U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Coal correlations in the China Butte Member

Locations of drill holes and measured sections shown on sheet 1

South — North

Correlations and nomenclature based on Honey and Robinson Roberts (1989): Dixon 7.5-minute quadrangle; Smiley Draw 7.5-minute quadrangle

Correlations and nomenclature based on Honey and Hettinger (2004) and modified from Honey and Robinson Roberts (1989): Peach Orchard Flat 7.5-minute quadrangle; T. 14 N., R. 91 W.; T. 15 N., R. 91 W.

Correlations and nomenclature based on Hettinger and Honey (2005): Blue Gap 7.5-minute quadrangle; T. 15 N., R. 92 W.; T. 16 N., R. 92 W.

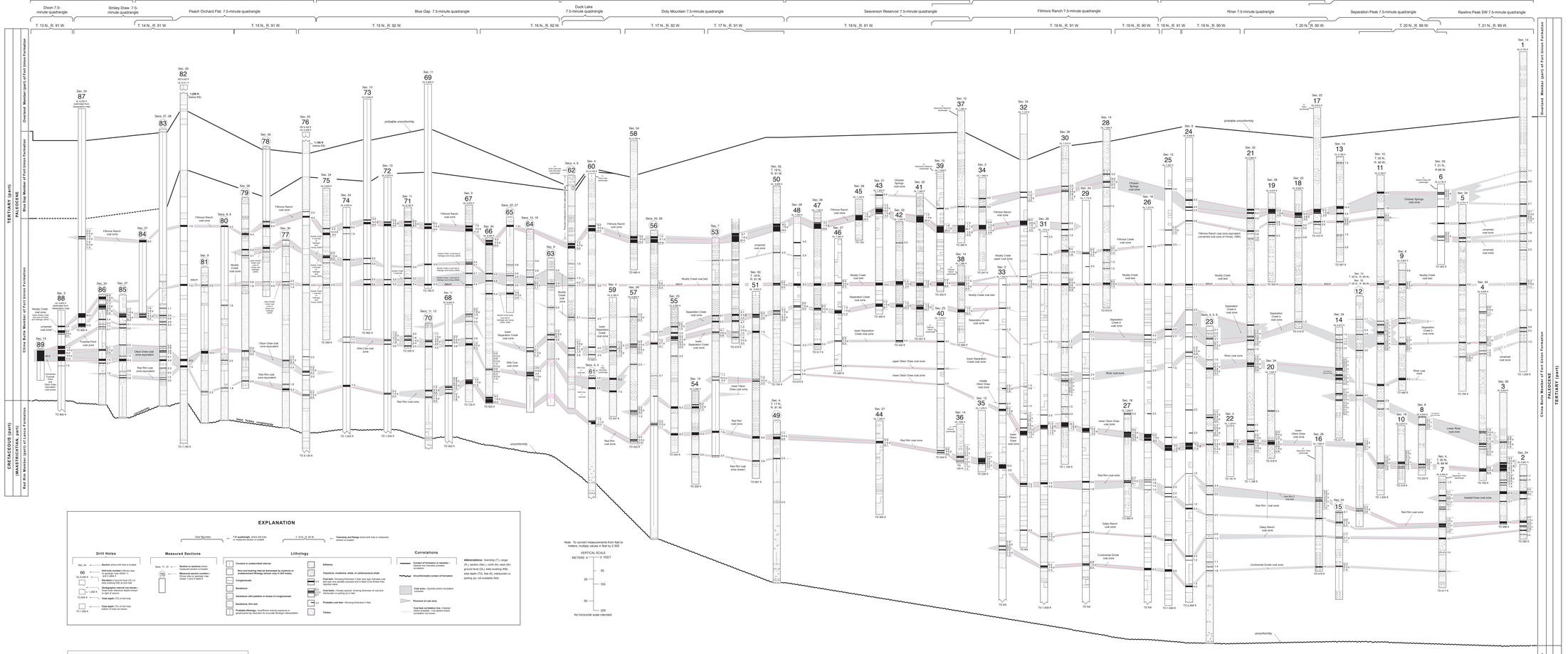
Correlations and nomenclature based on Hettinger and Honey (2006): Doty Mountain 7.5-minute quadrangle; T. 17 N., R. 92 W.; T. 17 N., R. 91 W.

Correlations and nomenclature based on Honey and Hettinger (1989a) and modified from Edson (1979): Seaverson Reservoir 7.5-minute quadrangle; T. 18 N., R. 91 W.

Correlations and nomenclature based on Honey and Hettinger (1989a) and modified from G.M. Edson, U.S. Geological Survey, unpublished mapping conducted in 1976 and 1977 in the Fillmore Ranch 7.5-minute quadrangle: Fillmore Ranch 7.5-minute quadrangle; T. 19 N., R. 91 W.; T. 19 N., R. 91 W.; T. 19 N., R. 90 W.; T. 19 N., R. 90 W.

Correlations and nomenclature based on Honey (1990): Riner 7.5-minute quadrangle; T. 20 N., R. 90 W.; T. 20 N., R. 89 W.

Correlations and nomenclature based on J.G. Honey and R.D. Hettinger, U.S. Geological Survey, previously unpublished coal bed mapping and measured sections (1976-1979, 2004) in the Separation Peak and Rawlins Peak SW 7.5-minute quadrangles, and modified from G.M. Edson, U.S. Geological Survey, unpublished coal bed mapping conducted in 1976-1977 in the Bridger Pass 15-minute quadrangle: Separation Peak 7.5-minute quadrangle; T. 20 N., R. 89 W.; Rawlins Peak SW 7.5-minute quadrangle; T. 21 N., R. 89 W.



EXPLANATION

Drill Holes

Sec. 34 — **Section** where drill hole is located

66 — **Drill hole number** (Dixon also to geologic map, sheet 1)
OL 6,000 ft — **Elevation** of ground level (OL) or kelly bushing (KB) at drill hole

1,290 ft — **Stratigraphic interval not drilled**—Depth to base of lowermost section in right of column

TD 1,290 ft — **Total depth** (TD) of drill hole—bottom of hole not shown

Measured Sections

Secs. 11, 12 — **Section or sections** where measured section is located

70 — **Measured section number**—Dixon also to geologic map (sheet 1) and in table 5

Dirk Mountain — **T.F quadrangle**, where drill hole or measured section is located

T. 14 N., R. 92 W. — **Township and Range** where drill hole or measured section is located

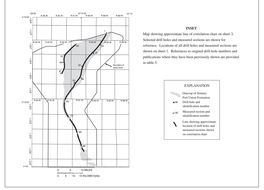
Lithology

- **Covered or undescribed interval**
- **Non-coal-bearing interval dominated by mudrock or sandstone/coal lithology (shown only in drill holes)**
- **Conglomerate**
- **Sandstone**
- **Sandstone with pebbles or lenses of conglomerate**
- **Sandstone, thin bed**
- **Probable lithology**—Insufficient outcrop exposure or geophysical log resolution for accurate lithologic interpretation
- **Siltstone**
- **Claystone, mudstone, shale, or carbonaceous shale**
- **Coal bed**—Showing thickness in feet plus zap count (bases coal bed was only partially exposed and is likely to be thicker than measured)
- **Coal bed**—Showing thickness, showing thickness of coal and interburden or parting (zp) in feet
- **Probable coal bed**—Showing thickness in feet
- **Clinker**

Correlations

- **Contact of formation or member**—Dashed where uncertain correlation
- **Unconformable contact of formation**
- **Coal zone**—Correlated where correlation uncertain
- **Coal bed of coal zone**
- **Coal bed correlation line**—Dashed where correlation uncertain; not dashed where correlation not known

Abbreviations: township (T.); range (R.); section (Sec.); north (N); west (W); ground level (GL); kelly bushing (KB); total depth (TD); feet (ft); interburden or parting (zp); not available (NA)



COAL CORRELATIONS IN THE CHINA BUTTE AND OVERLAND MEMBERS OF THE PALEOCENE FORT UNION FORMATION, EASTERN FLANK OF THE WASHAKIE BASIN AND SOUTHEASTERN FLANK OF THE GREAT DIVIDE BASIN, CARBON AND SWEETWATER COUNTIES, WYOMING

GEOLOGIC MAP OF UPPER CRETACEOUS AND TERTIARY STRATA AND COAL STRATIGRAPHY OF THE PALEOCENE FORT UNION FORMATION, RAWLINS–LITTLE SNAKE RIVER AREA, SOUTH-CENTRAL WYOMING

By
R.D. Hettinger, J.G. Honey, M.S. Ellis, C.S.V. Barclay, and J.A. East

2008

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1-888-ASK-USGS
Ancillary coverages and a PDF for this map are available at http://pubs.usgs.gov/

Coal correlations in the Cherokee coal zone of the Overland Member

Southwest — Northeast

Locations of drill holes and measured sections shown on sheet 1

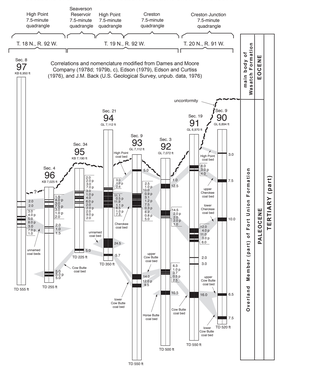

Table 5. Drill holes and measured sections shown on coal correlation chart (sheet 3) and geologic map (sheet 1). Drill holes and measured sections numbered 1 through 96 record coal beds in the China Butte Member of the Fort Union Formation. Drill holes 90 through 97 record coal beds in the Cherokee coal zone of the Overland Member of the Fort Union Formation. Abbreviations: drill hole (DH), measured section (MS), section (Sec.), township (T.), north (N.), range (R.), west (W.), Rocky Mountain Energy Company (RME), Union Pacific Coal (UP), U.S. Geological Survey (USGS).

ID number	Type	T.F.-minute quadrangle(s)	Location Sec.	T. N.	R. W.	Name of drill hole or measured section	Source of data	Published report where drill hole or measured section is shown
1	DH	Rawlins Peak SW	34	21	89	BP-06	USGS	Dames and Moore Company (1978b), Hettinger and Brown (1979)
2	DH	Rawlins Peak SW	34	21	89	BP-07	USGS	Dames and Moore Company (1978b), Hettinger and Brown (1979)
3	DH	Rawlins Peak SW	34	21	89	BP-08	USGS	Dames and Moore Company (1978b), Hettinger and Brown (1979)
4	DH	Rawlins Peak SW	34	21	89	BP-2016	USGS	Dames and Moore Company (1978b), Hettinger and Brown (1979)
5	DH	Rawlins Peak SW	34	21	89	MR-08	USGS	Dames and Moore Company (1978b), Hettinger and Brown (1979)
6	DH	Rawlins Peak SW	10	21	89	RR-103	RME	Dames and Moore Company (1978b)
7	DH	Separation Peak	4	20	89	BP-077	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
8	DH	Separation Peak	5	20	89	BP-2019	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
9	DH	Separation Peak	8	20	89	BP-2020	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
10	DH	Separation Peak	18	20	89	BP-2025	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
11	DH	Separation Peak	19	20	89	BP-2027	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
12	MS	Separation Peak	10, 15	20	89, 90	L. L. A section	USGS [1]	Hettinger and Brown (1979)
13	DH	Separation Peak	30	20	90	BP-032	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
14	DH	Separation Peak	29	20	90	BP-033	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
15	DH	Separation Peak	29	20	90	H-section	USGS [1]	
16	DH	Separation Peak	28	20	90	BP-034	USGS	Dames and Moore Company (1979c), Hettinger and Brown (1979)
17	DH	Rinar	22	20	90	R-21	USGS	Dames and Moore Company (1979b), Hettinger and Brown (1979), Honey (1990)
18	DH	Rinar	23	20	90	R-22	USGS	Dames and Moore Company (1979b), Hettinger and Brown (1979), Honey (1990)
19	DH	Rinar	28	20	90	R-32	USGS	Dames and Moore Company (1979b), Hettinger and Brown (1979), Honey (1990)
20	DH	Rinar	29	20	90	R-33	USGS	Dames and Moore Company (1979b), Hettinger and Brown (1979), Honey (1990)
21	DH	Rinar	32	20	90	R-35	USGS	Dames and Moore Company (1979b), Hettinger and Brown (1979), Honey (1990)
22	DH	Rinar	5	19	90	R-42	USGS	Dames and Moore Company (1979b), Hettinger and Brown (1979), Honey (1990)
23	MS	Rinar	4, 5, 8	19	90	Rinar section	USGS [1]	
24	DH	Rinar	12	19	91	SS 9-1	Union Carbide	Honey (1990)
25	DH	Rinar	12	19	91	SS 19-1-2	Union Carbide	Dames and Moore Company (1979a), Honey (1990)
26	DH	Rinar	18	19	90	SS 8-2	Union Carbide	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
27	DH	Fillmore Ranch	18	19	90	FR-03	USGS	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
28	DH	Fillmore Ranch	19	19	90	FR-02	USGS	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
29	DH	Fillmore Ranch	24	19	91	SS 21-1	Union Carbide	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
30	DH	Fillmore Ranch	26	19	91	FR-05	USGS	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
31	DH	Fillmore Ranch	26	19	91	SS 16-1	Union Carbide	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
32	DH	Fillmore Ranch	2	18	91	SS 28-1	Union Carbide	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
33	DH	Fillmore Ranch	2	18	91	SS 140-1	Union Carbide	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
34	DH	Fillmore Ranch	12	18	91	FR-03	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976), Honey and Hettinger (1989a)
35	DH	Fillmore Ranch	12	18	91	FR-08	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976), Honey and Hettinger (1989a)
36	DH	Fillmore Ranch	14	18	91	FR-07	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976), Honey and Hettinger (1989a)
37	DH	Seaverson Reservoir	19	19	91	SR-08	USGS	Dames and Moore Company (1979a), Hettinger and Brown (1979), Honey and Hettinger (1989a)
38	DH	Seaverson Reservoir	19	19	91	FR-09	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976), Honey and Hettinger (1989a)
39	DH	Fillmore Ranch	29	19	91	CR-52, 160	RME	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
40	DH	Fillmore Ranch	29	19	91	CR-52, 160	RME	Dames and Moore Company (1979a), Honey and Hettinger (1989a)
41	DH	Seaverson Reservoir	22	19	91	SR-09	USGS	Dames and Moore Company (1979a), Edson (1979), Edson and Curtiss (1976), Honey and Hettinger (1989a)
42	DH	Seaverson Reservoir	22	19	91	CR-53, 161	RME	Dames and Moore Company (1979a), Edson (1979), Edson and Curtiss (1976), Honey and Hettinger (1989a)
43	DH	Seaverson Reservoir	22	19	91	CR-53, 161	RME	Dames and Moore Company (1979a), Edson (1979), Honey and Hettinger (1989a)
44	DH	Seaverson Reservoir	27	19	91	SR-06	USGS	Dames and Moore Company (1979a), Edson (1979), Edson and Curtiss (1976), Honey and Hettinger (1989a)
45	DH	Seaverson Reservoir	27	19	91	CR-55, 163	RME	Dames and Moore Company (1979a), Edson (1979), Honey and Hettinger (1989a)
46	DH	Seaverson Reservoir	27	19	91	CR-55, 163	RME	Dames and Moore Company (1979a), Edson (1979), Honey and Hettinger (1989a)
47	DH	Seaverson Reservoir	28	19	91	SR-07	USGS	Dames and Moore Company (1979a), Edson (1979), Honey and Hettinger (1989a)
48	DH	Seaverson Reservoir	29	19	91	CR-74, 165	RME	Dames and Moore Company (1979a), Edson (1979), Honey and Hettinger (1989a)
49	DH	Doty Mountain	3	19	91	MB-11	USGS	Hettinger and Honey (2006), Hettinger and Honey (2006)
50	DH	Doty Mountain	12	19	91	DM-01	USGS	Hettinger and Brown (1979), Hettinger and Honey (2006)
51	DH	Doty Mountain	12	19	91	DM-02	USGS	Hettinger and Brown (1979), Hettinger and Honey (2006)
52	DH	Doty Mountain	12	19	91	CR-98, 242	RME	Dames and Moore Company (1979a), Hettinger and Honey (2006)
53	DH	Doty Mountain	13	19	91	MB-16	USGS	Dames and Moore Company (1979a), Hettinger and Honey (2006)
54	DH	Doty Mountain	13	19	91	242	RME	Dames and Moore Company (1979a), Hettinger and Honey (2006)
55	DH	Doty Mountain	13	19	91	242	RME	Dames and Moore Company (1979a), Hettinger and Honey (2006)
56	MS	Doty Mountain	22, 23	19	91	MS 39	USGS	Dames and Moore Company (1979a), Hettinger and Honey (2006)
57	DH	Doty Mountain	24	19	91	DM-24	USGS	Dames and Moore Company (1979a), Hettinger and Honey (2006)
58	DH	Doty Mountain	24	19	91	DM-23	USGS	Dames and Moore Company (1979a), Hettinger and Honey (2006)
59	DH	Doty Mountain	25	19	91	DM-22	USGS	Dames and Moore Company (1979a), Hettinger and Honey (2006)
60	DH	Rock Creek	4	18	91	MB-40 (part)	USGS	Dames and Moore Company (1979a), Hettinger and Honey (2006)
61	MS	Doty Mountain	3, 4	18	92	MS 40 (part)	USGS	Dames and Moore Company (1979a), Hettinger and Honey (1999)
62	MS	Doty Mountain, Duck Lake	4, 9	18	92	MS 41	USGS	Hettinger and Honey (2005)
63	MS	Blue Gap	5, 8	18	92	MS 2	USGS	Hettinger and Honey (2005)
64	MS	Blue Gap	5, 10	18	92	MS 3	USGS	Hettinger and Honey (2005)
65	MS	Blue Gap	22, 27	18	92	MS 16	USGS	Dames and Moore Company (1979b), Hettinger and Honey (2005)
66	DH	Blue Gap	28	18	92	DM-08	USGS	Dames and Moore Company (1979b), Hettinger and Honey (2005)
67	DH	Blue Gap	3	18	92	DM-07	USGS	Dames and Moore Company (1979b), Hettinger and Honey (2005)
68	DH	Blue Gap	11	18	92	Cow 017-1	Unexplored/Well	Dames and Moore Company (1979b), Hettinger and Honey (2005)
69	DH	Blue Gap	11	18	92	Cow 017-1	Unexplored/Well	Dames and Moore Company (1979b), Hettinger and Honey (2005)
70	MS	Blue Gap	11, 12	18	92	MS 30 (part)	USGS	Dames and Moore Company (1979b), Hettinger and Honey (2005)
71	DH	Blue Gap	13	18	92	DM-09	USGS	Dames and Moore Company (1979b), Hettinger and Honey (2005)
72	DH	Blue Gap	14	18	92	Cow 2-1	Unexplored/Well	Dames and Moore Company (1979b), Hettinger and Honey (2005)
73	DH	Blue Gap	24	18	92	Cow 30-1	Unexplored/Well	Dames and Moore Company (1979b), Hettinger and Honey (2005)
74	DH	Blue Gap	24	18	92	Cow 5-1	Unexplored/Well	Dames and Moore Company (1979b), Hettinger and Honey (2005)
75	DH	Blue Gap	24	18	92	DM-06	USGS	Dames and Moore Company (1979b), Hettinger and Honey (2005)
76	DH	Pelican Dividend Flat	25	18	92	SAS Fed. 24-1	Exxon Co	Honey and Hettinger (2006), Honey and Robinson Roberts (1989)
77	MS	Peach Orchard Flat	26	15	91	371	USGS	Honey (1989, has section 2), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
78	MS	Peach Orchard Flat	26	15	91	50	USGS	Honey (1989, has section 2), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
79	MS	Peach Orchard Flat	28	15	91	374	USGS	Honey (1989, has section 2), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
80	MS	Peach Orchard Flat	4, 9	14	91	314	USGS	Honey (1989, has section 12), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
81	MS	Peach Orchard Flat	9	14	91	311	USGS	Honey (1989, has section 12), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
82	MS	Peach Orchard Flat	27, 28	14	91	Kingham 4	Tenneco	Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
83	MS	Peach Orchard Flat	27, 28	14	91	323	USGS	Honey (1989, has sections 25 and 26), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
84	MS	Peach Orchard Flat and Smiley Draw	27, 34	14	91	324	USGS	Honey (1989, has section 27), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
85	MS	Smiley Draw	27	14	91	325	USGS	Honey (1989, has section 28), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
86	MS	Smiley Draw	34	14	91	326	USGS	Honey (1989, has section 28), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
87	MS	Smiley Draw	34	14	91	WY-S1-1	Unexplored/Well	Dames and Moore Company (1979b), Honey and Robinson Roberts (1989)
88	MS	Smiley Draw	34	14	91	WY-1	Unexplored/Well	Dames and Moore Company (1979b), Honey and Robinson Roberts (1989)
89	MS	Sheet	5	13	91	1	USGS	Honey (1989, has section 35), Honey and Hettinger (2004), Honey and Robinson Roberts (1989)
90	DH	Creston Junction	5	20	91	RMEUP	Dames and Moore Company (1979a)	
91	DH	Creston Junction	5	20	91	242	RME/UP	Dames and Moore Company (1979a)
92	DH	Creston	8	19	90	146	RME/UP	Dames and Moore Company (1979a)
93	DH	Creston	21	19	90	145	RME/UP	Dames and Moore Company (1979a)
94	DH	High Point	21	19	90	145	RME/UP	Dames and Moore Company (1979a)
95	DH	Seaverson Reservoir	21	19	91	BR-01	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976), Edson (1979)
96	DH	High Point	4	19	92	HP-02	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976)
97	DH	High Point	4	19	92	HP-03	USGS	Dames and Moore Company (1979a), Edson and Curtiss (1976)

[1] U.S. Honey previously unpublished stratigraphic sections measured in 2001 in the River and Separation Peak 7.5-minute quadrangles, Carbon County, Wyoming.