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REPORT ON THE
DAD (1-48) CLAIM GROUP
CLEAR CREEK AREA
DAWSON MINING DISTRICT

for

JEWEL RESOURCES LTD. (NPL)

by

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1.0 Summary and Conclusions

The Dad (1-48) mineral claims were located for Mr. C. Shandalla of Mission, B.C. to cover known radioactive mineral occurrences on Clear Creek in the Dawson Mining District, Y.T. These occurrences have been subjected to two periods of exploration including aerial scintillometer, ground radiometric, geology, and geochemistry surveys, and diamond drilling during the period 1969 - 1975.

The main zones of radioactivity are related to small plutons of porphyritic granite which have been shown to contain up to 0.05% U_3O_8 and 0.02% MoS_2 in limited sampling. Uranium counts varying between 15 to 30 with a local background of 1 to 2 have been obtained over zones A and B. The diamond drills holes are reported to demonstrate counts 4 to 6 times above background, but no assaying has been done.

Several areas remain untested on the property where coarse textured porphyritic granitic rocks are reported and indicated to be anomalous radioactively. The property has the potential of containing radioactive zones of economic volumes and grades.

2.0 Introduction

The Dad (1-48) claim group is located at Clear Creek, Yukon Territory near mileage 47.8 on the Dawson-Stewart Crossing Road. The claims were staked in August 1978 to cover known uranium occurrences. In 1966, George Karens, a Whitehorse prospector, initially staked this area of anomalous radioactivity. During the years 1969 to 1975 several periods of exploration activity were undertaken.

This report is based on a review of reports by A. R. Packer, P. Eng., D. Mark, Geophysist, J. W. MacLeod, P. Eng., L. T. Jory, P. Eng. and R. H. Hilker, P. Eng. and available governmental publications. The author visited the Dad claims on Sept. 2, 1978.

A summary of exploration undertaken on the uranium occurrences is presented and recommendations made for further surveys including more detailed geology and radiometric mapping in the Zone A and B areas. Surveys will be outlined for the dike on claims Dad 27, 28 and 29. Preliminary exploration will be recommended for the eastern half of the claim block, as this area appears to have been unexplored.

An estimate of costs has been prepared.

JEWEL RESOURCES LTD. (N.P.L.)

DAD (I-48) CLAIMS

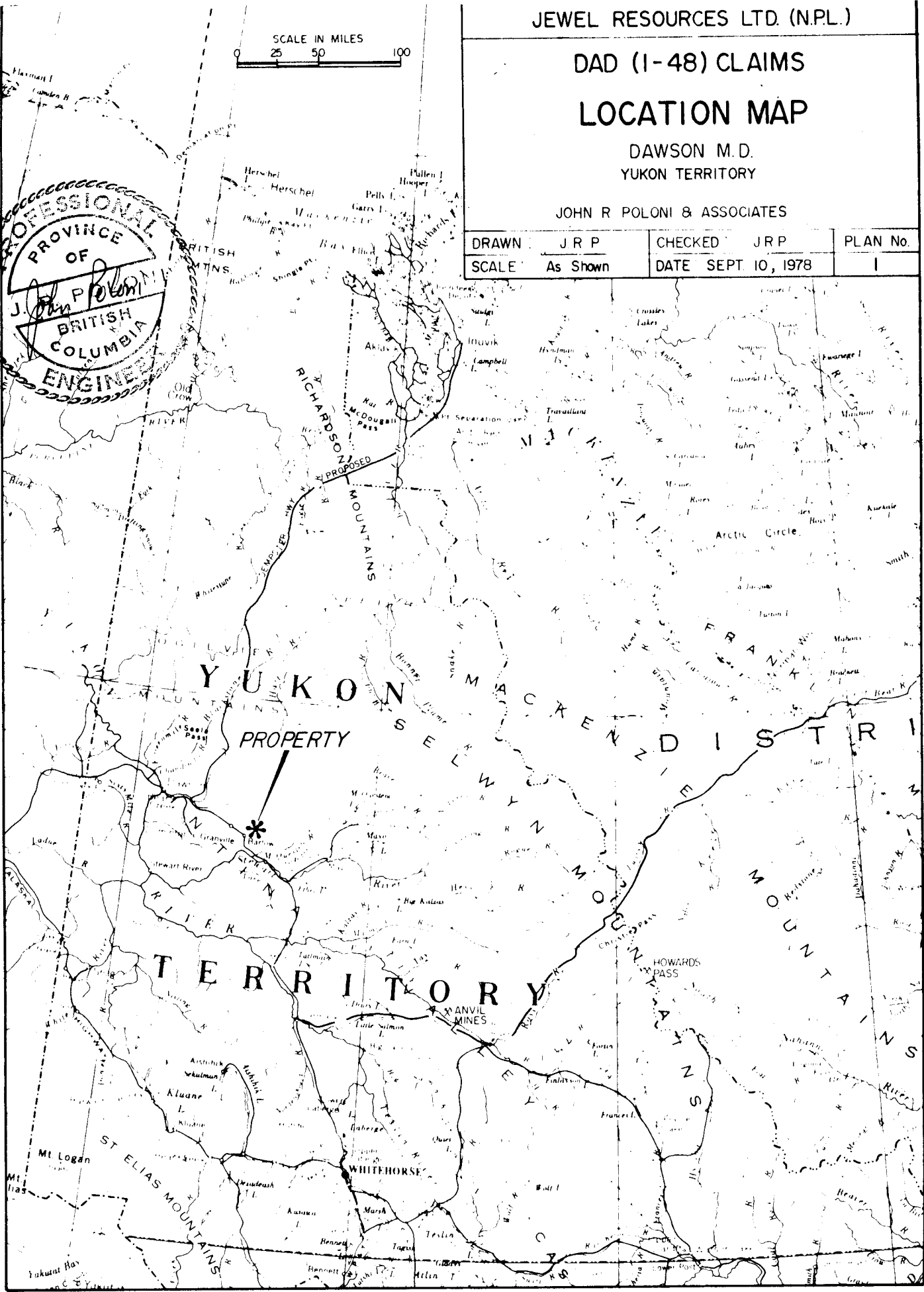
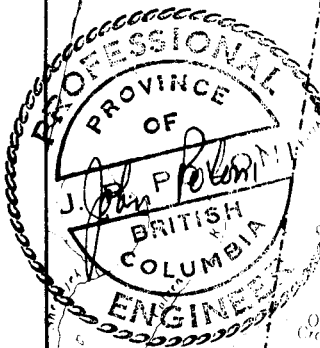
LOCATION MAP

DAWSON M.D.
YUKON TERRITORY

JOHN R POLONI & ASSOCIATES

DRAWN	J R P	CHECKED	J R P	PLAN No.
SCALE	As Shown	DATE	SEPT 10, 1978	I

SCALE IN MILES
0 25 50 100



Location Map

Plan No. 1

3.0 Location and Accessibility

The Dad (1-48) claim group is located approximately 3 miles easterly from mileage 47.8 on the Dawson-Stewart Crossing Road at about Latitude $63^{\circ}46'N$ and Longitude $137^{\circ}32'W$ in the Dawson Mining District, Yukon Territory. N.T.S. map sheets are 115-P-13 and 14. The claims straddle Clear Creek, a tributary of the Stewart River, and several tributary creeks.

Access is via tractor road from a gravel pit at mileage 47.8 in the Dawson-Stewart Crossing, North-easterly for approximately four miles along the Clear Creek road, and then easterly for 1/2 mile to the westerly claim boundary. Both Zone A and B can be reached by good 4-wheel drive roads. Approximately four miles of access roads have been built on the claims by previous operators.

An airstrip is shown near the Stewart River approximately ten miles south of the claims.

4.0 Claim Information

The Dad (1-48) group of mineral claims lie in the Dawson Mining District, Yukon Territory as shown on N.T.S. Sheet 115-P-13 and 14. Plan No. 2. The claims were staked during the middle of August 1978 for Mr. C. Shandalla of Mission City, B.C., an officer of Jewel Resources Ltd. Initial and final posts for DAD 5, 6, and 3, 4 respectively, were examined by the author on September 2, 1978. These claims had been located by W. McKinnon on August 17, 1978.

Recording dates for the claims were Aug. 31, 1978.

All data pertaining to locators names and location dates will be appended at a later date when obtained from the Mining Recorder's Office in Dawson and Whitehorse, Y.T.

5.0 Physical Features

The claims cover terrain described as low hilly relief with poplar and spruce cover. Elevations range from 2000 to 3500 feet A.S.L. in the area, but elevation changes are only moderate except for infrequent steep gorges along Clear Creek and its tributaries. Much of the area is covered by stream deposits and alluvium but locally moss covered permafrost areas of spruce forest are found.

6.0 History

The presence of allanite, a rare earth silicate, and monazite, a rare earth phosphate in the Clear Creek area has been known for some time. Bostock, H. S. (1964) reported the presence of allanite in porphyritic syenite from the Syenite Range, north of Clear Creek.

In 1966, George Karens, a Whitehorse prospector, located the Russ claims over an area of anomalous radioactivity in the Clear Creek area. This initiated the present era of exploration.

7.0 Past Exploration

7.1 1967

In 1967, the showings were examined by L. T. Jory, P. Eng. of Campbell, Dolmage and Associates. Jory states, "At the central part of showing, the outcrops are pegmatitic (porphyritic)

granite with phenocrysts of light creamish feldspar two inches or more in length. The matrix to the phenocrysts is composed of finer grained feldspars, 20% dull quartz, and less than 5% mafics, principally mica. The granite is strongly fractured with three more or less mutually perpendicular fracture sets".

Jory, L. T. describes radioactivity of three or four times background on the vicinity of the showings. Several samples submitted for assay ran between 0.01-0.05% U_3O_8 . Two samples assayed 0.02% MoS_2 .

Six hundred feet of Ex diamond drilling were recommended, but were not undertaken at that time.

7.2 1969-1970

A report by A. R. Parker, P. Eng., 1970, describes the methods used and results obtained from Radiometric Geophysical Surveys completed on the Russ claims during the period July 1969 to June 1970. Two surveys were undertaken, an Airborne Scintillometer Survey of approximately 100 miles conducted by Geotronics Surveys Ltd., and a ground Radiometric Survey of approximately 54 miles, by A. R. Parker and Associates Ltd.

As summarized by Hilker, R. G., May 1, 1976, these airborne and ground radiometric surveys outlined several areas of anomalous radiation exceeding 0.6 milliroentgens per hour. The results of these surveys are shown on Plan No. 4

As described by Parker, A. R., June 1, 1970, "Radiation, according to field evidence appears to be directly related to a small pluton of porphyritic granite and several satellite apophyses of similar rock which have intruded older granites near

their contact with Precambrian? schists". Parker, A. R. feels that mineralization is hydrothermal in nature and controlled by fractures, joints and local lineaments.

7.3 1975-1976

Possibly because of low price, demand and subsequently poor interest in uranium, the property was permitted to lapse. Beach Gold Mines Ltd. had the property restaked as the URA claims in March 1975. (MacLeod, J. W., May 15, 1975, examined the published literature on the showings and completed a report for Beach Gold Mines Ltd. recommending 1000 feet of diamond drilling.) This company conducted a 50 line mile, 4-channel scintillometer survey, limited soil geochemistry, and drilled 945 feet in a four drill hole program, two drill holes over each of Zones A and B, Plan No. 5. The methods of procedure and results of this work are summarized in a report by Hilker, R. G., May 1, 1976. He describes anomalous soil samples taken over Zones A and B as ranging between 2.5 and 12 ppm. A Gamma Ray 4-channel Spectrometer used in the radiometric survey reads total count, potassium (K-40), uranium (Bi-214) and thorium (Ti-208). Results of this survey are plotted at 1" = 200' covering approximately 36 of the URA claims. (It is noted that the Dad (1-48) mineral claims cover most of this survey area. The Dad (17-24) and (41-48) claims cover intrusive and schistose rocks to the east as yet unexamined by ground exploration surveys.) Hilker, R. G., 1976, states that survey results showed a uranium surface background count of 1 or 2 with Zone A and B

uranium counts varying between 15 to 30. Two drill holes tested Zone A, No. 1 - 158 feet, No. 2 - 242 feet and two holes No. 3 - 298 feet and No. 4 - 247 feet were drilled at Zone B. It is reported that the core indicated four to six times above radiometric background confirming the presence of uranium within the granitic porphyritic stock. No assays of the drill core were done.

Preliminary geological mapping and radiometric surveys indicated the presence of a porphyritic granite stock to the east which is anomalous radiometric, according to Hilker, R.G., 1976. This stock was not covered by the survey grid but is covered by the eastern part of the Dad claims as discussed in this section.

8.0 Geology

8.1 Regional Picture

The regional geology of the Clear Creek Area has been mapped by H. S. Bostock during 1946-49 for the Geological Survey of Canada and is available on Map 1143A - Geology, McQuesten, Yukon Territory, scale 1" = 4 miles. The area is underlain by Jurassic and/or Cretaceous Coast Intrusions, granite, granodiorite, and quartz monzonite; Ordovician or Earlier, Yukon Group schist, quartzite, phyllite and limestone; and Tertiary and Later stream deposits, alluvium. Uranium occurrences are located within the coast intrusions granite, granodiorite and quartz monzonite rock types in a coarse porphyritic phase. Plan No. 3.

8.2 Local Geology

Hilker, R. G., 1976, describes the radioactive rock exposures as small plutons of porphyritic granite that have intruded older granite, exposed along the banks of Clear Creek and in drainage tributaries. Jory, L. T., 1967, describes the unit as a feldspar porphyry with a matrix of feldspar, 20% quartz, and 5% mica.

As observed by the author, in the Zone A showing, the outcrops are coarsely pegmatitic with feldspar crystals to 2 1/2 inches in length at times having the appearance of being slightly unidirectional. Angular quartz grains make up approximately 10-20% of the rock interspersed with platy biotite mica. Three sets of fracture patterns were observed more or less mutually perpendicular. These fractures appear to occupy wider zones of shearing, the strongest of which appears parallel or sub parallel to the outcrop face.

The granite is rusty to buff yellow in colour, is moderately decomposed and disintegrates easily. As described by Jory, L.T., 1967, the granite in the showing area has a fairly consistent level of radioactivity of three or four times background. Hilker, R. G., 1976, describes Zones A and B with highs ranging to 15 to 30 times background.

9.0 Mineralization

No positive identification of the mineralogical source of the radioactivity has been made in examination of rock samples. MacLeod, J. W., 1975, suggests that the uranium could be present in the form of fine grained uraninite in the mica and/or allanite.

Petrographic examination of 23 thin sections from rock specimens and drill core submitted to the Yukon Resident Geologist's office in 1976 describes the host rock as a porphyritic quartz monzonite, containing elongated phenocrysts of microcline perthite, in a matrix of plagioclase, quartz and minor biotite. Biotite is described as the possible source of the radioactivity. Apatite, magnetite, zircon and epidote occur as abundant inclusions in the biotite mica. The report submits the opinion that the radioactivity is due to inclusions of uraniferous zircon and epidote in biotite, however, no uranium minerals were identified. Further more detailed studies are necessary.

10.0 Exploration Targets

Several targets remain to be tested on the Dad (1-48) claims as the results of previous exploration surveys.

A) Aerial Scintillometer anomalies shown on Plan No. 4 that remain to be located and tested by additional ground surveys are found on DAD 1, 2, 5, 30, 31, 32, 37 and 39. These may, in part, represent anomalous results obtained in the intrusive dike found on claims DAD 27, 28 and 29. Detailed geological mapping, soil and radiometric surveys are necessary to explore this area.

B) As discussed in section 7.3, the Dad claims (17-24) and (41-48) have not been subjected to ground surveys. These claims are known to cover, in part, intrusive granitic rocks which could be host rocks for radioactive minerals. Hilker, R. G., 1976, reports anomalous radiometrics in intrusive rocks east of Zones A and B.

C) Further detailed geological and radiometric mapping is required on Zone A and Zone B. Detailed petrographic and mineralogical studies are necessary so as to define the cause of the radioactivity. Radioactivity in Zone A may possibly be controlled by mineralization in one of the mutually near perpendicular shear zones as yet not thoroughly tested in drilling. One possibility is that the shear direction is parallel to the cliff face and hence parallel to the direction of Clear Creek but hidden by the stream deposits, leaving only a veneer of radioactivity on the exposed outcrop.

D) Recently, several exploration companies have been searching for uranium accumulations in porous sedimentary host rocks which are capped by barren basalts or other flows. One such situation has been found in southern British Columbia by Ducanex. One exploration pattern followed, is to initially locate "Source" rocks such as low grade radioactive granites and then attempt to investigate in proximity for capped porous sedimentary units which can present the necessary depositional environments for accumulation of the mobile uranium ions. The Clear Creek radioactive intrusive occurrences contain sufficient uranium to act as "Source" rocks but no attempt appears to have been made to date to locate the necessary sedimentary units which can act as the depositional environment.

11.0 Recommendations

The anomalous uranium host porphyritic granitic rocks near Clear Creek are prime targets for further exploration work. The Tenor of assays obtained from surface sampling are low but potential volumes appear large.

Two rock samples from previous surveys assayed 0.01% U_3O_8 with a uranium scintillometer count of 25 on Zone A. Several areas as described in Section 10.0 require further detailed studies. These studies include geological, geochemical and geophysical surveys. A line grid will be necessary for the Dad claims east of Zones A and B, and detailed grids over the intrusive dike and Zones A and B.

Further surveys and diamond drilling will be success contingent, on preliminary survey results.

Appendix A
Estimated Cost of the
Recommended Programs

Cost Estimate

1. Line Cutting		
- 34 line miles @ \$200/line mile	\$	6,800.00
- Detailed Grids		1,000.00
2. Radiometric Survey		
- 34 line miles		2,000.00
3. Geological Mapping		2,000.00
4. Geochemical Survey		
- Soils - 10 line miles @ \$100.00		1,000.00
- Silts		1,000.00
5. Assays and Shipping		700.00
6. Camp Rental and Supplies		2,500.00
7. Transportation		
Truck Rental, Air Fares		1,000.00
8. Trenching Drilling Blasting		3,000.00
9. Petrographic Studies		500.00
10. Report on Property		2,500.00
11. Contingencies		3,000.00
		<hr/>
	Total	\$ 27,000.00

Further surveys and diamond drilling are success contingent.

Respectfully,


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Appendix B

References

References

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5. Hilker, R. G., 1976. Uranium Occurrence Data on the URA Yukon Quartz Mineral Claim Group and the LUG 1-60, BAG 1-80, and GAB 1-72, Dawson M.D. Yukon Territory.
6. Bostock, H. S., 1946-49. Geological Survey of Canada Map 1143A Geology McQuesten Yukon Territory.
7. Hilker, R. G., 1976. Uranium Occurrence Data on the LUG 1-60, BAG 1-80, and GAB 1-72 Mineral Quartz Claims, Dawson M.D. Yukon Territory.