Appendix 3-2 Miscellaneous Results of Drilling Works on Individual Drillhole

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-38)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	7 Aug., '02 ~ 7Aug., '02	1.00	1.00	—	4	10
Drilling	10 Aug., '02 ~ 12 Aug., '02	4.75	Drilling : 4.75	—	19	47.5
			Accident: 0.00	—	—	—
Dismount	12 Aug., '02 ~ 12 Aug., '02	0.25	0.25	—	1	2.5
Total	7 Aug., '02 ~ 12 Aug., '02	6.00	6.00	—	24	60

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.50 m
Prolongation	14.00 m	Core length	55.50 m
Effective length	64.00 m	Core recovery	100.0 %

Working hours			
Drilling	70.0 hrs	74.5%	53.0%
Supplemental drilling work	24.0 hrs	25.5%	18.2%
Recovery from accident	-	-	-
Subtotal	94.0 hrs	100%	71.0%
Preparation/setting up	16.0 hrs	-	12.1%
Dismount/mobilization	4.0 hrs	-	3.0%
Transportation of water	18.0 hrs	-	13.6%
Others			
Total	132.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.50	None core	None core
8.5 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 64.00m/4.75 days = 12.63 m/d
Effective length / Total drilling shifts =
= 64.00m/9.5 shifts = 6.74 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	64.00 m				64.00 m
Core length	42.50 m				42.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	5.60 m	8.75%	100%
200mm ϕ	10.00 m	15.63%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-39)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	1Aug., '02 ~ 1 Aug., '02	0.50	0.50	—	2	5
Drilling	2 Aug., '02 ~ 6 Aug., '02	4.75	Drilling : 4.75	—	17	47.5
			Accident: 0.00	—	—	—
Dismount	6 Aug., '02 ~ 6 Aug., '02	0.25	0.25	—	1	2.5
Total	1 Aug., '02 ~ 6 Aug., '02	5.50	5.50	—	20	55

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	-14.00 m	Core length	29.00 m
Effective length	36.00 m	Core recovery	100.0 %

Working hours			
Drilling	36.0 hrs	54.5%	35.6%
Supplemental drilling work	30.0 hrs	45.5%	29.7%
Recovery from accident	-	-	-
Subtotal	66.0 hrs	100%	65.3%
Preparation/setting up	16.0 hrs	-	15.8%
Dismount/mobilization	6.0 hrs	-	5.9%
Transportation of water	13.0 hrs	-	12.9%
Others			
Total	101.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 36.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 36.00m/4.75 days = 7.58 m/d
Effective length / Total drilling shifts =
= 36.00m/ 9.5shifts = 3.79 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	36.00 m				36.00 m
Core length	29.00 m				29.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	7.00 m	19.44%	100%
200mm ϕ	9.00 m	25.00%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-40)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	28 Jul., '02 ~ 28 Jul., '02	0.50	0.50	—	2	5
Drilling	29 Jul., '02 ~ 1 Aug., '02	3.25	Drilling : 3.25	—	13	32.5
			Accident: 0.00	—	—	—
Dismount	1 Aug., '02 ~ 1 Aug., '02	0.25	0.25	—	1	2.5
Total	28 Jul., '02 ~ 1 Aug., '02	4.00	4.00	—	16	40

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	14.50 m	Core length	57.50 m
Effective length	64.50 m	Core recovery	100.0 %

Working hours			
Drilling	31.0 hrs	59.6%	43.1%
Supplemental drilling work	21.0 hrs	40.4%	29.2%
Recovery from accident	-	-	-
Subtotal	52.0 hrs	100%	72.2%
Preparation/setting up	8.0 hrs	-	11.1%
Dismount/mobilization	4.0 hrs	-	5.6%
Transportation of water	8.0 hrs	-	11.1%
Others			
Total	72.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 50.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 64.50m/3.25 days = 19.84 m/d
Effective length / Total drilling shifts =
= 64.50m/6.5shifts = 9.92 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	50.00 m				50.00 m
Core length	43.00 m				43.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	6.00 m	9.30%	100%
200mm ϕ	7.00 m	10.85%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-41)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	19 Aug., '02 ~ 19 Aug., '02	1.00	1.00	—	4	10
Drilling	20 Aug., '02 ~ 23 Aug., '02	3.75	Drilling : 3.75	—	17	37.5
			Accident:	—	—	—
Dismount	23 Aug., '02 ~ 23 Aug., '02	0.25	0.25	—	1	2.5
Total	19 Aug., '02 ~ 23 Aug., '02	5.00	5.00	—	20	50

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	-10.00 m	Core length	30.00 m
Effective length	40.00 m	Core recovery	100.0 %

Working hours			
Drilling	32.0 hrs	53.3%	34.0%
Supplemental drilling work	28.0 hrs	46.7%	29.8%
Recovery from accident	0.0 hrs	-	-
Subtotal	60.0 hrs	100%	63.8%
Preparation/setting up	16.0 hrs	-	17.0%
Dismount/mobilization	4.0 hrs	-	4.3%
Transportation of water	14.0 hrs	-	14.9%
Others			
Total	94.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 11.0	None core	None core
11.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 40.00m/3.75 days = 10.67 m/d
Effective length / Total drilling shifts =
= 40.00m/7.5 shifts = 5.33 m/shift

Drilling length by diameter					
Bit diameter	190mmϕ				Total
Drilling length	40.00 m				40.00 m
Core length	30.00 m				30.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mmϕ	7.00 m	17.50%	100%
200mmϕ	10.00 m	25.00%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-42)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	1 Aug., '02 ~ 1 Aug., '02	0.50	0.50	—	2	5
Drilling	1 Aug., '02 ~ 6 Aug., '02	5.25	Drilling : 5.25	—	21	52.5
			Accident: 0.00	—	—	—
Dismount	6 Aug., '02 ~ 6 Aug., '02	0.25	0.25	—	1	2.5
Total	1 Aug., '02 ~ 6 Aug., '02	6.00	6.00	—	24	60

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	-6.00 m	Core length	34.00 m
Effective length	44.00 m	Core recovery	100.0 %

Working hours			
Drilling	57.0 hrs	67.9%	52.8%
Supplemental drilling work	27.0 hrs	32.1%	25.0%
Recovery from accident	0.0 hrs	-	-
Subtotal	84.0 hrs	100%	77.8%
Preparation/setting up	8.0 hrs	-	7.4%
Dismount/mobilization	4.0 hrs	-	3.7%
Transportation of water	12.0 hrs	-	11.1%
Others			
Total	108.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 44.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 44.00m/5.25 days = 8.38 m/d
Effective length / Total drilling shifts =
= 44.00m/10.5 shifts = 4.19 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	44.00 m				44.00 m
Core length	34.00 m				34.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	7.00 m	15.91%	100%
200mm ϕ	10.00 m	22.73%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-43)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	28 Jul., '02 ~ 28 Jul., '02	0.50	0.50	—	2	5
Drilling	29 Jul., '02 ~ 31 Jul., '02	3.38	Drilling : 3.38	—	13.5	33.75
			Accident: 0.00	—	—	—
Dismount	31 Jul., '02 ~ 31 Jul., '02	0.13	0.13	—	0.5	1.25
Total	28 Jul., '02 ~ 31 Jul., '02	4.00	4.00	—	12	40

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	10.50 m
Prolongation	0.00 m	Core length	39.50 m
Effective length	50.00 m	Core recovery	100.0 %

Working hours			
Drilling	32.0 hrs	59.3%	44.4%
Supplemental drilling work	22.0 hrs	40.7%	30.6%
Recovery from accident	0.0 hrs	-	-
Subtotal	54.0 hrs	100%	75.0%
Preparation/setting up	8.0 hrs	-	11.1%
Dismount/mobilization	2.0 hrs	-	2.8%
Transportation of water	8.0 hrs	-	11.1%
Others			
Total	72.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 10.0	None core	None core
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 50.00m/3.375 days = 14.81 m/d
Effective length / Total drilling shifts =
= 50.00m/6.75 shifts = 7.41 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	50.00 m				50.00 m
Core length	10.50 m				10.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	8.00 m	16.00%	100%
200mm ϕ	11.60 m	23.20%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-44)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	23 Jul., '02 ~ 23 Jul., '02	0.50	0.50	—	2	5
Drilling	24 Jul., '02 ~ 27 Jul., '02	4.00	Drilling : 4.00	—	16	40
			Accident: 0.00	—	—	—
Dismount	28 Jul., '02 ~ 28 Jul., '02	0.50	0.50	—	2	5
Total	23 Jul., '02 ~ 28 Jul., '02	5.00	5.00	—	18	50

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	10.00 m	Core length	53.00 m
Effective length	60.00 m	Core recovery	100.0 %

Working hours			
Drilling	35.0 hrs	54.7%	36.5%
Supplemental drilling work	29.0 hrs	45.3%	30.2%
Recovery from accident	0.0 hrs	-	-
Subtotal	64.0 hrs	100%	66.7%
Preparation/setting up	8.0 hrs	-	8.3%
Dismount/mobilization	8.0 hrs	-	8.3%
Transportation of water	16.0 hrs	-	16.7%
Others			
Total	96.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 60.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 60.00m/4.00 days = 15.00 m/d
Effective length / Total drilling shifts =
= 60.00m/8.0 shifts = 7.50 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	60.00 m				60.00 m
Core length	53.00 m				53.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	8.00 m	13.33%	100%
200mm ϕ	10.00 m	16.67%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-45)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	7 Aug., '02 ~ 7 Aug., '02	1.00	1.00	—	4	10
Drilling	8 Aug., '02 ~ 12 Aug., '02	4.25	Drilling : 4.25	—	17	42.5
			Accident: 0.00	—	—	—
Dismount	12 Aug., '02 ~ 12 Aug., '02	0.25	0.25	—	1	2.5
Total	7 Aug., '02 ~ 12 Aug., '02	5.50	5.50	—	14	55

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	11.00 m	Core length	52.00 m
Effective length	61.00 m	Core recovery	100.0 %

Working hours			
Drilling	50.0 hrs	73.5%	50.0%
Supplemental drilling work	18.0 hrs	26.5%	18.0%
Recovery from accident	-	-	-
Subtotal	68.0 hrs	100%	71.0%
Preparation/setting up	16.0 hrs	-	16.0%
Dismount/mobilization	4.0 hrs	-	4.0%
Transportation of water	12.0 hrs	-	12.0%
Others			
Total	100.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 43.00m/3.25 days = 13.23 m/d
Effective length / Total drilling shifts =
= 43.00m/6.5 shifts = 6.62 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	61.00 m				61.00 m
Core length	52.00 m				52.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
270mm ϕ	5.60 m	9.18%	100%
200mm ϕ	10.00 m	16.39%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-46)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	23 Jul., '02 ~ 23 Jul., '02	0.50	0.50	—	2	5
Drilling	24 Jul., '02 ~ 27 Jul., '02	3.75	Drilling : 3.75	—	12	37.5
			Accident: 0.00	—	—	—
Dismount	27 Jul., '02 ~ 27 Jul., '02	0.25	0.25	—	1	2.5
Total	23 Jul., '02 ~ 27 Jul., '02	4.50	4.50	—	15	45

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	-22.00 m	Core length	20.00 m
Effective length	28.00 m	Core recovery	100.0 %

Working hours			
Drilling	26.0 hrs	43.3%	32.5%
Supplemental drilling work	34.0 hrs	56.7%	42.5%
Recovery from accident	-	-	-
Subtotal	60.0 hrs	100%	69.7%
Preparation/setting up	4.0 hrs	-	5.0%
Dismount/mobilization	8.0 hrs	-	10.0%
Transportation of water	8.0 hrs	-	10.0%
Others			
Total	80.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 28.00m/3.75 days = 7.47 m/d
Effective length / Total drilling shifts =
= 28.00m/7.5 shifts = 3.73 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	28.00 m				28.00 m
Core length	20.00 m				20.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	8.00 m	28.57%	100%
200mm ϕ	10.00 m	35.71%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-47)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	16 Jul., '02 ~ 16 Jul.., '02	0.50	0.50	—	2	5
Drilling	17 Jul., '02 ~ 23 Jul., '02	6.25	Drilling : 4.25	—	16.5	42.5
			Accident: 2.00	—	5	20
Dismount	23 Jul., '02 ~ 23 Jul., '02	0.25	0.25	—	1	2.5
Total	16 Jul., '02 ~ 23 Jul., '02	7.00	7.00	—	24.5	70

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	-14.00 m	Core length	28.00 m
Effective length	36.00 m	Core recovery	100.0 %

Working hours			
Drilling	20.0 hrs	20.0%	16.4%
Supplemental drilling work	48.0 hrs	34.3%	39.3%
Recovery from accident	32.0 hrs	32.0%	26.2%
Subtotal	100.0 hrs	100%	82.0%
Preparation/setting up	4.0 hrs	-	3.3%
Dismount/mobilization	8.0 hrs	-	6.6%
Transportation of water	10.0 hrs	-	8.2%
Others			
Total	122.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 200	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 360	100.0	100.0

Efficiency
Effective length / Working drilling days
= 36.00m/4.25 days = 8.47 m/d
Effective length / Total drilling shifts =
= 36.00m/8.5 shifts = 4.24 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	36.00 m				36.00 m
Core length	28.00 m				28.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	5.00 m	13.89%	100%
200mm ϕ	10.00 m	27.78%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-48)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	12 Jul., '02 ~ 12 Jul., '02	0.50	0.50	—	2	5
Drilling	13 Jul., '02 ~ 16 Jul., '02	3.25	Drilling : 3.25	—	12	32.5
			Accident: 0.00	—	0	0
Dismount	16 Jul., '02 ~ 16 Jul., '02	0.25	0.25	—	1	2.5
Total	12 Jul., '02 ~ 16 Jul., '02	4.00	4.00	—	15	40

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	1.00 m	Core length	43.00 m
Effective length	51.00 m	Core recovery	100.0 %

Working hours			
Drilling	33.0 hrs	62.3%	43.4%
Supplemental drilling work	20.0 hrs	37.7%	26.3%
Recovery from accident	0.0 hrs	-	-
Subtotal	53.0 hrs	100%	69.7%
Preparation/setting up	4.0 hrs	-	5.3%
Dismount/mobilization	7.0 hrs	-	9.2%
Transportation of water	12.0 hrs	-	15.8%
Others			
Total	76.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.0	None core	None core
8.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 54.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 51.00m/3.25 days = 15.69 m/d
Effective length / Total drilling shifts =
= 51.00m/6.5shifts = 7.85 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	51.00 m				51.00 m
Core length	43.00 m				43.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	6.00 m	11.76%	100%
200mm ϕ	10.00 m	19.61%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-49)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	4 Jul., '02 ~ 5 Jul., '02	2.00	2.00	—	6	20
Drilling	6 Jul., '02 ~ 12 Jul., '02	6.25	Drilling : 6.25	—	23.5	62.5
			Accident: 0.00	—	—	—
Dismount	12 Jul., '02 ~ 12Jul., '02	0.25	0.25	—	1	2.5
Total	4 Jul., '02 ~ 12 Jul., '02	8.50	8.50	—	30.5	85

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	4.00 m	Core length	44.10 m
Effective length	54.00 m	Core recovery	100.0 %

Working hours			
Drilling	32.0 hrs	51.6%	36.4%
Supplemental drilling work	19.0 hrs	30.7%	21.6%
Recovery from accident	11.0 hrs	17.7%	12.5%
Subtotal	62.0 hrs	100%	70.5%
Preparation/setting up	4.0 hrs	-	4.5%
Dismount/mobilization	6.0 hrs	-	6.8%
Transportation of water	16.0 hrs	-	18.2%
Others			
Total	88.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.5	None core	None core
7.5 - 10.0	100.0	100.0
10.0 - 20.0	99.5	99.5
20.0 - 30.0	98.3	98.3
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 54.0	99.8	99.8

Efficiency
Effective length / Working drilling days
= 54.00m/6.25 days = 8.64 m/d
Effective length / Total drilling shifts =
= 54.00m/12.50 shifts = 4.2 m/shift

Drilling length by diameter					
Bit diameter	190mmϕ				Total
Drilling length	54.00 m				54.00 m
Core length	44.10 m				44.10 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mmϕ	7.00 m	12.96%	100%
200mmϕ	10.00 m	18.52%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-50)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	4 Jul., '02 ~ 5 Jul., '02	2.00	2.00	—	3.5	20
Drilling	6 Jul., '02 ~ 14 Jul., '02	8.25	Drilling : 5.00	—	20	50
			Accident: 3.25	—	13	32.5
Dismount	14 Jul., '02 ~ 14 Jul., '02	0.25	0.25	—	1	2.5
Total	4 Jul., '02 ~ 14 Jul., '02	10.50	10.50	—	37.5	105

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	9.00 m	Core length	46.60 m
Effective length	59.00 m	Core recovery	100.0 %

Working hours			
Drilling	25.0 hrs	18.8%	13.0%
Supplemental drilling work	56.0 hrs	42.1%	29.2%
Recovery from accident	52.0 hrs	39.1%	27.1%
Subtotal	133.0 hrs	100%	69.3%
Preparation/setting up	32.0 hrs	-	16.7%
Dismount/mobilization	3.0 hrs	-	1.6%
Transportation of water	24.0 hrs	-	12.5%
Others			
Total	192.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 60.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 59.00m/5.00 days = 11.80 m/d
Effective length / Total drilling shifts =
= 59.00m/10.0 shifts = 5.90 m/shift

Drilling length by diameter					
Bit diameter	190mmϕ				Total
Drilling length	59.00 m				59.00 m
Core length	46.60 m				46.60 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mmϕ	7.00 m	11.86%	100%
200mmϕ	10.00 m	16.95%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-51)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	14 Jul., '02 ~ 14 Jul., '02	0.50	0.50	—	2	5
Drilling	15 Jul., '02 ~ 18 Jul., '02	3.75	Drilling : 2.75	—	8	27.5
			Accident: 1.00	—	4	10
Dismount	18 Jul., '02 ~ 18 Jul., '02	0.25	0.25	—	1	2.5
Total	14 Jul., '02 ~ 18 Jul., '02	4.50	4.50	—	15	45

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	5.00 m	Core length	48.00 m
Effective length	55.00 m	Core recovery	100.0 %

Working hours			
Drilling	22.0 hrs	36.7%	26.2%
Supplemental drilling work	22.0 hrs	36.7%	26.2%
Recovery from accident	16.0 hrs	26.7%	19.0%
Subtotal	60.0 hrs	100%	71.4%
Preparation/setting up	8.0 hrs	-	9.5%
Dismount/mobilization	4.0 hrs	-	4.8%
Transportation of water	12.0 hrs	-	14.3%
Others			
Total	84.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 55.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 55.00m/2.75 days = 20 m/d
Effective length / Total drilling shifts =
= 55.00m/5.5 shifts = 10 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	55.00 m				55.00 m
Core length	48.00 m				48.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	5.00 m	9.09%	100%
200mm ϕ	8.00 m	14.55%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-52)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	19 Jul., '02 ~ 19Jul., '02	0.50	0.50	—	2	5
Drilling	19 Jul., '02 ~ 23 Jul., '02	3.75	Drilling : 3.75	—	13.5	37.5
			Accident: 0.00	—	0	0
Dismount	23 Jul., '02 ~ 23 Jul., '02	0.25	0.25	—	1	2.5
Total	19 Jul., '02 ~ 23 Jul., '02	4.50	4.50	—	16.5	45

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	5.00 m	Core length	47.00 m
Effective length	55.00 m	Core recovery	100.0 %

Working hours			
Drilling	42.0 hrs	67.7%	47.7%
Supplemental drilling work	20.0 hrs	32.3%	22.7%
Recovery from accident	0.0 hrs	-	-
Subtotal	62.0 hrs	100%	70.5%
Preparation/setting up	8.0 hrs	-	9.1%
Dismount/mobilization	2.0 hrs	-	2.3%
Transportation of water	16.0 hrs	-	18.2%
Others			
Total	88.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.0	None core	None core
8.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 58.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 55.00m/3.75 days = 14.67 m/d
Effective length / Total drilling shifts =
= 55.00m/7.5 shifts = 7.33 m/shift

Drilling length by diameter					
Bit diameter	190mmϕ				Total
Drilling length	55.00 m				55.00 m
Core length	47.00 m				47.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mmϕ	7.00 m	12.73%	100%
200mmϕ	9.00 m	16.36%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-53)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	13 Aug., '02 ~ 13 Aug., '02	1.00	1.00	—	4	10
Drilling	14 Aug., '02 ~ 18 Aug., '02	4.75	Drilling : 4.75	—	19	47.5
			Accident: 0.00	—	0	0
Dismount	18 Aug., '02 ~ 18 Aug., '02	0.25	0.25	—	1	2.5
Total	13 Aug., '02 ~ 18 Aug., '02	6.00	6.00	—	25	60

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.50 m
Prolongation	15.00 m	Core length	56.50 m
Effective length	65.00 m	Core recovery	100.0 %

Working hours			
Drilling	55.0 hrs	72.4%	49.1%
Supplemental drilling work	21.0 hrs	27.6%	18.8%
Recovery from accident	-	-	-
Subtotal	76.0 hrs	100%	67.9%
Preparation/setting up	16.0 hrs	-	14.3%
Dismount/mobilization	4.0 hrs	-	3.6%
Transportation of water	16.0 hrs	-	14.3%
Others			
Total	112.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.5	None core	None core
8.5 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 60.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 65.00m/4.75 days = 12.63 m/d
Effective length / Total drilling shifts =
= 65.00m/9.5 shifts = 6.84 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	65.00 m				65.00 m
Core length	56.50 m				56.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	7.00 m	10.77%	100%
200mm ϕ	10.00 m	15.38%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-54)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	12 Aug., '02 ~ 13 Aug., '02	1.00	1.00	—	4	10
Drilling	13 Aug., '02 ~ 16 Aug., '02	2.75	Drilling : 2.75	—	11	27.5
			Accident: 0.00	—	0	0
Dismount	16 Aug., '02 ~ 16 AUg., '02	0.25	0.25	—	1	2.5
Total	12 Aug., '02 ~ 16 Aug., '02	4.00	4.00	—	16	40

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	10.00 m	Core length	52.00 m
Effective length	60.00 m	Core recovery	100.0 %

Working hours			
Drilling	28.0 hrs	73.7%	48.3%
Supplemental drilling work	10.0 hrs	26.3%	17.2%
Recovery from accident	0.0 hrs	-	-
Subtotal	38.0 hrs	100%	65.5%
Preparation/setting up	8.0 hrs	-	13.8%
Dismount/mobilization	4.0 hrs	-	6.9%
Transportation of water	8.0 hrs	-	13.8%
Others			
Total	58.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 6.0	None core	None core
6.0 - 10.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 60.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 61.00m/2.75 days = 22.18 m/d
Effective length / Total drilling shifts =
= 61.00m/5.5 shifts = 11.09 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	61.00 m				61.00 m
Core length	53.00 m				53.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	6.00 m	10.00%	100%
200mm ϕ	9.00 m	15.00%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBK-55)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	16 Aug., '02 ~ 16 Aug., '02	0.50	0.50	—	2	5
Drilling	17 Aug., '02 ~ 19 Aug., '02	2.25	Drilling : 2.25	—	9	22.5
			Accident: 0.00	—	0	0
Dismount	19 Aug., '02 ~ 19 Aug., '02	0.25	0.25	—	1	2.5
Total	16 Aug., '02 ~ 19 Aug., '02	3.00	3.00	—	12	30

Drilling Length			
Programmed length	50.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	8.00 m	Core length	51.00 m
Effective length	58.00 m	Core recovery	100.0 %

Working hours			
Drilling	23.0 hrs	63.9%	42.6%
Supplemental drilling work	13.0 hrs	36.1%	24.1%
Recovery from accident	-	-	-
Subtotal	36.0 hrs	100%	66.7%
Preparation/setting up	8.0 hrs	-	14.8%
Dismount/mobilization	4.0 hrs	-	7.4%
Transportation of water	6.0 hrs	-	11.1%
Others			
Total	54.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
8.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0
50.0 - 58.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 58.00m/2.25 days = 25.78 m/d
Effective length / Total drilling shifts =
= 58.00m/4.5 shifts = 12.89 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	58.00 m				58.00 m
Core length	51.00 m				51.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
250mm ϕ	5.00 m	8.62%	100%
200mm ϕ	7.00 m	12.07%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-26)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	20 Jul., '02 ~ 20 Jul., '02	1.000	1.000	—	4	10
Drilling	21 Jul., '02 ~ 21 Jul., '02	0.750	Drilling : 0.750	—	3	7.5
			Accident: 0.000	—	—	—
Dismount	21 Jul., '02 ~ 21 Jul., '02	0.25	0.250	—	1	2.5
Total	20 Jul., '02 ~ 21 Jul., '02	2.000	2.000	—	8	20

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	11.00 m
Prolongation	-9.00 m	Core length	20.00 m
Effective length	31.00 m	Core recovery	100.0 %

Working hours			
Drilling	8.0 hrs	34.8%	20.0%
Supplemental drilling work	15.0 hrs	65.2%	37.5%
Recovery from accident	-	-	-
Subtotal	23.0 hrs	100%	57.5%
Preparation/setting up	5.0 hrs	-	12.5%
Dismount/mobilization	4.0 hrs	-	10.0%
Transportation of water	8.0 hrs	-	20.0%
Others			
Total	40.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 11.0	None core	None core
11.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 31.00	100.0	100.0

Efficiency
Effective length / Working drilling days
= 31.00m/0.750 days = 41.33m/d
Effective length / Total drilling shifts =
= 31.00m/3.875 shifts = 10.78 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	11.00 m	20.00 m			31.00 m
Core length	0.00 m	20.00 m			20.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	11.00 m	35.48%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-27)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	22 Jul., '02 ~ 22 Jul., '02	0.125	0.125	—	0.5	1.25
Drilling	22 Jul., '02 ~ 22 Jul., '02	0.750	Drilling : 0.750	—	3	7.5
			Accident: 0.000	—	—	—
Dismount	22 Jul., '02 ~ 22 Jul., '02	0.125	0.125	—	0.5	1.25
Total	22 Jul., '02 ~ 22 Jul., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	-10.00 m	Core length	20.00 m
Effective length	30.00 m	Core recovery	100.0 %

Working hours			
Drilling	9.0 hrs	75.0%	45.0%
Supplemental drilling work	3.0 hrs	25.0%	15.0%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	60.0%
Preparation/setting up	2.0 hrs	-	10.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 10.0	None core	None core
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 30.00m/0.750 days = 40.00 m/d
Effective length / Total drilling shifts =
= 30.00m/1.5 shifts = 20.00 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	10.00 m	20.00 m			30.00 m
Core length	0.00 m	20.00 m			20.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	11.00 m	36.67%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-28)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	17 Jul., '02 ~ 17 Jul., '02	0.250	0.250	—	1	2.5
Drilling	17 Jul., '02 ~ 19 Jul., '02	2.500	Drilling : 2.500	—	10	25
			Accident: 0.000	—	—	—
Dismount	19 Jul., '02 ~ 19 Jul., '02	0.250	0.250	—	1	2.5
Total	17 Jul., '02 ~ 19 Jul., '02	3.000	3.000	—	12	30

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	9.50 m
Prolongation	-6.50 m	Core length	24.00 m
Effective length	33.50 m	Core recovery	100.0 %

Working hours			
Drilling	22.0 hrs	55.0%	37.9%
Supplemental drilling work	18.0 hrs	45.0%	31.0%
Recovery from accident	-	-	-
Subtotal	40.0 hrs	100%	69.0%
Preparation/setting up	4.0 hrs	-	6.9%
Dismount/mobilization	4.0 hrs	-	6.9%
Transportation of water	10.0 hrs	-	17.2%
Others			
Total	58.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 12.0	None core	None core
12.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 35.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 33.50m/2.50 days = 13.40 m/d
Effective length / Total drilling shifts =
= 33.50m/5.00 shifts = 6.70 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	9.50 m	24.00 m			33.50 m
Core length	0.00 m	24.00 m			24.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	9.00 m	26.87%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-29)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	11 Jul., '02 ~ 11 Jul., '02	0.688	0.688	—	2.75	6.875
Drilling	12 Jul., '02 ~ 16 Jul., '02	4.500	Drilling : 1.500	—	5	13
			Accident: 3.000	—	12	25
Dismount	16 Jul., '02 ~ 16 Jul., '02	0.3125	0.313	—	1.25	3.125
Total	16 Jul., '02 ~ 16 Jul., '02	5.500	5.500	—	21	48

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	0.00 m	Core length	31.00 m
Effective length	40.00 m	Core recovery	100.0 %

Working hours			
Drilling	13.0 hrs	18.1%	13.8%
Supplemental drilling work	11.0 hrs	15.3%	11.7%
Recovery from accident	48.0 hrs	66.7%	51.1%
Subtotal	72.0 hrs	100%	76.6%
Preparation/setting up	11.0 hrs	-	11.7%
Dismount/mobilization	5.0 hrs	-	5.3%
Transportation of water	6.0 hrs	-	6.4%
Others			
Total	94.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 16.0	None core	None core
16.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.00	100.0	100.0

Efficiency
Effective length / Working drilling days
= 40.00m/4.50 days = 8.89 m/d
Effective length / Total drilling shifts =
= 40.00m/9 shifts = 4.44 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	9.00 m	31.00 m			40.00 m
Core length	0.00 m	31.00 m			31.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	13.00 m	32.50%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-30)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	26 Jul., '02 ~ 26 Jul., '02	0.063	0.063	—	0.25	0.625
Drilling	26 Jul., '02 ~ 26 Jul., '02	0.813	Drilling : 0.813	—	3.25	8.125
			Accident: 0.000	—	—	—
Dismount	26 Jul., '02 ~ 26 Jul., '02	0.125	0.125	—	0.5	1.25
Total	26 Jul., '02 ~ 26 Jul., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	8.70 m
Prolongation	0.00 m	Core length	31.30 m
Effective length	40.00 m	Core recovery	100.0 %

Working hours			
Drilling	10.0 hrs	76.9%	50.0%
Supplemental drilling work	3.0 hrs	23.1%	15.0%
Recovery from accident	-	-	-
Subtotal	13.0 hrs	100%	65.0%
Preparation/setting up	1.0 hrs	-	5.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 12.0	None core	None core
12.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 40.00m/0.813 days = 49.20 m/d
Effective length / Total drilling shifts =
= 40.00m/1.626 shifts = 24.60 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	11.00 m	29.00 m			40.00 m
Core length	0.00 m	29.00 m			29.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	11.00 m	27.50%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-31)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	25 Jul., '02 ~ 25 Jul., '02	0.063	0.063	—	0.25	0.625
Drilling	25 Jul., '02 ~ 25 Jul., '02	0.813	Drilling : 0.813	—	3.25	8.125
			Accident: 0.000	—	—	—
Dismount	25 Jul., '02 ~ 25 Jul., '02	0.125	0.125	—	0.5	1.25
Total	25 Jul., '02 ~ 25 Jul., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	1.00 m	Core length	32.00 m
Effective length	41.00 m	Core recovery	100.0 %

Working hours			
Drilling	10.0 hrs	76.9%	47.6%
Supplemental drilling work	3.0 hrs	23.1%	14.3%
Recovery from accident	-	-	-
Subtotal	13.0 hrs	100%	61.9%
Preparation/setting up	1.0 hrs	-	4.8%
Dismount/mobilization	3.0 hrs	-	14.3%
Transportation of water	4.0 hrs	-	19.0%
Others			
Total	21.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 41.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 41.00m/0.813 days = 49.20 m/d
Effective length / Total drilling shifts =
= 41.00m/1.626 shifts = 25.22 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	11.00 m	30.00 m			41.00 m
Core length	0.00 m	30.00 m			30.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	11.00 m	26.83%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-32)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	24 Jul., '02 ~ 24 Jul., '02	0.125	0.125	—	0.5	1.25
Drilling	24 Jul., '02 ~ 24 Jul., '02	0.750	Drilling : 0.750	—	3	7.5
			Accident: 0.000	—	—	—
Dismount	24 Jul., '02 ~ 24 Jul., '02	0.125	0.125	—	0.5	1.25
Total	24 Jul., '02 ~ 24 Jul., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	0.00 m	Core length	31.00 m
Effective length	40.00 m	Core recovery	100.0 %

Working hours			
Drilling	9.0 hrs	75.0%	45.0%
Supplemental drilling work	3.0 hrs	25.0%	15.0%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	60.0%
Preparation/setting up	2.0 hrs	-	10.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 12.0	None core	None core
12.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 40.00m/0.750 days = 53.30 m/d
Effective length / Total drilling shifts =
= 40.00m/1.50 shifts = 26.67 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	9.00 m	31.00 m			40.00 m
Core length	0.00 m	31.00 m			31.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	11.00 m	27.50%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKS-33)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	23 Jul., '02 ~ 23 Jul., '02	0.125	0.125	—	0.5	1.25
Drilling	23 Jul., '02 ~ 23 Jul., '02	0.750	Drilling : 0.750	—	3	7.5
			Accident: 0.000	—	—	—
Dismount	23 Jul., '02 ~ 23 Jul., '02	0.125	0.125	—	0.5	1.25
Total	23 Jul., '02 ~ 23 Jul., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	40.00 m	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	-5.00 m	Core length	26.00 m
Effective length	35.00 m	Core recovery	100.0 %

Working hours			
Drilling	9.0 hrs	75.0%	45.0%
Supplemental drilling work	3.0 hrs	25.0%	15.0%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	60.0%
Preparation/setting up	2.0 hrs	-	10.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 12.0	None core	None core
12.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 35.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 35.00m/0.75 days = 46.67 m/d
Effective length / Total drilling shifts =
= 35.00m/1.50 shifts = 23.33 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	9.00 m	26.00 m			35.00 m
Core length	0.00 m	26.00 m			26.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	11.00 m	31.43%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-1)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	2 Aug., '02 ~ 2 Aug., '02	0.50	0.50	—	2	5
Drilling	3 Aug., '02 ~ 3 Aug., '02	0.44	Drilling : 0.44	—	2.75	4.375
			Accident: 0.00	—	0	0
Dismount	3 Aug., '02 ~ 3 Aug., '02	0.06	0.06	—	0.25	0.625
Total	2 Aug., '02 ~ 2 Aug., '02	1.00	1.00	—	5	10

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	0.00 m	Core length	37.00 m
Effective length	45.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	25.0%
Supplemental drilling work	2.0 hrs	28.6%	10.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	76.5%
Preparation/setting up	8.0 hrs	-	40.0%
Dismount/mobilization	1.0 hrs	-	5.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 11.0	None core	None core
11.0 - 20.0	100.0	100.0
20.0 - 29.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 45.00m/0.44 days = 102.86 m/d
Effective length / Total drilling shifts =
= 45.00m/0.875 shifts = 51.43 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	45.00 m			45.00 m
Core length	0.00 m	37.00 m			37.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-2)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	3 Aug., '02 ~ 3 Aug., '02	0.500	0.500	—	2	5
Drilling	4 Aug., '02 ~ 4 Aug., '02	0.438	Drilling : 0.438	—	1.75	4.375
			Accident: 0.000	—	0	0
Dismount	4 Aug., '02 ~ 4 Aug., '02	0.063	0.063	—	0.25	0.625
Total	3 Aug., '02 ~ 4 Aug., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	12.00 m
Prolongation	5.00 m	Core length	38.00 m
Effective length	50.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	22.7%
Supplemental drilling work	2.0 hrs	28.6%	9.1%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	31.8%
Preparation/setting up	8.0 hrs	-	36.4%
Dismount/mobilization	1.0 hrs	-	4.5%
Transportation of water	6.0 hrs	-	27.3%
Others			
Total	22.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 12.0	None core	None core
12.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 50.00m/0.4375 days = 114.29 m/d
Effective length / Total drilling shifts =
= 50.00m/0.875 shifts = 57.14 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	50.00 m			50.00 m
Core length	0.00 m	38.00 m			38.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-3)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	4 Aug., '02 ~ 4 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	4 Aug., '02 ~ 4 Aug., '02	0.438	Drilling : 0.438	—	1.75	4.375
			Accident: 0.000	—	0	0
Dismount	4 Aug., '02 ~ 4 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	4 Aug., '02 ~ 4 Aug., '02	0.500	0.500	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	-4.00 m	Core length	34.00 m
Effective length	41.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	41.7%
Supplemental drilling work	2.0 hrs	28.6%	16.7%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	58.3%
Preparation/setting up	0.5 hrs	-	4.2%
Dismount/mobilization	0.5 hrs	-	4.2%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 10.0	None core	None core
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 41.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 41.00m/0.4375 days = 93.71m/d
Effective length / Total drilling shifts =
= 41.00m/0.875 shifts = 46.86 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	41.00 m			41.00 m
Core length	0.00 m	34.00 m			34.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-4)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	9 Aug., '02 ~ 9 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	9 Aug., '02 ~ 9 Aug., '02	0.438	Drilling : 0.438	—	1.75	4.375
			Accident: 0.000	—	0	0
Dismount	9 Aug., '02 ~ 9 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	9 Aug., '02 ~ 9 Aug., '02	0.500	0.500	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	2.00 m
Prolongation	-28.00 m	Core length	14.00 m
Effective length	17.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 17.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 17.00m/0.4375 days = 38.86 m/d
Effective length / Total drilling shifts =
= 17.00m/0.875 shifts = 19.43 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	17.00 m			17.00 m
Core length	0.00 m	14.00 m			14.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-5)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	9 Aug., '02 ~ 9 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	9 Aug., '02 ~ 9 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	9 Aug., '02 ~ 9 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	9 Aug., '02 ~ 9 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	5.00 m
Prolongation	-27.00 m	Core length	13.00 m
Effective length	18.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	34.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 5.0	None core	None core
5.0 - 10.0	100.0	100.0
10.0 - 18.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 18.00m/0.4375 days = 41.14 m/d
Effective length / Total drilling shifts =
= 18.00m/0.875 shifts = 20.57 m/shift

Drilling length by diameter					
Bit diameter	190mm ϕ				Total
Drilling length	18.00 m				18.00 m
Core length	13.00 m				13.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-6)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	10 Aug., '02 ~ 10 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	10 Aug., '02 ~ 10 Aug., '02	0.438	Drilling : 0.438	—	1.75	4.375
			Accident: 0.000	—	0	0
Dismount	10 Aug., '02 ~ 10 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	10 Aug., '02 ~ 10 Aug., '02	0.500	0.500	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	3.00 m
Prolongation	-23.00 m	Core length	19.00 m
Effective length	22.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 22.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 22.00m/0.4375 days = 50.29 m/d
Effective length / Total drilling shifts =
= 22.00m/0.875 shifts = 25.14 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	22.00 m			22.00 m
Core length	0.00 m	19.00 m			19.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-7)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	29 Jul., '02 ~ 29 Jul., '02	0.031	0.031	—	0.1875	0.3125
Drilling	29 Jul., '02 ~ 29 Jul., '02	0.438	Drilling : 0.438	—	2.625	4.375
			Accident: 0.000	—	0	0
Dismount	29 Jul., '02 ~ 29 Jul., '02	0.031	0.031	—	0.1875	0.3125
Total	29 Jul., '02 ~ 29 Jul., '02	0.500	0.500	—	3	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	-1.00 m	Core length	37.00 m
Effective length	44.00 m	Core recovery	100.0 %

Working hours			
Drilling	4.0 hrs	57.1%	40.0%
Supplemental drilling work	3.0 hrs	42.9%	30.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 44.00m/0.438 days = 100.46 m/d
Effective length / Total drilling shifts =
= 44.00m/0.876 shifts = 50.23 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	44.00 m			44.00 m
Core length	0.00 m	37.00 m			37.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-8)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	29 Jul., '02 ~ 29 Jul., '02	0.125	0.125	—	0.5	1.25
Drilling	29 Jul., '02 ~ 30 Jul., '02	0.750	Drilling : 0.750	—	3	7.5
			Accident: 0.000	—	0	0
Dismount	30 Jul., '02 ~ 30 Jul., '02	0.125	0.125	—	0.5	1.25
Total	29 Jul., '02 ~ 30 Jul., '02	1.000	1.000	—	4	10

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	7.00 m
Prolongation	14.50 m	Core length	52.50 m
Effective length	59.50 m	Core recovery	100.0 %

Working hours			
Drilling	8.0 hrs	66.7%	40.0%
Supplemental drilling work	4.0 hrs	33.3%	20.0%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	60.0%
Preparation/setting up	2.0 hrs	-	10.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0
40.0 - 50.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 59.50m/0.75 days = 79.33 m/d
Effective length / Total drilling shifts =
= 59.50m/1.5 shifts = 39.67 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	59.50 m			59.50 m
Core length	0.00 m	52.50 m			52.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-9)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	30 Jul., '02 ~ 30 Jul., '02	0.250	0.250	—	1	2.5
Drilling	30 Jul., '02 ~ 31 Jul., '02	1.125	Drilling : 1.125	—	4.5	11.25
			Accident: 0.000	—	0	0
Dismount	31 Jul., '02 ~ 31 Jul., '02	0.125	0.125	—	0.5	1.25
Total	30 Jul., '02 ~ 31 Jul., '02	1.500	1.500	—	6	15

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	10.50 m	Core length	47.50 m
Effective length	55.50 m	Core recovery	100.0 %

Working hours			
Drilling	8.0 hrs	66.7%	40.0%
Supplemental drilling work	4.0 hrs	33.3%	20.0%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	60.0%
Preparation/setting up	2.0 hrs	-	10.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 55.50m/1.125 days = 49.33 m/d
Effective length / Total drilling shifts =
= 55.50m/2.25 shifts = 24.67 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	55.50 m			55.50 m
Core length	0.00 m	47.50 m			47.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-10)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	4 Jul., '02 ~ 5 Jul., '02	2.00	2.00	—	8	20
Drilling	6 Jul., '02 ~ 9 Jul., '02	3.75	Drilling : 1.00	—	4	10
			Accident: 2.75	—	11	27.5
Dismount	9 Jul., '02 ~ 9 Jul., '02	0.25	0.25	—	1	2.5
Total	4 Jul., '02 ~ 9 Jul., '02	6.00	6.00	—	24	60

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	-23.00 m	Core length	14.00 m
Effective length	22.00 m	Core recovery	100.0 %

Working hours			
Drilling	8.0 hrs	12.7%	8.0%
Supplemental drilling work	11.0 hrs	17.5%	11.0%
Recovery from accident	44.0 hrs	69.8%	44.0%
Subtotal	63.0 hrs	100%	63.0%
Preparation/setting up	32.0 hrs	-	32.0%
Dismount/mobilization	1.0 hrs	-	1.0%
Transportation of water	4.0 hrs	-	4.0%
Others			
Total	100.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 22.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 22.00m/1.00 days = 22.00 m/d
Effective length / Total drilling shifts =
= 22.00m/2.0 shifts = 11.0 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	13.00 m	9.00 m			22.00 m
Core length	0.00 m	9.00 m			9.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	13.00 m	59.09%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-11)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	10 Jul., '02 ~ 10 Jul., '02	0.50	0.50	—	1	2.5
Drilling	10 Jul., '02 ~ 10 Jul., '02	1.00	Drilling : 1.00	—	2	5
			Accident: 0.00	—	0	0
Dismount	10 Jul., '02 ~ 10 Jul., '02	0.50	0.50	—	1	2.5
Total	10 Jul., '02 ~ 10 Jul., '02	2.00	2.00	—	4	10

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.80 m
Prolongation	-33.00 m	Core length	8.00 m
Effective length	12.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	62.5%	25.0%
Supplemental drilling work	3.0 hrs	37.5%	15.0%
Recovery from accident	-	-	-
Subtotal	8.0 hrs	100%	40.0%
Preparation/setting up	4.0 hrs	-	20.0%
Dismount/mobilization	4.0 hrs	-	20.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 4.0	None core	None core
4.0 - 12.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 12.00m/1 days = 12.00 m/d
Effective length / Total drilling shifts =
= 34.00m/4 shifts = 8.5 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	4.00 m	8.00 m			12.00 m
Core length	0.00 m	8.00 m			8.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	3.00 m	25.00%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-12)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	15 Aug., '02 ~ 15 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	15 Aug., '02 ~ 15 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	15 Aug., '02 ~ 15 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	15 Aug., '02 ~ 15 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	6.00 m
Prolongation	-16.00 m	Core length	23.00 m
Effective length	29.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	41.7%
Supplemental drilling work	2.0 hrs	28.6%	16.7%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	58.3%
Preparation/setting up	0.5 hrs	-	4.2%
Dismount/mobilization	0.5 hrs	-	4.2%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 10.0	None core	None core
10.0 - 20.0	100.0	100.0
20.0 - 29.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 29.00m/0.4375 days = 66.28m/d
Effective length / Total drilling shifts =
= 29.00m/0.875 shifts = 33.14 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	29.00 m			29.00 m
Core length	0.00 m	23.00 m			23.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-13)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	27 Jul., '02 ~27 Jul., '02	0.25	0.25	—	1	2.5
Drilling	27Jul., '02 ~ 28 Jul., '02	1.50	Drilling : 1.50	—	6	15
			Accident: 0.00	—	0	0
Dismount	28 Jul., '02 ~ 28 Jul., '02	0.25	0.25	—	1	2.5
Total	27 Jul., '02 ~ 28 Jul., '02	2.00	2.00	—	8	20

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	-3.00 m	Core length	34.00 m
Effective length	42.00 m	Core recovery	100.0 %

Working hours			
Drilling	10.0 hrs	41.7%	26.3%
Supplemental drilling work	14.0 hrs	58.3%	36.8%
Recovery from accident	-	-	-
Subtotal	24.0 hrs	100%	63.2%
Preparation/setting up	4.0 hrs	-	10.5%
Dismount/mobilization	4.0 hrs	-	10.5%
Transportation of water	6.0 hrs	-	15.8%
Others			
Total	38.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 42.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 42.00m/1.5 days = 28.00 m/d
Effective length / Total drilling shifts =
= 42.00m/3.0 shifts = 14.00 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	42.00 m			42.00 m
Core length	0.00 m	34.00 m			34.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	9.00 m	21.43%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-14)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	31 Jul., '02 ~ 31 Jul., '02	0.06	0.06	—	0.25	0.625
Drilling	31 Jul., '02 ~ 31 Jul., '02	0.38	Drilling : 0.38	—	1.5	3.75
			Accident: 0.00	—	0	0
Dismount	31 Jul., '02 ~ 31 Jul., '02	0.06	0.06	—	0.25	0.625
Total	31 Jul., '02 ~ 31 Jul., '02	0.50	0.50	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	3.00 m	Core length	40.00 m
Effective length	48.00 m	Core recovery	100.0 %

Working hours			
Drilling	4.0 hrs	66.7%	33.3%
Supplemental drilling work	2.0 hrs	33.3%	16.7%
Recovery from accident	-	-	-
Subtotal	6.0 hrs	100%	50.0%
Preparation/setting up	1.0 hrs	-	8.3%
Dismount/mobilization	1.0 hrs	-	8.3%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.5	None core	None core
7.5 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 48.00m/0.375days = 128.0 m/d
Effective length / Total drilling shifts =
= 48.00m/0.65 shifts = 64.00 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	48.00 m			48.00 m
Core length	0.00 m	40.00 m			40.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-15)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	1 Aug., '02 ~ 1 Aug., '02	0.063	0.063	—	0.25	0.625
Drilling	1 Aug., '02 ~ 1 Aug., '02	0.375	Drilling : 0.375	—	1.5	3.75
			Accident: 0.000	—	0	0
Dismount	1 Aug., '02 ~ 1 Aug., '02	0.063	0.063	—	0.25	0.625
Total	1 Aug., '02 ~ 1 Aug., '02	0.500	0.500	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	0.00 m	Core length	37.00 m
Effective length	45.00 m	Core recovery	100.0 %

Working hours			
Drilling	4.0 hrs	66.7%	33.3%
Supplemental drilling work	2.0 hrs	33.3%	16.7%
Recovery from accident	-	-	-
Subtotal	6.0 hrs	100%	50.0%
Preparation/setting up	1.0 hrs	-	8.3%
Dismount/mobilization	1.0 hrs	-	8.3%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 7.0	None core	None core
7.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 30.0	100.0	100.0
30.0 - 40.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 45.00m/0.375 days = 120 m/d
Effective length / Total drilling shifts =
= 45.00m/0.75 shifts = 60.0 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	45.00 m			45.00 m
Core length	0.00 m	37.00 m			37.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-16)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	14 Aug., '02 ~ 14 Aug., '02	0.188	Drilling : 0.188	—	0.75	1.875
			Accident: 0.000	—	0	0
Dismount	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	14 Aug., '02 ~ 14 Aug., '02	0.250	0.250	—	1	2.5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	5.00 m
Prolongation	-16.00 m	Core length	24.00 m
Effective length	29.00 m	Core recovery	100.0 %

Working hours			
Drilling	2.0 hrs	66.7%	33.3%
Supplemental drilling work	1.0 hrs	33.3%	16.7%
Recovery from accident	-	-	-
Subtotal	3.0 hrs	100%	50.0%
Preparation/setting up	0.5 hrs	-	8.3%
Dismount/mobilization	0.5 hrs	-	8.3%
Transportation of water	2.0 hrs	-	33.3%
Others			
Total	6.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 5.0	None core	None core
5.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 29.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 29.00m/0.188 days = 154.67 m/d
Effective length / Total drilling shifts =
= 29.00m/0.375 shifts = 77.33 m/shift

Drilling length by diameter					
Bit diameter	92mm ϕ				Total
Drilling length	29.00 m				29.00 m
Core length	24.00 m				24.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-17)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	14 Aug., '02 ~ 14 Aug., '02	0.188	Drilling : 0.188	—	0.75	1.875
			Accident: 0.000	—	0	0
Dismount	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	14 Aug., '02 ~ 14 Aug., '02	0.250	0.250	—	1	2.5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	3.00 m
Prolongation	-20.00 m	Core length	22.00 m
Effective length	25.00 m	Core recovery	100.0 %

Working hours			
Drilling	2.0 hrs	66.7%	33.3%
Supplemental drilling work	1.0 hrs	33.3%	16.7%
Recovery from accident	-	-	-
Subtotal	3.0 hrs	100%	50.0%
Preparation/setting up	0.5 hrs	-	8.3%
Dismount/mobilization	0.5 hrs	-	8.3%
Transportation of water	2.0 hrs	-	33.3%
Others			
Total	6.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 3.0	None core	None core
3.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0
20.0 - 25.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 25.00m/0.188 days = 133.33 m/d
Effective length / Total drilling shifts =
= 25.00m/0.375 shifts = 66.67 m/shift

Drilling length by diameter					
Bit diameter	92mm ϕ				Total
Drilling length	25.00 m				25.00 m
Core length	22.00 m				22.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-18)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	14 Aug., '02 ~ 14 Aug., '02	0.188	Drilling : 0.188	—	0.75	1.875
			Accident: 0.000	—	0	0
Dismount	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	14 Aug., '02 ~ 14 Aug., '02	0.250	0.250	—	1	2.5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	4.00 m
Prolongation	-28.00 m	Core length	13.00 m
Effective length	17.00 m	Core recovery	100.0 %

Working hours			
Drilling	2.0 hrs	66.7%	33.3%
Supplemental drilling work	1.0 hrs	33.3%	16.7%
Recovery from accident	-	-	-
Subtotal	3.0 hrs	100%	50.0%
Preparation/setting up	0.5 hrs	-	8.3%
Dismount/mobilization	0.5 hrs	-	8.3%
Transportation of water	2.0 hrs	-	33.3%
Others			
Total	6.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 1.0	None core	None core
1.0 - 10.0	100.0	100.0
10.0 - 17.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 17.00m/0.188 days = 96.0 m/d
Effective length / Total drilling shifts =
= 17.00m/0.375 shifts = 48.0 m/shift

Drilling length by diameter					
Bit diameter	92mmϕ				Total
Drilling length	17.00 m				17.00 m
Core length	13.00 m				13.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-19)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	14 Aug., '02 ~ 14 Aug., '02	0.188	Drilling : 0.188	—	0.75	1.875
			Accident: 0.000	—	0	0
Dismount	14 Aug., '02 ~ 14 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	14 Aug., '02 ~ 14 Aug., '02	0.250	0.250	—	1	2.5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	1.00 m
Prolongation	-26.00 m	Core length	18.00 m
Effective length	19.00 m	Core recovery	100.0 %

Working hours			
Drilling	2.0 hrs	66.7%	33.3%
Supplemental drilling work	1.0 hrs	33.3%	16.7%
Recovery from accident	-	-	-
Subtotal	3.0 hrs	100%	50.0%
Preparation/setting up	0.5 hrs	-	8.3%
Dismount/mobilization	0.5 hrs	-	8.3%
Transportation of water	2.0 hrs	-	33.3%
Others			
Total	6.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 1.0	None core	None core
1.0 - 10.0	100.0	100.0
10.0 - 19.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 19.00m/0.188 days = 101.33 m/d
Effective length / Total drilling shifts =
= 19.00m/0.375 shifts = 50.67 m/shift

Drilling length by diameter					
Bit diameter	92mm ϕ				Total
Drilling length	19.00 m				19.00 m
Core length	18.00 m				18.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-20)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	7 Aug., '02 ~ 7 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	7 Aug., '02 ~ 7 Aug., '02	0.438	Drilling : 0.438	—	1.75	4.375
			Accident: 0.000	—	0	0
Dismount	7 Aug., '02 ~ 7 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	7 Aug., '02 ~ 7 Aug., '02	0.500	0.500	—	2	5

Drilling Length			
Programmed length	· 45.00 m	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	-33.00 m	Core length	4.00 m
Effective length	12.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 12.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 12.00m/0.4375 days = 27.43 m/d
Effective length / Total drilling shifts =
= 12.00m/0.875 shifts = 13.71 m/shift

Drilling length by diameter					
Bit diameter	92mm ϕ				Total
Drilling length	12.00 m				12.00 m
Core length	3.00 m				3.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-21)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	7 Aug., '02 ~ 7 Aug., '02	0.031	0.031	—	0.125	0.3125
Drilling	7 Aug., '02 ~ 7 Aug., '02	0.438	Drilling : 0.438	—	1.75	4.375
			Accident: 0.000	—	0	0
Dismount	7 Aug., '02 ~ 7 Aug., '02	0.031	0.031	—	0.125	0.3125
Total	7 Aug., '02 ~ 7 Aug., '02	0.500	0.500	—	2	5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	5.00 m
Prolongation	-27.00 m	Core length	13.00 m
Effective length	18.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 5.0	None core	None core
5.0 - 10.0	100.0	100.0
10.0-18.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 18.00m/0.4375 days = 41.143 m/d
Effective length / Total drilling shifts =
= 18.00m/0.875 shifts = 20.57 m/shift

Drilling length by diameter					
Bit diameter	92mm ϕ				Total
Drilling length	18.00 m				18.00 m
Core length	13.00 m				13.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-22)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	6 Aug., '02 ~ 6 Aug., '02	0.03	0.03	—	0.125	0.3125
Drilling	6 Aug., '02 ~ 6 Aug., '02	0.25	Drilling : 0.25	—	1	2.5
			Accident: 0.00	—	0	0
Dismount	6 Aug., '02 ~ 6 Aug., '02	0.03	0.03	—	0.125	0.3125
Total	6 Aug., '02 ~ 6 Aug., '02	0.31	0.31	—	1.25	3.125

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	7.50 m
Prolongation	-37.00 m	Core length	3.00 m
Effective length	8.00 m	Core recovery	100.0 %

Working hours			
Drilling	3.0 hrs	75.0%	42.9%
Supplemental drilling work	1.0 hrs	25.0%	14.3%
Recovery from accident	-	-	-
Subtotal	4.0 hrs	100%	57.1%
Preparation/setting up	0.5 hrs	-	7.1%
Dismount/mobilization	0.5 hrs	-	7.1%
Transportation of water	2.0 hrs	-	28.6%
Others			
Total	7.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 5.0	None core	None core
5.0 - 8.0	100.0	100.0

Efficiency

Effective length / Working drilling days

= 8.00m/0.25 days = 32.00 m/d

Effective length / Total drilling shifts =

= 8.00m/0.50 shifts = 16.00 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	8.00 m			8.00 m
Core length	0.00 m	3.00 m			3.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-23)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	6 Aug., '02 ~ 6 Aug., '02	0.03	0.03	—	0.125	0.3125
Drilling	6 Aug., '02 ~ 6 Aug., '02	0.31	Drilling : 0.31	—	1.25	3.125
			Accident: 0.00	—	0	0
Dismount	6 Aug., '02 ~ 6 Aug., '02	0.03	0.03	—	0.125	0.3125
Total	6 Aug., '02 ~ 6 Aug., '02	0.38	0.38	—	1.5	3.75

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	5.00 m
Prolongation	-30.00 m	Core length	8.00 m
Effective length	15.00 m	Core recovery	100.0 %

Working hours			
Drilling	4.0 hrs	80.0%	50.0%
Supplemental drilling work	1.0 hrs	20.0%	12.5%
Recovery from accident	-	-	-
Subtotal	5.0 hrs	100%	62.5%
Preparation/setting up	0.5 hrs	-	6.3%
Dismount/mobilization	0.5 hrs	-	6.3%
Transportation of water	2.0 hrs	-	25.0%
Others			
Total	8.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 6.0	None core	None core
6.0 - 10.0	100.0	100.0
10.0 - 15.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 15.00m/0.3125 days = 38.40 m/d
Effective length / Total drilling shifts =
= 15.00m/0.625shifts = 19.20 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	15.00 m			15.00 m
Core length	0.00 m	8.00 m			8.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-24)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	6 Aug., '02 ~ 6 Aug., '02	0.03	0.03	—	0.125	0.3125
Drilling	6 Aug., '02 ~ 6 Aug., '02	0.19	Drilling : 0.19	—	0.75	1.875
			Accident: 0.00	—	0	0
Dismount	6 Aug., '02 ~ 6 Aug., '02	0.03	0.03	—	0.125	0.3125
Total	6 Aug., '02 ~ 6 Aug., '02	0.25	0.25	—	1	2.5

Drilling Length			
Programmed length	45.00 m	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	-33.00 m	Core length	2.00 m
Effective length	12.00 m	Core recovery	100.0 %

Working hours			
Drilling	3.0 hrs	75.0%	42.9%
Supplemental drilling work	1.0 hrs	25.0%	14.3%
Recovery from accident	-	-	-
Subtotal	4.0 hrs	100%	57.1%
Preparation/setting up	0.5 hrs	-	7.1%
Dismount/mobilization	0.5 hrs	-	7.1%
Transportation of water	2.0 hrs	-	28.6%
Others			
Total	7.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 4.0	None core	None core
4.0 - 10.0	100.0	100.0
10.0 - 12.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 12.00m/0.3125 days = 38.40 m/d
Effective length / Total drilling shifts =
= 12.00m/0.625shifts = 19.20 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	12.00 m			12.00 m
Core length	0.00 m	8.00 m			8.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-25)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	13 Aug., '02 ~ 13 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	13 Aug., '02 ~ 13 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	13 Aug., '02 ~ 13 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	13 Aug., '02 ~ 13 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	2.00 m
Prolongation	-	Core length	27.00 m
Effective length	29.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	41.7%
Supplemental drilling work	2.0 hrs	28.6%	16.7%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	58.3%
Preparation/setting up	0.5 hrs	-	4.2%
Dismount/mobilization	0.5 hrs	-	4.2%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 10.0	None core	None core
10.0 - 20.0	100.0	100.0
20.0 - 29.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 29.00m/0.4375 days = 66.28m/d
Effective length / Total drilling shifts =
= 29.00m/0.875 shifts = 33.14 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	29.00 m			29.00 m
Core length	0.00 m	27.00 m			27.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-26)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	13 Aug., '02 ~ 13 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	13 Aug., '02 ~ 13 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	13 Aug., '02 ~ 13 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	13 Aug., '02 ~ 13 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	–	Overburden, sand & gravel, Quarternary	4.00 m
Prolongation	–	Core length	23.00 m
Effective length	27.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	–	–	–
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	–	5.0%
Dismount/mobilization	0.5 hrs	–	5.0%
Transportation of water	2.0 hrs	–	20.0%
Others			
Total	10.0 hrs	–	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 – 10.0	None core	None core
10.0 – 20.0	100.0	100.0
20.0 – 27.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 27.00m/0.4375 days = 61.71m/d
Effective length / Total drilling shifts =
= 27.00m/0.875 shifts = 30.86 m/shift

Drilling length by diameter					
Bit diameter	4″TB	92mm ϕ			Total
Drilling length	0.00 m	27.00 m			27.00 m
Core length	0.00 m	23.00 m			23.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-27)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	22 Aug., '02 ~ 22 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	22 Aug., '02 ~ 22 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	22 Aug., '02 ~ 22 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	22 Aug., '02 ~ 22 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	5.00 m
Prolongation	-	Core length	1.00 m
Effective length	6.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 5.0	None core	None core
5.0 - 6.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 6.00m/0.4375 days = 13.71m/d
Effective length / Total drilling shifts =
= 6.00m/0.875 shifts = 6.86 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	6.00 m			6.00 m
Core length	0.00 m	5.00 m			5.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-28)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	16 Aug., '02 ~ 16 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	16 Aug., '02 ~ 16 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	16 Aug., '02 ~ 16 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	16 Aug., '02 ~ 16 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	-	Core length	5.00 m
Effective length	15.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 10.0	None core	None core
10.0 - 15.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 15.00m/0.4375 days = 34.29m/d
Effective length / Total drilling shifts =
= 15.00m/0.875 shifts = 17.14 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	15.00 m			15.00 m
Core length	0.00 m	5.00 m			5.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-29)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	17 Aug., '02 ~ 17 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	17 Aug., '02 ~ 17 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	17 Aug., '02 ~ 17 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	17 Aug., '02 ~ 17 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	-	Core length	11.00 m
Effective length	20.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 20.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 20.00m/0.4375 days = 45.71m/d
Effective length / Total drilling shifts =
= 20.00m/0.875 shifts = 22.86 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	20.00 m			20.00 m
Core length	0.00 m	11.00 m			11.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-30)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	18 Aug., '02 ~ 18 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	18 Aug., '02 ~ 18 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	18 Aug., '02 ~ 18 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	18 Aug., '02 ~ 18 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	-	Core length	19.00 m
Effective length	19.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 19.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 19.00m/0.4375 days = 22.86m/d
Effective length / Total drilling shifts =
= 19.00m/0.875 shifts = 11.43 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	19.00 m			19.00 m
Core length	0.00 m	10.00 m			10.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-31)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	18 Aug., '02 ~ 18 Aug., '02	0.125	0.13	—	0.5	1.25
Drilling	18 Aug., '02 ~ 19 Aug., '02	0.750	Drilling : 0.75	—	3	7.5
			Accident: 0.00	—	0	0
Dismount	19 Aug., '02 ~ 19 Aug., '02	0.125	0.13	—	0.5	1.25
Total	18 Aug., '02 ~ 19 Aug., '02	1.000	1.00	—	4	10

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	9.50 m
Prolongation	-	Core length	9.50 m
Effective length	19.00 m	Core recovery	100.0 %

Working hours			
Drilling	8.0 hrs	66.7%	36.4%
Supplemental drilling work	4.0 hrs	33.3%	18.2%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	54.5%
Preparation/setting up	2.0 hrs	-	9.1%
Dismount/mobilization	2.0 hrs	-	9.1%
Transportation of water	6.0 hrs	-	27.3%
Others			
Total	22.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.5	None core	None core
9.5 - 10.0	100.0	100.0
10.0 - 19.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 19.00m/0.75 days = 25.33m/d
Effective length / Total drilling shifts =
= 19.00m/1.50 shifts = 12.67 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	19.00 m			19.00 m
Core length	0.00 m	9.50 m			9.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-32)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	19 Aug., '02 ~ 19 Aug., '02	0.125	0.13	—	0.5	1.25
Drilling	19 Aug., '02 ~ 20 Aug., '02	0.750	Drilling : 0.75	—	3	7.5
			Accident: 0.00	—	0	0
Dismount	20 Aug., '02 ~ 20 Aug., '02	0.125	0.13	—	0.5	1.25
Total	19 Aug., '02 ~ 20 Aug., '02	1.000	1.00	—	4	10

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	8.00 m
Prolongation	-	Core length	7.00 m
Effective length	15.00 m	Core recovery	100.0 %

Working hours			
Drilling	8.0 hrs	66.7%	40.0%
Supplemental drilling work	4.0 hrs	33.3%	20.0%
Recovery from accident	-	-	-
Subtotal	12.0 hrs	100%	60.0%
Preparation/setting up	2.0 hrs	-	10.0%
Dismount/mobilization	2.0 hrs	-	10.0%
Transportation of water	4.0 hrs	-	20.0%
Others			
Total	20.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.0	None core	None core
8.0 - 10.0	100.0	100.0
10.0 - 15.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 15.00m/0.75 days = 20.00m/d
Effective length / Total drilling shifts =
= 15.00m/1.50 shifts = 10.00 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	15.00 m			15.00 m
Core length	0.00 m	7.00 m			7.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-33)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	21 Aug., '02 ~ 21 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	21 Aug., '02 ~ 21 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	21 Aug., '02 ~ 21 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	21 Aug., '02 ~ 21 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	8.40 m
Prolongation	-	Core length	13.60 m
Effective length	22.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	41.7%
Supplemental drilling work	2.0 hrs	28.6%	16.7%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	58.3%
Preparation/setting up	0.5 hrs	-	4.2%
Dismount/mobilization	0.5 hrs	-	4.2%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.4	None core	None core
8.4 - 10.0	100.0	100.0
10.0 -20.0	100.0	100.0
20.0 -22.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 22.00m/0.4375 days = 50.29m/d
Effective length / Total drilling shifts =
= 22.00m/0.875 shifts = 25.14 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	22.00 m			22.00 m
Core length	0.00 m	13.60 m			13.60 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-34)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	15 Aug., '02 ~ 15 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	15 Aug., '02 ~ 15 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	15 Aug., '02 ~ 15 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	15 Aug., '02 ~ 15 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	–	Overburden, sand & gravel, Quarternary	10.00 m
Prolongation	–	Core length	24.00 m
Effective length	34.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	35.7%
Supplemental drilling work	2.0 hrs	28.6%	14.3%
Recovery from accident	–	–	–
Subtotal	7.0 hrs	100%	50.0%
Preparation/setting up	0.5 hrs	–	3.6%
Dismount/mobilization	0.5 hrs	–	3.6%
Transportation of water	6.0 hrs	–	42.9%
Others			
Total	14.0 hrs	–	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 – 10.0	None core	None core
10.0 – 20.0	100.0	100.0
20.0 – 30.0	100.0	100.0
30.0 – 34.0	100.0	100.0

Efficiency

Effective length / Working drilling days

= 34.00m/0.4375 days = 77.71m/d

Effective length / Total drilling shifts =

= 34.00m/0.875 shifts = 38.86 m/shift

Drilling length by diameter					
Bit diameter	4″TB	92mm ϕ			Total
Drilling length	0.00 m	34.00 m			34.00 m
Core length	0.00 m	24.00 m			24.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-35)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	20 Aug., '02 ~ 20 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	20 Aug., '02 ~ 20 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	20 Aug., '02 ~ 20 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	20 Aug., '02 ~ 20 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	9.00 m
Prolongation	-	Core length	7.00 m
Effective length	16.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	41.7%
Supplemental drilling work	2.0 hrs	28.6%	16.7%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	58.3%
Preparation/setting up	0.5 hrs	-	4.2%
Dismount/mobilization	0.5 hrs	-	4.2%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 16.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 16.00m/0.4375 days = 36.57m/d
Effective length / Total drilling shifts =
= 16.00m/0.875 shifts = 18.29 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	0.00 m	16.00 m			16.00 m
Core length	0.00 m	7.00 m			7.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-36)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	22 Aug., '02 ~ 22 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	22 Aug., '02 ~ 22 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	22 Aug., '02 ~ 22 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	22 Aug., '02 ~ 22 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	4.00 m
Prolongation	-	Core length	16.00 m
Effective length	20.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	50.0%
Supplemental drilling work	2.0 hrs	28.6%	20.0%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	70.0%
Preparation/setting up	0.5 hrs	-	5.0%
Dismount/mobilization	0.5 hrs	-	5.0%
Transportation of water	2.0 hrs	-	20.0%
Others			
Total	10.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 4.0	None core	None core
4.0 - 10.0	100.0	100.0
10.0 -20.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 20.00m/0.4375 days = 45.71m/d
Effective length / Total drilling shifts =
= 20.00m/0.875 shifts = 22.86 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	20.00 m			20.00 m
Core length	0.00 m	18.00 m			18.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-37)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	21 Aug., '02 ~ 21 Aug., '02	0.031	0.03	—	0.125	0.3125
Drilling	21 Aug., '02 ~ 21 Aug., '02	0.438	Drilling : 0.44	—	1.75	4.375
			Accident: 0.00	—	0	0
Dismount	21 Aug., '02 ~ 21 Aug., '02	0.031	0.03	—	0.125	0.3125
Total	21 Aug., '02 ~ 21 Aug., '02	0.500	0.50	—	2	5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	2.00 m
Prolongation	-	Core length	19.00 m
Effective length	21.00 m	Core recovery	100.0 %

Working hours			
Drilling	5.0 hrs	71.4%	41.7%
Supplemental drilling work	2.0 hrs	28.6%	16.7%
Recovery from accident	-	-	-
Subtotal	7.0 hrs	100%	58.3%
Preparation/setting up	0.5 hrs	-	4.2%
Dismount/mobilization	0.5 hrs	-	4.2%
Transportation of water	4.0 hrs	-	33.3%
Others			
Total	12.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 8.4	None core	None core
8.4 - 10.0	100.0	100.0
10.0 -20.0	100.0	100.0
20.0 -21.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 21.00m/0.4375 days = 48.00m/d
Effective length / Total drilling shifts =
= 21.00m/0.875 shifts = 24.00 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	0.00 m	21.00 m			21.00 m
Core length	0.00 m	19.00 m			19.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-38)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	26 Aug., '02 ~ 26 Aug., '02	0.03	0.03	—	0.125	0.3125
Drilling	26 Aug., '02 ~ 26 Aug., '02	0.69	Drilling : 0.69	—	2.75	6.875
			Accident: 0.00	—	0	0
Dismount	26 Aug., '02 ~ 26Aug., '02	0.03	0.03	—	0.125	0.3125
Total	26 Aug., '02 ~ 26 Aug., '02	0.75	0.75	—	3	7.5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	11.00 m
Prolongation	-	Core length	10.00 m
Effective length	21.00 m	Core recovery	100.0 %

Working hours			
Drilling	6.0 hrs	54.5%	33.3%
Supplemental drilling work	5.0 hrs	45.5%	27.8%
Recovery from accident	-	-	-
Subtotal	11.0 hrs	100%	61.1%
Preparation/setting up	0.5 hrs	-	2.8%
Dismount/mobilization	0.5 hrs	-	2.8%
Transportation of water	6.0 hrs	-	33.3%
Others			
Total	18.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 11.0	None core	None core
11.0 - 20.0	100.0	100.0
20.0 - 21.0	100.0	100.0

Efficiency

Effective length / Working drilling days

= 21.00m/0.6875 days = 30.55 m/d

Effective length / Total drilling shifts =

= 21.00m/1.375 shifts = 15.27 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	11.00 m	10.00 m			21.00 m
Core length	0.00 m	10.00 m			10.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	11.00 m	52.38%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-39)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	24 Aug., '02 ~ 24 Aug., '02	0.13	0.13	—	0.5	1.25
Drilling	24 Aug., '02 ~ 25 Aug., '02	1.09	Drilling : 1.09	—	4.375	10.938
			Accident: 0.00	—	0	0
Dismount	25 Aug., '02 ~ 25Aug., '02	0.03	0.03	—	0.125	0.3125
Total	24 Aug., '02 ~ 25 Aug., '02	1.25	1.25	—	5	12.5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	12.00 m
Prolongation	-	Core length	3.00 m
Effective length	15.00 m	Core recovery	100.0 %

Working hours			
Drilling	12.0 hrs	68.6%	42.9%
Supplemental drilling work	5.5 hrs	31.4%	19.6%
Recovery from accident	-	-	-
Subtotal	17.5 hrs	100%	62.5%
Preparation/setting up	2.0 hrs	-	7.1%
Dismount/mobilization	0.5 hrs	-	1.8%
Transportation of water	8.0 hrs	-	28.6%
Others			
Total	28.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 12.0	None core	None core
12.0 - 15.0	100.0	100.0

Efficiency
Effective length / Working drilling days
= 15.00m/1.09 days = 13.71 m/d
Effective length / Total drilling shifts =
= 15.00m/2.19 shifts = 6.86 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	12.00 m	3.00 m			15.00 m
Core length	0.00 m	3.00 m			3.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	12.00 m	80.00%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-40)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	25 Aug., '02 ~ 25 Aug., '02	0.03	0.03	—	0.125	0.3125
Drilling	25 Aug., '02 ~ 25 Aug., '02	0.69	Drilling : 0.69	—	2.75	6.875
			Accident: 0.00	—	0	0
Dismount	25 Aug., '02 ~ 25Aug., '02	0.03	0.03	—	0.125	0.3125
Total	25 Aug., '02 ~ 25 Aug., '02	0.75	0.75	—	3.0	7.5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	11.00 m
Prolongation	-	Core length	3.50 m
Effective length	14.50 m	Core recovery	100.0 %

Working hours			
Drilling	12.0 hrs	68.6%	42.9%
Supplemental drilling work	5.5 hrs	31.4%	19.6%
Recovery from accident	-	-	-
Subtotal	17.5 hrs	100%	62.5%
Preparation/setting up	2.0 hrs	-	7.1%
Dismount/mobilization	0.5 hrs	-	1.8%
Transportation of water	8.0 hrs	-	28.6%
Others			
Total	28.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 11.0	None core	None core
11.0 - 14.5	100.0	100.0

Efficiency
Effective length / Working drilling days
= 14.50m/0.69 days = 21.09 m/d
Effective length / Total drilling shifts =
= 14.50m/1.375 shifts =10.55 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mmϕ			Total
Drilling length	11.00 m	3.50 m			14.50 m
Core length	0.00 m	3.50 m			3.50 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mmϕ	11.00 m	75.86%	100%

Appendix 3-2 Miscellaneous Results of Individual Drillhole (MJBKE-41)

	Survey period		Breakdown of period		Total workers	
	Period	Total days	Working days	No working days	Engineers	Workers
Preparation	26 Aug., '02 ~ 26 Aug., '02	0.03	0.03	—	0.125	0.3125
Drilling	26 Aug., '02 ~ 27 Aug., '02	0.69	Drilling : 0.69	—	2.75	6.875
			Accident: 0.00	—	0	0
Dismount	27 Aug., '02 ~ 27Aug., '02	0.03	0.03	—	0.125	0.3125
Total	26 Aug., '02 ~ 27 Aug., '02	0.75	0.75	—	3	7.5

Drilling Length			
Programmed length	-	Overburden, sand & gravel, Quarternary	12.00 m
Prolongation	-	Core length	9.00 m
Effective length	18.00 m	Core recovery	100.0 %

Working hours			
Drilling	6.0 hrs	54.5%	33.3%
Supplemental drilling work	5.0 hrs	45.5%	27.8%
Recovery from accident	-	-	-
Subtotal	11.0 hrs	100%	61.1%
Preparation/setting up	0.5 hrs	-	2.8%
Dismount/mobilization	0.5 hrs	-	2.8%
Transportation of water	6.0 hrs	-	33.3%
Others			
Total	18.0 hrs	-	100%

Core recovery by each 10 meters		
Length (m)	Each (%)	Cumula. (%)
0 - 9.0	None core	None core
9.0 - 10.0	100.0	100.0
10.0 - 18.0	100.0	100.0

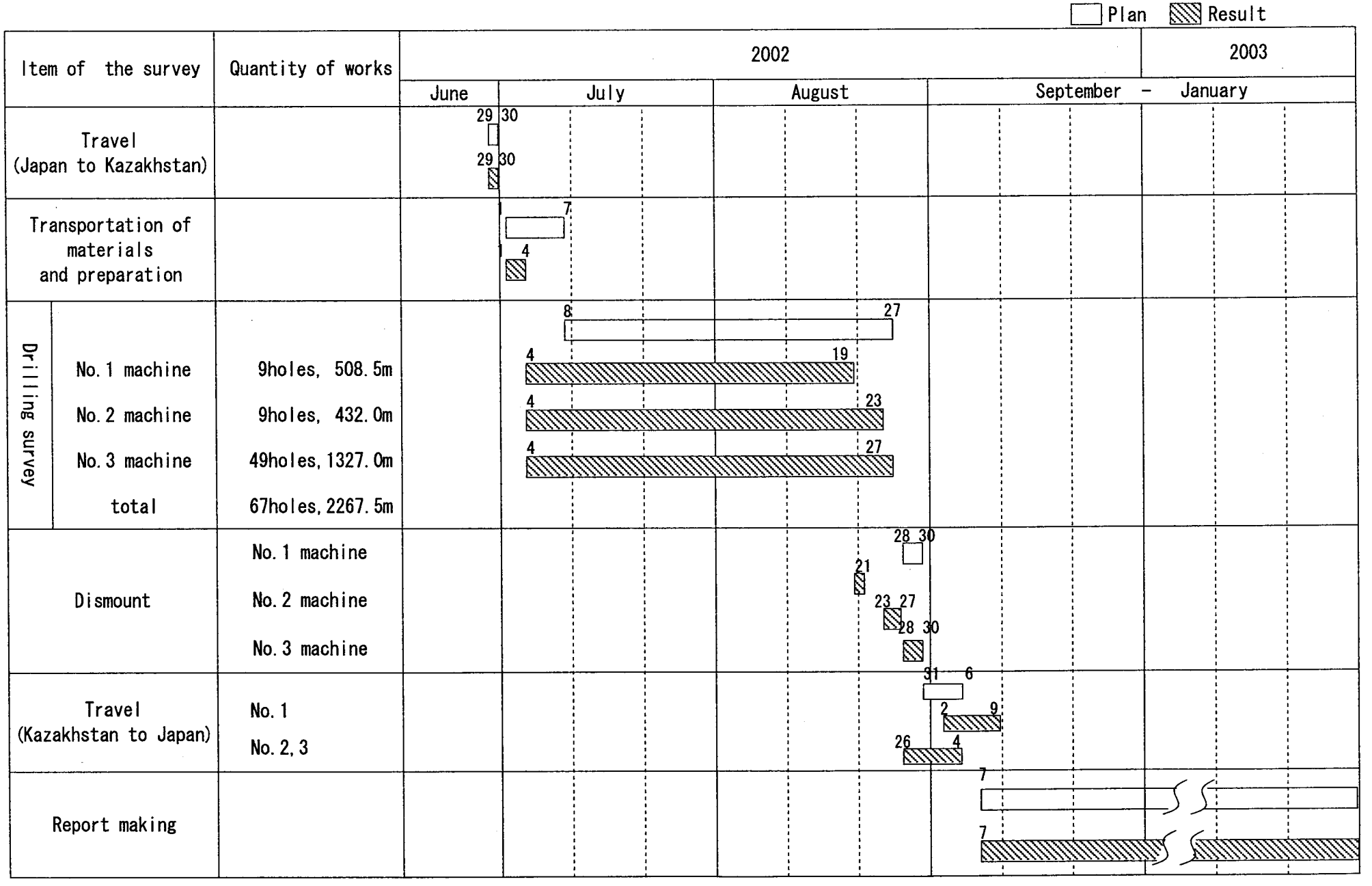
Efficiency
Effective length / Working drilling days
= 18.00m/0.6875 days = 28.18 m/d
Effective length / Total drilling shifts =
= 18.00m/1.375 shifts = 13.09 m/shift

Drilling length by diameter					
Bit diameter	4"TB	92mm ϕ			Total
Drilling length	9.00 m	9.00 m			18.00 m
Core length	0.00 m	9.00 m			9.00 m

Inserted casing pipes			
Inserted length by diameter		Inserted length / Drilling length	Casing recovery
133mm ϕ	10.00 m	55.56%	100%

Appendix 3-3 Progress Record of Drilling

Appendix 3-3 Progress Record of Drilling



THE MINERAL EXPLORATION IN THE KOKPETINSKAYA AREA THE THE REPUBLIC OF KAZFKHSTAN (PHASE III)

Pl. II-2-1 Geological Map of Pre -Tertiary Basement

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
JANUARY 2003

0 2.5 5 kilometers

LEGEND

	Maityub formation	$C_{2-3}mta$	conglomerate, sandstone, siltstone, mudstone
Carboniferous	Bukon formation	C_2bk	conglomerate, sandstone, siltstone, mudstone
	Arkalyk formation	$C_1V_{2-3}ar$	shale, sandstone, conglomerate /magnetite rich sandstone
Permian to Jurassic	Karaotkel batholith	gktIV	gabbro
		gktIII	granite
		gktII	syenite
		gktI	granitoids

THE MINERAL EXPLORATION IN THE KOKPETINSKAYA AREA THE THE REPUBLIC OF KAZFKHSTAN (PHASE III)

Pl.II-2-2 Isopack of weathering crust and Cainozoic Deposit

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
JANUARY 2003

Basement Rock Outcrop

Isopack of Weathering Crust and Cainozoic Deposit

- 10m
- 20m
- 30m
- 40m

Ore Reserve Block

Potential

Granitoids

⑤ Recommended Area

0 5 10km

THE MINERAL EXPLORATION
IN
THE KOKPETINSKAYA AREA
THE THE REPUBLIC OF KAZFKHSTAN
(PHASE III)

Pl. II-2-3Structural Countour Map of Pre -Tertiary Basement

JAPAN INTERNATIONAL COOPERATION AGENCY
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JANUARY 2003

LEGEND

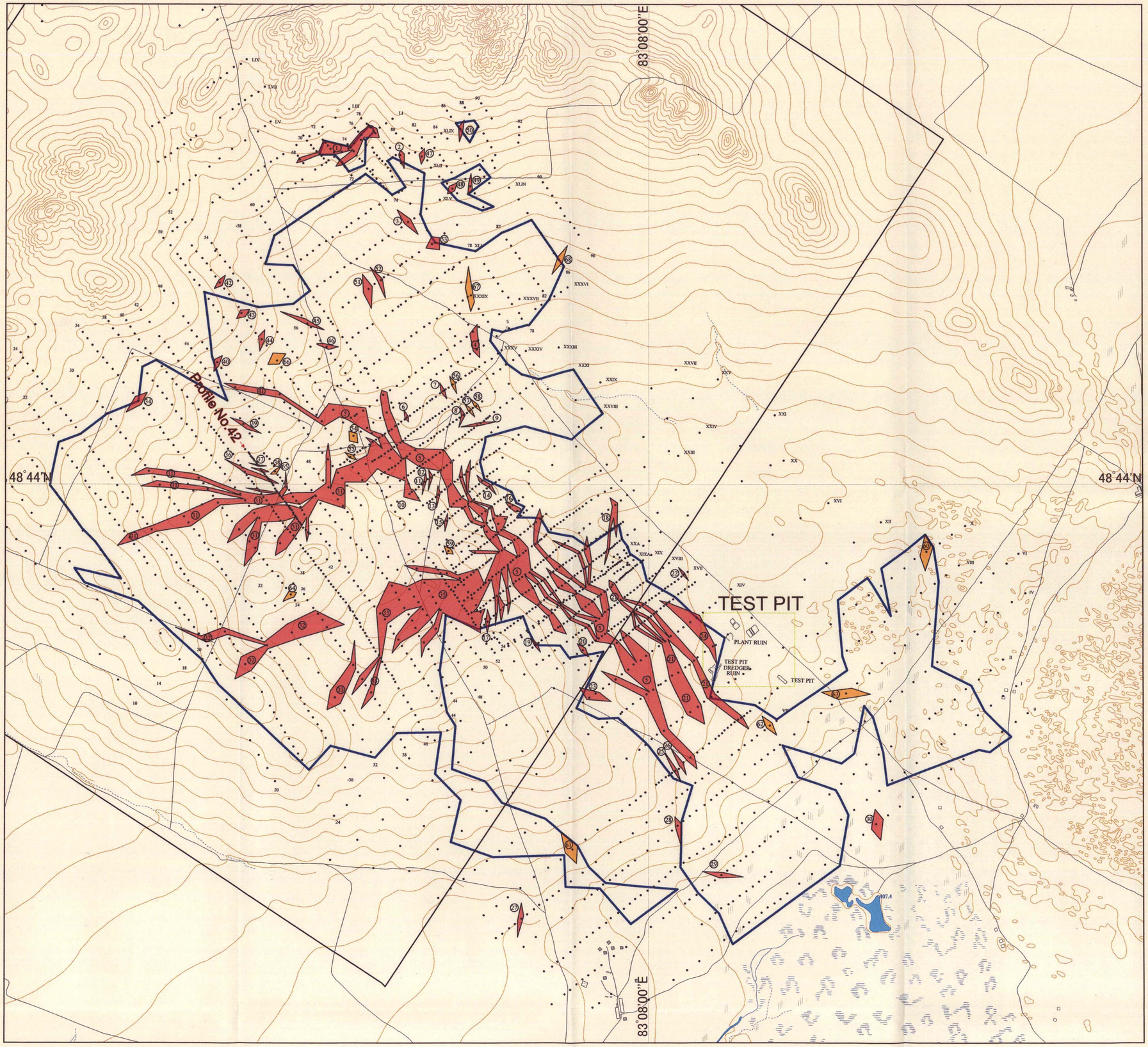
- 399
- 400 - 449
- 450 - 499
- 500 - 549
- 550 - 599
- 600 - 649
- 650 - 699
- 700 - 749
- 750 -

0 2.5 5 7.5 10 kilometers

THE MINERAL EXPLORATION IN THE KOKPETINSKAYA AREA THE THE REPUBLIC OF KAZFKHSTAN (PHASE III)

Pl. II-2-4 Ore Reserves Block of the Karaotokel Deposit

JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
JANUARY 2003



LEGEND

- Drilled Hole
- 42 Profile No.
- ⑤ Ore Block No.
- Ore reserve calculated in 1991
- Ore reserve calculated in 2002 Eluvial (Cut off >50kg/m³)
- Ore reserve calculated in 2002 Alluvial (Cut off >50kg/m³)

BLOCK NUMBER	BLOCK VOLUME (m³)	ILMENITE GRADE (kg/m³)	ZIRCON GRADE (kg/m³)
1	144,928	153.9	30.1
2	2,550	55.6	12.7
3	12,267	50.1	11.8
4	65,133	69.0	7.0
5	4,487,253	68.0	17.8
6	1,533	70.0	18.0
7	1,133	58.9	11.5
8	9,067	72.5	0.2
9	14,813	57.7	2.1
10	22,750	57.1	7.5
11	3,754	65.8	9.2
12	5,171	75.8	10.0
13	975	61.1	11.7
14	4,004	58.8	11.2
15	2,708	98.4	13.1
16	2,729	55.0	8.2
17	3,867	56.1	13.2
18	15,963	54.3	9.2
19	4,667	58.9	16.2
20	19,742	69.6	11.8
21	577,938	71.7	13.6
22	4,667	62.0	13.6
23	28,158	79.9	19.0
24	141,158	32.4	5.6
25	9,467	69.1	12.9
26	4,000	76.5	22.1
27	4,167	50.1	10.8
28	4,167	50.1	10.6
29	18,375	58.8	14.0
30	28,688	60.5	9.8
31	1,918,634	71.8	11.0
32	233,327	75.2	10.6
33	55,910	74.9	12.6
34	11,783	50.2	8.2
35	1,846,450	96.4	16.7
36	15,183	115.9	15.4
37	850	163.7	5.0
38	650	52.1	2.5
39	7,333	98.6	0.8
40	4,800	59.7	6.2
41	115,250	59.4	10.2
42	14,750	71.0	11.8
43	2,833	107.1	14.4
44	2,667	72.3	11.5
45	9,642	62.5	0.9
46	2,050	54.8	5.3
47	1,833	71.7	18.2
48	1,233	87.2	22.1
49	3,000	73.3	14.8
50	2,250	100.3	2.4
51	13,867	52.4	1.7
52	20,000	57.3	3.7
53	7,500	54.3	3.5
54	7,350	51.2	8.2
55	1,625	84.7	11.2
58	1,000	55.7	10.5
57	9,667	62.9	0.3
58	4,600	50.0	0.6
59	1,013	63.0	9.1
60	16,000	64.8	0.5
61	8,528	68.7	0.5
62	27,100	52.5	0.8
63	27,600	52.0	4.3
64	5,542	77.4	0.8
65	1,200	62.1	2.4
66	17,750	58.8	1.8
67	7,425	50.1	4.3
68	8,417	52.9	1.2
Grand Total	9,878,301	74.3	13.0