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PROSPECTING ACTIVITIES EDITH RIVER AREA. PROGRESS REPORT FOR PERIOD 7TH TO 17TH JULY. 1953.

by

D. E. Gardner.

DARWIN, N.T.

PROSPECTING ACTIVITIES EDITH RIVER AREA.

PROGRESS REPORT FOR PERIOD

7TH TO 17TH JULY.

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CONTENTS.

PLANS.

SUMMARY.

Twelve uranium prospects were discovered within an area 4 miles long by 1¼ miles wide in Cullen granite, adjacent to the contact with Brocks Creek sediments. An additional prospect was previously known to occur there. They are all small, and judging from surface counts, appear to be low in grade.

It is recommended that a shallow shaft be put down on one prospect (No.6) to test the possibility of deposits of a stock work type in a broad, fractured and brecciated shear zone that carries six small copper-uranium prospects over a length of ¾ mile. Two additional deposits that are poorly exposed should be tested by shallow costean.

INTRODUCTION

The area prospected is shown in plan on Plate 2 and a locality map is given in Plate 1. It comprises a belt of granitic country approximately 4 miles long and 1¼ miles wide, bounded on the west by Yenberrie Creek and one of its southward flowing tributories, and on the east by hornfelsed sediments of lower Proterozoic age. (Brocks Creek group). The prospecting was done by geologists D.E. Gardner and N.O. Jones, and survey hands S.J. Quain of the geological party, and B. Brewster and E. Rigby of the geophysical party. In order to cover the area systematically, it was subdivided into small topographic units, bounded by such features as creeks and the crest of ridges. Each unit of the area was traversed by one or more members of the prospecting party, who used Geiger-counters or ratemeters to test shear zones and outcropping quarts veins for radio-activity. Prospects were examined by either of the two geologists, who also made general notes on the geology of each unit of the prospecting area.

GENERAL GEOLOGY.

The country rock is portion of the Lower Proterozoic Cullen granite (Noakes, 1949). This is intrusive into Lower Proterozoic sediments of the Brocks Creek Group, which, in the area examined, appear to be fine grained, tuffaceous rocks, hornfelsed near the contact with the granite. Much of the area is covered by a thin mantle of detrital material, consisting of red or grey dust, and grains of quartz and of felspar, provided by the surface weathering of granite. In these localities, outcrops are mainly granitic tors, and resistant, silicified portions of shear zones. Narrow discontinuous fringes of stream gravel appear in the banks of Yenberrie Creek.

Near the contact, and, in general, in the eastern half of the area, the granite is coarse grained. On the ridges in the central portion of the area porphyritic granite appears in addition to the coarse grained, and fine grained granite occurs in the western and northern part of the area. The granite appears in air photos to be intersected by faults, which have a general easterly trend. Some at least of these contain veins of white quartz, generally brecciated and recemented. No radio-active minerals were detected in them, and frequently the count rate given by them is lower than the background count in the adjacent granite.

Near its contact with the sediments, in the southern part of the area that was prospected, the granite is strongly sheared and brecciated. It is intricately interlaced by quartz which occurs in irregular masses, as veins, some dipping at small angles to the south east, and

as fine stringers. Movement in the shear or fracture zone has taken place at least twice. Quartz veins have been brecciated and the cavities filled with encrusting crystalline quartz. Along this sheared and brecciated zone, small gossanous quartz bodies, occuring as veins or irregular masses, contain a little malachite and torbernite.

A different type of deposit (No. 2) occurs near the southern part of the area examined at a slight distance west of the brecciated zone just described. Here a siliceous lens in a shear zone contains malachite and torbernite.

Prospect No. 11 has already been described (Gardner and Jones, 1953). It occurs within a belt of granite, generally coarse grained, but in part medium grained and porphyritic, and is characterized by shear zones of a distinct type. They are narrow, closely jointed rather than markedly foliated, and are silicified and slightly greisenized adjacent to joint planes. In places, the granite is reddish coloured, apparently because of the introduction of some iron into it. The felspar is in part altered to a dark green micaceous or chloritic material. The main shear zones trend 330 degrees, and subsidiary ones trend 350 degrees. At prospect No. 11, the highest geiger counts, at least near the surface are obtained in a narrow, strongly sheared band within a platy jointed silicified band of the type described above. Vaggy vein quartz, slightly gossanous, occurs adjacent to it, possibly only in the vicinity of some subsidiary fractures. The vein quartz carries films of torbernite on joint planes and it may contain the primary uranium mineral at depth. Country rock similar to that surrounding Prospect No. 11, containing the same type of slightly greisenous shear zones, occurs at other localities, mapped approximately in Plate 2. These were prospected carefully in an attempt to find other deposits similar to No. 11.

Prospect 12 and 13 occur within similar country. In the case of No. 12 uraniferous minerals have been introduced into a narrow brecciated vein in part gossanous and probably occur at depth along with primary sulphides.

INDIVIDUAL PROSPECTS .

GENERAL

Thirteen prospects were found. Their co-ordinates with respect to the centre point of photo No. 5164, Run 3A, Mt. Todd, are as follows:-

In southwest quadrant.

Prospect No.	Co-ordinates (inches)	Diagonal (inches)
1	3.26S/1.1W	3.45
2	3.23S/1.25W	3.47
3	3.07S/1.25W	3.31
4	2.56S/1.02W	2.76
5	2.44S/1.05W	2.65
6	2.44S/1.01W	2.55
7	2.15S/1.25W	2.48
8	1.85S/1.45W	2.26
9	2.71S/2.21W	3.51

In northwest quadrant.

10	0.45N/2.93W	2.96
11	1.03N/2.65W	2.85
12	1.27N/1.51W	1.96
13	3.34N/2.17W	3.96

PROSPECT 1.

Description. A shear zone trending 310 degrees (M) occurs on the western site of a hill of coarse grained granite capped by hornfelsed Brocks Creek tuffs and sediments. The locality is marked by two blazed trees. Flatly dipping quartz veins in the granite, or perhaps altered sediment, below the hornfels, give a Geiger-count lower than the background in the area. Sheared coarse grained granite near the creek on the east side of the hill gives counts slightly above the background. Near the top of the hill, medium grained granite occurs close to the hornfels, and coarse grained granite in small outcrops or floaters a little farther down. A small outcrop appeared to be of siliceous fine grained granite. Floaters of greisen, a few inches wide, occur near the top of the hill apparently within the hornfels.

The uranium prospect (Plate 3) occurs within the shear zone on the western side of the hill. Its dip was not determined, but is thought to be nearly vertical. The central part of the shear zone is silicified in lenticular masses up to 3 feet wide, and contains numerous ramifying quartz veinlets, which have been fractured or brecciated. Unsheared masses of country rock contain coarse pink felspar, a little quartz, and some granular black mica. A greenish alteration product of (?) felspar is seen in places. In the sheared portions, quartz, which presumably was granular, is crushed into elongated masses within a grey-white base. A little green staining of siliceous portions of the sheared rock may be due to copper, since testing by the geochemical party indicated its presence.

Some 10 feet west of the silicified band, coarse granite is exposed. Geiger-counts ranging from 140 to 250 per minute, and at one place 400 per minute, were obtained on the silicified sheared rock over a length of 27 feet, and over widths ranging from 1 to 3 feet. The background count on the granite surrounding the shear zone was 100 per minute, and on the sediments capping the hill, approximately 50 per minute.

The surface soil and detritus was picked away from the western wall of the prospect, and hard, little altered, coarse granite was exposed.

Conclusions and Recommendations.

The source of the radio-activity in Prospect No. 1 is not obvious. It is probably torbernite occuring in the silicified rock, either disseminated or coating joint planes. The type of occurrence here differs from those seen at (1) the original Edith River uranium bearing area (Fisher, 1952), (2) the Yenberrie Uranium Prospect (Gardner and Jones, 1953) and (3) Tennyson's Uranium Prospect (Gardner and Jones, 1953b).

It is recommended that a test hole be put down here, or at a similar prospect along the "contact shear zone", for the purpose of sampling at depths down to 15 feet. Explosives would be needed. Probably a hole put down on prospect 6 would yield information directly applicable to prospect 1.

PROSPECT 2.

Description. This prospect is approximately 500 feet from prospect No. 1, on a bearing of 270 degrees (M). A tree was blazed to mark the locality. A shear zone in coarse grained or medium grained granitic rock trends approximately 355 degrees (M), and appears to be vertical. Over a distance of 120 feet

southward from the blazed tree, it contains numerous quartz veins along its strike, and joint planes within it are thinly coated with hematite. A siliceous zone about 4 feet wide is in part drusy and slightly vuggy, but gives a Geiger count (105 per minute) not appreciably higher than the background count in the vicinity. At the blazed tree, the shear zone is intersected by a distinct jointing that strikes 280 degrees (M) and dips 70 degrees south. Here, a highly siliceous vein up to about 1 ft. wide strikes 358 degrees (M) and dips about 70 degrees westward. It is only poorly exposed. It is slightly vuggy, and contains malachite and occasional small tabular masses of torbernite in some of the cavities. Geiger counts ranging from 150 to 400 per minute were obtained over a length of 42 ft., and over widths ranging from 8 inches to 15 inches. A sketch plan of the prospect is given in plate 3. Detrital material was removed from the edges of the siliceous vein, exposing hard, sheared granite, which gave a Geiger count approximately equal to the background count.

Conclusions and Recommendations.

Prospect No. 2 occurs in a quartz vein in a shear zone and occupies what is possibly a tension fracture in it. It was characterized by the uranium-copper mineralization associated with the shear or fracture zone adjacent to the contact of the granite and sediments.

The lode formation, viz., the siliceous vein, is small and the country rock is hard and relatively unweathered. Any testing of the deposit should be deferred until further prospecting has been done in the same general area, viz. farther to the north and to the south near the contact.

PROSPECT 3.

Description. Travelling northwards from prospect No. 2, a minor gully is crossed at a distance of about 350 feet, and at approximately 100 feet farther northward, is a weathered, slightly gossary outcrop about 5 feet long by 3 feet wide. It barely projects from the soil cover. It appears to be weathered granite, silicified in part, and the siliceous portions have small cavities which may represent earlier sulphide minerals. Counts across the outcrop range from 240 to 400.

Conclusions and Recommendations.

The occurrence is small and the Geiger count relatively low. However because of the poor exposure, a costean will be sunk across it to check Geiger counts beneath the surface, and possibly to obtain samples. The costean should be put down to about 2 feet 6 inches, or, if the rock becomes hard before then, to a depth where it becomes impracticable to continue with pick and shovel.

PROSPECTS NOS. 4, 5, 6, and 7.

These prospects are situated on the crest of a rounded ridge elongated in a northerly direction, and all of them occur within the shear and fracture zone near the contact, seen typically at prospect No. 1. A sketch plan showing their approximate positions is given in Plate 3.

PROSPECT 4.

Description. The prospect is a quartz vein exposed over a length of 8 feet, apparently lenticular, and 8 inches to 15 inches wide. It trends 345 degrees (M) and is probably nearly vertical. The quartz is in part hard and dense, and in part granular and tough. It is slightly vuggy, and contains a little torbernite and malachite in the cavities. The vein shows a rough lineation along its strike, probably due in part to fracturing, and in part to deposition of quartz along fractures. Cavities in it are encrusted with crystalline quartz.

Coarse detrital grains of felspar and quartz and grey-brown dust cover most of the surrounding country. The vein may be within a shear zone, which if present, would be narrow, because coarse grained granite crops out 10 feet to the east of it, and at a somewhat greater distance on the west. Joints in the granite on the east trend 360 degrees (M) and dip at high angles to both east and west. On the west of the vein, the joints trend 350 degrees (M), and are vertical. A plan showing Geiger counts and widths across the prospect are given in Plate 3.

Conclusions and Recommendations.

The uranium and copper minerals are probably derived from primary sulphide minerals in a narrow lenticular quartz vein, that appears to occupy a tension fracture. Other deposits (Nos. 5 to 7) occur a short distance from it, and one or more of these should be tested by pitting to a depth of 3 feet. Explosives would be needed.

PROSPECT 5.

This contains two small deposits which will be termed 5A and 5B. Prospect 5A is about 300 feet north of prospect No. 4 and 120 feet north-west of prospect 5B. Both occur within a broard shear and fracture zone similar to that of prospect 1.

PROSPECT 5A.

A copper lode 15 feet long and with a maximum width of 12 inches strikes 350 degrees (M) and dips steeply to the west. It occupies a cross fracture in a shear zone in coarse grained granite. The direction of the main shearing is 320 degrees (M). Joints in the granite strike 057 degrees (M) and seem to be later than the mineralization.

The copper lode is marked by a gossanous outcrop, and has malachite and a little chalcocite at shallow depths. At the southern end of the gossan, counts of 600 per minute were obtained over an area of 4 inches x 6 inches on very silicified rock, resembling jasper in appearance. A little torbernite associated with yellow ochre stains was found in it. The uranium mineralization appears to occur at the junction of the copper lode and a small fault or overthrust, striking parallel to the direction of shearing.

PROSPECT 5B

Counts ranging from 140 to 500 per minute were obtained at the intersections of quartz veins or stringers which follow two directions of shearing trending 310 and 337 degrees (M). The veins trending in the latter directions are dislocated by these trending 310 degrees. A little Torbenite was found, with disseminated hematite in an area 3 inches x 4 inches within a quartz vein. Oxidized copper minerals were found only in traces. A feature of the torbenite occurrences was the blackening of the quartz crystals in the

same or an adjacent vug. In veins, at the same locality, which do not contain uranium minerals, the quartz crystals are colourless.

Conclusions and Recommendations.

Prospects 5A and 5B appear to be too small to warrant additional work, but, because of the possibility of surface leaching, they should be considered in the light of information gained if any larger deposit of similar type is tested. It is suggested that prospect 6 could be tested in this way.

PROSPECT 6.

Description. Prospect No. 6 is approximately 250 feet northwards from prospect 5 (See plate 3). A shear zone in coarse grained granite has an exposed width of 65 feet. Strikes 328 degrees (M), and its dip appears to be 59 degrees west. It is crossed by (a) two sets of brecciated quartz veins striking 298 and 343 degrees (M), and with observed dips of 74 degrees west and 64 degrees east, respectively; and (b) by quartz stringers trending 038 degrees (M), and probably vertical. At the intersections of the quartz veins brecciated masses of vein quartz and sheared granite occur up to 3 feet wide and 5 feet long. The prospect contains three small uraniferous deposits, shown as A,B, and C in Plate 3. These are described here in the order B,C,A.

Deposit B is a mass of brecciated quartz and fragments of brecciated, altered, sheared granite. Cavities in it are lined by encrusting, crystalline quartz. The outline of the brecciated mass reflects approximately the trends of the two systems of quartz veins that cut across the shear zone. Similar masses of brecciated quartz occur at the intersections of other veins, but they give a low Geiger count, and presumably contain no uranium minerals.

Deposit C is a brecciated quartz vein that strikes approximately 318 degrees (M) and appears to dip 27 degrees east. An outcropping mass 3 feet long by 1 ft. by 1 ft. gave Geiger counts ranging from 600 to 900 per minute. Counts appreciably above background were obtained farther north and south, apparently along the continuation of the same vein. At the point where the highest count was obtained, the vein was dense and siliceous and contained fine white weathered constituent, resembling weathered felspar, from the surface to a depth of 1 inch. Torbernite was disseminated through this weathered layer, and below it, the Geiger count diminished greatly.

Deposit A. This deposit consists of quartzose masses similar in appearance to C, but probably not quite in situ. They may have broken from a vein that dips, like that of C, at a fairly low angle. Counts on the broken masses of vein rock ranged from 240 to 300 per minute.

Conclusions and Recommendations. Uranium bearing minerals occur along with copper minerals in flat dipping quartz veins, and in brecciated vein quartz and brecciated sheared granite at the intersections of quartz veins. The openings for mineralization were provided probably by a slight crackling or brecciation, which resulted in a type of stockwork in which the fractures are narrow and widely spaced. The deposits appear at the surface to be small and scattered, and are probably equally so at depth. It is possible, though, that the near surface material has been considerably leached, and that uranium minerals are more abundantly disseminated at some depth. This would probably apply to other deposits in the copper uranium bearing shear fracture zone near the contact, viz. to deposits 1,4,5, 7 and 8. It is recommended that this possibility be tested by sinking a shaft to a depth of

10 feet at the median point between deposits A, B, and C. Explosives would be needed from the surface downwards.

PROSPECT 7

Description Between prospect 6 and prospect 8 the band of brecciation and open fracturing in the granite is offset b to the west by cross faults, and is cut by large veins of massive quartz. Quartz veining extends into the adjacent metamorphosed sediments. The prospect occurs within this faulted zone and consists of two small deposits (a) on the east wall of a gully cutting through the quartz veins and (b) in a knob of brecciated granite 100 feet south of (a).
(a) Quartz veins, in several directions, cut across a grey green rock, which is probably a sheared sediment. An area 3 feet by 2 feet on the wall of the gully gave counts greater than 200 per minute, and a maximum count of 250 per minute. The highest count was associated with a narrow vein of smoky quarts, slightly vuggy, striking approximately 150 degrees (M) and having a moderate westerly dip. Scattered flakes of weathered torbernite were visible in the quartz.

(b) Geiger counts of 300 and 250 per minute were obtained on the floors of two cavities in altered granite which is brecciated, and contain interlacing veins of encrusting quartz. Several cavities occur near the prospect. White stainings, apparently formed by evaporation of solutions, are visible within them, and in the two largest cavities, which gave the relatively high Geiger counts, a blue staining, possibly from copper, appears on the roof. No uraniferous mineral was visible. There has probably been a slight concentration of copper and of uranium by the evaporation of solutions containing them.

Several small patches found within 100 feet of these deposits gave counts up to 200 per minute. It is possible that here, as at the locality of prospect 6, a more continuous uranium bearing body may be present at depth. The results of the work done on prospect 6 should be applicable to prospect 7.

PROSPECT 8

Description Prospect 8 is within a strongly fractured and brecciated shear zone, about 200 feet wide and trending 315 degrees (M), in coarse grained granite, near its contact with hornfelsed sediments. A sketch plan is given in Plate 3. The dip of the shearing in a good exposure about 100 feet south of the prospect is 58 degrees east, but other dips are vertical and at angles of 65 degrees west, and these may indicate separate stages of movement in the shear zone, or subsidiary fractures adjacent and parallel to a reverse or thrust fault. The fractured granite is in places intricately veined with quartz stringers. Brecciation of quartz veins, and the introduction of encrusting, crystalline quartz into cavities, shows that fracturing has taken place in at least two distinct periods.

The prospect occurs within a siliceous mass 5 feet long by 4 feet wide, intersected by quartz stringers that strike 340 degrees (M) and dip 65 degrees west. At the south west corner of this mass, a body of dense, siliceous material 2 feet long by 1 ft. wide by 1ft. 6 ins. thick contains small cavities, some of which are filled with malachite. Films of torbernite appear on fracture surfaces.

Conclusions and Recommendations.

The prospect is in a small, irregularly shaped, silicified body within the brecciated shear zone. It is too small to warrant additional work. Co nsidered in conjunction

with prospects 1,4,5,6 and 7 it strengthens the possibility, mentioned under prospect 6, that a stockwork of copper-uranium mineralization may occur within this brecciated shear zone.

PROSPECT 9

Description. The prospect is within a hard shear or fracture belt about 10 feet wide in fine grained granite, porphyritic in quartz. A silicified band, apparently lenticular, ranges in width from 1 ft. to 3 ft. over a length of 32 ft., and dips 82 degrees west. At the prospect, it has a slight platy jointing trending 293 degrees (M), and throughout its length has late vertical joints trending 360 degrees (M), and others trending 077 degrees (M) and dipping steeply southward. The silicified lens appears to be of granite brecciated and re-cemented with quartz Geiger counts ranging from 220 to 400 per minute were obtained over a length of 2 feet and a width of approximately 1 ft. 6 inches. The site is marked by a blazed tree.

Conclusions and Recommendations. The uranium bearing minerals probably occur within joint planes intersecting the fracture zone. If so, they would be restricted, at depth as at the surface, to a very small area. The prospect is too small to warrant further attention.

PROSPECT 10.

The prospect occurs in a fine grained granite rock that crops out on a flat topped hill, whose flanks are formed of massive porphyritic granite. The fine granite has a marked platy jointing trending 340 degrees (M), and a weaker cross jointing at approximately 270 degrees (M), both dip at a variable high angle. In composition it varies irregularly between quartz-rich and a mica-rich type. An area 6 ft. by 4 ft. within the mica-rich granite, elongated in a northerly direction, gave Geiger counts greater than 200 per minute, and a maximum count of 300 per minute. The count did not improve at the bottom of a hole 6 inches deep. No uranium bearing mineral was seen.

In view of its small size and apparent low grade, no further work is warranted on this prospect.

PROSPECT 11

This is the "Yenberrie Uranium Prospect discovered early in 1953 by Messrs. Young and Mazlin, and reported on by Gardner and Jones (1953). Torbernite has been found in a strongly sheared band 14 inches wide in a fracture or shear zone, in coarse grained granite, characterized by platy jointing along the strike, and slight greiserization and silicification. The eastern wall or hanging wall of the strongly sheared band is in places gossanous, and contains micaceous torbernite in joint planes. The type of country rock and the shear zones, characteristic of the area surrounding the Yenberrie prospect have already been described in the section of this report dealing with General Geology.

PROSPECT 12.

Description. This prospect, situated at the junction of two creeks, is a vein or band of siliceous breccia, 9 inches wide, trending 342 degrees (M) and with an apparent dip at the surface of 75 degrees east. A sketch map is given in Plate 3. The exposed length is 4 feet. Southwards the vein passes into a bank of creek gravel and northwards it is covered by soil and detritus. It is intersected by joints trending 280 degrees (M) and 82 degrees (M), dipping both to north and to the south. Coarse grained granite is exposed at its western edge. At the surface, the vein appears to represent coarse granite,

slightly greiserized, and later brecciated and silicified. It contains cavities, some limonitic, and others coated or filled with encrusting crystalline quartz.

A costean 5 feet long in a direction 82 degrees (M) (that is, along a prominent jointing in the granite), 2 feet wide and 2 ft. 6 ins. deep, was put down at the northern end of the outcrop, where the surface level is 1 ft. 6 ins. below the top of the outcrop. The dip of the vein appeared in the southern wall of the pit to be about 45 degrees east. The country rock exposed in the costean is coarse grained granite, showing platy jointing, and chloritic alteration of the Yenberrie type. The vein is in part made up of dense, compact, cherty quartz, with few cavities, and in part of somewhat granular, vuggy quartz showing limonitic boxwork and containing small flakes of torbernite on joint planes. Geiger counts given by Austronic Ratemeter using the 1 minute 20 X scale, in counts per minute, were:

Background, near edge of creek, north of prospect 100 to 120.

On outcrop, 1 ft. south of northern end, 500 to 560

Along south wall of costean, 6 ins. below surface, measured from east end 0 - 6 ins. 300
6" - 1'6" - 400
2' - 360
3' - 280

Along south wall, 6 ins from bottom (2' below surface), from east end: at 6" - 320
1' - 400
1'6" - 360

Along east wall, from top to bottom, measured from top:

at 6" - 300
1'0" - 240
1'6" - 300
2' - 300
2'6" - 400

The vein appears to be at about the foot of the eastern wall, and the bottom of the costean if continued a foot or two further east should cut it.

Conclusions and Recommendations.

The uranium minerals occur in a brecciated and silicified band or vein, in coarse granite. The latter is probably intersected by platy joints striking parallel to the vein. The prospect appears to be narrow and too low in grade to be of economic interest. It appears to extend northward through the eastern end of the shallow costean, this should be extended farther eastward to test the vein, and to find out whether a sheared band, like that at prospect 11, possibly uraniferous occurs on its eastern side.

PROSPECT 13

The prospect occurs in a shear zone, that trends 325 degrees (M) and dips at a high angle, probably to the west, in medium gained porphyritic granite. The sheared zone 6 to 12 inches wide, is enclosed in a band of platy fracturing and silicification some 5 feet wide. The northern end of the shear is offset approximately 6 ft. to the east by an easterly trending fracture, and the deposit occurs immediately south of this. A maximum Geiger count of 260 per minute was obtained, and counts exceeding 200 per minute occur over an area 4 feet by 1 ft. along the narrow sheared zone. No uranium minerals were seen.

In view of the small size and apparent low grade of the deposit, no further work is warranted.

REFERENCES.

Gardner D.E. and Jones N.O.	1953:	Preliminary report on Yenberrie Uranium Prospect.
Fisher N.H.	1952:	Edith River Uranium Bearing Area N.T. Bur. Min. Res. Geol. Records Rept. 1952/59.
Gardner D.E. and Jones N.O.	1953:	Tennyson's Uranium Prospect.

M.B. 14

The Northern Territory of Australia

(To be retained at Warden's Office)

MINES BRANCH

WARDEN'S OFFICE,

No.....

Dated.....19....

Subject.....

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Objection.....

Hearing.....

Recommended.....

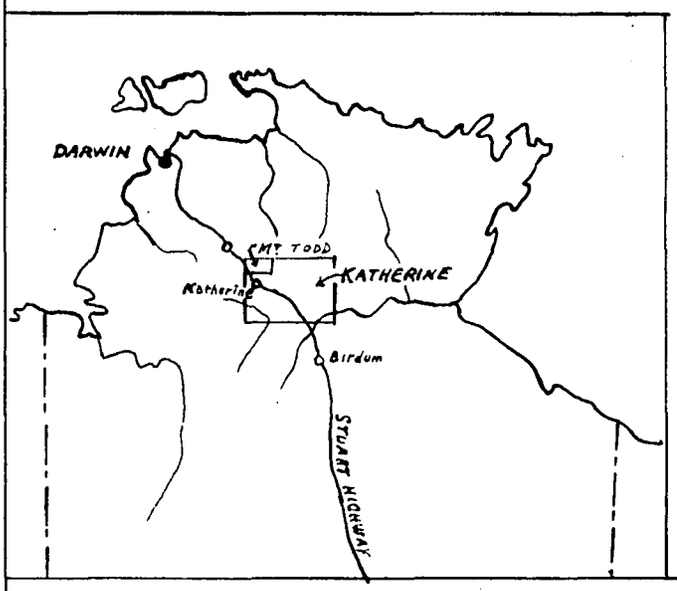
Approved.....

Gazetted.....

Posted.....

EDITH RIVER PROSPECTING, 7TH. TO 17TH JULY.

PLATE I.



POSITION OF AREA DEALT WITH IN REPORT AND REFERENCE TO AUSTRALIAN FOUR-MILE AND ONE-MILE SERIES.

LOCALITY MAP

Traced from photo-mosaic.

Scale of Miles

½ 0 1 2

Reference.

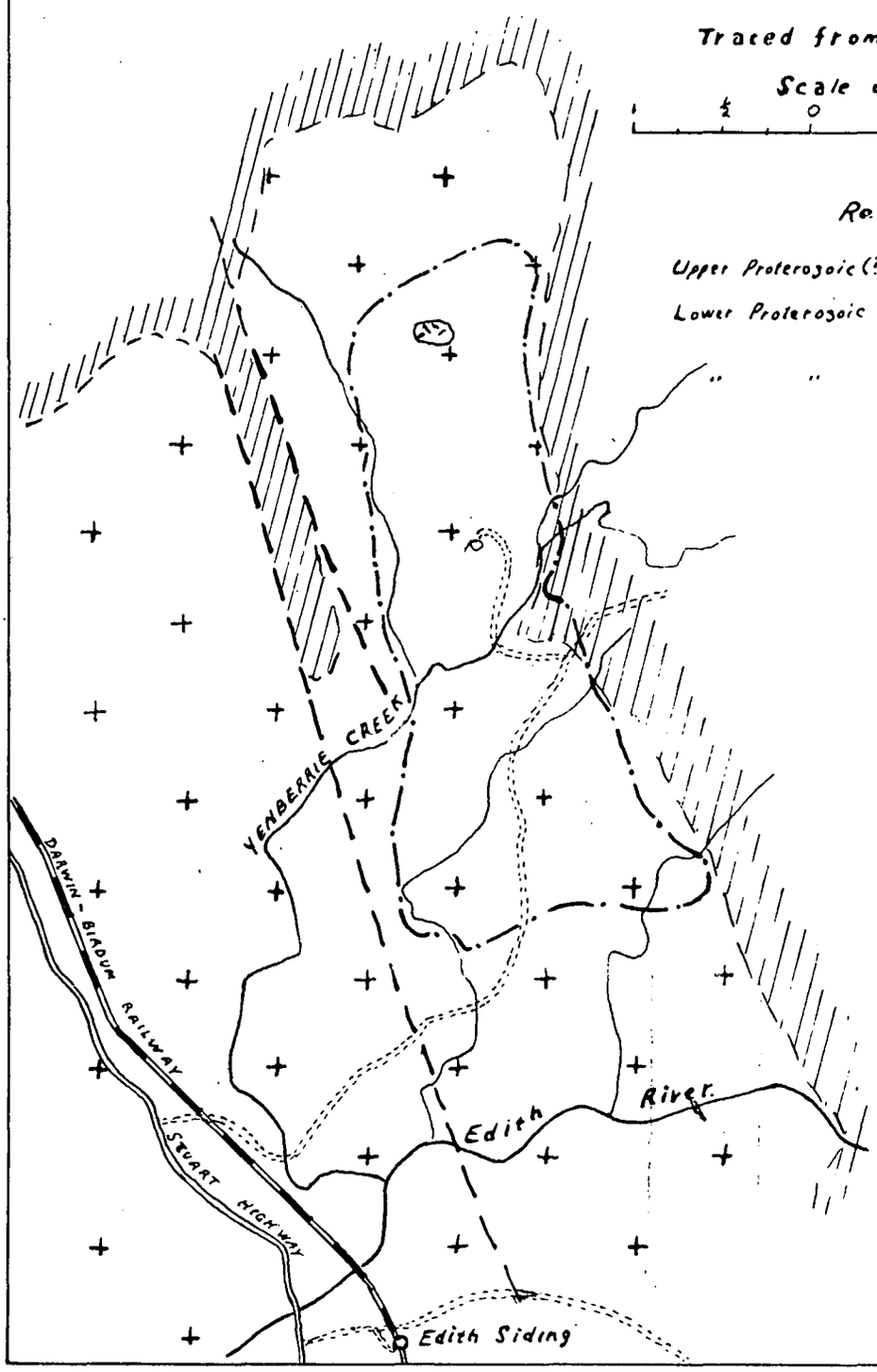
Upper Proterozoic (?) — Toscanite

Lower Proterozoic — Granite

" " — Brocks Creek Group, hornfelsed.

Faults

Boundary of area prospected.



EDITH RIVER PROSPECTING.

PLATE 2.

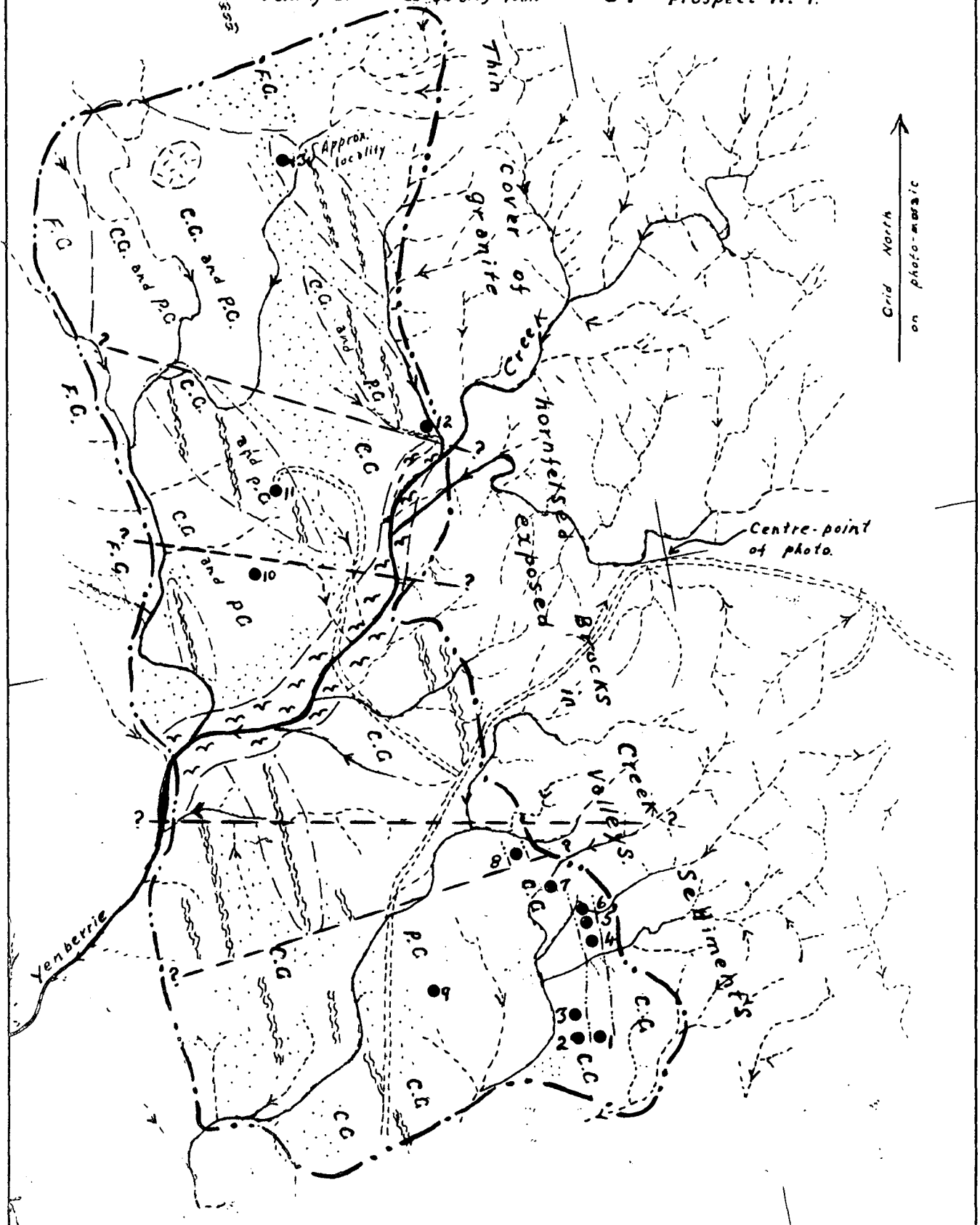
Plan showing area prospected 7th to 17th JULY, and localities of prospects.

Traced from air-photo, MT TODD 1-MILE SHEET, SURVEY 417, RUN 3A, No 5164.

Approximate scale: 2 inches = 1 mile.

Reference

- Alluvium (creek gravel)
- Detritus, mainly grains from disintegrated granite.
- Toscanite (?)
- Granitic country containing shear-zones typified by those at Yenberrie Prospect (No 11)
- Sheared granite, generally containing brecciated quartz-veins
- Boundary of area prospected.
- C.G. Coarse-grained granite
- P.G. Porphyritic "
- F.G. Fine-grained "
- ?——? Probable faults, traced from air-photos; generally contain brecciated veins of white quartz
- ●9 Prospect No. 9.



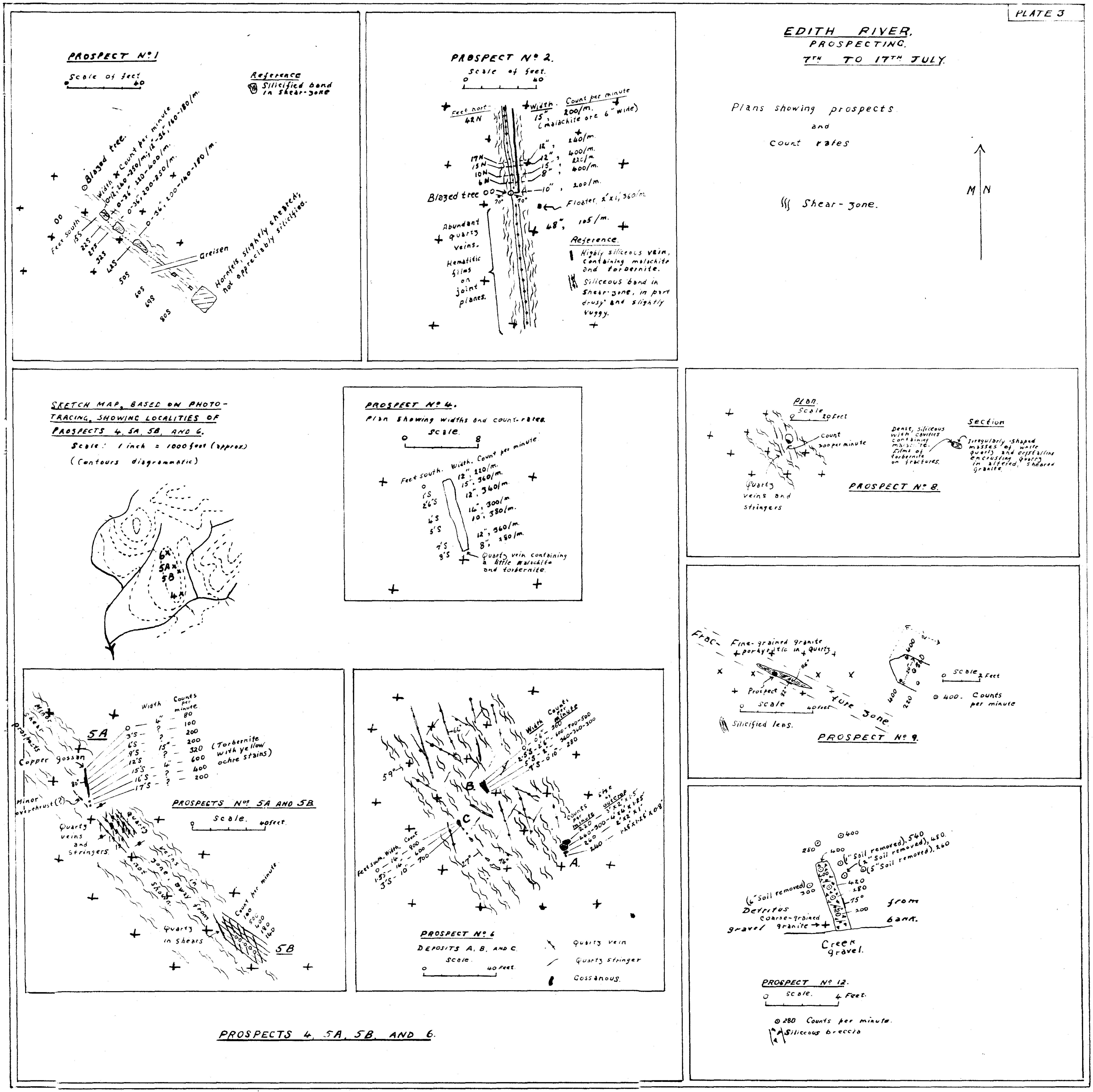


PLATE 3
EDITH RIVER.
PROSPECTING.
7TH TO 17TH JULY.
Plans showing prospects and count rates
Shear-zone.
M N
PROSPECT No. 1
Scale of feet 0 40
Reference
Silicified band in Shear-zone
Blazed tree.
Width x Count per minute
Feet South
Greisen
Hornfels, slightly sheared, not appreciably silicified.
PROSPECT No. 2.
Scale of feet. 0 40
Feet north
Width. Count per minute
15" 200/m. (malachite ore 6" wide)
Blazed tree
Floater, 2' x 1', 360/m.
Abundant quartz veins.
Hematitic films on joint planes.
Reference.
Highly siliceous vein, containing malachite and torbernite.
Siliceous band in shear-zone, in part drusy and slightly vuggy.
SKETCH MAP, BASED ON PHOTO-TRACING, SHOWING LOCALITIES OF PROSPECTS 4, 5A, 5B, AND 6.
Scale: 1 inch = 1000 feet (approx)
(Contours diagrammatic)
PROSPECT No. 4.
Plan showing widths and count-rates.
Scale 0 8
Feet south. Width. Count per minute.
Quartz vein containing a little malachite and torbernite.
Plan.
Scale 20 feet
Count 300 per minute
Section
Dense, siliceous with cavities containing malachite. Films of torbernite on fractures.
Irregularly-shaped masses of white quartz and crystalline encrusting quartz in altered, sheared granite.
Quartz veins and stringers
PROSPECT No. 8.
Fracture zone
Fine-grained granite porphyritic in quartz
Prospect
Scale 40 feet
Scale 2 feet
400. Counts per minute
Silicified lens.
PROSPECT No. 9.
PROSPECTS Nos. 5A AND 5B
Scale. 40 feet.
Minor shear prospects
Copper gossan
Width Counts per minute
(Torbernite with yellow ochre stains)
Minor overthrust (?)
Quartz veins and stringers.
Veins in zone, away from, not shown.
Quartz in shears
Count per minute
5A
5B
PROSPECT No. 6
DEPOSITS A, B, AND C.
Scale. 0 40 feet.
Quartz vein
Quartz stringer
Gossanous
Width Counts per minute
Counts per minute
Size of outcrop
Feet south. Width. Count
PROSPECTS 4, 5A, 5B, AND 6.
("Soil removed)
Detritus
Coarse-grained granite
gravel
from bank.
Creek gravel.
PROSPECT No. 12.
Scale. 0 4 Feet.
280 Counts per minute.
Siliceous breccia