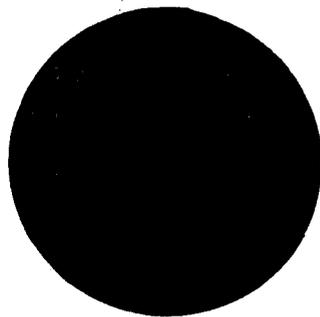


GENWAL COAL COMPANY

Mining and Reclamation Plan Crandall Canyon No. 1 Mine Volume 6

Act / 015 / 032

Pride & Performance



May 13, 1993

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QUATERNARY

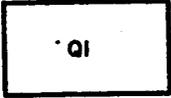


Alluvium
Stratified clay, silt, sand, gravel and some unsorted flood deposits.



Castlegate Sandstone
White to gray, coarse-grained often conglomeratic sandstone, cliff former, weathers to shades of brown. 150-500 feet.

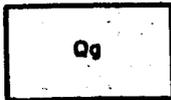
-Unconformity-



Landslide Deposits
Mixed rubble and blocks of material slumped from formations at higher elevations.



Blackhawk Formation
Yellow to gray, fine- to medium-grained sandstone, interbedded with subordinate gray and carbonaceous shale, several thick coal seams. 600-1,500 feet.

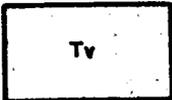


Gravel Deposits
Partly consolidated poorly sorted and stratified deposits of rock fragments of local origin, pediments or terrace, up to 75 feet thick.



Star Point Sandstone
Yellow-gray massive cliff-forming sandstone, often in several tongues separated by Masuk Shale, thickens westward. 90-1,000 feet.

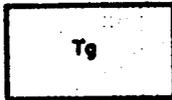
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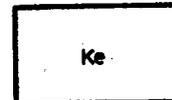
Volcanic Flows
Bullion Canyon Series, volcanic flows.



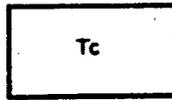
Masuk Shale
Yellow to blue-gray sandy shale, slope former, thick in north and central plateau area thins southward. 300-1,300 feet.



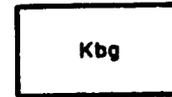
Green River Formation
Chiefly greenish lacustrine shale and siltstone.



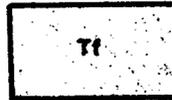
Emery Sandstone
Yellow-gray friable sandstone tongue or tongues, cliff former, may contain coal (?) in south part of plateau if mapping is correct, thickens to west and south. Coal may be present in subsurface to west. 50-800 feet.



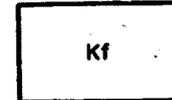
Colton Formation
Varicolored shale with sandstone and limestone lenses, thickest to the north. 300-1,500 feet.



Blue Gate Shale
Pale blue-gray, nodular and irregularly bedded marine mudstone and siltstone with several arenaceous beds, weathers into low rolling hills and badlands, thickens northerly. 1,500-2,800 feet.

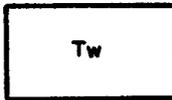


Flagstaff Formation
Dark yellow-gray to cream limestone, evenly bedded with minor amounts of sandstone, shale and volcanic ash, ledge former. 200-1,500 feet.

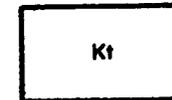


Ferron Sandstone
Alternating yellow-gray sandstone, sandy shale and gray shale with important coal beds of Emery coal field, resistant cliff former, thickens to the south. 50-950 feet.

TERTIARY
CRETACEOUS



North Horn Formation
Variiegated shales with subordinate sandstone, conglomerate and freshwater limestone, thickens to north, slope former. 500-2,500 feet.



Tununk Shale
Blue-gray to black sandy marine slope forming mudstone. 400-650 feet.



Price River Formation
Gray to white gritty sandstone interbedded with subordinate shale and conglomerate, ledge and slope former. 200-1,000 feet.

GENWAL COAL COMPANY
PLATE 6-1A

KEY FOR PLATE 6-1