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Earth is (mostly) flat: apportionment of the flux of continental sediment over millennial time scales

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Earth is (mostly) flat: apportionment of the flux of continental sediment over millennial time scales

Abstract

We use a new compilation of global denudation estimates from cosmogenic nuclides to calculate the apportionment and the sum of all sediment produced on Earth by extrapolation of a statistically significant correlation between denudation rates and basin slopes to watersheds without denudation rate data. This robust relationship can explain approximately half of the variance in denudation from quartz-bearing topography drained by rivers using only mean slopes as the predictive tool and matches a similar fit for large river basins. At slopes >200 m/km, topography controls denudation rates. Controls on denudation in landscapes where average slopes are 10 mm/k.y. We use global topographic data to show that the vast majority of the Earth's surface consists of these gently sloping surfaces with modest, but positive, gross denudation rates, and that these areas contribute the most sediment to the oceans. Because of the links between silicate weathering rates and denudation rates, the predominance of low sloping areas on the Earth's surface compared to areas of steep mountainous topography implies that mountain uplift contributes little to drawdown of CO2 at cosmogenic nuclide time scales of 103–106 yr. The poorly understood environmental controls that set the pace of denudation for the largest portion of Earth's surface hold the key to understanding the feedbacks between erosion and climate.

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1

Publisher: GSA Journal: GEOL: Geology Article ID: G33918 The Earth is (mostly) flat: Apportionment of the flux of

2 continental sediment over millennial time scales

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11 ABSTRACT

12 We use a new compilation of global denudation estimates from cosmogenic 13 nuclides to calculate the apportionment and the sum of all sediment produced on the 14 Earth by extrapolation of a statistically significant correlation between denudation rates 15 and basin slopes to watersheds without denudation rate data. This robust relationship can 16 explain approximately half of the variance in denudation from quartz-bearing topography 17 drained by rivers using only mean slopes as the predictive tool and matches a similar fit for large river basins. Above 200 m/km slopes, topography controls denudation rates. 18 19 Controls on denudation in landscapes where average slopes are < 200 m/km are unclear, 20 but sediment production rates in these areas average $\sim 45 \text{ mm/k.y.}$ with 75% of the 21 denudation rates being greater than 10 mm/k.y. We use global topographic data to show 22 that the vast majority of the Earth's surface consists of these gently sloping surfaces with

23	modest, but positive, gross denudation rates, and that these areas contribute the most
24	sediment to the oceans. Because of the links between silicate weathering rates and
25	denudation rates, the predominance of low sloping areas on the Earth's surface compared
26	to areas of steep mountainous topography implies that mountain uplift contributes little to
27	drawdown of CO ₂ at cosmogenic nuclide time scales of 10^3 - 10^6 yr. The poorly
28	understood environmental controls that do set the pace of denudation for the largest
29	portion of Earth's surface hold the key to understanding the feedbacks between erosion
30	and climate.

31 INTRODUCTION

32 Understanding the controls on fluxes of sediment from continents to the ocean is 33 critical for understanding rates of mass transfer among global sediment reservoirs, as well 34 as elemental fluxes (Plank and Langmuir, 1998), nutrient cycles (Meybeck, 1982), inputs 35 to organic carbon sinks (Ludwig et al., 1996), and their respective changes over short and 36 long time scales. Fluxes of variably-weathered sediment through rivers are also linked to 37 dissolved solute fluxes (West et al., 2005), a relation of critical importance because the 38 rate of weathering and metamorphism of silicate and carbonate minerals serves to transfer 39 CO_2 between the atmosphere and lithosphere, thereby regulating atmospheric CO_2 40 concentrations over geologic time scales (Berner et al., 1983). 41 The movement of sediment and chemical solutes through river basins is a highly

episodic process (e.g., Kirchner et al., 2001) that empirical relationships have shown to
be grossly dependent on watershed topography, climate, and other environmental and
cultural factors (Syvitski and Milliman, 2007). Topographic indices are best correlated
with sediment flux, and these empirical fits include linear, exponential, and power law

46	relations between erosion rate and mean elevation (Berner and Berner, 1987), local relief
47	(Ahnert, 1970), and catchment slope (Aalto et al., 2006). Recent work has shown that
48	significant variability in short-term sediment flux measurements is introduced by
49	stochastic processes such as intermittent release of stored sediment in a watershed (van
50	der Wiel and Coulthard, 2010). For watersheds with high internal variability of storage
51	and release of sediment, the magnitude of noise (the stochastic contribution to the total
52	flux) can be larger than environmental and/or physiographic forcing (Jerolmack and
53	Paola, 2010) and, in some cases, can completely obliterate long-term signals such as
54	those of climate change and tectonism. Because short-term measurements are more
55	readily masked by noise than are measurements averaged over long time scales, only
56	after thousands of years are sediment and solute fluxes likely to be dominated by actual
57	extrinsic forcing mechanisms (Jerolmack and Sadler, 2007). In such cases, exhumation
58	rates determined via thermochronometry and the rates of geomorphic evolution of the
59	landscape should be, and often are, in agreement (von Blanckenburg, 2005; Kirchner et
60	al., 2001). Sediment yields from the Earth's largest basins may mimic the robust response
61	of long-term measurements to external forcing, like those from cosmogenic nuclides,
62	because buffering mechanisms can integrate change over thousands of years (Métivier
63	and Gaudemer, 1999; Phillips, 2003).

64 Understanding how sediment flux to modern oceans compares to those over
65 geologic history with decidedly different climates is confounded by comparing noisy,
66 short-term values to those averaged over much longer time scales. Fortunately, average
67 river basin sediment fluxes can be directly determined over long time scales with the use
68 of cosmogenic nuclide geochemical tracers. Since this technique was first applied some

Publisher: GSA Journal: GEOL: Geology Article ID: G33918 two decades ago, over 1,500 flux determinations have been published (Portenga and

69

70	Bierman, 2011). This large data set over a wide range of topographic settings – both									
71	stable and tectonically active (Fig. 1) - allows us to extrapolate to unmeasured basins									
72	utilizing empirical relations derived from available data. With this approach, we assess									
73	the production of continental sediments at time scales of 1 k.y. to 1 m.y. and compare this									
74	rate to those determined from fluvial suspended sediment loads from large rivers									
75	(Summerfield and Hulton, 1994) and from continental sediment and rock volumes over									
76	geologic times (Wilkinson and McElroy, 2007).									
77	¹⁰ BE-DERIVED DENUDATION RATES AND THE DISTRIBUTION OF									
78	EARTH'S SLOPES									
79	We have compiled data on concentrations of cosmogenic ¹⁰ Be in fluvial									
80	sediments that have been published in refereed literature from the inception of the									
81	technique through 2011 (Table DR1 in GSA Data Repository ¹). Our compilation is									
82	similar in scope and size to that recently published by Portenga and Bierman (2011),									
83	although it is completely independent from it. All ¹⁰ Be concentrations and denudation									
84	rates were recalculated, full details and data being provided in the Data Repository.									
85	To complement the ¹⁰ Be data, we have derived appropriate topographic metrics									
86	from 3 arc second (nominally 90 m) Shuttle Radar Topography Mission (SRTM) data									
87	(http://srtm.csi.cgiar.org) for each discrete drainage basin whose outlet is the ¹⁰ Be									
88	sampling site. Due to the coarse resolution of the DEM data that we use in our analysis,									
89	and given the difficulty of accurately identifying and delineating very small river basins									
90	using these data, we limit our analysis to river basins with areas >1 km ² . Further, we also									
91	exclude the very large basins (see Table DR1 in the Data Repository), as mean									

92	topographic metrics derived for these will most likely be meaningless. The resulting data									
93	set includes 990 river basins with areas between 1 and 10,000 km^2 (Fig. 1), with mean									
94	denudation rates derived from ¹⁰ Be in their sediment, mean basin elevation, elevation									
95	range, mean basin slope, and standard deviation of slope (see the Data Repository).									
96	Given that the SRTM data is not global in coverage, for our global sediment flux									
97	calculations we use the U.S. Geological Survey's GTOPO30 data and its derivative,									
98	HYDRO1K. We calculate slope for Earth's ice-free areas using a 5×5 km moving									
99	window, so that the obtained values are comparable to the average basin slopes obtained									
100	for the 990 river basins. We chose a 5×5 km window because the majority of our basins'									
101	areas are in this range (Fig. 1, inset). Using larger windows, however, does not									
102	significantly change the results (Fig. DR1 in the Data Repository). We identify and									
103	separate endorheic basins from those draining to the ocean (Fig. 1, top inset).									
104	RESULTS									
105	Erosion rates from sediment derived ¹⁰ Be concentrations span several orders of									
106	magnitude, ranging from below 0.5 to over 6000 mm/k.y. (Fig. 2A). Given that our									
107	compilation of denudation rates does not represent an unbiased sample of erosional,									
108	continental environments, the calculation of a global continental sediment production rate									
109	must account for a weighting of rate based on area.									
110	At millennial time scales, the functional form of the denudation rate (D, mm/k.y.)									
111	versus mean slope (S, m/km) relation, obtained from our 990 river basins, is (Fig. 2A):									
112	$D = 11.9e^{0.0065S} $ (1)									
113	Equation 1 is very similar to the one obtained from the river load data of									
114	Summerfield and Hulton (1994), namely $D = 6.1e^{0.0071S}$ (Fig. 2A), and predicts that the									

115	rate of denudation increases exponentially with slope by ~0.65% for each meter per
116	kilometer increase in slope. While substantial variability is present in the data, reflecting
117	the dependence of erosion on other environmental factors (Milliman and Syvitski, 1992;
118	Portenga and Bierman, 2011), here we focus on the fact that mean basin slope explains
119	over half of the global variance of denudation rates at cosmogenic nuclide time scales (R^2
120	= 0.48; p < 0.01) and that the residuals sum to zero. Thus, although the data are 'noisy',
121	the best-fit curve still accounts for the majority of variation in average denudation rate in
122	basins all across the globe.
123	Based on the GTOPO30 data, 52% of the Earth's surface has mean slope below
124	10 m/ km (~0.6 degrees), and 92.5% below 100 m/km(~6 degrees) (Fig. 1). The
125	percentages are virtually the same (50.3 and 92.2%) if endorheic basins are excluded.
126	This means that a global sediment production rate calculated using Equation (1) will be
127	strongly controlled by the intercept; i.e., 11.9 mm/k.y. The functional relationship
128	between denudation rate and slope essentially breaks down for slope values < \sim 200 m/km
129	(~10 degrees), as the subset of the data from 0 to 200 m/km shows no correlation
130	between slope and denudation rate (Fig. 2B); this subset however, has a minimal
131	influence on the form of Equation 1, when removed the latter becoming: $D = 10.7e^{0.0067S}$.
132	Despite the lack of a relationship for slopes <200 m/km, between denudation rate and
133	slope, we note that all data in this subset, with the exception of those from extreme desert
134	settings (see Table DR1), have denudation rates >5 mm/k.y., and 75% of the denudation
135	rates are >10 mm/k.y. Further, the data in this subset span a wide range of latitudes and
136	altitudes (Figs. 2C and 2D), and therefore also a wide range of climatic settings. The lack
137	of a relationship between topography and denudation rate over a wide range of climatic

138	settings combined with the fact that 75% of the denudation rates in the 0–200 m/km
139	subset are above >10 mm/k.y. makes us surmise that despite being seemingly large, the
140	intercept of Equation 1 is a valid approximation of the average rate at which $\sim 50\%$ of the
141	Earth's surface is eroding.
142	Summing the above relation between average denudation rate and basin slope for
143	continental slopes derived from GTOPO30 (Fig. 3) yields an annual global sediment
144	production rate of 5.5 Gt (Fig. 3), although this value could be as low as 0.6 Gt or as high
145	as 6.7 Gt based on propagation of a $\pm 1\sigma$ standard error estimate. Excluding endorheic
146	basins lowers this estimate to 4.4 Gt, suggesting that as much as $\sim 20\%$ of the sediment
147	produced does not discharge into the oceans. Because cosmogenic nuclide concentrations
148	reflect total denudation, these sediment production rates include both chemical and
149	physical erosion.
150	DISCUSSION
151	The relation given in Equation 1 implies orders of magnitude variation in
152	denudation rates across Earth's surface as a function of basin-scale slope alone. This
153	relation saturates (i.e., denudation rates grows very quickly with small slope changes)
154	around 700–900 m/km (35–40 degrees) in close agreement with the threshold slope
155	determined by Montgomery and Brandon (2002). This is clear evidence that production

of sediment per unit area is much greater in mountainous regions than in lowlands in
agreement with a suite of studies of continental denudation (e.g., Milliman and Syvitski,
158 1992).

In order to better understand the production of sediment as a function of basincharacteristics, the frequency distribution (by area, Fig. 3A) of global basin slopes was

161	used to estimate the total sediment production as a function of slope (Fig. 3B). This
162	displays an overall inverse relation between slope and sediment production, not because
163	lower slopes erode faster, but because they encompass areas vast enough to outweigh the
164	production rate differential between steep and lowland regions. A different conclusion
165	was reached by Milliman and Syvitski (1992) when they estimated that small mountain
166	rivers contribute the most sediment to the world's oceans. We find a potentially opposing
167	result that the low sloping areas of the world erode slowly but steadily over a very large
168	area – overpowering the high-mountainous small rivers when one accounts for the
169	relatively small areas of those mountainous regions. It is important to note that because
170	the compiled cosmogenic data in this work were collected in denuding landscapes, these
171	rates are representative of gross denudation (chemical and physical erosion) and not net
172	denudation in their respective environments like those for the Milliman and Syvitski
173	(1992) estimate. While mountainous areas are likely to witness little deposition overall,
174	low-sloping areas are prone to deposition. This complicating factor makes directly
175	comparing the result of Milliman and Syvitski (1992) and this work impossible. Yet, in
176	terms of total gross denudation, large low-sloping areas are sites of the greatest fraction
177	of the total denudation.

178 Comparison with Other Data on Denudation and Sediment Delivery

Area-slope normalized suspended and dissolved fluxes for the 36 largest river basins draining ice-free continental surfaces exhibit strong similarity to the relation for cosmogenic nuclide-derived denudation rates versus slope; they show equivalent ranges of values and, when normalized for slope, globally averaged cosmogenic nuclide-derived denudation rates lie within the range of modern river sediment fluxes to the world's

184	oceans (Summerfield and Hulton, 1994) (Fig. 2A; see also Table DR2). We speculate that
185	sediment fluxes over these two seemingly different time scales are similar because large
186	watersheds serve to temporarily store sediments en route to oceanic delivery over these
187	time scales. This conforms with existing hypotheses that large watersheds act as buffers
188	for climatic and anthropogenic forcing (Métivier and Gaudemer, 1999; Phillips, 2003).
189	As such, the time scale of integration for sediment yield measurements of modern rivers
190	with sediment storage might be better conceptualized as the residence time of sediment in
191	the basin transport system (i.e., the volume of sediment held on the landscape divided by
192	the flux of sediment through the system) rather than the number of years over which the
193	measurements are made. Métivier and Gaudemer (1999) demonstrate that, for the world's
194	largest rivers, this value can be 10–100 k.y.
195	Compared to rates of sediment cycling based on remnant Phanerozoic sediment

196 stores (5 Gt/y; Wilkinson and McElroy, 2007), the globally averaged cosmogenic

197 nuclide-derived sediment production rate of 5.5 Gt/y (4.4 Gt/y excluding endorheic

198 basins) is essentially equivalent.

199 Implications for the Global Silicate Weathering Flux

Various studies (West et al., 2005, and references therein) have found a strong relationship between the total denudation rate and the silicate weathering flux in river basins. Our new data set and analysis allow us to estimate the total global silicate flux from these previously published relationships. In the empirical relationship of West et al. (2005), they and others (Carson and Kirkby, 1972; Stallard and Edmond, 1983; Hilley and Porder, 2008) note that watersheds may be classed into being either (1) *transport limited*—where minerals are nearly completely altered before their removal or (2)

207	<i>kinetically limited</i> —where the alteration of minerals is incomplete. The transport limited
208	settings make up most of the land area on Earth, and in these settings the total rates of
209	denudation show a better correlation with silicate cation fluxes. The kinetically limited
210	cases are not well correlated with silicate cation fluxes and are typically found in areas
211	that are rapidly eroding and experiencing uplift, and comprise a small portion of the
212	landscape. In these kinetically-limited cases, West et al. (2005) note a case of diminishing
213	returns where a larger denudation rate does not necessarily result in a larger silicate
214	cation flux like the transport-limited relationship shows.
215	Using the relationship between river denudation and river chemistry and our
216	estimate of the total global denudation rate, the silicate cation denudation rate is equal to
217	0.6 t/km per year. If we assume that each mol of silicate cation reacts with 1 mol of CO_2 ,
218	then we calculate $0.72 \times 10^8 t_{\rm CO_2}/yr$ for the ice-free area of the Earth. This amount is
219	lower than previously published values (5.1–5.5 \times 10 ⁸ t _{CO2} /yr; Meybeck, 1982; Berner et
220	al., 1983; Gaillardet et al., 1999), but close to recent numerical modeling work (1.5–3.3 \times
221	10^8 t _{CO2} /yr; Hilley and Porder, 2008). Given that our results only constrain denudation
222	rates for fluvially dissected landscapes that contain quartz, our calculated value should be
223	considered a minimum, as mafic rocks have minerals with a greater proportion of Ca and
224	Mg to supply for carbonate formation.
225	Global compilations show that silicate weathering rates and denudation rates are
226	tightly correlated (West et al., 2005). If this is true, and the greatest sensitivity of the
227	Earth's surface to changes in denudation lie in low sloping areas where small denudation
228	rate changes of these large areas drastically increase the average global denudation rate

229 (Fig. 3B), then this result has great consequences on global changes in the silicate

230	weathering cycle and rates of CO ₂ drawdown. Considering that steeply sloping mountain
231	belts such as the Himalayas, Alps and Andes are only a small proportion of the
232	continental land surface compared to the areas of low-slopes (Fig. 1), and that topography
233	(thus tectonics) does not control denudation rates in these low-sloping areas (Fig. 2B), we
234	postulate that increased mountain building represents only a minor contribution to global
235	CO_2 withdrawal unless the total area of the world taken up by mountains increases
236	substantially. Thus, the real driver of denudation and geomorphically or environmentally
237	driven climate change remains unknown.

238 CONCLUSIONS

239 We calculate the sum of all sediment produced for the (quartz-containing) Earth 240 by extrapolation of a statistically significant correlation between cosmogenic nuclide-241 derived long-term denudation rates and basin slopes to watersheds without denudation 242 rate data. This relationship can explain approximately half of the variance in denudation 243 from quartz bearing topography drained by rivers using only mean slopes. However, we 244 do not know what controls denudation in landscapes where average slopes are $< \sim 200$ 245 m/km, but the control that sets the pace of this zone, holds the key to understanding the 246 feedbacks between erosion and climate. The total mass flux determined from our tally is 247 5.5 Gt/yr and agrees well with the mass flux from previous global studies from solute and 248 sediment gauging data (Summerfield and Hulton, 1994; Syvitski and Milliman, 2007) 249 and Phanerozoic rock volumes (Wilkinson and McElroy, 2007). 250 Finally, we suggest that identifying conditions sufficient to significantly impact

the global flux of solid sediments and solutes to oceans in the low sloping areas is the

- 252 next crucial area of research to elucidate geologically historical rates and magnitudes of
- element cycling on Earth.

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- **333 FIGURE CAPTIONS**
- Figure 1. Global distribution of slope as calculated from the GTOPO30 DEM and
- averaged using a 5×5 km moving window, and the distribution of river basins that were
- used to determine global denudation rates (red circles). Top inset: the distribution of
- 337 endorheic basins. Bottom inset: histogram (bars) of basin areas in this compilation. Note
- the log scale on the *x*-axis. See text for more details.
- 339 Figure 2. (A) Mean drainage basin slopes from 90 m Shuttle Radar Topography Mission
- (SRTM) topographic data versus basin-wide denudation rates from cosmogenic ¹⁰Be in

341	river sediment (circles) and large-river denudation rates (squares) from Summerfield and
342	Hulton, (1994). (B) Same as (A) but showing only those basins that have an average
343	slope less than 200 m/km. The black dashed horizontal line is the median of the data and
344	the gray box bounds 50% of the data. Note the absence of a correlation between
345	denudation rate and slope. (C) and (D) Denudation rates of basins with slopes less than
346	200 m/km versus geographic latitude and average basin elevation. See text for more
347	details.
348	Figure 3. (A) Slope (x-axis) versus denudation rate predicted by Eq. 1 (right axis; gray
349	dashed curve), cumulative land area (red curves) and, as the product of denudation rate
350	and area, total sediment production rate (blue curves). The dashed blue and red curves
351	mark area and sediment production with endorheic basins removed. The summation over
352	all continental area yields a net (chemical and physical) global sediment production rate
353	of ~5.5 Gt/yr. (B) Sensitivity analysis exploring the contribution to the total global
354	sediment flux of areas with slopes below 10 m/km (~0.6 degrees), 20 m/km (~1.2
355	degrees), and 100 m/km (~6 degrees) as a function of their average denudation rates.
356	Using the values predicted by Eq. 1 (yellow circles), these areas contribute around 40%,
357	53%, and 81% of the total sediment flux, respectively. Even when the denudation rate is
358	lowered to 5 mm/k.y. (see Fig. 2B), these values are still around 21%, 31%, and 62%,
359	respectively. The dashed curves are obtained when endorheic basins are removed.
360	
361	¹ GSA Data Repository item 2013xxx, Table DR1 (complete dataset of ¹⁰ Be-derived
362	denudation rates and topographic metrics used in this work), Table DR2 (previous
363	estimates of sediment delivery to oceans) and the original references for these datasets in

- Tables DR1 and DR2, are available online at www.geosociety.org/pubs/ft2013.htm, or on
- 365 request from editing@geosociety.org or Documents Secretary, GSA, P.O. Box 9140,
- 366 Boulder, CO 80301, USA.





FIGURE 1



FIGURE 2





FIGURE 3

GSA Supplementary Material

The Earth is (mostly) flat: Apportionment of the flux of continental sediment over millennial timescales

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Be-10 COMPILATION

Catchment wide denudation rates were calculated using the re-normalised (2007 KNSTD) Be-10 concentrations, and following the formalism of Schaller et al. (2001) with Be-10 sea level high latitude (SLHL) production rates of: 4.5 ± 0.5 atoms.g-1.y-1 for high-energy neutrons, 0.097 ± 0.007 atoms.g-1.y-1 for slow muons, and 0.085 ± 0.012 atoms.g-1.y-1 for fast muons. The Be-10 SLHL production rate for high-energy neutrons was recalculated from Balco et al.'s (2008) Be-10 calibration-site dataset, using the time-independent altitude/latitude scaling scheme of Dunai (2000) and a Be-10 half-life of 1.387 ± 0.012 m.y. (Chmeleff et al., 2010; Korschinek et al., 2010). The Be-10 SLHL production rates for muons were taken from Kubik et al. (2009) and are based on Heisinger et al. (2002a,b). All Be-10 SLHL production rates were corrected for altitude and latitude using the time-independent scaling scheme of Dunai (2000) and for topographic shielding following Codilean (2006). All calculations were performed on a pixel-by-pixel basis using the 90m SRTM DEM (http://srtm.csi.cgiar.org/). At sites where duplicate measurements where made or multiple grain-size fractions were analysed, denudation rates were averaged.

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Table DR1: Global compilation of detrital Be-10-based denudation rates

No First Auth	Year of Publication	Reference ID	Sample ID	Published	Longitude	Latitude	Denudation Rate	D.R. Uncertainty	Basin Area	Elevation Range	Mean Elevation	Mean Slope	Slope Stdev	Mean Slope	Slope Stdev
1 Bierman	1998	1998BookChapter	WTS03001	TC-1	(WGS degrees) 134.398144	-23.517648	(mm/k.y.) 18.62	(mm/k.y.) 2.31	(km^2) 432.0	(m) 602	(m) 736.6	(m/km) 61.6	(<i>m/km</i>) 93.6	(degrees) 3.4	(degrees) 4.9
2 Bierman 3 Bierman	1998 1998	1998BookChapter 1998BookChapter	WTS03002 WTS03003	TC-2 TC-3	134.392063 134.433106	-23.524184 -23.566594	20.25 14.53	2.70	433.4 473.0	608 647	736.2 724.0	62.1 67.6	94.4 99.1	3.5 3.8	5.0 5.2
4 Bierman	1998	1998BookChapter	WTS03005	WP-8	138.575576	-31.557058	4.70	0.53	21.8	436	662.8	115.9	119.8	6.5	6.6
6 Brown	1998	1998EPSL160	WTS04001	CAY1	-65.957672	18.155531	69.77	17.11	26.3	274	289.5	94.4	58.6	5.4	3.3
7 Riebe 8 Riebe	2000 2000	2000Geol28 2000Geol28	WTS05003 WTS05006	GD-12 AL-8	-121.359062 -120.648703	39.887553 40.148160	177.74 33.57	28.31 4.00	1.5 1.1	880 177	1164.5 1755.8	505.4 196.3	211.8 112.6	26.0 11.0	10.1 6.1
9 Bierman 10 Bierman	2001	2001AmJSci301 2001AmJSci301	WTS06001 WTS06002	NAM-08 NAM-09	16.449449 16.300130	-23.317906	4.73	0.53	65.6 14.5	170 466	1828.3 1666.6	39.0 197.8	20.7 110.9	2.2	1.2
11 Bierman	2001	2001AmJSci301	WTS06003	NAM-16	15.773434	-23.303253	8.62	0.94	6554.5	1595	1392.6	132.6	121.3	7.4	6.5
12 Bierman 13 Schaller	2001	2001AMJSCI301 2001EPSL188	WTS06005 WTS07001	reg-5	12.120858	49.121429	29.22	5.21	2798.6	360	430.2	40.7	60.9	4.3	4.7
14 Schaller 15 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07002 WTS07003	reg-7 reg-11	12.399889 12.738258	49.180615 49.242804	28.20 23.59	3.75 3.16	2365.7 398.3	578 703	466.3 525.4	90.2 112.4	63.0 75.9	5.1 6.4	3.6
16 Schaller	2001	2001EPSL188	WTS07004	reg-12A	12.736185	49.186903	29.64	3.89	1402.8	1034	548.4	134.8	75.4	7.6	4.2
18 Schaller	2001	2001EPSL188	WTS07008	reg-14	12.837990	49.145738	25.27	3.18	1027.7	1031	670.1	142.4	76.8	8.1	4.3
19 Schaller 20 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07009 WTS07012	reg-18A reg-19-1	13.232567 13.254695	49.048262 49.014618	33.38 28.38	5.57 3.68	165.7 112.3	848 860	902.7 868.6	183.4 155.1	89.0 83.2	10.3 8.8	4.8
21 Schaller 22 Schaller	2001	2001EPSL188 2001EPSL188	WTS07013 WTS07014	reg-19-2	13.254727	49.014619	28.38	3.71	112.3	860 795	868.6	155.1	83.2	8.8	4.6
23 Schaller	2001	2001EPSL188	WTS07015	neck-1	8.617113	48.179196	55.92	7.82	427.4	65	747.5	30.6	4.8	1.8	0.3
24 Schaller 25 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07016 WTS07017	neck-2 neck-3	8.648274 9.419309	48.396322 48.703721	103.90	17.09	3319.6	773	932.5 561.6	43.8 97.9	2.1 95.7	2.5	0.1
26 Schaller 27 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07025 WTS07026	neck-8 neck-10	9.158036 8.617167	49.003964 48.853738	135.17 51.80	19.89 8.57	5700.5 306.5	6 535	691.0 707.5	50.2 71.2	12.4 25.9	2.9 4.1	0.7
28 Schaller	2001	2001EPSL188	WTS07027	meu-1	5.679748	48.401438	26.63	3.41	894.8	116	432.4	37.2	33.2	2.1	1.9
30 Schaller	2001	2001EPSL188	WTS07029	meu-4 meu-7	4.705065	49.896322	21.10	3.01	9312.2	4	377.4	17.2	1.0	1.0	0.1
31 Schaller 32 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07048 WTS07049	loi-17 loi-18	3.454769 3.448667	46.074746 45.943636	50.75 46.54	6.52 6.43	9037.5 1587.8	1191 1357	489.5 621.0	73.9 127.5	78.5 87.6	4.2	4.4
33 Schaller	2001	2001EPSL188	WTS07050	loi-19	3.360483	45.922951	71.74	11.00	6082.6	1558	869.8	137.0	105.3	7.7	5.7
35 Schaller	2001	2001EPSL188	WTS07052	loi-23	3.284925	45.462044	56.81	7.87	4140.8	493	1253.3	36.5	30.4	2.1	1.7
36 Schaller 37 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07053 WTS07055	loi-25A loi-29	3.491788 3.429900	45.116778 45.145681	56.23 54.85	8.43 8.54	1816.4 128.5	1059 58	1097.7 1352.5	140.4 110.0	101.7 41.6	7.9 6.3	5.5
38 Schaller	2001	2001EPSL188 2001EPSL188	WTS07056 WTS07057	loi-36 loi-37	3.861658	44.731655 44.866696	40.77	6.07 14.26	257.8	354	1271.5	112.1	59.4 43.4	6.4 6.1	3.3
40 Schaller	2001	2001EPSL188	WTS07058	loi-39	4.212215	45.744986	75.71	11.50	5003.1	694	1014.0	99.3	43.4	5.7	2.5
41 Schaller 42 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07059 WTS07061	loi-40 loi-45	4.044567 1.285123	45.997902 47.491560	57.61 23.97	9.32 3.27	6640.3 1402.1	9 82	848.5 135.2	115.7 18.8	28.8 10.5	6.6 1.1	1.6
43 Schaller 44 Schaller	2001	2001EPSL188 2001EPSL188	WTS07062 WTS07063	loi-48 loi-49	3.206198	47.138026	6.59 13.07	0.81	201.4	42	353.4	49.6	21.0	2.8	1.2
45 Schaller	2001	2001EPSL188	WTS07064	loi-50	3.500641	46.836692	21.55	2.68	1688.4	527	453.2	65.0	41.4	3.7	2.4
46 Schaller 47 Schaller	2001 2001	2001EPSL188 2001EPSL188	WTS07065 WTS07066	loi-51 loi-52	3.450358 3.683333	46.771140 46.516666	12.44 28.05	1.61 3.54	385.8 753.6	116 1066	246.6 460.9	26.0 96.7	16.6 76.4	1.5 5.5	4.3
48 Schaller 49 Schaller	2001	2001EPSL188 2001EPSL188	WTS07067 WTS07068	loi-54	3.985746	46.496142	20.32	2.75	2317.8	503 926	538.2 760.8	41.8	41.9	2.4	2.4
50 Schaller	2001	2001EPSL188	WTS07069	loi-56	3.458760	46.005835	22.20	2.96	136.0	263	346.4	36.9	34.1	2.1	1.9
51 Kirchner 52 Kirchner	2001 2001	2001Geol29 2001Geol29	WTS08001 WTS08002	2	-115.767353 -115.770809	44.372125 44.367885	167.98 91.59	18.88 10.19	1.2	549 514	1748.7 1689.6	280.5 271.5	108.4 109.2	15.5 15.0	5.7
53 Kirchner 54 Kirchner	2001	2001Geol29 2001Geol29	WTS08003 WTS08004	3	-115.788761 -115.806140	44.346089 44.337191	72.36	8.21	1.2	314 331	1580.1 1604.1	208.9	78.3	11.7 14.3	4.3
55 Kirchner	2001	2001Geol29	WTS08006	6	-115.784854	44.355736	65.20	7.58	1.0	321	1567.5	222.9	86.7	12.5	4.7
56 Kirchner 57 Kirchner	2001 2001	2001Geol29 2001Geol29	WTS08008 WTS08009	9	-115.346233 -115.351339	45.994787 45.993884	49.61 45.06	5.45	1.4	41/ 382	1551.8 1536.5	288.0	86.7 57.3	16.0 12.8	4.6
58 Kirchner	2001	2001Geol29 2001Geol29	WTS08010 WTS08016	10 16	-115.358195	45.994639	50.25	5.90	1.5	361	1534.2	225.2	75.7 117.8	12.6	4.1
60 Kirchner	2001	2001Geol29	WTS08017	17	-115.333749	45.988806	44.72	4.98	14.8	574	1603.9	276.2	108.5	15.3	5.8
61 Kirchner 62 Kirchner	2001 2001	2001Geol29 2001Geol29	WTS08018 WTS08019	18 19	-115.682535 -115.683494	45.052898 45.052806	139.87 139.81	16.94 16.46	2.1	1044 828	1816.7 1788.5	393.9 389.2	89.4 104.0	21.4 21.1	4.5
63 Kirchner 64 Kirchner	2001 2001	2001Geol29 2001Geol29	WTS08020 WTS08021	20 21	-115.684171 -115.678045	45.052688 45.042886	106.78 126.01	11.81 14.23	1.4 6.4	714 907	1733.2 1455.3	379.7 410.9	113.1 115.1	20.6 22.1	5.8 5.7
65 Kirchner	2001	2001Geol29	WTS08023	23	-115.672378	45.054504	122.17	13.80	2.5	894	1718.2	413.1	98.0	22.3	4.9
67 Kirchner	2001	2001Geol29 2001Geol29	WTS08024 WTS08025	24	-115.667634	45.671493	33.32	3.66	20.5	503	1319.3	391.4 174.8	72.7	9.9	4.0
68 Kirchner 69 Kirchner	2001 2001	2001Geol29 2001Geol29	WTS08026 WTS08027	26 27	-115.344177 -115.342826	45.709344 45.709986	33.66 47.15	3.79 5.15	97.8 129.6	931 702	1778.1 1637.4	197.1 186.5	89.3 87.9	11.1 10.5	4.9
70 Kirchner	2001	2001Geol29	WTS08028	28	-115.889318	45.822955	62.14	6.67	292.9	1750	1775.7	293.9	171.6	15.9	8.6
72 Kirchner	2001	2001Geol29	WTS08030	30	-115.587212	46.150586	138.66	15.39	3055.0	2038	1523.5	325.1	160.6	17.6	8.1
73 Kirchner 74 Clapp	2001 2002	2001Geol29 2002Geomorph45	WTS08031 WTS09001	31 YPG2A	-115.513889 -114.522495	46.085818 33.040117	117.53 41.01	13.74 5.84	4958.0 186.8	2331 695	1690.2 280.8	373.8 99.0	163.5 94.6	20.1 5.6	8.1
75 Clapp	2002	2002Geomorph45	WTS09007	YPG4A	-114.531178	33.088503	36.02	5.09	40.4	348	238.2	101.7	84.7	5.8	4.7
77 Clapp	2002	2002Geomorph45	WTS09017	YPG14A	-114.558269	33.086134	36.17	4.28	3.5	139	248.0	111.3	57.4	6.3	3.2
78 Clapp 79 Clapp	2002 2002	2002Geomorph45 2002Geomorph45	WTS09020 WTS09023	YPG15A YPG19A	-114.534749 -114.515618	33.082360 33.154669	35.31 25.93	4.41 3.02	4.6 59.5	188 158	230.3 447.1	99.7 172.0	60.2 74.7	5.7 9.7	3.4 4.1
80 Clapp 81 Clapp	2002 2002	2002Geomorph45 2002Geomorph45	WTS09027 WTS09028	YPG3A YPG5A	-114.533884 -114.523852	33.098460 33.088525	38.93 34.44	4.79 4.00	28.8 120.2	336 285	250.8 188.1	112.1 79.2	89.6 59.3	6.3 4.5	5.0 3.3
82 Clapp	2002	2002Geomorph45	WTS09029	YPG16A	-114.523975	33.107454	54.92	6.76	7.2	254	255.4	134.4	90.7	7.6	5.0
84 Clapp	2002	2002Geomorph45	WTS09030	YPG18A	-114.498850	33.145741	29.38	3.41	29.1	311	304.8	60.8	62.5	3.5	4.1
85 Clapp 86 Clapp	2002 2002	2002Geomorph45 2002Geomorph45	WTS09032 WTS09033	YPG20A YPG21A	-114.521746 -114.517154	33.163374 33.176849	23.45 21.66	2.83	3.7 34.6	208 198	306.9 322.1	113.3 80.6	79.9 60.2	6.4 4.6	4.4
87 Clapp	2002	2002Geomorph45	WTS09034	YPG22A	-114.520356	33.169731	30.03	4.22	3.8	149	306.8	77.8	44.0	4.4	2.5
89 Clapp	2002	2002Geomorph45	WTS09036	YPG28	-114.519309	33.206904	22.62	2.77	22.4	451	435.6	150.6	135.1	8.4	7.2
90 Matmon 91 Matmon	2003 2003	2003AmJSci303 2003AmJSci303	WTS10001 WTS10002	GSRF-1 GSRF-2	-83.254892 -83.193376	35.610151 35.628689	24.42 26.96	2.60	37.0 1.6	782	1516.9 1277.2	293.9 298.0	119.4 91.1	16.2 16.5	6.2 4.8
92 Matmon 93 Matmon	2003	2003AmJSci303 2003AmJSci303	WTS10005 WTS10006	GSRF-6 GSRF-7	-83.211732 -83.208076	35.622347	29.61	3.27	27.3	901 773	1436.1 1279 3	363.8	123.0	19.8 17.4	6.3
94 Matmon	2003	2003AmJSci303	WTS10007	GSRF-8	-83.213332	35.612979	32.80	3.52	3.6	829	1371.9	386.7	117.6	20.9	5.9
95 Matmon 96 Matmon	2003 2003	2003AmJSci303 2003AmJSci303	WTS10008 WTS10009	GSRF-9 GSRF-10	-83.224327 -83.237934	35.607696 35.584360	32.88 29.26	3.58 3.21	2.7 51.8	589 714	1261.6 1133.4	357.8 420.8	129.4 138.4	19.4 22.5	6.6 6.8
97 Matmon 98 Matmon	2003	2003AmJSci303 2003AmJSci303	WTS10010 WTS10011	GSRF-11 GSRF-12	-83.263710 -83.294854	35.580319 35.516986	22.49 29.67	2.43	55.9 191.6	918 1103	1356.3	338.3 324.6	170.9	18.2	8.5
99 Matmon	2003	2003AmJSci303	WTS10012	GSCO-1	-83.301184	35.505197	37.86	4.11	330.5	417	721.1	227.3	141.9	12.6	7.6
100 Matmon 101 Matmon	2003	2003AmJSci303 2003AmJSci303	WTS10019 WTS10020	GSCO-2 GSCO-3	-83.305526	35.516375	24.15	4.03	134.9	906	1031.8	336.7	120.9	18.4	5.7
102 Matmon 103 Matmon	2003 2003	2003AmJSci303 2003AmJSci303	WTS10021 WTS10022	GSCO-4 GSCO-5	-83.311920 -83.336070	35.558383 35.567226	44.56 26.85	4.85 2.97	51.4 9.3	1040 797	1215.2 1189.3	372.6 335.1	132.6 118.7	20.2 18.3	6.7
104 Matmon	2003	2003AmJSci303	WTS10023	GSCO-6	-83.359522	35.587206	23.79	2.63	1.6	588	1207.2	312.1	74.0	17.3	3.9
105 Matmon 106 Matmon	2003	2003AmJSci303	WTS10024 WTS10027	GSBC-1	-83.412816 -83.115131	35.001525 35.749331	35.56 41.03	3.85 4.43	2.4 74.8	396 1091	1445.4	341.2 343.3	111.7 117.8	18.7 18.7	5.8 5.9
107 Matmon 108 Matmon	2003 2003	2003AmJSci303 2003AmJSci303	WTS10028 WTS10029	GSBC-2 GSCS-1	-83.130305 -83.205496	35.735667 35.753783	39.83 45.59	4.56 5.11	65.7 7.1	1276 834	1366.1 1180.0	371.2 398.0	123.9 129.4	20.1 21.4	6.3 6.5
109 Matmon	2003	2003AmJSci303	WTS10030	GSLP-1	-83.415039	35.737621	38.86	4.30	117.4	1581	1166.7	355.4	146.6	19.2	7.4
110 Watmon 111 Matmon	2003	2003AmJSci303	WTS10031	GSMP-1	-83.709194	35.659340	30.28	3.34	155.8	1026	922.6	255.7 283.4	128.8	14.1	6.6
112 Matmon 113 Matmon	2003 2003	2003AmJSci303 2003AmJSci303	WTS10033 WTS10034	GSWP-1 GSDC-1	-83.535499 -83.434021	35.687640 35.464222	37.52 25.94	4.11 2.83	63.7 104.9	1514 1338	1225.3 1118.6	366.1 324.8	157.1 119.2	19.7 17.8	7.9
114 Matmon	2003	2003AmJSci303	WTS10035	GSAC-1	-83.935691	35.610746	17.33	1.90	157.6	1180	760.8	212.0	130.0	11.8	7.0
115 Matmon 116 Matmon	2003	2003AmJSci303	WTS10036	GSTM-1	-83.933689 -83.878134	35.499415 35.467079	21.86 23.63	2.43	15.0 39.2	963 1065	/8/.5 953.7	292.8 284.1	115.9 93.2	16.1 15.7	6.U 4.9
117 Matmon 118 Matmon	2003 2003	2003AmJSci303 2003AmJSci303	WTS10038 WTS10039	GSNC-1 GSCA-1	-83.527603 -83.070727	35.458078 35.668501	23.08 22.99	2.56	46.5 149.6	1457 1090	1158.9 1225.0	334.9 292.7	109.4 116.3	18.3 16.1	5.6 6.1
119 Matmon	2003	2003AmJSci303	WTS10040	GSRF-13	-83.246545	35.560557	29.89	3.39	42.2	1021	1249.2	321.9	122.1	17.6	6.3
120 Matmon 121 Matmon	2003	2003AmJSci303 2003AmJSci303	WTS10041 WTS10042	GSHC-1 GSHC-1	-83.565992 -83.724346	35.469691 35.475739	23.36 25.29	2.50	72.2 115.9	1414 1101	1160.5 1096.9	324.5 304.7	104.3 108.3	17.8 16.8	5.4 5.7
122 Matmon	2003	2003AmJSci303	WTS10043	GSEC-1	-83.774021	35.486695	22.46	2.49	57.7	1098	1033.9	302.6	104.6	16.7	5.5

123 Matmon	2003	2003AmJSci303	WTS10044	GSLR-2	-83.514109	35.599297	54.37	5.93	7.9	846	1421.5	343.8	101.5	18.8	5.2
124 Matmon	2003	2003AmJSci303	WTS10048	GSLR-3	-83.515375	35.598316	65.36	7.36	14.6	977	1481.9	354.6	123.4	19.3	6.3
126 Matmon	2003	2003AmJSci303	WTS10052	GSLR-5	-83.539506	35.618696	30.88	3.41	29.5	905	1307.5	295.2	102.1	16.3	5.4
127 Matmon	2003	2003AmJSci303	WTS10054	GSLR-6	-83.582066	35.653239	29.03	3.29	11.9	756	1118.8	285.8	111.6	15.8	5.8
128 Matmon 129 Vance	2003	2003AmJSci303 2003EPSI 206	WTS10055 WTS11001	GSLR-7 AK95	-83.598494 79.831977	30.655866	49.35 2546.81	5.44 378.69	100.5	8/1 4867	982.3 4858.4	290.8	125.9	16.0	6.6 12.6
130 Vance	2003	2003EPSL206	WTS11001	AK82	79.503350	30.524045	5470.85	864.41	4638.7	6421	4646.3	581.1	340.1	28.2	13.2
131 Vance	2003	2003EPSL206	WTS11004	AK124A	78.599332	30.145829	2169.68	336.20	7640.7	6412	3501.1	517.1	250.1	26.3	10.6
132 Riebe	2003	2003GCA67	WTS12001 WTS12002	RI-8	-65.795735	18.268833	78.93	9.47	4.1	487	709.7	201.2	104.2	11.3	4.8 5.6
134 Morel	2003	2003TerNov15	WTS13001	Wut4	8.222776	47.864687	120.34	20.13	38.7	481	962.3	201.8	111.9	11.3	6.0
135 Morel	2003	2003TerNov15	WTS13002	Wut5	8.218095	47.905121	42.76	6.34	1.5	341	1052.6	240.9	105.5	13.4	5.7
137 Morel	2003	2003TerNov15	WTS13003 WTS13004	Wut7	8.320909	47.842519	42.42	7.22	235.5	629	890.9	121.8	73.1	6.9	4.0
138 Morel	2003	2003TerNov15	WTS13005	Wut9	8.162650	47.879505	79.61	12.61	16.3	459	1037.0	177.3	103.4	9.9	5.6
139 Morel	2003	2003TerNov15	WTS13007	Wut12	8.262044	47.869038	54.64	7.79	127.0	711	986.7	190.5	109.6	10.7	5.9
140 Morel	2003	2003TerNov15 2002TerNov15	WTS13008	Wut8 Wut10	8.276096	47.859065	16.84	2.02	1.5	106	834.9	62.9	29.2	3.6	1.7
142 Morel	2003	2003TerNov15	WTS13010 WTS13011	Wut1	8.453689	47.848231	73.85	11.48	353.0	422	789.8	86.5	78.4	4.9	4.4
143 Morel	2003	2003TerNov15	WTS13012	Don1	8.242053	47.982986	35.98	4.91	5.0	208	1056.3	150.3	69.8	8.5	3.9
144 Morel	2003	2003TerNov15	WTS13013	Don2	8.253108	47.961259	35.30	5.28	2.8	166	1068.9	140.3	47.3	8.0	2.7
145 Morel	2003	2003TerNov15	WTS13014 WTS13015	Don4	8.366666	47.966666	12.24	1.40	2.3	130	940.0	47.7	17.0	2.7	1.5
147 vBlanckenburg	2004	2004JGR109	WTS14001	AO-1	80.593471	7.133057	18.82	2.34	44.8	1052	831.4	231.7	117.6	12.9	6.2
148 vBlanckenburg	2004	2004JGR109	WTS14002	AO-2	80.638154	7.147798	12.02	1.60	30.1	1235	1249.0	241.7	133.2	13.4	6.8
149 vBlanckenburg 150 vBlanckenburg	2004	2004JGR109 2004JGR109	WTS14003 WTS14004	NO-1 NO-2	80.631340	7.153453	22.97	2.41	14.1	899	1105.7	229.1	90.8	12.8	4.8
151 vBlanckenburg	2004	2004JGR109	WTS14005	HUG-1	80.748284	7.312347	21.04	2.52	134.5	1376	852.1	271.3	137.3	14.9	7.0
152 vBlanckenburg	2004	2004JGR109	WTS14006	HUG-2	80.746572	7.374194	29.72	5.57	69.3	1323	1146.5	289.7	147.8	15.8	7.4
153 vBlanckenburg	2004	2004JGR109 2004JGR109	WIS14007	MO-1 MO-2	80.764707	7.193494	24.93	3.39	106.7	1519	963.7	238.5	128.3	13.2	6.6
155 vBlanckenburg	2004	2004JGR109	WTS14009	MO-3	80.713273	7.133333	31.13	3.68	6.1	975	1521.2	322.6	138.1	17.6	6.6
156 vBlanckenburg	2004	2004JGR109	WTS14010	BO-1	80.835600	7.144473	50.24	7.48	146.7	1828	1171.9	285.0	141.1	15.6	7.2
157 vBlanckenburg	2004	2004JGR109	WTS14011	BO-2	80.798108	7.092724	34.15	4.33	74.2	1843	1533.6	359.8	205.7	19.1	9.4
158 vBlanckenburg	2004	2004JGR109 2004JGR109	WTS14012 WTS14013	UO-1 UO-2	80.908112	6.907770	25.14	4.48	730.8 93.0	1123	1416.1	187.9	122.5	10.5	6.5
160 vBlanckenburg	2004	2004JGR109	WTS14014	UO-3	80.851670	6.930427	36.43	6.22	42.0	1350	1871.1	221.6	158.2	12.2	8.1
161 vBlanckenburg	2004	2004JGR109	WTS14015	M-PER	80.595104	7.260614	15.84	1.90	1071.0	2038	1245.0	221.5	142.4	12.2	7.3
162 vBlanckenburg 163 vBlanckenburg	2004	2004JGR109 2004JGR109	WTS14016 WTS14017	M-HAG M-VIC	80.702941 80.786607	7.269045	28.00	3.48	1410.1 1898.7	1637	5/9.8	144.9 219.7	110.7	8.1	5.9
164 vBlanckenburg	2004	2004JGR109	WTS14018	M-MIN	80.980672	7.210545	28.81	3.61	3130.1	2180	605.1	294.5	169.7	16.0	8.6
165 Nichols	2005	2005BookChapter	WTS15001	CCC	-79.324874	9.359510	13.26	1.60	61.3	320	414.5	190.0	76.6	10.7	4.2
166 Nichols 167 Nichols	2005	2005BookChapter	WTS15002	CChC	-79.506469	9.266866	18.05	2.32	406.6	606	243.6	230.6	101.2	12.9	5.5
168 Nichols	2005	2005BookChapter	WTS15004	CHAG-9	-79.272359	9.363369	17.18	2.14	4.1	401	632.1	198.2	96.9	11.1	5.2
169 Nichols	2005	2005BookChapter	WTS15006	CHAG-12	-79.271742	9.368299	10.31	1.29	1.3	155	527.7	169.6	62.8	9.6	3.5
170 Nichols	2005	2005BookChapter	WTS15007	CHAG-14	-79.261047	9.370643	7.15	0.89	5.3	205	545.8	129.4	61.3	7.3	3.4
171 Nichols 172 Nichols	2005	2005BookChapter 2005BookChapter	WTS15008 WTS15009	CHAG-15 CHAG-17	-79.263076	9.369111 9.295804	13.86	1.67	3.4 176.0	244	556.6 423.9	151.5 213.3	60.8 94.1	8.6	3.4
173 Nichols	2005	2005BookChapter	WTS15010	CHAG-19	-79.505269	9.269348	14.00	1.96	364.2	744	410.4	252.8	111.6	14.0	5.9
174 Nichols	2005	2005BookChapter	WTS15011	Chico	-79.506521	9.270825	15.99	2.33	40.9	640	427.0	247.4	121.3	13.7	6.4
175 Nichols	2005	2005BookChapter	WTS15012	CHM-1	-79.320718	9.359500	10.59	1.29	34.9	448	517.0	182.0	88.5	10.2	4.8
177 Nichols	2005	2005BookChapter	WTS15014	CPC	-79.416250	9.294182	14.36	1.81	269.5	766	377.3	231.3	106.9	12.9	5.8
178 Nichols	2005	2005BookChapter	WTS15016	CTOM	-79.322502	9.365270	12.86	1.63	24.1	368	483.0	162.5	77.9	9.2	4.3
179 Nichols	2005	2005BookChapter	WTS15017	PIED	-79.411394	9.292551	15.25	1.78	92.9	820	553.5	237.0	95.9	13.2	5.1
180 Bierman 181 Bierman	2005	2005ESPL30 2005ESPL30	WTS16006	RP-3 RP-6	-106.890438	34.575404	17.23	1.80	465./	8/8	1/99.6	56.5 68.1	73.8	3.2	4.1
182 Bierman	2005	2005ESPL30	WTS16007	RP-7	-107.028106	34.891980	123.75	13.91	7078.7	475	1729.9	49.6	50.1	2.8	2.8
183 Bierman	2005	2005ESPL30	WTS16008	RP-8	-107.338672	35.038911	63.32	6.91	5107.1	738	1815.6	66.2	71.8	3.8	4.0
184 Bierman	2005	2005ESPL30	WTS16009	RP-9 RP-10	-107.322913	35.093115	160.49	19.42	310.0	1485	2332.9	92.9	93.7	5.2	5.1
186 Bierman	2005	2005ESPL30	WTS16010 WTS16011	RP-10 RP-14A	-107.544209	35.355175	56.26	6.31	745.0	596	2104.5	64.1	75.4	4.0	4.1
187 Bierman	2005	2005ESPL30	WTS16012	RP-14B	-108.009978	35.350083	63.97	7.13	747.5	154	2115.8	46.8	23.2	2.7	1.3
188 Bierman	2005	2005ESPL30	WTS16013	RP-18	-108.213680	35.342022	7.59	0.85	190.9	496	2463.4	80.2	71.2	4.6	3.9
189 Bierman 190 Bierman	2005	2005ESPL30 2005ESPL30	WTS16014 WTS16015	RP-19 RP-20	-106.942411 -107.034834	35.033766	143.94	16.31	6596.2 302.8	681 949	2079.1	50.5	44.9 96.9	2.9	2.5
191 Bierman	2005	2005ESPL30	WTS16016	RP-21	-107.043430	35.347824	136.49	15.90	5340.5	1075	2036.1	98.0	88.9	5.5	4.9
192 Bierman	2005	2005ESPL30	WTS16017	RP-22	-107.167751	35.570926	134.16	15.13	4737.7	1045	2125.8	107.1	92.7	6.0	5.1
193 Bierman	2005	2005ESPL30	WTS16018	RP-23	-107.179583	35.598648	178.34	20.65	1117.0	1109	2115.7	103.9	102.2	5.8	5.6
194 Bierman 195 Bierman	2005	2005ESPL30 2005ESPL30	WTS16020	RP-24 RP-25	-106.985794	35.924690	263.16	31.47 18.31	170.1	306	2062.6	43.2	42.4	2.5	2.4
196 Bierman	2005	2005ESPL30	WTS16021	RP-26	-106.993653	35.956110	407.08	48.40	358.1	1181	2383.5	105.0	98.4	5.9	5.4
197 Bierman	2005	2005ESPL30	WTS16022	RP-27	-107.191791	35.593280	129.57	14.61	3564.0	676	2034.9	95.1	90.8	5.4	5.0
198 Bierman	2005	2005ESPL30	WTS16023	RP-28	-107.240858	35.642182	167.78	18.40	1291.3	420	2009.1	59.4	45.8	3.4	2.6
200 Bierman	2005	2005ESPL30	WTS16024 WTS16025	RP-29 RP-30	-107.254776	35.810076	218.21	24.25	777.0	220	1998.5	104.6	67.1	4.7	4.5
201 Bierman	2005	2005ESPL30	WTS16026	RP-31	-107.258380	35.824438	279.61	33.17	301.3	339	2092.3	39.0	32.1	2.2	1.8
202 Bierman	2005	2005ESPL30	WTS16027	RP-32	-107.270653	35.819920	185.18	21.78	471.3	341	2086.7	36.4	27.0	2.1	1.5
203 Bierman 204 Bierman	2005	2005ESPL30 2005ESPL30	WTS16028	RP-33 RP-34	-107.391820	35.6566/8	71.06	7.99	570.1	3/1 754	2060.4	50.6	55.2	2.9	3.0
205 Bierman	2005	2005ESPL30	WTS16030	RP-35	-107.485806	35.588327	54.04	5.82	464.8	1308	2349.5	93.1	87.3	5.3	4.8
206 Bierman	2005	2005ESPL30	WTS16031	RP-36	-107.520782	35.577223	42.99	4.94	207.3	547	2143.8	70.2	82.2	4.0	4.5
207 Bierman	2005	2005ESPL30	WTS16032	RP-37	-107.521465	35.579984	66.46	7.59	511.6	528	2139.5	51.5	53.7	2.9	3.0
209 Bierman	2005	2005ESPL30	WTS16033	RP-30	-107.793230	35.340135	42.92	4.85	251.6	444	2197.5	68.5	82.5	3.9	4.2
210 Bierman	2005	2005ESPL30	WTS16035	RP-40	-107.794796	35.337527	34.24	3.91	197.6	1368	2411.9	103.6	89.1	5.9	4.9
211 Bierman	2005	2005ESPL30	WTS16036	RP-41	-107.796199	35.335829	31.77	3.66	449.6	65	2080.5	97.5	76.5	5.5	4.3
213 Ferrier	2005	2005ESPL30	WTS17001	NFC	-123.735481	39.360354	161.25	12.10	524.1	214	2204.9	223.0	100.2	4.8 12.5	4.7 5.5
214 Ferrier	2005	2005ESPL30	WTS17002	SFC	-123.754858	39.345060	109.84	14.98	4.4	256	185.5	219.8	95.4	12.3	5.2
215 Ferrier	2005	2005ESPL30	WTS17007	ORK	-124.064689	41.288343	640.81	85.07	704.1	1622	573.1	272.6	112.8	15.1	6.0
217 Ferrier	2005	2005ESPL30	WTS17008	LLM	-123.911548	41.328327	203.60	27.22	20.2	641	430.9	200.0	95.2	12.6	4.1 5.2
218 Ferrier	2005	2005ESPL30	WTS17010	PAN	-123.908234	41.088649	333.60	39.68	15.6	637	505.0	279.0	109.0	15.4	5.8
219 Safran	2005	2005ESPL30	WTS18001	BOL-01	-68.638411	-15.792800	1130.30	135.46	133.6	3627	4339.9	427.9	223.6	22.3	9.6
220 Satran 221 Safran	2005	2005ESPL30 2005ESPL30	WTS18002 WTS18003	BOL-02 BOL-03	-68.636/11	-15.782818 -15.764540	449.26	59.98	45.2	3152	4120.7	515.7 466.2	298.6	25.9	10.6
222 Safran	2005	2005ESPL30	WTS18004	BOL-05	-68.672034	-15.713020	895.20	117.90	31.3	2545	3654.5	509.6	155.1	26.6	7.0
223 Safran	2005	2005ESPL30	WTS18005	BOL-06	-68.678971	-15.668955	272.73	32.31	29.6	2210	4206.9	457.4	180.6	24.0	8.5
224 Safran	2005	2005ESPL30	WTS18006	BOL-07	-68.520830	-15.387584	275.21	31.55	2958.8	5317	3340.9	446.5	206.6	23.4	9.2
226 Safran	2005	2005ESPL30	WTS18008	BOL-08	-68.543078	-15.405095	404.16	53.09	26.8	2749	2510.7	574.6	163.5	20.0	9.2 7.2
227 Safran	2005	2005ESPL30	WTS18009	BOL-10	-68.490071	-15.346767	97.59	11.81	1.3	1139	1702.0	469.5	108.9	24.9	5.0
228 Safran	2005	2005ESPL30	WTS18010	BOL-11	-68.479800	-15.341753	415.22	68.75	4.1	1198	1836.5	529.6	124.1	27.6	5.6
229 Satran 230 Safran	2005	2005ESPL30 2005ESPI 30	W1518011 WT518012	BOI-14	-68.275998 -68.237393	-15.297111 -15.311120	259.35 230.84	28.33	3259.2 434 2	5725 3751	3188.2 2214 1	459.7 516 9	207.7	24.0	9.2
231 Safran	2005	2005ESPL30	WTS18013	BOL-15	-68.213418	-15.306879	288.80	32.35	5891.1	5754	3017.9	478.2	212.4	24.8	9.5
232 Safran	2005	2005ESPL30	WTS18014	BOL-16	-68.166869	-15.378225	92.11	12.05	121.8	2958	1664.7	490.7	198.2	25.5	9.1
233 Safran 234 Safran	2005	2005ESPL30	WTS18015	BOL-17 BOL-19	-68.153919	-15.401460	229.47	28.69	250.9	2728	1540.5	467.4	197.5	24.4	9.2
235 Safran	2005	2005ESPL30	WTS18018	BOL-19 BOL-20	-67.868780	-15.506623	621.14	46.47	1774.0	5574	2901.3	493.5 503.1	223.4	25.5	9.8 9.5
236 Safran	2005	2005ESPL30	WTS18019	BOL-21	-67.841331	-15.508144	218.20	28.13	5393.4	4903	1692.6	396.6	208.0	20.9	9.5
237 Safran	2005	2005ESPL30	WTS18020	BOL-22	-67.673304	-15.767436	472.36	63.09	1469.9	4075	1839.3	550.1	239.8	27.9	9.6
239 Safran	2005	2005ESPL30	WTS18021	BOL-23 BOL-24	-67.587536	-15.981321	308.70	5.78	25.9 154.6	2198	1816.5	433.4	130.5	22.8	0.7 9.1
240 Safran	2005	2005ESPL30	WTS18023	BOL-25	-67.626806	-16.040677	197.17	24.28	146.3	2438	1906.2	545.8	187.1	28.0	8.3
241 Safran	2005	2005ESPL30	WTS18024	BOL-26	-67.651834	-16.280274	284.08	35.09	41.0	2062	2230.3	451.9	205.9	23.6	9.4
242 Satran 243 Safran	2005	2005ESPL30	WTS18025	BOL-27	-68.120667	-16.157187	606.25	68.63 97 72	151.7	2962	4505.6	565.6	327.1	27.8	11.9
244 Safran	2005	2005ESPL30	WTS18027	BOL-29	-68.039301	-16.081171	532.81	69.11	32.2	2822	3410.9	508.2	202.8	26.2	8.9
245 Safran	2005	2005ESPL30	WTS18028	BOL-30	-68.015320	-16.061106	494.12	56.91	432.6	4695	3940.8	562.4	272.4	28.1	10.6
246 Safran	2005	2005ESPL30	WTS18029	BOL-31	-67.970591	-16.879866	265.41	30.34	111.1	1158	3964.1	259.7	149.4	14.3	7.7
247 Sarran 248 Safran	2005	2003E3PL30 2005ESPL30	WTS18030	BOL-32 BOL-33	-67.195935	-16.808016	246.45	26.74	84U.7 44.0	3149	3992.6 2656.8	340.3 417.1	197.1	18.2	9.5
249 Safran	2005	2005ESPL30	WTS18032	BOL-34a	-67.213270	-16.799855	465.68	61.88	178.0	3202	3342.0	511.8	195.3	26.4	8.7
250 Safran	2005	2005ESPL30	WTS18035	BOL-35a	-67.221237	-16.778313	172.88	19.51	3.6	1313	2715.3	628.4	150.0	31.7	6.3

251 Safran	2005	2005ESPL30	WTS18039	BOL-36a	-67.228386	-16.751776	224.72	26.27	21.4	1847	2794.4	589.0	190.3	29.9	8.3
252 Safran 253 Safran	2005	2005ESPL30 2005ESPL30	WTS18041 WTS18042	BOL-37 BOL-38a	-67.335355 -67.398294	-16.553169 -16.550337	477.11	54.10 60.46	845.2 5440.4	4559 5264	3268.7 3635.0	525.9 406.5	219.1	26.9 21.4	9.6 9.8
254 Safran	2005	2005ESPL30	WTS18044	BOL-39	-67.467341	-16.428654	145.61	16.76	69.1	2352	2102.9	450.2	192.7	23.6	8.8
255 Safran 256 Safran	2005 2005	2005ESPL30 2005ESPL30	WTS18045 WTS18046	BOL-40 BOL-41	-67.485506 -67.432037	-16.418810 -16.319493	324.34 1166.73	39.70 155.07	153.9 1468.0	3091 2912	2528.6 1944.4	521.3 495.3	188.2 190.4	26.9 25.7	8.2 8.6
257 Safran	2005	2005ESPL30	WTS18048	BOL-43	-67.432872	-16.322825	304.74	37.43	418.8	3296	2161.5	484.4	181.6	25.3	8.2
258 Satran 259 Safran	2005	2005ESPL30 2005ESPL30	WTS18049 WTS18050	BOL-44 BOL-45	-67.645811 -67.642389	-16.404941 -16.401593	628.83 810.72	76.52	602.7 353.9	5090 3520	3693.9 2713.8	631.7 637.9	323.8 286.6	30.6 31.2	11.5 10.0
260 Safran	2005	2005ESPL30	WTS18051	BOL-46a	-67.808894	-16.356875	382.71	48.43	23.2	2989	3746.7	580.2	289.5	28.7	10.9
261 Satran 262 Safran	2005	2005ESPL30 2005ESPL30	WTS18054 WTS18055	BOL-48 BOL-49	-67.909029 -67.888380	-16.313351 -16.310749	701.82 424.14	80.34 47.49	63.2 61.3	1907 2843	4257.1 4227.9	614.1 677.1	395.6 459.8	29.1 31.0	14.2 14.6
263 Reuter	2005	2005MScThesis	WTS19001	JSQ1	-76.753112	39.944823	27.15	3.13	573.4	304	214.5	74.5	46.6	4.3	2.6
264 Reuter 265 Reuter	2005	2005MScThesis 2005MScThesis	WTS19002 WTS19003	JSQ2 ISQ3	-76.720097 -76.898022	40.081700	18.33 25.19	2.09	1326.2 558.5	495	191.6 250.6	51.4 81.3	48.5 72.8	2.9	2.7
266 Reuter	2005	2005MScThesis	WTS19005	JSQ5	-77.168530	40.323140	13.89	1.54	535.0	557	315.9	138.1	101.4	7.8	5.6
267 Reuter	2005	2005MScThesis	WTS19006	JSQ6	-77.402213	40.370981	9.35	1.14	38.8	418	277.7	111.3	93.3	6.3	5.1
269 Reuter	2005	2005MScThesis	WTS19008	JSQ9	-77.794296	40.890641	16.59	1.89	224.3	491	394.1	80.6	82.1	4.6	4.5
270 Reuter	2005	2005MScThesis	WTS19009	JSQ10	-77.778493	40.943411	20.79	2.29	690.1	549	412.2	149.6	103.8	8.4	5.7
272 Reuter	2005	2005MScThesis	WTS19010 WTS19011	JSQ11	-78.264893	40.216683	11.16	1.26	1955.2	673	454.0	128.8	97.7	7.3	5.4
273 Reuter	2005	2005MScThesis	WTS19012	JSQ13	-78.492517	40.071497	10.84	1.21	445.2	626	486.1	125.0	88.9	7.1	4.9
275 Reuter	2005	2005MScThesis	WTS19013 WTS19014	JS42	-76.368082	39.946487	24.41	2.01	1211.8	345	151.9	54.9	46.1	3.1	2.6
276 Reuter	2005	2005MScThesis	WTS19015	JS43	-76.277217	40.010317	14.13	1.58	140.7	256	134.3	34.9	31.6	2.0	1.8
277 Reuter 278 Reuter	2005	2005MScThesis	WTS19016 WTS19017	JS44 JS45	-76.328295	40.144600 39.905942	26.07	2.86	381.8	271	189.6	56.0	34.7 41.8	3.3	2.0
279 Reuter	2005	2005MScThesis	WTS19020	JSQ29	-76.634392	42.002955	87.82	11.13	6507.0	502	481.9	116.0	85.2	6.6	4.7
280 Reuter 281 Reuter	2005	2005MScThesis 2005MScThesis	WTS19021 WTS19022	JSQ30 JSQ31	-77.131679	42.028690 41.909249	75.45 51.08	12.98	1986.1	492	527.3 541.6	134.2 116.9	88.1 84.8	7.6 6.6	4.9
282 Reuter	2005	2005MScThesis	WTS19023	JSQ32	-77.014700	41.790609	92.75	21.42	31.5	337	542.2	118.1	78.2	6.7	4.4
283 Reuter 284 Reuter	2005	2005MScThesis 2005MScThesis	WTS19024 WTS19026	JSQ33 JSQ35	-76.965182 -75.897289	41.815121 41.555511	89.82 99.30	16.10 11.61	26.1 1012.3	319 630	558.3 408.3	123.6 109.1	76.4 71.1	7.0 6.2	4.3 4.0
285 Reuter	2005	2005MScThesis	WTS19027	JSQ100	-78.153555	41.375843	32.34	4.18	3.0	354	524.9	306.6	139.4	16.8	7.3
286 Reuter 287 Reuter	2005	2005MScThesis 2005MScThesis	WTS19028 WTS19029	JSQ101 ISQ102	-78.196244 -78.152894	41.413665 41.458532	27.37	3.12	705.0	467 344	544.0 580.5	200.3	126.8 166.8	11.2	6.8 8.6
288 Reuter	2005	2005MScThesis	WTS19030	JSQ103	-78.186561	41.592175	42.19	5.16	5.6	324	570.9	261.7	117.0	14.5	6.2
289 Reuter	2005	2005MScThesis	WTS19031	JSQ104	-78.037510	41.704190	39.46	4.65	3.5	186	630.7	129.6	67.8	7.4	3.8
291 Reuter	2005	2005MScThesis	WTS19032	JSQ105	-78.359307	41.448276	27.89	3.13	3.2	174	597.3	175.5	75.1	9.9	4.2
292 Reuter	2005	2005MScThesis	WTS19034	JSQ107	-78.359213	41.427358	44.84	5.32	3.4	252	567.3	196.9	71.6	11.1	4.0
294 Reuter	2005	2005MScThesis	WTS19035 WTS19036	JSQ108 JSQ109	-78.103735	41.595805	50.98	6.47	3.4	259	638.1	276.0	107.0	15.3	5.7
295 Reuter	2005	2005MScThesis	WTS19037	JSQ110	-77.976035	41.452514	10.69	1.20	1.3	59	610.3	46.4	20.7	2.7	1.2
296 Reuter 297 Reuter	2005	2005MScThesis	WTS19039 WTS19040	JSQ112 JSQ113	-77.968934	41.385906 41.358322	23.36	2.61	3.5	200	536.8	167.4	70.2	9.5	4.7
298 Reuter	2005	2005MScThesis	WTS19041	JSQ114	-78.278100	41.244609	13.29	1.49	6.4	103	628.9	41.8	17.8	2.4	1.0
299 Reuter 300 Reuter	2005	2005MScThesis 2005MScThesis	WTS19042 WTS19043	JSQ115 JSQ116	-78.233381 -78.038751	41.275617 41.203619	17.78	1.97	4.8 6.5	175 219	622.2 543.5	89.1 70.6	91.2 31.5	5.0 4.0	5.1 1.8
301 Reuter	2005	2005MScThesis	WTS19044	JSQ117	-78.033936	41.204583	15.14	1.66	3.4	141	499.0	60.3	24.1	3.5	1.4
302 Reuter 303 Reuter	2005	2005MScThesis 2005MScThesis	WTS19045 WTS19046	JSQ118 JSQ119	-77.789435	41.285748	26.24	2.99	4.0	352	591.2 570.9	213.3 288.6	167.2 119.1	11.7	8.8 6.2
304 Reuter	2005	2005MScThesis	WTS19047	JSQ120	-77.921430	41.208882	25.61	2.93	15.1	370	609.2	161.6	169.8	8.9	8.9
305 Reuter 306 Reuter	2005	2005MScThesis 2005MScThesis	WTS19049 WTS19050	JSQ123 JSQ124	-77.797565	41.203146	11.79	1.27	3.1	111	643.9 293.8	81.1 125.0	38.5	4.6 7 1	2.2
307 Reuter	2005	2005MScThesis	WTS19051	JSQ125	-77.246073	41.097687	29.79	3.40	9.7	178	519.8	87.0	56.1	5.0	3.1
308 Reuter	2005	2005MScThesis	WTS19052	JSQ126	-77.274591	41.085208	21.26	2.28	2.1	76	555.9	51.8	30.8	3.0	1.8
310 Reuter	2005	2005MScThesis	WTS19055 WTS19054	JSQ127 JSQ128	-77.118859	41.074729	17.17	1.85	3.2	181	521.5	132.9	64.0	7.5	3.6
311 Reuter	2005	2005MScThesis	WTS19055	JSQ129	-77.222753	40.940345	7.64	0.82	3.1	100	622.6	59.2	33.0	3.4	1.9
312 Reuter 313 Reuter	2005	2005MScThesis	WTS19056 WTS19057	JSQ130 JSQ131	-76.522073	41.074138 41.075418	19.72	2.36	5.2	137	279.5	43.7	25.0 54.8	6.2	3.1
314 Reuter	2005	2005MScThesis	WTS19058	JSQ132	-76.716420	40.851677	8.02	0.89	3.8	95	206.0	60.7	41.4	3.5	2.4
315 Reuter 316 Reuter	2005	2005MScThesis 2005MScThesis	WTS19059 WTS19060	JSQ133 JSQ134	-76.897657	40.522252 40.686039	20.45	1.08	3.0	118	494.7 206.9	58.6	26.4 41.6	3.4 4.6	1.5
317 Reuter	2005	2005MScThesis	WTS19061	JSQ135	-76.956446	40.624969	24.83	2.74	4.0	148	218.5	107.1	63.9	6.1	3.6
318 Reuter 319 Reuter	2005	2005MScThesis 2005MScThesis	WTS19062 WTS19063	JSQ136 ISO137	-77.655656	40.368801 40.530273	4.42	0.50	3.3 8.6	99 287	328.9 452.4	83.5 207.7	36.5 96.6	4.8 11.6	2.1
320 Reuter	2005	2005MScThesis	WTS19064	JSQ138	-77.609124	40.531040	18.50	2.13	3.8	273	428.4	210.2	98.3	11.8	5.3
321 Reuter 322 Reuter	2005	2005MScThesis 2005MScThesis	WTS19065 WTS19066	JSQ139 ISO140	-77.766085	40.407224 40.326468	29.35 8.74	3.25	3.2	285	515.3 465.8	249.4 54.3	120.1 16.8	13.8 3.1	6.4 1.0
323 Reuter	2005	2005MScThesis	WTS19067	JSQ141	-78.111318	40.332325	11.64	1.31	4.5	188	508.8	83.9	36.4	4.8	2.1
324 Reuter	2005	2005MScThesis	WTS19068	JSQ142	-78.302606	40.442624	11.39	1.24	2.8	94	352.0	99.3	50.5	5.7	2.9
326 Reuter	2005	2005MScThesis	WTS19070	JSQ145 JSQ144	-77.790142	40.737848	8.18	0.92	3.2	222	643.3	186.7	91.1	10.5	5.0
327 Reuter	2005	2005MScThesis	WTS19071	JSQ145	-77.417897	40.816459	21.32	2.50	3.3	210	517.2	193.8	102.1	10.9	5.6
329 Reuter	2005	2005MScThesis	WTS19072 WTS19073	JSQ146 JSQ147	-77.485402	40.832032	37.03	4.39	3.3	252	495.6	222.7	41.7	5.2	6.9
330 Reuter	2005	2005MScThesis	WTS19074	JSQ148	-77.490314	40.982175	26.27	2.94	4.8	358	543.5	227.7	115.3	12.7	6.2
332 Reuter	2005	2005MScThesis	WTS19075 WTS19076	JSQ149 JSQ150	-76.330044	39.812087	11.26	1.28	3.9	106	167.6	65.7	43.3	3.8	2.4
333 Reuter	2005	2005MScThesis	WTS19077	JSQ151	-76.338643	39.817187	6.53	0.75	3.5	61	152.0	68.6	41.7	3.9	2.4
334 Reuter 335 Reuter	2005	2005MScThesis 2005MScThesis	WTS19078 WTS19079	JSQ152 JSQ153	-76.346256	39.815105 39.828805	5.68 14.67	0.79	25.3	145	180.2 190.7	49.8 49.5	20.9	2.9	1.2
336 Reuter	2005	2005MScThesis	WTS19080	JSQ154	-76.339041	39.836895	10.42	1.19	5.4	182	211.9	95.7	66.7	5.4	3.7
337 Reuter 338 Reuter	2005	2005MScThesis	WTS19081 WTS19082	JSQ155 JSQ156	-76.519873	39.865028 39.900793	10.84	1.24	4.1 4.4	139	198.1 243.2	82.1 68.8	41.6 33.9	4.7	2.4
339 Reuter	2005	2005MScThesis	WTS19083	JSQ157	-76.435325	39.749567	15.64	1.66	3.9	71	193.0	47.4	27.2	2.7	1.6
340 Reuter 341 Reuter	2005	2005MScThesis 2005MScThesis	WTS19084 WTS19085	JSQ158 JSQ159	-76.493401	39.775748 39.805804	11.47	1.27	7.0	88 91	215.8 282.6	54.0 62.1	26.7	3.1 3.6	1.5
342 Reuter	2005	2005MScThesis	WTS19086	JSQ160	-76.649811	39.816252	12.03	1.35	3.8	82	260.5	64.3	31.9	3.7	1.8
344 Reuter	2005	2005MScThesis	WTS19087	JSQ165	-76.345928	59.935808 40.025880	10.50	1.1/	3.4 104.6	83 138	200.4	72.1 32.6	37.8	4.1 1.9	2.1 1.7
345 Chappell	2006	2006PPP241	WTS20020	20	101.828227	30.855572	685.29	184.85	4512.0	3872	3938.8	537.3	194.7	27.6	8.6
347 Binnie	2006	2006QuatGeochr1	WTS20021 WTS21001	ZI MHC-2m	-116.962182	31.0221/3 34.130374	845.50 157.06	294.33 23.76	4.9	3/98 1297	4027.5 2577.9	545.4 386.7	134.2	27.7 20.9	9.7
348 Binnie	2006	2006QuatGeochr1	WTS21005	MHC-8	-116.977177	34.119522	346.90	59.78	8.1	1680	2384.7	413.1	158.4	22.0	7.6
349 Binnie 350 Binnie	2006	2006QuatGeochr1 2006QuatGeochr1	WTS21006 WTS21007	MHCW MHC-10	-116.961335 -116.990498	34.132046 34.123685	959.17 214.14	151.39 27.04	1.0 6.1	574	2219.2 1759.8	506.8 350.3	171.4 157.5	26.4 18.9	8.1 8.0
351 Binnie	2006	2006QuatGeochr1	WTS21008	MHC-11	-116.991346	34.126216	236.50	50.58	3.8	818	1768.1	347.4	157.5	18.8	8.0
352 Binnie 353 Binnie	2006	2006QuatGeochr1 2006QuatGeochr1	WTS21010 WTS21011	MHC-12 MHC-13	-116.992145	34.125368 34.113696	249.18	47.06	2.2	489	1709.9 1923.8	271.2	130.5 184.8	14.9 24.7	6.9 8 7
354 Binnie	2006	2006QuatGeochr1	WTS21012	MHC-14	-116.987147	34.114543	279.26	45.14	9.0	1025	1738.9	347.5	163.3	18.8	8.2
355 Binnie 356 Vanacker	2006	2006QuatGeochr1 2007EPSI 253	WTS21013 WTS22001	MHC-15 HP-2	-116.989661 80.810016	34.112872 6,803893	282.73	44.43	17.9 6.8	1065	1688.1 2147 9	350.8 80 7	167.6 54 4	18.9 4.6	8.3
357 Vanacker	2007	2007EPSL253	WTS22006	BO-U2	80.789930	6.790497	4.25	0.48	1.4	123	2098.8	130.8	62.8	7.4	3.5
358 Vanacker 359 Vanacker	2007	2007EPSL253 2007EPSL253	WTS22009 WTS22015	BO-U4 BO-F2F	80.784073 80.753120	6.783800 6.744456	3.97	0.54	16.7 1.6	299 1156	2143.6 1373 9	116.8 512 2	83.9 174 1	6.6 26.6	4.6
360 Vanacker	2007	2007EPSL253	WTS22017	ESP-5	80.784101	6.721041	36.71	5.15	18.7	1547	1429.0	516.1	245.9	26.3	10.2
361 Vanacker 362 Vanacker	2007	2007EPSL253 2007EPSL253	WTS22018	ESP-3 BO-R2F	80.818415 80 762222	6.731933	37.97	5.50	2.0	1257	1288.1	536.8 204 º	257.2	27.1	10.5
363 Quigley	2007	2007EPSL261	WTS23001	NWF01	137.954658	-32.117196	58.17	9.36	16.8	548	580.2	204.8	108.8	12.7	5.8
364 Quigley	2007	2007EPSL261	WTS23002	SWF04	137.950214	-32.151060	15.48	2.31	5.4	440	569.4	244.8	113.0	13.6	5.8
366 Quigley	2007	2007EPSL261	WTS23003	DCF01	137.932442	-32.130319	30.58	4.15	5.0 38.9	603	597.8	553.8 194.5	124.1	19.3	6.7
367 Belmont	2007	2007EPSL264	WTS24001	U-EFMC-G	-124.241848	47.687377	376.84	41.45	3.4	298	290.7	284.3	124.3	15.7	6.5
369 Belmont	2007	2007EPSL264	WTS24002	U-WC-S	-124.045691	47.739905	316.21	36.32	13.5	502 454	647.9	240.4 380.8	133.1	20.6	6.7
370 Belmont	2007	2007EPSL264	WTS24006	L-WC-S	-124.037933	47.730232	547.00	70.53	4.3	599	555.2	365.6	131.8	19.8	6.7
371 Salgado 372 Salgado	2007	2007ESPL32	WTS25002	Br3	-43.663915	-20.390581 -20.371277	14.37	5.82	5.0	270	1276.2	146.7 141.9	78.2	8.3 8.0	4.2
373 Salgado	2007	2007ESPL32	WTS25004	Br4	-43.662220	-20.367184	4.30	1.66	14.9	385	1218.1	156.5	83.8	8.8	4.6
375 Binnie	2007	2007Geol35 2007Geol35	WTS26003	3	-116.927972	34.084046 34.049663	2428.68 1460.72	526.78 229.15	1.2	668 938	1956.5 2167.0	468.9 522.7	124.4	24.9 27.2	6.U 7.0
376 Binnie	2007	2007Geol35	WTS26004	4	-116.940113	34.053039	1284.58	187.71	1.0	816	1958.5	584.2	148.4	29.9	6.6
378 Binnie	2007	2007Geol35	WTS26008	8	-116.979751	34.183102	710.58	100.73	2.0 3.5	874 955	2045.6	424.0	187.9	27.3	8.7 9.2

379 Binnie	2007	2007Geol35	WTS26009	9	-116.951371	34.185789	573.44	75.31	2.9	738	2125.8	372.8	196.7	19.8	9.8
380 Binnie 281 Binnie	2007	2007Geol35	WTS26010	10	-117.015431	34.212077	187.84	23.34	3.1	812	1974.3	484.5	166.3	25.4	8.0
382 Binnie	2007	2007Geol35	WTS26012	12	-116.935146	34.196563	249.78	29.34	1.6	597	2142.5	446.7	172.2	23.6	8.4
383 Binnie 284 Binnie	2007	2007Geol35	WTS26013	13	-116.928661	34.193864	308.14	35.74	1.4	664	2136.1	417.6	150.9	22.3	7.5
385 Binnie	2007	2007Geol35	WTS26015	15	-117.075616	34.396673	94.92	11.97	1.9	322	1548.7	224.8	120.3	12.5	6.4
386 Binnie	2007	2007Geol35	WTS26016	16	-117.032489	34.276754	163.68	19.18	2.3	702	2205.5	314.5	110.5	17.3	5.7
388 Binnie	2007	2007Geol35	WTS26017	18	-117.043854	34.279446	76.01	9.38	8.2	575	1924.9	112.1	63.2	6.4	3.5
389 Binnie	2007	2007Geol35	WTS26019	19	-117.062615	34.402745	138.69	18.01	6.1	912	1691.4	224.4	134.4	12.4	7.0
391 Vanacker	2007	2007Geol35	WTS27003	RGSTER	-78.897316	-2.961784	26.76	2.93	20.2	148	2919.0	174.5	131.4	9.7	7.3
392 Vanacker	2007	2007Geol35	WTS27004	RG2	-78.911738	-2.935872	59.57	7.14	29.3	722	2973.3	208.0	88.0	11.7	4.8
393 Vanacker 394 Vanacker	2007	2007Geol35	WTS27007 WTS27008	BQ	-78.932120	-2.936543	50.94	5.23	49.8	724	2910.6	225.7	99.0 113.4	12.6	6.0
395 Vanacker	2007	2007Geol35	WTS27009	QU	-78.920804	-2.981351	75.25	9.43	16.9	170	3056.8	298.8	70.5	16.6	3.7
396 Vanacker 397 Vanacker	2007	2007Geol35 2007Geol35	WTS27010 WTS27012	JA2(1) CJ	-78.881851 -78.872654	-2.875637 -2.920149	48.22 92.58	5.77 12.76	276.3 19.5	854 518	2849.9 2966.0	220.4 160.9	116.0 63.0	12.3 9.1	6.1 3.5
398 Vanacker	2007	2007Geol35	WTS27013	DE2	-78.922822	-2.767948	101.35	11.85	39.0	1118	3145.3	206.5	99.4	11.6	5.4
399 Vanacker 400 Vanacker	2007	2007Geol35 2007Geol35	WTS27014 WTS27015	SI5 RGD(1)	-78.808337 -78.800356	-2.991794 -2.942590	3.59 27.53	0.41 3.19	8.4 2.2	906 650	2843.9 2721.7	280.5 325.0	130.8 90.8	15.4 17.9	6.8 4.7
401 Reinhardt	2007	2007JGeophysRes112	WTS28003	MRS14	-3.489817	37.002233	1736.38	247.11	8.3	1301	2294.2	384.7	111.0	20.8	5.5
402 Reinhardt 403 Reinhardt	2007	2007JGeophysRes112 2007JGeophysRes112	WTS28004 WTS28005	MRS15B MRS17	-3.493582 -3.507711	36.999183 36.990017	1845.21 937.20	283.69 114.65	1.4 3.0	983 1186	2098.9 1953.3	328.9 365.8	109.9 109.3	18.0 19.9	5.6 5.5
404 Reinhardt	2007	2007JGeophysRes112	WTS28007	MRS21A	-3.507722	36.991534	1189.54	330.29	14.0	827	1715.6	364.1	163.4	19.6	7.9
405 Reinhardt 406 Wittmann	2007	2007JGeophysRes112 2007JGR112	WTS28008 WTS29001	MRS21B Anza	-3.512431 8.262312	36.988479 46.022889	1587.26 946.36	440.85 310.91	17.3 256.5	328 4287	1327.8 1781.7	394.5 615.5	104.6 231.2	21.4 30.7	5.3 9.5
407 Wittmann	2007	2007JGR112	WTS29002	Buetsch-1	7.412396	46.847306	121.93	24.72	12.2	228	839.2	185.4	86.5	10.4	4.7
408 Wittmann 409 Wittmann	2007	2007JGR112 2007JGR112	WTS29003 WTS29004	Buetsch-2 Chie	7.429769 8.301650	46.844579 46.504194	107.31 980.96	16.60 258.53	8.3 154.3	279 2218	908.8 2365.2	164.3 456.4	86.1 225.9	9.3 23.7	4.7 10.4
410 Wittmann	2007	2007JGR112	WTS29005	Emme	7.636110	47.032608	265.25	42.06	680.0	1618	984.5	242.8	155.7	13.3	7.8
411 Wittmann 412 Wittmann	2007	2007JGR112 2007JGR112	WTS29006 WTS29007	Furka Gren	8.492048 8.099770	46.586771 46.372263	1623.62 1516.89	343.47 511.41	27.6 5.8	1835	2496.8 2017.7	445.2 604.5	182.6 240.8	23.4 30.1	8.4 10.4
413 Wittmann	2007	2007JGR112	WTS29008	Klem-a	8.220107	47.046973	477.89	120.72	444.6	1777	1074.5	283.2	182.3	15.3	8.9
414 Wittmann 415 Wittmann	2007	2007JGR112 2007JGR112	WTS29010 WTS29011	Lonza Mag1	7.785528 8.735457	46.402976 46.224708	1999.81 359.22	548.29 83.77	103.0 10.8	2455 1846	2542.9 1152.0	560.1 549.7	261.5 205.6	28.1 28.1	10.8 9.5
416 Wittmann	2007	2007JGR112	WTS29012	Mag10	8.667499	46.389661	809.44	164.15	29.6	2234	1975.7	656.4	266.0	32.1	10.3
417 Wittmann 418 Wittmann	2007	2007JGR112 2007JGR112	WTS29013 WTS29014	Mag11-2 Mag11-4	8.622410 8.713289	46.297068 46.240970	825.17 852.95	162.09 169.10	450.1 542.9	2347 2027	1607.8 1276.6	600.8 604.6	287.4 253.1	29.6 30.1	11.2 10.7
419 Wittmann	2007	2007JGR112	WTS29015	Mag13	8.526237	46.448490	792.43	162.41	10.1	832	2512.1	427.2	209.8	22.4	9.8
420 Wittmann 421 Wittmann	2007	2007JGR112 2007JGR112	WTS29016 WTS29017	Mag16 Mag17	8.652433 8.638787	46.399504 46.409844	1125.44	311.17	120.9 46.0	2130	1972.2 1980.5	551.2 581.2	238.4 265.8	27.9	10.0 10.7
422 Wittmann	2007	2007JGR112	WTS29018	Mag18	8.667139	46.448987	635.01	107.53	6.8	1265	2131.3	510.9	231.2	26.1	10.1
423 Wittmann 424 Wittmann	2007	2007JGR112 2007JGR112	WTS29019 WTS29020	Mag2 Mag4	8.706109 8.546785	46.251334 46.299265	363.74	71.22	18.3 65.8	1914	1425.3 1833.2	631.1 537.6	181.1 265.9	31.7	7.6 10.6
425 Wittmann	2007	2007JGR112	WTS29021	Mag8	8.607107	46.342501	906.17	204.44	120.9	2777	1890.6	655.1	326.5	31.4	12.4
426 Wittmann 427 Wittmann	2007	2007JGR112 2007JGR112	WTS29022 WTS29023	Mela1 Mela2	8.574420 8.696556	46.138688 46.174181	1279.27 1060.98	298.63 419.06	106.0 166.0	1798 2087	1352.2	465.3	190.5 202.0	24.3 25.6	9.1
428 Wittmann	2007	2007JGR112	WTS29024	Mela3a	8.715736	46.181152	614.14	150.89	317.4	2245	1339.9	522.2	200.5	26.9	8.9
429 Wittmann 430 Wittmann	2007	2007JGR112 2007JGR112	WTS29026 WTS29028	Reuss-a Sense	8.640961 7.320947	46.839462 46.822271	1780.99 292.78	693.10 63.59	670.4 161.5	3130 1480	2100.9 1292.7	564.6 315.5	262.5 187.4	28.3	11.0 9.0
431 Wittmann	2007	2007JGR112	WTS29029	Sesia	8.259461	45.810757	525.37	115.35	618.4	4023	1600.5	569.0	218.9	28.8	9.3
432 Wittmann 433 Wittmann	2007	2007JGR112 2007JGR112	WTS29030 WTS29031	Taf Tic-a	7.289018	46.875190 46.519319	174.35	28.51 223.65	38.0 78.9	315 1841	700.3 2179.9	103.0 483.7	72.7	5.8 25.1	4.1 9.4
434 Wittmann	2007	2007JGR112	WTS29033	Toce-a	8.325026	46.176547	1300.27	303.16	360.4	2976	1938.9	532.9	272.0	26.8	11.7
435 Wittmann 436 Wittmann	2007 2007	2007JGR112 2007JGR112	WTS29035 WTS29037	Verz-a Wasen1-1	8.843657 7.818542	46.251111 47.022277	621.77 297.27	140.05 71.05	184.6 11.7	2336 496	1662.8 1046.2	689.7 301.0	263.5 107.9	33.4 16.6	10.2 5.7
437 Binnie	2008	2008EPSL276	WTS30002	кс	-116.962734	34.160188	660.43	81.76	1.5	871	2048.1	390.8	105.5	21.2	5.3
438 Codilean 439 Codilean	2008	2008Geol36 2008Geol36	WTS31001 WTS31002	N2C N2G	16.231486 16.313166	-23.484712 -23.469645	18.02	2.05	45.8 91.5	887 980	1564.8 1618.8	212.7	166.9 153.4	11.7 11.3	8.7 8.0
440 Codilean	2008	2008Geol36	WTS31003	N3E	16.419892	-23.342974	6.29	0.70	48.4	185	1834.7	43.2	18.3	2.5	1.1
441 Codilean 442 Norton	2008	2008Geol36 2008Geomorph95	WTS31004 WTS32001	N3F FON1	16.344922 8.061989	-23.325474 47.030380	9.59 304.57	1.08	78.2	582 723	1866.6 880.7	90.3 287.2	124.0 135.8	5.0 15.8	6.7 6.9
443 Norton	2008	2008Geomorph95	WTS32002	FON2	8.032105	47.037052	377.36	58.39	4.6	345	905.9	254.6	91.3	14.2	4.9
444 Norton 445 Norton	2008	2008Geomorph95 2008Geomorph95	WTS32003 WTS32004	FON3 FON4	7.981158	47.030459 46.972048	310.90 380.13	48.10 60.74	3.5	513	1000.8 1018.2	256.2	94.4 84.6	14.3 13.0	5.1 4.6
446 Norton	2008	2008Geomorph95	WTS32005	FON5	7.966169	46.970320	304.57	40.53	2.5	323	1083.5	298.0	114.9	16.4	6.0
447 Norton 448 Norton	2008 2008	2008Geomorph95 2008Geomorph95	WTS32006 WTS32009	FON6s FON7	7.970828 8.001204	46.987051 46.982830	653.95 465.71	166.78 70.17	2.4 12.0	338 531	1094.2 1045.6	305.4 317.3	105.7 123.6	16.8 17.4	5.6 6.4
449 Norton	2008	2008Geomorph95	WTS32010	TRUB1	7.892955	46.995373	363.06	56.37	1.7	321	1181.3	354.8	127.9	19.3	6.6
450 Norton 451 Norton	2008	2008Geomorph95 2008Geomorph95	WTS32011 WTS32012	TRUB2 TRUB3	7.884605	46.990380 46.967090	412.33 353.06	145.54 54.49	1.6 9.8	350	1181.1 1102.0	383.1 315.1	126.3 126.2	20.7 17.3	6.4 6.5
452 Norton	2008	2008Geomorph95	WTS32013	TRUB4	7.915450	46.988717	449.30	71.56	4.9	351	1133.9	309.1	98.5	17.0	5.2
453 Norton 454 Norton	2008	2008Geomorph95 2008Geomorph95	WTS32014 WTS32015	TRUB5 TRUB6	7.918744 7.888159	47.001379 46.947845	418.88 485.84	65.80 78.17	1.4 37.9	269	1168.7 1070.4	313.5 289.1	98.1 119.2	17.3 15.9	5.1 6.3
455 Finnegan	2008	2008GSABull120	WTS33002	NB-13-02	95.514425	29.908414	2799.81	312.05	20.0	2235	4123.3	643.8	248.7	31.7	9.5
456 Finnegan 457 Finnegan	2008 2008	2008GSABull120 2008GSABull120	WTS33003 WTS33004	NB-14-02 NB-23-02	95.410029 95.112136	29.946889 30.102215	3822.28 3174.76	423.66 400.89	19.8 28.5	2148 3311	4262.1 3741.6	654.3 673.8	264.7 207.9	32.0 33.2	10.1 8.2
458 Finnegan	2008	2008GSABull120	WTS33005	NB-5-02	95.179600	30.066000	2540.68	298.10	26.0	2997	3888.4	674.3	213.4	33.2	8.6
459 Finnegan 460 Finnegan	2008	2008GSABull120 2008GSABull120	WTS33006 WTS33007	NB-5-04 NB-6-04	94.803999 94.800326	29.945988	355.93	40.36 238.44	807.3 1688.4	4018	4172.7	427.6	206.7	22.4	9.7 11.6
461 Finnegan	2008	2008GSABull120	WTS33008	NB-7-02	95.259380	30.044567	6134.06	702.41	10.5	3038	4071.3	673.1	182.8	33.4	7.3
462 Wittmann 463 Wittmann	2009 2009	2009EPSL288 2009EPSL288	WTS34018 WTS34021	PIR18b CHA23a	-63.455180 -65.400151	-18.080826 -16.973315	528.78 278.64	188.74 46.64	1649.0 4983.9	2076 4375	1380.9 2430.1	319.5 399.3	190.5 227.2	17.2 20.9	9.2 10.5
464 Wittmann	2009	2009EPSL288	WTS34022	MAN15b	-66.823762	-14.869849	409.04	110.30	4065.4	1672	477.1	144.4	152.1	8.0	8.0
465 Kober 466 Kober	2009 2009	2009ESPL34 2009ESPL34	WTS35001 WTS35002	LL1 LL2	-69.863009 -70.016377	-18.336699 -18.399865	30.45 31.20	4.75	2546.9 3023.3	4554	3751.1 2126.8	265.6 260.5	209.5 177.9	14.3 14.2	10.4 9.1
467 Kober	2009	2009ESPL34	WTS35003	LL3	-70.301598	-18.399787	32.42	3.94	3338.2	1883	871.0	179.0	145.7	9.9	7.7
468 Kober 469 Kober	2009 2009	2009ESPL34 2009ESPL34	W1535004 WTS35005	LL4 LL5	-69.629668 -69.629671	-17.994721 -17.995552	15.02 15.65	2.48 1.95	881.1 1330.8	2352 2353	4320.9 4347.9	150.3 154.3	136.0 135.6	8.4 8.6	7.2 7.2
470 Densmore	2009	2009Geol37	WTS36007	04A10	-112.406058	45.108579	30.02	3.57	5.7	422	2398.5	187.5	86.0	10.5	4.7
471 Densmore 472 Densmore	2009	2009Geol37 2009Geol37	WTS36011 WTS36014	05WS1 05WS4	-118.586352 -118.599138	38.376422 38.344388	270.99 420.28	48.71 118.73	1.5 4.0	544 583	2187.7 2306.2	356.6 339.4	122.8 128.5	19.4 18.5	ь.2 6.6
473 Densmore	2009	2009Geol37	WTS36015	05WS5	-118.650396	38.226099	89.28	10.42	1.9	513	2537.2	270.1	93.2	15.0	5.0
474 Densmore 475 Densmore	2009 2009	2009Geol37 2009Geol37	WTS36017 WTS36019	05WS7 05WS9	-118.700458 -118.638663	38.516671 38.388598	107.25	17.51 30.93	2.9	676 749	2129.9 2509.7	409.3 352.1	163.0 124.5	21.8 19.2	8.0 6.4
476 Densmore	2009	2009Geol37	WTS36020	05WS11	-118.600408	38.402022	259.70	32.69	17.6	1046	2289.3	350.3	121.6	19.1	6.2
477 Densmore 478 Densmore	2009	2009Geol37 2009Geol37	WTS36021 WTS36022	05WS12 05WS13	-118.620121 -118.648968	38.421474 38.333078	64.76	21.17 10.41	1.0	453	2059.5	368.1 254.9	111.1 141.0	20.0	5.6
479 Densmore	2009	2009Geol37	WTS36023	05WS14	-118.626639	38.325045	379.07	74.66	35.8	855	2502.7	261.0	143.2	14.4	7.6
480 Densmore 481 Ouimet	2009 2009	2009Geol37 2009Geol37	WTS36024 WTS37001	05WS15 wbo302	-118.612098 101.529979	38.320695 30.269627	282.17 33.44	47.62	44.1 35.8	953 450	2468.2 4073.7	264.5 100.8	140.7 54.3	14.6 5.7	7.4
482 Ouimet	2009	2009Geol37	WTS37002	wbo305	101.540492	29.889491	22.16	2.39	21.1	370	4295.2	73.0	51.6	4.2	2.9
483 Ouimet 484 Ouimet	2009 2009	2009Geol37 2009Geol37	W1537003 WTS37004	wbo316 wbo424	101.237349 103.527316	29.429850 31.300110	228.23 371.61	25.54 44.71	33.5 16.4	1941 2030	4468.8 3003.7	484.3 664.0	222.6 190.1	25.0 32.9	10.0 7.9
485 Ouimet	2009	2009Geol37	WTS37005	wbo439	101.226257	29.409600	421.84	49.33	93.9	2537	4495.6	500.1	216.7	25.8	9.8
487 Ouimet	2009	2009Geol37	WTS37006	wb0444 wb0445	102.242943	29.374709 29.498637	296.32 684.55	47.66 93.26	23.6 10.0	1840	1938.1 2032.8	557.7 617.5	191.9 228.8	28.5 30.8	8.3 9.6
488 Ouimet	2009	2009Geol37	WTS37008	wbo448	102.193382	29.914585	483.58	55.03	95.6	4220	3381.3	636.1	218.3	31.6	8.9
489 Ouimet 490 Ouimet	2009 2009	2009Geol37 2009Geol37	W (\$37009 WT\$37010	wbo450 wbo501	102.179951 103.481369	30.227021 31.556515	351.57 256.50	39.96 29.21	28.3 14.1	3036 2682	3326.2 2833.3	644.4 779.5	163.4 246.7	32.3 36.9	6.8 9.1
491 Ouimet	2009	2009Geol37	WTS37011	wbo502	102.740546	31.752188	232.16	25.65	25.6	1853	4133.1	482.1	147.9	25.4	7.0
492 Ouimet 493 Ouimet	2009 2009	2009Geol37 2009Geol37	W1537012 WTS37013	wbo505 wbo506	101.618568 100.750121	32.210558 31.890209	201.02 181.54	24.32 19.62	20.3 40.7	1741 1528	3698.7 4235.4	528.6 477.1	161.6 167.2	27.4 25.0	7.4 8.0
494 Ouimet	2009	2009Geol37	WTS37014	wbo508	101.019892	32.197890	46.39	4.94	86.7	1345	4049.0	341.4	178.7	18.4	8.8
495 Ouimet 496 Ouimet	2009	2009Geol37	WTS37015 WTS37016	wb0510 wb0511	100.930648	31.715179 31.772766	40.25 102.64	4.36 10.74	169.3 169.3	845 1198	3934.2 4213.1	223.9 462.2	140.2 177.4	12.4 24.3	7.5 8.5
497 Ouimet	2009	2009Geol37	WTS37017	wbo512	101.105732	31.787621	117.53	12.47	10.9	1404	4003.7	481.9	188.3	25.1	8.8
498 Ouimet 499 Ouimet	2009	2009Geol37 2009Geol37	WTS37018 WTS37019	wb0513 wb0514	101.365759	31.750395	175.59 174.14	19.70 18.83	23.6 23.4	1954 2202	4136.1 3662.3	558.3	255.4 200.2	28.0 28.5	10.2 8.5
500 Ouimet	2009	2009Geol37	WTS37020	wbo515	102.049978	31.419829	167.48	18.06	14.1	1955	3226.6	522.1	151.7	27.2	7.0
501 Ouimet 502 Ouimet	2009	2009Geol37	WTS37021 WTS37022	wb0518 wb0519	101.720134 102.279118	30.954042 31.019680	2/4.61 169.67	30.64 19.24	21.7 9.5	2340 1863	3616.9 3371.9	605.2	186.2 176.9	31.8 30.6	7.7 7.7
503 Ouimet	2009	2009Geol37	WTS37023	wbo521	101.618923	30.541519	324.05	39.81	27.8	1526	4188.4	428.0	173.1	22.7	8.2
505 Ouimet	2009	2009Geol37	WTS37025	wbo522 wbo523	101.743302	30.679478	506.22 1175.39	61.81 147.16	14.8 50.5	2315 3063	3880.3 3470.8	654.5	226.8	33.8 32.3	8.5 9.0
506 Ouimet	2009	2009Geol37	WTS37026	wbo524	102.127866	30.375062	587.38	67.97	34.2	3559	3139.7	729.1	236.2	35.1	9.0

507 Ouimet	2009	2009Geol37	WTS37027	wbo529	102.059572	30.104716	651.35	81.35	7.0	2321	3823.2	689.2	190.6	33.9	7.8
509 Ouimet	2009	2009Geol37 2009Geol37	WTS37028 WTS37029	wbo530 wbo536	102.073183	30.078696 30.041914	106.73	59.66 12.44	14.2 78.8	3611 1912	3737.6	768.7 533.5	247.6 161.8	36.5	8.9 7.4
510 Ouimet	2009	2009Geol37	WTS37030	wbo538	101.219967	30.040163	101.82	11.05	43.5	1506	4046.9	497.2	175.3	25.9	8.2
511 Ouimet 512 Ouimet	2009	2009Geol37 2009Geol37	WTS37031 WTS37032	wbo544 wbo545	101.580417 101.521414	29.979858 30.330009	48.97 24.19	2.64	61.7 16.5	468	3963.1 3914.3	396.1 273.1	174.9	21.1 15.1	8.7
513 Ouimet	2009	2009Geol37	WTS37033	wbo549	102.110215	29.654313	3232.50	413.34	71.8	5030	4205.3	553.2	260.6	27.8	11.5
514 Ouimet 515 Ouimet	2009	2009Geol37 2009Geol37	WTS37034 WTS37035	wbo551	102.139929	29.342945	185.91	212.16	75.8	3544	2590.4	580.2	253.9	34.5 29.2	8.9 9.5
516 Ouimet	2009	2009Geol37	WTS37036	wbo604	103.273396	32.018235	318.88	36.90	99.0	2636	3353.0	619.9	196.4	31.1	8.3
517 Ouimet 518 Ouimet	2009	2009Geol37 2009Geol37	WTS37037 WTS37038	wbo605 wbo607	102.894405 102.494982	32.129778 32.269269	218.36	23.52	11.5	1567	3548.4 4005.0	547.4 373.7	149.8 128.0	28.3	6.5
519 Ouimet	2009	2009Geol37	WTS37039	wbo609	100.810971	32.419087	181.92	19.73	41.9	1145	4189.9	431.2	157.9	22.9	7.7
520 Ouimet 521 Ouimet	2009	2009Geol37 2009Geol37	WTS37040 WTS37042	wb0610q wb0612	100.387943	32.529886	65.09	7.43	46.7	753	4141.1 4242.1	290.9	138.0	16.1	5.5
522 Ouimet	2009	2009Geol37	WTS37043	wbo613	101.186921	32.618385	123.73	13.28	36.4	1546	4144.7	486.0	178.1	25.4	8.3
523 Ouimet 524 Ouimet	2009 2009	2009Geol37 2009Geol37	WTS37044 WTS37045	wbo614 wbo616	101.080376 101.050024	32.577635 32.432401	138.81 177.22	15.46 19.70	15.5 76.1	1182 1057	3945.3 3818.8	435.9 340.0	125.6 138.6	23.3 18.5	6.1 7.1
525 Ouimet	2009	2009Geol37	WTS37046	wbo617	101.221178	32.340400	77.96	8.33	29.5	960	3936.5	347.8	129.5	18.9	6.6
526 Ouimet 527 Ouimet	2009	2009Geol37 2009Geol37	WTS37047 WTS37048	wbo618 wbo619	100.719948	31.450024	118.50 241.62	13.03	43.7	1325	3979.8 3973.1	466.4	157.8 168.4	24.6 23.5	7.5
528 Ouimet	2009	2009Geol37	WTS37049	wbo621	101.379300	30.319768	51.40	5.80	62.5	528	4270.3	123.5	78.9	7.0	4.4
529 Ouimet	2009	2009Geol37	WTS37050	wbo622	101.421057	30.308957	73.80	7.80	3.1	278	4253.2	160.0	74.0	9.0	4.1
531 Ouimet	2009	2009Geol37	WTS37051	wbo624q	101.094988	29.767808	139.24	15.25	53.7	2241	3829.7	527.8	173.7	27.3	8.1
532 Ouimet	2009	2009Geol37	WTS37054	wbo625	101.306677	30.049807	128.26	13.82	5.4	783	4260.9	401.0	155.3	21.5	7.7
534 Ouimet	2009	2009Geol37	WTS37055	wbo633	102.018736	29.597242	3164.97	392.83	6.2	2836	4450.6	587.8	164.8	30.0	6.6
535 Ouimet	2009	2009Geol37	WTS37057	wbo637	102.250746	28.774070	1712.60	243.16	7.6	1178	2690.9	398.2	160.7	21.3	7.8
537 Ouimet	2009	2009Geol37	WTS37058 WTS37059	wb0639	101.895861	28.617989	1263.43	154.88	50.4	3001	2935.9	557.9	227.7	28.2	9.7
538 Ouimet	2009	2009Geol37	WTS37060	wbo641	101.680052	28.609680	330.66	37.11	33.1	2811	3505.7	580.3	199.5	29.4	8.1
540 Ouimet	2009	2009Geol37	WTS37061 WTS37062	wb0643	101.434064	29.509438	237.65	26.32	27.4	1667	4034.7	528.6	185.5	23.0	8.4
541 Ouimet	2009	2009Geol37	WTS37063	wbo644	101.518783	29.723831	60.78	6.36	18.0	1196	4258.3	433.4	183.2	22.9	8.8
542 Ouimet 543 Ouimet	2009	2009Geol37 2009Geol37	WTS37065	wbo645 wbo647	101.388931 102.200659	29.930083 29.686572	30.46 541.32	3.27 64.73	46.9 14.4	2395	4151.1 2399.5	269.9 744.0	163.3 262.5	14.7 35.5	8.4 9.9
544 Ouimet	2009	2009Geol37	WTS37066	wbo651	102.049270	31.293793	123.87	13.77	32.7	2233	3500.2	540.8	172.3	27.9	7.7
545 Ouimet 546 Cox	2009	2009Geol37 2009JGeol117	WTS38001	wbo653 2004-6A	47.125828	-19.003948	382.72	44.75	63.0 210.2	3056	3746.9	604.0 139.6	279.7 81.4	30.0	9.5
547 Cox	2009	2009JGeol117	WTS38002	2004-9A	47.528971	-18.947121	6.91	0.75	1544.6	546	1457.5	137.0	84.5	7.7	4.7
548 Cox 549 Cox	2009 2009	2009JGeol117 2009JGeol117	WTS38003 WTS38005	2004-2A 2005-3C	46.823305 48.207700	-18.945015 -17.550344	18.89 15.17	2.11	134.9 4.5	628 104	1329.0 871.1	139.7 105.5	80.8 54.6	7.9 6.0	4.4 3.1
550 Cox	2009	2009JGeol117	WTS38006	2005-6	48.265563	-17.566126	11.22	1.21	2.1	109	812.3	122.4	69.6	6.9	3.9
551 Cox 552 Stock	2009	2009JGeol117 2009Lith1	WTS38007 WTS39001	2005-7 KC	48.203896	-17.628485 41 107296	24.97	2.72	15.5	134	825.7 2186.6	98.4 394.9	54.9 122.0	5.6 21.3	3.1
553 Stock	2009	2009Lith1	WTS39002	HCN	-111.902578	41.065336	67.62	7.52	5.4	1364	2297.3	454.9	131.5	24.2	6.3
554 Stock	2009	2009Lith1	WTS39003	HC	-111.897607	41.057279	95.10	10.85	6.5	1249	2312.5	426.9	107.1	22.9	5.3
556 Stock	2009	2009Lith1	WTS39004	StC	-111.871252	40.975788	77.87	8.49	5.8	1238	2231.9	445.2	150.7	23.6	7.2
557 Stock	2009	2009Lith1	WTS39006	FC	-111.869808	40.939735	113.08	12.36	6.1	1358	2244.5	390.4	125.7	21.1	6.2
559 Stock	2009	2009Lith1	WTS39007 WTS39008	HoC	-111.839948	40.918973	102.42	11.38	11.7	1192	2231.4	370.8	125.6	20.1	6.3
560 Stock	2009	2009Lith1	WTS39009	SG	-111.741048	40.620471	195.31	26.02	2.2	1209	2519.6	739.8	200.3	35.8	7.6
562 Stock	2009	2009Lith1	WTS39010 WTS39011	TG	-111.725108	40.575674 40.579503	568.17	94.44 70.86	1.8	830	2931.4 2981.5	657.1	139.9	32.7	8.3
563 Stock	2009	2009Lith1	WTS39012	CG	-111.736635	40.570449	851.53	108.21	1.9	1414	2734.3	640.2	204.6	31.9	8.5
565 Stock	2009	2009Lith1	WTS39013 WTS39015	BC	-111.819044	40.541329 40.521316	184.52	12.64	2.5	996	2515.8	485.6	128.1	23.5	6.7
566 DiBiase	2010	2010EPSL289	WTS40001	SGB1	-118.156667	34.305851	144.34	32.32	174.7	1237	1353.3	322.3	130.0	17.6	6.7
567 DiBiase 568 DiBiase	2010 2010	2010EPSL289 2010EPSL289	WTS40002 WTS40003	SGB2 SGB3	-118.109678 -118.123847	34.306286 34.311617	157.68 111.43	42.92 20.17	102.0 106.4	1162 1128	1450.9 1426.1	272.4 262.6	132.8 123.7	15.0 14.5	6.9 6.5
569 DiBiase	2010	2010EPSL289	WTS40004	SGB4	-118.026632	34.278931	45.40	47.83	6.1	462	1543.9	249.0	112.4	13.8	6.0
570 DiBiase 571 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40005 WTS40006	SGB5 SGB6	-118.120337 -118.250991	34.330368	180.79	40.58 146.58	10.3	788	1356.9 1289.6	297.0	121.1	16.3 21.7	6.3 6.4
572 DiBiase	2010	2010EPSL289	WTS40007	SGB7	-118.148114	34.298912	337.48	66.72	3.2	697	1336.1	457.3	148.6	24.2	7.1
573 DiBiase 574 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40008 WTS40009	SGB9 SGB10	-118.255308 -118.195807	34.302540 34.282076	562.68 371.17	63.39 40.76	17.3	1162	1146.3 1114.3	416.2 398.8	144.7 160.8	22.2	7.1
575 DiBiase	2010	2010EPSL289	WTS40010	SGB11	-117.740197	34.296596	989.18	111.83	83.0	2089	1964.6	500.2	169.5	26.1	7.9
576 DiBiase	2010	2010EPSL289	WTS40011	SGB12	-117.761320	34.241866	1223.99	145.53	148.9	1771	1275.4	545.0	169.5	28.1	7.7
578 DiBiase	2010	2010EPSL289	WTS40012 WTS40013	SG116	-118.021004	34.279758	363.61	51.33	1.1	358	1532.8	241.9	96.0	13.5	5.2
579 DiBiase	2010	2010EPSL289	WTS40014	SG118	-118.027571	34.278923	3863.56	3470.97	6.4	464	1537.0	253.3	109.9	14.1	5.8
581 DiBiase	2010	2010EPSL289	WTS40015 WTS40016	SG125	-118.049026	34.341920	192.40	23.18	1.2	634	1579.2	402.7	143.9	20.8	7.4
582 DiBiase	2010	2010EPSL289	WTS40017	SG125	-118.083053	34.209026	526.45	68.25	3.1	899	1290.3	451.4	156.8	23.9	7.6
584 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40018 WTS40019	SG126 SG127	-118.084121 -118.085070	34.219157 34.219928	882.40	119.92	2.3	880	1389.8	482.7	169.2	27.1	7.9
585 DiBiase	2010	2010EPSL289	WTS40020	SG128	-118.010420	34.337565	44.66	6.19	2.4	35	1735.1	75.6	32.4	4.3	1.8
586 DiBiase 587 DiBiase	2010 2010	2010EPSL289 2010EPSL289	WTS40021 WTS40022	SG129 SG130	-118.010458 -117.989273	34.340684 34.378296	52.79	15.57	2.2	162	1/93./ 1715.5	131.0 213.6	61.1 90.2	7.4	3.4 4.9
588 DiBiase	2010	2010EPSL289	WTS40023	SG131	-117.991957	34.366575	107.77	17.26	2.5	245	1736.0	149.2	68.2	8.4	3.8
590 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40024 WTS40026	SG132 SG137	-117.889383	34.365818	674.86	95.05	47.3	1784	1737.0	491.4	86.3 174.1	25.6	4.7
591 DiBiase	2010	2010EPSL289	WTS40027	SG138	-117.891254	34.272190	497.15	88.89	18.1	1641	1406.7	495.9	196.8	25.7	9.0
592 DiBiase 593 DiBiase	2010 2010	2010EPSL289 2010EPSL289	WTS40028 WTS40029	SG140 SG141	-117.949195 -117.974660	34.244455 34.253615	230.48 329.31	28.45 43.49	7.6 43.5	957 1283	1087.4 1329.9	396.9 457.2	146.3 166.9	21.3 24.1	7.3 7.9
594 DiBiase	2010	2010EPSL289	WTS40031	SG151	-117.799633	34.320403	462.64	148.45	3.8	558	2236.8	393.9	122.4	21.3	6.1
595 DiBiase 596 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40032 WTS40033	SG152 SG157	-117.801543 -117.730880	34.323510 34.306012	82.97	9.65 198.81	2.1	678 1993	2368.9 2036.7	419.7 517.9	139.5	22.4	6.9 7.1
597 DiBiase	2010	2010EPSL289	WTS40034	SG158	-117.732760	34.306001	1127.70	183.46	53.7	1880	1960.1	483.4	171.6	25.3	8.1
598 DiBiase 599 DiBiase	2010 2010	2010EPSL289 2010EPSL289	WTS40036 WTS40037	SG161 SG162	-117.762809 -117.636759	34.302697 34.164573	1103.23 278.56	194.95 43.03	11.6 28.0	1455 2030	1965.2 1581.5	519.1 490.7	167.6 181.0	26.9 25.6	7.7
600 DiBiase	2010	2010EPSL289	WTS40039	SG204	-117.996585	34.360297	715.41	126.20	1.6	183	1767.7	156.0	72.9	8.8	4.1
601 DiBiase 602 DiBiase	2010 2010	2010EPSL289 2010EPSL289	WTS40040 WTS40041	SG205 SG206	-117.995663 -117.791286	34.361865 34.232316	126.19 347.75	15.60 107.36	1.8 5.3	196 565	1761.2 867.5	154.0 339.6	70.4 126.7	8.7 18.5	3.9 6.5
603 DiBiase	2010	2010EPSL289	WTS40042	SG207	-117.805461	34.241584	320.44	47.82	6.5	1182	1058.3	469.8	161.5	24.7	7.7
604 DiBiase 605 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40043 WTS40045	SG0701 SG0703	-117.992879 -118.103140	34.365007 34.309465	137.51 706.83	15.72 85.14	2.3	232	1745.3 1363.8	147.5 338.5	67.6 151.2	8.4 18.3	3.8
606 DiBiase	2010	2010EPSL289	WTS40046	SG0728	-117.901607	34.361814	125.43	14.56	8.8	672	2119.4	313.3	131.8	17.2	6.8
607 DiBiase	2010	2010EPSL289 2010EPSL289	WTS40047 WTS40048	SG0729 SG0730	-117.905352	34.360226	87.53	9.94 179.64	3.5	563 803	2053.6	329.1	121.4	18.0 16.9	6.3
609 DiBiase	2010	2010EPSL289	WTS40049	SG0740	-117.966044	34.321543	163.68	19.75	2.3	847	1895.8	361.3	112.0	19.7	5.6
610 DiBiase	2010	2010EPSL289	WTS40050	SG0743	-117.980893	34.305045	266.17	32.39	21.7	1267	1729.8	376.9	146.3	20.3	7.3
612 Meyer	2010	2010EPSL290	WTS41001 WTS41002	06D4	8.126739	48.584761	56.12	7.08	52.7	923	644.5	297.3	116.4	16.4	6.1
613 Meyer	2010	2010EPSL290	WTS41003	06D8	8.196057	48.578201	63.98	7.98	9.5	651	857.8	325.8	117.6	17.8	6.1
615 Meyer	2010	2010EPSL290 2010EPSL290	WTS41004 WTS41005	06D9 07D3	8.173390 8.162143	48.597116 48.568775	107.00	13.78	5.3	713	635.3	334.1	109.5	18.3	5.8 6.4
616 Meyer	2010	2010EPSL290	WTS41006	07D5	8.140844	48.569325	79.76	9.96	10.5	504	499.1	272.3	112.1	15.1	6.0
618 Meyer	2010	2010EPSL290	wrs41008 WTS41009	08D25	8.163934	46.508/68 48.589276	63.33 48.99	8.14 6.69	31.1 1.8	825 384	762.5 607.5	254.7	80.3	16.9	0.1 4.3
619 Meyer	2010	2010EPSL290	WTS41010	06D10	8.253707	48.132081	81.53	9.99	14.7	375	876.3	201.2	109.2	11.3	5.9
620 ivieyer 621 Meyer	∠010 2010	2010EPSL290 2010EPSL290	vv I 541011 WTS41017	06D11 06D12	8.212937 8.208545	48.106374 48.117648	48.56 40.69	5.96 5.25	10.4	156 168	1014.3 990.2	114.6 110.5	59.3 61.6	ь.5 6.3	3.3 3.5
622 Meyer	2010	2010EPSL290	WTS41013	06D13	8.227562	48.186311	64.85	8.04	7.7	517	824.4	229.5	123.9	12.7	6.6
623 ivieyer 624 Meyer	2010 2010	2010EPSL290 2010EPSL290	vv I 541014 WTS41015	06D14 06D15	8.248278 8.214064	48.214709 48.239915	56.02 87.05	ь.92 10.93	9.6 145.3	510 713	736.8 722.6	282.8 270.6	135.0 147.1	15.5 14.9	7.1 7.7
625 Meyer	2010	2010EPSL290	WTS41016	07D9	8.228379	48.131914	74.19	8.77	10.0	330	930.6	164.8	90.5	9.3	5.0
620 Meyer	2010	2010EPSL290 2010EPSL290	WTS41017 WTS41018	08D4	8.230383 8.213093	48.209645 48.234256	84.20 77.20	10.14	3.6 7.1	556	598.4	332.4 311.8	113.1 110.8	18.2	5.9 5.8
628 Meyer	2010	2010EPSL290	WTS41019	08D10	8.297008	48.207246	56.29	7.01	1.5	123	840.0	123.0	66.6	7.0	3.8
629 Meyer 630 Delunel	2010 2010	2010EPSL290 2010EPSL293	wTS41020 WTS42001	08022 Rd01	8.239716 5.846541	48.150359 45.054517	82.03 498.32	10.06 859.79	55.2 1072.1	511 3036	922.0 1801.2	172.3 525.4	108.2 284.8	9.7 26.4	5.8 12.1
631 Delunel	2010	2010EPSL293	WTS42002	Rd02	6.062101	45.013714	927.57	1647.35	303.1	3234	2404.0	700.2	295.9	33.5	11.2
632 Delunel 633 Delunel	2010 2010	2010EPSL293 2010EPSL293	WTS42003 WTS42004	Rd03 Rd04	6.207552 6.482774	45.038462 44.985941	1353.92 1529.42	2453.90 3300.67	213.2 22 2	2714	2413.2	533.2 554.8	303.9 298.4	26.5 27.5	12.1
634 Delunel	2010	2010EPSL293	WTS42005	Rd05	6.445973	44.891281	1305.81	2616.11	47.9	2477	2775.5	693.7	360.4	32.6	13.6

635 Delunel	2010	2010EPSI 293	WTS42006 Rd06	6.443325	44.881765	1499.10	2608.01	27.0	2328	2744.4	712.2	288.6	34.0	11.0
636 Delunel	2010	2010EPSL293	WTS42007 Rd07	6.485743	44.871068	1823.74	3247.37	113.2	2750	2574.4	657.5	314.6	31.7	12.2
637 Delunel	2010	2010EPSL293	WTS42008 Rd08	5.861961	44.941459	376.08	689.24	75.2	1907	1747.2	590.1	248.6	29.5	10.5
638 Delunel	2010	2010EPSL293	WTS42009 Rd09	5.897468	44.890781	308.14	582.08	246.5	2266	1611.3	590.4	258.0	29.4	11.2
640 Delunel	2010	2010EPSL293 2010EPSL293	WTS42010 Rd10 WTS42011 Mb130	5.989066	44.880868	426.17	1339.51	791.0	2530	2009.6	420.5	256.1	21.5	10.2
641 Delunel	2010	2010EPSL293	WTS42012 Mb146	6.063577	44.783874	740.14	1379.79	197.0	2702	2043.5	656.1	257.7	32.1	10.3
642 Norton	2010	2010ESPL35	WTS43001 Mil	8.324613	46.522058	580.35	88.40	4.1	99	2758.0	168.7	96.1	9.5	5.3
643 Norton	2010	2010ESPL35	WTS43002 Ober	8.307186	46.511348	427.38	72.10	3.7	474	2478.3	245.8	135.5	13.6	7.3
645 Norton	2010	2010ESPL35	WT543006 Ges	8 283070	46.302099	514 71	24.31	4.9	1403	2315.4	491.0	193.4	23.0	8.8
646 Norton	2010	2010ESPL35	WTS43007 Mins	8.262189	46.490468	3668.85	1011.17	14.2	1953	2487.1	549.8	245.6	27.7	10.6
647 Norton	2010	2010ESPL35	WTS43008 Rec	8.235452	46.465828	1711.96	463.00	9.1	2146	2484.9	577.6	201.1	29.3	8.5
648 Norton	2010	2010ESPL35	WTS43009 Hil	8.206290	46.447794	342.33	49.89	1.9	1379	2147.3	511.6	130.1	26.8	5.8
650 Norton	2010	2010ESPL35 2010ESPL35	WTS43011 Wil WTS43012 Wil2	8.19/988	46.441928	105.59	16.28	4.1	583	2383.3	429.1	1/2.3	18.4	5.5
651 Norton	2010	2010ESPL35	WTS43013 Ritz	8.228852	46.453712	337.98	61.66	3.9	1390	2196.2	536.6	166.9	27.7	7.7
652 Norton	2010	2010ESPL35	WTS43014 Spi	8.216287	46.447851	710.68	138.20	3.2	1417	2179.7	445.1	180.2	23.4	8.5
653 Norton	2010	2010ESPL35	WTS43015 Chr	8.203014	46.437143	984.54	236.41	2.6	1261	2037.7	534.1	160.4	27.7	7.3
655 Norton	2010	2010ESPL35	W1543016 Bet	8.189667	46.4320/1	1/09.63	417.19	2.5	1257	2071.9	482.5	188.1	25.1	8.9
656 Abbuehl	2010	2010Geomorph123	WTS44001 Piu11	-79.893302	-4.917906	7.49	0.84	1.4	68	3083.1	83.3	48.8	4.8	2.8
657 Abbuehl	2010	2010Geomorph123	WTS44002 Piu10	-79.996561	-4.944808	152.21	19.52	99.1	2355	2063.5	361.4	210.9	19.1	9.9
658 Abbuehl	2010	2010Geomorph123	WTS44003 Piu9	-80.053940	-5.018422	151.48	20.31	150.8	3035	1717.0	379.6	201.0	20.1	9.5
659 Abbuehl	2010	2010Geomorph123	WTS44004 Piu8	-80.131342	-5.084541	142.12	19.64	184.7	3249	1474.9	351.1	205.3	18.7	9.9
661 Abbuehl	2010	2010Geomorph123	WTS44006 2 6	-79.832295	-5.028925	38.85	6.16	12.9	1748	2507.5	488.1	200.1	25.3	8.8
662 Abbuehl	2010	2010Geomorph123	WTS44007 2_8	-79.848928	-5.045665	199.03	40.61	27.2	2015	2194.2	406.9	185.0	21.6	8.5
663 Abbuehl	2010	2010Geomorph123	WTS44008 2_10	-79.874733	-5.059914	293.00	46.75	51.2	2367	2007.1	376.6	174.6	20.1	8.1
665 Abbuehl	2010	2010Geomorph123 2010Geomorph123	W1S44009 2_12 WTS44010 Piu3	-79.894639	-5.113422	140.06	28.91	136.1	28/8	1826.9	3/3.2	174.9	20.0	8.3
666 Abbuehl	2010	2010Geomorph123	WTS44011 Piu4	-80.015318	-5.211379	44.72	6.42	2923.6	3552	1114.2	348.1	195.2	18.6	9.5
667 Abbuehl	2010	2010Geomorph123	WTS44012 Piu7	-80.172137	-5.113840	74.60	12.83	4659.4	3272	456.7	126.5	181.8	6.9	9.4
668 Abbuehl	2010	2010Geomorph123	WTS44013 2_16	-80.343990	-4.936886	18.09	3.28	6390.8	2330	291.1	98.3	157.4	5.4	8.2
659 Abbuehl	2010	2010Geomorph123 2010Geomorph122	W1544014 Piu2	-80.615476	-5.161892	25.97	3.35	7492.0	521	2255 7	25.3	23.3	1.4	1.3
671 Abbuehl	2010	2010Geomorph123	WTS44015 Piu12	-79.946606	-4.924677	194.60	24.98	3.5	1227	2148.2	364.8	136.7	19.7	6.7
672 Abbuehl	2010	2010Geomorph123	WTS44017 2_4	-80.013174	-4.977419	95.37	14.20	2.7	968	1317.1	432.0	136.3	23.1	6.7
673 Abbuehl	2010	2010Geomorph123	WTS44018 2_3	-80.021490	-4.988294	191.12	33.90	1.3	916	1184.6	552.4	169.7	28.4	7.7
675 Abbuehl	2010	2010Geomorph123 2010Geomorph123	W1544019 2_2 WT544020 2 1	-80.046446	-5.015069	128.14	9.32	10.1	1380	1021.5	445.4 309.6	172.1	23.5	8.1
676 Abbuehl	2010	2010Geomorph123	WTS44021 2 5	-79.805621	-5.035561	58.38	7.48	3.4	997	2709.4	384.2	138.6	20.7	6.9
677 Abbuehl	2010	2010Geomorph123	WTS44023 2_9	-79.875566	-5.059915	139.49	17.72	44.0	2132	2131.3	342.5	174.4	18.4	8.6
678 Abbuehl	2010	2010Geomorph123	WTS44024 2_11	-79.876327	-5.101693	38.31	4.96	7.3	1178	1468.7	413.7	165.5	22.0	7.8
679 Abbuehl	2010	2010Geomorph123 2010Geomorph123	W1544025 2_13 WT544026 Piu1	-79.892970	-5.115090	27.19	3.22	3.5 45.1	1033	83	567.2 11.4	197.2	28.9	8.2
681 Palumbo	2010	2010Geomorph117	WTS45001 06C3-(Y1)	99.610583	39.204618	96.94	12.02	3.8	447	2162.4	226.1	95.5	12.6	5.1
682 Palumbo	2010	2010Geomorph117	WTS45002 07C8-(Y2)	99.616395	39.209821	153.26	19.62	1.2	273	2111.7	188.2	73.5	10.6	4.0
683 Palumbo	2010	2010Geomorph117	WTS45004 06C2-(Y3)	99.621305	39.221758	131.52	16.94	13.2	940	2359.8	306.6	128.1	16.8	6.6
685 Palumbo	2010	2010Geomorph117 2010Geomorph117	WTS45005 06C6-(14)	99.743146	39.199361	230.34	31.68	9.3	940	2505.2	321.6	123.1	17.6	5.7
686 Palumbo	2010	2010Geomorph117	WTS45007 06C7-(Y6)	99.863737	39.159650	246.85	34.68	3.8	876	2456.2	399.2	137.2	21.5	6.8
687 Palumbo	2010	2010Geomorph117	WTS45008 06C8-(Y7)	99.889533	39.148988	190.97	24.14	3.4	944	2390.4	409.8	124.1	22.0	6.1
688 Palumbo	2010	2010Geomorph117	WTS45009 06C13-(Y8)	99.879568	39.119904	314.30	41.73	8.9	766	2774.4	384.2	182.6	20.5	8.7
690 Palumbo	2010	2010Geomorph117 2010Geomorph117	WTS45010 06C14-(Y9) WTS45011 07C1-(Y10)	100.023460	39.047699	366.01	70.69	2.9	796	2594.4	388.6	95.4	20.7	8.9 5.0
691 Palumbo	2010	2010Geomorph117	WTS45013 06C1-(Y11)	100.036587	39.027395	164.81	22.76	3.1	280	1874.2	169.6	94.4	9.5	5.2
692 Palumbo	2010	2010Geomorph117	WTS45014 06C15-(Y12	2) 100.057550	39.018983	377.76	58.00	1.2	326	1910.8	297.7	121.7	16.4	6.3
693 Palumbo	2010	2010Geomorph117 2010Geomorph117	W1545016 06C25-(L1) WT545017 07C30-(L2)	100.365735	39.195221	47.62	5.56	3.8	259	1638.6	112.6	44.3	6.4 7.5	2.5
695 Palumbo	2010	2010Geomorph117	WTS45020 06C30-(L5)	100.538473	39.097369	608.65	127.96	1.9	323	1698.6	154.1	79.6	8.7	4.4
696 Palumbo	2010	2010Geomorph117	WTS45021 06C18-(L6)	100.634367	39.053448	232.44	37.76	6.1	848	2106.5	330.8	192.6	17.7	9.2
697 Palumbo	2010	2010Geomorph117	WTS45022 06C19-(L7)	100.648572	39.045771	228.67	33.28	1.0	661	2189.7	516.8	211.4	26.6	9.8
699 Palumbo	2010	2010Geomorph117 2010Geomorph117	WTS45025 06C23-(L9)	100.805481	38.957468	245.99	30.62	15.9	1350	2962.5	399.8	135.5	21.5	6.7
700 Palumbo	2010	2010Geomorph117	WTS45026 06C21-(L10	0) 100.841564	38.945689	151.94	18.63	7.9	989	2859.7	362.1	129.1	19.6	6.4
701 Insel	2010	2010Geomorph122	WTS46001 N02	-67.039807	-15.161430	988.35	152.45	48.2	934	630.3	266.7	156.9	14.6	7.9
702 Insel 703 Insel	2010	2010Geomorph122 2010Geomorph122	W1546002 N04 WT546004 N05	-67.115246	-15.384047	186.05	20.54	333.4	1125	1114.1	254.9	143.4	14.0	7.3
704 Insel	2010	2010Geomorph122	WTS46005 N06	-67.427002	-15.679396	212.11	25.08	34.4	1077	1398.3	355.0	150.3	19.2	7.4
705 Insel	2010	2010Geomorph122	WTS46007 S01g	-63.262166	-19.789925	324.51	47.94	4.1	480	1115.2	510.7	245.3	26.0	10.9
706 Insel	2010	2010Geomorph122	WTS46008 S03g	-64.031807	-19.787140	903.53	106.54	4.8	626	1535.0	381.4	161.0	20.5	7.8
707 Insel	2010	2010Geomorph122 2010Geomorph122	W1546009 504	-64.079995	-19.611621	143.19	15.60	3930.4	3239	2281.5	319.9	1/8.9	17.3	8./
709 Insel	2010	2010Geomorph122	WTS46013 S06g	-65.306224	-19.101326	34.67	3.88	1317.8	2090	3535.1	280.6	159.0	15.3	8.1
710 Insel	2010	2010Geomorph122	WTS46014 S08	-63.250287	-19.521214	416.26	54.22	129.7	835	1105.5	234.6	173.4	12.8	8.8
711 Insel	2010	2010Geomorph122	WTS46015 S09	-63.228660	-19.788302	440.66	75.54	152.7	981	1145.3	263.9	206.7	14.2	10.1
713 Insel	2010	2010Geomorph122	WTS46018 S11	-63.681546	-19.929849	678.25	95.81	21.8	870	1462.0	367.1	174.0	19.7	8.7
714 Insel	2010	2010Geomorph122	WTS46019 S12	-63.889839	-20.095819	299.29	35.93	1035.3	1319	1346.4	234.0	156.5	12.9	8.1
715 Insel	2010	2010Geomorph122	WTS46020 S13	-63.939319	-19.800166	779.96	106.21	51.8	1044	1399.8	294.1	166.3	16.0	8.5
716 Insel 717 Insel	2010	2010Geomorph122 2010Geomorph122	W1546021 515 WT546022 516	-63.662553	-19.169662	523.93	65.51 468 12	3123.1	1684	1089.3	209.6	158.4	11.5	8.2
718 Meyer	2010	2010IntJEarthSc99	WTS47001 05D2	8.750964	51.474517	44.20	5.33	12.4	139	449.1	82.5	50.6	4.7	2.9
719 Meyer	2010	2010IntJEarthSc99	WTS47002 05D3	8.745479	51.491340	44.85	9.12	6.3	171	439.2	75.8	43.8	4.3	2.5
720 Meyer	2010	2010IntJEarthSc99	WTS47003 05D1	8.460753	51.487683	61.67	13.52	77.0	374	442.8	91.6	59.4	5.2	3.3
722 Meyer	2010	2010IntJEarthSc99	WTS47005 06D17	8.190185	51.478720	82.32	10.08	293.8	186	291.7	77.2	51.3	4.4	2.9
723 Meyer	2010	2010IntJEarthSc99	WTS47006 06D19	8.387540	51.477896	27.77	3.44	66.1	311	435.7	98.8	52.1	5.6	2.9
724 Meyer	2010	2010IntJEarthSc99	WTS47007 07D16	8.435243	51.457261	46.97	6.35	39.6	262	452.4	96.9	51.8	5.5	2.9
726 Meyer	2010	2010Int/EarthSc99	WTS47009 07D18	8.446782	51.483578 51.431221	52.23	5.74	10.7	200	599.4 480.9	91.3	47.4	5.2	2.7
727 Meyer	2010	2010IntJEarthSc99	WTS47010 07D21	8.308613	51.491598	52.03	6.51	254.0	418	409.1	89.0	54.1	5.1	3.1
728 Meyer	2010	2010IntJEarthSc99	WTS47011 07D23	8.418717	51.485462	80.56	9.57	8.3	99	345.5	50.8	42.3	2.9	2.4
729 Meyer	2010	2010IntJEarthSc99	WTS47012 07D24	8.356128	51.487829	52.08	6.44	10.3	109	323.9	46.5	27.1	2.7	1.6
731 Cyr	2010	2010IIIIJEarth5099 2010Lith2	WTS48001 1	8.152845 11.541879	31.450907 44.115208	49.18 408.25	5.93 61.40	10.3	321 553	387.7 724.7	92.5 313.5	44./ 112.7	5.3 17.2	2.5 5.9
732 Cyr	2010	2010Lith2	WTS48002 2	11.537133	44.109187	464.90	89.43	30.4	716	733.9	308.1	120.5	16.9	6.2
733 Cyr	2010	2010Lith2	WTS48003 3a	11.621478	44.221166	507.58	92.10	132.8	989	598.1	300.2	116.5	16.5	6.1
734 Cyr 735 Cwr	2010	2010Lith2	WT548005 4	11.597797	44.064734	390.77	45.86	48.3	806	731.1	329.8	128.7	18.0	6.6
736 Cyr	2010	2010Lith2	WTS48007 6	11.689437	43.981449	401.78	91.03	24.7	666	850.5	305.4	120.1	16.9	6.2
737 Cyr	2010	2010Lith2	WTS48008 7	11.884303	44.118459	758.06	141.20	188.0	1089	594.7	285.4	122.4	15.7	6.3
738 Cyr	2010	2010Lith2	WTS48009 8	15.380715	37.967451	1000.33	126.92	26.0	1149	598.5	387.7	139.6	20.9	6.9
739 Cyr 740 Cyr	2010	2010Lith2 2010Lith2	W1548010 9 WT548011 10	15.405999	38.002510	1470.28	424.85	49.0 26 1	1193	565.7 565.5	396.5	139.4 118 9	21.3	6.9
741 Cyr	2010	2010Lith2	WTS48012 11a	15.962382	37.948086	1581.33	434.85	19.7	1195	561.2	337.1	145.2	18.3	7.4
742 Cyr	2010	2010Lith2	WTS48014 12	16.083805	38.004328	662.96	80.23	43.4	1149	407.6	269.4	162.7	14.7	8.4
743 Wittmann 744 Wittmann	2011	2011GSABull123	WTS49017 Cb-1a	-59.444380	-15.240897	17.08	2.00	3997.3	594	435.6	55.7	56.5	3.2	3.1
745 Norton	2011	201105ABuil123 2011IntJEarthSci00	WTS50001 Ahrn	12.130092	47.050400	1616.50	333.99	35.0	1835	2362.1	40.3	41.7	2.0	2.4
746 Norton	2011	2011IntJEarthSci00	WTS50002 Antholzer	12.081700	46.815501	399.77	61.41	89.5	2299	2014.1	518.5	229.0	26.5	10.3
747 Norton	2011	2011IntJEarthSci00	WTS50003 Arno	10.678137	46.004134	589.45	77.95	50.4	2021	1885.6	523.4	191.1	27.0	8.5
748 Norton 749 Norton	2011	2011Int/EarthSci00	WTS50004 Avisio	11.450457	46.280755	439.10	81.59	626.4	2448	1874.3	447.1	237.0	23.2	10.4
750 Norton	2011	2011IntJEarthSci00	WTS50008 Bitto	9.569365	46.129038	543.66	88.51	95.5	2167	1546.7	555.4	185.9	28.4	8.2
751 Norton	2011	2011IntJEarthSci00	WTS50009 Castello	9.980053	46.159883	1391.64	285.88	28.3	2599	1763.6	601.0	248.0	29.9	10.0
752 Norton	2011	2011IntJEarthSci00	WTS50010 Fersina	11.255438	46.068272	377.24	73.95	79.8	1892	1457.3	411.5	146.3	22.0	7.0
753 Norton 754 Norton	2011	2011IntJEarthSci00 2011IntJEarthSci00	WISSUULL Hagger WTS50013 Fusino	11.582781 10.249209	46.333174	1836.09	392.51	20.3	1827	2028.7	536.2	256.2	28.1	10.8
755 Norton	2011	2011IntJEarthSci00	WTS50014 Hoeller	12.419984	47.273618	1144.50	361.70	71.1	2136	1969.0	558.1	243.4	28.1	10.2
756 Norton	2011	2011IntJEarthSci00	WTS50016 Krimmler	12.171716	47.213734	723.08	106.50	110.7	2379	2312.9	537.7	208.6	27.5	9.1
757 Norton 758 Norton	2011	2011IntJEarthSci00 2011IntJEarthSci00	WTS50017 Lagorai WTS50018 Maximo	11.505395	46.283248	262.11	38.87	16.9	1633	1928.2 2009 1	493.1 608 0	220.3	25.4	9.9 10 2
759 Norton	2011	2011IntJEarthSci00	WTS50019 Melach	11.264602	47.252811	723.26	94.68	245.6	2611	2082.6	508.2	213.5	26.1	9.5
760 Norton	2011	2011IntJEarthSci00	WTS50020 Muehl	12.376702	47.277822	993.67	185.58	31.8	1464	1667.3	406.5	134.0	21.8	6.6
/61 Norton 762 Norton	2011	2011IntJEarthSci00	WTS50021 Nero WTS50022 Novate	11.114619	46.137498	396.12	63.35	938.6	3044	1665.9	429.6	221.2	22.4	9.9
		- U A ANNUL LOI UNULUUU		3.433333	-0.413343	1044.07	111.33	22.1	2/40	-0.0.0	103.0	4.1.3		2.3

763 Norton	2011	2011IntJEarthSci00	WTS50023	Oglio	10.349160	46.159059	882.25	135.57	462.9	2876	1940.0	502.6	215.5	25.9	9.6
764 Norton 765 Norton	2011	2011IntJEarthSci00 2011IntJEarthSci00	WTS50024 WTS50025	Pfitsch	11.473587	46.902141	714.43	125.07	133.3	2477	2096.2	532.3 548 7	239.8	27.0	10.5
766 Norton	2011	2011IntJEarthSci00	WTS50026	Plima	10.825640	46.598113	1745.45	468.49	158.9	2913	2438.9	493.8	213.2	25.5	9.5
767 Norton	2011	2011IntJEarthSci00	WTS50027	Schnalz	10.978010	46.648950	850.30	135.84	220.8	3007	2372.0	554.4	217.2	28.2	9.5
769 Norton	2011	2011IntJEarthSci00	WTS50028 WTS50029	Talfer	11.354447	46.514723	383.29	48.17	416.2	2392	987.6	280.6	168.8	22.0	8.8
770 Norton	2011	2011IntJEarthSci00	WTS50030	Tauern	12.527477	47.086253	1686.35	299.85	84.7	2218	2377.0	500.7	228.4	25.7	9.9
771 Norton 772 Norton	2011	2011IntJEarthSci00 2011IntJEarthSci00	WTS50031 WTS50032	Watten Widschoenau	11.596998	47.278617	638.38 784.31	99.26 178.69	69.8 85.7	2099	1933.8	451.0	157.1	23.9	7.4
773 Norton	2011	2011IntJEarthSci00	WTS50033	Zemm	11.831783	47.151232	1085.70	181.23	231.9	2788	2249.1	592.2	249.0	29.6	10.2
774 Norton	2011	2011IntJEarthSci00	WTS50034	Ziel	11.061324	46.670583	1057.90	179.84	31.7	2752	2349.3	557.0	218.8	28.3	9.5
776 Norton	2011	2011IntJEarthSci00	WTS50035 WTS50036	val Moena	11.452084	46.274329	207.53	26.72	23.5	1581	2049.1 1844.3	503.2	228.2	27.5	9.5
777 Norton	2011	2011IntJEarthSci00	WTS50037	di Venina	9.912470	46.162458	1100.65	295.32	66.2	2635	1866.8	620.5	228.2	30.9	9.5
778 Palumbo	2011	2011TerraNova23 2011TerraNova23	WTS51001	07C44-(Q1)	97.227000	39.716000	98.09	11.60	347.3	1772	3492.8	270.6	146.0	14.9	7.5
780 Palumbo	2011	2011TerraNova23	WTS51002 WTS51003	07C41-(Q2) 07C42-(Q3)	97.660000	39.643000	130.69	15.64	665.0	2272	3678.0	330.8	197.5	17.4	9.4
781 Palumbo	2011	2011TerraNova23	WTS51004	07C43-(Q4)	97.695000	39.403000	209.37	25.13	5.5	1074	4317.2	508.4	159.3	26.5	7.4
782 Palumbo 783 Palumbo	2011 2011	2011TerraNova23 2011TerraNova23	WTS51005 WTS51006	07C45-(Q5) 07C46-(Q6)	97.629000 98.815000	39.400000	62.51	7.02	67.0 565.8	1427	4226.8	424.6	200.3	22.6	7.8 9.2
784 Palumbo	2011	2011TerraNova23	WTS51007	07C19-(Q7)	99.053000	39.250000	498.51	62.38	41.5	2000	3285.9	556.9	164.7	28.6	7.6
785 Palumbo	2011	2011TerraNova23	WTS51008	07C13-(Q8)	99.169000	39.162000	563.56	69.68	557.2	2896	3765.8	511.1	186.4	26.5	8.6
786 Palumbo 787 Palumbo	2011	2011TerraNova23 2011TerraNova23	WTS51009 WTS51010	07C12-(Q9) 07C20-(Q10)	99.246000	39.027000	1482.13	265.64	38.2	2047	3594.3	533.3	165.4	27.6	7.5
788 Palumbo	2011	2011TerraNova23	WTS51011	07C23-(Q11)	99.529000	38.856000	134.62	16.35	57.3	2107	3631.8	528.4	172.7	27.3	7.9
789 Palumbo	2011	2011TerraNova23 2011TerraNova23	WTS51012	06C16-(Q12)	99.555000	38.795000	235.97	28.42	813.0	2628	3783.9	434.7	181.9	22.9	8.7
791 Palumbo	2011	2011TerraNova23	WTS51015	06C34-(L12)	100.954000	39.036000	19.79	2.21	5.3	950	2687.1	199.3	67.3	11.2	3.7
792 Palumbo	2011	2011TerraNova23	WTS51017	06C12-(H3)	100.073342	39.649268	113.80	20.50	2.4	239	1905.6	141.0	62.5	8.0	3.5
793 Codilean 794 Codilean	2012	QuatGeochr	WTS52001 WTS52002	N2A N2B	16.089481	-23.478488	16.59	1.92	95.2 81.3	1405	1356.7	191.9	160.6	10.6	8.4
795 Codilean	2012	QuatGeochr	WTS52003	N2D	16.245457	-23.482986	16.70	1.99	19.7	871	1358.9	216.1	160.9	11.9	8.5
796 Codilean	2012	QuatGeochr	WTS52004	N2F	16.278043	-23.477074	15.76	1.78	73.8	1098	1631.6	230.2	159.6	12.6	8.3
798 Codilean	2012	QuatGeochr	WTS52005	N3B	16.434851	-23.387140	6.00	0.44	18.4	210	1751.4	31.5	23.6	1.8	1.3
799 Codilean	2012	QuatGeochr	WTS52007	N3C	16.433583	-23.357052	6.51	0.74	81.1	205	1816.7	39.3	20.3	2.3	1.2
800 Scharf 801 Scharf	2012	Geology(in review)	WTS53001 WTS53002	\$3.1 \$4.1	20.664803	-33.995580	6.13	0.68	8.4	1345	847.8 635.7	467.3	304.8 168.6	23.5	13.4
802 Scharf	2012	Geology(in review)	WTS53003	S6.1	21.407692	-33.434303	3.86	0.44	63.6	1671	1252.0	393.1	265.6	20.3	12.2
803 Scharf	2012	Geology(in review)	WTS53004	S07	21.351937	-34.021483	2.32	0.29	6.0	1070	462.6	266.8	157.0	14.6	7.7
804 Scharf 805 Scharf	2012	Geology(in review) Geology(in review)	WTS53005 WTS53006	SU8 S09	20.846127	-33.983784 -33.981517	3.35	0.39	25.7 16.5	1253	737.2 905.9	369.3 439.7	1/1.3	19.8	8.4
806 Scharf	2012	Geology(in review)	WTS53007	S10	20.423264	-33.984923	7.95	0.90	8.8	1431	1013.7	645.5	322.9	31.2	11.6
807 Scharf	2012	Geology(in review)	WTS53008	S11	21.214118	-33.463145	7.44	0.85	16.9	1540	1337.1	558.9	261.6	28.0	10.7
808 Scharf	2012	Geology(in review)	WTS53009 WTS53010	S12 S13	22.356838	-33.398385	5.77	0.39	8.7	1180	1435.3	436.1	183.5	23.1 24.3	8.5
810 Bierman	2001	2001BookChapter	WTS55001	dc-01	-123.967373	44.465265	147.53	52.82	157.2	851	356.4	298.4	133.2	16.4	6.9
811 Bierman	2001	2001BookChapter	WTS55003	dc-03a	-123.922432	44.496178	153.85	61.96	2.5	305	329.1	278.4	114.2	15.4	6.1
813 Bierman	2001	2001BookChapter	WTS55007	dc-29	-123.852264	44.536990	113.11	43.79	3.5	241	280.6	185.8	83.7	10.5	4.6
814 Bierman	2001	2001BookChapter	WTS55008	dc-30	-123.867247	44.523661	180.98	98.29	16.4	354	285.0	247.4	111.6	13.7	6.0
815 Bierman 816 Bierman	2001	2001BookChapter 2001BookChapter	WTS55009 WTS55010	dc-31 dc-35	-123.859200 -123.818105	44.508666 44.518983	65.82 137.75	11.18 25.01	19.0	354	284.0 340.9	246.6 229.8	108.9	13.7	5.8
817 Bierman	2001	2001BookChapter	WTS55011	dc-36	-123.817809	44.515570	153.56	40.00	4.4	394	384.1	284.0	135.5	15.6	7.1
818 Bierman	2001	2001BookChapter	WTS55012	dc-37	-123.821370	44.513888	146.44	56.38	11.8	394	353.1	250.0	120.4	13.9	6.4
820 Bierman	2001	2001BookChapter	WTS55015 WTS55014	dc-40	-123.859200	44.507323	300.41	196.66	75.6	735	373.1	287.5	123.3	15.8	6.5
821 Clapp	2001	2001QuatRes55	WTS56003	ECAC-10	-107.102046	35.698518	74.51	8.49	2.3	86	1979.5	56.5	32.7	3.2	1.9
822 Clapp	2001	2001QuatRes55	WTS56004	ECAC-11-1	-107.106698	35.703721	122.89	20.13	8.2	129	1950.4	47.9	30.6	2.7	1.7
824 Perg	2003	2003Geol31	WTS57002	PC	-122.405629	37.264445	233.97	29.21	154.0	818	312.3	228.4	108.8	12.7	5.9
825 Perg	2003	2003Geol31	WTS57003	wc	-122.270017	37.112763	282.46	33.49	59.1	699	366.4	243.3	122.5	13.5	6.4
826 Perg 827 Perg	2003	2003Geol31 2003Geol31	WTS57004 WTS57005	SLR	-122.023873	36.972233	204.13	24.70	303.7	980	429.9	226.9	126.1	12.6	6.0
828 Bierman	2007	2007QuatInt167/168	WTS58007	NIc4	16.276566	-23.972339	5.36	0.59	1.5	230	1585.7	173.6	82.8	9.8	4.6
829 Bierman 830 Bierman	2007	2007QuatInt167/168 2007QuatInt167/168	WTS58014 WTS58015	01280	15.074826	-21.454825	10.12	1.08	7966.5	1570	1280.3 1060.8	49.2	87.1	2.8	4.7
831 Bierman	2007	2007QuatInt167/168	WTS58016	01490	15.201610	-21.342461	10.29	1.12	7369.9	1465	1305.5	50.3	89.9	2.8	4.8
832 Bierman	2007	2007QuatInt167/168	WTS58017	01710	15.406151	-21.348415	10.55	1.16	6567.2	1353	1340.2	52.9	94.1	3.0	5.1
833 Bierman 834 Bierman	2007	2007Quatint167/168 2007Quatint167/168	WTS58018 WTS58019	01950 02690	15.639146	-21.409986	11.03	1.21	3796.2	1229	1421.0 1535.1	57.6	94.4 90.4	3.2	5.1 4.9
835 Bierman	2007	2007QuatInt167/168	WTS58020	O269ot	16.215903	-21.305865	11.81	1.31	227.8	682	1523.8	65.2	102.2	3.6	5.5
836 Bierman	2007	2007QuatInt167/168	WTS58021	0291n	16.348450	-21.166475	8.76	0.96	395.7	666	1584.4	63.5	104.4	3.5	5.7
838 Bierman	2007	2007Quatint167/168	WTS58022 WTS58023	S160t	15.857800	-22.518622	12.67	1.00	683.6	858	1277.6	99.2	116.6	5.5	6.3
839 Bierman	2007	2007QuatInt167/168	WTS58026	S259lc	16.436642	-22.256590	9.71	1.07	1.8	84	1086.6	61.5	39.3	3.5	2.2
840 Bierman 841 Bierman	2007	2007QuatInt167/168 2007QuatInt167/168	WTS58027 WTS58028	\$259s \$279sn	16.429594	-22.263422	10.64	1.19	8833.9 438.4	1414	1534.9	69.5 24.5	81.7	3.9	4.5
842 Bierman	2007	2007QuatInt167/168	WTS58029	\$3300	17.023232	-22.237601	10.22	1.08	307.7	704	1788.7	129.7	104.5	7.3	5.7
843 Bierman	2007	2007QuatInt167/168	WTS58030	\$333s	16.880649	-22.084568	9.05	1.01	3771.0	743	1564.6	43.9	55.3	2.5	3.1
844 Bierman 845 Bierman	2007	2007Quatint167/168 2007Quatint167/168	WTS58031 WTS58032	\$3370 \$337s	16.921489	-22.038239	8.47	1.87	2979.3	288	1477.0	24.2	26.6	1.4	1.5
846 Bierman	2007	2007QuatInt167/168	WTS58033	\$3930	17.261616	-21.840031	6.88	0.75	267.5	324	1616.4	26.6	21.9	1.5	1.3
847 Bierman	2007	2007QuatInt167/168	WTS58034	\$397s	17.294708	-21.848372	10.13	1.14	911.3	499	1681.5	50.8	48.3	2.9	2.7
849 Harkins	2007	2007JGR112	WTS59001	NH-KE-04-2	100.866652	35.051657	364.91	39.65	2.6	340	3857.5	266.2	97.8	14.8	5.3
850 Harkins	2007	2007JGR112	WTS59002	NH-KE-04-3	100.884878	34.896884	75.02	8.10	1.7	336	3942.0	249.5	89.7	13.9	4.9
851 Harkins 852 Harkins	2007	2007JGR112 2007JGR112	WTS59005 WTS59006	NH-KCB-05-1 NH-KCB-05-3	100.812671	34.776608	95.05	10.66	1./	593	3730.8	353.9	125.6	18.2	6.4 5.3
853 Harkins	2007	2007JGR112	WTS59007	NH-KCB-05-2	99.693329	34.752451	128.17	14.46	7.9	929	4287.6	415.4	110.1	22.3	5.5
854 Harkins	2007	2007JGR112	WTS59008	NH-KCB-05-6	101.387579	33.692382	78.34	8.78	3.8	780	3909.3	416.6	137.1	22.3	6.8
856 Sullivan	2007	2007MScThesis	WTS60005	CS-01a	-80.848014	36.447743	9.40	1.05	2.0	152	473.7	102.1	47.0	4.2	2.6
857 Sullivan	2007	2007MScThesis	WTS60009	CS-03a	-80.833877	36.467810	14.52	1.61	89.6	657	547.9	157.7	120.9	8.8	6.5
858 Sullivan 859 Sullivan	2007	2007MScThesis 2007MScThesis	WTS60017 WTS60022	CS-05 CS-07a	-80.858642	36.475460	10.28	1.15	4.1	252	480.1	138.9	104.1	7.8	5.7
860 Sullivan	2007	2007MScThesis	WTS60022	CS-08	-80.791030	36.554099	9.41	1.04	3.7	142	859.1	74.6	37.4	4.3	2.1
861 Sullivan	2007	2007MScThesis	WTS60027	CS-09	-82.391152	35.332077	13.78	1.55	4.2	74	683.8	47.6	28.3	2.7	1.6
862 Sullivan 863 Sullivan	2007	2007MScThesis 2007MScThesis	WTS60029 WTS60031	CS-13 CS-15	-82.220746	35.312982	13.89	1.58	3.1 17.6	253	393.7	121.9	85.9 136.7	6.9 9.1	4.8
864 Sullivan	2007	2007MScThesis	WTS60032	CS-16	-82.380813	35.543854	15.78	1.73	11.1	510	878.6	233.4	110.9	13.0	5.9
865 Sullivan	2007	2007MScThesis	WTS60033	CS-18	-82.329920	35.622927	12.13	1.30	3.3	365	810.7	185.3	111.8	10.4	6.1
867 Sullivan	2007 2007	2007MScThesis	WTS60035	CS-19 CS-20	-82.218542 -82.178689	35.622347	33.16 28.94	3.69	ь.4 35.1	481 634	705.2	2/5.1 211.0	122.0 113.5	15.2 11.8	ь.4 6.1
868 Sullivan	2007	2007MScThesis	WTS60036	CS-21	-82.164212	35.585747	22.56	2.46	47.4	608	596.0	180.0	118.7	10.1	6.4
869 Sullivan 870 Sullivan	2007	2007MScThesis	WTS60037	CS-22	-82.217136	35.570493	31.96	3.67	10.4	554	723.5	254.7	123.6	14.1	6.5
871 Sullivan	2007	2007MScThesis	WTS60039	CS-24	-82.404869	35.549373	34.55	3.82	4.1 5.1	581	1040.1	255.1 283.3	106.1	12.9	5.7
872 Sullivan	2007	2007MScThesis	WTS60040	CS-25	-80.432667	36.719059	8.62	0.97	5.3	151	900.6	88.9	50.0	5.1	2.8
8/3 Sullivan 874 Sullivan	2007 2007	2007MScThesis 2007MScThesis	WTS60041 WTS60042	CS-26 CS-27	-80.462798 -80.371638	36.775640 36.752134	10.53	1.19	4.8 8 5	336 148	916.7 949 5	175.9 91 २	100.1 50 4	9.9 5.2	5.4
875 Sullivan	2007	2007MScThesis	WTS60042	CS-28	-80.297953	36.787249	17.48	1.96	6.2	534	624.4	245.0	118.1	13.6	6.3
876 Sullivan	2007	2007MScThesis	WTS60044	CS-29	-80.225741	36.727205	7.24	0.82	18.2	535	571.8	186.1	122.3	10.4	6.5
878 Sullivan	2007	2007MScThesis	WTS60046	CS-30 CS-31	-ou.1/9/4/ -80.339933	36.665989	9.82 34.72	3.75	4.5 5.5	403	426.8	82.4 275.5	59.0 114.9	4.5	3.2 6.1
879 Sullivan	2007	2007MScThesis	WTS60047	CS-32	-80.450891	36.617493	25.29	2.78	116.4	635	827.5	151.1	145.0	8.4	7.6
880 Tomkins 881 Tomkins	2007	2007ESPL32 2007ESPL32	WTS61001 WTS61002	BM-21 BM-23	150.162387	-33.414925	19.41	2.16	13.9	208	1125.3	122.8	76.3	7.0	4.2
882 Duxburry	2008	2008MScThesis	WTS62001	SH-01a	-78.287288	38.571334	36.66	4.11	39.5	944	706.3	272.2	122.2	15.0	6.4
883 Duxburry	2008	2008MScThesis	WTS62005	SH-02a	-78.355027	38.663637	9.11	1.03	3.1	455	594.8	186.8	61.7	10.5	3.4
885 Duxburry	2008 2008	2008MScThesis	WTS62009	5H-03a SH-04a	-78.793761	38.361720 38.199079	7.08 4.61	1.21	9.4 12.8	489 562	501.8 649.2	235.6 330.0	122.5	13.1 18.0	6.5
886 Duxburry	2008	2008MScThesis	WTS62018	SH-06	-78.383440	38.676196	6.02	0.66	1.5	335	445.3	244.2	100.6	13.6	5.4
887 Duxburry	2008	2008MScThesis	WTS62019	SH-07	-78.414395	38.581581	13.45	1.43	9.7	762	828.5	347.7	123.8	19.2	6.2
889 Duxburry	2008	2008MScThesis	WTS62027	SH-10	-78.393017	38.657200	20.08	2.12	4.b 14.1	837	728.6 655.1	288.3	152.4	15.9 14.8	7.7 5.9

004 Date	2000	20000 10 -711-		CU 42	70.2562.47	20 64 4226	44.47			004	606 D	220.0		42.7	<i>c</i> .
891 Duxburry	2008	2008IVISCI nesis	W1562024	SH-12	-/8.25634/	38.614236	14.47	1.54	14.2	804	696.8	228.0	113.4	12.7	6.1
892 Duxburry	2008	2008IVISCI nesis	W1562026	SH-14	-/8.2/9023	38.525805	15.70	1.79	11.9	///	456.9	242.3	115.9	13.5	6.2
893 Duxburry	2008	2008MScThesis	WTS62027	SH-15	-78.290465	38.521291	11.88	1.29	6.0	618	426.9	250.0	115.3	14.0	6.2
894 Duxburry	2008	2008MScThesis	WTS62028	SH-16	-78.351143	38.542752	21.74	2.34	13.8	848	870.3	223.3	113.8	12.4	6.1
895 Duxburry	2008	2008MScThesis	WTS62029	SH-17	-78.365801	38.779505	4.41	0.50	9.3	667	479.4	220.1	88.8	12.3	4.8
896 Duxburry	2008	2008MScThesis	WTS62030	SH-18	-78.355555	38.663869	4.61	0.53	3.2	460	592.7	185.9	62.0	10.5	3.4
897 Duxburry	2008	2008MScThesis	WTS62031	SH-19	-78,496620	38,470814	12.49	1.30	11.5	681	822.5	253.9	108.8	14.1	5.8
898 Duxburry	2008	2008MScThesis	WTS62032	SH-20	-78.662214	38.357270	6.16	0.68	1.6	490	570.0	253.5	104.6	14.1	5.6
899 Duxburry	2008	2008MScThesis	WTS62033	SH-21	-78 368855	38 645894	13.48	1.45	57	630	698.1	302.5	134.2	16.6	7.0
900 Duxburry	2000	2009MScThosis	WTS62024	SH 22	-79 421691	29 612250	7 70	0.95	2.0	699	409.2	221.1	142.8	12.0	7.6
900 Duxburry	2008	2008MScThesis	WT562034	50-22	-78.421081	30.013339	7.70	0.85	2.9	000	496.2	251.1	142.8	12.0	7.0
901 Duxburry	2008	2008MScTnesis	W1562035	SH-23	-/8.1//83/	38.868771	16.38	1.75	18.8	498	496.4	197.3	86.3	11.1	4./
902 Duxburry	2008	2008MScThesis	WTS62036	SH-24	-78.745015	38.165650	11.78	1.31	3.7	444	729.1	286.2	109.5	15.8	5.8
903 Duxburry	2008	2008MScThesis	WTS62037	SH-25	-78.748704	38.147983	8.00	0.95	25.3	649	705.1	269.6	113.2	14.9	6.0
904 Duxburry	2008	2008MScThesis	WTS62038	SH-26	-78.620780	38.293101	10.19	1.10	2.5	368	793.3	222.3	63.0	12.5	3.5
905 Duxburry	2008	2008MScThesis	WTS62039	SH-27	-78.803653	38.099436	5.19	0.56	5.7	404	626.2	253.1	102.5	14.2	5.5
906 Duxburry	2008	2008MScThesis	WTS62040	SH-28	-78.804286	38.098903	5.64	0.61	5.7	404	626.2	252.4	102.3	14.2	5.5
907 Duxburry	2008	2008MScThesis	WTS62043	SH-31	-78 803352	38 160826	7 12	0.77	8 5	473	723 5	269.5	103.0	14.9	5.4
008 Durburry	2008	2000MAC a Those is	WT562043	5H-31	70.303332	38.210125	4.10	0.17	1.1	925	475.3	172.0	105.0	14.5	5.4
908 Duxburry	2008	2008IVI3CTHESIS	W1302044	30-32	-/0./2059/	56.510125	4.10	0.47	1.1	510	473.2	1/2.9	90.9	9.7	5.5
909 Duxburry	2008	2008MScTnesis	W1562045	SH-33	-78.726145	38.311243	4.29	0.47	1.1	323	4/1.2	168.3	97.3	9.5	5.3
910 Duxburry	2008	2008MScThesis	WTS62049	SH-37	-78.745005	38.252435	7.75	0.83	1.5	384	608.7	296.4	97.9	16.4	5.2
911 Duxburry	2008	2008MScThesis	WTS62050	SH-38	-78.769050	38.256404	8.37	0.92	15.2	587	644.9	293.1	121.3	16.1	6.3
912 Duxburry	2008	2008MScThesis	WTS62051	SH-39	-78.781203	38.221484	8.74	1.05	3.0	477	750.4	377.5	124.1	20.4	6.3
913 Duxburry	2008	2008MScThesis	WTS62052	SH-40	-78.691978	38.237605	7.56	0.83	3.3	451	804.0	248.0	84.4	13.8	4.5
914 Duxburry	2008	2008MScThesis	WTS62055	SH-43	-78.573897	38.362567	13.84	1.48	2.1	368	635.2	201.7	66.1	11.4	3.6
915 Duxburry	2008	2008MScThesis	WTS62056	SH-44	-78 456666	38 340308	8 4 4	0.95	13	89	267.2	60.3	40.5	3.4	23
016 Dunburry	2000	2008MEeThosis	WT562057	5H 4F	70.450000	30.530500	0.77	0.09	4.1	178	250.0	157.1	40.5	0.0	E.0
910 Duxburry	2008	2008WISCITIESIS	WT502057	50-45	-76.204434	30.323372	0.77	0.98	4.1	220	239.0	157.1	97.0	0.0	3.4
917 Duxburry	2008	2008IVISCI nesis	W1562058	SH-46	-78.245238	38.640808	19.23	2.12	1.6	355	445.5	251.8	89.0	14.0	4.8
918 Duxburry	2008	2008MScThesis	WTS62059	SH-47	-78.208541	38.647031	11.64	1.28	12.5	437	305.0	151.4	96.9	8.5	5.4
919 Duxburry	2008	2008MScThesis	WTS62060	SH-48	-78.105874	38.837972	13.08	1.43	16.9	531	395.9	165.8	86.2	9.3	4.8
920 Duxburry	2008	2008MScThesis	WTS62061	SH-49	-78.176853	38.926428	3.01	0.34	10.9	292	278.5	111.4	57.2	6.3	3.2
921 Duxburry	2008	2008MScThesis	WTS62063	SH-51	-78.239188	38.796486	10.45	1.14	4.6	648	555.0	233.2	98.1	13.0	5.3
922 Duxburry	2008	2008MScThesis	WTS62064	SH-52	-78.234472	38.809462	11.52	1.24	22.9	761	578.2	230.5	129.9	12.8	6.9
923 Duxburry	2008	2008MScThesis	WTS62065	SH-54	-78 723673	38 289722	14.47	1 59	1.8	314	680.8	343.2	113.7	18.8	5.9
024 Durburny	2000	2008MScThesis	WT562065	511-54	78.600543	30.203722	6 17	1.55	2210.4	1000	520.2	119.6	115.7	6.7	6.2
924 Duxburry	2008	2008IVISCI nesis	W1562066	SH-50	-78.600542	38.531411	6.17	0.66	3310.4	1090	529.2	118.6	115.3	6.7	6.3
925 Bierman	2009	2009GSAPortland	W1563001	QLD1	145.636/43	-16.821640	19.73	2.11	8.0	300	408.9	113.7	92.9	6.4	5.1
926 Bierman	2009	2009GSAPortland	WTS63002	QLD2	145.637389	-16.821640	21.17	2.30	8.0	302	408.5	113.3	92.7	6.4	5.1
927 Bierman	2009	2009GSAPortland	WTS63003	QLD3	145.677416	-16.963143	42.20	4.51	55.6	1197	588.7	242.6	144.9	13.4	7.6
928 Bierman	2009	2009GSAPortland	WTS63004	QLD4	145.689070	-16.947526	49.34	5.21	1.2	599	302.4	371.4	165.7	19.9	8.3
929 Bierman	2009	2009GSAPortland	WTS63005	QLD5	145.648469	-16.851790	17.41	2.01	1991.5	1239	593.1	93.0	95.7	5.2	5.3
930 Bierman	2009	2009GSAPortland	WT\$63006	01.06	145.670725	-16.873312	6.55	0.72	10.8	966	461.9	298.6	166.7	16.2	8.3
931 Bierman	2005	2009GSAPortland	WTS63007	0107	145 561044	-16 906751	21.60	2 35	76.6	624	521.9	137.0	110.9	7.7	6.1
000 Dierman	2005	2009CGAP-reland	WT503007	0.00	145.501044	-10.300731	21.00	2.55	112.0	024	521.5	137.0	110.5		0.1
932 Bierman	2009	2009GSAPortland	W1563008	QLD8	145.550810	-16.899389	20.78	2.21	142.6	8/1	593.9	147.8	118.0	8.5	6.4
933 Bierman	2009	2009GSAPortland	W1263009	QLD9a	145.512138	-16.823791	15.35	1.66	287.6	894	536.5	132.3	111.1	7.4	6.1
934 Bierman	2009	2009GSAPortland	WTS63012	QLD10	145.617465	-16.800974	15.53	1.73	1941.5	955	598.2	92.3	94.9	5.2	5.2
935 Bierman	2009	2009GSAPortland	WTS63013	QLD11	145.644454	-16.792279	19.08	2.07	4.1	111	406.3	84.3	49.3	4.8	2.8
936 Bierman	2009	2009GSAPortland	WTS63014	QLD12	145.654399	-16.826769	29.38	3.13	1.7	246	449.3	195.9	111.1	11.0	6.1
937 Bierman	2009	2009GSAPortland	WTS63015	QLD13	145.682219	-16.833059	62.05	6.81	2.5	563	318.5	331.7	130.9	18.1	6.8
938 Bierman	2009	2009GSAPortland	WTS63016	OLD14	145.681676	-16.815805	56.78	6.22	1.4	569	313.7	421.1	139.6	22.5	6.8
920 Heimcath	2009	2009558124	WTS64001	TC-17	122 207229	-12 460142	22.59	2 97	1.6	100	122.0	102.2	94.9	5.9	4.9
040 Heimseth	2005	2009E5FE34	WT564001	TC 20	133.297336	12.403143	£0.93	6.04	11.0	100	133.5	70.2	56.0	1.0	4.0
940 Heinsaun	2009	2009E3PL54	W1304005	10-20	155.269140	-12.430477	30.62	0.94	11.9	139	125.5	70.5	50.0	4.0	5.2
941 Heimsath	2009	2009ESPL34	W1564004	IC-21	133.288191	-12.455040	39.68	4.90	12.5	165	120.7	68.9	55.3	3.9	3.1
942 Heimsath	2009	2009ESPL34	W1564005	IC-225	133.269901	-12.453331	10.45	1.96	387.3	331	215.5	66.1	/1.3	3.8	4.0
943 Godard	2010	2010Tectonophysics491	WTS65001	LM253	103.485067	31.057257	690.21	149.71	1735.9	5016	3536.8	624.0	233.0	31.0	9.5
944 Godard	2010	2010Tectonophysics491	WTS65003	LM259	103.579893	31.487991	776.92	251.42	4626.1	4259	3617.2	608.2	218.6	30.5	9.1
945 Godard	2010	2010Tectonophysics491	WTS65006	SC004	103.469089	30.760824	193.55	53.79	341.8	3134	1899.8	517.3	226.0	26.5	9.7
946 Godard	2010	2010Tectonophysics491	WTS65007	SC016	103.792395	31.236703	227.32	107.91	337.8	3545	2490.6	681.9	288.7	32.9	11.3
947 Godard	2010	2010Tectononhysics491	WT\$65008	SC031	104 000725	31 459914	807 33	226.43	315.8	3895	2948.9	699.4	279.2	33.6	10.7
949 Godard	2010	2010Tectonophysics491	WT\$65000	\$6032	102 005946	21 217512	220.46	66 55	597	1/29	1421.2	400.5	152.5	21.4	7.4
040 Codard	2010	2010Tectonophysics451	WTSCSCO	50055	103.333040	31.317312	220.40	00.55	50.7	1450	1421.5	400.J	155.5	21.4	6.0
949 Godard	2010	2010Tectonophysics491	W1565011	SC059	103.493266	31.065810	343.66	88.08	5.2	1169	1503.9	564.5	154.8	29.0	6.9
950 Godard	2010	2010Tectonophysics491	WTS65012	SC071	104.113199	31.515926	277.77	70.96	318.5	3532	2272.8	600.1	233.4	30.0	9.8
951 Guralnik	2010	2010EPSL290	WTS66001	N4-N-SC	34.938130	30.487430	14.22	1.77	16.3	291	555.2	140.1	108.4	7.9	5.9
952 Guralnik	2010	2010EPSL290	WTS66002	N4-R-SD	34.938240	30.599978	28.81	3.36	214.4	612	595.6	97.4	118.2	5.4	6.3
953 Guralnik	2010	2010EPSL290	WTS66003	N4-NR-SD	34.942795	30.591668	30.77	4.25	343.5	627	605.5	95.1	104.7	5.3	5.7
954 Guralnik	2010	2010EPSL290	WTS66004	N1-SD	35.105961	30.661849	41.16	5.02	797.7	940	512.9	106.2	110.2	6.0	5.9
955 Heimcath	2010	2010GSSR246	WT\$67002	MD-1105	122 525501	-22 500622	0.74	0.12	212.6	669	921.4	92.7	97.4	4.7	4.9
956 Heimsath	2010	2010GSSR246	WTS67005	MD-1105	122 254950	-22 600221	9 57	1.69	10.0	172	700.2	45.2	26.5	2.6	1.5
057 plassal	2010	20100337 340	WT507005	ADCO CCD	132.334030	-23.033221	0.57	1.00	10.0	125	2644.2	430.4	20.5	2.0	1.5
957 Placzek	2010	2010EPSL295	W1568001	ADSU-6SD	-68.593472	-24.119957	1.27	0.16	137.7	1548	3611.2	138.4	92.1	7.8	5.1
958 Placzek	2010	2010EPSL295	W1568002	ADBA-25D	-69.030839	-23.535933	1.55	0.17	4194.5	2033	2774.3	/5.8	/1.8	4.3	4.0
959 Placzek	2010	ZUIUEPSL295	vv1568003	ASUI-SU	-70.280699	-24.095859	0.92	0.12	532.6	1755	1800.1	136.1	89.5	7.7	4.9
960 Placzek	2010	2010EPSL295	wTS68004	ADBA-55D	-69.474163	-23.394990	1.01	0.13	763.5	1275	2038.7	62.0	52.9	3.5	2.9
961 Placzek	2010	2010EPSL295	WTS68005	ADSA-1SD	-68.109296	-23.785608	2.37	0.32	242.9	2260	3367.9	100.4	80.0	5.7	4.4
962 Placzek	2010	2010EPSL295	WTS68006	ADSO-3SD	-70.063356	-24.089215	0.45	0.09	8.5	386	1231.1	151.9	74.4	8.6	4.1
963 Placzek	2010	2010EPSL295	WTS68007	ADBA-12SDsm	-69.460806	-23.402534	0.56	0.08	757.9	1259	2041.8	61.1	50.2	3.5	2.8
964 Placzek	2010	2010EPSL295	WTS68008	ADBA-13SD	-69.275045	-23.589136	0.37	0.06	5126.1	2373	2694.5	74.8	70.2	4.3	3.9
965 Henck	2011	2011EPSL303	WTS69001	52-SAL	96.802832	29.780387	273.32	32.82	337.4	1259	5245.9	400.4	226.1	21.0	10.8
966 Honck	2011	2011EPSI 202	WT\$60002	52.541	96 712146	20 770250	645 22	75.21	690.1	1720	5121.4	412.0	214.7	21.6	10.2
067 Henck	2011	2011EF 3E303	WT560002	50 CAL	07 161407	20.027104	550 19	62.96	210.6	2901	4590.5	491 5	107.5	21.0	10.5
307 Helick	2011	2011EP3L303	W1309003	50-5AL	97.101497	50.057194	550.16	05.60	519.0	2091	4369.5	401.5	197.5	23.0	9.2
968 Henck	2011	2011EPSL303	W1569004	49-SAL	97.161916	30.064599	270.24	29.66	2654.8	3098	4///.2	423.1	213.1	22.2	10.2
969 Henck	2011	2011EPSL303	WTS69006	46-SAL	97.286083	30.070898	131.78	15.31	71.2	2562	4288.4	521.9	201.7	26.9	8.6
970 Henck	2011	2011EPSL303	WTS69007	30-SAL	97.070000	30.598183	29.68	3.35	2094.9	1368	4768.6	249.9	180.0	13.6	9.3
971 Henck	2011	2011EPSL303	WTS69008	32-SAL	97.320410	30.194758	28.72	3.34	3251.8	1581	4750.7	265.5	180.9	14.4	9.2
972 Henck	2011	2011EPSL303	WTS69009	33-SAL	97.702936	29.860249	39.67	4.48	265.4	1329	4828.8	358.1	160.3	19.3	8.1
973 Henck	2011	2011EPSL303	WTS69010	34-SAL	97.771209	29.728735	52.57	5.56	1452.8	1528	4670.0	387.4	168.0	20.7	8.3
974 Henck	2011	2011EPSI 303	WTS69011	35-SAI	97.844728	29.677614	45.68	5.08	105.7	1343	4658.5	379.3	139.0	20.5	6.9
975 Henck	2011	2011EPSI 302	WTS60012	36-541	97 910747	29 545525	31.00	2 /5	210/ /	1702	4665 1	407.1	175 1	20.5	95
076 Honek	2011	2011010000	WTCC004-	110 CAL	00 000000	23.343323	31.33	3.43	21.54.4	1705	1003.1	407.1	100.2	21./	0.0
970 Menck	2011	2011EPSL303	vv1509015	119-2ML	98.890000	27.230000	70.58	7.94	2.3	1255	1883.4	629.8	190.2	31.6	7.9
977 Henck	2011	ZUI1EPSL303	vv1569025	29-MEK	97.336957	30.796292	88.07	9.42	6663.9	2521	4617.4	396.6	188.7	21.1	9.2
978 Henck	2011	2011EPSL303	WTS69027	39-MEK	98.370000	29.660000	120.90	13.39	176.5	2433	4040.4	399.7	184.7	21.2	9.0
979 Henck	2011	2011EPSL303	WTS69028	43-MEK	98.211217	29.548128	22.57	2.53	331.0	1847	4897.6	416.1	185.1	22.0	9.1
980 Henck	2011	2011EPSL303	WTS69029	4-MEK	98.811217	28.554437	608.43	78.50	461.2	3022	4096.2	507.2	187.5	26.3	8.4
981 Henck	2011	2011EPSL303	WTS69034	15-YANG	98.567693	31.753193	146.50	16.35	1310.3	2416	4333.6	473.5	183.4	24.8	8.4
982 Henck	2011	2011EPSL303	WTS69035	16-YANG	98,561977	31.678792	136.03	15.27	1356.3	2536	4311.9	476.7	184.9	24.9	8.5
983 Henck	2011	2011EPSI 303	WT569039	21-YANG	98.162677	31.406292	53.91	6 17	1553.2	1358	4327.9	278.7	138.2	15 3	7 7
994 Henck	2011	2011EDSI 202	WTS60020	20-YANG	09 297200	21 561620	53.31	5.17	1674.2	1000	4209 1	220.1	173.6	10.0	0.6
005 Honek	2011	2011EP3L303	VV1309039	10h VANC	30.30/288	31.301039	33.92	5.94	10/4.5	1908	4238.1	339.1	1/3.0	18.5	8.0
303 MERICK	2011	2011EP5L3U3	vv1509040	19D-TAING	98.370755	31.03/426	50.04	5.89	1159.4	1802	4315.b	315.3	10/.3	1/.1	8.4
986 Henck		//mi1EDSI 202	M/TS600/11	14a-YANG	98 378978	31 671187	79 23	9.14	1639.9	1005	4310.2	334 7	160.9	10.1	8.5
	2011	201127 32303	W1303041	150 1700	00.070070	01.021102	10.25			1005	4010.2	334.7	105.0	10.1	
987 Henck	2011 2011	2011EPSL303	WTS69042	18-YANG	98.670189	31.655193	146.44	18.86	115.3	1554	4360.5	381.0	178.0	20.3	8.6
987 Henck 988 Henck	2011 2011 2011	2011EPSL303 2011EPSL303 2011EPSL303	WTS69042 WTS69043	18-YANG 22-YANG	98.670189 97.978832	31.655193 31.320400	146.44 64.23	18.86 7.39	115.3 395.3	1554	4360.5 4303.0	381.0 248.7	178.0 123.1	20.3	8.6 6.5
987 Henck 988 Henck 989 Henck	2011 2011 2011 2011	2011EPSL303 2011EPSL303 2011EPSL303 2011EPSL303	WTS69042 WTS69043 WTS69044	18-YANG 22-YANG 24-YANG	98.670189 97.978832 97.879780	31.655193 31.320400 31.402060	146.44 64.23 65.30	18.86 7.39 7.57	115.3 395.3 432.2	1554 1049 1188	4360.5 4303.0 4566.0	381.0 248.7 312.8	178.0 123.1 142.2	20.3 13.8 17.1	8.6 6.5 7.3

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Figure DR1 (Top): Plot of cumulative global slope averaged over 5 km and 50 km moving windows. Note that >90% of the Earth's surface slope is below 50 m/km, and the effect of averaging over smaller or larger spatial scales does not significantly change that figure. **(Bottom):** A comparison of the frequency distribution of slope values obtained for the entire globe excluding Greenland and Antarctica, using the GTOPO30 (1km resolution; red) and GMTED2010 (250m resolution; blue). Note how the two curvers are near parallel suggesting that although topography is much smoother in GTOPO30, the relative proportions of the different topographic 'features' are maintained. With other words, on both DEMs, the Andes and the Amazon basin, for example, occupy the same amount of continental area – except that they are both represented with less detail in GTOPO30 than in GMTED2010. For information on GMTED2010, see: http://pubs.usgs.gov/of/2011/1073/pdf/of2011-1073.pdf

Table DR2: Previously published estimates of global fluxes of sediment to the ocean and continental denudation rates.

Reference	Sediment load	Sediment yield	Denudation rate		
Kelerenee	(Gt yr-1)	(kg m-2 yr-1)	(mm k.y1)		
Founier (1960) ^[1]	51.1	0.544	218		
Kuenen (1950) ^[1]	32.5	0.346	138		
Gilluly (1955) ^[1]	31.7	0.337	135		
Jansen and Painter (1974) ^[1]	26.7	0.284	114		
Pechinov (1959) ^[1]	24.2	0.257	103		
Lvovich(1974) ^[2]	21.7	0.231	92		
Safyahov(1978) ^[2]	21.3	0.227	91		
Schumm(1963) ^[1]	20.5	0.218	87		
Milliman and Syvitski (1992) ^[1,3]	20	0.213	85		
Lisitsyn (1974) ^[2]	18.5	0.197	79		
Holeman (1968) ^[1]	18.3	0.195	78		
Goldberg (1976) ^[1]	18	0.191	76		
Makkaveev (1981) ^[2]	17	0.181	72		
Milliman (1981) ^[2]	16	0.17	68		
USSR National Committee (1974) ^[1]	15.7	0.167	67		
Pinet and Souriau, 1998 ^[5]	15.7	0.167	67		
Dedkov and Mozzherin (2000) ^[2]	15.5	0.165	66		
Sundborg (1973) ^[1]	15	0.16	64		
Walling (1987) ^[5]	15	0.16	64		
Walling and Webb (1983) ^[1]	15	0.16	64		
Ludwig and Probst, (1996) ^[3]	14.8	0.156	62		
McLennan (1993) ^[4]	14	0.149	60		
Milliman and Meade (1983) ^[1,3]	13.5	0.144	58		
Lopatin(1952) ^[1]	12.7	0.135	54		
Harrison (1994) ^[5]	11.7	0.125	47		
Wold and Hay (1990) ^[4]	10.9	0.116	46		
Gregor (1970) ^[4]	10.5	0.112	45		
Summerfield and Hulton (1994)	9.7	0.103.	41		
Judson (1968) ^[4]	9.3	0.099	40		
Syvitski and Milliman, 2007	8.7	0.093	37		
Mackenzie and Garrels (1966) ^[1]	8.3	0.088	35		
This work (endorheic basins removed)	4.4	0.047	19		
Average	17	0.19	75		

^[1] Values from References from Walling and Webb (1996)

^[2] Values from References from Jaoshvilli (2002)

^[3] Values from References from Ludvig et al. (1996)

^[4] Values from References from Wilkinson (2005)

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