GEOLOGICAL AND GEOCHEMICAL DATA FOR SEDIMENT AND PORE WATER SAMPLES FROM THE NORTHEASTERN PACIFIC OCEAN, OFF THE COAST OF CAPE MENDOCINO, CALIFORNIA

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ABSTRACT

This report includes geological and chemical data that were compiled for sediment and pore water analyses of cores collected from abyssal depths off Cape Mendocino, California. The cores were obtained on a joint program with the United States using the vessel R.V. Wecoma. Sediment sample analyses included sediment colour, mean grain size, water content, organic carbon, total carbon, total metals (Ca, Si, Al, Fe, Mn, Zn, Cu, Ni), weak acid leachable metals (Fe, Mn, Zn, Cu), and the reducible fraction of metals (Fe, Mn, Zn, Cu). Pore water analyses included major cations (Na, Mg, Ca, K), nutrients (silicate, nitrate, nitrite, phosphate) and trace metals (Mn, Fe, Zn, Cu, Ni, Cd), and free hydrogen ion, electrons and sulfide ion.

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INTRODUCTION

A 100 km square area of the sea floor off Cape Mendocino, California has been studied for a number of geological and chemical parameters (Fig. 1a and 1b). Box, gravity, and piston core samples were collected from the Oregon State University research vessel R.V. Wecoma. This report contains the analytical results of ship-board observations and of laboratory geochemical analyses for both sediment and pore water samples. The samples were collected at 4 locations within the study area. A summary of these data are reported in Cranston et al. (1981). Other data relating to the cruise are given in Heath (1981a and b).

FIELD METHODS

Subsampling

A refrigerated container laboratory was used for core subsampling and storage. Sections of cores were extruded in a nitrogen flushed glove box at 4°C. Core descriptions were completed prior to geochemical subsampling. Colour descriptions were referenced to the "Munsell color system" and HUE, VALUE and CHROMA were determined using Munsell soil colour charts. Portions of each subsample were taken for shipboard electrochemical analyses (pH, pE and pS). One hundred to 200 ml of wet sediment from each sampling interval (1 to 10 cm) was submitted to a N_2 pressure of 3 bars to extract pore water. A set of 12 pressure containers were used simultaneously. Ten to 50 ml of filtered pore water was collected, depending on the water content and the amount of sediment.

Dissolved sulfate, total alkalinity and pH were determined immediately on a 2 ml portion of pore water. Nutrient subsamples were frozen and stored for autoanalyses at Oregon State University. Other allequots of

pore water subsamples were returned to our laboratory at the Bedford Institute of Oceanography and analysed for dissolved transition metals and major cations by atomic absorption spectroscopy. Sediment samples were stored for later analyses of their water content, total and organic carbon, particle size, acid leachable, reducible fraction and total metals.

SHIPBOARD ANALYSES

A 50 g sediment subsample was placed in a N_2 atmosphere at 4°C prior to pH and pE analyses. Sediment pH was determined using a combination pH electrode that was standardized with Palitsch buffer at pH 8.2 (Whitfield, 1969). Reproducibility of ±0.05 pH units was achieved routinely within 2 minutes. A combination platinum electrode, standardized in Zobell solution, was then used in the same sediment samples to determine redox potential as pE. Voltage was recorded over 90 seconds to account for electrode drift. Redox potential was calculated from the potential difference relative to the standard hydrogen electrode. Precision was estimated to be ±0.2 pE units.

A 5 ml sediment subsample was spiked immediately with antioxidant buffer (Frant and Ross, 1970) prior to determining total available sulfide. Total available sulfide was measured using a sulfide specific ion electrode. The electrode detection limit was 10^{-6} M or pS = 6.0 and the precision was ±0.2 pS units.

Total alkalinity (ALKPW) was determined on a 2 ml pore water sample. A potentiometric titration was completed for each sample with an automatic titrator that was controlled by a programmable circuit closure system. A microelectrode was used to measure the pore water pH during titration with 0.008 m HCl in 0.6 M NaCl. Alkalinity precision was ±0.02 meq L^{-1} (Edmond, 1970).

Dissolved sulfate (SO_4PW) was then precipitated in the alkalinity subsample by titrating with 2 mM $Pb(ClO_4)_2$ solution following the method of Goertzen and Oster (1972). Excess Pb^{2+} was determined with a lead specific ion electrode. The sample was mixed with methanol (70%) to decrease the solubility of lead sulfate. The addition of methanol can also decrease the solubility of $CaSO_4$. To check that $CaSO_4$ did not form precipitate, the lead precipitate was collected on 0.4 μm pore diameter Nuclepore filters which were later analysed for Pb and Ca. Interference from $CaSO_4$ precipitation did not occur in these analyses. The precision for dissolved sulfate concentrations determined by this potentiometric titration procedure was ±0.2 mM.

LABORATORY METHODS

Porewater analyses

Nutrient analyses included silica (SiO_2PW), nitrate (NO_3PW), phosphate (PO_4PW) and are reported in μ moles L^{-1} (μM). Because of an error in procedure, the data are questionable (Heath, 1981b).

The labile Fe, Zn, Cu, Ni and Cd concentrations in 1 ml of pore water (FePW, ZnPW, CuPW, NiPW and CdPW, respectively) were determined by flameless atomic absorption spectroscopy following chelation (at pH_4) and solvent extraction into an organic phase (Stoffyn, personal communications, method adapted from Brooks et al., 1967). The total precision and accuracy was determined to be ±15% of the available metal concentration. These trace metal concentrations are reported in ppb(μgL^{-1}).

Total Mn concentration in pore water (MnPW) was determined by direct flameless spectrophotometry. Aqueous samples (pH = 2.0) were injected directly into the atomization chamber of a Perkin-Elmer HGA500 graphite

furnace. Standards were prepared in seawater containing a negligible amount of this metal compared to the concentration in the samples. All instrumental parameters followed the manufacturers recommendations. Total Mn concentration is reported in ppb(μgL^{-1}).

The major cations (Na, Mg, Ca and K are reported as NaPW, MgPW, CaPW and KPW, respectively) were determined by flame atomic absorption spectroscopy following aqueous sample dilution. NaPW is reported in g L^{-1} and the other major cations are reported in ppm(mgL^{-1}). Precision was found to be ±1% (Cranston, 1974).

Sediment analyses

Sediment subsamples were stored in sealed containers and returned to our laboratory. Water content (reported as WATER in % of wet weight) was determined by weight loss of samples after drying at 60°C for 48 hours. Mean particle size data (reported as SIZE in μm) was obtained by Coulter counter analyses, using 30 and 200 μm apertures. Total carbon (TC in % of dry weight) was determined for washed, dried samples with a Leco carbon analyser. Inorganic carbon was removed by 1 M HCl treatment prior to determining the organic carbon concentration (OC in % of dry weight).

Elemental analyses (determined by flame atomic absorption spectroscopy) and nonsequential leach techniques:

(1) Total analyses (CaT, SiT, AlT, and FeT in % of dry weight, and MnT, ZnT, CaT, NiT, CuT in ppm($mg \cdot Kg^{-1}$) after a HF-H_3BO_3 total decomposition method (Buckley and Cranston, 1971).

(2) Weak acid leachable (FeWA, MnWA, ZnWA, CuWA) after a 4 M acetic acid leach (pH = 2.3) as described in MacIntosh et al. (1976). This leach fraction is considered to contain soluble carbonate complexes and adsorbed metals.

(3) Reducible metal after a 1 M hydroxylamine hydrochloride solution in 4 M acetic acid leach as suggested by Chester and Hughes (1967) and described by MacIntosh et al. (1976).

(4) Reducible metal residuals or the hydroxyamine leach residuals (FeHR, MnHR, ZnHR, CuHR) were determined as the residual when the weak acid leachable metal concentrations were subtracted from the reducible metal concentrations. This residual fraction is considered to be metal that had precipitated when its reduced form came in contact with oxidized sediments. The above leachable metal fractions are reported in ppm.

ACKNOWLEDGEMENTS

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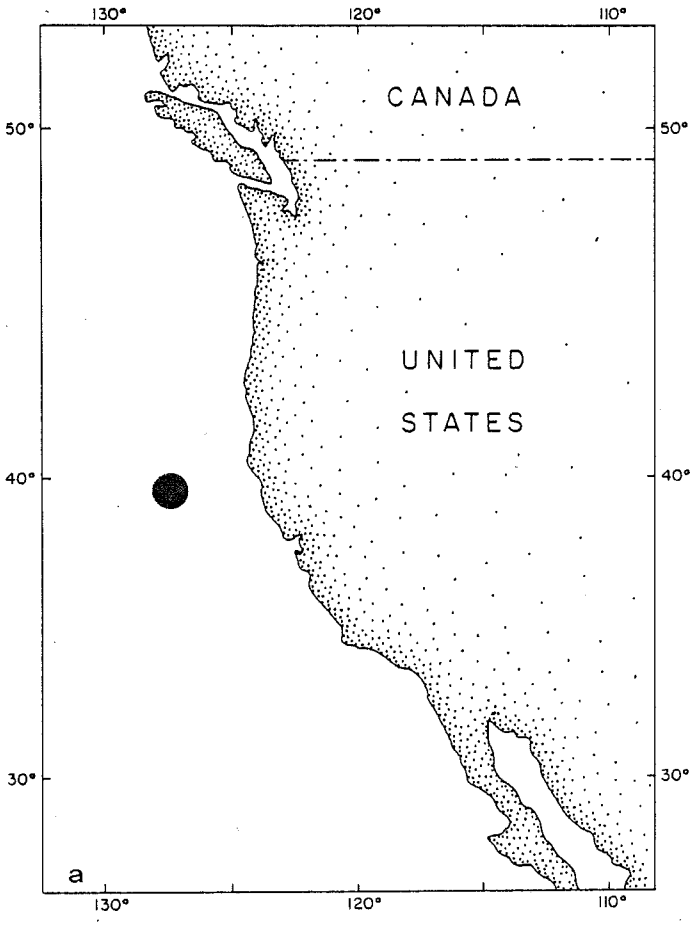

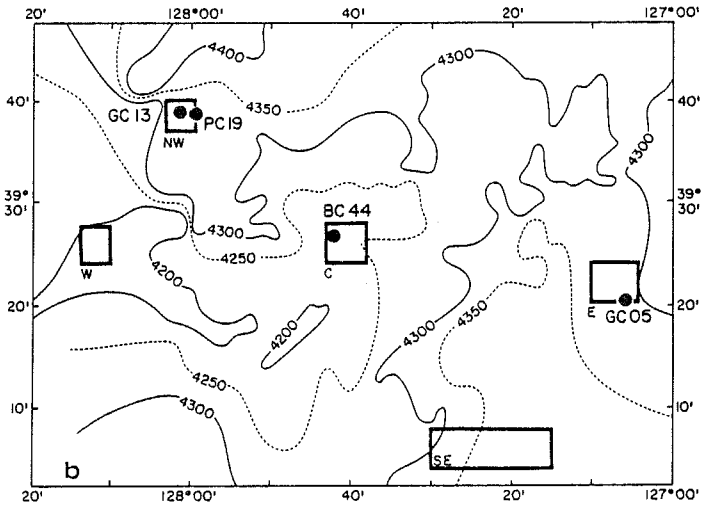

Figure 1a. *Location of study area in the Northeast Pacific Ocean.*

Figure 1b. *Detailed study area, showing sampling locations.*

CORE[1]	LATITUDE	LONGITUDE	WATER[2] DEPTH m	YEAR	DESCRIPTION
5.0	39° 19.9'	127° 06.0'	4318	1981	GRAVITY CORE
13.0	39° 38.4'	128° 01.1'	4351	1981	GRAVITY CORE
19.0	39° 38.5'	127° 59.1'	4337	1981	PISTON CORE
19.1	39° 38.5'	127° 59.1'	4337	1981	TRIGGER CORE
44.0	39° 26.8'	127° 42.4'	4238	1981	BOX CORE

[1] The core station identification should be prefixed by the cruise identifacation: "W8103".
[2] This is the corrected water depth.

CORE	DEPTH cm		SIZE µm	WATER %	OC %	TC %	CaT %	ID
5.0	.1	10.0	***	59.6	.50	1.00	.77	812901
5.0	10.0	15.0	***	58.4	.82	.98	.80	812902
5.0	15.0	20.0	***	54.6	.74	.86	.76	812903
5.0	20.0	25.0	***	50.0	.68	.80	.73	812904
5.0	25.0	30.0	***	53.1	.73	.78	.78	812905
5.0	30.0	35.0	***	54.4	.72	.77	.75	812906
5.0	35.0	40.0	***	53.3	.79	.76	.75	812907
5.0	40.0	45.0	***	50.9	.77	.80	.80	812908
5.0	45.0	50.0	***	56.7	.78	.86	.84	812909
5.0	50.0	60.0	***	55.2	.87	.94	.89	812910
5.0	60.0	70.0	***	55.7	.83	.97	1.29	812911
5.0	70.0	78.0	***	51.7	.80	.93	.80	812912
5.0	80.0	90.0	***	52.8	.74	1.37	2.21	812913
5.0	90.0	100.0	***	54.1	.86	1.26	1.82	812914
5.0	100.0	112.0	***	33.1	.69	.83	1.53	812915
5.0	112.0	121.0	***	53.1	.76	.84	.93	812916
5.0	121.0	130.0	***	52.3	.74	.78	.75	812917
5.0	130.0	140.0	***	50.8	.76	.76	.71	812918
13.0	.1	3.0	***	55.6	.56	.58	.80	812955
13.0	3.0	6.0	***	54.6	.55	.57	.73	812956
13.0	6.0	9.0	***	58.6	.60	.63	.78	812957
13.0	9.0	12.0	***	54.4	.60	.62	.86	812958
13.0	12.0	15.0	***	50.9	.59	.60	.88	812959
13.0	15.0	18.0	***	57.8	.65	.68	.83	812960
13.0	18.0	21.0	***	59.1	.56	.57	.84	812961
13.0	21.0	24.0	***	52.9	.50	.52	.89	812962
13.0	24.0	27.0	***	55.0	.52	.53	.96	812963
13.0	27.0	30.0	***	55.7	.47	.48	1.00	812964
13.0	30.0	33.0	***	54.4	.49	.52	.97	812965
13.0	33.0	36.0	***	53.1	.51	.56	.93	812966
13.0	60.0	64.0	***	54.4	.53	.58	.99	812949
13.0	70.0	74.0	***	57.4	.59	.73	1.18	812950
13.0	80.0	84.0	***	57.6	.51	.78	1.52	812951
13.0	90.0	94.0	***	57.7	.49	1.43	3.19	812952
13.0	100.0	104.0	***	56.2	.46	1.02	2.19	812953
13.0	116.0	120.0	***	56.6	.52	.58	1.15	812954
13.0	140.0	144.0	***	52.7	.52	.58	.84	812943
13.0	156.0	160.0	***	57.3	.54	.63	1.07	812944
13.0	168.0	171.0	***	58.8	.44	.74	1.59	812945
13.0	180.0	184.0	***	53.5	.47	.51	1.13	812946
13.0	194.0	198.0	***	56.7	.39	.47	.99	812947
13.0	206.0	210.0	***	57.9	.54	.91	1.72	812948
13.0	252.0	256.0	***	52.7	.57	.55	.78	812931
13.0	256.0	260.0	***	53.7	.58	.53	.80	812932
13.0	260.0	264.0	***	54.4	.59	.54	.87	812933
13.0	264.0	268.0	***	52.5	.49	.46	.79	812934
13.0	268.0	272.0	***	54.3	.48	.50	.98	812935
13.0	272.0	276.0	***	50.7	.46	.54	1.11	812936
13.0	276.0	280.0	***	52.8	.58	.61	1.11	812937
13.0	280.0	284.0	***	53.8	.62	.82	1.26	812938
13.0	284.0	288.0	***	53.6	.61	.73	1.13	812939
13.0	288.0	292.0	***	54.9	.46	.48	.73	812940
13.0	292.0	296.0	***	51.0	.37	.37	.73	812941
13.0	296.0	300.0	***	48.5	.36	.36	.62	812942
13.0	313.0	314.0	***	53.4	***	***	***	812919
13.0	321.0	322.0	***	52.9	***	***	***	812920
13.0	336.0	337.5	***	53.1	***	***	***	812921
13.0	337.5	339.0	***	51.9	***	***	***	812922
13.0	339.0	340.5	***	50.5	***	***	***	812923
13.0	340.5	342.0	***	50.1	***	***	***	812924

CORE	DEPTH cm		SIZE µm	WATER %	OC %	TC %	CaT %	ID
13.0	342.0	343.5	***	51.1	***	***	***	812925
13.0	343.5	345.0	***	50.3	***	***	***	812926
13.0	345.0	346.5	***	49.6	***	***	***	812927
13.0	346.5	348.0	***	50.9	***	***	***	812928
13.0	360.0	361.0	***	51.9	***	***	***	812929
13.0	374.0	375.5	***	52.0	***	***	***	812930
19.0	653.0	658.0	3.0	51.6	.42	.44	.86	813028
19.0	658.0	663.0	2.4	50.0	.49	.55	.78	813029
19.0	663.0	668.0	2.3	48.6	.56	.62	.79	813030
19.0	668.0	673.0	2.5	47.5	.49	.55	.78	813031
19.0	673.0	678.0	2.8	46.3	.43	.53	.82	813032
19.0	678.0	683.0	2.9	48.8	.44	.54	.88	813033
19.0	683.0	688.0	2.6	50.3	.40	.46	.79	813034
19.0	688.0	693.0	2.6	51.3	.41	.50	.98	813035
19.0	693.0	698.0	2.6	50.1	.51	.54	.84	813036
19.0	698.0	703.0	2.6	49.4	.53	.61	.82	813037
19.0	703.0	708.0	2.7	50.5	.45	.82	.82	813038
19.0	708.0	713.0	2.8	49.0	.47	.73	.75	813039
19.0	798.0	803.0	2.8	50.2	.38	.37	.73	813015
19.0	803.0	808.0	2.4	51.0	.42	.38	.72	813016
19.0	808.0	813.0	2.4	***	.36	.36	.76	813017
19.0	813.0	818.0	2.3	48.1	.28	.33	.68	813018
19.0	818.0	823.0	2.5	56.7	.31	.37	.74	813019
19.0	823.0	830.0	2.3	51.7	.41	.53	.94	813020
19.0	830.0	835.0	2.1	48.8	.40	.56	1.18	813021
19.0	835.0	840.0	2.4	49.0	.47	.75	1.35	813022
19.0	840.0	845.0	2.4	47.0	.50	.87	1.70	813023
19.0	845.0	850.0	2.7	47.0	.48	1.08	2.33	813024
19.0	850.0	855.0	2.3	***	.40	1.08	2.56	813025
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19.0	954.0	959.0	2.9	51.1	.44	.50	.89	813004
19.0	959.0	964.0	3.0	49.2	.66	.70	.85	813005
19.0	964.0	969.0	3.5	50.7	.47	.48	.84	813006
19.0	969.0	974.0	2.8	55.7	.42	.48	.83	813007
19.0	974.0	979.0	3.1	54.5	.44	.48	.88	813008
19.0	979.0	984.0	3.2	53.6	.47	.49	.77	813009
19.0	984.0	989.0	3.1	50.8	.55	.58	.85	813010
19.0	989.0	994.0	2.5	53.6	.46	.51	.77	813011
19.0	994.0	999.0	3.2	50.1	.55	.59	.79	813012
19.0	999.0	1004.0	2.5	49.6	.55	.66	.99	813013
19.0	1004.0	1009.0	3.7	49.4	.60	1.20	2.41	813014
19.0	1113.0	1118.0	2.3	48.5	.41	3.45	8.40	812991
19.0	1118.0	1123.0	2.4	48.3	.38	3.84	9.50	812992
19.0	1123.0	1128.0	2.1	46.8	.41	3.86	9.65	812993
19.0	1128.0	1133.0	2.2	47.3	.48	3.12	8.20	812994
19.0	1133.0	1138.0	2.3	***	.50	3.31	8.88	812995
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19.0	1143.0	1148.0	2.3	47.8	.46	3.14	7.67	812997
19.0	1148.0	1153.0	2.3	51.6	.40	1.18	2.76	812998
19.0	1153.0	1158.0	2.4	50.5	.41	1.15	2.74	812999
19.0	1158.0	1163.0	2.3	50.0	.43	1.24	2.79	813000
19.0	1163.0	1168.0	2.2	49.7	.50	1.07	2.18	813001
19.0	1168.0	1173.0	2.3	49.8	.51	1.22	2.65	813002
19.0	1270.0	1275.0	2.5	50.9	.52	.69	1.06	812979
19.0	1275.0	1280.0	2.2	51.8	.47	.63	1.06	812980
19.0	1280.0	1285.0	2.2	49.1	.50	.53	.85	812981
19.0	1285.0	1290.0	2.3	44.0	.50	.51	.74	812982
19.0	1290.0	1295.0	2.5	50.3	.50	.54	.84	812983
19.0	1295.0	1300.0	2.4	51.4	.43	.42	.73	812984

CORE	DEPTH cm		SIZE μm	WATER %	OC %	TC %	Ca %	
19.0	1300.0	1305.0	2.3	47.2	.40	.41	.76	812985
19.0	1305.0	1310.0	2.5	49.9	.37	.38	.74	812986
19.0	1310.0	1315.0	2.4	50.8	.46	.52	.79	812987
19.0	1315.0	1320.0	2.7	47.2	.54	.82	.98	812988
19.0	1320.0	1325.0	2.5	49.3	.47	.78	1.07	812989
19.0	1325.0	1330.0	2.3	51.4	.46	.52	1.21	812990
19.1	201.0	206.0	***	54.1	.54	1.02	1.90	812967
19.1	206.0	211.0	***	49.3	.55	1.76	3.48	812968
19.1	211.0	216.0	***	56.8	.57	1.44	2.78	812969
19.1	216.0	221.0	***	58.5	.60	.96	1.62	812970
19.1	222.0	227.0	***	50.9	.54	.63	.79	812971
19.1	227.0	232.0	***	50.6	.63	.73	.85	812972
19.1	232.0	237.0	***	55.8	.71	.82	.93	812973
19.1	237.0	242.0	***	56.7	.60	.88	1.55	812974
19.1	249.0	257.0	***	49.6	.62	1.03	1.83	812975
19.1	257.0	265.0	***	53.1	.59	.79	1.39	812976
19.1	265.0	273.0	***	55.4	.50	.63	1.07	812977
19.1	277.0	283.0	***	56.4	.52	.61	.94	812978
44.0	.1	1.0	***	76.1	.96	1.04	.86	813040
44.0	.1	1.0	***	71.1	.89	.95	.85	813042
44.0	1.0	2.0	***	67.9	.85	.92	.80	813041
44.0	1.0	2.0	***	64.0	.85	.91	.96	813043
44.0	2.0	3.0	***	62.6	.81	.88	.75	813044
44.0	3.0	4.0	***	61.5	.84	.88	.75	813045
44.0	4.0	5.0	***	60.6	.72	.76	.76	813046
44.0	5.0	6.0	***	59.3	.68	.77	.76	813047
44.0	6.5	8.0	***	58.5	.72	.76	.82	813048
44.0	8.0	10.0	***	55.5	.71	.75	.80	813049
44.0	10.0	11.0	***	55.7	.77	.75	.78	813050
44.0	11.0	12.0	***	54.4	.73	.78	.78	813051
44.0	12.0	13.0	***	53.7	.70	.77	.80	813052
44.0	13.0	14.0	***	54.0	.68	.70	.82	813053
44.0	14.0	15.0	***	53.1	.66	.70	.79	813054
44.0	15.0	16.0	***	53.0	.72	.70	.81	813055
44.0	16.0	17.0	***	54.3	.66	.70	.81	813056
44.0	17.0	19.0	***	54.4	.71	.75	.79	813057
44.0	19.0	20.0	***	54.4	.72	.75	.82	813058
44.0	20.0	21.0	***	53.5	.78	.79	.81	813059
44.0	21.0	22.0	***	53.3	.72	.74	.79	813060
44.0	22.0	23.0	***	52.8	.68	.71	.80	813061
44.0	23.0	24.0	***	53.2	.64	.72	.85	813062
44.0	24.0	26.0	***	52.2	.66	.76	.80	813063
44.0	26.0	28.0	***	52.6	.60	.76	.85	813065
44.0	28.0	30.0	***	52.6	.75	.72	.88	813067
44.0	30.0	32.0	***	52.2	.76	.75	.88	813069
44.0	32.0	33.0	***	53.4	.72	.75	.87	813071
44.0	33.0	35.0	***	53.4	.74	.78	.88	813072

CORE	DEPTH cm		SiT %	AlT %	FeT %	MnT ppm	ZnT ppm	CuT ppm	NiT ppm	ID
5.0	.1	10.0	25.2	6.7	5.9	18500.	187.	169.	228.	812901
5.0	10.0	15.0	27.6	7.5	6.5	7860.	160.	167.	137.	812902
5.0	15.0	20.0	25.7	7.7	6.5	5820.	156.	163.	147.	812903
5.0	20.0	25.0	25.2	7.7	6.0	6560.	151.	158.	157.	812904
5.0	25.0	30.0	25.0	7.7	6.6	5580.	146.	168.	175.	812905
5.0	30.0	35.0	26.1	7.8	6.6	3560.	129.	111.	135.	812906
5.0	35.0	40.0	25.7	7.9	7.0	923.	139.	105.	137.	812907
5.0	40.0	45.0	27.2	8.2	7.5	935.	150.	126.	141.	812908
5.0	45.0	50.0	27.3	8.6	7.2	935.	167.	126.	157.	812909
5.0	50.0	60.0	25.3	7.8	7.0	980.	182.	116.	157.	812910
5.0	60.0	70.0	26.1	8.1	6.5	969.	162.	105.	137.	812911
5.0	70.0	78.0	27.3	8.4	6.9	1010.	148.	85.	133.	812912
5.0	80.0	90.0	24.9	7.8	6.3	901.	116.	79.	122.	812913
5.0	90.0	100.0	25.4	8.1	6.2	686.	126.	79.	114.	812914
5.0	100.0	112.0	29.3	8.1	5.6	664.	110.	63.	86.	812915
5.0	112.0	121.0	27.8	7.9	6.0	3100.	139.	127.	122.	812916
5.0	121.0	130.0	25.4	8.0	6.6	2390.	142.	127.	137.	812917
5.0	130.0	140.0	25.2	7.8	6.4	732.	139.	92.	137.	812918
13.0	.1	3.0	24.5	7.7	6.1	11400.	174.	162.	200.	812955
13.0	3.0	6.0	23.4	7.9	4.9	9800.	161.	157.	188.	812956
13.0	6.0	9.0	24.0	8.0	6.7	8390.	160.	157.	200.	812957
13.0	9.0	12.0	25.1	8.0	6.6	9260.	170.	167.	200.	812958
13.0	12.0	15.0	25.0	8.3	7.1	9790.	160.	157.	182.	812959
13.0	15.0	18.0	25.1	8.3	7.1	8560.	153.	157.	191.	812960
13.0	18.0	21.0	24.9	8.3	6.6	9440.	157.	157.	184.	812961
13.0	21.0	24.0	24.8	8.2	6.8	9960.	149.	143.	184.	812962
13.0	24.0	27.0	24.9	7.9	6.8	7690.	147.	129.	150.	812963
13.0	27.0	30.0	24.0	7.8	6.5	8210.	137.	119.	160.	812964
13.0	30.0	33.0	23.9	8.0	6.9	5330.	131.	110.	160.	812965
13.0	33.0	36.0	25.5	7.9	6.6	3610.	137.	119.	140.	812966
13.0	60.0	64.0	28.3	8.9	6.8	2860.	139.	105.	156.	812949
13.0	70.0	74.0	26.3	8.4	6.8	1240.	136.	105.	147.	812950
13.0	80.0	84.0	26.4	8.7	7.9	3180.	144.	114.	151.	812951
13.0	90.0	94.0	24.0	7.9	7.1	1690.	131.	105.	144.	812952
13.0	100.0	104.0	24.1	8.4	6.8	6560.	131.	124.	182.	812953
13.0	116.0	120.0	24.4	8.4	7.5	2820.	131.	119.	151.	812954
13.0	140.0	144.0	25.6	8.4	7.1	3850.	141.	110.	179.	812943
13.0	156.0	160.0	27.3	8.5	7.6	1230.	140.	114.	165.	812944
13.0	168.0	171.0	27.9	8.7	7.7	7510.	136.	148.	182.	812945
13.0	180.0	184.0	25.8	8.4	7.1	1000.	133.	100.	147.	812946
13.0	194.0	198.0	27.7	8.7	7.6	8380.	160.	366.	235.	812947
13.0	206.0	210.0	26.1	8.4	7.5	1160.	158.	215.	156.	812948
13.0	252.0	256.0	27.4	8.8	7.1	946.	152.	79.	157.	812931
13.0	256.0	260.0	22.7	8.3	7.2	2250.	143.	92.	157.	812932
13.0	260.0	264.0	29.6	8.8	7.4	6320.	151.	150.	157.	812933
13.0	264.0	268.0	29.7	9.7	5.9	2860.	156.	150.	147.	812934
13.0	268.0	272.0	27.8	8.6	5.4	1173.	142.	105.	118.	812935
13.0	272.0	276.0	26.3	8.8	5.4	2590.	144.	141.	157.	812936
13.0	276.0	280.0	26.0	8.4	6.8	3850.	146.	143.	191.	812937
13.0	280.0	284.0	26.5	8.3	6.9	3110.	148.	124.	168.	812938
13.0	284.0	288.0	26.8	8.8	7.5	1840.	170.	171.	182.	812939
13.0	288.0	292.0	25.8	8.4	6.8	1040.	146.	114.	165.	812940
13.0	292.0	296.0	26.5	8.7	7.2	1090.	149.	110.	147.	812941
13.0	296.0	300.0	22.6	6.7	5.9	980.	143.	129.	165.	812942
13.0	313.0	314.0	***	***	***	***	***	***	***	812919
13.0	321.0	322.0	***	***	***	***	***	***	***	812920
13.0	336.0	337.5	***	***	***	***	***	***	***	812921
13.0	337.5	339.0	***	***	***	***	***	***	***	812922
13.0	339.0	340.5	***	***	***	***	***	***	***	812923
13.0	340.5	342.0	***	***	***	***	***	***	***	812924

CORE	DEPTH cm		SiT %	AlT %	FeT %	MnT ppm	ZnT ppm	CuT ppm	NiT ppm	ID
13.0	342.0	343.5	***	***	***	***	***	***	***	812925
13.0	343.5	345.0	***	***	***	***	***	***	***	812926
13.0	345.0	346.5	***	***	***	***	***	***	***	812927
13.0	346.5	348.0	***	***	***	***	***	***	***	812928
13.0	360.0	361.0	***	***	***	***	***	***	***	812929
13.0	374.0	375.5	***	***	***	***	***	***	***	812930
19.0	653.0	658.0	26.5	8.4	9.0	1180.	124.	189.	143.	813028
19.0	658.0	663.0	23.5	7.5	7.9	1250.	125.	75.	140.	813029
19.0	663.0	668.0	24.8	8.0	7.6	1980.	136.	75.	143.	813030
19.0	668.0	673.0	24.2	7.9	7.1	2390.	136.	156.	121.	813031
19.0	673.0	678.0	23.3	7.8	7.1	2090.	141.	96.	136.	813032
19.0	678.0	683.0	25.6	8.4	7.3	1690.	141.	67.	129.	813033
19.0	683.0	688.0	23.8	7.5	7.2	1270.	139.	58.	123.	813034
19.0	688.0	693.0	25.1	8.1	8.2	1180.	119.	167.	114.	813035
19.0	693.0	698.0	24.8	8.1	6.8	1130.	139.	350.	129.	813036
19.0	698.0	703.0	25.6	8.8	6.6	1140.	145.	273.	129.	813037
19.0	703.0	708.0	25.5	8.5	6.6	1200.	140.	205.	114.	813038
19.0	708.0	713.0	25.3	8.2	6.9	1140.	135.	90.	129.	813039
19.0	798.0	803.0	25.0	7.9	7.1	1080.	147.	63.	150.	813015
19.0	803.0	808.0	24.9	7.7	7.5	1100.	138.	88.	157.	813016
19.0	808.0	813.0	25.3	7.5	7.0	1150.	125.	100.	157.	813017
19.0	813.0	818.0	24.9	7.0	9.1	1260.	107.	205.	157.	813018
19.0	818.0	823.0	25.8	7.4	8.7	1440.	123.	710.	157.	813019
19.0	823.0	830.0	25.2	7.2	8.6	1290.	134.	205.	157.	813020
19.0	830.0	835.0	26.5	7.6	7.8	1240.	135.	58.	143.	813021
19.0	835.0	840.0	23.8	7.5	7.4	1350.	149.	67.	129.	813022
19.0	840.0	845.0	24.9	8.1	7.4	1910.	149.	58.	136.	813023
19.0	845.0	850.0	22.9	7.1	6.5	1750.	140.	58.	129.	813024
19.0	850.0	855.0	23.8	7.5	6.5	1810.	138.	50.	129.	813025
19.0	855.0	860.0	24.4	7.7	7.2	1310.	129.	50.	114.	813026
19.0	949.0	954.0	26.4	8.2	7.0	1090.	142.	200.	203.	813003
19.0	954.0	959.0	25.3	7.7	7.1	1130.	131.	138.	179.	813004
19.0	959.0	964.0	25.6	8.1	6.5	1000.	155.	186.	203.	813005
19.0	964.0	969.0	25.7	7.5	7.0	1160.	148.	133.	194.	813006
19.0	969.0	974.0	26.1	8.3	7.8	1200.	136.	225.	179.	813007
19.0	974.0	979.0	25.6	8.6	7.2	1170.	142.	133.	179.	813008
19.0	979.0	984.0	25.0	8.1	7.2	1150.	174.	205.	193.	813009
19.0	984.0	989.0	25.7	8.6	7.1	1090.	218.	951.	329.	813010
19.0	989.0	994.0	24.5	7.9	7.4	1140.	175.	264.	200.	813011
19.0	994.0	999.0	25.4	7.9	6.5	1150.	196.	172.	186.	813012
19.0	999.0	1004.0	27.0	8.5	7.2	1140.	192.	209.	200.	813013
19.0	1004.0	1009.0	24.6	8.0	6.4	1210.	184.	183.	186.	813014
19.0	1113.0	1118.0	18.2	5.8	4.5	4490.	118.	61.	164.	812991
19.0	1118.0	1123.0	18.6	6.0	4.3	3600.	123.	124.	177.	812992
19.0	1123.0	1128.0	17.6	6.1	4.4	4310.	105.	78.	177.	812993
19.0	1128.0	1133.0	20.4	6.6	4.7	4220.	131.	89.	170.	812994
19.0	1133.0	1138.0	24.2	7.5	5.9	5580.	136.	133.	190.	812995
19.0	1138.0	1143.0	18.6	5.9	4.6	6810.	144.	400.	183.	812996
19.0	1143.0	1148.0	20.0	6.1	4.9	4100.	143.	89.	162.	812997
19.0	1148.0	1153.0	23.7	6.9	8.6	1750.	139.	148.	234.	812998
19.0	1153.0	1158.0	25.2	7.6	7.0	1170.	147.	89.	177.	812999
19.0	1158.0	1163.0	24.7	8.1	6.4	1120.	156.	83.	190.	813000
19.0	1163.0	1168.0	23.6	7.2	6.3	1180.	166.	119.	190.	813001
19.0	1168.0	1173.0	24.8	7.9	6.8	1220.	170.	162.	190.	813002
19.0	1270.0	1275.0	26.1	8.2	6.0	1120.	174.	270.	186.	812979
19.0	1275.0	1280.0	26.5	8.2	6.0	1060.	151.	119.	170.	812980
19.0	1280.0	1285.0	26.7	8.2	5.9	1030.	155.	129.	156.	812981
19.0	1285.0	1290.0	26.9	8.6	6.2	1040.	149.	133.	160.	812982
19.0	1290.0	1295.0	27.6	8.5	6.5	1060.	158.	361.	184.	812983
19.0	1295.0	1300.0	26.0	7.9	6.2	991.	143.	162.	174.	812984

CORE	DEPTH cm		SiT %	AlT %	FeT %	MnT ppm	ZnT ppm	CuT ppm	NiT ppm	ID
19.0	1300.0	1305.0	26.9	8.2	6.5	1050.	136.	225.	166.	812985
19.0	1305.0	1310.0	26.7	8.3	7.8	1150.	123.	72.	164.	812986
19.0	1310.0	1315.0	26.1	7.7	7.1	2250.	127.	89.	177.	812987
19.0	1315.0	1320.0	26.4	7.7	6.6	8910.	130.	61.	164.	812988
19.0	1320.0	1325.0	24.1	7.5	6.7	9260.	130.	50.	164.	812989
19.0	1325.0	1330.0	26.4	8.2	7.2	1570.	123.	56.	153.	812990
19.1	201.0	206.0	24.5	7.6	6.9	1850.	161.	105.	180.	812967
19.1	206.0	211.0	22.3	7.1	5.4	2500.	173.	129.	160.	812968
19.1	211.0	216.0	23.0	7.4	5.2	2290.	188.	124.	170.	812969
19.1	216.0	221.0	25.1	7.8	6.1	1940.	181.	100.	180.	812970
19.1	222.0	227.0	25.1	7.4	5.4	18000.	155.	162.	200.	812971
19.1	227.0	232.0	24.6	7.6	6.0	11500.	164.	157.	184.	812972
19.1	232.0	237.0	24.8	7.5	6.1	3360.	159.	133.	146.	812973
19.1	237.0	242.0	24.6	7.5	6.3	5080.	143.	124.	150.	812974
19.1	249.0	257.0	23.4	7.2	5.7	4330.	124.	119.	140.	812975
19.1	257.0	265.0	25.7	7.9	6.5	2880.	128.	124.	130.	812976
19.1	265.0	273.0	26.1	8.0	6.0	1170.	141.	72.	124.	812977
19.1	277.0	283.0	25.6	8.4	6.5	1200.	138.	105.	160.	812978
44.0	.1	1.0	26.8	7.4	6.7	7510.	165.	150.	157.	813040
44.0	.1	1.0	24.6	7.0	6.2	7860.	154.	141.	157.	813042
44.0	1.0	2.0	26.1	7.1	6.2	7510.	159.	141.	157.	813041
44.0	1.0	2.0	26.4	7.5	7.0	8390.	161.	141.	174.	813043
44.0	2.0	3.0	25.4	6.9	6.4	8210.	159.	150.	159.	813044
44.0	3.0	4.0	25.1	7.0	6.1	8910.	165.	150.	164.	813045
44.0	4.0	5.0	25.4	7.0	6.0	14200.	186.	145.	186.	813046
44.0	5.0	6.0	24.3	6.8	5.1	23300.	178.	150.	186.	813047
44.0	6.5	8.0	24.9	6.8	6.3	28000.	144.	141.	164.	813048
44.0	8.0	10.0	23.9	6.9	5.8	26000.	151.	150.	200.	813049
44.0	10.0	11.0	23.5	7.1	5.8	15600.	143.	141.	166.	813050
44.0	11.0	12.0	25.1	7.5	6.3	7330.	151.	127.	159.	813051
44.0	12.0	13.0	25.1	7.2	6.4	9100.	151.	136.	173.	813052
44.0	13.0	14.0	26.9	8.1	6.9	12600.	157.	136.	173.	813053
44.0	14.0	15.0	24.9	7.3	6.3	13500.	156.	136.	185.	813054
44.0	15.0	16.0	24.2	7.1	6.2	22500.	162.	155.	202.	813055
44.0	16.0	17.0	22.8	6.8	5.8	36000.	161.	155.	200.	813056
44.0	17.0	19.0	24.8	7.1	6.3	12200.	151.	123.	159.	813057
44.0	19.0	20.0	26.0	7.5	6.8	3100.	143.	95.	145.	813058
44.0	20.0	21.0	26.4	7.8	6.8	5820.	142.	140.	141.	813059
44.0	21.0	22.0	24.2	7.1	6.3	10700.	148.	165.	162.	813060
44.0	22.0	23.0	25.1	7.4	6.7	15300.	160.	160.	186.	813061
44.0	23.0	24.0	26.8	7.8	6.6	16700.	153.	145.	186.	813062
44.0	24.0	26.0	24.6	7.4	6.0	13800.	159.	145.	175.	813063
44.0	26.0	28.0	26.3	7.9	6.4	9610.	158.	135.	174.	813065
44.0	28.0	30.0	25.5	7.7	6.8	22500.	175.	170.	233.	813067
44.0	30.0	32.0	25.1	7.7	6.9	9610.	163.	130.	186.	813069
44.0	32.0	33.0	24.4	7.6	6.2	12100.	174.	145.	196.	813071
44.0	33.0	35.0	25.4	7.4	6.5	12100.	183.	150.	200.	813072

CORE	DEPTH cm		FeWA ppm	MnWA ppm	ZnWA ppm	CuWA ppm	ID
5.0	.1	10.0	531.	609.	46.1	41.4	812901
5.0	10.0	15.0	751.	639.	25.5	54.9	812902
5.0	15.0	20.0	899.	658.	27.8	56.0	812903
5.0	20.0	25.0	762.	590.	21.7	46.6	812904
5.0	25.0	30.0	774.	611.	16.6	43.6	812905
5.0	30.0	35.0	994.	554.	10.9	34.3	812906
5.0	35.0	40.0	727.	150.	10.2	34.3	812907
5.0	40.0	45.0	733.	110.	11.4	45.1	812908
5.0	45.0	50.0	739.	102.	14.3	52.8	812909
5.0	50.0	60.0	756.	116.	15.5	33.9	812910
5.0	60.0	70.0	816.	160.	13.5	33.5	812911
5.0	70.0	78.0	840.	240.	9.5	24.1	812912
5.0	80.0	90.0	798.	196.	5.1	27.5	812913
5.0	90.0	100.0	768.	177.	6.1	17.6	812914
5.0	100.0	112.0	869.	152.	9.2	17.6	812915
5.0	112.0	121.0	840.	649.	16.0	36.9	812916
5.0	121.0	130.0	875.	546.	8.1	23.8	812917
5.0	130.0	140.0	703.	83.	8.7	20.8	812918
13.0	.1	3.0	626.	121.	22.0	26.0	812955
13.0	3.0	6.0	638.	94.	19.4	28.1	812956
13.0	6.0	9.0	667.	118.	19.1	32.4	812957
13.0	9.0	12.0	739.	137.	18.8	32.7	812958
13.0	12.0	15.0	745.	102.	19.6	31.2	812959
13.0	15.0	18.0	851.	173.	21.2	40.5	812960
13.0	18.0	21.0	679.	78.	17.9	28.1	812961
13.0	21.0	24.0	703.	113.	17.6	26.0	812962
13.0	24.0	27.0	745.	130.	12.1	17.7	812963
13.0	27.0	30.0	608.	193.	7.8	12.0	812964
13.0	30.0	33.0	667.	251.	7.2	12.3	812965
13.0	33.0	36.0	745.	208.	9.6	18.9	812966
13.0	60.0	64.0	679.	384.	8.6	19.7	812949
13.0	70.0	74.0	650.	222.	5.7	11.7	812950
13.0	80.0	84.0	525.	379.	6.8	18.0	812951
13.0	90.0	94.0	355.	303.	4.6	14.3	812952
13.0	100.0	104.0	376.	769.	8.4	36.2	812953
13.0	116.0	120.0	483.	442.	4.9	18.0	812954
13.0	140.0	144.0	608.	499.	9.2	24.9	812943
13.0	156.0	160.0	566.	238.	4.6	10.3	812944
13.0	168.0	171.0	430.	860.	7.7	43.3	812945
13.0	180.0	184.0	471.	162.	4.2	6.7	812946
13.0	194.0	198.0	436.	1030.	13.7	145.0	812947
13.0	206.0	210.0	393.	227.	6.7	40.2	812948
13.0	252.0	256.0	372.	168.	4.7	5.0	812931
13.0	256.0	260.0	341.	686.	4.7	5.3	812932
13.0	260.0	264.0	644.	233.	14.6	34.5	812933
13.0	264.0	268.0	471.	232.	7.0	17.2	812934
13.0	268.0	272.0	390.	397.	3.9	9.0	812935
13.0	272.0	276.0	489.	480.	4.7	20.0	812936
13.0	276.0	280.0	554.	484.	10.9	30.9	812937
13.0	280.0	284.0	453.	984.	6.8	31.3	812938
13.0	284.0	288.0	471.	906.	7.2	35.2	812939
13.0	288.0	292.0	531.	288.	5.8	37.3	812940
13.0	292.0	296.0	376.	260.	4.9	26.7	812941
13.0	296.0	300.0	448.	287.	6.4	43.3	812942
13.0	313.0	314.0	***	***	***	***	812919
13.0	321.0	322.0	***	***	***	***	812920
13.0	336.0	337.5	***	***	***	***	812921
13.0	337.5	339.0	***	***	***	***	812922
13.0	339.0	340.5	***	***	***	***	812923
13.0	340.5	342.0	***	***	***	***	812924

CORE	DEPTH cm		FeWA ppm	MnWA ppm	ZnWA ppm	CuWA ppm	ID
13.0	342.0	343.5	***	***	***	***	812925
13.0	343.5	345.0	***	***	***	***	812926
13.0	345.0	346.5	***	***	***	***	812927
13.0	346.5	348.0	***	***	***	***	812928
13.0	360.0	361.0	***	***	***	***	812929
13.0	374.0	375.5	***	***	***	***	812930
19.0	653.0	658.0	655.	221.	4.9	17.9	813028
19.0	658.0	663.0	566.	490.	3.9	10.0	813029
19.0	663.0	668.0	549.	1060.	4.7	16.5	813030
19.0	668.0	673.0	501.	1370.	5.1	68.4	813031
19.0	673.0	678.0	531.	1150.	5.7	65.2	813032
19.0	678.0	683.0	584.	770.	5.2	17.3	813033
19.0	683.0	688.0	560.	610.	4.3	9.5	813034
19.0	688.0	693.0	655.	250.	3.5	16.4	813035
19.0	693.0	698.0	578.	365.	5.4	169.0	813036
19.0	698.0	703.0	543.	417.	6.0	88.7	813037
19.0	703.0	708.0	537.	387.	5.2	72.8	813038
19.0	708.0	713.0	584.	350.	4.9	20.0	813039
19.0	798.0	803.0	608.	282.	4.8	7.5	813015
19.0	803.0	808.0	608.	337.	3.6	12.4	813016
19.0	808.0	813.0	566.	277.	3.8	5.0	813017
19.0	813.0	818.0	655.	356.	3.4	18.5	813018
19.0	818.0	823.0	822.	515.	4.4	248.0	813019
19.0	823.0	830.0	768.	510.	4.5	49.3	813020
19.0	830.0	835.0	798.	470.	4.8	5.5	813021
19.0	835.0	840.0	673.	580.	4.8	14.1	813022
19.0	840.0	845.0	644.	924.	4.9	10.6	813023
19.0	845.0	850.0	620.	988.	4.2	10.9	813024
19.0	850.0	855.0	596.	978.	3.8	10.3	813025
19.0	855.0	860.0	709.	570.	4.1	6.5	813026
19.0	949.0	954.0	739.	288.	5.3	70.7	813003
19.0	954.0	959.0	679.	240.	3.9	28.9	813004
19.0	959.0	964.0	644.	237.	6.1	49.3	813005
19.0	964.0	969.0	727.	316.	6.6	31.1	813006
19.0	969.0	974.0	721.	174.	4.7	27.8	813007
19.0	974.0	979.0	762.	208.	6.8	18.4	813008
19.0	979.0	984.0	768.	192.	9.6	58.9	813009
19.0	984.0	989.0	929.	191.	16.5	259.0	813010
19.0	989.0	994.0	756.	225.	8.6	54.1	813011
19.0	994.0	999.0	673.	290.	8.3	30.4	813012
19.0	999.0	1004.0	840.	291.	9.9	57.0	813013
19.0	1004.0	1009.0	851.	400.	8.5	48.7	813014
19.0	1113.0	1118.0	846.	3060.	5.4	16.3	812991
19.0	1118.0	1123.0	869.	3540.	10.2	56.0	812992
19.0	1123.0	1128.0	786.	2840.	4.3	24.0	812993
19.0	1128.0	1133.0	804.	2810.	4.9	25.5	812994
19.0	1133.0	1138.0	863.	3850.	6.2	45.6	812995
19.0	1138.0	1143.0	1050.	5390.	8.7	106.0	812996
19.0	1143.0	1148.0	792.	4030.	5.8	20.4	812997
19.0	1148.0	1153.0	1010.	482.	8.3	30.6	812998
19.0	1153.0	1158.0	721.	307.	4.0	11.9	812999
19.0	1158.0	1163.0	667.	411.	4.4	10.9	813000
19.0	1163.0	1168.0	584.	443.	4.8	20.4	813001
19.0	1168.0	1173.0	685.	523.	5.5	29.9	813002
19.0	1270.0	1275.0	816.	240.	7.8	53.7	812979
19.0	1275.0	1280.0	875.	178.	6.4	22.1	812980
19.0	1280.0	1285.0	804.	173.	6.1	25.5	812981
19.0	1285.0	1290.0	857.	161.	6.0	20.0	812982
19.0	1290.0	1295.0	941.	172.	9.1	123.0	812983
19.0	1295.0	1300.0	816.	109.	4.8	36.8	812984

CORE	DEPTH cm		FeWA ppm	MnWA ppm	ZnWA ppm	CuWA ppm	ID
19.0	1300.0	1305.0	958.	140.	5.3	64.7	812985
19.0	1305.0	1310.0	941.	132.	4.6	10.0	812986
19.0	1310.0	1315.0	941.	1020.	6.5	15.6	812987
19.0	1315.0	1320.0	1040.	7010.	4.8	8.7	812988
19.0	1320.0	1325.0	1080.	7100.	4.6	10.6	812989
19.0	1325.0	1330.0	786.	739.	4.4	8.3	812990
19.1	201.0	206.0	406.	522.	5.8	18.9	812967
19.1	206.0	211.0	328.	1270.	7.0	40.3	812968
19.1	211.0	216.0	406.	1160.	8.5	21.2	812969
19.1	216.0	221.0	566.	660.	7.9	23.5	812970
19.1	222.0	227.0	750.	862.	20.9	39.5	812971
19.1	227.0	232.0	733.	922.	26.0	47.7	812972
19.1	232.0	237.0	786.	535.	16.5	27.9	812973
19.1	237.0	242.0	679.	693.	15.6	28.6	812974
19.1	249.0	257.0	650.	616.	8.3	21.7	812975
19.1	257.0	265.0	596.	487.	5.8	16.6	812976
19.1	265.0	273.0	359.	345.	7.2	11.0	812977
19.1	277.0	283.0	632.	315.	5.2	5.3	812978
44.0	.1	1.0	1120.	614.	36.1	64.4	813040
44.0	.1	1.0	1070.	530.	33.3	57.7	813042
44.0	1.0	2.0	1070.	510.	32.9	62.2	813041
44.0	1.0	2.0	1030.	480.	33.1	56.1	813043
44.0	2.0	3.0	1000.	458.	31.4	51.9	813044
44.0	3.0	4.0	958.	455.	34.0	47.4	813045
44.0	4.0	5.0	846.	496.	39.5	38.2	813046
44.0	5.0	6.0	798.	796.	33.2	30.5	813047
44.0	6.5	8.0	828.	1190.	20.6	34.4	813048
44.0	8.0	10.0	828.	1380.	18.6	44.3	813049
44.0	10.0	11.0	846.	1060.	18.1	43.9	813050
44.0	11.0	12.0	935.	704.	18.5	43.9	813051
44.0	12.0	13.0	941.	829.	21.3	52.9	813052
44.0	13.0	14.0	851.	891.	21.4	46.2	813053
44.0	14.0	15.0	863.	1050.	26.3	48.4	813054
44.0	15.0	16.0	703.	1530.	28.8	51.6	813055
44.0	16.0	17.0	887.	2260.	34.3	57.7	813056
44.0	17.0	19.0	828.	1090.	22.1	41.1	813057
44.0	19.0	20.0	857.	458.	17.3	29.9	813058
44.0	20.0	21.0	851.	614.	20.0	41.7	813059
44.0	21.0	22.0	780.	1030.	26.6	55.8	813060
44.0	22.0	23.0	780.	1210.	28.8	51.9	813061
44.0	23.0	24.0	727.	1300.	29.4	48.4	813062
44.0	24.0	26.0	733.	1310.	29.6	51.3	813063
44.0	26.0	28.0	750.	952.	26.9	45.7	813065
44.0	28.0	30.0	584.	1680.	38.2	55.5	813067
44.0	30.0	32.0	750.	1020.	30.6	42.0	813069
44.0	32.0	33.0	733.	1270.	35.5	50.0	813071
44.0	33.0	35.0	721.	1290.	35.9	50.3	813072

CORE	DEPTH cm		FeHR ppm	MnHR ppm	ZnHR ppm	CuHR ppm	ID
5.0	.1	10.0	3279.	12391.	41.0	91.6	812901
5.0	10.0	15.0	2879.	6581.	16.6	60.1	812902
5.0	15.0	20.0	2661.	4702.	9.5	40.6	812903
5.0	20.0	25.0	2538.	5720.	13.9	48.9	812904
5.0	25.0	30.0	2376.	5089.	11.5	43.5	812905
5.0	30.0	35.0	1956.	2166.	8.1	27.5	812906
5.0	35.0	40.0	1323.	429.	5.2	13.6	812907
5.0	40.0	45.0	1127.	394.	4.1	17.8	812908
5.0	45.0	50.0	991.	392.	4.7	20.2	812909
5.0	50.0	60.0	1064.	399.	5.4	15.6	812910
5.0	60.0	70.0	884.	407.	5.5	12.4	812911
5.0	70.0	78.0	940.	434.	6.2	11.9	812912
5.0	80.0	90.0	762.	418.	2.8	9.1	812913
5.0	90.0	100.0	842.	428.	3.5	10.7	812914
5.0	100.0	112.0	771.	361.	2.2	2.9	812915
5.0	112.0	121.0	1580.	2411.	9.9	32.3	812916
5.0	121.0	130.0	1125.	804.	9.0	33.8	812917
5.0	130.0	140.0	737.	364.	4.5	9.0	812918
13.0	.1	3.0	2954.	11479.	33.1	105.0	812955
13.0	3.0	6.0	2962.	9746.	32.9	111.9	812956
13.0	6.0	9.0	2933.	8682.	27.6	101.6	812957
13.0	9.0	12.0	2741.	8133.	24.6	96.3	812958
13.0	12.0	15.0	2830.	9738.	29.6	99.8	812959
13.0	15.0	18.0	2749.	7567.	23.8	93.5	812960
13.0	18.0	21.0	2921.	8542.	27.8	98.9	812961
13.0	21.0	24.0	2877.	10087.	27.9	93.0	812962
13.0	24.0	27.0	2855.	7200.	15.3	65.8	812963
13.0	27.0	30.0	2262.	7177.	13.5	48.6	812964
13.0	30.0	33.0	2123.	5469.	9.1	36.7	812965
13.0	33.0	36.0	2255.	4072.	10.6	43.3	812966
13.0	60.0	64.0	1741.	2216.	8.6	29.8	812949
13.0	70.0	74.0	1220.	316.	7.6	24.1	812950
13.0	80.0	84.0	1255.	1511.	7.6	28.8	812951
13.0	90.0	94.0	609.	591.	5.1	20.4	812952
13.0	100.0	104.0	1184.	5091.	8.5	39.3	812953
13.0	116.0	120.0	1287.	1328.	7.6	30.4	812954
13.0	140.0	144.0	1842.	4261.	9.6	41.6	812943
13.0	156.0	160.0	1194.	227.	7.2	23.4	812944
13.0	168.0	171.0	1260.	5380.	7.1	52.0	812945
13.0	180.0	184.0	1049.	57.	5.7	14.9	812946
13.0	194.0	198.0	1824.	5750.	9.7	95.0	812947
13.0	206.0	210.0	867.	42.	4.5	43.9	812948
13.0	252.0	256.0	393.	434.	2.9	2.1	812931
13.0	256.0	260.0	799.	824.	7.2	13.8	812932
13.0	260.0	264.0	2356.	5417.	17.2	68.5	812933
13.0	264.0	268.0	1409.	2638.	13.4	46.2	812934
13.0	268.0	272.0	710.	337.	5.6	19.3	812935
13.0	272.0	276.0	881.	520.	6.9	27.4	812936
13.0	276.0	280.0	1636.	3636.	9.2	45.3	812937
13.0	280.0	284.0	1037.	2856.	6.9	40.2	812938
13.0	284.0	288.0	699.	334.	5.1	34.6	812939
13.0	288.0	292.0	456.	68.	3.6	18.5	812940
13.0	292.0	296.0	585.	94.	3.5	23.9	812941
13.0	296.0	300.0	642.	85.	3.7	27.6	812942
13.0	313.0	314.0	***	***	***	***	812919
13.0	321.0	322.0	***	***	***	***	812920
13.0	336.0	337.5	***	***	***	***	812921
13.0	337.5	339.0	***	***	***	***	812922
13.0	339.0	340.5	***	***	***	***	812923
13.0	340.5	342.0	***	***	***	***	812924

CORE	DEPTH		FeHR	MnHR	ZnHR	CuHR	ID
	cm		ppm	ppm	ppm	ppm	
13.0	342.0	343.5	***	***	***	***	812925
13.0	343.5	345.0	***	***	***	***	812926
13.0	345.0	346.5	***	***	***	***	812927
13.0	346.5	348.0	***	***	***	***	812928
13.0	360.0	361.0	***	***	***	***	812929
13.0	374.0	375.5	***	***	***	***	812930
19.0	653.0	658.0	915.	72.	2.2	17.9	813028
19.0	658.0	663.0	924.	154.	3.3	8.2	813029
19.0	663.0	668.0	681.	150.	2.0	15.7	813030
19.0	668.0	673.0	729.	240.	2.6	31.1	813031
19.0	673.0	678.0	829.	170.	2.2	11.1	813032
19.0	678.0	683.0	656.	138.	2.2	10.5	813033
19.0	683.0	688.0	610.	113.	2.0	8.4	813034
19.0	688.0	693.0	805.	90.	1.6	18.6	813035
19.0	693.0	698.0	1112.	118.	3.7	25.0	813036
19.0	698.0	703.0	797.	103.	3.2	51.3	813037
19.0	703.0	708.0	953.	109.	3.3	68.2	813038
19.0	708.0	713.0	736.	103.	3.0	16.0	813039
19.0	798.0	803.0	772.	75.	3.7	5.4	813015
19.0	803.0	808.0	642.	25.	3.3	.5	813016
19.0	808.0	813.0	380.	109.	1.8	15.5	813017
19.0	813.0	818.0	985.	97.	2.2	24.3	813018
19.0	818.0	823.0	1018.	77.	2.3	94.0	813019
19.0	823.0	830.0	1042.	51.	3.4	46.3	813020
19.0	830.0	835.0	842.	39.	3.2	7.4	813021
19.0	835.0	840.0	747.	32.	4.5	10.0	813022
19.0	840.0	845.0	566.	59.	3.9	7.0	813023
19.0	845.0	850.0	290.	0	2.2	5.0	813024
19.0	850.0	855.0	404.	62.	2.2	7.9	813025
19.0	855.0	860.0	601.	55.	2.5	5.3	813026
19.0	949.0	954.0	901.	69.	3.8	15.4	813003
19.0	954.0	959.0	1051.	90.	4.8	27.8	813004
19.0	959.0	964.0	1106.	136.	6.1	38.5	813005
19.0	964.0	969.0	1003.	74.	4.5	26.1	813006
19.0	969.0	974.0	1149.	86.	6.2	43.9	813007
19.0	974.0	979.0	948.	70.	3.3	22.8	813008
19.0	979.0	984.0	812.	57.	3.3	26.7	813009
19.0	984.0	989.0	1121.	75.	8.7	0	813010
19.0	989.0	994.0	1054.	91.	6.2	41.5	813011
19.0	994.0	999.0	1127.	150.	7.9	29.6	813012
19.0	999.0	1004.0	710.	30.	6.0	21.3	813013
19.0	1004.0	1009.0	439.	41.	5.4	4.6	813014
19.0	1113.0	1118.0	64.	280.	1.2	.5	812991
19.0	1118.0	1123.0	171.	320.	.7	0	812992
19.0	1123.0	1128.0	66.	190.	1.6	3.1	812993
19.0	1128.0	1133.0	111.	300.	1.8	4.7	812994
19.0	1133.0	1138.0	217.	330.	2.7	3.9	812995
19.0	1138.0	1143.0	430.	1370.	2.9	0	812996
19.0	1143.0	1148.0	118.	200.	2.2	3.2	812997
19.0	1148.0	1153.0	630.	190.	5.6	15.3	812998
19.0	1153.0	1158.0	729.	59.	4.9	11.7	812999
19.0	1158.0	1163.0	603.	75.	5.2	8.1	813000
19.0	1163.0	1168.0	856.	144.	6.9	14.9	813001
19.0	1168.0	1173.0	805.	116.	6.9	15.5	813002
19.0	1270.0	1275.0	734.	28.	4.5	25.4	812979
19.0	1275.0	1280.0	555.	15.	1.9	14.9	812980
19.0	1280.0	1285.0	686.	53.	2.6	16.0	812981
19.0	1285.0	1290.0	883.	51.	3.5	19.5	812982
19.0	1290.0	1295.0	959.	60.	2.9	27.0	812983
19.0	1295.0	1300.0	854.	54.	3.1	15.9	812984

CORE	DEPTH cm		FeHR ppm	MnHR ppm	ZnHR ppm	CuHR ppm	ID
19.0	1300.0	1305.0	822.	41.	2.8	4.0	812985
19.0	1305.0	1310.0	829.	43.	2.5	6.1	812986
19.0	1310.0	1315.0	949.	320.	4.6	13.9	812987
19.0	1315.0	1320.0	830.	1680.	2.8	4.2	812988
19.0	1320.0	1325.0	820.	2220.	2.1	2.9	812989
19.0	1325.0	1330.0	754.	27.	2.8	4.0	812990
19.1	201.0	206.0	545.	93.	5.2	21.1	812967
19.1	206.0	211.0	403.	20.	4.3	27.8	812968
19.1	211.0	216.0	410.	140.	4.5	12.3	812969
19.1	216.0	221.0	398.	132.	4.9	11.0	812970
19.1	222.0	227.0	3400.	19038.	26.8	86.5	812971
19.1	227.0	232.0	3467.	12418.	32.5	79.3	812972
19.1	232.0	237.0	3114.	3865.	17.4	38.0	812973
19.1	237.0	242.0	2191.	5047.	14.9	36.2	812974
19.1	249.0	257.0	1510.	2474.	9.2	23.8	812975
19.1	257.0	265.0	1304.	1123.	6.8	25.9	812976
19.1	265.0	273.0	596.	38.	3.5	8.4	812977
19.1	277.0	283.0	1028.	71.	3.1	12.8	812978
44.0	.1	1.0	3230.	7076.	25.0	56.6	813040
44.0	.1	1.0	3190.	7180.	24.0	59.3	813042
44.0	1.0	2.0	3450.	7280.	22.0	62.8	813041
44.0	1.0	2.0	3140.	7860.	25.4	66.9	813043
44.0	2.0	3.0	3260.	8412.	24.9	77.1	813044
44.0	3.0	4.0	3472.	9385.	32.5	83.6	813045
44.0	4.0	5.0	3504.	14504.	47.8	102.8	813046
44.0	5.0	6.0	3332.	22704.	42.7	91.5	813047
44.0	6.5	8.0	3212.	23810.	21.2	77.6	813048
44.0	8.0	10.0	3392.	22920.	16.7	82.7	813049
44.0	10.0	11.0	3244.	15040.	16.4	69.1	813050
44.0	11.0	12.0	3105.	7816.	13.4	52.4	813051
44.0	12.0	13.0	3359.	9171.	15.2	58.1	813052
44.0	13.0	14.0	3059.	11509.	18.5	60.8	813053
44.0	14.0	15.0	3097.	14750.	18.5	62.6	813054
44.0	15.0	16.0	3207.	24270.	23.0	83.4	813055
44.0	16.0	17.0	2673.	33240.	23.2	79.3	813056
44.0	17.0	19.0	2952.	12510.	15.4	54.7	813057
44.0	19.0	20.0	2843.	3752.	12.7	34.2	813058
44.0	20.0	21.0	3109.	5296.	16.8	46.8	813059
44.0	21.0	22.0	3180.	10370.	20.3	68.2	813060
44.0	22.0	23.0	3130.	16090.	26.1	76.1	813061
44.0	23.0	24.0	2973.	16200.	25.1	64.6	813062
44.0	24.0	26.0	3097.	13990.	24.3	64.7	813063
44.0	26.0	28.0	3190.	9448.	25.2	51.8	813065
44.0	28.0	30.0	2116.	12620.	10.7	36.9	813067
44.0	30.0	32.0	3080.	9980.	28.4	54.5	813069
44.0	32.0	33.0	3177.	11730.	32.4	56.0	813071
44.0	33.0	35.0	3319.	11310.	35.4	55.7	813072

CORE	DEPTH		NaPW	MgPW	KPW	CaPW	SiO_2PW	NO_3PW	NO_2PW	PO_4PW	ID
	cm		$g.L^{-1}$	ppm	ppm	ppm	µM	µM	µM	µM	
5.0	.1	10.0	10.8	1200.	421.	422.	449.	53.5	3.40	6.5	812901
5.0	10.0	15.0	11.1	1220.	434.	437.	462.	47.9	1.72	6.7	812902
5.0	15.0	20.0	10.9	1220.	432.	429.	475.	41.1	1.06	7.9	812903
5.0	20.0	25.0	10.8	1210.	425.	423.	471.	28.1	.73	8.9	812904
5.0	25.0	30.0	10.7	1200.	419.	415.	477.	22.5	.53	11.1	812905
5.0	30.0	35.0	10.6	1220.	431.	420.	463.	23.3	.53	11.1	812906
5.0	35.0	40.0	11.1	1250.	478.	441.	464.	35.5	1.13	15.9	812907
5.0	40.0	45.0	10.8	1190.	463.	421.	415.	31.2	1.06	12.0	812908
5.0	45.0	50.0	11.0	1260.	465.	441.	441.	29.0	.53	16.0	812909
5.0	50.0	60.0	10.7	1280.	484.	442.	427.	16.9	.53	18.7	812910
5.0	60.0	70.0	11.7	1310.	488.	466.	423.	22.1	.60	20.9	812911
5.0	70.0	78.0	11.1	1240.	472.	444.	403.	22.5	.93	21.1	812912
5.0	80.0	90.0	11.7	1310.	501.	467.	454.	30.4	1.00	18.3	812913
5.0	90.0	100.0	11.1	1220.	448.	437.	450.	17.8	.53	16.6	812914
5.0	100.0	112.0	11.0	1220.	451.	444.	462.	16.1	.53	21.0	812915
5.0	112.0	121.0	11.1	1220.	465.	452.	426.	25.2	3.20	10.8	812916
5.0	121.0	130.0	11.0	1220.	446.	441.	527.	29.1	1.00	17.0	812917
5.0	130.0	140.0	11.0	1200.	459.	440.	***	***	***	***	812918
13.0	.1	3.0	10.5	1180.	396.	416.	283.	91.9	1.33	4.5	812955
13.0	3.0	6.0	10.7	1220.	408.	427.	268.	80.5	.60	4.3	812956
13.0	6.0	9.0	10.7	1200.	413.	423.	265.	83.5	.47	4.5	812957
13.0	9.0	12.0	10.5	1190.	406.	424.	260.	83.2	1.72	4.4	812958
13.0	12.0	15.0	10.6	1200.	406.	431.	212.	81.3	1.19	3.8	812959
13.0	15.0	18.0	10.7	1180.	404.	431.	211.	83.4	.47	3.8	812960
13.0	18.0	21.0	10.7	1200.	413.	423.	311.	80.6	.73	4.7	812961
13.0	21.0	24.0	10.8	1220.	421.	425.	292.	79.1	.60	5.0	812962
13.0	24.0	27.0	10.9	1220.	423.	437.	279.	70.9	.40	5.4	812963
13.0	27.0	30.0	10.9	1220.	423.	437.	320.	68.5	.40	5.5	812964
13.0	30.0	33.0	10.6	1190.	398.	419.	330.	67.0	.60	5.7	812965
13.0	33.0	36.0	10.7	1200.	411.	431.	291.	67.1	.40	5.3	812966
13.0	60.0	64.0	10.4	1130.	387.	419.	327.	66.0	.93	6.7	812949
13.0	70.0	74.0	10.3	1130.	381.	425.	282.	55.5	.80	7.2	812950
13.0	80.0	84.0	10.5	1180.	394.	439.	327.	48.2	.73	7.7	812951
13.0	90.0	94.0	10.8	1220.	404.	442.	316.	42.5	.67	8.5	812952
13.0	100.0	104.0	10.5	1200.	400.	433.	229.	42.2	.67	8.7	812953
13.0	116.0	120.0	10.6	1180.	400.	427.	294.	71.8	.67	10.7	812954
13.0	140.0	144.0	10.3	1130.	387.	435.	302.	44.6	.87	5.7	812943
13.0	156.0	160.0	10.6	1180.	398.	453.	302.	46.6	.93	7.8	812944
13.0	168.0	171.0	10.6	1190.	396.	450.	310.	36.7	1.00	8.7	812945
13.0	180.0	184.0	10.3	1130.	383.	436.	306.	29.7	1.06	9.5	812946
13.0	194.0	198.0	10.6	1190.	398.	449.	302.	25.6	1.06	10.5	812947
13.0	206.0	210.0	10.7	1160.	396.	453.	299.	19.3	.47	11.3	812948
13.0	252.0	256.0	11.2	1270.	421.	431.	283.	27.6	.40	12.7	812931
13.0	256.0	260.0	11.3	1270.	432.	432.	290.	28.3	.67	12.6	812932
13.0	260.0	264.0	10.7	1210.	404.	433.	359.	60.2	.67	6.4	812933
13.0	264.0	268.0	11.1	1300.	423.	434.	356.	61.4	.80	6.9	812934
13.0	268.0	272.0	10.9	1250.	413.	435.	313.	31.5	.53	10.9	812935
13.0	272.0	276.0	11.0	1250.	411.	436.	323.	33.9	.47	9.7	812936
13.0	276.0	280.0	10.7	1250.	404.	437.	301.	42.5	.87	9.9	812937
13.0	280.0	284.0	10.6	1240.	394.	438.	330.	20.7	.67	10.0	812938
13.0	284.0	288.0	10.6	1210.	402.	439.	251.	17.4	.53	13.0	812939
13.0	288.0	292.0	10.7	1220.	406.	440.	234.	20.2	.53	12.9	812940
13.0	292.0	296.0	10.6	1190.	398.	441.	216.	18.0	.53	14.3	812941
13.0	296.0	300.0	10.6	1210.	421.	461.	208.	19.0	.67	14.3	812942
13.0	313.0	314.0	***	***	***	***	***	***	***	***	812919
13.0	321.0	322.0	***	***	***	***	***	***	***	***	812920
13.0	336.0	337.5	***	***	***	***	***	***	***	***	812921
13.0	337.5	339.0	***	***	***	***	***	***	***	***	812922
13.0	339.0	340.5	***	***	***	***	***	***	***	***	812923
13.0	340.5	342.0	***	***	***	***	***	***	***	***	812924

CORE	DEPTH		NaPW	MgPW	KPW	CaPW	SiO_2PW	NO_3PW	NO_2PW	PO_4PW	ID
	cm		$g.L^{-1}$	ppm	ppm	ppm	µM	µM	µM	µM	
13.0	342.0	343.5	***	***	***	***	***	***	***	***	812925
13.0	343.5	345.0	***	***	***	***	***	***	***	***	812926
13.0	345.0	346.5	***	***	***	***	***	***	***	***	812927
13.0	346.5	348.0	***	***	***	***	***	***	***	***	812928
13.0	360.0	361.0	***	***	***	***	***	***	***	***	812929
13.0	374.0	375.5	***	***	***	***	***	***	***	***	812930
19.0	653.0	658.0	11.0	1250.	408.	463.	162.	32.3	.93	20.1	813028
19.0	658.0	663.0	12.2	1380.	444.	509.	165.	37.6	.87	19.3	813029
19.0	663.0	668.0	11.1	1280.	425.	468.	153.	28.4	.73	16.0	813030
19.0	668.0	673.0	11.4	1280.	432.	464.	149.	32.8	.87	15.9	813031
19.0	673.0	678.0	10.8	1220.	411.	454.	170.	29.3	.80	17.0	813032
19.0	678.0	683.0	10.8	1240.	419.	459.	143.	31.1	.87	17.3	813033
19.0	683.0	688.0	10.6	1210.	408.	443.	168.	25.8	.73	16.7	813034
19.0	688.0	693.0	11.1	1250.	413.	463.	152.	30.0	.80	16.5	813035
19.0	693.0	698.0	10.7	1180.	410.	448.	168.	34.6	.93	16.4	813036
19.0	698.0	703.0	11.1	1270.	430.	466.	144.	30.2	.87	18.3	813037
19.0	703.0	708.0	10.8	1230.	406.	455.	140.	32.9	.73	16.1	813038
19.0	708.0	713.0	12.2	1420.	450.	522.	***	30.7	.87	14.7	813039
19.0	798.0	803.0	10.4	1200.	388.	448.	155.	27.8	.73	13.9	813015
19.0	803.0	808.0	***	***	***	***	154.	36.1	1.06	12.9	813016
19.0	808.0	813.0	10.6	1200.	400.	448.	164.	36.6	.87	18.2	813017
19.0	813.0	818.0	10.9	1220.	406.	459.	174.	38.8	1.06	12.5	813018
19.0	818.0	823.0	12.7	1430.	474.	528.	***	***	***	***	813019
19.0	823.0	830.0	11.2	1260.	415.	467.	142.	33.5	.67	11.9	813020
19.0	830.0	835.0	11.3	1290.	415.	479.	160.	43.2	1.60	16.9	813021
19.0	835.0	840.0	11.5	1310.	421.	493.	193.	33.6	1.00	17.1	813022
19.0	840.0	845.0	10.6	1240.	390.	453.	167.	24.3	.53	15.5	813023
19.0	845.0	850.0	10.8	1240.	389.	453.	176.	23.9	.80	17.0	813024
19.0	850.0	855.0	10.8	1230.	394.	445.	171.	27.0	1.00	17.1	813025
19.0	855.0	860.0	10.7	1220.	389.	443.	182.	24.9	.80	20.5	813026
19.0	949.0	954.0	10.8	1220.	395.	460.	200.	57.2	***	21.5	813003
19.0	954.0	959.0	10.6	1220.	398.	451.	171.	74.4	***	15.2	813004
19.0	959.0	964.0	10.6	1210.	390.	451.	165.	62.5	***	12.6	813005
19.0	964.0	969.0	11.0	1260.	414.	464.	165.	80.3	***	14.7	813006
19.0	969.0	974.0	11.6	1280.	417.	482.	177.	41.3	1.00	12.8	813007
19.0	974.0	979.0	11.1	1220.	396.	462.	190.	40.9	1.19	20.9	813008
19.0	979.0	984.0	10.8	1220.	394.	465.	183.	40.9	2.33	16.6	813009
19.0	984.0	989.0	11.0	1230.	398.	451.	204.	25.1	1.13	22.9	813010
19.0	989.0	994.0	10.8	1210.	384.	450.	159.	23.3	.80	17.4	813011
19.0	994.0	999.0	11.4	1240.	417.	465.	150.	36.1	1.60	12.9	813012
19.0	999.0	1004.0	10.8	1210.	398.	457.	187.	24.7	.73	14.9	813013
19.0	1004.0	1009.0	10.7	1200.	389.	452.	182.	32.6	1.27	18.5	813014
19.0	1113.0	1118.0	10.6	1200.	396.	439.	194.	35.4	***	14.7	812991
19.0	1118.0	1123.0	10.7	1220.	389.	450.	206.	36.7	***	15.4	812992
19.0	1123.0	1128.0	10.8	1240.	396.	462.	216.	41.2	***	17.3	812993
19.0	1128.0	1133.0	10.9	1250.	407.	467.	215.	45.0	***	13.1	812994
19.0	1133.0	1138.0	10.9	1250.	405.	463.	199.	54.5	***	15.9	812995
19.0	1138.0	1143.0	10.9	1240.	411.	464.	202.	48.9	***	13.7	812996
19.0	1143.0	1148.0	10.8	1220.	403.	450.	207.	48.1	***	16.5	812997
19.0	1148.0	1153.0	11.4	1240.	475.	460.	***	***	***	***	812998
19.0	1153.0	1158.0	10.8	1240.	410.	457.	202.	75.7	***	16.3	812999
19.0	1158.0	1163.0	11.2	1280.	424.	476.	194.	53.9	***	15.3	813000
19.0	1163.0	1168.0	10.6	1190.	400.	449.	189.	59.0	***	17.1	813001
19.0	1168.0	1173.0	10.9	1240.	410.	457.	172.	53.7	***	14.4	813002
19.0	1270.0	1275.0	10.9	1210.	435.	480.	175.	36.9	.73	11.3	812979
19.0	1275.0	1280.0	10.9	1200.	432.	479.	***	***	***	***	812980
19.0	1280.0	1285.0	11.2	1240.	447.	486.	***	***	***	***	812981
19.0	1285.0	1290.0	10.8	1200.	426.	473.	195.	32.8	.67	15.2	812982
19.0	1290.0	1295.0	10.9	1200.	435.	473.	192.	46.6	.80	11.5	812983
19.0	1295.0	1300.0	10.9	1200.	426.	474.	202.	38.7	.73	12.7	812984

CORE	DEPTH		NaPW	MgPW	KPW	CaPW	SiO_2PW	NO_3PW	NO_2PW	PO_4PW	ID
	cm		$g.L^{-1}$	ppm	ppm	ppm	µM	µM	µM	µM	
19.0	1300.0	1305.0	10.7	1190.	409.	471.	213.	40.8	1.13	15.3	812985
19.0	1305.0	1310.0	10.3	1110.	407.	442.	***	79.6	***	12.8	812986
19.0	1310.0	1315.0	10.5	1180.	415.	432.	137.	61.5	***	11.5	812987
19.0	1315.0	1320.0	10.9	1220.	415.	458.	218.	54.4	***	13.3	812988
19.0	1320.0	1325.0	10.8	1220.	415.	459.	201.	47.7	***	10.5	812989
19.0	1325.0	1330.0	10.9	1210.	407.	462.	201.	40.5	***	18.6	812990
19.0	201.0	206.0	10.7	1180.	434.	445.	254.	***	***	***	812967
19.0	206.0	211.0	10.2	1160.	417.	432.	***	***	***	***	812968
19.0	211.0	216.0	10.7	1190.	429.	451.	193.	27.0	.67	13.6	812969
19.0	216.0	221.0	10.7	1200.	438.	446.	214.	43.5	1.39	13.9	812970
19.0	222.0	227.0	10.7	1190.	423.	435.	388.	***	***	***	812971
19.0	227.0	232.0	***	***	***	***	340.	***	***	***	812972
19.0	232.0	237.0	10.8	1220.	427.	449.	354.	***	***	***	812973
19.0	237.0	242.0	10.8	1220.	427.	431.	341.	21.7	.73	7.9	812974
19.0	249.0	257.0	10.6	1220.	427.	432.	354.	45.2	1.19	8.8	812975
19.0	257.0	265.0	11.0	1250.	434.	454.	328.	31.6	1.13	12.2	812976
19.0	265.0	273.0	11.0	1220.	445.	466.	283.	32.3	.93	13.6	812977
19.0	277.0	283.0	10.9	1220.	433.	463.	321.	40.7	.93	14.7	812978
44.0	.1	1.0	10.7	1190.	390.	436.	239.	71.6	2.67	5.3	813040
44.0	.1	1.0	11.2	1260.	404.	448.	263.	74.7	.87	5.3	813042
44.0	1.0	2.0	10.7	1190.	404.	434.	270.	79.1	.80	4.7	813041
44.0	1.0	2.0	11.4	1310.	423.	471.	280.	89.2	.67	6.2	813043
44.0	2.0	3.0	10.9	1240.	421.	452.	338.	95.3	.73	6.3	813044
44.0	3.0	4.0	11.0	1240.	421.	453.	338.	95.3	1.13	6.9	813045
44.0	4.0	5.0	11.1	1230.	411.	448.	359.	85.0	.87	6.7	813046
44.0	5.0	6.0	11.1	1210.	411.	432.	364.	85.5	.93	7.8	813047
44.0	6.5	8.0	10.8	1190.	417.	434.	393.	84.2	1.60	7.9	813048
44.0	8.0	10.0	11.2	1230.	425.	438.	353.	65.3	2.73	7.3	813049
44.0	10.0	11.0	10.2	1190.	408.	429.	413.	79.1	1.80	8.3	813050
44.0	11.0	12.0	13.4	1500.	512.	545.	***	***	***	***	813051
44.0	12.0	13.0	10.9	1200.	421.	438.	***	***	***	***	813052
44.0	13.0	14.0	10.9	1200.	415.	440.	406.	75.7	2.06	10.4	813053
44.0	14.0	15.0	13.2	1400.	501.	522.	***	***	***	***	813054
44.0	15.0	16.0	11.0	1230.	425.	441.	***	***	***	***	813055
44.0	16.0	17.0	11.1	1170.	417.	439.	***	***	***	***	813056
44.0	17.0	19.0	11.0	1180.	422.	429.	425.	42.2	1.27	9.3	813057
44.0	19.0	20.0	12.3	1380.	465.	499.	***	***	***	***	813058
44.0	20.0	21.0	11.0	1210.	415.	445.	***	***	***	***	813059
44.0	21.0	22.0	10.4	1190.	402.	421.	***	***	***	***	813060
44.0	22.0	23.0	11.3	1280.	427.	462.	***	***	***	***	813061
44.0	23.0	24.0	10.7	1220.	415.	447.	428.	56.0	1.33	13.4	813062
44.0	24.0	26.0	11.1	1250.	434.	453.	409.	64.6	1.19	13.0	813063
44.0	26.0	28.0	10.6	1210.	425.	443.	435.	50.4	1.19	12.6	813065
44.0	28.0	30.0	10.8	1180.	427.	436.	440.	50.5	1.00	13.4	813067
44.0	30.0	32.0	11.1	1250.	421.	454.	392.	44.4	1.13	14.2	813069
44.0	32.0	33.0	11.0	1210.	429.	444.	400.	57.4	1.39	15.2	813071
44.0	33.0	35.0	10.8	1210.	421.	438.	404.	51.8	1.06	16.8	813072

CORE	DEPTH		pH	pE	pS	ALKPW	SO_4PW	ID
	cm					$meq.L^{-1}$	mM	
5.0	.1	10.0	7.4	9.60	6.00	2.6	29.6	812901
5.0	10.0	15.0	7.6	8.70	6.00	2.7	29.8	812902
5.0	15.0	20.0	7.5	5.70	6.00	2.7	30.0	812903
5.0	20.0	25.0	7.5	7.20	6.00	2.9	29.7	812904
5.0	25.0	30.0	7.5	7.40	6.00	2.9	28.6	812905
5.0	30.0	35.0	7.9	6.90	6.00	2.9	28.6	812906
5.0	35.0	40.0	8.5	6.40	6.00	3.3	31.6	812907
5.0	40.0	45.0	8.7	5.80	6.00	3.2	28.0	812908
5.0	45.0	50.0	8.4	5.30	5.44	3.5	29.8	812909
5.0	50.0	60.0	8.8	5.60	4.87	3.7	31.1	812910
5.0	60.0	70.0	8.7	5.90	5.16	3.6	28.8	812911
5.0	70.0	78.0	8.2	5.50	5.41	3.0	28.8	812912
5.0	80.0	90.0	8.5	6.10	4.88	3.8	30.1	812913
5.0	90.0	100.0	8.6	4.20	4.18	4.0	30.7	812914
5.0	100.0	112.0	8.1	1.80	4.24	3.9	30.0	812915
5.0	112.0	121.0	8.3	6.10	6.00	3.0	27.6	812916
5.0	121.0	130.0	8.0	6.30	6.00	3.6	32.5	812917
5.0	130.0	140.0	7.9	6.10	6.00	3.8	33.2	812918
13.0	.1	3.0	7.0	9.60	***	2.3	28.6	812955
13.0	3.0	6.0	7.6	7.90	***	2.5	29.2	812956
13.0	6.0	9.0	7.4	7.20	***	2.5	29.5	812957
13.0	9.0	12.0	7.3	7.30	***	2.5	28.7	812958
13.0	12.0	15.0	7.4	7.50	***	2.4	27.9	812959
13.0	15.0	18.0	7.3	7.40	***	2.4	28.9	812960
13.0	18.0	21.0	7.1	7.60	***	2.6	29.6	812961
13.0	21.0	24.0	7.1	7.40	***	2.6	29.4	812962
13.0	24.0	27.0	7.1	7.70	***	2.6	29.6	812963
13.0	27.0	30.0	7.1	7.50	***	2.6	28.9	812964
13.0	30.0	33.0	7.0	7.00	***	2.6	28.8	812965
13.0	33.0	36.0	7.2	6.90	***	2.6	29.0	812966
13.0	60.0	64.0	7.7	6.80	***	2.6	29.3	812949
13.0	70.0	74.0	7.9	6.70	***	2.7	28.5	812950
13.0	80.0	84.0	7.8	6.90	***	2.7	28.5	812951
13.0	90.0	94.0	8.0	6.90	***	2.9	28.6	812952
13.0	100.0	104.0	7.7	6.40	***	2.7	28.6	812953
13.0	116.0	120.0	7.8	6.80	***	2.7	28.2	812954
13.0	140.0	144.0	7.9	9.10	5.41	2.5	28.5	812943
13.0	156.0	160.0	7.8	6.80	6.00	2.8	28.9	812944
13.0	168.0	171.0	7.8	6.60	6.00	2.8	28.5	812945
13.0	180.0	184.0	8.0	6.70	6.00	2.8	28.8	812946
13.0	194.0	198.0	8.0	6.80	6.00	2.9	29.6	812947
13.0	206.0	210.0	7.8	6.60	6.00	2.9	28.9	812948
13.0	252.0	256.0	8.1	7.90	5.50	3.1	28.9	812931
13.0	256.0	260.0	7.7	6.20	6.00	3.1	29.6	812932
13.0	260.0	264.0	7.7	7.00	6.00	2.7	29.4	812933
13.0	264.0	268.0	7.6	7.40	6.00	2.7	29.3	812934
13.0	268.0	272.0	7.8	7.30	6.00	2.9	29.4	812935
13.0	272.0	276.0	8.0	7.00	6.00	2.9	29.0	812936
13.0	276.0	280.0	7.8	6.80	6.00	2.8	29.5	812937
13.0	280.0	284.0	7.6	7.10	6.00	3.0	29.5	812938
13.0	284.0	288.0	8.5	5.80	6.00	3.1	28.8	812939
13.0	288.0	292.0	8.6	5.50	5.39	3.2	28.9	812940
13.0	292.0	296.0	8.8	5.80	5.09	3.1	28.6	812941
13.0	296.0	300.0	8.8	5.70	4.81	3.1	28.8	812942
13.0	313.0	314.0	8.1	6.20	***	***	***	812919
13.0	321.0	322.0	7.8	6.10	***	***	***	812920
13.0	336.0	337.5	7.9	6.30	***	***	***	812921
13.0	337.5	339.0	7.8	6.50	***	***	***	812922
13.0	339.0	340.5	7.8	6.80	***	***	***	812923
13.0	340.5	342.0	7.6	6.90	***	***	***	812924

CORE	DEPTH		pH	pE	pS	ALKPW	SO_4PW	ID
	cm					meq.L^{-1}	mM	
13.0	342.0	343.5	7.7	7.20	***	***	***	812925
13.0	343.5	345.0	7.8	7.00	***	***	***	812926
13.0	345.0	346.5	7.8	6.70	***	***	***	812927
13.0	346.5	348.0	7.8	6.40	***	***	***	812928
13.0	360.0	361.0	8.1	4.80	***	***	***	812929
13.0	374.0	375.5	7.9	6.50	***	***	***	812930
19.0	653.0	658.0	8.3	5.30	5.50	3.7	29.6	813028
19.0	658.0	663.0	8.4	4.90	6.00	3.8	30.0	813029
19.0	663.0	668.0	8.3	5.20	5.50	3.8	28.3	813030
19.0	668.0	673.0	8.2	5.40	6.00	3.8	28.0	813031
19.0	673.0	678.0	8.2	4.60	6.00	3.7	27.6	813032
19.0	678.0	683.0	8.2	5.10	6.00	3.8	27.8	813033
19.0	683.0	688.0	8.3	5.50	5.48	3.8	28.8	813034
19.0	688.0	693.0	8.2	4.80	5.38	4.0	30.0	813035
19.0	693.0	698.0	8.3	5.50	5.50	3.8	28.6	813036
19.0	698.0	703.0	8.2	5.50	6.00	3.9	28.6	813037
19.0	703.0	708.0	8.2	5.20	5.10	3.9	28.8	813038
19.0	708.0	713.0	7.8	5.50	6.00	***	***	813039
19.0	798.0	803.0	8.4	5.80	6.00	3.6	27.4	813015
19.0	803.0	808.0	8.1	4.60	6.00	***	32.6	813016
19.0	808.0	813.0	8.7	5.00	6.00	3.7	28.6	813017
19.0	813.0	818.0	8.0	5.50	6.00	3.6	29.3	813018
19.0	818.0	823.0	8.6	5.50	6.00	***	***	813019
19.0	823.0	830.0	8.5	5.40	6.00	3.9	28.9	813020
19.0	830.0	835.0	8.4	5.40	5.50	3.7	29.6	813021
19.0	835.0	840.0	8.4	5.50	6.00	3.6	29.2	813022
19.0	840.0	845.0	8.5	5.60	6.00	3.7	28.1	813023
19.0	845.0	850.0	8.4	5.50	6.00	3.5	27.8	813024
19.0	850.0	855.0	8.4	5.60	6.00	3.4	27.3	813025
19.0	855.0	860.0	8.4	5.70	6.00	4.0	30.2	813026
19.0	949.0	954.0	8.3	5.10	3.98	3.9	29.4	813003
19.0	954.0	959.0	8.2	4.70	4.51	3.8	29.4	813004
19.0	959.0	964.0	8.2	5.00	4.42	4.0	30.2	813005
19.0	964.0	969.0	8.3	5.60	5.27	3.7	30.0	813006
19.0	969.0	974.0	8.2	5.40	4.55	3.6	29.7	813007
19.0	974.0	979.0	8.3	4.80	5.22	3.8	28.6	813008
19.0	979.0	984.0	8.4	4.90	4.32	3.8	29.6	813009
19.0	984.0	989.0	8.4	5.10	3.93	3.9	28.1	813010
19.0	989.0	994.0	8.4	4.80	4.65	4.0	***	813011
19.0	994.0	999.0	8.4	4.90	4.57	3.9	28.5	813012
19.0	999.0	1004.0	8.3	5.20	4.44	4.0	28.8	813013
19.0	1004.0	1009.0	8.3	5.40	4.50	3.7	28.2	813014
19.0	1113.0	1118.0	8.2	5.70	4.68	3.8	29.2	812991
19.0	1118.0	1123.0	8.2	5.30	4.72	3.8	28.5	812992
19.0	1123.0	1128.0	8.2	5.20	4.62	3.7	28.5	812993
19.0	1128.0	1133.0	8.2	5.10	4.62	3.8	28.5	812994
19.0	1133.0	1138.0	8.2	5.30	4.81	3.7	28.5	812995
19.0	1138.0	1143.0	8.3	4.80	4.24	3.6	28.1	812996
19.0	1143.0	1148.0	8.3	5.00	4.92	3.8	28.6	812997
19.0	1148.0	1153.0	8.4	4.90	4.99	3.2	31.4	812998
19.0	1153.0	1158.0	8.6	5.00	4.81	3.9	28.7	812999
19.0	1158.0	1163.0	8.5	5.20	6.00	3.9	28.6	813000
19.0	1163.0	1168.0	8.5	5.30	4.95	3.9	28.5	813001
19.0	1168.0	1173.0	8.4	5.40	4.65	3.8	28.5	813002
19.0	1270.0	1275.0	8.4	5.70	4.65	4.3	29.5	812979
19.0	1275.0	1280.0	8.5	4.60	4.35	4.1	28.5	812980
19.0	1280.0	1285.0	8.5	4.70	4.77	4.3	28.3	812981
19.0	1285.0	1290.0	8.6	4.70	4.72	4.2	28.3	812982
19.0	1290.0	1295.0	8.5	4.70	3.68	4.2	28.3	812983
19.0	1295.0	1300.0	8.6	4.50	4.59	4.3	28.3	812984

CORE	DEPTH		pH	pE	pS	ALKPW	SO_4PW	ID
	cm					meq.L^{-1}	mM	
19.0	1300.0	1305.0	8.4	4.60	4.14	4.2	27.8	812985
19.0	1305.0	1310.0	8.7	4.80	4.81	3.9	27.2	812986
19.0	1310.0	1315.0	8.5	4.80	5.03	4.0	27.2	812987
19.0	1315.0	1320.0	8.5	4.90	4.55	4.2	28.0	812988
19.0	1320.0	1325.0	8.5	5.00	4.89	4.2	28.6	812989
19.0	1325.0	1330.0	8.5	4.60	4.86	4.1	28.9	812990
19.0	201.0	206.0	8.4	4.40	6.00	3.2	29.4	812967
19.0	206.0	211.0	8.4	5.40	6.00	3.1	28.0	812968
19.0	211.0	216.0	8.3	5.20	6.00	3.2	28.8	812969
19.0	216.0	221.0	8.4	5.30	5.27	3.0	27.8	812970
19.0	222.0	227.0	7.6	7.00	5.38	2.7	30.8	812971
19.0	227.0	232.0	7.6	7.00	6.00	2.7	30.2	812972
19.0	232.0	237.0	7.6	6.80	6.00	3.0	33.2	812973
19.0	237.0	242.0	7.9	6.80	6.00	2.7	29.2	812974
19.0	249.0	257.0	7.8	6.70	6.00	2.8	28.8	812975
19.0	257.0	265.0	7.8	6.70	6.00	3.2	32.5	812976
19.0	265.0	273.0	8.0	6.40	6.00	2.8	29.4	812977
19.0	277.0	283.0	7.9	6.10	6.00	2.9	29.0	812978
44.0	.1	1.0	7.4	9.20	6.00	2.4	29.3	813040
44.0	.1	1.0	7.5	7.80	6.00	2.4	28.9	813042
44.0	1.0	2.0	7.7	8.20	6.00	2.4	28.7	813041
44.0	1.0	2.0	7.6	7.20	6.00	2.3	29.2	813043
44.0	2.0	3.0	7.7	7.40	6.00	2.3	29.7	813044
44.0	3.0	4.0	7.6	6.90	6.00	2.1	29.8	813045
44.0	4.0	5.0	7.7	7.00	6.00	2.2	29.8	813046
44.0	5.0	6.0	7.6	7.20	6.00	2.1	29.4	813047
44.0	6.5	8.0	7.4	7.20	6.00	2.1	29.4	813048
44.0	8.0	10.0	7.5	7.30	6.00	2.2	29.5	813049
44.0	10.0	11.0	7.5	7.10	6.00	2.1	30.7	813050
44.0	11.0	12.0	7.6	7.10	6.00	***	***	813051
44.0	12.0	13.0	7.4	8.00	6.00	1.4	29.4	813052
44.0	13.0	14.0	7.4	8.00	6.00	2.4	28.9	813053
44.0	14.0	15.0	7.4	7.00	6.00	***	***	813054
44.0	15.0	16.0	7.5	7.00	6.00	***	***	813055
44.0	16.0	17.0	7.3	7.20	6.00	2.4	29.5	813056
44.0	17.0	19.0	7.5	7.00	6.00	2.6	29.3	813057
44.0	19.0	20.0	7.5	6.80	6.00	2.4	29.4	813058
44.0	20.0	21.0	7.5	6.80	6.00	2.4	28.8	813059
44.0	21.0	22.0	7.5	7.10	6.00	2.3	29.0	813060
44.0	22.0	23.0	7.4	7.00	6.00	2.4	29.0	813061
44.0	23.0	24.0	7.5	6.90	6.00	2.7	31.0	813062
44.0	24.0	26.0	7.5	7.00	6.00	2.4	29.7	813063
44.0	26.0	28.0	7.5	7.40	6.00	2.5	29.0	813065
44.0	28.0	30.0	7.6	6.90	6.00	2.5	28.9	813067
44.0	30.0	32.0	7.6	7.00	6.00	2.5	28.6	813069
44.0	32.0	33.0	7.6	6.90	6.00	***	***	813071
44.0	33.0	35.0	7.6	7.00	6.00	2.7	28.2	813072

CORE	DEPTH cm		MnPW ppb	FePW ppb	ZnPW ppb	CuPW ppb	NiPW ppb	CdPW ppb	ID
5.0	.1	10.0	1.	0	9.9	3.3	1.8	.23	812901
5.0	10.0	15.0	247.	0	40.8	5.4	9.0	.88	812902
5.0	15.0	20.0	1280.	0	45.6	3.2	14.5	.39	812903
5.0	20.0	25.0	1910.	0	45.2	6.3	17.6	2.40	812904
5.0	25.0	30.0	4050.	0	27.6	6.7	20.3	.44	812905
5.0	30.0	35.0	3030.	12.	23.0	6.9	19.5	.47	812906
5.0	35.0	40.0	5000.	45.	.2	.0	.7	.80	812907
5.0	40.0	45.0	4960.	152.	57.4	3.5	11.3	1.66	812908
5.0	45.0	50.0	5780.	215.	28.1	2.3	8.9	.49	812909
5.0	50.0	60.0	5580.	357.	24.9	3.2	8.7	.16	812910
5.0	60.0	70.0	5650.	161.	57.2	2.0	6.8	.18	812911
5.0	70.0	78.0	5760.	130.	49.1	4.2	7.3	.67	812912
5.0	80.0	90.0	6610.	319.	74.0	4.0	5.4	.91	812913
5.0	90.0	100.0	6630.	337.	13.4	1.4	3.7	.14	812914
5.0	100.0	112.0	6520.	507.	30.6	1.0	3.6	.10	812915
5.0	112.0	121.0	4220.	28.	32.9	4.0	12.8	1.87	812916
5.0	121.0	130.0	5850.	39.	21.8	1.3	12.5	.46	812917
5.0	130.0	140.0	5400.	106.	23.5	2.1	12.3	.30	812918
13.0	.1	3.0	1.	21.	45.5	.3	.3	.18	812955
13.0	3.0	6.0	1.	0	0	0	0	0	812956
13.0	6.0	9.0	1.	0	0	0	0	0	812957
13.0	9.0	12.0	1.	0	23.7	11.8	.6	.24	812958
13.0	12.0	15.0	1.	0	19.1	2.5	.5	.21	812959
13.0	15.0	18.0	1.	0	13.8	1.1	.5	.18	812960
13.0	18.0	21.0	1.	0	26.7	1.8	.3	.18	812961
13.0	21.0	24.0	1.	0	23.0	1.4	.5	.15	812962
13.0	24.0	27.0	1.	68.	26.7	.9	.4	.26	812963
13.0	27.0	30.0	1.	0	29.0	3.5	.9	.22	812964
13.0	30.0	33.0	1.	0	18.4	1.9	.2	.14	812965
13.0	33.0	36.0	1.	0	32.6	1.5	.7	.23	812966
13.0	60.0	64.0	734.	0	46.2	2.8	4.5	.26	812949
13.0	70.0	74.0	1650.	0	45.5	1.2	5.0	.15	812950
13.0	80.0	84.0	2190.	0	72.0	1.1	4.5	.18	812951
13.0	90.0	94.0	3010.	0	42.2	1.9	5.7	.28	812952
13.0	100.0	104.0	3470.	0	58.8	.7	4.9	.17	812953
13.0	116.0	120.0	3490.	0	51.3	1.1	6.6	.58	812954
13.0	140.0	144.0	1.	0	25.9	***	1.5	***	812943
13.0	156.0	160.0	2280.	0	29.2	***	5.7	***	812944
13.0	168.0	171.0	3280.	0	27.9	***	6.6	***	812945
13.0	180.0	184.0	4190.	0	31.5	***	5.8	***	812946
13.0	194.0	198.0	5110.	0	33.7	***	8.7	***	812947
13.0	206.0	210.0	5560.	0	30.8	***	5.8	***	812948
13.0	252.0	256.0	8860.	0	16.5	***	7.0	***	812931
13.0	256.0	260.0	8170.	0	19.5	***	6.4	***	812932
13.0	260.0	264.0	1240.	0	26.9	***	4.0	***	812933
13.0	264.0	268.0	625.	0	23.0	***	4.6	***	812934
13.0	268.0	272.0	4630.	0	22.7	***	6.3	***	812935
13.0	272.0	276.0	3500.	0	30.2	***	5.7	***	812936
13.0	276.0	280.0	4790.	0	25.3	***	7.8	***	812937
13.0	280.0	284.0	8220.	0	62.0	***	11.6	***	812938
13.0	284.0	288.0	12900.	282.	19.1	***	4.6	***	812939
13.0	288.0	292.0	12600.	135.	28.7	***	3.8	***	812940
13.0	292.0	296.0	12700.	186.	15.0	***	3.8	***	812941
13.0	296.0	300.0	12100.	49.	48.5	***	3.3	***	812942
13.0	313.0	314.0	***	***	***	***	***	***	812919
13.0	321.0	322.0	***	***	***	***	***	***	812920
13.0	336.0	337.5	***	***	***	***	***	***	812921
13.0	337.5	339.0	***	***	***	***	***	***	812922
13.0	339.0	340.5	***	***	***	***	***	***	812923
13.0	340.5	342.0	***	***	***	***	***	***	812924

CORE	DEPTH cm		MnPW ppm	FePW ppm	ZnPW ppm	CuPW ppm	NiPW ppm	CdPW ppm	ID
13.0	342.0	343.5	***	***	***	***	***	***	812925
13.0	343.5	345.0	***	***	***	***	***	***	812926
13.0	345.0	346.5	***	***	***	***	***	***	812927
13.0	346.5	348.0	***	***	***	***	***	***	812928
13.0	360.0	361.0	***	***	***	***	***	***	812929
13.0	374.0	375.5	***	***	***	***	***	***	812930
19.0	653.0	658.0	9840.	371.	26.3	.8	3.9	.03	813028
19.0	658.0	663.0	10500.	161.	40.0	1.1	5.5	.04	813029
19.0	663.0	668.0	11100.	53.	22.8	3.7	7.3	.26	813030
19.0	668.0	673.0	10700.	105.	23.7	2.0	6.4	.16	813031
19.0	673.0	678.0	9360.	209.	21.8	1.2	3.6	.06	813032
19.0	678.0	683.0	10900.	276.	15.3	1.4	5.9	.14	813033
19.0	683.0	688.0	9980.	95.	13.0	1.4	3.8	.11	813034
19.0	688.0	693.0	***	***	***	***	***	***	813035
19.0	693.0	698.0	10900.	969.	2.6	2.3	6.1	.20	813036
19.0	698.0	703.0	12200.	305.	2.9	3.5	6.8	.10	813037
19.0	703.0	708.0	13200.	172.	7.2	1.9	8.3	.18	813038
19.0	708.0	713.0	10300.	625.	44.5	1.4	4.3	.27	813039
19.0	798.0	803.0	8870.	85.	6.2	1.4	3.0	.10	813015
19.0	803.0	808.0	***	***	***	***	***	***	813016
19.0	808.0	813.0	9020.	376.	31.9	1.1	3.1	.14	813017
19.0	813.0	818.0	8110.	89.	26.0	1.5	3.0	.27	813018
19.0	818.0	823.0	8610.	45.	32.4	3.5	4.5	.34	813019
19.0	823.0	830.0	8230.	7.	23.7	1.6	3.1	.24	813020
19.0	830.0	835.0	8380.	244.	69.9	1.4	3.3	.25	813021
19.0	835.0	840.0	9570.	265.	48.7	1.1	3.4	.26	813022
19.0	840.0	845.0	9660.	462.	14.2	.5	3.1	.10	813023
19.0	845.0	850.0	9690.	469.	20.8	3.7	1.3	.16	813024
19.0	850.0	855.0	8880.	682.	26.5	1.5	4.4	.06	813025
19.0	855.0	860.0	8460.	560.	26.0	1.1	2.2	.18	813026
19.0	949.0	954.0	7880.	430.	24.3	2.3	1.2	.28	813003
19.0	954.0	959.0	8450.	140.	28.6	.8	.8	.06	813004
19.0	959.0	964.0	9920.	387.	20.5	1.0	3.4	.30	813005
19.0	964.0	969.0	9280.	246.	22.0	1.3	3.1	.12	813006
19.0	969.0	974.0	8930.	177.	26.0	1.3	2.3	.30	813007
19.0	974.0	979.0	8050.	437.	18.2	1.0	1.5	.18	813008
19.0	979.0	984.0	8430.	408.	29.4	.9	.7	.20	813009
19.0	984.0	989.0	7790.	628.	16.8	4.3	.7	.14	813010
19.0	989.0	994.0	8460.	446.	16.0	.4	1.3	.10	813011
19.0	994.0	999.0	7390.	410.	18.3	2.3	1.0	.16	813012
19.0	999.0	1004.0	9000.	464.	25.4	.9	2.3	.21	813013
19.0	1004.0	1009.0	7430.	686.	14.4	1.0	.5	.19	813014
19.0	1113.0	1118.0	7120.	399.	8.3	1.3	0	0	812991
19.0	1118.0	1123.0	7380.	469.	8.9	.4	1.9	0	812992
19.0	1123.0	1128.0	7350.	478.	15.7	.6	.5	.13	812993
19.0	1128.0	1133.0	7290.	92.	15.1	.7	.4	.14	812994
19.0	1133.0	1138.0	7470.	265.	16.0	.6	1.0	.12	812995
19.0	1138.0	1143.0	7290.	359.	17.7	.6	1.4	.06	812996
19.0	1143.0	1148.0	7100.	83.	7.0	.4	0	.19	812997
19.0	1148.0	1153.0	4350.	41.	20.9	4.1	2.9	.17	812998
19.0	1153.0	1158.0	7350.	336.	37.7	1.1	.7	.19	812999
19.0	1158.0	1163.0	7630.	349.	36.7	.7	.5	.10	813000
19.0	1163.0	1168.0	7280.	492.	22.2	.9	0	.10	813001
19.0	1168.0	1173.0	7690.	419.	16.4	.5	.9	.10	813002
19.0	1270.0	1275.0	6480.	209.	18.8	.6	.6	0	812979
19.0	1275.0	1280.0	6330.	***	***	***	***	***	812980
19.0	1280.0	1285.0	6410.	33.	25.0	.7	1.3	0	812981
19.0	1285.0	1290.0	6690.	108.	19.7	.6	.4	0	812982
19.0	1290.0	1295.0	6240.	177.	20.0	.6	2.6	0	812983
19.0	1295.0	1300.0	6530.	48.	48.5	1.8	1.2	.49	812984

CORE	DEPTH cm		MnPW ppb	FePW ppb	ZnPW ppb	CuPW ppb	NiPW ppb	CdPW ppb	ID
19.0	1300.0	1305.0	6550.	191.	80.7	.7	.8	0	812985
19.0	1305.0	1310.0	5400.	185.	76.7	2.5	10.2	.61	812986
19.0	1310.0	1315.0	4880.	18.	67.7	.8	730.0	.10	812987
19.0	1315.0	1320.0	6090.	196.	60.6	.6	1.0	0	812988
19.0	1320.0	1325.0	5914.	6.	63.3	0	1.0	0	812989
19.0	1325.0	1330.0	6430.	141.	31.6	1.3	1.2	.08	812990
19.0	201.0	206.0	13200.	331.	42.4	3.4	6.4	.59	812967
19.0	206.0	211.0	12400.	127.	73.8	1.8	4.4	.18	812968
19.0	211.0	216.0	13600.	150.	22.9	1.2	4.8	.05	812969
19.0	216.0	221.0	13000.	360.	51.4	1.1	3.0	.11	812970
19.0	222.0	227.0	1570.	14.	26.2	1.5	6.5	.14	812971
19.0	227.0	232.0	4220.	51.	39.8	2.3	10.0	.20	812972
19.0	232.0	237.0	5190.	0	94.7	3.4	9.4	.34	812973
19.0	237.0	242.0	6260.	0	65.1	2.4	***	.37	812974
19.0	249.0	257.0	8060.	0	34.2	3.3	8.7	.34	812975
19.0	257.0	265.0	8890.	0	50.2	1.8	7.4	1.87	812976
19.0	265.0	273.0	9570.	0	41.8	3.6	8.4	.20	812977
19.0	277.0	283.0	10900.	0	50.8	2.9	7.7	.12	812978
44.0	.1	1.0	1.	6.	20.5	8.3	1.5	.37	813040
44.0	.1	1.0	1.	0	13.0	5.2	1.8	.22	813042
44.0	1.0	2.0	1.	23.	13.1	5.0	.9	.14	813041
44.0	1.0	2.0	1.	0	53.1	10.2	1.1	.69	813043
44.0	2.0	3.0	1.	0	40.5	5.4	.6	.29	813044
44.0	3.0	4.0	493.	0	50.4	4.9	.7	2.75	813045
44.0	4.0	5.0	1.	0	66.5	5.4	1.1	.68	813046
44.0	5.0	6.0	1.	0	46.7	6.3	.4	.25	813047
44.0	6.5	8.0	764.	0	72.4	9.7	2.3	***	813048
44.0	8.0	10.0	243.	6.	29.3	13.5	3.3	.17	813049
44.0	10.0	11.0	505.	12.	42.5	6.0	5.3	.50	813050
44.0	11.0	12.0	1650.	0	54.3	8.7	9.3	.65	813051
44.0	12.0	13.0	313.	0	50.9	9.5	8.5	.28	813052
44.0	13.0	14.0	***	***	***	***	***	***	813053
44.0	14.0	15.0	***	***	***	***	***	***	813054
44.0	15.0	16.0	***	***	***	***	***	***	813055
44.0	16.0	17.0	3300.	***	***	***	***	***	813056
44.0	17.0	19.0	2780.	0	36.4	4.6	8.1	.29	813057
44.0	19.0	20.0	2280.	0	64.8	11.0	8.4	.71	813058
44.0	20.0	21.0	4940.	***	***	***	***	***	813059
44.0	21.0	22.0	3050.	0	42.8	6.7	8.8	.39	813060
44.0	22.0	23.0	5000.	71.	118.2	10.8	5.4	***	813061
44.0	23.0	24.0	***	***	***	***	***	***	813062
44.0	24.0	26.0	***	***	***	***	***	***	813063
44.0	26.0	28.0	***	***	***	***	***	***	813065
44.0	28.0	30.0	2520.	***	***	***	***	***	813067
44.0	30.0	32.0	5050.	***	***	***	***	***	813069
44.0	32.0	33.0	5300.	0	74.9	7.0	8.0	.45	813071
44.0	33.0	35.0	4830.	0	115.3	***	9.0	***	813072

CORE	DEPTH cm		HUE	VALUE	CHROMA	ID
5.0	.1	10.0	10. YR	3.0	2.0	812901
5.0	10.0	15.0	10. YR	3.0	3.0	812902
5.0	15.0	20.0	10. YR	3.0	3.0	812903
5.0	20.0	25.0	10. YR	3.0	3.0	812904
5.0	25.0	30.0	2.5Y	3.0	2.0	812905
5.0	30.0	35.0	2.5Y	3.0	2.0	812906
5.0	35.0	40.0	5. Y	4.0	1.0	812907
5.0	40.0	45.0	5. Y	4.0	1.0	812908
5.0	45.0	50.0	5. GY	4.0	1.0	812909
5.0	50.0	60.0	5. GY	4.0	1.0	812910
5.0	60.0	70.0	5. GY	4.0	1.0	812911
5.0	70.0	78.0	5. GY	4.0	1.0	812912
5.0	80.0	90.0	5. GY	4.0	1.0	812913
5.0	90.0	100.0	5. GY	4.0	1.0	812914
5.0	100.0	112.0	2.5YR	2.5	0	812915
5.0	112.0	121.0	10. YR	3.0	3.0	812916
5.0	121.0	130.0	5. Y	4.0	1.0	812917
5.0	130.0	140.0	5. Y	4.0	1.0	812918
13.0	.1	3.0	7.5YR	4.0	2.0	812955
13.0	3.0	6.0	7.5YR	4.0	2.0	812956
13.0	6.0	9.0	7.5YR	4.0	2.0	812957
13.0	9.0	12.0	7.5YR	4.0	2.0	812958
13.0	12.0	15.0	7.5YR	4.0	2.0	812959
13.0	15.0	18.0	7.5YR	4.0	2.0	812960
13.0	18.0	21.0	7.5YR	4.0	2.0	812961
13.0	21.0	24.0	7.5YR	4.0	2.0	812962
13.0	24.0	27.0	7.5YR	4.0	2.0	812963
13.0	27.0	30.0	10. YR	4.0	2.0	812964
13.0	30.0	33.0	2.5Y	4.0	2.0	812965
13.0	33.0	36.0	2.5Y	4.0	2.0	812966
13.0	60.0	64.0	5. Y	4.0	4.0	812949
13.0	70.0	74.0	5. Y	4.0	4.0	812950
13.0	80.0	84.0	5. Y	4.0	4.0	812951
13.0	90.0	94.0	5. Y	3.0	2.0	812952
13.0	100.0	104.0	5. Y	4.0	4.0	812953
13.0	116.0	120.0	5. Y	4.0	4.0	812954
13.0	140.0	144.0	10. YR	3.0	3.0	812943
13.0	156.0	160.0	5. Y	5.0	2.0	812944
13.0	168.0	171.0	5. Y	5.0	3.0	812945
13.0	180.0	184.0	5. Y	5.0	3.0	812946
13.0	194.0	198.0	5. Y	4.0	2.0	812947
13.0	206.0	210.0	5. Y	5.0	3.0	812948
13.0	252.0	256.0	2.5Y	5.0	2.0	812931
13.0	256.0	260.0	5. Y	4.0	1.0	812932
13.0	260.0	264.0	5. Y	5.0	1.0	812933
13.0	264.0	268.0	5. Y	5.0	1.0	812934
13.0	268.0	272.0	10. YR	3.0	4.0	812935
13.0	272.0	276.0	2.5Y	5.0	2.0	812936
13.0	276.0	280.0	5. Y	5.0	2.0	812937
13.0	280.0	284.0	2.5Y	5.0	2.0	812938
13.0	284.0	288.0	10. YR	3.0	4.0	812939
13.0	288.0	292.0	5. Y	4.0	1.0	812940
13.0	292.0	296.0	5. G	5.0	1.0	812941
13.0	296.0	300.0	5. Y	5.0	2.0	812942
13.0	313.0	314.0	5. Y	5.0	1.0	812919
13.0	321.0	322.0	5. Y	5.0	3.0	812920
13.0	336.0	337.5	5. Y	5.0	1.0	812921
13.0	337.5	339.0	5. Y	5.0	1.0	812922
13.0	339.0	340.5	5. Y	5.0	3.0	812923
13.0	340.5	342.0	5. Y	5.0	3.0	812924

CORE	DEPTH cm		HUE	VALUE	CHROMA	ID
13.0	342.0	343.5	5. Y	5.0	3.0	812925
13.0	343.5	345.0	5. Y	5.0	3.0	812926
13.0	345.0	346.5	5. Y	5.0	2.0	812927
13.0	346.5	348.0	5. Y	5.0	2.0	812928
13.0	360.0	361.0	5. Y	5.0	2.0	812929
13.0	374.0	375.5	5. Y	5.0	3.0	812930
19.0	653.0	658.0	5. Y	5.0	1.0	813028
19.0	658.0	663.0	5. Y	5.0	1.0	813029
19.0	663.0	668.0	5. Y	5.0	1.0	813030
19.0	668.0	673.0	5. Y	5.0	1.0	813031
19.0	673.0	678.0	5. Y	5.0	1.0	813032
19.0	678.0	683.0	5. Y	5.0	1.0	813033
19.0	683.0	688.0	5. Y	5.0	1.0	813034
19.0	688.0	693.0	5. Y	5.0	1.0	813035
19.0	693.0	698.0	5. Y	5.0	1.0	813036
19.0	698.0	703.0	5. Y	5.0	1.0	813037
19.0	703.0	708.0	5. Y	5.0	1.0	813038
19.0	708.0	713.0	5. Y	5.0	1.0	813039
19.0	798.0	803.0	5. GY	5.0	1.0	813015
19.0	803.0	808.0	5. GY	5.0	1.0	813016
19.0	808.0	813.0	5. GY	5.0	1.0	813017
19.0	813.0	818.0	5. GY	5.0	1.0	813018
19.0	818.0	823.0	5. GY	5.0	1.0	813019
19.0	823.0	830.0	5. GY	5.0	1.0	813020
19.0	830.0	835.0	5. Y	5.0	1.0	813021
19.0	835.0	840.0	5. Y	5.0	1.0	813022
19.0	840.0	845.0	5. Y	5.0	1.0	813023
19.0	845.0	850.0	5. Y	5.0	1.0	813024
19.0	850.0	855.0	5. Y	5.0	1.0	813025
19.0	855.0	860.0	5. Y	5.0	1.0	813026
19.0	949.0	954.0	5. GY	4.0	1.0	813003
19.0	954.0	959.0	5. GY	4.0	1.0	813004
19.0	959.0	964.0	5. GY	4.0	1.0	813005
19.0	964.0	969.0	5. GY	4.0	1.0	813006
19.0	969.0	974.0	5. GY	4.0	1.0	813007
19.0	974.0	979.0	5. GY	4.0	1.0	813008
19.0	979.0	984.0	5. GY	4.0	1.0	813009
19.0	984.0	989.0	5. GY	4.0	1.0	813010
19.0	989.0	994.0	5. GY	4.0	1.0	813011
19.0	994.0	999.0	5. GY	4.0	1.0	813012
19.0	999.0	1004.0	5. GY	4.0	1.0	813013
19.0	1004.0	1009.0	5. GY	4.0	1.0	813014
19.0	1113.0	1118.0	5. GY	4.0	1.0	812991
19.0	1118.0	1123.0	5. GY	4.0	1.0	812992
19.0	1123.0	1128.0	5. GY	4.0	1.0	812993
19.0	1128.0	1133.0	5. GY	4.0	1.0	812994
19.0	1133.0	1138.0	5. GY	4.0	1.0	812995
19.0	1138.0	1143.0	5. GY	4.0	0	812996
19.0	1143.0	1148.0	5. GY	5.0	1.0	812997
19.0	1148.0	1153.0	5. GY	5.0	1.0	812998
19.0	1153.0	1158.0	5. GY	5.0	1.0	812999
19.0	1158.0	1163.0	5. GY	5.0	1.0	813000
19.0	1163.0	1168.0	5. GY	5.0	1.0	813001
19.0	1168.0	1173.0	5. GY	5.0	1.0	813002
19.0	1270.0	1275.0	5. GY	4.0	1.0	812979
19.0	1275.0	1280.0	5. GY	4.0	1.0	812980
19.0	1280.0	1285.0	5. GY	4.0	1.0	812981
19.0	1285.0	1290.0	5. GY	4.0	1.0	812982
19.0	1290.0	1295.0	5. GY	4.0	1.0	812983
19.0	1295.0	1300.0	5. GY	4.0	1.0	812984

CORE	DEPTH cm		HUE	VALUE	CHROMA	ID
19.0	1300.0	1305.0	5. GY	5.0	1.0	812985
19.0	1305.0	1310.0	5. GY	5.0	1.0	812986
19.0	1310.0	1315.0	5. GY	5.0	1.0	812987
19.0	1315.0	1320.0	5. GY	5.0	1.0	812988
19.0	1320.0	1325.0	5. GY	5.0	1.0	812989
19.0	1325.0	1330.0	5. GY	5.0	1.0	812990
19.1	201.0	206.0	5. GY	5.0	1.0	812967
19.1	206.0	211.0	5. GY	5.0	1.0	812968
19.1	211.0	216.0	5. GY	5.0	1.0	812969
19.1	216.0	221.0	5. GY	5.0	1.0	812970
19.1	222.0	227.0	10. YR	3.0	2.0	812971
19.1	227.0	232.0	10. YR	3.0	2.0	812972
19.1	232.0	237.0	10. YR	3.0	3.0	812973
19.1	237.0	242.0	10. YR	3.0	3.0	812974
19.1	249.0	257.0	2.5Y	4.0	2.0	812975
19.1	257.0	265.0	2.5Y	4.0	2.0	812976
19.1	265.0	273.0	5. Y	4.0	2.0	812977
19.1	277.0	283.0	5. Y	4.0	2.0	812978
44.0	.1	1.0	10. YR	3.0	2.0	813040
44.0	.1	1.0	10. YR	3.0	2.0	813042
44.0	1.0	2.0	10. YR	3.0	2.0	813041
44.0	1.0	2.0	10. YR	3.0	2.0	813043
44.0	2.0	3.0	10. YR	3.0	2.0	813044
44.0	3.0	4.0	10. YR	3.0	2.0	813045
44.0	4.0	5.0	10. YR	3.0	2.0	813046
44.0	5.0	6.0	10. YR	3.0	2.0	813047
44.0	6.5	8.0	10. YR	3.0	2.0	813048
44.0	8.0	10.0	10. YR	3.0	2.0	813049
44.0	10.0	11.0	10. YR	3.0	2.5	813050
44.0	11.0	12.0	10. YR	3.0	2.0	813051
44.0	12.0	13.0	10. YR	3.0	2.0	813052
44.0	13.0	14.0	10. YR	3.0	2.0	813053
44.0	14.0	15.0	10. YR	3.0	2.0	813054
44.0	15.0	16.0	10. YR	3.0	2.0	813055
44.0	16.0	17.0	10. YR	2.5	1.5	813056
44.0	17.0	19.0	10. YR	3.0	3.0	813057
44.0	19.0	20.0	2.5Y	3.0	2.0	813058
44.0	20.0	21.0	2.5Y	3.0	2.0	813059
44.0	21.0	22.0	2.5Y	3.0	2.0	813060
44.0	22.0	23.0	2.5Y	3.0	1.5	813061
44.0	23.0	24.0	2.5Y	3.0	1.5	813062
44.0	24.0	26.0	2.5Y	3.0	2.0	813063
44.0	26.0	28.0	2.5Y	3.0	2.0	813065
44.0	28.0	30.0	2.5Y	3.0	1.5	813067
44.0	30.0	32.0	2.5Y	3.0	2.0	813069
44.0	32.0	33.0	2.5Y	3.0	2.0	813071
44.0	33.0	35.0	2.5Y	3.0	1.5	813072

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