					. 1	Gt	···O	L_()GI	IC LUG OF DRILL		_		
***		C	OKT	AS		PRO)JE(CT_			O. SK-2 (SHEET			
LOCA	ATIO	V		DAN	1		*.	_ :		1	m COMMENCED m COMPLETED	<u></u>	<u>0</u>	-1987 -1987
ELEV	ATIC	N	<u> </u>	10.	8.	34		<u>n</u>		EPTH OF OVERBURDEN 17.09 NGTH OF ROCK DRILLING 53.00		r	12(
C001	RDIN	ATE	X. 4	78.4	ŠĞ.	35. O	$\overline{\cap}$	-		TAL LENGTH OF CURE 58.7	m LOGGED BY			- <u> </u>
			HOLIZO ANGLE				<u>У</u> _			DRE RECOVERY 83.9	%			en skrie
		,		1						OBSERVATION OF CORE	Г	1		¥
¥	OCK NAME	9	CORE	¥20	9	~	8	1 1/2			WATER TABLE	V-	ОЕРТН	LEVATION
DEPTH	ğ	10	8 53	8 3	CASING	COLOR	WEATHER ING	\$ 5 5	CUTTIN	DESCRIPTION	LEAKAGE OF DRILLING WA	ATER	ă	Б
2011	æ		0 -> 100,				32		- 8		LUGEON	m	0m	490.835
G			וואאו					 		20.5m: Calsite vein 2m		E		
4			KKK						2			Ë	-1	
) 'न		\mathbb{Z}	KIKII]]	3	21.0 wide along 25°dip crac	Po max = 8.0 kg/cm	E		
2-						•				21.0~21.3m : Serpenti	e William	1.30	-2	
1			WW.						2.	Imm wide along severa	Lu=(34)	/.30	-	
3~1		V	MAI I						ļ	230 cracks.	Pomax = 8.0		-3	
1 1	-		ии) 	3	21.9 m : Calsite Vein Im] [-,)]	
4-			ИИН						-	240 wide.			-4	
l alm					ļ						Lu= (44)			
5-1		V		ŀİ					2	23.0m: Calsite vein/m	Poinax = 8.0		_	
										26.0 wide.			-8	
6,771	. :								3	26.3 26.0m: Calsite vein In				
7-7		V			- }					wide.	[[())		-7	
1 7			AMII							27.6m: 45 dip crock.	Po max = 8.0	l E	_	
8-										1		1.30	-8	
2 Նահադադադադա	٠ ن		KKANI	}						no serpentine.	Lu=(22)		-	
9-7	Peridotite	V	WW.		- }	· >	 				Po nox. = 8.0		-9	
, 1	do:			mm 98¢		Dark gray	> ->	2			16 max 0.0		-o	
30-	eri			784		× ×	~	4						
	12			ĺ		Š			1		Lu= 23		-1	
']	į	\ \ \							5		Pomox. = 10.0		-	
2-3									2				-2	
4					ĺ			٠.	_		Lu= 0	Ī	-	
3-3		V							ļ				-3	÷ 1
=			WW.								Pomax. = 10.0	1.30		
3 4 1 1					- {				}			1.30	-4	
1	- (Ì					Lu= 0:			
5-7		V									Po max. = 10.0			
	ļ)								-6	
6-7	ĺ	ļ												
7.4	-	$\sqrt{ }$	HHH								Lu=0		-7	4 B S
1		<u></u> .								37.5 37.5m: Serpentine Imm	Po max = 10.0		-	
المائيسياسيا ميلسياسيا	1	- }				Ì			2	wide along 45 dip crack		1.30	-8	
1		1								38.8 38.8~39.0m: Fragment	1 Lu=0			
9-1	ĺ	\vee				ļ	ļ		, ,	39.0 core, no serpentine.	Pomox = 10.0		-9	
40	1	1				ĺ			3	Core, no ser renewe.			o l	470.834
		{ [// N		بليسيد		1	1	1	• driller's note (Water table			
		}								stick), 2(substick), 3(piece), 4(freqment), 5 grain	warer table	0.30	:	
			<u> </u>	core loss RQD		ż				5(safi) composed)	"before drilling	I I		
				indu			1		- a foat	3 - 16				

LOCATI		OKT	DAM		OJE	CT -	DE	HOLE NO 70,00	m COMMENCED_		9	-1987
ELEVAT	rion -	<u> 5</u>	10.8	34		<u>n</u>		PTH OF OVERBURDEN 17.00			9)SI	_1987
COORD		HOLIZO	452.695.		Ō	<u>.</u>		NGTH OF ROCK DRILLING 53.00 TAL LENGTH OF CORE 58.75			ICA	
		ANGLE				_		RE RECOVERY 83.9	%			
پير [T	<u> </u>		1			O	BSERVATION OF CORE	WATER TABLE -V			ž.
DEPTH CX NA	507	CORE	CASING	£	E E	SS	3 K	DESCRIPTION	WATER PRESSURE TEST	v	ОЕРТН	ELEVATION
90 XX		REC	집 조염이	COLOR	WEATHER ING	HARD. NESS	CUTTING	to contribut	LEAKAGE OF DRILLING WA	TER		
4 0m		0 → 100,	1 12 14 1						LUGEON	m	Om	470.834
1		XXXXX					3	40.5	Lu=0			
1 1	V				:	. ;		41.5m and 44.5m: 45°	Powar = 10.0		1	
7		HINK						dip cracks no filling.]	ر درا	
2-1											1	
3				lij		1 100		er e	Lu = 0		3	
171				V (1)					Pomas : 10.0	ا مد		
4										1.30	4	·
7									Lu=1.2		5	
5 1	1	HYYY		,			1		Pomax = 10.0			
6-1] :	- 5				8	
11							2		Lu=2.2			
7-	V								1		-7	
1									Po inex. = 1010			:
8-1			7					487 : 45° dip crack	·			
9-1	입교			1 3. 1 2.				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\		-9	
1			tatu t	104	1			· •	j .			
50-	1,0	WW.	989	2 ×	2	2			}	1.30	-0	
	9	KKKI	6	000				•	Lu=0			
1-3								dip crack.	Pomax. = 10.0		_	
2		WW						,			2	
1						:		52.2m : Serpentine Imm	111 = 0			
3-1					}]	wide along 35°dip crack.			-3	
ul									100000			
4								\rightarrow \tau_{\tau_{\tau}}				
5-1											-5	
unt								·	Tomax. > 10.0			*
6-							2			1.30	-6	
1711					:				Lu = 0		.,	:
7-1	IV								Pamax. =10.0		[']	
8-											-8	
गाम							-	58.5	11100			
9 1	V						1	1			-9	
60	## 48.7m: 45° dip crack. 10											
<u> </u>	ا در ا					1	1	> driller's nate 4				
						4	1	and the second s	-	0.30		
		ł	- C(XX 1015 - D() D			ا) ا	::::::::::::::::::::::::::::::::::::::	Annound .	perore atilling	<i>i</i> . l		

LOCATION ELEVATION COORDINA ANGLE FR	I TE OM	Y. 4 HOLIZO	DAM 10.83 152.695 NTAL	34	0	0T _ m	DE DE LE TO	PTH OF HOLE 70.00) m COMPLETED 1) m DRILLED BY	<u>2 - 9</u>	-1987 -1987
DEPTH ROCK NAME	507	CORE RECOVERY	CEMENTA- TION KIND OF BIT CASING	80.00	WEATHER JING	HARD. NESS		BSERVATION OF CORE DESCRIPTION	WATER TABLE // WATER PRESSURE TEST LEAKAGE OF DRILLING WATE	R LGG	ELEVATION
udoudouhodouhodouhodouho Peridotize			uu 98¢	Dark gray		2	2 3 2	60.8 60.8~63.0m: Serpenting 1~2mm wide along many cracks. 63.0 64.0 66.0~66.4 m: Serpenting 66.4 66.4 66.4 66.4 66.4 66.4 66.4 66.	Lu=0 Fo mox.=10.0 Lu=0 Fo max.=10.0 Lu=0 Po mox.=10.0	E 3/3 3 3 3 4 5 6 8 9 9 0 1 2 3 4 5 6 8 9 9 0 0 1 2 3 4 5 6 8 9 9 0 0 1 2 3 3 4 5 6 8 9 9 0 0 1 2 3 3 4 5 6 8 9 9 0 0 1 2 3 3 4 7 8 8 9 9 0 0 1 2 3 3 3 3 3 3 5 6 7 8 8 9 9 9 0 0 1 2 3 3 3 3 5 6 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	440.834
	ļ		care loss				erd) ~ (tick), 2(substick), 3(piece), 4(freqment), 5 grain	water table water table perore drilling	2.30 2.50	

LOCATION ELEVATION COORDINA ANGLE FRO BEARING C	. <u>6</u> (те <u>ў</u> эм носіг	The second second	9 m 33 90 ·	DI LE TO	EPTH OF HOLE EPTH OF OVERBURDEN INGTH OF ROCK DRILLING 100.0 OTAL LENGTH OF CORE 100.0 DRE RECOVERY 100.0	m COMPLETED O m DRILLED BY O m LOGGED BY	11.	9 DSI ICA	-1988 -1988
DEPTH ROCK NAME	CORE RECOVERY	CEMENTA- TION KIND OF BIT CASING	COLOR WEATHER HNS HARD		DESCRIPTION DESCRIPTION	WATER TABLE	V	DEPTH	ELEVATION
intendendendendendendendendendendendendende			Say Say	3 1 4 2 3 3 2 3 2 5 4 2	Ho surface soil. 0 ~ 1.5m: Piece ~ tragment 1.5 cores. 1.9m: Oxidization crack 3.2 80°dip. 3.5 3.9 2.1m: Oxidization crack 4.7 70°dip. 5.0 3.5~3.9m: Serpentine	Lu = (40) Po max = 3.0 kg/cm Lu = (41) Po mox = 3.0 Lu > 100 Po max = 3.0 Lu = (33) Po max = 5.0 Lu = (6) Po max = 5.0 Lu = 5.1 Po mox = 10.0	5.00 5.50 7.00 7.50	այիտերահահակակակակակականականականականականականակ	607.609 [™]
20		core less		Operal -	spect, Zimosocki, Stanson, Standarditi, Syrani	Vater table Water table Water table Water table	/5,00 0.30 0.50	عسليه 0	587.609

					(at	-0	LU)(al	C LOG OF DRIEL		^	e e	· · . · .
' wast		oute esta	GOK]		PR)JE(<u>er</u>		HOLE N	SK = 3 (SHEET	고 오토	<u>၁</u>	10.88
4.5	OITA)AM	ः र े	-	_ : '	06	PTH OF HOLE 100,0	Om COMMENCED	<u>20 -</u> 11 -	g	-1988
	/ATIO) 7, 609 452 55 9			<u>n</u>	DE	NGTH OF ROCK DRILLING 100.0) w OBILEO BY	Γ	SL	
			HOLIZO	452,559. - 177,956.		<u>)</u>	•	TO	TAL LENGTH OF CORE 100.0	O m LOGGED BY			
				HOLE					RE RECOVERY 100.0	%	PEMA		
					[-		BSERVATION OF CORE	WATER TABLE -V	<u>, </u>		×
ОЕРТН	NAME	9	CORE	¥ 80 9	- ne	జ	8		[WATER PRESSURE TEST	ν	ОЕРТН	ELEVATION
130	Š	, 0	8 3	CEMEN TION KIND C	8	7 4	HARD NESS	8Ę	DESCRIPTION	LEAKAGE OF DRILLING W	ATER	۵	a
200		-	0+100		-	5				LUGEON	m	0m	587.609
			ший		-					- 1-6		-	
1	:-		MXXI					,		Lu = 5.5		-,	
17		V	KKKK					2		Pomax. = 10,0 hg/cm²		-	
2-			MAN			Ì		<u> </u>	22.0 22.0~22.7m: Piece cores	, ,	1	-2	
1								١.,	22.7 Weak Serpentinization.	Lu= 2.9		-	
3-		V	иии						22.1	Po 184X = 10.0		-3	
								Ì		16 max 1010	15.20		
4-			KKKA			Ì					15.20 21.16	-4	
	1		иии					2	25.0 in : Weathered calci	40 Lu=0		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
5-		V	XXXX	1						Po max = 10.0			
			KKK						vein less than Imm wide			-8	11.1
2 3 4 5 6 7 10 10 10 10 10 10 10			иии]				(60°dip).			-	
7-		V	KKK					 	27.0	Lu=O		-7	
		V	иии							Pomox. = 10.0	1		
8-										محد وبريس برسوس مرسوس مرسوس	/5.00 /5.00	-8	
0.1					١.					Lu=0		-	
9-	é	V	MM		3	-	'			Pomox = 10.0	(E	-9	
_ =	Peridotite			# 98¢	912	>			29.8~30.6m: Serpentine	A 2			
30	á		WW	184	Dark	2	2		less than Imm wide along			-0	
The state of	o r		WWW	Ĭ	Pa					Lu=3.4		1	
1-		V						1	several cracks.	Pomox. = 10.0		_	
3			WWW	1	}			,	33.5m: Calcite Vein 5mm		22,45	-2	
								,			16.70		
3-		٧		1				2	wide (30°dip)	Lu = 2.9		-3	
1	ſ	•	WWW	. (1	[<u> </u>		Po mox. = 10.0		-	
4	' <u> </u>								33.6~34.0m core:			-4	
ulu		•							Laboratory test.	Lu = 5.2		-	
5		٧							·	Po max. = 10.0		-5	
-			MKK							70.00	32,65	_	
8-]		KIKKIK								28.95		
2 3 4 5 8 7 8 9 9										Lu=6.2		-7	
/~		V	ИИИ							Po max. = 10.0			
, T] 1								-8	
, I	- 1				}				39.0 ~ 40.0 m : Piece care	174		- 1	
9-1		Ÿ						ļ	37.0			- 9	
_ =		*	KAKAII					3	no serpentine.	Pomax. = 10.0],,_[
4 ₀ =			имиЛ		اــــا	i	لبا	1	40,0 ▶ driller's note ◀		16,70	0	367.609
				* * ;				1 (1	nick), 2(subadck), 3(piece), 4(freqment), 5 grain	water table	0.30		
			INY-K ^T A	core loss			1 (h	erd) —	5(soft)	Water table before drilling	10.30		and the second
			L	- AQO		٠,	(fresh)	~ 5 (dec	3 - 20		19 J		

ANG	/ATIC ROIN LE F	N ON IATE ROM	60 - X 4 Houizo	TAS DAM 07,609 452,559 117,954 DINTAL HOLE	PROJ 74 33 90	ECT m	DE DE LE TO	PTH OF HOLE 100.0	O. SK - 3 (SHEET O. m. COMMENCED O. m. COMPLETED O. m. DRILLED BY	<u> 25 -</u> 11 -	<u>5</u>	<u>-1988</u> -1988
ОЕРТЯ	ROCK NAME	907	CORE RECOVERY	CEMENTA- THON KIND OF BIT CASING	COLOR	HARD.		BSERVATION OF CORE	WATER TABLE	V	рерти	ELEVATION
4 5 6 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 8 9 6	Periodicine and the second			ww 98 b	TANK TO THE TANK THE	2	1	40.0m: Serpentine Imm wide along 45° dip crack. Scattered screentine less than Imm wide. 49.5 51.0 60.0	LU=0 Pomax=10.0 25.98 25.98 27.50 41.36		547.609 547.609	
		:		– come loës – ROD		3 - 3 - 3	hex off ~	b driffer's note 4 block), 2 (substick), 3 (piece), 4 (tregment), 8 grain 5 (soft) composed) 3 - 21	Water table after drilling water table before drilling	0.30		

COO	ATIO RDIN	I N ATE	60 ¥4	AM 7,609 452,559 177,958) 74 03		n	DE LE		M COMMENCED m COMPLETED O m DRILLED BY O m LOGGED BY	_11 <u> </u>	<u>9</u>	-1988
				HOLE				CC	ORE RECOVERY 100.0	%	4	•	
рертн	ROCK NAME	106	CORE. RECOVERY	CEMENTA- TION KIND OF BIT CASING	COLOR	FATHER ING	HARD- NESS		BSERVATION OF CORE DESCRIPTION	WATER TABLE — \ WATER PRESSURE TEST LEAKAGE OF DRILLING W		рертя	ELEVATION
60m	-		0 +100,		}	Þ				LUGEON	m	0 m	547.609
1 mfunfun		V							500	Lu=0 Pomox = 10.0 hg/cm²	3/.55 production	-1	
3 1		V						2		Lu=0 Poinex = 100	27.70	3 .	
2 3 4 2 2 4 2 2 4 4 10 14 11 1		тт 						3*	15.5 15.5~65.7m: Piece ~ 65.7 fragment cores, weak	Lu= 0. Pomexi = 10.0	38.90	-5 -8	
السائسيلسيا		V						2	serpentinization.	Lu=0 Pomax = 10.0	27.10	-7 -8	
70mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm	Peridotite	∨		486 ma	Dark gray	2	2	1 2		Lu=0 Po max = 10.0 Lu=0 Po max = 10.0		-9 -0	
3 դավադեական		*						2	73.3 m and 73.2m; Serpentine Inm wide along 50° dip cracks.	Lu=0 Pomax = 10.0	46.70	-3	
3 4 2 2 անումումումումումումումումում		 V							74.5 m: Serpentine I- 75.0 2 mm wide along 50 dip crack.	Lu=0 Pomax = 10.0	<i>3</i> 4.90	-5 -6	
7 7 8 8		V .						/ S Z		Lu=0 Pomox.=10.0		-7 -8	
80 100 100 100 100 100 100 100 100 100 1		~						2	79.0	Lu = 0 Famox = 10.0	34.95	9	S27.609
				- cora foss - ROD	٠			e(d) ~ !	b driller's note 4 tick), 2 (substick), 3 (piece), 4 (fragment), 6 grain (soft) (composed)	water table after drilling — water table before drilling	0.30		

ANG	ATION ROIN	ON NATE ROM	60	3.7) 74 23 9	0	'n	DE LE TO CO	PTH OF HOLE PTH OF OVERBURDEN O O O O O O O O O O O O O	m COMPLETED	11 <u>-</u>	S S CA	-1988 -1988
ОЕРТН	POCK NAME	907	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER	HARD. NESS	بنصنع	DESCRIPTION	WATER TABLE	NTER	рЕРТН	ELEVATION
80m			0 → 100 _%							LUGEON	m	0m	527.609
80 mm 1 2 3 4 mm 5 6 8 7 8 9 1 2 3 4 mm m		<pre></pre>		may 72¢	The second secon				86.3m: Seprentine Imm wide along \$5° dip crack. 88.6~89.1m core: Laboratory test. 89.5m: Serpentine 1~2 mm wide along 30° dip crack. 91.1m: Serpentine 1~2 mm wide along horizontal crack. 92.4m: Serpentine and calcite vein less thom Imm wide.	Lu=0 Pomox=10.0 Lu=0 Pomox=10.0 Lu=0 Pomox=10.0 Lu=0 Pomox=10.0 Lu=0 Pomox=10.0 Lu=0 Pomox=10.0	43.05 45.80 45.80 30.00 \$3.00	1 2 3 4 5 6 7 8 9	527.40 %.
0 8 ահամահական		>						1 2	980 R·Q·D (Av.) = 91% 1000 End of drill hole	Pomax = 10.0 Lu=0 Pomax = 10.0	55, 80	-8 -9 0	507.609
				core loss				und) ~:	driller's note 4 y tick), 2 (substick), 3 (piece), 4 (fragment), 5 grain y y y y y y y y y y y y y	vater table after drilling	0.30		

DEPTH COCK NAME	CORE RECOVERY	CEMENTA- TION XIND OF SET CASING			HARD. NESS		RE RECOVERY 100.C BSERVATION OF CORE DESCRIPTION	WATER TABLE	V	ДЕРТН	ELEVATION
Om.	0 -> 100		انسنا	<u>¥</u>	<u> </u>			LUGEON	m	Om	607.222 ₹
Periodinal malamina de la Sonta Periodini de la Sonta del la Sonta de la Sonta de la Sont		486 mm	Dark gray			2 3 2 3 2 3 1 5 2 2	No surface soil. 15 Oxidization crack is few 20 2.6 m: Serpentine Imm wide along 30° dip crack. 160 drilling direction 28 5.8~6.1m: Piece-tragment b.1 cores, weak serpentini- zation. 8.2m: Serpentine I~5mm wide along 30° dip crack. 9.3m: Serpentine Imm wide along 30° dip crack. 14.0~15.0 m: Piece cores, weak serpentinization. 15.0 16.0~16.3 m core: Laboratory test. 15.5m: Serpentine 2mm 180 wide along 45° dip crack 17.1m: Serpentine and calcite vein 2mm wide 200 along 60° dip crack.	Lu > 100 Po max = 30 Lu = (28)	2.00 3.00 2.05 2.05 2.05 3.00		593.

	ATIO RDIN LE FI	N ATE ROM	Ç X. 4 Y. 4 HOLIZO	(TAS)AM 507.2 133.389: INTAL HOLE S	22 30 4	5	n	DE LE TO	PTH OF HOLE 80.0 PTH OF OVERBURDEN 0 NGTH OF ROCK DRILLING 80.0 TAL LENGTH OF CORE 80.0 RE RECOVERY 100.0	m COMPLETED Om DRILLED BY Om LOGGED BY	10- 24- DS	8 8	-1988 -1988
ОЕРТН	ROCK NAME	r o G	CORE RECOVERY	CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER ING	HARD.	CORE CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE		E 230	ST.080 & ELEVATION
	The state of the s							2	mm wide along 30°dip crack 22.0~22.5 m : Weak 22.0 52.5 serpentinization.	Lu = 2.9 formax = 10.0 t3/cm² Lu = 3.8 Po max. = 10.0	րիումումումումում	2	
գտորայացուրագուրագուրութ 2 		>						1 5 2 3	25.5 25.5 ~26.0 m: Piece core	Lu=0.4	79.60 handandandan	5	
6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<ţ.							26.0 80 dip crock with thin serpentine. 26.8m : Serpentine Imm wide	Lu=3.0 Pomax = 10.0	17.00 E	7	
300mm	Peridotite	< ! > <		mm 384	Dark gray	2	2	7	30.6 m : Serpentine 1~5 mm wide along 20° dip crack	Lu=1.3 Pomox = 10.0	ակափափափակա		
3 3 4 1		\						2		Lu=0.4 Pomax=10.0	29.10 thurstandarda		
9 9 3040001-001-001-001-001-001-001-001-001-0		>							37.3m, 37.4m and 37.7m:	Lu=3.0 Pomax.=10.0 Lu=4.8	18.70 Less		
2 8 9 1		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\							Serpentine Imm wide along 55° dip cracks	Pomax = 10.0 Lic = 1.2 Pomax = 10.0	յ Մարևահասիանան Մարևահարհանան		
40				- core loss			111	1 (s	▶ driller's note € tick), 2(substick), 3(piece), 4(freqment), 5 grain 5(soft)	water table after drilling water table before drilling	17.15 c	<u> </u>	7 8. 938]

LOCATION ELEVATION COORDIN ANGLE F BEARING	N ATE ROM	X X Y. 4 HOLIZO	(TAS)AM 507. 22 133.359	PR(22)	<u> </u>	OT n	DE DE LE TO	PTH OF HOLE 80.0 PTH OF OVERBURDEN 0 NGTH OF ROCK DRILLING 80.0	m COMPLETED 2 Om DRILLED BY Om LOGGED BY	10- 8	3 -1988 1
DEPTH ROCK NAME	907	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER ING	HARD. NESS		DESCRIPTION OF CORE	WATER TABLE		BLEVATION
4 0m		0 - 100,							LUGEON	m 0	™578.938¥
2 3 4 4 5 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	> 1 >						/ } 2	42.lm : Serpentine Imm wide along 30°dip crack.	Lu=1.6 Pomox = 10.0 kg/cm Lu=15.0 Pomox = 10.0	8.204	
	V							44.5	Lu=40 Pomax=10.0 Lu=6.3	ծ. 20	
و ماساساساساساساساساساساساساساساساساساساس	∨			>			2	47.5m : Calcite vein Imm wide, 60°dip. 48.8 m : Serpentine Imm	Poincy. = 10:0	21.70 8 4.30 th	
9 Juliuduuduuduuduud Peridotite	· · · · · · · · · · · · · · · · · · ·		ф86 тт	Dark gray	2	2		wide along 30 dip and 45 dip cracks. 50.4m: Scrpentine Imm wide.	49.80 M Lu = 0 Pomax. > 10:0	ակահահահանա Հ	
8 Նուդուդուդուդուդուդուդուդուդուդուդուդուդո	٧						3	Laboratory test. 53.5 53.5~54.3m: Piece cores thin meshy serpentine.	Lu=0 Pomax = 10.0	22/04/3	
ه پاستاستاستانین	V:						3	55.0 56.0 56.0m: Calcite vein 2 56.5 cm wide and Serpentine	Lu=0 Pomax.=10.0 Lu=0	6.90 le 8 8 90 le 7	
1	¥ V						3	5mm wide along 35° dip Crack. 58.5 57.2m : Serpentine Imm wide along 20° dip crack.	Po max = 10.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
<u>601</u>			– core loss – ROO				#rd) ~ (b driller's note 4 fick), 2(substick), 3(piece), 4(fragment), 5 grain 5(soft) composed)	Water table	0.30 0.50	

ANG	ATIC RDIN LE F	ON IATE ROM	€ X Y, 4 HOLIZO	(TAS)AM 507,2: 152:563; DNTAL HOLE S	22 38 4	5	ņ	DE LE TO	HOLE NO PTH OF HOLE PTH OF OVERBURDEN OUTHOUS ROCK DRILLING TAL LENGTH OF CORE RE RECOVERY HOLE NO 80,0 100.0	m COMPLETED m DRILLED BY m LOGGED BY	10- 24- [8	<u>-1988</u> -1988
ЭЕРТН	ROCK NAME	00	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	To a second	HARD. NESS	CORE CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE — \(\square\) WATER PRESSURE TEST LEAKAGE OF DRILLING WAT		рертн	ELEVATION
60m	2.0		0 +100,	(Set 3)						LUGEON	m 17.15	Оm	564.786♥
سناسنا		1.7						2		2u=0	,, 3	-1.	
milne		Y								Pomax. = 10.0			
2-								3	62.0 62.3	Lu= O			
3		V					, , , , , , , , , , , , , , , , , , ,	74.		Pomez = 10.0	2/ 70	-3	
19 - Հայաստանում		7 - 6 0						2		Lu=0	48.50	4	
5-11-11	- 1	٧								Pomax = 10.0		-5	·
84111									in the second se	Lu = 0		-6	
1-121-121		Y						3	67.2~67.5 m: Thin meshy 67.2 serpentine.	POHOX =10.0		-7	
8-III		30						1	<i>51.</i> 3 (17.90 17.90	-8	
94	رو	V		£	ay		3	3		Lu=0 Pomay = 10.0		-9	٠
20 10 ակապատանում	dotin			mm 98¢	k 21	2	2		70.0		1000	-0	,
ستلسأ	Peri	3 7		Ĭ	Dark			-		Lu=0	1	- -;	
		V								Pomay. = 10.0	18.30	-	
, June 1								5		Lu=0	48.45 E	-	
341111		V						3		Pomox = 10.0	בונלנונלנו	-3	
4								ر ا		Lu=0		-4 -	
5-11-1	i de la constanta de la consta	٧								Pomox = 10.0		-5. -	
9								- • -	75.5~76.0 m core: Laboratory test.		18.00 18.00	-6	
3 4 5 6 7 8 million of the second sec		V							77.3 77.3~77.8m:90° dip	Lu=0 Ponox.=10.0		~7 ~	
8 11								3	77.8 Crock.		111111111111111111111111111111111111111	-8	
9-11		V						3	R·Q·D (Av.) = 86%	Lu=0 Pomox.=10.0		-9	
80		2 - 1				<u> </u>			sao End of drill hole		18.36	0	S50.653
				— core lots — ROD				ard) — !	tick), 2(tubatick), 3(piece), 4(fragment), 5 gram	water table gfter drilling water table before drilling	0.30		·

	ANGLE	TION DINATE FROM	5 X 4 Y 4 1 HOLIZO)AM 17,56 \$2,534.2 78,057.8	<u>55 </u>	m	DE LEI TO CO	PTH OF HOLE PTH OF OVERBURDEN NGTH OF ROCK DRILLING TAL LENGTH OF CORE RE RECOVERY 100.C 39.C 69.C 69.C	O m COMPLETED 6 O m DRILLED BY	<u> </u>	
	DEPTH DOCK NAME	L O G	CORE	CEMENTA- TYON XIND OF BIT CASING	COLOR WEATHER	HARD.	ان	BSERVATION OF CORE DESCRIPTION	WATER TABLE	HLL430	ELEYATION
	0m		0 - 100	Section 1					LUGEON YM	On	\$17.561°
	8 2 2 2 4 2 2 2 4 2 4 2 4 4 4 4 4 4 4 4	0 0 0 0 0 0 0 0 0		486 mm	Dark gray ~ fareenish gray			Alluvium. They include peridotit and some limestane gravels. No fine material in core hox. 0~26m: All peridotit gravels.	8:10 \\ 7.5 \\ 7.5 \\ 7.6 \\ 7	indinahadandandandandandandandandandandandandan	
	50س مسلسا	0		1)),) 7,3		\$01.178
_				- core loss - ROD			hard) ~ 5	> driller's note 4 ick), 2 (substick), 3 (plece), 4 (fragment), 5 grain (soft) ornposed)	Water table after drilling - 0.3 Water table - 0.5 before drilling	<u>2</u>	

LEV OO! NGI	E F	N ATE ROM	5 F. 4 HOLIZO		} 5			DE LEI TO CO	PTH OF HOLE 100.0 PTH OF OVERBURDEN 39.0 NGTH OF ROCK DRILLING 61.0 TAL LENGTH OF CORE 69.9 RE RECOVERY 69.9	O m COMPLETED O m DRILLED BY 7 m LOGGED BY	6 - D J1	9 S I C A	-198 -198
:	ROCK NAME	LOG	CORE RECOVERY	CEMENTA. TION KIND OF BIT CASING	COLOR	WEATHER ING	HARD. NESS	CUTTING O	BSERVATION OF CORE DESCRIPTION	WATER YABLE —— N WATER PRESSURE TEST LEAKAGE OF DRILLING W		ОЕРТН	ELEVATION
0m	- 31		0 → 100 _%							LUGEON	m	0π	517,561
4		<u> </u>		**************************************						1 1	7.30 7.30	-1	
of a short market and a short ma		O		ě							7.30	-	
2-]											, , ,	2	
4								1	26.0-27.5m: Included		7.30	-3	
	1	O					1		red shale gravels.		7.30	-	
1										i i		-4	
1			HM					•			7.30	- !	
-		0									l distribution	· b	
크											7.30	-6	
1				40	Va 10	-							
4		0		975		٢.	-		gager (1) to the second of th	:	7.30	·7 -	
1					Sic		ļ.					-8	
1	2				Greenish				29.0~30.5m: Included		E	.	
-	1/16	0			₹ }	1			limestone gravels.		7.30	-9	
عاسا	7				gray			{ 				.0	
3					Dark	ľ							 -
1		0			ಗಿ						1	1	
1							i				7.30 7.30	,	 .
عطست				1	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -						7.30		! !
1		Q					.:					.3	
1					45								
التنائدي				uu							l limit	4	· :
1		0		457 mm							7.30	-5	1
1				79-			. :			·			Į
استظيرها بسائيها وساسعانسان							2.0		38-39m: Included		Lumb Lumb	6	
1					}				limestone gravels.		طسط	-7	
1		0		, i ^c					7 181	,	1		
1				4.							7.30	8	
1				Į			'		39.0	Lu = 22.0	thund:	9	485.61
1	9.8			457	Park	1	2	3	Peridotite.	Pomax = 10.0	E		
	<u> </u>	V			36	\ <u></u>	4	4	peridotive.	Hg/em²	LE	0	484.7

00I NGI	LE FI	ATE ROM	F 4.1 HOLIZO	17.56 \$2.534.2 78,657.2 NTAL HOLE S	<u>.</u> 5	5	<u>n</u> - -	LE TO CO	TH OF OVERBURDEN 39.0 IGTH OF ROCK DRILLING 61.0 TAL LENGTH OF CORE 69.0 RE RECOVERY 69.0	7 m LOGGED BY	DS JICA	1007/2015 1007/2015
U 530	ROCK NAME	9:0-7	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER SING	HARD.	CUTTING	DESCRIPTION	WATER TABLE WATER PRESSURE TEST LEAKAGE OF DRILLING WATE		ELEVATION
Qσ			0 →100 _%							LUGEON	nn Om	484.795
بيبئيستسيليي		V						3 4	39.0~42.0m: Piece ~ fragment cores.		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
ntariognalisation of the second surface of t		м У						3	42.1m: Serpentine Imm 440	1,,00	7.30 mal 19.00 mg 19.	
للساسلاسداد		V						2	wide.	Lu=0 Pomex = 10.0	արևարևային 7.30	
وأبسليسأسهاء		V	4					3		Lu = 0 Pomex. = 10.0	7.30 g	
-3	tite	∜		mu 154	ray	<u></u>			48.8m: Serpentine 3mm	Lu=0 Poinax = 10:0	րուկուդունուն Ծ	
سيآسماسياسيا	Peridotite	 \		(54	Dark gray	2	2	Z	50.5m: Serpentine lens diameter Icm.	Lu=0 Pomox, =10.0	مارسداری راسیدار مارسداری راسیدار	
بسيئيسيا سيئيد		V						2 3		Lu = 0 Pomax = 10.0	8./5 2 P. /5 11 11 3	
بأبيبيا ببيائيسانيساني		V						4 3	543 543~545 m and 548~ 545 55,2m: Fragment cores,	Lu=19.0	14 14 15	
يبيانييرايييرايييراييولا		\ \ \						2	ss.2 weak serpentinization.	Lu=16.1	8.15 6 8.00 E	
ليسليسانساس								3			8.00 8 9.15 h	
almini.		V			·. 					Pomax = 10.0	6 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	468.41

GEOLOGIC LOG OF DRILL HOLE PROJECT HOLE NO. SK - 5

LOC	ATIO	N		MAC	PR	OTE	<u> </u>	ΟE	PTH OF HOLE 100.0		14 -	7	-1988
ELE/	Ατι	NC	<u>ુ 5</u>	17.56	1		<u>m</u>		PTH OF OVERBURDEN 39.0		<u>6 -</u>		<u>-1988</u>
C00	ROIN	IATE	141	72,057.8	<u>.</u> 5!		_	4 1 2 1	NGTH OF ROCK DRILLING 61.0 TAL LENGTH OF CORE 69.9			SI	
			HOLIZO	HOLE S			_	A 150	tal length of core 69.9 re recovery 69.9		V_I	عبد	L
BEA	KING	OF	ANGLE	HOLE O	70	<u> </u>			·	1 70	r	—т	
	3	ပ	ພ ≩	Ę≅o ō	-	œ	[ر	(1)	BSERVATION OF CORE	WATER TABLE	V-	¥	NO.
DEPTH	OCK NAME	0	CORE	EMENT. TION KIND OF BIT' CASING	SOLOR	WEATHER	Š Š	NE.	DESCRIPTION	WATER PRESSURE TEST	1	DEPTH	ELEVATION
	5		-	3	8	¥.	2	3		LEANAGE OF DRILLING W			
6 om			0 -+ 100 ₀	in array			-			LUGEON	m	Ow!	468.4/2₹
4			KKI III							Lu=0	E	- [
1-		V						2	61.2~61.4 m core:	Pomos = 10.0	Ē	-1	
			ИИШ					į	• And the second	kg/cm²	9 00 5	~	
2 3 4 5			(A41111					1	Laboratory test.		8.00	-2	
4		1 1 1	Z IIII	\$5				3		Lu=0		-3	
3-1		V	(A.IIIII		.,,	11		[Pomar. = 10.0		_	
			ź IIII						11 - 11 Am Poor Me			-4	
								 	64.2 64.2 ~ 66.0m : Poor core	1 .		-	
5-		1/			1	1		3	recovery.	Lu=0		~ B	
1		٧	W					4	Piece cores	Po max. = 10.0			
6-		- √.		-].			<u> </u>	66.0		8.15	-6	
		-1111		1 2					66.4m: Serpentine Imm	Lu=0		- [
7-		∇	KKKIII				ŀ.		wide.	Pomax. = 10.0		-7	
1			KKIII				' '		6.8 m: Weak serpen-	7 6 37 6 7 5 7 5 7 5		-	
8-		1 46	KKA.		-4				tinization 2~3cm wide.			-8	
	(e	50 gag			[<u>[</u>	ŀ			tinization 2~3cm wine.	Lu=0	800		
9-1	Peridotite	V			ark arav			2		Poinax = 10.0	8 20	.9	
7,	10		WW.		0	2	2	,			! :	.0	
70-	7.6				120	7	~	3					
1.5	Q.	1			~	1				Lu=0		.,	
1		V	W)			50.7) :			Po max. = 10.0	<u> </u>	-	
2		ć		n u							1	2	Ì
1				25		ľ				Lu=0	. 1	-	
3-	٠,	٧.	KKI	6			.			Pomox = 10.0		-3	·
1			KKIII							7 G MOX = 107 =	200		
4-	•	: 4								·	8.00	-4	
1			KKKIII							Lu=0	1		1
5 1		V				ŀ				Pomox = 10.0	1	-6	. [
1		-				1				<u> </u>	111	6	
6-			WW					,	76.0 76.0~76.4 m core:			.	
, 1				1 1				,	Laboratory test.	Lu=0		.7	1
, 1		V	HHH		- A.	4.5		2	•	Pomax = 10.0	E	.	
8-3		1 1 1 ₉	HHH			:		<u> </u>	78.0		7.90 E	-8	ļ
1	1. s							2		Lu-o	°.70	- [
9-1		V						3			[9	
1 4								3		Pomax = 10.0	[0	4 F 7 A 3 A
<u> </u>			א ורא		L	<u> </u>			> driller's note 4			<u></u>	452.029
			8					14	tick), Z(substick), 3(place), 4(fragmant), 8 grain	water table after drilling	0.30		
e e i de E e e e			INN V	core loss			l. Jir	iard) ~	Blacin	water table before drilling	0.30		
						٠.							

HOLE No. SK-5 (SHEET 5 OF 5) GOKTAS **PROJECT** LOCATION DAM
ELEVATION 517,561
COORDINATE \$452,534,29 100.00 m COMMENCED DEPTH OF HOLE 39.00 m COMPLETED 6 -DEPTH OF OVERBURDEN DSL LENGTH OF ROCK DRILLING 61,00 m
TOTAL LENGTH OF CORE 69.97 m DRILLED BY LOGGED BY TOTAL LENGTH OF CORE ANGLE FROM HOLIZONTAL 69.97 % BEARING OF ANGLE HOLE S40° E CORE RECOVERY OBSERVATION OF CORE WATER TABLE WEATHER ING HARD NESS CORE CORE WATER PRESSURE TEST DESCRIPTION LEAKAGE OF DRILLING WATER LUGEON Om 452.029 800 Lu=0 Pomax, = 10.0 2 kg/cm² 8.00 8.05 3 Lu = 0 84.0m: Slickenside Pomar = 10,0 60' dip. 3-4 844 84.4-84.7m: Piece~ Lu = 0 fragment cores, thin POHAZ. = 10.0 serpentine. 8.00 Luzo. POHAX = 10.0 89.0~89.5m : Piece cores Lu=0 no serpentine. Pomes. = 10.0 3 8.15 2 8.15 Lu= 0 Poinox = 10.0 Lu= 0 Pomax = 10.0 2 Lu = 0 POINAX, = 10.0 95.6~96.0m core: Laboratory test. Lu = 0 Pomar. = 10.0 98.0~100.0m : Weak ser 8.00 E pentinization. 2 Lu=0 RQ.D (Av.) = 53% Pomax = 10.0 End of drill hole I (stick), 2 (substick), 3 (piece), 4 (frequent), 5 grain 1 (hard) ~ 5 (soft)

and the second	ATIO RDIN LE F	N IATE ROM		KTAS DAM 14236 52.570.9 78.097.0 NTAL HOLE	5 , , , ,			DE LE TO	PTH OF HOLE 90.0	Om COMPLETED Om DRILLED BY Use togged by	11 <u>-</u> 1 - C	5 8 9 SI CA	_1988 _1988
ОЕРТН	ROCK NAME	ဗဝ၁	CORE	CEMENTA: TION KIND OF BIT CASING	COLOR	WEATHERING	HARD. NESS	CUTTING O	BSERVATION OF CORE DESCRIPTION	WATER TABLE — V WATER PRESSURE TEST LEAKAGE OF DRILLING W	V	осетн	ELEVATION
§ milimilianian	Alluvium		0 ÷ 100 ₉₈	Ф90тт	gray Brown				Alluvium. 0~1.5m: Sand and gravels 20 1.5~20m: Peridotite gravels		m 2.00 2.00	0m 1 1 1 2 2	542.365 * 540.365
» ա ա գ		V						4	2.3 Peridotite, 2.0-9.5m: Many oxidir Eation cracks.	Lu = (70) Pomax. = 3.0 reg/cm²	2.00	ուսիայիումումումու	
9 9 ահասհամասկում		¥				3	2	2 3	5.2m : Weathered ser- pentine Imm wide.	Lu > 100 Pomex. = 3.0 Lu = (40)	2.00 2.00	8	
ى ساسىلسىلىسلىس		V								Poinax = 5.0	5.85 6.50	7	
յ օ Մասևավագեր	ridotite	> 1 >		ww 98¢	k gray	· 2	2	2	9.5 10.2m: Serpentine 1~5 mm wide along horizontal crack.		8.10 8.20		
3 1 ակապական	Peri	 V			Dork	ง		3 2 1 3	120 11.8 m: Weathered Set- pentine I min wide along 60° dip crack.	Pomox. = 10.0 Lu = 13.7 Pomox. = 10.0	10.80 12.00	2	
		>				2	2	/ {	/%0	14.50M Lu = 5.1 Pomod = 10.0		4 5	
9 4 4 1 1		V						2 1 3	16.9	Lu = 8,6 Poinax. = 10.0	13.70 13.90	6 7 7 8	
20 9 10 10 10 10 10 10 10 10 10 10 10 10 10		>						1 2	/8-5	Lu = 0 Pomax. = 10.0		9	522.363
				core toss - ROD				urd) —	tick), 2(substick), 3(piecs), 4(fragment), 5 grein	water table after drilling water table before drilling	0.30		

LOCATION ELEVATION COORDINA ANGLE FRO BEARING (I TE <u>Ŷ</u> .4.	DAM 542.36	PRO	OJE(CT m	DE DE LE TO CO	PTH OF HOLE PTH OF OVERBURDEN NGTH OF ROCK DRILLING TAL LENGTH OF CORE RE RECOVERY 99,	S. SK - 6 (SHEET) OM COMMENCED OM COMPLETED OM DRILLED BY 3 m LOGGED BY	<u>11 - 8</u>	-1988 -1988
DEPTH ROCK NAME	CORE CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER ING	HARD		BSERVATION OF CORE DESCRIPTION	WATER TABLE — M WATER PRESSURE TEST LEAKAGE OF DRILLING WAT		ELEYATION
20m	0 ⇒ 100	*						LUGEON	m or	<u>₹55 3&₹</u>
thuitududududududududududududududududududu		φδ6 mm	Dark gray	2	2	3 3-4 1 5 2	29.9~30.3m: rrogment 30.3 cores, meshy serpenting 1~5mm wide (60°dip). 31.3 31.3~31.8m: Piece ~ fragment cores, meshy serpentine Imm wide (70°90°dip). 35.8~36.0m: Piece cores, no serpentine. 35.8 36.0 36.0~36.5m core: Laboratory test. 37.8 37.8~38.5m: Piece cores, 38.5 no serpentine.	Pomax = 10.0 Lu = 0 Pomax = 10.0	15.6. 16. 16. 16. 17. 18. 19. 10. 11. 11. 12. 13. 14. 15. 18. 17. 18. 19. 10. 11. 11. 12. 13. 14. 15. 18. 17. 18. 19. 10. 11. 11. 12. 13. 14. 15. 18. 17. 18. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	
40		core 1053		1	100	1 (s		Water table altor drilling Water table before drilling	0.30 0.50	502,365

GEOLOGIC LOG OF DRILL HOLE GOKTAS PROJECT HOLE No. SK - 6

ANG	ATIC RDIN LE FI	ATE ROM	Y & Y	KTAS)AM 542,36 52,570,9 78,997,8 INTAL HOLE	5 7 2 9	. e r	<u>n</u>	OE LE TO	PTH OF HOLE 90.0 PTH OF OVERBURDEN 2.0 NGTH OF ROCK DRILLING 88.0	DOm COMPLETED DOM DRILLED BY 33 m LOGGED BY	- <u> </u> - <u> </u>	- 8	-1988 -1988
БЕРТН	ROCK NAME	903	CORE	CEMENTA- TION GND OF BIT CASING	COLOR	WEATHER	HARD. NESS	CUTTING C	BSERVATION OF CORE DESCRIPTION	WATER TABLE WATER PRESSURE TEST LEAKAGE OF DRILLING W	\	рерти	ELEVATION
4 am			0+100%							LUGEON	m	0m	502.365 ¥
1								2 - 3	40.7m : Serpentine Imm	Lu=0		<u> </u>	
1-1	4.4	$\overline{\vee}$				1, 1	1	3	41.0 wide along 70°dip crack.	Poinax = 10.0		-1	
ساسا									V	kg/cm²	14.50	Ę ,	
1 × 3 Jumpontonito	- 4 - 4	14 A									16.70	[*.
3-		V	KAKA							Lu=0 Pomax=10.0		3	.
		*								[6 kid x, = 10.0		<u> </u>	
4-					N.			1				4	
գույությունույություրությունույր 1900 - Հայաստանույությունույր		(1.)						1		Lu = 0		E ₋₅	
51		V	MA							Pomax. = 10.0			
6-				•				2			14.50	E 6	
1				m 98¢						Lu=0	27.00	E.	,
7-		٧		•					47.9m: Calcite vein	Pomar. = 10.0		7	
٦			HIM						less than Imm wide.			E-8	
*													
8-1	ţç	V								Lu=0 Pomar = 10.0		-9	
1	华		HHHH		\$	_	7.0			10 max 1010	14.50	E E	
50-	ridot				4	2	2	-	50,0		14.50	0	
. [Pe	19			2			2		Lu=0		Ę,	:
[. V	HHH					3		Pomar. = 10.0		<u> </u>	
2-											14.50 21.30	2	
-								3		Lu=0	, 3-		[
3-1		٧								Poinax. = 10.0		1 3 1 1	
4-									540			4	
]			HHH	4						Lu=0			
5-		V								Pomay = 10.0		5	
- 1										l ding.	13.30		
8		34						Z			13.30 15.30	E.º	
7-				ww 9L o	100	}				Lu=0		E-7	
- 1		Υ.		47.						Pomax = 10,0		11-7 1-8	
8		- P	HUR			-						-8	
									h0 h	Lu=0		Ē.	
9-1		V						7	590	POMON. = 10.0		9	
60		1.5	PHY					2			1450	Ę o	482.365
9 04				cora losa RGO				l (▶ driller's note 4 bickly, 2(subsidick), 3(pisce), 4(fragment), 6 grain 5(soft) composed)	Water table after drilling Water table before drilling	0.30		T.E. W. A. S.

	÷				GE)בוכ)GI	C LOG OF DRIL	با	HOLE		1.5	ge
ومعدياتم			GO	KTAS	PROJ	ECT			-	O SK = 6 (SHEET	4 of		4000
LOC	ATIO	Ŋ.)AM				1 11 tr 1. main.		OOm COMPLETED		_8 9	<u>-1988</u> -1988
	ATIC			542.36 52.570.4		<u>m</u>	DE	PTH OF OVERBURDEN			<u>, U</u>	SI	-1300
				52,5/0.9 78,097.0 NTAL				TAL LENGTH OF CORE	39.	23 m LOGGED BY		CA	
			ANGLE			<u></u>	***			1_%		177 g	eg estab
							0	BSERVATION OF CORE		WATER TABLE -V	\		ž
DEPTH	ROCK NAME	907	CORE	CEMENTA TION KIND OF BIT CASING	COLOR	HARD.	CORE	DESCRIPTION		WAYER PRESSURE TEST LEAKAGE OF DRILLING WA	TER	DEPTH	EEVATION
60m			0 +100,				1			LUGEON	m	Om	482365♥
1711		>								Lu=0 Pomas, > 10:0	21.00	-1	

1 (fresh) ~ 5 (decomposed)

GEOLOGIC LOG OF DRILL HOLE GOKTAS PROJECT HOLE No. SK - 6

ELE COO ANO	LE F	ON IATE ROM	X 4 X 4 Y 4 1 HOLIZO	KTAS DAM 542.36 52,570.9 78,097.0 INTAL	55 7 9) O	<u>.</u> n	DE LE	HOLE No PTH OF HOLE 90.0 PTH OF OVERBURDEN 2.0 NGTH OF ROCK DRILLING 88.0 TAL LENGTH OF CORE 89.2 RE RECOVERY 99.1	Om COMPLETED Om DRILLED BY	11 - 1 - D	8 9 S1	-1988 -1988
DEPTH	ROCK NAME	LOG	CORE	CEMENTA- TON KIND OF BIT CASING	20108	WEATHER ING	HARD. NESS	CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE MATER PRESSURE TEST LEAKAGE OF DRILLING WA	TER	ОЕРТН	ELEVATION
800			0 + 100%							LUGEON	m	0 in	462.365♥
2 day		\								Lu=0 Pomen=10.0 KeVcui ²	14.50 L	-1 - -2	
3 4	te	>			ray				0/ F . M . J	Lu=0 Pomax=10.0	alanalusulusulus	-3 - -4	
5 6	Peridotite	\ \		476 mm	Dark gray	2	2	112	86.5m: Meshy serpentine 10cm wide, weak serpen- tinization.	Lu = 0 Pomax. = 10.0	14.30 14.50	5 6	
2 3 4 5 5 7 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8 8 7 8	A Property of the Control of the Con	1 >							-89.4~89.8m core: Laboratory test.	Lu=0 Pomar =1010	etriestatestatestates	-7 - -8	
9	The second secon	V		**	31				R.O.D (Av.) = 91%	Lu=0 P.max.=10.0	7450H	-9	4 kc 2 3 k
9 1 2 արտիարակացույում արդարարարարարարարարարարարարարարարարարար										vater table	/450 հումարիակավարկակարհումարկարհումարկարհումարկարհումարկարհումար	-1 -2 -3 -4 -5 -6 -7 -8	452.365
				core loss				erd) ~	tick), 2(substick), 3(piece), 4(fragment), 5 grein	after drilling	0.50		

GEOLOGIC LOG OF DRILL HOLE HOLE NO SK 7 (SHEET 1 OF 4

LOCATIO ELEVATI COORDI ANGLE BEARING	ION NATE FROM	D 6 X 4 Y 4 i HOLIZO	TAS AM 03,68 \$3,439,6 \$1,439,6 NTAL HOLE N	7 <u>}</u> 60	m	D LE T(PTH OF HOLE PTH OF OVERBURDEN NGTH OF ROCK DRILLING 80.0	Om LOGGED BY	23 - 0 6 - 1 DS	9 -1988 0 -1988 J
DEPTH ROCK NAME	LOG	CORE	CEMENTA- FION KIND OF BIT CASING	COLOR	HARO.		DESCRIPTION DESCRIPTION	WATER TABLE WATER PRESSURE TEST LEAKAGE OF DRILLING WATER LUGEON		<u> </u>
Sombordendendendendendendendendendendendendend	>		φ86 mm	Dark gray	2 2 3	3 4	No surface soil. 13 Peridotite. 4.1m: Oxidization crack 45° dip. 4.3m and 4.5m: Serpentine Imm wide along 0°~ 15' dip cracks. 16 drilling direction? 6.1m: Serpentine Imm wide along 15° dip crack. 17.5 tinization. 17.5	Pomox. = 5.0 Lu=(5) Pomox. = 5.0 Lu=0 Pomox. = 5.0 Lu=0 Pomox. = 10.0 Lu=1.4 Pomox. = 10.0 Lu=2.6 Pomox. = 10.0 Lu=2.6 Pomox. = 10.0	7	586.366
	ļ		- core Joss ROD			(hard) –	tück), 2(substick), 3(piece), 4(fraqment), 8 gfain	Water table after drilling	0.30	

ANG	ATIC ROIN LE F	IN ATE ROM	E Ş.4 HOLIZC	TAS DAM 03.68 53.439 DNTAL HOLE N	17 11 6	0	m -	DE LE TO GC	PTH OF HOLE 80.0 PTH OF OVERBURDEN 0 NGTH OF ROCK DRILLING 80.0 TAL LENGTH OF CORE 80.0 RE RECOVERY 100.0	Om DRILLED BY	23 6 -	- 9 - 10	<u>-</u>
ОЕРТН	ROCK NAME	907	CORE	CEMENTA- TYON KUND OF BIT CASING	COLOR	WEATHER JNG	HARD	CUTTING	BSERVATION OF CORE DESCRIPTION	WAYER TABLE V WATER PRESSURE TEST LEAKAGE OF ORILLING W	V— ATER	ОЕРТИ	
20m			0 → 100°							LUGEON	m	Om	586
1 1 1 1000 fronting		V								Lu. 0 Format. = 10.0 FE/cm²	15.00	1 2	
3		V						2		Lu=0 Pomax. = 10.0		3 4	
mpunpunpu		V								Lu=0 Privat = 10.0	15.68	, 55 8 9 9	
2		V		ww 989				3	270 27.0~27.5m and 28.0~ 27.5 28.5m: Piece cores,	Lu = 0 Pomax = 10.0	20,00	7 8	
8bd	148	V		3 ∲	3			3	28.0 no serpentine. 28.5	Lu=0 Powar = 10.0		9	
30	Peridot				ark ord	2	2	3	306 30.6~31.0m: Piece cores		10.00 10.00	0	
1 1	4	V			7	,		3	31.0 weak serpentinization.	Powor = 10.0		2	
سلسلاسلس		٧						2		Lu= 0 Power, = 10.0	3.00	11 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
م ملسلساساسا		V							35.0~36.0 in: 80° dip crac with thin calcite vein	Pomax = 10.0	3.00	4 5 Kanada ahawka	
2 9 11		V						3	36.5~37.0m: Piece core, 36.5 weak serpentinization 37.0 no Oxidization crack.	Lu = 16.5 Pomar. = 10.0		6 3 3	
ա. Նումասկում		V		- ww 9L4				2	36.6 m : Slickenside	Lu=0 Pomax=10.0	0.00		-
7	77	ľ		4						767105.470.0		9 9 0	56

COORDINATE X 415 ANGLE FROM HOLIZON BEARING OF ANGLE HE	TAL 6 OLE <u>N 25</u>		Q U T O	EPTH OF HOLE EPTH OF OVERBURDEN ENGTH OF ROCK DRILLING OTAL LENGTH OF CORE ORE RECOVERY OBSERVATION OF CORE	m COMPLETED Om DRILLED BY Om LOGGED BY	6-10 DSI JICA	<u>-1988</u>
DEPTH ROCK NAME LOG CORE RECOVERY	CEMENTA TION KIND OF BIT CASING	WEATHER ING	CORE	DESCRIPTION	WATER PRESSURE TEST LEAKAGE OF DRILLING WAT		ELEVA
4 0m 0 +100 _%					LUGEON	m Con	568.046
2			2 3	42.5~44.5 m: Thin ser- 42.5 pentine along 70°~80° dip crack.		0.00 Land 2 A A O Land 3	
61			3	44.5 45.0~ 45.6 in: Serpentin 45.0 Imm wide along 40° dip 45.6 crack. 47.1~47.4 m: Calcite	Powar = 10,0	0.00 L	
Peridotite C K K	Dark gray		3 3-4	47.4 vein 2-3 mm wide, ser- pentine I mm wide and talc less thou I mm wide Meshy. 47.9 ~51.5m: Serpentin I mm wide along many cracks.	Lu=0 Panes = 10.0	Bulling Bullin	
2-Time V V V V V V V V V			2 2	Cracks.		0.00 4 0.00 4	
5 milion				54.8m : Serpentine Imm wide along 40°d; crack.	Lu-0 Pomax = 10.0	5 1000-1100-1100-1100-1100-1100-1100-110	
7 X				57.2m: Meshy serpen- tine Imm wide. 58.1m: Serpentine Imm		6.00 L 8	
9-11-11-11-18-18-18-18-18-18-18-18-18-18-				wide along 30°dip crack.	Lu=0 Pomax = 10,0	0.00 uuuluuluulu 9 0 uuluuluulu	<i>\$51.</i> 725

DEPTH	ROCK NAME	LOG	CORE	CEMENTA - TION KIND OF BIT CASING	COCOR	THER NG	RSS NESS	CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE	\- \	рертн	ELEVATION
	5			5	8	3	≨	9		LEAKAGE OF DRILLING W	y	. 0.70	
0 m			0 → 100, 11/1/1/11	-]							m	Ųm E	\$\$1.725
4	-41								60.3m : Serpenti e Imm	Lu-0		ا دردا	
		V							wide along 30 dip crack.	Pomax = 10,0			
Jampanjanjan					1				62.7 m : Serpentine /mm	. 4,5,4	0.00	2	
1		334.3					\		wide along 10° dip crack.	Lu=0	0.00	-	1
3 🖥		V			1				wine any to any crack	Pomax = 10.0		E-3	
1	1							2		y omeg.		<u>.</u>	}
4										<u> </u>		E-4	
اساساساساساس	. :	 ار		Ass. Pr			ļ. :			Lu = 0		E 5	ļ
]		\ \ \	WW.							Pomas, = 10.0		E '	
8		2			1						0.00	E-6	
and a										Lu=0	0.00	<u>.</u>	
,릨		V								Pomax = 10.0		-7	
_3	:								67.5			E 8	
1	. :				1						1	-8	
البسائيينانسان	10							1		Lu=0		E_9	
"]	tit	\ \ \ \ \		Ē	\ \frac{2}{8}	-		1		Pomax = 10.0		<u> </u>	
1	Peridotite			₩w 9.2¢	3	2	2	2			0.00	0	
سلسلستنس	eri			13 A P 15	Jark					Lu = 0	0.00		
1-	7	V								Pomax. = 10.0		1	
4		-}											
2-∄			MMI						72.0			-2	
3	1								721 - 1727 1 500	Lu=0		3	
]		¥				Ì			73.1 m and 73.7 m: Ser-	Pomax = 10.0			
1	1.74								pentine lum wide along		0.00	-4	
1									70°dip.crack.	Lu = 0	0.00		
; -		\vee		Ì				1.14		Pomax = 10.0		-5	
-			HH		\			2		, , , , , , , , , , , , , , , , , , , ,		امداد	
1								2				-6	
7										Lu = 0		7	
1		V								Pomax. = 10,0			
Mary Land marken Santan Santa						1				·	0.00	-8	
1				# 15A	199					Lu=0	0.00	<u>E</u> .	{
1					1				ROD(Av) = 9/%	Paniax = 10.0		9	
4	4.		KKKKK	1	1	1	1	1	800 End of drill hole		0.00	<u>-</u>	ì

COO!	ATION /ATION RDINATE LE FRON	X. Y. 4. 1 HOLIZO	ORACE 631,3 455,757,9 172,232,9 ONTAL	57	40000000	EL m	Di LE T(PYH OF HOLE 90.0 PYH OF OVERBURDEN 3.0 NGTH OF ROCK DRILLING 87.0	Om LOGGED BY	4 8 :	. 6	<u>-1988</u> -1988
речн	COCK NAME	CORE	CEMENTA- TION KIND OF BIT CASING				<u>ر</u>	DBSERVATION OF CORE	WATER TABLE	۸	ОЕРТН	SVATION
9G	ROCK	8 8	9 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	COLOR	WEAT!	HARD. NESS	CUTTIN	DESCRIPTION	LEAKAGE OF DRILLING W			
Om		0 → 100 _%	e I	- 6					LUGEON	m	0m	63/357₹
ndambani 1	Alluvium		- 490 mm	Dark				Alluvium 10 0.0~1.0 m: Dark brownish		7.00 00 v	iluminalo	\$1. - 1. - 1.
2110121	Allu			Gray	•			soil and gravels. 1.0-3.0m: Gray limestone gl	avels.		3	628.357
3 411							3	3.4 Gray, hard limestone. 3.9 There are oxidation zone	Lu=(85) 5 Pomax = 3.0		4	
2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-						3	50 in the fissures. 3.9~5.0m: Vertical	kg/cm² Lu= (54)			
8 100								60 solution crack.	Pomar. = 5:0	S.75.	6	
8 7 milanilar	-						3		Lu= (75) Pomax * 5.0	7.60	8	
8 մասկան	C		8				2	8.5 9.5 9.5m: Calcite vein Icm	Lu=65.0		9	
الماسيا ساسساسيا	Limestone		ww 98¢	\ \^	૩	2		wide tilled solution crac 45° dip.	k, Pomax. = 10.0			
, mulminul	Lim			Gray				ii.5m: Solution crack with clay moterial,	Lu = 55.0 Pomox. = 10.0		2	1 1 1 2 1
3 111111							2	13.0 70°dip.	Lu = 16.0	9.14 13.00	E-3	
4								14.5 F)5.5~16.0m core : Labora	Pomax, = 10.0		1-4 1-1-1-1-1-5	
9 2 1							3011	tory test.	Lu= 60.0		6 8	
ىلىسىلىسىك سلىسىلىسىك							1	16.6 16.0~16.6m: Horizontal cracks 5cm interval.	Lu · 58.0	16.00 16.00	 	
8 1							2	18.8 18.8m : Solution crack	Pomax = 10.0		8 1 1 1 1 1	
20 1 1					2 3	2	1 2	70° dip.	Lu=55.0		o O	611.\$57
			- core loss				ard) ~	tick), 2(substick), 3(piece), 4(freqment), 5 grein	after drilling— Water table before drilling	0.30		

рерти	ROCK NAME	L.O.G. CORE RECOVERY	CEMENTA- TION KIND OF BIT CASENG	CCLOR	WEATHER LING HARD	NESS	DESCRIPTION OF CORE	WATER TABLE	DEPTH	ELEVATION
E minutuniuniuniuniuniuniuniuniuniuniuniuniuniu	Limestone	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Gray Control of the C	2 4 3	2 2 2 2 2	23.0 ~ 24.5 m: Piece core 7cm interval cracks, 70° dip. 25.0 25 ~ 90m (End of drill hole): More meshy calcite veins. 26.5 m and 30~32m: 28.0 Calcite vein rich. 29.0 28.0 m; Brownish weat ered zone 4cm wide, 15° dip. 31.7 m: Oxidization crack 1 mm wide, 70° dif	Lu=60.0 Pomax = 10.0 Lu=45.0 Pomax = 10.0 Lu=39.0 Pomax = 10.0 Lu=24.0 Pomax = 10.0 Lu=13.0 Pomax = 10.0 Lu=6.5 Pomax = 10.0		11.357
tanlandankadankadankan					2 - 3	2 / / / / / 2	36.5 39.0m: Oxidization crack along calcite ve	Lu + 8,9 Pomay, = 10.0	inhuduuluuluuluuluuluuluuluuluuluu	591.33

LOCATION ELEVATION COORDINA ANGLE FRO BEARING C	TE 7.4	RACE 631, 31 172,232,0 INTAL	5 7 - 90	IEL m	DE DE LE	PTH OF HOLE 90.0 PTH OF OVERBURDEN 3.0 NGTH OF ROCK DRILLING 87.0	Om LOGGED BY	4 8 1	5	-1988 -1988
	LOG CORE RECOVERY	CEMENTA- TION KIND OF BIT CASING	COLOR	HARD.		DESCRIPTION OF CORE DESCRIPTION	WATER TABLE	TER	ОЕРТН	ELEVATION
O 6 8 2 2 9 2 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		φ8¢ mm	Snay Dark gray	2 \ 3	152	40.0 40.0 ~ 57.0 m Limestone (bituminaus). 40.0 m: Solution crack with clay material. 48.85 ~ 47.0 m core: Micro scopic observation. 57.5 m: Solution crack 70° dip. 100.2 (2100000000000000000000000000000000000	Lu=0 Pomax. = 10.0 33.45 39.25 39.25 35.45 31.25 33.40 34.40	3 4 6 7 8 9	574357 574357	
		- core fors			hard) –	•	water table before drilling.	4 0.5U		

LOCA ELEV/	ATION		GOK HEAD * 4		E 3	TUI 57	ИN		DE DE	PTH OF HOLE 90.0	OO m COMMENCED		5 6	-1988 -1988
ANGL	E FRO	MC	HOLIZO NGLE	NTAL)O -	- 	TO	TAL LENGTH OF CORE 89.5 RE RECOVERY 99.6	Om LOGGED BY	2,112	CA	
ОЕРТН	ROCK NAME	L 0 G	CORE	CEMENTA. TION XIND OF	CASING	COLOR	WEATHER	HARD. NESS	CUTTING O	BSERVATION OF CORE DESCRIPTION	WATER TABLE — WATER PRESSURE TEST LEAKAGE OF DRILLING WA		ОЕРТН	ELEVATION
6ºm			0 + 100 ₈								LUGEON	m	0m	531.357*
2 - 2 - 3 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4	. imestone			mm 38 p		Gray Care and the second of th	2 - 3	2	2 3 4 2	60m: Small cavities rich. 62.0m: Calcite vein 1cm 62.0 wide filled solution crack. 63.5 62.0~69.0 m: More oxidization zone Many solution cracks with clay material. 63.5~65.2m: Fragment cores caused by two direction solution 69.0	Fomax = 10.0 Formax = 10.0 Formax = 10.0 Lu = 38.0 Formax = 10.0 Lu = 28.0 Formax = 10.0 Lu = 30.0 Lu = 30.0 Lu = 7.9	57.20 57.20 57.20 59.25	1 2 3 4 5 6 7 8 9	337.3374
Minding and A 2 2 6 7 8 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Limestone (bituminous)					Dark gray	2 3	2 3	2	75.0 ~ 90.0m (End of drill hole): Limestone 77.0 (bituminous).	Lu = 0 Po 1110x. = 10.0 Lu = 0 Water table	\$5.5 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1 2 3 4 5 6 7 8 9 0	\$\$6.357 \$11.357
				core loss				100	j (s ard) —	tick), Zlaubatick), Sipiace), Alfraqment), Signain	Watter drilling	0.30		
			£	~ figo			1	(fresh)	~ 5 (dec	omposed)				

	ATION IDINA	<u>-</u> TE_	EAL X	TAS DRACE 631, 35 453,737,9 172,232,4 INTAL	37 1	INEL _m	DE LE	PTH OF HOLE 90.0 PTH OF OVERBURDEN 3.0 NGTH OF ROCK DRILLING 87.0 NTAL LENGTH OF CORE 89.5	O m COMPLETED O m DRILLED BY O m LOGGED BY	4 8 - 1	5	- <u>1988</u> - <u>1988</u>
BEAR	ING ()F A	NGLE	HOLE		-		RE RECOVERY 99,4 DESERVATION OF CORE				2
OEPTH	ROCK NAME	901	CORE	CEMENTA TION KIND OF BIT CASING	COLOR	ING ING HARD.		DESCRIPTION	WATER TABLE —— WATER PRESSURE TEST LEAKAGE OF DRILLING W		ОЕРТН	ELEVATIO
8 om		(⇒100 ₂						LUGEON	m	Om	<i>511.3</i> 57♥
8 0. 1	Limestone (bituminous)			486 min	Darkgray white Dark gray	2 3	2	83.9~844m core: Labora tory test. 84.7~84.9m core: Micro scopic observation. 85.2~86.0m: Calcite 85.4 vein rich 85.6 85.4~85.6m: Oxidization calcite vein, fragment cores. R.O.D (Av.) = 86%. 90.0 End of drill hole	Po max = 10.0 Lu = 0 2- Pomax = 10.0	\$7.76 59.70 58.30 58.30	milia and a de	sol 357_
2 3 4 2 5 6 7 8 8 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								▶ driller's note 4	Water table	4 030	22 3 4 5 6 6 77 8 9 0 0	
				- core loss]	randi ~ i	tick), 2(subatick), 3(piece), 4(fragment), 5 grain 5(soft) composed)	water drilling before drilling	0.50		

			the same of	STAS				the state of the s	STATE OF THE PERSON NAMED IN COLUMN TWO	TB-2 (SHEET	1 of	10) 5	_198 <u>8</u>
and the second second	OTA VATIO	100	ДСАЛ	740.0	76	W.C.	DE	PTH OF OVERBURDEN	0	m COMPLETED	19 -	. 7	<u>-1988</u>
. 10.00	أبريدا والمواروان	TAP	the area of the comment		\$ 90	الرينية		NGTH OF ROCK DRILLING TAL LENGTH OF CORE				DSI. ICA	<u></u>
	"我说话。	Section .	HOLIZO ANGLE	HOLE				RE RECOVERY 813/10 =	89.2	% %		1.VZ	
	¥.		≤	ر بلا کی				BSERVATION OF CORE		WATER TABLE	\ <u></u>		₹
ОЕРТИ	ROCK NAME	001	CORE	CEMENTA THON KIND OF BIT CASING	COLOR	HARD.	ORE	DESCRIPTION		WATER PRESSURE TEST	,	ОЕРТН	ELEVATION
		-	0 → 100°		გ _ გ	` ≇ - -	53			LEAKAGE OF DRILLING WI	Yn	0.00	w 140.076₹
Øm E							+-						40.0767
1		İ						Non-coring				-1	
utun									İ		1,3		
2	- 1								·	er e	250	- 2	.*
3	- j										2.50 2.50	3	
uhu											4,00		
400								45			4.00	-4	
5	2	E			ST.			5.0 Massive limest	οης			5	
									j				
6	7.7			ф90 mm				Non-coring				6	
7-1				8			1					7	
, urdan													
7 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	si											E-8	·
1											8.20 9.00	-9	
, and	10				3	_		9.5			9.00		
10	<u> </u>				Q.W		-	10.0 Limestone with s				0	
11111								layer I cm thick	at			1	
Trust								9. 75m.					
2-												-2	
. el								Non-coring		••		3	
3								, 1 -			9.50 10.00		
4-					1			. e . h	: •		10.00	-4	
india	.5				Kakan	1		145 150		:		-5	
5,171					Dan					!		-	
6				₩ 98¢							850 1450	6	
				98¢				Non-coring	.	İ	.,,		
7								0	:				
8											9,50 4,50	8	
ary a											,,00		
9 111								19.5		4 - 4 - 44		9	
20	S	E			9	1		20.0 Massive limesto				0	720.076
				ativity and the	1		1 (5	b driffer's note 4 bck), 2(substick), 3(piece), 4(fragment), 6	grain	ater table after drilling	0.30		
			† N¥ VIJ	– core loss – ROO		100	had) ~	S(soft)	٧	ater table before drilling	•		

COO) F F	N ATE	HEAL	CTAS DRACE 740 0 168,253,6 INTAL HOLE	TU 76 8 9	NN O	EL "	DE LE	HOLE I PTH OF HOLE 190.0 PTH OF OVERBURDEN 0 NGTH OF ROCK DRILLING 190.0 TAL LENGTH OF CORE 81.2 RE RECOVERY 81.2410 = 89.3	m COMPLETED O m DRILLED BY O m LOGGED BY	10 - 19 - I	- <u>5</u> - 7 - 25 I	<u>-1988</u> <u>-1988</u>
ОЕРТН	OCK NAME	507	CORE RECOVERY	CEMENTA- TION KIND OF BIT CASING			<u> </u>		BSERVATION OF CORE DESCRIPTION	WATER TABLE V WATER PRESSURE TEST LEAKAGE OF DRILLING W		оертн	ELEVATION
20m			0 -+ 100 ₈₄			3		- 0		LUGEON	m	Qm	720.076₹
1							- - - -		Non-coring		\$.00 12.50	2	
3-4-	4											3	
5-	\$7				Gray				25.0 Massive limestone Non-coring		5.65 6.50		
7 7 8 1 1 1 1 1 1 1 1 1				٥								7 8 9	
30-	S:7			486 mm	4104				29.5 30.0 Massive limestone Non-coring		8.00 28.00		
3	-								ď			3	
5 6	\$7	E			\$010				345 35.0 Mossive limestone		\$.00 6.50	5	
7 8 8 9									Non-coring				
2111				.	Grey				39.5				
40	<u> </u>			- core fost	Ÿ			ird) ~ !	40.5 Massive limestone + driffer's note 4 bick), 2(substick), 3(piece), 4(fragment), 5 grain (stant)	Water table after drilling water table before drilling	0.30	E 0	[7 <u>00. 076</u>]

ELEV COO ANG	ATIO	N ON IATE ROM	HEA(CTAS DRACE 740 0 168 855 9 DNTAL HOLE	TU 76 8 9	NN 0	ĒL.	DE DE LE TO		O m DRILLED BY	10 - 19 -	· 5 · 7	-1988 -1988
HLAGO	ROCK NAME	5.0.7	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER!	HARD- NESS	CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE — N WATER PRESSURE TEST LEAKAGE OF DRILLING W	√	DEPTH	ELEVATION
4 0m			0->100%							LUGEON	m		700.076 [™]
ساسا								;·			33.00		
1									Non-coring				
2-									v			-2	
3-1												3	
11111											-		
4-1					ح			· ·	44.5			E 4	
5 -	2				g. Lo				50.0 Massive limestone	-		E 5	
												E-8	
, in							·		ih u n carino				
7-1									Non-coring	.],	7./5 7.30	7	
8-1												8	
- 1		.;					-					مراسساس و	
9-				MADI					49.5		I .) -	
50-	.5	I		ww 98¢	g.				50.0 Massive limestone				
1													
1-11								.					ļ
2-							# 1 1 2		Non-coring			2	
3-1	i j					.					10.50	3	
* 1							:			}	36.70		
4-1									54.5			-4	
5-1	S	王			6 ra				55.0 Massive limestone			5	
بيطينا						j			•			աևու	
6-1								.				6 	
14							:		Non-coring			7	
_ 1141.11									v			مراسية المسائيسة	
8-1												<u> </u>	
8-1									59.5		38.50	9	
6°]	2				600				60.0 Massive limestone			0	680.076
	Down Massive Innestration Water table after drilling 0.30 (attabl. 2(substick), 3(peopl. 4(fragment), 5 grain Water table G.50 Water table Defore drilling												

ANG	ATIO RDIN LE FI	N ATE ROM	HEAL Y. 4. HOLIZO	(TAS)RACE 740.0 168.325.5 INTAL HOLE	TU 76 } }	NN O	EL 1	DE LE TQ		O m DRILLED BY O LOGGED BY	10 - 19 -	- <u>5</u> - 7 DS1	-1988 -1988
ОЕРТН	ROCK NAME	901	CORE RECOVERY		,		HARD. NESS	CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE —/V WATER PRESSURE TEST LEAKAGE OF DRILLING WA	\	н1430	ELEVATION
6ºm			0 → 100 _%							LUGEON	Υn	0m	680.076
6 7 8 9 70 1 2 3 4 5 4 5 5 5 5 6 7 8 9 70 1 2 3 4 5 5 5 5 5 6 5 5 6 6 7 6 7 7 8 7 7 7 7 7 7 7 7 7 7 7 7 7	57		0-100/8	486 mm	Grav Grav				Non-coring 64.5 65.0 Massive limestone Non-coring Non-coring Non-coring	LUGEON	\$2.00 \$6.50 28.00 28.00	mindindududududududududududududududududud	\$2.076\$\text{\$\frac{1}{2}}\$
8 2 milion frontemplant contraction of the second						والمستعدة والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعدد والمستعد			Non-coring		27.00 89.50	6 7 8 9 9	
<u>8. 1</u>	\$	ر ا 		- cons loss	িথ্য			Nard) ~	80.0 Massive Limestone driller's note 4 stick), 2(substick), 3(piece), 4(frequient), 5 grain 5 (soft)	Water table after drilling Water table before drilling	0.30	F	<i>660.</i> 076 <u> </u>

COO ANG	GOKTAS PROJECT LOCATION HEADRACE TUNNEL DEPTH OF HOLE ELEVATION 740.076 m DEPTH OF OVERBURDEN 0 m COMMENCED 10 - 5 -1988 COORDINATE 4168.25.89 LENGTH OF ROCK DRILLING 190.00 m DRILLED BY DS1 ANGLE FROM HOLIZONTAL 90 TOTAL LENGTH OF CORE 81.20 m LOGGED BY JICA BEARING OF ANGLE HOLE - CORE RECOVERY 81.2410 = 89.2 %													
оертн	ROCK NAME	907	CORE	CEMENTA. TON KIND OF BIT	CASING	WEATHER	HARD		BSERVATION OF CORE DESCRIPTION	WATER TABLE — V WATER PRESSURE TEST LEAKAGE OF DRILLING W	√ AYER	DEPTH	ELEVATION	
80m			0 ⇒ 100 _%			<u> </u>				LUGEON	m	0 m	660.076	
										: :	27.00			
2	e all consequences								Non-coring			2		
3 4 3 4											28.00			
2 5	\$7					h die			845 850 Massive limestone	-	68.00	եսևսու <u>հ</u> 15		
9 9 1000 m												րուդուդու 18		
اسالسال	Talifier Teacher								Non-coring			7 7		
8 Արտանագր											88.00			
90-	57			uu 984		(Max			89.5 90.0 Massive limestone			مئسلس 0		
ا. بسلامیت آ ین				8								ամասնու		
or Stanfandan									Non-coring		18.50 68.50			
33												1.3 1.1.4 1.1.4		
Գուդուդո	57	1				drov v			94.5 95.0 Massive limestone			5 5		
6,000								-	Non-coring		45.00 46.00	6		
հաստանում Լուսիսայիս								÷.				7		
8 8 Munituri												و دراسلسلیسل		
	V					<u> </u>	-		199.5 100.0 Massive limestone	-	71.00	E 0	690,076	
<u>- 00</u> 1	ا ئ د ــا			core loss				HQ) ~	▶ doller's note 4 pick), 2(subspick), 3(piece), 4(freqment), 6 grain	Water table after drilling water table before drilling	0.30		<u> </u>	

COOR ANGL	ATION IDINAT E FRO	E M	HEAC پر چرا HOLIZO	740.0 68.825.8	TU 76 8 9	O_	EL.	DE LE TO	PTH OF HOLE 190.01 PTH OF OVERBURDEN 0 NGTH OF ROCK DRILLING 190.01	Om LOGGED BY	10 19	5	1988 1988
ОЕРТН	ROCK NAME	3	CORE RECOVERY	CEMENTA. TION KIND OF BIT CASING	COLOR	WEATHER	HARD. NESS		BSERVATION OF CORE DESCRIPTION	WATER TABLE V WATER PRESSURE TEST LEAKAGE OF DRILLING WA	V	ОЕРТН	ELEVATION
100m		+	0 + 100,							LUGEON	M 7450	Om	640.076*
8 8 2 2 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				144	gray.				Non-Coring 104.5~105.0m core: 104.5 Microscopic observations 105.0 Massive limestone Non-coring	17.	7.50 77.90	minibahankankankankankankankankankankankankanka	430.576
المان من من من من من من من من المسلمة	inous Limestone			mm 98¢	Gray	2	2	2 3 1	Erray, hard limestone. 112.5m: Oxidization crack. 112.6~113.1m core: Laboratory test; 113.85~114.0m core: 115.8 Microscopic observation		76.30 79.30 79.30 97.00	adsadsmindredadied	<u> 124 276</u>
120 120	Limestone (bituminous)				Dark gray	2	3	2 3	117.0 Limestone (bituminous) 117.0~117.2m: Fragment cores.	Lu=0 Poinax = 10.0 Lu=0 Poinax = 10.0 water table	73.50 74.00	7 8 9 0	620.076
		K	7 KA	- core loss				sid) !	, i	water table before drilling	1		

LOCATION HEADRACE TUNNEL DEPTH OF HOLE 190.00 m COMMENCED 10 - 5 -198 ELEVATION 740.076 m DEPTH OF OVERBURDEN 0 m COMPLETED 19 - 7 -198 COORDINATE 4.128.23.38 LENGTH OF ROCK DRILLING 190.00 m DRILLED BY DS ANGLE FROM HOLIZONTAL 90 TOTAL LENGTH OF CORE 81.20 m LOGGED BY JICA		GOKTAS PROJECT	A Anna a	HOLE No.	TB-2 (SHEET	7 of 10)	
COORDINATE TALER ST. SE LENGTH OF ROCK DRILLING 190,00 m DRILLED BY DS	LOCATION	HEADRACE TUNNEL	DEPTH OF HOLE	190.00	m COMMENCED	10 - 5 -19	388
COORDINATE Y 4168.333.38 LENGTH OF ROCK DRILLING 190,00 m DRILLED BY DS	ELEVATION	740.076 m	DEPTH OF OVERBURDEN	0	m COMPLETED	19 - 7 -19	988
	COORDINATI	X. 460,325,80 Y. 4168,653,59				DSI	
						JICA	
BEARING OF ANGLE HOLE CORE RECOVERY 81.2410 = 89.2 %	BEARING OF	ANGLE HOLE	CORE RECOVERY 81.2/910	= 89.2	%		e.

	ME		. ≩	¥-≿			- (BSERVATION OF CORE	WATER TABLE	\		8
OEPTH	ROCK NAME	10.6	CORE	CEMENTA TION KIND OF SPT	80.00	WEATHER	HARD- NESS	CUTTING	DESCRIPTION	WATER PRESSURE TEST LEAKAGE OF DRILLING WA	.	реетн	ELEVATION
20m			0 → 100			1				LUGEON	m	Om	620.076
سياسياسيان	The state of the state of							3	/21.5	Lu=0 Pamox = 10.0 kg/cm²		ուլույիումու	
ع برساستان							3	3	No oxidization crack,	Lu=0	73.40 86.00	1012 1013 1013	
ستلسلس						2				Pomax. = 10.0		بالله الله الله الله الله الله الله الله	
فليستأسينا	~								124.6-124.78 m core : 125.0 Microscopic obser-	Lu=0 Pomar = 10:0		والسراسط ما	
بستسملس	Minous			101			3	2	vation.	Lu=0	67.00 67.00		
فلسباسياسياسالسليسليونات	e (bitu			- 486 mm		3	3	3	127.6 ~ 128.0m : Re-con- 127.6 128.0 solidated tracture zon	Poleax = 10.0		ساسساس 8	
سلسالس	imestone (bituminous				1	Dark		1	15° dip. 129.5	Lu=0 Pomax.=10.0		ئىسىلىسىلىد 9	
استأسمك	711								147.5	Lu≈0	67.05 67.05		
فالسطينيان						2	2		Walt to and	fomax = 10.0		ւրուդուդու Տ	
سيلسيك							3	2	No solution crack	Lu= 0 Pomax =10.0		ىيىرلىيىرلىيە دەر	
ملسيتسيا											86.00 86.00	4	
بيبائيينين									136.0	Lu=0 Pomax =10.0	63,00	11.15 6	604.07
Juntanimalan	Sandstone			Lecu		20107	2	3 5 4	136.0 ~ 149.0 m Quartz Sandstone.	Lu=0 Pomax=10.0	63.00	1 7 8	
بالسنايسان	Guarte s			476 mm		34617		2	138.0 139.5~140.3m: Piece~ 139.5 fragment cores,	Lu = 0 Po max = 10.0	65,10	ىلىسىلىسىلىد ق	4000
οi				core loss	<u>ــــــــــــــــــــــــــــــــــــ</u>	1		1	tick), 2(suberick), 3(piace), 4(fragment), 5 grain	water table after drilling Water table before drilling	0.30		1600.0

LOCATION ELEVATION COORDINATE ANGLE FROM BEARING OF	HEAD X. 41 HOLIZO	TAS RACE 740.07 68.355.3 NTAL	PROJECTUNN 76 8 90	EL n	DE DE LE	HOLE NO HOLE N	D. TB-2 (SHEET D. m. COMPLETED O. m. DRILLED BY O. m. LOGGED BY	10 - 19 -	- 5 7	-1988 -1988
DEPTH ROCK NAME LOG	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR WEATHER ING	HARD. NESS		BSERVATION OF CORE	WATER TABLE V WATER PRESSURE TEST LEAKAGE OF DRILLING W		H1430	ELEVATION
140m	0 → 100 ₉₄						LUGEON	m	0m	400.076₹
1. mestone Sandstone		\$ 76 mm	lock gray		2 4 2 1 3	142.4 144.4~144.6 m and 145.1 142.7 ~145.5 m: Fragment care oxidization cracks. 144.4 144.6 144.6~145.1 m core: 145.5 Laboratory test. 146.5~146.7 m core: Microscopic observation 149.0 149.2 149.0~180.0 m: Sandy limestone. 152.3 scopic observation. 155.0 Laboratory test.	Lu=0 Ponax.=10.0	45:40 87:50 76:00 17:00 78:00 76:20	and the first of the second of	391.076
8					2 (3	No oxidization crack	Lu=0 Po max.=10.0 Lu=0 Pomax.=10.0	77.00 156.00	urlunlankaharlankarh	<i>≤</i> 80.076
<u>160] </u>		core loss			×d !	> driller's nota 4 tick), 2(substick), 3(piece), 4(fregment), 5 grain	water table after drilling Water table before drilling	0.30		

ш	 	HOLE	<u>-</u>				RE RECOVERY 813/10 = 89.2		· · ·		:
ROCK NAME	LOGRE CORE RECOVERY	CEMENTA TRON KIND OF BIT CASING	COLOR	WEATHER	HARD. NESS			WATER TABLEV WATER PRESSURE TEST LEAKAGE OF DRILLING WA	VTER	ОЕРТН	ELEVATION
m	0+100%	i daga daga daga daga daga daga daga dag					760.0	LUGEON	m 88.00	Om	580.02
uluukuduulu							160.0~168.0m: Poor core recovery.	Lu=0 Pomax=10.0 ***/cm=	88.00 88.00	dududududu	- :
يطبيناني يعطيهان							50~75%. 163.6~163.75m core:	Lu=0 Pomax=100	88.00 88.00	<u></u>	
nhadankanlantimbankanlantimbankanlantankanlantankanlantankanlantankanlantankanlantankanlantankanlantankanlanta				2	3	3	Microscopic observation.	Lu = 0 Pamox. = 10.0	\$8.00 92.15 88.00 88.00	E	
ntuntuntu					4			Lu = 0 Po max = 10.0		րուրուրույլ 1	
limestone		m 473m	ray					Lu=0 Pomax = 10.0	93.40	ريرلسياسسليسطي ساسياسساسط	
utuutuutu Sandy		456 mm	Dark gray				170.0 ~ 172.0 m: Poor core recovery, 50%	Lu=0 Pomax=10.0	88.00 88.00	سلسسلستا	
سلسيسياسياس							172.0	Lu=0 Pomax, = 10:0		بىلىسلىسلىيىلى 3 ع	
alanacharaktaraktaraktarak				2	2	2 5 3		Lu=0 Pomox=10.0	89.12 89.10	5 5	
Teatabara (ma)					3			Lu = 0 Poinax = 10.0	176.00 29.50	1 6 1 7	
Tringer in					: .	3	178.0 178.0 ~ 18.0 m: Core tecovery 75%.	Lu=17.5	90.00 100.00	اسباسباس و	

			C 01	KTAS :				<i>i</i>	HOLE N	O. TB-2 (SHEET	10 or	10)
LOCA	Tioi	u		NIAS DRACE				DE	PTH OF HOLE 190.0	Om COMMENCED	10 -	- 5	- <u>1988</u>
ELEV		•		740.0	76			DE	PTH OF OVERBURDEN O	m COMPLETED	19 -	. 7	<u> </u>
COOF		25. 11		60.825.8 168.653.		·Λ	- 11 -	LE	NGTH OF ROCK DRILLING 190.0 TAL LENGTH OF CORE 81.2	O m LOGGED BY		LC A	
			HOLIZO ANGLE	HOLE		0		CC	RE RECOVERY 813410 = 89.2	_%	HAV.		
							_	44. 24	BSERVATION OF CORE	WATER TABLE	۸		8
ОЕРТН	NAME	50	CORE	CEMENTA TION KIND OF BIT CASING	ã	H 12	SS	<u>يد</u> پړ	DESCRIPTION	WATER PRESSURE TEST		нтаза	EVATIO
8	Š	و	0 0	KENT CENT	8	A S	HAR N	CUTTING	DESCRIPTION	LEAKAGE OF DRILLING W	ATER		
180m	1)		0 -100,6						100	LUGEON	179.00	Om	560.076₹
1		300							180.0 ~ 190.0 m (End	Lu=0			
յումումուսիումուսիումումումումումումումումումումումումումո			WW	}					of arill hole):	Pomax =10,0		<u>F</u>)	
- 4			MIN						Dolomitic limestone.	hg/cin2		_2	
2 1			WIN						Dojona	Lu=0			
3-1	£ 5		<i>K</i> UIN						180.0~188.0m : Core	Po Mex. = 10.0		-3	
1	325								recovery 50~75%.	7 0 11100	179.00		
4-1	lime Stone			11480	\					1 2	179.00	Ε"	
1				\$2.6	aro.	2	2	3		\\ \(\alpha = 0 \)		5	
, ,	4				`		}			Pomax =10.0			
6-1	Dofomitic									j	179.00	-6	
4	ರ					}				Lu+0		F .	
7-3		H								Pomor. = 10.0			
8. 1									188.0 187.7~187.85 m core:		179.00	-8	
, 1								2	Microscopic observation] 	,,,,	Ĺ	
9 1					<u> </u>		2		189.0	Pomax = 10.0		-9	551.076
1					Park	2	3	2	190.0 End of drill hole		179.00	-	550.076
190-}					-								
1.1	i	-							RBD(Av)=60%			E .	
. 4												-	
2-												E-2	
1												<u> </u>	
3-1	- 1											E-3	
1							}					4	
,												E	
5-1						1		ļ				5 	
1												Ē	
6-						}						E-6	
7	. !						}					-7	
أسما												E	
8-1				ľ						1 4 4 6 6		-6	
بملما													
9-1				• [Day Falls of		-9 	
0 1										<u> </u>		6	
			(1, 1)			1	1	1.	a driller's note 4 tick), 2(substick), 3(piece), 4(fragment), 5 grain	Water table after drilling	0.30	 	
				— come loss			10	: ~ (D14)		Water table before drilling	اردی،	1 -	
			1	- AQD		Į 1	(fresh)	~ 5(dec	omposed)				

GEOLOGIC LOG OF DRILL HOLE GOKTAS PROJECT HOLE No. PR - 1

				KTAS		<u>er</u>		The state of the s	Vo. PB-1 (SHEET	-	-	
LOCA	TIQI	٧		ER PL			DE		OO m COMMENCED			<u>-1988</u>
ELEV	ATIC	N	<u> </u>	91,912) <u> </u>	<u>n</u>	1	44.00	OO m COMPLETED			1988
C00	RDIN	ATE	<u> </u>	62.758.5 66.135.8	3		1.140		OO m DRILLED BY		SI	
	.27 10		HOLIZO		90	<u></u>			37 m LOGGED BY		CA	1
BEA	RING	OF	ANGLE	HOLE		_	CO	ORE RECOVERY 99.	1%			
	ME		RY	¥ 4		,		OBSERVATION OF CORE	WATER TABLE	1		8
нтчэо	POCK NAME	ပ ဝ	CORE	MENT TION TO O	COLOR WEATHER INS	S	A FE	DESCRIPTION	WATER PRESSURE TEST	" .[DEPTH	ELEVATION
9	န္တ	. 	, A	유 호흡증	Ø 3 [∓]	HAR	85	3	LEAKAGE OF DRILLING W	ATER	۵۱	3
Qm			0 +100,		2				LUGEON	m	Om	39/.9/2₩
				1	<u>o</u>			AP				
					100	100 E. 10		0.5			-	1
'=	7.5	Δ			 			Talus deposit.			- 1	
	deposit				00	\setminus					_	
2	À.				Dark gray			Oxidized gravels and		[-2 3	
	Talus				9	١ ١	\	clay.			_	
3-	9	Δ						3.3				
					umc.	. :	$ \ $	V40	Lu=(10)		-4	387.912
4-3					100		3		Po max = 3,0		-	
					Brownshdark green B				kg/cm²	2.40		1
5-					8-		4	Sandstone (graywac	ce).	3.07		1
			W		\$ 3	3		5.8	Lu=(22)		-6	
67			Millill		Jus.		3		Pomax = 5.0			
		•	/		MII.		ų-	1.0~ 7.5m : Many 0x10	'/†		-7	
7			//		20		3	Earion cracks.				
								7.5	Lu= (12)		8	
8-3									Pomex = 5,0	}		
1		•					2		ara-	4.75	_	1
9-3		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		E S				scopic observation	4.0	4.75	3	1
1 4		•		Ф86 та				7.5	Lu=9.8		-0	[
10-				ě			3	9.9m: Calcite vein	Po mor. = 10.0		- 0	
		1					٦	Imm wide (45°dip).				
1-1	9	- A - 1	ИИИ				<u> </u>	11.3		1	-	
	0,7	•					2		Lu=10.5		- 2	
2-	Sandst		ИИИ		3			12.0	Pomax = 10.0	}	- 4	
1	3	•			2		3		•	5.82		
3-	Ś	•	W		43 ~					11.00	-3	
1 1	3	•	\mathbf{K}		123	2			Lu=4.9			
4-1		A.S			fireenish gray		 	14.1 14.1m: Horizontal	Pomax = 10.0		-4	
1 =		•			(b)			oxidization crack.			-5	[
5-		V.	KARIIII				2	ONTO CONTON CANCEL.			- 0	
] =		# 2% -							Lu= 6.8		-	
6-3			KAIIII			1	-	-16.0	Pomox.= 10.0		-6	
1 1			KNIIII			}	3	170		11.25	7	
7-		+ 3	KKKKI				2	17.0		11.00	- '	.
=		•	HUUN				3	17.5	Lu=5.4			
8-	3.4	3.	HHHI				ļ ~~	18.0	Po mox. = 10.0		-8	
4		•	KKKKII				2		1		_	
9-								Joe			-9	
1, 1		•	KKIII				3	19.5	Lu=5.8	11.25	0	37/9/2
120 ±	لسم		KN IV		<u> </u>	i	1	▶ dniler's note €	Water table after drilling			ليتناهم
		!	8	1			4,0	(stick), Z(substick), Z(piece), 4(freqment), 5 grain	water table	0.50		
			ixi EL	core 1011		1	hard) ~	~ S(soft)	petore drilling	1		
		•		— RQD	. 1,	(fresh)	Side	ecomposed				
		٠.						3 ~ 57				
					19 5			$\Phi(x) = \{x \in \mathcal{X} \mid x \in \mathcal{X} \mid x \in \mathcal{X}\}$				

ANGLE !	ON 39 NATE 7:41 ROM HOLIZO G OF ANGLE	62.758.59 66.135.85 ONTAL	<u>-</u> 90	m ·	LENGT TOTAL CORE	RECOVERY 99.1	Om DRILLED BY 7 m LOGGED BY	DS1 JICA
DEPTH ROCK NAME	L O G CORE RECOVERY	CEMENTA TION KIND OF BIT CASING	COLOR WEATHER ING	HARO. NESS	CUTTING SMIT	VATION OF CORE DESCRIPTION	WATER TABLE — WATER PRESSURE TEST LEAKAGE OF DRILLING WA	
20 8 2 2 8 8 2 2 2 8 9 2 2 2 8 9 2 2 2 2 8 9 2 2 2 2		mm974	Purple Greenish 2ray 6-N 6-N C N N	2 3 2 2 2 3 2	4 29.4 3 27.6 3 27.6 3 27.6 3 27.6 3 30.5 3 34.6 3 35.5 3 35.5 3 35.5 3 35.5	and 23.0~23.5m: Fragment cores, crack Fragment cores, crack Fragment core: Labora- 24.6~25.0m core: Labora- 5 tory test. 25.5~49.2m: 6 freenish groy ~ purple shale. Boundary dip is 35° at 25.5m. 25.7~26.5m: Dark gray shale, lamina 40° dip. 32.0m and 33.0m: 0xidizotion cracks. 33.9~34.0m: Fragment cores.	Lu=4! Y Pomax = 10.0 Lu=0 Pomax = 10.0 Lu=0 Pomax = 10.0	77. 27. 37. 9/27 77. 72 11

ELEV COO ANG	4. 27. F	N ATE ROM	POW 30 3.4.1 HOLIZO	KTAS ER P) 1. 9 62. 758 66. 758 ONTAL HOLE	LAI 12 189	ЯТ 90	m	DE LE		PB-1 (SHEET O m COMMENCED O m COMPLETED O m DRILLED BY 7 m LOGGED BY	25 - 16 -	5	<u>-1988</u> <u>-1988</u>
OEPTH	ROCK NAME	106	CORE RECOVERY	CEMENTA- TION KIND OF BIT	CASING	WEATHER	HARD	CORE	OBSERVATION OF CORE DESCRIPTION	WATER TABLE	V— ATER	ОЕРТН	ELEVATION
4 om	200	100	0 -> 100%	12.5						LUGEON	m	Om	351.912 T
- Indualini					A X	Greenish gray	2 3	3	40.5m : Lamina 35dip.	Fo max. = 10.0	8.70 24.00	- -1	
o Mandanhi						9	2	3	420~42.5m core: Lobo tory test.	Lu=0 m- Pomax=10.0		-2 -3	
3. 4 5 5.	Shale					Purple		4	-43.5 -44.6 43.5~44.6m: Froguen	Lic = 0 Pomax = 10,0	18.84 18.84		
8 արակապա	8				-	<u> </u>		3 4	ייטא ריי	Lu=0 Po max. = 10.0		dundandan	
باستاستان،						Greenish gray	2 3	3	47.5	Lu=2.2	8.57 22.80	lund, ordered	
8 8 Առակապետ				ши		GI		3	492	Pomax. = 10.0	22.80 22.80	, , , , , , , , , , , , , , , , , , ,	342.7/2
50 milion		4		,916			2 2	3	50.1 at 49.2 m	Lu = 0 Pomax = 1010		o Lindauduud	
5. Limborhan								3	gray sandstone.	Lu=3.3 Pomax.=100		2	
ع. 4 باسلامیمامیمانید	one	•				/ar	3 2	3	52.8 52.8~545m: Many oxidization cracks.	Lu=1.8	9.24 27.80	3	
ئىسىرايىسىئىسىلىس ئىسىرايىسىئىسىلىس	Sandston	•				areenish			54.5 55.3~55.9 m core : Lob	Po max. = 10.0		-5	
السائسانسان السائسانسان		•					2	3	tory test.	Lu = 0 Po mox. = 10.0	/0.00 /0.00	-6 -7	
8 milimlandim						3			58.2~58.35m core: Microsoft scopic observation.	Lu=0 o- Pomax.=10.0		8	
ا ماسط								3		Lu=o		E 0	331.912
6 <u>∘</u> 1				core loss				(hardi -	► driller's note 4 (sbck), 2(subsock), 3(piece), 4(fragment), 5 grain — 5 (soft) decomposed)	Water table after drilling Water table before drilling	0.50		1420 (18.1

سميد		recide time.		KTAS			CT_	-		O. PB-1 (SHEET) O m COMMENCED		
100	ATION /ATION		7C	ER PL)], 9],	S STAT		n	4.7		O m COMPLETED		
			8.4	62.758. 66.135.	3		<u></u>	1 F	NGTH OF ROCK DRILLING 67.0	O m DRILLED BY	DSI	
			-T- -X -T	DO LAD.	9	n -	•		TAL LENGTH OF CORE 70.3	7 m LOGGED BY	JIC	
		100	NGLE					5 1	RE RECOVERY 99.1			
	ų,	T		<u>ــــــــــــــــــــــــــــــــــــ</u>	T		بۇخارىيىد دە		BSERVATION OF CORE	WATER TABLE	۸,	ð
ОЕРТН		5	CORE	SEMENTA KIND OF BIT CASING	¥	岩	S	ي پر		WATER PRESSURE TEST	Z E	LEVATION
ä	8	2	8 2	P. 329	8	WEATHER ING	HARD	35	DESCRIPTION	LEAKAGE OF DRILLING W		ä
60m			⇒100 _a ,			<u> </u>				LUGEON	m Om	331,912
Oviii	55	. 1	ишії		200	2-3	2	3	60.5			331.412
1 1	-3	πV	X		\$ 0	2	2			Pomox = 10:0	9.33	
1-			7		0 :	3	3	3	60.5 ~ 64.0m : Shale.		9.33 1 22.69	
			XIIIII					 	61.5	Lu=0		
2-	Shale		1411111			,	5	3		Painax. ×10.0	E'	
1	ho	Ηď	XIIII		Purple	2	2	1				
3-	· · ·		(H)		1 3	3	3	4			E .	
1			ЖиIII	Wu M				1	64.0	Lu=0		327.9/2
4-	8	∐-Ŋ		#97¢	-			<u> </u>		Po max = 10.0		
	Sandston	•	1441111	6	Greenish	2	2	2	64.0~65.5 m : Sandstone		9.30	
5-	18	· N			20	•	~	3	655		9.30 9.30	326.4/2
1 4		ıτ∦	(I)		-	 	_			Lu=0	E.	
6-				4.7					66.0~66.15 m core: Mich	d-	E .	
		ΙK	ЯШ						scopic observation.	Po max. = 10.0	9.30	
7-		ll f	4		0	2	3	3			29.50	
	Shale				0			4	65.5~ 70.0m : Shale.	Lu=0		
8	Sh	ĺ		v 1 .	Purple			•		Pomox. =10.0	E 8	
					1					7811100. 70.0	9.08	
9	. **			-		2		3	69.0		28.50	
1 1	:			<u></u>		7 3	3	4		Lu=0		321.912
70-		Щ	,	794	3			-	70.0~ 710 m : Sandstone.	Poinax = 10.0	F-0	VEI THE
	SS		KKI II		Greenist	2	2	3	7/0 End of drill hole	10111-2	34.96	320.9/2
1-		-#			\$			-	Ling of drift hole		J	735.17.5
-												
2-		-			\ .				R.O.D (Av.) = 48%		E ⁻²	1
3-								ĺ			□ 3	
				· .						ta Atria		40.5
4-											E ⁴	
5-											E-5	
1 4												
6-											F-6	
=												
7-				•							F7	
4							i					
8-											E-8	
=										}	F	}
9-	ļ										E-9	
4				•							E.	
[0]		Щ.			لــــا	لـــا		1	▶ driller's nota ◀	Water table	1	ليسسيا
								1 (1	tick), 2(substick), 3(piece), 4(fragment), 5 grain	after drilling	0.30	
		1/	X KTA	- core loss			Lih	ard) !	S (soft)	Water table before drilling	1,7,7,1	
		4	<u> </u>	- RQD		\$	(fresh) -	- 5(dec	omposed)			

GEOLOGIC LOG OF DRILL HOLE GOKTAS PROJECT HOLE No. PB - 2

COORD ANGLE	TION DINATE FROM	5 Y. 4 HOLIZO	NSTOCI 21,35; 162,565;3 INTAL HOLE	3 8 9	o .		CO LEI DE	PTH OF OVERBURDEN 2,2 NGTH OF ROCK DRILLING 67,7 TAL LENGTH OF CORE 68,6 RE RECOVERY 98,4	75 m DRILLED BY	24 - 5	<u> </u>
ОЕРТИ	ROCIC NAME E O G	CORE	CEMENTA- THON KIND OF BIT CASING	%0703 CO!O8	WEATHER	HARD. NESS	CUTTING	DESCRIPTION	WATER TABLE ————————————————————————————————————	ER DEPTH	ELEVATION
6 mahadandandandandandandandandandandandandan	ne Talus depasit		ww.78¢	Lin Gray	2 3 3	2	3 2	0~2.25 m: Takus deposin Limestone gravels 420 2.25 3.1 Assive limestone. 4.5 5.4~8.5 m: Many solu- tion cracks. 70°~80'dip	LUGEON Lu = (0) CH. Po max. = 3.0 Lu = (7) Po max. = 3.0 Lu = (19) Po max. = 5.0 Lu > /00 Po max. = 0 Lu > /00 Po max. = 0		521.353 T
$\frac{2}{3}$	Limestone			Gray	3	2	2 4 1 3 2	14~16m: Meshy calcit Vein. 15.0 15.8~16.0 m and 17.2~ 15.8 17.5 m: Fragment cons. 17.2 17.5 18.5 18.5 m: Solution crack 70°~80° dip. 19.5 19.5	Lu > 100 Po 111 ax. = 1.0 Lu = 36.5 Po 111 ax. = 10.0	14.00 landandandandandandandandandandandandanda	\$01.353

	ON PE		3	<u>m</u>	DE LE TO CO	PTH OF HOLE 70,C PTH OF OVERBURDEN 2,2 NGTH OF ROCK DRILLING 67,7 WHAT LENGTH OF CORE 98,4	5 m LOGGED BY	7 - 4 24 - 5 DS	<u>-1988</u> <u>-1988</u> J
DEPTH ROCK NAME	L O G CORE	RECOVERY CEMENTA- TION KIND OF BIT CASING	COLOR	HARD.	G	BSERVATION OF CORE DESCRIPTION	WATER TABLE	ATER E	ELEVATION
2011	0 +10	00 ₃₄				200	LUGEON	m or	501.353 ₹
Solution in the standard of th		mm 92.4	Gray Dark Gray	2 3	3 2 4 2-33-4 2 4 2-33 3 2 4 2	200 21.0 22.0 22.0 ~ 25.4 m: Fragment cores. 25.4 26.0 27.0 28.0 m: Meshy calcite vein 5~10mm wide. 30.0 30.0 m: Calcite vein filled open crack. 33.4 34.0~34.15 m core: Micro 34.5 scopic observation. 35.4 36.6 Many oxidization crack 38.5 39.5	Lu = 25.0 Popiox = 10.0	22.00 hull 3 22.00 hull 3 22.00 hull 4 25.00 hull 1 28.00 hull 1 32.00	
40	TT THE				3		ater table	<u> </u>	481.353
		core loss			hard) —	tick), 2(substick), 3(piece), 4(frequent), 5 grain	after drilling	0.50	

ELE\ COO ANG	S. 4 34 6 14	PEN N 5 ATE Y 4 ROM HOLIZO		(} 90	 	DE LE 10	PTH OF HOLE 70.0 PTH OF OVERBURDEN 2.2 NGTH OF ROCK DRILLING 67.1	35 m LOGGED BY	7 - 24 - D	4	<u>-1988</u> -1988
BEA	KUVG	OF ANGLE	HOLE				BSERVATION OF CORE	<u></u> %			
ОЕРТН	ROCK NAME	L O G CORE RECOVERY	CEMENTA. TION KIND OF BUT CASING	COLOR	ING HARD. NESS		DESCRIPTION	WATER TABLE WATER PRESSURE TEST LEAKAGE OF DRILLING W	ATER	ЭЕРТН	ELEVATION
4 0m		0 →100 _%						LUGEON	m	0m	481.353
1 1 2 3 4 6 6 7 1 8 9 0 1 2 3 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6			4.76 mm	Gray	3 2 2 3 2 2 3	3 4 / 5 2 2 3 / 3	44.0 45.4~45.8 m core: Labo tory test. 44.0~\$1.5 m: Few sole 47.8 tion crack. 48.2 47.8~48.2 m: Fragme cores. many thin organ material layers. 54.5 54.5 56.0~64.2 m: Sandstone	Lu=7.6 Poinax = 10.0 Lu=0 Pomox = 10.0 Lu=0 Pomox = 10.0 Lu=0 Pomox = 10.0 Lu=0 Pomox = 10.0	45.45.45.45.45.45.45.45.45.45.45.45.45.4	-2 -3 -4 -5 -6 -7 -8 -9	465.353
2 2 3 3 3 3 3 3 3 3 4 3 4 4 4 4 4 4 4 4	Sandstone			Dark gray	2 4	415	contained organic materio	10 max. = 1010	54.46	-7 -8 - -9	(11.35)
<u> 60∃</u>	1		- core loss		.	hard) ~	ticky, 2(substick), 3(piece), 4(freqment), 5 grain	Water table after orilling — Water table before drilling	0.30 0.50	0	[461.353]

ELEV. COOR ANGL	E FROM	PEN 5. Y. 4.1 HOLIZO	TAS ISTOCH 21,353 22,565,3 RTAL HOLE	(} 90	m •	DE DE LE	PTH OF HOLE PTH OF OVERBURDEN AND THE PTH OF ROCK DRILLING AND THE PTH OF ROCK DRILLING AND THE PTH OF ROCK DRILLING AND THE PTH OF ROCK DRILLING AND THE PTH OF HOLE TO COMMENT T	O. PB - 2 (SHEET) O m COMMENCED 25 m COMPLETED 275 m DRILLED BY	7 - 4 24 - 5 DSI	_ <u>1988</u> _ <u>1988</u>
DEPTH	ROCK NAME	CORE	CEMENTA- TION KIND OF BIT CASING	COLOR	HARD.		BSERVATION OF CORE DESCRIPTION	WATER TABLE	EG DE	ELEVATION
6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Limestone Sondstone "	0-100,4	466 mm	Gray Dark gray	4	3 3	Cores are brittle. Core recovery 60~99%. 64.2 ~ 70.0m (End of 65.5 drill hole): Limestone 67.80~67.95m core: Michaeler scopic observation.	Lu=0 Pomax = 10.0 Rg/cm² Lu=0 Pomax = 10.0 Lu=0 Pomax = 10.0		457./53
70 1							tory test. 70.0 End of drill hole R Q D (Av.) = 56%	Pomax = 10.0	ساستاساساساساساساس ج	46/35 <u>3</u>
7 3 4 2 5 6 4 4 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					And the second s	Application of the control of the co			չ հավանիակայիստիականումում անումում	
7 8 9 9 1				1		1	Call Brokenski Mariana Administrativ	vacer table after drilling	2.30	
			- care foss - ROD			hard) — !		Vater table before drilling	vəq!	

ANGLE	ITION DINATI E FRON	Alter:	(TAS) native Pr 20.511 153.534 17.144 HOLE	ower P1 3 39 65	ant (m (. 1	EPTH OF HOLE 50: EPTH OF OVERBURDEN 35. ENGTH OF ROCK DRILLING 15.	50 m DRILLED BY		<u>-1987</u> -1987 L
нызо	ROCK NAME	L C	CEMENTA. TION KIND OF BIT CASING	COLOR WEATHER ING	HARD. NESS CORE	OBSERVATION OF CORE OESCRIPTION	WATER TABLE		ELEVATION
6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<i>ww</i> 06 <i>φ</i>	Dark gray		0.7 Alluvium. 0~0.7m: Brownish graval and sand. 0.7~35.5m: Peridotite gravels. No fine moterial in coll boxes.	2	ումադիակակակակակակակակակակակակակակակակակակա	500.5/8 [™]
			core loss HQD			 driller's note 4 (abck), 2(substick), 3(plece), 4(fragment), 5 grain 5(soft) 	water table after drilling -0. Water table 0. before drilling		

ANGLE I	ON NATE FROM	Alterna	20,518 13,534 ITAL	Wer } sq ss c	Pla O	int n	DE DE LE TO	PTH OF HOLE PTH OF OVERBURDEN NGTH OF ROCK DRILLING TAL LENGTH OF CORE RE RECOVERY	50.0 35.5 15.5	Om DRILLED BY	23 - 9 9 - 10 DS	<u> 1987</u> 1987
DEPTH ROCK MAME	507		CEMENTA- TION KIND OF BIT CASING	COLOR	WEATHER	HARO. NESS		BSERVATION OF CORE DESCRIPTION		WATER TABLE	ER Om	E EVATION
S milmilioning	0	0> 1.00 %							***		2000	
1 2 3 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0							ditto.		24.80M	3 2300 4	
5-11	0		\$90 mm	λγ						T. I	22.50 22.50 6 6	
8 8 2 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	0		\$	Dark gray	;						/9.00 = 8 = 8 = 5 = 9	
300 1 mm	0	<i>BEBB</i>									27.00 0 27.00 1 27.00 2	
3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0										26 00 3 28 50 4	
5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	0		1 476 mm					35.5 Cracky perido	tite.		26.00 70.50 -5 5.50 6 26.50	485.018
8 2 Lundunkunlunkunlunku PRivist	>		49¢	Dark gray	. Z	(W ~ N)	3 1 4	Thin serpenting 37.5 are seen along cracks.	ne loyers	Lu=4.1 Pamax.=10.0 kg/cm² Lu=1.7	26.001-9 1/6.001-19	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
401	<u> </u>	i .	core loss	1	•		aro) ~ '	▶ driller's note 4 bck), 2(substick), 3(piece), 4(freament), b(soft) composed)	Y 5 grain y	vater table after drilling vater table before drilling	0.30 0.50	\ <u>480.5/8</u> \

ANG	GEOLOGIC LOG OF DRILL HOLE GOKTAS PROJECT HOLE No. SSK - 1 (SHEET 3 OF 3) LOCATION Alternative Power Mant DEPTH OF HOLE ELEVATION 520,518 m DEPTH OF OVERBURDEN 35,50 m COMPLETED 9-10-1987 COORDINATE 473,544.55 LENGTH OF ROCK DRILLING 15,50 m DRILLED BY DS1 ANGLE FROM HOLIZONTAL 90: TOTAL LENGTH OF CORE 31,35 m LOGGED BY JICA BEARING OF ANGLE HOLE - CORE RECOVERY 62,7 %											
ОЕРТН	ROCK NAME	1.06	CORE	CEMENTA TION KIND OF BIT CASING	COLOR	WEATHER ING	HARD. NESS	CUTTING	BSERVATION OF CORE DESCRIPTION	WATER TABLE —— WATER PRESSURE TEST LEAKAGE OF DRILLING WA		ELEVATION
4 Co. Co. Co. Co. Co. Co. Co. Co. Co. Co.		The second of th		97¢	Darkgray			3.4	Piece and tragment coves continue. No oxidization along cracks. R.Q.D (Av.) = 10% 50.0 End of drill hole	Lu = 1.3 Pomar = 10.0 kg/cm²	m reduction denote the standard material and the standard material and the standard material and the standard material and the standard material and the standard material and the standard material and standard material a	480.518
7			<u> </u>					1 (1	sints 21s. August 35siecel 4/fragmanti 5 orain	vater table after drilling	0.50	
			IXV V	s core loss ADI2	:			herd) ~ - 5 (de		before drilling	į f	·