6133

PROGRESS REPORT

I.P., Seismic, and Percussion Drilling on the Hag 1-6, Knight Rambler, Big Bug, Vernon and Islander Claims

82E/3E HAG

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6

Greenwood Mining Division 49⁰06'N, 119⁰08'W N.T.S. - 82E/3

R.W. Cannon, P. Eng.

Breakdown of Drilling Expenditures (V-149)

Personnel Supervising Job:	
J.M. Thornton Aug. 3rd to Aug. 17th, 1976	
S.J. Tennant Aug. 3rd to Aug. 17th, 1976	
Salaries and Benefits @ \$100/day/man.	
30 x \$100	= \$3,000.00
Transportation @\$25.00/day	_
15 x \$25	= \$ 375.00
Room and Board at the Edelweiss Inn	= \$ 516.93
Kettle Construction Company, Rock Creek	•
Cat work putting in drill sites plus road work	
30.5 hours @\$24/hr.	= \$ 732.00
Travel Time	= \$ 60.00
H.N. Horning Percussion Drilling Limited	
1980' @\$3/ft.	= \$5,940.00
1980' with water @\$.25/ft.	= \$ 495.00
1½ Batches AM9 @\$20/Batch	= \$ 30.00
Mobilization and de-mobilization @\$.50/mile	
400 miles x \$0.50	= \$ 200.00
Assaying for Au, Ag, Cu, Zn, Pb.	
187 samples @\$7.85/sample	= \$1,467.95
Total cost of drilling	\$12,816.88



Breakdown of Expenditures (V-149)

For Geophysics

Induced Polarization Survey

Personnel Employed:

R.W. Cannon	June	1/th	to	21st,	19/6
W. McIntosh	June	17th	to	22nd,	1976
S.J. Tennant	June	17th	to	21st,	1976
J.M. Thornton	June	17th	to	21st,	1976

Salaries and Benefits @\$100/day/man

21 days x \$100

= \$2,100.00

Equipment Costs 5 days @\$75/day

= \$ 375.00

Seismic Survey

Personnel Employed:

R.W. Cannon	June	22nd	to	June	25th,	1976
S.J. Tennant	June	22nd	to	June	25th,	1976
J.M. Thornton	June	22nd	to	June	25th,	1976

Salaries and Benefits @\$100/day/man

12 days x \$100 = \$1,200.00 Equipment Rental from Kenting = \$1,229.78

Room and Board at the Edelweiss Inn = \$ 684.52

Transportation - 4 wheel drive vehicle @\$25/day

9 days x \$25 = \$ 225.00

Report Cost - Data Reduction, Report Writing & Drafting = \$1,100.00

Total Cost \$6,914.30

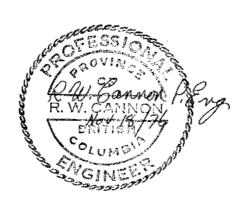


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and Drill Hole Locations	-· ,	In Folder
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I.P. Sections L6W, 8W, 12W, 14W	1:5,000	End of Text
Seismic Profiles	1"=20'	End of Text

A-A', B-B', C-C', D-D', E-E',

F-F', G-G', H, I-I', J-J'

V-149 Rice Creek 1976 Progress Report

Summary

A geophysical program was conducted on the yellow group of claims and the Hag 4 claims in June 1976. The program consisted of an Induced Polarization Survey (I.P.) and seismic profiling over areas of interest. The I.P. survey covered 6.3 line km of which 5.8 km was on the Hag 4 claim and 0.5 km was on the yellow claim group. Eight sites were tested by the seismic refraction method.

I.P. indicated that the anomalous zone on line 10W continued through line 6W to 14W and was still open to the east and west.

Seismic profiling indicated a depth to bedrock of 15 m or less. During the seismic survey it was discovered that the source of the geochem anomaly on and near Rice Creek was due to the dumping of old Camp McKinney tailings in this area.

Early in August 1976, a percussion drill program was initiated to test the I.P. anomaly as well as several of the E.M. anomalies detected in 1975. Eight holes were completed totalling 603.6 meters. No economic mineralization was encountered.

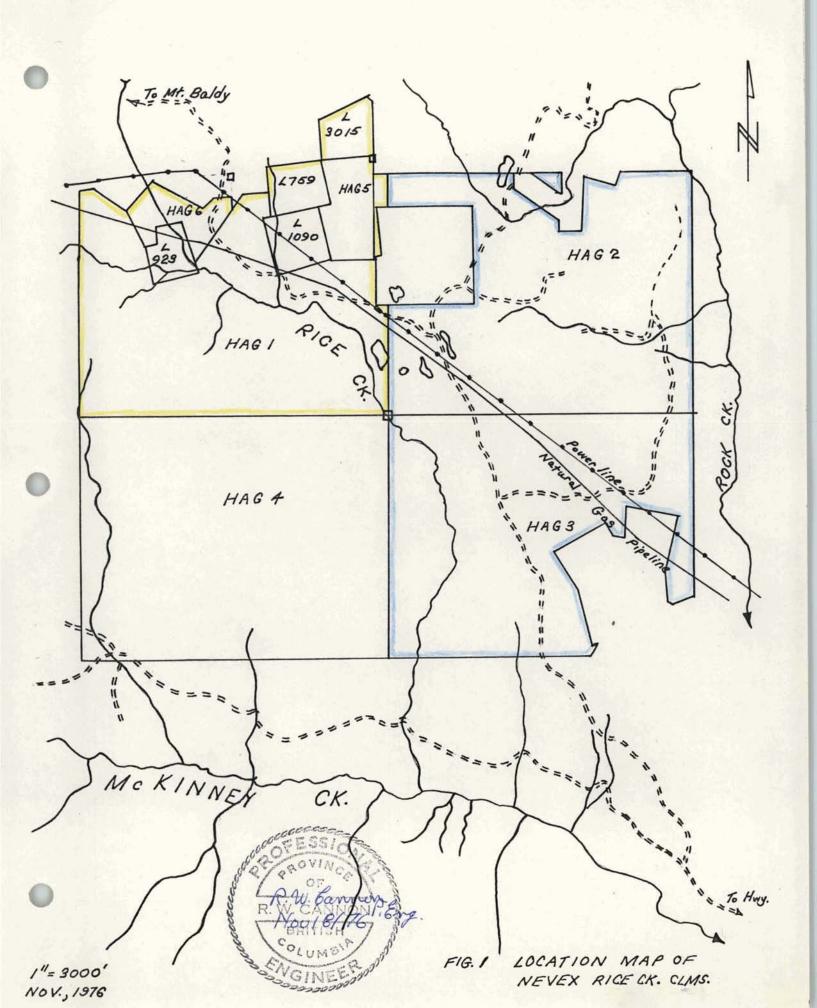
Introduction

During mid June, 1976, a total of 63 km of I.P. was conducted over four lines using 100 m dipoles and three separations. Refraction seismic profiling was conducted over 8 selected areas.

In August, 1976, eight holes totalling 603.6 m of percussion drilling were completed.

Location and Access

The property is located immediately southeast of the Camp McKinney claim area. Access to the central part of the claim area is via the Mt. Baldy - Canyon Bridge Road, approximately 11 km from Canyon Bridge. The southern part of the claim area is accessible from the "Eldon" road which parallels McKinney Creek south of the property.



Property Status

The property consists of 88 units and 4 crown grants as follows:

Group	Name	Record Date	Tag No.	Expiry Date
Yellow	Hag 1 20 Units	March 19, 1975	07088	March 19, 1977
Blue	Hag 2 20 Units	March 19, 1975	07089	March 19, 1978
Blue	Hag 3 20 Units	March 19, 1975	07090	March 19, 1978
	Hag 4 20 Units	March 19, 1975	07091	March 19, 1977
Yellow	Hag 5 4 Units	June 24, 1975	09130	June 24, 1977
Yellow	Hag 6 4 Units	June 24, 1975	09131	June 24, 1977
Yellow	Knight Rambler	June 11, 1975	L3015	June 11, 1977
Yellow	Big Bug	June 11, 1975	L923	June 11, 1977
Yellow	Vernon	Aug. 22, 1975	L759	Aug. 22, 1977
Yellow	Islander	Aug. 22, 1975	L1090	Aug. 22, 1977

Previous Work

Soil and stream geochemical surveys were carried out by Nevex and Canex. A detailed C.E.M. shootback electromagnetic survey, Radem (V.L.F.) survey, magnetometer survey and a reconnaissance I.P. survey were conducted by Canex during 1975.

Current Work - Geophysics

<u>I.P.</u>

Four lines (6W, 8W, 12W, 14W) were surveyed with McPhar Model P-660 equipment using 100 m dipoles and 3 separations. Frequencies of 0.3 and 5.0 Hz were used. 6.3 km of line was surveyed in 4 days.

In the field procedure, measurements on the surface were made in a way that allows the effects of lateral changes in the properties of the ground. Current was applied to the ground at two points (x) feet apart. The potentials were measured at two other points also (x) feet apart, in line with the current electrodes. The distance between the nearest current and potential electrodes was an integer number (n) times the basic distance (x).

The measurements were made along surveyed lines, with a constant distance (NX) between the nearest current and potential electrodes. Measurements were taken with values of N=1, 2 and 3 for X=100m.

Apparent resistivity (Qa) is the bulk resistivity of the ground between the extreme electrodes. Many factors influence this parameter; zoning, two and three layer geometry, swamps and physical electrode placement.

Percent frequency effect (P.F.E.) is the difference in resistivity measured by the receiver at two transmitted frequencies, generally a decade apart.

P.F.E. is independent of the physics of the survey and dependent mostly on the polarization of the subsurface rocks. Sulfides (except those of zinc and molybdenum) and graphite, as well as clays respond predictably to I.P.

Metal factor is a built up parameter which is supposed to remove the effects of resistivity from the P.F.E. data. It also enhances responses made by good targets.

In plotting the results, the values of the apparent resistivity, P.F.E. and the apparent metal factor measured for each set of electrode positions were plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes.

The apparent resistivity, P.F.E. and metal factor values are each plotted on their respective "pseudo-section." The lateral displacement of a given value is determined by the location along the survey line of the center point between the current and potential electrodes. The distance of the value from the line is determined by the distance (NX) between the current and potential electrodes when the measurement was made. The separation between the sender and receiver electrodes is only one factor which determines the depth to which the ground is being sampled in any particular measurement. The plotted results were contoured using a logarithmic contour interval 1, 1.5, 2, 3, 5, 7.5 and 10.

Seismic

Detailed refraction seismic lines were run over eight sites using a Huntec RS-4 refraction unit. Reversed profiles were run where possible using a 20 foot geophone spacing. It was hoped overburden depths would be less than 50 feet (15 m.) but topographic relief and the absence of outcrop within the claim area suggested considerably more overburden.

The RS-4 is a multichannel seismic unit employing light sensitive recording paper. Twelve channels of data plus timing lines and shot times are recorded on the 4" wide strip chart. The seismic signal can be generated by either blasting caps or a large sledge hammer. It was found that even in the most heavily covered areas, the hammer gave more repeatable results.

In addition to getting results from a 20 foot shot point, readings using 5, 10 and 15 foot source to first geophone were made. Arrival times were picked and estimated to the closest millisecond. Rough profiles were generated in the field in order to verify results.

Percussion Drilling

In August a small percussion drill program was initiated to test the I.P. anomaly as well as several of the E.M. anomalies. H.N. Horning Percussion Drilling Limited of Kamloops was the contractor.

Eight holes were completed totalling 603.5 meters. No economic mineralization was encountered. A summary of the drill holes is as follows:

	<u> </u>	
Drill Hole#	<u>Depth</u>	Co-ord. of Hole
PRC 1	73.2 m.	L10W/4S
PRC 2	76.2 m	L8W/9S
PRC 3	73.2 m.	L14W/4.5N
PRC 12	76.2 m.	L14W/3N
PRC 6	76.2 m.	L10W/8.5N
PRC 5	76.2 m.	L10W/5.75N
PRC 4	76.2 m.	1.10W/4N
PRC 7	76.2 m.	L11W/3.5N

<u>Discussion of Results</u>

I.P. results indicate a continuous anomaly from line 14W to 6W and beyond with P.F.E. values ranging from 6 to 12 plus percent. The P.F.E. values decrease to background both to the north and south. On line 10W, resistivities at 3N are so low that readings were not available whereas from 12W to 8W at 4S a zone of 1200 ohm-meter material was recorded. It was felt that at least one hole should test this high P.F.E., high resistivity zone for possible pyrite and gold in quartz veins similar to Camp McKinney.

Seismic data indicated depths to be much less than the expected 50 feet (15 m). In fact, most of the depths were less than 20 feet (6 m). The resolution of the seismic unit was the prime cause of inaccuracy in the calculated depths as well as the ever present problem of picking faint returns from the occasional noisy record. Some difficulties were experienced with the hammer switch which malfunctioned upon occassion.

Several velocity layers, characterized by velocities of 1,000 fps, 2,500 fps, 4,000 fps, 7,000 fps, 14,000 fps, were revealed by the survey; the first 3 being various stages of consolidation in the glacial cover. The 7,000 fps layer was attributed to the Anarchist series rocks, with the 14,000 plus fps material due to the intrusive rocks.

Eight areas were selected for depth determinations labelled A through J on the profiles. The results were as follows:

Profile	Location	Over- burden	Bed- <u>rock</u>
A-A'	end to end profiles, N-S road at	4.9'(1.5 m)	29.4'(8.95 m)
B-B ¹	15W about 4+00N	7.5'(2.3 m)	29.2'(8.9 m)
C-C*	end to end profiles, L14W	8.7'(2.63 m)	8.7'(2.63 m)
D-D'	C and D at 3+00N	7.9'(2.4 m)	7.9'(2.4 m)
E-E'	E-W road profile, L14W at 8+00S	5.3'(1.6 m)	19.5'(5.95 m)
F-F'	L6W at 3+00S	6.5'(2.0 m)	18.4'(5.6 m)
G-G'	road S of lake, LO at 2+00N	11.7'(3.6 m)	42.7'(13 m)
Н	single profile in bed of Rice Creek L4E at 4+00S	13.2'(4 m)	28.7(8.75 m)
I-I*	profile on access road at old bridge 3W at 5+00N	6.4'(2 m)	33'(10.1 m)
J-J *	E-W profile along road, L10W at 4+00S	2.7'(.8 m)	44'(13.4 m)

The majority of the Nevex Mines claim area is underlain by members of the dominantly sedimentary Anarchist series. To the west and south-west the Anarchist series has been intruded by granodiorite, a member of the Nelson intrusives. The Anarchist group consists of greenstone, quartzite, greywache and limestone. Greenstone is the most common and implies a green hornblendic to chloritic rock of andesitic composition.

Mineralization at the McKinney mine was confined to quartz veins in which the most abundant mineral was pyrite. Lesser amounts of sphalerite, galena, chalcopyrite and rarely tetrahedrite and pyrrhotite were also present. Occassionally native gold was prominent in some veins.

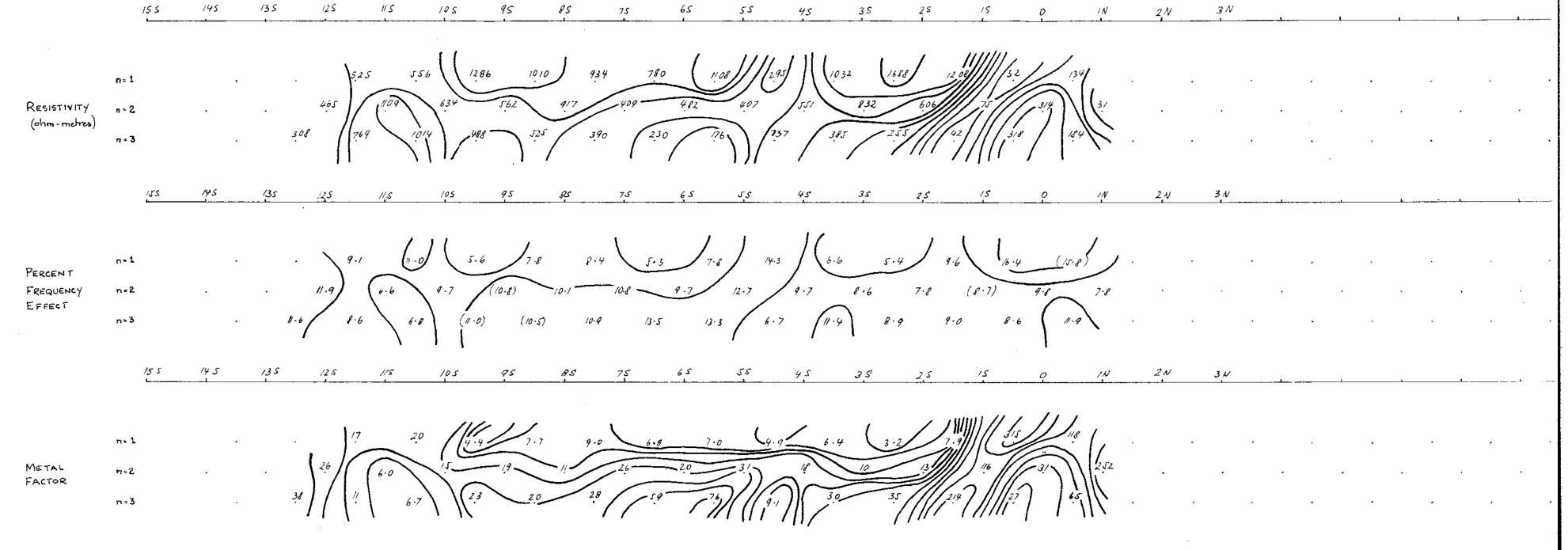
Drilling done in the first half of August proved several of the seismic determinations. The hole PRC-1 collared at L10W-4S required 15 m of casing - and hole PRC-12 at L14W-3N encountered bedrock at 2.4 m.

Soft rock was encountered in all drill holes except PRC-12 which was extremely hard. A dark grey-green fine grained rock (intrusive) was noted in this hole. Rocks encountered in other holes were variously carbonates (some large calcite crystals in cuttings), shales with heavy pyrite and zones of graphite and quartz veins which satisfactorily explained the E.M. and I.P. anomalies.

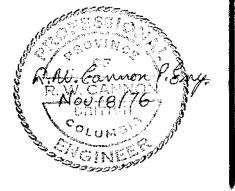
It was also discovered during the seismic survey that the geochem anomaly in and around Rice Creek was caused by the dumping of Camp McKinney tailings. These tailings had apparently been dumped along an old wagon trail many years previous and had become completely overgrown by local vegetation.

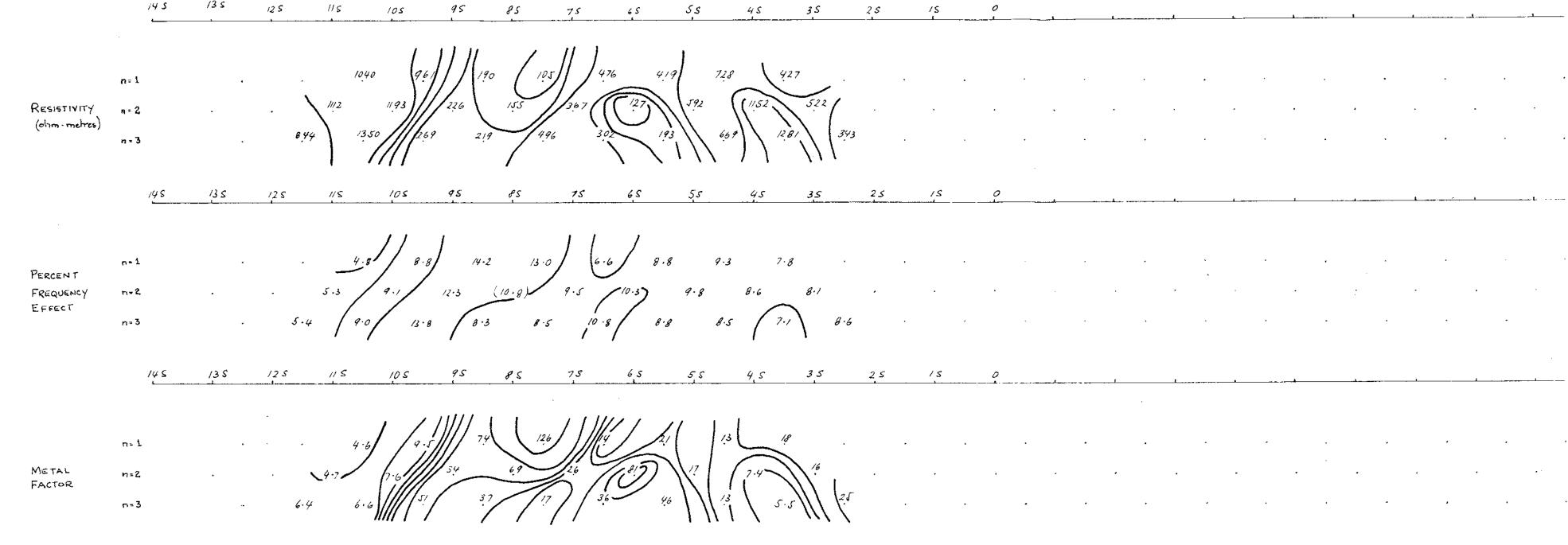
Conclusions and Recommendations

It was concluded that the sources of the I.P. and E.M. anomalies were satisfactorily explained by the percussion drilling. It is recommended that no further work be done on the property at this time.



NEVEX 6 W V-149 JUNE, 1976

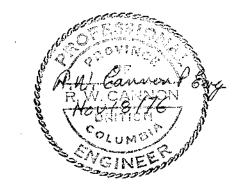


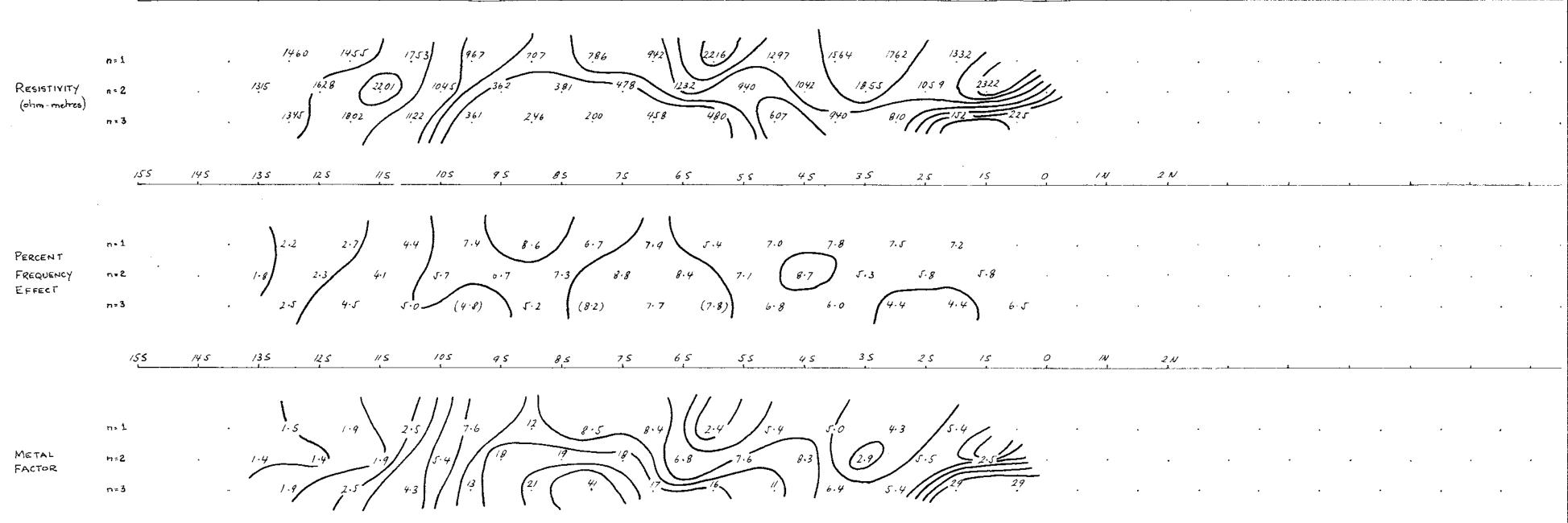


NEVEX 8W

V-149

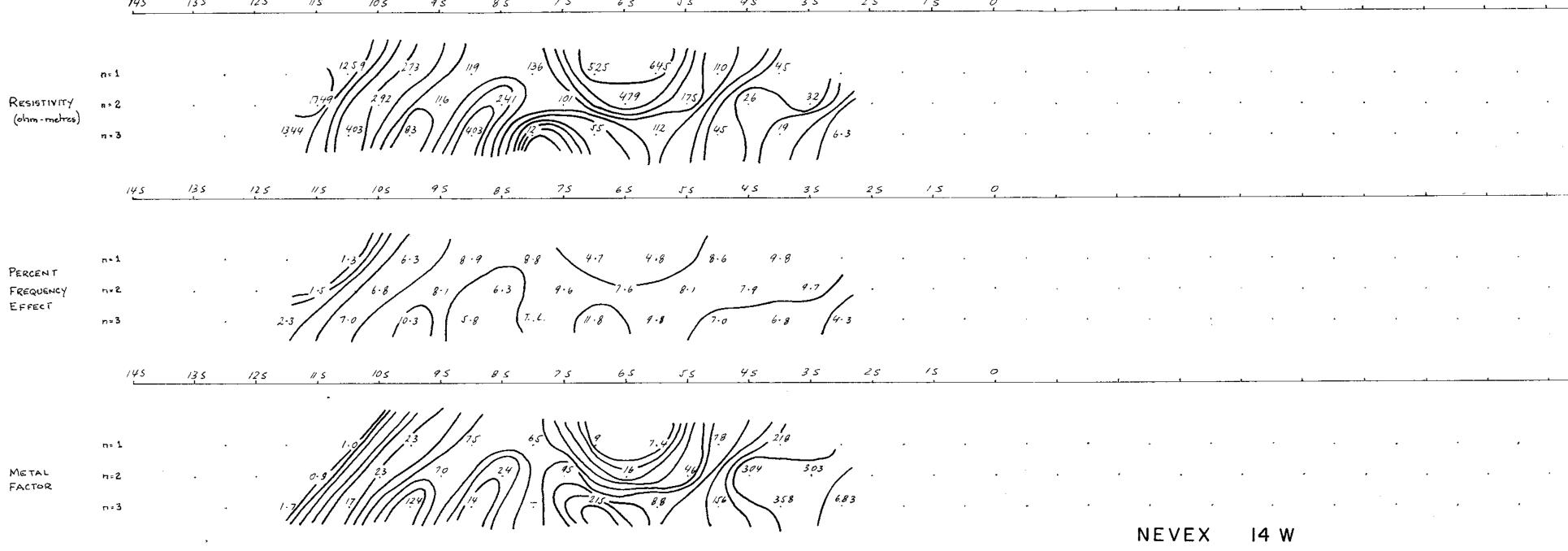
JUNE, 1976



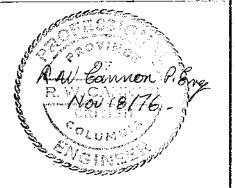


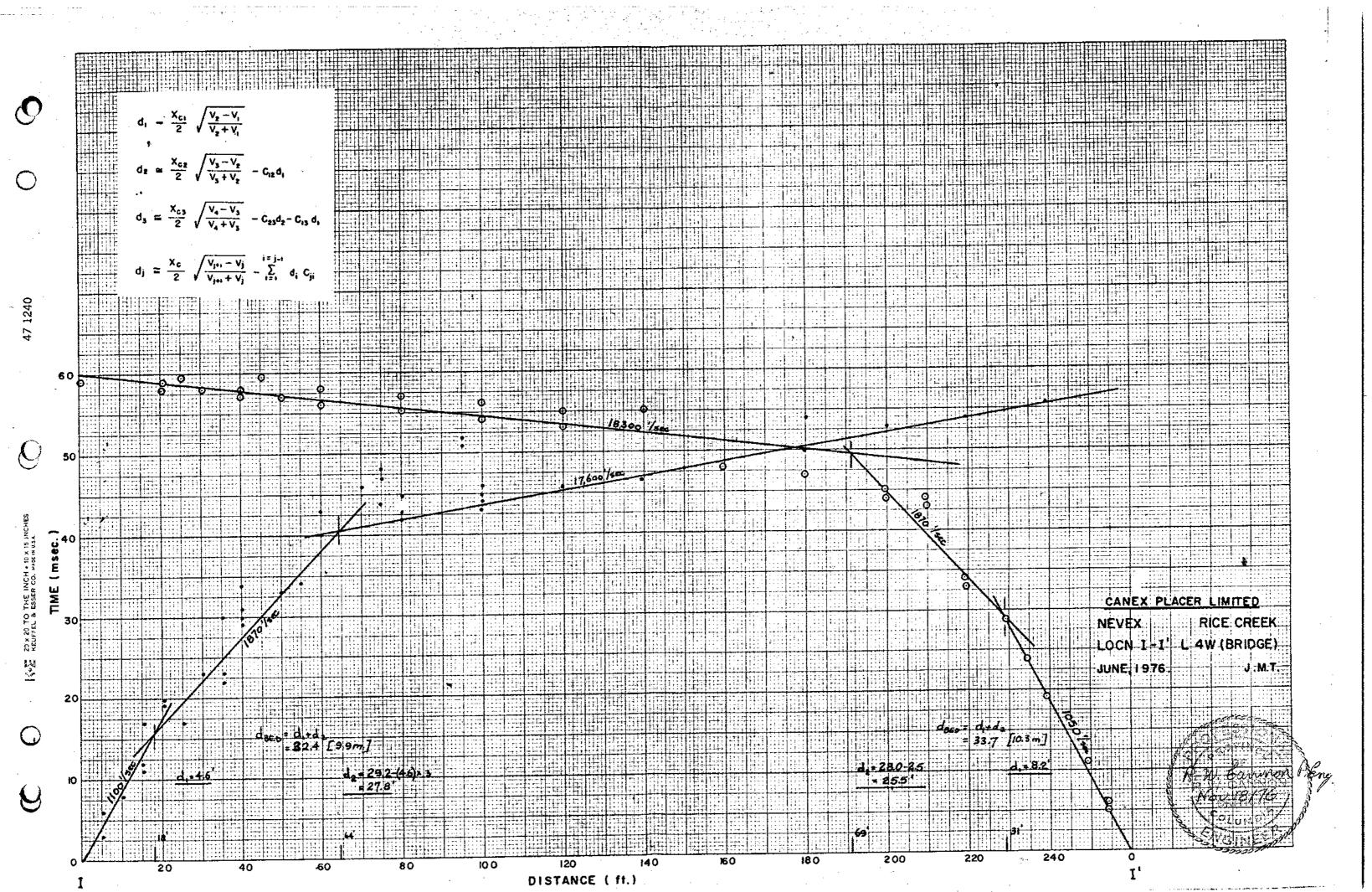
NEVEX 12 W V - 149 JUNE, 1976

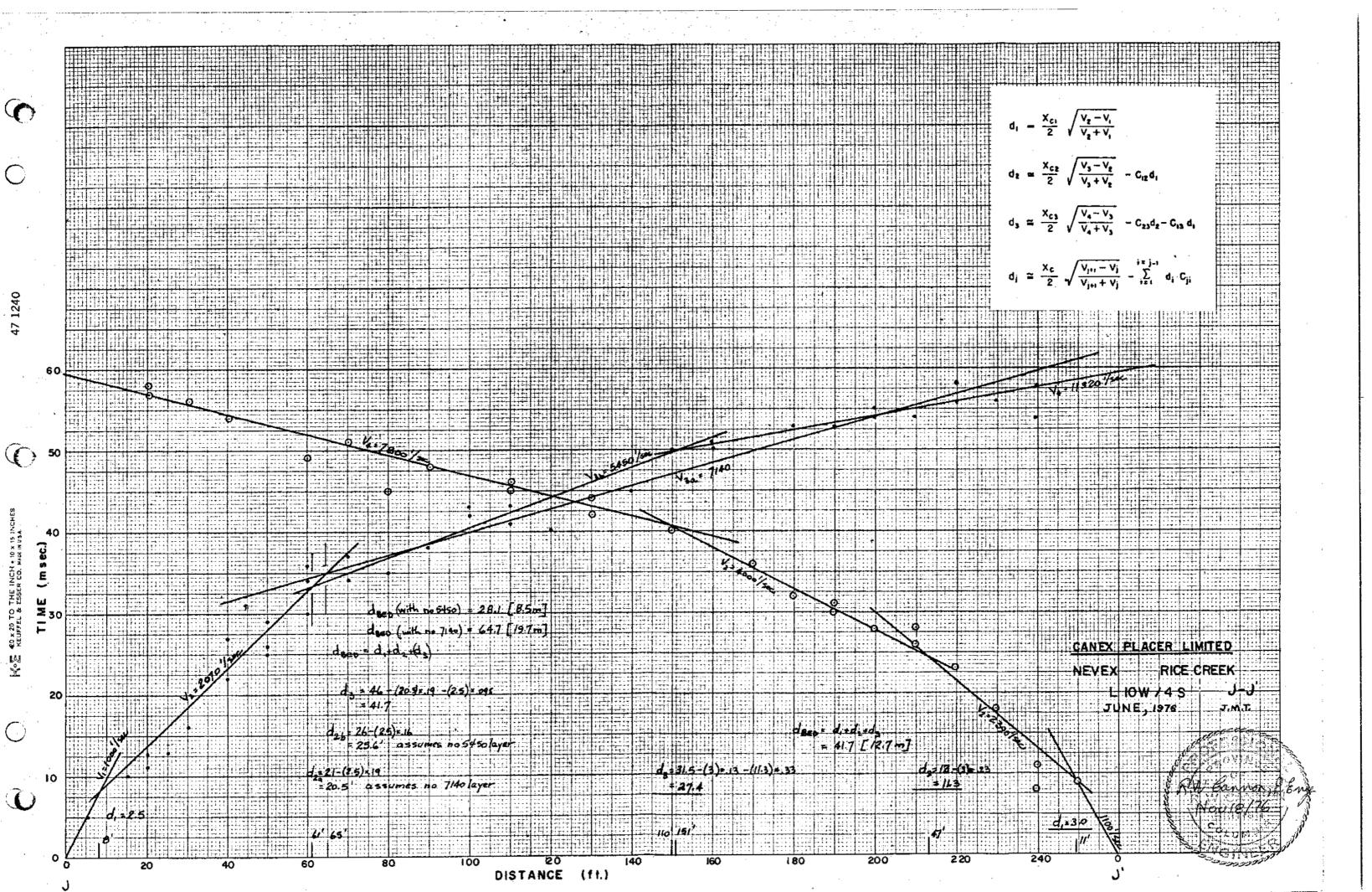


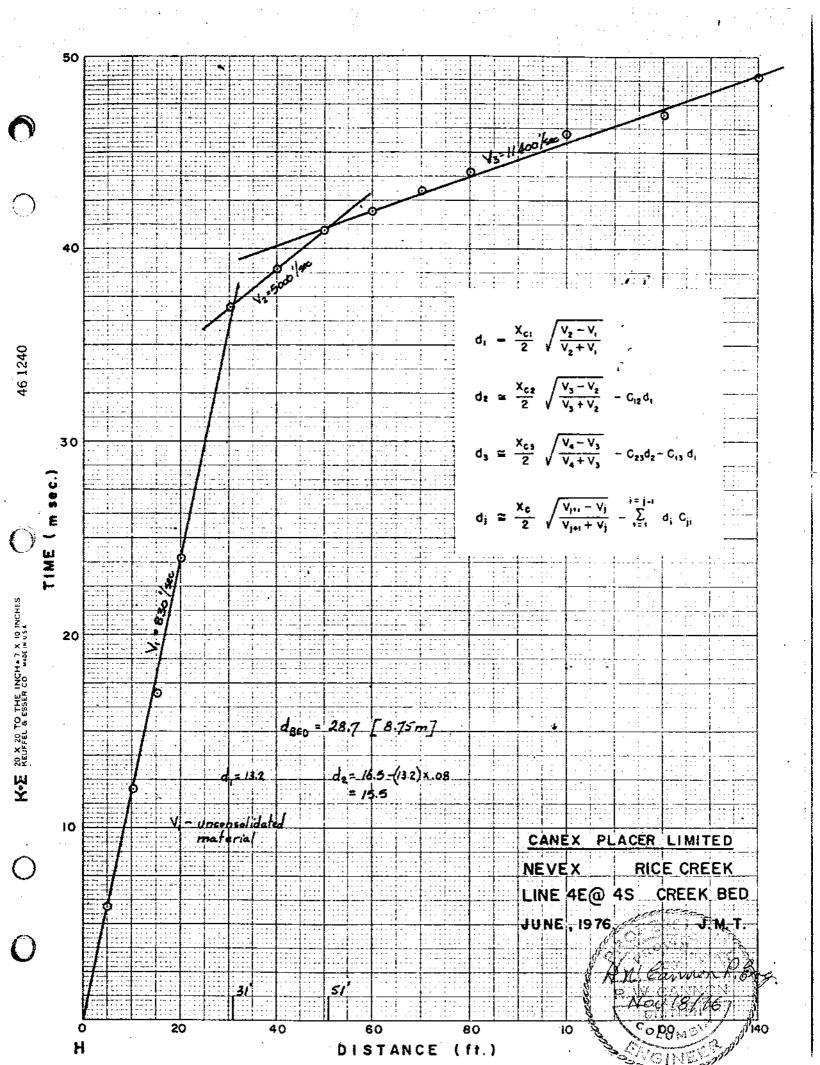


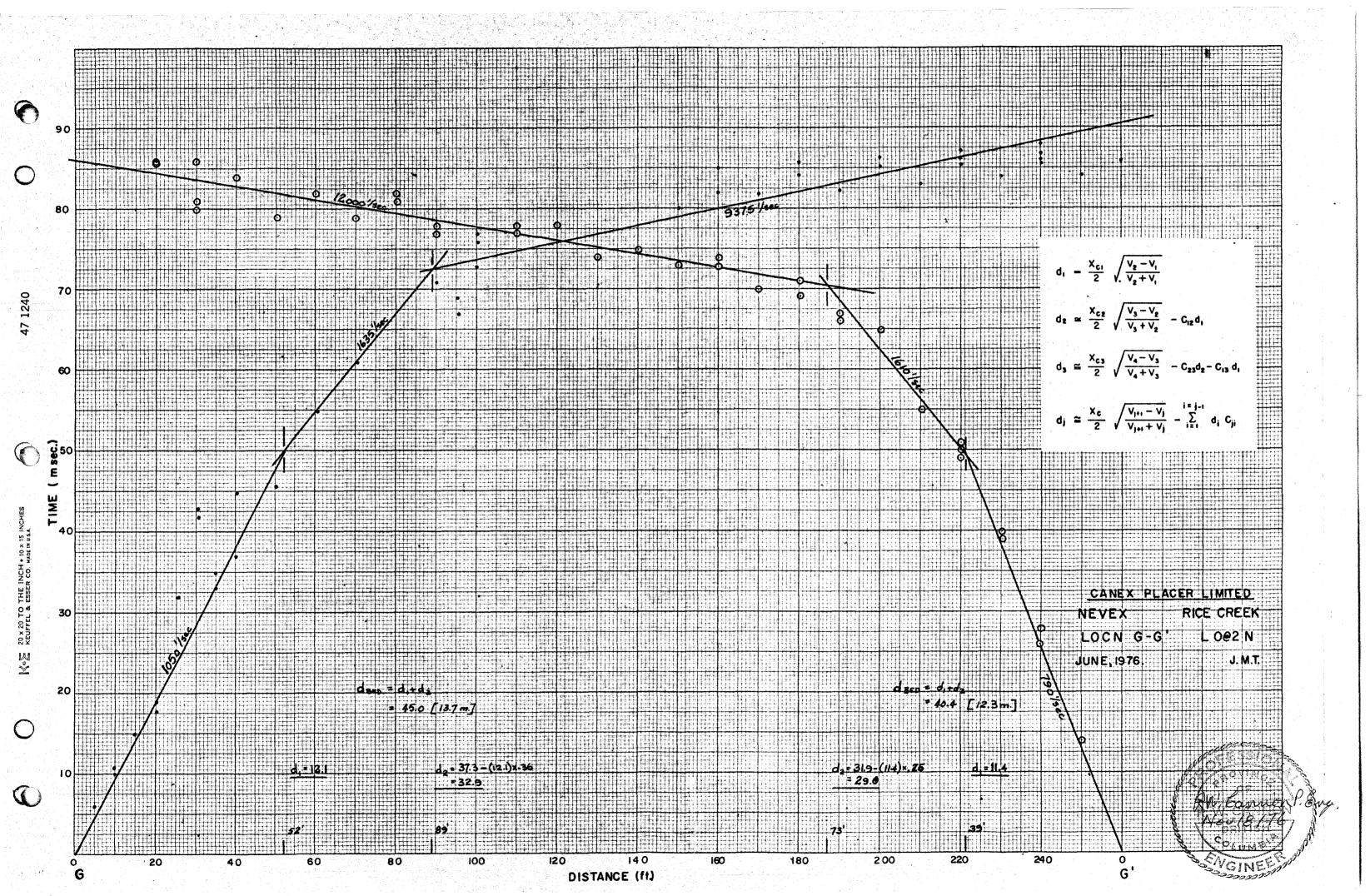
NEVEX 14 W V-149 JUNE, 1976

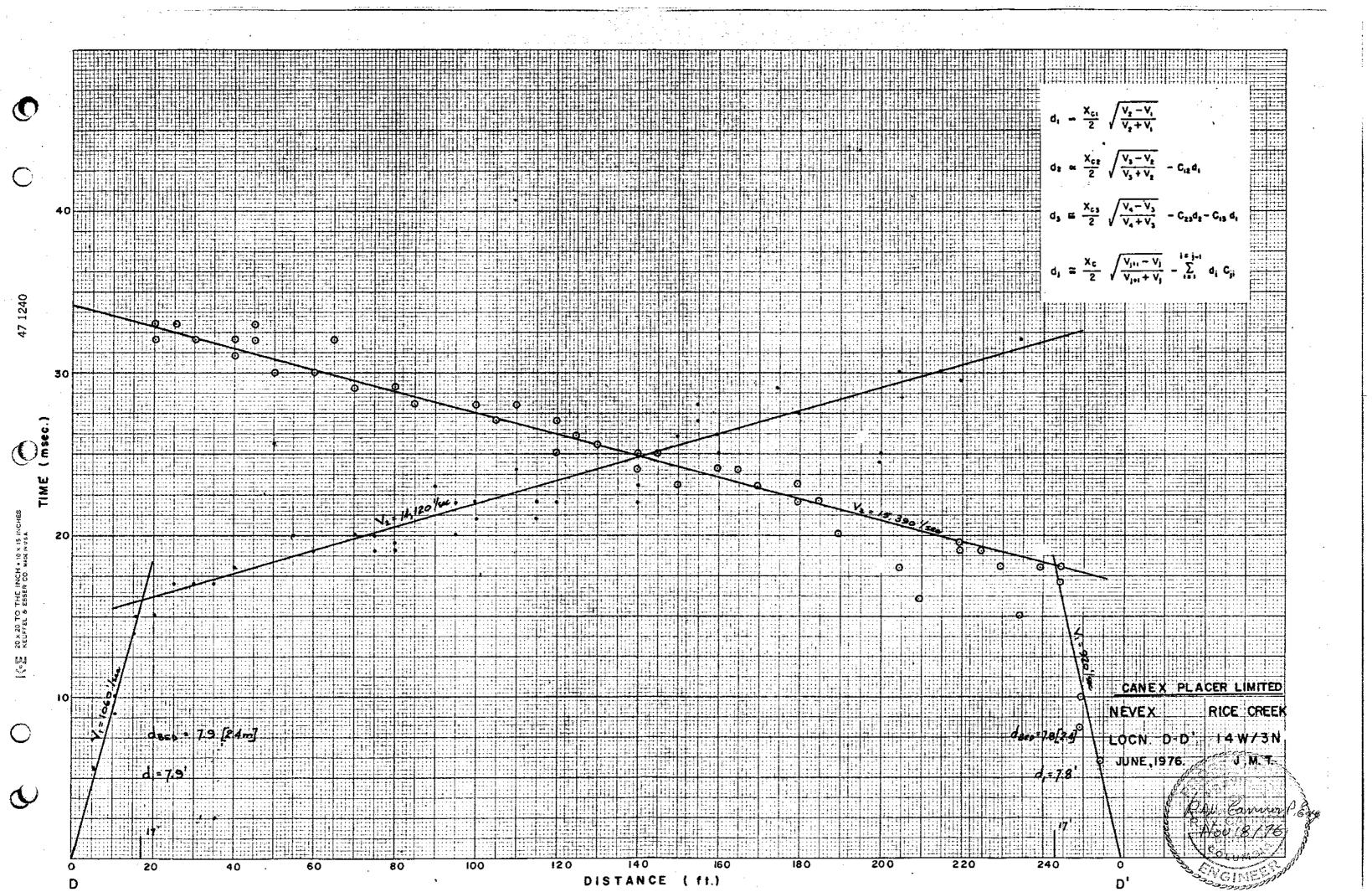


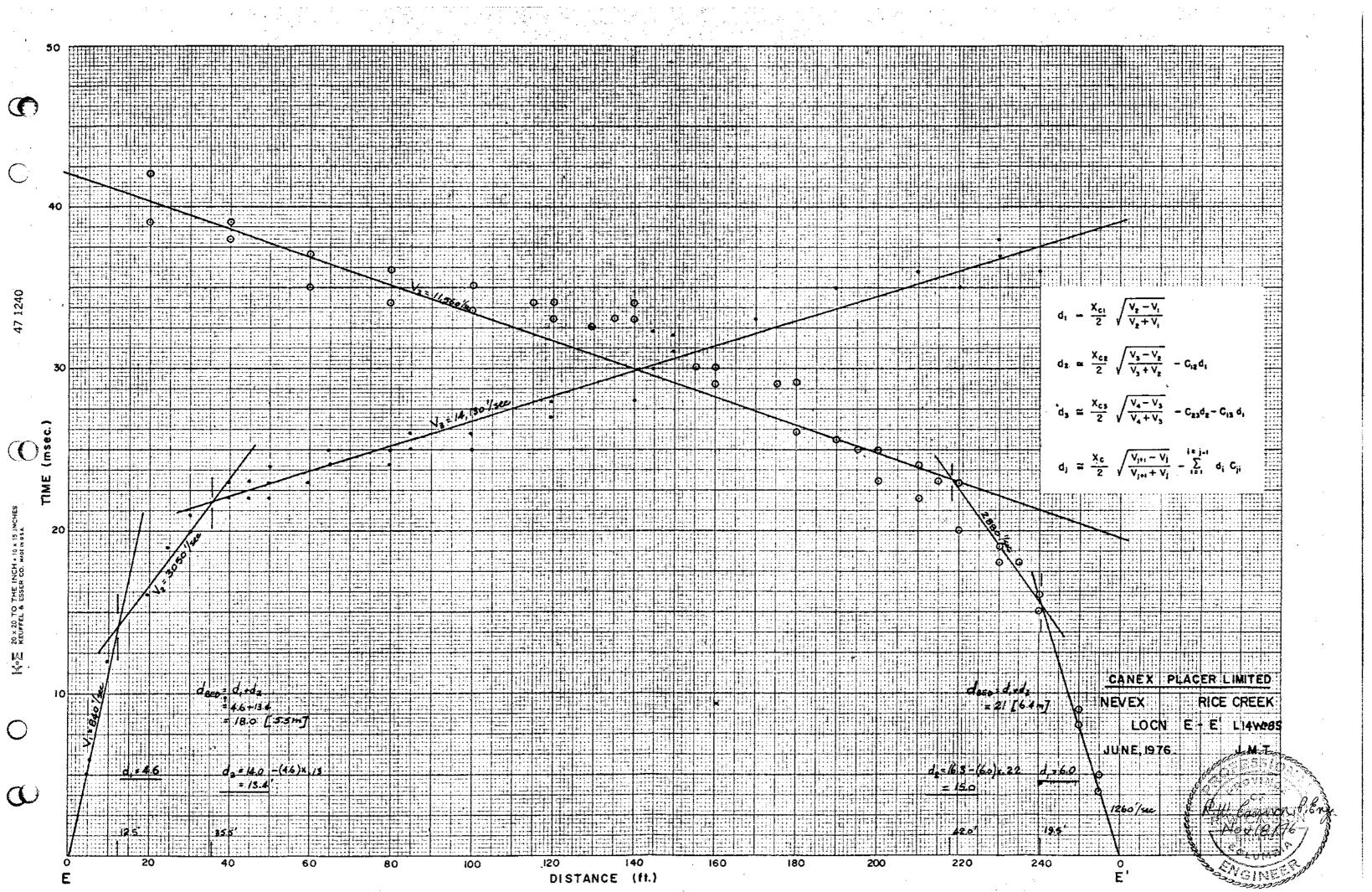


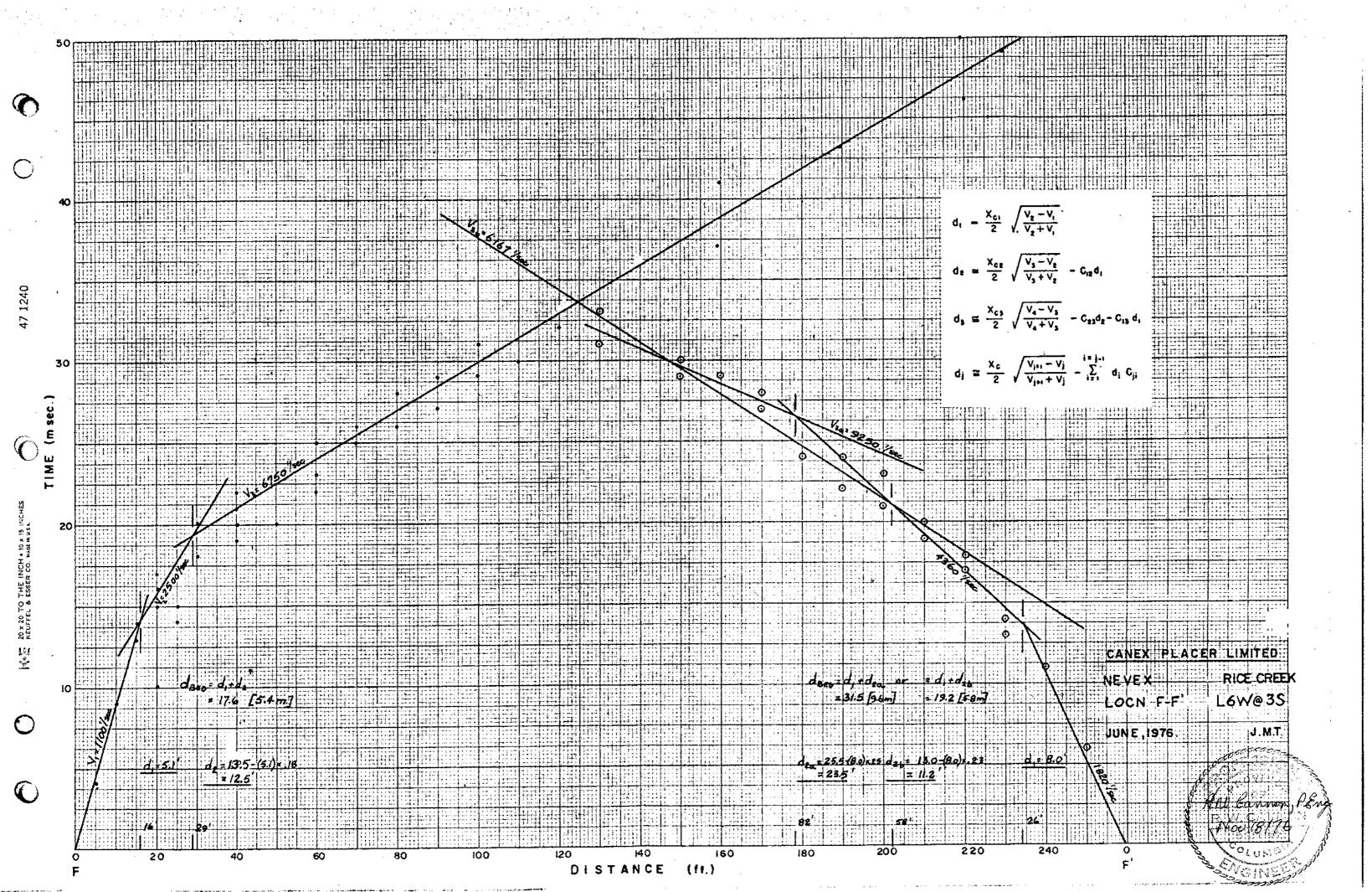


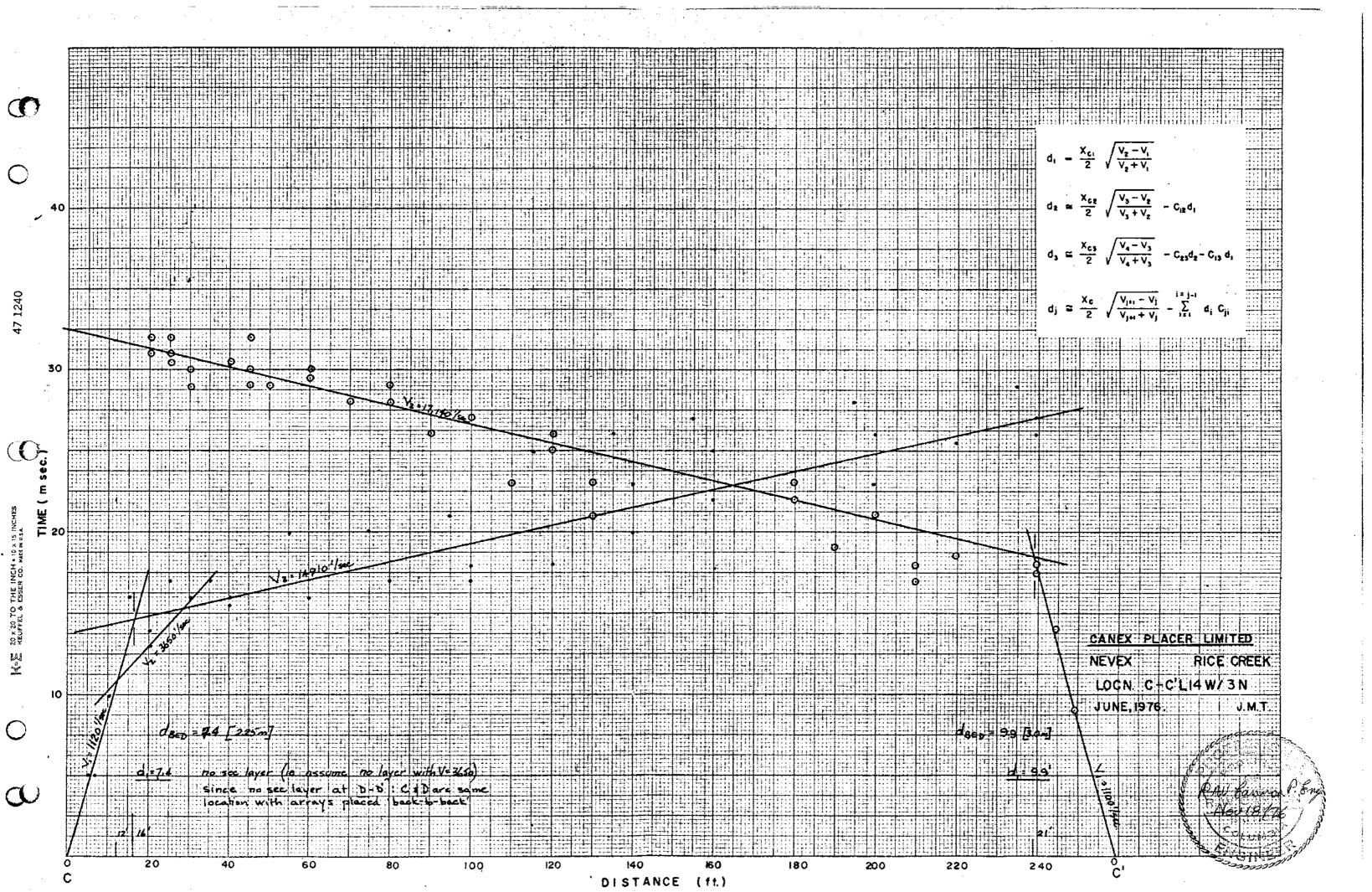


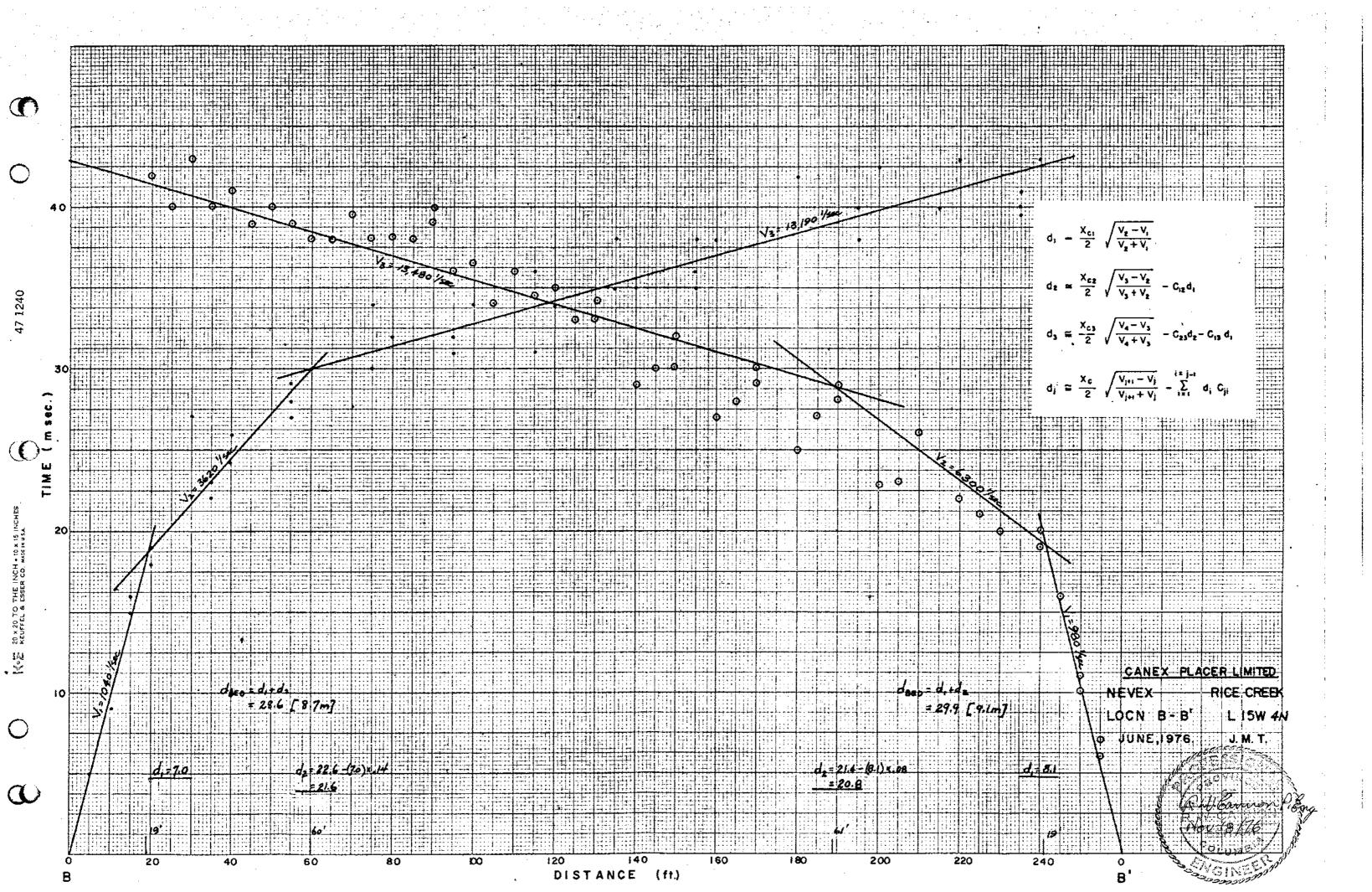


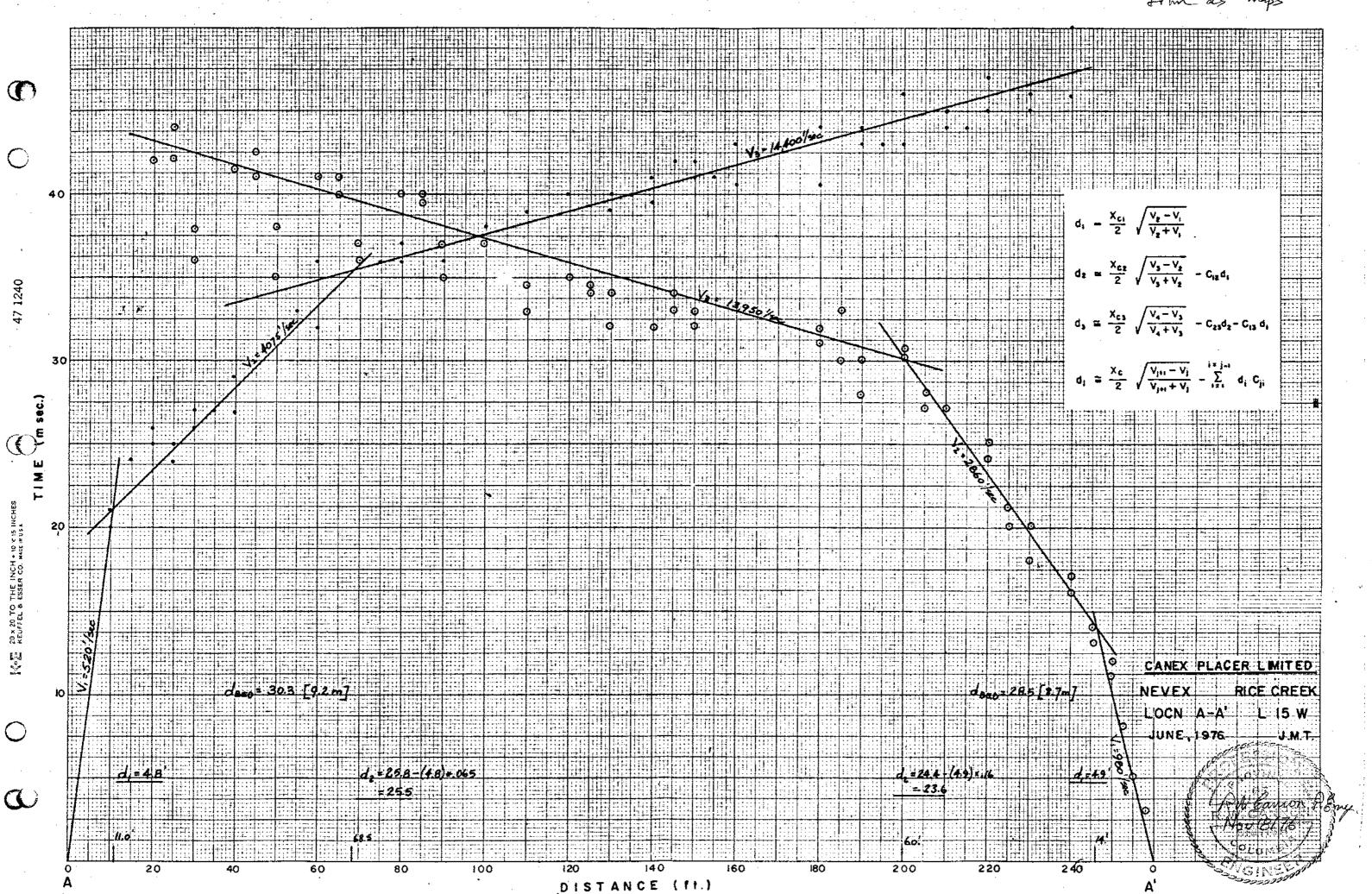












FORM NO. 127

PLACER DEVELOPMENT LIMITED

GEOCHEMISTRY DIVISION

323 Alexander Street - Vancouver, B.C.

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PLACER DEVELOPMENT LIMITED

GEOCHEMISTRY DIVISION

AREA ROCK CREEK

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PLACER DEVELOPMENT LIMITED

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GEOCHEMISTRY DIVISION

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DATE <u>AUG/16/76</u> PAGE No. S. J. T. F. W. SANT was DDM PPM IN SOIL OR SEDIMENT SAMPLE NO. РЬ Zn 20-301 PRC#1 30-401 002-2) 40-501 50-60 60-70 :10 3) 70-801 ol6 80-901 / 90-100 100-110' 110-120 -500 10-120-1301 02-130-1401 a) 140-150' 202-150-160 *a* 160-170' 170-1801 180-190 190-200 200-210 / 510-550, / 220-230 31) \bigcirc 230-240 02*a*

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PLACER DEVELOPMENT LIMITED

GEOCHEMISTRY DIVISION

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6

110-1201

120-130 130-140'

140-150

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GEOCHEMISTRY DIVISION

323 Alexander Street - Vancouver, B.C.

AREA BOCK CREEK

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FORM NO. 127

PLACER DEVELOPMENT LIMITED

GEOCHEMISTRY DIVISION

AREA ROK OFFK U149 323 Alexander Street - Vancouver, B.C.

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