

1. Name and Address of Applicant:
SAN ILDEFONSO WATER DISTRICT
 D. Borja Subd., Poblacion
 San Ildefonso, Bulacan

2. Location of Source:
 Well #3 Spring
 (Barangay, Municipality, Province)
Malibangang, San Ildefonso, Bulacan

3. Location of Diversion Point
 a. Map Sheet No.
 b. Latitude: 15°03'30"
 c. Longitude: 120°56'09"

5. Purpose: (Check as appropriate)
 a. Domestic and Municipal Use
 b. Irrigation
 c. Power generation
 d. Fisheries
 e. Livestock raising
 f. Industrial use, and
 g. Other uses

6. Related Data:
 Area to be irrigated : N.A. hectares
 Crop Type : _____
 Water Duty : 0.0029 lps/ha person
 Population to be served by system : 7000 persons
 Rated Capacity of power plant : N.A. kw.
 Fishpond area : _____ ha.
 Livestock population to be served : N.A. heads
 Annual production _____ (product) : _____ tons (for industrial)

7. Water Availability:

a. Existing MWSS wells within 0.5 km. radius

MWSS Well Number	NAME	Lateral Distance (m)
	<u>N.A.</u>	

b. Existing Wells Within 0.5 km. radius

Water Permit Number	NAME	Amount of water granted (lps)	Lateral Distance (m)
	<u>No Record</u>		

c. Pending Applications within 0.5 km. radius

Water Permit Appl. No.	NAME	Amount of water applied for: (lps)	Lateral Distance (m)
<u>WPA 30399</u>	<u>Alliance Agro (DW2)</u>	<u>not stated</u>	<u>1500</u>

8. Hydrogeological data (Sub-area 1-2509)

Static Water Level <u>23</u> m.	Transmissivity: <u>No Data</u> m ² /d	Specific Capacity <u>4.938</u> lps/m
	Mining Yield: <u>6.669.31</u> lps	Safe yield: <u>4.523.26</u> lps

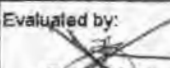
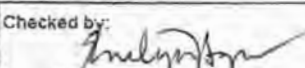
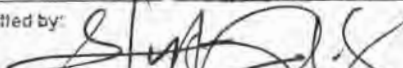
9. Computation for beneficial use requirement: WR = 7000 x 0.0029
WATER REQUIREMENT: 20.3 lps

10. Well Capacity 30.62 lps

11. Prior Appropriation: 37.01 12. Water available for appropriation: 4486.35
 13. Amount of Water Applied for: (lps) 15 lps 14. Amount of Water Recommended for Approval: (lps) 30.62 lps

15. Remarks: (Amount recommended for approval must be equal to either the amount of water available for appropriation, beneficial use requirement, the amount of water applied for or well capacity, whichever is the least).

Per evaluation, the well capacity is 30.62 lps; hence, the same is recommended for approval.

Evaluated by:  ROY ANGELO P. REQUIERME Engineer II	Checked by:  EVELYN V. AYSON Engineer IV	Submitted by:  ATTY. ELEENIO M. BAGALIHOG Chief, Water Rights Division
Date: _____	Date: _____	Date: _____

16. All staff works are completed

Verified correct: 
JESUS G. DE LEON
 Deputy Executive Director

Certified by: 
ATTY. RODOLFO D. MATEO
 Executive Director



REPUBLIC OF THE PHILIPPINES NATIONAL WATER RESOURCES BOARD 8th Floor NIA Bldg., EDSA, Quezon City				WELL LOG RECORD SHEET		
1. NAME OF APPLICANT: SAN ILDEFONSO WATER DISTRICT				25. DEPTH OF EACH LAYER (MBGS)	26. SYMBOLS	27. SHORT DESCRIPTION OF PENETRATED STRATA
2. LOCATION: San Ildefonso, Bulacan		WELL NO.: PTD# 2001-009				
3. MAP NO./SCALE: Lat. 15 03'30"		4. COMPLETION DATE: July 6, 2001				
5. COORDINATES: Long. 120 56'09"		6. GRD. LEVEL (M) MS.L.		0 - 4M		Top soil w/sand, silty
7. DRILLING DEPTH (M): 150 M		8. COMPLETED DEPTH (M): 150 M		4 - 6		Clay
9		FROM: 11 TO: 14		6 - 11		Silt
CASINO AND SCREEN OR PERFORATION SCHEDULE C-CASING S-SCREEN P-PERFORATION	Diarnator (cm):	C/S/F	MIS. BELOW GR. SP	11 - 14		Fine to coarse sand w/clay
	0 - 48M	Blank	87 - 90M	screen 135-138-B	10 - 22	Shale w/ fine sand
	48 - 54	screen	90 - 93	blank 138-141-S	22 - 26	Clay w/ shale
	54 - 66	blank	93 - 99	screen 141-150-B	26 - 31	Limestone with shale
	66 - 69	screen	99 - 105	blank	31 - 38	Clay with shale
	69 - 75	blank	105 - 108	screen	38 - 46	Clay
	75 - 78	screen	108 - 114	blank	46 - 53	Gravel, sand, limestone
	78 - 87	blank	114 - 120	screen	53 - 57	Clay with fine to coarse
10. TYPE OF SCREEN AND PERFORATION: SS screen		132 - 135 screen				sand
11. STATIC BELOW GROUND (m)		DATE	ELEVATION (M) MS.L.	57 - 61		Clay
WATER LEVEL				61 - 67		Gravel, coarse sand
				67 - 78		Clay
12. TEST DISCHARGE (LPS): 21 LPS		13. TEST DRAWDOWN (M): 9 m		78 - 87		Sand, tuff with quartz
		14. TEST DURATION (MIN): 72 hrs.		87 - 95		Clay with tuff
15. TRANSMISSIVITY (SQ.M/DAY):		16. STORATIVITY:		95 - 114		Gravel, coarse sand, Tuff, quartz
17. SPECIFIC CAP (LPS/M.):		18. WATER RIGHT DATE:		114 - 115		Clay
19. WATER RIGHT QUANTITY (LPS):		20. WATER ANALYSES (N):		115 - 117		Gravel, coarse sand, tuff, quartz
21. SIEVE TEST ANALYSES (N):		22. GEOPHYSICAL LOGGING (N):		117 - 146		Clay
23. NAME OF DRILLER: ISLAND ARC DRILLING CORP		NWRB REG. NO.: 0001		146 - 150		Gravel, coarse sand with Clay
24. REMARKS:						

REPUBLIC OF THE PHILIPPINES
NATIONAL WATER RESOURCES BOARD
8th Floor NIA Bldg., EDSA, Quezon City

PUMPING TEST DATA SHEET

1. Region No. 2. Basin/Name Long. 120 56' 09". Well I.D. No. PTD# 2001-009
4. Location: San Ildefonso, Bulacan 5. Local Well No. Malipampang # 3
6. Type of Test. Cons. Q. [] Recovery [] Step drawdown [] 7. Pump Setting (m) 235 ft.
8. Duration From 7/2/01 To 7/3/01 Minutes 72 hrs.
9. Dist. From Pumped Well 10. Casing Dia. 8/10" 11. Description of MP 30 HP
12. Test Data from Pumping Well [] Observation Well [] 13. WL Measured

DATE	HOUR	TIME AFTER THE START OF PUMP	WATER LEVEL (meter) PWL	DRAWDOWN/ RECOVERY(m)	DISCHARGE (lps)	REMARKS
7/2/01	10:25	AM				
		01	23.50		36.16	
		02	23.50		37.17	
		03	23.50		36.20	
		04	23.50		35.30	
		05	23.50		35.44	
		06	23.50		36.63	
		07	23.50		38.16	
		08	24.00		37.17	
		09	24.00		37.80	
		10	24.00		37.24	
		12	24.00		36.03	
		14	24.00		35.21	
		16	24.00		37.17	
		18	24.00		36.48	
		20	24.00		36.10	
		25	24.00		37.16	
		30	24.00		36.49	
		35	24.00		36.50	
		40	24.00		37.01	
		45	24.00		36.80	
		50	24.00		36.70	
		55	24.00		36.60	
	11:25AM	60	23.50		36.49	
		70	24.00		34.33	
		80	24.00		34.48	
		90	24.00		36.42	
		100	24.50		36.65	
	12:25AM	120	24.50		36.56	
		140	24.50		35.77	
		160	24.50		36.23	
	1:25PM	180	25.00		36.10	
		200	25.00		35.08	
		220	25.00		34.12	
	2:25PM	240	25.00		35.27	
		270	25.00		34.78	
	3:25PM	300	25.50		33.44	

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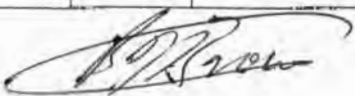
REPUBLIC OF THE PHILIPPINES NATIONAL WATER RESOURCES BOARD 8 th Floor NIA Bldg., EDSA, Quezon City			PUMPING TEST DATA SHEET			
1. Region No.		2. Basin/Name		3. Well I.D. No.		
4. Location:				5. Local Well No.		
6. Type of Test, Cons. Q. <input type="checkbox"/> Recovery <input type="checkbox"/> Step drawdown <input type="checkbox"/> 7. Pump Setting (m)						
8. Duration		From To		Minutes		
9. Dist. From Pumped Well			10. Casing Dia.		11. Description of MP	
12. Test Data from Pumping Well <input type="checkbox"/> Observation Well <input type="checkbox"/>				13. WL Measured		
DATE	HOUR	TIME AFTER THE START OF PUMP	WATER LEVEL (meter) ^{PWL}	DRAWDOWN/ RECOVERY(m)	DISCHARGE (lps)	REMARKS
		330	25.50		35.97	
	4:25PM	360	25.50		35.02	
		390	26.00		34.72	
	5:25PM	420	26.00		34.07	
		480	26.30		33.61	
		540	26.50		32.75	
		600	26.80		33.61	
		660	26.80		33.45	
		720	26.80		34.54	
		780	27.10		34.42	
		840	27.30		34.76	
		900	27.30		34.64	
		960	27.30		34.43	
		1020	27.30		34.54	
		1080	27.30		34.44	
		1140	27.30		33.05	
		1200	27.30		34.60	
		1260	27.30		33.72	
		1320	27.50		33.89	
		1380	27.50		33.78	
7/03/01	10:25AM	1440	27.50		33.00	
		1500	27.50		31.44	
		1560	27.50		32.78	
		1620	27.50		33.78	
		1680	27.50		33.00	
		1740	27.50		32.25	
		1800	27.50		33.00	
		1860	27.80		32.10	
		1920	27.80		31.39	
		1980	27.80		30.44	
		2040	27.80		31.89	
		2100	27.80		32.10	
		2160	27.80		31.39	
		2220	27.80		31.51	
		2280	27.80		31.50	
		2340	27.80		31.42	
		2400	27.80		32.67	

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REPUBLIC OF THE PHILIPPINES NATIONAL WATER RESOURCES BOARD 8 th Floor NIA Bldg., EDSA, Quezon City	PUMPING TEST DATA SHEET
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1. Region No.		2. Basin/Name		3. Well I.D. No.	
4. Location:				5. Local Well No.	
6. Type of Test. Cons. <input type="checkbox"/> Q. <input type="checkbox"/> Recovery <input type="checkbox"/> Step drawdown <input type="checkbox"/> 7. Pump Setting (m)					
8. Duration		From		To Minutes	
9. Dist. From Pumped Well			10. Casing Dia.		11. Description of MP
12. Test Data from Pumping Well <input type="checkbox"/> Observation Well <input type="checkbox"/> 13. WL Measured					

DATE	HOUR	TIME AFTER THE START OF PUMP	WATER LEVEL (meter) PWL	DRAWDOWN/ RECOVERY(m)	DISCHARGE (lps)	REMARKS
		2460	27.80		32.29	
		2520	27.80		31.93	
		2580	27.80		32.39	
		2640	27.80		31.74	
		2700	27.80		31.69	
		2760	28.50		31.84	
	9:25AM	2820	28.50		32.10	
7/04/01	10:25AM	2880	28.50		31.48	
		3000	28.50		31.48	
		3120	28.50		31.39	
		3240	28.80		31.00	
		3360	29.00		31.84	
		3480	29.00		31.44	
		3600	29.00		31.21	
		3720	29.00		31.20	
		3840	29.20		30.76	
		3960	29.20		31.46	
		4080	29.20		30.86	
		4200	29.20		31.34	
7/05/01	10:25AM	4320	29.20		30.62	72 HRS. FINISH PUMPING



1. Region No. 2. Basin/Name Long. 120 56' 09" Well I.D. No. PTD# 2001-009
 4. Location: San Ildefonso, Bulacan 5. Local Well No. Malipampang # 3
 6. Type of Test. Cons. Q. Recovery Step drawdown 7. Pump Setting (m) 235 ft.
 8. Duration From To Minutes
 9. Dist. From Pumped Well 10. Casing Dia. 11. Description of MP 30 HP
 12. Test Data from Pumping Well Observation Well 13. WL Measured

DATE	HOUR	TIME AFTER THE START OF PUMP	WATER LEVEL (meter)	DRAWDOWN/RECOVERY(m)	DISCHARGE (lps)	REMARKS
R E C O V E R Y -						
7/05/01	10:30AM	01		24.50		
		02		24.40		
		03		24.30		
		04		24.20		
		05		24.10		
		06		24.02		
		07		24.00		
		08		23.97		
		09		23.92		
		10		23.85		
		12		23.81		
		14		23.73		
		16		23.67		
		18		23.61		
		20		23.57		
		25		23.47		
		30		23.39		
		35		23.31		
		40		23.22		
		45		23.16		
		50		23.11		
		55		23.05		
	1 Hr	60		23.00		
		70		22.88		
		80		22.77		
		90		22.68		
		100		22.59		
		110		22.53		
	2 Hrs	120		22.47		
		140		22.30		
		160		22.21		
	3 Hrs	180		22.07		
		200		21.97		
		220		21.90		
	4 Hrs	240		21.74		
		260		21.59		

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REPUBLIC OF THE PHILIPPINES
 NATIONAL WATER RESOURCES BOARD
 8th Floor NIA Bldg., EDSA, Quezon City

PUMPING TEST DATA SHEET

1. Region No. 2. Basin/Name 3. Well I.D. Ho
 4. Location: 5. Local Well Ho
 6. Type of Test Cons. Q. [] Recovery [] Step drawdown [] 7. Pump Setting (m)
 8. Duration From To Minutes
 9. Dist. from Pumped Well 10. Casing Dia. 11. Description of MP
 12. Test Data from Pumping Well [] Observation Well [] 13. WL Measured

DATE	HOUR	TIME AFTER THE START OF PUMP	WATER LEVEL (meter)	DRAWDOWN/ RECOVERY (m)	DISCHARGE (lps)	REMARKS
		280		21.50		
	5 Hrs	300		21.44		
		330		21.27		
	6 Hrs	360		21.15		
		390		21.02		
	7 Hrs	420		20.85		
		450		20.78		
	8 Hrs	480		20.71		
		510		20.65		
	9 Hrs	540		20.58		
		570		20.52		
	10 hrs	600		20.42		
	11 Hrs	660		20.32		
	12 hrs	720		20.25		
	13 Hrs	780		20.15		
	14 Hrs	840		20.05		
	15 Hrs	900		19.95		
	16 Hrs	960		19.84		
	17 Hrs	1020		19.73		
	18 Hrs	1080		19.65		
	19 Hrs	1140		19.60		
	20 Hrs	1200		19.55		
	21 Hrs	1260		19.50		
	22 Hrs	1320		19.46		
	23 Hrs	1380		19.46		
	24 Hrs	1440		19.46		

[Signature]

WATCON, Inc.

Room 315 Phil Social Science Center Bldg.
Commonwealth Avenue, Diliman,
Quezon City, Philippines

Fax Transmission

DATE: JUNE 5, 2001 **TIME:** 11:51 AM
TO: Mr. BARRY BROWN **FAX:** 872-14-01
Island Arc Drilling Corp. **TEL:** 805-5766

FROM: Carlos Perez **PHONE:** 453-82-98
WATCON, Inc. **FAX:** 453-82-98

RE: Borehole Logging of San Idelfonso WD Well

We are forwarding herewith the results of borehole logging of San Idelfonso Well in Barangay Malipangpang, San Idelfonso, Bulacan. Said logging was conducted last June 4, 2001 and the description of samples and recommended locations of screens are as follows:

DESCRIPTION OF SAMPLES

<u>DEPTH (M BGL)</u>	<u>DESCRIPTION OF SAMPLE</u>
0 - 4	TOP SOIL W/ SAND, SILTY
4 - 6	CLAY
6 - 11	SILT
11 - 14	FINE TO COARSE SAND W/ CLAY
14 - 22	SHALE W/ FINE SAND
22 - 26	CLAY W/ SHALE
26 - 31	LIMESTONE W/ SHALE
31 - 38	CLAY W/ SHALE
38 - 46	CLAY
46 - 53	GRAVEL, SAND, LIMESTONE
53 - 57	CLAY W/ FINE TO COARSE SAND
57 - 61	CLAY
61 - 67	GRAVEL, COARSE SAND
67 - 78	CLAY
78 - 87	SAND, TUFF W/ QUARTZ
87 - 95	CLAY W/ TUFF
95 - 114	GRAVEL, COARSE SAND / TUFF, QUARTZ
114 - 115	CLAY



115 - 117

NO SAMPLE (GRAVEL, COARSE SAND / TUFF, QUARTZ ?)

117 - 146

CLAY

146 - 150

GRAVEL, COARSE SAND W/ CLAY

RECOMMENDED LOCATIONS OF SCREENS

DEPTH (M BGL)

LENGTH (METERS)

48 - 54

6

66 - 69

3

75 - 78

3

87 - 90

3

93 - 99

6

105 - 108

3

114 - 120

6

132 - 135

3

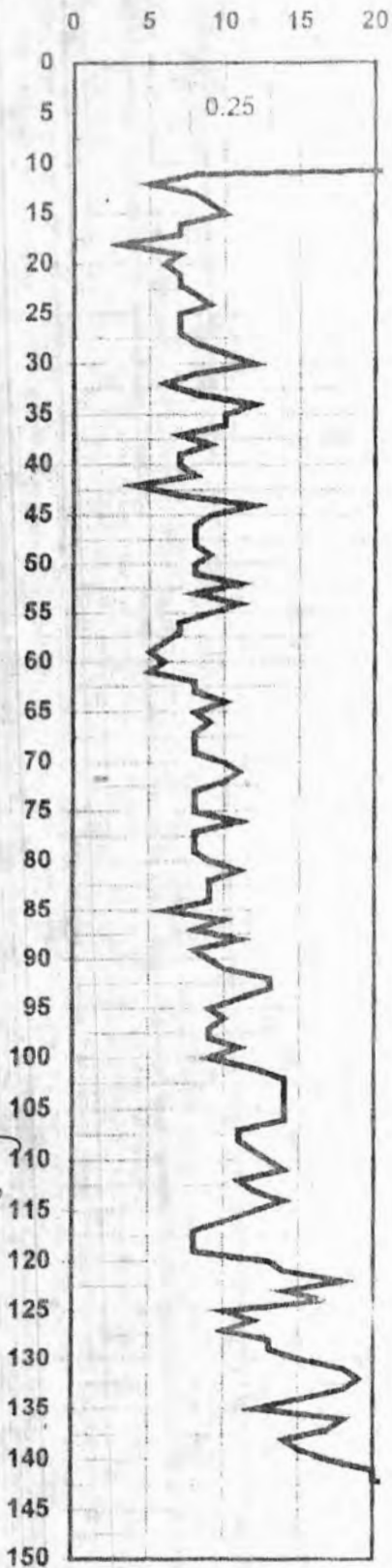
138 - 141

3

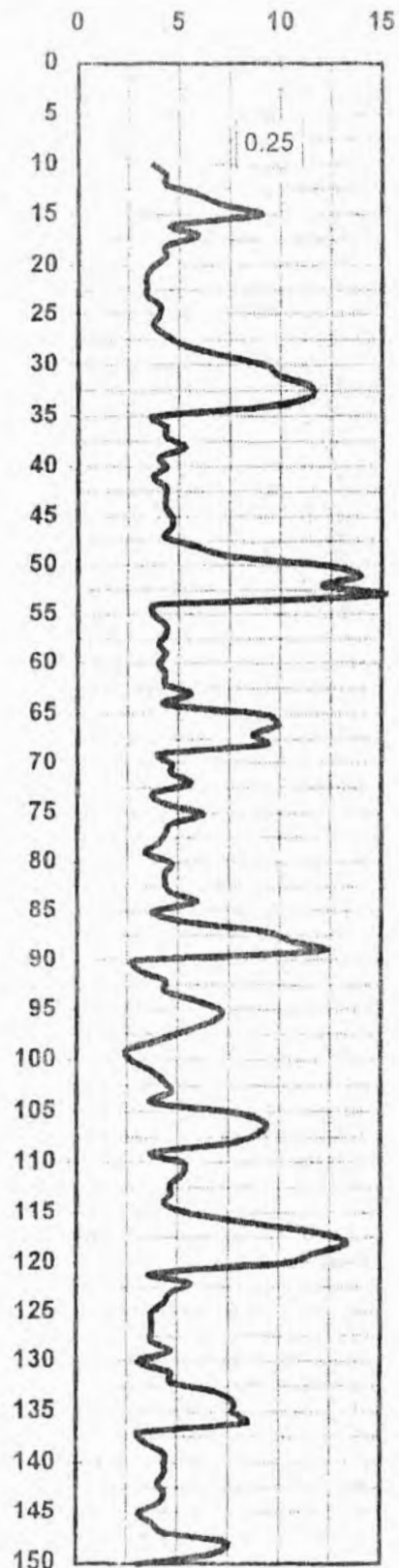
Thank you and best regards.



Self Potential (millivolts)



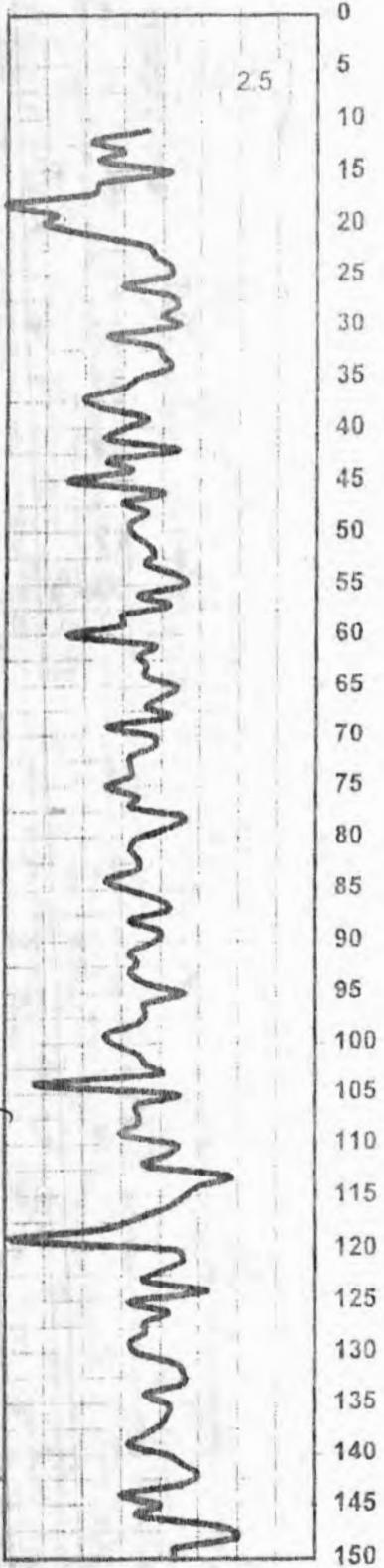
Resistivity (ohm-meter)



Signature

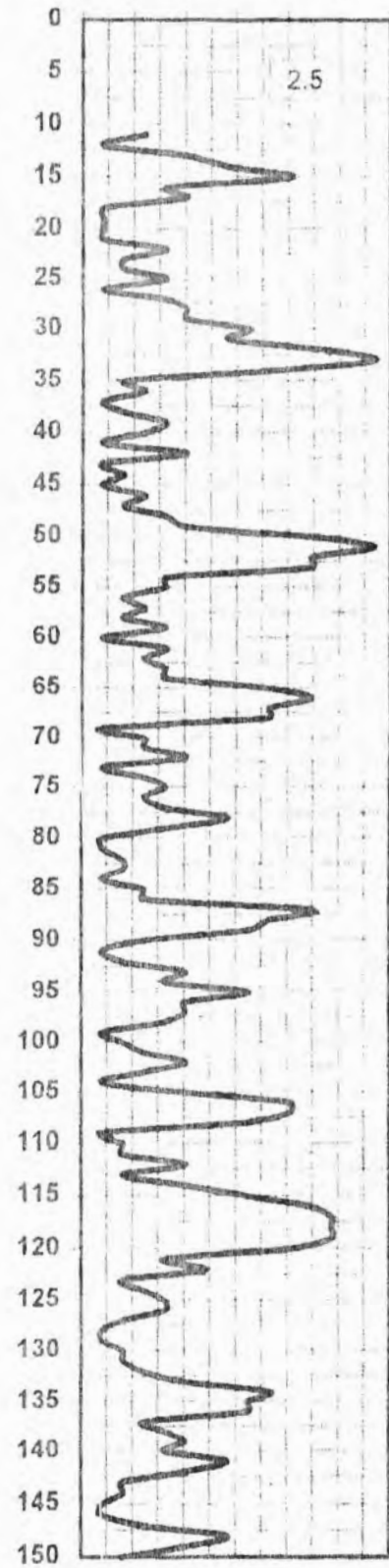
Self Potential (millivolts)

40 30 20 10 0



Resistivity (ohm-meter)

0 10 20 30 40 50 60



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B. Brown