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MORE THAN TWO AND ONE-QUARTER BILLION TONS OF COAL ESTIMATED IN HUERFANO AND LAS ANIMAS COUNTIES, COLORADO

A preliminary map showing the geology and distribution of coal resources in Gulnare, Cuchara Pass, and Stonewall area, Huerfano and Las Animas Counties, Colo., has been released by the Geological Survey, Secretary of the Interior Douglas McKay announced today.

Coal deposits of this area, which is part of the Trinidad coal field, are estimated to exceed 2¼ billion tons. The coal occurs in beds of Early Tertiary and Late Cretaceous age and is high volatile A and B bituminous coking coal.

The geologic map is on a scale of about three inches equals one mile and covers an area of approximately 250 square miles in northwestern Las Animas and southwestern Huerfano Counties. It shows the distribution of Cenozoic, Mesozoic and Paleozoic strata and early Tertiary intrusive rocks and structural features of the area. The stratigraphy of part of the Late Cretaceous and Early Tertiary strata is illustrated by graphic sections and the extent and thickness of the coal beds are shown in coal sections. Estimated original reserves of coal are shown in tables.

Titled "Geology and coal resources of the Gulnare, Cuchara Pass, and Stonewall area, Huerfano and Las Animas Counties, Colorado," by G. H. Wood, Jr., R. B. Johnson, and G. H. Dixon, the report has been placed on open file in order to make the information available in advance of formal publication of the report. Copies may be consulted at the Geological Survey Library, Room 1033, General Services Administration Building, Washington 25, D. C.; Room 468, New Customhouse, Denver, Colo.; and Room 504, Federal Building, Salt Lake City, Utah.

x x x

Maps + Plates in map drawer

G. H. Dixon, and G. D. Hill. 1954

P.N. 64691

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[Table 1-A of 13]
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Total estimated original coal reserves in the Gulnare, Cuchara Pass, and Stonewall area, Huerfano and Las Animas Counties, Colorado

(All coal is of bituminous rank, in thousands of short tons)

Township and Range	Total reserves on a coal bed basis				Total reserves on a coal zone basis	Total Reserves
	In beds 14 to 28 inches thick	In beds 28 to 42 inches thick	In beds more than 42 inches thick	Total	Additional reserves inferred on a coal zone basis	Total
T31S,R66W	—	—	—	—	117,260	117,260
T31S, R67W	—	—	—	—	23,600	23,600
T31S, R68W	1,080	660	1,450	3,190	—	3,190
T31S, R69W	6,070	5,150	8,140	19,360	—	19,360
T32S, R66W	2,560	840	—	3,400	323,900	327,300
T32S, R67W	10	—	—	10	424,750	424,760
T32S, R68W	51,230	31,430	93,600	176,260	99,710	275,970
T32S, R69W	580	60	1,600	2,240	—	2,240
T33S, R66W	12,250	4,690	45,700	62,640	176,250	238,890
T33S, R67W	65,990	50,420	16,110	132,520	404,620	537,140
T33S, R68W	27,120	63,310	34,080	124,510	185,850	310,360
Total all Townships	166,890	156,560	200,680	524,130	1,755,940	2,280,070

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Estimated original coal reserves on a coal bed basis in the Gulnare, Cuchara Pass, and Stonewall area, Huerfano and Las Animas Counties, Colorado

(All coal is of bituminous rank, in thousands of short tons)

Formation and Bed	Measured and Indicated Reserves: In beds 14 to 28 inches thick	In beds 28 to 42 inches thick	In beds more than 42 inches thick	Total	Inferred Reserves: In beds 14 to 28 inches thick	In beds 28 to 42 inches thick	In beds more than 42 inches thick	Total	Total Reserves: In beds 14 to 28 inches thick	In beds 28 to 42 inches thick	In beds more than 42 inches thick	Total
T. 31 S., R. 68 W. 0-1,000 feet of overburden												
Vermejo												
Other beds	40	20		60					40	20		60
Bed 4							10	10			10	10
Bed 1							20	20			20	20
Total 0-1000 feet	40	20		60			30	30	40	20	30	90
1,000-2,000 feet of overburden												
Vermejo												
Other beds			140	120		260	140	120		260		
Bed 5					260	260			260	260		
Bed 4					300	300			300	300		
Bed 1			100			100	100			100		
Total 1000-2000 feet			240	120	560	920	240	120	560	920		

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T 31 S R 68 W

2,000-3,000 feet of overburden

Vermejo												
Other beds	630	520		1,150					630	520		1,150
Bed 5							370	370			370	370
Bed 4			20	20			470	470			490	490
Bed 1					170			170	170			170
Total 2000-3000 feet	630	520	20	1,170	170		840	1,010	800	520	860	2,180
Township Total	670	540	20	1,230	410	120	1,430	1,960	1,080	660	1,450	3,190

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T. 31 S., R. 69 W.
0-1,000 feet of overburden

Vermejo											
Other beds	980	740	1,130	2,850				980	740	1,130	2,850
Bed 5	10	830	1,240	2,080	450	740	1,190	460	830	1,980	3,270
Bed 4	380	660	820	1,860	90	660	750	470	660	1,480	2,610
Bed 2	790			790				790			790
Bed 1	30			30	250		250	280			280
Total 0-1000 feet	2,190	2,230	3,190	7,610	790	1,400	2,190	2,98[illegible]	2,2[illegible]	4,590	9,800

1000-2000 feet of overburden

Vermejo											
Other beds	530	170	390	1,090				530	170	390	1,090
Bed 5		700	790	1,490	420	330	750	420	700	1,120	2,240
Bed 4	220	480	470	1,170	50	320	370	270	480	790	1,540
Bed 2	820			820				820			820
Bed 1					40		40	40			40
Total 1000-2000 feet	1,570	1,350	1,650	4,570	510	650	1,160	2,080	1,350	2,300	5,730

2000-3000 feet of overburden

Vermejo											
Other beds	460	240	60	760				460	240	60	760
Bed 5	10	470	550	1,030	290	50	340	300	470	600	1,370
Bed 4	210	450		660	40	590	630	250	450	590	1,290
Bed 3		410		410					410		410
Bed 1											
Total 2000-3000 feet	680	1,570	610	2,860	330	640	970	1,010	1,570	1,250	3,830
Township Total	4,440	5,150	5,450	15,040	1,630	2,690	4,320	6,070	5,150	8,140	19,360

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T. 32 S., R. 69 W.
0-1000 feet of overburden

Vermejo											
Other beds	350	60		410				350	60		410
Bed 5			120	120		750	750			870	870
Bed 4			450	450		280	280			730	730
Bed 1					230		230	230			230
Total 0-1000 feet	350	60	570	980	230	1,030	1,260	580	60	1,600	2,240
Township Total	350	60	570	980	230	1,030	1,260	580	60	1,600	2,240

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T. 32 S., R. 68 W.
0-1000 feet of overburden

Raton												
Middle mm. Ciruela bed	80			80					80			80
Vermejo												
Other beds	4,800			4,800	170	2,250		2,420	4,970	2,250		7,220
Bed 5	150	590	30,970	31,710			2,150	2,150	150	[illegible]	33,120	33,860
Bed 4	2,070	1,570	5,510	9,150	60	3,430	3,230	6,720	2,1[illegible]	5,[illegible]	8,740	15,870
Bed 2		690	1,210	1,900						690	1,210	1,900
Bed 1	50	1,440		1,490	3,370	4,710		8,080	3,420	6,150		9,570
Total 0-1000 feet	7,150	4,290	37,690	49,130	3,600	10,390	5,380	19,370	10,750	14,680	43,070	68,500

1000-2000 feet of overburden

Raton												
Lower mm. Apache bed					50			50	50			50
Vermejo												
Other beds	1,480			1,480	2,240	2,320		4,560	3,72[illegible]	2,[illegible]		6,040
Bed 5	30	280	12,320	12,630	260	550	9,760	10,570	290	830	22,080	23,200
Bed 4	1,150	100	2,860	4,110	4,180	2,000	5,050	11,230	5,330	2,100	7,910	15,340
Bed 3		2,780	660	3,440						2,780	660	3,440
Bed 1	330	1,220		1,550	1,860	2,730		4,590	2,190	3,950		6,140
Total 1000-2000 feet	2,990	4,380	15,840	23,210	8,590	7,600	14,810	31,000	11,580	11,980	30,650	54,210

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T 32 S R 68 W

2000-3000 feet of overburden

Vermejo												
Other beds	120			120	6,810	630		7,440	6,930	630		7,560
Bed 5						1,540	15,340	16,880		1,540	15,340	16,880
Bed 4			1,770	1,770	14,370	1,510	2,770	18,650	14,370	1,510	4,540	20,420
Bed 2	40			40					40			40
Bed 1		10		10	7,560	1,080		8,640	7,560	1,090		8,650
Total 2000-3000 feet	160	10	1,770	1,940	28,740	4,760	18,110	51,610	28,900	4,770	19,880	53,550
Township Total	10,300	8,680	55,300	74,280	40,930	22,750	38,300	101,980	51,230	31,430	93,600	176,260

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T. 32 S., R. 67 W.
1000-2000 feet of overburden

Raton				
Lower mm.				
Apache bed	10	10	10	10
Total 1000-2000 feet	10	10	10	10
Township Total	10	10	10	10

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T. 32 S., R. 66 W.
0-1000 feet of overburden

Raton						
Lower mm. Primero bed	2,560	840	3,400	2,560	840	3,400
Total 0-1000 feet	2,560	840	3,400	2,560	840	3,400
Township Total	2,560	840	3,400	2,5[illegible]	[illegible]0	3,400

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T. 33 S., R. 68 W.
0-1000 feet of overburden

Raton												
Middle mm.												
Ciruela bed	150			150					150			150
Other beds	80			80					80			80
Lower mm.												
Apache bed	240	1,720	2,320	4,280	1,470	9,870	3,060	14,400	1,710	11,590	5,380	18,680
Other beds	2,130	3,460	880	6,470	2,380			2,380	4,510	3,460	880	8,850
Vermejo												
Other beds	30	1,510	450	1,990		2,860	690	3,550	30	4,370	1,140	5,540
Bed 4		10	10,880	10,890	[illegible]	1,150	4,230	5,380	[illegible]	11,160	15,110	16,270
Bed 2			1,380	1,380							1,380	1,380
Total 0-1000 feet	2,630	6,700	15,910	25,240	3,850	13,880	7,980	25,710	6,480	20,580	23,890	50,950

1000-2000 feet of overburden

Raton												
Lower mm.												
Apache bed	10	90		100	3,040	6,120	280	9,440	3,050	6,210	280	9,540
Other beds					150			150	150			150
Vermejo												
Other beds	20	420	1,960	2,400	1,080	17,110	1,910	20,100	1,100	17,530	3,870	22,500
Bed 4		670	2,110	2,780	5,820	15,530	3,930	25,280	5,820	16,200	6,040	28,060
Bed 2		1,300		1,300						1,300		1,300
Total 1000-2000 feet	30	2,480	4,070	6,580	10,090	38,760	6,120	54,970	10,120	41,240	10,190	61,550

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2000-3000 feet of overburden

Vermejo												
Other beds					2,520	1,490		4,010	2,520	1,490		4,010
Bed 4					7,990			7,990	7,990			7,990
Bed 2	10			10					10			10
Total 2000-3000 feet	10			10	10,510	1,490		12,000	10,520	1,490		12,010
Township Total	2,670	9,180	19,980	31,830	24,450	54,130	14,100	92,680	27,120	63.310	34,080	124,510

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T. 33 S., R. 67 W.
0-1000 feet of overburden

Raton												
Upper mm.												
All beds	60	60	10	130	200			200	260	60	10	330
Middle mm.												
Ciruela bed	4,890	40,180		45,070	13,310			13,310	18,200	40,180		58,380
Other beds	370			370					370			370
Lower mm.												
Primero bed	110	300	4,140	4,550	1,170	1,250	11,930	14,350	1,2[illegible]	[illegible]50	16,070	18,900
Apache bed	1,020	650		1,670	3,750	3,140		6,890	4,770	3,790		8,560
Other beds	10,280	3,260		13,540	15,670			15,670	25,950	3,260		29,210
Vermejo												
Bed 4					1,200			1,200	1,200			1,200
Total 0-1000 feet	16,730	44,450	4,150	65,330	35,300	4,390	11,930	51,620	52,030	48,840	16,080	116,950
1000-2000 feet of overburden												
Raton												
Lower mm.												
Primero bed					190	50	30	270	190	50	30	270
Apache bed					6,490	1,530		8,020	6,49[illegible]	[illegible]30		8,020
Other beds					990			990	990			990
Vermejo												
Bed 4					2,690			2,690	2,690			2,690
Total 1000-2000 feet					10,360	1,580	30	11,970	10,3[illegible]	1,580	30	11,970
2000-3000 feet of overburden												
Vermejo												
Bed 4				3,600	3,600		3,600	3,600	3,600			3,600
Total 2000-3000 feet					3,600			3,600	3,600			3,600
Township Total	16,730	44,450	4,150	65,330	49,260	5,970	11,960	67,190	65,990	50,420	16,110	132,520

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0-1000 feet of overburden

Raton												
Middle mm.												
Ciruela bed	5,850	630		6,480	4,910			4,910	10,760	630		11,390
Other beds	90			90					90			90
Lower mm.												
Primero bed					1,400	4,060	45,700	51,160	1,400	4,060	45,700	51,160
Total 0-1000 feet	5,940	630		6,570	6,310	4,060	45,700	56,070	12,25[illegible]	[illegible],690	45,700	62,640
Township Total	5,940	630		6,570	6,310	4,060	45,700	56,070	12,250	4,690	45,700	62,640
Grand Total 0-1000 feet	35,030	58,380	61,510	154,920	52,640	33,560	73,450	159,650	87,670	91,940	134,960	314,570
Grand Total 1000-2000 feet	4,590	8,210	21,560	34,360	29,800	48,060	22,170	100,030	34,390	56,270	43,730	134,390
Grand Total 2000-3000 feet	1,480	2,100	2,400	5,980	43,350	6,250	19,590	69,190	44,83[illegible]	350	21,990	75,170
GRAND TOTAL ALL COALS	41,100	68,690	85,470	195,260	125,790	87,870	115,210	328,870	166,890	156,560	200,680	524,130

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