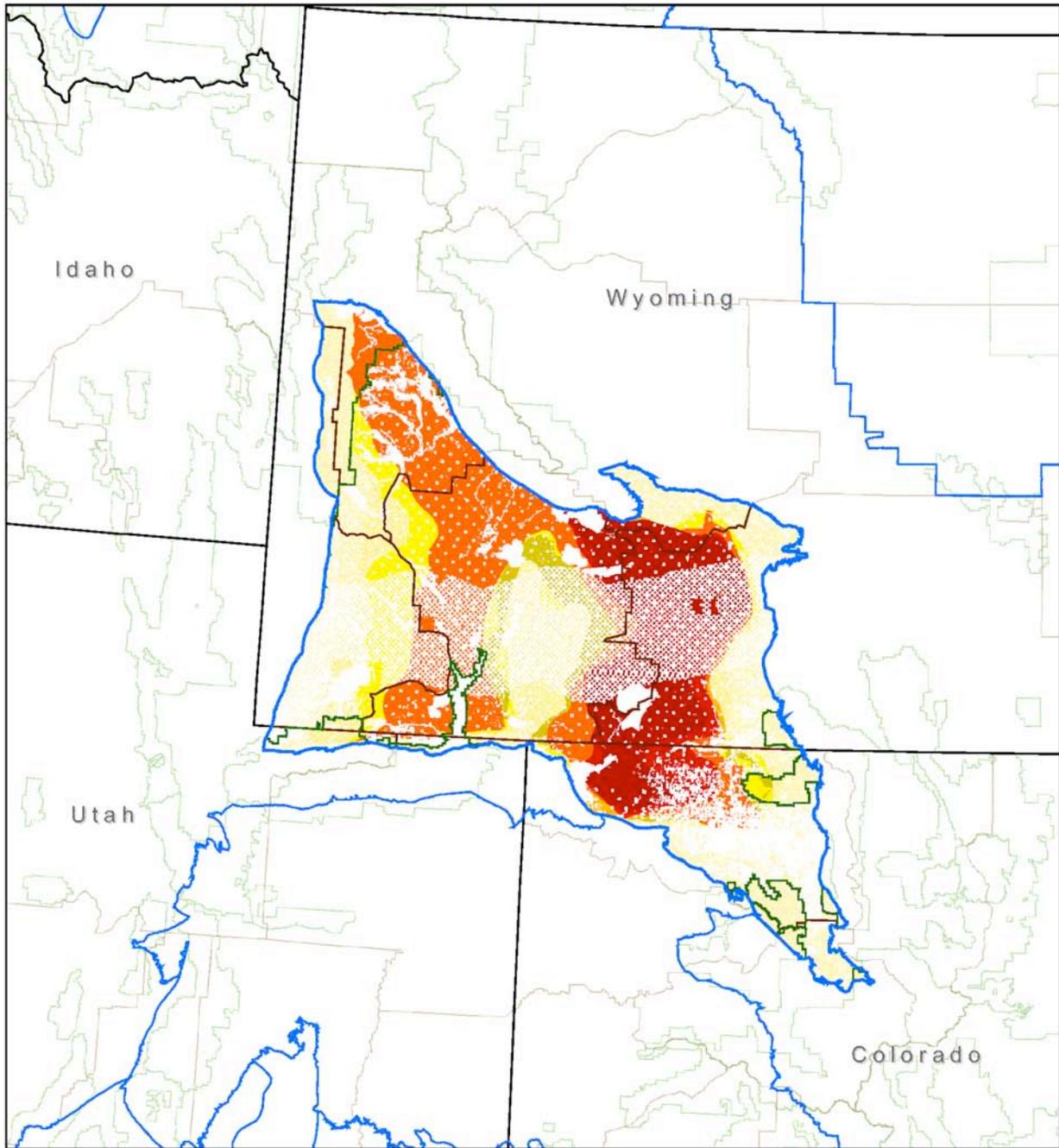


Figure 3s

Access Map, Total Gas – Greater Green River Study Area - Categories 1-10

**Section 3
Results**



-  BLM Jurisdiction
-  Forest Service Jurisdiction
-  Oil and Gas Resource Study Areas

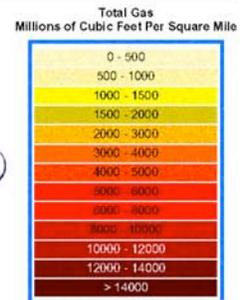
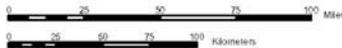
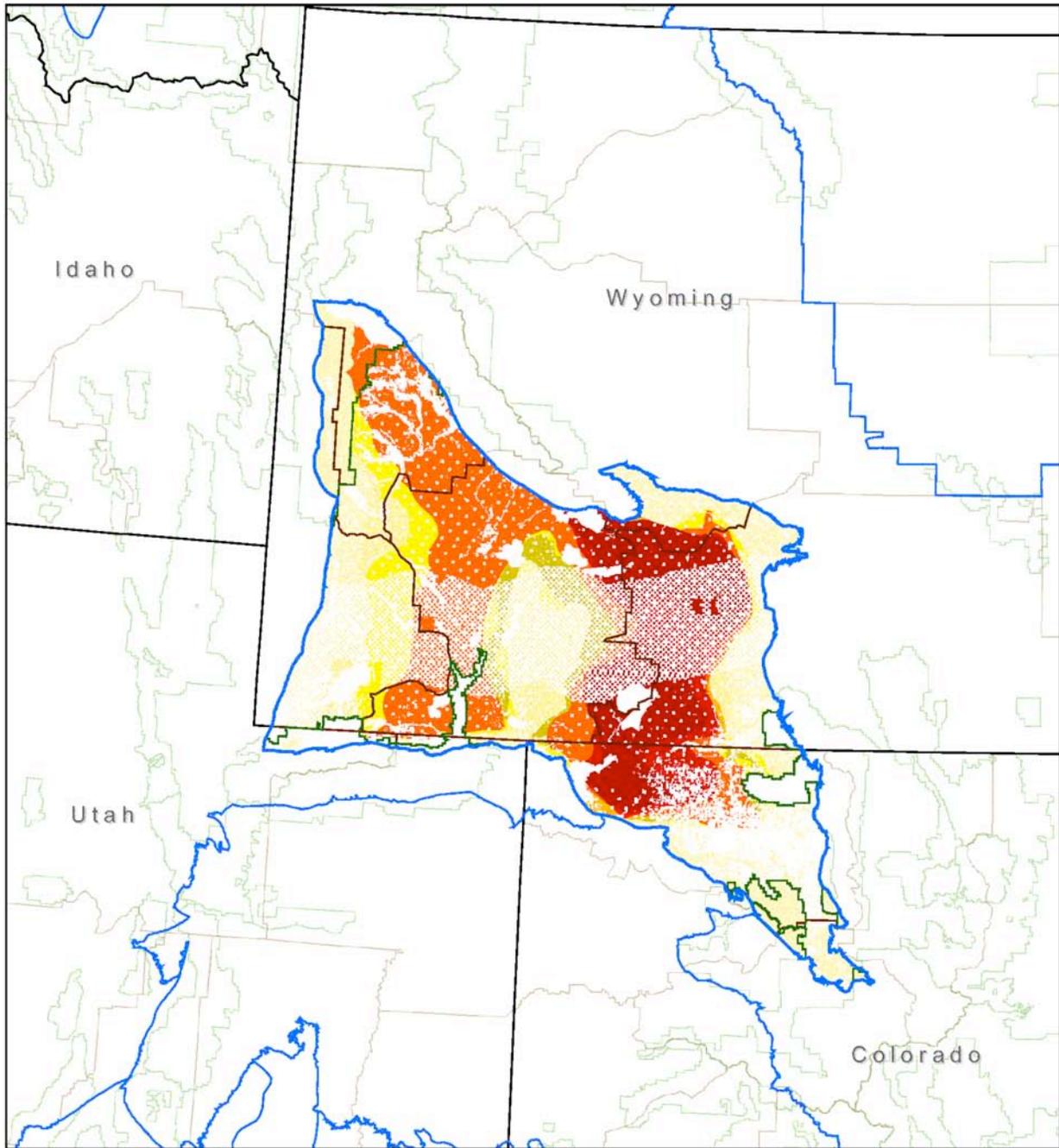
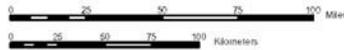


Figure 3t Access Map, Total Gas – Greater Green River Study Area - - Categories 2-10



- BLM Jurisdiction
- Forest Service Jurisdiction
- Oil and Gas Resource Study Areas



Total Gas
Millions of Cubic Feet Per Square Mile

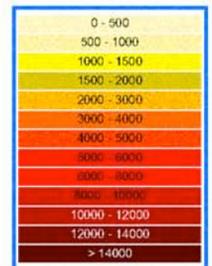
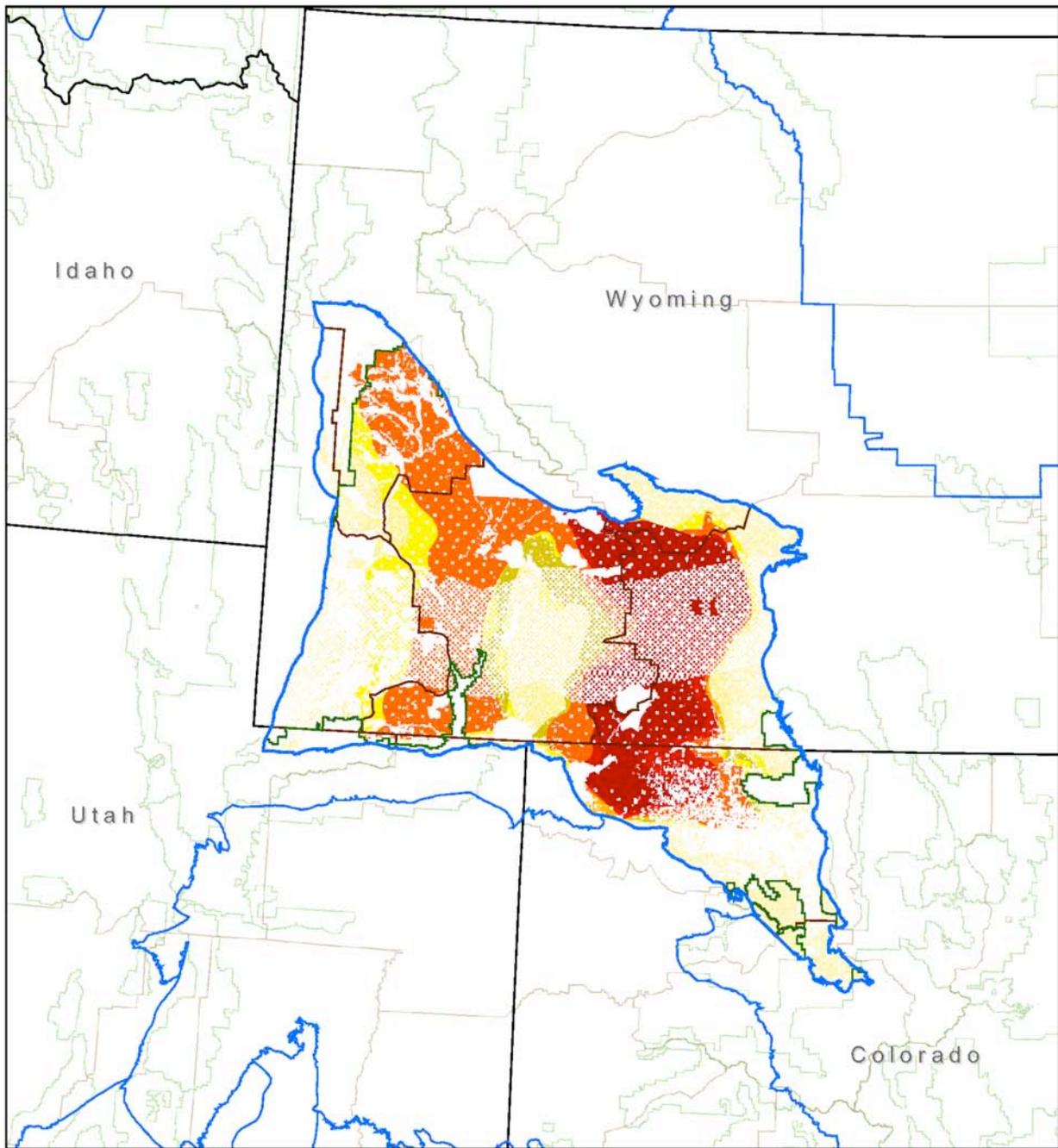


Figure 3u Access Map, Total Gas – Greater Green River Study Area - Categories 3-10

Section 3
Results



- BLM Jurisdiction
- Forest Service Jurisdiction
- Oil and Gas Resource Study Areas

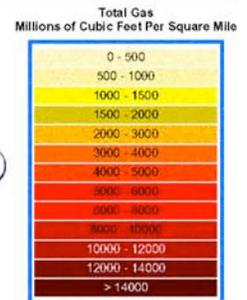
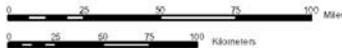


Figure 3v Access Map, Total Gas – Greater Green River Study Area - Categories 4-10

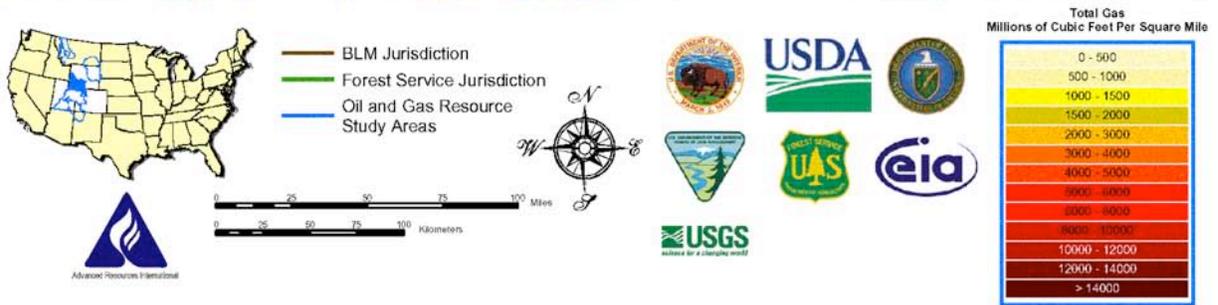
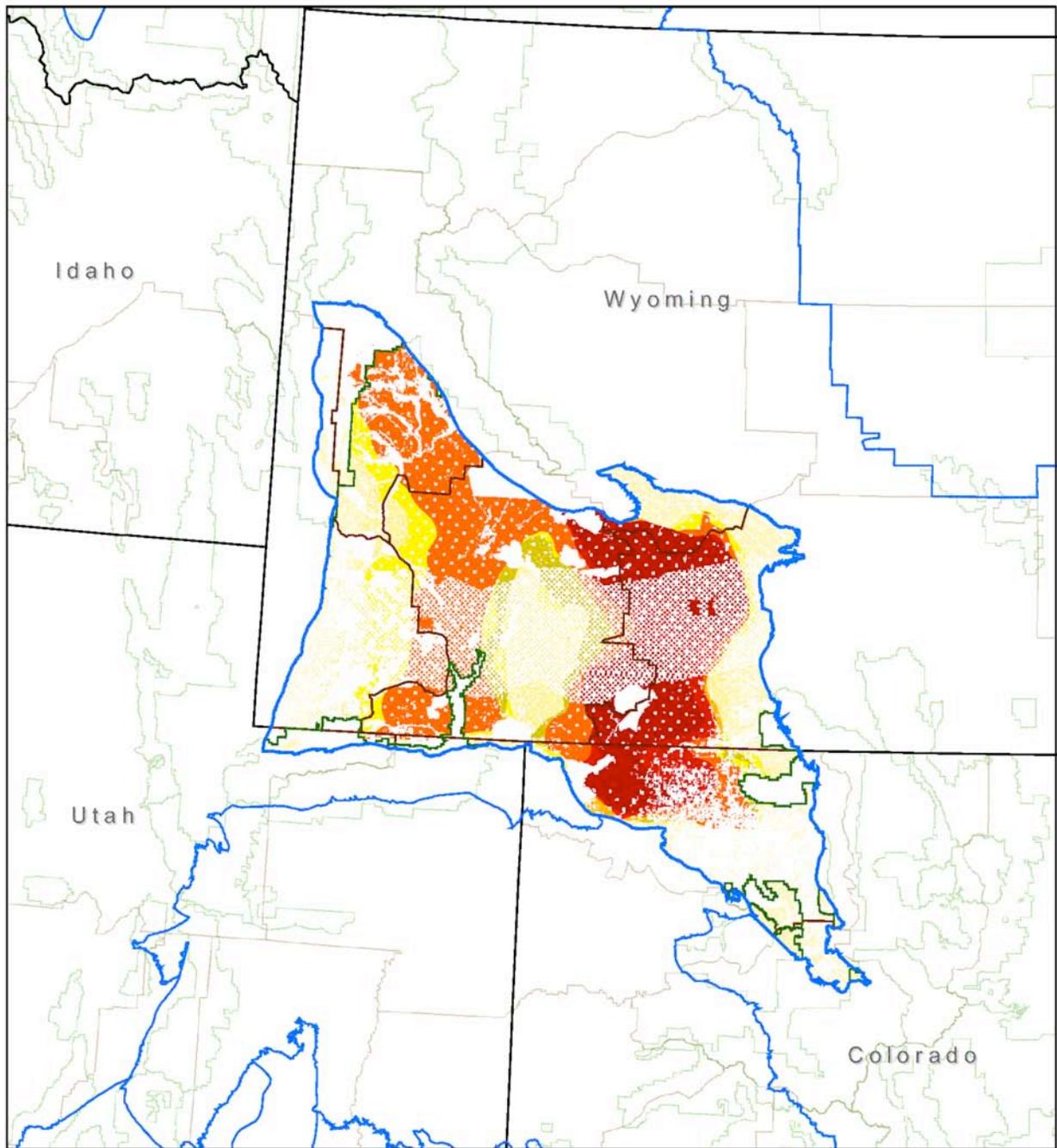


Figure 3w Access Map, Total Gas – Greater Green River Study Area - Categories 5-10

Section 3
Results

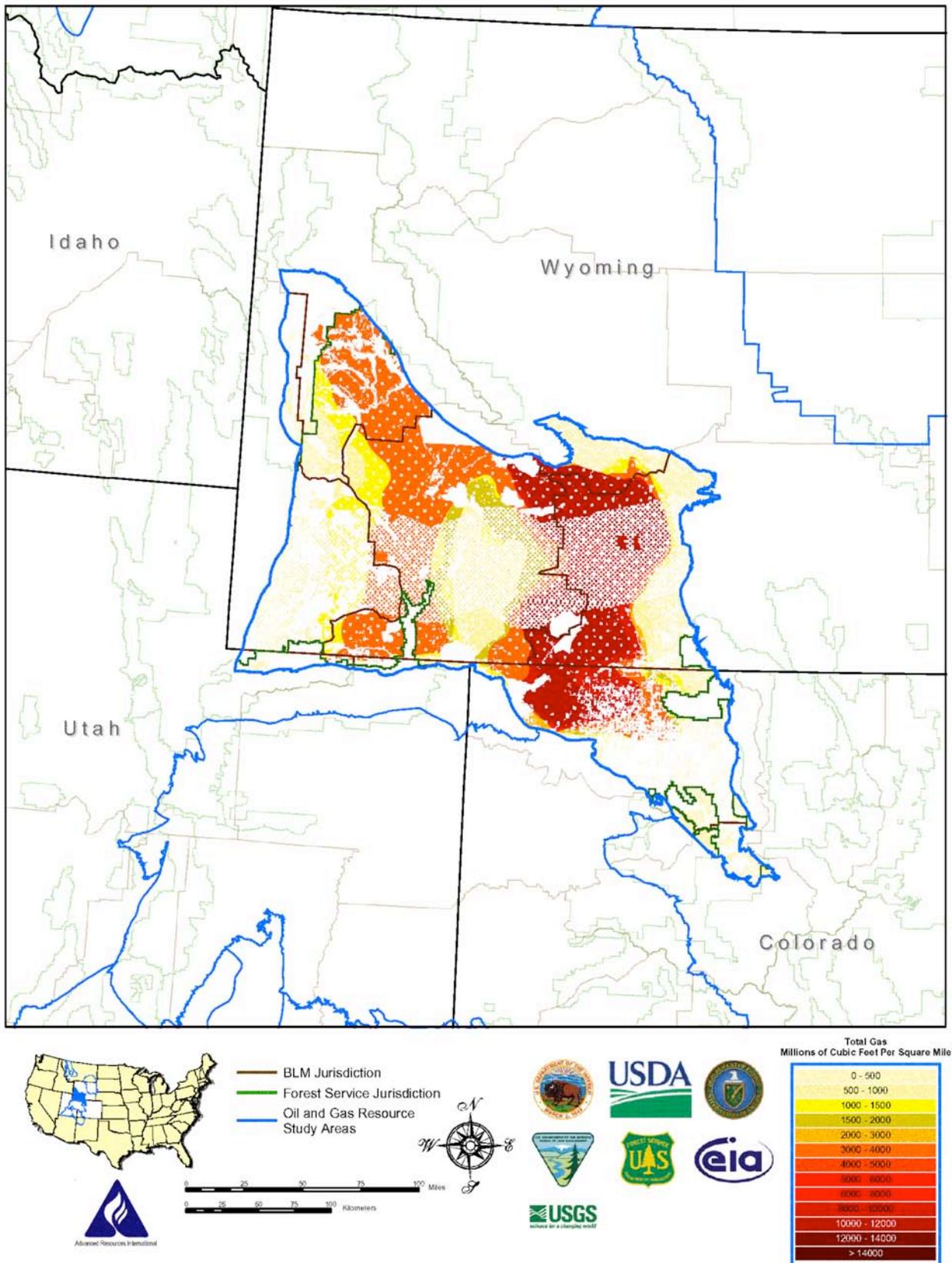
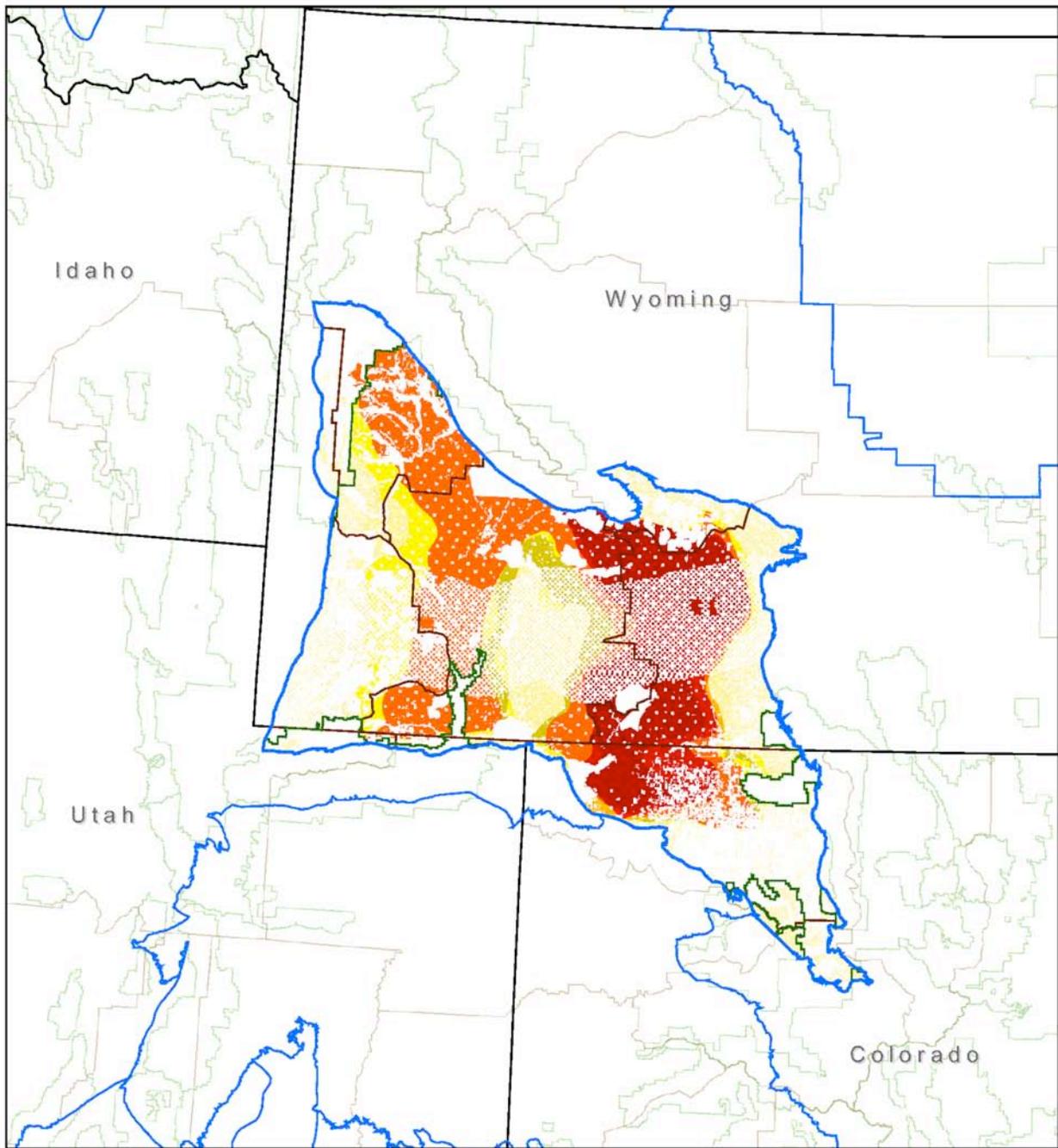
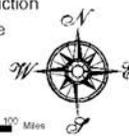


Figure 3x Access Map, Total Gas, Greater Green River Study Area - Categories 6-10



-  BLM Jurisdiction
-  Forest Service Jurisdiction
-  Oil and Gas Resource Study Areas



Total Gas
Millions of Cubic Feet Per Square Mile

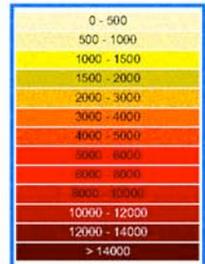


Figure 3y

Access Map, Total Gas – Greater Green River Study Area - Categories 7-10

**Section 3
Results**

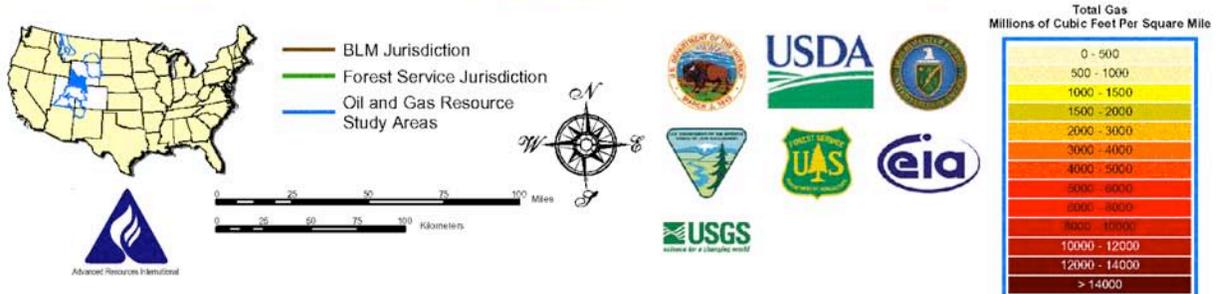
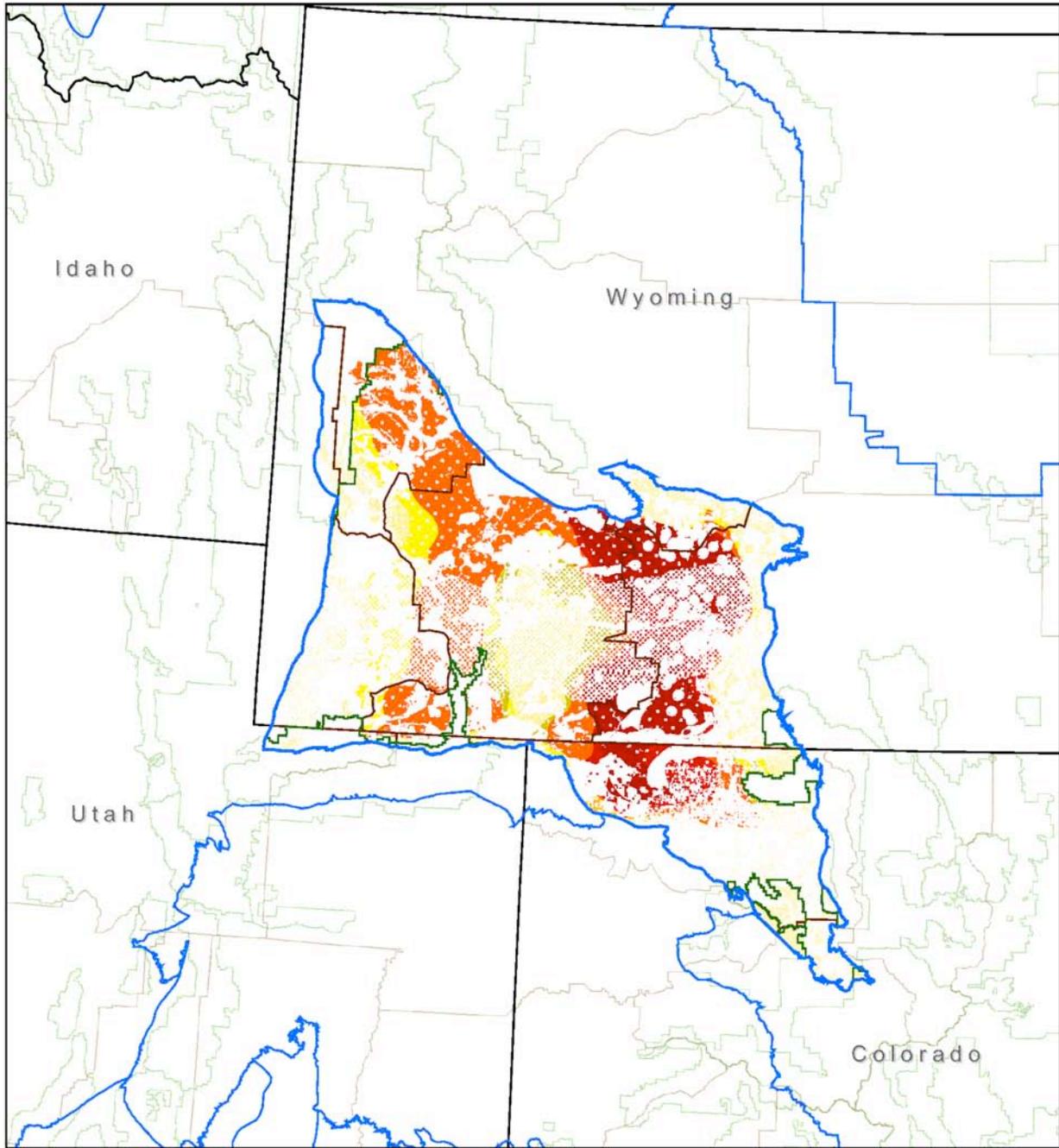


Figure 3z Access Map, Total Gas – Greater Green River Study Area- Categories 8-10

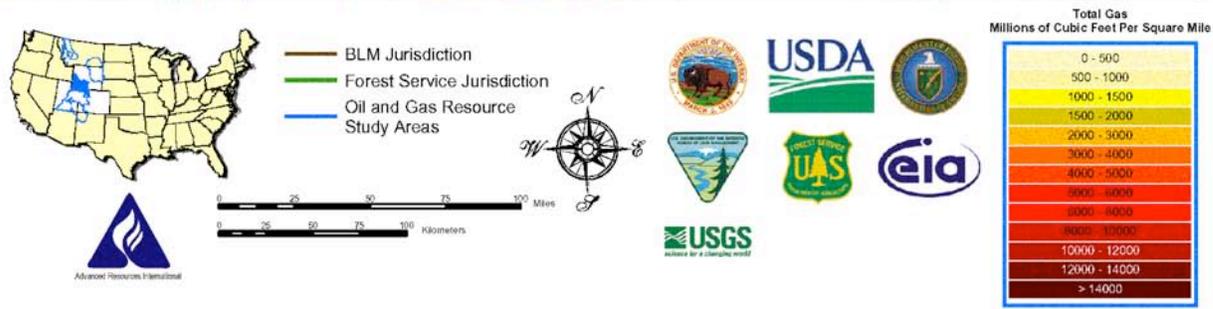
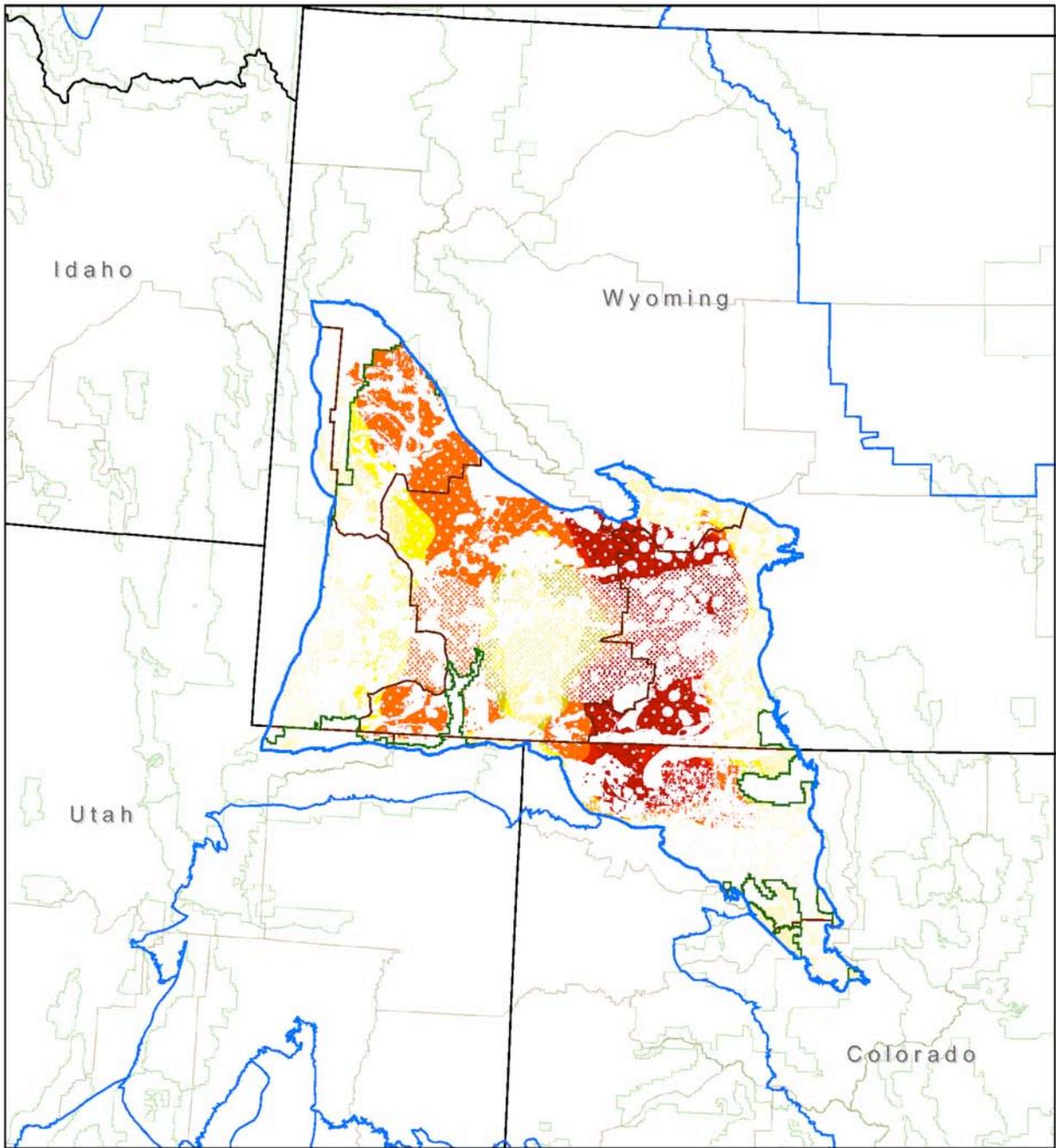


Figure 3aa Access Map, Total Gas – Greater Green River Study Area - Categories 9-10

**Section 3
Results**

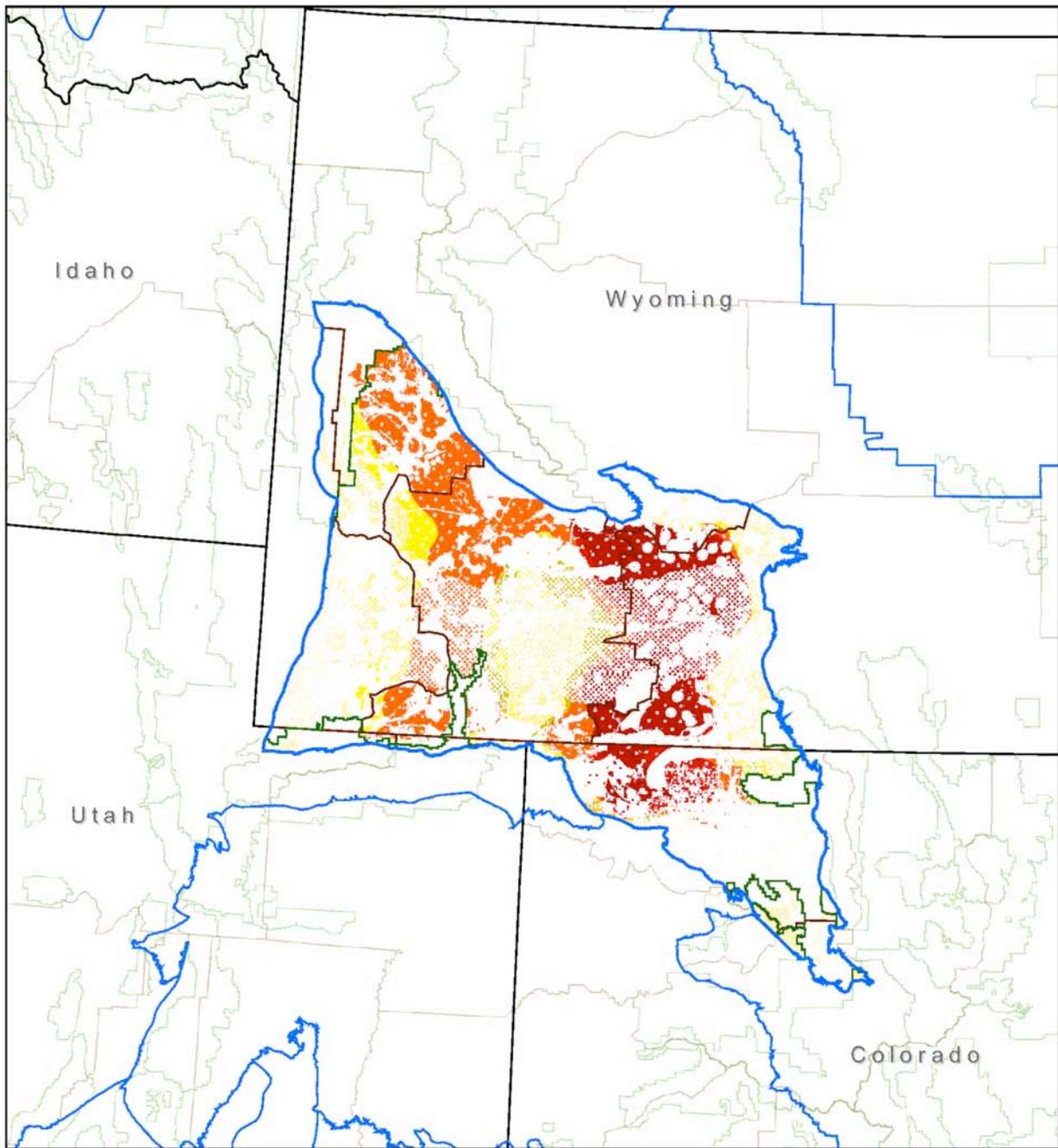


Figure 3ab Access Map, Total Gas -- Greater Green River Study Area - Category 10

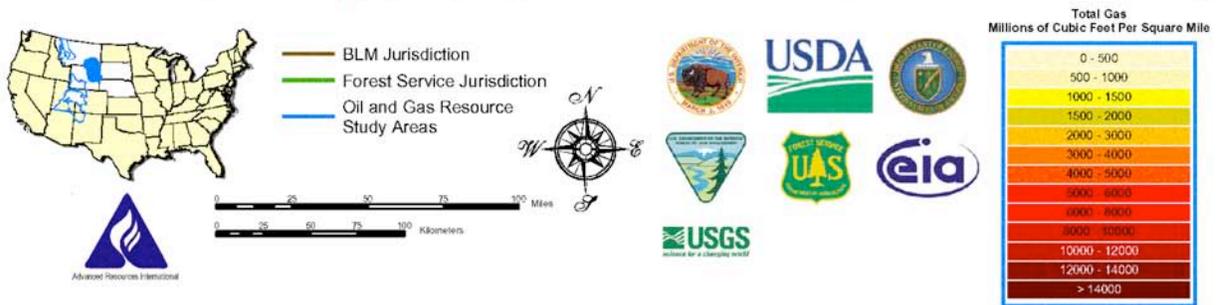
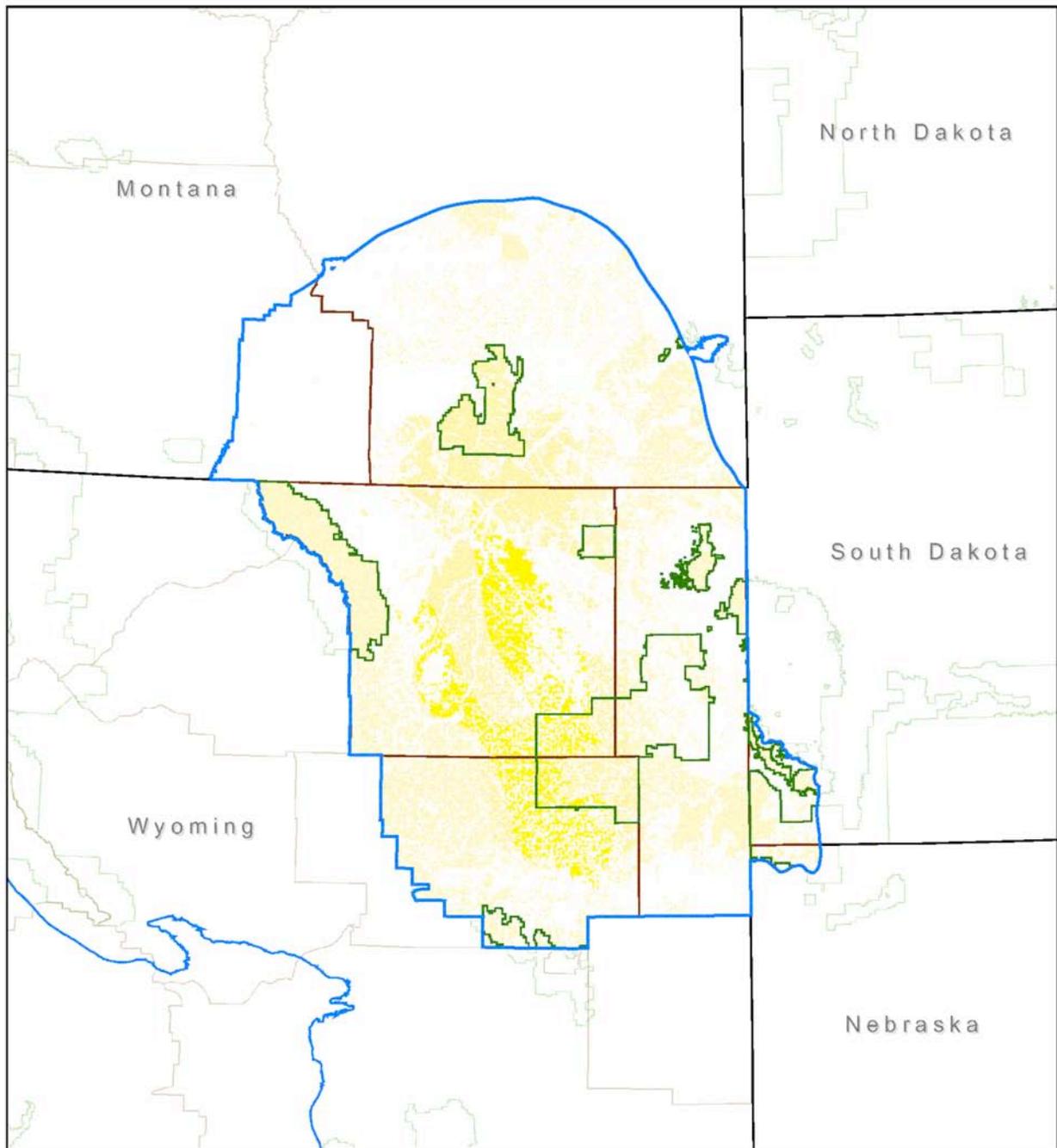


Figure 3ac Access Map, Total Gas -- Powder River Study Area - Categories 1-10

**Section 3
Results**

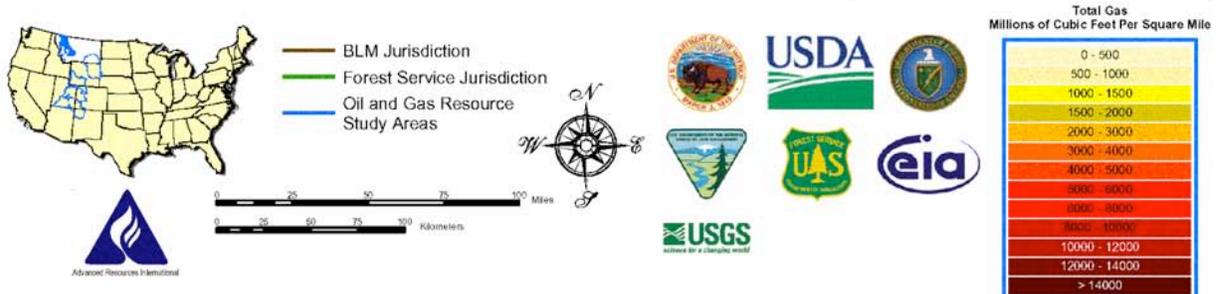


Figure 3ad Access Map, Total Gas – Montana Thrust Belt Study Area - Categories 1-10