

CR 7624

BHP-TRIAKO RESOURCES JOINT VENTURE

BONAPARTE BASIN, N.T.

EL6969

ANNUAL REPORT FOR PERIOD

ENDED 17 SEPTEMBER 1992

C.I. EDGAR

December 1992

CR 93 / 046

Tenement is held by:

BHP MINERALS LIMITED
Level 3
3 Plain Street
EAST PERTH WA 6004

SUMMARY

One diamond drillhole was completed south of the Sandy Creek deposit. No economic mineralisation was intersected.

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1. INTRODUCTION

EL6969 (Sandy Creek) is located just inside the Northern Territory border approximately 60km northeast of the Kimberley township of Kununurra and covers parts of both Legune Station to the north and Spirit Hill Station to the south. Geologically, the EL covers the eastern margin of the onshore Bonaparte Basin. EL 6969 is contained entirely within the Auvergne 1:250,000 geological sheet area (see Fig, 1).

Access to the EL is possible via the unsealed, graded Keep River Road. Access within the EL is possible via several sandy tracks and old seismic lines.

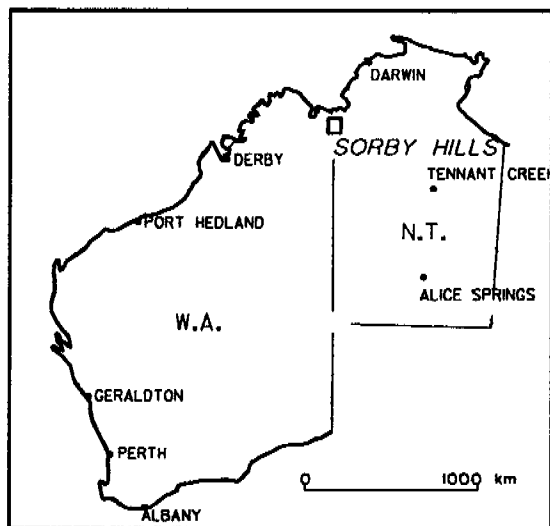
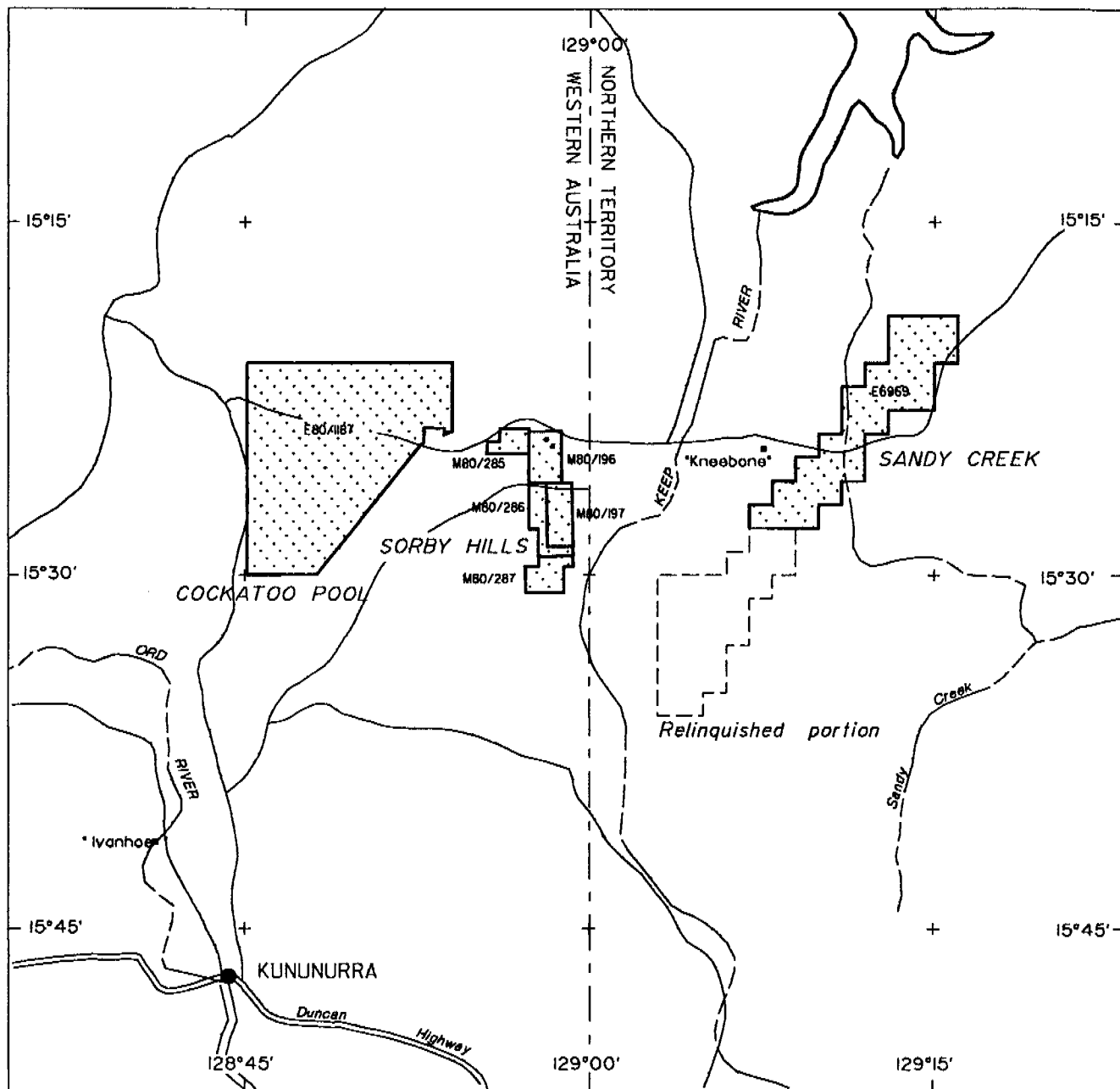
The tenement was applied for to test shallow carbonate rocks for possible "Mississippi Valley Type" base metal deposits.

1.1 History

The Sandy creek deposit lies within EL6969. This region was explored for base metals by Aquitaine and its Bonaparte Gulf Joint Venture partners since 1972. Exploration methods used have included detailed IP surveys, seismic reflection surveys, stream geochemistry and drilling. By 1984 a total of 19 diamond drill holes and 50 non core holes had been drilled in the region of the Sandy Creek deposit.

Mineralisation is principally associated with basin margin faulting, but some stratabound mineralisation is present. The mineralisation is hosted by the Clb₂ sandy dolomites of the Burt Range Formation.

In 1985 BHP entered the Sorby Hills Joint Venture with Triako Resources



Scale 1: 500 000
0 10 20 30 40 km

Microstation

Prepared :

Drawn : S. Shephard

Date : 4.9.92

Revised : 28.10.92



BHP Minerals Limited
A.C.N. 008 694 782

**SORBY HILLS JOINT VENTURE
TENEMENT LOCATION PLAN
NOVEMBER 1992**

Centre : Perth

A4-5428

FIGURE 1,

(who had acquired the project from Aquitaine) and carried out exploration on EL4413, together with adjacent tenements in Western Australia (Sorby). This work was concentrated away from the Sandy Creek deposit but in 1989 BHP carried out an IP survey over the Sandy Creek deposit^{to} the north. This IP survey showed that the Burt Range Formation to the north of the Sandy Creek deposit is still chargeable and BHP commenced a fence of diamond drill holes 800m north of the Sandy Creek deposit to test the Burt Range Formation. This work was reported under EL4413.

Drilling at Sandy Creek has delineated a total resource (indicated) of 3.2 mt @ 4.5% Pb, 2.4% Zn, 15 g/t Ag (using a 5% Pb + Zn cutoff).

2. TENEMENT STATUS

EL4413 was relinquished on the 29th September, 1989 after an exploration retention lease was pegged over the Sandy Creek Prospect.

EL6969 was applied for on 19/2/90 and was granted on 17/9/90. It comprised 52 sub blocks (83.2km²). There was a 50% reduction in October 1992. The current tenement status is given below.

No work was conducted on the relinquished portion of EL6969.

EL 6969 SANDY CREEK	RETAINED AREA
LEGUNE MAP 25/1	1:100,000 SHEET

BLOCK	25/1	2460 - 2660
		2461 - 2661
		2362 - 2562
		2263 - 2563
		2264 - 2364

	2165 - 2265
	2066 - 2266
	1967 - 2167
	1868 - 2068
TOTAL	26 BLOCKS

EL 6969 SANDY CREEK	RELINQUISHED AREA
LEGUNE MAP 25/1	KEEP MAP 25/4 1:100,000

BLOCK	25/1	1869 - 1969
		1770 - 1970

BLOCK	25/4	1441 - 1841
		1442 - 1742
		1443 - 1743
		1444 - 1644
		1445 - 1645
		1446 - 1546

TOTAL	26 BLOCKS
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3. WORK CARRIED OUT IN 1992

A 200m vertical diamond drillhole (SCD1992) was completed 800m south of the known Sandy Creek mineralisation and 300m south of a gossanous outcrop of Burt Range Formation (Clb₂). See plates for drillhole location. No economic mineralisation was intersected.

The site was selected for a number of reasons. The area south of the Clb₂ gossan outcrop is totally untested by deep diamond drilling. Only shallow percussion holes have been drilled previously. The drillhole was partly designed to test a zone of chargeability anomalism in the under-explored carbonates of the Burt Range and

Button's Formation (see Plan AD-2208). It was also hoped to test for parallel fault structures and breccias.

The hole penetrated 25m of Recent sandy overburden then a silty and sandy dolomite sequence of the Early Carboniferous Burt Range Formation to 200m. Two high angle planar structures were noted at 88m and 159m and a one metre cavity at 93m. Only trace secondary sulphides were encountered near surface and trace marcasite blebs in vuggy dolomite at 127m and 133m. See drilling log for details.

4. CONCLUSIONS

Drilling of one cored hole to test Burt Range Formation some 800m to the south of the Sandy Creek deposit intersected ground preparation and traces of marcasite but no base metal sulfides.

REFERENCES

- DENDLE P.K., 1986: BHP-EATM Joint Venture, Bonaparte Gulf Basin, N.T. EL 4413. 1986 Annual Report for the Period 30.9.1985 to 29.9.1986. Report Number CR 5240.
- INGEBRITSEN R., McCHESNEY S. and GAGAN M., 1984: St Joe-Aquitaine-Mimets Joint Venture. 1983 Annual Report. Mineral Exploration in the Northern Territory portion of the Bonaparte Basin. Two Volumes. Report Number SJB83-6.
- INGEBRITSEN R. and SHELLEY J., 1984: St Joe-Elf Aquitaine Joint Venture, EL 4413 Annual Report for the year ending 8th September, 1984. 2 Volumes. Report Number SJB84-2.
- JORGENSEN G.C., 1987: BHP - Triako Resources Joint Venture, Bonaparte Gulf Basin, N.T. EL 4413. 1987 Annual Report for the period 30.9.1986 to 29.9.1987. Report Number CR 5594.
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- JORGENSEN G.C., 1989: BHP - Triako Resources Joint Venture, Bonaparte Basin N.T. EL4413. 1989 Annual Report for period 30/9/88 to 29/9/89.
- JORGENSEN G.C., 1990: BHP - Triako Resources Joint Venture, Bonaparte Basin, N.T. EL 4413, Final Report 1989. CR 6777.

EXPENDITURE FOR THE EXPLORATION LICENCE YEAR 1991 - 1992

Wages & Salaries	\$ 6,009
Field Support	\$ 3,030
Drilling	\$16,923
Vehicles	\$ 725
Geochemistry	\$ 181
Equipment	\$ 2,281
Office Expenses	\$ 703
Other	\$ 258
In house Services	
Drafting	<u>\$ 115</u>
	\$30,225
20% of Total for Corporate Overheads	<u>\$ 6,045</u>
	\$36,270
	=====

BHP BASE METALS W.A. - BOHAPARTE GULF HEADER SHEET

1 of 2

DEPTH 200 m LOGGED BY CAMERON EDGAR HOLE No. SCD 1992 R.L. ~20m A.S.L. DATE

CONTRACTOR Westralian Diamond Drillers			TENEMENT EL6969			MINERALISATION							
MACHINE WARMAN 1000 (STOCKY)			PROSPECT SANDY CREEK (N.T.)			FROM	TO	TYPE	COMMENTS				
COMMENCED			JOB No. L77			37	38		?dissem 2° sulphides - TRACE only				
COMPLETED			AMG GRID			61.4	-		oxid joint surface - ? 2° sulphides Trace				
METHOD NQ diamond core			8296300 mN			127	128		Trace marcasite blebs in vuggy dolm				
			520510 mE			133	134		" " " " " "				
SURVEY METHOD			HOLE DIAMETER			PURPOSE OF HOLE							
DEPTH	MAG BRG	DECL	HOLE DIAMETER	FROM	TO	CORE ORIENTED Y(N) NO TOWARDS							
0	-	90°	5 1/2" core	0	37	DRILLING WATER LOSS YES							
			HQ	37	47	NB: USE NBK5004 FOR WATERBORE *****							
			NQ	49	200	HOLE CONDITION 400m west.							
						PLUGGED NO							
						CEMENT NO							
						ANYTHING LEFT IN HOLE NO							
STRATIGRAPHIC LOG						STRUCTURAL LOG (MILLING, PLANAR FEATURES, RUBBLE BRECCIATION)							
FROM	TO	FACE	CODE	ROCK TYPE	Q _u	LIST	INTERVAL	UNIT DESCRIPTION	STRATIG.	FROM	TO	INTERVAL	COMMENTS
0	5	Rf	O.V.E.R				5	Pale orange brown unconsolidated fine gr. sand	RECENT	88.0	88.20		High angle planar feature
5	10	Rf	O.V.E.R				5	Orange brown CLAYS and minor sand		159.4	159.8		" " " "
10	25	Rf	O.V.E.R				15	Orange brown sand and clay					with oxid ? 2° sulphides
25	119.2		S.N.D.O					Pale yellow brown sandy Dolomite and grey blue silty dolomite; massive to poorly bedded units becoming more vuggy from 61m.	Early CARB BURTRa Fm C1b2 "SANDY DOLOMITES"				
								25-30 sandy yell/br dolm					
								30-37 silty grey blue dolm					
								37-38.7 sandy					
								38.7-44.7 silty					
								44.7-57 sandy					
								57-66.8 silty					
								66.8-71.7 sandy					
								71.7-83 silty (wisps)					
								83-101.7 sandy (vughs) (etched out shell material) (Trace 2°s)					
								101.7-105.2 silty					
								105.2-109.3 sandy - Trace dissem oxid blebs sulphide					
								109.3-111.3 silty					
								111.3-119.2 sandy (vughs)					

BHP BASE METALS W.A. - BONAPARTE GULF HEADER SHEET

2 of 2

DEPTH 200m

LOGGED BY C. EDGAR

HOLE No. SCD1992

R.L. ~20m

DATE

CONTRACTOR Westralian Diamond Drillers			TENEMENT EL 6969			MINERALISATION						
MACHINE WARMAN 1000			PROSPECT SANDY CK(NT)			FROM	TO	TYPE	COMMENTS			
COMMENCED			JOB No. L77									
COMPLETED			COG. AMG. GRID 82 96 300 mN 520 510 mE			LOCAL GRID						
METHOD Nx CORE												
SURVEY METHOD			HOLE DIAMETER			PURPOSE OF HOLE						
DEPTH	MAG BRG	DECL	HOLE DIAMETER	FROM	TO	CORE ORIENTED Y/N TOWARDS						
						DRILLING WATER LOSS						
						HOLE CONDITION						
						PLUGGED						
						CEMENT						
						ANYTHING LEFT IN HOLE						
STRATIGRAPHIC LOG						STRUCTURAL LOG (MILLING, PLANAR FEATURES, RUBBLE BRECCIATION)						
FROM	TO	FACIES	CODE	ROCK TYPE	Qu	LIST Qu	INTERVAL	UNIT DESCRIPTION	FROM	TO	INTERVAL	COMMENTS
119.2	200		SI, DO					Green grey/blue silty dolm with minor sandy dolomite interbeds. Vugs contain minor blebs of marcasite.				
								119.2-137.7 green grey/blue silty dolm.				
								137.7-145.6 pale yell/br sandy dolm				
								145.6-148.5 green silty dolm				
								148.5-189 yellow sandy dolm				
								*NB one metre cavity 175-176m				
								* Very badly broken core from 174-192				
								189-200 grey blue silty dolm - minor soft sed. slumping ? Buttons Fm				
								200m EOH.				
								STORED AT SORBY CAMP				
								NO GEOCHEM SAMPLING				

BONAPARTE BASIN
E.L. 4413 - NORTHERN TERRITORY
SANDY CREEK & ALPHA HILL AREAS
INTERPRETATIVE BEDROCK GEOLOGY
OVERBURDEN COVER REMOVED

Scale 1:10000

Revised 12-10-89, 12-11-92

author: R.H. Ingebritsen

date: December, 1984

Drawing No. AO-2208

FIGURE 3

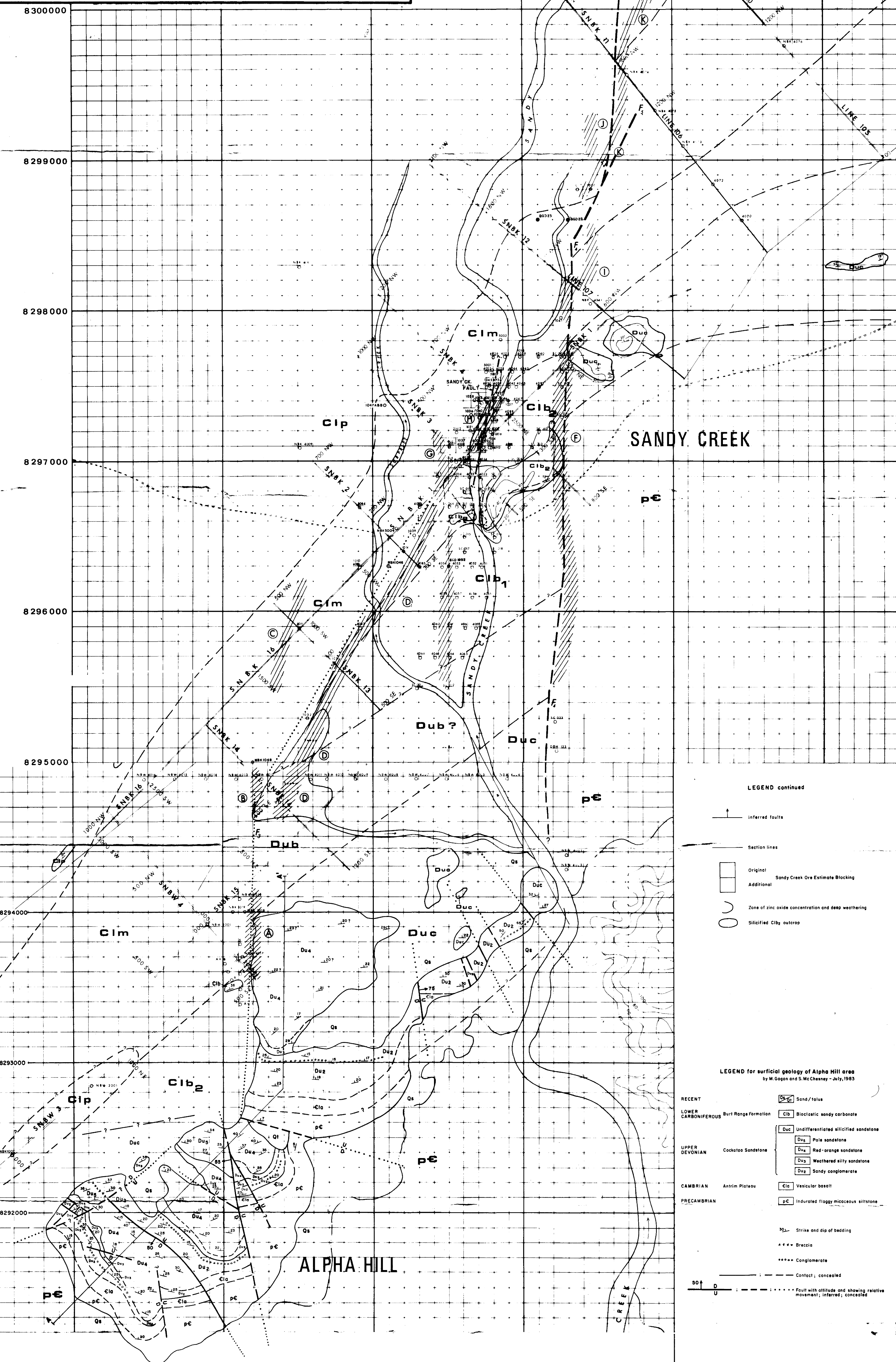
drafted: A.B., L.C.

base plan:

LEGEND

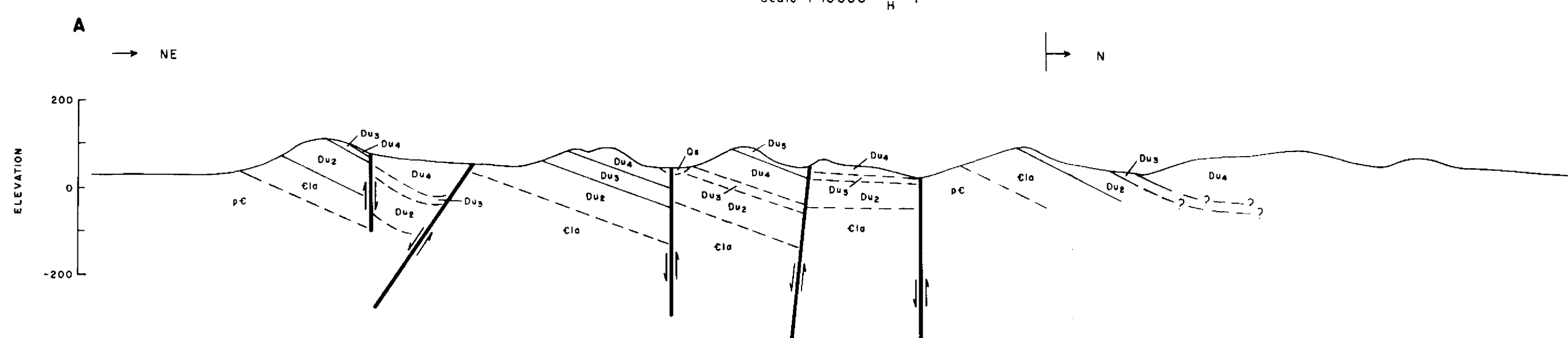
UPPER CARBONIFEROUS	Border Creek Formation	Cub	Sandstone & Conglomerate		Outcrop boundary
	Point Spring Sandstone	Cip	Quartz Sandstone		Interpreted Geological Contacts
LOWER CARBONIFEROUS	Mulligans Beds	Cim	Silty Shale, Calcareous Quartz Sandstone		Faults
	Burr Range Formation	Cib2	Sandy Dolomite		Strike and angle of dip
		Cib1	Silty Member		Drill hole location
UPPER DEVONIAN	Buttons Beds	Dub?	Quartz Sandstone Dolomite		Chargeability
	Kellys Knob Sandstone	Duc	Quartz Sandstone		
CAMBRIAN	Antrim Plateau Volcanics	Cla	Minor Limestone		
PROTEROZOIC	Undifferentiated	pc			

Base plan prepared by - Aquitaine Australia Minerals Pty Ltd.
Drawing No. 750-M-80 Report No. SJB8



SECTION A-A'

Scale 1:10000



SANDY CREEK & ALPHA HILL AREAS
GEOLOGICAL & STRUCTURAL INTERPRETATION

