



42801NW0052 38 KEITH

010

Diamond Drilling

Township of KEITH

Report N^o 38

Work performed by: Palomar Gold Mines

Claim N ^o	Hole N ^o	Footage	Date	Note
	1	744'		(1)
	2	283'		(1)
	3	292'		(1)
	4	755'		(1)
	5	505'		(1)
	6	603'		(1)
	7	707'		(1)
	8	578'		(1)
	9	626'		(1)

John

5093'

Notes:

- (1) These holes were probably located in claims S 42642, S 42640, S 42645, S 42641, S 42653. The work was done during the winter of 1946-47.

PLANS FILED IN '1' FILE

PALOMAR GOLD MINES LTD.

Keith Twp.

Description

Cubicle
No.

Diamond Drill Section 1-8 -- Uncoloured Paper Tracing -- 1"-100'

32

MUSKEGO

TWP.

7.5M

PENHORWOOD TWP.

6M

PALOMAR L.

GROUND HOE P.

S #2642	S #2640	S #3901
S #2645	S #2641	S #3900
S #2646	S #2644	S #3899
S #2643	S #2639	S #3898
S #2655	S #2647	S #3897
S #2654	S #2648	S #3896
S #2655	S #2649	S #3902
S #2656	S #2650	S #3903
S #2652	S #2651	

PALOMAR GOLD MINES LIMITED

Keith Township

Scale: 1 inch = 40 chains

T-100

PROPERTY PALOMAR GOLD MINES LTD.
 Keith Twp.

HOLE NUMBER 1 T-106
 SHEET NUMBER 1
 SECTION FROM 0' TO 412'

DIAMOND DRILL RECORD

LOCATION: LAT. N 13711 0 45°
 DEP. E 16178 250' 40°
 ELEVATION OF COLLAR 1156 500' 34°
 DATUM 701' 33½°
 DIRECTION AT START: BEARING S 1° W Ast.
 DIP -45°

STARTED
 COMPLETED
 ULTIMATE DEPTH 744'
 PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 11	Casing				
11-108	<u>Banded Silicious Iron Form</u> Black and White cherty bands up to 1 in. thick - No effect on compass.				
108-434	<u>Tuffaceous Sediment? Greywacke?</u> Some dark argillaceous sections but largely light green, granular type showing some bedding and granular texture, like a true greywacke. From 200' it is a light grey, massive, coarsely bedded type, with only a few places where the bedding is apparent. Indication of tops to top of hole. Somewhat altered to carbonates and sericite. 270'	1			
	325-395 - Becoming more sheared and altered but retains some bedding. Sericite and carbonate mark planes of foliation at about 45°.				
	395-412 - Massive light grey type as before sheared zone. Some banding with blue-grey carbonate and quartz				

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HOLE NUMBER 1 110

SHEET NUMBER 2

SECTION FROM 413' TO 698'

DIAMOND DRILL RECORD

LOCATION: LAT. N 13716
 DEP. E 16178
 ELEVATION OF COLLAR 1156
 DATUM
 DIRECTION AT START: BEARING S 10° W
 DIP -45°

STARTED
 COMPLETED
 ULTIMATE DEPTH 744'
 PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
	and yellow sericite.				
	413-419 - Basic Dyke?				
	Green, even-textured, andesitic looking rock, with streaks of leucoxene alteration distributed throughout, giving a peppery appearance. Contacts are sharp at both ends.				
	419-434 - Grey-Green - sheared, banded type as before with blue quartz carbonate stringers.				
434-499	Zone of Surface Oxidation - Soft, rusty weathered material, completely disintegrated.				
	489-493 - Greenstone - Coarse green relatively unaltered section possibly a dyke.				
499-599½	Andesite? - Green, medium textured, uniform type. Not badly altered except short sections that are rusted.				
599½-710	Oxidized Zone - Red, rusty, completely altered rock, largely lost core.				
	683-698 - Somewhat less oxidized - andesite as before.				

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DIAMOND DRILL RECORD

HOLE NUMBER 4 T-100
 SHEET NUMBER 1
 SECTION FROM 0' TO 350'

LOCATION: LAT. N 12641
 DEP. E 15500 0 45°
 ELEVATION OF COLLAR 1187 150 42°
 DATUM 300 41°
 DIRECTION AT START: BEARING N 1° W 450 28 1/2°
 DIP 45° 600 21 1/2° 750 19 1/2°

STARTED
 COMPLETED
 ULTIMATE DEPTH 755°
 PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 87	Casing				
87-118	Black Tuff - Well banded with very regular, but fine banding 98-99 - White, carbonatized dyke, highly sheared, cuts off bedding at a sharp angle.				
118-133	Dioritic Dyke - Old, sheared, chloritic type - rather coarse textured. Includes 2 short sections of tuff.				
133-139	Altered Greenstone - Probably lava, but contains numerous sections of quartz and carbonate in veins and as irregular stringers.				
139-416	Andesitic Lava - Grades from former altered zone to more massive type and from 215 is quite coarse textured and uniform.				
	230-250 - Quite dioritic in appearance but grades to fine lava both ways.				
	275-278 - Lost core.				
	278-350 - Spherulitic light green dense type with zones of spherules scattered at intervals through the core.				

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DIAMOND DRILL RECORD

HOLE NUMBER 4
 SHEET NUMBER 2
 SECTION FROM 285' TO 546'

LOCATION: LAT. N 12641
 DEP. E 15500
 ELEVATION OF COLLAR 1187
 DATUM _____
 DIRECTION AT START: BEARING N 1° W
 DIP 45°

STARTED _____
 COMPLETED _____
 ULTIMATE DEPTH 755'
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
	285-288 - Black, basic dyke, fine textured and uniform.				
	320-321 - Basic, black dyke.				
	325-327 - Basic, black dyke.				
	350-355 - Reverts to massive andesite.				
	355-357.5 - Basic Dyke as before.				
	357.5-381 - Medium andesite lava, somewhat altered.				
	381-385 - Coarse dioritic phase.				
	385-416 - Andesite with stringers of quartz and carbonate.				
416-546	Diorite - Sharp contact to a coarse-grained dioritic type, altered to carbonate and chlorite. 437'	3			
	450 - Same coarse diorite, less altered, with greenish colour and some epidotization. Surface marked by patches of white opaque mineral.				
	530-546 - Becomes finer textured to contact. Contact is not sharp, but can be located over a few inches and looks				

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DIAMOND DRILL RECORD

HOLE NUMBER 4 1"
 SHEET NUMBER 3
 SECTION FROM 546' TO 755'

LOCATION: LAT. N 12641
 DEP. E 15500
 ELEVATION OF COLLAR 1187
 DATUM _____
 DIRECTION AT START: BEARING N 1° W
 DIP 45°

STARTED _____
 COMPLETED _____
 ULTIMATE DEPTH 755'
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
	like an intrusive contact.						
546-673	Andesitic Lava - Light green, dense, massive type. Some zones of spherules noted and some more massive zones particularly after 625.						
	646-652 - Quartz and calcite vein, with very little pyrite and pyrrhotite.						
	Contact at 673 is at 12 in. vein of white quartz.						
673-755	Diorite						
	673-715 - Extremely carbonated and lighter grey-green throughout, with stringers of quartz and carbonate.						
	715-755 - Becomes less carbonatized coarse-textured, dark green chloritic type similar to section from 416-546.						
755	END OF HOLE						

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HOLE NUMBER 5
 SHEET NUMBER 1
 SECTION FROM 0' TO 447'

DIAMOND DRILL RECORD

LOCATION: LAT. N 12838 0° - 45°
 DEP. E 15528 150 - 46°
 ELEVATION OF COLLAR 1170 300 - 22 1/2°
 DATUM 450 - 16°
 DIRECTION AT START: BEARING S 1° W
 DIP -45

STARTED
 COMPLETED
 ULTIMATE DEPTH 505'
 PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 120	Casing				
120-129	Oxidized material				
129-137	Andesitic lava - Carbonatized and somewhat sheared with 25% lost core.				
137-152	Dioritic Dyke - Old, grey green chloritic type with some scattered large cubes of pyrite.				
152-352	Interbedded Tuffs & Greywacke Slaty, fine-bedded variety with short sections of coarser, light grey fragmental. No magnetic attraction. 200 - Sections of coarse grey type comprise more than 50% of core and remainder is black, slaty argillite. Several sections give indication of tops by grain gradation to top of hole in slaty beds.				
	347 - End of black argillites				
	347-352 - Coarse greywacke.				
352-447	Cherty Tuff - Light grey and yellow, sericitized and cherty. Somewhat sheared and crudely banded.				

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DIAMOND DRILL RECORD

HOLE NUMBER 5
SHEET NUMBER 2
SECTION FROM 412' TO 506'

LOCATION: LAT. N 12838
DEP. E 15528
ELEVATION OF COLLAR 1170
DATUM
DIRECTION AT START: BEARING S 1° W
DIP -45

STARTED
COMPLETED
ULTIMATE DEPTH 505'
PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
	412-417 - Volcanic fragmental. Similar to above cherty tuff, with obscure grey fragments.						
	417-447 - Cherty tuff as before, but somewhat brecciated, with sections of graphitic material near contact.						
447-506	Graphitic Tuff - Looks like black iron formation, with some bands of brown hematite and massive sulphides. No magnetic attraction. 40% lost core.						
	500-506 - Grey and less graphitic, but highly sheared.						
506	END OF HOLE						

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DIAMOND DRILL RECORD

HOLE NUMBER 6 T-100

SHEET NUMBER 1

SECTION FROM 0' TO 170'

LOCATION: LAT. N 11944 0 - 45°
 DEP. E 15525 150 - 41
 ELEVATION OF COLLAR 1217 300 - 21½
 DATUM 450 - 18
 DIRECTION AT START: BEARING N 1° E 600 - 9½
 DIP -45°

STARTED
 COMPLETED
 ULTIMATE DEPTH 603'
 PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 96	Casing				
96-132½	Grey Siliceous Sheared Rhyolites and Fragmentals				
	Includes sections of fragmental material.				
	Dark blue-gray, siliceous looking rock, with occasional large quartz eyes and shearing @ 45° to core.				
	128½-132 is largely a volcanic looking fragmental with angular white cherty fragments (chicken feed) 129½'	4			
132½-170	Coarse Quartz Porphyry - Light yellow-grey colour, with sericite in bands, and numerous large bluish quartz eyes. Contact at 132½ is quite sharp, but quartz eyes continue into grey type. 150'	5			
	155-163½ - Dioritic dyke - Even medium textured chloritic type.				
	165-170 - Quartz porphyry becomes light yellow in colour and quite massive. Quartz eyes seem to diminish in size toward contact (Intrusive?)				

Thin Section - Aclastic rock - probably a rhyolite tuff.

Thin Section - Quartz-Feldspar Porphyry of flow origin.

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DIAMOND DRILL RECORD

HOLE NUMBER 6
 SHEET NUMBER 2
 SECTION FROM 170' TO 485'

LOCATION: LAT. N 11944
 DEP. E 15525
 ELEVATION OF COLLAR 1217
 DATUM _____
 DIRECTION AT START: BEARING N 1° E
 DIP -45°

STARTED _____
 COMPLETED _____
 ULTIMATE DEPTH 603'
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
170-603	Sheared Rhyolitic Tuffs and Pyroclastics				
	Grey and yellow, crudely banded rock with sericite and carbonate stringers, but in general hard and cherty. The grey bands are brecciated in places. In part it is probably a volcanic fragmental. Occasional quartz eyes noted.				
	Contains short sections of black graphitic tuff, as from 235-245.				
	333-340 - Dark slaty volcanic fragmental with drawn out white fragments.				
	342 - Amygdules? over a few inches.				
	350-365 - Fracture breccia.				
	Grey elongated fragments in a black, chloritic groundmass which in places consists only of a series of stringers.				
	365-444 - Blue-Grey and yellow sheared, banded tuffaceous type, with a little silicious flow material.				
	444-485 - Flow material with well-developed quartz eyes becomes increasingly				

prominent.

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HOLE NUMBER 6
SHEET NUMBER 3
SECTION FROM 485' TO 603'

DIAMOND DRILL RECORD

LOCATION: LAT. N 11944
DEP. E 15525
ELEVATION OF COLLAR 1217
DATUM _____
DIRECTION AT START: BEARING N 1° E
DIP -45°

STARTED _____
COMPLETED _____
ULTIMATE DEPTH 603'
PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
	485-603 - Blue-grey, cherty looking rock, with sericite in wavy fractures and considerable carbonate. Fragmental appearance in places is probably due to brecciation.	586'	6				
603	END OF HOLE						

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DIAMOND DRILL RECORD

HOLE NUMBER 7
 SHEET NUMBER 1
 SECTION FROM 0' TO 330 1/2'

LOCATION: LAT. N 11436 0 - 52°
 DEP. E 15543 150 - 44 1/2
 ELEVATION OF COLLAR 1224 300 - 31 1/2
 DATUM 450 - 14 1/2
 DIRECTION AT START: BEARING N 1° W 600 - 0
 DIP -50°

STARTED _____
 COMPLETED _____
 ULTIMATE DEPTH 707'
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 68	Casing				
68 - 226 199 1/2	Dacitic Lava - Light green relatively massive, but sheared and carbonatized type of lava. Very uniform and granular in texture, but there are a few sections containing quartz filled amygdules and a few quartz eyes visible. Foliation is at about 40°.				
194 1/2 - 216	Old Dioritic Dyke - Sheared, and largely altered to chlorite and carbonate.				
216 - 308	Dacitic Lava - as before				
	236-238 } Old sheared dioritic				
	245-249 } dykes as before.				
	261 - Changes from massive, dense type with quartz amygdules to coarser, uniform massive lavas. Contact at 308 is gradational.				
308 - 330 1/2	Replacement Breccia - A grey, fragmental with the general appearance of flow top breccia but due in part to replacement by black graphitic and cherty material. In places the black chert occurs only as narrow	326'	7		

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DIAMOND DRILL RECORD

HOLE NUMBER 7
 SHEET NUMBER 2
 SECTION FROM 350' TO 629'

LOCATION: LAT. N 11436
 DEP. E 15543
 ELEVATION OF COLLAR 1224
 DATUM _____
 DIRECTION AT START: BEARING N 1° W
 DIP 35° -50°

STARTED _____
 COMPLETED _____
 ULTIMATE DEPTH 707'
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
	stringers and in other places it constitutes over 50%, with isolated angular grey fragments				
	350-430½ - Fragments less conspicuous and more foliation, with massive pyrite in places.				
330½-348	Chloritic Dyke - Texture is rather fine, with chloritic streaks in a grey matrix.				
	347-348 - Lost core.				
348-525	Rhyolite Tuffs and Pyroclastics				
	Blue-grey and yellow banded rock, with high carbonatization. Same as rock in d.d.h. 6 from 170-603.				
	Banding is not regular.				
525-550	Black Graphitic Tuff - No magnetic attraction				
550-629	Acid Tuffs and Pyroclastics				
	Grey, highly carbonatized, soft and somewhat sheared.				
	550½-551½ - Basic dyke				
	593-608 - Basic dyke, highly chloritic.				

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Keith Twp.

DIAMOND DRILL RECORD

HOLE NUMBER 7
 SHEET NUMBER 3
 SECTION FROM 629' TO 707'

LOCATION: LAT. N 11436
 DEP. E 15543
 ELEVATION OF COLLAR 1224
 DATUM _____
 DIRECTION AT START: BEARING N 1°W
 DIP -50°

STARTED _____
 COMPLETED _____
 ULTIMATE DEPTH 707'
 PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
629-690	Rhyolite - grey, siliceous type - Contact not distinct but quartz eyes appear and rock is siliceous.						
647-649½	Grey siliceous dyke. Tuffs revert to banded sericitic type as from 348-525.						
649½-690	Largely flow type, yellow to grey with quartz eyes. Includes short sections that are light gray with numerous large quartz eyes.						
690-707	Coarse Quartz Porphyry Grey, coarse type, with numerous large quartz phenocrysts.						
707	END OF HOLE						

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DIAMOND DRILL RECORD

HOLE NUMBER 8
SHEET NUMBER 1
SECTION FROM 0' TO 446'

LOCATION: LAT. N 10979 0 - 45°
DEP. E 15602 150 - 37½
ELEVATION OF COLLAR 1222 300 - 14½
DATUM 450 - 4
DIRECTION AT START: BEARING N 1° W
DIP 45°

STARTED
COMPLETED
ULTIMATE DEPTH 578'
PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 69	Casing				
69-302	Sheared Carbonatized Andesitic Lavas - Grey green, sheared, carbonatized type, with shearing at about 45°. Some grey carbonate in planes of foliation. 145 - Carbonatization increases and rock becomes brownish, soft and sheared. Some stringers of white carbonate. 231-245 - Black-grey brecciated zone. 245 - Soft brown, highly carbonatized and sheared as before.				
302-446	Sheared Andesitic Lavas - Alteration less intense and shearing less intense, but core is intersected by numerous quartz and carbonate stringers, very much like Joburke. main zone flows. Colour is light green. 321½-325½ - Grey carbonate alteration. 325½-446 - Sheared green lavas with contorted quartz and carbonate stringers, as before.				

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DIAMOND DRILL RECORD

HOLE NUMBER 8
 SHEET NUMBER 2
 SECTION FROM 446' TO 578'

LOCATION: LAT. N 10979
 DEP. E 15602
 ELEVATION OF COLLAR 1222
 DATUM
 DIRECTION AT START: BEARING N 1° W
 DIP 45°

STARTED
 COMPLETED
 ULTIMATE DEPTH 578'
 PROPOSED DEPTH.....

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
446-578	<p><u>Sheared, Carbonatized Andesitic Lava</u> Grey soft Grey soft, highly carbonatized and highly sheared. Entirely different than former type. Carbonatization decreases gradually from 525 to 550 and colour changes to green. 550-578 - Massive andesitic type; with little shearing but considerable quartz and carbonate in small veinlets.</p>						
578'	END OF HOLE						

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 Keith Twp.

DIAMOND DRILL RECORD

HOLE NUMBER 9
 SHEET NUMBER 1
 SECTION FROM 0' TO 570'

LOCATION: LAT. N 11079
 DEP. E 15576
 ELEVATION OF COLLAR 1124
 DATUM
 DIRECTION AT START: BEARING South 2° W. Ast.
 DIP 52

STARTED
 COMPLETED
 ULTIMATE DEPTH 626'
 PROPOSED DEPTH

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$
0 - 60	Casing				
60-220	Sheared, Carbonatized Andesite Green, fine grained highly sheared - Foliation @ 45° 75-83 - Light grey highly carbonatized coarse phase - Possibly a dyke. Some old sheared dioritic dykes, less than 2' long as a rule. Contact grades 220-230 from andesite to dacite.				
220-250	Dacite - Darker green massive, with brown leucoxene and small quartz eyes.				
250-304	Andesite - Massive green, fine textured, with stringers of quartz and carbonate.				
304-470	Dacite ? - Sharp contact to coarse textured, highly carbonatized and chloritic, green rock Dioritic near contact, but it passes gradually back to finer textured type. Small blue quartz eyes visible. No shearing until about 460.				
470-570	Chloritic Carbonate Schist Becomes progressively more schistose from 470 to 480, with grey carbonate stringers.				

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DIAMOND DRILL RECORD

HOLE NUMBER 9
SHEET NUMBER 2
SECTION FROM 553½' TO 626'

LOCATION: LAT. N 11079
DEP. E 15576
ELEVATION OF COLLAR 1124
DATUM _____
DIRECTION AT START: BEARING South 2° W Ast.
DIP 52°

STARTED _____
COMPLETED _____
ULTIMATE DEPTH _____
PROPOSED DEPTH _____

DEPTH FEET	FORMATION	SAMPLE No.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD \$		
	Rock is dark green-black, soft and broken.						
	553½-559 - Hornblende Lamprophyre.						
	A grey, siliceous dyke, with numerous needles of hornblende, partly gone to chlorite.						
570-626	<u>Chloritized Basic Lava</u>						
	Green-black, fairly soft massive greenstone. Probably same rock as above, but no schisting and few carbonate stringers.						
626	END OF HOLE						

DRILLED BY _____

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ONTARIO
DEPARTMENT OF MINES

T-100
RESIDENT GEOLOGIST
39 THIRD AVENUE, TIMMINS, ONT.

PALOMAR GOLD MINES LTD.

Keith Twp.

Sudbury Mining Division

Introduction:

The program of exploration carried out during the winter of 1946-47 was under the direction of Mr. G. W. Moore of the engineering staff at Joburke Gold Mines. The core was logged by the writer, and an attempt was made to correlate it with the geology of the Joburke property. This report is intended as a record of the observations resulting from the limited study of the drill core and its comparison with the results from neighbouring properties. A composite cross-section showing the results of the drilling is included with this report. No plan has been prepared, but the location and geology of the Palomar drilling is included on the 1" = 400' scale plan of Joburke Gold Mines Ltd. T-70

Location & Access:

The property consists of 26 claims in Keith Twp., adjoining directly east of Joburke Gold Mines Ltd. It reaches the Groundhog River on the east, and includes part of Mackeith Lake on the west. The main line of the C. N. R. runs obliquely across the property from N.W. to S.E. and Joburke Station is within the property.

The claims are numbered as follows:

S42639 - S42656 - 18 claims
S43896 - S43903 - 8 claims.

No permanent camps have been constructed at the time of writing.

Object and Extent of Development

The property was formed on the assumed extension of the gold-bearing zone of Joburke Gold Mines Ltd. Since there is little outcropping in the area south of Mackeith Lake, it was thought that cross-sectional drilling would be advisable as an initial step.

Some prospecting was done during the summer of 1946, but no geological map was prepared. Rock outcroppings are quite plentiful in the north part of the property, but the only rock located in the south half is in the S.E. corner of S42653, where there are a few small outcrops of sheared rhyolite porphyry.

Approximately 5100 feet of diamond drilling was completed in 9 holes. The object was to cross-section the ground from Mackeith Lake, south to the boundary of the property. Drilling was started about 900 feet east of the Joburke boundary and No. 1 hole was located on the small point on the north shore of Mackeith Lake. Holes 2 and 3 ran into bad ground under the lake, and the section was continued further west, only 200 feet from the Joburke boundary.

Geology:

A study of the few outcrops on surface on the Palomar and on the east end of the Joburke indicates that the shearing and the rock formations swing to the south east across the corner of Palomar and onto the property of Hoodoo Lake Mines. This trend is confirmed to some extent by the drilling.

The northern part of the section drilled, encountered interbedded greywacke and andesitic lava, which probably corresponds to the sedimentary series encountered in the collar of d.d.h. 146 on the Joburke property, to the north of the ore zone.

The sediments include quartzose greywacke and argillite, with sections of graphitic tuff. These graphitic tuffs occur in bands up to 60 feet wide in both the andesites and sediments. The sediments in hole P-1 reach a width of 300 feet, dip north at about 75° and face north.

The andesites which appear to be interbedded with the sediments are on the whole relatively unaltered and massive. However, in two sections in holes 1 & 2 they are completely disintegrated by oxidation, apparently as a result of infiltration of surface solutions. In hole 1, an oxidized zone over 100 feet wide was encountered at a vertical depth of 400 feet below lake level. These zones of oxidation probably represent faults of considerable magnitude. It is interesting to note that they line up very well with the strong strike fault encountered in d.d.h.'s 186 and 188

on the Joburke.

South of the sediments in d.d.h. 5, a wide zone of rhyolites, tuffs, and pyroclastics was entered. This series is over 800 feet wide, in holes 5, 6, and 7. It comprises graphitic tuffs, acid fragmentals and cherty tuffs, sheared grey, siliceous rhyolite, and coarse quartz porphyry. It is comparable to the series of rhyolitic volcanics encountered by drilling to the south east on the Hoodoo Lake property, and also probably is part of the same horizon as the quartz porphyry which outcrops north of the ore zone on the Joburke.

To the south of the acid volcanics, in the collar of d.d.h. 7 and also in holes 8 and 9, a series of interbedded dacites and andesites was encountered. These are similar in appearance to the rocks in the ore zone at Joburke, and also similar to the zone drilled on the Hoodoo Lake property. In hole No. 8 from 302-446 a section of sheared andesitic lavas was intersected, with numerous contorted stringers of quartz and carbonate, very similar to some of the rocks in the vicinity of No. 1 zone at Joburke.

In hole No. 9, near the south extremity of the cross-section, 100 feet of soft chlorite-carbonate schist was cut, from 470 to 570 feet, and south of this the rock is a black, basaltic looking greenstone. This section corresponds to the rocks encountered in Joburke hole No. 27, south of the ore zone.

Values:

No values of interest were encountered.

Conclusions:

The sequence and appearance of the rocks in this drilling indicates that the horizon embracing the Joburke Ore Zone was passed through. While no values were obtained, the amount of work done was not sufficient to test the favourable zone thoroughly. Only one drill hole tested the extension of these lavas, which showed typical quartz and carbonate stringers, but failed to yield interesting mineralization at this point.

If the structure has been properly interpreted, the favourable horizon of andesites and dacites swings sharply to the south on the Palomar and straightens out again to the east in the area drilled by Hoodoo. In that case the most

favourable ground might lie in the area where folding takes place. This area was not tested in the drilling program completed to date on the Palomar property.

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June 4, 1947.

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