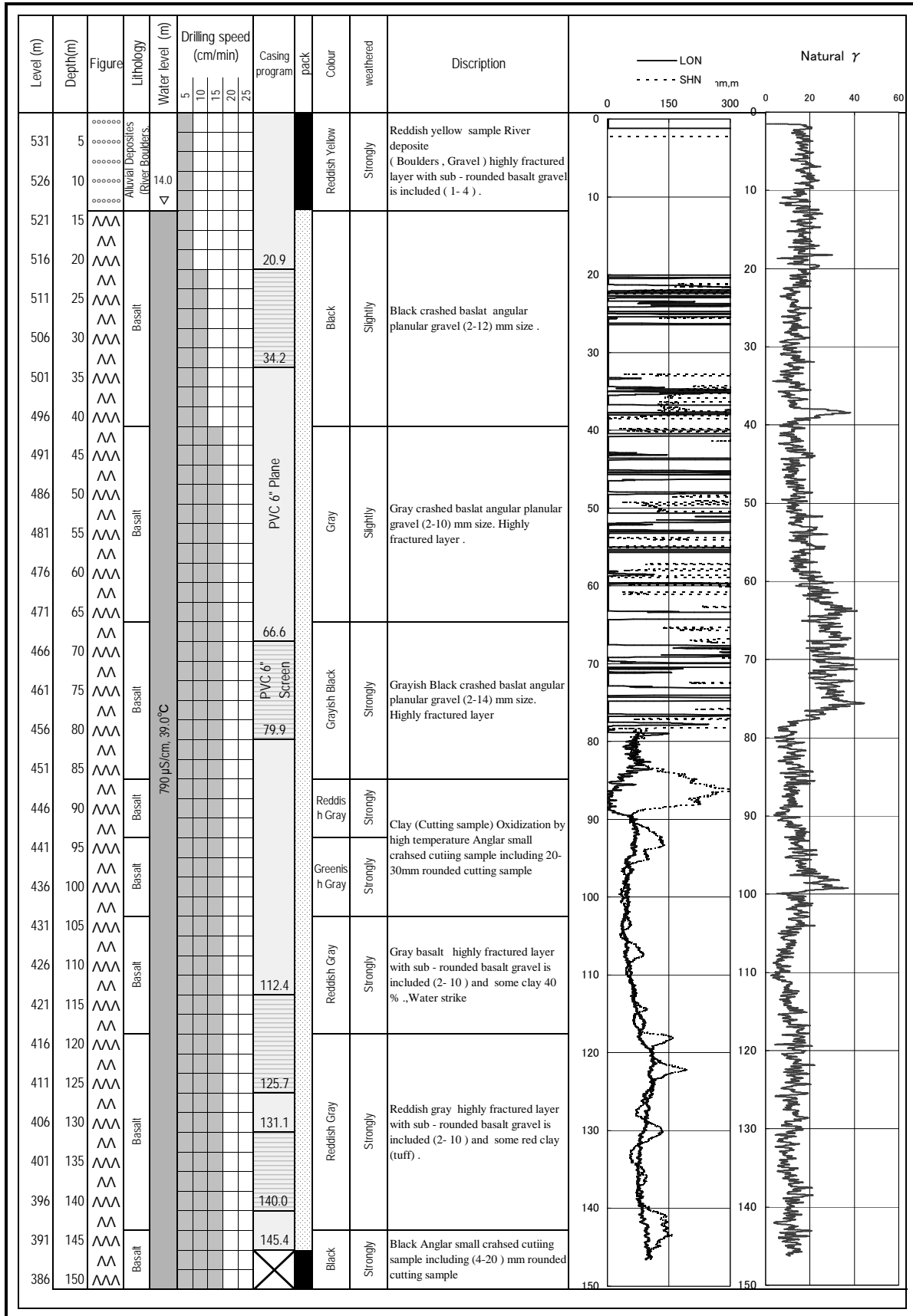


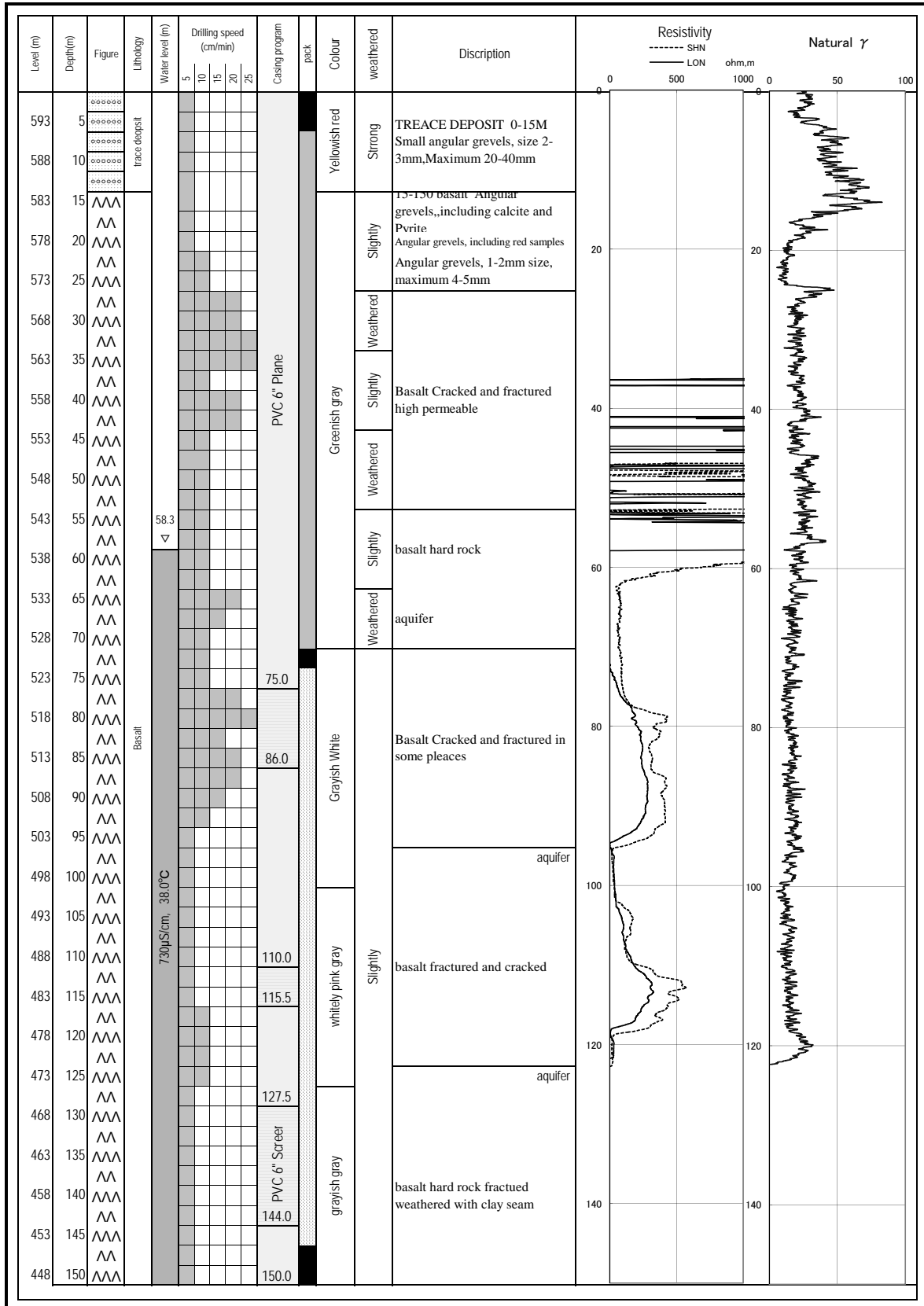
Drilling BH JW-8
Coordinates: 11.08629N, 42.40719E

Date: 2010/10/14~15
Village name: AFKA ARRABA
Altitude: 536m



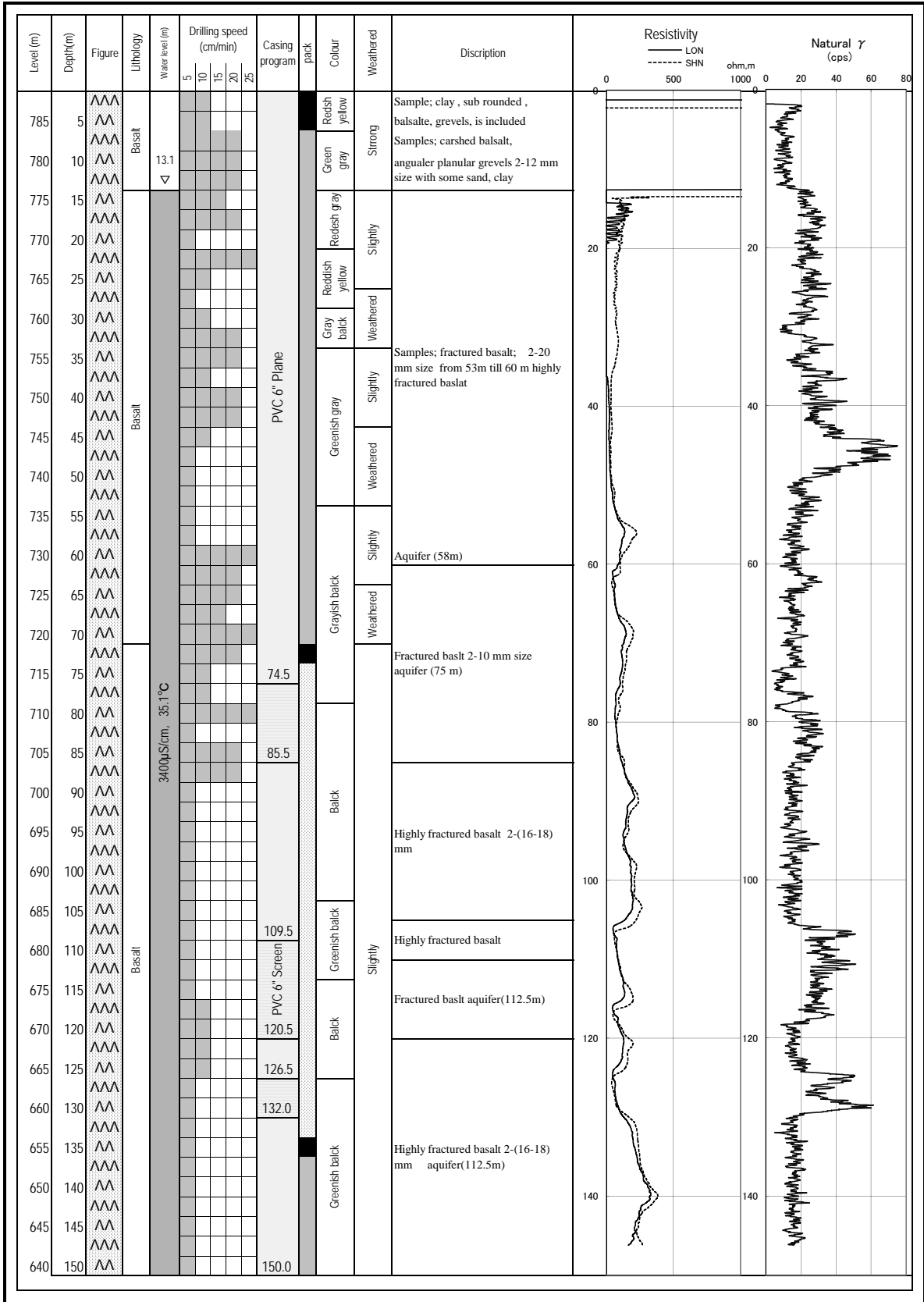
Drilling BH JW-9
 Coordinates: 11.21184N, 42.67193E

Date: 2010/9/29~10/1
 Village name: HAMBOUCTA
 Altitude: 598m



Drilling BH JW-10
 Coordinates: 11.09704N, 42.65063E

Date: 2010/10/3~5
 Village name: GUELLILE
 Altitude: 790m



SUMMARY OF WELL CONDITION

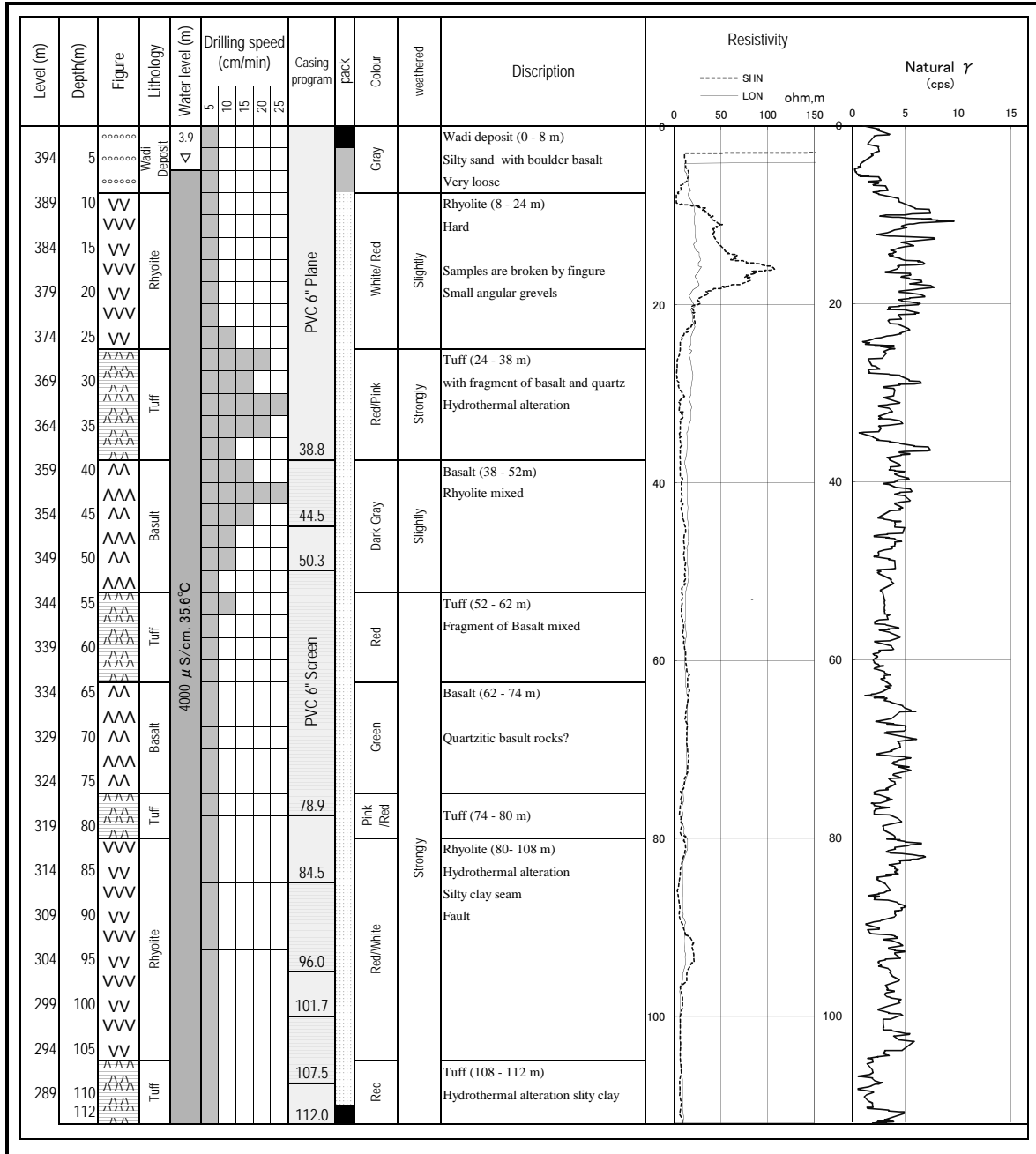
LOCATION: MIDGARRA

DATE: 20-Aug-10

	GEO MARK	LITHOLOGY	WATER LEVEL	SUMMARY OF WATER PUMP TEST
0		0-8m Wadi Deposit sand rich gravel with boulder	S.W.L= 3.9	5 STEP TEST Not done
	^^	8-112m Basalt		
	^^^	Weathered and hydrothermal alteration lava		24 HOURS CONTINUOUS UP LIFT UPLIFT Q= 6.7 L/S TOTAL Q= 578.9 M ³ /24 HOURS DRAW DOWN=26.4M TRANSMISIVITY=13.2M ² /DAY
	^^	High permeability	DWWL= 30.3	
50	^^^	24-38m		
	^^^	52-62m		
	^^	74-80m		RECOVERY TEST RECOVERY TIME=160 MIN TRANSMISIVITY=8.1M ² /DAY
	^^^	Tuff Hydrothermal alteration		
	^^			
	^^^	80--108m		WATER QUALITY EC=4,310 µS/cm PH=7.1 TEMPERATURE=35.6°C
	^^	Rhyolite		
	^^^	Red with white fragment		
	^^	Silty clay seam		
100	^^^	108-112m		
	^^	Red tuff		
	^^^	Hydrothermal alteration		
112	^^			

Drilling BH JW-11
 Coordinates: 11.16117N, 42.96377 E

Date: 2010/7/23~27
 Village name: MIDGARRA
 Altitude: 399m



SUMMARY OF WELL CONDITION

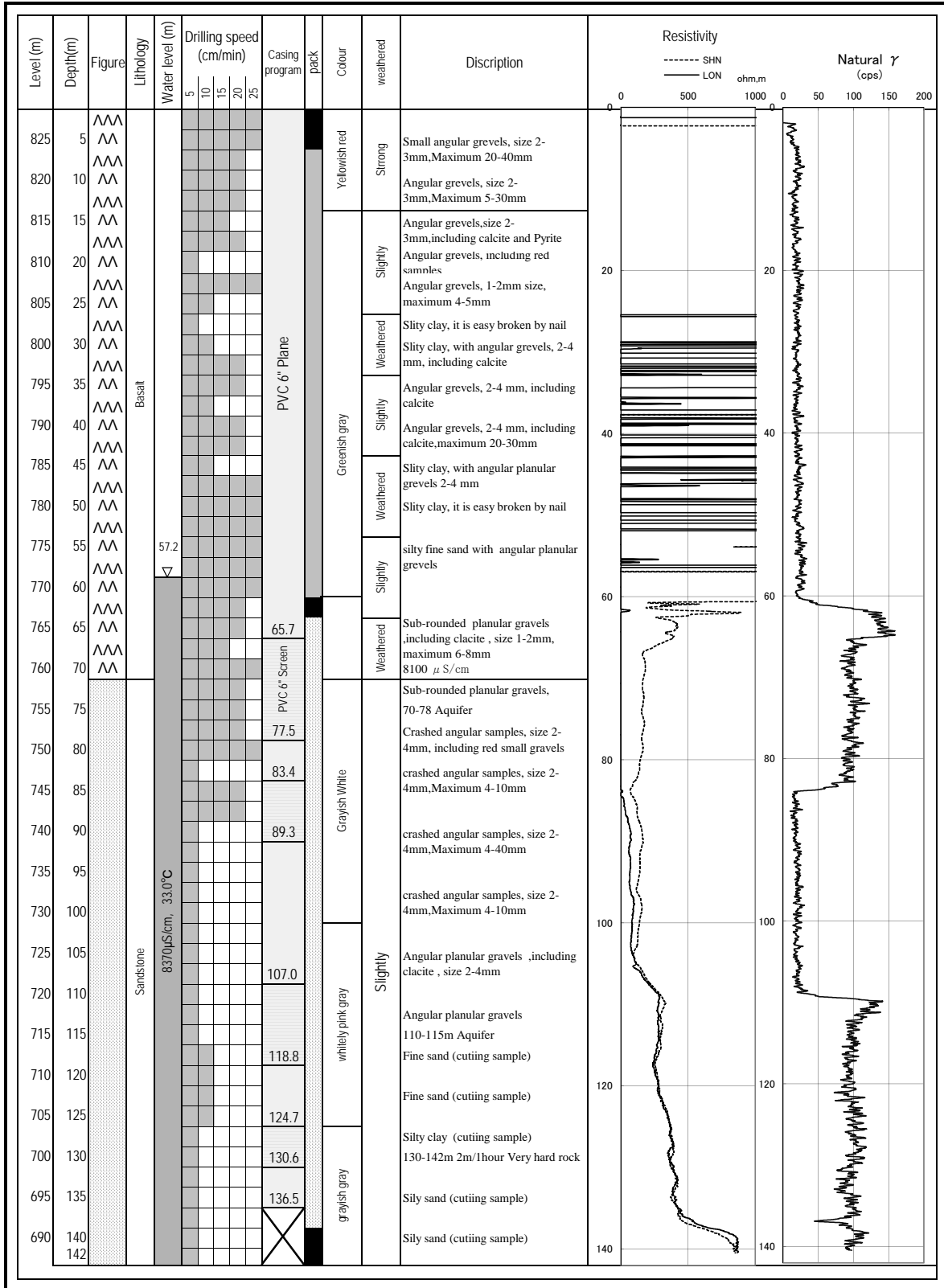
LOCATION: OUARABALEI

DATE: 17-Aug-10

		GEO MARK	LITHOLOGY	WATER LEVEL	SUMMARY OF WATER PUMP TEST
0		^^^	0-70m		<p>5 STEP TEST</p> <p>Not done</p> <p>24 HOURS CONTINUOUS UP LIFT</p> <p>UPLIFT Q= 4 L/S TOTAL Q= 345.6 M³ / 24 HOURS DRAW DOWN=59.05M TRANSMISIVITY=3.0M²/DAY</p> <p>RECOVERY TEST</p> <p>RECOVERY TIME= 90 MIN TRANSMISIVITY=2.5M²/DAY</p> <p>WATER QUALITY</p> <p>EC=8,370 μ S/cm PH= TEMPERATURE= 33.0°C</p>
		^^	Basalt		
		^^	Weathered		
		^^	cracked and		
		^^	fractured into		
		^^	fragments		
		^^			
		^^	Porous partly	S.W.L= 31.1	
		^^			
		^^	Scoria-like		
		^^			
		^^	High permeability		
		^^			
		^^	<u>aquifer</u> 65-70m		
50		^^	70-142m		
		^^	Sandstone		
		^^	with minoy mudstone		
		^^	louse and soft		
		^^			
		^^	High permeability	DWWL= 90.2	
		^^			
		^^	Partly bearing		
		^^	salty material		
100		^^			
		^^			
142		^^			

Drilling BH JW-12
 Coordinates: 11.08918N, 42.76075E

Date: 2010/7/27~29
 Village name: OUARABALEI
 Altitude: 830m



SUMARRAY OF WELL CONDITION

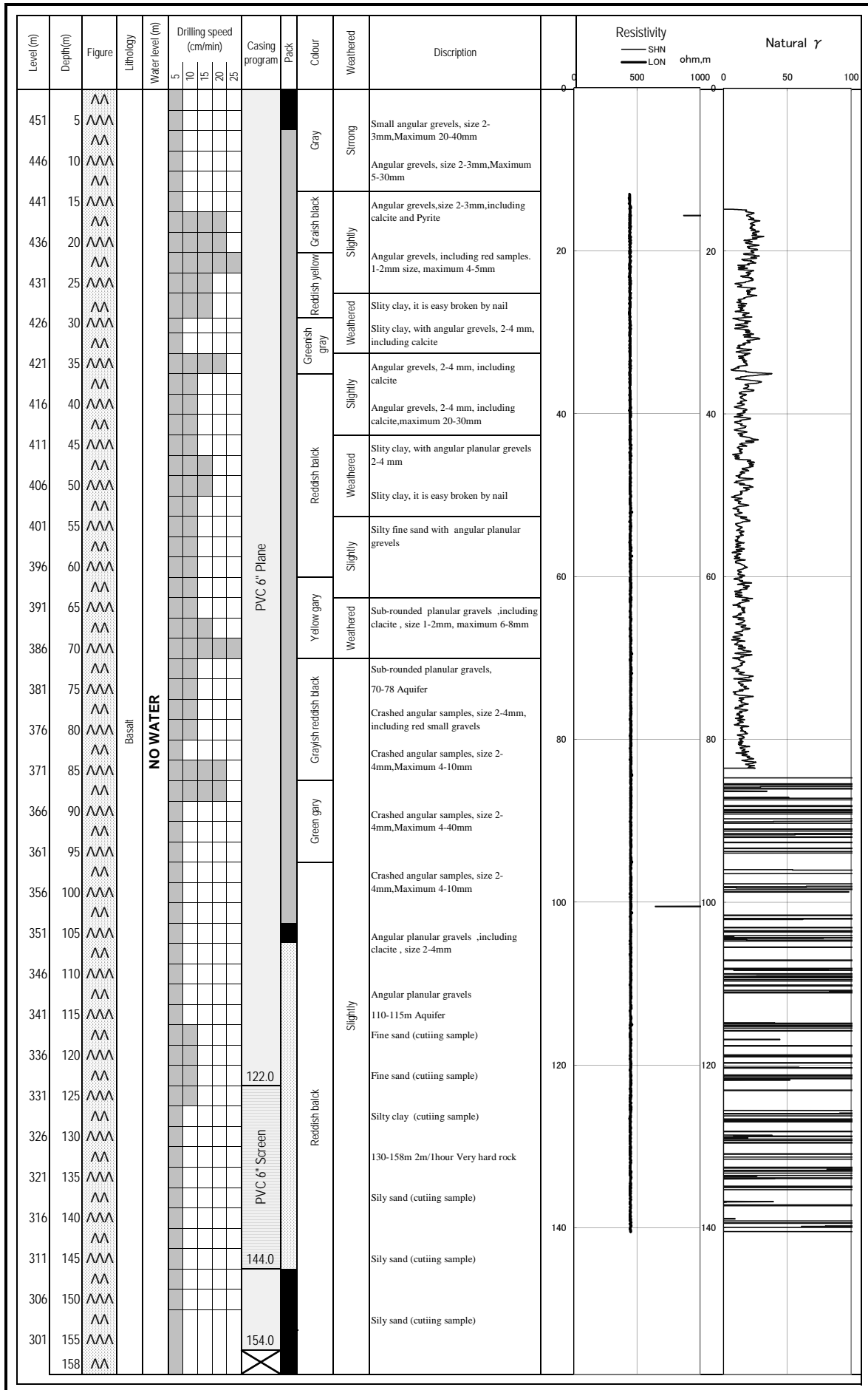
LOCATION: HILBAHEY

DATE: 10-Oct-10

	GEO MARK	LITHOLOGY	WATER LEVEL	SUMMARY OF WATER PUMP TEST
0		0-12m Gravel boulder		
	^^^	12-158m		<u>5 STEP TEST</u>
	^^	Basalt lava		NO WATER
	^^^	Typical lava hard and tight rock		
	^^			
	^^^	Cracked is rare		<u>24 HOURS CONTINUOUS UP LIFT</u>
	^^			NO WATER
50	^^^	Weathered in some plaeces		
	^^			
	^^^	Fresh locally fractured		<u>RECOVERY TEST</u>
	^^			NO WATER
	^^^			
	^^			
	^^^			<u>WATER QUALITY</u>
100	^^			NO WATER
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
150	^^^			
	^^			
158	^^^			

Drilling BH JW-13
 Coordinates: 11.4774N, 42.85307E

Date: 2010/10/6~10
 Village name: HILBAHEY
 Altitude: 456m



SUMMARY OF WELL CONDITION

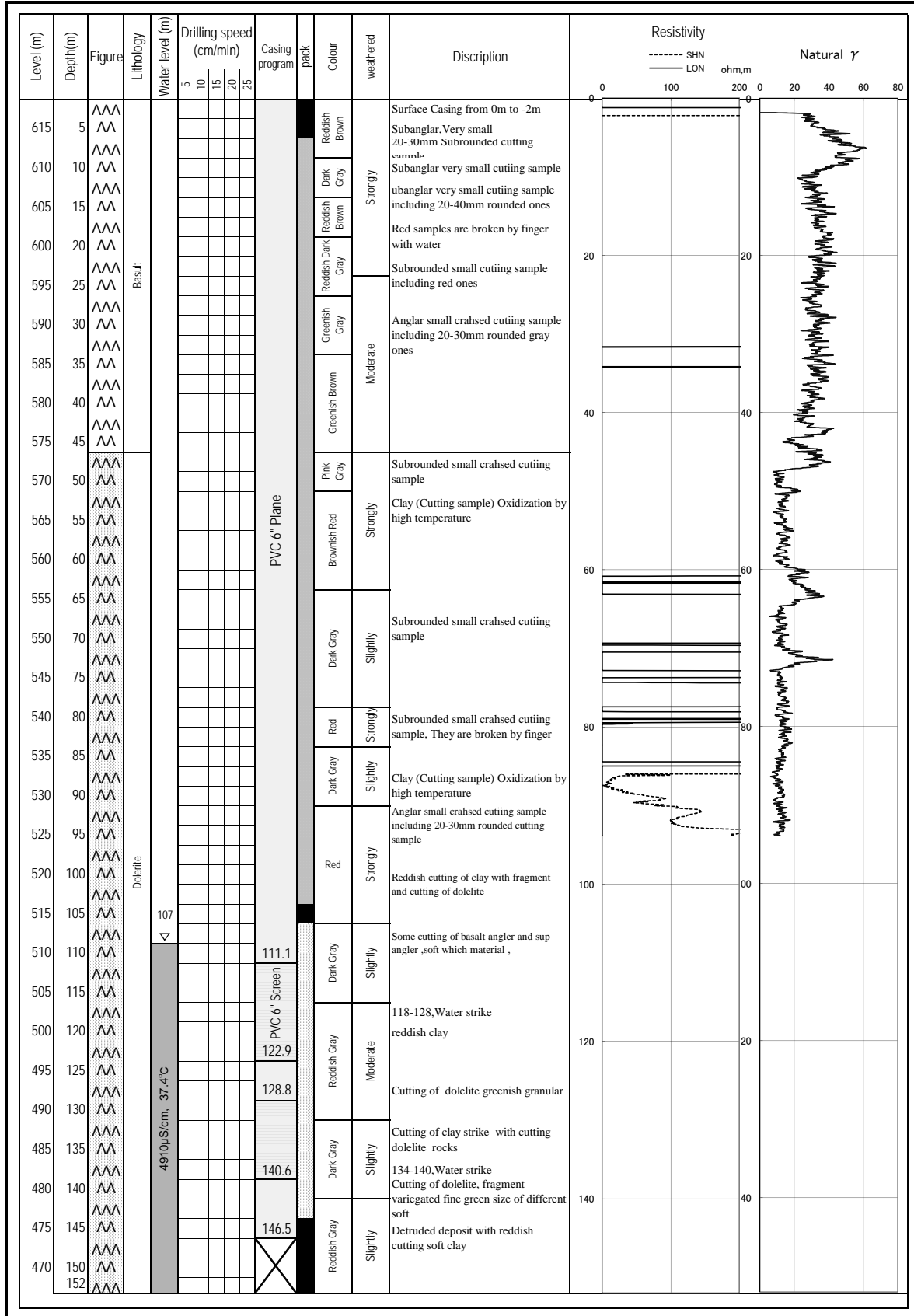
LOCATION: PETIT BARA

DATE: 4-Aug-10

	GEO MARK	LITHOLOGY	WATER LEVEL	SUMMARY OF WATER PUMP TEST
0	^^	0--150m		<p><u>5 STEP TEST</u></p> <p>Not done</p> <p><u>24 HOURS CONTINUOUS UP LIFT</u></p> <p>UPLIFT Q= 7 L/S TOTAL Q= 604.8 M³ / 24 HOURS DRAW DOWN=0.86M TRANSMISIVITY=460.6M²/DAY</p> <p><u>RECOVERY TEST</u></p> <p>RECOVERY TIME= 45 MIN TRANSMISIVITY=407.4M²/DAY</p> <p><u>WATER QUALITY</u></p> <p>EC=4,910 μ S/cm PH=7.33 TEMPERATURE= 37.4°C</p>
	^^^	Basalt Lava		
	^^	Hard and tight rock		
	^^^	partially only cracked		
	^^	Low permeability		
	^^^			
	^^			
	^^^			
	^^	0--40m		
	^^^	Weathered and fractured		
	^^	with clay seam		
	^^^			
	^^			
50	^^^	50--55m		
	^^	Weathered with clay		
	^^^			
	^^	60--65m		
	^^^	Weathered reddish		
	^^	in color		
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
100	^^^	100m below		
	^^	Cracked and fractured		
	^^^	High permeability		
	^^		S.W.L= 110.9	
	^^^		DWWL= 111.76	
	^^			
	^^^	118m below		
	^^	Aquifer rich		
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
150	^^^			
152	^^			

Drilling BH JW-14
 Coordinates: 11.35762E, 42.78563 E

Date: 2010/7/16~22
 Village name: PETIT BARA
 Altitude: 620m



SUMMARY OF WELL CONDITION

LOCATION: PK30

DATE: 3-Oct-10

	GEO MARK	LITHOLOGY	WATER LEVEL	SUMMARY OF WATER PUMP TEST
0	^^^			
	^^	0-150m		<p><u>5 STEP TEST</u></p> <p>Not done due to short discharge</p> <p><u>CONTINUOUS UP LIFT</u></p> <p>UPLIFT Q= 0.27 L/S TOTAL Q= 0,95m³ / HOUR DRAW DOWN=47.6M TRANSIMISIVITY=0.14M²/DAY</p> <p><u>RECOVERY TEST</u></p> <p>RECOVERY TIME= 130 MIN TRANSIMISIVITY=0.21M²/DAY</p> <p><u>WATER QUALITY</u></p> <p>EC=477 μ S/cm PH=7.3 TEMPERATURE=40.0°C</p>
	^^^	Basalt		
	^^	Typical Lava		
	^^^	Vertical joint developed		
	^^	Hard and tight rock		
	^^^	Slightly cracked		
	^^	Low permeability		
	^^^			
	^^			
	^^^	0--40m		
	^^	Slightly weathered		
	^^^			
	^^			
50	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^		S.W.L= 81.9	
	^^			
	^^^	90m-151m		
	^^	Cracked and fractured		
	^^^	in some places		
	^^			
100	^^^	Low permeability		
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^			
	^^			
	^^^		DWWL= 129.5	
	^^			
	^^^			
	^^			
	^^^			
	^^			
151	^^			

Drilling BH JW-15
 Coordinates: 11.52272N, 42.91245E

Date: 2010/7/11~15
 Village name: PK-30
 Altitude: 323m

