

G E O L O G

F O R M A T -- I

E D I T L I S T I N G

ARCHER CATHRO AND ASSOCIATES LTD.

WERNECKE JOINT VENTURE IGOR PROP

FORMAT VERSION : 6B02

DRILLHOLE/TRVERSE 80CH010
TOTAL DEPTH/LENGTH 107.29
CORE/HOLE DIAMETER B

COLLAR ELEVATION 1169.00
NORTHING(- IF S) 3595.50
EASTING (- IF W) -43.00

AZIMUTH(LEG 1) 63.00
VERTICAL ANGLE -50.00
CO-ORD SYSTEM GRD

GEOLOGGED BY : WDE +
DATE DY/MON/YR 23/JUN/80
PROJECT NUMBER WJV

F . . I N T E R V A L . .		CORE	MF %	TYPI-	TEX-	GRAIN	FRACS	STRUCTURES...	ALT/N ASSEM.+ MINERALIZATION.	AI	CI
K L	(M T . 2)	RECOV	OI M ROCK	MINS	OAL TURES	-+ M	S	T D B	HA HA HA HA HA HA HA HA HA	LN	RN
E A		-MISS	DE I	TM TM	MIN MAJOR	FC CA	DEN M	ID T AZM O I D		TT	ET
Y G	F.R.O.M : T..0 I.N.T	+PC.1	IR X TYPE	1 2	1 TX TX	X	I	K P P. 1	QZ CL CB C2 AB XX HX PY UR YY BM ZONE		

R.O.D. U- EN R COLOR MIN MINOR ON H/ TOO M ID L AZM O L D											
NIT PV OV 2 RD PC PDW 2 G T G 2											

/	0.00	6.71	6.71	OVER									
/ FLT	6.71	7.62	.91	BRPE CB	9A4 BR FZ	07 58	XX	FZ	70	P2 <) P5 P3	< +	84	
L				HB2	8G	8T2	23 FC	41		<) P3 P2	HE		
R	6.71	15.54		POOR RECOVERY DUE TO HIGHLY FRACTURED ROCK. APPEARS TO BE WIDE									
R	6.71	15.54		FAULT ZONE. SLICKENSIDED FRACTUO.1 19 2460 TO 80 .									
R	6.71	15.54		INTENSE CB ALTERATION									
/ FLT	7.62	7.65	.03	X BRPE CB	9A4 BR FZ	07 58	XX	FZ	70	P1 P2 P4 00	P3	34	
L				HB2	8G	8T2	23 FC	41		V1 P3 00	MG V=		
R	7.62	7.65		MAY BE FLOAT IN OVERBURDEN.									
/ FLT	7.65	15.54	7.89	BRPE CB	9A4 BR FZ	07 58	XX	FZ	70	P2 <) P5 P3	< +	84	
L				HB2	8G	8T2	23 FC	41		<) P3 P2	HE		
R	15.54	17.28		HE ALTERED TO CL									
/	15.54	16.15	.61	X BRPE CB	9A6 BR FZ	07 58	XX			P2 P= P6 P3		84	
L				HB2	6G		23 FC	4		<) P3 P1			
/	16.15	17.28	1.13	BRPE CB	9A6 BR	07 58	24			P2 P= P6 P3		84	
L				HB2	6G		23 FC	3		<) P3 P1			
/	17.28	27.37	10.09	BRPE	7A9 BR	07 58	23	FL	75	P3 <) P3 P1	P+	54	
L				HB2	6G		22 FC	2		< + P2 P3	HE		
R	17.28	27.37		FRAGMENT BOUNDARIES VERY OBSCURE.									

DRILLHOLE/TRVERSE --- 80CH010 --- (CONTINUED)

K	FLG	F.R.O.M	T.O.D	I.N.T	RECOV	MF	X	ROCK	TM	TH	QM1	TX	TX	--	XM	FRX	1	ID	S	AZM	T	DP	B	QZ	CL	CB	C2	AB	XX	HX	PY	UR	YY	BM	Z1
					R.O.D	R.U	DE	PV	COLOR	QM2	TX	TX	SR	SO	SML	2	ID	P	AZM	B	PL	2	FL	BA	C1	C3	MU	HA	H:	CP		HA	12	12	
/	L	27.37	32.40	5.03				BRPE	CB	1A9	BR		07	48	2									P2	P+	P4	P3			P)				94	
						HB2			3G				22	FC	2											< (	P2	P4		HE					
R		27.37	34.35					GRADATIONAL CONTACT WITH OVERLYING ROCKS.																											
/	L	32.40	33.77	1.37			X	BRPE	CB	CL	1A9	BR		07	48	2								P1	P1	P4	P3			00			74		
						HB2			3G				22	FC	2											< (	P2	P4		00					
R		32.40	33.77					CL CLUSTERS MARBLED THROUGH BLEACHED ARGILLITE.																											
/	L	33.77	34.35	.58			X	BRPE	CB		1A9	BR		07	48	3								P2	P+	P4	P3			P)			54		
						HB2			3G				22	FC	3											V=	< (	P2	P4		HE	<-			
R		33.77	34.35					CL PROBABLY AFTER MG																											
/	L	34.35	39.01	4.66				BROS	CP	MG	7T4	BR		06	27	16			FL				45	P2	<+	P4	P3			D1	D+	MA	35		
						HB4			7GPY				44	CO	6											V=	V+	P1	P1		MG	D=			
R		34.35	39.78					FLOW BANDING(?) RANGES FROM 20-60 WEAKLY DEVELOPED. CP OCCURS																											
R		34.35	39.78					IN MATRIX AND REPLACING EUHEDRAL MG. BA VEINS ARE POST CP																											
R		34.35	39.78					EMPLACEMENT. PRESENCE OF SOME SLIGHTLY SMOKY QZ VERY IMPORTANT.																											
R		34.35	39.78					HEMATITE STAINED BARITE VEINS EXHIBIT GREATEST RADIOACTIVITY.																											
/	L	39.01	39.78	.77			X	BROS	CP	MG	7T4	BR		06	27	16			FL				45	P2	<+	P4	P3			D=	D1	MA	54		
						HB4			7GPY				44	CO	6											V=	V+	P1	P1		MG	D+			
R		39.01	39.78					GRADES BACK INTO UNMINERALIZED ROCK.																											
/	L	39.78	41.70	1.92				BRPQ	CB	CL	8T7	BR	RP	07	27	2			CN				B	50	P3	P1	P4	P2			D=		64		
						HB2			6G		6G1			23	CO	21											D)	V)	P2	P2		D=			
R		39.78	41.70					BEYOND SHARP CONTACT CP CONTENT GRADUALLY INCREASES OVER 1M.																											
R		39.78	41.70					CL OFTEN RIMS SOMETIMES REPLACES FRAGMENTS.																											
R		41.70	52.03					FRAGS COMPLETELY REPLACED. CP AND PY USUALLY OCCUR IN THE MATRIX																											
R		41.70	52.03					OR REPLACING THE 4-6 MM EUHEDRAL MG. BA AND CB VEINS POST CU.																											
R		41.70	52.03					APPROXIMATE PARAGENESIS: BRECCIATION; MG XTAL GROWTH; HE-CB																											
R		41.70	52.03					ALTERATION; FRACTURING WITH CL; CP-PY ALTERATION; CB-BA VEINS.																											
/	L	41.70	42.31	.61			X	BRSO	CL	CP	9A2	BR		07	18	13			F1				40	P1	P2	P4	P			D=	D)		13		
						HB4			5GCB		8T1		56	CO	3			1									V+	V+	P4	P=		H>	D=		
/	L	42.31	46.27	3.96				BRSO	CP	HX	9A2	BR		06	16	13			FL				40	P1	<=	P4	P			D1	D=		44		
						HB4			7GCB		8T1		56	CO	3												V+	V+	P4	P=		H>	D2		

DRILLHOLE/TRAVERSE --- BOCH010 --- (CONTINUED)

K	FLG	F.R.O.M	T..0	I.N.T	RECOV	MF	%	ROCK	TM	TM	QM1	TX	TX	--	XM	FRX	1	ID	S	AZM	T	DP	B	QZ	CL	CB	C2	AB	XX	HX	PY	UR	YY	BM	ZI
					R.O.D	R.U	DE	PV	COLOR	QM2	TX	TX	SR	SO	SML	2	ID	P	AZM	B	PL	2	FL	BA	C1	C3	MU	HA	H:	CP		HA	12	12	
/	L	46.27	47.40	1.13		X	BR	SO	CP	HX	9A2	BR	06	28	13	FL		40	P1	D2	P4	P		D1	D=								44		
					HB4			7GCB	8T1				36	FO	3				V+	V+	P4	P=		H>	81								23		
R		46.27	47.40						ALTERATION IS LESS INTENSE. FRAGMENTS ARE MORE VISIBLE. BA-CB																										
R		46.27	47.40						VEINS CONTAIN SOME COARSE GRAINED CP AND CUT FL AT 90 .																										
/	L	47.40	50.93	3.53			BR	SO	CP	HX	9A2	BR	06	16	13	FL		40	P1	<=	P4	P		D1	D=								44		
					HB4			7GCB	8T1				56	CO	3				V+	V+	P4	P=		H>	D2										
/	L	50.93	52.03	1.10		X	BR	SO	CP	HX	9A2	BR	06	16	35	FL		40	P1	<=	P4	P		D1	D1	<+							34		
					HB4			7GCB	8T1				56	CO	41				V=	V+	P4	P=		H<	D=										
R		50.93	52.03						BA VEINLETS ARE VERY RED PROBABLY DUE TO HEMATITE STAINS. BA																										
R		50.93	52.03						AFTER CP-PY MINERALIZATION WHICH APPEARS TO BE RELATED TO CL																										
R		50.93	52.03						MICROFRACTURES. MOST FRACTURES WELL HEALED. LOWER PORTION OF																										
R		50.93	52.03						INTERVAL RED AND WELL FRACTURED.																										
/	L	52.03	52.49	.46			BR	OX	UR	CP		BR		2	CN		40		D1	P4			D2	D)	<+								35		
					HB4			6RBA						2	CN		40		62	<+	P4		H<	6+											
R		52.03	52.49						VERY STRONGLY FOLIATED, SHARP CONTACTS. UR OCCURS IN MICROVEINS																										
R		52.03	52.49						RIMMING CP. BA VERY RED, USUALLY SURROUNDS THE SOOTY PITCHBLENDE																										
R		52.03	52.49						THIS INTERVAL CORRESPONDS TO HIGHEST RADIOACTIVITY. NO FRAGMENTS																										
/	L	52.49	54.25	1.76			BR	CL		7T1	BR	06	18	2	FL		50	P3	P2	P1	P=		D1	D)									25		
					HB3			5G		9A1			24	CO	21				<+	<)	P=	P3		H>	D+										
R		52.49	62.79						CP OCCURS IN CORE OF HX CRYSTALS. HX LOCALLY UPTO 50% OF ROCK																										
R		52.49	62.79						USUALLY WITH INCREASED CB IN MATRIX. SOME HX IS ALTERED TO CL.																										
/	L	54.25	55.93	1.68		X	BR	CL		7T1	BR	06	18	2	VN		60	83	P2	P1	P=		D1	D)									25		
					HB3			5G		9A1			24	CO	21				V+	V=	P=	P3		H>	D+										
R		54.25	55.93						SMALL VEINS (<1CM) CB, LARGE VEINS (UPTO 10CM) RED BA WITH WHITE																										
R		54.25	55.93						CB SELVAGE. CP SOMETIMES WITH CB.																										
/	L	55.93	57.00	1.07			BR	CL		7T1	BR	06	18	2	FL		50	P3	P2	P1	P=		D1	D)									25		
					HB3			5G		9A1			24	CO	21				<+	<)	P=	P3		H>	D+										
/	L	57.00	60.44	3.44		X	BR	CL		8T2	BR	06	18	24	FL		40	P3	P2	P1	P=		D=	D(									25
					HB3			4G		9A1			24	CO	31				<+	<)	P=	P3		H>	D(
R		57.00	60.44						CL ALTERATION OF MG AND SOME FRAGMENTS COMMON.																										

CL ALTERATION OF MG AND SOME FRAGMENTS COMMON.

DRILLHOLE/TRVERSE --- 80CH010 --- (CONTINUED)

K	FLG	F.R.O.M	T.O	I.N.T	RECOV	MF	%	ROCK	TM	TM	QM1	TX	TX	--	%M	FRX	1	ID	S	AZM	T	DP	B	QZ	CL	CB	C2	AB	XX	HX	PY	UR	YY	BM	ZI
					R.Q.D	R.U	DE	PV	COLOR	QM2	TX	TX	SR	SO	SML	2	ID	P	AZM	B	PL	2	FL	BA	C1	C3	MU	HA	H:	CP		HA	12	12	
/	L	60.44	62.79	2.35		X	BRCL	CL	7T1	BR	06	18	36		FL		50						P3	P2	P3	P=			D1	D)			03		
						HB3		3G	9A1		24	CO	52											<+ <)	P=	P2			HE	D+					
/	L	62.79	68.88	6.09			BROX	HE	CB	7T1	BR	RP	06	17	23		FL						40	P1	P1	P4			P4	D+			05		
						HB4		2G			45	CO	21												V1	P3			HE	6)					
R		62.79	73.67				INTENSE HE-CB ALTERATION HAS DESTROYED MOST FRAGMENTS. MUCH OF																												
R		62.79	73.67				THE HE APPEARS TO BE ON LATE MICROFRACTURES. CB IS DOLOMITE, CB																												
R		62.79	73.67				CRYSTALS ARE COMMON IN MATRIX. SOME EUMEDRAL HE AFTER MG IN TOP																												
R		62.79	73.67				OF INTERVAL.																												
/	L	68.88	73.67	4.79		X	BROX	HE	CB	7T1	BR	RP	06	17	23		FL						40	P1	P1	P4			P4	D+			05		
R		68.88	73.67																																
/	L	73.67	77.02	3.35			BROS	HE	PY	7T1	BR	RP	06	17	23		FL						60	P2	P1	P2	P+		P4	P=			05		
						HB4		1G	6A1		45	FO	21														P2	P+		HE					
R		73.67	78.12				PY USUALLY IN CRYSTALS																												
/	L	77.02	78.12	1.10		X	BROS	HE	PY	7T1	BR	RP	06	17	25		FL						50	P2	P1	P2	P+		P4	P=			05		
						HB4		1G	6A1		45	FO	41														P2	P+		HE					
/	L	78.12	82.84	4.72			BROX	HE		7T3	BR		17	49	2		FL						50	P3	P1	P3	P3		GR	P2	D+			15	
						HB1		1B	6R2		12	FC	21														V+	P1		HE	D+				
R		78.12	82.84				HX MATRIX CONTAINS LARGE FRAGMENTS (UPTO 50CM) OF PRE-EXISTING																												
R		78.12	82.84				BRECCIA. THE ROCK HAS AN ODD MOTTLED APPEARANCE DUE TO THE BLUES																												
R		78.12	82.84				AND REDS OF THE HE MATRIX AND THE TAN COLOR OF THE HB2 FRAGMENTS																												
R		78.12	82.84				SIGNIFICANT BECAUSE IT IMPLIES 2 PHASES OF BRECCIATION. MINOR																												
R		78.12	82.84				CP OCCURS IN BOTH BRECCIA PHASES. HE OCCURS IN SHEETS ALONG WITH																												
R		78.12	82.84				A BLUISH NOT METALLIC MINERAL (GRAPHITE?).																												
/	L	82.84	87.78	4.94			BRPE			7T9	BR		19	99	12												P4	<+ P4	P4		<) D)			35	
						HB1		6A					13	CC	2												V(<+ P1		HE	D-					
R		82.84	107.29				MOST FRAGS EITHER CB ALTERED OR LIMY PELITE. LARGELY CRACKLE.																												
/	L	87.78	89.31	1.53		X	BRPE			7R9	BR		19	99	12		FL						50	P5	<+ P2	P2			P=	D)			45		
						HB1		6A					13	CC	2												V(<+ P2		HE	D-					
/	L	89.31	98.91	9.60			BRPE			7T9	BR		19	99	12													P4	<+ P4	P4		<) D)			35
						HB1		6A					13	CC	2													V(<+ P1		HE	D-				

DRILLHOLE/TRVERSE --- 80CH010 --- (CONTINUED)

K FLG F.R.O.M : T.O.O I.N.T RECOV MF X ROCK TM TM QM1 TX TX --+ XM FRX 1 ID S AZM T DP B QZ CL CB C2 AB XX MX PY UR YY BM ZI

R.Q.D R.U DE PV COLOR QM2 TX TX SR SO SML 2 ID P AZM B PL 2 FL BA C1 C3 MU HA H: CP HA 12 12

/ FLT 98.91 99.03 .12 X BRPE 7T9 BR 19 99 1X F/ 45 PX <+ P4 P4 <) D) 02
L HB1 6A 13 CC X VI <+ P1 HE D-

/ 99.03 102.72 3.69 BRPE 7T9 BR 19 99 12 P4 <+ P4 P4 <) D) 35
L HB1 6A 13 CC 2 VI <+ P1 HE D-

/ 102.72 104.88 2.16 X BRPE 7T9 BR 17 68 12 P4 <+ P4 P4 P1 <) D) 25
L HB1 6A 23 CC 2 VI <+ P1 HE D-

R 102.72 104.88 ALBITIZATION HAS ATTACHED ONLY A FEW FRAGMENTS.

/ 104.88 106.22 1.34 BRPE 7T9 BR 19 99 12 P4 <+ P4 P4 <) D) 35
L HB1 6A 13 CC 2 VI <+ P1 HE D-

/ 106.22 107.29 1.07 X BRPE 7G9 BR 99 X9 12 P4 P= P4 P4 <) D) 35
L HB1 6A 13 CC 2 VI <1 P1 HE D-

R 106.22 107.29 APPEARS TO BE A SINGLE LARGE CRACKLED FRAGMENT.

A MIN 0.00 0.00 0.00 PPM U PPM CU PPM CO PPM AG PPB AU PPM MO CPS
A LAB 0.00 0.00 0.00 CHEMEX CHEMEX CHEMEX CHEMEX CHEMEX CHEMEX SCNTRX
A TYP 0.00 0.00 0.00 1H-COR 1H-COR 1H-COR 1H-COR 1H-COR 1H-COR IN BAG

A 001 33.77 34.35 .58 100.0 J17214 14.5 146 64 2.4 7 29 140

R TGG 33.77 34.35 54513

A 001 34.35 35.87 1.52 100.0 J17215 118.0 39600 192 2.4 7 29 200

R TAG 34.35 35.87 54514 69060

A 001 35.87 37.40 1.53 100.0 J17216 288.1 24400 184 2.4 7 29 260

R NAG 35.87 37.40 69061 54515

A 001 37.40 39.01 1.61 100.0 J17217 45.0 25500 450 2.4 7 29 180

R TAG 37.40 39.01 54514 69060

A 001 39.01 39.78 .77 100.0 J17218 29.0 17400 550 2.4 7 29 120

R TAG 39.01 39.78 54514 69060

A 001 39.78 41.76 1.98 100.0 J17219 21.5 600 98 2.4 7 29 120

R TAG 39.78 41.76 54514 69060

A 001 41.76 42.37 .61 100.0 J17220 161.0 19200 188 6.4 23 16 160

R TAG 41.76 42.37 54514 69060

DRILLHOLE/TRVERSE --- 80CH010 --- (CONTINUED)

A MIN	0.00	0.00	0.00	PPM U	PPM CU	PPM CO	PPM AG	PPB AU	PPM MO	CPS
A LAB	0.00	0.00	0.00	CHEMEX	CHEMEX	CHEMEX	CHEMEX	CHEMEX	CHEMEX	SCNTRX
A TYP	0.00	0.00	0.00	1H-COR	1H-COR	1H-COR	1H-COR	1H-COR	1H-COR	IN BAG
A 001	42.37	43.89	1.52 100.0 J17221	771.2	87000	350	6.4	23	16	520
R NAG	42.37	43.89		69061	54515					
A 001	43.89	45.42	1.53 100.0 J17222	423.7	49100	270	6.4	23	16	400
R NAG	43.89	45.42		69061	54515					
A 001	45.42	46.27	.85 100.0 J17223	330.5	90000	310	6.4	23	16	230
R NAG	45.42	46.27		69061	54515					
A 001	46.27	47.40	1.13 100.0 J17224	508.5	39600	380	6.4	23	16	660
R NAG	46.27	47.40		69061	54515					
A 001	47.40	49.23	1.83 100.0 J17225	550.8	96200	450	6.4	23	16	440
R NAG	47.40	49.23		69061	54515					
A 001	49.23	50.90	1.67 100.0 J17226	737.3	66500	390	6.4	23	16	760
R NAG	49.23	50.90		69061	54515					
A 001	50.90	52.43	1.53 100.0 J17227	1754.2	24000	310	6.4	23	16	1300
R NAG	50.90	52.43		69061	54515					
A 001	52.43	53.95	1.52 100.0 J17228	17.0	2500	166	6.4	23	16	120
R TAG	52.43	53.95		54514	69060					
A 001	53.95	55.47	1.52 100.0 J17229	21.0	1700	220	0.1	5	6	120
R TAG	53.95	55.47		54514	69060					
A 001	55.47	57.00	1.53 100.0 J17230	21.0	1200	88	0.1	5	6	120
R TAG	55.47	57.00		54514	69060					
A 001	57.00	58.52	1.52 100.0 J17231	11.0	210	114	0.1	5	6	130
R TGG	57.00	58.52		54513						
A 001	58.52	60.05	1.53 100.0 J17232	6.5	138	150	0.1	5	6	130
R TGG	58.52	60.05		54513						
A 001	60.05	61.57	1.52 100.0 J17233	7.5	196	136	0.1	5	6	130
R TGG	60.05	61.57		54513						

