2774

PART 2

SUMMARY REPORT

PROJECT NO. 95 - LARGO

R.C. Cunningham
April 1, 1970.

I N D E X

map 3 I. P. + Resistivity Survey
Cdupl-of map 2 in Part 1

SUMMARY REPORT

PROJECT NO. 95 - LARGO

Project No. 95 - Largo - consists of 100 claims, namely High 1 to 100 inclusive which were staked for Largo Mines Limited and Arlington Silver Mines Limited under the directorship of Mr. B.J. Nesbitt of 1110 - 505 Burrard Street, Vancouver 1, B.C.

The High group of claims was covered by a 44.8 mile grid of lines at 800 foot intervals, striking east-west and over this grid the original holders (Largo and Arlington Silver Mines) had Barringer Research Ltd. carry out magnetometer, geochemical and I.P. Surveys. The results of the geochemical magnetometer and time domain I.P. surveys warranted additional work on the property and as a consequence a Joint Venture Agreement was entered into with Phelps Dodge Corporation Of Canada, Limited on November 15, 1969.

Location and Access:

The High group of claims (Project No. 95 - Largo) lies immediately to the west of Tunkwa Lake in the Kamloops Mining Division of B.C. and is about 16 miles south of the town of Savona on the Trans Canada Highway.

Access to the property is via bush road from the Savana-Merritt road and the coordinates of the southeast corner are approximately 120'45'W longitude and 50'30'N latitude. The area lies within N.T.S. Map: Cherry Creek 92I10/West and is directly south of the west end of Kamloops Lake.

General Geology:

The High group of claims lies just to the northeast of the exposed rocks of the Guichan Batholithic complex and constitutes an area of gently rolling topography.

The general rock type is depicted as the Upper Kamloops Group and is known as the Tranquille Volcanics. They are olivine-rich basalts of medium grained texture, vary from amygdaloidal to massive and are dark greenish grey to very dark olive green in colour. The weathering is a light to dark buff in colour caused by the deterioration of the iron within the olivine and most of the weathering is very thin, virtually forming an icing over the fresh rock.

The volcanics are early Tertiary in age and are underlain and at times interbedded with the Coldwater Sediments which are thought to be a part of the Lower Kamloops Group.

The sediments are generally flat lying, are predominantly clay-shales with some minor sandy partings and the bedding is thin and distinct. From the drilling it would appear that much of the sedimentary detritus is derived from volcanic action and thick sequences of agglomerate or clay-shale breccia are common within the sequence.

The maximum depth of the Coldwater series of sediments is unknown and in the area drilled exceeds more than 700 feet.

The Upper Triassic Nicola Group of Volcanics appears to underly the Coldwater sediments and these are the predominant basement rocks which were intruded by the Lower to Middle Jurassic Guichon intrusives. These latter are the rocks which have given rise to the prolific copper mineralization of the Highland Valley Area.

Geophysical Data:

Magnetics

It would appear that there are two different phases of magnetics present, one of which is a shallow phase and the other a deep seated phenomenon. The shallow phase is most prominant on lines 56N, 64N, and 72N in the vicinity of 30+00E and along the eastern margin of Block "A" and in the southwest section of Block "B".

It would now appear that these are magnetic sections of the Kamloops volcanics and in many cases the source rocks are at less than 100 feet in depth.

The deep seated anomalies are particularly prominent west of the Base Line and define a northerly-trending feature which extends right across the property. A similar but less well defined feature lies in the eastern section of Block "A". These underlying features possibly depict structures within the Nicola Volcanics ore the intruding Guichon rocks.

I.P. Data

The High group was totally covered by an I.P. survey prior to its optioning by Phelps Dodge. This work was done under contract by Seigel and Associates and was carried out in the time domain.

The I.P. response on Block "B" was remarkably uniform and totally lacking in interest. That on Block "A" presented two anomalies concave to the north and occupying a zone around the outside of the anomalous magnetic zone.

The changeability anomalies are centred about 0+00E on line 40N and extends N.W., east, then N.E., and at 24+00 on line 40W. This latter feature parallels the N.W. striking arm of the larger anomaly and could be separated by a fault from that larger structure.

Geochemical Survey

The Barringer Geochemical Survey was discarded after completion as it was thought that excessive depths of overburden had masked the copper values of the underlying rocks.

Work Accomplished Under Agreement:

Diamond Drilling

The diamond drilling program was carried out more or less following the recommendations of Mr. R. Caven in his Barringer Research report but after completion of the first hole the angle drilling was abandoned and vertical holes were substituted.

The first hole was collared at 40+00N, 4+00W and was drilled grid east at a dip of .50°. This is known as D.D.H. No. 2 and encountered 53 feet of sand and till overburden. From 53' to 58' the casing was driven through highly weathered basalt and no core was recovered.

From 58' to 198' the core consisted of relatively massive basalt with varying amounts of fracturing and minor chlorite alteration. A thin section analysis of the rock gave the following:

Mode

Olivine	15%
Plagioclase	45%
Augite	30%
Opaque minerals (magnetite & ilumenite)	5%
Serpentine	3%
Calcite	2%

Minor fine vesicles were noted from 191.5 to 198 feet.

At 198 feet the drill entered a poorly consolidated clay-shale of medium grey to dark grey colour. The rock had a waxy to plastic consistency with some silt or sandy seams throughout. All sediments had a clayey matrix and numerous beds exhibited clay pellets or breccia texture. The angle of the bedding varied from 45° to 60° to the core and much of the clay-shale could possibly be of volcanic origin.

At 417.5 feet the sediment changed to a conglomerate but the rock constituents remained the same. It was composed of rounded to sharp clay-shale pebbles in a generally fine grained clay matrix and varied from light grey to a brownish colour.

At 468 feet the rock was noticeably rusty and sandy but all circulation of drill water had been lost and the drill rods became stuck in the deteriorating clay-shale.

The hole was abandoned at 468 feet and the rods and casing were removed.

The second hole (D.D.H. No. 1) was collared at 28+00W on line 40+00N and was drilled at -90°. The overburden was shown to have a depth of 79 feet and basalt similar to that encountered in hole No. 2 (above) was encountered from 79' to 107 feet. This lava had several layers of fine vesicles but was similar to that found in the first hole.

From 107 feet to 217.5 feet the drill cut light grey to greenish grey clay-shale of variable consistency similar to that found in the first hole.

From 217.5 to 370 feet the drill encountered conglomeritic clay-shale which graded into clay-shale breccia of a predominantly tan colour.

No mineralization was encountered in the hole and like the first drill hole the clay-shale took on water, became a thick viscous mud, and once again the hole had to be abandoned at 370 feet due to caving and sticking rods.

At this point the drilling was halted while the anomalous I.P. conditions were checked using the McPhar equipment and carrying out the survey in the frequency domain.

Upon completion of the check survey the drilling was continued and the machine was set up at 1+00E on line 40+00N. Oil well procedures were used in the mudding and drilling. Fuel Oil was used as the liquid media for the muds and the hole was put down at -90°.

The depth objective of the hole was set at 600 feet minimum by Dr. Bell of McPhar Geophysics and the hole was driven to a final depth of 700 feet.

In the upper levels the hole was similar to the others and penetrated 36 feet of overburden prior to penetrating basalt from 36' to 137 feet.

At this last footage the drill entered a clay-shale and remained in the same material to 387 feet. From 387' to 402 feet a coarse vesicular basalt was cut in which the vesicles decreased in numbers and size with depth. From 402' to 411' massive basalt was cut and from 411 to 430 feet massive, fine grained basalt was present.

From 430 to 601 feet the rock consisted of clay-shale breccia and conglomeritic clay-shale which varied in colour from grey to greenish grey, tan, purple, reddish and brown.

From 601 to 651 feet the clay-shales were interbedded with minor andesitic flows with a maximum thickness of four feet and from 651 to 700 the rocks were entirely of clay-shale and clay-shale breccia.

No sulphides were cut in any of the holes and lab tests on the clay-shale gave resistivity values of (8-14) and frequency effects of 0.4 to 0.9%. The metal factor was moderate to low and varied from 30 to 110. These effects are much lower than those obtained in the I.P. survey.

Check I.P. Survey

In the period between the second and third holes a check I.P. survey was run from 20+00N to 68+00N along the base line and from 48+00W to 48+00E along line 40+00N. The McPhar frequency domain data correlated very well with the Barringer time domain results and a section of clay-shale from hole number 1 was checked in the laboratory for frequency characteristics, resistivity and metal factor.

In total the work accomplished is as follows:

D.D.H. No. 1	370'
D.D.H. No. 2	468'
D.D.H. No. 3	700'
Total	1538'

I.P. Check Survey 14,400 feet.

Recommendations and Conclusions

The original geophysical results were verified by the McPhar I.P. check work and the anomalies are valid.

The geochemical survey results are meaningless due to the great depths of overlying sediment and the thick lava beds.

The three drill holes were drilled in prime target areas and in each of the three holes the rock types encountered were the same. The causitive factor for the anomalous zones along 40+00 North was not determined but two of the holes were deep enough to have intersected the anomalous zone.

A semi-quantitive spectographic analysis of the clay-shales proved they contained no mineral of economic interest and since no mineral was evident to a depth of 700 feet the anomalous zone would appear to lack economic criteria.

The anomalies as obtained by the I.P. Surveys have not been explained but the cause would appear to lie within the clay-shale horizon and no economic minerals are to be found at open-pit mining depths.

Due to the above, no further work can be justified on the High group and it is recommended that the property be returned to its owners.

R.C. Cunningham

April 1/70

R.C. Cunningham

References:

(1) N.T.S. Map: Cherry Creek 92I10/West.

(2) G.S.C. Map 886A.

(3) G.S.C. Memoir 249, Nicola Map Area, 1961.

(4) G.S.C. Aeromagnetic Map 5217 G, 1968.

(5) PhD Thesis - Geology and Geochronology of the Guichon Creek Batholith, B.C.; by Kenneth Eugene Northcote; 1968.

(6) Memo re: Project No. 95 - Largo Option by J.H. Ratcliffe, March 25/70.

(7) Geophysical and Geochemical Report on the High Group for Arlington Silver Mines Ltd., and Largo Mines Limited, by Barringer Research Limited, R. Caven, October 1969.

(8) Memo re: Project No. 95 - Largo by J.H. Ratcliffe, November 10, 1969.

DIAMOND DRILL RECORD

CLAIM NO. High 66 PROPERTY Project 95 (Largo) HOLE NO. 1

LATITUDE Line 40 ELEVATION 4000-4100 BEARING - DEPTH 370' STARTED Jan. 12/70 COMPLETED Jan. 17/70

DEPARTURE Stn. 28W SECTION - DIP Vertical DRILLED BY Canadian Longyear LOGGED BY R.H. Beaton

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-79	Overburden (36-49 basalt boulders vesicular in part, 49-79 flat-lying well bedded tan-colored silt or loess)					
79-107	Basalt, fresh appearance, finely vesicular in places and fractured at varying angles as follows:- 79-82 finely vesicular 79-90 fracturing 4"-12" spacing, generally steep or flat angles, sooty material in some. 90-107 finely vesicular, fracturing 6"-18" spacing					
107 - 217.5	Clay shale, grey with greenish and brownish coloration, light grey 215-217.5. Variable consistency e.g. earthy 116-127, predominantly med. grain sand 136-145, silty with few sandy streaks 145-167, largely grit at 162 and 163-167, grit and sandy streaks 167-215.					
217.5-370	Conglomeritic clay shale at top to clayey breccia at base, predominately tan color. 217.5-247 Tan clay, gritty, occasional small pebble, some smooth clay beds. Pebbles & red clay pellets 237-240. 247-297 Conglomerate-breccia. Angular and rounded pebbles & fragments up to 3" variable as to color hardness, and lithology. Matrix clayey (brown at 283-297). 297-370 Breccia, pale grey to tan color, fragments 1" to 2", clayey matrix rendering material weakly cohesive. Fragments in part felsitic, finely banded & lithified (sediments), or relatively soft and white (ash?).					
	Hole discontinued at 370 feet due to general caving with bit sticking below 329 feet. Casing pulled.					

CLAIM NO. High 64 **DIAMOND DRILL RECORD** PROPERTY Project 95 (Largo) HOLE NO. 2

LATITUDE Line 40 ELEVATION 4000-4100 BEARING N90°E DEPTH 468' STARTED Dec. 13/69 COMPLETED Jan. 8/70

DEPARTURE Stn. 4W SECTION DIP -50 DRILLED BY Canadian Longyear LOGGED BY R.H.Beaton

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-53	Overburden					
53-58	Bedrock (no core)					
58-198	Basalt - dark grey, uniformly fine grained rock, relatively soft yet tough, cores readily with excellent recovery. No alteration noted other than in frequent fractures at all attitudes. Degree of fracturing variable. Most fractures are lined with a black film. Those near surface are rusty. Chlorite and/or calcite? common in lower fractures. Bluish film noted in a few near-surface fractures. Fracture intensity as follows:-					
	58-78 fracture spacing 1" to 12" Generally rusty, occasional blue film.					
	78-98 fracture spacing 1" to 12" Rust diminishing, some chlorite slips.					
	98-117 fracture spacing 6" to 12" Fractures fine, sometimes clayey with yellowish film.					
	117-153 fracture spacing 3" to 12" Chlorite more prevalent in fractures.					
	153-191.5 fracture spacing 6" to 24" Chlorite and/or calcite fillings common. Black film diminishing. Rock slightly finer grain?					
	191.5-198 Fine vesicles noted at 192', 193', 195-196'.					
198 - 417.5	Clay-shale. Medium grey to dark grey generally with a greenish cast. Usually waxy to plastic consistency but some silty, sandy, or grit bands always with a clayey matrix. Coarser horizons include small varicolored clay pellets indicative of reworking also some small particles of red shale (fire hardened). Fine bedding planes at certain horizons are at 45°/core. N.B. Water circulation lost at top of clay where no recovery. Apart from frequent color variations, recorded in field book, pertinent data follows:-					

CLAIM NO.....

DIAMOND DRILL RECORD

PROPERTY..... HOLE NO.....

LATITUDE..... ELEVATION..... BEARING..... DEPTH..... STARTED..... COMPLETED.....

DEPARTURE..... SECTION..... DIP..... DRILLED BY..... LOGGED BY.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
	198 Clay pellets in clay matrix 1/32"-1/2"					
	217 Silty, weak banding? at 60°/core.					
	220½-222½ Silty 250, 250½ Fine banding at 45° core.					
	271 Few volcanic dk. grey pebbles to 3/4" loose in core box.					
	289-291 Clayey sand & grit with clay pellets to ½". 295½-297 " " " " " " " " "					
	N.B. 289-297 Several silty or sandy horizons					
	300-301, 304½-305½, 308-309, 309½-311, 312-312½, 319½-320 Impure clayey grit including a few red shale pellets to ¼" (reworked?).					
	325-346 Includes a few minor silty bands. 347-360 Distinct fine banding at 45°/core.					
	361-363 Silty. 372-386 Clayey silt at 372 to clayey fine sand at 386. (rods stuck here).					
	386-409 Slightly silty in places. 403-404 Distinct bedding at 47°/core. 409-410.5 Distinct bedding at 45°/core.					
	410.5 Tuff or ash? bed, white, 3/4" thick.					
417.5-468	Conglomerate with clayey matrix as follows:-					
	417-425 Numerous pebbles to 1 inch, some well rounded, others angular, including dark green rounded clay pellets, pale grey felsite, light grey ash fragments (reworked and/or explosion fragments).					
	425-468 Conglomerate, less clay content than preceding, fragments and pebbles, both rounded & sharply angular up to 1½". Core greenish with brown discoloration. Lowermost few feet noticeably rusty and sandy.					
	Drill unable to advance past this point (sticking, circulation cut off). Hole abandoned. Casing pulled.					

DIAMOND DRILL RECORD

CLAIM NO. High 33 | PROPERTY Project 95 (Largo) | HOLE NO. 3

LATITUDE 40+00N | ELEVATION 4000' ± | BEARING Vert. | DEPTH 700' | STARTED Feb. 12, 1970 | COMPLETED Feb. 23, 1970

DEPARTURE 1+00E | SECTION | DIP 90° | DRILLED BY Canadian Longyear | LOGGED BY B.J. Vanderkamp & R.H. Beaton

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0-36	Overburden (bouldery till?)					
36-137	Basalt, massive, non vesicular - Fracture spacing as follows: 36'-60' 1" to 12"; 60'-78' 6" to 24"; 78'-97' 6" to 60"; 97'-115' 6" to 24"; 115'-137' 3" to 24"					
	Angle of fracture - variable but vert. & 45° common.					
	Pale green chloritic gouge in some fractures. N.B. 105-106 lost circulation in vugh					
137-306	Clay shale, generally greenish grey with waxy texture, flat lying.					
	Details as follows:					
	137-146 No recovery. Circulation lost & restored.					
	150 1/2 - 153 Silty.					
	156 - 158 1/2 Dark grey.					
	180 1/2 - 182 1/2 Silty.					
	182 1/2 1" band pale grey pumice? at 90°/core					
	182 1/2 - 187 1/2 Dark grey					
	187 1/2 - 196 Clayey pumice or clayey silty sand. Lost 7' core 189-196 & circulation decrease from 80% to 50%.					
	196-206 Gritty clay, very poorly cohesive, 50% recovery (ash plus clay?)					
	206-216 Occasional sandy clay stringers. First small red grains noted at 211, 213, 216					
	231 Sandy horizon, 3 inches					
	235 Sandy horizon, 3 inches					
	267 1/2 Med. grey band 1" thick					
	270 1/2 - 277 1/2 Clayey greenish grey sand and grit At 276-277 appears porous, grit fragments to 1/2", some red grains (hard, volc.?)					
	277 1/2 - 281 Sandy clay-shale, soft.					
	281 - 287 1/2 Brownish cast to normal grey-green colour					
	290 Fine sand or ash parting)					
	291 " " " " ")					
	300 " " " " ")pumice?					
	301 " " " " ")					
	287 1/2 - 306 Fine dark grey streaks throughout at 90°/core.					

CLAIM NO. High 33 **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. .....

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
306-387	Conglomeritic clay-shale and lesser breccia-clay-shale. Spacing of pebbles variable from sparse to crowded. Composition and color of pebbles variable (clays, ash, lava). Size of pebbles variable up to 1 1/2 inches. Details as follows:-					
	306-309 Grey-green conglomeritic brecciate clay with rounded and angular pebbles and fragments up to 1 inch (some clay, some pumice)					
	309 - 314 1/2 Occasional pumice fragment to 1"					
	314 1/2 - 317 1/2 Greenish grey breccia conglomerate to 1". Pebbles & fragments, pale green to green to black, soft to cherty, thin (3") loose gravel horizon at base.					
	317 1/2 - 321 Pale green-grey waxy clay-shale, middle foot is a breccia with fragments to 1/4". Yellow 2" silt bed at base.					
	321 - 323 1/2 Light greenish grey clay shale with numerous small ash? flecks (harsh texture)					
	323 1/2 - 326 Light brown clay shale breccia - conglomerate with fragments from 1/8" at top to 1/2" at base, all colors and hardnesses, earthy at base.					
	326 - 336 Light brown clay shale with scattered soft (ash?) pellets. Interval 330 - 332 a clay-cong.-breccia with frags. to 1" vari. color & vari. hardness.					
	336 - 344 1/2 Orange tan clay shale locally cong. breccia to 1 1/2" with soft pumice & clay fragments and chert.					
	344 1/2 - 345 Pale greenish grey waxy clay shale.					
	345 - 362 As preceding with scattered pellets of pumice etc. Coarsely conglomeritic at 355-357, 358-362.					
	362 - 380 1/2 Brown, soft, earthy, conglomeritic (to 1 1/2") to 363 1/2. Tan clay shale with scattered to crowded pebbles to 2", some clay, some pumice, some basalt? to 380 1/2.					
	380 1/2 - 382 Pale greenish waxy clay shale.					
	382 - 387 Tan colored clay shale, waxy texture, early shrinkage checking (bentonitic?)					
387-402	Basalt, coarsely vesicular (vesicles to 2"). Top 1 foot light brown, rather weak. Clay at contact almost white. Basalt includes some waxy green clay (in vesicles?) near top, also occasional pebble inclusion. Amount of vesicles decreases toward 402.					

CLAIM NO. High 33 **DIAMOND DRILL RECORD** PROPERTY..... HOLE NO.....

LATITUDE..... ELEVATION..... BEARING..... DEPTH..... STARTED..... COMPLETED.....

DEPARTURE..... SECTION..... DIP..... DRILLED BY..... LOGGED BY.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
402-411	Basalt becomes much more massive; small stringers of chlorite present in this section especially at 408; also chlorite present at fractures at 50° - 60° from direction of core.					
411-430	Fine grained massive basalt with fractures at about 50° to core direction. Along these fractures some chlorite present. The last foot 429-430 consist of more vesicular basalt with contact at 430.					
430-601	Baked conglomeritic clay shale reddish brown in appearance; pebbles rounded and varying in composition; size of pebbles up to 1 1/2" in diameter.					
	438-449 Conglomeritic clay shale with very soft matrix; composition & size of pebbles variable.					
	449-503 Conglomeritic clay shale: increasing in amount of pebbles also increase in size up to 2" in diam. some carbonaceous soft material in streakes present. The increase in pebbles makes the clay shale appear tougher in composition.					
	503-504 One foot of clay shale without any pebbles matrix greyish.					
	504-518 Conglomeritic clay shale with 2" pebbles matrix seems to become more chloritic in composition towards 518.					
	518-525 Conglomeritic clay shale with much smaller pebble size 1/4" diam. more chloritic material in matrix.					
	525-525 1/2 6" band of grey clay shale without any pebbles; very sharp contacts.					
	525 1/2 - 532 Conglomeritic clay shale matrix chloritic and is green in color pebbles up to 1/2" but most are in 1/8-1/4" range; pebbles not too abundant.					
	532-550 Conglomeritic clay shale matrix greey-grey; some pebbles with brown color present.					
	550-564 Clay shale with high amount of angular fragments, still some pebbles present. Composition of pebbles and fragments is heterogenoous; matrix soft and chloritic.					
	564-565 One 6" band of basalt and one 6" band of reddish material.					
	565-567 Clay shale with both pebbles and angular fragments of heterogenous composition, matrix soft and chloritic.					

CLAIM NO. High 33

DIAMOND DRILL RECORD

PROPERTY ..... HOLE NO. .....

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
	567-569 Conglomeritic clay shale, matrix grey, soft; pebbles up to 1 1/2" in diameter.					
	569 - 572 Conglomeritic clay shale with more chloritic matrix.					
	572-575 Conglomeritic clay shale with less pebbles; matrix grey.					
	575-576 7" volcanic (basalt) in grey clay shale matrix.					
	576-595 Conglomeritic clay shale matrix much browner in appearance green chloritic streaks throughout it relatively few pebbles and small fragments present.					
	595-601 Conglomeritic to breccia clay shale. Matrix of clay shale becomes purple brown in color mainly fragments, angular and small are present.					
601-602	Small lens of andesite present.					
602-607	Breccia clay shale matrix appears to be still a clay shale but fragments are mainly of volcanic origin and very angular (agglomerate).					
607-609	Andesite 2 feet present of andesite similar in composition to volcanic fragments.					
609-615	Breccia clay shale great abundance of fragments present size up to 6-7" in diameter.					
615-616	Vesicular andesite.					
616-632	Breccia clay shale. Fragments are 90% of volcanic origin matrix clay varying in composition sometimes more chloritic (agglomerate).					
632-633	One foot of andesite, not vesicular.					
633-641	Breccia clay shale matrix more reddish in color fragments up to 6"-7" in diameter but also many smaller (agglomerate).					
641-645	Massive andesite.					

CLAIM NO. High 33

DIAMOND DRILL RECORD

PROPERTY ..... HOLE NO. .....

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
645-650	Breccia clay shale.								
650-651	One foot of andesite.								
651-700	Breccia clay shale. Some large fragments present matrix in places rather chloritic.								
	667-669 Two feet of breccia clay shale matrix brown; less fragments.								
	669-696 Breccia clay shale; at 685 some fragments appear vesicular.								
	696-700 Clay shale; matrix light brown with little or no pebbles; a few up to 1/4" in diameter.								
	700 ' - END OF HOLE								

NESBITT - [illegible] CROU[illegible] - (92I/10)

	Claim	Tag No.	Record No.	Expiry Date
*	High #1	985701	76327	Feb. 21/72
*	#2	985702	76328	"
	#3	985703	76329	"
	#4	985704	76330	"
	#5	985705	76331	"
	#6	985706	76332	"
*	#7	985707	76333	"
*	#8	985708	76334	"
*	#9	985709	76335	"
*	#10	985710	76336	"
*	#11	985711	76337	"
*	#12	985712	76338	"
*	#13	985713	76339	"
*	#14	985714	76340	"
	#15	985715	76273	Feb. 19/72
	#16	985716	76274	"
	#17	985717	76275	"
	#18	985718	76276	"
*	#19	985719	76277	"
*	#20	985720	76278	"
*	#21	985721	76279	"
*	#22	985722	76280	"
*	#23	985723	76281	"
*	#24	985724	76282	"
*	#25	985725	76283	"
*	#26	985726	76284	"
*	#27	985727	76285	"
*	#28	985728	76286	"
*	#29	985729	76287	"
*	#30	985730	76288	"
*	#31	985731	76289	"
	#32	985732	76290	"
	#33	985733	76291	Feb. 19/73
	#34	985734	76292	Feb. 19/73
	#35	985735	76293	Feb. 19/73
	#36	985736	76294	"
	#37	985737	76295	"
	#38	985738	76296	"
	#39	985739	76297	"
*	#40	985740	76341	Feb. 21/72
	#41	985741	76298	Feb. 19/73
*	#42	985742	76342	Feb. 21/72
	#43	985743	76299	Feb. 19/73
*	#44	985744	76343	Feb. 21/72
	#45	985745	76300	Feb. 19/73

	Claim	Tag No.	Record No.	Expiry Date
*	High #46	985746	76344	Feb. 21/72
	#47	985747	76345	"
	#48	985748	76346	"
	#49	985749	76347	"
	#50	985750	76348	"
	#51	985751	76349	"
	#52	985752	76350	"
	#53	985753	76351	"
	#54	985754	76352	"
*	#55	985755	76353	"
	#56	985756	76354	"
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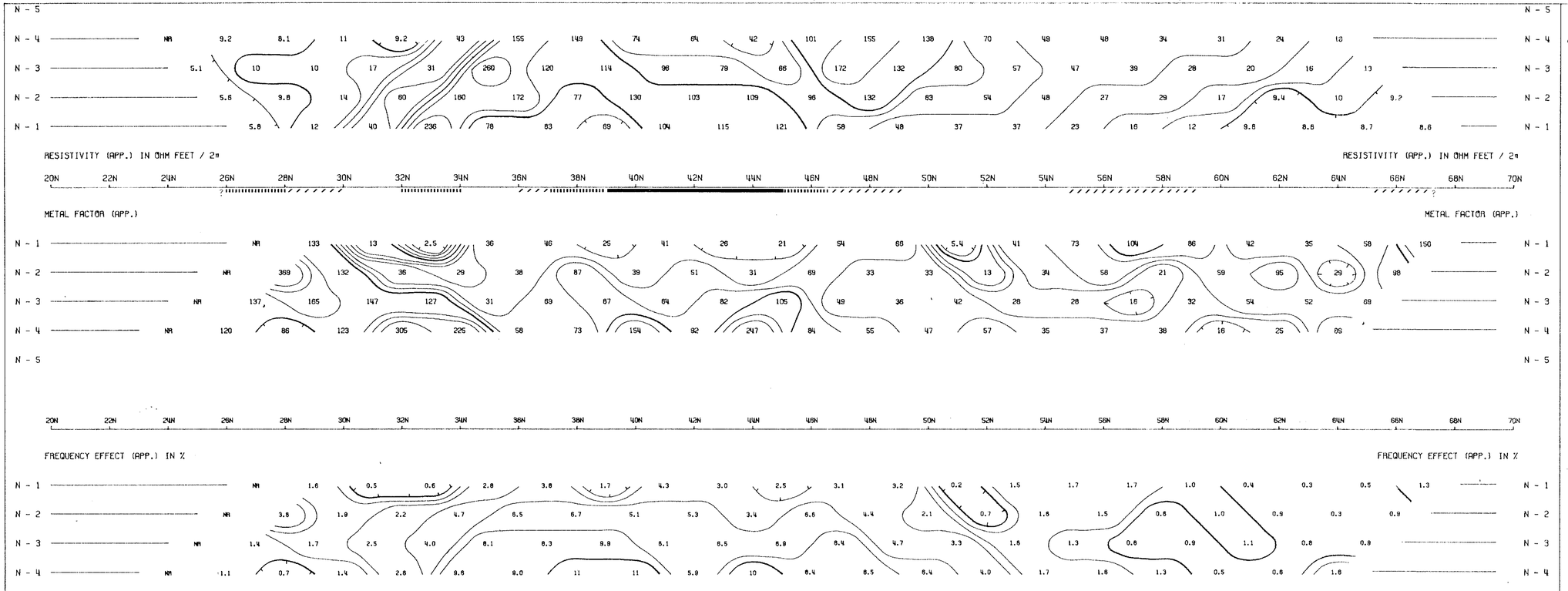
	#58	985758	76356	"
	#59	985759	76357	"
	#60	985760	76358	"
	#61	985761	76359	"
	#62	985762	76360	"
	#63	985763	76361	"
	#64	985764	76362	Feb. 21/73
	#65	985765	76363	Feb. 21/72
	#66	985766	76364	Feb. 21/73
	#67	985767	76365	Feb. 21/72
	#68	985768	76366	Feb. 21/73
	#69	985769	76367	Feb. 21/72
	#70	985770	76368	"
	#71	985771	76301	Feb. 19/73
	#72	985772	76302	"
	#73	985773	76303	"
	#74	985774	76304	"
	#75	985775	76305	"
	#76	985776	76306	"
	#77	985777	76369	Feb. 21/73
	#78	985778	76370	"
	#79	985779	76371	"
	#80	985780	76372	"
	#81	985781	76373	"
	#82	985782	76374	"
	#83	985783	76375	Feb. 21/72
	#84	985784	76376	"
	#85	985785	76307	Feb. 19/73
	#86	985786	76308	"
	#87	985787	76309	"
	#88	985788	76310	"
	#89	985789	76311	"
	#90	985790	76312	"

Claim	Tag No.	Record No.	Expiry Date
High #91	985791	76313	Feb. 19/73
#92	985792	76314	"
#93	985793	76315	"
#94	985794	76316	"
#95	985795	76317	"
#96	985796	76318	"
#97	985797	76319	"
#98	985798	76320	"
#99	985799	76321	"
#100	985800	76322	"

Typed Nov.20/69/vh

Amended Dec. 23/69
Typed Dec.23/69-vh



2774

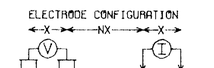
OWG. NO.- I.P.-5387-1

PHELPS DODGE CORPORATION OF CANADA LIMITED

TUNKWA LAKE PROPERTY, LARGO OPTION, PROJECT 95
HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

LINE NO.- BASELINE

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: JAN 1970

APPROVED:

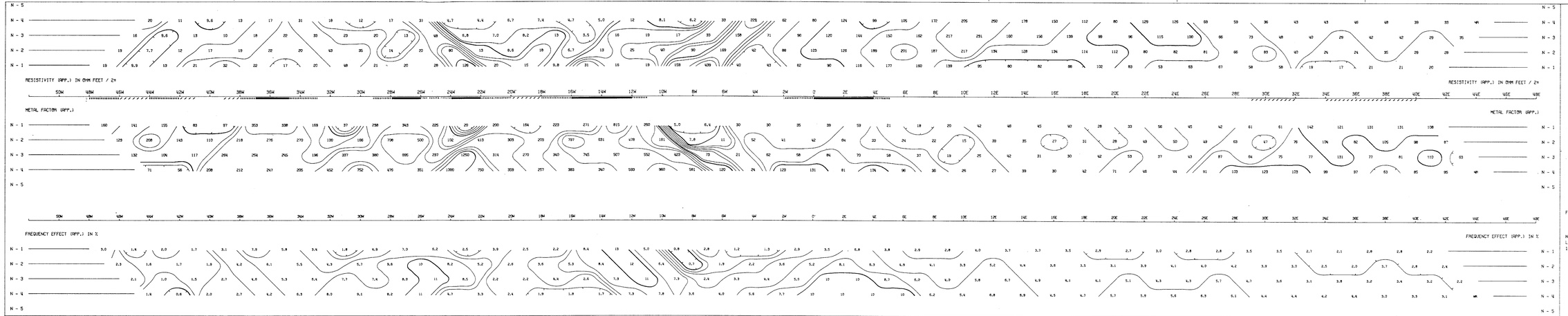
DATE: May 3/70

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER



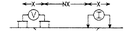
DWG. NO.- I.P.-5387-2

PHELPS DODGE CORPORATION OF CANADA LIMITED

TUNGSTEN LAKE PROPERTY, LARGE OPTION, PROJECT 95
HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

LINE NO.- 40N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF PARABOLIC ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: JAN 1970

APPROVED:

DATE: Mar 3/70

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1-1.5-2-3-5-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

DWG. I.P.P. 3407

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP

See other part for Maps 1 and 2.

2774 M-3

SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE ——————

PROBABLE ····· ····· ·····

POSSIBLE \ \ \ \ \ \ \ \ \

Number at the end of anomaly indicates spread used.

PHELPS DODGE CORPORATION OF CANADA LIMITED

TUNKWA LAKE PROPERTY, LARGO OPTION, PROJECT 95, HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET

DRAWN: D N H
DATE: FEBRUARY 1970
APPROVED:

McPHAR GEOPHYSICS LIMITED R.A. Bell Mar 2/70

DWG. I.P.P. 3407