



GLOBAL  
GEOCHEMISTRY  
CORPORATION

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September 25, 1989  
4623

Dr. Daniel L. Carrier  
Unocal Geothermal Division  
3576 Unocal Place, P.O. Box 6854  
Santa Rosa, CA 95406

Dear Dr. Carrier:

Enclosed please find  $\delta D$  and  $\delta^{18}O$  isotope data for the 12 water samples which you submitted. The data are reported relative to the VSMOW international standard. Appended to the bottom of the data file are the values of standards collected with your samples. The expected values of these standards expressed in per mil (‰) are:

	$\delta D$	$\delta^{18}O$
DH	-214.7	
DL	4.22	
DI		-14.61

The invoice is also enclosed.

Please call if you have questions or comments.

Thank you.

Sincerely,

Kristopher A. Kohrt  
Lab Manager

CONFIDENTIAL

Sample	GGCID	Del180	Del180 Dup	DelD	DelD Dup
3117-081489-1414	4623-1	-9.04		-97.35	-100.53
3117-081489-1530	4623-2	-8.61		-98.95	-99.41
3117-081489-1735	4623-3	-9.01		-100.53	-95.92
3117-081489-1834 STM	4623-4	-12.43		-111.82	-111.53
3117-081489-1920	4623-5	-9.11		-100.15	-101.88
3117-081589-1210	4623-6	-9.19		-101.16	-101.31
3117-081589-1515	4623-7	-9.38		-102.96	-103.30
3117-081689-1215	4623-8	-9.25		-103.35	-104.11
3117-081789-1115	4623-9	-9.44	-9.37	-101.29	-104.35
3117-081889-1000	4623-10	-9.38		-100.46	-99.71
3117-081989-1515	4623-11	-9.18		-100.42	-103.33
3117-082189-1230	4623-12	-9.19		-100.80	-100.70
4623-DL1-248				-215*	
4623-DH1-246				4*	
4623-DL2-246				-214*	
4623-DH2-248				5*	
4560-DI-2-258		-14.64*			
4560-DI-1-258		-14.56*			
4623-DI-2-248		-14.60*			
OSH4623-DI3-248 (-14.		-14.64*			

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Sample	GGCID	Del18O	Del18O Dup	DelD	DelD Dup
87131012911230	7096-1	-10.2	-10.2	-98	-99
87131012911345	7096-2	-10.2		-99	-99
87131012911445	7096-3	-13.0		-109	-110
87131012911515	7096-4	-10.2		-99	-99
87131012911615	7096-5	-10.1		-99	-99
87131012911715	7096-6	-9.9		-100	-101
87131012911750	7096-7	-13.2		-109	-108
87131013911045	7096-8	-10.2		-100	-103
87131013911145	7096-9	-10.2		-100	-101
87131013911200	7096-10	-12.9		-111	-111
87131013911245	7096-11	-10.1		-99	-100
87131013911345	7096-12	-9.7		-99	-100
87131013911445	7096-13	-10.0	-9.9	-102	-99

STANDARD

7102-NI-2-304	-11.8	
7096-NI-1-306	-11.6	
7096-NI-2-306	-11.8	
7096-NH-1-305		34
7096-NH-2-305		35
7096-DL-1-305		-216
7096-DL-2-305		-214

ESTABLISHED STANDARD VALUES

STANDARD	$\delta^{18}O$	$\delta D$
NI	-11.65	
NH		34
DL		-215

Values are reported in ‰ relative to SMOW

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Supervisor