

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES
CESSNOCK - MUSWELLBROOK REGION

RECORDS 1953, No. 133

copy 3

REPORT
ON THE WESTERN FLANK
OF THE MUSWELLBROOK
ANTICLINE
(TEXT AND ILLUSTRATIONS)

by

M. C. KONECKI

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES
CESSNOCK - MUSWELLBROOK REGION

RECORDS 1953, No. 133

REPORT
ON THE WESTERN FLANK
OF THE MUSWELLBROOK
ANTICLINE

(TEXT AND ILLUSTRATIONS)

by

M. C. KONECKI

SUMMARY.

This report deals with the results of 22,355 ft. of scout boring over an area of approximately 50 square miles on the western flank of the Muswellbrook (N.S.W.) Anticline. A traverse of overlapping bore-holes, located between the outcrops of the Upper Marine Series (Mulbring Beds) in the east and of the Triassic sediments in the west, provided a more complete section of the Upper Coal Measures in this area, than has been previously available. Some 46 coal seams were encountered and tentatively numbered for correlation. Some of the coal seams exhibit very good qualities, but none could be classed as a good gas or coking coal.

Igneous intrusions are numerous and of a fairly wide vertical and areal extent; their influence on the associated coal seams is generally destructive.

The results of the above boring may be regarded as a basis for any detailed future underground and/or open-cut mining investigations.

No attempt was made to estimate coal reserves of any kind.

INTRODUCTION.

The boring campaign on the western flank of the Muswellbrook Anticline was initiated at the end of November, 1952, along with similar operations which commenced earlier (March, 1952) in the Howick Area on the south-eastern limb of the Anticline. The campaign was designed, in its original stage, to locate areas suitable for the open-cut coal mining, and entailed scout-boring to be followed by test and define boring where coal seams of suitable quality were found.

Difficulties arose fairly early in obtaining "Authority to Enter" for many areas. Verbal agreements with the land-owners were made in some instances, but these were insufficient to assure the required freedom of movement and prospecting and in some areas bores had finally to be restricted to public roads.

At this time the coal industry in New South Wales was demanding higher quality coal. Only good gas and coking coal was of interest because the demand for poorer quality coal has been satisfied. In addition, the allowable "over-burden to coal ratio" was decreasing, thus narrowing still more the limits of prospecting with topography becoming a critical factor. In the circumstances, the programme of coal investigation by boring on the western flank of the Muswellbrook Anticline was modified with the view of penetrating and investigating the quality of all coal seams between the outcrops of the Upper Marine Series in the east (up-dip) and the Triassic sediments in the west (down-dip). The case for such a procedure was strengthened by the fact that nothing was known of the coal seams and subsurface geology of the whole of the western flank of the Anticline, and therefore there was a possibility of encountering a coal-seam or coal-seams of high quality in the upper part of the Upper Coal Measures. If, on the other hand, no high-quality coal-seams were found on the western flank such negative results would be of considerable value to future investigations in changed economic conditions, or in cases of national emergency. The boring programme was completed in October, 1953.

Boring operations were carried out in adjoining and arbitrarily delineated sub-areas, which were as follows:

1. Bowman's Hill Subarea
2. Saddler's Creek Subarea
3. Mount Arthur Subarea
4. Edinglassie Subarea
5. Roxburgh Subarea
6. Blakefield Subarea
7. Anderson's Gap Subarea.

(For reference see Map N14-121, Plate 1).

Boring was restricted to those parts where the Bureau (through the Joint Coal Board) had an official "Authority to Enter" or where verbal permission was obtained from the respective landowners. The "Authority to Enter" position was never satisfactory during the duration of the operations. This led to considerable difficulties and eventually, boring was restricted to the public roads, e.g. from Muswellbrook to Denman and from Muswellbrook to Jerry's Plain.

The bores were first located by pace-and-compass method with the aid of the 1" = 1 mile Military Map. They were subsequently related to adjacent roads, fences and topographic features by theodolite and stadia traverses. The final map was prepared by supplementing the above data with further detail from the appropriate parish maps and by adapting the contours from the Muswellbrook Military 1-mile Sheet.

THE STRATIGRAPHIC SECTION.

A total stratigraphic section of some 2,800 ft. has been measured on the western flank of the Muswellbrook Anticline. This section is made up as follows in the ascending order:

Upper Marine "Series" : Over 200 ft. thick in bore BMR 2(S) Mt. Arthur. Only 11'6" of the "Series" were entered into by bore BMR 3(S) Edinglassie.

Bayswater Silstone : 80'6" thick in bore BMR 3(S) Edinglassie.
(Bayswater Formation of W. F. Booker).

Upper Coal Measures : Over 3,000 ft. thick.
(Tomago and possibly Newcastle stages)

It was not possible to make firm correlations between the strata penetrated by the bores and those found on the south-eastern limb of the Anticline, because bores were too widely spaced for such an area and sequence and because no well-defined marker beds existed in the Coal Measures. However, the characteristics of certain coal seams and general stratigraphic and structural considerations provide the tentative correlations presented in this report. (See plates 2, 3, 4, 5 and 6).

The sections and a structure-contour map drawn on the basis of these correlations show that they are, at least, feasible. Additional work may modify these tentative conclusions but at present they seem to provide a fair picture of subsurface

conditions on the western flank of the Muswellbrook Anticline.

Coal seams were given tentative numbers instead of names because the evidence for correlation was not sufficiently convincing.

DESCRIPTION OF THE STRATIGRAPHIC UNITS.

1. The Upper Marine Series.

Only two bores (BMR 2(S) Mt. Arthur and BMR 3(S) Edinglassie) penetrated this unit in their lower portions.

Bore BMR 2(S) Mt. Arthur entered grey shales below alluvial gravel at about 55 ft. and continued in this rather monotonous facies to 200'6". The upper portion of this section is sandy or silty in parts and contains abundant marcasite. The lower portion is purer and darker. A sample from the interval 55 ft. to 60 ft. contained the following foraminifera: Ammodiscus multinctus, Frondicularia woodwardi, Hyperamminoides acicula, Nodasaria sp., Trochammina sp. (I. Crespin, 1953).

The presence of the calcareous foraminifera along with the arenaceous forms indicate, according to Miss I. Crespin, the Branxton Stage of the Upper Marine Series. If that be so then at least 200 ft. of the Mulbring Stage were removed by erosion from the section penetrated by this bore.

On the other hand M. A. Reynolds of the Bureau of Mineral Resources has shown (unpublished paper) that calcareous foraminifera do occur in the uppermost portion of the Mulbring Stage, and that their absence in the middle and lower portions of that stage and above the Branxton Stage may be due to ecological factors.

No samples were examined from the lowermost portion (last 21 ft.) of bore BMR 3(S) Edinglassie, but on the lithological grounds the top of the "Mulbring or Crinoidal Stage" has been placed in that bore at 462'8", i.e. below the Bayswater Silstone and on top of the dark grey shale.

The samples immediately above 453'2" were washed but no foraminifera or other microfossils were found.

2. The Bayswater Silstone.

Only one bore, BMR 3(S) Edinglassie, penetrated this unit between depths of 382'2" and 462'8" on the western flank of the Muswellbrook Anticline. This transitional unit occurring between the marine Mulbring Stage and the fresh-water Tomago Stage was penetrated by a number of BMR bores on the eastern limb of the Anticline and have been listed by Veevers (1953, p.15).

In bore BMR 3(S) Edinglassie the Bayswater Silstone consists of siltstone with subordinate silty shale and a 6-inch band of medium-grained greywacke at the bottom. Some beds are sideritic. No pyritic nodules were recorded.

3. The Upper Coal Measures (Tomago and ?Newcastle Stage)

The beds of the coal measures penetrated by the bores on the western flank of the Muswellbrook Anticline belong to the Tomago Stage and possibly extend into the over-

lying Newcastle Stage. It is impossible to locate the boundary between these stages with any degree of confidence from the evidence available from the bores. However, the fact that the stratigraphic sequence covered by the bores includes practically the full section of the Upper Coal Measures compels one to assume that the Newcastle Stage, as well as the Tomago Stage must be represented. Assuming that the thickness of the Tomago Stage in the Singleton-Muswellbrook Coal Field is of the order of 1,600 to 1,800 ft. (Booker, 1953), the remaining upper section proved by the bores may well represent the Newcastle Stage.

Moreover, this is suggested by the lithology of bore cores in the Anderson's Gap subarea and that of some in the Blakefield and Bowman's Hill subareas. The Anderson's Gap area bores in particular are characterized by a conspicuous paucity of coal seams which are thin (except seam 46) and of a high ash content and corresponding low volatiles. The coal is shaly and there are numerous partings and bands separating coal-plies. The intervening thick beds of shale contain numerous bands of tuffaceous and bentonitic claystones and shales. The siltstones are also tuffaceous in many cases and the grey-wackes are more argillaceous than those from the bore of a lower stratigraphic position. The fine-grained sediments, i.e. shale, claystone and siltstone, constitute about half of the section.

The lithology of the above sediments is different from the remarkably persistent rhythmic succession of coal-greywacke-fine grained sediments-coal, which is so well displayed in the lower portion of the section, and which is typical of the Tomago Stage in this and other areas.

It is possible therefore that the Anderson's Gap Section and, possibly also, the upper parts of bores BMR 7(S) and 8 (S) Blakefield and BMR 1(S), 2(S), 4(S) and 5(S) Bowman's Hill represent the Newcastle Stage.

3A. The Coal Seams.

A great number of coal seams was found in the section drilled. They were given tentative numbers 1 to 46 and an attempt was made to correlate them by any lithologic criteria available and by working out their relating positions in regard to regional stratigraphy and structure. Some at least of the coal seams may be splits of parent seams. Where splitting was obvious, the seam number was followed by letters of the alphabet. A separate number for each seam was preferred where splitting was not established.

It may be argued that it is impossible to correlate coal seams between bores spaced more than a mile apart because seams are likely to lense, split or thin out. Furthermore, as stated previously, there are practically no marker beds within the Coal Measures. Although this is, in general, a valid argument, there are some coal seams in the section which because of their appearance, character, quality and the position of intervening bands could serve as marker beds themselves. The marker coal seams are those numbered 14, 26, 38 and 39. In addition, the similarity of the thickness and the relatively constant position of the seams within the sequence provided apparently good correlation between a number of bores. Coal seams numbered 19, 20, 23, 24, 25, 26, 27, 28, 29, 30 and 31 were used in such correlations.

Other considerations, such as the position of the bore

in relation to structure (plunge and dip) and to the position of a particular coal-seam above the Upper Marine "Series"/ Tomago Stage boundary and/or above or below the marker seam, as well as the lithologic character of the intervening clastic sediments were used as additional aids.

The resulting stratigraphic and structural picture, although tentative, is considered feasible and essentially correct.

Some of the coal seams have a considerable areal extent and retain their lithologic and quality characteristics over a long distance. As an illustration of this let us consider seam 26. This coal seam is characterized by the consistent occurrence of a white to brown "tuffaceous" bed in the lower portion, near the base of the seam. The thickness of the bed is generally more than one foot and in places over two feet. Its maximum thickness appears to be developed in the area of bores BMR 10(S) and 11(S) Saddler's Creek; the thickness is reduced, but remains fairly constant, in bores BMR 1(S), 2(S), 3(S), 4(S) and 5(S) Saddler's Creek; BMR 1(S) and 6(S) Mt. Arthur; BMR 1(S), 2(S) and 3(S) Bowman's Hill. A further reduction of thickness occurs in the Blakefield Area.

In most places, the vertical variations in volatile and ash contents within the seam follow the same general pattern and the lower portion is commonly of poorer quality than the upper portion. The portions of seam 26, penetrated in bores BMR 3(S) Saddler's Creek, BMR 1(S) and 6(S) Mt. Arthur provide the exceptions to this general statement.

The seam is cindered by igneous intrusion in bores BMR 1(S) and 2(S) Bowman's Hill, and it becomes shaly and of high ash content in the Blakefield subarea. The seam appears to die out somewhere in the Blakefield subarea.

A similar examination of the extent and the behaviour of seam 14 can be made. This seam is of a considerable gross thickness and is characterized by tuffaceous bands, commonly in its upper portion. It is possible that seam 13 is the lower split of seam 14.

Seams 38 and 39 are possibly merging into one in bore BMR 7(S) Blakefield and, farther west, in the Anderson's Gap subarea. These two seams are very distinctive because tuffaceous shale, claystone and siltstone bands and beds occur above, below and between them. A sample taken from about 200 ft. in bore BMR 1(S) Bowman's Hill has been identified by Dr. J. Glover (1953) as being a "vitric, rhyolite tuff". Seam 38 in Bores BMR 2(S) and 5(S) Bowman's Hill was affected by igneous intrusion. In general the quality of coal in both seams in the Bowman's Hill and Blakefield subareas is similar although the quality of coal in seam 39 in bores BMR 1(S) and 5(S) Bowman's Hill is relatively high. Some plies of seam 39 in these bores contain rather high volatiles (up to 36.8%) and low ash (down to 4.5%). On the whole, however, both seams are of medium ash content.

Apart from lithological similarities, the correlation of these seams in the two distant subareas, i.e. Bowman's Hill and Blakefield, seems confirmed by their relative positions on the structure. Bowman's Hill bores are "up-dip" but "down the plunge" while the Blakefield bores are "down-dip" but "up the plunge".

A group of seams 29 (a, b, c), 30 and 31 can be followed both along and across the structure without much difficulty. The sediments between seams 29 and 31 in the Blakefield subarea are fine-grained, i.e. shale, claystone and/or siltstone, while to the south-east in the Mt. Arthur, Saddler's Creek and Bowman's Hill subareas, the lower portion of these sediments is occupied by greywacke which is conglomeratic in places. None of these seams was found in bores BMR 5(S) and 6(S) Blakefield, and this is possibly due to a wash-out. Seam 29 is subject to splitting, and it appears to die out in the Bowman's Hill subarea. Seam 30 is insignificant and of small areal extent.

Seams 19 and 20 and Seams 23 and 24 may be followed over a considerable distance because the thickness of the sediments between the two pairs of seams is fairly constant and also because the lithology of these sediments shows little change. The seams themselves show little variation in thickness.

The correlation of the lower group of seams (1, 2, 3, 4, 5, 6, 7, 8, 10 and 11) is fairly well established in the Edinglassie and Roxburgh subareas - that is across the structure. An attempt has been made also to correlate these seams with those thought to be corresponding seams in bore BMR 10(S) Saddler's Creek and bores BMR 1(S) Jerry's Plain and BMR 2(S)R Pond's Creek, although it is fully realized that the distances involved are great - amounting to about 5 miles in each case. The last two of the bores mentioned above are situated on the southern plunge of the Muswellbrook Anticline.

Tentative correlations are as follows:-

1. Seam 1 may be the stratigraphic equivalent of Barrett's Seam. The thickness, quality and the elevation above the upper boundary of the Upper Marine "Series" support this correlation.
2. Seam 2 may be the stratigraphic equivalent of the Liddell Seam. Seam 2 possibly represents both splits of the Liddell Seam penetrated in bore BMR 2(S)R Pond's Creek, and does not appear to be well developed in the Edinglassie subarea (bore BMR 3(S)). It may not even be continuous. However, high content of volatile matter (36.1-38.9%) in seam 2 checks well with the average content of the Liddell Seam.
3. Seam 3 may be the stratigraphic equivalent of the Artie's Seam. Here again the comparable characteristics of the two seams are thickness, general shaly character and the consequent deterioration of quality as compared with the two lower seams.
4. Seams 4, 5, 6 and 7 are considered to occupy the stratigraphic position of seams C, E, F and N, O, P in Pond's Creek and Parnell's Creek subareas, Howick Area, on the southern and eastern limb of the Muswellbrook Anticline (Veevers, 1953).
5. Seam 8 may be considered as the stratigraphic equivalent of the Farrell's Creek Seam. Veevers (1953, p.23) describes the Farrell's Creek Seam as follows: "... Its thickness is very variable, with a maximum of 15.8 ft. in 6(S) Parnell's Creek". (It is about 17 ft. thick in bore BMR 4(S) Edinglassie, on the western flank). "In practically all cases the chemical composition is extremely constant. Rock bands are negligible; ash content is 12% to 19%, volatiles from 25% to 30%. It is free from splitting

phenomena over the entire area". The above description fits perfectly Seam 8 which was penetrated in bores BMR 4(S) Edinglassie, BMR 1(S) Roxburgh and BMR 10(S) Saddler's Creek.

6. Seams 10 and 11 are thought to occupy approximately the stratigraphic position of Seam "W" in the Howick Area. Two definite seams (10 and 11) were penetrated in bores BMR 10(S) Saddler's Creek and BMR 1(S) Roxburgh, while only one (presumably Seam 10) was found in bore BMR 4(S) Edinglassie. The significance of this behaviour is not clear. A thinning of Seam 10 is indicated "up-dip" possibly together with rather abrupt dying out of Seam 11.

The number "12" has not been assigned to any coal seam.

7. Seam 13 and 14 might be correlated with seams "X", and "X", in the Pond's Creek subarea.

THE QUALITY OF COAL SEAMS.

It has been already stated that no coal seams of outstanding quality were found in the whole section penetrated by the bores on the western flank of the Muswellbrook Anticline.

By reference to the graphic detail logs of the coal seams (Folder 3) an idea may be obtained as to their thickness, composition (including bands) and proximate analyses.

In preparing the graphic coal detail logs use has been made of the symbols expressing macro-structure employed by H. R. Brown and H. Berry of the C.S.I.R.O. Coal Research Station in their excellent paper entitled "Some Notes on the Chemical Characteristics and Coking Properties of some N.S.W. Coal Seams". Verbal permission to use these symbols (with small modifications) has kindly been given by one of these officers.

The symbols as herein employed do not cover all variation of the macro-composition of the coal plies. Moreover, they have been, in places, made to fit the descriptions given by a number of geologists who logged the bores. Subject to these limitations this mode of graphically presenting the "coal detail" of a seam is probably superior to marking coal plies in black only. The influence of igneous intrusives on coal seams has been symbolically indicated. In the proximate analyses this influence is expressed by the reduction of the hygroscopic moisture and volatile content and the increase of fixed carbon. A general deterioration of the calorific value is evident although in some instances the reverse is true.

With the probable exception of seams 1, 2 and 36 the major coal seams (those over 5 ft. thick) found on the western flank of the Muswellbrook Anticline may be roughly described as coal of medium ash and volatiles, and as such they are suitable for steam raising.

Seam 1 may be considered of medium to low-grade gas-coal, but its thickness appears to be insufficient in the area which would be most suitable for open-cut mining.

Seam 2, unfortunately, appears to be much thinner and is divided by numerous rock-bands. This occurs also in areas where topography would be suitable for open-cutting. Apart from the rock-bands, the seam consists of good gas-coal.

Seam 8, although practically free from rock bands and of good thickness, contains rather low volatiles and medium ash. It could be effectively mined in the Edinglassie subarea by open-cut method providing there was a demand for this quality of coal.

The above remarks may also apply to Seam 14 in the Roxburgh-Edinglassie subareas.

A very interesting seam was found at depth in bores BMR 7(S) and 8(S) Blakefield. This is seam 36, with a low ash content (2.8%-5.2%) and excellent calorific value. The lower third of the seam contains high volatiles (37.2%-38.4%) and is "medium coking". Its thickness is approximately 11 feet and the uppermost 10 ft. are free of bands.

This seam is worth investigating in some detail and the areas suitable for open-cut mining are north-east of bore BMR 7(S) Blakefield and also north and north-west of bore BMR 8(S) Blakefield.

Seam 39 as found in bores BMR 1(S) and BMR 5(S) Bowman's Hill exhibits fairly good qualities in respect of ash content. An open-cut area is possible, although the nearby Plashett Sill may have affected the quality of the coal in portions of the area.

In all, it would appear that the most attractive subareas for open-cut mining are Blakefield, Roxburgh and Edinglassie.

THE IGNEOUS INTRUSIONS.

The occurrence of igneous intrusives on the western flank of the Muswellbrook Anticline is fairly widespread both areally and vertically. (See Plates 2, 3, 4, 5, 7 and 8).

Sills and dykes, were mapped by a number of geologists as occurring on and close to the crestal area of the Muswellbrook Anticline (Savoy, Carrington and Plathett Sills). They are considered to be of Tertiary age. In addition, at least two sills possibly occur in the vicinity of Mt. Arthur Hill (elevation 1578') and Ogilvie Hill (elevation 1534'). A "dolerite sill" was mapped by T. H. Rodger of the Bureau of Mineral Resources in the area between Ogilvie Hill and the Trig. Station (1056') to the north-east.

The sills penetrated in the bores on the western flank of the Muswellbrook Anticline were logged as dolerites. However, the subsequent examination of a number of core-samples by Dr. J. E. Glover of the Bureau of Mineral Resources showed that two rock types were present at least in some of the sills. They are dolerite and basalt. In his general statement Dr. Glover says that he called rocks with ophitic and subophitic texture "dolerites", whereas porphyritic and amygdaloidal rocks he called "basalts" (J. E. Glover, 1953, and 1954). His statement continues: "Many basalts and dolerites are partly converted to carbonate, and in every such case ferromagnesians are attacked but plagioclase remains. Origin of the abundant carbonate is not known: if general proximity of cindered coal seams could be demonstrated it might suggest combination of carbon dioxide from coal with calcium of ferromagnesian minerals to give calcium carbonate. Some fresh rocks contain serpentine apparently pseudomorphous

after olivine, and though no olivine has been identified, the magma may have been of the olivine basalt rather than tholeiitic type. Absence of interstitial quartz and lack of pigeonitic pyroxene supports this. Augite in all samples dealt with in this report is titaniferous".

Glover thinks that "basalt could represent margins of dolerites intrusive at shallow depth and dolerites could represent inner portions of basalt flows".

There is no evidence in the bore-cores of lava flows, as the sediments in the upper and lower contacts are either cindered or indurated. The contemporary occurrence of dolerite and basalt can generally be explained by a process of fractional crystallization of the original olivine-basalt type magma, in conjunction with, in some instances, the peripheral cooling of the injected sheet-like bodies.

However, the occurrence of the considerable thickness of basalt only in the cores of bore BMR 5(S) Mt. Arthur is difficult to explain. There are insufficient drilling data to suggest any reasonable explanation, but it is very tentatively suggested that the bore might have penetrated a series of inclined dykes which might have been associated with a fault zone in this area. The apparent thickness of basalt totals about 210 ft., and the depth of the bore is 437'6".

In many instances the intrusive igneous rock has been altered by deuteric action, and, as pointed out by Glover, the ferromagnesian minerals were replaced partly at least by carbonates. Glover's explanation of a possible source of abundant carbonate appears to be very reasonable.

As a matter of interest, a description of two slides (Glover's specimen No. 2) from the core from the depth of 411 ft. in bore BMR 1(S) Bowman's Hill is given below:

"Two rocks are present in these sections: a black rock (coal) and a grey felspathic, calcareous rock of igneous origin. Much of the igneous rock is made up of grey, turbid material impossible to resolve under the microscope, and scattered throughout it are abundant, randomly oriented plagioclase laths varying in length from 0.03 mm. to 1 mm. Carbonate is present as small granules, as irregularly shaped aggregates, up to 3 mm. in diameter, and commonly as laths that have clearly replaced plagioclase. Chalcedonic quartz has also been introduced, but compared with carbonate is relatively rare. Both minerals are also found in the coal fragment in this slide. The precise nature of the igneous rock is difficult to determine here; it seems to have been an intermediate to basic intrusive, probably a dolerite".

THE STRUCTURE.

The main structure is the Muswellbrook Anticline. Generally the dip of its western flank does not exceed 5° and is commonly 2° to 3° . An increase of dip has been noticed near the contact of the Tomago Stage with the Upper Marine "Series". The contour map prepared for seams 14 and 26 as well as the sections indicate that a certain amount of folding did take place on the western flank (see plates 8, 9, 10). This is particularly evident in the Blakefield subarea.

The plunge of the Anticline is also gentle and may be studied in the sections on Plate 8.

At least two faults are indicated from the sub-surface bore data, which however are insufficient for the determination of the strike and hade of the faults. Consequently they have been shown very schematically as normal faults in the sections (Plate 9).

One of the faults is indicated between bores BMR 8(S) Saddler's Creek and BMR 2(S) Mt. Arthur. Unless we accept an abnormally high dip (about 45°) between those two bores, a fault must be assumed with a vertical throw of several hundred feet. If we assume that bore BMR 2(S) Mt. Arthur entered the uppermost Mulbring Stage at a depth of about 50 ft. from the surface, below a mantle of alluvium, a vertical throw of some 500 ft. is indicated.

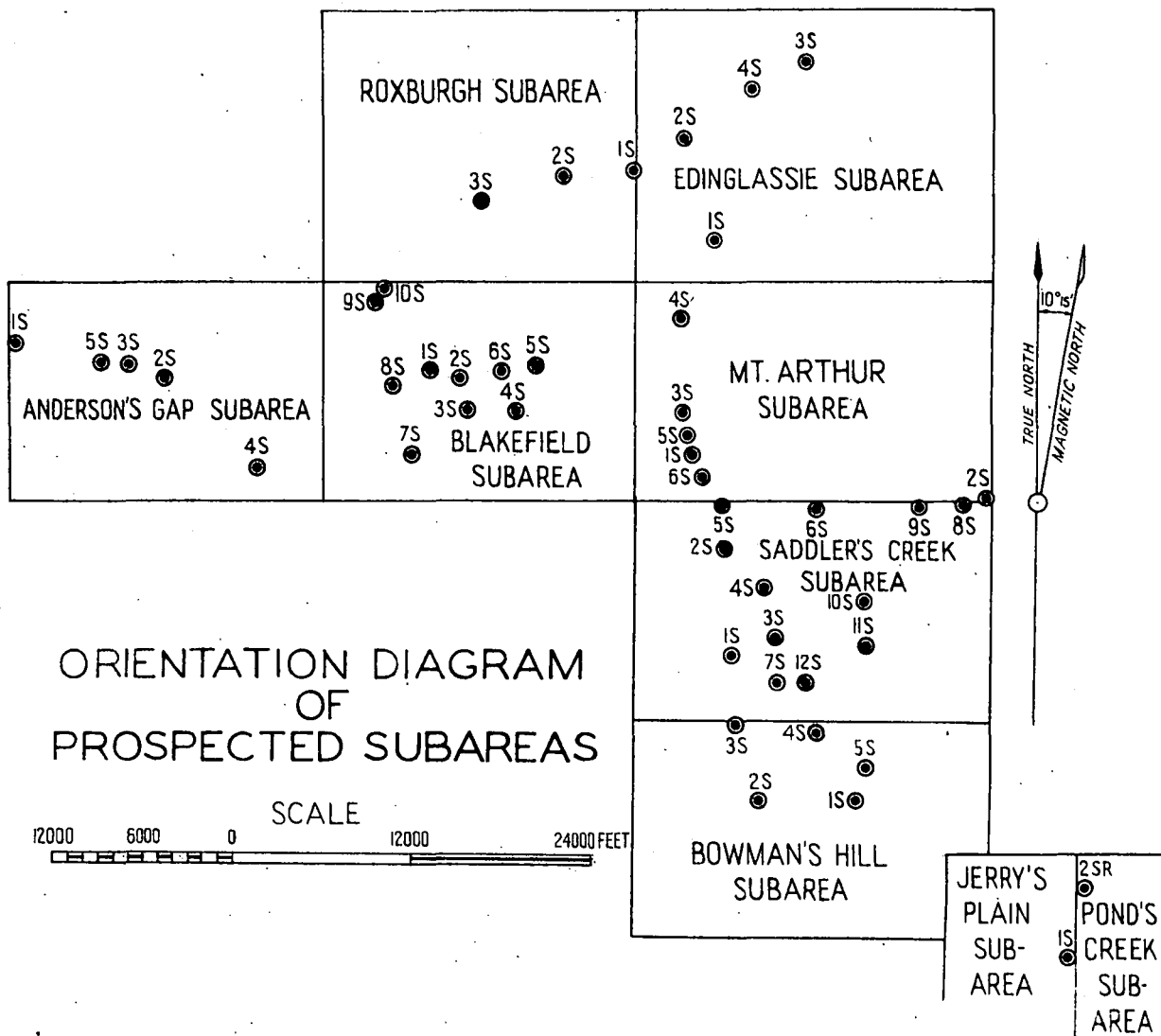
However, the occurrence of calcareous Foraminifera together with arenaceous forms in the sample from 50 ft. to 60 ft. below the surface indicates, according to Miss I. Crespin, the Branxton Stage of Upper Marine Series. If the sample represents uppermost Branxton Stage, some 200 ft. of the Mulbring Stage would have to be added to the Upper Marine strata found in bore BMR 2(S) Mt. Arthur and this would indicate a vertical throw for the postulated fault of at least 700 feet.

Another major fault is indicated from the sub-surface data of bores BMR 8(S) and 1(S) Blakefield and BMR 2(S) Roxburgh on one side and BMR 3(S) Roxburgh, BMR 10(S) and 8(S) Blakefield and BMR 4(S) Anderson's Gap, on the other. A vertical throw of some 450-500 ft. is indicated. It would appear that we are dealing here with a normal fault with a general north-westerly dip the down-thrown block lying on the north-west side of the postulated fault.

First indication of a possible fault was furnished by the abnormal stratigraphic position of seam 36 in bores BMR 7(S) and BMR 8(S) Blakefield. Instead of finding the seam at a shallow depth, as was expected from its structural position "up the plunge" and at a lower topographic elevation, bore BMR 8(S) Blakefield struck it much lower than bore BMR 7(S) Blakefield, which is "down the plunge" and also topographically higher.

REFERENCES.

- Booker, W.F., 1953 - The Geology and Coal Resources of the Singleton-Muswellbrook Coal-Field. (unpub. thesis for Ph.D., Sydney Univ.)
- Crespin, I., 1953 - Micropalaeontological Report on Bore and Surface Samples from the Muswellbrook Area, N.S.W. Bur.Min.Resour.Aust.. Rec. 1953/97 (unpub.)
- Glover, J.E., 1953 - Petrographic Description of 17 Rock Specimens from Muswellbrook, N.S.W. Bur.Min. Resour.Aust.. Rec. 1953/79 (unpub.)
- _____, 1954 - Petrographic Description of 21 Rock Specimens from Muswellbrook, N.S.W. Bur.Min. Resour.Aust.. Rec. 1954/8 (unpub.)
- Veevers, J.J., 1953 - Howick Area Report. Bur.Min.Resour. Aust. Rec. 1953/47 (unpub.)

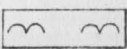
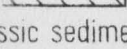
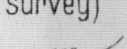
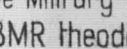
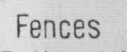
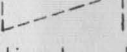
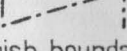
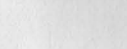


**GEOLOGICAL MAP
WESTERN FLANK OF THE
MUSWELLBROOK ANTICLINE**

PARISHES OF VAUX, WYNN, BROUGHAM, ALTHORPE AND DENMAN
COUNTIES OF DURHAM AND BRISBANE
NEW SOUTH WALES

SCALE
3200 1600 800 0 3200 6400 9600 FEET

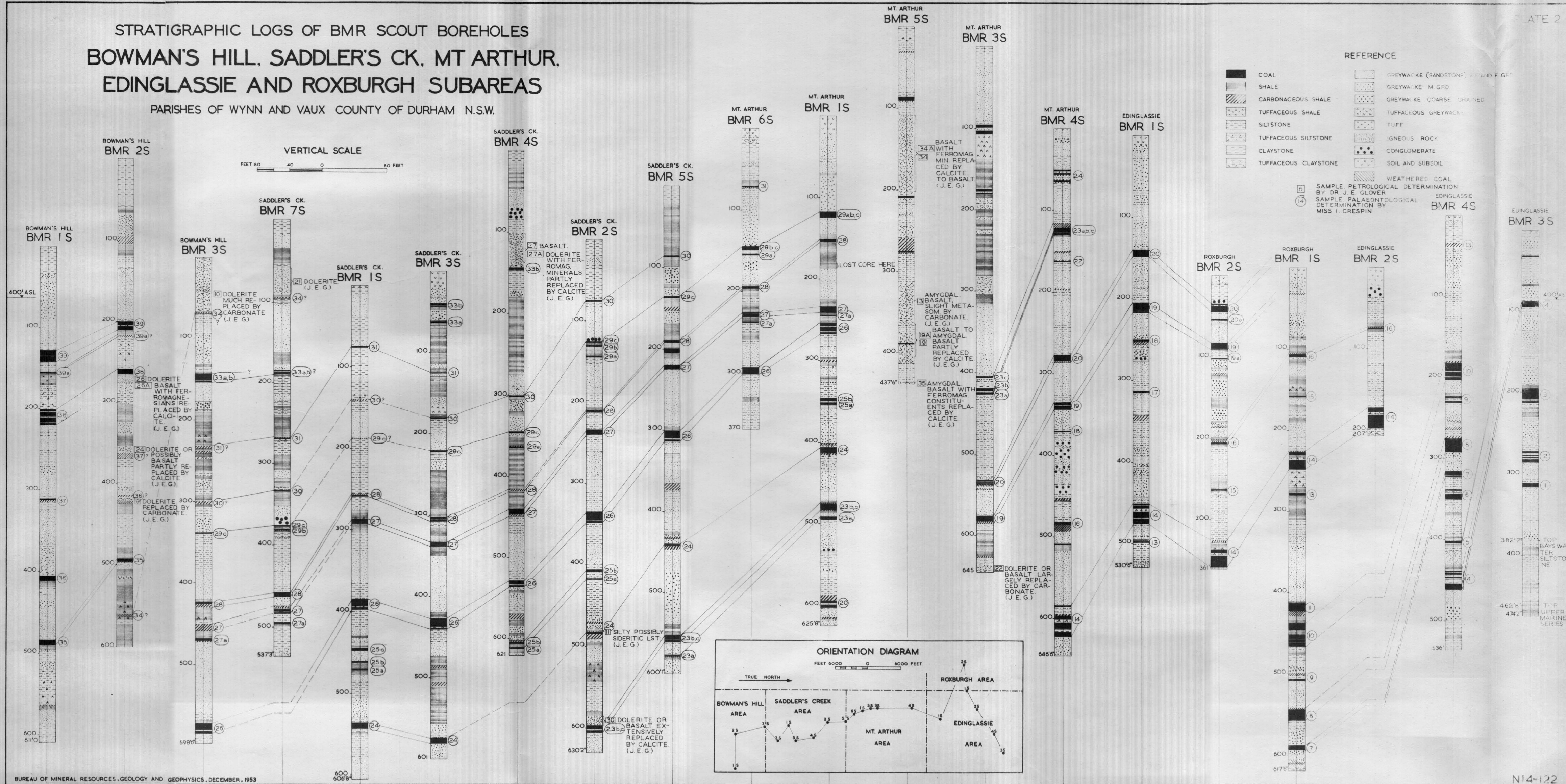
REFERENCE

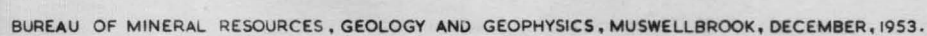
-  Alluvium
-  Triassic sediments
-  Upper coal measures
-  Western boundary of upper marine series
-  Igneous rock (sill)
-  BMR 2(S) BLAKEFIELD
-  BMR rotary scout bore (BMR theodolite survey)
-  Topographic contours (1 Mile Military Map and BMR theodolite survey)
-  Fences (BMR theodolite survey)
-  Portion boundary (From Parish Maps)
-  Parish boundary (From Parish Maps)

LOCALITY MAP



REFERENCE

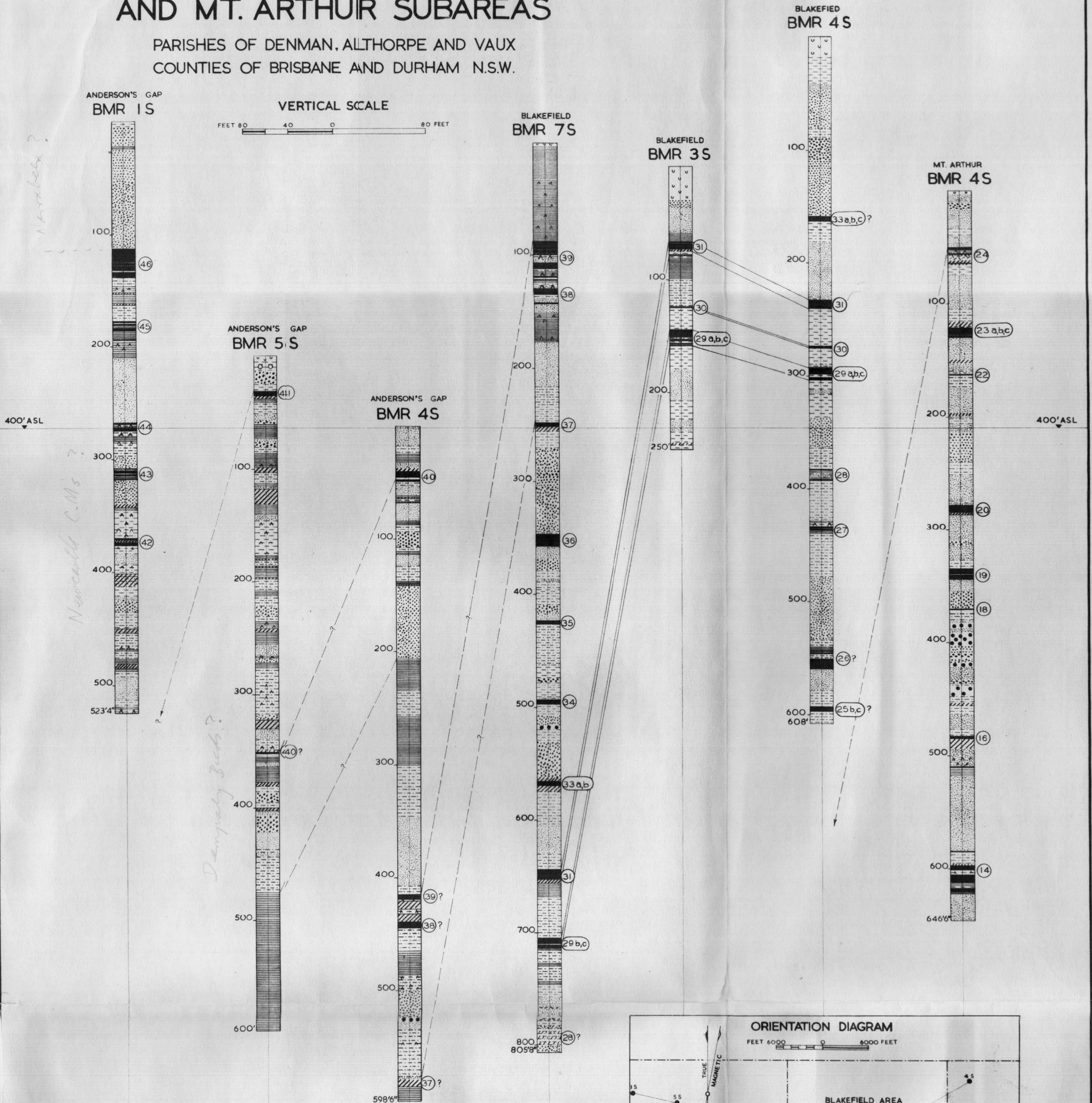




STRATIGRAPHIC LOGS OF BMR SCOUT BOREHOLES ANDERSON'S GAP, BLAKEFIELD AND MT. ARTHUR SUBAREAS

PLATE 4

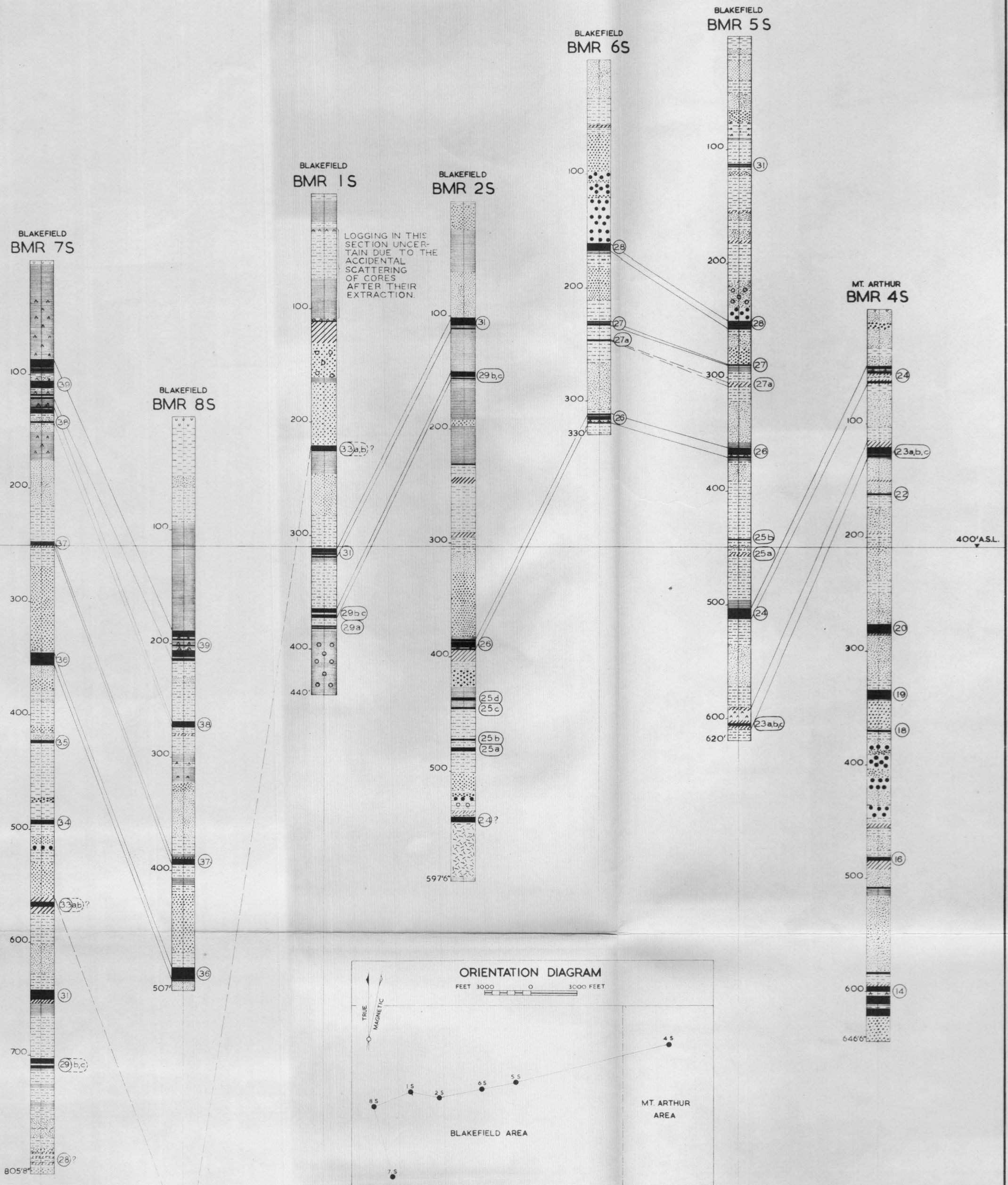
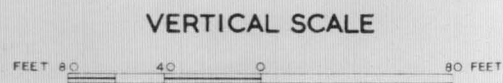
PARISHES OF DENMAN, ALTHORPE AND VAUX
COUNTIES OF BRISBANE AND DURHAM N.S.W.



STRATIGRAPHIC LOGS OF BMR SCOUT BOREHOLES BLAKEFIELD AND MT. ARTHUR SUBAREAS

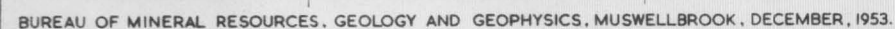
PLATE 5

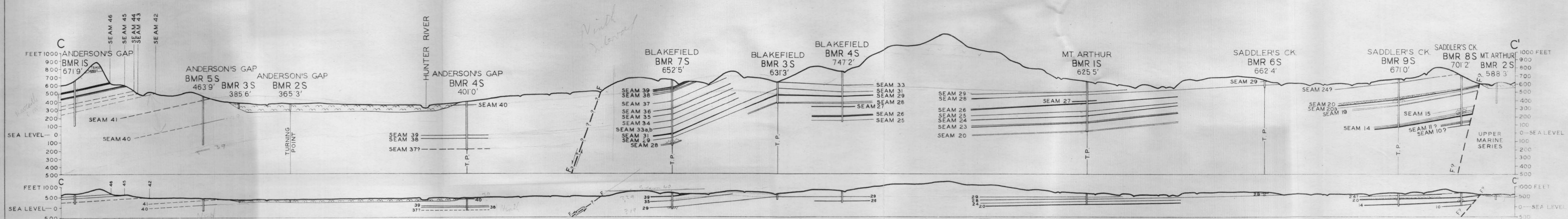
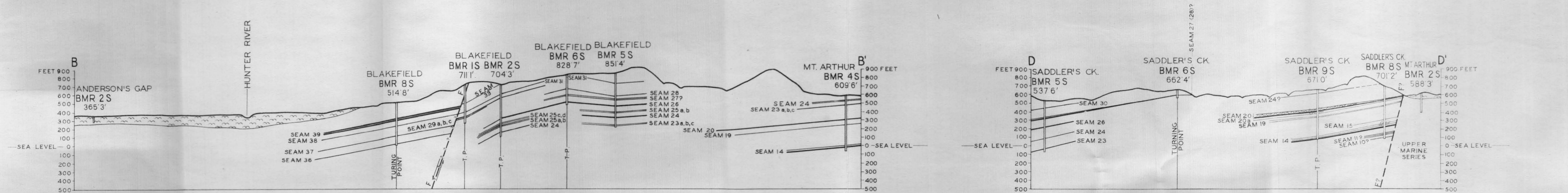
PARISH OF VAUX, COUNTY OF DURHAM, N.S.W.



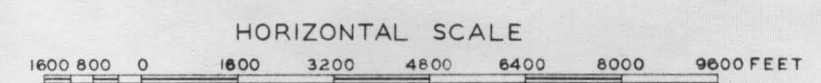
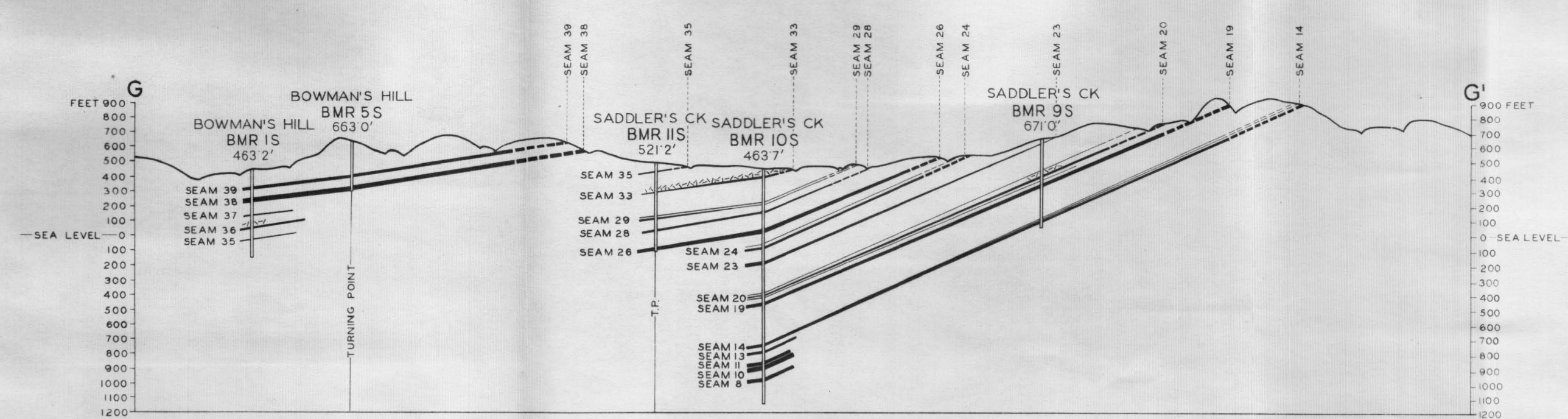
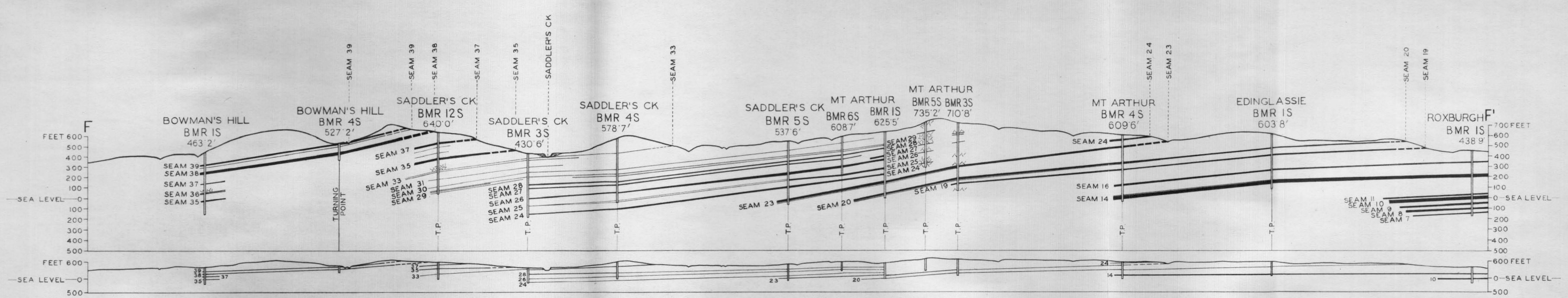
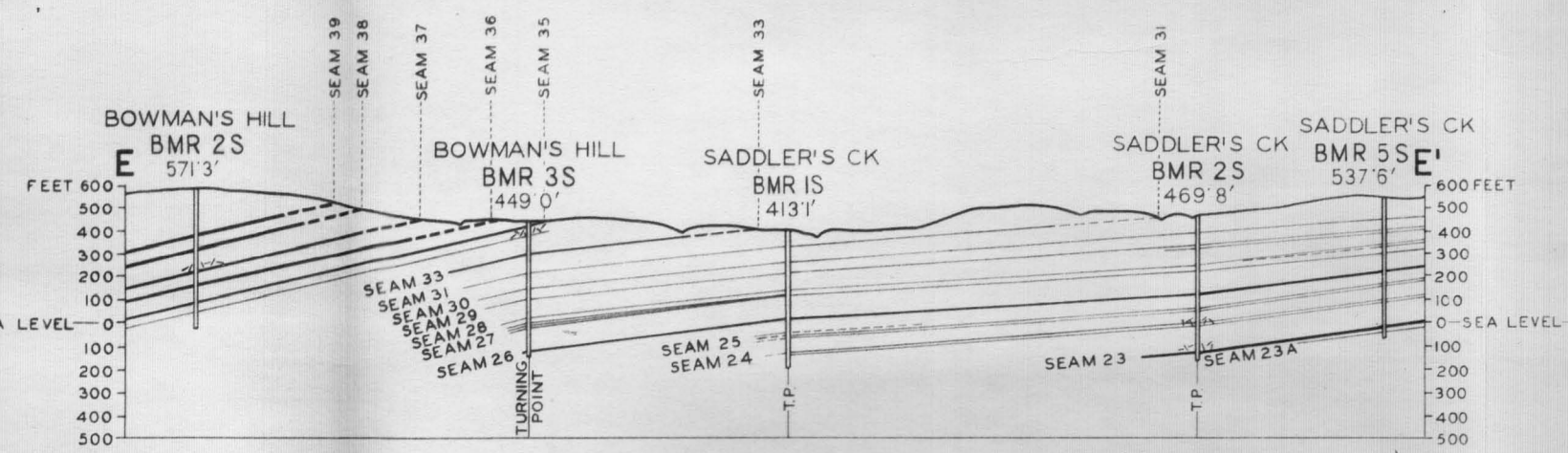
PARISH OF VAUX COUNTY OF DURHAM N.S.W.

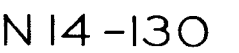
PARISH OF VAUX COUNTY OF DURHAM N.S.W.





1600 800 0 1600 3200 4800 6400 8000 9600 FEET





COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES
CESSNOCK - MUSWELLBROOK REGION

RECORDS 1953, No. 133

REPORT
ON THE WESTERN FLANK
OF THE MUSWELLBROOK
ANTICLINE
(GRAPHIC LOGS OF COAL SEAMS)

NON-LENDING COPY

NOT TO BE REMOVED
FROM LIBRARY

Part 2 of 3

013110



by

M. C. KONECKI

013110

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES
CESSNOCK - MUSWELLBROOK REGION

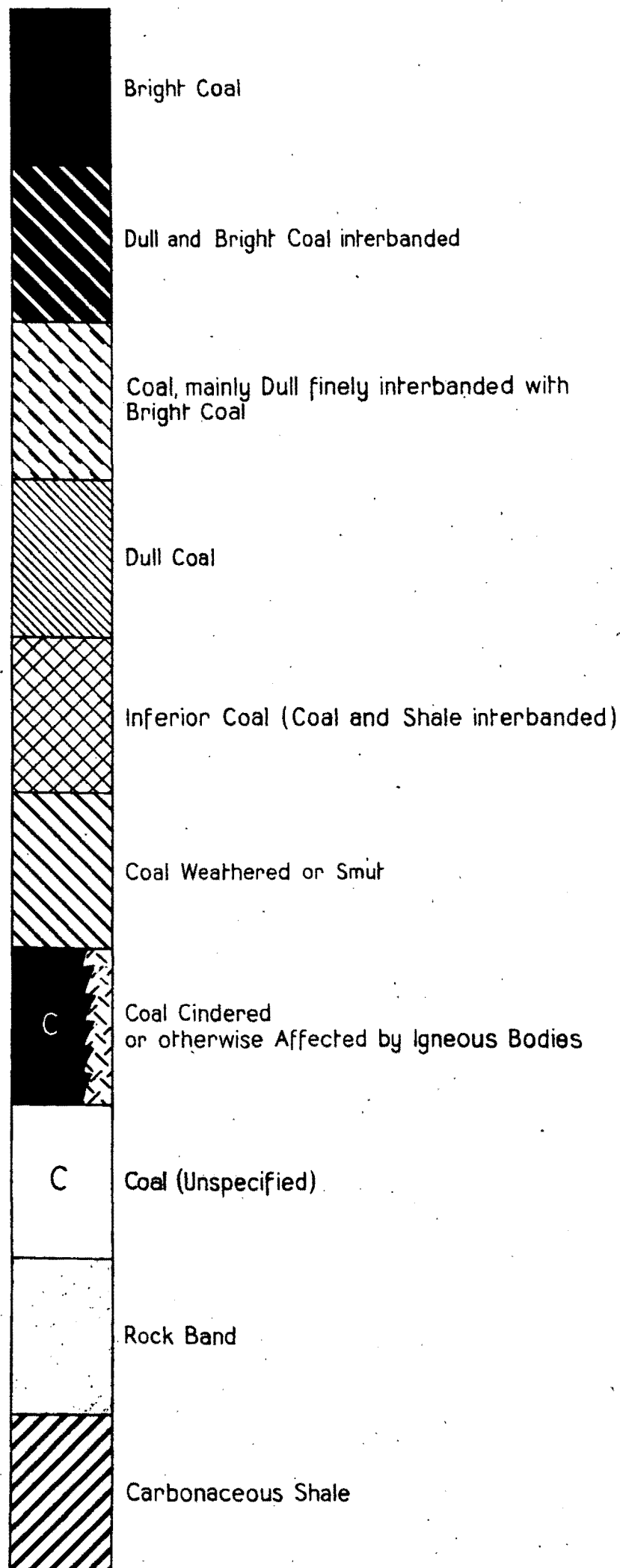
RECORDS 1953. No. 133

REPORT
ON THE WESTERN FLANK
OF THE MUSWELLBROOK
ANTICLINE
(GRAPHIC LOGS OF COAL SEAMS)

by

M. C. KONECKI

LEGEND



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Anderson's Gap Hole No: BMR 1(S) Elevation: 671.9'
Reference: BMR N14-121, January, 1954 Datum: Standard
Begun: 3.12.52 Finished: 2.1.53 Depth: 523'4"

COAL DETAIL (1"-2')

HM V FC Ash BThU
5.4 23.2 43.0 23.4 9,110

No.1

6.0 25.8 40.9 13.3 10,530

No.2

5.6 25.0 47.2 22.2 10,030

No.2a

5.6 26.8 43.6 19.0 10,510

No.3

5.9 25.7 51.3 17.1 10,780

No.4

3.8 17.3 27.6 51.3 --

No.5

5.2 24.8 47.6 22.4 10,110

No.6

4.3 20.6 29.3 45.8 --

No.7

HM V FC Ash BThU
5.1 25.7 42.3 26.9 9,310

No.8

4.8 22.5 36.2 36.5 --

No.9

4.8 21.8 39.8 33.9 8,360

No.10

4.8 23.5 39.6 32.1 8,630

No.11

112' 8 "

113' 11 "

114' 0 "

115' 1 "

115' 10 1/2 "

116' 0 "

118' 0 "

118' 3 "

119' 0 "

119' 1 "

120' 10 "

123' 4 1/2 "

123' 7 "

124' 6 "

124' 8 "

125' 3 "

125' 11 "

126' 10 "

127' 5 "

128' 3 "

130' 3 "

132' 3 1/2 "

132' 3 1/2 "

134' 0 "

136' 5 "

136' 8 "

137' 1 "

137' 11 "

177' 2 "

177' 10 1/2 "

178' 11 "

180' 6 "

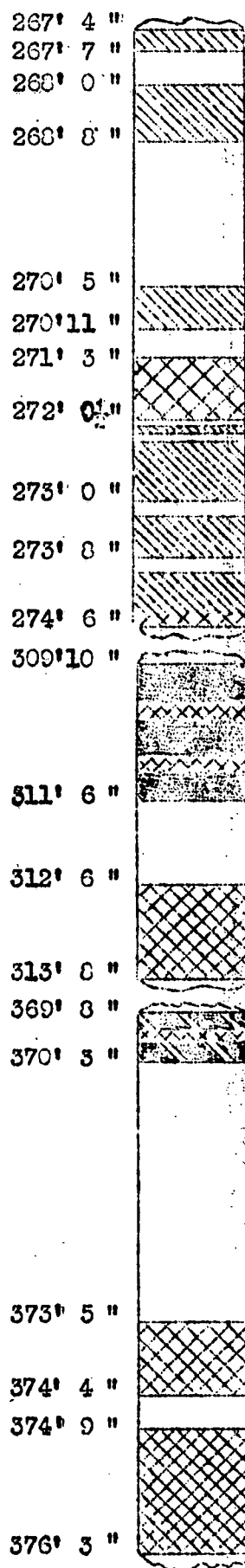
182' 7 1/2 "

185' 5 "

188' 5 "

193' 11 "

COAL DETAIL (1"-2')



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Anderson's Gap Hole No: BMR 4(S) Elevation: 401.0'
Reference: BMR N14-121, January, 1954 Datum: Standard
Bogum 4.5.53 Finished: 7.6.53 Depth: 598' 6"

COAL DETAIL (1"-2')

IRI V FC Ash BThU
5.4 33.5 47.7 13.4 11,370

No.1

5.2 23.3 39.9 31.6 8,730

No.2

4.1 36.7 53.8 5.4 13,430

No.3

4.2 35.3 50.0 10.0 12,690

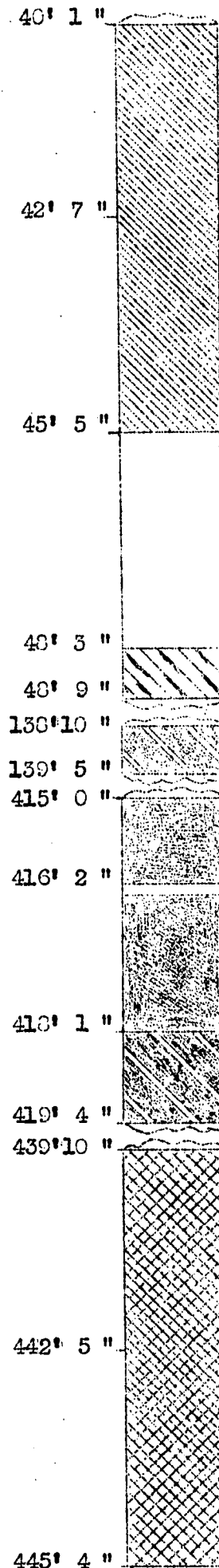
No.4

4.4 31.4 44.3 19.9 10,990

No.5

4.7 33.2 46.9 15.2 11,610

No.6



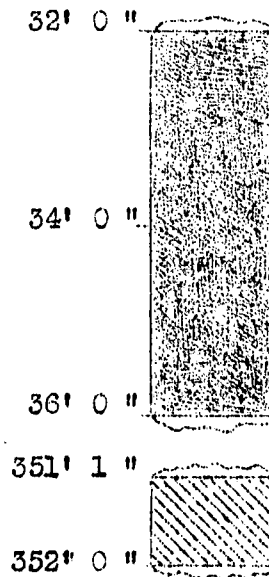
COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Anderson's Gap. Hole No.: HMR 5(S) Elevation: 463.9'
Reference: HMR N14-121, January, 1954. Datum: Standard
Begun: 5.5.53 Finished: 4.6.53 Depth: 600' 0"

COAL DETAIL (1"-2")

HM	V	FC	Ash	BTU
5.8	30.7	46.7	16.3	11,150
<u>No.1</u>				

5.9	32.5	49.3	12.3	11,700
<u>No.2</u>				



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Blakefield

Hole No: BMR 1(S)

Elevation: 711'1"

Reference: BMR N14-121

Datum: Standard

Began: 26.11.52

Finished: 17.12.52

Depth: 440'0"

COAL DETAIL (1" = 2')

HM	VM	FC	Ash	B.Th.U
----	----	----	-----	--------

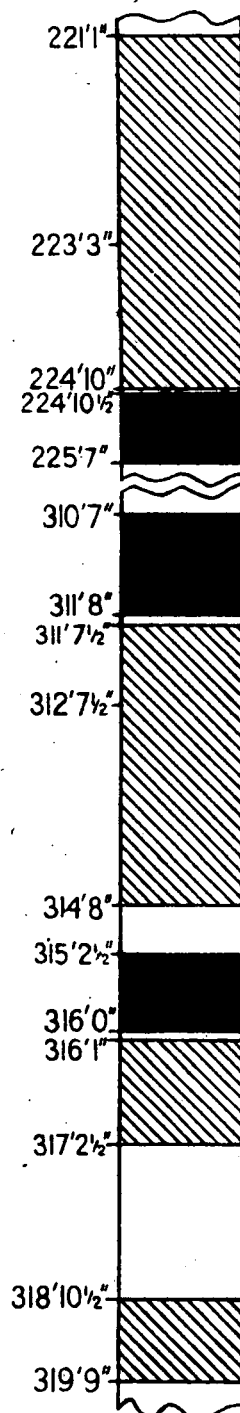
4.2 34.0 56.5 5.3 13.320
No 1

4.1 34.6 52.9 8.4 12.700
No 2

4.3 32.7 50.9 12.1 12.210
No 3

4.2 31.9 53.5 10.4 12.410
No 4

4.3 34.1 54.6 7.0 12.960
No 5

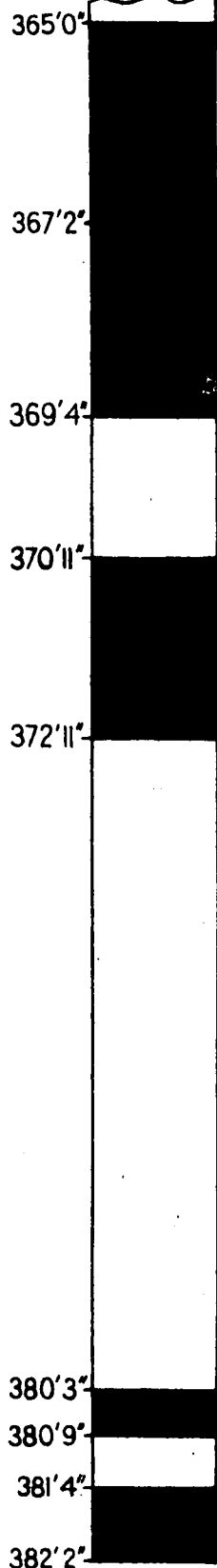


HM	VM	FC	Ash	B.Th.U
----	----	----	-----	--------

3.6 31.1 48.6 16.7 11.640
No 6

3.0 28.9 39.0 29.1 9.640
No 7

3.2 24.1 36.8 35.9 —
No 8



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Blakefield

Hole No: LMR 2(S)

Elevation: 704.3'

Reference: LMR NL4-121, January, 1954

Datum: Standard

Begun: 1.12.52

Finished: 2.3.53

Depth: 597' 6"

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThU
4.6	36.3	50.1	9.0	12,240

No.1

HM	V	FC	Ash	BThU
4.9	33.6	52.9	8.6	12,460

No.2.

HM	V	FC	Ash	BThU
4.9	34.3	50.7	9.6	12,310

No.3.

102' 3 "

103' 3 "

103' 4 1/2 "

106' 2 1/2 "

106' 5 1/2 "

107' 7 1/2 "

107' 9 1/2 "

108' 8 1/2 "

111' 2 1/2 "

111' 4 1/2 "

111' 5 "

112' 3 "

150' 6 "

152' 6 "

154' 7 "

HM	V	FC	Ash	BThU
1.3	11.7	65.6	21.4	

No.6.

HM	V	FC	Ash	BThU
1.4	18.1	49.1	31.4	

No.7.

HM	V	FC	Ash	BThU
1.5	16.2	55.3	26.5	

No.8.

HM	V	FC	Ash	BThU
3.5	30.7	52.2	13.6	11,920

No.9.

305' 4 "

307' 4 "

307' 7 "

309' 7 "

391' 10 1/2 "

393' 1 1/2 "

394' 0 "

436' 4 "

438' 9 "

438' 11 "

439' 7 "

445' 0 "

446' 0 "

481' 7 "

483' 4 "

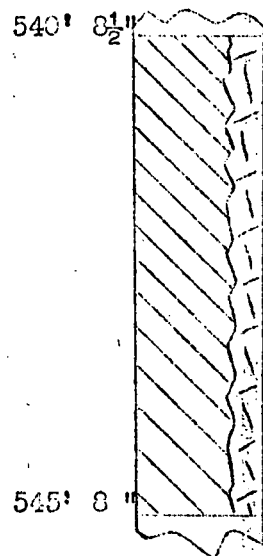
HM	V	FC	Ash	BThU
4.9	33.8	50.0	11.3	12,010

No.4.

HM	V	FC	Ash	BThU
5.2	33.3	53.2	8.3	12,420

No.5.

COAL DETAIL (1"-2')



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Blakefield

Hole No: DMR 3(S)

Elevation: 631.3'

Reference: DMR M14-121, January, 1954.

Datum: Standard

Begun: 12.12.52

Finished: 22.12.52

Depth: 250' 0 "

COAL DETAIL (1"-2')

HM V FC Ash DThU
4.8 31.7 54.3 9.2 12,420

No.1

4.3 33.2 54.5 8.0 12,650

No.2.

4.1 33.1 53.4 9.4 12,620

No.3.

3.9 33.9 53.4 8.8 12,750

No.4.

3.7 34.1 50.3 11.9 12,320

No.5.

3.4 31.2 48.7 16.7 11,520

No.6.

3.4 28.2 44.7 23.7 10,350

No.7.

67' 4 "

67' 6 "

67' 11 "

69' 1 1/2 "

69' 2 1/2 "

70' 5 1/2 "

70' 7 "

71' 11 "

72' 1 "

73' 1 "

145' 4 "

145' 11 "

146' 2 "

148' 8 "

148' 10 "

151' 6 "

152' 8 "

154' 3 "

156' 5 "

156' 9 "

158' 0 "

158' 11 "

Area: Blakefield

Hole No: BMR 4(S)

Elevation: 747.2'

Reference: BMR M14-121, January, 1954.

Datum: Standard

Begun: 18.12.52

Finished: 30.1.53

Depth: 608'0"

COAL DETAIL (1"=2')

HM	V	FC	Ash	BTHU
5.8	33.1	54.8	6.3	12,680

No.1

HM	V	FC	Ash	BTHU
5.6	34.8	54.7	4.9	12,970

No.2

HM	V	FC	Ash	BTHU
5.6	32.5	52.5	9.4	12,260

No.3

HM	V	FC	Ash	BTHU
5.3	30.1	49.6	15.0	11,500

No.4

HM	V	FC	Ash	BTHU
4.8	32.4	53.4	9.4	12,470

No.5

HM	V	FC	Ash	BTHU
5.4	34.4	55.2	5.0	13,100

No.6

HM	V	FC	Ash	BTHU
4.9	35.0	52.3	7.8	12,740

No.7

157' 10"

159' 1"

159' 2"

161' 2"

161' 5"

162' 1"

162' 11"

233' 6"

234' 8"

234' 11"

237' 8"

237' 11 $\frac{1}{2}$ "

239' 6"

239' 7"

240' 6"

240' 8"

241' 3"

274' 2"

275' 7"

HM	V	FC	Ash	BTHU
4.4	31.2	51.5	12.9	11,930

No.8

HM	V	FC	Ash	BTHU
4.5	35.2	49.8	10.5	12,400

No.9

HM	V	FC	Ash	BTHU
4.4	34.8	48.2	12.6	12,100

No.10.293' 4 $\frac{1}{2}$ "293' 10 $\frac{1}{2}$ "

294' 2"

295' 4 $\frac{1}{2}$ "295' 6 $\frac{1}{2}$ "296' 7 $\frac{1}{2}$ "

296' 8"

297' 0"

297' 2"

299' 8"

302' 2"

303' 8"

428' 7"

429' 7"

434' 7"

435' 1"

436' 0"

436' 7"

433' 10"

437' 11"

438' 4"

544' 0"

544' 8"

545' 1"

546' 7"

COAL DETAIL (1"-2")

HM V FC Ash BThU
3.5 24.6 61.1 10.8 12,530

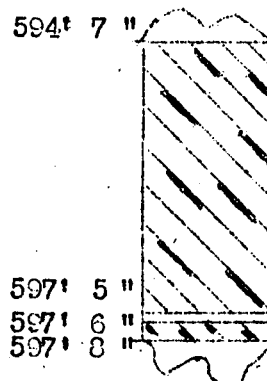
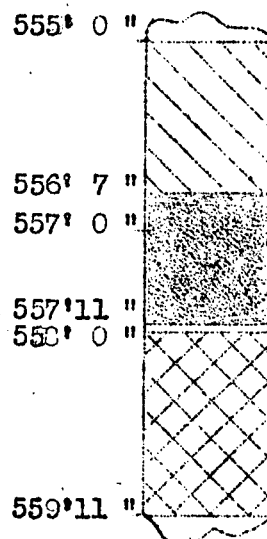
No.11

3.7 29.1 45.5 21.7 10,700

No.12.

4.2 29.5 55.2 11.1 12,310

No.13



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Blakefield Hole No: BMR 5(3) Elevation: 351.4'
Reference: BMR N14-121, January, 1954 Datum: Standard
Begun: 8.1.52 Finished: 11.2.53 Depth: 620'0"

COAL DETAIL (1"-2")

112' 5 "

113' 8 "

114' 7 "

115' 1 "

HM	V	FC	Ash	BthU
5.8	33.9	49.1	13.2	12,030

3.4 34.0 44.9 17.7 11,300

No.5

250' 11 1/2 "
251' 1 "
251' 5 "
251' 9 "
251' 11 "

HM	V	FC	Ash	BthU
4.2	31.5	56.0	8.3	12,640

No.1

3.8 34.1 50.1 12.0 12,180

No.6

254' 0 "

4.5 36.5 53.6 5.4 13,050

No.2

4.3 32.0 53.9 4.8 13,170

No.7

256' 6 "

256' 9 "

4.1 32.8 50.2 12.9 11,960

No.3

258' 0 "

4.0 32.7 54.3 9.0 12,560

No.8

269' 3 "

269' 10 "

4.3 32.0 54.4 9.3 12,400

No.9

363' 5 "
363' 9 "
363' 10 1/2 "

366' 7 1/2 "
366' 9 "

368' 8 1/2 "

370' 0 1/2 "

371' 6 1/2 "

504' 1 "

507' 5 "

510' 5 "

513' 5 "
605' 10 "

607' 3 "

COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Blakefield Hole No: BMR 6(S) Elevation: 828.7'
Reference: BMR N14-121 January, 1954. Datum: Standard
Begun: 31.1.53 Finished: 14.2.53 Depth: 330' 0"

COAL DETAIL (1"-2')

FM	V	FC	Ash	BThU	
5.6	23.4	53.1	7.9	12,220	162' 5 "
<u>No.1</u>					
4.9	32.2	56.6	6.3	12,600	164' 3 "
<u>No.2</u>					
4.8	31.4	52.0	11.8	12,040	167' 0 "
<u>No.3.</u>					
					168' 4 "
					230' 7 "
					231' 4 "
					231' 9 "
4.4	30.8	53.2	11.6	11,900	
<u>No.4.</u>					
					233' 6 "
					233' 8 "
					234' 1 "
					247' 7 "
					248' 4 "
					312' 6 "
					313' 0 "
					313' 5 "
3.8	33.1	50.9	13.1	12,080	
<u>No.5.</u>					
					314' 11 "
					315' 2 "
4.0	32.0	50.3	13.7	11,920	
<u>No.6.</u>					
					317' 7 "
					319' 0 "
					320' 0 "

COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Blakelyfield

Hole No: BMR 7(S)

Elevation: 652.5'

Reference: BMR M14-121, January, 1954

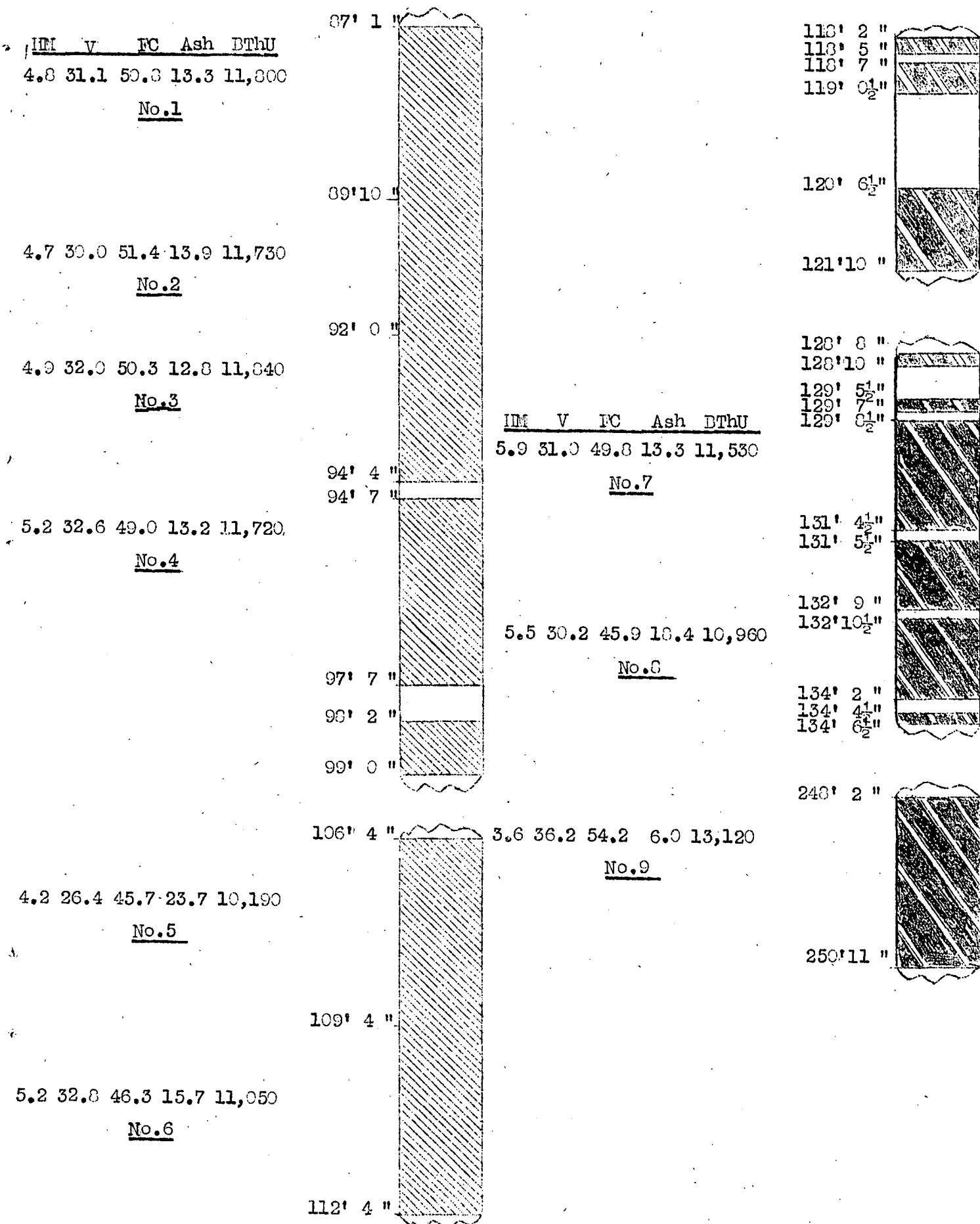
Datum: Standard

Begun: 17.2.53

Finished: 17.4.53

Depth: 305' 8"

COAL DETAIL (1"-2')



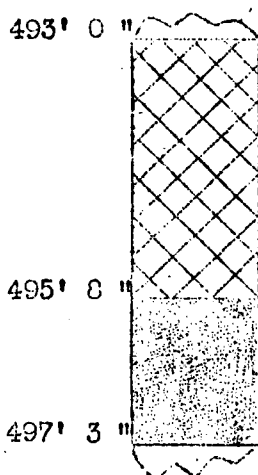
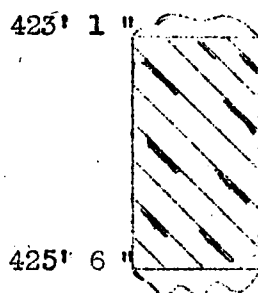
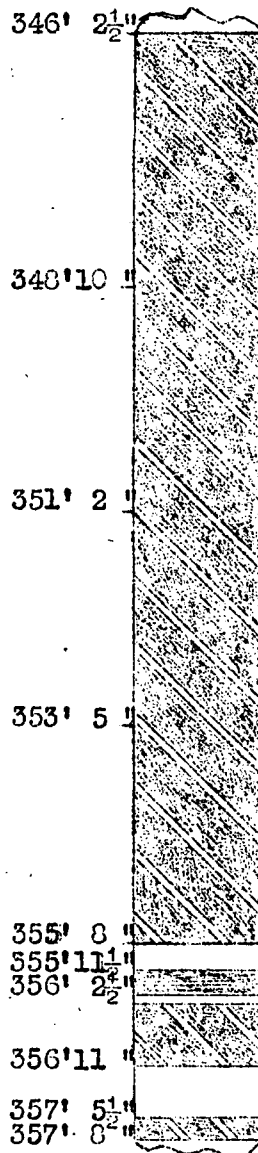
COAL DETAIL (1"-2')

HM	V	FC	Ash	DThu
3.9	30.2	60.7	5.2	13,250
<u>No.10</u>				

HM	V	FC	Ash	DThu
4.1	32.5	59.6	3.8	13,420
<u>No.11</u>				

HM	V	FC	Ash	DThu
3.9	34.6	58.6	2.9	13,600
<u>No.12</u>				

HM	V	FC	Ash	DThu
3.7	37.2	55.9	3.2	13,560
<u>No.13</u>				



HM	V	FC	Ash	DThu
3.4	30.0	53.9	12.7	12,070
<u>No.14</u>				

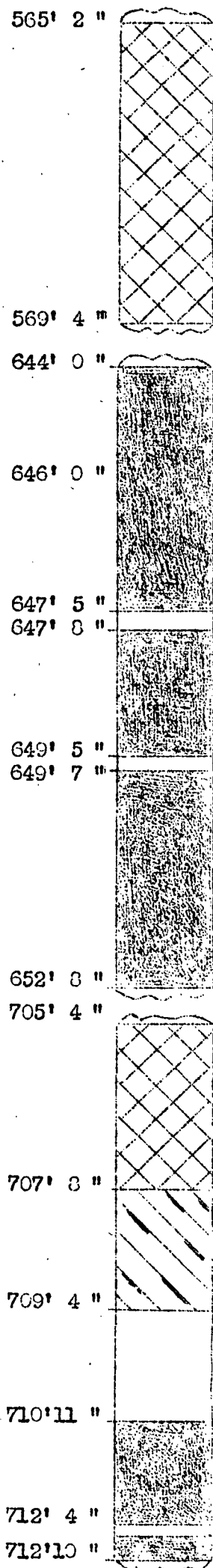
HM	V	FC	Ash	DThu
3.3	30.4	54.4	11.9	12,210
<u>No.15</u>				

HM	V	FC	Ash	DThu
3.3	32.5	55.3	8.9	12,720
<u>No.16</u>				

HM	V	FC	Ash	DThu
3.2	27.9	45.9	23.0	10,630
<u>No.17</u>				

HM	V	FC	Ash	DThu
2.5	26.1	43.0	28.4	10,000
<u>No.18</u>				

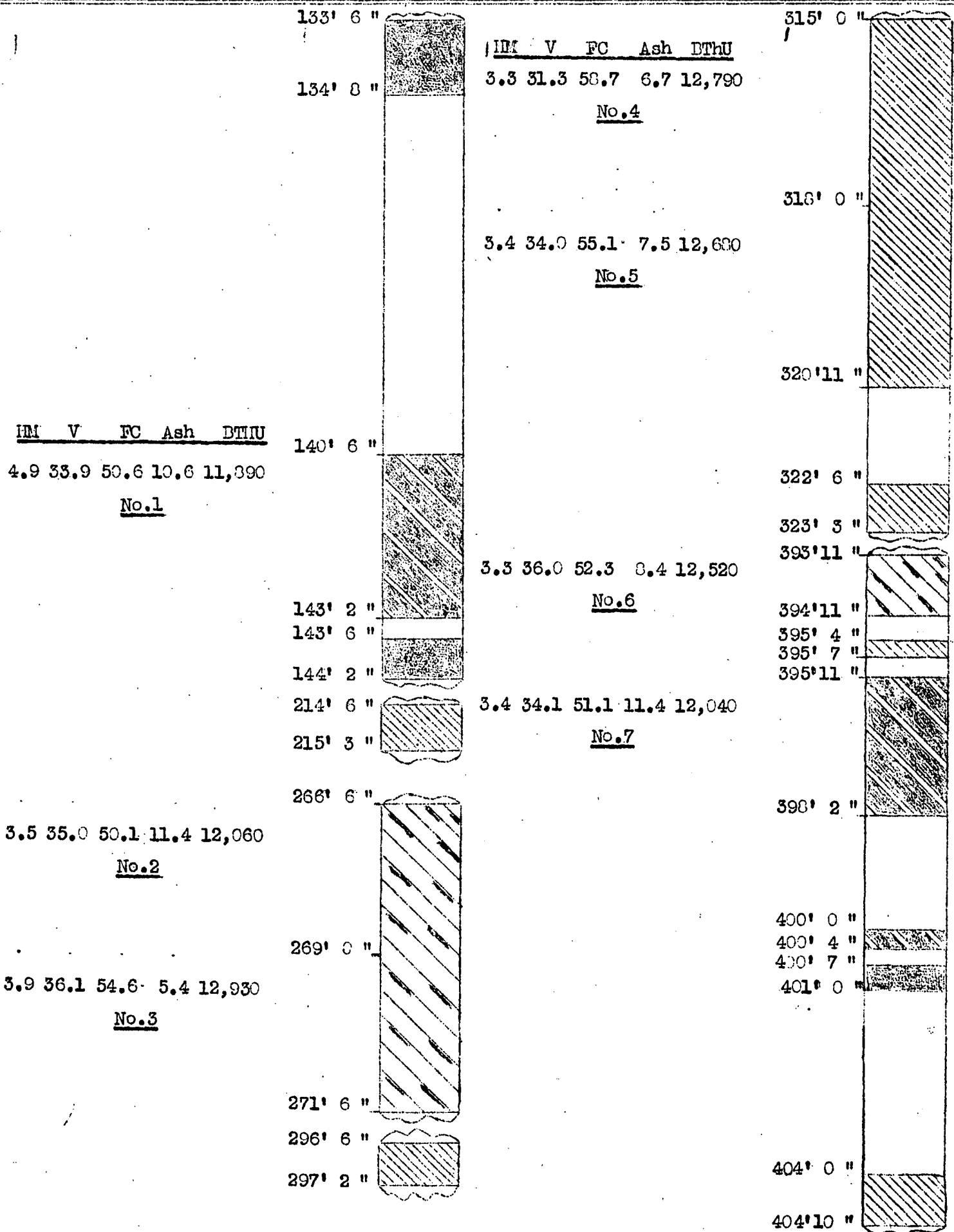
HM	V	FC	Ash	DThu
3.0	28.7	56.1	12.2	12,150
<u>No.19</u>				



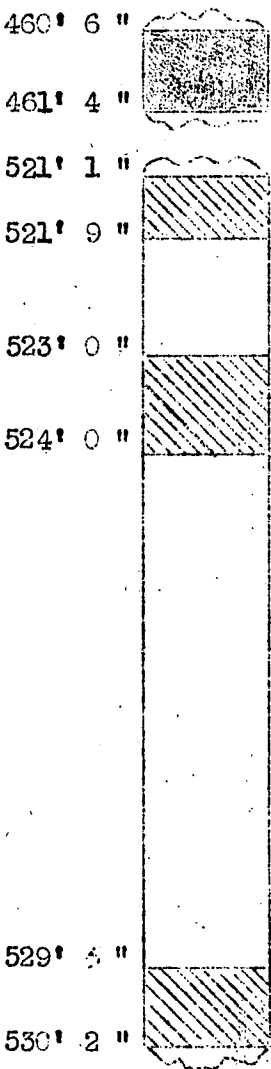
COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Blakefield Hole No: DMR 10(S) Elevation: 439.7'
Reference: DMR N14-121, January, 1954 Datum: Standard
Begun: 3.8.53 Finished: 13.9.53 Depth: 599' 6"

COAL DETAIL (1"-2')



COAL DETAIL (1"-2')



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Bowman's Hill

Hole No: BMR 1(S)

Elevation: 463.2'

Reference: BMR N14-121, January, 1954

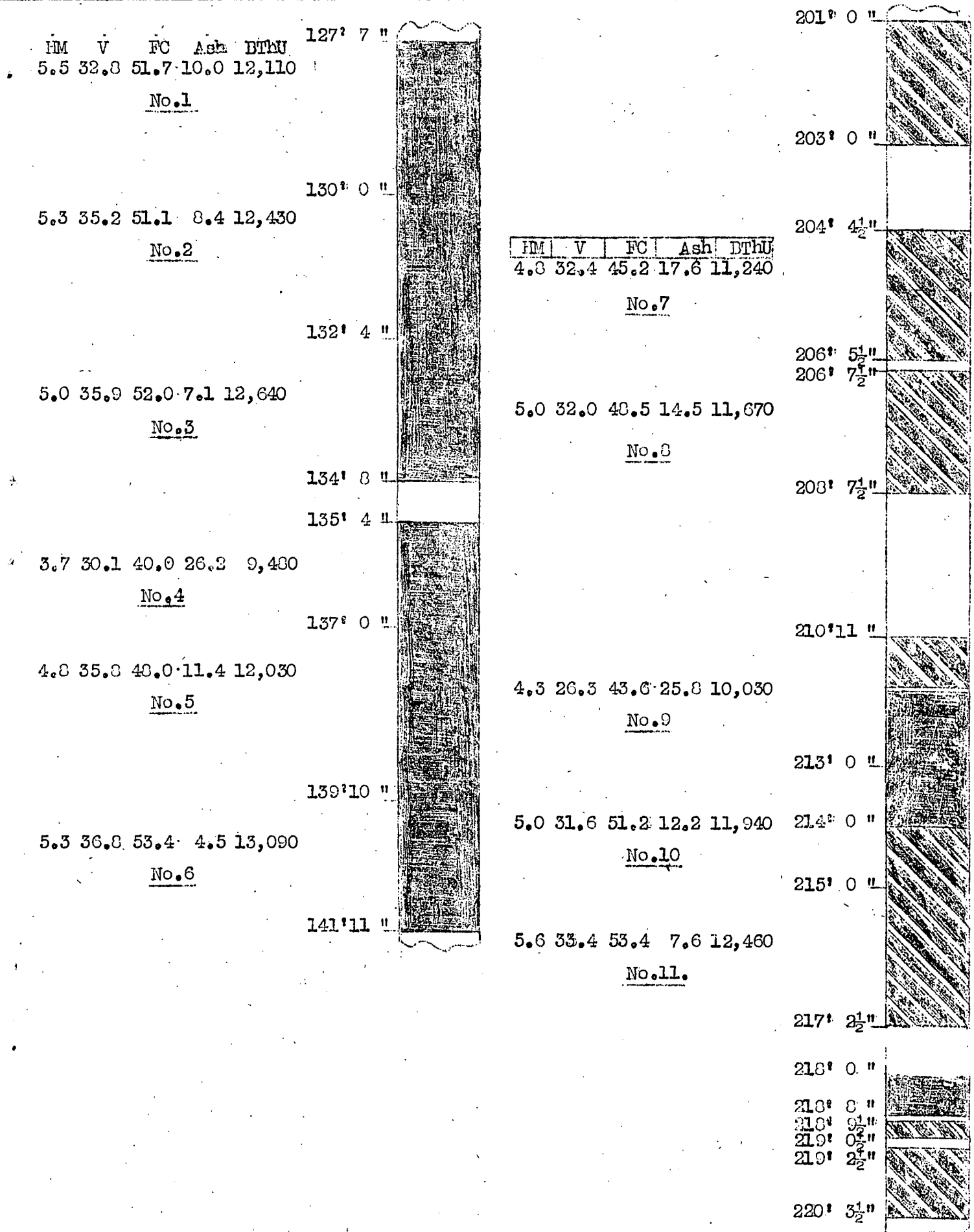
Datum: Standard

Begun: 30.3.53

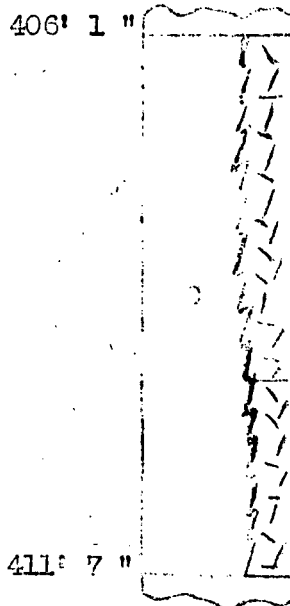
Finished: 14.5.53

Depth: 611'.

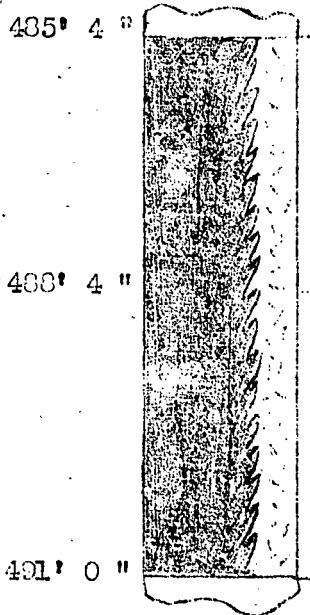
COAL DETAIL (1"-2')



COAL DETAIL (1"-2')



HM	V	FC	Ash	BTU
2.6	14.3	72.3	10.3	12,700



2.5 11.2 76.0 10.3 12,860

491' 0 "

Area: Bowman's Hill

Hole No: DMR 2(S)

Elevation: 571.3'

Reference: DMR N14-121

Datum: Standard

Begun: 5.6.53

Finished: 30.6.53

Depth: 600' 0 "

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThU
3.4	34.8	52.0	9.8	12,630

No.1

HM	V	FC	Ash	BThU
3.8	34.4	49.0	12.8	12,220

No.2

HM	V	FC	Ash	BThU
4.1	35.4	48.8	11.7	12,200

No.3

HM	V	FC	Ash	BThU
4.5	38.2	52.2	5.1	13,300

No.4

HM	V	FC	Ash	BThU
2.7	7.9	50.2	39.2	---

No.5

HM	V	FC	Ash	BThU
2.2	7.5	50.2	40.1	---

No.6

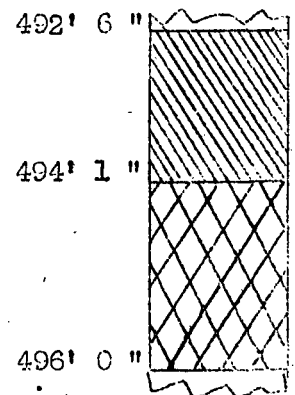
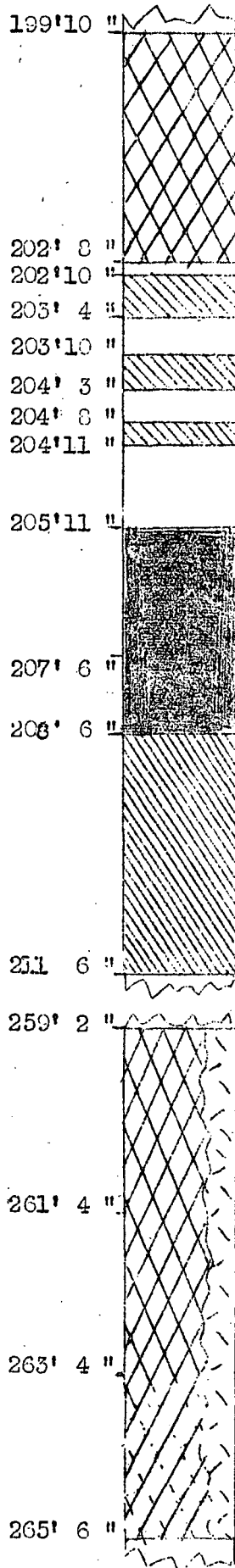
HM	V	FC	Ash	BThU
3.0	9.4	63.4	24.2	10,190

No.7

HM	V	FC	Ash	BThU
5.8	35.1	57.4	3.7	13,530

No.8

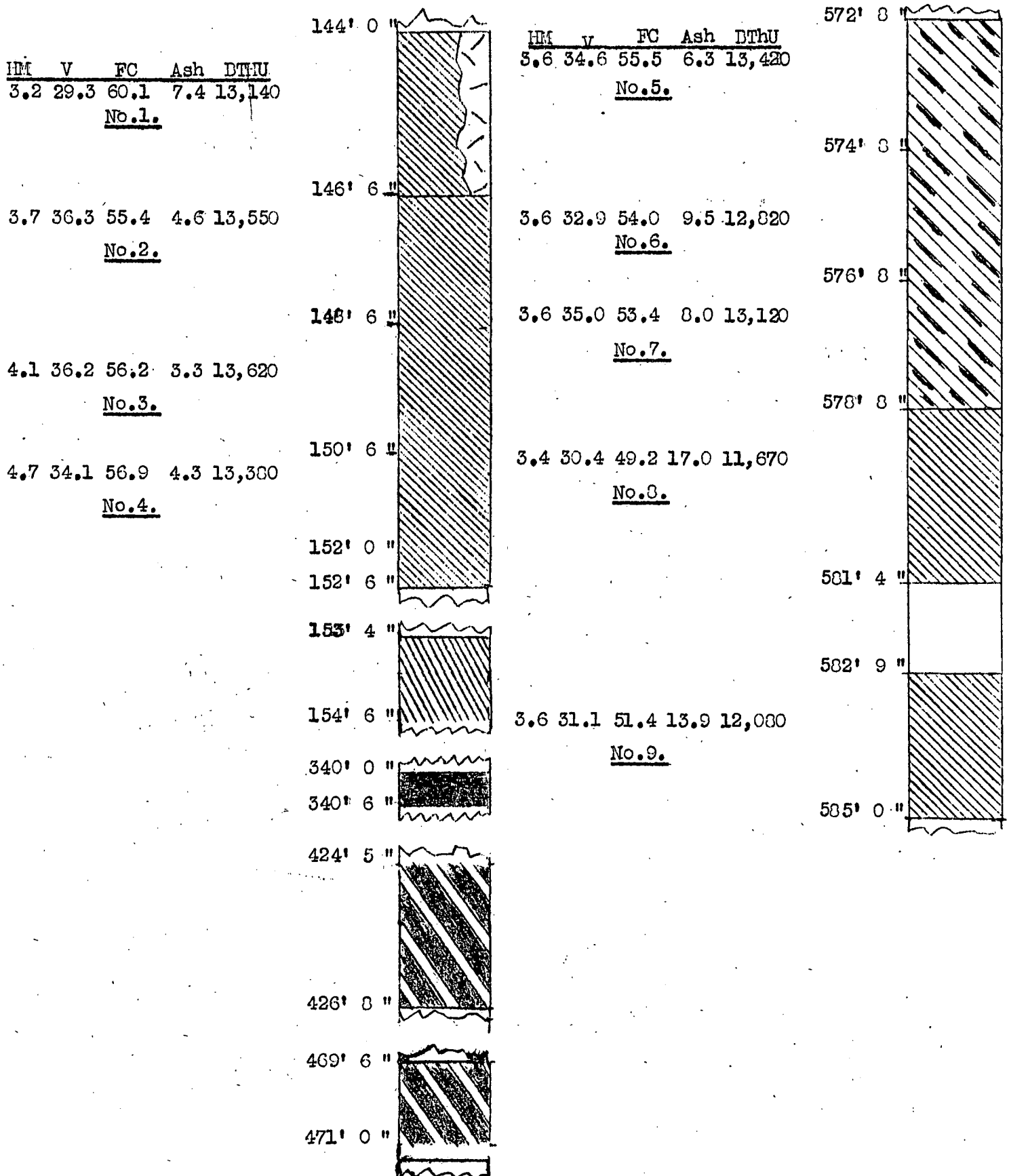
HM	V	FC	Ash	BThU
3.1	26.4	35.2	35.3	---

No.9

COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Dowman's Hill. Hole No: DMR 3(S) Elevation: 449.0'
Reference: DMR N14-121, January, 1954 Datum: Standard
Begun: 8.6.53 Finished: 30.6.53 Depth: 598' 6"

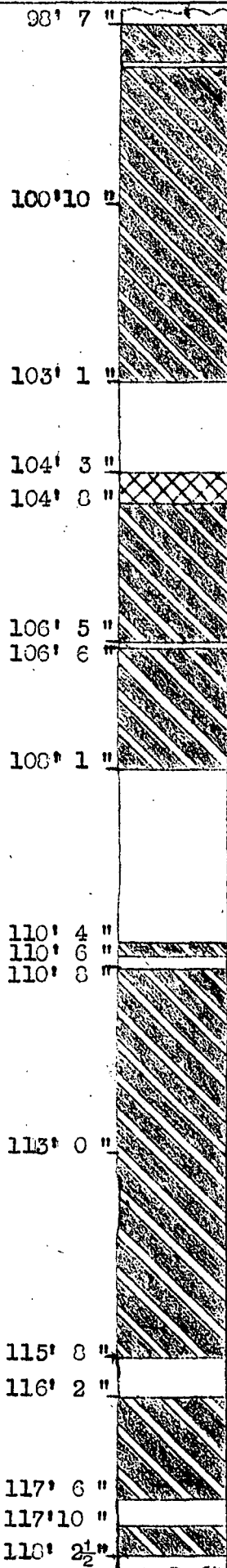
COAL DETAIL (1"-2')



Bureau of Mineral Resources, Geology and Geophysics

Depth: 155' 0 "

No. 7.



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Downan's Hill

Hole No: IMR 5(S)

Elevation: 663.0'

Reference: IMR N14-121, January, 1954

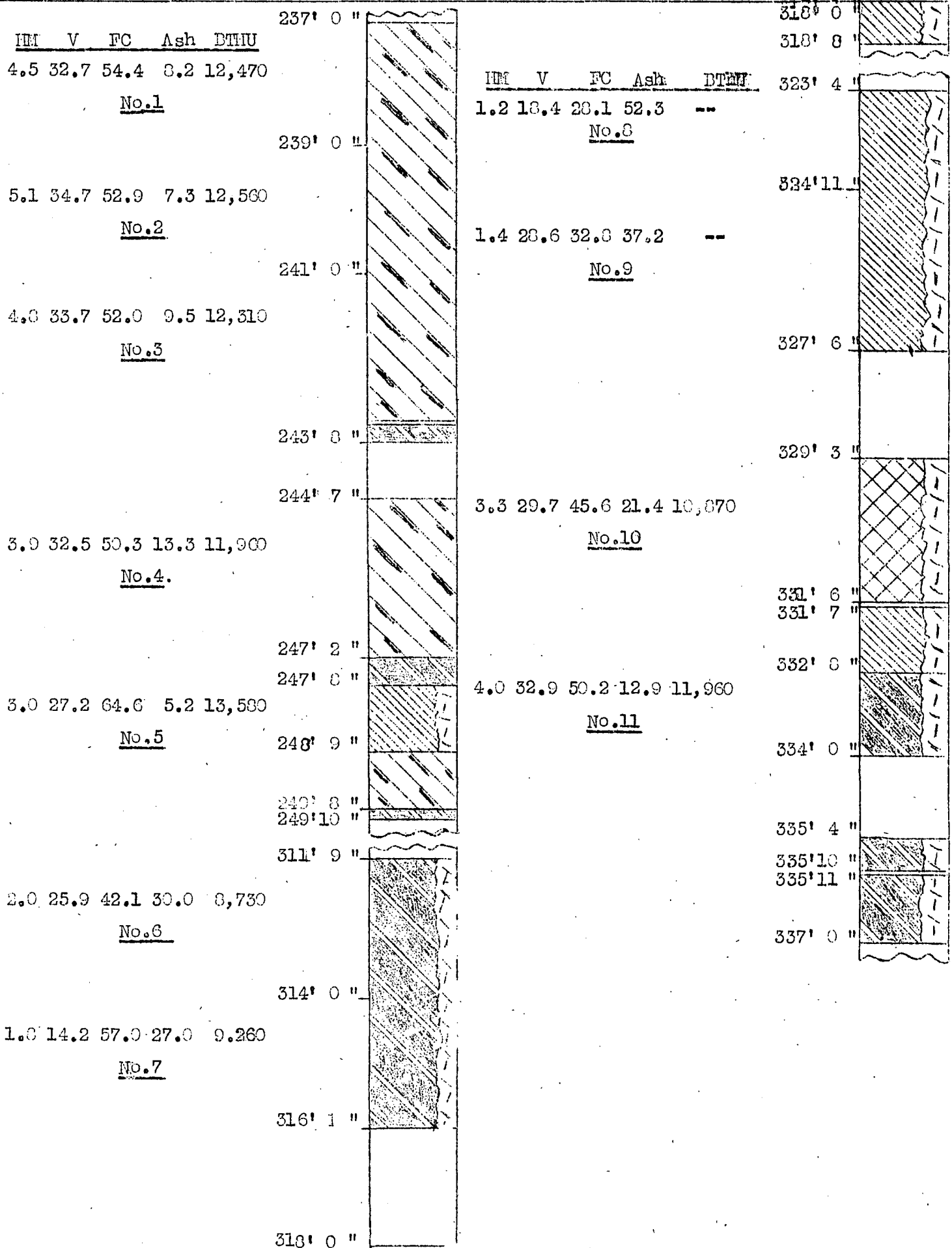
Datum: Standard

Begun: 6.7.53

Finished: 21.7.53

Depth: 348' 0"

COAL DETAIL (1"-2")



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Edinglassie

Hole No: DMR 1(S)

Elevation: 603.3'

Reference: DMR N14-121, January, 1954

Datum: Standard

Begun: 9.6.53

Finished: 10.7.53

Depth: 530' 6 "

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThU
4.4	30.2	56.5	8.9	12,640

No.1

HM	V	FC	Ash	BThU
4.8	31.9	57.1	6.2	13,030

No.2

HM	V	FC	Ash	BThU
4.6	27.4	54.0	14.0	11,610

No.3

HM	V	FC	Ash	BThU
4.4	24.5	41.2	29.9	9,230

No.4

140' 3 "

141' 2 "

141' 7 "

143' 2 "

146' 2 "

147' 1 "

147' 4 "

149' 1 "

204' 11 "

205' 10 "

206' 5 "

C

214' 7 "

214' 11 "

HM	V	FC	Ash	BThU
3.7	29.5	48.6	18.2	11,600

No.5

HM	V	FC	Ash	BThU
3.6	29.2	47.8	19.4	11,450

No.6

HM	V	FC	Ash	BThU
3.6	27.6	52.1	16.7	11,600

No.7

214' 11 "

215' 2 "

216' 1 "

216' 11 "

251' 4 "

252' 4 "

314' 1 "

315' 3 "

452' 3 "

452' 9 "

453' 8 "

454' 7 1/2 "

454' 9 "

456' 0 "

458' 2 "

462' 5 "

462' 11 "

463' 3 "

464' 9 "

466' 3 "

COAL DETAIL (1"-2')

MM	V	FC	Ash	BThU
3.9	33.3	50.9	11.9	12,270
<u>No.8</u>				

466' 3 "

468' 0 "

469' 5 "

469' 8 1/2 "

470' 5 "

470' 7 "

470' 10 1/2 "

471' 3 "

3.9	28.2	51.1	16.8	11,640
<u>No.9</u>				

472' 11 "

473' 3 "

474' 4 "

3.8	34.0	51.2	11.0	12,550
<u>No.10</u>				

476' 2 "

480' 4 "

480' 9 "

488' 6 "

488' 11 "

489' 1 "

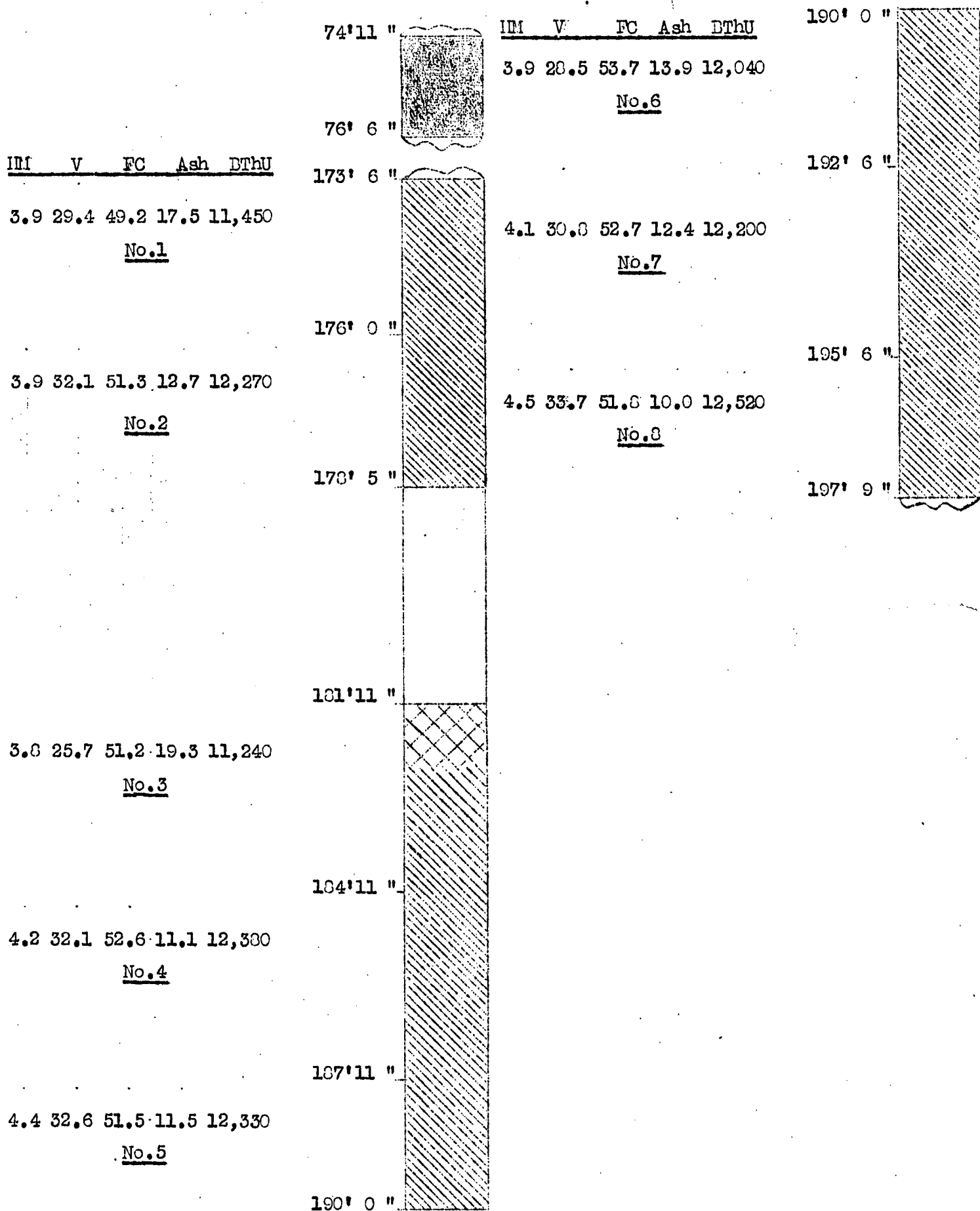
500' 4 "



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Edinglassie Hole No: BMR 2(S) Elevation: 440.1'
Reference: BMR N14-121, January, 1954 Datum: Standard
Begun: 8.7.53 Finished: 20.7.53 Depth: 207'.

COAL DETAIL (1"-2")



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Edinglassie

Hole No: BMR 3(S)

Elevation: 486.3'

Reference: BMR N14-121, January, 1954

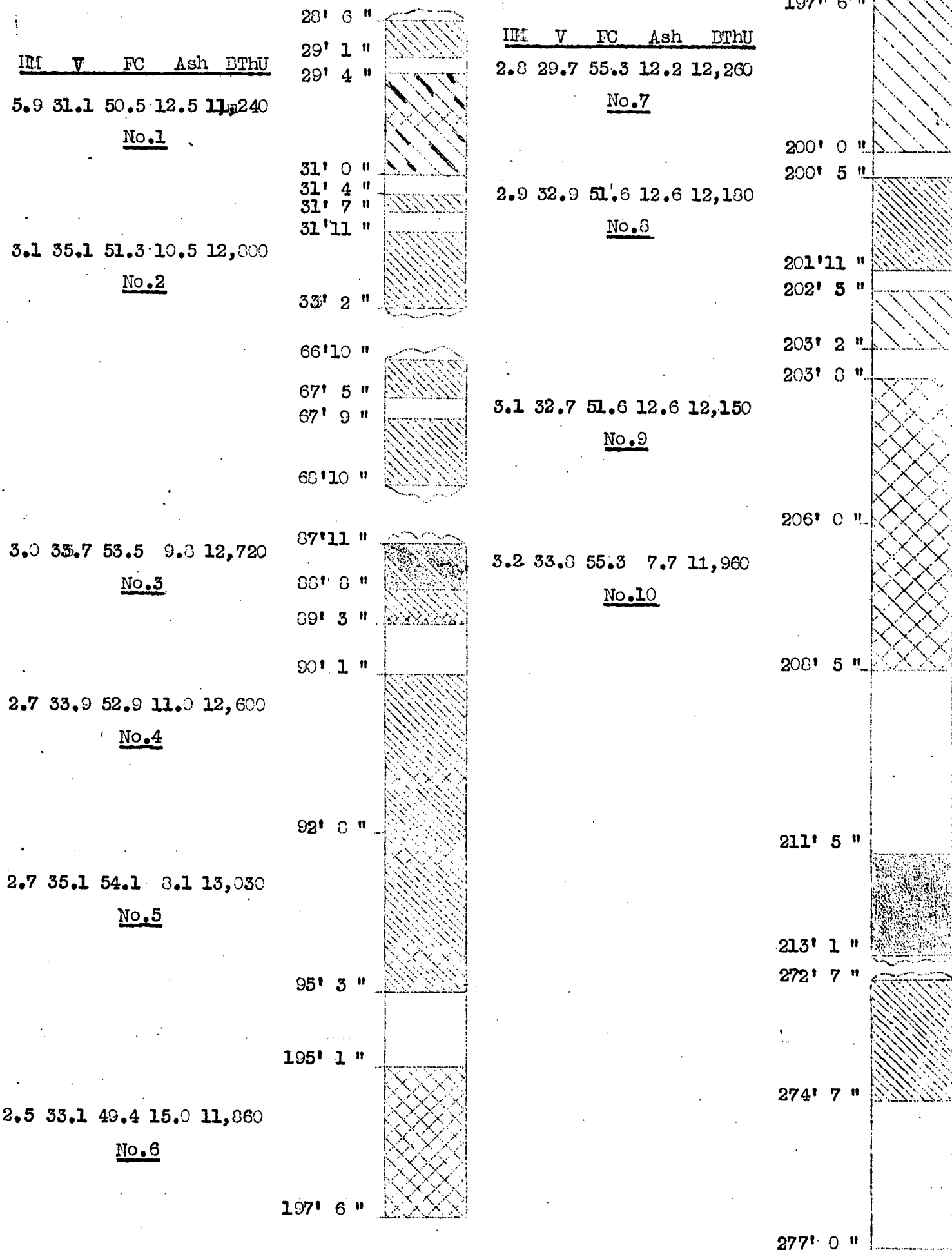
Datum: Standard

Begun: 22.7.53

Finished: 15.8.53

Depth: 474' 2"

COAL DETAIL (1"-2')



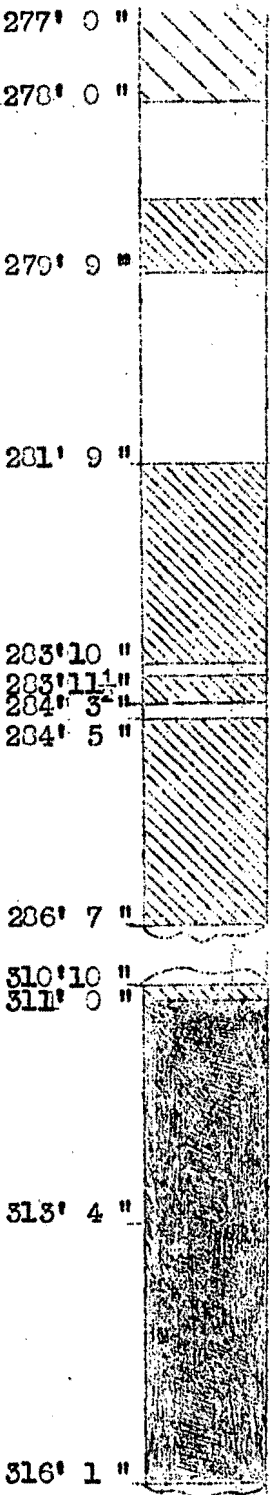
COAL DETAIL (1"-2')

HM V FC Ash BThU
2.7 36.1 49.5 11.7 12,550
No.11

2.8 38.9 51.1 7.2 13,250
No.12

2.8 36.6 52.7 7.9 13,120
No.13

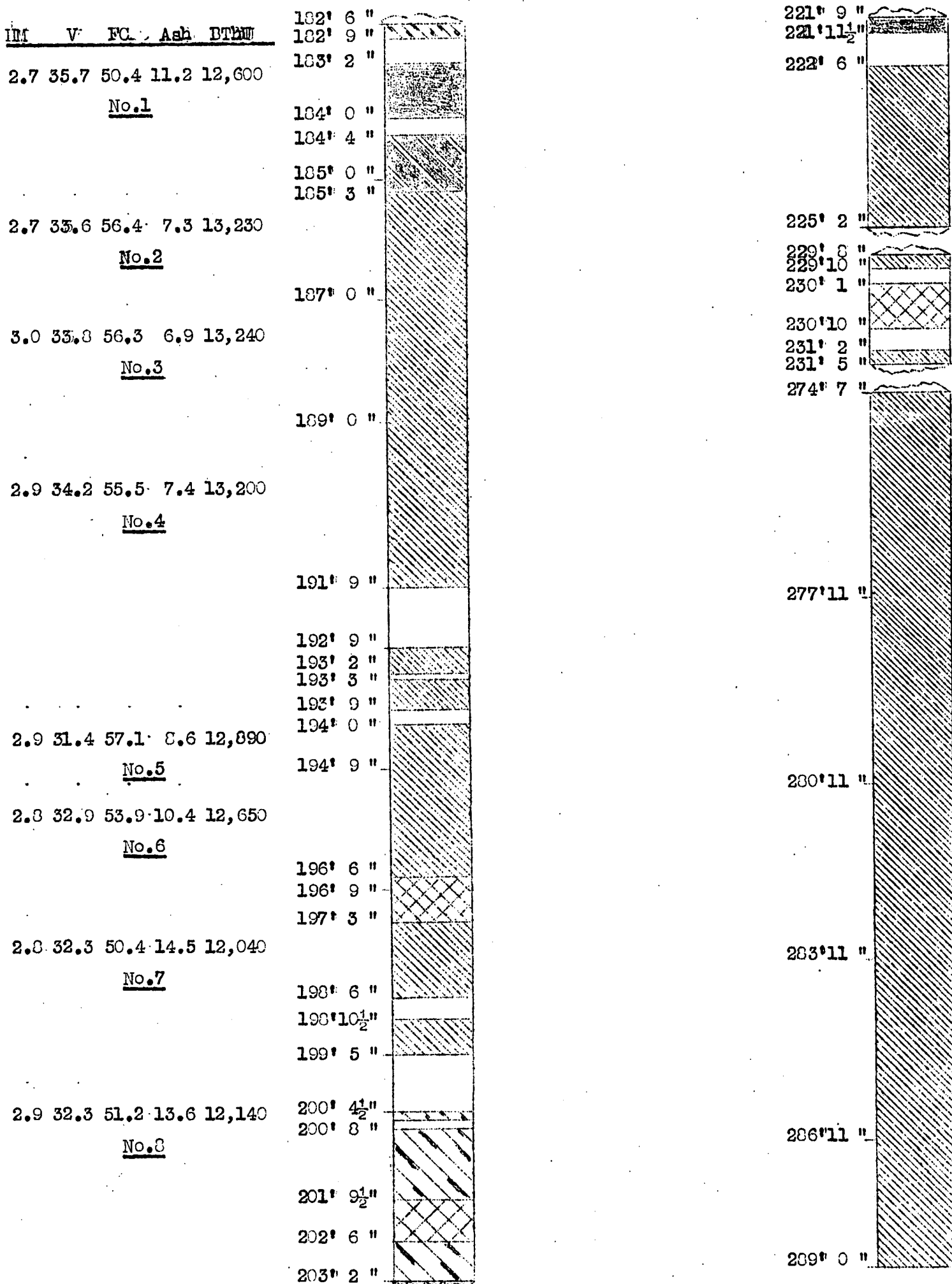
2.9 35.0 53.8 8.3 12,970
No.14



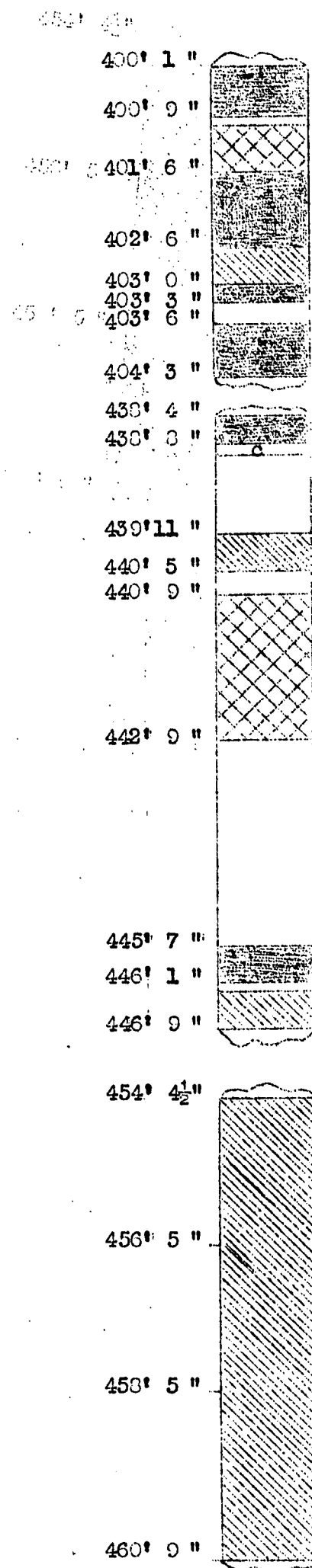
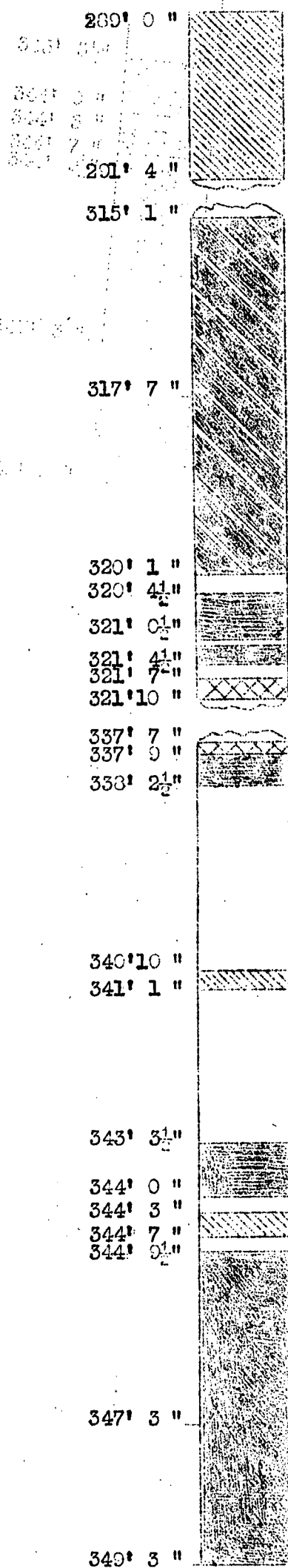
COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Edinglassie Hole No: BMR 4(S) Elevation: 504.4'
Reference: BMR M14-121, January, 1954 Datum: Standard
Begun: 18.8.53 Finished: 18.9.53 Depth: 536'0"

COAL DETAIL (1"-2")



COAL DETAIL (1"=2')



Area: Mount Arthur

Hole No: IMR 1(S)

Elevation: 625.5' ASL

Reference: IMR N14-121, January, 1954

Datum: Standard

Begun: 11.3.53

Finished: 27.3.53

Depth: 625' 8 "

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThU
4.3	26.8	53.6	14.3	11,590

No.1

117' 11 "

120' 0 "

5.0 30.6 55.0 9.4 12,490

No.2

122' 1 1/2 "

122' 4 1/2 "

5.1 29.9 57.3 7.7 12,710

No.3

123' 6 1/2 "

124' 0 "

5.4 32.0 55.6 7.0 12,740

No.4

126' 0 "

152' 4 "

154' 9 "

235' 4 "

235' 6 "

235' 11 "

4.2 31.0 50.2 14.6 11,790

No.5

237' 11 "

238' 2 "

4.2 35.1 54.8 5.9 13,130

No.6

240' 0 "

240' 1 "

4.3 34.7 52.4 8.6 12,710

No.7

242' 1 "

HM	V	FC	Ash	BThU
3.9	33.0	53.1	10.0	12,420

No.8

4.1 33.1 54.4 8.4 12,620

No.9

4.0 32.8 48.9 14.3 11,770

No.10

3.9 35.1 51.2 9.3 12,380

No.11

3.8 32.3 52.7 11.2 11,380

No.12

5.0 31.2 51.9 11.9 12,290

No.13

245' 4 "

245' 9 "

255' 2 "

256' 10 "

4.1 33.1 54.4 8.4 12,620

No.9

258' 7 "

259' 7 "

4.0 32.8 48.9 14.3 11,770

No.10

261' 2 "

261' 9 "

3.9 35.1 51.2 9.3 12,380

No.11

263' 8 "

3.8 32.3 52.7 11.2 11,380

No.12

264' 11 "

266' 3 "

5.0 31.2 51.9 11.9 12,290

No.13

267' 10 "

COAL DETAIL (1"-2')

HM	V	FC	Ash	DThu
4.0	34.5	50.9	10.6	12,460

No.14

347' 4"

350' 4"

352' 4"

354' 2"

4.4 30.1 54.5 11.0 12,390

No.15

3.1 23.3 57.8 10.8 12,560

No.16

407' 0"

409' 0"

411' 0"

4.0 35.9 57.4 2.7 13,670

No.17

4.1 33.7 55.2 7.0 13,080

No.18

414' 0"

3.7 31.8 56.5 8.0 12,920

No.19

3.6 32.3 52.3 11.8 12,370

No.20

4.0 32.0 55.1 8.9 12,740

No.21

476' 6"

479' 0"

481' 6"

484' 6"

493' 1"

495' 9"

594' 8"

597' 8"

601' 7"

603' 7"

Area: Mount Arthur

Hole No: IMR 5(S)

Elevation: 710.8'

Reference: BMR M14-121, January, 1954

Datum: Standard

Began: 30.3.53

Finished: 22.4.53

Depth: 645'

COAL DETAIL (1"-2")

HM	V	FC	Ash	BTHU
----	---	----	-----	------

4.0 5.4 74.5 16.1 11,630

No.1

5.0 4.4 77.7 12.9 12,050

No.2

5.1 4.7 82.8 7.4 12,360

No.3

4.9 4.9 77.5 12.7 12,090

No.4

96' 0 "

97' 6 "

99' 2 "

103' 0 "

105' 6 "

108' 0 "

176' 3 "

177' 6 "

180' 1 "

180' 10 "

HM	V	FC	Ash	BTHU
----	---	----	-----	------

2.8 3.7 78.5 15.0 12,140

No.5

3.3 36.7 45.2 14.8 12,010

No.6

3.3 27.8 60.6 8.3 12,940

No.7

3.5 35.1 56.5 4.9 13,590

No.8

404' 11 "

405' 10 "

420' 5 "

422' 6 "

423' 2 "

425' 5 "

427' 1 "

576' 2 "

577' 9 "

578' 8 1/2 "

579' 8 1/2 "

582' 6 "

Bureau of Mineral Resources, Geology and Geophysics

Area: Mount Arthur

Hole No: EMR 4(S)

Elevation: 609.6'

Reference: EMR N14-121, January, 1954

Datum: Standard

Begun: 24.4.53

Finished: 19.5.53

Depth: 646' 6"

COAL DETAIL (1"-2')

HM	V	FC	Ash	BTHU
3.6	4.6	65.0	26.8	9,250

No.1

3.6 31.8 43.1 16.5 11,730

No.2

4.2 34.4 49.6 11.8 12,340

No.3

4.7 31.4 51.4 12.5 12,120

No.4

4.3 30.4 58.6 6.2 12,890

No.5

4.5 26.8 58.6 10.1 12,340

No.6

4.5 31.6 57.5 6.4 12,830

No.7

4.6 29.9 55.9 9.6 12,370

No.8

HM	V	FC	Ash	BTHU
4.3	31.8	57.1	6.8	13,110

No.9

4.1 30.1 58.5 7.3 13,110

No.10.

4.2 29.2 47.0 19.6 11,070

No.11.

4.2 31.2 49.7 14.9 11,830

No.12.

4.2 31.3 54.4 10.1 12,690

No.13

3.4 28.8 47.8 20.0 11,440

No.14.

3.4 30.9 49.2 16.5 11,980

No.15.

334' 7"

336' 7"

339' 3"

339' 6"

341' 3"

341' 8"

342' 8"

342' 10"

343' 2"

343' 6 $\frac{1}{2}$ "

344' 9"

598' 1"

598' 9"

598' 10 $\frac{3}{4}$ "

599' 0"

600' 1 $\frac{1}{2}$ "600' 7 $\frac{1}{2}$ "

600' 9"

602' 3 $\frac{1}{2}$ "

COAL DETAIL (1"-2')

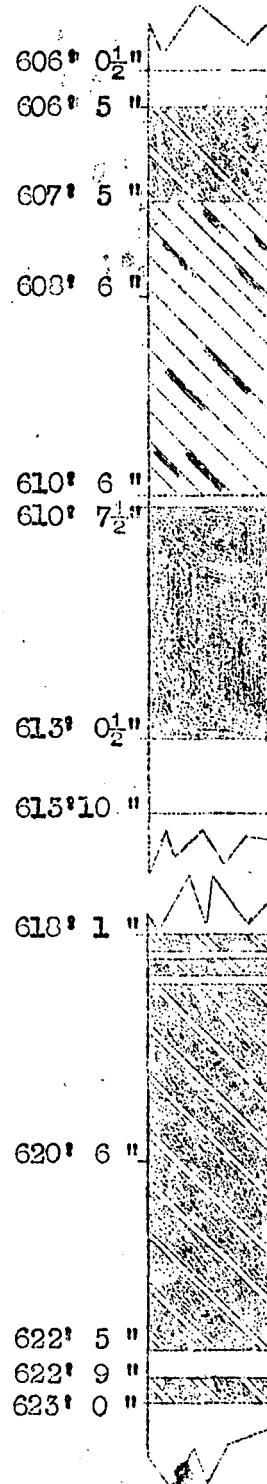
HM	V	FC	Ash	BThU
3.7	27.1	43.2	21.0	13,240
<u>No.16</u>				

4.0 23.7 55.5 11.8 12,600
No.17

4.1 32.1 53.2 10.6 12,790
No.18

4.1 29.1 49.4 17.4 11,740
No.19.

4.0 32.1 53.6 10.3 12,350
No.20.



Bureau of Mineral Resources, Geology and Geophysics

Area: Mt. Arthur.

Hole No: IMR 5(S)

Elevation: 735.2'

Reference: IMR N14-121, January, 1954.

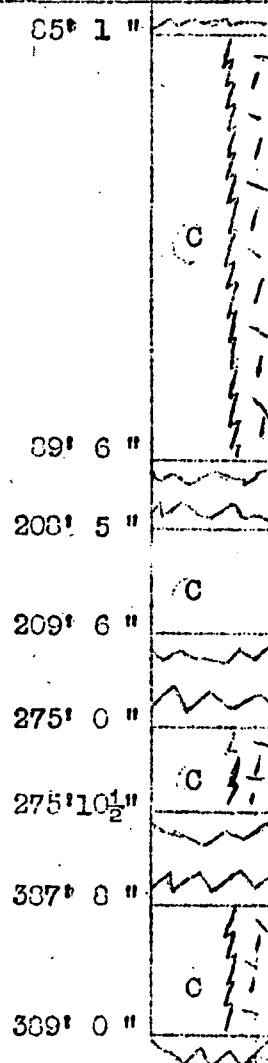
Datum: Standard

Begun: 25.5.53

Finished: 4.7.53

Depth: 437' 6 "

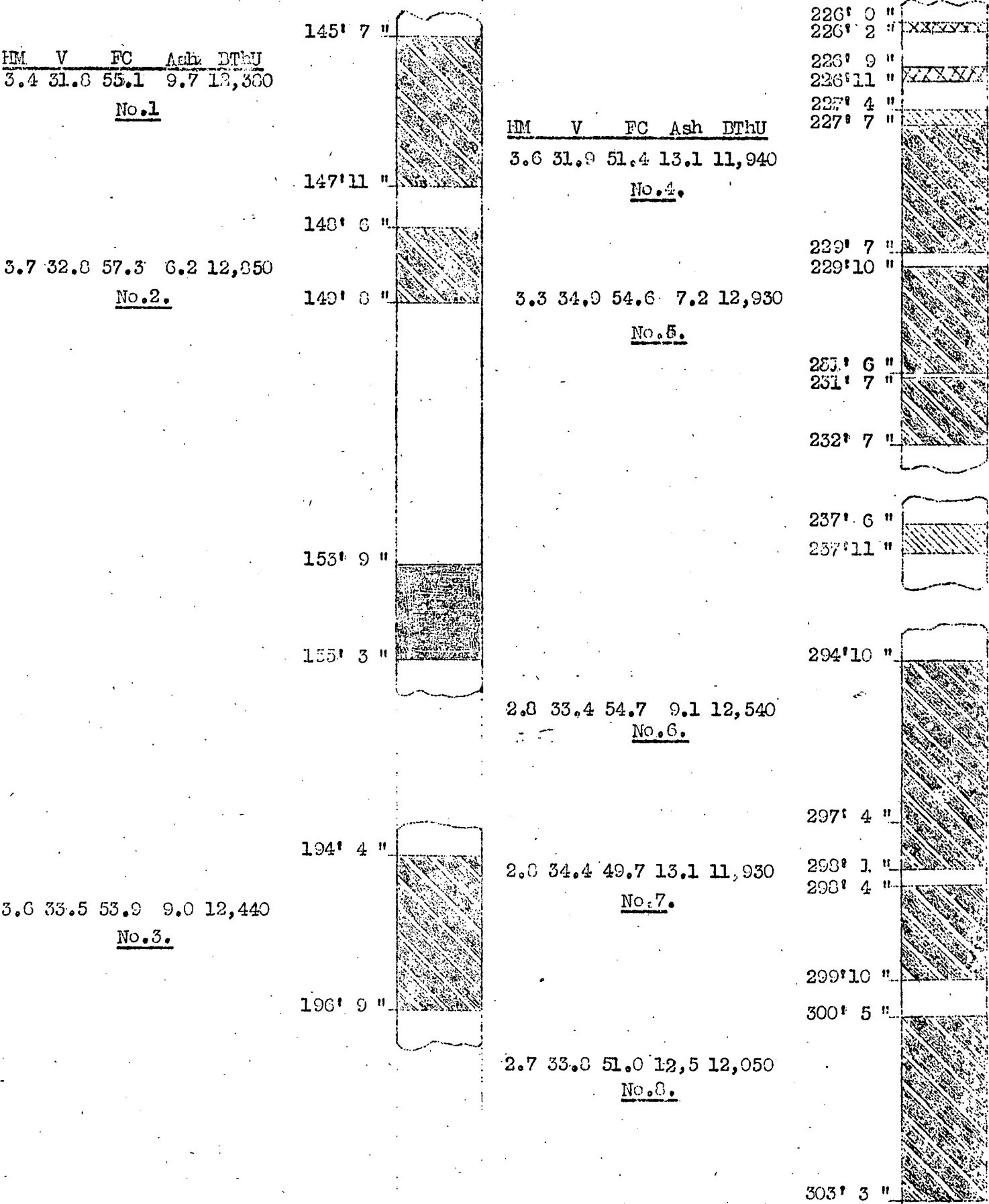
COAL DETAIL (1"-2')



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Mt. Arthur. Hole No: EMR 6(S) Elevation: 608.7'
Reference: EMR N14-121, January, 1954 Datum: Standard
Begun: 15.10.53 Finished: 31.10.53 Depth: 370' 0"

COAL-DETAIL (1"-2')



COMMONWEALTH OF AUSTRALIA.

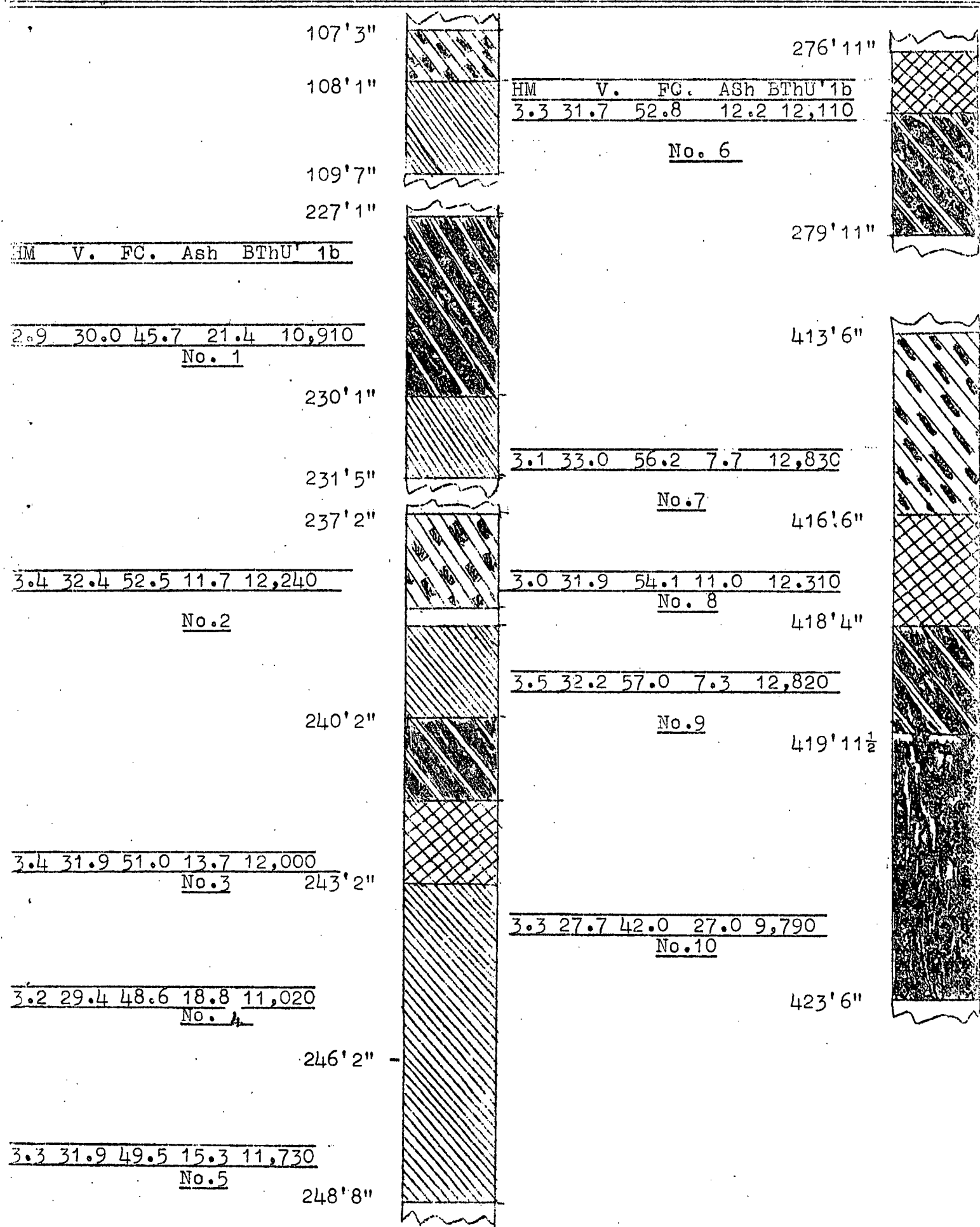
Bureau of Mineral Resources, Geology and Geophysics

Area: Roxburgh
Reference: N14-121
Begun: 13.8.53

Hole No: BMR 1S
January 1954
Finished: 2.10.53

Elevation: 437.7
Datum: Standard
Depth: 617'6"

COAL DETAIL (1"-2')



COAL DETAIL (1"-2')

437'0"

450'5"

450'10"

451'6"

451'10"

452'11 $\frac{1}{2}$ "

452'4 $\frac{1}{2}$ "

HM	V.	FC.	Ash	BTNU ^{1b}
3.2	30.1	56.2	10.5	12,440

No.11

455'9"

456'9"

3.2	31.6	54.7	10.5	12,410
-----	------	------	------	--------

No.12

446'6"

447'0"

459'9"

448'0 $\frac{1}{2}$ "

3.2	31.5	53.2	12.1	12,170
-----	------	------	------	--------

No.13

462'9"

3.2	30.2	56.3	10.3	12,470
-----	------	------	------	--------

No.14

464'2"

3.3	30.8	56.7	9.2	12,610
-----	------	------	-----	--------

No.15

466'6"

505'9"

507'9"

COAL DETAIL (1"-2')

HM	V.	FC.	Ash	BThU'lb
3.2	31.3	57.7	7.8	12,860

No.16

543'1"

2.8	26.5	46.3	24.4	10,390
-----	------	------	------	--------

No.17

546'1"

3.1	27.1	52.2	17.6	11,360
-----	------	------	------	--------

No.18

549'1"

3.3	27.6	54.5	14.6	11,770
-----	------	------	------	--------

No.19

552'1"

552'6"

553'4"

554'6"

3.4	29.0	56.8	10.8	12,290
-----	------	------	------	--------

No.20

556'9"

3.3	28.4	57.0	11.3	12,240
-----	------	------	------	--------

No.21

558'6"

590'2"

590'6"

3.3	28.4	57.0	11.3	11,580
-----	------	------	------	--------

No.22

592'6"

COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Roxburgh	Hole No: DMR 2(S)	Elevation: 428.7'
Reference: DMR N14-121, January, 1954		Datum: Standard
Began: 21.9.53	Finished: 8.10.53	Depth: 361' 0"

COAL DETAIL (1"-2")

HM	V	FC	Ash	BThU
3.4	33.0	56.2	7.4	12,880

No.1

38' 2"

40' 6"

3.4	33.9	55.6	7.1	12,910
-----	------	------	-----	--------

No.2

42' 6"

3.4	33.1	52.6	10.9	12,350
-----	------	------	------	--------

No.3

43' 8"

43' 10"

44' 9"

102' 4"

103' 3"

204' 11"

207' 3"

54' 0"

55' 0"

55' 4"

263' 0"

263' 10"

3.2	31.6	57.9	7.3	12,940
-----	------	------	-----	--------

No.4

83' 1"

85' 6"

3.2	32.1	50.6	14.1	11,860
-----	------	------	------	--------

No.5

87' 9"

3.4	32.2	53.5	10.9	12,190
-----	------	------	------	--------

No.6

89' 11"

90' 11"

91' 1"

HM	V	FC	Ash	BThU
2.9	29.7	48.3	19.1	11,180

No.7

336' 10"

338' 6"

2.7	31.4	49.9	16.0	11,730
-----	------	------	------	--------

No.8

341' 3"

COAL DETAIL (1"=2')

IM V FC Ash DThu
2.8 27.9 51.9 17.4 11,430

No.9

3.0 32.8 53.7 10.5 12,490

No.10

3.3 31.2 54.2 11.3 12,350

No.11

3.1 29.6 52.5 14.8 11,870

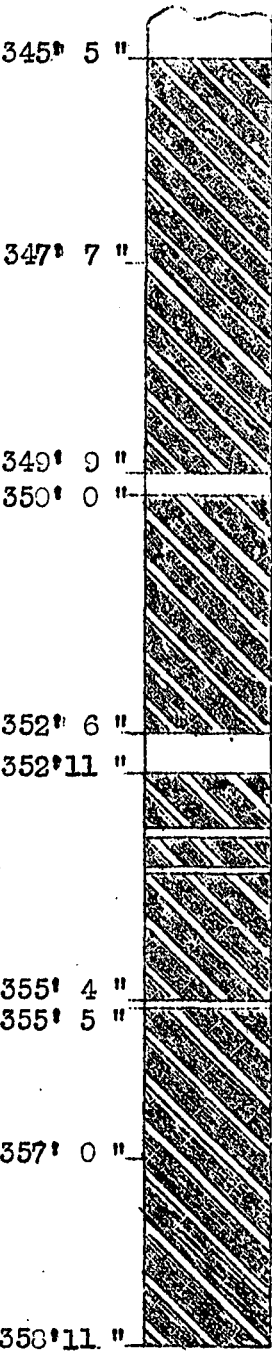
No.12

3.1 32.3 53.6 11.0 12,410

No.13

3.1 34.3 54.1 8.5 12,920

No.14



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek Hole No: BMR 1(S) Elevation: 413.1'
 Reference: BMR N14-121, January, 1954 Datum: Standard
 Begun: 12.1.53 Finished: 30.1.53 Depth: 606' 8"

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThU
4.9	29.6	52.2	13.3	11,830

No.1

4.2 35.5 43.9 11.4 12,420

No.2

4.7 34.7 52.8 7.3 12,860

No.3

4.1 34.5 54.2 7.2 13,070

No.4

3.8 33.4 53.5 9.3 12,700

No.5

4.4 32.7 51.4 11.5 12,200

No.6

288' 0"

289' 7"

289' 9 $\frac{1}{2}$ "291' 3 $\frac{1}{2}$ "

291' 6"

292' 4"

292' 9"

293' 1 $\frac{1}{2}$ "

293' 5"

386' 1"

389' 5 $\frac{1}{2}$ "

390' 1"

392' 7"

395' 0"

HM	V	FC	Ash	BThU
4.6	31.6	51.0	12.8	11,960

No.7

3.7 34.8 57.5 4.0 13,670

No.8

4.0 34.0 53.3 3.7 13,610

No.9

4.6 34.6 52.2 3.6 12,670

No.10

396' 7"

399' 3"

445' 11 $\frac{1}{2}$ "

446' 3"

448' 6"

538' 3"

540' 7"

542' 11"

545' 3"

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek.

Hole No: BMR 2(S)

Elevation: 469.8' ASL

Reference: BMR NL4-121, January, 1954

Datum: Standard

Begun: 11.12.52

Finished: 31.1.53

Depth: 641' 2"

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThU
5.3	31.0	52.8	10.9	12,170

No.1

4.6 37.0 53.8 4.6 13,250

No.2

4.3 34.7 52.2 8.3 12,800

No.3

4.1 34.4 51.5 10.0 12,710

No.4

4.5 36.1 49.3 10.1 12,570

No.5

HM	V	FC	Ash	BThU
9.1	6.2	70.7	14.0	10,480

No.6

236' 4 "

236' 10 "

238' 4 "

238' 6 "

241' 3 "

336' 0 "

338' 2 "

338' 3 "

339' 7 "

339' 10 "

341' 2 "

341' 4 "

341' 8 "

344' 10 "

346' 9 "

348' 6 "

407' 0 "

407' 1 1/2 "

407' 5 "

409' 6 "

597' 4 "

598' 9 "

599' 1 1/2 "

600' 7 1/2 "

600' 10 "

601' 0 1/2 "

601' 3 1/2 "

602' 0 "

604' 2 1/2 "

605' 9 1/2 "

605' 11 "

606' 4 "

COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek. Hole No: BMR 3(S).

Elevation: 430.6' ASL

Reference: BMR N14-121, January, 1954

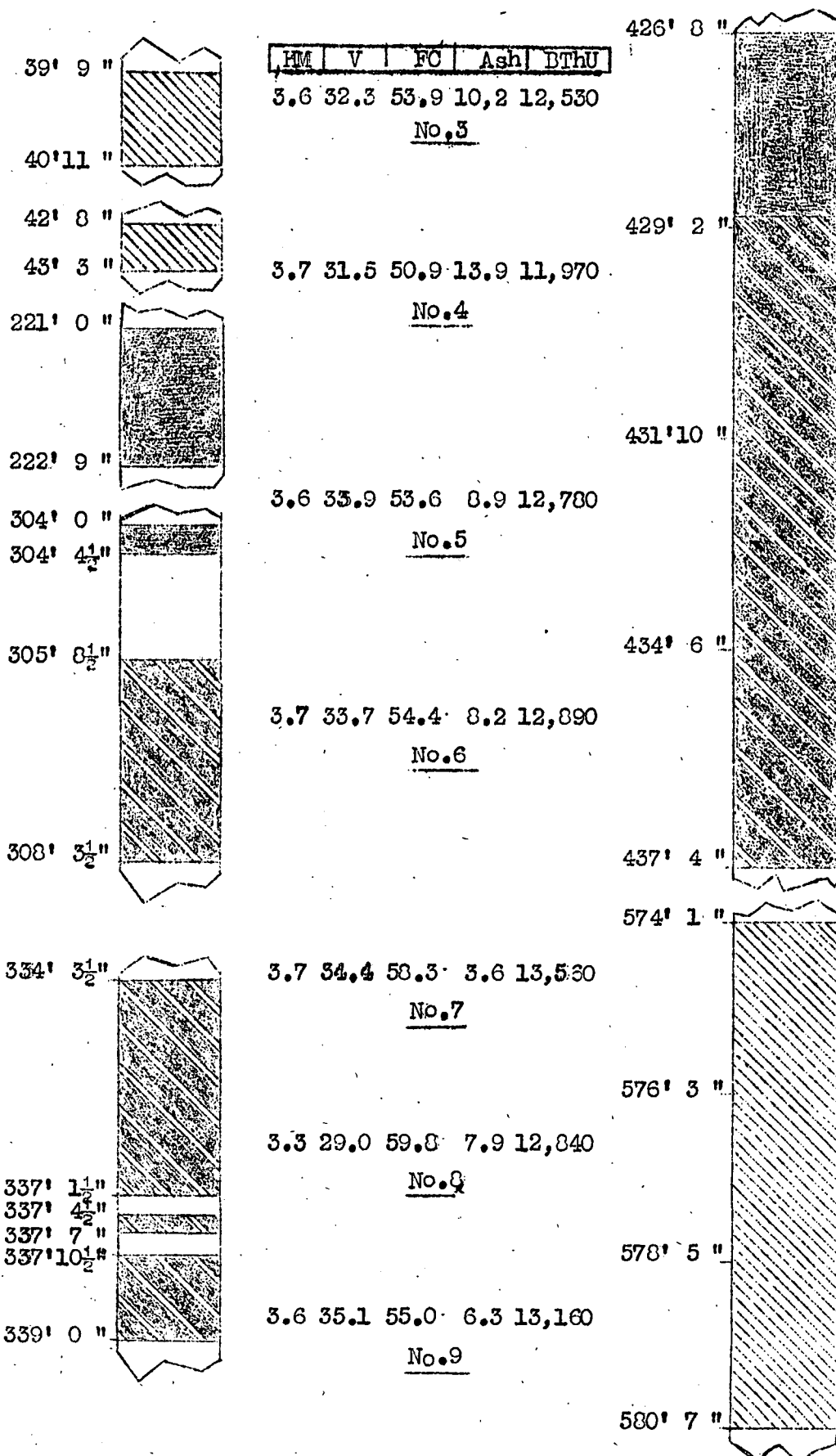
Datum: Standard

Begun: 12.2.53

Finished: 13.3.53

Depth: 601'

COAL DETAIL (1"-2')



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek.

Hole No.: BMR 4(S)

Elevation: 578.5' ASL

Reference: BMR N14-121, January, 1954.

Datum: Standard

Begun: 14.2.53

Finished: 21.3.53

Depth: 621' 0 "

COAL DETAIL (1"-2')

441' 5 "

446' 9 "

529' 0 "

533' 0 "

535' 0 "

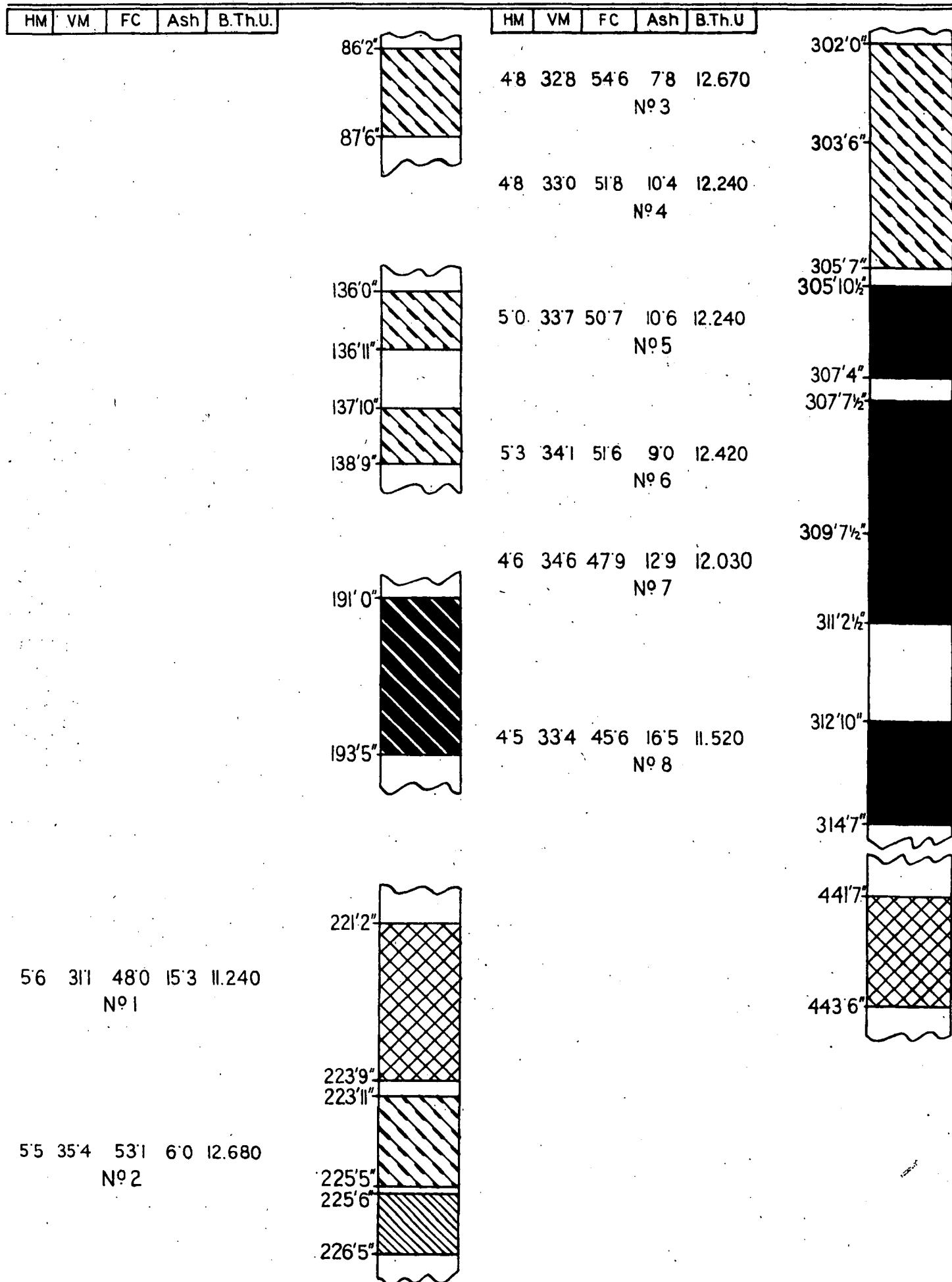
535' 6 "



COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek Hole N^o: BMR 5(S) Elevation: 537' 6"
Reference: BMR N14-121 Datum: Standard
Begun: 19.2.53 Finished: 10.3.53 Depth: 600' 1"

COAL DETAIL (1" = 2')



COAL DETAIL (1"-2")

HM V FC Ash DTMU

3.4 11.4 60.9 24.3 9,460

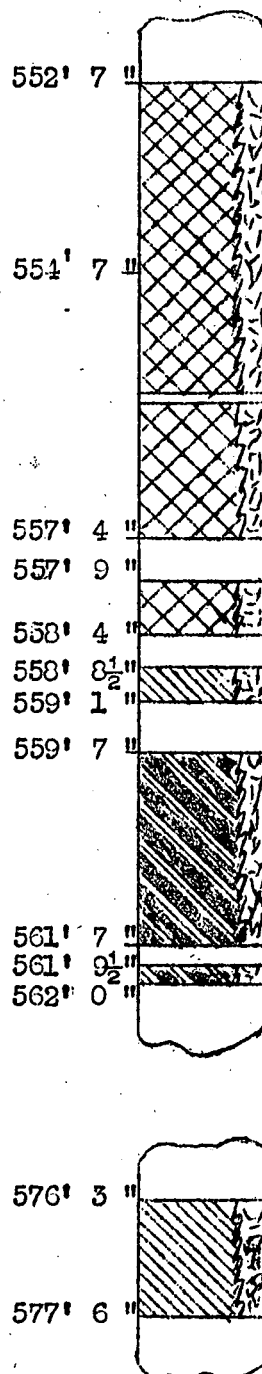
No.9

2.7 9.8 61.8 25.7 9,560

No.10.

3.8 16.3 72.2 7.7 12,130

No.11



COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek. Hole No: BMR 7 (S) Elevation: 495.5'
 Reference: BMR NL4-121 January, 1954 Datum: Standard
 Begun: 5.3.53 Finished: 27.3.53 Depth: 537' 3"

COAL DETAIL (1"-2")

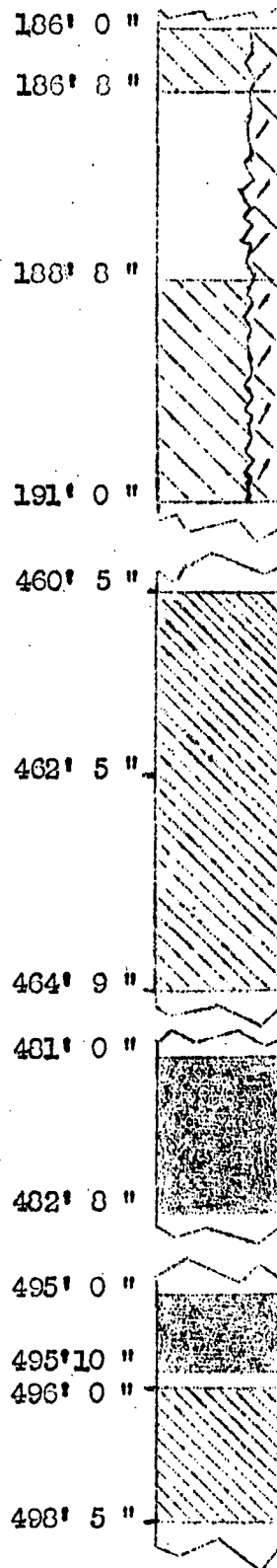
HM	V	FC	Ash	D _{thU}
4.1	32.5	48.4	15.0	11,670

No.1

4.2 35.8 54.9 5.1 13,450

No.2

4.4 32.9 52.7 10.0 12,530

No.3

COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek. Hole No: BMR 8 (S)

Elevation: 701.2'

Reference: BMR N14-121, January, 1954

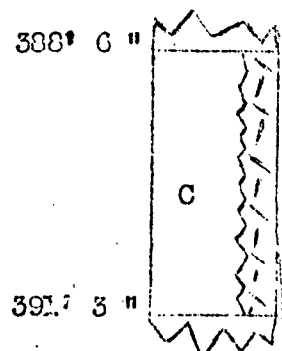
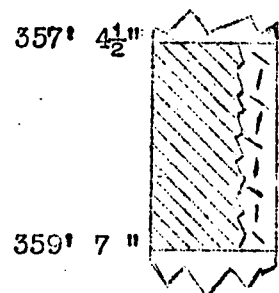
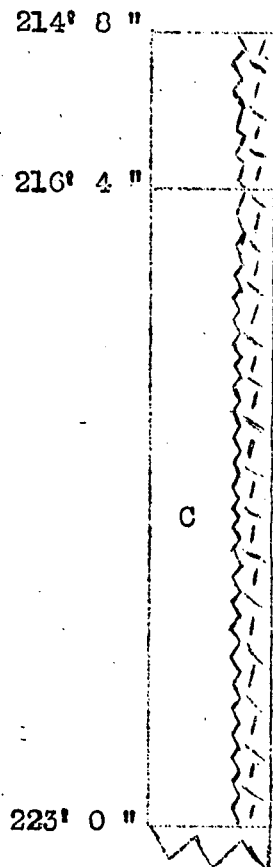
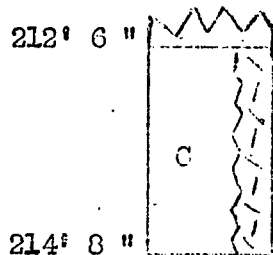
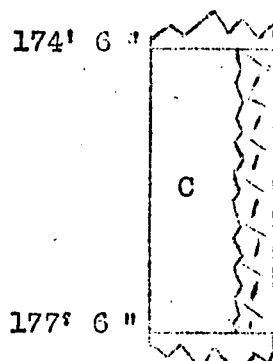
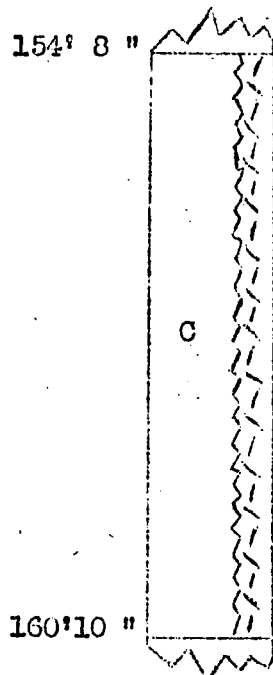
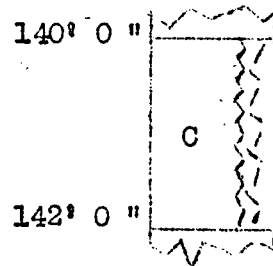
Datum: Standard

Begun: 24.3.53

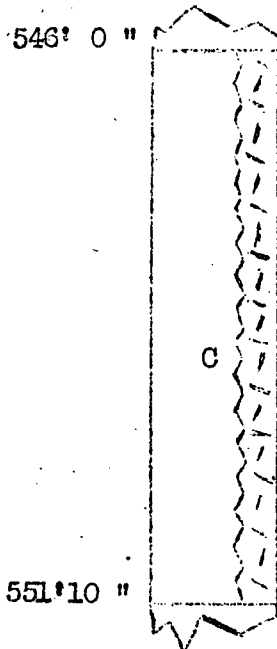
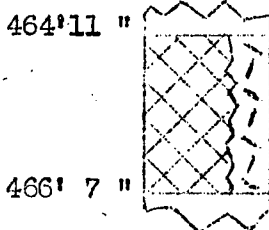
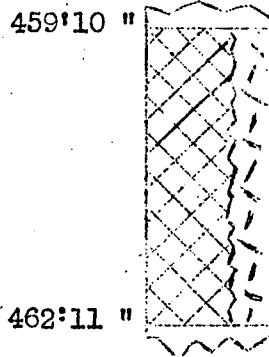
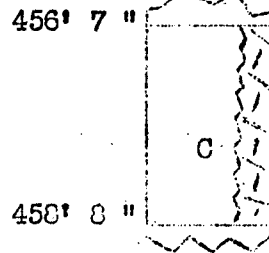
Finished: 27.4.53

Depth: 625'

COAL DETAIL (1"-2')



COAL DETAIL (1"-2")



HM	V	FC	Ash	BTU
2.9	36.8	50.7	9.6	13,060

No.1

3.2 36.7 50.5 9.6 13,030

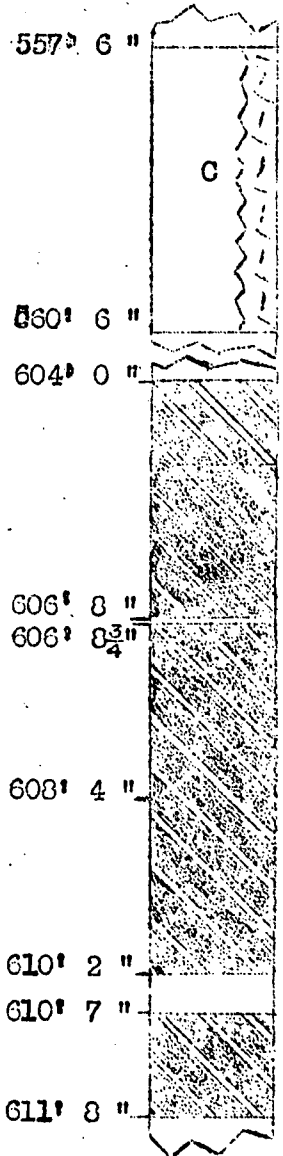
No.2

3.5 36.4 53.0 7.1 13,370

No.3

3.4 35.1 55.6 5.9 13,580

No.4



Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek Hole No: 9(S)

Elevation: 700.0' ASL

Reference: DMR Map N14-121, Jan. '54.

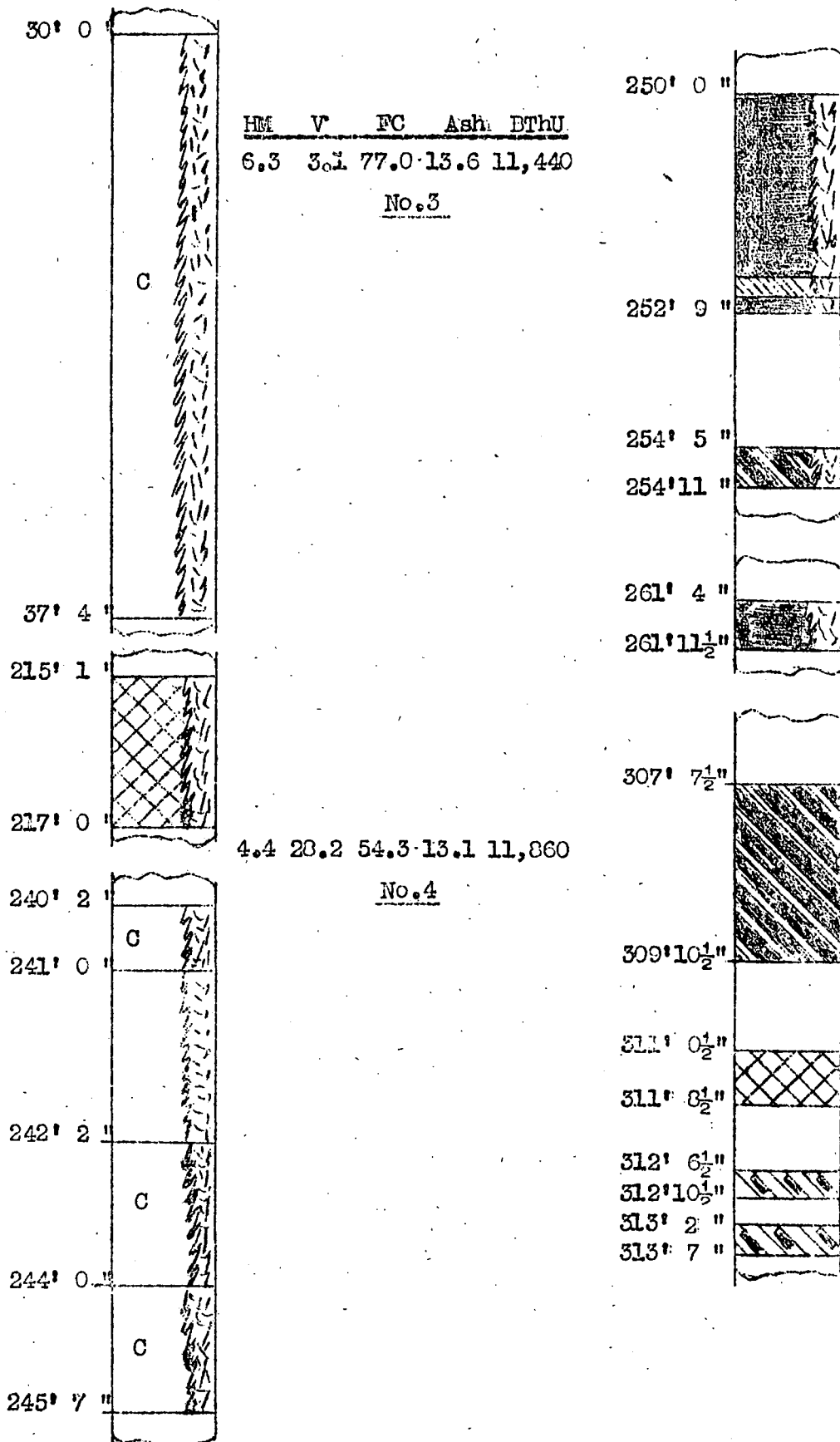
Datum: Standard

Begun: 26.3.53

Finished: 25.4.53

Depth: 599' 6 "

COAL DETAIL (1"-2')



COAL DETAIL (1"-2')

HM	V	FC	Ash	DThU
4.4	26.3	54.6	14.7	11,660

No.5

318' 5 $\frac{1}{2}$ "
 318' 11"
 319' 2 $\frac{1}{2}$ "

320' 11 $\frac{1}{2}$ "

322' 8 $\frac{1}{2}$ "
 322' 11 $\frac{1}{2}$ "

323' 9 $\frac{1}{2}$ "324' 6 $\frac{1}{2}$ "324' 10 $\frac{1}{2}$ "325' 8 $\frac{1}{2}$ "

325' 10"

543' 2"

544' 2"

544' 6"

545' 0"

545' 2"

545' 11"

556' 3 $\frac{1}{2}$ "

557' 1"

557' 2 $\frac{1}{2}$ "

3.3 30.7 50.1 15.9 11,890

No.6

558' 10"

4.4 30.5 50.7 14.4 11,950

No.7560' 3 $\frac{1}{2}$ "565' 10 $\frac{1}{4}$ "

566' 4"

566' 9 $\frac{1}{2}$ "

4.4 27.4 51.3 16.9 11,600

No.8

568' 0"

HM	V	FC	Ash	DThU
----	---	----	-----	------

4.7 27.2 56.9 11.2 12,380

No.9

4.6 32.7 55.3 7.4 13,080

No.10

4.4 29.7 56.6 9.3 12,790

No.11

4.8 30.5 54.5 10.2 12,600

No.12

4.1 27.2 53.2 15.5 11,920

No.13

4.1 25.4 48.2 22.3 10,910

No.14

4.7 29.8 52.4 13.1 12,180

No.15

568' 0"

568' 9"

570' 6"

572' 6 $\frac{1}{2}$ "573' 0 $\frac{1}{2}$ "

575' 10"

578' 1 $\frac{1}{2}$ "578' 3 $\frac{1}{2}$ "

579' 2"

579' 4"

579' 11"

580' 0"

581' 4 $\frac{1}{2}$ "

581' 6"

582' 2"

582' 4"

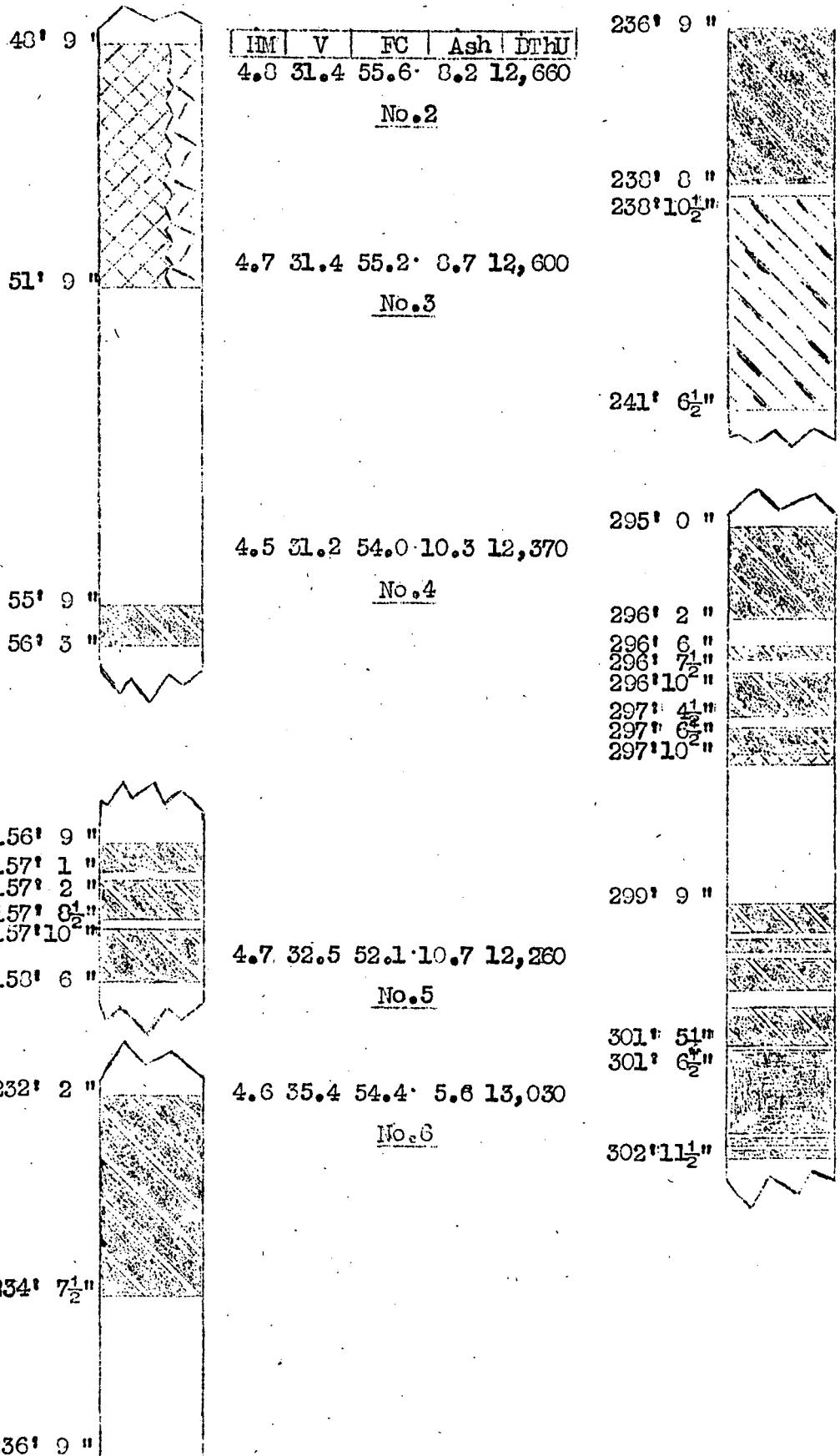
584' 2 $\frac{1}{2}$ "

COMMONWEALTH OF AUSTRALIA

Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek. Hole No: DMR 10(S) Elevation: 463.7'
 Reference: DMR M14-121, January, 1954 Datum: Standard
 Begun: 18.5.53 Finished: 17.9.53 Depth: 1599' 3"

COAL DETAIL (1"-2')



COAL DETAIL (1"-2")

HM	V	FC	Ash	DTHU
3.7	34.8	51.5	10.0	12,620

No.7

3.6 37.7 54.2 4.5 13,400

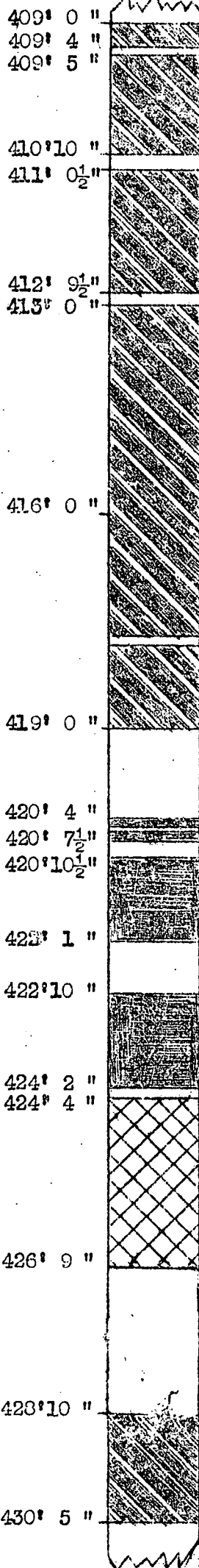
No.8

3.4 36.6 53.2 6.8 13,230

No.9

3.5 34.6 52.1 9.8 12,720

No.10.



558' 11 "

561' 4 "

573' 6 "

575' 10 "

576' 1 "

577' 3 "

659' 9 "

661' 3 "

662' 8 "

664' 6 "

3.4 34.8 50.7 11.1 12,560

No.11.

COAL DETAIL (1"-2')

HM	V	FC	Ash	BThu
3.1	30.3	54.0	12.6	12,370

No.12

3.0 30.8 53.2 13.0 12,320

No.13.

2.7 31.9, 53.3 12.1 12,610

No.14

2.6 30.7 51.7 15.0 12,260

No.15

2.7 30.1 51.1 16.1 12,000

No.16

2.6 30.6 52.0 14.3 12,290

No.17

2.7 30.4 57.6 9.3 13,010

No.18

720' 4 "

720' 9 "

Recovery.
No

722' 7 "

722' 10 "

724' 3 "

725' 3 "

725' 8 "

725' 10 "

726' 5 "

726' 9 "

728' 3 "

729' 9 "

822' 3 "

823' 6 "

853' 11 "

854' 3 "

855' 7 "

857' 4 "

921' 10 "

922' 6 "

923' 7 "

925' 10 "

927' 3 "

927' 6 "

928' 1 "

HM	V	FC	Ash	BThu
2.7	28.4	52.3	16.6	12,100

No.19

2.7 27.9 52.7 16.7 12,000

No.20

3.2 34.2 55.3 7.3 13,540

No.21

2.9 35.3 53.1 3.7 14,120

No.22.

2.5 29.1 60.2 8.2 13,140

No.23

2.5 35.0 57.0 5.5 13,660

No.24

2.5 33.6 57.5 6.3 13,510

No.25

945' 2 "

945' 9 "

946' 3 "

947' 5 "

947' 6 "

948' 9 "

1001' 1 "

1001' 4 "

1001' 10 "

1003' 7 "

1005' 6 1/2 "

1006' 0 "

1073' 5 "

1075' 4 "

1075' 5 "

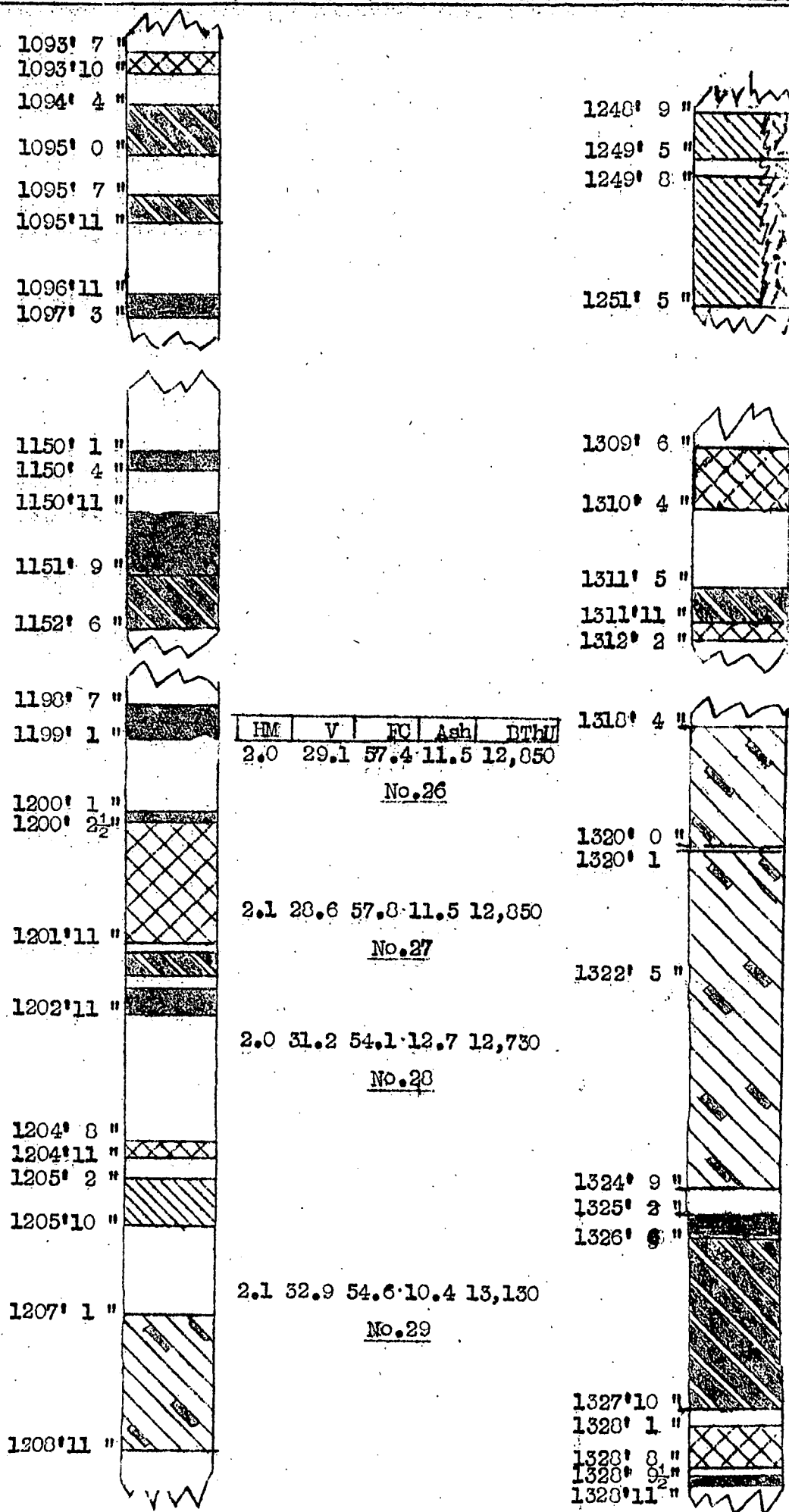
1076' 3 "

1078' 5 "

1078' 10 "

1081' 6 "

COAL DETAIL (1"-2')



COAL DETAIL (1"-2')

HM V FC Ash DThU
2.5 26.5 57.3 13.7 12,550

No.30.

2.4 30.3 50.7 8.6 13,370

No.31

2.2 31.9 46.5 19.4 11,520

No.32.

2.4 29.2 52.6 15.8 12,100

No.33.

2.4 28.4 54.2 15.0 12,230

No.34.

1.9 30.6 47.8 19.7 11,760

No.35.

HM V FC Ash DThU
2.2 29.7 49.6 10.5 11,820

No.36.

1.9 26.4 47.6 24.1 10,970

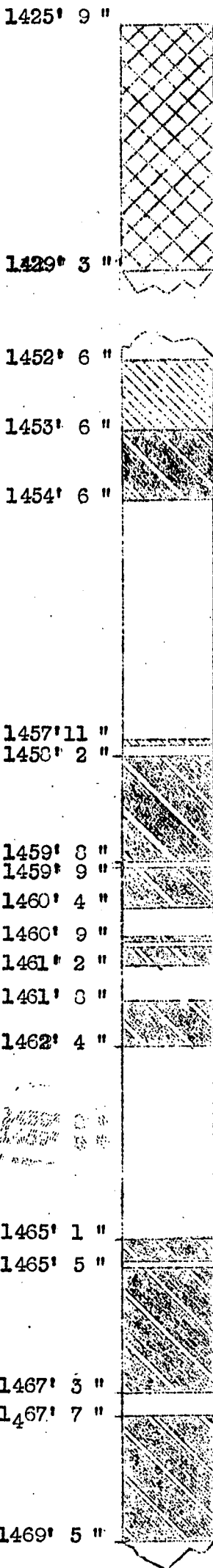
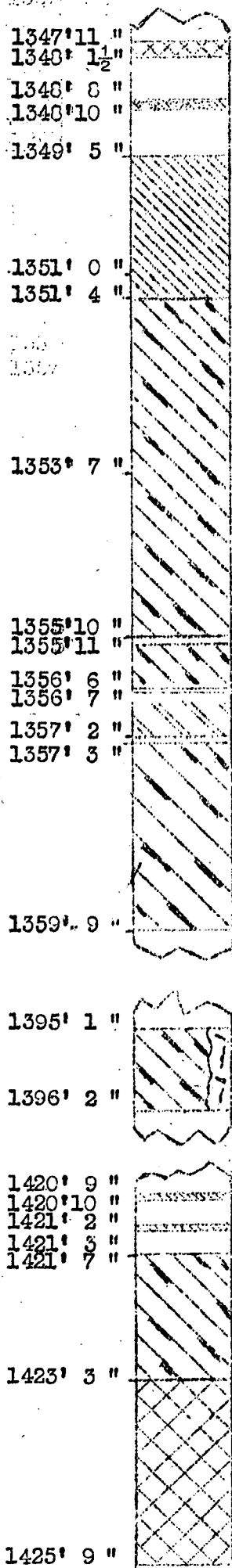
No.37.

2.0 32.8 53.9 11.3 13,010

No.38.

2.1 30.3 48.3 19.3 11,760

No.39.



COAL DETAIL (1"-2')

HM	V	FC	Ash	DThu
2.1	33.4	53.1	11.4	12,970

No.40.

1479' 10 "

1480' 3 "

1482' 5 "

1483' 8 "

1483' 11 "

1488' 7 "

1490' 0 "

1490' 6 "

1491' 0 "

1520' 0 "

1520' 3 "

1520' 5 "

1522' 4 "

1543' 9 "

1545' 1 "

1545' 5 "

1546' 0 "

1572' 2 "

1573' 4 "

Area: Saddler's Creek	Hole No: BMR II(S)	Elevation: 521'2"
Reference: BMR N14-121		Datum: Standard
Begun: 22.7.53	Finished: 26.8.53	Depth: 611'0"

HM	VM	FC	Ash	B.Th.U.
33	29.1	58.0	9.6	12.650
No 1				
3.2	28.1	57.7	11.1	12.460
No 2				
3.9	30.0	49.6	16.5	11.430
No 3				
4.0	33.5	51.9	10.6	12.320
No 4				
3.3	37.5	53.6	5.6	13.280
No 5				
3.2	35.2	51.3	10.3	12.550
No 6				
3.0	32.4	53.7	10.9	12.460
No 7				
3.4	35.4	54.4	6.8	13.030
No 8				
3.2	34.6	52.1	10.1	12.620

N 14-149

COMMONWEALTH OF AUSTRALIA
Bureau of Mineral Resources, Geology and Geophysics

Area: Saddler's Creek

Hole No: BMR 12(S)

Elevation: 640' 0"

Reference: BMR N14-121

Datum: Standard

Began: 15.9.53

Finished: 16.10.53

Depth: 600' 0"

COAL DETAIL (1" = 2')

HM	VM	FC	Ash	B.Th.U.
----	----	----	-----	---------

HM	VM	FC	Ash	B.Th.U.
----	----	----	-----	---------

					106' 8"
					106' 11"
					107' 0"
					107' 4"
					107' 7"
4' 6	33' 1	48' 9	13' 4	11.830	
					Nº 1
					109' 7"
4' 4	32' 2	45' 3	18' 1	11.220	
					Nº 2
					111' 6"
					114' 3"
4' 1	31' 3	46' 7	17' 9	11.390	
					Nº 3
					116' 3"
4' 6	33' 0	53' 0	9' 4	12.650	
					117' 11"
					118' 1"
					118' 4"
					119' 1"
					119' 8"
4' 8	33' 6	53' 8	7' 8	12.890	
					119' 10"
					Nº 5
					120' 9"
					121' 1"
					121' 6"

4' 0	30' 0	62' 0	4' 0	13.750
				Nº 6

2' 8	22' 0	67' 9	7' 3	13.360
				Nº 7

2' 7	17' 1	71' 5	8' 7	13.210
				Nº 8

2' 8	12' 6	78' 3	6' 3	12.720
				Nº 9



COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES
CESSNOCK - MUSWELLBROOK REGION

PART 3 OF 3

RECORDS 1953. No. 133

013112

copy 3

REPORT
ON THE WESTERN FLANK
OF THE MUSWELLBROOK
ANTICLINE
(LOGS OF SCOUT BOREHOLES)

by

M. C. KONECKI

013112

COMMONWEALTH OF AUSTRALIA
DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES,
GEOLOGY AND GEOPHYSICS

OPEN CUT COAL INVESTIGATIONS IN NEW SOUTH WALES
CESSNOCK - MUSWELLBROOK REGION

RECORDS 1953. No. 133

REPORT
ON THE WESTERN FLANK
OF THE MUSWELLBROOK
ANTICLINE
(LOGS OF SCOUT BOREHOLES)

by

M. C. KONECKI

ANDERSON'S GAP SUBAREA

ANDERSON'S GAP SUBAREA

Intervals of analysed coal samples.

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals	
1S	510	1	112' 8 "	- 113' 11 "
	511	2	114' 0 "	- 115' 10 $\frac{1}{2}$ "
	512	2a	116' 0 "	- 118' 0 "
	513	3	118' 3 "	- 120' 10 "
	514	4	120' 10 "	- 123' 4 $\frac{1}{2}$ "
	515	5	123' 7 "	- 125' 11 "
	516	6	128' 3 "	- 130' 3 "
	517	7	130' 3 "	- 132' 3 $\frac{1}{2}$ "
	518	8	134' 0 "	- 136' 5 "
	519	9	136' 8 "	- 137' 11 "
	520	10	178' 11 "	- 180' 6 "
	521	11	182' 7 $\frac{1}{2}$ "	- 185' 5 "
4S	1734	1	40' 1 "	- 42' 7 "
	1735	2	42' 7 "	- 45' 5 "
	1736	3	415' 0 "	- 418' 1 "
	1737	4	418' 1 "	- 419' 4 "
	1738	5	439' 10 "	- 442' 0 "
	1739	6	442' 0 "	- 445' 4 "
5S	1732	1	32' 0 "	- 34' 0 "
	1733	2	34' 0 "	- 36' 0 "

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 1S Anderson's Gap:

DISTRICT	Cessnock-Muswellbrook	COUNTY	Brisbane	PARISH	Denman	PORTION	195"	LOCATION	354 yds. NW Corner Por. 84 175 yds. SW Corner Por. 94
----------	-----------------------	--------	----------	--------	--------	---------	------	----------	--

Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 671.9' Ref. Map N 14-121

Logged by N. Hoyling Cased 124'10" Datum Standard Ref. Report Records 1953/133

Sunk by Houben & Kent..... Type of Drill Mindrill A 2000..... Depth 523'4"..... Date Begun/Finished 3.12.52/2.1.53

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
7	5	0	7	COAL dull, broken	0	7										
27	6	0	1	Shale br.	0	1										
127	7 $\frac{1}{2}$	0	1 $\frac{1}{2}$	Shale bk.	0	1 $\frac{1}{2}$										
128	3	0	7 $\frac{1}{2}$	Shale l.gy.	0	7 $\frac{1}{2}$										
130	3	2	0	COAL, mostly dull, broken fragmentary	1	6	6/BMR					5.2	24.8	47.6	22.4	10,110
132	3 $\frac{1}{2}$	2	0 $\frac{1}{2}$	COAL as above	1	4	7/BMR					4.3	20.6	29.3	45.8	----
132	7	0	3 $\frac{1}{2}$	Shale bk.	0	3 $\frac{1}{2}$										
132	8	0	1	Shale gy.	0	1										
132	9	0	1	Shale bk.	0	1										
134	0	1	3	Shale l.gy., s.	1	3										
136	5	2	5	COAL, dull v.shy. w.few bright bds.	2	5	8/BMR	0 $\frac{1}{2}$				5.1	25.7	42.3	26.9	9,310
136	8	0	3	Shale, dk.gy.	0	3										
137	1	0	5	COAL, dull, shy.	0	5										
137	2	0	1	Shale gy.	0	1	9/BMR			1		4.8	22.5	36.2	36.5	----
137	11	0	9	COAL, generally dull, v.shy., w. sh.lam.	0	9										
140	11	3	0	Greywacke, l.gy., f.grd.	3	0										
145	7	4	8	Siltstone, l.gy.	4	8										
152	3	6	8	Shale, l.gy. ? tuff., w. carb.lam. & lenses, calc.in the last 6"	6	8										
153	7	1	4	Shale, bk. w.five bright coal bds.	1	4										
160	8	7	1	Shale l.gy., silty & sdy. in parts & w. dk. bds.	7	0										
161	4 $\frac{1}{2}$	0	8 $\frac{1}{2}$	Shale bk.	0	8 $\frac{1}{2}$										
161	7	0	2 $\frac{1}{2}$	Shale l.gy.	0	2 $\frac{1}{2}$										
162	10	1	3	Shale bk. w.some bright coal bds. & a wh. calc.lense	0	11										
177	2	14	4	Siltstone greyish-wh.	14	4										
177	10 $\frac{1}{2}$	0	8 $\frac{1}{2}$	COAL, dull, shy., w.calcitic zones	0	8 $\frac{1}{2}$										
178	0	0	1 $\frac{1}{2}$	Siltstone, l.gy.	0	1 $\frac{1}{2}$										
178	4 $\frac{1}{2}$	0	4 $\frac{1}{2}$	Shale, dk.gy.	0	4 $\frac{1}{2}$										
178	11	0	6 $\frac{1}{2}$	Shale, l.gy.	0	6 $\frac{1}{2}$										
180	6	1	7	COAL dull	1	7	10/BMR					4.5	21.8	39.8	33.9	8,360

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
182	2	1	0	Shale, dk.to v.l.gy.	1	0	11/DMR					4.8	23.5	39.6	32.1	8,630
182	7 $\frac{1}{2}$	0	5 $\frac{1}{2}$	Siltstone greyish-wh.	0	5 $\frac{1}{2}$										
185	5	2	9 $\frac{1}{2}$	COAL, dull, broken	2	9 $\frac{1}{2}$										
193	5	8	0	Shale, l.gy.	7	11										
193	11	0	6	COAL, dull, shy.	0	4										
205	0	11	1	Shale l.gy. waxy looking, ? tuff.	10	1										
208	10	3	10	Shale, dk.gy.	3	10										
267	4	58	6	Greywacke, greyish-wh., f.to m.grain	57	2										
267	7	0	3	COAL, dull	0	3										
268	0	0	5	Shale, bk., w.l.gy.sdy.bds.	0	5										
268	0	0	0	COAL dull pyr. w.l.gy.slst.lense	0	7 $\frac{1}{2}$										
268	9	0	1	Shale, l.gy.	0	1										
268	11	0	2	COAL, dull, shy.	0	2										
270	5	1	6	Claystone, greyish-wh.	1	0										
270	11	0	6	COAL, dull	0	4										
271	3	0	4	Shale bk.	0	4										
272	0 $\frac{1}{2}$	0	9 $\frac{1}{2}$	COAL, dull, shy.	0	9 $\frac{1}{2}$										
272	1 $\frac{1}{2}$	0	1	Shale, bk.	0	1										
272	2 $\frac{1}{2}$	0	1	COAL, dull	0	1										
272	3 $\frac{1}{2}$	0	1	Siltstone, l.gy.	0	1										
273	0	0	8 $\frac{1}{2}$	COAL, dull	0	8 $\frac{1}{2}$										
273	2	0	2	Shale, greyish-bk., lenticular	0	2										
273	0	0	6	COAL, dull	0	6										
273	10	0	2	Shale, l.gy., lenticular	0	2										
274	6	0	8	COAL, dull, shy. at bot.	0	8										
275	1	0	7	Shale, dk.gy.	0	7										
277	3	2	2	Claystone, greyish-wh. ? tuff.	2	2										
281	8	4	5	Shale, dk.gy., w.R.coal bds.	4	5										
282	5	0	9	Siltstone, l.gy.	0	9										
286	7	4	2	Claystone, greyish-wh.	0	4										
296	0	9	5	Siltstone, gy., w.sh.bds.	9	5										
308	7	12	7	Greywacke, l.gy. m.-c.gr.w.pbl.bds.	12	3										

[illegible]

[illegible]

[illegible]

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 2S Anderson's Gap

DISTRICT	Cessnock-Muswellbrook	COUNTY	Brisbane	PARISH	Denman	PORTION	194	LOCATION	220 yds. SE Corner Por. 6 REM 378 yds. NW Corner Por. 191
----------	-----------------------	--------	----------	--------	--------	---------	-----	----------	--

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 365.31 Ref. Map N 14-121

Logged by K. Malcolm Cased 65' Datum Standard Ref. Report Records 1953/133

Sunk by Houben & Kent Type of Drill Mindrill A 2000 Depth 65' Date Begun/Finished 6.1.53/9.1.53

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
11	4	11	4	Alluvial soil, bk.loam to y.clay	11	4										
65	0	53	8	River gravels; unconsol, cbl.and pbls. of porphyrey, porphyrite, andesite, chert, basalt, qite, ind.sh.etc. cbls. from $\frac{1}{2}$ to 3" dia. rounded.	2	0										
				Hole abandoned.					typed 13.1.54.							

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 3S Anderson's Gap

Cessnock-
DISTRICT Muswellbrook COUNTY Brisbane PARISH Denman PORTION 110 LOCATION 174 yds. NE Corner Por. 110
326 yds. SE Corner Por. 110
Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 385.6' Ref. Map N 14-121
Logged by N.V. Hoyling Cased No Datum Standard Ref. Report Records 1953/133
Sunk by BMR Type of Drill Failing 750/262 Depth 48' 2" Date Begun/Finished 4.3.53/5.3.53

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
10	6	10	6	Sand partly compact, rest gy., c. to m. grd.	0	0										
44	2	34	8	Clay sdy., gy. to br.-gy.	27	1										
48	2	3	0	Gravel, c., pbl. to cbl	0	0										
Hole abandoned.																
												typed 13.1.54.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 4S Anderson's Gap

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Altharpe	PORTION	18	LOCATION	468 yds. NE End 374 yds. SW Corner	R 15039 Per. 86
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	401.0'	Ref. Map	N 14-121			
Logged by	P. G. Duff	Cased	Not	Datum	Standard	Ref. Report	Records 1953/133			
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750/290	Depth	598' 6"	Date Begun/Finished	4.5.53/7.6.53			

[illegible]

[illegible]

Estimated Depth Ft. Ins.		Estimated Thickness Ft. Ins.		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.		Coal Sample No.	Miner. Bands Included Ft. Ins.		Miner. Bands Excluded Ft. Ins.		PROXIMATE ANALYSIS				
												H.M.	V.	F.C.	ASH	B. TH. U/LB
293	3	20	0	Shale gy. & dk. gy. w. v. t. silty bds.; greasy sh. slow drilling, one t. well cemented cgl. bd.	19	6										
299	3	6	0	Shale bk. w. t. clay lam. at top	6	0										
300	3	1	0	Shale gy. & dk. gy.	1	0										
303	9	3	6	Siltstone gy.	3	6										
324	9	21	0	Siltstone l. gy. grading into f. g. gw. large vertical fract.	21	0										
345	0	20	3	Siltstone gy. numerous l. gy. gw. bds.; t. carb. lam. common	20	3										
394	2	49	2	Greywacke l. gy. f. grd. & slst. gy. in f. intb. state. R. sideritic bds.	49	1										
407	7	13	5	Greywacke l. gy. v. f. grd. & slst. numerous carb. lam. vert. fract.	13	5										
415	0	7	5	Siltstone l. gy.	7	5										
416	2	1	2	COAL bright bdd. some broken	1	2										
416	4	0	2	Shale bk., carb.	0	2	3/DMR			2		4.1	36.7	53.8	5.4	13,430
418	1	1	9	COAL as before	1	9										
419	4	1	3	COAL dull & bright broken	1	3	4/DMR					4.2	35.8	50.0	10.0	12,690
420	8	1	1	Claystone tuff. silty in part l. & dk. br.	1	1										
423	9	3	1	Shale bk. v. coaly in part ind.	3	1										
426	11	3	2	Shale bk. hd. d. silty bds.	3	2										
427	7	0	8	Marl? wh. s. d.	0	8										
431	2	3	7	Claystone wh. silty calc. - tuff.	3	7										
433	0	1	10	Shale bk. ind.	1	10										
436	3	3	3	Shale bk. v. coaly in part small wh. clay bd. at bot.	3	3										
438	5	2	2	Shale gy. & dk. gy. hd. d.	2	2										
439	10	1	5	Claystone wh. br. s. silty & tuff.	1	5										
442	0	2	2	COAL v. shy. perhaps too heavy part appears burnt one t. wh. tuff. bd.	2	2	5/DMR			3		4.4	31.4	44.3	19.9	10,990

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS						
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.
445	4	3	4	COAL as above	3	4	6/BMR									
465	0	19	8	Siltstone l.gy.& gw.v.f.grd. intb.	19	8					4.7	33.2	46.9	15.2	11,610	
477	0	12	0	Shale gy.mainly, some slst.,sh. gy. & dk.gy. carb. detritus common	10	0										
485	6	8	6	Shale gy.& slst.l.gy.v. finely intb., one small coal bd.	1	5										
486	11	1	5	Claystone wh.tuff.silty	1	5										
496	8	9	9	Siltstone gy.,hd.,d. partly sideritic	9	9										
497	1	0	5	Claystone wh.tuff.	0	5										
498	4	1	3	Siltstone gy. dioperic some gw.	1	3										
498	6	0	2	Shale bk.carb.	0	2										
524	10	26	4	Greywacke l.gy.m.grd. R.carb.lam.	26	4										
522	10	3	0	Pebble s.cgl.in wh.bentonite matrix	3	0										
535	5	7	7	Greywacke l.gy.v.f.grd. fractd.,calcite	7	7										
545	8	10	3	Siltstone gy.& dk.gy.w.one s.clst.bd.	7	4										
548	10	3	2	Claystone sdy.s.plastic tuff.	3	0										
566	2	17	4	Siltstone gy.& dk.gy. some gw.	17	4										
576	8	10	6	Siltstone as above broken	6	8										
578	8	2	0	Greywacke l.gy.v.f.grd. one bk.carb.bd.	2	0										
584	8	6	0	Shale bk.carb.	5	0										
598	6	13	10	Shale gy.& dk.gy.carb.im part	13	10										
				Hole completed.												
					typed 17.1.54.											

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 5S Anderson's Gap

Cessnock-							
DISTRICT	Muswellbrook	COUNTY	Brisbane	PARISH	Denman	PORTION	95
						LOCATION	180yds. NW Corner Por. 110 320yds. SW Corner Por. 110
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	463.9'	Ref. Map	N 14-121
Logged by	P. G. Duff	Cased	34'	Datum	Standard	Ref. Report	Record 1953/133
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750/291	Depth	600'	Date Begun/Finished	5.5.53/4.6.53

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
410	0	4	3	Greywacke l.gy.c.grd.	4	0										
420	0	10	0	Greywacke gn.-gy.,v.c. grd.many pbl.bds.	10	0										
423	8	3	8	Greywacke as above	3	8										
430	0	6	4	Greywacke gy.f.grd.numerous sh.lenses & bk.carb.bds.	6	4										
438	5	8	5	Greywacke gy.v.f.grd.	8	4										
440	0	1	7	Siltstone gy.	1	7										
444	2	4	2	Greywacke l.gy.f.grd.	4	2										
450	0	5	10	Siltstone gy.fractd.sideritic in part	5	10										
460	0	10	0	Siltstone gy.w.R.sh.bds.	10	0										
472	9	12	9	Siltstone gy.& gw.v.f.grd.w.R.sh.bds. vert.fractures	11	9										
475	0	2	3	Shale gy.w.R.gw.bds.	1	9										
495	0	20	0	Shale dk.gy.w.intb.l.gy.slst.& gw. vert. fractures; cross bedded	20	0										
532	0	37	0	Shale dk.gy. some l.gy.slst.bds., sh.is hd.& d.& mostly fractd. some fractures calcite filled.	37	0										
581	0	49	0	Shale gy.& dk.gy. R.sideritic bds.; vertical fractures common; for correlation w.4(S); t.wh.lst.bds.at (5798)	48	0										
600	0	19	0	Shale as above w.t.wh.gw.bds.& some pbl.bds.	19	0										
				Hole completed.												
typed 13.1.54.																

BLAKEFIELD SUB-AREA.

B L A K E F I E L D S U B A R E A

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals				
1S	487	1	221'	1 "	-	223'	3 "
	488	2	223'	3 "	-	225'	7 "
	489	3	310'	7 "	-	312'	7½ "
	490	4	312'	7½ "	-	314'	8 "
	491	5	315'	2½ "	-	317'	2½ "
	492	6	365'	0 "	-	367'	2 "
	493	7	367'	2 "	-	369'	4 "
	494	8	370'	11 "	-	372'	11 "
2S	1016	1	102'	3 "	-	103'	3 "
	1017	2	103'	4½ "	-	106'	2½ "
	1018	3	106'	5½ "	-	108'	8½ "
	1019	4	150'	6 "	-	152'	6 "
	1020	5	152'	6 "	-	154'	7 "
	1021	6	385'	4 "	-	387'	4 "
	1022	7	387'	7 "	-	389'	7 "
	1023	8	389'	7 "	-	391'	10½ "
	1024	9	436'	4 "	-	439'	7 "
3S	535	1	67'	11 "	-	69'	1½ "
	536	2	69'	2½ "	-	70'	5½ "
	537	3	70'	7 "	-	71'	11 "
	538	4	72'	1 "	-	73'	1 "
	539	5	146'	2 "	-	148'	8 "
	540	6	148'	10 "	-	151'	6 "
	541	7	152'	8 "	-	154'	3 "
4S	855	1	157'	10 "	-	159'	1 "
	856	2	159'	2 "	-	161'	2 "
	857	3	161'	5 "	-	162'	11 "
	858	4	233'	6 "	-	234'	8 "
	859	5	234'	11 "	-	237'	8 "
	860	6	237'	11½ "	-	239'	6 "
	861	7	239'	7 "	-	241'	3 "
	862	8	293'	4½ "	-	295'	4½ "
	863	9	295'	6½ "	-	297'	0 "
	864	10	297'	2 "	-	299'	8 "
	865	11	555'	0 "	-	557'	0 "
	866	12	557'	0 "	-	559'	11 "
	921	13	594'	7 "	-	597'	8 "
5S	912	1	251'	11 "	-	254'	0 "
	913	2	254'	0 "	-	256'	6 "
	914	3	256'	9 "	-	258'	0 "
	915	4	363'	10½ "	-	366'	7½ "
	916	5	366'	9 "	-	368'	8½ "
	917	6	370'	0½ "	-	371'	6½ "
	918	7	504'	5 "	-	507'	5 "
	919	8	507'	5 "	-	510'	5 "
	920	9	510'	5 "	-	513'	5 "

BLAKEFIELD SUBAREA

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals	
6S	902	1	162' 5 "	164' 3 "
	903	2	164' 3 "	167' 0 "
	904	3	167' 2 "	168' 4 "
	905	4	231' 9 "	234' 1 "
	906	5	313' 5 "	314' 11 "
	907	6	315' 2 "	317' 7 "
7S	1384	1	87' 1 "	89' 10 "
	1385	2	89' 10 "	92' 0 "
	1386	3	92' 0 "	94' 4 "
	1387	4	94' 7 "	97' 7 "
	1388	5	106' 4 "	109' 4 "
	1389	6	109' 4 "	112' 4 "
	1390	7	129' 8 $\frac{1}{2}$ "	131' 4 $\frac{1}{2}$ "
	1391	8	131' 5 $\frac{1}{2}$ "	134' 2 "
	1392	9	248' 2 "	250' 11 "
	1393	10	346' 2 $\frac{1}{2}$ "	348' 10 "
	1394	11	348' 10 "	351' 2 "
	1395	12	351' 2 "	353' 5 "
	1396	13	353' 5 "	355' 8 "
	1397	14	644' 0 "	646' 0 "
	1398	15	646' 0 "	647' 5 "
	1399	16	647' 8 "	649' 5 "
	1400	17	649' 7 "	652' 8 "
	1401	18	707' 8 "	709' 4 "
	1402	19	710' 4 "	712' 10 "
8S	2193	1	189' 2 "	192' 0 "
	2194	2	192' 0 "	194' 3 "
	2195	3	195' 9 "	197' 3 "
	2196	4	206' 4 "	209' 3 "
	2197	5	209' 3 "	210' 7 "
	2198	6	212' 11 "	214' 9 "
	2199	7	269' 6 "	272' 0 "
	2200	8	272' 0 "	274' 0 "
	2201	9	390' 2 "	392' 0 "
	2202	10	392' 0 "	394' 9 "
	2203	11	486' 0 "	488' 9 "
	2204	12	488' 9 "	490' 9 "
	2205	13	490' 9 "	492' 9 "
	2206	14	492' 9 "	494' 9 "
	2207	15	494' 9 "	496' 11 "
10S	3026	1	140' 6 "	143' 2 "
	3027	2	266' 6 "	269' 0 "
	3028	3	269' 0 "	271' 6 "
	3029	4	315' 0 "	318' 0 "
	3030	5	318' 0 "	320' 11 "
	3031	6	393' 11 "	395' 7 "
	3032	7	395' 7 "	398' 2 "

Name and No. of Bore BMR 1S Blakefield

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	5	LOCATION	229 yds. SE Corner Por. 4 1990 yds. NW Corner Por. 5
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	711.1'	Ref. Map	N 14-121		
Logged by	N. Hoyling	Cased	22'	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750S/N 291	Depth	440'	Date Begun/Finished	26.11.52/17.12.52		

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
227	4	0	11	Calcite w.anastomosing gy.sh.veinlets & some l.gy.claystone	0	11										
245	9	18	5	Shale,dk.gy.,pyritiferous	18	5										
283	3	37	6	Greywacke, l.gy.f.to med.gr.	32	5										
310	7	27	4	Siltstone, gy.,w.dk.gy.& f.grained l.gy. gw.bds. and many carb.lam.	27	4										
311	8	1	1	COAL mostly bright	1	1	3/BMR					4.3	32.7	50.9	12.1	12,210
311	9 1/2	0	1 1/2	Shale brown	0	1 1/2										
312	7 1/2	0	10	COAL mostly dull	0	10										
314	8	2	1 1/2	COAL as above	2	1 1/2	4/BMR					4.2	31.9	53.5	10.4	12,410
314	10	0	2	Siltstone, gy.,sandy at base	0	2										
315	2 1/2	0	4 1/2	Shale, dk.gy.	0	4 1/2										
316	0	0	9 1/2	COAL, mostly bright	0	9 1/2										
316	1	0	1	Shale, dk.gy.	0	1	5/BMR					4.3	34.1	54.6	7.0	12,960
317	2 1/2	1	1 1/2	COAL, dull, shaly in parts	1	1 1/2										
318	10 1/2	1	8	Shale,dk.gy. w.some bright coal lam.	1	8										
319	9	0	10 1/2	COAL, bright w.brown sh.lam.& a shaly bd.	0	10 1/2										
324	7 1/2	4	10 1/2	Shale,dk.gy.	4	10 1/2										
326	0	1	4 1/2	Siltstone, l.gy.	1	4 1/2										
326	6	0	6	Shale, bl.,w.two gy.silty bds.	0	6										
365	0	38	6	Siltstone, gy.,w.many carb.lam.& sandy bds.	38	3										
367	2	2	2	COAL mostly bright & broken	1	10	6/BMR					3.6	31.1	43.6	16.7	11,640
369	4	2	2	COAL as above	1	11 1/2	7/BMR					3.0	28.9	39.0	29.1	9,640
370	11	1	7	Siltstone,wh.	1											
372	11	2	0	COAL, mostly bright & fragmentary	1	10	8/BMR					3.2	24.1	36.8	35.9	----
373	11	1	0	Shale, dk.gy. to gy.	1	0										
380	3	6	4	Siltstone l.gy.,w.gy.sh.& sandy bds.	6	4										
380	9	0	6	COAL,generally bright	0	6										
381	4	0	7	Shale, greyish-black	0	7										
382	2	0	10	COAL, bright,w.calcitic cleat	0	10										
440	0	57	10	Shale,dk.gy.,silty,w.R.sandy & pebbly bds.	57	3										

Hole completed

typed 26.12.53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 2S Blakefield

DISTRICT		COUNTY		PARISH		PORTION		LOCATION	
Muswellbrook		Durham		Vaux		5		723 yds. SE Corner Por. 4 2050 yds. NE Corner Por. 5	
Surveyed by N. Gorbunow		Survey Method		Theodolite Traverse		Elevation		704.3'	
Logged by N. Hoyling		Cased		21' 6"		Datum		Standard	
Sunk by Pacific Boring Co.		Type of Drill		Ruston Bucyrus 22 W		Depth		597' 6"	
						Ref. Map		N 14-121	
						Ref. Report		Records 1953/133	
						Date Begun/Finished		1.12.52/2.3.53	

[illegible]

Hole completed

typed 26.12.53

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 3S Blakefield

Geoseek		Name and No. of Bore		Date	
DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Vaux
				PORTION	5
				LOCATION	984 yds. NE Corner Par. 86
					390 yds. SE Corner Per. 5
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	631.3'
					Ref. Map N 14-121
Logged by	D. K. Malcolm	Cased	No	Datum	Standard
					Ref. Report Records 1953/133
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750/290	Depth	250'
					Date Begun/Finished 12.12.52/22.12.52

[illegible]

Estimated Depth Ft. Ins.	Estimated Thickness Ft. Ins.	GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.	Coal Sample No.	Miner. Bands Included Ft. Ins.	Miner. Bands Excluded Ft. Ins.	PROXIMATE ANALYSIS				
							H.M.	V.	F.C.	ASH	B. TH. U/LB
85 9	5 6	Shale, l.gy., v. friable plant remains	5 6								
99 7	13 10	Shale, l.gy. w. bds. & lenses of claystone & f.gr. sandstone; plant remains abundant	13 10								
124 3	24 8	Siltstone, l.gy., w. thin shale & carb. bds. plant remains	24 8								
124 7	0 4	Shale, carb.	0 4								
124 9	0 2	COAL - bright friable	0 2								
125 9	1 0	Sideritic claystone, l.gy. v. hd.	1 0								
145 0	19 3	Claystone, l.gy., friable plant remains	18 9								
145 4	0 4	Claystone, silty br. plant remains	0 4								
145 11	0 7	COAL, hd., bright	0 7								
146 2	0 3	Shale, hd., bl., carb.	0 3			I					
148 8	2 6	COAL hd., bright, w. thin sh. bds; well jointed calcite in joints	2 2	5/BMR			3.7	34.1	50.3	11.9	12,320
148 10	0 2	Shale, hd., bl., carb.	0 2								
151 6	2 8	COAL, shaly, generally dull w. bright bds.	2 8	6/BMR			3.4	31.2	48.7	16.7	11,520
152 8	1 2	Siltstone, v. hd., gy. br.	1 2								
154 3	1 7	COAL, generally hd. & v. shly.	1 7	7/BMR			3.4	28.2	44.7	23.7	10,350
154 5	0 2	Shale bl., carb. plant remains	0 2								
155 1	0 8	Siltstone dk., br., often w. thin coal bds.	0 8								
155 3	0 2	Shale bl., carb. w. thin coal bds.	0 2								
156 5	1 2	Claystone, dk. br. hd. w. thin carb. bds.	1 2								
156 9	0 4	COAL, hd. & dull w. thin bright bds.	0 4								
158 0	1 3	Claystone, as above, w. thin sh. bds.	1 3								
158 11	0 11	COAL, hd., bright, dull, bdd. w. cleat	0 11								
159 1 1/2	0 3	Claystone, as above	0 3								
179 5	19 7	Claystone, gy., silty plant remains silty bds. & lenses	19 7								
207 5	23 0	Greywacke, l.gy., f.gr. w. scattered in gr. bds., f. carb. lam. widely spaced throughout	27 16								
221 11	17 6	Claystone l.gy., silty w. abundant plant remains & thin carb. bds.	17 23								

Name and No. of Bore DWR 4S Blakefield

DISTRICT	Cassano-R. Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	5	LOCATION	400 yds. NE Corner Port. 5 400 yds. SE Corner Port. 5
Surveyed by	N. G. G. G. G.	Survey Method	Theodolite Traverse	Elevation	747.2'	Ref. Map	N 14-131		
Logged by	K. Malcolm & N. Hoyling	Cased	No	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Pacific Drilling Co.	Type of Drill	Failing 750 S/N 291	Depth	608'	Date Begun/Finished	18.12.52/30.1.53		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS				
Ft.	Inch.	Ft.	Inch.		Ft.	Inch.				H.M.	V.	F.C.	ASH	B.T.H. U/LB
10	0	10	0	Alluvium, red, sandy	0	0								
21	0	0	0	Claystone; wh., w.ferruginous gw.bds.	2	3								
28	0	4	0	Claystone, wh., ferr.	3	6								
	0		0	Claystone, pinkish-gy. w.a br.claystone band	3	0								
41	0	9	0	Claystone yellow br., w.br.non stains, fract., often soft w.plant remains	7	0								
41	6	0	6	Siltstone, gy.hd., w.plant remains	0	6								
48	0	5	3	Greywacke, yellow-br., f.gr.; friable mic., w.plant remains & thin gy. slst.bds.	5	3								
80	7	33	10	Greywacke, gy.-br., m.gr.hd.w.scattered carb.bds. & thin pebble bds.w.pebbles up to ½" dia	33	10								
89	7	9	0	Siltstone gy., hd., w.f.bl.carb.lan.	9	0								
157	10	68	3	Greywacke, as above, but c.gr.& w.abundant pebble bds. & thin carb.lan., below 110' gen.m.gen.m.gr.	68	3								
159	1	1	3	COAL hd., gn.bright w.thin dull bds. showing cleat	1	3	1/BMR			5.8	33.1	54.3	6.3	12,680
159	2	0	1	Siltstone, br. pyrf., hd., lenticular	0	1								
161	2	2	0	COAL, as above	2	0	2/BMR			5.6	34.8	54.7	4.9	12,970
161	5	0	3	Siltstone as above	0	3								
163	1	0	0	COAL as above	0	0								
162	1½	0	1½	Shale, br., w.plant remains	0	1½								
162	11	0	9½	COAL as above	0	9½	3/BMR			5.6	32.5	52.5	9.4	12,260
164	0	1	1	Shale, d.br., w.abundant plant remains	0	11								

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS								
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
556	7	1	7	COAL, dull mostly rather shaly	1	7	11/BMR											
557	0	0	5	COAL, mostly bright	0	5												
557	11	0	11	COAL, as above 5"	0	11												
558	0	0	1	Shale bl.	0	1	12/BMR		1									
559	11	1	11	COAL, mostly bright shaly in bds.	1	11												
579	0	19	1	Greywacke, dk.gy., f.-grained w. thin bl. silty bds.	19	1												
579	9	0	9	Shale, bl., hd; w. plant remains	0	9												
594	7	14	10	Siltstone, d.gy., w. thin carb. bds. & abund plant remains; thin sandy bds.	14	10												
597	5	2	10	COAL, gen. shaly, dull v. hd., w. thin bright bds., gen. broken	2	10	13/BMR											
597	3	0	1	Shale, bl., carb.	0	1												
597	3	0	2	COAL, as above	0	2												
598	3	0	6	Shale, as above	0	6												
600	0	9	10	Siltstone, as above	7	8												
				Hole completed														
											typed 27.12.53							

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 5S Blakefield

DISTRICT	Cessnock-	COUNTY	Durham	PARISH	Vaux	PORTION	5	LOCATION	290 yds.NE Corner Por.5
	Muswellbrook								1540 yds.SW Corner Por.151
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation		851.4'	Ref. Map	N 14-121	
Logged by	D.K.Malcolm	Cased	No	Datum	Standard		Ref. Report	Records 1953/133	
Sunk by	Pacific Boring Co.	Type of Drill	Failings 750 S/N 290	Depth	620'		Date Begun/Finished	8-1-52/11-2-53	

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.
11	0	11	0	Loam, red, w.wd.sh.c sst.frag.	0	0									
15	8	4	8	Greywacke; red-br; f.to m.gr; fen.w.d. br.mottling(hematite) tuff.?	4	8									
20	10	5	2	Siltstone, gy. to l.br.,v.hd.w.thin wh. claystone bds. thin sd.y.bds.& carb.lam. widely spaced	5	2									
39	4	18	6	Greywacke, as above	18	6									
51	8	12	4	Siltstone, l.gy.,v.f.gr.;w.thin sd.y.bds. & plant remain	12	4									
62	9	11	1	Greywacke, as above	11	1									
64	3	1	6	Greywacke; buck-red; c.gr.,fen.	1	6									
76	6	12	3	Greywacke, mottled gy.& l.br.,m.gr. friable	12	3									
89	8	13	2	Claystone, v.silty, w.sd.bds.,l.br.,v. friable & soft (tuff.?)	13	2									
89	11	0	3	Shale; bl; carb, v.friable	0	3									
90	5	0	6	Claystone, as above	0	6									
90	11	0	6	Shale, as above	0	6									
111	9	20	10	Siltstone, l.gy.,f.gr.,v.hd.,w.shy.bds. up to 2"	18	1									
112	5	0	8	Claystone; d.gy., hd.;mass.,w.plant remains	0	8									
113	8	1	3	COAL; v.friable; shattereded; shaly	1	3									
114	7	0	11	Siltstone; l.gy.,mass, carb.,v.hd.	0	11									
115	1	0	6	COAL, as above	0	6									
118	11	3	10	Siltstone; as above	3	10									
120	5	1	6	Greywacke, l.gy.,m.gr.,w.thin carb.lam.	1	5									

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
604	9	0	2	Tuffaceous, as above	0	2										
604	11	0	2	Shale, as above	0	2										
605	4	0	5	Tuffaceous, as above	0	5										
605	10	0	6	Shale, as above	0	6										
607	3	1	5	COAL, dull, cindered, w.veins of kaolin.	1	5										
608	6	1	3	Shale & coal, indurated & cindered w.wh. bds. & veins	1	2										
609	9	1	3	Shale, bl.,carb.; indurated	1	3										
610	3	0	6	Siltstone, d.gy.,mic., v.hd.,carb.	0	6										
611	3	1	0	Shale, bl.,carb., indurated & cindered w.veins of w.kaolin	1	0										
620	0	8	9	Siltstone, as above	8	9										
				Hole completed.	typed 28,12.53											

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR 6S Blakefield

Cessnock-				1030yds. NE Corner Por. 5	
DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	930yds. SW Corner Por. 151
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	828.7'
Logged by	K. Malcolm & W. Hoyling	Cased	22'	Datum	Standard
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750 S/N 291	Depth	330'
				Ref. Map	N 14-121
				Ref. Report	Records 1953/133
				Date Begun/Finished	31.1.53/14.2.53

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
131	11	11	9	Siltstone to v.f.gr.gw., l.gy., gen.hd.; thin carb. bds.	11	9	4/BMR									
212	7	30	8	Greywacke, m.gr., w.f.gr.bds., l.gy., gen. hd. & mass.	30	0										
230	7	18	0	Siltstone, gy. to d.gy., mass.	16	8										
231	4	0	9	COAL, hd., gen. bright, w. thin sh.bds.	0	9										
231	5	0	1	Shale, d.br., carb.hd.	0	1										
231	9	0	4	Clay, d.br., v. soft	0	4										
233	6	1	9	COAL, as above, shattered in lower 9"	1	9										
233	8	0	2	Siltstone, gr.-br., hd.	0	2				2		4.4	30.8	53.2	11.6	11,980
234	1	0	5	COAL, hd., br., shattered	0	5										
247	7	13	6	Siltstone, gy., v.f.gr., friable w. plant remains & thin coal bds.	9	4										
248	4	0	9	COAL, hd., bright, mass.	0	7	5/BMR									
266	2	17	10	Siltstone, as above	17	10										
308	2	42	0	Greywacke, l.gy., f. to m.gr., hd., mass.	41	6										
312	6	4	4	Siltstone, gy., hd., w. plant remains	4	4										
313	0	0	6	COAL, hd., bright, broken	0	6										
313	2	0	2	Shale, bl., carb.	0	2	6/BMR									
313	5	0	3	Greywacke, m.gr., friable, l.gy.	0	3										
314	11	1	6	COAL, hd., bright w. thin sh.bds.	1	6						3.8	33.1	50.0	13.1	12,080
315	2	0	3	Shale, bl., carb.hd.	0	3										
317	7	2	5	COAL, as above	2	3						4.0	32.0	50.3	13.7	11,940
318	10	1	3	Siltstone, v.hd..gy.-wh., mass., ? tuff.	1	3										
319	0	0	2	Shale, as above	0	2										
320	0	1	0	COAL, as above	1	0										
330	0	10	0	Siltstone, l.gy., hd., w. wh. sandy bds.	9	6										

Hole completed.

typed 28.12.53.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 7S Blakefield

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	86	LOCATION	2120 yds.NW Corner Por.79 2310 yds.NE Corner Por.86
----------	-----------------------	--------	--------	--------	------	---------	----	----------	--

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 652.5 Ref. Map N 14-121

Logged by N. Heyling, M.A. Reynolds Cased No. Datum Standard Ref. Report Records 1953/133

Sunk by BMR Type of Drill Failing 1500 S/N 316 Depth 805'8" Date Begun/Finished 17.2.53/17.4.53

[illegible]

[illegible]

[illegible]

Estimated Depth Ft. Ins.	Estimated Thickness Ft. Ins.	GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.		Coal Sample No.	Miner. Bands Included Ft. Ins.		Miner. Bands Excluded Ft. Ins.		PROXIMATE ANALYSIS				
										H.M.	V.	F.C.	ASH	B. TH. U/LB
649	5	1	9	COAL, bright cleated, shattered	1	6	16/BMR			3.3	32.5	55.3	18.9	12,720
649	7	0	2	Claystone, l.br.sideritic	0	2								
652	8	3	1	COAL, bright somewhat powdery & shy.at base	2	8	17/BMR			3.2	27.9	45.9	23.0	10,630
656	2	2	6	Shale, bk.carb.w.f.bds.of bright coal	3	2								
666	8	10	6	Shale, dk.gy.to carb.w.bds.of l.gy.gw.	6	3								
705	4	30	8	Siltstone, dk.gy.to bl.gy.w.finely intb. l.gy.gw.bds.	30	8								
707	8	2	4	COAL, v.shy.w.pyr.bds.& some bright bds.	1	2								
709	4	1	8	COAL, dull w.bright bds.	1	8	18/BMR			2.5	26.1	34.0	23.4	10,000
710	9	1	5	Siltstone, l.br.,sideritic	1	5								
710	11	0	2	Shale, bk.carb.hd.	0	2								
712	4	1	5	COAL, mainly bright	1	5								
712	6	0	2	Claystone, dk.hr.,carb.	0	2	19/BMR		2	3.0	23.7	56.1	12.2	12,150
712	10	0	4	COAL, bright	0	4								
715	0	2	2	Shale, dk.br.to bk.,carb.	2	0								
727	7	12	7	Siltstone, dk.br.to bk.and gw.l.gy.f.to m. finely intb.	9	10								
728	10	1	3	Shale, bk.carb.	1	3								
743	2	14	4	Siltstone, l.gy.to dk.gy.,w.bds.of l.gy. gw. in places	12	4								
745	8	1	6	Shale, bk.carb.at top grading into a dk.br. clst. at base	1	6								
749	4	5	8	Siltstone, intb. dk.gy. & l.gr.gy.gw.	5	8								
750	5	1	1	Claystone, l.gy.s.	1	1								
756	9	6	4	Siltstone, dk.gy.to bk.w.f.bds.of f.gr.gw.	6	4								
760	11	4	2	Greywacke, l.gy.f.to m.gr.w.bd.of dk.slst.	4	2								
761	5	0	6	Siltstone intb. dk.gy.v.f.gr.gw.gy.	0	6								
762	2	0	9	Shale, carb.,coaly in part	0	9								
764	9	2	7	Greywacke intb., f.gr. & siltst., l.gy.										
766	1	1	4	Siderite, l.w.cone in cone structure	1	4								
768	1/2	2	10	Greywacke, l.gy.f.to m.gr.	2	10								
769	0	0	1	Shale,carb. bk.	0	1								

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
774	6	5	6	Greywacke, l.gy.f.to m.gr.w.bds. of dk. slst.	5	6										
777	11	3	5	Siltstone, dk.br.sideritic in part, grading into a claystone	2	6										
783	3	5	4	Siltstone,dk.gy. to bk. w.bds. of l.gy.m. gr.gw.	5	4										
785	3	2	0	Greywacke, l.gy.m.gr.w.bds.of gy.slst.	2	0										
785	9	0	6	Siltstone, l.gy.	0	6										
786	1	0	4	Siderite, br.gy.,hd.shattered	0	4										
801	4	15	3	Siltstone, dk.gy.to bk.carb.,coaly in places w.numerous f.bds.of m.gr.gw.	13	6										
801	8	0	4	Siderite, dk.br.-gy., hd.,cone in cone structure	0	4										
805	8	4	0	Greywacke, l.gy.,m.gr.w.bd.of dk.gy.slst.	3	7										
Hole completed.					typed 1.1.54.											

BUREAU OF MINERAL RESOURCES

Name and No. of Bore.....BMR 8S Blakefield

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	5	LOCATION	1822 yds. NW Corner Por. 5 2020 yds. SW Corner Por. 5
----------	-----------------------	--------	--------	--------	------	---------	---	----------	--

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 514.8' Ref. Map N 14-121

Logged by P.G.Duff Cased 60'6" Datum Standard Ref.-Report Records-1953/133

Sunk by Pacific Boring Co. Type of Drill Fairing 750/290 Depth 507 Date Begun/Finished 2.7.53/24.7.53

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
488	9	2	9	CCAL mostly dull friable.	2	9	11/BMR					4.0	33.8	58.1	4.1	13,620
490	9	2	0	COAL dull R.pyrites	2	0	12/BMR					4.0	31.7	59.3	5.0	13,520
492	9	2	0	COAL as above	2	0	13/BMR					4.1	34.9	57.5	3.5	13,720
493	9	1	0	COAL as above	1	0	14/BMR					3.8	38.4	55.0	2.8	13,960
494	9	1	0	COAL dull, some bright bds. mostly finely broken	1	0										
496	11	2	2	CCAL as above	2	2	15/BMR					3.6	38.4	52.9	5.1	13,690
497	2	0	3	Siltstone, wh.tuff.	0	3										
497	9	0	7	CCAL dull v.finely divided	0	7										
497	2	0	5	Shale gy.& bl.part carb.	0	5										
507	8	8	10	Greywacke l.gy.f.grained & siltstone gy.	8	0										
				Hole completed.					typed 28.12.53.							

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 9S Blakefield

Cessnock-				63 yds. N.E. End R 900
DISTRICT Muswellbrook	COUNTY Durham	PARISH Vaux	PORTION R 6713	LOCATION 717 yds. S.W. Corner Pcr. 4

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 410.0' Ref. Map N 14-121

Logged by P.G.Duff Cased Not Datum Standard Ref. Report Records 1953/133

Sunk by Pacific Boring Co. Type of Drill Failing 750/290 Depth 58' 0" Date Begun/Finished 26.7.53/2.8.53.

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
10	0	10	0	Alluvium soil red-brown, mostly sandy some clayey	0	0										
38	0	28	0	Greywacke, l.br. & br.coarse grained unconsolidated, R. clay bds.	0	0										
58	0	30	0	Conglomerate hd.chert like pebbles & cobbles up to 2" diam, various colours	0	0										
				Hole abandoned at 58' could not penetrate conglomerate.												
typed 28.12.53																

Name and No. of Bore BMR 10S Blakefield

DISTRICT Muswellbrook COUNTY Durham PARISH Vaux PORTION R6718 LOCATION 10406 yds. to the corner of the

Surveyed by N. Gorbunov Survey Method Theodolite Traverse Elevation 439.7 Ref. Map N 14-123

Logged by P.G. Duff Cased 53' Datum Standard Ref. Report Records 1953/133

Sunk by Pacific Boring Co. Type of Drill Failing 750/290 Depth 599' 6" Date Begun/Finished 3.8.53/13.9.53

[illegible]

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
523	0	1	3	Shale bk.carb.	1	3										
524	0	1	0	COAL dull	1	0										
524	2	0	2	Shale bk.carb.	0	2										
525	3	1	1	Siltstone wh.tuff., shell moulds	1	1										
529	6	4	3	Shale gy.	4	3										
530	2	0	8	COAL, dull v.finely divided	0	8										
531	3	1	1	Shale, bk.carb.bright coal bds.	0	1										
531	10	0	7	Shale silty gy.	0	7										
539	8	7	10	Shale gy.& bk.silty,numerous t.coal lenses & bds., dip 30°	7	10										
549	9	10	1	Siltstone gy.& gw. f.grd. l.gy.intb.dip 30°	10	1										
560	6	10	9	Greywacke l.gy.v.f.grd.,some darker slst. bds.; gw.coarser at top	10	9										
570	9	10	3	Greywacke l.gy.f.to m.grd., fri.at top, dip 20°	9	10										
571	3	0	6	Greywacke l.gy.m.grd.	0	6										
572	8	1	5	Shale gy.silty & sdy.	0	7										
582	0	9	4	Greywacke l.gy.m.grd., grading into f.grd.	6	4										
592	0	10	0	Shale dk.gy.& bk.R.coal lenses	2	1										
593	9	1	9	Shale gy.& dk.gy.s.clayey	1	1										
599	6	5	9	Shale br.-gy.v.clayey perhaps could be salted clayst., bot.part almost clst. gy.s. fri. broken.	5	9										
Hole completed.																
												typed 1.1.54.				

BOWMAN'S HILL SUBAREA

B O W M A N ' S H I L L S U B A R E A

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals				
1S	1190	1	127'	7 "	-	130'	0 "
	1191	2	130'	0 "	-	132'	4 "
	1192	3	132'	4 "	-	134'	8 "
	1193	4	135'	4 "	-	137'	0 "
	1194	5	137'	0 "	-	139'	10 "
	1195	6	139'	10 "	-	141'	11 "
	1545	7	204'	4 $\frac{1}{2}$ "	-	206'	5 $\frac{1}{2}$ "
	1546	8	206'	7 $\frac{1}{2}$ "	-	208'	7 $\frac{1}{2}$ "
	1547	9	210'	11 "	-	213'	0 "
	154	10	213'	0 "	-	215'	0 "
	1549	11	215'	0 "	-	217'	2 $\frac{1}{2}$ "
	1550	12	485'	4 "	-	488'	4 "
	1551	13	488'	4 "	-	491'	0 "
2S	2045	1	199'	10 "	-	202'	8 "
	2046	2	202'	10 "	-	203'	4 "
	2047	3	205'	11 "	-	208'	6 "
	2048	4	208'	6 "	-	211'	6 "
	2049	5	259'	2 "	-	261'	4 "
	2050	6	261'	4 "	-	263'	4 "
	2051	7	263'	4 "	-	265'	6 "
	2052	8	492'	6 "	-	494'	1 "
	2053	9	494'	1 "	-	496'	0 "
3S	2054	1	144'	0 "	-	146'	6 "
	2055	2	146'	6 "	-	148'	6 "
	2056	3	148'	6 "	-	150'	6 "
	2057	4	150'	6 "	-	152'	6 "
	2058	5	572'	8 "	-	574'	8 "
	2059	6	574'	8 "	-	576'	8 "
	2060	7	576'	8 "	-	578'	8 "
	2061	8	578'	8 "	-	581'	4 "
	2062	9	582'	9 "	-	585'	0 "
4S	2063	1	98'	7 "	-	100'	10 "
	2064	2	100'	10 "	-	103'	1 "
	2065	3	104'	3 "	-	106'	5 "
	2066	4	106'	6 "	-	108'	1 "
	2067	5	110'	8 "	-	113'	0 "
	2098	6	113'	0 "	-	115'	8 "
	2099	7	116'	2 "	-	118'	2 $\frac{1}{2}$ "
5S	2182	1	237'	0 "	-	239'	0 "
	2183	2	239'	0 "	-	241'	0 "
	2184	3	241'	0 "	-	243'	8 "
	2185	4	244'	7 "	-	247'	2 "
	2186	5	247'	2 "	-	249'	8 "
	2187	6	311'	9 "	-	314'	0 "
	2188	7	314'	0 "	-	316'	1 "
	2189	8	323'	4 "	-	324'	11 "
	2190	9	324'	11 "	-	327'	6 "
	2191	10	329'	3 "	-	331'	6 "
	2192	11	331'	6 "	-	334'	0 "

BUREAU OF MINERAL RESOURCES

Name and No. of Bore

BMR 1S Bowman's Hill

Cessnock		Name and No. of Bore		206 yds. SE Corner Por. 21	
DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Wynn
				PORTION	21
				LOCATION	720 yds. SW Corner Por. 21
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	463.2'
				Ref. Map	N 14-121
Logged by	H.S. Taylor-Rogers & M. Reynolds	Cased	No	Datum	Standard
				Ref. Report	Records 1953/133
Sunk by	BMR	Type of Drill	Failing 750/262	Depth	611'
				Date Begun/Finished	30.3.53/14.5.53

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
529	1	3	0	Greywacke, l.gy.f.grd. w.t. slst.bds - faulted	3	0										
554	4	25	3	Siltstone, gy.fract. & slickensided w.R.t.bd. l.gy.tuff.sh. & 2.t. apophyses of ign.rock near bot.	22	5										
559	6	5	2	Siltstone, gy. & wh. tuff. finely. interbdd. tough highly ind. w.t. bds. almost quartzite.	5	2										
563	2	3	8	Siltstone, wh. tuff. tough ind.	3	8										
564	8	1	6	Siltstone, gy.w. bd.carb.sh.w.t. coal bds. in middle.	1	6										
569	0	4	4	Shale, wh. tuff. less ind.	4	4										
589	3	20	3	Interbdd. v.f.-f.grd. gv. & gy.slst. w. calcite veins & faulted - throw-up to 5½"	20	3										
603	8	14	5	Siltstone, to claystone, dk.gy.	14	5										
611	0	7	4	Greywacke, f.grd. shy. to slst.	5	10										
Hole completed																
													typed	22.11.'53		

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 2S Bowman's Hill

DISTRICT		Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	1315	LOCATION	464 yds. SW Corner Por. 23
Surveyed by		N. Gorbunow	Survey Method		Theodolite Traverse		Elevation	571.3'	Ref. Map	N 14-121
Logged by		P. Duff	Cased		61'		Datum	Standard	Ref. Report	Records 1953/133
Sunk by		Pacific Boring Co.	Type of Drill		Failing 750/291		Depth	600'	Date Begun/Finished	5.6.53/30.6.53

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.
326	5	3	7	Greywacke light gy.med grained sh.bds.	3	7									
329	0	2	7	Shale bk. some gw.bds.	2	7									
332	0	3	0	Shale gy.with Silty bands	3	0									
334	1	2	1	Greywacke light grey med grained some shale	2	1									
334	5	0	4	Igneous rock fine gr.white ground mass dark phenocrysts	0	4									
339	0	4	7	Greywacke light gy.med.grained some shale	4	7									
349	0	10	0	Shale Greywacke & siltstone finely intb.	10	0									
352	4	3	4	Shale bk. indurated at bottom	3	4									
353	2	0	10	Shale bk.with doleritic apophyses	0	10									
359	0	5	10	Dolerite green-black	5	10									
361	4	2	4	Dolerite light green grey	2	4									
364	2	2	10	Shale black carbonaceous	2	10									
369	0	4	10	Shale grey, carb.detritus,siderite bd.	4	10									
379	0	10	0	Siltstone light grey fractured some gw.	10	0									
399	0	20	0	Siltstone grey & dark grey finely handed	20	0									
403	0	4	0	Siltstone as above	4	0									
409	0	6	0	Greywacke light grey med grained	6	0									
411	0	2	0	Siltstone grey	2	0									
414	0	3	0	Shale grey	3	0									
416	0	2	0	Shale black carbonaceous	2	0									
417	0	1	0	Igneous rock fine gr.white ground mass dark phenocrysts	1	0									
419	6	2	6	Igneous rock as before,shale inclusions	2	6									
423	6	4	0	Shale black carb.with many dull coal bds.	4	0									
427	0	3	6	Shale grey grading into siltstone	3	6									
437	0	10	0	Shale & siltstone grey intb. one brown gy. sideritic band	10	0									
446	0	9	0	Siltstone grey & gw. l.gy. fine grained intb.	9	0									
451	0	5	0	Siltstone & gyw. as before	5	0									
460	0	9	0	Greywacke l.grey very fine grained rare coal lenses	9	0									
469	0	9	0	Siltstone grey mostly fractured rare gw.	9	0									
478	0	9	0	Siltstone grey hard dense rare gw.& siderite very rare coal lenses	9	0									
487	0	9	0	Shale grey silty	9	0									

Page

Name and No. of Bore

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
492	6	5	6	Shale grey sideritic in part	4	4										
494	1	1	7	COAL dull broken	1	7	8BMR					3.8	35.1	57.4	3.7	13,530
496	0	1	11	COAL very finely divided shly.	1	5	9BMR					3.1	26.4	35.2	35.3	--
497	4	1	4	Shale black carb.	1	4										
501	0	3	8	Siltstone grey	3	8										
505	0	4	0	Greywacke l. grey very fine grained sideritic in part	4	0										
512	9	7	9	Shale grey part sid. rare siltstone & gw.	7	5										
517	3	4	6	Greywacke light grey coarse grained ind. sideritic in part	4	0										
522	0	4	9	Shale grey & greywacke light grey ind.	4	9										
523	1	1	1	Shale grey	1	1										
523	6	0	5	Shale black tuffaceous sandy soft	0	5										
524	2	0	8	Shale grey	0	8										
524	6	0	4	Shale black carb.	0	4										
531	0	6	6	Shale grey & greywacke light grey fine grained indurated	6	6										
537	0	6	0	Shale grey, some broken	6	0										
545	0	8	0	Shale grey, greywacke light gy. intb. One thin white tuffaceous band	8	0										
555	0	10	0	Shale grey rare thin white tuff. bds.	10	0										
560	0	5	0	Shale grey thin white tuff. bds.	4	0										
560	8	0	8	Shale white tuff.	0	8										
563	6	2	10	Shale grey & black carb.	2	10										
565	6	2	0	Shale grey & green grey part. tuff.	2	0										
567	6	2	0	Shale grey - green tuff.	2	0										
570	6	3	0	Siltstone light grey indurated	2	6										
575	6	5	0	Shale & siltstone light grey & grey ind.	5	0										
581	0	5	6	Shale grey broken	4	9										
591	0	10	0	Shale grey	10	0										
600	0	9	0	Shale grey	9	0										

Hole completed.

typed 30.11.53

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 3(S) Bowman's Hill

DISTRICT Cessnock- COUNTY Durham PARISH Wynn PORTION R1315 LOCATION 598 yds. NW Corner Por 24
 Muswellbrook
 Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 449.0' Ref. Map BMR N14-121
 Logged by P. Duff Cased 36'6" Datum Standard Ref. Report Records 1953/133
 Sunk by Pacific Boring Co. Type of Drill Failing 750/290 Depth 598'-6" Date Begun/Finished 8.6.53/30.6.53

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
36	3	36	3	Greywacke light brown med. grained rare claystone bands	Cuttings											
37	10	1	7	Pebbles sub-angular various colours	1	7										
38	3		5	Shale black indurated		5										
38	5		2	Shale white indurated		2										
38	11		6	Greywacke red-brown indurated		6										
40	1	1	2	Greywacke light-grey techenitic (?)	1	2										
43	3	3	2	Greywacke doleritic (?) green-grey weathered	3	2										
46	5	3	2	Dolerite green-grey	3	2										
55	5	9	0	Dolerite green-grey, <u>weathered</u>	9	0										
63	5	8	0	Dolerite green-grey	8	0										
67	9	4	4	Dolerite green-grey	4	4										
69	9	2	0	Shale grey & dark-grey, some broken	1	3										
79	7	9	10	Siltstone grey	9	10										
89	2	9	7	Siltstone grey shaley in part sandy in part	9	7										
99	4	10	2	Greywacke med. grained soft friable	10	2										
130	6	31	2	Greywacke med. to fine grained weathered & friable. Some carb. laminations	31	2										
133	0	2	6	Greywacke med. grained	2	4										
135	5	2	5	Shale grey	2	5										
140	5	5	0	Siltstone light grey grading into greywacke	5	0										
142	3	1	10	Greywacke light grey fine grained	1	10										
144	0	1	9	Shale brown grey carb. detritus common	1	9										
146	6	2	6	COAL some smutty at top, rest dull, br. R. sh. bds.	2	6	1/BMR 3S					3.2	29.3	60.1	7.4	13,140
148	6	2	0	As above.	2	0	2/BMR 3S					3.7	36.3	55.4	4.6	13,550
150	6	2	0	As above	2	0	3/BMR 3S					4.1	36.2	56.4	3.3	13,620
152	6	2	0	COAL drill broken	2	0	4/BMR 3S					4.7	34.1	56.9	4.3	13,380

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
443	0	0	9	Greywacke light grey fine grained	0	9										
451	8	3	8	Siltstone grey light grey sideritic at bottom	3	6										
453	0	1	4	Shale white tuff.	1	0										
460	2	7	2	Shale brown & grey, one 6" band black carb. shale	6	7										
462	10	2	8	Shale black	2	4										
469	6	6	3	Shale grey & siltstone light grey intb.	6	3										
471	0	1	6	COAL dull & bright, broken, friable	1	6										
472	6	1	6	Shale black carb.	1	6										
493	6	21	0	Shale grey & light grey part carb. silty in part	21	0										
563	11	70	5	Greywacke light grey rare carb. laminae	68	2										
567	0	3	1	Siltstone grey sideritic in part	3	1										
572	5	5	6	Shale & siltstone interbedded	5	6										
572	8	0	2	Shale black	0	2										
574	8	2	0	COAL mostly dull, some bright bands, rare shale bands.	2	0	5/BMR			2		3.6	34.6	55.5	6.3	13,420
576	8	2	0	Coal as above	2	0	6/BMR			1		3.6	32.9	54.0	9.5	12,820
578	8	2	0	Coal as above	2	0	7/BMR			3 3/4		3.6	35.0	53.4	8.0	13,120
581	4	2	8	Coal as above, becoming rather heavy and shaley at base	2	8	8/BMR			4 1/2		3.4	30.4	49.2	17.0	11,670
582	9	1	5	Siltstone white tuff.	1	5										
585	0	2	3	COAL mostly dull some shale bands	2	3	9/BMR			1		3.6	31.1	51.4	13.9	12,080
588	0	3	0	Siltstone grey & light grey	3	0										
590	6	10	6	Siltstone light grey & shale grey finely interbedded	10	6										

Hole completed

typed 8.12.53.

Cessnock -

Name and No. of Bore

BMR 48 Bowman's Hill

~~695 yds. NW Corner Por. 22~~

340 yds. NE Corner Por. 22

DISTRICT	N. Gorbunow	COUNTY	PARISH	PORTION	LOCATION
Surveyed by	M.A. Reynolds	Survey Method	Theodolite Traverse	Elevation	Ref. Map
Logged by	Pacific Boring Co.	Cased	Failing 750/291	Datum	Ref. Report
Sunk by		Type of Drill		Depth	Date Begun/Finished

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
113	0	2	4	COAL dull, bright bdd.w.R.bds.br.tuff.sh.	2	4	5/BMR			1 1/2		4.2	32.5	49.2	14.1	11,840
115	3	2	0	COAL dull & bright bdd.w.R.bds.br.tuff sh.w.tk.carb.sh.	2	0	6/BMR			3/4		4.7	35.5	52.9	6.9	12,820
116	2	0	6	Shale bk.-dk.gy.carb.w.numerous t.bds.coal	0	6										
117	6	1	4	COAL dull & bright bdd.w.t.br.sh.bd.	1	4				1 1/2						
117	10	0	4	Shale l.br.tuff.sdg.	0	4	7/BMR			4		4.3	36.5	52.7	6.5	12,910
118	2 1/2	0	4 1/2	COAL dull & bright bdd.	0	4 1/2										
123	10 1/2	5	8	Greywacke l.gy.f.&c.grd.w.t.gy.sh.bd.	5	8										
131	6 1/2	7	8	Siltstone gy.to l.gy.f.grd.gw.	7	8										
140	3 1/2	9	2	Greywacke l.gy.w.c.grd.at bot.	9	2										
155	0	14	3 1/2	Siltstone gy.shaly w.t.bd.sideritic & 2 t. bds.f.grd.Greywacke	13	3										
Hole completed																
													typed	30.11.53		

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 5S Bowman's Hill

Cossneek		Name and No. of Bore	
DISTRICT	Muswellbrook	COUNTY	Durham
	N. Gorbunow	PARISH	Wynn
Surveyed by		PORTION	21
Survey Method	Theodolite Traverse	LOCATION	809 yds. NE Corner Por. 21 976 yds. SE Corner Por. 21
Elevation	663'	Ref. Map	N 14-121
Logged by	M. A. Reynolds & S. D. Henderson	Cased	12'
Datum	Standard	Ref. Report Records	1953/133
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750/291
Depth	348'	Date Begun/Finished	8.7.53/21.7.53

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
206	6	6	6	Greywacke c.grd.w.v.c.grd.bds.whitish	5	11										
211	10	5	4	Greywacke c.grd.whitish	5	4										
215	0	3	2	Greywacke n.grd.l.gy.w.silty bds.	3	2										
219	11	4	11	Greywacke c.grd.whitish w.v.c.grd.bds.	4	11										
221	8	1	9	Greywacke n.grd.whitish w.silty bds.	1	9										
224	0	2	4	Greywacke f.grd.l.gy.silty	2	4										
233	0	9	0	Greywacke f.grd.l.gy.w.t.silty & planty bds.	9	0										
236	1	3	1	Greywacke f.grd.l.gy.w.t.silty planty bds.	3	1										
236	7	0	6	Siltstone gy.hd.planty	0	6										
237	0	0	5	Siltstone dk.gy.w.t.coal streaks	0	5										
237	0	2	0	COAL hard dull & bright bds.burnt parts	2	0	1/BMR				4.5	32.7	54.4	8.4	12.470	
241	0	2	0	COAL hard dull & bright bds.burnt parts	2	0	2/BMR				5.1	34.7	52.9	7.3	12.560	
243	5	2	5	COAL as before w.1" coaly sh.bd.at bott.	2	5	3/BMR			1	4.8	33.7	52.0	9.5	12.310	
243	8	0	3	COAL dull & bright bdd. hard	0	3										
244	7	0	11	Claystone l.br.silty parts tuff.?	0	11										
247	2	2	7	COAL hard & dull w.bright bds.	2	7	4/BMR				3.9	32.5	50.3	13.3	11.960	
247	8	0	6	COAL dull & bright bdd.soft	0	6										
248	6	0	10	COAL soft & dull w.smud broken	0	10	5/BMR				3.0	27.2	64.6	5.2	13.580	
248	9	0	3	COAL soft & dull, burnt?	0	3										
249	8	0	11	COAL hard & dull w.bright bds.	0	11										
249	10	0	2	SMUT and COAL soft & dull, broken	0	2										
250	0	0	2	Shale coaly	0	2										
250	6	0	6	Siltstone gy.w.few plants	0	6										
252	7	2	1	Siltstone l.gy.hard plants	2	1										
252	9	0	2	Clay Ironstone gy.br.	0	2										
257	0	4	3	Siltstone l.gy. hard, plants	4	3										
262	6	5	6	Siltstone l.gy.hard, planty, sandy bds.	5	6										
263	4	0	10	COAL hard & dull w.1" l.br.claystone bd.	0	10										
264	11	1	7	Greywacke f.grd.l.gy.v.tuff.	1	4										
269	3	4	4	Greywacke f.grd.l.gy.v.tuff.	4	4										
274	0	4	9	Greywacke f.n.grd.l.gy.v.tuff.	4	9										
279	4	5	4	Greywacke n.grd.white v.tuff.	5	4										
283	0	3	8	Greywacke n.grd.white v.tuff.	3	8										
285	7	2	7	Greywacke f.grd.white v.tuff.	7	7										
293	3	7	8	Claystone, whitish, tuff.	7	8										

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
299	0	5	9	Claystone whitish, tuff. jointed	5	9										
305	0	6	0	Claystone white, tuff., shaley bds.	6	0										
310	6	5	6	Greywacke m.grd.white, jointed, tuff.	5	3										
311	9	1	3	Siltstone carb. tuff. w.dull & bright	1	1										
				COAL bds.indurated												
314	0	2	3	COAL dull & bright bdd.indurated w.wh.veins	2	4	6/BMR					2.0	25.9	42.1	30.0	8,730
316	1	2	1	COAL dull & bright bdd.indurated w.	1	0	7 BMR					1.8	14.2	57.0	27.0	9,260
0	0	0	0	white veining & cindered bds.	0	0										
316	7	0	6	Claystone w.Coal v.soft	0	4										
318	0	1	5	Clay soft white	0	11										
318	0	0	0	COAL dull indurated	0	3										
323	0	4	4	Claystone, tough, dk.gy.& black w.	2	10										
0	0	0	0	disseminated white grains	0	0										
323	4	0	4	Claystone dk.gy.& black	0	4										
324	11	1	7	COAL dull burnt, much white wining	1	7	8/BMR					1.2	18.4	28.1	52.3	--
327	0	2	1	COAL dull & soft & sooty, cindered bds.	2	1	9/BMR					1.4	20.6	32.8	37.2	--
327	6	0	6	COAL hard & dull v.white veining	0	6										
327	10	0	4	Claystone l.br.tuff.	0	4										
329	0	1	2	Tuff.white w.dark crystals	1	2										
329	3	0	3	Claystone l.br.tuff.	0	2										
331	6	2	3	COAL dull, shaley indurated	2	3	10/BMR					3.3	29.7	45.6	21.4	10,870
331	7	0	1	COAL bright broken	0	1										
332	0	1	1	COAL dull broken	1	1	11/BMR					4.0	32.9	50.2	12.9	11,960
334	0	1	4	COAL dull & light bdd.soft & broken	1	4										
335	4	1	4	Shale coaly indurated & thin bds.of	1	1										
0	0	0	0	Claystone l.br.tuff.	0	0										
335	10	0	6	COAL dull & bright bdd.soft & sooty	0	6										
335	11	0	1	Claystone l.br.tuff.	0	1										
337	0	1	1	COAL dull & bright bdd.soft & sooty	0	11										
340	6	3	6	Greywacke f.grd.l.gy. tuff.slikensided	3	6										
343	0	2	6	Greywacke f.grd.l.gy.tuff.& silty	2	6										
0	0	0	0	slikensided broken	0	0										
344	7	1	7	Greywacke v.f.grd.l.gy.tuff.slikensided	1	7										
346	0	1	5	Siltstone gy.planty, soft & tuff.	1	5										
348	0	2	-	Shale l.gy.w.abundant plants	1	6										

Hole completed

typed 1.12.53

EDINGLASSIE SUBAREA

E D I N G L A S S I E S U B A R E A

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals				
1S	2086	1	140'	3 "	-	143'	2 "
	2087	2	143'	2 "	-	146'	2 "
	2088	3	146'	2 "	-	149'	1 "
	2089	4	204'	11 "	-	206'	5 "
	2090	5	453'	8 "	-	456'	0 "
	2091	6	456'	0 "	-	458'	2 "
	2092	7	462'	5 "	-	466'	3 "
	2093	8	466'	3 "	-	469'	8 $\frac{1}{2}$ "
	2094	9	470'	5 "	-	473'	3 "
	2095	10	473'	3 "	-	476'	2 "
2S	2078	1	173'	6 "	-	176'	0 "
	2079	2	176'	0 "	-	178'	5 "
	2080	3	181'	11 "	-	184'	11 "
	2081	4	184'	11 "	-	187'	11 "
	2082	5	187'	11 "	-	190'	0 "
	2083	6	190'	0 "	-	192'	6 "
	2084	7	192'	6 "	-	195'	6 "
	2085	8	195'	6 "	-	197'	9 "
3S	2337	1	28'	6 "	-	31'	0 "
	2338	2	31'	4 "	-	33'	2 "
	2339	3	87'	11 "	-	89'	3 "
	2340	4	90'	1 "	-	92'	8 "
	2341	5	192'	8 "	-	195'	3 "
	2342	6	195'	1 "	-	197'	6 "
	2343	7	197'	6 "	-	200'	0 "
	2344	8	200'	5 "	-	203'	2 "
	2345	9	203'	8 "	-	206'	0 "
	2346	10	206'	0 "	-	208'	5 "
	2347	11	281'	9 "	-	284'	3 "
	2348	12	284'	5 "	-	286'	7 "
	2349	13	310'	10 "	-	313'	4 "
	2350	14	313'	4 "	-	316'	1 "
4S	2351	1	182'	6 "	-	185'	0 "
	2352	2	185'	0 "	-	187'	0 "
	2353	3	187'	0 "	-	189'	0 "
	2354	4	189'	0 "	-	191'	9 "
	2355	5	192'	9 "	-	194'	9 "
	2356	6	194'	9 "	-	196'	9 "
	2357	7	196'	9 "	-	199'	5 "
	2358	8	200'	4 $\frac{1}{2}$ "	-	203'	2 "
	3041	9	222'	6 "	-	225'	2 "
	3042	10	274'	11 "	-	277'	11 "
	3043	11	277'	11 "	-	280'	11 "
	3044	12	280'	11 "	-	283'	11 "
	3045	13	283'	11 "	-	286'	11 "
	3046	14	286'	11 "	-	289'	0 "
	3047	15	289'	0 "	-	291'	4 "
	3048	16	315'	1 "	-	317'	7 "
	3049	17	317'	7 "	-	320'	1 "
	3050	18	343'	3 $\frac{1}{2}$ "	-	345'	3 "
	3051	19	345'	3 "	-	347'	3 "

E D I N G L A S S I E S U B A R E A

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals					
4S	3052	20	347'	3 "	-	349'	3 "	
	3053	21	400'	1 "	-	404'	3 "	
	3054	22	439'	11 "	-	442'	9 "	
	3055	23	454'	4 $\frac{1}{2}$ "	-	456'	5 "	
	3056	24	456'	5 "	-	458'	5 "	
	3057	25	458'	5 "	-	460'	9 "	

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 1S Edinglassie.

DISTRICT	Cessnock- Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	R 1315	LOCATION	247 yds 227 yds	NE Corner Por. 62 SE Corner Por. 62
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	603.3'	Ref. Map	74-121			
Logged by	S.D. Henderson	Cased	No	Datum	Standard	Ref. Report	Records 1953/133			
Sunk by	BMR	Type of Drill	Failing 750/263	Depth	530' 6"	Date Begun/Finished	9.6.53/10.7.53			

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included	Min. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				H.M.	V.	F.C.	ASH	B. TH. U/LB	
442	0	9	0	Greywacke m.grd.wh.w.t.silty bds.	9	0									
443	3	1	3	Greywacke m.grd.whitish	1	3									
448	5	5	2	Greywacke f.grd.l.gy.w.t.silst.bds.	5	2									
451	11	3	6	Siltstone l.gy.ind. planty, slightly sdy.	3	6									
452	3	0	4	Shale carb.	0	4									
452	4	0	1	COAL dull, shy.	0	1									
453	9	0	5	COAL dull & bright bdd., broken	0	5									
453	8	0	11	Claystone v.l.br.tuff., ind.	0	11									
454	7 $\frac{1}{2}$	0	11 $\frac{1}{2}$	COAL dull & bright bds. & $\frac{1}{4}$ " s.clst.bd.	0	11 $\frac{1}{2}$									
454	9	0	1 $\frac{1}{2}$	Claystone br.tuff.	0	1 $\frac{1}{2}$	5/BMR			3.7	29.5	43.6	13.2	11,600	
456	0	1	3	COAL dull & bright bds.	1	3									
458	2	2	2	COAL as above	2	2	6/BMR			3.6	29.2	47.3	19.4	11,450	
458	3	0	1	Siltstone carb., tuff., ind.	0	1									
458	6	0	3	Siltstone carb., tuff. ind.	0	3									
462	5	3	11	Tuff, v.f.grd., wh., ind.	3	11									
462	11	0	6	COAL dull w.bright bds.	0	6									
463	3	0	4	Clay-Ironstone dk.	0	4	7/BMR			3.6	27.6	52.1	16.7	11,630	
464	9	1	6	COAL mainly dull, broken	1	3									
466	3	1	6	COAL, v.s., dull, shattered	0	3									
468	0	1	9	COAL, dull, s.v.broken	0	3									
469	5	1	5	COAL, s.d.w.b.bds., broken parts	1	3	8/BMR			3.9	33.3	50.9	11.9	12,270	
469	7 $\frac{1}{2}$	0	2 $\frac{1}{2}$	Shale, carb., few plants	0	2 $\frac{1}{2}$									
469	8 $\frac{1}{2}$	0	1	COAL, mainly bright	0	1									
470	5	0	8 $\frac{1}{2}$	Shale, carb., few plants	0	8 $\frac{1}{2}$									
470	7	0	2	COAL mainly bright	0	2									
470	10 $\frac{1}{2}$	0	3 $\frac{1}{2}$	Shale carb.	0	3 $\frac{1}{2}$									
471	3	0	4 $\frac{1}{2}$	COAL dull to bright	0	4 $\frac{1}{2}$									
471	4	0	1	Claystone yellowish br., s., tuff.	0	1	9/BMR			3.9	23.2	51.1	16.3	11,640	
472	11	1	7	COAL, dull w.bright bds.	1	7									
473	0	0	1	Claystone l.br., s.	0	1									
473	3	0	3	COAL mainly dull	0	1									
474	4	1	1	COAL dull & bright bdd.	1	1	10/BMR			3.8	34.0	51.2	11.0	12,550	
476	2	1	10	COAL, bright	1	10									

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
479	4	3	2	Siltstone l.gu.br.sdy.tuff., few plants	3	2										
480	4	1	0	Siltstone l.gy.w.br.tuff. & sdy.bds.	1	0										
480	9	0	5	COAL bright	0	5										
481	1	0	4	Siltstone slightly carb. t.coal bd.	0	4										
482	5	1	4	Greywacke f.grd. l.gy. & slst.gy.intb.	1	4										
483	2	0	9	Claystone l.gy.br., sideritic	0	9										
483	5	5	3	Greywacke f.grd.w.t.slst.bds.	5	3										
483	10	0	5	Siltstone gy., dense	0	5										
489	2	0	4	Greywacke f.grd. gy., silty	0	4										
489	5	0	3	Clay-Ironstone br.	0	3										
491	7	2	2	Greywacke f.grd., l.gy.m.t.slst.bds.	2	2										
493	3	1	8	Greywacke m.f.grd., whitish	1	8										
494	7	1	4	Siltstone l.gy., dense	1	4										
494	10	0	3	Clay-Ironstone, br.	0	3										
496	8	1	10	Shale dk.gy.w.strong vertical cleavage dense & slightly planty	1	10										
497	4	0	9	Shale bk.w.strong vertical cleavage	0	9										
498	6	1	2	Shale bk.w.strong vertical cleavage	1	2										
498	11	0	5	COAL dull & bright bdd.	0	5										
499	1	0	2	Clay-Ironstone, bk.	0	2										
500	4	1	3	COAL dull & bright bdd.	1	3										
501	1	0	9	Shale bk.	0	9										
505	0	3	11	Siltstone dk.gy.w.sdy.bds.	3	11										
505	4	0	4	Claystone gy.br.sideritic	0	4										
514	0	8	8	Siltstone gy. & gw.v.f.grd.intb.	8	8										
519	0	5	0	Siltstone gy. & gw.v.f.grd.intb.	5	0										
521	10	2	10	Siltstone gy. & gw.f.grd.l.gy., intb.	2	10										
523	0	1	2	Siltstone l.gy.planty, hd., sideritic	1	2										
524	4	1	4	Greywacke f.grd.l.gy., silty bds.	1	4										
530	6	6	2	Greywacke m.f.grd., whitish	6	2										
				Hole completed.												
												typed 2.1.54.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 2S Edinglassie

DISTRICT		Cessnock- Muswellbrook	COUNTY	Durham	PARISH	Brougham	PORTION	6718	LOCATION	374 yds. NNW Corner Por. 1 REM 550 yds. NE Corner Por. 1 REM
Surveyed by		N. Gorbunow	Survey Method		Theodolite Traverse	Elevation	486.3'	Ref. Map		N 14-21 Par. of Vaux
Logged by		P. G. Duff	Cased		15'	Datum	Standard	Ref. Report		Records 1953/133
Sunk by		Price & Anderson	Type of Drill		Goldfields 20	Depth	474' 2"	Date Begun/Finished		22.7.53/15.8.53

[illegible]

Estimated Depth Ft. Ins.		Estimated Thickness Ft. Ins.		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.		Coal Sample No.	Miner. Bands Included Ft. Ins.		Miner. Bands Excluded Ft. Ins.		PROXIMATE ANALYSIS				
												H.M.	V.	F.C.	ASH	B. TH. U/LB
128	7	1	8	Greywacke l.gy.m.grd.	4	6										
130	2	1	7	Greywacke gy.f.grd.	1	5										
133	2	3	0	Siltstone gy.,gw.l.gy.intb.	3	0										
142	5	9	3	Siltstone gy.& l.gy.	7	2										
157	6	15	1	Siltstone gy.& l.gy.R.l.gy.gw.	17	0										
165	9	8	3	Greywacke l.gy.f.& m. grd., one small sideritic bd.	8	1										
166	6	0	9	Siltstone br.gy.sideritic	0	9										
171	6	5	0	Siltstone gy.& gw.l.gy. f.grd.	5	0										
172	8	1	2	Shale bk. one t.coal bd.	1	2										
173	6	0	10	Greywacke l.gy.v.f.grd.,vertically fractd. pyrites	0	10										
176	0	2	6	COAL mostly dull R.bright lvs. R.sh.bds.l. gy.& br. gy.	2	6	1/BMR			1 1/2		3.9	29.4	49.2	17.5	11,450
178	5	2	5	COAL as above	2	5	2/BMR					3.9	32.1	51.3	12.7	12,270
181	11	3	6	Siltstone wh.hd.dense vertically fractd. pyr.tuff.	3	6										
184	11	3	0	COAL dull shy.vugular	3	0	3/BMR			2		3.8	25.7	51.2	19.3	11,240
187	11	3	0	COAL as above	3	0	4/BMR			1 3/4		4.2	32.1	52.6	11.1	12,380
190	0	2	1	COAL dull shy.	2	1	5/BMR			2 1/2		4.4	32.6	51.5	11.5	12,330
192	6	2	6	COAL as above	2	6	6/BMR			3/4		3.9	28.5	53.7	13.9	12,040
195	6	3	0	COAL as above	3	0	7/BMR					4.1	30.8	52.7	12.4	12,200
197	9	2	3	COAL as above	2	3	8/BMR					4.5	33.7	51.8	10.0	12,520
202	4	4	7	Siltstone, gy.R.l.gy. gw.	4	7										
202	7	0	3	Shale bk.sdy.	0	3										
207	0	4	5	Siltstone gy.& gw.l.gy.f.grd.intb., one br. -gy.sideritic bd.	4	4										
Hole completed.												typed 2.1.54.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 3S Edinglassie

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Brougham	PORTION	R6718	LOCATION	374 yds. NNW Corner Por. 1 REM
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	486.3'	Ref. Map	N 14-121	Par. of	Vaux
Logged by	P. G. Duff	Cased	15'	Datum	Standard	Ref. Report	Records	1953/133	
Sunk by	Price & Anderson	Type of Drill	Goldfields 26	Depth	474' 2"	Date Begun/Finished	22.7.53/15.8.53		

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
319	0	2	1	Greywacke l.gy.m.grd.	2	1										
337	2	13	2	Greywacke l.gy.f.& m.grd.	17	3										
346	2	9	0	Siltstone l.gy.some v.f. grd.gw.	9	0										
355	2	9	0	Siltstone gy.& dk.gy.mottled	8	11										
364	2	9	0	Siltstone shy.mottled gy.& l.gy.	9	0										
368	4	4	2	Siltstone as before	4	0										
373	2	4	10	Greywacke l.gy.f.& m. grd., vertical fracture calcite filled	4	10										
382	2	9	0	Greywacke l.gy.m.grd.	8	5										
390	2	8	0	Siltstone gy.,gw.l.gy. v.f.grd.at top; R.sideritic bds.	7	11										
399	2	9	0	Shale gy. silty	8	11										
426	2	27	0	Siltstone gy.few.shy.bds.	26	8										
435	2	9	0	Siltstone almost sh.,sideritic at top	9	0										
444	2	9	0	Shale gy.silty bds., sideritic	9	0										
453	2	9	0	Siltstone gy. w.sh.bds.	9	0										
462	2	9	0	Shale silty gy.& l.gy.	9	0										
462	8	0	6	Greywacke gy.sideritic m.grd.	0	6										
465	8	3	0	Shale dk.gy.	3	0										
474	2	8	6	Shale v.dk.gy.	8	6										
				Hole completed.	typed 2.1.54											

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 4S Edinglassie

Cessnock-	387 yds. NW Corner 1 REM
DISTRICT Muswellbrook COUNTY Durham PARISH Brougham PORTION 6718	LOCATION 75 yds. NE Corner CSL48.5
Surveyed by N. Gorbunow	Survey Method Theodolite Traverse Elevation 504.4' Ref. Map N. 14-12
Logged by P. G. Duff	Cased 15' Datum Standard Ref. Report Records 1953/133
Sunk by Price & Anderson	Type of Drill Goldfields 20 Depth 536' Date Begun/Finished 18.8.53/18.9.53

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
91	6	1	0	Greywacke l.gy.v.c.grd.	1	0										
142	0	50	6	Siltstone gy.shy.in part some t.bk.carb. sh.bds. & R.gw.bds.	49	8										
142	6	0	6	Siltstone br.-gy.sideritic	0	6										
146	8	4	2	Siltstone gy.w.intb. l.gy.f.grd.gw.	4	2										
151	0	4	4	Greywacke l.gy.f.grd.	4	4										
160	0	9	0	Greywacke l.gy.,f.& v.f.grd.	9	0										
176	0	16	0	Greywacke l.gy.,f.& v.f.grd., bds. of darker slst.	16	0										
178	0	2	0	Shale gy.	2	0										
181	6	3	6	Shale gy.	3	6										
182	3	0	9	Shale bk.carb., pyr.	0	9										
182	6	0	3	Shale bk.carb.	0	3										
182	9	0	3	COAL dull w.bright bds.	0	3										
183	2	0	5	Shale bk.carb.	0	5				5						
184	0	0	10	COAL bright	0	10	1/BMR					2.7	35.7	50.4	11.2	12,600
184	4	0	4	Shale bk.carb.	0	4				4						
185	0	0	8	COAL dull & bright bds.	0	8										
185	3	0	3	COAL as above	0	3										
187	0	1	9	COAL dull, vertically fractured	1	9	2/BMR					2.7	33.6	56.4	7.3	13,230
189	0	2	0	COAL as above	2	0	3/BMR					3.0	33.8	56.3	6.9	13,240
191	9	2	9	COAL as above	2	9	4/BMR					2.9	34.2	55.5	7.4	13,200
192	9	1	0	Shale dk.gy.	1	0										
193	2	0	5	COAL dull	0	5										
193	3	0	1	Shale br.-gy.	0	1				1½						
193	9	0	6	COAL dull broken	0	6	5/BMR					2.9	31.4	57.1	8.6	12,890
194	0	0	3	Shale br.-gy.silty	0	3				3						
194	9	0	9	COAL dull R.vertical fractures	0	9										
196	6	1	9	COAL as above	1	9	6/BMR					2.8	32.9	53.9	10.4	12,650
196	9	0	3	COAL dull shy.	0	3				1½						

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.
414	0	6	0	Siltstone l.gy.,sideritic bd.at top	5	7									
423	0	9	0	Greywacke l.gy.f.to m.grd.	9	0									
429	6	6	6	Greywacke as before	6	3									
432	0	2	6	Siltstone l.gy.	2	6									
437	8	5	8	Shale gy.& dk.gy.silty	5	3									
438	4	0	3	Shale gy.& bk.	0	3									
438	8	0	4	COAL bright	0	2									
438	10	0	2	COAL (not recovered)	0	0									
439	11	1	1	Shale, bk.sdy.	1	0									
440	5	0	6	COAL mostly dull	0	6									
440	9	0	4	Shale bk. carb.	0	4	22/BMR		4	3.0	29.1	51.6	16.3	11,710	
442	9	2	0	COAL dull few bright bds.shy.,mostly broken	2	0									
445	3	2	6	Shale gy.& dk.gy.	2	6									
445	7	0	4	Shale bk.carb.many t. coal bds.	0	4									
446	1	0	6	COAL bright	0	6									
446	2	0	1	Shale bk.	0	1									
446	9	0	7	COAL dull v.broken	0	7									
448	3	1	6	Shale bk.& dk.gy.	1	6									
454	3	6	0	Siltstone gy.& gw. l.gy. v.f.grd.	6	0									
454	4 $\frac{1}{2}$	0	1 $\frac{1}{2}$	Shale bk.carb.	0	1 $\frac{1}{2}$									
454	4 $\frac{1}{2}$	0	1 $\frac{1}{2}$	COAL dull	0	1 $\frac{1}{2}$									
456	5	1	11	COAL dull fri. some bright bds. mostly broken appears wd.	1	11	23/BMR			3.0	31.4	50.6	15.0	11,830	
458	5	2	0	COAL as above	2	0	24/BMR			2.9	33.3	52.2	11.6	12,410	
460	9	2	4	COAL as above	2	4	25/BMR			3.0	32.7	56.2	8.1	12,970	
462	3	1	6	Greywacke l.gy.f.& v.f.grd.	1	6									
469	0	6	9	Greywacke l.gy.f.grd.	6	9									
471	8	2	8	Greywacke l.gy.m.grd. R.t.coal lenses & bds.	2	6									
472	6	0	10	Siltstone gy.	0	10									
476	8	4	2	Greywacke l.gy.f.& m. grd.	3	10									
478	1	1	5	Greywacke l.gy.v.f.grd.	1	5									
480	11	2	10	Greywacke l.gy.m.& c.grd.	2	10									

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
499	0	18	1	Greywacke l.gy. c.& m.grd.grading into f. grd. at bot. v.R. t.coal bds.	18	1										
508	0	9	0	Siltstone gy., gw. l.gy.& sh.gy.intb., R.siderite	8	11										
509	10	1	10	Greywacke, l.gy.v.f.grd., ind.	1	10										
512	4	2	6	Shale gy. silty in part	2	6										
517	6	5	2	Siltstone gy. & gw.f.grd. l.gy.intb.	5	2										
518	4	0	10	Shale gy.	0	10										
519	7	1	3	Shale gy. dk.gy.slickensided	1	3										
522	0	2	5	Shale gy.	2	5										
530	0	8	0	Siltstone gy.& sh.dk.gy.v.finely intb. one 3" siderite bd. some slickensiding	8	0										
530	3	0	3	Shale sideritic	0	3										
536	0	5	9	Siltstone l.gy.grading into f.grd.l.gy.gw.	5	9										
				Hole completed.												
					typed 2.1.54.											

MOUNT ARTHUR SUBAREA

M O U N T A R T H U R S U B A R E A

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals	
1S	1212	1	117'	11 "
	1213	2	120'	0 "
	1214	3	122'	4 $\frac{1}{2}$ "
	1215	4	124'	0 "
	1216	5	235'	11 "
	1217	6	238'	2 "
	1218	7	240'	1 "
	1219	8	255'	2 "
	1220	9	256'	10 "
	1221	10	259'	7 "
	1222	11	261'	9 "
	1223	12	263'	8 "
	1224	13	264'	11 "
	1225	14	347'	4 "
	1226	15	352'	4 "
	1227	16	407'	0 "
	1228	17	409'	0 "
	1229	18	411'	0 "
	1230	19	476'	6 "
	1231	20	479'	0 "
	1232	21	481'	6 "
3S	1721	1	96'	0 "
	1722	2	97'	6 "
	1723	3	103'	0 "
	1724	4	105'	6 "
	1725	5	420'	5 "
	1726	6	576'	2 "
	1727	7	577'	9 "
	1728	8	579'	8 $\frac{1}{2}$ "
4S	1525	1	121'	7 "
	1526	2	122'	10 "
	1527	3	124'	10 $\frac{1}{2}$ "
	1528	4	128'	6 "
	1529	5	278'	8 $\frac{1}{2}$ "
	1530	6	280'	0 "
	1531	7	281'	11 "
	1532	8	283'	4 $\frac{1}{2}$ "
	1533	9	334'	7 "
	1534	10	336'	7 "
	1535	11	339'	6 "
	1536	12	341'	3 "
	1537	13	342'	10 "
	1538	14	598'	1 "
	1539	15	600'	9 "
	1540	16	606'	5 "
	1541	17	608'	6 "
	1542	18	610'	7 $\frac{1}{2}$ "
	1543	19	618'	1 "
	1544	20	620'	6 "

M O U N T A R T H U R S U B A R E A

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals					
6S	3033	1	145'	7 "	-	147'	11 "	
	3034	2	148'	6 "	-	149'	8 "	
	3035	3	194'	4 "	-	196'	9 "	
	3036	4	227'	4 "	-	229'	7 "	
	3037	5	229'	10 "	-	232'	7 "	
	3038	6	294'	10 "	-	297'	4 "	
	3039	7	297'	4 "	-	299'	10 "	
	3040	8	300'	5 "	-	303'	3 "	

BUREAU OF MINERAL RESOURCES

Name and No. of Bore.....BMR 1S Mount Arthur.....

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	124	LOCATION	317yds. NW Corner Por. 124 224yds. NE Corner Por. 134
Surveyed by	N. Corbunow	Survey Method	Theodolite Traverse	Elevation	625.5'	Ref. Map	N 14-121		
Logged by	H. S. Taylor-Rogers & P. Duff	Cased	No	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Houben & Kent	Type of Drill	Minidrill A 2000	Depth	625' 8"	Date Begun/Finished	11.3.53/27.3.53		

[illegible]

Estimated Depth Ft. Ins.	Estimated. Thickness Ft. Ins.	GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.	Coal Sample No.	Min. Bands Included Ft. Ins.	Min. Bands Excluded Ft. Ins.	PROXIMATE ANALYSIS				
							H.M.	V.	F.C.	ASH	B. TH. U/LB
226	3	39 0	Greywacke light grey fine grained grading into med. grained w. depth, numerous thin carb. lam., few vugs, rare small coal lenses. fractured in part	39 0							
235	4	9 1	Shale & siltstone grey, numerous thin coal bds. & lenses	9 1							
235	6	0 2	COAL bright bdd., pyrites	0 2							
235	11	0 5	Claystone dark brown	0 5							
237	11	2 0	COAL friable dull & bright	2 0	5/BMR		4.2	31.0	50.2	14.6	11,790
238	2	0 3	Shale sandy black brown	0 3							
240	0	1 10	COAL dull & bright part fragmentary	1 10	6/BMR		4.2	35.1	54.8	5.9	13,130
240	1	0 1	Shale brown grey pyrites	0 1							
242	1	2 0	COAL dull & bright fragmentary, friable, weathered?	2 0	7/BMR		4.3	34.7	52.4	8.6	12,710
242	10	0 9	Siltstone grey, pyrites	0 9							
244	6	1 8	Shale grey pyrites	1 8							
245	4	0 10	Shale black, carb., coal lenses	0 10							
245	9	0 5	COAL, bright bdd., friable, wh. mineral veins	0 5							
246	9	1 0	Shale grey & black coal bds.	1 0							
254	0	7 3	Shale grey & light grey coal lenses	7 2							
255	2	1 2	Shale brown grey slickensided (drill?)	1 2							
255	7	0 5	COAL fragmentary, bright	0 5							
256	10	1 3	COAL bright, bdd, pyrites	1 3	8/BMR		3.9	33.0	53.1	10.0	12,420
258	7	1 9	COAL as above	1 9	9/BMR		4.1	33.1	54.4	8.4	12,620
259	7	1 0	Shale black	1 0							
261	2	1 7	COAL as before	1 7	10/BMR		4.0	32.8	48.9	14.3	11,770
261	9	0 7	Shale black	0 6							
263	8	1 11	COAL as before	1 11	11/BMR		3.9	35.1	51.2	9.8	12,380
264	11	1 3	COAL as before	1 3	12/BMR		3.8	32.3	52.7	11.2	11,830
266	3	1 4	Claystone wh. tuff.	1 4							
267	10	1 7	COAL dull & bright	1 7	13/BMR		5.0	31.2	51.9	11.9	12,290
272	8	4 10	Siltstone grey pyrites	4 10							
281	8	9 0	Siltstone fine grey loc. v. carb.	9 0							

[illegible]

[illegible]

[illegible]

Hole completed

typed 20-22.53

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 2S Mount Arthur

Cessnock-

DISTRICT Muswellbrook COUNTY Durham PARISH Wynn PORTION 284 LOCATION 257yds. SE Corner Por. 284
448yds. NE Corner Por. 136

Surveyed by N. Gorbunow Survey Method Theodolite Traverse Elevation 588.3 Ref. Map N 14-121

Logged by P. Duff Cased No Datum Standard Ref. Report Records 1953/133

Sunk by Pacific Boring Co. Type of Drill Failing 750/290 Depth 200' 6" Date Begun/Finished 17.3.53/24.3.53

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
32	0	32	0	Gravel sub.angular coarser with depth	6	0										
32	0	0	0	Gravel coarse sub angular, ironstone gw. soft shale pebble												
33	0	0	0	Gravel as above more shale												
35	0	0	0	Gravel as above very sandy												
36	0	0	0	Gravel, fine gr. sandy sub angular w. some grey shale frag.												
37	6	0	0	Gravel as above												
39	0	0	0	Gravel as above fine grained												
43	0	0	0	Gravel as above fine grained												
45	0	0	0	Gravel coarse w. abd. qtz frag.												
47	0	0	0	Gravel as above some l. grey shale												
49	0	0	0	Gravel as above												
51	0	0	0	Gravel as above												
53	0	0	0	Gravel as above												
55	0	0	0	Gravel as above												
57	0	0	0	Gravel as above more fragment bk. shale frag. some carb. mat.												
58	0	0	0	Gravel as above w. angular bk. & grey shale frag. some sst.,												
59	0	0	0	Gravel much coarser, w. abund large frag. bk. & dk. grey silty carb. shale												
60	0	0	0	Shale bk. v. gravelly w. frag. wh. sst. shale is carb. & bdd. & occ. v. sandy												
63	0	3	0	Shale, grey v. sandy bdd. loc. abund marcasite sm. lenses wh. f. gr. sd., occ. carb. some mica.	3	0										

no coring possible.

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
280	8	13	2	Shale as above w.t.bd.gw.(carb.)at bot.	12	3										
303	7	22	11	Igneous rock as above (described as tuff.) altered by deuteric action s.	21	9										
317	4	13	9	Shale as above bk.silty to slst.bk.-dk.gy. w.t.bds.of v.f.grd. gw.	13	9										
322	5	5	1	Greywacke intb.l.gy.f.grd.& gy.slst.	5	1										
347	0	24	7	Greywacke l.gy.f.grd.w.occ.t.bds. of gy. slst.(rarely sideritic)	24	7										
401	6	54	6	Greywacke l.gy.f.-m.grd.w.occ.slst.bd.as above & t.bd.dk.gy.carb.slst.near bot.	53	8										
402	6	1	0	Siltstone bk.carb. ind.	1	0										
404	11	2	5	Igneous rock gy.porphyrritic	2	5										
405	10	0	11	COAL cindered & bk.carb.sh.	0	10										
407	5	1	7	Siltstone bk.ind.to gy.	1	7										
411	6	4	1	Igneous rock	4	1										
413	3	1	9	Siltstone l.gy.v.broken	0	9										
418	4	5	1	Claystone s.l.gy.,many small wh.rounded pbl.& much gn.staining	5	1										
419	11	1	7	Claystone almost wh.silty some wh.pbl.as before but now wd.	1	7										
420	5	0	6	Shale bk.t.dull coal bds.	0	6										
422	6	2	1	COAL cindered coke like, v.broken	2	1	5/BMR					2.8	3.7	78.5	15.0	12,140
423	2	0	8	COAL as before v.broken	0	8										
423	8	0	6	Shale gy.v.broken	0	6										
425	4	1	8	Shale bk.grading into gy.slst.	1	8										
425	5	0	1	Shale bk.	0	1										
427	1	1	8	COAL broken cindered v.broken in part	1	8										
428	8	1	7	Siltstone gy. ind.	1	7										
432	0	3	4	Shale & slst.bk.& gy.intb.	3	4										
440	10	8	10	Siltstone intb.dk.gy.(sideritic in part)& l.gy.f.grd.gw.	7	9										

Name and No. of Bore

[illegible]

Page

Name and No. of Bore

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
537	3	0	3½	COAL as above 1'1"	0	3½										
537	11	0	8	Shale dk.gy.-bk.carb.	0	8										
540	2	2	3	Greywacke intb.l.gy.f.grd.& gy.slst.	2	3										
542	0	1	10	Shale bk.carb.w.t.bd.sideritic slst.& f.grd.gw.	1	10										
574	6	32	6	Greywacke intb.l.gy.f.grd.& gy.slst.	32	6										
576	1	1	7	Siltstone gy.	1	7										
576	2	0	1	Shale gy.cly.w.carb.mat.& s.gn.cly.pellets	0	1										
576	6	0	4	COAL dull & bright bdd.cleated w.wh.min. on cleat plains	0	4										
577	8	1	2	COAL dull & bright bdd.,broken br.limonite staining mostly bright	1	2	6/BMR					3.3	36.7	45.2	14.8	12,010
577	9	0	1	COAL bright coarsely granular w.small sphaerales of ? siderite	0	1										
578	8½	0	11½	COAL as above 1'2" mostly broken	0	11½	7/BMR					3.3	27.8	60.6	8.3	12,940
579	8½	1	0	COAL dull w.bright bds.v.lam.	1	0										
582	6	2	9½	COAL mostly bright broken w.t.bds. mainly dull as above 1'1"	2	9½	8/BMR					3.5	35.1	56.5	4.9	13,590
584	1	1	7	Shale dk.gy.carb.w.bright coal lam.	1	7										
586	3	2	2	Shale dk.gy.large bright coal lenses & bds.	2	2										
591	6	5	3	Siltstone l.gy.hd.	5	3										
627	9	36	3	Shale gy.& slst.to v.f.grd.gw.l.gy.intb. some t.coal lam.	36	3										
630	0	2	3	Siltstone dk.gy.hd.d.ind.	2	3										
633	7	3	7	Siltstone to sh.bk.carb.ind.	3	7										
645	0	11	5	Igneous rock gy.-gn.gy. amygdaloidal s.fri. at bot.	8	9										
Hole completed.												typed 11.1.54.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 4S Mount Arthur

DISTRICT ~~Cessnock~~ Muswellbrook COUNTY Durham PARISH Vaux PORTION R 1315 LOCATION 23 yds. NW Corner Por. 81 807 yds. NE Corner Por. 154

Surveyed by N. Corbunow Survey Method Theodolite Traverse Elevation 609.6 Ref. Map N 14-121
 Logged by M. A. Reynolds Cased 46' Datum Standard Ref. Report Records 1953/133
 Sunk by Houben Type of Drill Mindrill A 2000 Depth 646' 6" Date Begun/Finished 24.4.53/19.5.53

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				H.M.	V.	F.C.	ASH	B. TH. U/LB
1	9	1	9	Topsoil br.sdy.	1	9								
11	0	9	3	Greywacke f.-m.grd.wd.w.occasional s.shaly slst.bd.	9	3								
18	6	7	6	Greywacke c.grd.wd.	7	6								
34	6	16	0	Greywacke f.grd.w.slst.bds.	16	0								
40	6	6	0	Siltstone gy.wd.in part w.t.sdy.bd. wd.sideritic over bot.1'1"	6	0								
49	7 1/2	9	1 1/2	Interbdd.f.grd.gw.& slst.gy.-dk.gy.	9									
50	6	0	10 1/2	Siltstone dk.gy.-bk.carb.	0									
50	11	0	5	COAL dull & bright bdd.fractd.broken	0	5								
51	4	0	5	Claystone bk.carb.dk.gy.	0	5								
51	7	0	3	COAL dull & bright bdd.	0	3								
52	11	1	4	Shale bk.carb.silty in part indurated	1	4								
54	11	2	0	Siltstone wh.tuff.w.t.bd.carb.sh.near bot. indurated	2	0								
55	3	0	4	Siltstone gy.-bk.carb.indurated	0	4								
55	4	0	1	COAL dull & bright land.	0	1								
55	9 1/2	0	5 1/2	Shale silty wh.& black coaly w.veins	0	5 1/2								
56	0 3/4	0	11	COAL shaly(?), indurated cindered	0	11								
56	10 1/2	0	2	Shale bk.carb.	0	2								
58	4	1	5 1/2	Shale bk.carb.& coal indurated & indruded by igneous rock (as below) Apophyses up to 3"	1	5 1/2								
62		3	8	Igneous Rock off-wh. amyg.daloidal w. xenoliths of sh. coal as above	3	8								
63	8	1	8	Shale gy.-bk.carb w.limonite stains indurated in part	1	8								

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
631	6	8	6	Greywacke grey-light grey fine grained	8	6										
646	6	15	0	Greywacke light grey fine-med. grained with thin bds. grey siltstone	14	7										
Hole completed																
												typed 11.12.53.				

Name and No. of Bore ~~BMR 5S Mount Arthur~~

Cessnock-									
DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	R 1315	LOCATION	180 yds. NW Corner Por. 167
									467 yds. NE Corner Por. 167
Surveyed by	N. Gorbinow	Survey Method	Theodolite Traverse	Elevation	735.2'	Ref. Map	N 14-121		
Logged by	M. A. Reynolds	Cased	21'	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Price & Anderson	Type of Drill	Goldfields 20	Depth	437' 6"	Date Begun/Finished	25 5 53/4 7 53		

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA.	Core Measured		Coal Sample No.	Min. Bands Included	Min. Bands Excluded	PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				H.M.	V.	F.C.	ASH	B. TH. U/LB
161	4	56	2	Igneous rock gy.amygdales w.chlorite & calcite developed, probably as a result of deuteric action; generally c.grd. to v.f.grd. & showing contact w.m.grd. gw.at bottom	56	2								
174	11	13	7	Greywacke gy.m. & f.grd.ind.showing contact w.ign.rock for a few inches at top and bottom	13	7								
189	3	14	3	Igneous rock gy.as above, showing differentiation, becoming f.grd.at bot.	14	3								
197	3	8	0	Igneous rock l.gy.f.grd.showing contact w.gw.(v.f. & f.grd.) over most of length	8	0								
208	5	11	2	Igneous rock gn. & l.gn.gy.c.grd.fri. & ? wd.mostly	9	8								
209	6	1	1	COAL cindered pyr.	1	0								
213	1	3	7	Igneous rock off wh.s.fri.as above 9'8"	3	7								
218	9	5	8	Siltstone bk.carb.shly.ind.w.contact shown over top 5"	3	10								
228	8	9	11	Greywacke l.gy.f.grd.w.t.slst.bds.w.bd. sideritic slst.at bot.	9	9								
233	2	4	6	Greywacke l.gy.m.grd.	4	5								
242	6	9	4	Siltstone dk.gy.w.f.grd.gw.lenses	9	4								
242	10	0	4	Shale bk.carb.ind.	0	4								
257	10	15	0	?Dolerite gn.gy.amygdales	15	0								
274	8	16	10	Siltstone bk.carb.w.t.gw.lam.	16	10								
275	0	0	4	Shale bk.sdy.	0	4								
275	10 1/2	0	10 1/2	COAL ind.	0	10 1/2								
279	2	3	3 1/2	Shale bk.ind.w.t.coal bds.	3	3 1/2								
290	7	11	5	Siltstone, intb.bk.-dk.br. & f.-m.grd.gw.	11	5								
298	8	8	1	Siltstone dk.br.-bk.to claystone bk.carb.	8	1								
304	1	5	5	Siltstone as above for 2 1/2' to l.gy. f.grd.gw.	5	5								

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
312	6	8	5	Siltstone-silty clst. bk.carb.w.f.wh. vertical veins & w.t.gw.bds.at top	8	5										
366	6	54	0	Igneous rock br.gy.-gy.amygdaloidal becoming dk.br.w.xenoliths of & showing contact w.bk.carb.sh.& ? coal	53	6										
373	7	7	1	Siltstone shy.bk.carb.ind.showing contact w.above w.t.sdy.bds. ! :grd. in part	7	1										
387	8	14	1	Igneous rock l.gn.gy.w.gn.amygdales showing sharp contacts	14	1										
389	0	1	4	COAL ind. & rich in vein minerals	1	4										
412	9	23	9	Igneous rock l.gn.gy.amygdaloidal w.dk.gy. & showing irreg.contact at bot.	23	9										
413	6	0	9	Siltstone bk.carb.ind.	0	9										
433	8	20	2	Siltstone dk.gy.bk.w.t.bds.v.f.-f.grd.gw. & 2 v.t.apophyses of ign.rock	20	2										
437	6	3	10	Igneous rock gy.amygdaloidal	3	10										
				Hole completed.												
typed 1.1.1954.																

Cessnock-

Name and No. of Bore 143 yds. Corner Por. 129

Muswellbrook

Durham

Wynn

R 1315

143 yds. N. Corner Por. 129

388 vds. N. E. Corner Por. 129

DISTRICT N. Gorbunov COUNTY Theodolite PARISH Traverse PORTION 608.7 LOCATION N 14-121

Surveyed by F.G. Duff Survey Method 15 C Elevation Standard Ref. Map Records 1953/133

Logged by Price & Anderson Cased Goldfields No. 20 Datum 370.0" Ref. Report 15.10.53/31.10.53

Sunk by Type of Drill Depth Date Begun/Finished

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
145	3	44	10	Greywacke l.gy.m.to c.grained R.v.c. grained bdd.	44	10										
145	7	0	4	Claystone br.tuff.	0	4										
146	3	0	3	COAL cleated, bright bdd.	0	3	1/BMR					3.4	31.3	55.1	9.7	12,300
147	11	1	8	COAL bright bdd.broken	1	8										
148	6	0	7	Shale gy.	0	7										
149	8	1	2	COAL bright bdd.	1	2	2/BMR					3.7	32.3	57.3	6.2	12,350
151	0	1	4	Shale gy.	1	4										
153	9	2	9	Shale gy.& dk.gy.carb.	2	5										
155	3	1	6	COAL broken bright bdd.R.sh.	1	6										
157	7	2	4	Shale gy.numerous t.coal bds. & lenses	2	3										
160	2	2	7	Greywacke l.gy.v.f.grained	2	7										
163	2	3	0	Greywacke l.gy.f.grained	3	0										
168	0	4	10	Greywacke l.gy.c.grained	4	10										
176	0	3	0	Greywacke l.gy.c.grained, fractured ind.	3	0										
184	0	3	0	Greywacke l.gy.m.to f.grained sideritic at base	3	0										
192	0	3	0	Greywacke l.gy.f.grained	3	0										
194	4	2	4	Shale gy.silty at top one 4" sideritic bd.	2	4										
196	9	2	5	COAL bright bdd.cleated mostly broken	2	5	3/BMR					3.6	33.5	53.9	9.0	12,440
201	5	4	3	Shale gy.	4	3										
207	0	5	7	Shale gy. R.slst.	5	7										
213	7	6	7	Siltstone & f.grained gw. l.gy.intb.	6	5										
215	0	1	5	Siltstone br.gy.sideritic	1	0										
223	0	3	0	Shale gy.silty,sideritic at bot.	7	10										
226	0	3	0	Shale silty carb. at bot.	3	0										
226	2	0	2	COAL dull shy.	0	2										
226	9	0	7	Shale gy.carb.	0	7										
226	11	0	2	COAL dull shy.	0	2										
227	4	0	5	Claystone wh.tuff.	0	5										
227	7	0	3	COAL dull	0	3										
229	7	2	0	COAL bright bdd.	2	0	4/BMR					3.6	31.9	51.4	13.1	11,940

ROXBURGH SUBAREA

ROXBURGH SUB-AREA.

Intervals of Analysed Coal Samples.

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals
1S	53/3189	1	227'1" - 230'1"
	3190	2	237'2" - 240'2"
	3191	3	240'2" - 243'2"
	3192	4	243'2" - 245'2"
	3193	5	246'2" - 248'8"
	3194	6	276'11" - 279'11"
	3195	7	413'6" - 416'6"
	3196	8	416'6" - 418'4"
	3197	9	418'4" - 419'11 ¹ / ₂ "
	3198	10	419'11 ¹ / ₂ " - 423'6"
	3199	11	452'4 ¹ / ₂ " - 455'9"
	3200	12	456'9" - 459'9"
	3201	13	459'9" - 462'9"
	3202	14	462'9" - 464'2"
	3203	15	464'2" - 466'6"
	3204	16	543'1" - 546'1"
	3205	17	546'1" - 549'1"
	3206	18	549'1" - 552'1"
	3207	19	552'1" - 554'6"
	3208	20	554'6" - 556'9"
	3209	21	588'6" - 590'6"
	3210	22	596'6" - 592'6"
2S	3166	1	38'2" - 40'6"
	3167	2	40'6" - 42'6"
	3168	3	42'6" - 44'9"
	3169	4	83'1" - 85'6"
	3170	5	85'6" - 87'9"
	3171	6	87'9" - 89'11"
	3172	7	336'10" - 338'6"
	3173	8	338'6" - 341'3"
	3174	9	345'5" - 347'7"
	3175	10	347'7" - 349'9"
	3176	11	350'0" - 352'6"
	3177	12	352'11" - 355'4"
	3178	13	355'0" - 357'0"
	3179	14	357'0" - 358'11"

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 1S Roxburgh

DISTRICT		COUNTY		PARISH		PORTION		LOCATION	
Muswellbrook		Durham		Vaux		R6718		244 yds. NW Corner CSE48.1	
N. Gorbunow				Theodolite Traverse				474 yds. SW Corner D4944 Lot 8	
Surveyed by P.G. Duff		Survey Method		Elevation		Ref. Map			
		No		437.7'		N 14-121			
Logged by B.M.R.		Cased		Datum		Ref. Report			
				Standard		Records 1953/133			
Sunk by		Type of Drill		Depth		Date Begun/Finished			
		Failing 750/263		617' 6"		13.8.53/2.10.53			

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	H.M.	V.	F.C.
192	6	1	7	Greywacke l.gy.f.grd.ind.	1	7								
201	6	9	0	Greywacke l.gy.v.f.grd. three 6" br.-gy. sideritic bds.	9	0								
206	8	5	2	Greywacke l.gy.v.f.grd.w.slst.& sh.bds.	5	2								
212	1	5	5	Siltstone gy.& l.gy.	5	5								
215	1	3	0	Greywacke l.gy.& gy.f.grd.	3	0								
220	7	5	6	Greywacke l.gy.v.f.grd.	5	6								
223	3	2	8	Siltstone gy.	2	8								
225	9	2	6	Shale bk.,carb.	2	6								
226	6	0	9	Shale gy.silty	0	9								
227	1	0	7	Shale bk.carb.coal lenses	0	7								
230	1	3	0	COAL bright bdd.	2	11	1/BMR			2.9	30.0	45.7	21.4	10,910
231	5	1	4	COAL dull broken	0	6								
234	1	2	8	Shale gy.& dk.gy.	0	4								
235	7	1	6	Siltstone tuff.; ind.	1	6								
236	8	1	1	Siltstone wh.hd.tuff.	1	1								
237	2	0	6	Shale bk.carb.	0	6								
238	9	1	7	COAL dull w.f.bright bds.	1	7								
239	0	0	3	Shale dk.gy.	0	3	2/BMR			3	3.4	32.4	52.5	11.7 12,240
240	2	1	2	COAL mostly dull	1	2								
240	7	0	5	COAL as above	0	5								
241	11	1	4	COAL bright bdd.	1	2	3/BMR			2 $\frac{1}{2}$	3.4	31.9	51.0	13.7 12,000
243	2	1	1	COAL v.shy.	1	1				1 $\frac{3}{4}$				
243	3	0	1	COAL as above	0	1								
246	2	2	11	COAL dull R.sh.bds.	2	11	4/BMR			3.2	29.4	48.6	18.8	11,020
248	8	2	6	COAL as above	2	4	5/BMR			2 $\frac{1}{2}$				
249	1	0	5	Shale dk.gy.	0	2				3.3	31.9	49.5	15.3	11,730
270	10	21	9	Siltstone gy.& l.gy., R.wh.tuff.bds.& R.br.-21 gy.sideritic bds.	0	9								
276	6	5	8	Shale gy.	5	7								
276	11	0	5	Shale bk.	0	4								

[illegible]

[illegible]

Name and No. of Bore

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
549	1	3	0	COAL as above	3	0	17/BMR					2.8	26.5	46.3	24.4	10,390
552	1	3	0	COAL as above	3	0	18/BMR					3.1	27.1	52.2	17.6	11,360
552	6	0	5	COAL as above	0	5	19/BMR					3.3	27.6	54.5	14.6	11,770
554	6	2	0	COAL dull v.shy.	2	0				4 1/2		3.4	29.0	56.8	10.8	12,290
556	9	2	3	COAL as above	2	3	20/BMR									
560	5	3	8	Siltstone l.gy.	3	8										
561	9	1	4	Greywacke l.gy.v.f.grd.	1	4										
566	3	4	6	Siltstone gy.	4	6										
569	6	3	3	Greywacke l.gy.m.grd. ind., fractd.	3	3										
572	3	3	2	Greywacke l.gy.c.grd.	2	4										
588	6	15	10	Greywacke l.gy.c.grd. R.coal lenses	15	10										
590	2	1	8	COAL dull mainly	1	8	21/BMR					3.3	28.4	57.0	11.3	12,240
590	6	0	4	Shale bk.carb.	0	4										
592	6	2	0	COAL dull mainly	2	0	22/BMR					3.3	28.4	57.0	11.3	11,580
598	3	6	2	Greywacke l.gy. c. & m.grd., ind., carb.lam.	6	2										
600	1	1	5	Greywacke l.gy.c.grd.	1	5										
604	10	4	9	Greywacke l.gy.f.grd.	4	9										
607	6	2	8	Greywacke l.gy.m.grd., ind. fractd.	2	8										
610	11	3	5	Shale bk.carb. one gw.bd.	3	5										
615	5	4	6	Greywacke gy.f.grd.	4	6										
617	6	2	1	Siltstone gy. & gw.l.gy., carb.mat.	2	1										

Hole completed.

typed 24.1.54.

[illegible]

[illegible]

Estimated Depth Ft. Ins.		Estimated Thickness Ft. Ins.		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured Ft. Ins.		Coal Sample No.	Miner. Bands Included Ft. Ins.		Miner. Bands Excluded Ft. Ins.		PROXIMATE ANALYSIS				
												H.M.	V.	F.C.	ASH	B. TH. U/LB
272	7	3	8	Greywacke f.grd. l.gy.	3	8										
288	0	15	5	Siltstone gy.& gw.f.grd.l.gy.bdd.	15	5										
293	0	5	0	Greywacke l.grd.l.gy.	5	0										
325	11	32	11	Siltstone gy.& gw.f.grd.l.gy.bdd.	32	11										
329	6	3	1	Shale carb.	3	1										
335	6	6	6	Shale gy.w.t.sdy.bds.	6	6										
335	9	0	3	Shale coaly	0	3										
336	10	1	1	Claystone tuff., shy.wh.hd.	1	1										
337	6	0	8	COAL dull & bright bdd.w.few shy.bds.	0	8										
337	7	0	1	Claystone tuff. sdy.l.br.	0	1	7/BMR					2.9	29.7	40.3	19.1	11,180
338	6	0	11	COAL dull & bright bdd.	0	11										
338	10	0	4	Shale coaly	0	4										
341	3	2	5	COAL dull & bright bdd.w.slight calcite	2	5	8/BMR					2.7	31.4	49.9	16.0	11,730
341	5	0	2	Shale coaly	0	2										
345	5	4	0	Claystone tuff.sdy.wh.v.hd.	4	0										
347	7	2	2	COAL bright & dull bdd.	2	2	9/BMR					2.8	27.9	51.9	17.4	11,430
349	9	2	2	COAL as above	2	2	10/BMR					3.0	32.8	53.7	10.5	12,490
350	0	0	3	Siltstone shy.slightly tuff.l.br.	0	3										
352	6	2	6	COAL bright & dull bdd.	2	6	11/BMR					3.3	31.2	54.2	11.3	12,350
352	8	0	2	Shale coaly	0	2										
352	11	0	3	Shale sdy.hd.coaly	0	3										
353	6	0	7	COAL bright & dull bdd.	0	7										
353	7	0	1	Siltstone carb.	0	1				1						
353	11	0	4	COAL dull & bright bdd.	0	4										
354	0	0	1	Siltstone carb.	0	1	12/BMR			1		3.1	29.6	52.5	14.8	11,870
355	4	1	4	COAL dull & bright bdd.	1	4										
355	5	0	1	Siltstone carb.	0	1										
357	0	1	7	COAL bright & dull bds.& 1/2 bd.clst.tuff.	1	7	13/BMR					3.1	32.3	53.6	11.0	12,410
358	11	1	11	COAL bright w.dull bds.	1	11	14/BMR					3.1	34.3	54.1	8.5	12,920
361	0	2	1	Greywacke f.& v.f.grd.w.silty bds.	2	1										

Hole completed.

typed 24.1.54.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore B.H.R. 3(S) Roxburgh.

DISTRICT	Cessnock- Muswellbrook	COUNTY	Durham	PARISH	Vaux	PORTION	LOCATION	1413yds.NE Corner Por 24 438yds.NE Corner Por 3
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation		Ref. Map	N14-121	
Logged by	Paul G. Duff	Cased	Not	Datum	Standard	Ref. Report	1953/133	
Sunk by	Price/Anderson	Type of Drill	Goldfields 20	Depth	23'	Date Begun/Finished	9.10.53/13.10.53	

[illegible]

SADDLER'S CREEK SUBAREA

SADDLER'S CREEK SUBAREA

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals				
1S	867	1	288'	0 "	-	289'	7 "
	868	2	289'	9 $\frac{1}{2}$ "	-	291'	3 $\frac{1}{2}$ "
	869	3	291'	6 "	-	292'	4 "
	870	4	286'	1 "	-	389'	5 $\frac{1}{2}$ "
	871	5	390'	1 "	-	392'	7 "
	872	6	392'	7 "	-	395'	0 "
	873	7	396'	7 "	-	399'	3 "
	874	8	538'	3 "	-	540'	7 "
	875	9	540'	7 "	-	542'	11 "
	876	10	542'	11 "	-	545'	3 "
2S	877	1	236'	4 "	-	238'	4 "
	878	2	238'	6 "	-	241'	3 "
	879	3	336'	0 "	-	338'	2 "
	880	4	338'	3 "	-	341'	2 "
	881	5	341'	8 "	-	344'	10 "
	882	6	597'	4 "	-	600'	7 $\frac{1}{2}$ "
3S	1196	1	334'	3 $\frac{1}{2}$ "	-	337'	1 $\frac{1}{2}$ "
	1197	2	337'	10 $\frac{1}{2}$ "	-	339'	0 "
	1198	3	426'	8 "	-	429'	2 "
	1199	4	429'	2 "	-	431'	10 "
	1200	5	431'	10 "	-	434'	6 "
	1201	6	434'	6 "	-	437'	4 "
	1202	7	574'	1 "	-	576'	3 "
	1203	8	576'	3 "	-	578'	5 "
	1204	9	578'	5 "	-	580'	7 "
5S	1025	1	221'	2 "	-	223'	9 "
	1026	2	223'	11 "	-	226'	5 "
	1027	3	302'	0 "	-	303'	6 "
	1028	4	303'	6 "	-	305'	7 "
	1029	5	305'	10 $\frac{1}{2}$ "	-	307'	4 "
	1030	6	307'	7 $\frac{1}{2}$ "	-	309'	7 $\frac{1}{2}$ "
	1031	7	309'	7 $\frac{1}{2}$ "	-	311'	2 $\frac{1}{2}$ "
	1032	8	312'	10 "	-	314'	7 "
	1033	9	552'	7 "	-	554'	7 "
	1034	10	554'	7 "	-	557'	4 "
	1035	11	559'	7 "	-	561'	7 "
7S	1729	1	460'	5 "	-	462'	5 "
	1730	2	462'	5 "	-	464'	9 "
	1731	3	496'	0 "	-	498'	5 "
8S	1552	1	604'	0 "	-	606'	8 "
	1553	2	606'	8 $\frac{3}{4}$ "	-	608'	4 "
	1554	3	608'	4 "	-	610'	2 "
	1555	4	610'	7 "	-	611'	8 "

SADDLER'S CREEK SUBAREA

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals				
9S	1427	1	242'	2 "	-	244'	0 "
	1428	2	244'	0 "	-	245'	7 "
	1429	3	250'	0 "	-	252'	9 "
	1430	4	307'	7 $\frac{1}{2}$ "	-	309'	10 $\frac{1}{2}$ "
	1431	5	318'	5 $\frac{1}{2}$ "	-	320'	11 $\frac{1}{2}$ "
	1432	6	557'	2 $\frac{1}{2}$ "	-	558'	10 "
	1433	7	558'	10 "	-	560'	3 $\frac{1}{2}$ "
	1434	8	565'	10 $\frac{1}{2}$ "	-	568'	0 "
	1435	9	568'	9 "	-	570'	6 "
	1436	10	570'	6 "	-	572'	6 $\frac{1}{2}$ "
	1437	11	573'	0 $\frac{1}{2}$ "	-	575'	10 "
	1438	12	575'	10 "	-	578'	1 $\frac{1}{2}$ "
	1439	13	578'	3 $\frac{1}{2}$ "	-	579'	11 "
	1440	14	580'	0 "	-	582'	2 "
	1441	15	582'	4 "	-	584'	2 $\frac{1}{2}$ "
10S	2686	1	232'	2 "	-	234'	7 $\frac{1}{2}$ "
	2687	2	236'	9 "	-	238'	8 "
	2688	3	238'	10 $\frac{1}{2}$ "	-	241'	6 $\frac{1}{2}$ "
	2689	4	295'	0 "	-	297'	10 "
	2690	5	299'	9 "	-	301'	5 $\frac{3}{4}$ "
	2691	6	301'	6 $\frac{1}{2}$ "	-	302'	11 $\frac{1}{2}$ " (?)
	2692	7	409'	0 "	-	410'	10 "
	2693	8	411'	0 $\frac{1}{2}$ "	-	412'	9 $\frac{1}{2}$ "
	2694	9	413'	0 "	-	416'	0 "
	2695	10	416'	0 "	-	419'	0 "
	2696	11	428'	10 "	-	430'	5 "
	2697	12	722'	10 "	-	724'	3 "
	2698	13	725'	3 "	-	726'	9 "
	2699	14	726'	9 "	-	729'	9 "
	2700	15	853'	11 "	-	855'	7 "
	2701	16	855'	7 "	-	857'	4 "
	2702	17	923'	7 "	-	925'	10 "
	2703	18	925'	10 "	-	928'	1 "
	2704	19	945'	2 "	-	947'	5 "
	2705	20	947'	6 "	-	948'	9 "
	2706	21	1001'	1 "	-	1003'	7 "
	2707	22	1003'	7 "	-	1006'	0 "
	2708	23	1073'	5 "	-	1076'	3 "
	2709	24	1076'	3 "	-	1078'	5 "
	2710	25	1078'	10 "	-	1081'	6 "
	2711	26	1318'	4 "	-	1320'	0 "
	2712	27	1320'	1 "	-	1322'	5 "
	2713	28	1322'	5 "	-	1324'	9 "
	2714	29	1325'	2 "	-	1327'	10 "
	2760	30	1349'	5 "	-	1351'	0 "
	2761	31	1351'	4 "	-	1353'	7 "
	2762	32	1353'	7 "	-	1355'	10 "
	2763	33	1355'	10 "	-	1357'	2 "
	2764	34	1357'	3 "	-	1359'	9 "
	2765	35	1421'	7 "	-	1423'	3 "

SADDLER'S CREEK SUBAREA

Intervals of analysed coal samples

BMR Bore No.	Analysis No.	BMR Sample No.	Intervals					
10S	2766	36	1458'	2 "	-	1459'	8 "	
	2767	37	1459'	9 "	-	1462'	4 "	
	2768	38	1465'	1 "	-	1467'	3 "	
	2769	39	1467'	7 "	-	1469'	5 "	
	2770	40	1479'	10 "	-	1482'	5 "	
11S	2751	1	53'	0 "	-	54'	6 "	
	2752	2	54'	6 "	-	56'	6 "	
	2753	3	454'	5 "	-	456'	4 "	
	2754	4	458'	0 "	-	460'	7 "	
	2755	5	580'	5 "	-	582'	0 "	
	2756	6	582'	2 "	-	583'	6 "	
	2757	7	583'	6 "	-	586'	2 "	
	2758	8	587'	6 "	-	589'	8 "	
	2759	9	589'	8 "	-	591'	9 "	
12S	53/3180	1	107' 7"		-	109' 7"		
	3181	2	109' 7"		-	111' 6"		
	3182	3	114' 3"		-	116' 3"		
	3183	4	116' 3"		-	118' 4"		
	3184	5	119' 1"		-	121' 6"		
	3185	6	251' 0"		-	253' 7"		
	3186	7	254' 10"		-	257' 9"		
	3187	8	257' 9"		-	259' 4"		
	3188	9	259' 9"		-	261' 7"		

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 1S Saddler's Creek.

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	R 1315	LOCATION	1230 yds. NW Corner Por. 24 1375 yds. NE Corner Por. 24
Surveyed by	N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	413.1'	Ref. Map	N 14-121		
Logged by	N. Hoyling & K Malcolm	Cased	55'	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Houben & Kent	Type of Drill	Mindrill A 2000	Depth	606'8"	Date Begun/Finished	12.1.53/30.1.53		

[illegible]

Name and No. of Bore

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
462	9	0	3	COAL, mostly dull	0	3										
463	7	0	10	Shale, dark grey	0	10										
464	3	0	3	Shale, black	0	3										
464	9	0	6	Shale, dark grey	0	6										
465	9	1	0	Shale, black	1	0										
469	3	3	6	Greywacke, grey, fine-grained, with darker shaly bands	3	6										
471	0	0	9	Shale, dark grey	0	9										
471	10	0	10	COAL, mostly dull	0	10										
479	4	7	6	Shale, dark grey	7	6										
488	6	9	2	Greywacke, grey, fine to med.-grained with darker shaly bands, some sideritic	9	0										
489	6	1	0	Clay-ironstone, brownish-grey	1	0										
492	9	3	3	Clst., gy., hd., w. thin carbonaceous bands	3	3										
506	11	14	2	Slst., l. gy., v. hd. w. sdy. bds. and carbonaceous lam	14	2										
532	3	25	4	Greywacke, l. grey, m. to c. gr.; gen. hd. & mass.	25	4										
538	2	5	11	Siltstone as above	5	11										
538	3	0	1	Shale, bl., carbonaceous; v. hd.	0	1										
539	0	0	9	COAL gen. hd. & bright	0	9	8/BMR				3.7	34.3	57.5	4.0	13,670	
540	7	1	7	COAL gen. hd. & bright with thin shale & shaly coal-bands	1	7										
542	11	2	4	COAL as above 1'7"	2	4	9/BMR				4.0	34.0	58.3	3.7	13,610	
545	3	2	4	COAL as above 2'4"	2	4	10/BMR				4.6	34.6	52.2	3.6	12,670	
549	0	3	9	Claystone d. gy., shy., w. pl. remains	3	9										
551	8	2	8	Shale, bl., carbonaceous, v. hd. w. t. coal bds.	2	8										
557	6	5	10	Siltstone d. gy., w. thin sandy lenses	5	6										
563	0	5	6	Clst., l. gy. w. abund pl. remains	5	4										
580	6	17	6	Slst., as above 5'10"	17	6										
606	8	26	2	Gw., l. gy. f.-to m. gr., gen. hd. w. t. soft coal bands	26	2										
Hole completed																
typed 10.12.53																

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
579	0	34	6	Siltstone, gy., w.sideritic bds. and nodules & shale bands	30	1										
586	3	7	3	Shale greyish-black, silty	7	0										
589	3	3	0	Shale, purplish-grey, with a black bd.ind.	2	0										
595	3	6	0	Igneous rock, gy., coarse-grd., grading into	6	0										
597	4	2	1	Shale, purplish-grey, black at bottom, ind.	2	1										
598	9	1	5	COAL, dull, cindered	1	5										
599	1 1/2		4 1/2	Shale, black, indurated, graphitic	0	4 1/2	6/BMR			4 1/2		9.1	6.2	70.7	14.0	10,400
600	7 1/2	1	5	COAL, generally dull, cindered, gaseous	1	6										
600	10	0	2 1/2	Shale, black, indurated, graphitic	0	2 1/2										
601	1 1/2	0	2 1/2	COAL, generally, bright, cindered	0	2 1/2										
601	3 1/2	0	3	Shale, black, indurated, graphitic	0	3										
602	0	0	6 1/2	COAL, dull, cindered w.indurated shale lenses	0	6 1/2										
604	2 1/2	2	2 1/2	Shale black, indurated, graphitic, with cindered coal bands	2	2 1/2										
605	9 1/2	1	7	COAL, dull, cindered	1	7										
605	11	0	1 1/2	Shale as above	0	1 1/2										
606	4	0	5	COAL, dull, with bright bands, cindered	0	3 1/2										
608	6	2	2	Shale, dark grey to black with some bright coal bands	2	2										
613	4	4	10	Siltstone to v.f.-grd.greywacke	4	10										
630	2	16	10	Greywacke bright grey, f.grd.	16	7										
Hole completed.												typed 5.12.53				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 3S Saddler's Creek.

DISTRICT	Cessnock-	COUNTY		PARISH		PORTION		LOCATION	750 yds NW Corner Por.7
	Muswellbrook		Durham		Wynn	1			1855 yds SW Corner Por.7
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation	430.6'			Ref. Map	N 14-121
Logged by	N.Hoyling & P.Duff	Cased	20'	Datum	Standard			Ref. Report	Records 1953/133
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750 S/N 291	Depth	601'			Date Begun/Finished	12.2.53/15.3.53

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included	Min. Bands Excluded	PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				H.M.	V.	F.C.	ASH	B. TH. U/LB
19	0	19	0	Alluvium brown, sandy	6	0								
31	0	12	0	Greywacke, brown, med.grained, friable	11	0								
33	0	2	0	Siltstone iron stained broken	1	0								
34	10	1	10	Greywacke light grey fractured iron stained	0	10								
36	8	1	10	Greywacke light brown v.broken w.small pieces weathered coal	0	10								
39	9	3	1	Siltstone grey fractures iron stained thin carb.laminations	2	1								
40	11	1	2	COAL dull weathered	0	10								
42	0	1	1	Shale grey	0	4								
42	6	0	6	Greywacke light grey v.f.grained iron std.	0	6								
42	8	0	2	Greywacke as before w.shale bd.	0	2								
43	3	0	7	COAL as before but fragmentary	0	7								
44	10	1	7	Shale grey iron stained w.intb. l.gy.v.f g. greywacke	1	7								
45	8	0	10	Greywacke l.gy.f.g.	0	10								
46	1	0	5	Shale gy.and black silty	0	5								
46	6	0	5	Greywacke as before	0	5								
48	6	2	0	Shale bk.& dark gy.t.coal lenses pyrites	2	10								
52	9	4	3	Greywacke l.gy.coarse & med.grained	4	3								
53	9	1	0	Greywacke coarse grd. l.gy.	1	0								
58	9	5	0	Greywacke coarse grd. almost conglomerate	5	0								
61	2	2	5	Greywacke l.gy.med.& f.grd.some shale	2	5								
62	0	0	10	Siltstone l.gy.	0	10								
63	0	1	0	Shale dark gy.& black	0	6								
63	3	0	3	COAL bright	0	2								
63	4	0	1	Shale black & coal	0	1								
67	4	4	10	Shale gy.& dark gy.	4	0								
68	1	0	9	Siltstone grey	0	9								

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
576	3	2	2	COAL dull, some fragmentary	2	2	7/BMR					3.7	34.4	58.3	3.6	13,560
578	5	2	2	COAL as above	2	2	8/BMR					3.3	29.0	59.3	7.9	12,840
580	7	2	2	COAL as above	2	2	9/BMR					3.6	35.1	55.0	6.3	13,160
601	0	20	5	Greywacke l.gy. med.grained	10	9										
				Hole completed.	typed 11.12.53											

Name and No. of Bore BMR 4S Saddle Creek

DISTRICT	Cessnock- Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION 1	LOCATION	1043 yds SE Corner Por.162
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation	578.7	Ref. Map	N 14-121	778 yds SW Corner Por.156
Logged by	N.Hoyling, P.G.Duff & H.S.Taylor Rogers	Cased	43'	Datum	Standard	Ref. Report	Records 1953/133	
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750 S/N 291	Depth	621'	Date Begun/Finished	14.2.53/21.3.53	

[illegible]

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
606	2	0	6	COAL broken bright brittle	0	6										
611	6	5	4	Shale, black v.w.bdd., v.carbonaceous w.abdt.plant remains occ. $\frac{1}{2}$ " bands bright coal	5	4										
612	2		8	COAL bright clear	0	8										
612	9		7	Shale, black very carb. w.v.well preserved plant remains	0	7										
618	3	5	6	Shale, grey w.bdd. full of plant remains	5	6										
621	0	2	9	Greywacke grey f.gr.hd.part.bdd. w.occ. shale ptgs.	2	9										
Hole completed.																
												typed 12.12.53				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 5S Sadler's Creek

DISTRICT	Gessnock- Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	164	LOCATION	127 yds. NE Corner Por.171 287 yds. SE Corner Por.130
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation	537.6'	Ref. Map	N 14/121		
Logged by	N.Hoyling & P.Duff	Cased		Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Houben & Kent	Type of Drill	Mindrill A 2000	Depth	600'1"	Date Begun/Finished	19.2.53/10.3.53.		

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included	Min. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.
544	0	1	1	Shale bk. as before	0	5									
552	7	2	11	Shale bk.	2	10									
554	7	2	0	COAL dull v.shy., pyritif	2	0	9/BMR								
555	10	1	3	COAL as above	1	3									
555	11	0	1	Claystone tuff.	0	1	10/BMR		1						
557	4	1	5	COAL dull burnt shy.in part	1	5									
557	7	0	3	Claystone tuff.	0	3									
557	9	0	2	Shale bk.	0	2									
558	4	0	7	COAL as before	0	7									
558	0 1/2	0	4 1/2	Shale bk.carb.	0	4 1/2									
559	0	0	4 1/2	COAL powdery, dull?	0	4 1/2									
559	7	0	6	Shale bk.powdery coal bds.	0	4									
561	7	2	0	COAL burnt dull & bright	2	0	11/BMR								
561	9 1/2	0	2 1/2	Shale bk.	0	2 1/2									
562	0	0	2 1/2	COAL as before	0	2 1/2									
563	4	1	4	Shale bk.& dk.gy.	1	4									
566	9	3	5	Siltstone gy.t.carb.lam.	3	5									
568	11	2	2	Greywacke c.grained l.gy.	2	2									
569	2	0	3	Shale gy.	0	3									
575	6	6	4	Siltstone gy.& gw.l.gy. f.grained intb. fractured	6	4									
576	3	0	9	Shale gy.& bk.carb.	0	9									
577	6	1	3	COAL friable mostly dull	1	3									
580	1	2	7	Shale bk.w.coal bds.	2	7									
582	1	2	0	Shale gy.grading into slst.	2	0									
585	1	3	0	Greywacke l.gy.m.grained	3	0									
600	1	15	0	Greywacke l.gy.m.grained, R.pbl.bds.& carb. lam.	14	1									
				Hole completed.											
											typed 6.1.54.				

~~Cessnock~~

as well broc

.....

G. Duff M. A. Reynolds

S. Taylor-Rogers

Specific Boring Co

GEOLOGICAL DESCRIPTION OF STRATA

Core Measured	
Ft.	Ins.

Coal
Sample
No.

Min. Band Included	
Ft.	Ins

Min. Bands	Excluded	Ft.	Ins.
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

PROXIMATE ANALYSIS

H.M.	V.	F.C.	ASH	B. TH. U/LB
------	----	------	-----	-------------

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
63	10	2	1	Greywacke gn. & buff, f.gr. fairly s., loc. iron-stained	0	9										
72	3	8	5	Greywacke buff, f.m.gr.generally mass. but shows bedding locally on carb. mat., strong jtng.	8	5										
84	5	12	2	Greywacke intb. l.gy.f.grd. & gy.slst. w.t. sh. bds. & t.bd.red-br. wd.ironstone	12	2										
				Hole abandoned.												
typed 24.1.54.																

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 7S Saddler's Creek

DISTRICT	Cessnock-	COUNTY	Durham	PARISH	Wynn	PORTION	1	LOCATION	750 yds NW 871 yds NE	Corner Por. 23 Corner Por. 25
Surveyed by	Muswellbrook N. Gorbunow	Survey Method	Theodolite Traverse	Elevation	185.5'	Ref. Map	N 14-121			
Logged by	P. G. Duff, & H. S. Taylor-Rogers	Cased	No	Datum	Standard	Ref. Report Records	1953/133			
Sunk by	BMR	Type of Drill	Failine 750/262	Depth	537' 3"	Date Begun/Finished	5.3.53/27.5.53			

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.
17	9	17	9	Topsoil claystone, red-br.,sdy.	8	0									
24	7	6	10	Sandstone l.br.m.grained ironstained	2	4									
33	8	9	1	Greywacke l.br.f.grained ironstained	9	1									
36	2	2	6	Greywacke as before	2	6									
42	8	3	6	Shale dk.gy.& bk.silty ironstained hd.dense	6	3									
50	9	8	1	Shale dk.gy. in t.bds.w.intb.l.gy.f.grained gw.bds. cross bedding v.evident	8	1									
54	1	3	4	Greywacke l.br.,hd.,dense fractured	3	4									
56	9	2	8	Claystone silty y.br.,s.trace bk.sh.at base	2	2									
58	3½	1	6½	Claystone gy.& red-br.,s.broken	1	1½									
59	1½	0	10	Claystone y.br. w.large rough ironstone pbl. sand & gravel reported	0	4									
60	9	1	7½	Dolerite, sharp clear junction dk.gy.	1	1½									
66	9	6	0	Dolerite dk.gy.	5	5									
94	2	27	5	Dolerite dk.gy.v.fractured in places fractures filled w.calcite	27	5									
95	10	1	8	Siltstone l.gy.	1	8									
96	0	0	2	Shale bk.	0	2									
98	7	2	7	Shale dk.gy.& bk.coaly in part v.broken in part	2	7									
104	6	5	11	Siltstone l.gy.fractured	5	11									
107	9	3	3	Greywacke l.gy.f.grained	2	3									
114	2	6	5	Greywacke l.gy.f.grained grading into slst. at bot.	6	5									
121	11	7	9	Greywacke c.grained pbl.friable	7	9									

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
426	4	3	0	Claystone gy.v.hd.cut cone frac.occ. plant remains	3	0										
433	6	7	2	Greywacke gy.bdd.w.sh.ptgs.& occ. clst. modules	5	0										
460	5	26	11	Siltstone gy.w.bdd.w.abundant excellent plants. occ. t.bds. gw.in bot.	26	11										
462	5	2	0	COAL bk.w.bdd. mainly dull	2	0	1/BMR					4.1	32.5	40.4	15.0	11,670
464	9	2	4	COAL as above	2	4	2/BMR					4.2	35.8	54.9	5.1	13,450
475	10	11	1	Greywacke gy.hd.f.gr. v.carb.w.bds. up to 6" of slst.	11	1										
478	4	2	6	Shale bk. w.bdd. v.carb.coaly	2	1										
479	5	1	1	Soapstone gy.gn. bdd. s.	1	1										
479	6	0	1	Clay-Ironstone, v.hd.	0	1										
481	0	1	6	Shale, bk.f.bdd.v.carb.occ.silty	1	6										
482	8	1	0	COAL bk.bdd. mainly bright some vert.calcite	1	0										
484	7	2	1	Shale, bk.bdd. coaly carb.w.plant remains	2	1										
495	0	10	5	Siltstone dk.gy. w.bdd.w.t.ptgs.gw. & occ. carb. in top 4"	9	5										
495	10	0	10	COAL bk.bdd. mainly bright	0	9										
496	0	0	2	Claystone, drab. hd. sub conchoidal frac.	0	2										
496	5	2	5	COAL bk. w.bdd. dull w.occ.bds.bright coal	2	5	3/BMR					4.4	32.9	52.7	10.0	12,530
502	6	4	1	Shale dk.br. w.bdd. hrd.v.carb.w. plant remains	4	1										
527	1	24	7	Siltstone l.gy.v.w.bdd.fairly hd.occ.t. ptgs.f.w.gw.occ.2" bases hd.drab clst. excellent plant remains.	24	7										
537	3	10	2	Greywacke wh.hd.f.gr.mass.q.pure	10	2										
Hole completed.																
												typed 6.1.54.				

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 8S Saddler's Creek.

DISTRICT	Cossnoek Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	36	LOCATION	333 yds. NW Corner Por. 36 130 yds. NE Corner Por. 36
----------	-------------------------------------	--------	--------	--------	------	---------	----	----------	--

Surveyed by: N. Gorbunow Survey Method Theodolite Traverse Elevation 701.2' Ref. Map N 14-121

Logged by H.S. Taylor-Rogers 221 Cased Datum Standard Ref. Report Records 1953/133

Sunk by Pacific Boring Co. Type of Drill Failing 750/291 Depth 625' Date Begun/Finished 24.3.53/27.4.53

[illegible]

Name and No. of Bore

[illegible]

[illegible]

[illegible]

Hole completed.

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 9S Saddler's Creek

DISTRICT	Cessnock- Muswellbrook N.Gorbunow	COUNTY	Durham	PARISH	Wynn	PORTION	38	LOCATION	277 yds. SW corner Por. 38 250 yds. SE corner Por. 38
Surveyed by	H.S. Taylor-Rogers & M.A. Reynolds	Survey Method	Theodolite Traverse	Elevation	671.0'	Ref. Map	N 14-121		
Logged by		Cased	No	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750/290	Depth	599 6"	Date Begun/Finished	26.3.53/25.4.53		

[illegible]

Name and No. of Bore

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
566	4	0	5 $\frac{3}{8}$	COAL dull & bright bdd.	0	5 $\frac{3}{8}$										
566	9 $\frac{1}{2}$	0	5 $\frac{3}{8}$	COAL mostly dull, shaly	0	5 $\frac{3}{8}$	0/BMR					4.4	27.4	51.3	16.9	11,600
568		1	2 $\frac{1}{2}$	COAL dull & bright bdd.	1	2 $\frac{1}{2}$										
568	9		9	Shale dk.br.granular-slst.,br.-gy.		9										
570	6	1	9	COAL dull & bright bdd.	1	9	9/BMR					4.7	27.2	56.9	11.2	12,380
572	6 $\frac{1}{2}$	2	1 $\frac{1}{2}$	COAL as above 1'9"	2	1 $\frac{1}{2}$	10/BMR					4.6	32.7	55.3	7.4	13,080
573		0	6	Siltstone dk.br.-br.	0	6										
575	10	2	9 $\frac{1}{2}$	COAL dull,shaly,at top to bright bds.	2	9 $\frac{1}{2}$	1/BMR					4.4	29.7	56.6	9.3	12,790
578	11 $\frac{1}{2}$	2	3 $\frac{1}{2}$	COAL dull & bright banded	2	3 $\frac{1}{2}$	2/BMR					4.0	30.5	54.5	10.2	12,600
578	3 $\frac{1}{2}$	0	2	Siltstone br.	0	2										
578	6	0	2 $\frac{1}{2}$	COAL dull & bright bdd.	0	2 $\frac{1}{2}$										
579	2	0	0	COAL dull & bright bdd.broken	0	0	13/BMR					4.1	27.2	53.2	15.5	11,920
579	4	0	2	Siderite br.tough	0	2										
579	11	0	7	COAL mostly dull bright bds.more common at top & bot.	0	7										
580	0	0	1	Shale br.fri.	0	1										
581	4 $\frac{1}{2}$	1	4 $\frac{1}{2}$	COAL mostly dull w.bright bds.& R.t.br. slst.lens.	1	4 $\frac{1}{2}$										
581	6	0	1 $\frac{1}{2}$	Shale bk.carb.w.br.sdy lenses	0	1 $\frac{1}{2}$	14/BMR					4.1	25.4	48.2	22.3	10,910
582	2	0	8	COAL mostly dull w.bright bds.	0	8										
582	4	0	2	Siltstone dk.br.shaly	0	2										
584	2 $\frac{1}{2}$	1	10 $\frac{1}{2}$	COAL dull v.bright bdd.	1	10 $\frac{1}{2}$	15/BMR					4.7	29.8	52.4	13.1	12,180
584		0	4	Shale dk.gy.carb.-gy.	0	4										
585	4	0	9 $\frac{1}{2}$	Siltstone sideritic at top & w.Vertebraria	0	9 $\frac{1}{2}$										
599	6	14	2	Greywacke l.gy.f.grd.w.t.slst.bds.& w.R. t.carb.sh.bd.& 2 t.bds.coal	14	2										

Hole completed

typed 10.12.53

BUREAU OF MINERAL RESOURCES

BMR 105 Saddlers Creek

Name and No. of Bore

1260 yds. NW Corner Por. 6
1045 yds. NE Corner Por. 6

DISTRICT	Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	6.	LOCATION	1045 yds. NE Corner Por.6
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation	4637	Ref. Map	N 14-121		
Logged by	M.Reynolds & S.D.Henderson	Cased	22'	Datum	Standard	Ref. Report	Records 1953/33		
Sunk by	BMR	Type of Drill	Failing 1500	Depth	1599' 3"	Date Begun/Finished	18.5.53/17.9.53.		

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included	Miner. Bands Excluded	PROXIMATE ANALYSIS					
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.	V.
30	0	30	0	Clay br.sdy.(20') to slst.br.& gy. mottled sdy.	1	4									
40	9	18	9	Dolorite br.& gn.wd.to gn.gy.w.4' bd.slst. near bot.	16	4									
51	9	3	0	COAL dull w.some sh.ind.broken	2	4									
55	9	4	0	Siltstone v.f.grd.gw.gy.wd.shy.in part	4	0									
56	3	0	6	COAL dull & bright bdd. w.t.bd.carb.sh. at top	0	6									
73	0	16	9	Greywacke gy.v.f.grd.-l.gy.f.grd.w.occ. t.slst.bds.	16	9									
75	5	2	5	Greywacke gy.c.v.c.grd.w.t.slst.bds.& v.t. coal bds.	2	5									
77	10	2	5	Conglomerate f.grd.fri.	2	5									
78	5	0	7	Greywacke m.f.grd.	0	7									
78	3	0	3	Shale bk.carb. $\frac{3}{4}$ " & coal mostly bright, broken	0	3									
79	1	0	5	Siltstone gy.shy.	0	5									
80	6	1	5	Greywacke n.c.grd.w.t.slst.bd.	1	5									
114	7	4	1	Greywacke mostly f.grd.-m.grd.w.t.bds.gy. dk.gy.shy.slst.-t.bdd.carb.mat. s.fri. in part	32	5									
125	9	11	2	Siltstone dk.gy.shy.sdy.in part	10	4									
127	9	2	0	Shale l.gy.-off-wd.?tuff.	1	10									
151	7	23	10	Siltstone-Claystone dk.gy.shy.over top 2' w.t.gw.bd.	21	1									
153	7	2	0	Shale dk.gy.silty	2	0									

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
428	10	2	1	Claystone dk.br.w. ³ / ₄ " coal bd. to br.gy.tuff.	1	4	11/BMR					3.4	34.8	50.7	11.1	12,560
430	5	1	7	COAL dull & bright bdd.	1	4										
476	10	46	5	Greywacke l.gy.-gy.f.grd.w.t.gy.slst.bds.	45	9										
488	9	11	11	Greywacke l.gy.m.-c.grd.ind.in part	11	11										
504	9	16	0	Greywacke v.f.& f.grd.w.t.gy.clst.bds.	15	8										
521	2	16	5	Greywacke l.gy.m.grd.fri.near bot.	15	9										
526	7	5	5	Siltstone gy.& v.f.grd.gw.intb.	5	5										
528	1	1	6	Shale bk.carb.silty	1	6										
532	3	4	2	Siltstone gy.w.t.bd.carb.sh.at bot.	1	3										
535	3	3	0	Greywacke v.f.-f.grd.	2	10										
538	3	3	0	Siltstone gy.shy.w.bds.dk.gy.-bk.carb.sh.	1	10										
545	3	7	0	Siltstone gy.shy.w.bds.dk.gy.bk.carb.sh. & t.bds.sideritic	3	3										
555	9	10	6	Siltstone to claystone shy.gy.-dk.gy.	9	7										
558	11	3	2	Shale dk.gy.-bk.carb.w.t.bd.powdery bright coal	2	11										
561	4	2	5	COAL ind.&cindereed in part w.t.bd.of pyr. woody mat.	2	5										
573	6	12	2	Igneous rock br.f.grd.to dk.gy.c.grd. dolerite in central portion(wd.in part)	12	2										
575	10	2	4	COAL ind.shy.at top	2	4										
576	1	0	3	Shale bk.carb.ind.	0	3										
577	3	1	2	COAL powdery	0	3										
597	3	20	5	Siltstone dk.gy.-gy.becoming interlam.d. w.v.f.-f.grd.gw. as below	17	1										
606	7	8	11	Greywacke l.gy.v.f.-f.grd.w.gy.slst.bds.& numerous hm. carb.mat. sideritic in part	8	11										
635	11	29	4	Greywacke l.gy.f.grd.ind.at top	29	4										
648	8	12	9	Greywacke gy.v.f.grd.to slst.gy.-dk.w.t. apophysis (dolerite)near bot.	12	9										
649	9	1	1	Igneous rock dk.gy.f.grd.dolerite	1	1										
650	3	0	6	Shale bk.ind.	0	6										

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
953	10	1	11	Limestone impure l.gy.	1	11										
954	1	0	3	Clay-Ironstone l.gy.br.	0	3										
955	1	1	0	Siltstone l.gy.hd. & planty, sideritic at top	1	0										
955	6	0	5	Siltstone gy., tuff.	0	5										
955	11	0	5	Claystone yellowish br. tuff.	0	4										
957	4	1	5	Greywacke v.f.grd.gy. ind.	1	5										
960	5	3	1	Greywacke f.grd.l.gy.	3	1										
961	2	0	9	Siltstone l.gy.; sdy., broken	0	9										
964	0	2	10	Greywacke f.& v.f.grd.l.gy.	2	10										
965	3	1	3	Siltstone gy., planty, hd.	1	3										
968	3	3	0	Greywacke f.grd.l.gy.w.v.f.grd.bds.	3	0										
970	1	1	10	Siltstone dk.gy. planty	1	10										
973	0	2	11	Greywacke f.& v.f.grd.gy.	2	11										
976	0	3	0	Greywacke v.f.grd. w.silty & sdy.bds.	3	0										
978	11	2	11	Greywacke m.grd.l.gy.	2	11										
979	11	1	0	Greywacke f.grd.w.t.silty bd.	1	0										
981	1	1	2	Greywacke f.grd.l.gy.hd.broken	1	0										
981	8	0	7	Siltstone gy.sdy.broken	0	6										
991	6	9	10	Greywacke f.to m.grd.whitish w.carb. plant remains	9	10										
992	1	0	7	Greywacke f.grd.w.silty bd.	0	5										
993	2	1	1	Siltstone dk.gy.sdy.	0	10										
994	4	1	2	Greywacke m.grd.whitish	0	10										
995	7	1	3	Greywacke f.grd.l.gy.& slst.gy.intb.	0	11										
997	0	1	5	Shale dk.gy.	1	1										
1000	2	3	2	Greywacke m.grd.whitish	2	4										
1000	7	0	5	Siltstone bk.v.coaly	0	5										
1001	1	0	6	Siltstone gy.	0	6										
1001	4	0	3	COAL bright	0	3										
1001	10	0	6	Shale dk.gy.	0	6										
1003	7	1	9	COAL bright w.few dull bds.shattered	1	9	21/DMR		6	3.2	34.2	55.3	7.3	13,540		

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B.T.H. U/LB
1420	9	3	0	Greywacke f.grd.dk.gy.w.f.conglomerate bds.	2	11	35/BMR					1.9	30.6	47.8	19.7	11,760
1420	10	0	1	COAL hrd.& dull	0	1										
1421	1	0	3	Claystone, tuff. y.br.	0	3										
1421	3	0	1	COAL hd.& dull w.dissenunated pyrs.	0	1										
1421	7	0	4	Greywacke f.grd.gy.br.slightly tuff.	0	4										
1423	3	1	8	COAL hd.& dull w.t.bright bds.	1	8										
1425	9	2	6	COAL hd.& dull w.shy.bds., broken	1	4										
1429	3	3	6	COAL hd.& dull w.shy. bds.	1	6										
1430	6	1	3	Siltstone dk.gy. planty, slightly carb.	0	6										
1434	3	3	9	Greywacke f.grd.l.gy.	1	8										
1442	9	8	6	Greywacke f.grd.l.gy. w.silty bds.	8	0										
1449	5	6	8	Greywacke f.grd.l.gy.w.silty bds.	4	5										
1452	9	2	7	Greywacke v.f.grd. gy.& slst.dk.gy., bdd.	1	6										
1452	6	0	6	Siltstone gy. shy.& planty	0	5										
1453	6	1	0	COAL dull, jted.	0	9										
1454	6	1	0	COAL bright & dull bdd. & wh.veining	0	11	36/BMR					2.2	29.7	49.6	18.5	11,820
1455	7	1	1	Siltstone l.gy.; sdy., cone-in-cone structure	1	0										
1457	11	2	4	Siltstone dk.gy.planty, w.sdy.bds.	2	0										
1458	0	0	1	COAL hd.& dull	0	1										
1458	2	0	2	Siltstone gy.br.tuff.	0	2										
1459	8	1	6	COAL dull & bright bdd.w.t.bds. of tuff. clst.	1	2										
1459	9	0	1	Claystone tuff. l.br.	0	1										
1460	0	0	3	COAL dull & bright bdd.	0	1										
1460	4	0	4	COAL dull & bright bdd., broken	0	3										
1460	9	0	5	Siltstone carb.shy.	0	4				5						
1460	10	0	1	COAL dull & bright bdd.	0	1	37/BMR					1.9	26.4	47.6	24.1	10,970
1460	11	0	1	Siltstone gy.	0	1				1						
1461	2	0	3	COAL, dull & bright bdd.	0	3										
1461	5	0	3	Siltstone carb.shy.	0	3				3						
1461	8	0	3	Claystone, silty, slickensided	0	3				3						
1462	4	0	8	COAL dull & bright bdd.w.t.bds.of tuff.clst.	0	8										

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included	Min. Bands Excluded	PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.				Ft.	Ins.	Ft.	Ins.	H.M.
1462	7	0	3	Siltstone carb.	0	3	33/DMR	1	2.0	32.3	53.9	11.3	13,010	
1465	1	2	6	Siltstone gy. planty w.sdy.bds.	2	6								
1465	5	0	4	COAL dull & bright bdd.	0	4								
1465	6	0	1	Claystone br.tuff.w.coal traces	0	1								
1467	3	1	9	COAL dull & bright bdd.	1	9								
1467	7	0	4	Claystone br. tuff.silty & coaly	0	3	39/DMR	2.1	30.3	40.3	19.3	11,760		
1469	3	1	8	COAL dull & bright bdd.	1	6								
1469	5	0	2	COAL dull & bright bdd., broken	0	1								
1472	9	3	4	Greywacke f.grd.gy.w.silty bds.	3	4								
1473	3	0	6	Shale coaly	0	6								
1478	1	4	10	Siltstone gy.planty	4	6	40/DMR	0 1/2	2.1	33.4	53.1	11.4	12,970	
1479	10	1	9	Siltstone dk.gy. planty, slickensided, sdy. & coaly	1	9								
1479	11	0	1	COAL bright w.wh.veining	0	1								
1479	11 1/2	0	0 1/2	Shale coaly	0	0 1/2								
1480	1 1/2	0	2	COAL hd.& dull	0	2								
1480	3	0	1 1/2	Shale carb.	0	1 1/2	1 1/2	2.1	33.4	53.1	11.4	12,970		
1482	5	2	2	COAL dull & bright bdd.	2	2								
1483	8	1	3	Shale carb. w.bright coal bds.	1	3								
1483	11	0	3	COAL mainly bright	0	3								
1484	7	0	8	Siltstone carb.	0	8								
1487	7	3	0	Greywacke f.grd.gy.w.silty bds.	2	9	1	1	1	1	1	1	1	
1488	10	1	3	Siltstone gy. planty, w.sdy.bds.	1	1								
1489	7	0	9	Greywacke f.grd.l.gy.	0	9								
1489	9	0	2	COAL bright	0	2								
1490	0	0	3	Claystone br.tuff., silty & coaly	0	3								
1490	6	0	6	COAL silty dull	0	6	0	0	0	0	0	0	0	
1491	0	0	6	COAL dull w.bright bds.	0	6								
1491	2	0	2	Claystone silty tuff., l.br.	0	1								
1496	9	5	7	Greywacke f.grd.to m.grd.l.gy.w.silty bds.	5	3								

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Min. Bands Included		Min. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
1588	0	5	10	Greywacke m.grd. whitish	5	10										
1590	3	2	3	Greywacke v.f.grd.l.gy.	2	3										
1590	10	0	7	Siltstone l.gy. planty	0	7										
1592	2	1	4	Claystone l.gy. sideritic; sd.& planty	1	4										
1597	1	4	11	Greywacke f.grd. l.gy.w.m.grd. & silty bds.	4	11										
1597	3	2	2	Siltstone & silty clst. l.gy. planty w.t.carb. bds., slickensides	2	1										
				Hole completed.					typed lo.1.54.							

BUREAU OF MINERAL RESOURCES

Name and No. of Bore BMR 11S Saddler's Creek

DISTRICT	Cessnock-Muswellbrook	COUNTY	Durham	PARISH	Wynn	PORTION	6	LOCATION	1340 yds. SW Corner Por.6 498 yds. SE Corner Por.6
Surveyed by	N.Gorbunow	Survey Method	Theodolite Traverse	Elevation	521.2'	Ref. Map	N 14-121		
Logged by	S.D.Henderson	Cased	no	Datum	Standard	Ref. Report	Records 1953/133		
Sunk by	Pacific Boring Co.	Type of Drill	Failing 750/291	Depth	611'	Date Begun/Finished	22.7.53/26.8.53		

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
591	9	2	1	COAL as above	2	0	9/BMR					3.2	34.6	52.1	10.1	12,620
592	11	1	2	Claystone tuff. dk.br. to wh.	1	0										
593	7	0	8	Claystone tuff. l.yellow, s.w.pbl.of altered dolerite	0	3										
594	0	0	5	COAL hd.shy., irreg.fused to above clst.	0	5										
595	5	1	5	COAL dull & bright bdd.w.t.bd. of tuff.clst.	1	5										
595	7	0	2	Shale carb.	0	2										
596	4	0	9	Siltstone l.gy.slightly tuff.& coaly	0	9										
596	5	0	1	COAL, bright	0	1										
597	5	1	0	Siltstone l.gy. slightly tuff.& coaly	1	0										
598	0	0	7	Greywacke f.grd. l.gy.hd.	0	7										
599	2	1	2	Greywacke v.f.grd.gy. silty	1	2										
602	0	3	6	Greywacke f.to m.grd., whitish	4	4										
611	0	4	0	Greywacke m.grd. whitish & f.& v.f.grd. l.gy. intb.	4	0										
				Hole completed.												
											typed 16.1.54.					

Cessnock-

Name and No. of Bore

BMR

12S Saddler's Creek

DISTRICT _____

COUNTY Durham

PARISH Wynn

PORTION 7

LOCATION 874 yds. SW Corner Por. 7

Surveyed by SD. Henderson

Survey Method

..... PARISH
Theodolite Traverse

640.0'

Ref. Map N 14-121

H.S. Taylor-Rogers

Cased

Failing 750/290

Standard

Ref. Report Records 1953/133

Sunk by

Type of Drill

Depth 600'

Date Begun/Finished 15.9.53/16.10.53.

[illegible]

Page

Name and No. of Bore

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
202		7	7	1	Greywacke m.& f.grd.l.gy.		7	1								
203		1	0	6	Siltstone gy.		0	6								
204		0	0	11	Greywacke f.grd. wh.w.coaly streaks		0	11								
205		6	1	6	COAL dull & bright bdd.w.wh.veins		1	6								
214		9	9	3	Greywacke m.grd.whitish		9	3								
225		0	10	3	Shale, gy. sdy.		10	3								
234		9	9	9	Shale gy.sdy. w.t.bds.of f.grd.gw.		9	7								
239		8	4	11	Greywacke f.grd.l.gy.w.t.bds.of sh.gy.		4	11								
250		0	10	4	Greywacke m.grd.whitish		10	4								
250	11	0		11	Shale dk.gy.w.slickensided		0	11								
251		0	0	1	Greywacke m.grd.l.gy.		0	1								
253		7	2	7	COAL dull & bright bdd.broken		2	6	6/BMR			4.0	30.0	62.0	4.0 13,750	
254		0	0	5	Greywacke v.f.grd.dk.gy.sideritic		0	4								
254	10	0		10	Siltstone dk.gy.shy.& carb., slickensided		0	9								
257		9	2	11	COAL bright w.some dull bds.		2	11	7/BMR			2.8	22.0	67.9	7.3 13,360	
259		4	1	7	COAL dull & bright bdd.		1	7	8/BMR			2.7	17.1	71.5	8.7 13,210	
259		9	0	5	Siltstone dk.gy.shy.		0	5								
261		7	1	10	COAL dull w.bright bds.		1	10	9/BMR			2.8	12.6	78.3	6.3 13,720	
262		2	0	7	Shale carb. w.t.coal bds.		0	7								
265		9	3	7	Shale carb. planty		3	7								
275		8	9	11	Siltstone gy.shy. sdy.bds.		9	11								
286		9	11	1	Greywacke c.grd.gy.		11	1								
294		6	7	9	Greywacke m.grd., gy., jntd.& broken		7	6								
301		0	6	6	Greywacke m.grd.gy.to l.gy.		6	6								
308		1	7	1	Greywacke f.& v.f.grd.gy. to wh.w.slst. bds.		7	1								
309		7	1	6	Dolerite f.grd. gy.gn.		1	6								
329		4	19	9	Dolerite m.grd.gy.gn.		19	9								
345		8	16	4	Dolerite m.grd. gy.gn.s.		16	4								
355		2	9	6	Greywacke v.f.grd.l.gy.& slst.l.gy. to wh.altered		9	6								
363		8	8	6	Dolerite l.greenish-gy. f.grd. w.calcite veining, hd.		8	6								

Estimated Depth		Estimated Thickness		GEOLOGICAL DESCRIPTION OF STRATA	Core Measured		Coal Sample No.	Miner. Bands Included		Miner. Bands Excluded		PROXIMATE ANALYSIS				
Ft.	Ins.	Ft.	Ins.		Ft.	Ins.		Ft.	Ins.	Ft.	Ins.	H.M.	V.	F.C.	ASH	B. TH. U/LB
514		1	4	6			4	6								
517		3	3	7			3	7								
517		11	0	3			0	3								
519		11	2	0			2	0								
521		0	1	1			1	1								
523		5	2	5			2	5								
525		9	2	4			2	4								
526		3	0	6			0	6								
527		3	1	0			1	0								
528		0	0	9			0	8								
529		6	1	6			0	11								
530		7	1	1			0	6								
531		5	0	9			0	6								
533		0	1	7			1	7								
534		0	1	0			0	9								
565		0	31	0			30	0								
565		6	0	6			0	6								
565		9	0	3			0	3								
566		3	0	6			0	6								
566		9	0	6			0	6								
570		7	3	10			3	10								
571		3	1	1			1	1								
573		0	1	4			1	4								
577		4	4	4			4	4								
577		6	0	2			0	2								
578		1	0	7			0	7								
579		0	0	11			0	11								
580		0	1	0			0	4								
581		7	1	7			1	7								
581		11	0	4			0	4								
583		11	2	0			2	0								
584		2	0	3			0	3								

