UA SCIENCE
ARIZONA GEOLOGICAL SURVEY

1955 E 6th St.
Tucson, AZ 85721
https://azgs.arizona.edu/
(520) 621-2470

Drill core data for the Red Mountain porphyry copper-molybdenum system, Harshaw mining district, Patagonia Mountains, Santa Cruz County, Arizona

Arizona Geological Survey Open-File Report 25-4

Recommended Citation:

Mako, C. A., Holman, B. I., Fairbanks, K. J., Foley, A. P., and Richardson, C. A., 2025, Drill core data for the Red Mountain porphyry copper-molybdenum system, Harshaw mining district, Patagonia Mountains, Santa Cruz County, Arizona: Arizona Geological Survey Open-File Report 25-4.

Description:

Red Mountain in Patagonia, AZ hosts a porphyry copper-molybdenum deposit with a history of substantial exploration drilling. Drill data including logs, assay results, and geologic maps, as well as skeletonized drill core, were donated to the Arizona Geological Survey in 2004. This repository includes all available original drilling data, scanned and made available as PDFs, as well as tabulated data in spreadsheets.

Tabulated digital data and other products related to this document are available at:
http://hdl.handle.net/10150/676938

This work was funded by the United States Geological Survey National Geological and Geophysical Data Preservation Program, G23AP00215.

HOLE NO. 140

COLLAR COORDINATES 866,022:184,559
COLLAR ELEVATION 5,740'
DEPTH OF HOLE 5,145'

SAMPLE NO.	ELEVATION (Feet)	DEPTH INTERVAL (Feet)	FOOT-AGE	ASSAYS								% CHAL-COPYRITE	% PYRITE	% TOTAL SULFIDE	% ANH-YDRITE	PY/CH RATIO
				Cu %	Mo ppm	Au oz	Ag oz	Pb ppm	Zn ppm	S %	S= %					
15500-15502	5605-5544	135- 196	61	.05						4.99	2.99					
15503-15505	5525-5466	215- 274	59	.07						7.55	5.36					
15506-15507	5425-5397	315- 343	28	.07						6.33	3.04					
15508-15510	5397-5385	343- 355	12	2.57	70	.003	.08	50	20	10.95	4.71		7.60	10.82		
15511-15515	5385-5360	355- 380	25	.25	70	Tr.	.08	40	20	9.09	3.61		6.65	6.96		
15516-15529	5360-5240	380- 500	120	.05	60	.002	.06	30	20	7.63	5.20	.14	9.64	9.78		68.9
15530-15539	5240-5140	500- 600	100	.04	80	.001	.10	70	60	7.18	3.31	.12	6.12	6.24		51.0
15540-15549	5140-5040	600- 700	100	.03	60	.002	.08	30	60	5.96	4.18	.09	7.77	7.86		86.4
15550-15559	5040-4940	700- 800	100	.05	110	Tr.	.09	30	60	8.72	6.83	.14	12.70	12.84		90.7
15560-15569	4940-4840	800- 900	100	.04	90	.001	.09	30	120	7.55	5.52	.12	10.26	10.38		85.6
15570-15579	4840-4740	900-1000	100	.03	100	.002	.08	30	140	6.35	4.46	.09	8.30	8.39		92.2
15580-15589	4740-4640	1000-1100	100	.04	50	.001	.07	30	30	3.35	3.23	.12	5.97	6.09		49.8
15590-15599	4640-4540	1100-1200	100	.05	70	.002	.07	30	70	5.28	5.20	.14	9.64	9.78		68.9
16200-16209	4540-4440	1200-1300	100	.05	40	.002	.04	10	180	4.57	4.51	.14	8.35	8.49		59.6
16210-16219	4440-4340	1300-1400	100	.05	50	.002	.09	20	500	4.04	3.69	.14	6.82	6.96		48.7
16220-16229	4340-4240	1400-1500	100	.06	40	Tr.	.11	30	820	5.76	5.19	.17	9.61	9.78		56.5
16230-16239	4240-4140	1500-1600	100	.05	50	Tr.	.08	20	1320	2.45	2.21	.14	4.05	4.19		28.9
16240-16249	4140-4040	1600-1700	100	.05	60	.002	.08	60	1360	3.58	1.76	.14	3.20	3.34		22.9

HOLE NO. 140

COLLAR COORDINATES 866,022:184,559
COLLAR ELEVATION 5,740'
DEPTH OF HOLE 5,145'

SAMPLE NO.	ELEVATION (Feet)	DEPTH INTERVAL (Feet)	FOOT-AGE	ASSAYS								% CHAL-COPYRITE	% PYRITE	% TOTAL SULFIDE	% ANH-YDRITE	PY/CH RATIO
				Cu %	Mo ppm	Au oz	Ag oz	Pb ppm	Zn ppm	S %	S= %					
16250-16259	4040-3940	1700-1800	100	.05	70	.002	.05	20	1120	2.65	2.61	.14	4.79	4.93		34.2
	3940-3840	1800-1900	100	.08	80	.002	.05	60	1240			.23				
16270-16279	3840-3740	1900-2000	100	.06	60	.002	.09	200	600	2.20	1.62	.17	2.92	3.09		17.2
16280-16289	3740-3640	2000-2100	100	.07	80	.002	.05	160	210	2.57	2.38	.20	4.33	4.53		21.7
16290-16299	3640-3540	2100-2200	100	.11	60	.002	.07	60	190	2.68	1.65	.32	2.88	3.20		9.0
16300-16309	3540-3440	2200-2300	100	.09	60	.001	.09	30	140	2.30	2.01	.26	3.60	3.86		13.8
	3440-3340	2300-2400	100	.11	60	.002	.06	20	140			.32				
16320-16329	3340-3240	2400-2500	100	.13	100	.001	.05	30	120	2.60	2.56	.38	4.55	4.93		12.0
16330-16339	3240-3140	2500-2600	100	.13	90	.001	.09	30	110	3.00	3.00	.38	5.37	5.75		14.1
16340-16349	3140-3040	2600-2700	100	.10	110	Tr.	.06	20	80	2.23	2.20	.29	3.93	4.22		13.6
16350-16359	3040-2940	2700-2800	100	.12	70	Tr.	.10	40	210	2.97	2.76	.35	4.94	5.29		14.1
16360-16369	2940-2840	2800-2900	100	.11	70	Tr.	.07	30	180	2.50	2.47	.32	4.42	4.74		13.8
16370-16379	2840-2740	2900-3000	100	.10	80	Tr.	.09	40	180	3.01	2.95	.29	5.34	5.63		18.4
16380-16389	2740-2640	3000-3100	100	.11	70	.001	.10	60	150	2.64	1.73	.32	3.03	3.35	3.87	9.5
16390-16399	2640-2540	3100-3200	100	.12	70	Tr.	.10	50	160	2.51	2.02	.35	3.56	3.91	2.09	10.2
16400-16409	2540-2440	3200-3300	100	.20	80	.001	.15	60	130	3.44	2.61	.58	4.51	5.09	3.53	7.8
16410-16419	2440-2340	3300-3400	100	.14	70	.002	.08	50	160	3.37	2.76	.41	4.91	5.32	2.60	12.0
16420-16429	2340-2240	3400-3500	100	.15	70	.001	.10	30	100	3.24	3.15	.43	5.62	6.05	.38	13.1

HOLE NO. 140

COLLAR COORDINATES 866,022:184,559
COLLAR ELEVATION 5,740'
DEPTH OF HOLE 5,145'

SAMPLE NO.	ELEVATION (Feet)	DEPTH INTERVAL (Feet)	FOOT-AGE	ASSAYS								% CHAL-COPYRITE	% PYRITE	% TOTAL SULFIDE	% ANH-YDRITE	PY/CH RATIO
				Cu %	Mo ppm	Au oz	Ag oz	Pb ppm	Zn ppm	S %	$S^{=}$ %					
16430-16439	2240-2140	3500-3600	100	.07	50	Tr.	.08	20	60	1.36	1.22	.20	2.15	2.35	.60	10.8
16440-16444	2140-2090	3600-3650	50	.09	80	Tr.	.06	80	200	1.68	1.39	.26	2.43	2.69	1.23	9.4
16445-16449	2090-2040	3650-3700	50	.23	90	.001	.13	50	130	3.02	2.94	.67	5.08	5.75	.34	7.6
16450-16459	2040-1940	3700-3800	100	.16	80	.001	.11	30	40	2.31	2.13	.46	3.69	4.15	.77	8.0
16465+16467-16470	1940-1840	3800-3900	100	.14	90	Tr.	.05	30	90	1.44	.58	.41	.82	1.22	3.66	2.0
16471-16480	1840-1740	3900-4000	100	.14	110	.003	.07	20	50	1.92	1.38	.41	2.32	2.73	2.30	5.7
16481-16498	1740-1650	4000-4090	90	.11	70	.003	.03	20	50	1.81	1.35	.32	2.32	2.64	1.96	7.3
16499-16505	1650-1615	4090-4125	35	.05	40	.003	.04	30	70	.92	.61	.14	1.05	1.19	1.32	7.5
16506-16514	1615-1570	4125-4170	45	.12	110	.003	.11	170	70	2.40	2.01	.35	3.54	3.89	1.66	10.1
16515-16531	1570-1485	4170-4255	85	.13	80	.003	.06	30	30	1.35	.96	.38	1.55	1.93	1.66	4.1
16532-16538	1485-1450	4255-4290	35	.60	120	.004	.17	30	70	2.68	2.51	1.74	3.56	5.30	.72	2.0
16539-16560	1450-1340	4290-4400	110	.13	50	.003	.11	20	70	1.55	.56	.38	.81	1.19	4.21	2.1
16561-16570	1340-1270	4400-4470	70	.11	30	.002	.11	20	70	1.29	.67	.32	1.05	1.37	2.64	3.3
16571-16574	1270-1235	4470-4505	35	.25	40	.004	.14	20	90	2.61	1.85	.72	3.00	3.72	3.23	4.2
16575-16586	1235-1175	4505-4565	60	.54	40	.004	.13	20	60	3.57	2.65	1.57	3.93	5.50	3.91	2.5
16587-16591	1175-1150	4565-4590	25	2.37	100	.005	.35	20	170	6.22	4.34	6.87	3.63	10.50	8.00	0.5
16592-16596	1150-1125	4590-4615	25	.59	120	.006	.20	10	70	3.43	2.58	1.71	3.71	5.42	3.62	2.2
16597-16613	1125-1040	4615-4700	85	1.99	120	.006	.31	30	100	4.60	2.86	5.77	1.57	7.34	7.40	0.3

HOLE NO. 140

COLLAR COORDINATES 866,022:184,559
COLLAR ELEVATION 5,740'
DEPTH OF HOLE 5,145'

SAMPLE NO.	ELEVATION (Feet)	DEPTH INTERVAL (Feet)	FOOT-AGE	ASSAYS								% CHAL-COPYRITE	% PYRITE	% TOTAL SULFIDE	% ANH-YDRITE	PY/CH RATIO
				Cu %	Mo ppm	Au oz	Ag oz	Pb ppm	Zn ppm	S %	$S^{=}$ %					
16614-16623	1040- 990	4700-4750	50	.11	70	.002	.05	60	80	2.47	2.16	.32	3.84	4.16	1.32	12.0
16624-16633	990- 940	4750-4800	50	.22	80	.002	.08	40	40	1.69	1.31	.64	2.04	2.68	1.62	3.2
16634-16644	940- 885	4800-4855	55	.16	50	.001	.08	40	40	1.99	.65	.46	.92	1.38	5.70	2.0
16645-16654	885- 835	4855-4905	50	.20	110	.002	.05	50	70	1.69	.82	.58	1.16	1.74	3.70	2.0
16655-16664	835- 785	4905-4955	50	.15	100	.002	.06	40	60	1.58	1.00	.43	1.59	2.02	2.47	3.7
16665-16673	785- 740	4955-5000	45	.28	100	.002	.03	40	40	1.76	1.04	.81	1.42	2.23	3.06	1.8
16674-16693	740- 640	5000-5100	100	.09	40			60	40	.69	.48	.26	.73	.99	.89	2.8
16694-15599 + 17800-17802	640- 595	5100-5145	45	.13	40			10	30	.72	.54	.38	.77	1.15	.77	2.0