Hartless Joe - Hartless Joe

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		516567	6753488	1553	67.06

ZONE: Unknown

SECTION:

HOLE: HAR-16-001

CLAIM:

Contractor: Beaudoin

Drill: 1

Core Size: NTW

Casing Depth:

Drilling Dates: -

Geology Logged By: J. Morton

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET: King

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	3.9	3.9	BAS
3.9	9.27	5.37	BAS
9.27	11.2	1.93	MST
11.2	17.04	5.84	BAS
17.04	17.33	0.29	QV
17.33	17.86	0.53	MST
17.86	18.16	0.3	SLT
18.16	22.02	3.86	MST
22.02	22.42	0.4	LST
22.42	32.75	10.33	MST
32.75	50.81	18.06	BAS
50.81	51.14	0.33	SLT
51.14	63.44	12.3	BAS
63.44	67.06	3.62	AND

SAMPLES	
Numbers:	K292942 to K292981
Total:	40
Batch:	002, 003
Certificates:	WH16154785, WH16154788

COMMENTS

Box Log

HAR-16-001

Hartless Joe
Unknown Zone

Archer,Cathro & Associates (1981) Limited

Box Number	From (m)	To (m)
1	0	5.94
2	5.94	9.89
3	9.89	13.87
4	13.87	18.16
5	18.16	22.42
6	22.42	26.67
7	26.67	30.93
8	30.93	35.3
9	35.3	39.12
10	39.12	43.04
11	43.04	47.25
12	47.25	51.28
13	51.28	55.62
14	55.62	59.87
15	59.87	64.14
16	64.14	67.06

Box Number	From (m)	To (m)

Box Number	From (m)	To (m)

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.90	3.90	BAS	FG	Overburden; Cobbles/rubble of dark green basalt; Chlorite on fracture surfaces.							
						DK	GN	RB				
3.90	9.27	5.37	BAS	FG	Dark green, moderately brecciated pillow basalt with limey black inter-pillow mud hosting abundant v.f.g. epidote and carbonate, very rare mm-scale diffuse patches of quartz, and trace pyrite and sphalerite as v.f.g. ribbons and clots; Basalt pillows are often vesicular with mm-scale vesicles filled with black mud and trace grains of v.f.g. pyrite; Limonite, carbonate and chlorite on fracture surfaces; Very rare sub-mm hairline stringers of carbonate hosting v.f.g. sphalerite.							
						DK	GN	BX	CHL	3I	Py	0.01
									EPI	2I	Sp	0.02
									CAR	2I		
									OXI	2I		
9.27	11.20	1.93	MST	FG	Mudstone breccia with sub-angular dark green volcanic clasts, up to 2.5cm in diameter, with diffuse borders, suspended in a dark black matrix; Matrix hosts disseminated v.f.g. pyrite as well as sparse v.f.g. pyrite and trace spahlerite, as clots and ribbons increasing in abundance downsection, with ~15% of bottom the 6cm of the interval comprising sulphide minerals; Very rare sub-mm hairline stringers of quartz-carbonate; Bottom contact is sharp and strongly limonitic.							
						DK	GN	SD	OXI	1I	Sp	0.02
						DK	BK	BX	CHL	3I	Py	1
									CAR	1I		
11.20	11.99	0.79	BAS	FG	Very weakly brecciated dark green basalt, hosting v.f.g. disseminated pyrite (in vesicles?) as well as clots and ribbons of pyrite-carbonate-epidote; Very rare sub-mm hairline stringers of quartz-carbonate; Limonite and chlorite on fracture surfaces.							
						DK	GN	BX	CHL	2I	Py	0.5
									EPI	1I		
									OXI	1I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
11.99	17.04	5.05	BAS	FG	Medium grey to dark green, limey, un-brecciated basalt(?) with stacked/bedded mm-scale carbonate ribbons/horizons aligned 70-80 degrees TCA; Clots and ribbons of v.f.g. pyrite associated with carbonate-epidote and trace sphalerite, in seemingly en-echelon mm-scale ribbon systems that are aligned ~30 degrees TCA; Limonite, chlorite and carbonate on fracture surfaces; Rare diffuse patches of quartz-carbonate.							
						MD	GY		CHL	2I	Py	0.03
						DK	GN		CAR	3I	Sp	0.01
									OXI	1I		
									EPI	1I		
17.04	17.33	0.29	QV	--	Pale white-green, banded and brecciated exhalative silica, (colliform, granular and massive), with numerous mm-scale rounded quartz clasts with diffuse borders re-healed within a siliceous matrix; Patches of pale tan albite or adularia within the silica bands, as well as rare ribbons of v.f.g. sphalerite and clots of v.f.g. pyrite and galena; Elongate sub-angular dark mud clasts suspended in quartz matrix; Very rare limonitic hairline fractures; Limonite on fracture surfaces.							
						LT	WH	BN			Py	0.01
						LT	GN				Sp	0.05
											Gn	0.01
17.33	17.86	0.53	MST	VF	Dark grey-green limey mudstone(?) hosting abundant clots and disseminations of v.f.g. pyrite as well as mm-scale gashes of quartz-carbonate hosting v.f.g. clots of pyrrhotite-sphalerite; Chlorite, carbonate and limonite on fracture surfaces.							
						DK	GY		CAR	3I	Po	0.01
						DK	GN		OXI	1I	Sp	0.01
									CHL	1I	Py	0.5
17.86	18.16	0.30	SLT	VF	Massive medium grey-green siltstone, with very rare v.f.g. disseminated pyrite; Un-altered; Diffuse contacts with overlying and underlying seds.							
						MD	GY	MA				
						MD	GN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
18.16	22.02	3.86	MST	VF	Bioturbated and un-brecciated, dark grey-green to maroon limey mudstone to grainstone, with grains of crinoid(?) fragments and soft-sediment loading structures; Several mm-scale colliform quartz-carbonate veinlets hosting clots of v.f.g. pyrite with limonite halos (descibed in detail in the secondary structures log); Diffuse mm-scale ribbons of pyrite-carbonate, increasing in abundance down-section; Limonite, chlorite and carbonate on fracture surfaces.							
						LT	PU		CAR	3I		
						LT	BN		CHL	1I		
						DK	GY	SD	OXI	1I	Py	1
22.02	22.42	0.40	LST	FG	7 cm wide banded and un-mineralized quartz-carbonate horizon, underlain by medium grey limestone(?) crackle breccia with mm-scale (up to 1cm wide) ribbons of quartz hosting rare clots of v.f.g. pyrite and hematite, as well as rare v.f.g. pyrite in breccia matrix; Limonite on fracture surfaces.							
						MD	GY	BX	OXI	1I	Py	0.02
22.42	25.20	2.78	MST	VF	Strongly brecciated, silica-flooded, medium grey to tan-maroon mudstone, with bands of white to pale green, colliform quartz-carbonate, cross-cutting quartz veinlets, diffuse brecciated clasts/patches of silica, hundreds of mm-scale ribbons of carbonate, and brecciated clasts of mudstone wallrock suspended in silica matrix; Mudstone wallrock displays soft-sediment loading structures (micro-faulting); Abundant v.f.g. pyrite as round clots in mudstone, as ribbons along quartz selvages, as seams within mm-scale quartz veinlets, and disseminated throughout; Rare clots of v.f.g. hematite suspended in quartz, as well as trace coarse grains of galena; Live limonite on fracture surfaces.							
						MD	GY					
						LT	PU	SD	OXI	1I		
						LT	WH	BX	CAR	3I	Py	3
						LT	GN	BN	SIL	3I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
25.20	31.12	5.92	MST	VF	Medium tan to medium grey, limey, brecciated mudstone, hosting deformed and elongate mudstone clasts in a dark grey-black mud matrix; Sparse veinlets of quartz-carbonate with (live) limonitic fracture surfaces/selvages; Ribbons and patches of quartz carbonate, up to 1.5cm wide, surround mudstone clasts and display soft-sediment loading structures (flames, micro-faults) Quartz-carbonate bands also stacked in sections up to 7cm wide; Sparse round clots of v.f.g. pyrite in dark mud matrix or in carbonate ribbions; 2cm diameter irregular clot of massive pyrite hosted in patchy quartz-carbonate at 29.85m; Limonite, carbonate and chlorite on fracture surfaces; Very limonitic/gougey fracture @ 27.74m (not a fault).							
						MD	GY	BX	OXI	1I	Py	0.03
						MD	TN	BN	CHL	2I		
								SD	CAR	2I		
31.12	32.75	1.63	MST	VF	Dark green, un-brecciated, limey mudstone(?) with moderate mm-scale carbonate stringers hosting minor epidote; Trace round clots of v.f.g. pyrite throughout; Chlorite and carbonate on fracture surfaces; Strongly magnetic but no visible pyrrhotite.							
						DK	GN		CHL	3I	Po	1
									CAR	2I		
32.75	42.06	9.31	BAS	FG	Weakly bxa dark green basalt with very little inter-pillow mud, transitioning to plagioclase-phyric basalt @ 41m; Very strongly magnetic between 34-38m; Sparse mm-scale ribbons of quartz-carbonate-epidote hosting clots of v.f.g. pyrite, pyrrhotite and shpalerite; Large ~3cm diameter clots of massive v.f.g. pyrite surrounded by v.f.g. epidote @ 34.74m; Black chlorite and lesser carbonate, minor limonite, on fracture surfaces.							
						DK	GN	BX	CHL	4I	Po	1
									CAR	1I	Py	0.1
											Sp	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
42.06	47.19	5.13	BAS	FG	Dark green pillow basalt/pillow basalt brecccia top, transitioning to un-brecciated basalt bottom; Between pillows is a black mud matrix supporting mm- to cm-scale sub-angular basalt clasts; Matrix hosts moderate clots of v.f.g. pyrite at the to of the interval, and increasing v.f.g. epidote-pyrrhotite-sphalerite down-section; Very sparse sub-mm hairline carbonate stringers throughout; Chlorite and lessor carbonate, minor limonite on fracture surfaces; Vesicular portions of basalt contain white carbonate in sub-mm vesicles.							
						DK	GN	BX	CHL	2I	Py	0.1
									CAR	1I	Po	0.1
											Sp	0.05
47.19	49.63	2.44	BAS	FG	Same lithology as 42.06 - 47.19m; Top metre is strongly magnetic but no apparent pyrrhotite except as rare matrix v.f.g. fill, and trace v.f.g. chalcopyrite; Chlorite and lesser carbonate on fracture surfaces.							
						DK	GN	BX	CHL	2I	Po	1
									CAR	1I	Py	0.4
											Sp	0.05
49.63	50.81	1.18	BAS	FG	Same lithology as 42.06 - 47.19m; Core is strongly magnetic throughout interval but contains no apparent pyrrhotite except for sparse v.f.g. clots in inter-pillow mud; Vesciular basalt in the bottom 17cm of interval has vesicles filled with carbonate-epidote; Clots of v.f.g. pyrite up to 1cm in diameter are suspended in black mud matrix; Chlorite, carbonate and limonite on fracture surfaces.							
						DK	GN	BX	CHL	2I	Py	0.04
									OXI	1I	Sp	0.01
									CAR	1I	Po	1
50.81	51.14	0.33	SLT	VF	Medium grey-green massive siltstone(?) with sharp contacts at the top and bottom oriented 55 degrees TCA.							
						MD	GY	MA				
						MD	GN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
51.14	54.29	3.15	BAS	FG	Same general lithology as 42.06 - 47.19m, with a muddy bioturbated top until ~52.70m; Bottom 30cm is strongly magnetic with no apparent pyrrhotite; Rare sub-mm to mm-scale carbonate stringers throughout, hosting v.f.g. epidote and pyrite, minor sphalerite and pyrrhotite; Chlorite on fracture surfaces.							
						DK	GN	BX	CHL	2I	Po	0.04
								SD			Py	0.03
											Sp	0.01
54.29	57.41	3.12	BAS	FG	Same general lithology as 42.06 - 47.19m, but only the bottom 33cm is basalt - above this is a bioturbated mudstone(?); Abundant clots and ribbons of v.f.g. epidote and pyrite in the muddy top of the interval; Rare mm-scale quartz-carbonate-epidote ribbons with pyrite and minor pyrrhotite-sphalerite in lower basalt portion of the interval; Chlorite, carbonate and limonite on fracture surfaces.							
						DK	GN	BX	CHL	2I	Py	0.03
								SD	CAR	2I	Po	0.02
									OXI	1I	Sp	0.01
57.41	61.66	4.25	BAS	FG	25cm of dark black mudstone, followed by un-brecciated, medium grey-green, amygdaloidal(?)/vesicular basalt with mm-scale amygdules of carbonate; Top 25cm hosts abundant clots of v.f.g. pyrite, lesser pyrrhotite, and diffuse/patchy epidote throughout; Bottom 4m is un-mineralized, with rare mm-scale carbonate stringers and occasionaly limonitic, diffuse patches of epidote; Chlorite is only in the top mud.							
						MD	GY				Po	0.01
						DK	GN	SD	CAR	3I	Py	0.03
61.66	63.44	1.78	BAS	FG	Same general lithology as 42.06 - 47.19; Cm-diameter volcanic clasts with diffuse borders are hosted in a black mud matrix; Moderate round clots of pyrite-pyrrhotite-sphalerite along with epidote are hosted in the inter-pillow black mud matrix; Chlorite and carbonate on fracture surfaces.							
						DK	GN	BX	CHL	3I	Py	0.5
									CAR	1I	Po	0.03
											Sp	0.03

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
63.44	64.70	1.26	AND	FG	Medium grey, plagioclast-phyric andesite dyke(?) with euhedral and glomerophenocrysts of white plagioclase, cross-cut by sub-mm hairline stringers of quartz; Very rare angular clots of v.f.g. pyrite with limonite halos.							
						MD	GY					
64.70	67.06	2.36	AND	FG	Dark grey plagioclase-hornblende(?)-phyric porphyry, strongly silicified, with mm- to sub-mm-scale stringers of quartz hosting grains of v.f.g. pyrite with limonitic halos, as well as sub-mm hairline stringers of limonite throughout; Limonite on fracture surfaces.							
						DK	GY		SIL	3I		
									OXI	1I		
									CAR	1I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.90	3.90	BAS	FG	Overburden; Cobbles/rubble of dark green basalt; Chlorite on fracture surfaces.							
						DK	GN	RB				
3.90	9.27	5.37	BAS	FG	Dark green, moderately brecciated pillow basalt with limey black inter-pillow mud hosting abundant v.f.g. epidote and carbonate, very rare mm-scale diffuse patches of quartz, and trace pyrite and sphalerite as v.f.g. ribbons and clots; Basalt pillows are often vesicular with mm-scale vesicles filled with black mud and trace grains of v.f.g. pyrite; Limonite, carbonate and chlorite on fracture surfaces; Very rare sub-mm hairline stringers of carbonate hosting v.f.g. sphalerite.							
						DK	GN	BX	CHL	3I	Sp	0.02
									OXI	2I		
									EPI	2I	Py	0.01
									CAR	2I		
9.27	11.20	1.93	MST	VF	Mudstone breccia with sub-angular dark green volcanic clasts, up to 2.5cm in diameter, with diffuse borders, suspended in a dark black matrix; Matrix hosts disseminated v.f.g. pyrite as well as sparse v.f.g. pyrite and trace spahlerite, as clots and ribbons increasing in abundance downsection, with ~15% of bottom the 6cm of the interval comprising sulphide minerals; Very rare sub-mm hairline stringers of quartz-carbonate; Bottom contact is sharp and strongly limonitic.							
						DK	BK	BX	CHL	3I	Py	1
						DK	GN	SD	OXI	1I	Sp	0.02
									CAR	1I		
11.20	17.04	5.84	BAS	FG	Medium grey to dark green, weakly brecciated to un-brecciated, limey basalt, with clots and ribbons of v.f.g. pyrite, lesser sphalerite, associated with diffuse patchy quartz-carbonate-epidote. Limonite, chlorite and carbonate on fracture surfaces.							
									OXI	1I		
									EPI	1I		
						DK	GN		CAR	2I	Sp	0.01
						MD	GY	BX	CHL	2I	Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
17.04	17.33	0.29	QV	--	Pale white-green, banded and brecciated exhalative silica, (colliform, granular and massive), with numerous mm-scale rounded quartz clasts with diffuse borders re-healed within a siliceous matrix; Patches of pale tan albite or adularia within the silica bands, as well as rare ribbons of v.f.g. sphalerite and clots of v.f.g. pyrite and galena; Elongate sub-angular dark mud clasts suspended in quartz matrix; Very rare limonitic hairline fractures; Limonite on fracture surfaces.							
											Gn	0.01
						LT	WH	BN			Py	0.01
						LT	GN				Sp	0.05
17.33	17.86	0.53	MST	VF	Dark grey-green limey mudstone(?) hosting abundant clots and disseminations of v.f.g. pyrite as well as mm-scale gashes of quartz-carbonate hosting v.f.g. clots of pyrrhotite-sphalerite; Chlorite, carbonate and limonite on fracture surfaces.							
						DK	GY		CAR	3I	Po	0.01
						DK	GN		OXI	1I	Sp	0.01
									CHL	1I	Py	0.5
17.86	18.16	0.30	SLT	VF	Massive medium grey-green siltstone, with very rare v.f.g. disseminated pyrite; Un-altered; Diffuse contacts with overlying and underlying seds.							
						MD	GN					
						MD	GY	MA				
18.16	22.02	3.86	MST	VF	Bioturbated and un-brecciated, dark grey-green to maroon limey mudstone to grainstone, with grains of crinoid(?) fragments and soft-sediment loading structures; Several mm-scale colliform quartz-carbonate veinlets hosting clots of v.f.g. pyrite with limonite halos (descibed in detail in the secondary structures log); Diffuse mm-scale ribbons of pyrite-carbonate, increasing in abundance down-section; Limonite, chlorite and carbonate on fracture surfaces.							
						DK	GY	SD	OXI	1I	Py	1
						LT	PU		CAR	3I		
						LT	BN		CHL	1I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
22.02	22.42	0.40	LST	VF	7 cm wide banded and un-mineralized quartz-carbonate horizon, underlain by medium grey limestone(?) crackle breccia with mm-scale (up to 1cm wide) ribbons of quartz hosting rare clots of v.f.g. pyrite and hematite, as well as rare v.f.g. pyrite in breccia matrix; Limonite on fracture surfaces.							
						MD	GY	BX	OXI	1I	Py	0.02
22.42	32.75	10.33	MST	VF	Top 2.78m consists of strongly brecciated, quartz-flooded, medium grey to tan-maroon mudstone, with multi-episodic and exhalative colliform quartz-carbonate bands, veinlets and ribbons, hosting clots of pyrite and suspended clasts of quartz and mudstone wallrock; This transitions down-section to brecciated tan to medium grey mudstone, consisting of elongate/deformed rip-up clasts of mudstone in a grey-black mud matrix, with ribbons and patches of quartz-carbonate surrounding clasts, as well as stacked bands of quartz-carbonate up to 7cm wide.							
						MD	GY	BX	OXI	1I	Py	1
						MD	TN	BN	CAR	2I	Po	1
						LT	PU	SD	SIL	2I		
32.75	50.81	18.06	BAS	FG	Cycles of dark green, pillow basalt/pillow basalt breccia tops transitioning down-section to weakly brecciated vesicular basalt; Black inter-pillow mud contains clots and ribbons of v.f.g. pyrite with lesser pyrrhotite, chalcopyrite and sphalerite, as well as diffuse patches of epidote-carbonate; Most of this interval is strongly magnetic, which is attributed to unseen v.f.g. pyrrhotite disseminated throughout; Chlorite, lesser carbonate, and minor limonite alteration is ubiquitous.							
						DK	GN	BX	CHL	2I	Py	0.1
											Cp	0.01
									CAR	1I	Po	0.5
									OXI	1I	Sp	0.01
50.81	51.14	0.33	SLT	VF	Medium grey-green massive siltstone(?) with sharp contacts at the top and bottom oriented 55 degrees TCA.							
						MD	GY	MA				
						MD	GN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
51.14	63.44	12.30	BAS	FG	Same general lithology as 32.75 - 50.81m; Bioturbated mud tops, or muddy pillow basalt breccia tops, cycling downward into weakly brecciated and sometimes amygdaloidal basalt bottoms; Clots and ribbons of v.f.g. epidote-pyrite with lesser pyrrhotite-sphalerite in muddy tops, and rare diffuse patches of epidote in un-brecciated bottoms; Less intense chlorite alteration than previous interval(s).							
						DK	GN	BX	CHL	1I	Py	0.05
								SD	CAR	1I	Po	0.02
											Sp	0.01
63.44	67.06	3.62	AND	FG	Plagioclase-(glomero)phyric and plagioclase-hornblende-phyric porphyry dyke(?), which is cross-cut by mm- to sub-mm-scale quartz stringers and sub-mm stringers of limonite; Bottom 2.36m is strongly silicified, with a bleached appearance; Relatively un-mineralized (trace py.)							
						DK	GY					
						MD	GY		SIL	1I		

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.90	3.90	0	0	0.00	0	--	--	--	Overburden.
3.90	4.57	0.67	0.67	100	0.38	57	1R	3H	2W	
4.57	6.10	1.53	1.38	90	0.72	47	0R	3H	2W	
6.10	7.62	1.52	1.45	95	0.76	50	1R	3H	1W	
7.62	10.67	3.05	3.03	99	2.00	66	0R	3H	1W	
10.67	12.19	1.52	1.52	100	0.95	63	1R	3H	1W	
12.19	15.24	3.05	2.98	98	2.28	75	4R	3H	2W	
15.24	18.29	3.05	3	98	1.96	64	3R	3H	1W	
18.29	21.34	3.05	2.91	95	2.76	90	3R	3H	2W	
21.34	24.38	3.04	3.04	100	2.89	95	4R	3H	1W	
24.38	27.43	3.05	3.01	99	2.47	81	3R	3H	1W	
27.43	30.48	3.05	3	98	2.17	71	3R	3H	1W	
30.48	33.53	3.05	3.05	100	2.34	77	3R	3H	1W	
33.53	36.58	3.05	2.8	92	2.15	70	1R	3H	1W	
36.58	39.62	3.04	3.04	100	1.51	50	1R	3H	1W	
39.62	42.67	3.05	2.98	98	2.33	76	2R	3H	1W	
42.67	45.72	3.05	3.01	99	2.74	90	1R	3H	1W	
45.72	48.77	3.05	3.05	100	3.03	99	0R	3H	1W	
48.77	51.82	3.05	3.05	100	2.55	84	0R	3H	1W	
51.82	54.86	3.04	2.94	97	2.79	92	1R	3H	1W	
54.86	57.91	3.05	3.05	100	2.65	87	2R	3H	1W	
57.91	60.96	3.05	3	98	2.72	89	2R	3H	1W	
60.96	64.01	3.05	3.05	100	2.84	93	2R	3H	1W	
64.01	67.06	3.05	3.05	100	1.79	59	3R	3H	1W	

Strategic metals ltd.

Magnetic Suscepatibility

HAR-16-001

Hartless Joe
Unknown Zone

Archer,Cathro & Associates (1981) Limited

Depth (m)	Magnetic Susceptibility	Rock Type	Comments
4	1.04	BAS	
5	1.15	BAS	
6	0.67	BAS	
7	0.48	BAS	
8	0.4	BAS	
9	0.43	BAS	
10	0.84	MST	
11	0.77	MST	
12	0.78	BAS	
13	1.1	BAS	
14	6.73	BAS	
15	0.75	BAS	
16	0.67	BAS	
17	2.28	BAS	
18	0.52	SLT	
19	0.7	MST	
20	1.09	MST	
21	1.12	MST	
22	1.46	MST	
23	1.24	MST	
24	0.38	MST	
25	1.24	MST	
26	0.89	MST	
27	0.55	MST	
28	0.75	MST	
29	0.78	MST	
30	0.94	MST	
31	36.1	MST	
32	41.1	MST	

Depth (m)	Magnetic Susceptibility	Unit	Comments
33	23.2	BAS	
34	5.66	BAS	
35	37.2	BAS	
36	104	BAS	
37	41.4	BAS	
38	5.24	BAS	
39	1.01	BAS	
40	0.77	BAS	
41	1.32	BAS	
42	0.84	BAS	
43	1.14	BAS	
44	0.77	BAS	
45	8.09	BAS	
46	17	BAS	
47	7.71	BAS	
48	16.6	BAS	
49	2.25	BAS	
50	13	BAS	
51	0.67	SLT	
52	1.26	BAS	
53	2.13	BAS	
54	92.8	BAS	
55	6.82	BAS	
56	11.4	BAS	
57	1.09	BAS	
58	1.36	BAS	
59	1	BAS	
60	0.43	BAS	
61	0.78	BAS	

Depth (m)	Magnetic Susceptibility	Rock Type	Comments
62	0.67	BAS	
63	1.56	BAS	
64	0.52	AND	
65	0.13	AND	
66	0	AND	
67	0.13	AND	

Depth (m)	Magnetic Susceptibility	Unit	Comments

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	K292950	☐	H00-002		62Pa	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	K292954	☐	H00-002			☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	K292961	☐	H00-002		15A	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	K292977	☐	H00-003			☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	K292981	☐	H00-003		62Pa	☐	☐	☐
0.00	3.90	3.90	-QC-	1.00	26	K292942	☐	H00-002			☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	K292946	☐	H00-002			☑	☐	☐
3.90	6.10	2.20	BAS, BAS	2.07	94	K292943	☐	H00-002			☐	☐	☐
6.10	7.62	1.52	BAS	1.52	100	K292944	☐	H00-002			☐	☐	☐
7.62	9.27	1.65	BAS	1.46	88	K292945	☐	H00-002			☐	☐	☐
9.27	11.20	1.93	BAS, MST	0.92	48	K292947	☐	H00-002			☐	☐	☐
11.20	12.19	0.99	BAS, MST	0.99	100	K292948	☐	H00-002			☐	☐	☐
12.19	15.24	3.05	BAS	3.00	98	K292949	☐	H00-002			☐	☐	☐
15.24	17.04	1.80	BAS	1.76	98	K292951	☐	H00-002			☐	☐	☐
17.04	17.33	0.29	BAS, QV	0.29	100	K292952	☐	H00-002			☐	☐	☐
17.33	18.29	0.96	MST, QV	0.86	90	K292953	☐	H00-002			☐	☐	☐
18.29	21.34	3.05	MST	2.91	95	K292955	☐	H00-002			☐	☐	☐
21.34	22.42	1.08	MST	1.08	100	K292956	☐	H00-002			☐	☐	☐
22.42	25.20	2.78	LST, MST	2.75	99	K292957	☐	H00-002			☐	☐	☐
25.20	27.43	2.23	MST	2.09	94	K292958	☐	H00-002			☐	☐	☐
27.43	29.95	2.52	MST	2.40	95	K292959	☐	H00-002			☐	☐	☐
29.95	31.12	1.17	MST	1.15	98	K292960	☐	H00-002			☐	☐	☐
31.12	32.75	1.63	MST	1.63	100	K292962	☐	H00-002			☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
32.75	33.53	0.78	MST, BAS	0.78	100	K292963	☐	H00-002			☐	☐	☐
33.53	36.58	3.05	BAS	2.80	92	K292964	☐	H00-002			☐	☐	☐
33.53	36.58	3.05	BAS	2.80	92	K292965	☐	H00-002			☐	☐	☑
36.58	39.62	3.04	BAS	3.04	100	K292966	☐	H00-002			☐	☐	☐
39.62	42.67	3.05	BAS	2.98	98	K292967	☐	H00-002			☐	☐	☐
42.67	45.72	3.05	BAS	3.01	99	K292968	☐	H00-002			☐	☐	☐
45.72	48.77	3.05	BAS	3.05	100	K292969	☐	H00-002			☐	☐	☐
48.77	50.81	2.04	BAS	2.04	100	K292970	☐	H00-002			☐	☐	☐
50.81	51.14	0.33	BAS, SLT	0.32	97	K292971	☐	H00-002			☐	☐	☐
51.14	54.02	2.88	SLT, BAS	2.70	94	K292972	☐	H00-002			☐	☐	☐
54.02	54.86	0.84	BAS	0.83	99	K292973	☐	H00-003			☐	☐	☐
54.86	57.91	3.05	BAS	3.05	100	K292974	☐	H00-003			☐	☐	☐
57.91	59.87	1.96	BAS	1.92	98	K292975	☐	H00-003			☐	☐	☐
59.87	61.66	1.79	BAS	1.79	100	K292976	☐	H00-003			☐	☐	☐
61.66	63.44	1.78	BAS	1.77	99	K292978	☐	H00-003			☐	☐	☐
63.44	64.20	0.76	BAS, AND	0.76	100	K292979	☐	H00-003			☐	☐	☐
64.20	67.06	2.86	AND	2.19	77	K292980	☐	H00-003			☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	As ppm	Hg ppm	Sb ppm	Tl ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
H00-002	K292942	0.00	3.90	0.03	2		0	0.0	☐	☐	☐	☐	Overburden.
H00-002	K292946	0.00	0.00	0.03	0		0	0.0	☐	☐	☑	☐	
H00-002	K292950	0.00	0.00	9.76	20		2	1.6	☐	☐	☐	☑ 62Pa	
H00-002	K292954	0.00	0.00	0.03	0		0	0.0	☐	☐	☑	☐	
H00-002	K292961	0.00	0.00	14.80	492		46	4.2	☐	☐	☐	☑ 15A	
H00-003	K292977	0.00	0.00	0.03	0		0	0.0	☐	☐	☑	☐	
H00-003	K292981	0.00	0.00	9.73	18		2	1.6	☐	☐	☐	☑ 62Pa	
H00-002	K292943	3.90	6.10	0.03	2		0	0.0	☐	☐	☐	☐	
H00-002	K292944	6.10	7.62	0.03	1		0	0.0	☐	☐	☐	☐	
H00-002	K292945	7.62	9.27	0.03	3		0	0.0	☐	☐	☐	☐	
H00-002	K292947	9.27	11.20	0.03	4		1	0.0	☐	☐	☐	☐	
H00-002	K292948	11.20	12.19	0.03	4		0	0.1	☐	☐	☐	☐	
H00-002	K292949	12.19	15.24	0.03	3		0	0.1	☐	☐	☐	☐	
H00-002	K292951	15.24	17.04	0.03	11		1	0.2	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	As ppm	Hg ppm	Sb ppm	Tl ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
H00-002	K292952	17.04	17.33	0.83	30		2	0.1	☐	☐	☐	☐	
H00-002	K292953	17.33	18.29	0.17	22		1	0.4	☐	☐	☐	☐	
H00-002	K292955	18.29	21.34	0.03	12		1	0.2	☐	☐	☐	☐	
H00-002	K292956	21.34	22.42	0.32	135		3	0.7	☐	☐	☐	☐	
H00-002	K292957	22.42	25.20	1.57	235		5	0.3	☐	☐	☐	☐	
H00-002	K292958	25.20	27.43	0.03	30		1	0.3	☐	☐	☐	☐	
H00-002	K292959	27.43	29.95	0.03	41		1	0.1	☐	☐	☐	☐	
H00-002	K292960	29.95	31.12	0.03	11		0	0.1	☐	☐	☐	☐	
H00-002	K292962	31.12	32.75	0.07	5		1	0.2	☐	☐	☐	☐	
H00-002	K292963	32.75	33.53	0.03	3		1	0.0	☐	☐	☐	☐	
H00-002	K292964	33.53	36.58	0.03	4		1	0.0	☐	☐	☐	☐	
H00-002	K292965	33.53	36.58	0.03	4		1	0.0	☐	☑	☐	☐	
H00-002	K292966	36.58	39.62	0.03	5		0	0.0	☐	☐	☐	☐	
H00-002	K292967	39.62	42.67	0.03	13		0	0.0	☐	☐	☐	☐	
H00-002	K292968	42.67	45.72	0.03	2		0	0.0	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	As ppm	Hg ppm	Sb ppm	Tl ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
H00-002	K292969	45.72	48.77	0.03	2		0	0.0	☐	☐	☐	☐	
H00-002	K292970	48.77	50.81	0.03	3		0	0.0	☐	☐	☐	☐	
H00-002	K292971	50.81	51.14	0.03	2		0	0.0	☐	☐	☐	☐	
H00-002	K292972	51.14	54.02	0.03	2		0	0.0	☐	☐	☐	☐	
H00-003	K292973	54.02	54.86	0.03	3		0	0.0	☐	☐	☐	☐	
H00-003	K292974	54.86	57.91	0.03	2		0	0.0	☐	☐	☐	☐	
H00-003	K292975	57.91	59.87	0.03	2		0	0.0	☐	☐	☐	☐	
H00-003	K292976	59.87	61.66	0.03	2		0	0.0	☐	☐	☐	☐	
H00-003	K292978	61.66	63.44	0.03	3		0	0.0	☐	☐	☐	☐	
H00-003	K292979	63.44	64.20	0.03	0		0	0.0	☐	☐	☐	☐	
H00-003	K292980	64.20	67.06	0.03	2		0	0.0	☐	☐	☐	☐	

From (m)	To (m)	Structure Type	MapInfo Code	Attitude TCA	Attitude TRFE	Structure Count	Description	Mineral	Conc.	Mineral Texture
18.72	21.72	VN	37	40	NUL	10	Mm-scale quartz veinlets hosting rare clots of v.f.g. pyrite with limonite halos.			
								Py	0.8	IN
39.78	39.80	FA	64	90	NUL	1	Light green, calcareous, gougey and breccaited fault.			