

# DRILLING RECORD

AREA: <b>PIEMAN INVESTIGATION</b>	CO-ORDINATES:	E:	N:	HOLE No.
LOCATION: <b>Sophia Tunnel Line</b>	ON LINE: <b>FP 25</b> <b>FP 24</b>	BEARING: <b>0°00'</b>	AT CH:	<b>6636</b>
GEOLOGICAL PLAN: SURVEY PLAN: <b>5368855</b>	AT STN: <b>FP 25</b>	BEARING: <b>169°25'</b>	DIST: <b>73'</b>	FILE No.
DATES (a) DRILLED: <b>May '65</b> (b) WATER TABLE: <b>20-5-65</b>	SURFACE	COLLAR	WATER TABLE	SHEET
METHOD: <b>D.D. E1000</b> DIAMETER: <b>N<sup>4</sup>, N<sub>x</sub>, N<sub>y</sub>, B<sub>x</sub>, B<sub>m</sub></b>		<b>937'</b>	<b>40' depth in hole</b>	<b>1</b>
SITE REMARKS: <b>Talus slope at peg T62 +25'</b>	HOLE DRILLED	ANGLE FROM HORIZONTAL	DIRECTION	OF
	VERT./HOR./INC.	<b>35°</b>	<b>229°</b>	<b>4</b>
				SHEETS

DEPTH	CORE DRAWN	CORE LENGTH	CASING	RECOVERY %	GRAPHIC LOG	JOINTS No. Per Foot.	FLUID RETURN	GROUND WATER	WATER PRESSURE TESTS LEAKAGE	REMARKS	
										lim. - limonite	qu. - quartz
0											sl. - slickensides Only joints > 0.1" shown
0-10	1" to 4"		N		Δ		Yellow				0'0" - 27'6" Talus containing weathered sub-angular granitic rock with some quartzite. Much limonite has been deposited on joint faces and in the rock. The granitic blocks are up to 6".
10-35	4" to 2"				Δ		Green				27'6" - 35'0" weathered granitic rock
35-45	2" to 8"				+	at least 3				lim	
45-55	1" to 3"		B		+	4.2				lim	
55-60	3" to 5"				+	4.6				Grey	
60-62	3" to 3"				+	4.6				lim	35'0" - 71'0" Partly weathered granitic rock. Some leached joints with limonite. Chloritised zone from 60' to 62' (slickensides?)
62-64	5" to 3"				+	3.6				lim	
64-68	6" to 6"				+	2.6				0.3" chl. sl.	
68-70	1" to 3"				+	4.6					Below 71'0" Mainly sound rock types as above.
70-75	3" to 5"				+	3.4					"Granite" becomes coarse-grained and bleached with milky-white feldspars from 64' to 103'. The grainsize is up to 1/4".
75-80	5" to 15"				+	3.4				lim. chl.	
80-87	1.5" to 18"				+	1.6				qu. lim. chl.	80' - lower limit of oxidation.
87-89	5" to 10"				+	2.0				chl.	Most core loss probably between 87'8 and 89'3".
89-90	1.3" to 1.6"				+	3.2					
90-91	1.2" to 4.8"				+	2.2				sl. ?	
91-95	5" to 12"				+	1.8				chl. sl.	

8.4  
10.7  
18.3  
18.9  
19.5  
21.6  
24.4  
26.7  
27.2

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AREA: <b>PIEMAN INVESTIGATION</b>		CO-ORDINATES:		E:	N:	HOLE No. <b>6636</b>
LOCATION: <b>Sophia Tunnel Line</b>		ON LINE: <b>F.P. 25</b>		BEARING: <b>0°00'</b>	AT CH.	
GEOLOGICAL PLAN:		SURVEY PLAN: <b>5368855:</b>		AT STN: <b>F.P. 25</b>	BEARING: <b>169°25'</b>	DIST: <b>73'</b>
DATES (a) DRILLED: <b>May, '65</b> (b) WATER TABLE: <b>20-5-65.</b>		LEVEL:		SURFACE	COLLAR	WATER TABLE
METHOD: <b>O.D. E1000.</b>		DIAMETER: <b>N<sup>o</sup>4, N<sub>x</sub>, N<sub>m</sub>, B<sub>x</sub>, B<sub>m</sub>.</b>		<b>937'</b>		<b>40' depth in hole</b>
SITE REMARKS: <b>Talus slope at peg T62 + 25'.</b>		INCL.		HOLE DRILLED	ANGLE FROM HORIZONTAL	DIRECTION
				VERT./HOR./INC.	<b>35°</b>	<b>229°</b>

FILE No.  
SHEET **2**  
OF **4**  
SHEETS

DEPTH	CORE DRAWN	CORE LENGTH	CASING	RECOVERY %	GRAPHIC LOG	JOINTS No. Per Foot.	FLUID RETURN	GROUND WATER	WATER PRESSURE TESTS LEAKAGE	REMARKS
100'							Gray			Only joints > 0.1" shown
31.4	4-6				+	2.8				py pyrite
105'	1-7"						py			chl chlorite
	5-9				+	5.1				sl. slickensides
110'	1-4"									lea. leached
	3"				+	4.8				carb. carbonate
115'	6"									qu. quartz
36.6	7"				+	3.8	clay			120'2" clay-filled joint, 0.2"
					+	4.8				
38.1							clay			126'0" - 126'6" - 6" of rock decomposed
38.4					+	5.4				to greenish clay. Controlled by a joint. Slickensides (?)
38.6	<4 most						clay			
	<2"				+	6.4	chl			130' steep chloritised joint, 0.2"
39.6	3-9						?sl			Possible fault in zone 125' - 137'.
	5-5				+	4.4	chl, sl			
41.8	2-6						both			
	8"				+	3.2	0.1" chl, py, sl.			Coarse-grained, fairly fresh
	5-8						sl			granitic rock type with chloritised, slickensided, leached
	3-6				+	3.4				and carbonate-coated joints. Red feldspar commonly partly
	12									leached. Skeletal structures of
	2-4				+	3.0				red feldspar, quartz and
145'	4-6									chlorite in some joints. Other
	12"				+	2.8	0.2" py, lea, chl			joints generally tight with
	12"						0.4" lea, chl, qu			thin chlorite coatings.
	3"				+	2.2				Note: Core improves from 137'.
150'	3-6									
	5"				+	2.2				
	11									
155'	15				+	2.2	sl			
	12									
	3-6									
160'	8"				+	2.2	chl sl			
	12-14									
	4-8				+	1.6	py			171'6" 2" chloritised "granite" with
	16"									abundant pyrite.
165'	4-6				+	2.2				
	4-6									
	9"				+	2.0				
170'	20"									
	5-6				+	3.8	sl			
	7"									
175'	23"				+	1.6	0.1" chl, lea, sl			
	3-11"									
180'	24"				+	2.2				
	4"									
185'	6"				+	2.0				
	10"									
190'	15				+	3.8	sl			
	2-7"									
195'	most				+	1.6	0.1" chl, lea, sl			
	6"									
	6-14"				+					

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LOCATION: <b>Sophia Tunnel Line</b>		ON LINE: <b>F.P. 25</b> <b>F.P. 24</b>	BEARING: <b>0°00'</b>	AT CH:	<b>6636</b>
GEOLOGICAL PLAN: SURVEY PLAN: <b>S368855;</b>		AT STN: <b>F.P. 25</b>	BEARING: <b>169°25'</b>	DIST: <b>73'</b>	FILE No.
DATES (a) DRILLED: <b>May, '65</b> (b) WATER TABLE: <b>20-5-65</b>		SURFACE	COLLAR	WATER TABLE	SHEET <b>3</b> OF <b>4</b> SHEETS
METHOD: <b>D.D. E1000</b> DIAMETER: <b>N<sup>o</sup>4, Nx, Nm, Bx, Bm</b>		<b>937'</b>		<b>40' depth in hole</b>	
SITE REMARKS: <b>Talus slope at peg T62+25'</b>		HOLE DRILLED	ANGLE FROM HORIZONTAL	DIRECTION	
		VERT./HOR./INC.	<b>35°</b>	<b>229°</b>	

DEPTH	CORE DRAWN	CORE LENGTH	CASING	RECOVERY	GRAPHIC LOG	JOINTS No. Per Foot.	FLUID RETURN	GROUND WATER	WATER PRESSURE TESTS LEAKAGE	REMARKS
200'	most	6"			+	1.8	Grey			
205'		14"								
210'		5"			+	1.2				
215'		6"								
220'	most	7"			+	1.6	sl			
		14"					sl			
		7-3			+	2.4	carb			
225'		3"			+	1.2	sl			
230'		6"								
235'		20"			+	1.0	chl			
							sl			
240'	most	6"			+	1.4	py			
		6"					carb			
245'		16"			+	1.2				
250'					+	1.6				
255'					+	0.8				
260'		26"			+	1.0	chl			
							carb			
265'					+	0.8				
270'		4"			+	0.4				
275'		6"								
		20"			+	0.6	qu, chl,			
							sl			
280'					+	0.8				
285'					+	1.4				
290'		5"			+	1.0	py			
		6"					carb			
295'		16"			+	0.8				
300'	most	6"			+	0.6				
		6"								
		12"								

68.3

71.3

74.7

75.7

Rock type is medium-coarse grained granitic. It is bleached from 224'-234' and is very rich in red feldspar from 245' to 248'6". The rock is fairly fresh and massive, and thin bands of pyrite and quartz / chlorite are common.

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SURFACE COLLAR WATER TABLE <b>937'</b> <b>40' depth in hole</b>		HOLE DRILLED ANGLE FROM HORIZONTAL DIRECTION <b>35°</b> <b>229°</b>			
VERT/MOR/INC. <b>35°</b> <b>229°</b>					

DEPTH	CORE DRAWN	CORE LENGTH	CASING	RECOVERY				GRAPHIC LOG	JOINTS No. Per Foot.	FLUID RETURN	GROUND WATER	WATER PRESSURE TESTS LEAKAGE	REMARKS
				2	4	8	100						
30'	5"												
	6"							+	0.8				
30 1/2'	18"												
	most												
	6"							+	1.2				
31'	12"												
	25"							+	1.2				
31 1/2'	2"												
	8"							+	1.8				
	6"												
32'	16"							+	0.4				
	25"												
32 1/2'	most												
	3"												
	13"												
33'	20"							+	0.8				
	14"												
33 1/2'	10"							+	1.0				
	20"												
34'	3"												
	6"												
34 1/2'	11"							+	0.8				
	6"												
35'	20"												
	6"												
35 1/2'	6"							+	0.3				
	23"												
55'													
60'													
65'													
70'													
75'													
80'													
85'													
90'													
95'													
100'													

965

103-5  
103-7

107-0

2.00 psi 8.0 g.p.m.  
 180 psi 10.0 g.p.m.  
 200 psi 0.0 g.p.m.  
 2.00 psi 0.0 g.p.m.  
 200 psi 0.0 g.p.m.

Mainly sound granitic rock type.

316'6" 1" Quartz, chlorite, pyrite, carb(?) filled joint.

Quartz porphyry from 325'9" to 326'3". 326'70" - 327'6" & 345'9" - 346'3". Hard siliceous brown colour. Removed 3" from 326' for section which confirmed rock type.

← TS 0176 (Quartz feldspar porphyry and chloritized granite).

339'7" - 340'2" Dark green, hard, highly chloritised zone.

Hole completed at 351'0"

Logged by T. Munro.