UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COAL RESOURCE OCCURRENCE

AND

COAL DEVELOPMENT POTENTIAL

OF THE

RESERVOIR CREEK QUADRANGLE

CAMPBELL COUNTY, WYOMING

BY

INTRASEARCH INC.

DENVER, COLORADO

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This report is preliminary, and has not been edited or reviewed for conformity with United States Geological Survey standards or stratigraphic nomenclature.

TABLE OF CONTENTS

		Page
I.	INTRODUCTION	1
II.	GEOLOGY	4
III.	DATA SOURCES	9
IV.	COAL BED OCCURRENCE	10
V.	GEOLOGICAL AND ENGINEERING MAPPING PARAMETERS	14
VI.	COAL DEVELOPMENT POTENTIAL	16
	Table 1.--Strippable Coal Reserve Base Data (in short tons) for Federal Coal Lands in the Reservoir Creek Quadrangle, Campbell County, Wyoming.	19
	Table 2.--Coal Resource Base Data (in short tons) for Underground Mining Methods for Federal Coal Lands in the Reservoir Creek Quadrangle, Campbell County, Wyoming.	20
	Table 3.--Coal Resource Base Data (in short tons) for In-Situ Gasification for Federal Coal Lands in the Reservoir Creek Quadrangle, Campbell County, Wyoming.	21
	SELECTED REFERENCES	22

TABLE OF CONTENTS (continued)

	MAPS	PLATES
1.	Coal Data Map	1
2.	Boundary and Coal Data Map	2
3.	Coal Data Sheet	3
4.	Mining Ratio-Isopach Map of the Smith Coal Bed	4
5.	Structure Contour Map of the Smith Coal Bed	5
6.	Isopach Map of Overburden of the Smith Coal Bed	6
7.	Areal Distribution and Identified Resources of the Smith Coal Bed	7
8.	Identified Resources of the Smith Coal Bed	8
9.	Mining Ratio-Isopach Map of the Anderson Coal Bed	9
10.	Structure Contour Map of the Anderson Coal Bed	10
11.	Isopach Map of Overburden of the Anderson Coal Bed	11
12.	Areal Distribution and Identified Resources of the Anderson Coal Bed	12
13.	Identified Resources of the Anderson Coal Bed	13
14.	Mining Ratio-Isopach Map of the Canyon Coal Bed	14
15.	Structure Contour Map of the Canyon Coal Bed	15
16.	Isopach Map of Overburden of the Canyon Coal Bed	16
17.	Areal Distribution and Identified Resources of the Canyon Coal Bed	17
18.	Identified Resources of the Canyon Coal Bed	18
19.	Mining Ratio-Isopach Map of the Cook Coal Bed	19

TABLE OF CONTENTS (continued)

		Plate
20.	Structure Contour Map of the Cook Coal Bed	20
21.	Isopach Map of Overburden/Interburden of the Cook Coal Bed	21
22.	Areal Distribution and Identified Resources of the Cook Coal Bed	22
23.	Identified Resources of the Cook Coal Bed	23
24.	Mining Ratio-Isopach Map of the Wall Coal Bed	24
25.	Structure Contour Map of the Wall Coal Bed	25
26.	Isopach Map of Overburden of the Wall Coal Bed	26
27.	Areal Distribution and Identified Resources of the Wall Coal Bed	27
28.	Identified Resources of the Wall Coal Bed	28
29.	Mining Ratio-Isopach Map of the Pawnee Coal Bed	29
30.	Structure Contour Map of the Pawnee Coal Bed	30
31.	Isopach Map of Overburden of the Pawnee Coal Bed	31
32.	Areal Distribution and Identified Resources of the Pawnee Coal Bed	32
33.	Identified Resources of the Pawnee Coal Bed	33
34.	Mining Ratio-Isopach Map of the Cache Coal Bed	34
35.	Structure Contour Map of the Cache Coal Bed	35
36.	Isopach Map of Overburden of the Cache Coal Bed	36
37.	Areal Distribution and Identified Resources of the Cache Coal Bed	37
38.	Identified Resources of the Cache Coal Bed	38
39.	Coal Development Potential for Surface Mining Methods	39

CONVERSION TABLE

To Convert	Multiply By	To Obtain
inches	2.54	centimeters (cm)
feet	0.3048	meters (m)
miles	1.609	kilometers (km)
acres	0.40469	hectares (ha)
tons (short)	0.9072	metric tons (t)
cubic yards/ton	0.8428	cubic meters per metric ton
acre feet	0.12335	hectare-meters
Btu/lb	2.326	kilojoules/kilogram (kJ/kg)
Btu/lb	0.55556	kilocalories/kilogram (kcal/kg)
Fahrenheit	5/9(F-32)	Celsius

I. Introduction

The report and accompanying maps set forth the Coal Resource Occurrence (CRO) and Coal Development Potential (CDP) of coal beds within the Reservoir Creek Quadrangle, Campbell County, Wyoming. The CRO and CDP map series includes 39 plates (U.S. Geological Survey Open-File Report 78-832). The project is compiled by IntraSearch Inc., 1600 Ogden Street, Denver, Colorado under KRCRA Northeastern Powder River Basin, Wyoming Contract Number 14-08-0001-17180. This contract is a part of a program to provide an inventory of federal coal in Known Recoverable Coal Resource Areas (KRCRA) in the western United States.

The Reservoir Creek Quadrangle is located in Campbell County, in northeastern Wyoming. It encompasses all or parts of Townships 55, 56, and 57 North, Ranges 74 and 75 West, in Wyoming, and covers the area: 44°45' to 44°52'30" north latitude; 105°45' to 105°52'30" west longitude.

A maintained gravel road provides access to the Reservoir Creek quadrangle from the southeast corner to the center of the quadrangle. Minor roads and trails that branch from this gravel road constitute an avenue of access to much of the area. The main gravel road extends southward, where it joins U.S. Highway 14-16 about 4 miles (6.4 km) south of Recluse, Wyoming. The closest railroad is the Burlington Northern trackage between Gillette and Sheridan, Wyoming, 14 miles (22.5 km) to the southwest.

LX Bar Creek and SA Creek drain northwestward across the quadrangle into the Powder River. The lowest topographic elevation in the area, 3660 feet (1116 meters) above sea level, is in the valley floor of SA Creek. The fairly rugged terrain north of LX Bar Creek attains an elevation of 4222 feet (1287 m) above sea level. The somber grays, yellows, and browns of outcropping shales and siltstones contrast strikingly with the brilliant reds, oranges, and purples of "clinker", and deep greens of the juniper and pine tree growth.

The thirteen to fourteen inches (33 to 36 cm) of annual precipitation that falls in this semi-arid region accrues principally in the springtime. Summer and fall precipitation usually originates from thunderstorms and infrequent snowfalls of six inches (15 cm) or less generally characterize winter precipitation. Although temperature ranges from less than -25°F (-32°C) to more than 100°F (38°C) have been recorded near Arvada, Wyoming, average wintertime minimums and summertime maximums approach +5° to +15°F (-15° and -9°C) and 75° to 90°F (24° to 32°C), respectively.

Surface ownership is divided among fee, state, and federal categories with the state and federal surface generally leased to ranchers for grazing purposes. Details of surface ownership are available at the County Courthouse in Gillette, Wyoming. Details of mineral ownership on federal lands are available from the U.S. Bureau of Land Management in Cheyenne, Wyoming. Federal coal

ownership is shown on Plate 2 of the Coal Resource Occurrence maps. The non-federal coal ownership comprises both fee and state coal resources.

The Coal Resource Occurrence and Coal Development Potential program focuses upon: 1) the delineation of lignite, subbituminous, bituminous, and anthracite coal at the surface and in the subsurface on federal land; 2) the identification of total tons in place as well as recoverable tons; 3) categorization of these tonnages into measured, indicated, and inferred reserves and resources, and hypothetical resources; and 4) recommendations regarding the potential for surface mining, subsurface mining and in-situ gasification of the coal beds. This report evaluates the coal resources of all coal beds in the quadrangle which are five feet (1.5 m) or greater in thickness, and occur at a depth up to 3000 feet (914 m).

Surface and subsurface geological and engineering extrapolations drawn from the current data base suggest the occurrence of approximately 7.8 billion tons (7.1 billion metric tons) of total coal-in-place in the Reservoir Creek Quadrangle.

The suite of maps that accompany this report set forth and portray the coal resource and reserve occurrence in considerable detail. For the most part, this report intends to augment the cartographically displayed information with minimum word duplication of said data.

II. Geology

Regional. The thick, economic coal deposits of the Powder River Basin in northeastern Wyoming occur mostly in the Tongue River Member of the Fort Union Formation. Approximately 3000 feet (914 m) of the Fort Union Formation that includes the Tongue River, Lebo, and Tullock Members of Paleocene age, are unconformably overlain by approximately 700 feet (213 m) of the Wasatch Formation of Eocene age. These Tertiary formations lie in a structural basin flanked on the east by the Black Hills uplift, on the south by the Hartville and Casper Mountain uplifts, and on the west by the Casper Arch and the Big Horn Mountain uplift. The structural configuration of the Powder River Basin originated in Late Cretaceous time, with episodic uplift thereafter. The Cretaceous Cordillera was the dominant positive land form throughout the Rocky Mountain area at the close of Mesozoic time.

Outcrops of the Wasatch Formation and the Tongue River Member of the Fort Union Formation cover most of the areas of major coal resource occurrence in the Powder River Basin. The Lebo Member of the Fort Union Formation is mapped at the surface east of the Reservoir Creek Quadrangle (McKay, 1974), and presumably projects into the subsurface beneath much of the area of this report. One of the principal characteristics for separating the Lebo and Tullock Members (collectively referred to as the Ludlow Member east of

Miles City, Montana) from the overlying Tongue River Member is the color differential between the lighter-colored upper portion and the somewhat darker lower portion (Brown, 1958). Although geologists working with subsurface data, principally geophysical logs, in the basin are trying to develop criteria for subsurface recognition of the Lebo-Tullock and Tongue River-Lebo contacts, no definitive guidelines are known to have been published. Hence, for subsurface mapping purposes the Fort Union Formation is not divided into its member subdivisions for this study.

During the Paleocene epoch, the Powder River Basin tropic to subtropic depositional environment included broad, inland flood basins with extensive swamps, marshes, freshwater lakes, and a sluggish but active drainage system, superimposed on a near base level, emerging sea floor. Localized uplifts began to disturb the near sea level terrain of northeastern Wyoming, following retreat of the Cretaceous seas. However, the extremely fine-grained characteristics of the Tongue River Member clastics suggest that areas of recurring uplift peripheral to the Powder River Basin were subdued during major coal deposit formation.

The uplift of areas surrounding the Powder River Basin created a structural basin of asymmetric characteristic, with the steep west flank located on the eastern edge of the Big Horn Mountains. The axis of the Powder River Basin is difficult to specifically define, but is

theorized to be located in the western part of the basin, and to display a north-south configuration some 15 to 20 miles (24 to 32 km) east of Sheridan, Wyoming. Thus, the sedimentary section described in this report lies on the east flank of the Powder River Basin, with gentle dips of two degrees or less disrupted by surface structure thought to relate to tectonic adjustment and differential compaction.

The surface drainage system existent during Fort Union time in the Wyoming portion of the Powder River Basin displayed a near base level profile with discharge northeastward. During Tongue River time, the flat landmass was near sea level. A tropical to subtropical climate existed, and much of the vast areas where organic debris collected was within a reducing depositional environment.

Some coal beds in the Powder River Basin exceed 200 feet (61 m) in thickness. Deposition of these thick in-situ coal beds requires a discrete balance between subsidence of the earth's crust and in-filling by tremendous volumes of organic debris. These conditions in concert with a favorable ground water table, non-oxidizing clear water and a climate amenable to the luxuriant growth of vegetation produce a stabilized swamp critical to the deposition of coal beds. Deposition of the unusually thick coal beds of the Powder River Basin may be partially attributable to short distance water transportation of organic detritus into areas of crustal subsidence. Variations in coal bed thickness throughout the basin relate to changes in the depositional environment. Drill hole data that indicate either the

complete absence or extreme attenuation of a thick coal bed probably relate to location within the ancient stream channel system servicing this low land area in Early Cenozoic time. Where thick coal beds thin rapidly from the depocenter of a favorable depositional environment, it is not unusual to encounter synclinal structure over the maximum coal thickness due to the differential compaction between organic debris in the coal depocenter, and fine-grained clastics in the adjacent areas.

The Wasatch Formation of Eocene age crops out over most of the central part of the Powder River Basin and exhibits a disconformable contact with the underlying Fort Union Formation. The contact has been placed at various horizons by different workers; however, for the purpose of this report, in western Campbell County, Wyoming, the contact is positioned at the top of the Roland coal bed as mapped by Olive (1957) and is oonsidered to disconformably descend in the stratigraphic column to the top of the Wyodak-Anderson (Roland of Taff, 1909) along the eastern boundary of the coal measures. No attempt is made to differentiate the Wasatch and Fort Union Formations on geophysical logs or in the subusrface mapping program that is a part of this CRO-CDP project.

Although Wasatch and Fort Union lithologies are too similar to allow differentiation in some areas, most of the thicker caal beds occur in the Fort Union section on the east flank of the Powder River

Basin. Furthermore, orogenic movements peripheral to the basin apparently increased in magnitude during Wasatch time causing the deposition of friable, coarse-grained to gritty arkosic sandstones, fine to very fine-grained sandstones, siltstones, mudstones, claystones, and brown to black carbonaceous shales. These sediments are noticeably to imperceptibly coarser than the underlying Fort Union clastics.

The Reservoir Creek Quadrangle is located in an area where surface rocks are classified into the Tongue River Member of the Fort Union Formation. Although the Tongue River Member is reportedly 1200 to 1300 feet (366 to 396 m) thick (Olive, 1957), only 500 to 600 feet (152 to 183 m) are exposed in this area. Olive (1957) correlated coal beds in the Spotted Horse coal field with coal beds in the Sheridan coal field (Baker, 1929) and Gillette coal field (Dobbin and Barnett, 1927), Wyoming, and with coal beds in the Ashland coal field (Bass, 1932) in southeastern Montana. This report utilizes, where possible, the coal bed nomenclature used in previous reports. The Smith and Dietz No. 1 coal beds were named by Taff (1909). Baker (1929) assigned names to the Anderson, Canyon, and Wall coal beds. The Cook coal bed was named by Bass (1932), and both the Pawnee and Cache coal beds were named by Warren (1959). The Oedekoven coal bed was informally named by IntraSearch (1978).

Local. The Reservoir Creek Quadrangle lies on the eastern flank of the Powder River Basin, where the strata dip gently westward. Wasatch starta crop out in the high elevations; however, the Tongue River Member

of the Fort Union Formation crops out over most of the quadrangle. The Fort Union Formation is composed of very fine-grained sandstone, siltstone, claystone, shale, carbonaceous shale, and numerous coal beds. The Wasatch Formation caps divides in the Reservoir Creek area, and lies disconformably on the Tongue River Member (Olive, 1957). The Wasatch consists of sandstone, siltstone, shale, and thin coal beds.

The configuration of structural contours on top of the coal beds delineates a structural high, which trends southwestward through the quadrangle. This structural high trends from the northeastern corner of the quadrangle to the southwest, and becomes better defined and uniform in the lower coal beds.

III. Data Sources

Areal geology of the coal outcrops and associated clinker is derived from the Spotted Horse Coalfield Report (Olive, 1957). The coal bed outcrops are adjusted to the current topographic maps in the area.

The major source of subsurface control, particularly on deep coal beds, is the geophysical logs from oil and gas test bores and producing wells.

Some geophysical logs are not applicable to this study, for the logs relate only to the deep potentially productive oil and gas zones. More than eighty percent of the logs include resistivity, conductivity, and self-potential curves. Occasionally the logs include gamma, density, and sonic curves. These logs are available from several commercial sources.

All geophysical logs available in the quadrangle are scanned to select those with data applicable to Coal Resource Occurrence mapping.

Paper copies of the logs are obtained, interpreted, and coal intervals annotated. Maximum accuracy of coal bed identification is accomplished where gamma, density, and resistivity curves are available. Coal bed tops and bottoms are picked on the logs at the midpoint between the minimum and maximum curve deflections. The correlation of coal beds within and between quadrangles is achieved utilizing a fence diagram to associate local correlations with regional coal occurrences.

The topographic map of the Reservoir Creek Quadrangle is published by the U.S. Geological Survey, compilation date, 1971. Land ownership data is compiled from land plats obtained from the U.S. Bureau of Land Management in Cheyenne, Wyoming. This information is current to October 13, 1977.

IV. Coal Bed Occurrence

Fort Union Formation coal beds that are present in all of part of the Reservoir Creek Quadrangle include, in descending stratigraphic order, the Smith, Anderson, Canyon, Cook, Wall, Pawnee, Cache, and Oedekoven. A complete suite of maps (structure, isopach, mining ratio, overburden/interburden, identified resources and areal distribution of identified resources) is prepared for each of these coal beds, except for the Oedekoven coal bed where insufficient thickness and areal extent preclude detailed mapping.

No physical and chemical analyses are known to have been published regarding the coal beds in the Reservoir Creek Quadrangle. However, the general "as received" basis proximate analyses for northern Campbell County, Wyoming coal beds are as follows:

COAL BED NAME		ASH	FIXED CARBON	MOISTURE	VOLATILES	SULPHUR	BTU/LB
Smith (P)		6.440	31.390	35.370	26.800	0.450	7125
Anderson (U)	Hole 7406	6.317	31.113	32.583	29.986	0.327	7498
Canyon (P)		4.290	32.852	35.100	27.758	0.307	7298
Cook (P)		4.620	34.410	33.640	27.330	0.250	7766
Wall (U)	Hole 7426	9.542	29.322	32.150	28.985	0.500	7279
Pawnee (U)	Hole 7424	7.880	31.029	31.910	29.183	0.386	7344
Cache (U)	Hole 741	9.481	30.517	31.420	28.582	0.488	7271

(P) - Proprietary Data
(U) - U.S. Geological Survey & Montana Bureau of Mines & Geology - 1974

The Coal Data Sheet, Plate 3, shows the downhole identification of coal beds within the quadrangle as interpreted from geophysical logs from oil and gas test bores and producing sites. Inasmuch as the Canyon coal bed underlies the entire quadrangle, it is designated as datum for the correlation diagram. The Canyon and Cook coal beds show the thickest coal bed occurrences throughout the quadrangle. The Wall, Pawnee, and Cache coal beds occur throughout the area. Although a deep coal bed, between 200 feet (61 m) and 300 feet (91 m) below the

Cache coal bed is mapped as a local coal bed, it may correlate with the Oedekoven coal bed of the Recluse, Wyoming area. Neither the amount of data existent on this coal bed, nor the coal thickness, justify full-scale mapping of the coal bed.

The Smith coal bed ranges from 5 feet (1.5 m) thick in the eastern portion of the quadrangle, to 30 feet (9 m) thick in the southwest corner. The Smith coal bed is partially burned along its outcrop. The structural contours on the Smith coal bed indicate gentle deformation of the coal bed throughout the quadrangle.

The Anderson coal bed occurs 120 feet (37 m) to 220 feet (67 m) below the Smith coal bed, and ranges from 10 feet (3 m) to 30 feet (9 m) in thickness. Subsurface control indicates that the Anderson coal bed thins to 10 feet (3 m) both eastward and westward, and thickens considerably to the northeast and southwest. The Anderson coal bed is partially burned along its outcrop. Two structural highs are present in the eastern half of the quadrangle, and a structural low occurs on the western boundary.

The Canyon coal bed is separated from the overlying Anderson coal bed by 120 feet (37 m) to 270 feet (82 m) of clastic sediments. The Canyon coal bed averages 33 feet (10 m) in thickness and thins to less than 10 feet (3 m) in the northwest corner of the quadrangle. In the western part of the quadrangle, it thickens to 46 feet (14 m). Over the southern half of the quadrangle, it averages 38 feet (12 m) in thickness.

The Canyon coal bed structure map shows two closed synclinal features in the northern half of the quadrangle. The western edge of the map portrays the lowest structural elevations.

Forty to 370 feet (12 to 113 m) of interburden separate the Cook coal bed from the overlying Canyon coal bed. The Cook coal bed averages 39 feet (12 m) in thickness. It attains a thickness of 50 feet (15 m) in the western sector of the quadrangle, and thins to 30 feet (9 m) in the eastern part. The Cook coal bed is split by 3 to 99 feet (0.9 to 30 m) of interburden in the northern half of the quadrangle. The Cook coal bed does not crop out within the quadrangle, and over most of the study area, it occurs 500 feet (152 m) or more beneath the surface. The Cook coal bed structure map indicates a uniform dip of 2^{o} to 3^{o} to the west.

The Wall coal bed occurs 10 to 116 feet (3 to 35 m) beneath the Cook coal bed, and averages 25 feet (8 m) thick. Thicknesses for the Wall coal bed range from 17 feet (5 m) in the northwestern sector, to 35 feet (11 m) in the western area. The Wall coal bed occurs more than 500 feet (152 m) beneath the surface throughout this quadrangle. The Wall coal bed structure map presents a structural high which trends to the south from the northeastern corner of the quadrangle.

The Pawnee coal bed is separated from the overlying Wall coal bed by 20 to 120 feet (6 to 37 m) of clastic debris. The Pawnee coal bed ranges from 0 to 30 feet (0 to 9 m) thick, and averages approximately 11 feet (3 m) in thickness. The Pawnee coal bed is absent in two holes in the northeastern portion of the quadrangle, and it thickens westward to a maximum thickness of 30 feet (9 m). The Pawnee coal bed is more than 500 feet (152 m) beneath the surface throughout the quadrangle, and shows fairly uniform structural contours throughout the quadrangle. A structural high is present in Section 36, T. 56 N., R. 75 W.

Twenty-five to 140 feet (8 to 43 m) of clastic sediments separate the Cache coal bed from the overlying Pawnee coal bed. The Cache coal bed pinches out in the northeastern and northwestern parts of the quadrangle, and thickens slightly to the east. The Cache coal bed averages approximately 7 feet (2 m) in thickness and occurs 500 feet (152 m) or more beneath the surface throughout the quadrangle. A structural high trends to the south from the northeastern corner of the study area.

V. Geological and Engineering Mapping Parameters

Subsurface mapping is based on geologic data within and adjacent to the Reservoir Creek area. Data from geophysical logs are used to correlate coal beds and control contour lines for the coal thickness, structure, and overburden maps. Isopach lines are also drawn to honor selected measured sections where there is sparse subsurface control.

Where isopach contours do not honor surface measured sections, the surface thicknesses are thought to be attenuated by oxidation and/or erosion, hence not reflective of total coal thickness. Structure contour maps are constructed on the tops of the main coal beds. Where subsurface data is scarce, supplemental structural control points are selected from the topographic map along coal outcrops.

In preparing overburden isopach maps, no attempt is made to identify coal beds that occur in the overburden to a particular coal bed under study. Mining ratio maps for this quadrangle are constructed utilizing a 95% recovery factor. Contours on these maps identify the ratio of bank cubic yards of overburden to tons of recoverable coal. Where ratio control points are sparse, interpolated points are computed using coal structure, coal isopach, and topographic control. On the Areal Distribution of Identified Resources Map (ADIR), coal bed reserves are not calculated where the coal is less than 5 feet (1.5 m) thick, where the coal occurs at a depth greater than 500 feet (152 m), and where non-federal coal exists.

Coal tonnage calculations involve the planimetering of areas of measured, indicated and inferred reserves and resources, and hypothetical resources to determine their areal extent in acres. Acres are multiplied by the average coal bed thickness and 1750 (the number of tons of lignite A per acre-foot; 12,874 metric tons per hectare-meter) to

determine total tons in place. Recoverable tonnage is calculated at 95% of the total tons in place. Directly north of the Reservoir Creek Quadrangle in the Montana portion of the Powder River Basin, a recovery factor of 85 percent is utilized because of the general northward thinning of economic coal beds. Where tonnages are computed for the CRO-CDP map series, resources and reserves are expressed in millions of tons. Frequently the planimetering of coal resources on a sectionized basis involves complexly curvilinear lines (coal bed outcrop and 500-foot stripping limit designations) in relationship with linear section boundaries and circular resource category boundaries. Where these relationships occur, generalizations of complex curvilinear lines are discretely utilized, and resources and/or reserves are calculated within an estimated two to three percent plus or minus accuracy.

VI. Coal Development Potential

Strippable Coal Development Potential. Areas where coal beds are 5 feet (1.5 m) or more in thickness and are overlain by 500 feet (152 m) or less of overburden are considered to have potential for surface mining and are assigned a high, moderate, or low development potential based on the mining ratio (bank cubic yards of overburden per ton of recoverable coal). The formula used to calculate mining ratios is as follows:

$$MR = \frac{t_o\ (0.922)}{t_c\ (rf)}$$

where MR = mining ratio
t_o = thickness of overburden
t_c = thickness of coal
rf = recovery factor
0.922 = conversion factor (bank cubic yds/ton)

A surface mining potential map was prepared utilizing the following mining ratio criteria:

1. Low development potential = 15:1 and greater ratio.
2. Moderate development potential = 10:1 to 15:1 ratio.
3. High development potential = 0 to 10:1 ratio.

The surface mining potential is high for most of the Reservoir Creek Quadrangle. The Anderson and Canyon coal beds develop high surface mining potential in the drainages of SA and LX Bar Creeks. In the high terrain of Reservoir Creek Quadrangle, the Smith coal bed is considered to have high potential for surface mining. Table 1 sets forth the estimated strippable reserve tonnages per coal bed for the quadrangle.

Underground Mining Coal Development Potential. Subsurface coal mining potential throughout the Reservoir Creek Quadrangle is considered low. Table 2 sets forth the coal resources in tons per coal bed.

In-Situ Gasification Coal Development Potential. The evaluation of subsurface coal deposits for in-situ gasification potential relates to the occurrence of coal beds more than 5 feet (1.5 m) thick buried from 500 to 3000 feet (152 to 914 m) beneath the surface. This categorization is as follows:

1. Low development potential relates to a total coal section less than 100 feet (30 m) thick, or coal beds that lie 500 feet (152 m) to 1000 feet (305 m) beneath the surface.

2. Moderate development potential is assigned to a total coal section from 100 to 200 feet (30 to 61 m) thick, and from 1000 to 3000 feet (305 to 914 m) beneath the surface.

3. High development potential involves 200 feet (61 m) or more of total coal thickness buried from 1000 to 3000 feet (305 to 914 m).

The coal development potential for in-situ gasification on the Reservoir Creek Quadrangle is low, hence no CDP map is generated for this map series. The resource tonnage for in-situ gasification with low development potential totals approximately 4.7 billion tons (4.3 billion metric tons) (Table 3). None of the coal beds in the Reservoir Creek Quadrangle qualify for a moderate or high development potential rating.

Table 1.--Strippable Coal Reserve Base Data (in short tons) for Federal Coal Lands in the Reservoir Creek Quadrangle, Campbell County, Wyoming.

Development potentials are based on mining ratios (bank cubic yards of overburden/ton of recoverable coal).

Coal bed	High development potential (0-10:1 Mining Ratio)	Moderate development potential (10:1-15:1 Mining Ratio)	Low development potential (>15:1 Mining Ratio)	Total
Smith	400,600,000	19,900,000	1,000,000	421,500,000
Anderson	262,100,000	230,300,000	174,000,000	666,400,000
Canyon	459,700,000	716,400,000	89,400,000	1,265,500,000
Cook	143,900,000	451,300,000	10,900,000	606,100,000
Wall	-	-	58,700,000	58,700,000
Pawnee	-	-	-	-
Cache	-	-	-	-
TOTAL	1,266,300,000	1,417,900,000	334,000,000	3,018,200,000

Table 2.--Coal Resource Base Data (in short tons) for underground mining methods for Federal Coal Lands in the Reservoir Creek Quadrangle, Campbell County, Wyoming.

Coal Bed Name	High Development Potential	Moderate Development Potential	Low Development Potential	Total
Smith	-	-	-	-
Anderson	-	-	-	-
Canyon	-	-	576,100,000	576,100,000
Cook	-	-	1,645,000,000	1,645,000,000
Wall	-	-	1,396,100,000	1,396,100,000
Pawnee	-	-	766,900,000	766,900,000
Cache	-	-	269,900,000	269,900,000
Total	-	-	4,654,000,000	4,654,000,000

Table 3.--Coal Resource Base Data (in short tons) for In-Situ Gasification for Federal Coal Lands in the Reservoir Creek Quadrangle, Campbell County, Wyoming.

Coal Bed Name	High Development Potential	Moderate Development Potential	Low Development Potential	Total
Smith	-	-	-	-
Anderson	-	-	-	-
Canyon	-	-	576,100,000	576,100,000
Cook	-	-	1,645,000,000	1,645,000,000
Wall	-	-	1,396,100,000	1,396,100,000
Pawnee	-	-	766,900,000	766,900,000
Cache	-	-	269,900,000	269,900,000
Total	-	-	4,654,000,000	4,654,000,000

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