

## EXPLANATION

### WELL SYMBOLS

(CBNG well status as of 11/01/2009)

- Shut in well
- Producing coalbed natural gas well
- Permitted coalbed natural gas well
- Abandoned coalbed natural gas well

### NATURAL GAS PIPELINES

- Colorado Interstate Gas
- Pioneer
- Questar Pipeline
- Unknown
- Western Transmission Co.
- Williams Natural Gas
- Wyoming Interstate Co. (Colorado Interstate Gas)

### GEOLOGIC MAP UNITS

- Alluvium and colluvium
- Playa lake and other lacustrine deposits
- Landslide deposits
- Dune sand and loess deposits
- Gravel, pediment, and fan deposits
- Basalt flow or igneous intrusion
- Miocene Rocks (Browns Peak Formation)
- Green River Formation: Lanesy Member
- Green River Formation: Tipton Shale Member
- Green River Formation: Luman Tongue
- Battle Spring Formation
- Wasatch Formation: Cathedral Bluffs Tongue
- Wasatch Formation: Main Body
- Fort Union Formation
- Lance Formation
- Lewis Shale
- Mesaverde Group, undivided
- Steele Shale
- Niobrara Formation
- Frontier Formation and Mowry and Thermopolis Shales
- Cloverly, Morrison, and Sundance Formations
- Chugwater Formation

### TOWNS

- Towns

### HYDROLOGY

- Lakes
- Rivers and Streams

### FAULTS

- Faults

### ROADS

- Interstate
- State Highway

### CONTINENTAL DIVIDE

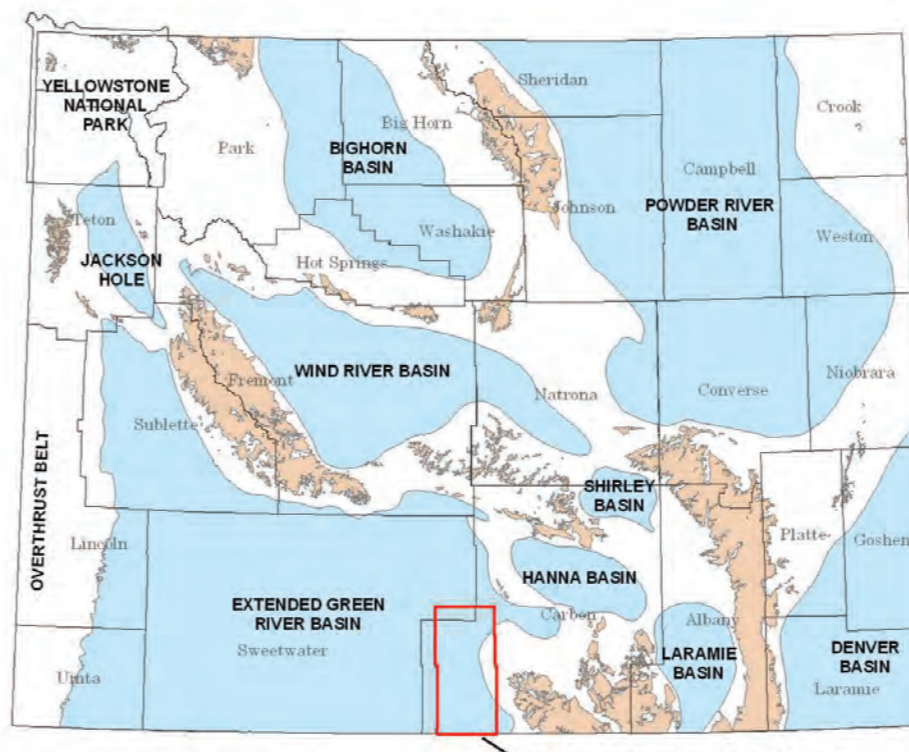
- Continental Divide

### CBNG LEASING UNITS

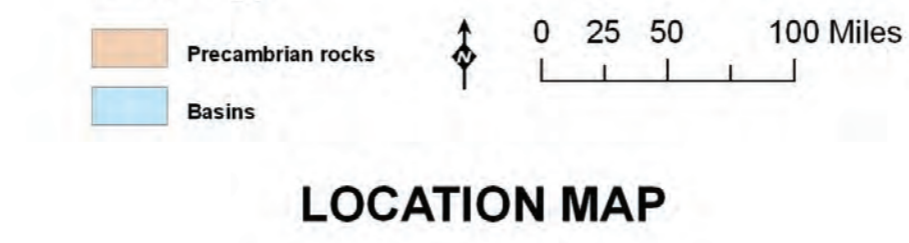
- Black Pearl
- Blue Gap II
- Blue Goose II
- Boulder Creek
- Brown Cow
- Burbank Draw
- Catalina
- Cherokee Creek
- Cow Creek
- Creston III
- Doty Mountain
- Esby
- Jacksparrow
- Jolly Roger
- Morgan Run
- Red Rim
- Sun Dog
- Wild Cow

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

### SECTION INDEX MAP



### LOCATION MAP

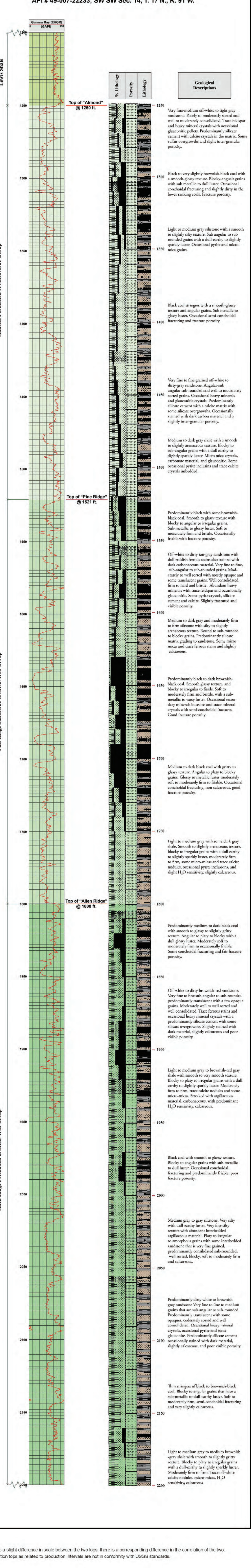


### REFERENCES

- Basin Boundaries: Created by Wyoming State Geological Survey (Abby L. Kirkaldie, Phyllis Ranz, Fred Porter, Joseph Hasi), 2005. Published by Wyoming State Geological Survey, Laramie, WY.
- Bedrock Geology: U.S. Geological Survey, Denver, CO, 1994.
- CBNG Leasing Units: Created by LR2000, Premier Data Services, Bureau of Land Management, Cathy R. Stillwell, 2008.
- Pipelines: Created by Wyoming State Geological Survey (Abby L. Kirkaldie, Phyllis Ranz, Fred Porter, Joseph Hasi), 2005. Published by Wyoming State Geological Survey, Laramie, WY.
- Pre-Cambrian Outcrops: Created by Wyoming State Geological Survey (Abby L. Kirkaldie, Phyllis Ranz, Fred Porter, Joseph Hasi), 2005. Published by Wyoming State Geological Survey, Laramie, WY.
- Railroads: Created by Wyoming State Geological Survey (Abby L. Kirkaldie, Phyllis Ranz, Fred Porter, Joseph Hasi), 2002. Published by Wyoming State Geological Survey, Laramie, WY.
- Rivers: Created by Geographic Data Technology, Inc. (GDTI), 2002. Published by Environmental Systems Research Institute, Inc. (ESRI), Redlands, California, USA, 2000.
- Roads: Created by US Census TIGER files, 1997. Published by Spatial Data and Visualization Center, Laramie, WY.
- Section Boundaries: Created by Wyoming Water Resources Center, 1994. Published by University of Wyoming Spatial Data and Visualization Center, Laramie, WY.
- Water Boundaries: Created by Wyoming Gap Analysis, 1996. Published by Spatial Data and Visualization Center, Laramie, WY.
- Well Data and Well Logs: Wyoming Oil and Gas Conservation Commission, 2009. <http://wogcc.state.wy.gov/>
- Yellowstone Boundary: Created by Wyoming Gap Analysis, 1996. Published by Spatial Data and Visualization Center, Laramie, WY.

### TYPICAL GEOPHYSICAL AND LITHOLOGIC LOG FOR THE TARGET AREA

API # 49-007-22233; SW SW Sec. 14, T. 17 N., R. 91 W.



Map projection: Lambert Conformal Conic.  
Central Meridian: -107.0  
Standard Parallel 1: 33.0  
Standard Parallel 2: 45.0  
Latitude of Origin: 41.0  
Horizontal datum: North American Datum of 1983.  
Ellipsoid: Geodetic Reference System 80.

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### ACKNOWLEDGEMENTS

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## COALBED NATURAL GAS ACTIVITY IN THE ATLANTIC RIM AREA, CARBON COUNTY, WYOMING

by  
Scott A. Quillman, Brett N. Worman, and James R. Rodgers  
2009

Note: Due to a slight difference in scale between the two logs, there is a corresponding difference in the correlation of the two. Formation tops are related to production intervals are not in conformity with USGS standards.