Supplementary Information

Table 1. List of representative samples of the NHVC and the respective complementary information.

Sample ID	Thin section ID	Type of sample	Description in field	Hillside/slope	Sector	masl	Stage	Unit	P	Q	Geochemical classification	Other analyses
VNH49a	325861	In situ, extrusive volcanic rock	Morro Negro dome	**S**	South	4475 (hm)	Recent Huila	**Q_2d**	X	_		
VNH49b	325846	In situ, extrusive volcanic rock	Morro Negro dome	**S**	South	4475 (hm)	Recent Huila	**Q_2d**	X	X	Andesite	Microprobe
ACNH223	325875	In situ, extrusive volcanic rock	Morro Negro dome	**S**	South	Base at 4390	Recent Huila	**Q_2d**	X	_		
ACNH223a	325876	Fragment, fall of blocks (talus)	Fall of blocks (talus) of the Morro Negro dome	**S**	South	Base at 4390	Recent Huila	**Q_2d**	X	_		
ACNH223b	325877	Fragment, fall of blocks (talus)	Fall of blocks (talus) of the Morro Negro dome	**S**	South	Base at 4390	Recent Huila	**Q_2d**	X	_		
ACNH223c	325878	Fragment, fall of blocks (talus)	Fall of blocks (talus) of the Morro Negro dome	**S**	South	Base at 4390	Recent Huila	**Q_2d**	X	_		
VNH16	325856	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4370 (hh) 4450 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH17	100283	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4370 (hh) 4430 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH18	100284	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4575 (hm)	Recent Huila	**Q_2rn**	X	X	Dacitic andesite	Microprobe
VNH19	325835	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4525 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH20	325836	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4520 (hh) 4545 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH21	100285	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4490 (hh) 4550 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH22	325837	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4300 (hh) 4400 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH23	100286	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4500 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH24	325838	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4390 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH25	325839	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4210 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH38	100271	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4600 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH38a	325842	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4600 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH39	325843	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4170 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH100	100300	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4405 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH103	325899	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4425 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH104	325900	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4405 (hm)	Recent Huila	**Q_2rn**	X	X	Dacitic andesite	Microprobe
BPNH105	325901	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4500 (hm)	Recent Huila	**Q_2rn**	X	X	Dacite	Microprobe
BPNH106	100302	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4245 (hh) 4260 (hg) 4390 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH115	325906	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4250	Recent Huila	**Q_2rn**	X	X	Dacitic andesite	Microprobe
BPNH116	325907	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4480	Recent Huila	**Q_2rn**	X	_		
BPNH116a	325908	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4480	Recent Huila	**Q_2rn**	X	_		
BPNH116b	325909	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4480	Recent Huila	**Q_2rn**	X	_		
BPNH117a	325910	Pumice fragment	Pyroclastic flow (CDP)	**E**	North	4300	Recent Huila	**Q_2rn**	X	_		
BPNH117b	325911	Lithic fragment	Pyroclastic flow (CDP)	**E**	North	4300	Recent Huila	**Q_2rn**	X	_		
BPNH120	100303	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4550 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH121	100304	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4600	Recent Huila	**Q_2rn**	X	_		
BPNH317	BPNH317	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4360 (hh) 4480 (hg) 4410 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH318	BPNH318	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4390 (hh) 4581 (hg) 4470 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH319	BPNH319	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4500 (hh) 4622 (hg) 4560 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH320	BPNH320	Rock in situ (?), porphyritic andesite	Lava flow	**W**	North	4540 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH321	BPNH321	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4400 (hh) 4525 (hg) 4490 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH322	BPNH322	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4405 (hh) 4499 (hg) 4470 (hm)	Recent Huila	**Q_2rn**	X	_		
BPNH323	BPNH323	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4380 (hh) 4497 (hg) 4450 (hm)	Recent Huila	**Q_2rn**	X	_		

Table 1. List of representative samples of the NHVC and the respective complementary information (*continued*).

Sample ID	Thin section ID	Type of sample	Description in field	Hillside/slope	Sector	masl	Stage	Unit	P	Q	Geochemical classification	Other analyses
ACNH205a	100295	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4200 (hm)	Recent Huila	**Q_2rn**	X	_		
ACNH417	ACNH417	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4270 (hh) 4422 (hg) 4400 (hm)	Recent Huila	**Q_2rn**	X	_		
ACNH418	ACNH418	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4260 (hh) 4410 (hg) 4400 (hm)	Recent Huila	**Q_2rn**	X	_		
ACNH419	ACNH419	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4210 (hh) 4366 (hg) 4325 (hm)	Recent Huila	**Q_2rn**	X	_		
ACNH420	ACNH420	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4200 (hh) 4376 (hg) 4300 (hm)	Recent Huila	**Q_2rn**	X	_		
ACNH423	ACNH423	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4375 (hh) 4499 (hg) 4430 (hm)	Recent Huila	**Q_2rn**	X	_		
VNH12	325832	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4380 (hh) 4500 (hm)	Recent Huila	**Q_2rc**	X	_		K/Ar
VNH13	100264	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4380 (hh) 4475 (hm)	Recent Huila	**Q_2rc**	X	X	Dacitic andesite	Microprobe
VNH13a	325833	Pumice fragment (no in situ)	Pyroclastic flow (CDP)	**W**	Central	4325 (hh) 4450 (hm)	Recent Huila	**Q_2rc**	X	_		
VNH14	100282	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4325 (hh) 4400 (hm)	Recent Huila	**Q_2rc**	X	_		
VNH15	325834	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4155 (hh) 4150 (hm)	Recent Huila	**Q_2rc**	X	_		
VNH40	No thin section	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4360 (hm)	Recent Huila	**Q_2rc**		_		
VNH41	No thin section	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4250	Recent Huila	**Q_2rc**		X	Dacite	Microprobe
VNH42	325844	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4250	Recent Huila	**Q_2rc**	X	_		
VNH43	100288	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4160 (hm)	Recent Huila	**Q_2rc**	X	_		
VNH43a	No thin section	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4160 (hm)	Recent Huila	**Q_2rc**		_		
VNH44	100289	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4450	Recent Huila	**Q_2rc**	X	X	Dacitic andesite	Microprobe
BPNH90	100298	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4270 (hm)	Recent Huila	**Q_2rc**	X	_		
BPNH90aa	325890	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	_		
BPNH91	325891	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4280	Recent Huila	**Q_2rc**	X	_		
BPNH98	100299	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4400 (hh) 4400 (hg) 4425 (hm)	Recent Huila	**Q_2rc**	X	_		
BPNH124	325913	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4450	Recent Huila	**Q_2rc**	X	_		
BPNH125	325914	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	X	Dacite	Microprobe
BPNH125a	100270	Lithic fragment	Pyroclastic flow (CDP)	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	_		
BPNH125b	325915	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	X	Dacitic andesite	Microprobe
BPNH125d	325916	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	X	Dacite	Microprobe
BPNH125e	325917	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	_		
BPNH125h	325918	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4300 (hm)	Recent Huila	**Q_2rc**	X	X	Dacite	Microprobe
BPNH129	325919	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4200	Recent Huila	**Q_2rc**	X	_		
ACNH212	100268	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4050	Recent Huila	**Q_2rc**	X	_		
ACNH215a	100270	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4010 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH216	100269	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	4280	Recent Huila	**Q_2rc**	X	_		
ACNH429	ACNH429	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	3120 (hh) 4189 (hg) 4200 (hm)	Recent Huila	**Q_2rc**	X	X	Dacitic andesite	Microprobe
ACNH430	ACNH430	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4275 (hh) 4353 (hg) 4300 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH431	ACNH431	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4365 (hh) 4451 (hg) 4400 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH432	ACNH432	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4400 (hh) 4471 (hg) 4405 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH433	ACNH433	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4505 (hh) 4545 (hg) 4505 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH434	ACNH434	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4550 (hh) 4525 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH435	ACNH435	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4620 (hh) 4615 (hm)	Recent Huila	**Q_2rc**	X	_		
ACNH436	ACNH436	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4555 (hh) 4636 (hg) 4575 (hm)	Recent Huila	**Q_2rc**	X	_		

Table 1. List of representative samples of the NHVC and the respective complementary information (*continued*).

Sample ID	Thin section ID	Type of sample	Description in field	Hillside/slope	Sector	masl	Stage	Unit	P	Q	Geochemical classification	Other analyses
ACNH440	ACNH440	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4365 (hh) 4448 (hg) 4400 (hm)	Recent Huila	**Q_2rc**	X	_		
VNH46	325845	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4240 (hm)	Recent Huila	**Q_2rs**	X	_		
VNH47	100291	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4270 (hm)	Recent Huila	**Q_2rs**	X	_		
VNH50	100292	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4300 (hh) 4350 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH96	325893	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4320 (hh) 4360 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH96a	325894	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4350 (hg) 4360 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH97	325896	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4470 (hh) 4530 (hg) 4515 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH97a	325895	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4500 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH135	325922	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4575 (hh) 4575 (hm)	Recent Huila	**Q_2rs**	X	X	Andesite	Microprobe
BPNH135a	325923	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4575 (hh) 4575 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH138	100305	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4280 (hh) 4410 (hg) 4325 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH140	325925	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4320 (hg) 4300 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH329	BPNH329	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4555 (hh) 4573 (hg) 4525 (hm)	Recent Huila	**Q_2rs**	X	_		
BPNH330	BPNH330	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4410 (hh) 4540 (hg) 4500 (hm)	Recent Huila	**Q_2rs**	X	X	Dacitic andesite	
ACNH218	325872	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4300 (hm)	Recent Huila	**Q_2rs**	X	_		
ACNH226	325879	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4400 (hh) 4475 (hm)	Recent Huila	**Q_2rs**	X	_		K/Ar
ACNH226a	325880	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4400 (hh) 4475 (hm)	Recent Huila	**Q_2rs**	X	_		
ACNH227	325881	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4530 (hh) 4575 (hm)	Recent Huila	**Q_2rs**	X	X	Andesite	Microprobe
ACNH228	325882	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4400 (hh) 4405 (hm)	Recent Huila	**Q_2rs**	X	X	Dacitic andesite	Microprobe
ACNH229	325883	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4370 (hh) 4390 (hm)	Recent Huila	**Q_2rs**	X	X	Andesite	Microprobe
ACNH230	100274	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4380 (hh) 4425 (hm)	Recent Huila	**Q_2rs**	X	_		
ACNH230a	100275	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4380 (hh) 4425 (hm)	Recent Huila	**Q_2rs**	X	_		
ACNH441	ACNH441	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4450 (hh) 4532 (hg) 4500 (hm)	Recent Huila	**Q_2rs**	X	_		
ACNH442	ACNH442	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4520 (hh) 4533 (hg) 4550 (hm)	Recent Huila	**Q_2rs**	X	_		
VNH5	325854	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3540 (hh) 3825 (hm)	Ancient Huila	**Q_1an**	X	_		
VNH6a	No thin section	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3545 (hh) 3750 (hm)	Ancient Huila	**Q_1an**		_		
VNH7	100279	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3540 (hh) 3745 (hm)	Ancient Huila	**Q_1an**	X	_		
VNH9	325855	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3890 (hh) 3900 (hm)	Ancient Huila	**Q_1an**	X	_		
VNH10	100280	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3900 (hh) 3950 (hm)	Ancient Huila	**Q_1an**	X	_		
VNH11	100281	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3900 (hh) 4000 (hm)	Ancient Huila	**Q_1an**	X	_		
BPNH101	325898	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4385 (hh) 4410 (hg) 4280 (hm)	Ancient Huila	**Q_1an**	X	_		
BPNH102	100301	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4385 (hh) 4410 (hg) 4350 (hm)	Ancient Huila	**Q_1an**	X	_		
BPNH107	325902	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4340 (hm)	Ancient Huila	**Q_1an**	X	X	Dacitic andesite	Microprobe
BPNH111	325905	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3845 (hm)	Ancient Huila	**Q_1an**	X	X	Dacite	Microprobe
ACNH200	325864	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4100 (hm)	Ancient Huila	**Q_1an**	X	X	Dacitic andesite	Microprobe
ACNH201	325865	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4000 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH201b	100296	Rock in situ, porphyritic andesite	Lava flow	**E**	North	4000 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH202	325866	Rock in situ, porphyritic andesite	Lava flow	**E**	North	3950 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH203	325867	Rock in situ, porphyritic andesite	Lava flow	**E**	North	3700	Ancient Huila	**Q_1an**	X	X	Dacitic andesite	Microprobe
ACNH204	325868	Rock in situ, porphyritic andesite	Lava flow	**E**	North	3950 (hm)	Ancient Huila	**Q_1an**	X	_		

Table 1. List of representative samples of the NHVC and the respective complementary information (*continued*).

Sample ID	Thin section ID	Type of sample	Description in field	Hillside/slope	Sector	masl	Stage	Unit	P	Q	Geochemical classification	Other analyses
ACNH421	ACNH421	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4150 (hh) 4305 (hg) 4270 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH422	ACNH422	Rock in situ, porphyritic andesite	Lava flow	**W**	North	4306 (hg) 4240 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH424	ACNH424	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3980 (hh) 4074 (hg) 4000 (hm)	Ancient Huila	**Q_1an**	X	X	Dacitic andesite	Microprobe
ACNH425	ACNH425	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3905 (hh) 4048 (hg) 4000 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH426	ACNH426	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3790 (hh) 3911 (hg) 3850 (hm)	Ancient Huila	**Q_1an**	X	_		
ACNH428	ACNH428	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3640 (hh) 3917 (hg) 3775 (hm)	Ancient Huila	**Q_1an**	X	X	Dacitic andesite	$^{40}Ar/^{39}Ar$ Microprobe
VNH26	325840	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	3905 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH99	325897	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4470 (hg) 4400 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH148b	325930	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4430 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH149	325931	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4275 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH151b	100267	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4060 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH152	325932	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	3900 (hg) 3900 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH152a	325933	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4320 (hg) 3900 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH324	BPNH324	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4180 (hh) 4277 (hg) 4225 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH325	BPNH325	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4145 (hh) 4254 (hg) 4210 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH326	BPNH326	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4130 (hh) 4227 (hg) 4150 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH327	BPNH327	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4201 (hg) 4100 (hm)	Ancient Huila	**Q_1ac**	X	_		
BPNH328	BPNH328	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4307 (hg) 4250 (hm)	Ancient Huila	**Q_1ac**	X	_		
ACNH206	325869	Rock in situ, porphyritic andesite	Brecciated lavas	**E**	Central	4400	Ancient Huila	**Q_1ac**	X	_		
ACNH209	100272	Rock in situ, porphyritic andesite	Brecciated lavas	**E**	Central	3800	Ancient Huila	**Q_1ac**	X	X	Dacitic andesite	
ACNH210	100273	Rock in situ, porphyritic andesite	Lava flow	**E**	Central	3900	Ancient Huila	**Q_1ac**	X	_		
ACNH233	325884	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4235 (hh) 4340 (hm)	Ancient Huila	**Q_1ac**	X	X	Dacitic andesite	Microprobe
ACNH234	100265	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4140 (hh) 4270 (hm)	Ancient Huila	**Q_1ac**	X	_		
ACNH235	325885	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4080 (hh) 4200 (hm)	Ancient Huila	**Q_1ac**	X	_		
ACNH236	325886	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4030 (hh) 4030 (hm)	Ancient Huila	**Q_1ac**	X	X	Andesite	Microprobe
ACNH437	ACNH437	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4540 (hh) 4602 (hg) 4540 (hm)	Ancient Huila	**Q_1ac**	X	_		
ACNH438	ACNH438	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4450 (hh) 4524 (hg) 4475 (hm)	Ancient Huila	**Q_1ac**	X	_		
ACNH439	ACNH439	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	4405 (hh) 4494 (hg) 4445 (hm)	Ancient Huila	**Q_1ac**	X	X	Dacitic andesite	Microprobe
VNH45	100290	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4150 (hm)	Ancient Huila	**Q_1as**	X	_		
VNH51	325847	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4300 (hh) 4375 (hm)	Ancient Huila	**Q_1as**	X	X	Dacitic andesite	Microprobe
VNH53	325848	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4000 (hh) 4000 (hm)	Ancient Huila	**Q_1as**	X	X	Dacitic andesite	Microprobe
VNH54	100293	Rock in situ, porphyritic andesite	Lava flow	**E**	South	3750 (hh) 3700 (hm)	Ancient Huila	**Q_1as**	X	X	Dacitic andesite	Microprobe
BPNH92	325892	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4230	Ancient Huila	**Q_1as**	X	_		
BPNH130	325920	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4300	Ancient Huila	**Q_1as**	X	_		
BPNH133	325921	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4500 (hg) 4340 (hm)	Ancient Huila	**Q_1as**	X	_		
BPNH139	325924	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4325 (hm)	Ancient Huila	**Q_1as**	X	X	Dacite	Microprobe
BPNH142	325926	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4150 (hm)	Ancient Huila	**Q_1as**	X	_		
BPNH143	325927	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4020 (hg) 4250 (hm)	Ancient Huila	**Q_1as**	X	X	Dacitic andesite	Microprobe
BPNH145	325928	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3925 (hm)	Ancient Huila	**Q_1as**	X	_		
BPNH146	325929	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3900 (hg) 3800 (hm)	Ancient Huila	**Q_1as**	X	X	Dacitic andesite	Microprobe

Table 1. List of representative samples of the NHVC and the respective complementary information (*continued*).

Sample ID	Thin section ID	Type of sample	Description in field	Hillside/slope	Sector	masl	Stage	Unit	P	Q	Geochemical classification	Other analyses
BPNH331	BPNH331	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4331 (hg) 4300 (hm)	Ancient Huila	**Q_1as**	X	_		
BPNH332	BPNH332	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3900 (hh) 3986 (hg) 3950 (hm)	Ancient Huila	**Q_1as**	X	_		
BPNH333	BPNH333	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3340 (hh) 3408 (hg) 3340 (hm)	Ancient Huila	**Q_1as**	X	_		
ACNH220	325873	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4400 (hm)	Ancient Huila	**Q_1as**	X	_		
ACNH221	325874	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4170 (hh) 4205 (hm)	Ancient Huila	**Q_1as**	X	X	Dacite	Microprobe
ACNH224	100297	Rock in situ, porphyritic andesite	Lava flow	**E**	South	4520 (hm)	Ancient Huila	**Q_1as**	X	_		
ACNH225	100276	Rock in situ, porphyritic andesite	Lava flow	**W**	South	4320 (hh) 4325 (hm)	Ancient Huila	**Q_1as**	X	_		
VNH56	100294	Fragment of volcanic rock	Fragmentary deposit	–	South	3400	Ancient Huila	**Q_1ae**	X	_		
VNH57	325850	Fragment of volcanic rock	Fragmentary deposit	–	South	3200	Ancient Huila	**Q_1ae**	X	_		
VNH58	325862	Fragment of volcanic rock	Fragmentary deposit	–	South	2800 (hm)	Ancient Huila	**Q_1ae**	X	_		
VNH59	325863	Fragment of volcanic rock	Fragmentary deposit	–	South	2700 (hm)	Ancient Huila	**Q_1ae**	X	_		
VNH60	No thin section	Fragment of volcanic rock	Fragmentary deposit	–	South	2000 (hm)	Ancient Huila	**Q_1ae**		_		
BPNH315	BPNH315	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4160 (hh) 4286 (hg) 4275 (hm)	"Upper"	**Q_1ls**	X	_		
ACNH407	ACNH407	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4200 (hh) 4355 (hg) 4325 (hm)	"Upper"	**Q_1ls**	X	X	Dacite	Microprobe
ACNH408	ACNH408	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4170 (hh) 4323 (hg)	"Upper"	**Q_1ls**	X	_		
ACNH413	ACNH413	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4340 (hh) 4488 (hg) 4480 (hm)	"Upper"	**Q_1ls**	X	X	Dacite	$^{40}Ar/^{39}Ar$
ACNH414	ACNH414	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4550 (hg) 4500 (hm)	"Upper"	**Q_1ls**	X	X	Dacite	Microprobe
BPNH310	BPNH310	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4080 (hh) 4140 (hg) 4200 (hm)	"Intermediate"	**Q_1lm**	X	_		
BPNH311	BPNH311	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4085 (hh) 4196 (hg) 4190 (hm)	"Intermediate"	**Q_1lm**	X	_		
BPNH313	BPNH313	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4095 (hh) 4230 (hg) 4200 (hm)	"Intermediate"	**Q_1lm**	X	_		
BPNH314	BPNH314	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4295 (hg) 4250 (hm)	"Intermediate"	**Q_1lm**	X	_		
BPNH316	BPNH316	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4140 (hh) 4271 (hg) 4225 (hm)	"Intermediate"	**Q_1lm**	X	_		
ACNH410	ACNH410	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4220 (hg) 4200 (hm)	"Intermediate"	**Q_1lm**	X	_		
ACNH412	ACNH412	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4260 (hh) 4441 (hg) 4390 (hm)	"Intermediate"	**Q_1lm**	X	X	Dacitic andesite	$^{40}Ar/^{39}Ar$ Microprobe
ACNH415	ACNH415	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4330 (hh) 4578 (hg) 4500 (hm)	"Intermediate"	**Q_1lm**	X	X	Dacitic andesite	Microprobe
ACNH416	ACNH416	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4350 (hh) 4514 (hg) 4350 (hm)	"Intermediate"	**Q_1lm**	X	_		
VNH3a	325830	Rock in situ (?), porphyritic andesite	Lava flow	_	Laguna de Páez	> 3800	"Lower"	**Q_1li**	X	_		K/Ar
BPNH108	325903	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4380 (hg) 4300 (hm)	"Lower"	**Q_1li**	X	_		
BPNH110	325904	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	3895 (hm)	"Lower"	**Q_1li**	X	X	Andesite	Microprobe
BPNH306	BPNH306	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	3960 (hh) 4092 (hg) 4100 (hm)	"Lower"	**Q_1li**	X	_		
BPNH307	BPNH307	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	3980 (hh) 4104 (hg) 4025 (hm)	"Lower"	**Q_1li**	X	X	Andesite	$^{40}Ar/^{39}Ar$ Microprobe
BPNH308	BPNH308	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4020 (hh) 4154 (hg) 4045 (hm)	"Lower"	**Q_1li**	X	X	Andesite	
BPNH309	BPNH309	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4000 (hh) 4141 (hg) 4030 (hm)	"Lower"	**Q_1li**	X	_		
BPNH312	BPNH312	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	4095 (hh) 4230 (hg) 4140 (hm)	"Lower"	**Q_1li**	X	_		
ACNH406	ACNH406	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	3970 (hh) 4118 (hg) 4080 (hm)	"Lower"	**Q_1li**	X	_		
ACNH411	ACNH411	Rock in situ, porphyritic andesite	Lava flow	_	Laguna de Páez	3925 (hh) 4069 (hg) 4080 (hm)	"Lower"	**Q_1li**	X	X	Andesite	Microprobe
VNH6	325831	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3545 (hh) 3750 (hm)	Pre–Huila	**Q_1pn**	X	X	Dacitic andesite	
VNH30	325857	Rock in situ, porphyritic andesite	Lava flow	**E**	North	3500	Pre–Huila	**Q_1pn**	X	X	Dacitic andesite	Microprobe
VNH31b	No thin section	Rock in situ (?), porphyritic andesite	Lava flow	**E**	North	3400 (hm)	Pre–Huila	**Q_1pn**		_		

Table 1. List of representative samples of the NHVC and the respective complementary information (*continued*).

Sample ID	Thin section ID	Type of sample	Description in field	Hillside/slope	Sector	masl	Stage	Unit	P	Q	Geochemical classification	Other analyses
VNH33	325841	Rock in situ, porphyritic andesite	Lava flow	**E**	North	3200	Pre–Huila	**Q_1pn**	X	_		K/Ar
BPNH302	BPNH302	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3175 (hh) 3235 (hg) 3200 (hm)	Pre–Huila	**Q_1pn**	X	_		
BPNH303	BPNH303	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3580 (hh) 3600 (hm)	Pre–Huila	**Q_1pn**	X	_		
ACNH401	ACNH401	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3090 (hh) 1800 (hg) 3100 (hm)	Pre–Huila	**Q_1pn**	X	X	Dacitic andesite	$^{40}Ar/^{39}Ar$
ACNH401a	ACNH401a	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3100 (hm)	Pre–Huila	**Q_1pn**	X	_		
ACNH401b	ACNH401b	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3100 (hm)	Pre–Huila	**Q_1pn**	X	_		Microprobe
ACNH427	ACNH427	Rock in situ, porphyritic andesite	Lava flow	**W**	North	3670 (hh) 3720 (hm)	Pre–Huila	**Q_1pn**	X	_		
VNH32	325858	Rock in situ, porphyritic andesite	Brecciated lavas	**E**	Central	3350 (hm)	Pre–Huila	**Q_1pc**	X	_		
ACNH403	ACNH403	Rock in situ, porphyritic andesite	Lava flow	**W**	Central	3420 (hh) 3530 (hg) 3400 (hm)	Pre–Huila	**Q_1pc**	X	X	Dacitic andesite	K/Ar – Microprobe
VNH56a	325849	Rock in situ, porphyritic andesite	Lava flow	–	South	3400	Ancient Huila	**Q_1ps?**	X	X	Andesite	K/Ar – Microprobe
BPNH334	BPNH334	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3125 (hh) 3406 (hg) 3100 (hm)	Pre–Huila	**Q_1ps**	X	_		
BPNH335	BPNH335	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3160 (hh) 3230 (hg) 3200 (hm)	Pre–Huila	**Q_1ps**	X	_		
BPNH336	BPNH336	Rock in situ, porphyritic andesite	Lava flow	**W**	South	3070 (hh) 3116 (hg) 3100 (hm)	Pre–Huila	**Q_1ps**	X	_		
BPNH337	BPNH337	Rock in situ, porphyritic andesite	Lava flow	**W**	South	2795 (hh) 2843 (hg) 2800 (hm)	Pre–Huila	**Q_1ps**	X	X	Dacitic andesite	$^{40}Ar/^{39}Ar$ Microprobe
BPNH338	BPNH338	Rock in situ, porphyritic andesite	Lava flow	**W**	South	2705 (hh) 2842 (hg) 2700 (hm)	Pre–Huila	**Q_1ps**	X	_		
BPNH339	BPNH339	Rock in situ, porphyritic andesite	Brecciated lavas	**W**	South	2600 (hm)	Pre–Huila	**Q_1ps**	X	_		
BPNH340	BPNH340	Rock in situ, porphyritic andesite	Lava flow	**W**	South	2400 (hm)	Pre–Huila	**Q_1ps**	X	_		
BPNH341	BPNH341	Rock in situ, porphyritic andesite	Columnar lava	**W**	South	2300 (hh) 2842 (hg) 2250 (hm)	Pre–Huila	**Q_1ps**	X	X	Dacitic andesite	K/Ar – Microprobe

Note: (hh) masl–altimeter; (hg) masl–GPS; (hm) masl–map; (P) detailed petrographic analysis; (Q) lithogeochemical analysis.

Table 2. Major and minor elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España.

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Sample	SiO_2	Al_2O_3	Fe_2O_3	MnO	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	LOI	TOTAL	Ba	Sr	Y	Sc	Zr	Be	V
	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
VNH–6	60.67	15.79	5.23	0.09	3.35	5.57	4.66	2.46	0.750	0.29	0.57	99.44	1114	1020	13	12	152	2	135
VNH–13	60.22	15.92	6.18	0.11	2.95	5.39	4.27	2.41	0.710	0.33	1.49	99.98	996	787	14	11	160	2	133
VNH–18	60.51	15.70	6.49	0.10	4.15	5.75	4.28	2.05	0.670	0.26	0.25	100.20	907	865	14	14	149	2	141
VNH–30	61.86	15.85	6.15	0.10	3.12	5.33	4.24	2.28	0.730	0.26	0.51	100.44	1023	709	15	13	169	2	169
VNH–41	62.67	15.46	5.20	0.09	2.59	4.67	4.29	2.71	0.620	0.25	1.53	100.08	1073	735	14	10	176	2	112
VNH–44	61.78	15.29	5.83	0.10	4.28	5.46	4.34	2.24	0.655	0.22	0.16	100.34	1044	792	12	13	142	2	135
VNH–49	57.57	15.71	7.02	0.10	4.74	6.61	4.33	1.78	0.885	0.39	0.50	99.62	896	980	15	14	164	2	157
VNH–51	60.77	15.90	6.38	0.09	2.81	5.11	3.83	1.93	0.720	0.28	2.18	100.00	980	612	26	13	176	2	142
VNH–53	60.18	16.54	6.69	0.12	3.31	5.71	4.09	1.77	0.800	0.30	0.80	100.31	914	672	19	14	159	1	151
VNH–54	57.56	16.69	7.78	0.13	3.54	6.30	3.95	1.64	0.905	0.33	0.91	99.73	895	723	18	16	145	1	188
VNH–56A	59.08	16.54	6.71	0.12	3.27	6.28	3.99	1.87	0.770	0.30	0.35	99.28	858	776	17	13	151	1	152
BP–104	61.48	15.05	5.49	0.10	3.86	5.46	3.91	2.55	0.650	0.22	0.66	99.42	958	617	15	13	171	2	126
BP–105	62.36	15.99	5.08	0.08	2.50	4.72	4.67	2.67	0.640	0.30	1.04	100.05	1144	921	12	8	166	2	145
BP–107	64.15	16.04	4.79	0.08	2.28	4.41	4.38	2.90	0.565	0.23	0.29	100.12	1122	667	14	9	186	2	100
BP–110	57.64	15.72	7.28	0.12	4.64	7.22	3.71	1.42	0.870	0.28	1.37	100.27	830	691	17	23	117	1	202
BP–111	63.90	15.28	4.93	0.09	2.54	4.38	4.19	2.70	0.615	0.20	1.44	100.27	1068	635	14	10	198	2	113
BP–114	61.30	15.83	5.33	0.08	2.80	5.03	4.58	2.47	0.675	0.28	1.50	99.88	1115	960	11	10	161	2	122
BP–125	62.66	15.67	5.18	0.09	2.87	4.98	4.38	2.61	0.630	0.37	0.90	100.33	1059	787	13	10	173	2	115
BP–125B	61.59	15.87	5.80	0.09	3.40	5.46	4.37	2.48	0.720	0.31	0.11	100.21	1032	823	13	12	166	2	168
BP–125D	63.42	15.95	5.52	0.09	2.75	4.72	4.39	2.56	0.670	0.05	0.26	100.39	1058	748	11	11	172	2	122
BP–125H	63.84	15.93	4.91	0.08	2.42	4.59	4.45	2.72	0.590	0.34	0.27	100.15	1097	764	14	9	176	2	108
BP–135	57.64	16.26	7.40	0.12	4.14	6.53	4.07	1.72	0.890	0.32	1.16	100.24	902	745	17	16	153	1	166
BP–139	63.67	15.79	5.07	0.09	2.25	4.26	4.34	2.80	0.590	0.23	0.91	99.99	1116	602	16	10	188	2	106
BP–143	61.80	16.58	5.70	0.09	2.92	4.69	4.18	2.12	0.780	0.24	1.28	100.39	1011	671	15	13	169	2	149
BP–146	61.27	15.68	5.79	0.09	2.83	4.78	3.88	2.51	0.720	0.25	2.79	100.60	1021	657	15	12	181	2	133
AC–200	60.11	15.58	6.33	0.10	3.56	5.74	4.10	2.09	0.685	0.25	0.94	99.51	920	778	14	14	146	1	137
AC–203	64.27	15.53	4.48	0.08	2.10	4.18	4.37	2.78	0.530	0.24	1.36	99.92	1100	756	12	8	165	2	93
AC–221	62.64	16.89	5.58	0.09	2.58	4.58	4.17	1.95	0.755	0.24	1.38	100.86	945	689	15	13	163	1	137
AC–227	57.02	17.17	7.45	0.12	3.94	6.43	3.96	1.49	0.980	0.27	1.36	100.20	866	729	17	19	149	1	185
AC–228	59.73	16.30	6.68	0.11	3.28	5.70	4.29	1.90	0.765	0.33	0.99	100.07	910	763	16	12	169	1	143
AC–229	58.87	16.21	7.24	0.12	4.07	6.62	4.16	1.82	0.875	0.30	0.05	100.32	960	715	17	18	152	1	180
AC–233	61.37	15.37	6.08	0.10	4.34	5.67	4.21	2.13	0.665	0.25	0.19	100.37	1021	763	12	14	141	2	138
AC–236	58.83	16.59	7.32	0.11	3.53	6.05	4.24	1.76	0.825	0.31	0.84	100.40	902	734	15	14	144	2	182
SY3 CERT	59.63	11.75	6.49	0.32	2.67	8.26	4.12	4.23	0.150	0.54	1.16		450	302	718	7	320	20	50
SY–3/D	60.23	11.48	6.55	0.32	2.58	8.26	4.03	4.19	0.135	0.54			474	304	718	8	366	20	47
MRG–1 CERT	39.09	8.46	17.93	0.17	13.55	14.71	0.74	0.18	3.770	0.08	1.56		61	266	14	55	108	–1	526
MRG–1	39.09	8.50	17.85	0.17	14.03	14.75	0.74	0.21	3.770	0.08			56	275	14	55	102	1	524

Table 2. Major and minor elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 17419 – CODE 4LITHO–MAJ ELEM FUS ICP (WRA.REV2)																			
Sample	**SiO_2**	**Al_2O_3**	**Fe_2O_3**	**MnO**	**MgO**	**CaO**	**Na_2O**	**K_2O**	**TiO_2**	**P_2O_5**	**LOI**	**TOTAL**	**Ba**	**Sr**	**Y**	**Sc**	**Zr**	**Be**	**V**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**
W–2 CERT	52.44	15.35	10.74	0.16	6.37	10.87	2.14	0.63	1.060	0.13	0.60		182	194	24	35	94	1	262
W–2/C	52.39	15.34	10.96	0.16	6.37	10.86	2.20	0.62	1.015	0.10			187	192	21	35	94	–1	269
DNC–1 CERT	47.04	18.30	9.93	0.15	10.05	11.27	1.87	0.23	0.480	0.08	0.60		114	145	18	31	41	1	148
DNC–1/D	46.32	18.33	9.85	0.14	10.10	11.01	1.90	0.23	0.445	0.05			113	140	17	30	37	–1	141
BIR–1 CERT	47.77	15.35	11.26	0.17	9.68	13.24	1.75	0.03	0.960	0.05			8	108	16	44	22	–1	311
BIR–1/D	48.57	15.95	11.60	0.17	9.85	13.38	1.85	0.03	0.915	0.02			8	109	16	44	13	–1	314
G–2 CERT	69.08	15.35	2.66	0.03	0.75	1.96	4.08	4.48	0.480	0.14			1882	478	11	4	309	3	36
G–2/C	69.08	15.38	2.73	0.03	0.74	1.94	4.06	4.60	0.455	0.10			1869	478	10	3	348	2	33
NBS 1633a CERT	48.78	27.02	13.44	0.02	0.75	1.55	0.23	2.26	1.330	0.38			1500	830	86	40	310	12	297
NBS/C	48.44	26.67	13.55	0.02	0.73	1.53	0.22	2.01	1.295	0.38			1307	794	84	38	267	12	275
IF–G CERT	41.20	0.15	55.85	0.04	1.89	1.55	0.03	0.01	0.010	0.06			2	3	9	–1	2	5	–5
IF–G	40.17	0.14	55.41	0.02	1.87	1.49	0.01	0.04	–0.005	0.05			6	3	10	–1	3	4	–5
AC–E CERT	70.35	14.70	2.53	0.06	0.03	0.34	6.54	4.49	0.110	0.01			55	3	184	–1	780	12	–5
AC–E/C	70.25	14.78	2.56	0.06	0.03	0.36	6.54	4.50	0.095	0.01			62	2	181	–1	861	11	–5

Adrianne I. Rittau, B.Sc., C. Chem.

Report A05–0090 – CODE 4LITHO–MAJ ELEM FUS ICP (WRA.REV2)																			
Sample	**SiO_2**	**Al_2O_3**	**Fe_2O_3**	**MnO**	**MgO**	**CaO**	**Na_2O**	**K_2O**	**TiO_2**	**P_2O_5**	**LOI**	**TOTAL**	**Ba**	**Sr**	**Y**	**Sc**	**Zr**	**Be**	**V**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**
ACNH209	59.39	16.14	6.97	0.11	3.59	6.07	4.16	2.09	0.889	0.28	0.35	100.03	944	729	17	16	133	1	176
ACNH401	58.99	16.29	6.61	0.11	3.21	5.74	4.28	2.23	0.831	0.38	0.49	99.17	1053	868	18	13	158	2	145
ACNH403	59.89	15.54	6.37	0.11	3.68	5.92	4.21	1.89	0.783	0.27	0.77	99.43	969	702	18	15	128	1	147
ACNH407	63.65	15.84	4.31	0.07	2.08	4.14	4.58	2.62	0.591	0.25	1.83	99.97	1277	888	13	7	144	2	96
ACNH411	57.72	16.16	7.27	0.13	3.94	6.90	3.89	1.47	0.919	0.29	0.53	99.22	826	661	19	19	110	1	179
ACNH412	60.18	15.04	6.16	0.09	4.41	5.36	4.23	2.17	0.753	0.27	0.54	99.20	1063	800	16	13	128	2	139
ACNH413	63.74	15.87	4.44	0.07	2.00	4.31	4.75	2.51	0.611	0.27	0.31	98.88	1227	901	13	7	140	2	99
ACNH414 (1)	62.64	15.59	4.43	0.08	2.18	4.25	4.32	2.56	0.608	0.28	2.22	99.16	1233	874	13	8	141	2	99
ACNH414 (2)	62.64	15.59	4.43	0.08	2.17	4.24	4.33	2.59	0.605	0.27	2.22	99.15	1236	876	12	8	142	2	99
ACNH415	59.72	16.24	5.88	0.11	2.97	5.64	4.00	1.82	0.821	0.27	1.22	98.70	958	629	19	16	135	1	156
ACNH424	63.37	15.65	4.94	0.08	2.34	4.42	4.61	2.75	0.643	0.26	0.19	99.27	1189	826	14	9	154	2	113
ACNH428	59.45	15.90	6.28	0.11	3.75	5.99	4.14	2.20	0.744	0.26	0.69	99.50	954	812	15	15	127	1	147
ACNH429	61.04	15.42	5.71	0.10	3.93	5.45	4.38	2.23	0.709	0.24	0.19	99.37	1097	796	14	14	127	2	142
ACNH439	61.45	15.88	5.96	0.10	3.14	5.17	4.34	2.02	0.759	0.27	0.40	99.50	1087	747	16	13	130	1	144
BPNH307	58.92	16.05	6.61	0.12	3.74	6.10	4.06	1.78	0.833	0.28	0.98	99.48	986	660	18	15	130	1	150
BPNH308	58.97	16.20	7.04	0.12	4.07	6.33	3.98	1.67	0.888	0.29	0.46	100.01	941	668	18	18	128	1	162
BPNH330	59.12	15.73	6.65	0.11	3.40	5.76	4.02	2.12	0.906	0.29	1.01	99.12	1057	690	18	15	145	2	171

Table 2. Major and minor elements. Results of chemical analysis – ACTLABS Laboratory, Canada– sponsored by Universidad Complutense de Madrid, España (*continued*).

Report A05–0090 – CODE 4LITHO–MAJ ELEM FUS ICP (WRA.REV2)																			
Sample	**SiO_2**	**Al_2O_3**	**Fe_2O_3**	**MnO**	**MgO**	**CaO**	**Na_2O**	**K_2O**	**TiO_2**	**P_2O_5**	**LOI**	**TOTAL**	**Ba**	**Sr**	**Y**	**Sc**	**Zr**	**Be**	**V**
	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
BPNH337	61.00	15.80	5.70	0.10	3.35	5.46	4.29	2.02	0.744	0.26	1.04	99.75	1079	760	16	13	130	1	132
BPNH341	59.75	16.06	6.11	0.10	3.03	5.38	4.30	2.20	0.789	0.31	1.13	99.16	1059	771	17	11	150	2	137
Blanco	0.02	–0.01	–0.01	0.00	–0.01	–0.01	–0.01	–0.01	0.003	–0.01			–1	–1	–1	–1	–1	–1	–5
SY3 CERT	59.62	11.75	6.49	0.32	2.67	8.26	4.12	4.23	0.150	0.54	1.16		450	302	718	6.8	320	20	50
SY–3/A	59.38	11.52	6.41	0.32	2.52	8.19	4.12	4.08	0.149	0.53			442	307	719	10	325	21	50
NIST 694 CERT	11.20	1.80	0.79	0.01	0.33	43.60	0.86	0.51	0.110	30.20									1736
NIST 694/A	11.18	1.88	0.76	0.01	0.33	43.15	0.88	0.52	0.115	28.11			114	945	168	3	102	4	1569
W–2 CERT	52.44	15.35	10.74	0.16	6.37	10.87	2.14	0.63	1.060	0.13	0.60		182	194	24	35	94	1.3	262
W–2/A	52.24	15.17	10.72	0.16	6.30	10.78	2.23	0.62	1.056	0.13			172	192	24	35	84	–1	263
DNC–1 CERT	47.04	18.30	9.93	0.15	10.05	11.27	1.87	0.23	0.480	0.09	0.60		114	145	18	31	41	1	148
DNC–1/A	46.69	18.27	9.89	0.14	10.17	11.26	1.94	0.22	0.479	0.07			105	141	18	31	31	–1	139
BIR–1 CERT	47.77	15.35	11.26	0.17	9.68	13.24	1.75	0.03	0.960	0.05			7.7	108	16	44	22	0.58	313
BIR–1/A	47.76	15.26	11.25	0.17	9.65	13.21	1.86	0.03	0.964	0.02			8	108	16	44	11	–1	322
GBW 07113 CERT	72.78	12.96	3.21	0.14	0.16	0.59	2.57	5.43	0.300	0.05			506	43	42.5	5.2	403	4.09	3.8
GBW 07113/A	72.76	12.84	3.19	0.14	0.14	0.57	2.54	5.41	0.283	0.05			499	40	48	6	403	4	34
NBS 1633b CERT	49.24	28.43	11.13	0.02	0.80	2.11	0.27	2.26	1.320	0.53			709	1041		41			296
NBS 1633b/A	49.13	28.28	11.10	0.02	0.77	2.12	0.27	2.28	1.291	0.54			709	1030	98	41	227	13	290
STM–1 CERT	59.64	18.39	5.22	0.22	0.10	1.09	8.94	4.28	0.135	0.16			560	700	46	0.61	1210	9.6	(8.7)
STM–1/A	59.55	18.15	5.29	0.22	0.09	1.12	8.85	4.14	0.131	0.12			593	699	48	1	1203	9	–5
IF–G CERT	41.20	0.15	55.85	0.04	1.89	1.55	0.03	0.01	0.014	0.06			1.5	3	9	0.38	2.4	4.7	4
IF–G/A	41.17	0.12	55.29	0.04	1.86	1.52	0.01	–0.01	0.003	0.07			5	4	10	–1	8	4	–5
FK–N CERT	65.02	18.61	0.09	0.01	0.01	0.11	2.58	12.81	0.020	0.02			200	39	0.3	0.05	13	1	3
FK–N/A	65.15	18.47	0.09	0.00	–0.01	0.10	2.49	12.59	0.006	0.02			203	37	–1	–1	–1	–1	–5

C. Douglas Read, B.Sc.

Laboratory manager

Notes:

( )Values only for information.

All other values are proposed.

Trace element values are in parts per million. Negative values are below the detection limit.

Table 3. Trace elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España.

Report 1719 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)																				
Sample	**V**	**Cr**	**Co**	**Ni**	**Cu**	**Zn**	**Ga**	**Ge**	**As**	**Rb**	**Sr**	**Y**	**Zr**	**Nb**	**Mo**	**Ag**	**In**	**Sn**	**Sb**	**Cs**	**Ba**
VNH–6	123	71	12	–15	47	35	19	1	–5	58	944	12	151	8	2	–0.5	–0.2	–1	–0.5	1.8	1140
VNH–13	131	35	15	30	74	76	21	1	–5	65	757	15	169	7	2	–0.5	–0.2	–1	–0.5	2.2	1060
VNH–18	139	186	24	39	48	80	20	1	–5	56	818	13	154	6	3	–0.5	–0.2	1	–0.5	1.6	948
VNH–30	151	42	14	–15	19	54	19	1	–5	59	633	14	161	6	–2	–0.5	–0.2	1	–0.5	0.9	1010
VNH–41	107	42	13	–15	30	58	20	1	–5	75	697	14	179	7	3	–0.5	–0.2	–1	–0.5	2.5	1130
VNH–44	125	242	18	50	65	53	19	–1	–5	62	740	12	143	5	3	–0.5	–0.2	1	–0.5	1.9	1080
VNH–49	145	165	20	51	50	73	19	–1	–5	45	883	14	162	8	–2	–0.5	–0.2	1	–0.5	0.9	899
VNH–51	135	46	22	–15	34	116	19	1	–5	54	587	26	178	7	–2	–0.5	–0.2	1	–0.5	0.9	1040
VNH–53	145	40	16	–15	27	51	19	1	–5	43	630	19	162	6	–2	–0.5	–0.2	1	–0.5	0.8	948
VNH–54	183	26	20	–15	44	151	21	1	–5	36	711	18	152	6	–2	–0.5	–0.2	1	–0.5	0.6	968
VNH–56A	140	35	14	–15	45	67	19	1	–5	49	715	17	150	6	–2	–0.5	–0.2	1	–0.5	0.8	879
BP–104	116	141	14	27	46	33	18	–1	–5	69	572	14	167	6	2	–0.5	–0.2	–1	1.0	2.1	984
BP–104 REP	111	118	14	28	45	46	17	–1	–5	68	558	14	163	6	2	–0.5	–0.2	–1	–0.5	2.2	969
BP–105	137	45	12	–15	41	70	20	1	–5	67	876	11	171	7	2	–0.5	–0.2	1	–0.5	2.0	1200
BP–107	89	39	11	–15	37	56	20	1	–5	82	620	14	186	7	2	–0.5	–0.2	–1	–0.5	2.3	1160
BP–110	180	117	19	–15	29	76	18	1	–5	32	636	17	117	4	–2	–0.5	–0.2	–1	–0.5	–0.5	757
BP–111	99	48	10	–15	16	39	18	–1	–5	74	570	14	192	6	2	–0.5	–0.2	–1	–0.5	2.3	1090
BP–114	116	48	13	–15	40	57	20	1	–5	58	848	11	152	7	–2	–0.5	–0.2	1	–0.5	1.6	1070
BP–125	107	63	13	–15	28	88	20	1	–5	69	708	12	162	7	3	–0.5	–0.2	1	–0.5	2.3	1020
BP–125B	169	80	16	18	24	64	21	1	–5	63	773	13	166	7	5	–0.5	–0.2	–1	–0.5	1.3	1030
BP–125D	122	53	13	49	34	54	20	1	–5	73	694	10	172	7	–2	–0.5	–0.2	1	–0.5	1.9	1040
BP–125H	108	40	13	–15	43	66	21	1	–5	81	735	13	182	7	2	–0.5	–0.2	–1	–0.5	2.0	1100
BP–135	170	109	21	33	50	88	20	1	–5	41	709	17	153	6	3	–0.5	–0.2	1	–0.5	1.1	799
BP–139	106	35	12	–15	27	137	20	1	–5	77	560	15	188	7	3	–0.5	–0.2	–1	–0.5	2.3	1130
BP–143	152	44	15	–15	27	57	21	1	–5	55	640	15	171	7	–2	–0.5	–0.2	1	–0.5	0.8	1030
BP–146	126	27	14	–15	45	64	20	1	–5	61	598	14	172	7	2	–0.5	–0.2	1	–0.5	1.8	984
AC–200	137	88	17	–15	54	66	19	1	–5	61	707	13	145	6	2	–0.5	–0.2	1	–0.5	2.0	912
AC–203	90	47	10	80	28	64	20	1	–5	77	706	12	166	7	3	–0.5	–0.2	–1	–0.5	2.5	1110
AC–221	121	44	11	–15	17	64	19	–1	–5	45	595	13	155	6	–2	–0.5	–0.2	–1	–0.5	0.8	869
AC–227	183	48	19	17	48	88	21	1	–5	33	688	16	148	7	–2	–0.5	–0.2	1	–0.5	1.2	775
AC–227 REP	186	51	19	–15	50	95	21	1	–5	35	691	16	149	7	–2	–0.5	–0.2	1	–0.5	1.2	763
AC–228	148	58	17	67	35	83	22	1	–5	51	724	16	172	7	2	–0.5	–0.2	1	–0.5	1.4	897
AC–229	179	76	20	–15	48	74	20	1	–5	45	659	16	147	6	–2	–0.5	–0.2	1	–0.5	0.8	798
AC–233	137	208	19	36	37	65	19	–1	–5	57	697	12	138	5	–2	–0.5	–0.2	–1	–0.5	1.5	961
AC–236	183	56	18	–15	27	85	20	2	–5	43	672	14	142	5	–2	–0.5	–0.2	1	0.8	1.0	866
Blanco	–5	–20	–1	–15	–10	–30	–1	–1	–5	–2	–2	–1	–5	–1	–2	–0.5	–0.2	–1	–0.5	–0.5	–3
Standard MAG1	142	103	22	42	28	126	23	2	8	152	144	29	132	13	–2	–0.5	–0.2	3	0.8	8.8	507
MAG1 CERT	140*	97*	20.4*	53*	30*	130*	20.4*		9.2	149*	146*	28*	126*	12	1.6	0.08	(0.18)	3.6	0.96*	8.6*	479*

Table 3. Trace elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 1719 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)																				
Sample	**V**	**Cr**	**Co**	**Ni**	**Cu**	**Zn**	**Ga**	**Ge**	**As**	**Rb**	**Sr**	**Y**	**Zr**	**Nb**	**Mo**	**Ag**	**In**	**Sn**	**Sb**	**Cs**	**Ba**
Standard BIR1	321	393	51	166	125	76	16	2	–5	–2	113	17	20	–1	–2	–0.5	–0.2	–1	–0.5	–0.5	8
BIR1 CERT	313*	382*	51.4*	166*	126*	71*	16	1.5	(0.4)	0.25*	108*	16*	16	0.6	(0.5)	(0.036)		0.65	0.58	0.005	7
Standard DNC1	150	287	54	250	94	69	14	1	–5	3	143	18	40	3	–2	–0.5	–0.2	1	0.8	–0.5	110
DNC1 CERT	148*	285*	54.7*	247*	96*	66*	15	(1.3)	(0.2)	(4.5)	145*	18*	41*	3	(0.7)	(0.027)			0.96*	(0.34)	114*
Standard GXR2	50	34	8	–15	66	540	36	1	18	73	148	17	259	8	–2	15.7	–0.2	2	48	4.8	2,243
GXR2 CERT	52	36	8.6	21	76	530	37		25	78.0	160	17	269	11	(2.1)	17	(0.252)	1.7	49	5.2	2,240
Standard LKSD3	76	75	28	40	30	140	15	1	10	72	239	29	184	6	–2	2.7	–0.2	1	0.9	2.2	655
LKSD3 CERT	82	87	30	47	35	152			27	78	240	30	178	8	(<5)	2.7		3	1.3	2.3	680
Standard GXR1	83	–40	8	69	1,115	765	13	4	429	–4	296	33	31	–1	18	30	0.8	54	122	3	708
GXR1 CERT	80	12	8.2	41	1,110	760	14		427	(14)	275	32	(38)	(0.8)	18	31	0.8	54	122	3.0	750
Standard SY3	51	–40	7	–30	–20	252	36	4	17	214	311	719	331	149	–4	–1	–0.4	6	–1	3	468
SY3 CERT	50	(11)	8.8	11	17	244*	27*	1.4	19	206*	302*	718*	320	148	(1.0)	(1.5)		(6.5)	0.31	3	450

D. D'Anna, Dipl. T.

ICPMS technical manager, Activation Laboratories Ltd.

Report 50090 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)																				
Sample	**V**	**Cr**	**Co**	**Ni**	**Cu**	**Zn**	**Ga**	**Ge**	**As**	**Rb**	**Sr**	**Y**	**Zr**	**Nb**	**Mo**	**Ag**	**In**	**Sn**	**Sb**	**Cs**	**Ba**
ACNH209	179	39	20	–20	46	68	21	1	–5	56	741	18	134	8	–2	–0.5	–0.2	2	–0.5	1.2	969
ACNH401	140	22	17	–20	28	92	22	1	–5	55	855	18	157	9	–2	–0.5	–0.2	1	–0.5	0.8	1040
ACNH403	147	94	18	23	29	78	20	1	–5	47	704	18	133	8	–2	–0.5	–0.2	1	–0.5	1.3	968
ACNH407	95	36	11	–20	25	71	22	1	–5	67	882	14	148	8	–2	–0.5	–0.2	2	–0.5	2.3	1290
ACNH411	172	75	20	–20	24	83	20	1	–5	27	639	18	114	8	–2	–0.5	–0.2	1	–0.5	–0.5	798
ACNH412	142	245	21	69	53	84	21	2	–5	54	814	16	131	7	–2	–0.5	–0.2	2	–0.5	0.6	1100
ACNH413	98	33	11	–20	29	67	22	1	–5	61	897	13	141	8	–2	–0.5	–0.2	2	–0.5	1.7	1240
ACNH414	97	34	11	–20	31	75	21	1	–5	66	873	13	145	8	–2	–0.5	–0.2	2	–0.5	1.8	1230
ACNH414 REP	92	32	11	–20	44	72	21	1	–5	63	837	12	139	7	–2	–0.5	–0.2	2	–0.5	1.9	1180
ACNH415	156	40	16	–20	19	77	20	1	–5	46	636	19	135	8	–2	–0.5	–0.2	1	–0.5	–0.5	958
ACNH424	114	45	13	–20	31	82	22	1	–5	77	829	14	157	9	–2	–0.5	–0.2	2	0.5	1.4	1210
ACNH428	143	75	19	26	54	79	20	1	–5	58	781	15	128	7	–2	–0.5	–0.2	1	–0.5	2.3	914
ACNH429	132	147	18	37	18	57	19	1	–5	60	761	13	124	7	–2	–0.5	–0.2	1	–0.5	0.6	1050
ACNH439	139	42	16	–20	36	70	21	1	–5	50	722	16	130	8	–2	–0.5	–0.2	1	–0.5	1.1	1060
BPNH307	144	58	19	24	19	76	19	1	–5	44	643	18	132	10	–2	–0.5	–0.2	2	–0.5	1.6	965
BPNH308	156	65	20	29	24	79	20	1	–5	41	651	18	127	11	–2	–0.5	–0.2	2	–0.5	0.6	911
BPNH330	165	24	19	–20	59	79	21	1	–5	58	685	19	145	9	–2	–0.5	–0.2	1	–0.5	1.1	1040
BPNH337	128	66	16	22	22	77	20	1	–5	50	750	17	131	8	–2	–0.5	–0.2	2	–0.5	1.4	1060
BPNH341	134	26	16	–20	39	76	21	1	–5	53	763	17	153	9	–2	–0.5	–0.2	2	–0.5	1.4	1040
Material–Control W2	231	80	40	67	107	83	17	2	–5	20	184	21	86	7	–2	–0.5	–0.2	2	0.8	1.7	165

Table 3. Trace elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 50090 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)																				
Sample	**V**	**Cr**	**Co**	**Ni**	**Cu**	**Zn**	**Ga**	**Ge**	**As**	**Rb**	**Sr**	**Y**	**Zr**	**Nb**	**Mo**	**Ag**	**In**	**Sn**	**Sb**	**Cs**	**Ba**
W2 CERT	262*	93*	44*	70*	103*	77*	20*	(1.0)	1.2	20*	194*	24*	94*	7.9	(0.6)	(0.046)			0.79	0.99*	182*
Material–Control WMG–1	148	712	186	2,490	5,800	105	10	2	15	3	37	13	51	5	2	1.8	–0.2	2	2.7	1.3	106
WMG–1 CERT	(149)	(770)	(200)	(2700)	(5900)	(110)	(10.3)		(7)	(4)	(41)	(12)	(43)	(6)	(1.4)	(2.7)		(2.2)	(1.8)	(0.48)	(114)
Blanco	–5	–20	–1	–20	–10	–30	–1	–1	–5	–2	–2	–1	–5	–1	–2	–0.5	–0.2	–1	–0.5	–0.5	–3
Standard MAG1	129	96	21	55	28	124	22	1	11	153	140	27	129	15	–2	–0.5	–0.2	3	0.7	8.5	492
MAG1 CERT	140*	97*	20.4*	53*	30*	130*	20.4*		9.2	149*	146*	28*	126*	12	1.6	0.08	(0.18)	3.6	0.96*	8.6*	479*
Standard BIR1	313	386	52	167	133	77	16	2	–5	–2	108	16	16	–1	–2	–0.5	–0.2	–1	0.6	0.6	7
BIR1 CERT	313*	382*	51.4*	166*	126*	71*	16	1.5	(0.4)	0.25*	108*	16*	16	0.6	(0.5)	(0.036)		0.65	0.58	0.005	7
Standard DNC1	163	269	55	246	99	66	14	1	–5	4	142	18	36	1	–2	–0.5	–0.2	1	0.9	0.8	102
DNC1 CERT	148*	285*	54.7*	247*	96*	66*	15	(1.3)	(0.2)	(4.5)	145*	18*	41*	3	(0.7)	(0.027)			0.96*	(0.34)	114*
Standard GXR2	47	35	8	–20	73	141	38	1	41	78	154	18	259	11	2	7.3	–0.2	2	39.3	5.1	2,240
GXR2 CERT	52	36	8.6	21	76	530	37		25	78.0	160	17	269	11	(2.1)	17	(0.252)	1.7	49	5.2	2,240
Standard LKSD3	72	80	30	54	33	–30	15	1	49	78	247	30	172	9	–2	1.3	–0.2	2	1.4	2.7	669
LKSD3 CERT	82	87	30	47	35	152			27	78	240	30	178	8	(<5)	2.7		3	1.3	2.3	680
Standard–Calibración MICA Fe	133	82	25	45	–10	1,170	95	3	–5	2,380	4	48	926	301	–2	1.1	0.6	70	–0.5	164	152
MICA Fe CERT	135*	90*	23*	35*	5*	1300*	95*	3.2	3	2200*	5*	48*	800*	270*	1.2		0.60	70*		180*	150*
Standard GXR1	81	–40	8	–40	1,110	754	16	3	426	–4	288	30	33	–2	18	31	0.8	48	77	3	918
GXR1 CERT	80	12	8.2	41	1,110	760	14		427	(14)	275	32	(38)	(0.8)	18	31	0.8	54	122	3.0	750
Standard SY3	44	–40	7	–40	–20	254	33	3	29	209	298	788	363	132	–4	–1	–0.4	8	–1	3	444
SY3 CERT	50	(11)	8.8	11	17	244*	27*	1.4	19	206*	302*	718*	320	148	(1.0)	(1.5)		(6.5)	0.31	3	450
Standard–Calibración STM1	–5	–20	–1	–20	–10	239	33	2	5	111	631	43	1,210	237	6	1.8	–0.2	7	1.6	1.5	562
STM1 CERT	(8.7)	(4.3)	0.9	(3)	(4.6)	235*	36*	(1.4)	4.6	118*	700*	46*	1210*	268*	5.2	0.079*	(0.12)	6.8	1.66*	1.54*	560*
Standard–Calibración IFG1	–5	–20	27	36	–10	–30	–1	24	–5	–2	4	9	–5	–1	–2	–0.5	–0.2	–1	1.0	–0.5	–3
IFG1 CERT	2	4	29*	23	13*	20*	0.7	24	1.5	0.4	3	9*	1	0.1*	0.7		0.2	0.3	0.63	0.06	1.5

C. Douglas Read, B.Sc

Laboratory manager, Activation Laboratories Ltd.

Notes:

*Recommended values.

( )Values only for information.

All other values are proposed.

Trace element values are in parts per million. Negative values are below the detection limit.

Values of Cu, Zn, Ni, Ag, As, Sb, Cr, Sn obtained by ICP/MS are only in order of magnitude and are provided as general information.

Table 4. Rare earth elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España.

Report 1719 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)														
Sample	**La**	**Ce**	**Pr**	**Nd**	**Sm**	**Eu**	**Gd**	**Tb**	**Dy**	**Ho**	**Er**	**Tm**	**Yb**	**Lu**
VNH–6	31.0	56.1	6.12	25.3	4.7	1.24	3.3	0.4	2.1	0.4	1.1	0.16	1.0	0.14
VNH–13	26.4	49.0	5.42	22.8	4.4	1.20	3.4	0.5	2.6	0.5	1.4	0.21	1.3	0.19
VNH–18	23.5	44.1	4.88	20.5	4.1	1.10	3.1	0.4	2.4	0.4	1.2	0.19	1.1	0.16
VNH–30	22.4	41.4	4.58	19.6	3.9	1.12	3.1	0.5	2.4	0.5	1.3	0.20	1.3	0.20
VNH–41	27.2	50.0	5.48	22.1	4.3	1.06	3.2	0.5	2.4	0.5	1.4	0.20	1.3	0.20
VNH–44	21.7	39.5	4.36	18.3	3.4	1.00	2.9	0.4	2.1	0.4	1.2	0.17	1.1	0.14
VNH–49	30.4	54.9	6.09	25.8	4.8	1.36	3.7	0.5	2.5	0.5	1.3	0.18	1.2	0.15
VNH–51	28.4	53.1	6.11	27.2	5.8	1.54	5.2	0.8	4.2	0.8	2.3	0.34	2.1	0.31
VNH–53	27.4	51.4	6.01	25.8	5.3	1.38	4.1	0.6	3.2	0.6	1.8	0.28	1.8	0.26
VNH–54	24.7	49.1	5.91	26.0	5.3	1.43	4.3	0.6	3.2	0.6	1.7	0.25	1.5	0.23
VNH–56A	23.0	44.1	5.02	22.1	4.4	1.24	3.6	0.6	3.0	0.6	1.7	0.24	1.5	0.24
BP–104	24.3	44.8	4.86	19.8	3.9	1.02	3.2	0.5	2.4	0.5	1.4	0.20	1.3	0.19
BP–104 REP	23.9	44.4	4.90	20.1	3.8	0.99	3.2	0.4	2.3	0.4	1.3	0.21	1.3	0.20
BP–105	30.0	54.1	5.75	23.6	4.4	1.20	3.3	0.4	2.0	0.4	1.0	0.15	0.9	0.13
BP–107	26.3	48.1	5.07	20.6	3.9	1.04	3.2	0.4	2.3	0.4	1.3	0.20	1.3	0.19
BP–110	21.0	40.4	4.70	20.9	4.4	1.26	3.5	0.5	2.9	0.6	1.7	0.26	1.6	0.24
BP–111	25.9	47.9	5.21	21.0	4.1	1.09	3.1	0.4	2.4	0.5	1.4	0.20	1.3	0.20
BP–114	26.3	48.3	5.42	21.0	3.6	1.07	2.9	0.4	1.9	0.3	1.0	0.14	0.9	0.12
BP–125	25.2	46.6	5.30	20.7	3.9	1.02	3.2	0.4	2.2	0.4	1.2	0.18	1.1	0.16
BP–125B	25.5	48.2	5.59	22.9	4.4	1.12	3.6	0.5	2.4	0.5	1.3	0.19	1.2	0.18
BP–125D	18.1	31.5	3.45	13.4	2.8	1.00	2.3	0.3	1.7	0.4	1.1	0.17	1.1	0.18
BP–125H	25.3	46.2	5.05	20.2	3.8	1.04	3.0	0.4	2.1	0.4	1.2	0.16	1.0	0.16
BP–135	22.4	44.3	5.23	22.1	4.5	1.29	3.8	0.5	2.8	0.6	1.6	0.22	1.5	0.21
BP–139	26.1	48.4	5.35	20.8	4.2	1.03	3.4	0.5	2.6	0.5	1.5	0.23	1.5	0.24
BP–143	22.7	42.5	4.86	19.5	3.8	1.22	3.3	0.5	2.5	0.5	1.4	0.19	1.3	0.18
BP–146	24.3	45.2	5.11	20.3	4.0	1.07	3.4	0.5	2.5	0.5	1.3	0.20	1.2	0.20
AC–200	23.5	44.0	5.05	19.9	4.0	1.10	3.5	0.5	2.3	0.5	1.3	0.19	1.1	0.19
AC–203	24.6	45.7	5.19	20.1	3.6	1.00	3.0	0.4	2.0	0.4	1.1	0.17	1.1	0.17
AC–221	21.4	38.0	4.17	16.7	3.3	1.10	2.7	0.4	2.3	0.5	1.4	0.21	1.4	0.22
AC–227	13.4	24.6	2.94	12.7	3.1	1.27	2.8	0.4	2.5	0.5	1.5	0.23	1.5	0.23
AC–227 REP	13.7	24.9	3.03	13.5	3.2	1.34	3.1	0.5	2.6	0.5	1.5	0.22	1.6	0.23
AC–228	25.8	50.1	5.81	23.4	4.6	1.26	3.8	0.5	2.7	0.5	1.5	0.23	1.5	0.23
AC–229	24.1	46.1	5.38	21.9	4.5	1.27	4.0	0.5	2.8	0.6	1.6	0.24	1.4	0.22
AC–233	20.7	39.2	4.36	17.2	3.4	0.97	2.9	0.4	2.1	0.4	1.1	0.16	1.1	0.17
AC–236	20.2	38.6	4.48	18.5	4.0	1.16	3.4	0.4	2.4	0.5	1.4	0.20	1.3	0.22
Blanco	–0.1	–0.2	–0.05	–0.1	–0.1	–0.05	–0.1	–0.1	–0.1	–0.1	–0.1	–0.05	–0.1	–0.04
Standard MAG1	46	90	9.9	39	7.6	1.57	5.4	1.0	5.3	1.0	2.9	0.44	2.7	0.37
MAG1 CERT	43*	88*	9.3	38*	7.5*	1.55*	5.8*	0.96*	5.2*	1.02*	3	0.43*	2.6*	0.40*

Table 4. Rare earth elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 1719 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)														
Sample	**La**	**Ce**	**Pr**	**Nd**	**Sm**	**Eu**	**Gd**	**Tb**	**Dy**	**Ho**	**Er**	**Tm**	**Yb**	**Lu**
Standard BIR1	0.7	2.0	0.37	2.5	1.2	0.59	1.9	0.4	2.6	0.6	1.8	0.28	1.8	0.28
BIR1 CERT	0.62*	1.95*	0.38*	2.5*	1.1*	0.54*	1.85*	0.36*	2.5*	0.57*	1.7*	0.26*	1.65	0.26*
Standard DNC1	3.9	8.6	1.04	4.8	1.4	0.57	2.0	0.4	2.7	0.6	2.0	0.32	2.0	0.33
DNC1 CERT	3.8*	10.6	1.3	4.9*	1.38*	0.59*	2	0.41*	2.7	0.62	2*	(0.33)	2.01*	0.32*
Standard GXR2	26	50	5.10	19	3.6	0.75	3.3	0.5	2.8	0.6	1.7	0.28	1.7	0.27
GXR2 CERT	25.6	51.4		(19)	3.5	0.81	(3.3)	0.48	3.3			(0.3)	2.04	(0.27)
Standard LKSD3	50	89	10.9	43	7.8	1.48	6.6	0.9	4.8	1.0	2.8	0.43	2.7	0.39
LKSD3 CERT	52	90		44	8.0	1.50		1.0	4.9				2.7	0.4
Standard GXR1	8.2	16	1.90	9.0	2.6	0.7	4.3	0.8	4.4	1.0	2.8	0.4	2.1	0.30
GXR1 CERT	7.5	17		(18)	2.7	0.69	4.2	0.83	4.3			(0.43)	1.9	0.3
Standard SY3	1,340	2,230	223	672	109	17	105	18	118	29	68	12	62	7.92
SY3 CERT	1340*	2230*	223*	670	109	17*	105*	18	118	29.5*	68	11.6*	(62)	7.90

Report 50090 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)														
Sample	**La**	**Ce**	**Pr**	**Nd**	**Sm**	**Eu**	**Gd**	**Tb**	**Dy**	**Ho**	**Er**	**Tm**	**Yb**	**Lu**
ACNH209	22.3	43.8	5.30	21.6	4.1	1.29	3.6	0.5	2.9	0.5	1.5	0.22	1.5	0.22
ACNH401	28.0	53.4	6.47	26.6	4.8	1.47	4.0	0.6	3.0	0.6	1.6	0.24	1.5	0.22
ACNH403	25.2	47.3	5.70	22.8	4.1	1.27	3.8	0.5	2.8	0.5	1.5	0.23	1.4	0.23
ACNH407	31.7	52.5	6.36	24.6	3.9	1.14	3.0	0.4	1.9	0.4	1.0	0.15	1.0	0.16
ACNH411	21.4	42.5	5.14	21.6	4.1	1.32	3.7	0.6	3.0	0.6	1.6	0.24	1.6	0.23
ACNH412	28.6	55.0	6.66	27.3	4.6	1.30	4.0	0.5	2.6	0.5	1.3	0.20	1.2	0.17
ACNH413	29.1	52.8	6.24	24.1	3.9	1.18	3.0	0.4	2.0	0.4	1.0	0.15	1.0	0.16
ACNH414	28.8	53.9	6.22	24.2	4.1	1.19	3.2	0.4	2.1	0.4	1.1	0.16	1.0	0.15
ACNH414 REP	28.0	52.8	6.17	23.9	4.0	1.13	3.1	0.4	2.0	0.4	1.1	0.16	1.0	0.15
ACNH415	23.8	43.9	5.06	20.7	3.9	1.32	3.7	0.6	3.0	0.6	1.8	0.27	1.8	0.26
ACNH424	27.5	51.3	5.99	23.9	4.1	1.17	3.3	0.4	2.3	0.4	1.2	0.18	1.2	0.17
ACNH428	24.3	46.8	5.48	22.0	3.9	1.18	3.4	0.5	2.6	0.5	1.4	0.20	1.3	0.20
ACNH429	20.3	38.5	4.61	18.5	3.4	1.06	2.9	0.4	2.1	0.4	1.2	0.17	1.1	0.16
ACNH439	24.1	45.0	5.45	21.9	4.0	1.25	3.6	0.5	2.6	0.5	1.5	0.22	1.4	0.21
BPNH307	25.5	48.1	5.71	22.8	4.2	1.34	3.8	0.5	2.9	0.6	1.7	0.24	1.6	0.24
BPNH308	25.1	48.9	5.80	23.4	4.4	1.35	3.9	0.6	3.0	0.6	1.7	0.25	1.6	0.23
BPNH330	25.6	49.2	5.93	24.1	4.6	1.35	4.1	0.6	3.0	0.6	1.6	0.24	1.5	0.23
BPNH337	25.5	46.3	5.60	22.6	4.0	1.19	3.5	0.5	2.6	0.5	1.4	0.21	1.3	0.19
BPNH341	25.8	50.7	6.00	24.0	4.3	1.32	3.8	0.5	2.8	0.5	1.5	0.22	1.4	0.21
Material–Control W2	10.5	22.2	2.85	12.6	3.1	1.15	3.7	0.6	3.7	0.7	2.2	0.33	2.0	0.29
W2 CERT	11.4*	24*	(5.9)	14.0	3.25*	1.1*	3.6*	0.63	3.8*	0.76*	2.5	0.4	2.05*	0.33*
Material–Control WMG–1	7.5	15.3	2.00	9.0	2.2	0.75	2.5	0.4	2.3	0.5	1.3	0.21	1.2	0.19
WMG–1 CERT	(8.2)	(16)		(9)	(2.3)	(0.8)		(0.4)	(2.8)	(0.5)		(0.2)	(1.3)	(0.21)

Table 4. Rare earth elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 50090 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)														
Sample	**La**	**Ce**	**Pr**	**Nd**	**Sm**	**Eu**	**Gd**	**Tb**	**Dy**	**Ho**	**Er**	**Tm**	**Yb**	**Lu**
Blanco	–0.1	–0.1	–0.05	–0.1	–0.1	–0.05	–0.1	–0.1	–0.1	–0.1	–0.1	–0.05	–0.1	–0.04
Standard MAG1	43.2	86.8	10.07	39.0	7.4	1.57	6.4	1.0	5.3	1.0	2.8	0.44	2.6	0.38
MAG1 CERT	43*	88*	9.3	38*	7.5*	1.55*	5.8*	0.96*	5.2*	1.02*	3	0.43*	2.6*	0.40*
Standard BIR1	1.4	2.4	0.50	2.7	1.2	0.60	2.0	0.4	2.7	0.6	1.7	0.29	1.7	0.26
BIR1 CERT	0.62*	1.95*	0.38*	2.5*	1.1*	0.54*	1.85*	0.36*	2.5*	0.57*	1.7*	0.26*	1.65	0.26*
Standard DNC1	4.0	8.4	1.12	5.1	1.4	0.64	2.1	0.4	2.9	0.6	2.0	0.33	1.9	0.30
DNC1 CERT	3.8*	10.6	1.3	4.9*	1.38*	0.59*	2	0.41*	2.7	0.62	2*	(0.33)	2.01*	0.32*
Standard GXR2	25.5	50.4	5.40	20.1	3.6	0.79	3.2	0.5	2.9	0.6	1.7	0.28	1.7	0.27
GXR2 CERT	25.6	51.4		(19)	3.5	0.81	(3.3)	0.48	3.3			(0.3)	2.04	(0.27)
Standard LKSD3	50.6	91.9	11.9	45.5	8.1	1.59	6.8	0.9	5.2	1.0	2.9	0.46	2.8	0.42
LKSD3 CERT	52	90		44	8.0	1.50		1.0	4.9				2.7	0.4
Standard–Calibración MICA Fe	204	420	51.6	189	34.7	0.68	23.8	2.8	11.0	1.4	3.8	0.58	3.4	0.50
MICA Fe CERT	200*	420*	49*	180*	33*	0.7*	21*	2.7*	11*	1.6*	3.8*	0.48*	3.5*	0.5*
Standard GXR1	9.0	15.2	2.1	9.0	2.9	0.7	4.2	0.8	4.8	0.9	2.7	0.4	2.2	0.31
GXR1 CERT	7.5	17		(18)	2.7	0.69	4.2	0.83	4.3			(0.43)	1.9	0.3
Standard SY3	1,260	2210	222	757	129	20.9	129	23.5	141	29.6	91.2	14.3	72.0	8.88
SY3 CERT	1340*	2230*	223*	670	109	17*	105*	18	118	29.5*	68	11.6*	(62)	7.90
Standard–Calibración STM1	145	242	24.3	77.4	11.7	3.55	8.9	1.5	7.7	1.4	4.2	0.68	4.1	0.61
STM1 CERT	150*	259*	19*	79*	12.6*	3.6*	9.5*	1.55*	8.1*	1.9	4.2*	0.69	4.4*	0.60
Standard–Calibración IFG1	2.7	3.7	0.43	1.7	0.4	0.40	0.7	0.1	0.8	0.2	0.6	0.10	0.6	0.09
IFG1 CERT	2.8*	4*	0.4*	0.2	0.4*	0.39*	0.74*	0.11*	0.8*	0.2*	0.63*	0.09*	0.6*	0.09*

Notes:

*Recommended values.

( )Values only for information.

All other values are proposed.

Trace element values are in parts per million. Negative values are below the detection limit.

Table 5. Other trace elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España.

Report 1719 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)								
Sample	**Hf**	**Ta**	**W**	**Tl**	**Pb**	**Bi**	**Th**	**U**
VNH–6	4.0	0.7	1	0.1	–5	–0.2	10.6	3.2
VNH–13	4.6	0.7	1	0.3	10	–0.2	11.7	3.9
VNH–18	4.1	0.5	1	0.2	8	–0.2	9.2	2.8
VNH–30	4.5	0.7	1	0.3	7	–0.2	10.6	3.5
VNH–41	5.0	0.8	1	0.4	10	–0.2	14.0	4.5
VNH–44	3.8	0.6	1	0.3	8	–0.2	10.0	3.3
VNH–49	4.2	0.7	1	0.1	6	–0.2	8.8	2.7
VNH–51	4.9	0.6	1	0.3	7	–0.2	10.0	2.9
VNH–53	4.2	0.6	1	0.2	6	–0.2	8.6	2.4
VNH–54	3.9	0.8	–1	0.1	7	–0.2	7.3	2.1
VNH–56A	4.2	0.6	–1	0.2	8	–0.2	8.3	2.6
BP–104	4.5	0.7	1	0.2	–5	–0.2	12.4	4.1
BP–104 REP	4.7	0.7	3	0.3	7	–0.2	12.6	4.1
BP–105	4.4	0.7	1	0.3	11	–0.2	12.2	3.6
BP–107	4.9	0.7	1	0.3	11	–0.2	14.3	4.6
BP–110	3.2	0.4	1	0.2	6	–0.2	6.1	1.8
BP–111	5.3	0.7	1	0.3	6	–0.2	14.5	4.7
BP–114	4.2	0.7	1	0.1	7	–0.2	10.6	3.2
BP–125	4.5	0.7	1	0.3	10	–0.2	11.9	3.9
BP–125B	4.6	0.7	1	0.3	8	–0.2	11.2	3.7
BP–125D	4.7	0.8	1	0.2	8	–0.2	12.7	4.1
BP–125H	4.5	0.7	1	0.2	8	–0.2	12.8	4.3
BP–135	3.9	0.5	1	0.3	8	–0.2	6.8	1.9
BP–139	5.2	0.7	1	0.6	10	–0.2	12.8	4.2
BP–143	4.6	0.6	–1	0.3	–5	–0.2	9.0	2.7
BP–146	4.5	0.7	1	0.5	9	–0.2	10.1	3.0
AC–200	4.1	0.6	1	0.2	–5	–0.2	10.2	3.2
AC–203	4.4	0.7	1	0.5	9	–0.2	12.6	4.2
AC–221	4.1	0.6	1	0.3	6	–0.2	8.5	2.5
AC–227	3.8	0.6	1	0.1	5	–0.2	7.2	2.0
AC–227 REP	4.1	0.6	1	0.1	6	–0.2	7.1	2.1
AC–228	4.5	0.6	1	0.3	8	–0.2	8.6	2.6
AC–229	4.2	0.6	1	0.2	8	–0.2	8.1	2.4
AC–233	3.8	0.6	1	0.3	8	–0.2	8.9	2.9
AC–236	3.7	0.5	–1	0.3	8	–0.2	6.5	2.0
Blanco	–0.2	–0.1	–0.5	–0.1	–5	–0.2	–0.1	–0.1
Standard MAG1	3.7	1.2	1.9	0.4	20	–0.2	12	2.9
MAG1 CERT	3.7*	1.1	1.4	(0.59)	24*	0.34	11.9*	2.7*

Table 5. Other trace elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 1719 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)								
Sample	**Hf**	**Ta**	**W**	**Tl**	**Pb**	**Bi**	**Th**	**U**
Standard BIR1	0.7	–0.1	–0.5	–0.1	6	–0.2	–0.1	–0.1
BIR1 CERT	0.6*	0.04	0.07	(0.01)	3	(0.02)	0.03	0.01
Standard DNC1	1.1	0.1	1.0	–0.1	8	–0.2	0.3	–0.1
DNC1 CERT	1.01*	0.098*	(0.2)	(0.026)	6.3	(0.02)	(0.2)	(0.1)
Standard GXR2	6.8	0.8	1.4	0.6	706	–0.2	8.2	2.8
GXR2 CERT	8.3	0.9	1.9	1.03	690	(0.69)	8.8	2.9
Standard LKSD3	4.7	0.6	0.8	0.5	21	–0.2	11	4.4
LKSD3 CERT	4.8	0.7	(<4)		29		11.4	4.6
Standard GXR1	0.9	–0.2	164	0.4	740	1,380	2.7	35
GXR1 CERT	1.0	0.175	164	(0.39)	730	1,380	2.44	34.9
Standard SY3	12	24	3	1.5	131	0.7	1,003	650
SY3 CERT	9.70	30*	1.1*	1.50	133*	(0.8)	1003*	650*

Report 50090 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)								
Sample	**Hf**	**Ta**	**W**	**Tl**	**Pb**	**Bi**	**Th**	**U**
ACNH209	3.8	0.6	–1	0.3	8	0.8	8.8	3.1
ACNH401	4.5	0.7	–1	0.3	21	1.0	10.5	3.3
ACNH403	3.6	0.5	–1	0.4	9	0.7	7.6	2.4
ACNH407	3.9	0.6	–1	0.6	18	2.8	10.2	3.3
ACNH411	3.2	0.5	–1	0.1	11	–0.4	5.7	1.7
ACNH412	3.6	0.5	–1	0.4	14	206.9	8.3	2.7
ACNH413	3.9	0.6	–1	0.5	33	1.6	9.4	3.1
ACNH414	4.1	0.6	–1	0.6	18	2.2	10.0	3.2
ACNH414 REP	3.9	0.6	–1	0.6	13	1.9	9.8	3.1
ACNH415	3.7	0.5	–1	0.3	8	2.8	7.8	2.5
ACNH424	4.5	0.7	–1	0.6	16	2.3	11.9	4.1
ACNH428	3.8	0.5	–1	0.4	13	1.6	9.7	3.3
ACNH429	3.6	0.5	–1	0.3	10	0.9	9.0	3.2
ACNH439	3.7	0.7	–1	0.4	12	1.5	7.8	2.6
BPNH307	3.6	0.7	–1	0.4	10	1.0	8.0	2.4
BPNH308	3.6	0.7	–1	0.3	10	2.1	7.6	2.3
BPNH330	4.2	0.6	–1	0.5	11	1.4	8.8	2.8
BPNH337	3.6	0.6	–1	0.4	14	1.3	8.6	2.7
BPNH341	4.3	0.6	–1	0.4	11	2.0	9.0	2.9
Material–Control W2	2.3	0.5	–1	0.2	10	–0.4	2.2	0.5
W2 CERT	2.56*	0.5	(0.3)	(0.2)	9	(0.03)	2.2*	0.53
Material–Control WMG–1	1.4	0.3	–1	–0.1	12	4.7	1.2	0.7
WMG–1 CERT	(1.3)	(0.5)	(1.3)		(15)		(1.1)	(0.65)

Table 5. Other trace elements. Results of chemical analysis – ACTLABS Laboratory, Canada – sponsored by Universidad Complutense de Madrid, España (*continued*).

Report 50090 RPT.XLS – CODE 4LITHO–TRACE ELEM FUS ICP/MS (WRA4B2.REV2)								
Sample	**Hf**	**Ta**	**W**	**Tl**	**Pb**	**Bi**	**Th**	**U**
Blanco	–0.2	–0.1	–1	–0.1	–5	–0.4	–0.1	–0.1
Standard MAG1	3.6	1.2	2	0.3	21	–0.4	12.6	3.0
MAG1 CERT	3.7*	1.1	1.4	(0.59)	24*	0.34	11.9*	2.7*
Standard BIR1	0.6	–0.1	–1	–0.1	–5	–0.4	–0.1	–0.1
BIR1 CERT	0.6*	0.04	0.07	(0.01)	3	(0.02)	0.03	0.01
Standard DNC1	1.0	–0.1	–1	–0.1	7	–0.4	0.3	–0.1
DNC1 CERT	1.01*	0.098*	(0.2)	(0.026)	6.3	(0.02)	(0.2)	(0.1)
Standard GXR2	6.6	0.8	2	0.5	111	–0.4	8.7	2.9
GXR2 CERT	8.3	0.9	1.9	1.03	690	(0.69)	8.8	2.9
Standard LKSD3	4.6	0.7	–1	0.3	–5	–0.4	11.7	4.8
LKSD3 CERT	4.8	0.7	(<4)		29		11.4	4.6
Standard–Calibración MICA Fe	27.8	33.8	10	16.0	7	–0.4	178	94.5
MICA Fe CERT	26*	35*	15	16	13*	2	150*	80*
Standard GXR1	0.8	–0.2	165	0.5	730	1380	2.7	34.9
GXR1 CERT	1.0	0.175	164	(0.39)	730	1,380	2.44	34.9
Standard SY3	10.5	14.9	10	1.7	94	3.7	1,000	599
SY3 CERT	9.70	30*	1.1*	1.50	133*	(0.8)	1003*	650*
Standard–Calibración STM1	26.4	18.0	3	0.3	21	2.1	30.3	8.8
STM1 CERT	28*	18.6*	3.6*	0.26	17.7*	0.13	31*	9.06*
Standard–Calibración IFG1	–0.2	0.2	220	–0.1	–5	–0.4	–0.1	–0.1
IFG1 CERT	0.04	0.2	220	0.02	4		0.1	0.02

Notes:

*Recommended values.

( )Values only for information.

All other values are proposed.

Trace element values are in parts per million. Negative values are below the detection limit.

Values of Pb, W obtained by ICP/MS are only in order of magnitude and are provided as general information.