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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

ROYAUTRRIGATION DEPARTMENT MINISTRY OF AGRICULTURE AND COOPERATIVES KING JOM, ORTHAIL AND

THE STUDY ON THE KOK-ING-NAN WATER DIVERSION PROJECT IN(THE KINGDOM OF THAILAND

DATABASE REPORT FOR THE GEOLOGICAL INVESTIGATION

(Feasibility Study)



NOVEMBER 1999

SANYU CONSULTANTS FRE NIPPON KOĐT CO., LTD.

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1. General

Table 1.1 List of Drilling Investigation (Location, Drilling Depth, In-situ Test etc.)

Depth (m) Height(ELm) Coordinate of Coordin				;	i					- -	•	•
DHIGALI 30.0 389 596,800 DHIGALI 30.0 389 596,800 DHIGLER 30.0 389 597,100 DHIGLER 30.0 387 606,230 DHIGLER 30.0 397 606,230 DHIGLER 30.0 387 606,230 DHIGLER 30.0 385 598,800 DHIGLER 20.0 387 606,430 DKI-S 20.0 387 606,430 DKI-S 20.0 387 606,430 DKI-B 30.0 387 606,430 DKI-B 30.0 387 606,430 DKI-B 30.0 397 600,000 DKI-B 30.0 397 600,000 DKI-B 30.0 397 600,000 DKI-B 30.0 397 600,000 DKI-B 40.0 36.2 63.400 DHID-L 40.0 36.2 63.400 DHIC-B 40	Hole No.	Depth (m)		X-coord.	ᅜᆜ	Geophysics Logging	Lugeon 1es (Times)	Permeability Test (Times)	Times)	(Samples)	renomed by	Year
DHKLBI 30.0 389 59.1,100 DHKLBZ 30.0 371 506.270 DHKLBZ 30.0 377 60.270 DHKLBZ 30.0 377 60.270 DHKLBZ 30.0 377 60.270 DKL-S 30.0 387 60.200 DKL-S 30.0 387 60.481 DKL-S 20.0 385 588.00 DKL-S 20.0 387 60.6480 DKL-S 20.0 387 60.6480 DKL-S 20.0 387 60.6480 DKL-S 20.0 373 60.6480 DKL-S 20.0 375 60.6480 DKL-S 30.0 377 60.6480 DKL-S 30.0 377 60.6480 DKL-S 30.0 377 60.6480 DKL-S 30.0 373 60.6480 DKL-S 40.0 362 624.500 DHK-BKSP 40.0	DHKG-A1	30.0	▋	296,800	2,205,280	:			23		Thai side	1997
DHKJ-B2 30.0 39.1 593,730 DHKJ-B2 30.0 377 66,230 DHKJ-B3 20.0 377 616,230 DHKJ-B3 20.0 377 611,130 DHKJ-B3 20.0 389 591,740 DKJ-B 20.0 389 591,740 DKJ-B 20.0 387 60,649 DKJ-B 20.0 387 60,649 DKJ-B 20.0 387 60,640 DKJ-B 20.0 387 60,640 DKJ-B 30.0 397 60,000 DKJ-B 30.0 <th< td=""><td>DHKI-B1</td><td>30.0</td><td>389</td><td>591,100</td><td>2,202,730</td><td></td><td>***</td><td></td><td>29</td><td>1</td><td>Thai side</td><td>1997</td></th<>	DHKI-B1	30.0	389	591,100	2,202,730		***		29	1	Thai side	1997
DHIG-B7 300 397 606,200 DHIG-B8 200 387 606,200 DHIG-B8 200 387 613,000 DKI-B8 200 387 606,400 DKI-B 200 387 606,400 DKI-B 200 387 606,400 DKI-B 200 387 606,400 DKI-B 200 397 606,400 DKI-B 300 397 606,400 DKI-B 300 397 606,400 DHKB-I-S 300 373 606,400 DHKB-I-S 400 362 624,600 DHKB-I-S 400 362 624,600 DHKB-I-S 400 362 624,600 DHK-I-BADI 40	DHKI-B2	30.0	391	593,780	2,200,400				30	1	That side	1997
DHIGLES 200 367 618,230 DHIGLES 200 382 617,100 DKI-4 30.0 385 591,400 DKI-4 30.0 385 591,400 DKI-4 30.0 385 501,000 DKI-5 20.0 385 501,000 DKI-6 20.0 385 501,000 DKI-6 20.0 385 501,000 DKI-6 20.0 387 606,400 DKI-6 20.0 373 606,400 DKI-7 20.0 373 607,000 DHKI-1-SP 70.0 436 610,000 DHKI-1-SP 70.0 436 624,500 DHKI-1-SP <td>DHKI-B7</td> <td>-86A</td> <td>397</td> <td>606,290</td> <td>2,190,630</td> <td>-</td> <td></td> <td></td> <td>21</td> <td></td> <td>Thai side</td> <td>1997</td>	DHKI-B7	-86A	397	606,290	2,190,630	-			21		Thai side	1997
DHK-B9 20.0 37.2 617.100 DKI-B9 20.0 38.9 591.740 DKI-S 30.0 38.9 591.740 DKI-S 20.0 38.7 60.480 DKI-S 20.0 38.7 60.480 DKI-B 20.0 39.7 60.000 DKI-B 20.0 39.7 60.000 DHKI-BSP 30.0 39.7 60.000 DHKI-BSP 30.0 39.7 60.000 DHKI-BSP 70.0 436 610.000 DHKI-BSP 70.0 436 610.000 DHKI-BSP 70.0 436 610.000 DHKI-BSP 70.0 436 610.000 DHKI-BSP 70.0 436 610.00 DHKI-S 55.0 436 613.00 DHKI-S 55.0 430 53.0 645.20 DHKI-S 50.0 35.0 624.50 DHKI-S 55.0 430 65.45.50	DHKI-B8	133	367	618,230	2,182,290	**	**		19	1	Thai side	1997
DKL2 30.0 389 591,740 DKL4 30.0 385 598,000 DKL5 20.0 385 598,000 DKL5 20.0 387 606,480 DKL5 20.0 373 606,480 DKL5 20.0 373 606,000 DKL6 30.0 373 600,000 DKL7 30.0 373 600,000 DHK1-BSP 30.0 373 600,000 DHK1-BSP 30.0 377 600,000 DHK1-BSP 30.0 377 600,000 DHK1-BSP 30.0 377 600,000 DHK1-BSP 30.0 373 613,00 DHK1-BSP 30.0 362 624,30 DHK1-BSP 40.0 362 624,30 DHK1-L 55.0 430 63,00 DHK1-L 50.0 373 643,20 DHK1-L 50.0 373 643,20 DHK2-L 50.0	DHKI-B9	ಜೆ	372	617,100	2,175,370	į		1	20	1	Thai side	1997
DKI-4 300 385 598,200 DKI-5 200 385 601,000 DKI-5 200 387 606,400 DKI-6 200 373 617,600 DKI-7 200 373 617,600 DKI-1 200 373 617,600 DKI-1 200 373 617,600 DKI-1 200 373 617,600 DKI-1 200 375 600,000 DHKI-1 200 375 600,000 DHKI-1 200 375 600,000 DHKI-1 200 375 600,000 DHKI-1 200 436 610,000 DHKI-1 300 375 624,500 DHKI-1 400 362 624,500 DHKI-1 400 362 624,500 DHKI-1 400 362 624,500 DHKI-2 300 482 624,500 DHKI-3 400 362 <td>DKI-2</td> <td>- SS</td> <td>88</td> <td>591,740</td> <td>2,201,950</td> <td></td> <td></td> <td></td> <td>8 8</td> <td>•</td> <td>Thai side</td> <td>1997</td>	DKI-2	- SS	88	591,740	2,201,950				8 8	•	Thai side	1997
DECADIO 370 606,490 DKG-5 2.0.0 373 606,740 DKG-1 2.0.0 373 607,600 DKL-1 2.0.0 373 617,600 DKL-1 2.0.0 373 617,600 DKL-1 30.0 397 606,000 DHK-1 7.0.0 436 610,000 DHK-2 55.0 426 610,000 DHK-3 40.0 362 624,00 DHK-1 40.0 362 624,00 DHK-1 40.0 364 627,50 DHK-1 40.0 362 624,410 DHK-1 40.0 364 627,50 DHK-1 40.0 364 627,50 DHK-1 40.0 364	DKI 4	1	385	598,800	2,199,080	:	! !		3 5		Thai side	<u> </u>
DKF-7 20.0 39.2 606,740 DKI-8 20.0 37.3 606,740 DKI-8 30.0 37.3 617.600 DHKI-BASP 30.0 39.7 60.000 DHKI-BASP 30.0 39.7 60.000 DHKI-BASP 30.0 39.7 60.000 DHKI-BASP 30.0 39.7 60.000 DHKI-I-SP 70.0 436 610.000 DHKI-I-SP 50.0 373 626.500 DHKI-I-SP 50.0 373 628.500 DHKI-I-SP 40.0 362 624.00 DHKI-I-SP 50.0 373 628.500 DHKI-I-SP 50.0 373 628.500 DHKI-I-SP 50.0 373 648.200	DKT-6		387	606.480	2,192,420	!!	!!!	1	16	1	Thai side	1997
DKK-84 20.0 37.3 617,600 DKK-84 30.0 39.5 588,100 DHKL-BASP 30.0 39.7 60,000 DHKL-BASP 30.0 39.7 60,000 DHKB-1.38P 70.0 430 604,090 DHKB-1.38P 70.0 430 604,090 DHKB-1.3P 70.0 436 610,000 DHKB-1.3P 70.0 436 610,000 DHKB-1.3P 70.0 436 610,000 DHKB-1.3P 65.0 425 610,000 DHKB-1.3P 65.0 425 610,000 DHBB-4.5 65.0 425 611,720 DHBD-1 40.0 362 624,410 DHBD-1 40.0 362 624,410 DHBD-1 40.0 362 624,500 DHBAADI 65.0 482 624,600 DHSADISP 60.0 482 635,500 DHBAADI 65.0 338 635,500			392	606,740	2,191,000	i			19		Thai side	1997
DHKL-B4 30.0 39.5 589,100 DHKL-B8 30.0 39.7 602,000 DHKL-BSP 30.0 39.7 602,000 DHKB11-4SP 70.0 436 610,000 DHKB11-4SP 70.0 436 610,000 DHKB11-2 65.0 426 610,000 DHKB17-2 55.0 426 610,000 DHKB17-2 55.0 426 610,000 DHBJ-4.5 65.0 436 610,000 DHBJ-4.5 65.0 426 610,000 DHBJ-4.5 65.0 520 613,100 DHBJ-4.5 60.0 352 624,300 DHBJ-4.5 40.0 352 624,300 DHBJ-4.5 40.0 373 628,500 DHBJ-1.5 50.0 495 649,500 DHBJ-1.5 50.0 373 649,40 DHBJ-1.5 60.0 450 651,50 DHBJ-1.5 60.0 373 643,50		(3)	373	617,600	2,183,720	3	1		8	1	Thai side	1997
DHKL-BSP 30.0 357 600,000 DHKL-BSP 30.0 357 602,200 DHKBIT-LSP 70.0 436 610,000 DHKB-II-LSP 70.0 436 610,000 DHKB-II-SP 70.0 436 610,000 DHKB-II-SP 50.0 436 610,000 DHKB-II-SP 50.0 436 610,000 DHBB-II-SP 50.0 436 610,000 DHBB-II-SP 50.0 430 611,310 DHBD-II 40.0 362 624,300 DHID-I 40.0 362 624,300 DHILADI 65.0 482 640,570 DHILADI 65.0 482 640,570 DHS-II-SP 90.0 495 643,690 DHS-II-SP 90.0 495 643,690 DHB-II-SP 90.0 495 643,690 DHB-II-SP 90.0 495 643,600 DHB-II-SP 120.0 336 643,600		188. 1	395	598,100	2,193,900	1	1	ı	21;	1	Thai side	1997
DHK-BOST 300 357 602/320 DHKB11-18P 70.0 436 610,000 DHKB17-1-18P 70.0 436 610,400 DHKB17-1 65.0 426 611,330 DHKB17-1 65.0 426 610,400 DHKB17-2 65.0 426 611,730 DHKB17-2 55.0 420 610,400 DHKB17-2 55.0 420 611,730 DHB-4 40.0 362 624,410 DHID-1 40.0 362 624,410 DHID-2 40.0 362 624,300 DHID-1 40.0 362 624,300 DHID-1 40.0 377 628,630 DHID-2 40.0 377 628,630 DHID-3 40.0 377 628,630 DHADISP 60.0 482 623,530 DHB-3 55.0 483 635,130 DHB-4 60.0 383 635,130 DHB-5<	DHKI-BS	18 P	397	900,000	2,190,600	1	1	1			That side	
DHRADI 700 430 604,050 DHKB11-137 700 436 610,000 DHKB12-1 65.0 436 610,000 DHKB17-1 65.0 435 610,200 DHKB17-2 65.0 436 610,400 DHKB17-2 65.0 435 610,200 DHKB17-2 65.0 425 610,400 DHIAD1 40.0 362 624,600 DHID-3 40.0 364 624,600 DHIAD1 50.0 373 628,600 DHIAD1 50.0 373 628,600 DHIAD1 60.0 373 628,600 DHAAD1 65.0 482 64,200 DHAAD1 65.0 482 64,200 DHB-3 55.0 482 64,200 DHB-3 55.0 482 65,600 DHB-3 55.0 482 65,600 DHB-4 45.0 383 66,600 DHB-3 <th< td=""><td>DHKI-B6SP</td><td>*** *</td><td>397</td><td>602,920</td><td>2,192,120</td><td>٥</td><td>1</td><td></td><td>41</td><td> </td><td>That Side</td><td>1881</td></th<>	DHKI-B6SP	*** *	397	602,920	2,192,120	٥	1		41		That Side	1881
DHRADI 500 420 610,000 DHKBTZ 650 426 610,400 DHKBTZ-1 650 426 610,400 DHKBTZ-2 650 426 610,400 DHKBTZ-2 650 426 610,400 DHBA-3 165.0 350 611,730 DHBA-1 400 362 624,410 DHBA-1 400 362 624,600 DHIP-2 400 362 624,600 DHIP-3 400 364 624,600 DHIP-3 400 364 624,600 DHIP-3 400 360 636,600 DHIP-3 400 373 628,600 DHADISP 600 373 649,300 DHBA-3 610 482 636,130 DHB-4 620 637 649,300 DHB-4 620 657,50 668,300 DHB-4 620 430 657,50 DHB-4 620	DHKEUI-IS		430	000,050	001,781,2 000,001,0	2		;	1	7	Thai side	1997
DHKBTZTRA7 500 480 610,400 DHKBTZ-1 65.0 435 610,200 DHKBTZ-2 55.0 420 611,730 DHB-4.5 165.0 362 624,300 DHB-1 40.0 362 624,600 DHB-2 40.0 362 624,600 DHI-2 40.0 362 624,600 DHI-2 40.0 362 624,600 DHI-2 40.0 362 624,600 DHI-2 40.0 362 624,600 DHI-4DI 65.0 373 628,600 DHI-4DI 65.0 373 648,50 DHI-4DI 65.0 373 648,50 DHA-DISP 90.0 482 640,570 DHA-DISP 120.0 463 652,40 DHB-3 120.0 463 652,50 DHB-4 45.0 383 635,150 DHB-3 55.0 420 652,50 DHB-3 <t< td=""><td>DHKB-1</td><td>(E) (E)</td><td>426</td><td>613 830</td><td>2,188,990</td><td></td><td>1</td><td></td><td> </td><td>4</td><td>Thai side</td><td>1997</td></t<>	DHKB-1	(E) (E)	426	613 830	2,188,990		1			4	Thai side	1997
DHKBJTZ-1 65.0 435 610.200 DHKBJTZ-2 55.0 420 611,730 DHBL-4.5 55.0 420 611,730 DHBL-4.5 55.0 420 611,730 DHBL-4.5 40.0 362 624,300 DHIMD-3 40.0 362 624,410 DHIMD-3 40.0 364 627,500 DHIADI 65.0 482 646,500 DHIADI 65.0 482 646,500 DHADI 65.0 373 628,690 DHADI 65.0 373 628,200 DHSDIN 60.0 482 646,500 DHSADI 60.0 482 648,200 DHB-4 120.0 483 653,100 DHB-5 120.0 460 657,30 DHB-5 120.0 460 657,30 DHB-5 120.0 460 667,410 DHB-7 45.0 383 635,100 DHB-7	DHK-EXTRA	\$ 88	480	610,400	2,189,800	1	0	!	:	, i	JICA side	1997
DHKBTT-2 55.0 420 611,730 DHBJ-4.5 165.0 320 613,100 DHBJ-4.5 165.0 320 624,300 DHBD-1 40.0 362 624,410 DHIN-3 40.0 362 624,410 DHIN-3 30.0 373 628,690 DHIADI 65.0 482 640,570 DHIADI 65.0 482 640,570 DHADI 65.0 482 640,570 DHADI 65.0 482 640,570 DHADI 65.0 482 643,200 DHADI 65.0 482 643,200 DHADI 60.0 463 653,230 DHB-4 40.0 383 653,230 DHB-5 45.0 388 635,130 DHB-6 60.0 463 652,430 DHB-7 45.0 483 652,430 DHB-8 50.0 382 643,430 DHB-8 50.0	route) DHKBJT2-1	-48	435	610,200	2,193,300		3	****	,	3	Thai side	1997
DHB-45 165.0 520 613.100 DHB-45 40.0 362 624.300 DHID-1 40.0 362 624.300 DHID-3 40.0 362 624.410 DHIM-3 30.0 373 628.690 DHIADI 65.0 394 627.500 DHIADI 65.0 394 627.500 DHIADI 65.0 373 628.690 DHADISP 90.0 482 640.500 DHSADI 60.0 530 648.300 DHSADI 60.0 530 648.300 DHSADI 60.0 530 648.300 DHSADI 60.0 530 648.300 DHSADI 60.0 460 665.420 DHBADI 60.0 460 665.420 DHB-4 45.0 482 635.100 DHB-5 120.0 463 634.820 DHB-6 150.0 382 634.820 DHB-7 6	DHKBTT2-2		420	611,730	2,192,250		3				Thai side	1997
DHIB-1 40.0 562 024,300 2 DHIB-1 40.0 362 024,410 2 DHIB-2 40.0 364 628,690 2 DHIM-3 50.0 373 628,690 2 DHIADI 65.0 482 640,570 2 DHIADISP 90.0 495 645,580 2 DH3ADI 65.0 530 648,300 2 DH3ADI 60.0 530 648,300 2 DH4ADI 60.0 460 653,430 2 DHB-3 55.0 460 653,430 2 DHB-4 40.0 383 643,400 2 DHB-5 150.0 461 643,900 2 DHB-7 50.0 382 644,900	DHBU-4.5		520	613,100	2,190,650	٥	/		1 8	4	JICA side	255
DHB-2 40.0 364 624,600 2 DHIN-1 50.0 373 628,690 2 DHIN-1 50.0 373 628,690 2 DHIADI 65.0 482 646,570 2 DHIADI 65.0 482 646,570 2 DH3ADI 60.0 495 645,280 2 DH3ADI 60.0 530 648,300 2 DH3ADI 60.0 530 648,300 2 DHADI 60.0 530 648,300 2 DHADI 60.0 460 655,410 2 DHB-3 55.0 463 653,430 2 DHB-4 120.0 463 653,430 2 DHB-5 120.0 463 653,430 2 DHB-6 150.0 463 653,430 2 DHB-7 45.0 383 653,430 2 DHB-8 50.0 382 643,900	DHID:1	40.0	362	624,300	2,175,400	i	1	1	39	i	The side	2651
DHIY-1 50.0 394 627,500 2 DHIADI 65.0 482 646,570 2 DHIADI 65.0 482 646,570 2 DHAADI 65.0 482 646,570 2 DHAADI 60.0 530 648,300 2 DHAADI 60.0 530 648,300 2 DHAADI 60.0 530 648,300 2 DHBADI 70.0 550 654,10 2 DHB-1 40.0 388 636,130 2 DHB-2 40.0 383 636,130 2 DHB-3 55.0 461 644,940 2 DHB-4 40.0 383 665,410 2 DHB-5 120.0 461 644,940 2 DHB-6 150.0 375 668,430 2 DHB-7 60.0 382 665,600 2 DHB-8 50.0 372 644,420	DHID-3	40.0	385	624,600	2,175,400				\$ 4		Thai side	1997
DHIADI 65.0 37.3 628,690 2 DHIADI 65.0 482 640,570 2 DHIADI 65.0 482 640,570 2 DHIADI 65.0 530 645,550 2 DHAADI 65.0 535 649,000 2 DHAADI 65.0 535 648,200 2 DHAADI 60.0 530 648,200 2 DHB-1 70.0 383 65,410 2 DHB-2 45.0 383 65,410 2 DHB-3 45.0 383 65,410 2 DHB-4 40.0 383 65,430 2 DHB-3 45.0 482 65,430 2 DHB-4 45.0 383 65,430 2 DHB-5 50.0 375 683,430 2 DHB-6 50.0 375 683,430 2 DHB-7 60.0 482 65,450	DHIY-1	50.0	394	627.500	2,174,500	i	4	ŀ	ł	!	Thai side	1997
DH1AD1 65.0 482 640,570 2 DH2AD1SP 90.0 495 645,550 2 DH3AD1 60.0 530 645,550 2 DH3AD1 60.0 535 645,000 2 DH4AD1 65.0 535 649,000 2 DH5AD1 70.0 550 648,200 2 DH5AD1 70.0 550 648,200 2 DHB-1 40.0 383 653,130 2 DHB-2 45.0 388 636,030 2 DHB-3 45.0 482 653,10 2 DHB-4 45.0 482 653,10 2 DHB-5 120.0 463 653,430 2 DHB-6 150.0 463 653,430 2 DHB-7 60.0 383 663,430 2 DHB-8 50.0 382 634,570 2 DHB-9 50.0 382 634,570		30.0	373	628,690	2,174,480	1	3	i	10	1	Thai side	1997
DH2ADISP 90.0 495 645,550 2 DH3ADI 60.0 530 645,550 2 DH3ADI 60.0 535 648,300 2 DH4ADI 70.0 550 654,200 2 DH5ADI 70.0 550 654,10 2 DHB-1 70.0 38 653,130 2 DHB-1 40.0 383 653,130 2 DHB-2 45.0 383 635,130 2 DHB-3 45.0 383 635,130 2 DHB-4 40.0 383 635,130 2 DHB-3 45.0 462 653,140 2 DHB-4 40.0 383 653,140 2 DHB-5 120.0 463 653,450 2 DHB-6 50.0 382 653,450 2 DHB-7 60.0 382 634,570 2 DHBO-6 50.0 372 648,500		65.0	482	640,570	2,174,400		3		-		Thai side	1997
DHBADL 60.0 530 649,000 2 DHBADL 65.0 535 649,000 2 DHBADL 65.0 535 64,290 2 DHBADL 70.0 550 657,350 2 DHBADL 40.0 460 665,410 2 DHB-1 40.0 383 636,030 2 DHB-1 40.0 383 636,030 2 DHB-2 40.0 383 636,030 2 DHB-3 55.0 402 635,170 2 DHB-6 120.0 461 644,940 2 DHB-8 50.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 649,300 2 DHB-10.6 50.0 403 636,500		90.0	495	645,550	2,174,000	0	1	Į,	1	1	Thai side	1997
DHSADI 70.0 550 654,290 2 DHSADISP 120.0 660 657,350 2 DHSADISP 120.0 660 657,350 2 DHS-1 40.0 383 635,150 2 DHB-2 45.0 460 665,410 2 DHB-3 45.0 383 635,130 2 DHB-3 120.0 463 635,710 2 DHB-3 120.0 463 635,810 2 DHB-4 120.0 461 644,940 2 DHB-5 120.0 463 635,810 2 DHB-6 60.0 383 665,840 2 DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 649,320 2 DHB-8 50.0 375 649,320 2 DHBS-1-13.0 30.0 420 636,300 2 DHB-1-2.5 220.0 230 <t< td=""><td>DHAADI</td><td>0.00</td><td>230</td><td>000,060</td><td>2,160,000</td><td></td><td>2</td><td>→</td><td></td><td>→</td><td>The side</td><td>1867</td></t<>	DHAADI	0.00	230	000,060	2,160,000		2	→		→	The side	1867
DHGADISP 120.0 660 657,350 2 DHTADI 60.0 460 657,150 2 DHD-1 40.0 383 635,150 2 DHB-2 45.0 388 635,150 2 DHB-3 55.0 402 635,170 2 DHB-3 55.0 463 635,820 2 DHB-5 120.0 463 635,840 2 DHB-6 150.0 482 63,440 2 DHB-7 50.0 375 663,440 2 DHB-6 50.0 375 663,440 2 DHB-7 50.0 375 663,440 2 DHB-8 50.0 375 663,400 2 DHB-1 60.0 403 653,600 2 DHB-1 50.0 375 649,350 2 DHB-1 50.0 537 649,350 2 DHB-1 50.0 530 642,420	DHSAD1	70.0	550	654,290	2,155,780	ļ	3	1	1			1997
DHTAD1 60.0 460 665,410 2 DHB-1 40.0 383 635,150 2 DHB-2 45.0 388 635,150 2 DHB-3 55.0 402 635,710 2 DHB-3 55.0 402 635,710 2 DHB-5 120.0 461 644,940 2 DHB-5 120.0 461 644,940 2 DHB-5 120.0 461 644,940 2 DHB-6 150.0 462 658,400 2 DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHB-1 60.0 375 668,140 2 DHB-1 60.0 375 648,200 2 DHB-1 60.0 370 648,200 2 DHB-1 60.0 370 648,200 2 DHB-1 60.0 370 648,900	DH6AD1SP	120.0	099	657,350	2,154,940	0	9	ļ	!	3	Thai side	1997
DHB-1 40.0 383 635,150 2 DHB-2 45.0 388 635,150 2 DHB-3 55.0 402 635,710 2 DHB-3 55.0 402 635,710 2 DHB-4 120.0 461 644,940 2 DHB-5 120.0 461 644,940 2 DHB-6 150.0 482 65,840 2 DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHB-7 60.0 403 65,840 2 DHB-8 50.0 375 668,140 2 DHB-9 50.0 375 668,140 2 DHB-1 60.0 403 635,230 2 DHB-1 50.0 390 634,820 2 DHB-18SP 145.0 390 634,820 2 DHB-18SP 80.0 420 636,800	DHTAD1	60.0	460	665,410	2,146,680		3	1		7	Thai side	1997
DHB-4 45.0 386 025,030 2 DHB-3 55.0 402 635,710 2 DHB-4 120.0 461 638,820 2 DHB-5 120.0 461 649,40 2 DHB-6 150.0 482 652,550 2 DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHB-7 60.0 403 653,650 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,230 2 DHB-8 50.0 403 653,650 2 DHB-16.5 50.0 390 634,820 2 DHBS-18.0 50.0 377 649,350 2 DHB-18.18.0 20.0 537 649,350 2 DHB-18.22.5 200.0 537 648,300 2 DHB-2 30.0 420	DHB-1	40.0	383	635,150	2,173,750	1	3	!	(!	Thai side	1986
DHB-4 53.0 46.2 638,820 2 DHB-5 120.0 46.1 64.940 2 DHB-6 120.0 46.1 64.940 2 DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHB-7 60.0 403 635,050 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,230 2 DHB-1 35.0 382 634,270 2 DHB0-6 35.0 382 642,420 2 DHB1-18.0 50.0 390 634,820 2 DHB1-18.0 50.0 537 649,350 2 DHB1-18.0 50.0 537 649,350 2 DHB1-18.0 50.0 537 648,40 2 DHB4-3 60.0 420 65	2.8H2.7	45.0	388	636,030	2,174,000	•	3	:	۲	1	That side	1996
DHB-5 120.0 461 644,940 2 DHB-6 150.0 482 652,550 2 DHB-6 150.0 482 653,840 2 DHB-7 60.0 383 668,140 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 375 668,140 2 DHB-8 50.0 382 634,270 2 DHB-7 35.0 382 634,370 2 DHB-7 30.0 390 634,820 2 DHB-7 30.0 372 648,900 2 DHB-7 30.0 537 649,350 2 DHB-7 30.0 420 668,400 2 DHB-6 30.0 420 668,400 2 DHB-6 42.0 30.0 668,400 2 DHC-1 42.0 420 668,300	DHB	120.0	463	638.820	2175 580		7 6		2 ~		Thai side	1996
DHB-6 150.0 482 652,550 2 DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHA-1 60.0 403 655,050 2 DHA-2 70.0 412 636,230 2 DHB0-3 35.0 382 636,230 2 DHB0-6 35.0 382 636,230 2 DHB1SP 80.0 420 636,500 2 DHB1SP 80.0 420 636,500 2 DHB1-18.0 205.0 537 649,300 2 DHB1-22.5 200.0 537 649,300 2 DHB1-23.0 300.0 619 651,150 2 DHB1-22.5 200.0 547 650,000 2 DHB4-33.0 300.0 420 668,40 2 DHB40SOSP 90.0 420 668,40 2 DHC-1 42.0 387		120.0	461	644,940	2,174,990	I	, w	1	, o	1	Thai side	188
DHB-7 60.0 383 665,840 2 DHB-8 50.0 375 668,140 2 DHA-1 60.0 403 635,050 2 DHA-2 70.0 412 636,230 2 DHB0- 35.0 382 634,820 2 DHB0- 50.0 390 634,820 2 DHB1-16.5 50.0 390 634,820 2 DHB1-18.0 200.0 537 649,350 2 DHB1-18.0 205.0 537 649,350 2 DHB1-18.0 205.0 537 649,350 2 DHB1-28.0 300.0 619 651,150 2 DHB1-38.0 300.0 619 655,000 2 DHB4-56.0 300.0 420 668,300 2 DHB40 60.0 390 668,400 2 DHB50SP 90.0 420 668,300 2 DHC-1 42.0 384 <td></td> <td>150.0</td> <td>482</td> <td>652,550</td> <td>2,156,750</td> <td></td> <td>3</td> <td></td> <td>9</td> <td>:</td> <td>Thai side</td> <td>1996</td>		150.0	482	652,550	2,156,750		3		9	:	Thai side	1996
DHB-5 50.0 37.5 608,140 DHA-1 60.0 403 635,050 DHA-2 70.0 412 636,230 DHB0- 35.0 382 634,570 DHB0- 50.0 390 634,820 DHB1SP 80.0 420 636,500 DHB1-18.0 200.0 537 649,350 DHB1-18.0 200.0 537 649,350 DHB1-22.5 220.0 547 650,000 DHB1-26.0 300.0 619 651,150 DHB3-26.0 300.0 619 651,150 DHB46SP 100.0 420 668,240 DHB48-33.0 310.0 638 655,670 DHB46SP 60.0 390 668,240 DHB50SP 90.0 420 668,240 DHB50SP 90.0 420 668,240 DHB50SP 65.0 420 668,240 DHC2 65.0 420 668,240	DFB-7	0.09	383	665,840	2,145,420		6	1	2	-	Thai side	38
DHA-2 70.0 412 636,230 DHB0 35.0 382 634,870 DHB1SP 80.0 420 634,820 DHB1SP 80.0 420 636,500 DHB1-18.0 200.0 532 648,900 DHB1-18.0 200.0 537 649,350 DHB1-22.5 220.0 547 650,000 DHB1-26.0 300.0 619 651,150 DHB1-33.0 310.0 638 655,000 DHB49 60.0 390 668,240 DHB49 60.0 390 668,240 DHB50SP 90.0 420 668,670 DHB50SP 90.0 420 668,240 DHB50SP 60.0 390 668,240 DHB50SP 60.0 387 628,480 DHB7 80.0 226 678,015 DH2 80.0 284 678,095 DH3 60.0 232 678,135 DH4	DHA.1	20.0	3/2 403	635,050	2,144,030		1		2		Thai side	<u> </u>
DHB0. 35.0 382 634,570 DHB0.6 50.0 390 634,820 DHB1SP 80.0 420 636,500 DHB3.16.5 200.0 532 649,320 DHB1-18.0 205.0 537 649,350 DHB1-18.0 205.0 547 650,000 DHB1-22.5 220.0 547 650,000 DHB1-22.6 300.0 619 651,150 DHB1-22.5 220.0 547 650,000 DHB1-22.5 300.0 619 651,150 DHB1-22.6 300.0 638 655,670 DHB4-33.0 100.0 420 668,240 DHB40 60.0 320 668,240 DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DH2 80.0 284 678,095 DH2 80.0 284 678,095 DH3 60.0 296 678,135 DH	DHA-2	70.0	412	636,230	2,177,510	1	9 (7)	:	,,,	1 !	Thai side	1966
DHB0.6 50.0 390 634,820 2 DHB1SP 80.0 420 636,500 2 DHB45P 145.0 488 642,420 2 DHB4-18.0 200.0 532 648,900 2 DHB4-18.0 205.0 537 649,350 2 DHB4-28.0 300.0 619 651,150 2 DHB4-28.0 300.0 619 651,150 2 DHB4-28.0 300.0 619 651,150 2 DHB46SP 100.0 420 668,240 2 DHB46SP 60.0 390 668,240 2 DHB46SP 60.0 390 668,240 2 DHB50SP 90.0 420 668,830 2 DHB50SP 90.0 420 668,830 2 DHC-1 42.0 387 678,480 2 DHC 80.0 284 678,015 2 DH4 80.0 322 <td>DHB0</td> <td>35.0</td> <td>382</td> <td>634,570</td> <td>2,174,520</td> <td></td> <td>3</td> <td></td> <td>٥</td> <td>!</td> <td>Thai side</td> <td>1997</td>	DHB0	35.0	382	634,570	2,174,520		3		٥	!	Thai side	1997
DHBISF 80.0 420 636,500 2 DHBSSP 145.0 488 642,420 2 DHBI-16.5 200.0 532 648,900 2 DHBI-18.0 205.0 537 649,350 2 DHBI-28.0 300.0 619 651,150 2 DHBI-33.0 310.0 638 655,000 2 DHBI-33.0 310.0 638 655,000 2 DHBI-33.0 310.0 420 668,40 2 DHBSOSP 90.0 420 668,240 2 DHBSOSP 90.0 420 668,830 2 DHBSOSP 90.0 420 668,830 2 DHC-1 42.0 387 628,480 2 DHC-2 65.0 410 629,500 2 DH2 80.0 284 678,015 2 DH3 60.0 296 678,135 2 DH4 50.0 331	DHB0.6	50.0	38	634,820	2,175,420	! (3	1	1		Thai side	1997
DHBJ-16.5 200.0 532 648,900 2 DHBJ-16.5 205.0 537 649,550 2 DHBJ-22.5 220.0 537 659,000 2 DHBJ-26.0 300.0 619 651,150 2 DHBJ-33.0 310.0 638 655,000 2 DHB46SP 100.0 420 665,670 2 DHB50SP 60.0 390 668,240 2 DHB50SP 90.0 420 668,240 2 DHC-1 42.0 387 628,480 2 DHC-2 65.0 410 629,500 2 DHC 30.0 322 678,015 2 DH3 60.0 284 678,015 2 DH3 60.0 296 678,135 2 DH4 50.0 322 678,470 2 DH5 30.0 316 678,515 2 DH5 30.0 316 67	DHBRSP	30.0	024	642,420	2,175,870	0	1 4			1 6	Thai side	18
DHBJ-18:0 205.0 537 649,350 DHBJ-22.5 220.0 547 650,000 DHBJ-26:0 300.0 619 651,150 DHBJ-33:0 310.0 638 655,000 DHBJ-33:0 100.0 420 665,670 DHBJ-33:0 668,240 688,240 688,240 DHBSOSP 90.0 420 668,240 DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DHI 50.0 322 678,015 DH2 80.0 284 678,055 DH3 60.0 234 678,055 DH3 60.0 236 678,135 DH4 50.0 331 678,135 DH5 30.0 316 678,470 DH5 30.0 316 678,135	DHBJ-16.5	200.0	532	648,900	2,171,420	0	7	1	1	1	JICA side	88
DHB-22.5 220.0 547 650,000 DHB-26.0 300.0 619 651,150 DHB1-33.0 310.0 638 655,000 DHB46SP 100.0 420 665,670 DHB50SP 60.0 390 668,240 DHB50SP 90.0 420 668,240 DHC-1 42.0 387 668,830 DHC-2 65.0 410 629,500 DHC 50.0 322 678,015 DHS 80.0 284 678,035 DHS 60.0 296 678,135 DHS 50.0 331 678,187 DHS 30.0 316 678,187 DHS 30.0 316 678,187 DHS 30.0 316 678,187	DHBJ-18.0	205.0	537	649,350	2,170,160	0	7	:	3	П	JICA side	1998
DHBI-33.0 310.0 638 655,000 DHBI-33.0 310.0 638 655,000 DHB49 60.0 390 668,240 DHB50SP 90.0 420 668,240 DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DH1 50.0 322 678,015 DH2 80.0 284 678,095 DH3 60.0 284 678,095 DH4 50.0 331 678,135 DH5 50.0 331 678,135 DH5 30.0 328 678,470 DH5 30.0 316 678,470	DHBJ-22.5	220.0	547	0000059	2,166,890	0	,			\top	JICA side	88
DHB46SP 100.0 420 665,670 DHB49 60.0 390 668,240 DHB50SP 90.0 420 668,830 DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DH2 80.0 284 678,015 DH3 60.0 284 678,095 DH3 60.0 296 678,135 DH4 50.0 331 678,135 DH5 30.0 328 678,470 DH5 30.0 316 678,470 DH6 30.0 316 678,470	DHB1-330	310.0	610	OCT 1700	2 157 250	o	4 1			\dagger	TICA side	<u> </u>
DHB49 60.0 390 668,240 DHB50SP 90.0 420 668,830 DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DH1 50.0 322 678,015 DH2 80.0 284 678,095 DH3 60.0 296 678,135 DH4 50.0 331 678,187 DH5 30.0 328 678,470 DH6 30.0 316 678,470 DH6 30.0 316 678,470	DHB46SP	100.0	420	665,670	2,146,630	0			i	3 6	Thai side	1997
DHB50SP 90.0 420 668.830 DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DH1 50.0 322 678,015 DH2 80.0 284 678,095 DH3 60.0 296 678,135 DH4 50.0 331 678,135 DH5 30.0 328 678,470 DH5 30.0 316 678,515	DHB49	0.09	390	668,240	2,145,820		3		ŀ		Thai side	1997
DHC-1 42.0 387 628,480 DHC-2 65.0 410 629,500 DH1 50.0 322 678,015 DH2 80.0 284 678,095 DH3 60.0 296 678,135 DH4 50.0 331 678,187 DH5 30.0 328 678,470 DH6 30.0 316 678,515		90.0	420	668,830	2,145,170	0	-			1	Thai side	1997
DH1 50.0 32.2 678,015 DH2 80.0 284 678,095 DH3 60.0 296 678,135 DH4 50.0 331 678,187 DH5 30.0 328 678,470 DH6 30.0 316 678,515	34.35	42.0	387	628,480	2,159,310	ş	3	1	£ [F-1	Thai side	19%
DH2 80.0 284 678.095 DH3 60.0 296 678.135 DH4 50.0 331 678.187 DH5 30.0 328 678,470 DH6 30.0 316 678,515	DHI	50.0	322	678.015	2,141,785		1	=	- -	-	Thai side	2 2 2 2 2 2 2 3 2 3 3 3 3 3 3 3 3 3 3 3
60.0 296 678,135 50.0 331 678,187 30.0 328 678,470 30.0 316 678,515	DHZ	80.0	284	678,095	2,141,845	,	7	25			Thai side	1997
30.0 328 678,470 30.0 328 678,470 30.0 316 678,515	EHG	0.09	296	678,135	2,141,875	:	14	18	3	i	Thai side	1661
30.0 316 678,515	PHA DES	20.0	331	678,187	2,141,925		1	\$!	4,		Thai side	138
	DHG	30.0	316	678.515	2.142,120	: !	7	77 &	0 K	; ;	Thai side	187
holes 4632.0	64 holes	4632.0					170	115	546	¥		

^{*} S.P.T.: Standard penetration test

* S.P.T.: Standard penetration test

* The test contents of geophysics logging are as follows.

(1) Caliper logging, (2) Full waveform sonic logging, (3) Electric logging, (4) Resistivity logging, (5) Natural Gamma logging

Table 1.2 List of Survey Line for Refraction Prospecting Survey

		Length	Coord. of Starting Point	arting Point	Coord. of Ending Point	ding Point	Performed
Line Name	Location	E)	X-coord.	Y-coord.	X-coord.	Y-coord.	Ъу
CVIT 1-1 W. C.	Kok-Ino No 1 tunnel inlet (main)	400	601,425	2,198,150	601,805	2,198,005	Thai side
7-T-T-WO	Vot Ing No 1 tunnel inlet (Sub)	400	601,740	2,198,230	601,555	2,197,890	Thai side
SVIT 1.3	Kok-Ing No.1 tunnel Outlet (main)	1,000	603,435	2,197,355	604,215	2,196,705	Thai side
27. T.V.	Kok-Ing No 1 monel outlet (sub)	300	603,345	2,197,250	603,530	2,197,490	Thai side
SKIT 1/4	Kok-Ing No 1 tunnel outlet (sub)	400	603,880	2,196,725	604,165	2,197,035	Thai side
SKI 1 SKIT 2	Kok-Ing No.2 tunnel inlet (main)	4,800	606,190	2,191,650	610,128	2,189,900	Thai side
CVIT 1000	Vok-Ing No 2 turnel inlet (sub)	200	098'609	2,190,320	689,609	2,189,850	Thai side
SKIT-2/IRE	Kok-Ing No.2 tunnel outlet (main)	800	613,670	2,188,635	614,435	2,188,370	Thai side
SKIT 3/PR	Kok-Yoo No 2 tunnel outlet (sub)	500	614,220	2,188,740	614,033	2,188,279	Thai side
Tine IV	Inc. Vot No 1 tunnel (main)	1.925	626,540	2,174,395	628,475	2,174,500	Thai side
SRO(Main)	Ino. Yot No. 2 tunnel inlet (main)	3,100	634,350	2,175,370	637,475	2,175,615	Thai side
SDO(Mem)	Ing-Vot No.2 tunnel inlet (sub)	500	634,800	2,175,620	634,827	2,175,127	Thai side
SEO/SubB)	Ing. Vot No.2 tunnel inlet (Sub)	500	635,680	2,175,675	635,830	2,175,195	Thai side
SBO(Si-bC)	Ino-Yot No.2 tunnel inlet (sub)	009	637,055	2,175,780	636,620	2,175,360	Thai side
SOROMain	Ing. Vot No 2 tunnel inlet (main)	1,100	635,720	2,174,275	636,650	2,174,830	Thai side
COBO(S.IK)	Too-Yot No.2 tunnel inlet (sub)	500	636,360	2,174,950	636,635	2,174,535	Thai side
SAd1(Main)	Inc. Yot No.2 tunnel Adit No.1 (main)	1,000	640,495	2,174,025	640,995	2,174,890	Thai side
SAMI(Sub)	The Yot No.2 tunnel Adit No.1 (sub)	200	640,435	2,174,320	640,795	2,174,030	Thai side
SAdo.RER	Ino-Yot No.2 tunnel Adit No.2 (main)	400	645,280	2,173,350	645,105	2,172,990	Thai side
SA43-RFR1	Ing-Yot No.2 tunnel Adit No.3(main)	200	648,300	2,169,700	647,825	2,169,854	Thai side
SA43-RFR2	Ing. Yot No.2 tunnel Adit No.3(sub)	200	648,086	2,169,507	648,257	2,169,977	Thai side
SA44-RFR2	Ing-Yot No.2 tunnel Adit No.4(main)	009	648,906	2,160,205	649,020	2,159,616	Thai side
SAdd.RPR1	Ing-Yot No.2 tunnel Adit No.4(sub)	059	649,170	2,160,005	648,631	2,159,686	Thai side
SAd5-RFR1	Ing-Yot No.2 tunnel Adit No.5(main)	300	654,410	2,155,900	654,181	2,155,705	Thai side
SAdS-RFR2	Ing-Yot No.2 tunnel Adit No.5(sub)	200	654,566	2,155,725	654,131	2,155,971	Thai side
SAd6-RFR1	Ing-Yot No.2 tunnel Adit No.6(main)	500	657,120	2,155,040	656,799	2,155,423	Thai side
SAd6-RFR2	Ing-Yot No.2 tunnel Adit No.6(sub)	200	656,683	2,155,205	657,164	2,155,343	Thai side
SAd7-RFR1	Ing-Yot No.2 tunnel Adit No.7(main)	400	665,400	2,146,650	665,702	2,146,389	Thai side
SAd7-RFR2	Ing-Yot No.2 tunnel Adit No.7(sub)	500	665,494	2,146,857	665,390	2,146,367	Thai side
SB49-RFR1	Ing-Yot No.2 tunnel outlet(main)	008	668,810	2,145,250	669,308	2,144,624	Thai side
SB49-RFR2	Ing-Yot No.2 tunnel outlet(sub)	009	669,230	2,145,203	668,738	2,144,858	I hai side
SKI.RON/Main)	Kok- Ing tunnel south route(main)	1,035				1	Thai side
SKI.R20(Suh)	Kok- Ing tunnel south route(sub)	345					Thai side
SR(Wain)	Ing-Yot No.1 tunnel (main)	066		1			Thai side
SBO(Sub)	Ing-Yot No.1 tunnel (sub)	495		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Thai side
NY-A	Yao dam - dam axis	440					Thai side
NY-B	Yao dam - left saddle	220					Thai side
NY-C	Yao dam - cross section toward dam axi	385					Thai side
Total		29,485					
9 000000000000000000000000000000000000							

[•] Line name SKIT-2 corresponds to SKI-1/2RR as line name of tunnel survey line

Table 1.3 List of Survey Line for Reflection Prospecting Survey

,,	1	Length	Coord. of Si	Coord. of Starting Point	Coord, of Ending Point	nding Point	remormed
Line Name	Location	(m)	X-coord.	Y-coord.	X-coord.	Y-coord.	by
SKIT1-RFI1	Kok-Ing No.1 tunnel (along the road)	1,200	602,855	2,197,965	602,190	2,197,155	Thai side
SKITZ-RPI-1		1,000	612,955	2,188,865	612,030	2,189,195	Thai side
SHOVMain		4.500	637,475	2,175,615	642,000	2,176,000	Thai side
SRO(Sub)	Ing-Yot No.2 tunnel, near adit No.1	006	641,450	2,176,300	641,820	2,175,500	Thai side
S2RO/Main)	Ing. Vot No.2 tunnel, near inlet	1,600	636,650	2,174,830	638,000	2,175,652	Thai side
\$2BO(Sub)	Ing-Yot No.2 tunnel, near inlet	006	637,845	2,175,165	637,130	2,175,525	Thai side
S2BO.RFI 1	Ing-Yot No.2 tunnel, between inlet and adit No.1	1,100	639,095	2,175,520	638,055	2,175,935	Thai side
S2RO-RFI 2	Ing-Yot No.2 tunnel, between inlet and adit No.1	008	639,555	2,175,330	639,095	2,176,205	Thai side
SB&-RFL1	Ing. Yot No.2 tunnel, between adit No.1 and No.2	006	642,320	2,175,490	642,450	2,176,475	Thai side
SB10/Pxt)	Ing-Yot No.2 tunnel, between adit No.1 and No.2	500	645,050	2,174,950	645,550	2,174,800	Thai side
SB10(W)	Inc-Yot No.2 tunnel, between adit No.1 and No.2	009	644,530	2,174,830	644,550	2,175,450	Thai side
SHIOFF	Ing-Yot No.2 tunnel, between adit No.1 and No.2	006	645,050	2,174,700	645,360	2,175,550	Thai side
SA42.RFI.2	Ing-Yot No.2 tunnel, adit No.2 (along the road)	1,300	644,895	2,172,965	645,230	2,174,020	Thai side
SB16(Main)	Ing-Yot No.2 tunnel, between adit No.2 and No.3	1,000	649,195	2,171,525	648,495	2,172,255	Thai side
SB16(Sub)	Ing-Yot No.2 tunnel, between adit No.2 and No.3	006	648,745	2,171,125	649,095	2,172,065	Thai side
SAd3.REI	Ing-Yot No.2 tunnel, adit No.3 (along the road)	006	647,695	2,169,515	648,250	2,170,205	Thai side
SR17/Main)	Ing-Yot No.2 tunnel, near adit No.3	1,000	649,035	2,170,305	650,045	2,170,150	Thai side
SR17(Sub)	Inc-Yot No.2 tunnel, near adit No.3	700	649,425	2,169,960	649,665	2,170,435	Thai side
SR21(Main)	Ine-Yot No.2 tunnel, between adit No.3 and No.4	1,100	649,415	2,167,055	650,515	2,166,815	Thai side
SR21(Sub)	Ing-Yot No.2 tunnel, between adit No.3 and No.4	700	650,125	2,166,470	650,350	2,167,245	Thai side
SB35(Main)	Ing-Yot No.2 tunnel, adit No.6	2,000	657,335	2,155,665	658,740	2,154,255	Thai side
SB35(Sub)	Ing-Yot No.2 tunnel, adit No.6	008	657,320	2,155,065	658,290	2,155,325	Thai side
SA47-RFI	Ing-Yot No.2 tunnel, adit No.7 (along the road)	1,600	506,599	2,145,250	665,535	2,146,670	Thai side
CR46(Main)	Ing-Yot No.2 tunnel, near adit No.7	006	665,335	2,147,255	665,505	2,148,045	Thai side
SR48(Main)	Ing-Yot No.2 tunnel, near outlet	1,100	668,445	2,145,625	062,730	2,146,350	Thai side
SR48(Sub)	Ing. Yot No.2 tunnel, near outlet	908	668,425	2,145,960	590,899	2,145,455	Thai side
SB49-RFL1	Ing-Yot No.2 tunnel, outlet	1,500	668,485	2,144,670	668,525	2,145,905	Thai side
Total	27 lines	31,200			:		

^{*} Survey line length is described on the basis of "Seismic Reflection Survey Report, Volume 2, Seismic Velocity Contour Interpretation".

Report, Volume 2, Seismic Velocity Contour Interpretation".

* Survey line length by location map on the above report are as follows, \$22B0-RFL1: 1,000 m, \$B16 (Main): 900 m, \$B21 (Sub): 800 m

* The whole line of \$B0 (Main), \$2B0 (Main), \$B10 (Ext) and \$B35 (Main) line are located on tunnel alignment.

\$B48 (Main) line is located in parallel towards tunnel alignment.

Table 1.4 List of Survey Line for Electromagnetic Prospecting (TEM, TDEM) Survey

(EL.m) Easting Northing (EL.m) (Am) (Am) 573 613,190 2,190,567 537 2.9 481 639,425 2,175,622 497 1.4 491 642,681 2,175,777 500 0.4 468 645,673 2,174,103 482 0.5 523 645,274 2,174,103 482 0.5 564 645,601 2,174,244 541 0.34 465 645,601 2,174,387 509 0.3 564 645,671 2,174,387 541 0.3 point sounding sub-total 8,14 585 654,126 2,159,719 1292 1.0 580 654,741 2,157,190 640 2.4 581 659,061 2,154,035 801 2.0 581 659,061 2,154,035 801 3,54 total 13,54			0	Coordinates (A)		0	Coordinates(B)		Line	No.
TMB 3.0 Genting (EL.m) Easting Northing (EL.m) Easting Northing (EL.m) Easting Northing (EL.m) Easting Northing (EL.m)	Site No.	/TDEM line	ÿ.	art point of line		<u>д</u>	d point of line	,	length	points
TMB 3.0 610,735 2,191,989 573 613,190 2,190,567 537 2.9 TMB 3.9 638,039 2,175,421 481 639,425 2,175,622 497 1.4 TMB 11.0 a 644,967 2,174,972 468 645,573 2,174,176 501 1.0 TMB 11.0 a 645,126 2,174,572 523 645,274 2,174,103 482 0.5 TMB 11.0 c 645,126 2,174,515 490 645,372 2,174,244 541 0.34 TMB 11.0 c 645,419 2,174,625 564 645,601 2,174,238 541 0.3 TMB 11.0 c 645,419 2,174,675 621 645,751 2,174,438 541 0.3 TMB 46.0 665,270 2,147,150 465 665,877 2,146,335 425 1.0 KOK-ING B 3 3 665,877 2,144,338 541 0.3 TDEMB 50.0 654,005 2,158,937 2,154,335 2,154,335 10 <td></td> <td></td> <td>Easting</td> <td>Northing</td> <td>(ELm)</td> <td>Easting</td> <td>Northing</td> <td>(El_m)</td> <td>(km)</td> <td>(Nos)</td>			Easting	Northing	(ELm)	Easting	Northing	(El_m)	(km)	(Nos)
TMB 3.9 638,039 2,175,421 481 639,425 2,175,622 497 1.4 TMB 8.1 642,300 2,175,421 481 642,681 2,175,777 500 0.4 TMB 11.0 a 644,967 2,174,572 468 645,573 2,174,176 501 1.0 TMB 11.0 b 645,752 2,174,515 490 645,372 2,174,103 482 0.5 TMB 11.0 c 645,126 2,174,515 490 645,372 2,174,244 541 0.34 TMB 11.0 c 645,619 2,174,675 564 645,601 2,174,387 509 0.3 TMB 46.0 665,270 2,147,150 465 665,877 2,146,385 541 0.3 KOK-ING B Accident 2,160,066 935 664,176 2,154,035 8.14 1.0 TDEMB 30.0 654,005 2,158,937 950 654,176 2,157,190 640 2,154,035 801 2,03 TDEMB 35.0 657,600		TIMB 3.0	610,735	2,191,989	573	613,190	2,190,567	537	2.9	146
TMB 8.1 642,300 2,175,900 491 642,681 2,175,777 500 0.4 TMB 11.0 a 644,967 2,174,972 468 645,573 2,174,176 501 1.0 TMB 11.0 b 645,752 2,174,572 523 645,732 2,174,244 541 0.34 TMB 11.0 c 645,126 2,174,525 564 645,601 2,174,387 509 0.3 TMB 11.0 c 645,419 2,174,676 621 645,751 2,174,387 509 0.3 TMB 11.0 c 645,569 2,174,676 621 645,751 2,174,388 541 0.3 KOK-ING B 3 3 665,877 2,146,355 425 1.0 TDEMB 29.4 653,231 2,160,066 935 654,126 2,157,190 640 2.4 TDEMB 35.0 657,600 2,155,400 381 659,061 2,157,190 640 24 TDEMB 35.0 657,600 2,155,400 381 659,061 2,157,035<		TMB 3.9	638,039	2,175,421	481	639,425	2,175,622	497	14	71
TMB 11.0 a 644,967 2,174,972 468 645,573 2,174,105 501 1.0 TMB 11.0 b 645,752 2,174,525 523 645,274 2,174,103 482 0.5 TMB 11.0 c 645,126 2,174,525 564 645,332 2,174,387 509 0.3 TMB 11.0 c 645,419 2,174,676 621 645,751 2,174,387 509 0.3 TMB 11.0 c 645,569 2,174,676 621 645,751 2,174,387 509 0.3 KOK-ING B A65 665,877 2,146,355 425 1.0 TDEMB 29,4 -653,231 2,160,066 935 654,126 2,157,190 640 2.4 TDEMB 30,0 654,055 2,158,937 950 654,741 2,157,190 640 2.4 TDEMB 35,0 657,600 2,155,400 581 659,061 2,154,035 801 2.0 TDEMB 35,0 657,600 2,155,400 581 659,061 2,154,035		TMB 8.1	642,300	2,175,900	491	642,681	2,175,777	200	9.4	21(6)
TMB 11.0 b 645,752 2,174,252 523 645,274 2,174,103 482 0.5 TMB 11.0 c 645,126 2,174,515 490 645,332 2,174,244 541 0.34 TMB 11.0 d 645,419 2,174,676 621 645,601 2,174,387 509 0.3 TMB 11.0 e 645,569 2,174,676 621 645,751 2,174,388 541 0.3 KOK-ING B AKOK-ING B		TMB 11.0 a	644,967	2,174,972	468	645,573	2,174,176	501	1.0	12
TMB 11.0c 645,126 2,174,515 490 645,332 2,174,244 541 0.34 TMB 11.0d 645,419 2,174,625 564 645,601 2,174,387 509 0.3 TMB 11.0e 645,569 2,174,676 621 645,751 2,174,438 541 0.3 KOK-ING B AKOK-ING B </td <td></td> <td>TMB 11.05</td> <td>645,752</td> <td>2,174,252</td> <td>523</td> <td>645,274</td> <td>2,174,103</td> <td>482</td> <td>0.5</td> <td>8</td>		TMB 11.05	645,752	2,174,252	523	645,274	2,174,103	482	0.5	8
TMB 11.0d 645,419 2,174,625 564 645,601 2,174,387 509 TMB 11.0e 645,569 2,174,676 621 645,751 2,174,438 541 TMB 11.0e 665,270 2,147,150 465 665,877 2,146,355 425 KOK-ING B Point sounding Sub-total TDEMB 29.4 -653,231 2,160,066 935 654,126 2,159,719 1292 TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801	TEM	TMB 11.0 c	645,126	2,174,515	490	645,332	2,174,244	<u>¥</u>	0.34	18(18)
TMB 11.0e 645,569 2,174,676 621 645,751 2,174,438 541 TMB 46.0 665,270 2,147,150 465 665,877 2,146,355 425 KOK-ING B Accident sounding Accident sounding Accident sub-total Accident sub-total Accident sub-total TDEMB 29.4 -653,231 2,160,066 935 654,126 2,159,719 420 TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 TOEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801	: :	TMB 11.0 d	645,419	2,174,625	564	645,601	2,174,387	509	03	19
TMB 46.0 665,270 2,147,150 465 665,877 2,146,355 425 KOK-ING B Point sounding sub-total TDEMB 29.4 -653,231 2,160,066 935 654,126 2,159,719 1292 TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801		TMB 11.0e	645.569	2,174,676	621	645,751	2,174,438	541	03	16
KOK-ING B point sounding sub-total TDEMB 29.4 - 653,231 2,160,066 935 654,126 2,159,719 1292 TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801		TMB 46.0	665.270	2,147,150	465	665,877	2,146,355	425	1.0	51
TDEMB 29.4 -653,231 2,160,066 935 654,126 2,159,719 1292 TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 Robertal 4,003 4,003 4,003 4,003 4,003 5,004 5,004 5,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,004 6,00		KOK-ING B			point sc	guipunc				15
TDEMB 29.4 -653,231 2,160,066 935 654,126 2,159,719 1292 TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 Robins 801 802 803 803 804 803								sub-total	8.14	455
TDEMB 30.0 654,005 2,158,937 950 654,741 2,157,190 640 TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 sub-total		TDEMB 29.4	-653.231	2,160,066	935	654,126	2,159,719	1292	1.0	21
TDEMB 35.0 657,600 2,155,400 581 659,061 2,154,035 801 sub-total total	TOEM	TDEMB 30.0	654,005	2,158,937	950	654,741	2,157,190	640	2.4	49
sub-total total		TDEMB 35.0	009.759	2,155,400	581	659,061	2,154,035	801	2.0	4
		2						sub-total	5.4	111
								total		995

2. Location Map of Geological Investigation

2.1. Location Map of Geological Investigation

(Scale 1/10,000(Original Scale 1/50,000))





