

AMOCO CANADA PETROLEUM COMPANY LTD. - MINING DIVISION - DIAMOND DRILL HOLE RECORD

PROPERTY	GALORE CREEK B.C. C.W. Claims 94,96,141-144	LATITUDE	23+00N	STARTED	July 7, 1970	DIP TEST					
HOLE NO.	C.W. 3A-70	DEPARTURE	18+00W	FINISHED	July 12, 1970	Footage	Corrected	Footage	Corrected	Footage	Corrected
BEARING	280° Azimuth	ELEVATION	1980 feet	LENGTH	500.5 feet	500.5'	-47°				
DIP-COLLAR	-50°	SECTION		LOGGED BY	S. L. Putter						

FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE			ASSAYS				
From	To				From	To	Length	Cu	Mo	Au	Ag	Ni
0	68.	Bx Casing										
0	277	Overburden, sand and gravel, mixed with fine - to very fine-grained, somewhat brecciated, lightly to moderately altered, intermediate to basic metavolcanic as broken core. Fragments of breccia within metavolcanic are porphyritic, containing 60 - 70% up to 1 - 2mm subhedral to anhedral white masses of feldspar and feldspar phenocrysts in a 30 - 40% black to dark green mafic minerals (chlorite, possibly some pyroxene). Matrix of metavolcanic and of fragments is massive, dark grey-green to dark green, very fine-grained aphanitic chlorite-feldspar intermediate to basic metavolcanic. Moderately to lightly epidotized, especially in porphyritic fragments; contains up to 5% 2 - 4mm medium-grained pink porphyroblasts of K-spar, with ragged edges grading into the matrix. (esp. at 8'). Very slightly magnetic (at 23'). Trace pyrite in isolated 1 - 2mm blebs.	Trace pyrite	613	0	10	10	Trace	Trace	Trace	Trace	
				614	10	20	10	"	"	"	"	
277	42.57	Sandstone. Rusty-brown to white-cream. Fine to very fine-grained Massive though appears slightly brecciated in places. Contains 50 - 60% up to 1mm transparent, glassy, moderately well-sorted, subangular to subrounded quartz grains; 20 - 30% white subangular feldspar grains. Extensively cut and bleached by rusty-brown to white quartz veins, rose quartz, and pinkish hematite (and K-spar?) veins. Minor greenish argillic (epidote?) alteration in small (up to 5mm) patches. Infiltrating metavolcanic has tended to darken and assimilate sandstone in places, especially near lower contact (41 - 42.5'). Trace to about 1% pyrite, in 1 - 2 mm blebs and stringers to 1cm	Trace to 1% Pyrite	615	20	30	10	.01	"	"	"	
				616	30	40	10	.03	"	"	"	
42.57	65.5	As 0 - 277, mainly broken core. Fine - to very fine-grained somewhat brecciated, lightly to moderately altered, intermediate to basic, feldspar-chlorite metavolcanic. Crowded porphyritic with 60 - 80% up to 1 - 2mm subhedral white feldspar phenocrysts. Contains isolated fragments of non-porphyritic massive aphanitic intermediate to basic (chloritic?) metavolcanic; 1 - 5 anhedral (fragments-like masses) white feldspar (K-spar?); and pinkish white K-spar (porphyroblasts?). Moderate epidote alteration. Cut by thin (up to 1mm) greenish epidote and pink hematite veins.	Trace to 1% pyrite	617	40	50	10	.02	"	"	"	
				618	50	60	10	.02	"	"	"	

FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE			ASSAYS						
From	To				From	To	Length	Cu.	Mo.	Au.	Ag.	Ni		
		Trace to 1% pyrite, disseminated in 1 - 2 mm blebs and in thin long stringers, especially in veins and intercrystalline spaces.												
65.5	84.5	Intermediate metavolcanic. Generally massive to somewhat brecciated fine to very fine-grained aphanitic, grey to greenish-grey. Distinct lithic porphyritic metavolcanic fragments (about 5%) and about 20 - 40% subangular, pinkish K-spar-rich (porphyroblast?) fragments (to 3cm) of metavolcanic. Matrix of metavolcanic is massive, aphanitic, intermediate to basic metavolcanic with 60% greyish-white to transparent very fine-grained plagioclase (?) (probably also some K-spar) to 30% light green very fine-grained chlorite. About 20 - 40% pinkish K-spar masses as ghostlike fragments. Isolated minor lithic, non-porphyritic lapillized, subrounded metavolcanic present. Extensively cut by thin (up to 1mm) to wide (to 6 inches) veins of epidote, accompanied by K-spar. Unit characterized by larger K-spar fragments, lack of porphyritic lithic frags.(about 5%) and heavy epidote veining. Pyrite: Generally 1% to 3 - 5% in places (eg 77 - 77.5) disseminated (up to 1mm) grains and blebs (to 5mm), esp. associated with epidote	1% Pyrite 3 - 5% Pyrite in places	619 620	60 70	70 80	10 10	.01 .01	Trace "	Trace "	Trace "			
		75 - 84.5 - 10 - 15% rounded porphyritic feldspar fragments to 3 cm, some phenocrysts slightly epidotized. General increase in frequency to bottom of unit of porphyritic lithic metavolcanic, and dark green chloritic fragments.												
		84.5 - Gradational contact, especially with respect to lithic fragments of porphyritic-feldspar metavolcanic												
84.5	390.4	Metavolcanic breccia. Generally grey to greenish-grey with white and yellowish-white feldspar, crystals (phenocrysts) and dark green masses. Consists of 10% up to 100% (?) lithic fragments of metavolcanic and igneous intrusive? origin, in a matrix varying from almost massive, aphanitic very fine-grained, feldspar-chlorite metavolcanic, through slightly porphyritic-feldspar metavolcanic, to porphyritic (20 - 30%) metavolcanic. The fragments consist of various shapes, ash to block -(or bomb) sized, and of various types. Fragment types are; distinct and ghostlike fragments of crowded porphyritic, 50 - 60% white subhedral to euhedral, up to 1 - 2mm feldspar phenocrysts, in an aphanitic very fine-grained, massive metavolcanic matrix; less numerous fragments of crowded (up to 80%) porphyritic-feldspar metavolcanic, of chloritic massive rather basic metavolcanic, and of equigranular, fine-grained to possibly medium grained, 60% feldspar to 30% chlorite and pyroxene. The nature of the fragment to matrix relationship and even the identity of either one, becomes difficult to determine in places so that the matrix appears to vary as stated above. The larger fragments appear more rounded (bombs?)	Trace Chalcopyrite Generally 1 - 2% Py to 5% Py. Generally 1% Pyrrhotite	621	80	90	10	.02	"	"	"			

FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE			ASSAYS							
From	To				From	To	Length	Cu.	Mo.	Au.	Ag.	Ni.			
		than the smaller lapilli-sized fragments, but no gradations between sizes are seen. Numerous fragments (phenocryst? porphyroblasts) of anhedral feldspar (K-spar?) to 1 - 2 cm are present throughout the unit as are pinkish porphyroblasts (usually in fragments or as fragments) of K-spar of similar sizes. Argillic alteration is generally light, with moderate chloritic and epidote alteration in places, variable amounts of quartz, hematite, and K-spar veining, and rare instances of garnet development. Very slightly magnetic, due to black magnetite in places, esp. in and near equigranular intrusive-looking fragments. The extent of alteration and the distinctiveness of the fragments are generally light and extreme respectively, except from about 300' to 372' where heavier argillic alteration has tended to obscure fragment boundaries. Isolated vitric fragments have been seen. Mineralization: Trace Chalcopyrite in isolated blebs. Generally 1 - 2% disseminated pyrite in disseminated grains (up to 1mm), blebs to 1 cm, long stringers (width - up to 1 - 2 mm) and up to 5% pyrite in veins and large blebs (width to 1 - 2cm) with quartz epidote. Generally 1% disseminated pyrrhotite, (reddish tarnished-looking) as disseminated blebs (up to 1mm to 1 cm) and up to 4% pyrrhotite in veins and large blebs (to 1 - 2 cm) with pyrite, quartz and epidote. Massive in some veins. Lower grade mineralization is uniformly distributed in some sections and very inhomogeneously distributed in others; often seen replacing fragments.													
92.8 -		Black magnetite in heavily chloritic 3cm fragments		622	90	100	10	.01	Trace	Trace	Trace				
98 - 101.5 -		Slightly magnetic, non-porphyrific metavolcanic													
111 -		Well-developed med. K-spar crystals		623	100	110	10	.01	"	"	"				
112 - 124 -		3 - 5% pyrite in places		624	110	120	10	.01	"	"	"				
124 -		Sharp contact with massive metavolcanic below at 70° - 90° to core axis		625	120	130	10	.02	"	"	"				
124 - 130.2 -		Intermediate to basic metavolcanic or submetavolcanic. Massive very fine-grained aphanitic, dark green. Spotted with 10 - 20% bluish-white irregular fine to very fine grained masses of feldspar (anhedral). Cut by thin (up to 1 - 2mm) light to medium green epidote and very fine-grained (later stage?) intermediate to basic chloritic metavolcanic. About 2cm light grey-green chloritic "bleaching" at contact with unit above and 1 cm at contact with unit below. Pyrite 1 - 2% disseminated in blebs to 1 cm and thin, long stringers.		626	130	140	10	.01	"	"	"				
138.4 -		Well developed zoned feldspar crystals.													
138.5 -		Quartz & epidote vein stock work over 6" resulting in obliteration of feldspar crystals & 1 - 2% disseminated pyrite.		627	140	150	10	Trace	"	"	"				
158.9 - 160 -		3 - 5% pyrite disseminated & in long stringers in quartz & chlorite veins; 2% pyrrhotite, disseminated in blebs, especially with pyrite.		628	150	160	10	.01	"	"	"				

FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE			ASSAYS						
From	To				From	To	Length	Cu.	Mo.	Pu.	Ag.	Ni.		
	163 - 164	Pinkish - tinting of K-spar rich fragments (up to 1 cm - 2 cm).												
	167 - 168	Heavy argillic alteration obliterated fragments in part as 167 - 168		629	160	170	10	.01	Trace	Trace	Trace			
	183 -			630	170	180	10	Trace	"	"	"			
	189 - 191	Very fine-grained grey, intermediate to basic metavolcanic or subvolcanic as 124 - 130.2		631	180	190	10	.01	"	"	"			
	193.2 - 193.7	as 189 - 191		632	190	200	10	.01	"	"	"			
	204.3 - 205.8	as 189 - 191 with part obliteration of porphyritic fragments and matrix.		633	200	210	10	.01	"	"	"			
	210.5 - 211	about 3% po. in stringers and blebs		634	210	220	10	.01	"	"	"			
	218 - 218.6	1 cm wide quartz vein at 20° to core axis over 6 inches in length; contains 1% pyrite, 2 - 3% pyrrhotite												
	222; 223	about 2% pyrrhotite in "bleached" light green very fine-grained chloritic metavolcanic fragments.		635	220	230	10	.01	"	"	"			
	237.5	1 cm vein of quartz-epidote with up to 1% pyrite and euhedral pale to dark brown, garnet (andrd. dits? - CaFe Garnet).		636	230	240	10	.02	"	"	"			
	243 - 244	3 - 4% pyrrhotite, 2 - 3% pyrite in blebs and stringers.		637	240	250	10	.02	"	"	"			Tr
	245.6	vein as 237.5 with garnet												
	249.5 - 250.5	1cm thick irregular, garnet epidote vein containing massive (60 - 80% in vein) pyrite - pyrrhotite, parallel to core axis over 1 foot		638	250	260	10	.02	"	"	"			
	251.5; 251.9; 255;	256 - 5 - 10 mm garnet-epidote veins at 60 - 90° to core axis with pyrrhotite to 1% and pyrite of 1%.												
	263.5	Massive pyrrhotite with pyrite bléb (2X 1 cm) replacing K-spar? fragment		639	260	270	10	.01	"	"	"			
	283 - 283.5	5 - 10 mm vein containing 1 - 2% pyrite, 1 - 2% pyrrhotite at about 10° to core axis.		640	270	280	10	.01	"	"	"			
		Trace Chalcopyrite		641	280	290	10	.02	"	"	"			Tr
	298 - 301	Feldspar rich section, More argillic alteration? Strongly-white compared to main unit		642	290	300	10	.02	"	"	"			
	302 - 302.3	as 298 - 301												
	302.5 - 304	Extensive thick 2 - 3" transparent to pink-transparent quartz veining & stockwork of thinner veinlets with accompanying 3% pyrite, except for 303' - 1 cm of disseminated pyrite to 40 - 50% to massive		643	300	310	10	.02	"	"	"			
	304.1 - 305.7	1% Pyrite; 2% pyrrhotite, disseminated especially in 3" at about 305'.												
	319.5 - 320	3 - 4% pyrrhotite, 1% pyrite in blebs & stringers		644	310	320	10	.01	"	"	"			
	323 - 327.5	Medium to heavy argillic alteration of feldspar rich sub-unit to bright white colour Moderate argillic "veining" and 1 - 2% pyrite, 1 - 2% pyrrhotite, especially in epidote veins & blebs		645	320	330	10	.02	"	"	"			
	342.3 - 348	Massive, light coloured, feldspar-rich metavolcanic breccia. Moderate argillic alteration. 3% fine-grained pyrrhotite, 1 - 2% py. variable in veins and with pyrite		646	330	340	10	.02	"	"	"			Tr
				647	340	350	10	.02	"	"	"			

FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE			ASSAYS						
From	To				From	To	Length	Cu.	Mo.	Au.	Ag.	Ni		
3		349 - 350.5 - as 342.3 - 348 350.5 - 364.8 - contains fragments of 342.3 - 348 and 349 - 350.5, some K-metasomatism with moderate epidote veining; 3% disseminated pyrite, especially in epidote; up to 1% pyrrhotite generally with pyrite.		648	350	360	10	.03	Trace	Trace	Trace			
		364.8 - 372 - White-cream colour from moderate to heavy argillic alteration and quartz-epidote veining. Effect moderate from 364.8 - 367.5, intense from 367.5 - 369, and moderate from 369 - 372. Generally 1% pyrite disseminated; up to 1% disseminated pyrrhotite only in 369 - 372 with K-metasomatism as K-spar porphyroblasts.		649	360	370	10	.05	"	"	"			
		372 - 390.1 - Very distinct, fragment-matrix contrast due to minimal argillic alteration. Slight K-metasomatism and argillic alteration in places. Trace to 1% py, except 2 - 3% pyrite at 380.5 - 381; trace pyrrhotite.		650	370	380	10	.02	"	"	"			
				651	380	390	10	.02	"	"	"			
390.4	395.8	Intermediate to basic metavolcanic (flow?), massive, very fine-grained (up to 0.5mm). Felsic to mafic content about 2:1. Moderate argillic alteration. Pyrite: 1% very fine-grained disseminated, except 2 - 3% in veins.	1% pyrite with 2 - 3% pyrite in veins	652	390	400	10	.05	"	"	"			
		395.8 - Gradational contact with sandstone unit below.												
395.8	423.5	Feldspathic sandstone. Mainly white with cream and pale brown. Fine-grained. Massive, though relief bedding may be apparent from colour and slight compositional variations. 30% fine-grained (up to 1mm) subrounded to subangular, white, moderately-sorted, feldspar grains and minor fragments (even isolated subhedral crystals have rounded edges); 30% fine-grained, glassy, transparent moderately-sorted, quartz grains in a generally greyish transparent to transparent aphanitic silicic matrix. Pale brown varieties in unit are apparently more grit-like, with more feldspar as grains, fragments, and in matrix, less quartz, and slightly more immature. Slight light greenish tinges are due to light epidote alteration of feldspar, while dark green tones are due to light chloritic alteration. Pale brown grits; 397.5 - 399.5; 402 - 402.3; 402.7 - 403.6; 407 - 407.5; 421.4 - 423.5 (more quartz in this latter than in the other grits). Slight to moderate chloritic alteration; 408 - 421.4. Unit is intruded by quartz, nematitic(?), K-spar (?) epidote and possibly carbonate, especially in 408 - 421.1. Trace to 1% pyrite as disseminated grains, with grains, large blebs, and stringers, in quartz and epidote to 3 - 5% at 397.5; 399.5; 401.4; 409.9; 413; 413.9. Up to 20% pyrite, 1 - 2% pyrrhotite, massive for 1" at 409.4.	Trace to 1% pyrite with 3 - 5% pyrite in places  Up to 20% pyrite and 1-2% pyrrhotite at 409.4	653	400	410	10	.05	"	"	"			
				654	410	420	10	.02	"	"	"			



FOOTAGE		DESCRIPTION	% Mineralization	SAMPLE NO.	FOOTAGE			ASSAYS					
From	To				From	To	Length	Cu.	Mo.	Am.	Ag.	Ni.	
448.6	454.7	Diorite(?) or Intermediate to basic metavolcanic or sub-metavolcanic. Porphyritic. Fine - to very fine-grained. Characterized by up to 1mm - 5mm masses of mainly chlorite (45% of rock), and sub-hedral, white, 1mm phenocrysts of feldspar in a very fine-grained feldspar chlorite matrix. Cut by quartz, chlorite, and epidote veining. Both upper and lower contacts are bleached, paler green than the main body of the intrusion, and have bleached the surrounding sandstones to some extent. Trace to 1% pyrite, disseminated, especially in epidote veins.	Trace to 1% pyrite	658	450	460	10	.02	"	"	"	"	0.01
454.7	470.5	Feldspathic, sandstone. Massive. Pale green to white. Generally similar compositionally to 442.5 - 448.6 but non-bedded and non-banded. Cut by extensive quartz chlorite veining.		659	460	470	10	.02	"	"	"	"	0.02
	455.4 - 457 -	Pale brown carbonate weathering out in sandstone.											
	456 -	Trace to up to 1% chalcopyrite	Trace to up to 1% Chalcopyrite										
	456 - 456.6 -	10 - 20% massive, honey to dark brown sphalerite.	10 - 20% Sphalerite										
	457 - 459 -	Massive, very fine-grained chloritic intermediate to basic submetavolcanic. Upper contact obscured by chloritic alteration. 10% very fine-grained, (about 0.5mm) white feldspar phenocrysts.											
	459.6 - 464 -	As 455.4 - 457 with 5% Sphalerite massive in part, with carbonate.	5% Sphalerite										
	464 - 470.5 -	As main unit, turning darker green to bottom of subunit.											
	466.3 - 470.5 -	Contact with unit below parallels core axis for 4 feet; about 1% pyrite	1% pyrite										
470.5	484.5	Intermediate to basic metavolcanic or submetavolcanic. Very fine-grained. Phaneritic. Dark greenish-grey, turning medium green (482.5 - 484.5) to bottom of unit. 1 cm chilled margin (chloritic) in contact with sandstone unit above. Pyrite: about 1% disseminated.	1% pyrite	660	470	480	10	.01	"	"	"	"	-
	477.5 - 481 -	Broken core											
484.5	500.5	Mudstone-sandstone sequence. Dense black mudstone, bedded at 60° to core axis, interbedded and intercalated with light grey transparent, fine - to very fine-grained feldspathic sandstone 40 - 50% feldspar in a transparent quartz matrix. Extensively cut by stockworks of quartz. Pyrite: about 1 - 2% in very fine grains, lobs, stringers and in thin (up to 1mm) veinlets; 5% disseminated pyrite in one 1.5 cm bed at 489.5'. Trace pyrrhotite at 496.5; 498.5; 499.7	1 - 2% pyrite with 5% pyrite over 1.5 cm. Trace pyrrhotite.	661	480	490	10	.01	"	"	"	"	-
500.5		END OF HOLE		662	490	500.5	10.5	.02	"	"	"	"	-