NORTH FLINDERS MINES LTD / ROEBUCK RESOURCES NL TENNANT CREEK FARMIN JOINT VENTURE

FINAL REPORT ON HOPEFUL STAR MCC 1069 AND 1070

FOR PERIOD 2ND JANUARY1992 TO 1ST JANUARY 1995

D. A. C. Archibald North Flinders Exploration April 1995

RH:DACA272



TABLE OF CONTENTS

SUMMARY

1. INTRODUCTION	1
2. TENEMENT DETAILS	1
3. LOCATION AND ACCESS	1
4. PREVIOUS MINING AND EXPLORATION	1
5. EXPLORATION UNDERTAKEN ON MCC 1069 AND 1070 BETWEEN JANUARY 1992 AND JANUARY 1995	3
6. REFERENCES	3

<u>APPENDIX</u>

Shallow Vertical RAB Drilling to Establish Bedrock Lithologies and Geochemistry - Logs and Assays

LIST OF FIGURES

Figure 1	Location Plan	1:100,000
Figure 2	Tenement Plan	1:12,500
Figure 3	Bedrock Geochemistry - Gold (ppb)	1:2,500 film
Figure 4	Bedrock Geochemistry - Bismuth (ppm)	1:2,500 film
Figure 5	Bedrock Geochemistry - Copper (ppm)	1:2,500 film
Figure 6	Bedrock Geochemistry - Lead (ppm)	1:2.500 Film

SUMMARY

This final report on MCC 1069 and 1070 documents all exploration carried out by Roebuck Resources NL during the period of tenure from January 1992 to January 1995. Both mineral claims lie immediately to the south-east of tenements covering the Hopeful Star mine workings (17 kilometers WNW of Tennant Creek).

Work undertaken comprised:-

- · establishment of a pegged grid
- drilling of 168 shallow vertical RAB holes on the grid to establish bedrock lithologies beneath cover and associated Au, Cu, Bi and Pb geochemistry.

More comprehensive exploration was carried out on those tenements closer to the mine workings.

1. INTRODUCTION

This final report on MCC 1069 and 1070 documents all exploration carried out by Roebuck Resources NL during the period of tenure from January 1992 to January 1995.

The tenements covered a possible extension of a low order gold in soil and bedrock geochemical anomaly (the GAIL PROSPECT). This had been identified by Newmont Australia Ltd and was located about 250 metres east-south-east of the "Hopeful Star Extended" workings.

To test for a continuation of the known geochemical anomalism, exploration of the tenements comprised:-

- · establishment of a pegged grid
- drilling of 168 shallow vertical RAB holes on the grid to establish bedrock lithologies beneath cover and associated Au, Cu, Bi and Pb geochemistry.

2. TENEMENT DETAILS

Details pertaining to the mineral claims are given in the table below.

	Date of Grant	Date of Expiry	Area (hectares)	Rental
MCC 1069	2/1/92	1/1/95	40	\$ 400.00
MCC 1070	2/1/92	1/1/95	32	\$ 320.00

Exploration of the mineral claims was integrated with work carried out on other tenements which lie closer to or over, the original Hopeful Star mine workings (See Figure 2).

3. LOCATION AND ACCESS

Both mineral claims are located 17 kilometers ENE of Tennant Creek and approximately one kilometer ESE of the mine workings at Hopeful Star.

Access from Tennant Creek is via the unmade road which serviced small mining operations at Hopeful Star, New Moon, Blue Moon etc. Short tracks south from this road reach MCC 1069 and 1070 (see Figure 1).

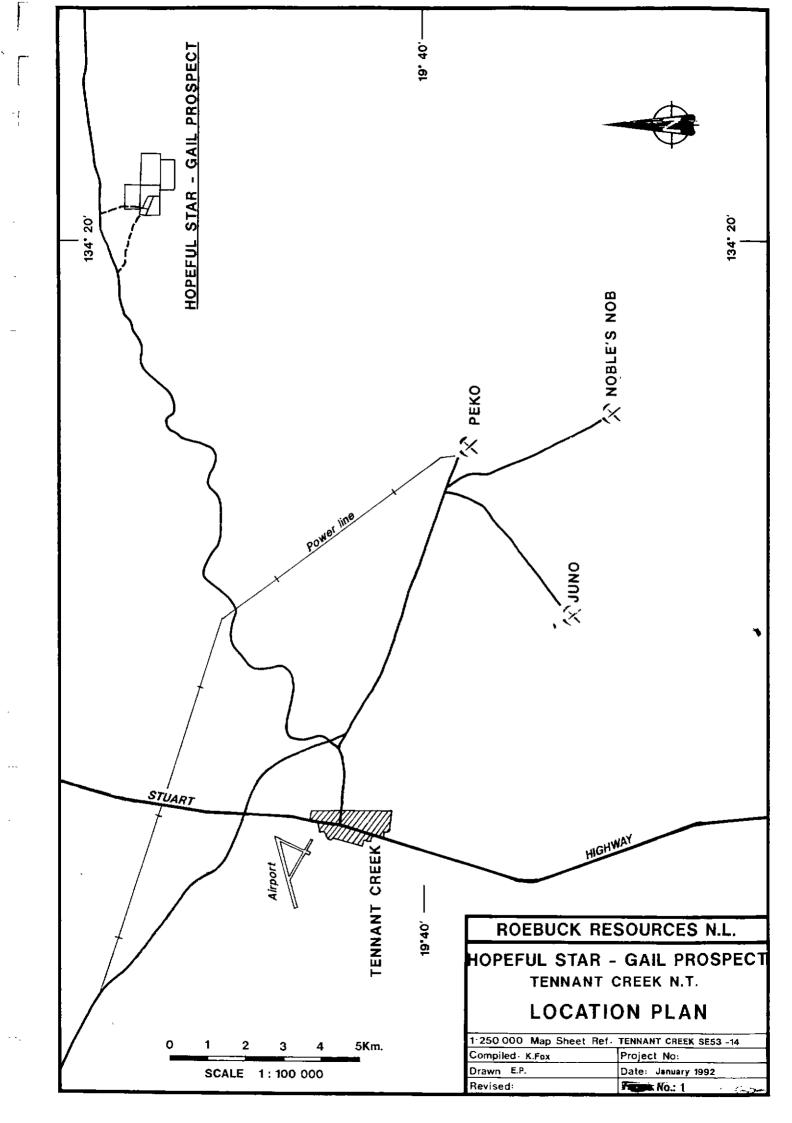
4. PREVIOUS MINING AND EXPLORATION

Mining History

There are no existing mine workings on MCC 1069 and 1070 though the old 'Hopeful Star" and "Hopeful Star Extended" mine workings are located nearby within Mineral Leases C 624 and C 632.

The original "Hopeful Star" mine is located on the south side of a prominent conical hill which rises about 25 metres above the surrounding country. It comprises two shallow (about 5 metres) shafts, a small open pit and an adit. About 70 metres of drives extend beneath the hill.

Ivanac, 1954 records that, up to June 1952 the mine had produced 1,641.27 tonnes of ore which yielded 5,303 grams of gold at an average grade of 3.23 grams per tonne. Tailings averaged 2.84 grams per tonne suggesting a head grade of 6.07 grams per tonne.



At some time prior to 1957 but after 1952 a 19.5 metre deep shaft was sunk on the "Hopeful Star Extended" prospect and some very small scale development occurred although no production was recorded. In 1957, a Uniter Uranium N.L. (McBride, 1957) mapped and sampled these workings.

On the 19.5 metres vertical depth level the shear had been developed by an 8 metres long drive. A 1.5 metres channel sample across the shear averaged 0.79 grams of gold per tonne.

On the 15 metres level development was more extensive. Stoping extended over a total east-west length of 18 metres and a maximum width of 9 metres. To the west of the shaft channel sampling indicated an average grade of 13.83 grams of gold per tonne over a horizontal width of 3.7 metres. Twelve metres further to the east in the stope east of the shaft channel sampling indicated an average grade of 18.01 grams of gold per tonne over 3.1 metres.

No further work is known to have been done until 1967 when B.A. Tapp undertook a programme of geological mapping, dump sampling, diamond drilling and Wagon (percussion) drilling.

Nine dump samples from the original "Hopeful Star" mine averaged 1.06 grams of gold per tonne. Two diamond drill holes totalling 255 metres were completed to test beneath "The Tooth". Neither ore grade nor significantly anomalous gold intersections were recorded. About 100 metres east-south-east of "The Tooth" a single vertical Wagon (percussion) drill hole was completed which encountered 3 metres averaging 29.4 grams of gold per tonne between 3 metres and 6 metres downhole depth.

In 1969 a shaft was sunk to 11.5 metres depth on the abovementioned hole and a further 20 vertical percussion holes were drilled in a close spaced array around it. One of these, HS13 located 9 metres east of the original hole encountered six metres averaging 14.46 grams per tonne.

From the bottom of the shaft (sunk by G.S. Remfrey and partners) stoping was extended over an average north-south width of 3 metres and length of 3 metres west and 6 metres east.

Recorded production (Tennant Creek Battery records, 1969) from this working was 201.17 tonned of ore which yielded 6,.572 grams of gold at an average grade of 32.67 grams per tonne. The tailings averaged 11.31 grams per tonne indicating a head grade of 43.98 grams of gold per tonne.

Attempts to continue mining this ore shoot in late 1969 were thwarted when the shaft collapsed. Attention was diverted to the "Hopeful Star Extended" workings. Production commenced but operations were again interrupted by shaft collapse. A new shaft was sunk 5 metres further to the west. This shaft reached the 15 metres level from which some additional ore was mined. A drive was extended for about 8 metres to the west at the 10 metres depth level with a small three metres long cross-cut to the north from its end.

Late 1969 to early 1970 production from the "Hopeful Star Extended" workings is believed to have been 182.47 tonnes of ore at an average gold grade of 10.29 grams per tonne. The head grade was approximately 11.8 grams per tonne.

In the years immediately preceding 1978, Gordon Stanley Remfrey removed the main "Hopeful Star" mine mullock dumps and transported them to the Tennant Creek Battery for treatment. A total of 613.56 tonnes of ore were treated and yielded 1,409 grams of gold at an average grade of 2.3 grams per tonne. The head grade was approximately 3.00 grams per tonne.

Exploration History

There is no known previous exploration activity over MCC 1069 and 1070, though substantial work has been undertaken on adjacent Hopeful Star tenements by Geotechnics (Aust.) Pty Ltd. for Inter-Copper NL, Tennant Creek Gold Ltd., Mentana Minerals NL and Roebuck Resources NL. This exploration was carried out between 1970 and the present.

One of the possibilities supported by the results of this work was an extension of geochemical anomalism ESE from the vicinity of the Hopeful Star workings. MCC 1069 and 1070 were pegged to cover the prospective ground.

5. EXPLORATION UNDERTAKEN ON MCC 1069 AND 1070 BETWEEN JANUARY 1992 AND JANUARY 1995.

Gridding

To test for an east-south-easterly extension of geochemical anomalism into the mineral claims, the Gail Grid was pegged prior to a subsequent programme of shallow vertical RAB drilling to test weathered bedrock. The baseline (5000N) was pegged on a bearing of approximately 114° TN from the north-east corner of MLC 632 (see Figure 2). Traverses 80 metres apart were turned north and south off the baseline with a length of 200 metres. 1.6 line kilometres of grid fell within MCC 1069 and 0.8 line kilometers lay within MCC 1070.

RAB Drilling

In 1991 the Gail Grid was constructed to cover a low order soil and bedrock gold anomaly about 600 metres east-south-east of the old 'Hopeful Star Mine". This grid was tied in to the previous "Hopeful Star" grid and bedrock geochemical RAB holes were drilled at intervals of 20 metres along grid north-south lines 80 metres apart.

93 holes were drilled for a total of 566 metres in MCC 1069 and 75 holes were drilled for a total of 449 metres in MCC 1070. Holes were drilled vertically through cover until an identifiable weathered bedrock sample was obtained. This was lithologically logged and then later assayed for gold (1ppb detection limit) plus bismuth, copper and lead (1ppm detection limit). Logs and assays are presented in the appendix.

No zones of strongly anomalous geochemistry were encountered.

6. REFERENCES

- Fox, K., 1987: Consultant geologists report for prospectus of Tennant Creek Gold Ltd. December, 1987: Unpublished.
- Fox, K., 1991: Tennant Creek Joint Venture, Summary Report on Exploration Progress for the Six Months to December, 1991: Roebuck Resources N.L. Technical Report No. 248 (Volumes 1 and 2); January 1992.
- Fox, K., 1992: The Hopeful Star Prospect; a brief preliminary assessment of the results of exploration completed by the Roebuck Resources N.L./North Flinders Mines Ltd. Joint Venture up to 30th April, 1992: Roebuck Resources N.L. Technical Report No. 264; May, 1992.
- Fox, K., 1992: Tennant Creek Joint Venture, Summary Report on Exploration Progress for the Five Months to 31 May, 1992: Roebuck Resources Technical Report No. 266; June, 1992.
- Fox, K., 1993: Tennant Creek Joint Venture, Summary Report for Period from 1st June, 1992 to 31st December, 1992: Roebuck Resources N.L. Technical Report No. 293 (Volumes 1,2 and 3); February, 1993.
- Ivanac, J.F., 1954: The Geology and Mineral Deposits of the Tennant Creek Gold-field, Northern Territory: Bureau of Mineral Resources, Geology and Geophysics, Bulletin No. 22.
- Mackie, A.W., 1990: Hopeful Star progress report: Mentana Minerals N.L. Report No.?

- McBride, B., 1957: Report on Joint Venture Programme at Tennant Creek, Northern Territory. United Uranium N.L.: N.T. Geol. Survey Open File.
- Tapp, B.A., 1967: Report on Minor Metalliferous Investigations, Tennant Creek Area, N.T.: Bureau of Mineral Resources, Geology and Geophysics Record 1967/127.
- Ward, H.J., 1970: Report on the Gigantic Mine and Hopeful Star Areas and Authority to Prospect 2892, Tennant Creek District, Northern Territory: Geotechnics (Aust) Pty. Ltd. (August, 1970). N.T. Geol. Survey Open File.
- Ward, H.J., 1970: Report on the Hopeful Star and Gigantic Mine Areas and 370 sq. mile Authority to Prospect (A.P. 2892), Tennant Creek District, Northern Territory: Geotechnics (Aust) Pty Ltd.. N.T. Geol. Survey Open File.
- Wyatt, J.D., 1971: Report on Phase 1 Exploration of the Gigantic and New Moon Hopeful Star Areas, Tennant Creek District, Northern Territory: Geotechnics (Aust) Pty. Ltd. for Inter-Copper N.L. N.T. Geol. Survey Open File.

APPENDIX

SHALLOW VERTICAL RAB DRILLING TO ESTABLISH BEDROCK
LITHOLOGIES AND GEOCHEMISTRY
- LOGS AND ASSAYS

1		BEDROCK	GEOC	HEMIC	AL	RAB. 7	DRILL H	OLE	La	νст.	H0	·
20		GRID RET		SOIL	HOLE	N. T. GATION	ROCK TYPE	Au Au	Bi	Cu	Pb	
358 24 14·10-91	TOPAC	TIESHES E	TIPTES 14	1176			-1	1 140	Lebit	I TPILL	PPM	<i>J</i>
14.10-91	-										•	
357	<u>:</u>											-
24 66 447	-											
44+	-										***************************************	
											any patro de de contra que	,
	-										To a spondarding	,
	-											,
	•											
-												
											-	
											ļ.	
											,	/
40-											-	7
405_											~	
	121	1	F / 5 ==	T	6	Chl. grey sil	ak pupl	<	1	1	-	
			5100		 	2 (1.			X	4	12	
•	122		5/20	3	6	A	tggw.	/	X	8	9	
	123		5140	3	6	*		,	×	5	8	
	124		5160	<i>T</i> 3	6	Chi grey sol beige clay		4 /	×	5	8	
-	125		5180	T 3	6	<u> </u>	eyes	, ,	×	6	8	
ر ہم اص	126	100005		7	6	, " , " ;	Clayer-a	4	† 	3		
-447		1 0800€	5200N	5	6	455 ats	silfst.	×	K		11	
5.10-91	127	10800E	5200N	4		ofw grey silcrete-chi.	gw. dk red	. X	/	6	8	
	128	·	5180	4	6	4	silfst.	/	×	8	13	
	129		5160	T 4	6	beige chi clay.	2	,	X	4	10	
-	130		5140	74	6	of w chi sile beige clay.	beige Silf st.	1	1	5	7	
	131		5120	7-3	6	beige CLI Clay	beige bi		×	9	9	
_				 		glast. I flage			-			,
	/32		5100	4	ی	beige day	silfst. beige		 	3	17	1
-	/33		5080	T 4-	٠	9/2 frage ss	silfst	2	2	4	6	
01 ln 1.0	134		5060	4	6	Ofw CAL. Silc beine clau		3	×	2	9	

8. /48 BEDROCK GEOCHEMI	CAL	RAB. DI	ZILL HA	LE	L	>ст.	6	•
SAMPLE GRIS REFERENCE SOIL	HOLE	ALTERATION	Rock	Åυ	Bi	Cu	Pb	
- 15.10.91 NUMBER METRES E METRES N TYPE	DETTH		TYPE	БЬР	Ppm	PPM	ppm	
135 10800E 5040 T	6	beige chicky	l :-••	1	×	3	11	
	6	minar	brbeige	ス	×	4	8	
136 5020 7 137 5000 4	6	hem.	S. If ch.	3		4	6	
138 4980 4	6	clay win her	red CN Silf st.	1	×	6	8	
. 139 4960 T	6	dkpurple Chi	silf st.	,	1	7	12	_
				,	,	,,		-A
f							1	
Ţ								
							4	
Correct.								
]	
			_	_	_			_
n 146 4820N T	6	_	brdk	2			25	
7		dkpeple	purple chi gw.		×	8	~	:
126m 21holes 147. 4800N. 4	6	Chi clay	_	1	X	フ	21	
1/10 Inage - 1	6	dk purple Hem	br dkred Silfst.	,	×	17	12	7
148 10880E 4800N 4		Chi Cay 9 st.	henryst.			1/	/3	``
149 4820 4	6	*	74	1	×	8	27	
150 1,210 T.	6	4	ak perple	,			21	:
		9 Fr. 55.	sittst.		X	14	24.	١,
· 151 4866 T	6	_	~	1	/	13	14	1
152 4880 4 152 4880 4	6	depuple	VH bren	,			9	
152 4880 4		.chi. Feclay	Purp. Silts	<i>!</i>	X	15		
153 4900 T	6	4		1	×	9	7	
154 4920 7	6	dk purp. Ch	be purp.	2	2	7	10	
	-	Clay hem st.	silfst.			·	70	
155 4940 4	6		a	2	X	4	14	
1.900 7	G	ofer Cusic.	beige	1		8	10	
156 4960 4	- -	beige clay	sittst.		×		70	
nen-St=henstite 157 4980 4	6	hem.st.	gar themst	1	×	3	6	
Stringer 158 5000N 4	6	ofw Chi Clay them St.	4	1	×	7	8	
Total Scoon 4	+	Then St.	<u> </u>	<u> </u>				
159 5020 4	6	<i>p</i> .	<i>Ja</i>	X	×	5	//	
160 5040 4	6	O/w Chl. Clay	dkred			1.	7.	
	-	theige o	Silfst.	. <u>×</u>	×	4	21	
161 5060 4	6			×	×	2	10	
in 2 162 5080 4								

216 36 SAMPLE GRID REFERENCE SOIL HOLE NUMBER MATRES E METAES N TYPE DEPTH ALTERATION 15.10.91 164 POX 5120N T 6 Ofw CAI Clay t beige clay 165 5140 T 6 Ofw CAI Clay t beige clay 165 5140 T 6 Ofw CAI Clay t beige clay 166 5160 T 6 Ofw CAI Clay t beige clay 167 POX 5180 T 5 Cafe 168 5200N T 6 CAI Ofw Clay 125 21 169 10960E 5200N T 6 Ofw CAI Caib 170 5180 T 6 Ofw CAI Caib 171 5160 T 6 Ofw CAI Caib 172 5140 T 6 Ofw CAI Caib 173 5120 T 6 Ofw CAI Caib 174 5100N T 6 Ofw CAI Caib 175 5080 T 6 Ofw CAI Caib 176 Ofw CAI Caib 177 STOON T 6 Ofw CAI Caib 178 STOON T 6 Ofw CAI Caib 179 Ofw CAI Caib 170 Ofw CAI Caib 171 5100N T 6 Ofw CAI Caib 172 Ofw CAI Caib 173 Ofw CAI Caib 174 Ofw CAI Caib 175 Ofw CAI Caib 176 Ofw CAI Caib 177 Ofw CAI Caib 178 Ofw CAI Caib 179 Ofw CAI Caib 170 Ofw CAI Caib 170 Ofw CAI Caib 171 Ofw CAI Caib 172 Ofw CAI Caib 173 Ofw CAI Caib 174 Ofw CAI Caib 175 Ofw CAI Caib 176 Ofw CAI Caib 177 Ofw CAI Caib 178 Ofw CAI Caib 179 Ofw CAI Caib 170	Ared Silfet. Considerations	Au ppb 2 / / / / / / / / / / / / / / / / / /	Bi Ppm X X X	Cu ppm 7 14 5	Pb ppm 10 12 10 9
216 36	dk red siltst. aft. Colla. av? dkred siltst. dkred bisilt. aper vH av dkred siltst. e dkred siltst.	2 / / / / / / X	x x x	7 14 5	10 12 10 9
15.10.91 164 POK 5120N T 5 Cothwilm 9 ft 11x figs 165 5140 4 6 pluck Clay for chy	dkred sikst. dkred sikst. dkred presty qkred sikst. edkred brsitst.	/ / / / / / X	x x x	14 5	/2 /0 9
165 5140 4 6 glow Chi Clay he 166 5160 T 6 glow Chi Clay he 167 POR 5180 T 5 Copy Chi Clay he 167 POR 5180 T 6 Chi of w Clay he 167 POR 5180 T 6 Chi of w Clay their ge clay 125 21 169 10960E 5200N 4 6 clay then ght 170 5180 T 6 Chi chi Chay then ght 171 5160 T 6 glow Chi-carb: 172 5140 T 6 glow Chi-carb: 172 5140 T 6 glow Chi-carb: 173 5120 T 6 green chi chay them st 174 5100N 4 6 green chi st conines) 174 5100N 4 6 green hope	dkred sitst. dkred sitst. dkred sitst. dkred sitst. edkred br sitst.	l X	× × /	5	10
165 5140 4 6 FREGE Chyle 166 5160 4 6 FREGE Chyle 167 POR 5180 5 5 Q fr 167 POR 5180 5 5 Large 169 169 169 169 5200N 4 6 GW Chl-carb 175 170 5180 5 6 Chyle Chyle Chyle 170 5180 5 6 Chyle Chyle Chyle 171 5160 5 6 Chyle Chyle Chyle 172 5140 4 6 Gw Chl-carb 172 5140 4 6 Gw Chl-carb 173 5120 4 6 Gw Chl-carb 173 5120 4 6 Gw Chl-carb 174 5100N 4 6 Gw Chyle 174 6 Gw Chy	Sitet. dkred prositet. qu dkred sitet. dkred sitet.	l X	× /	6	9
166 3160 4 6 theige day here 167 POR 5180 5 5 Carge of the carge	AK red Silfet.	l X	/		
167 POR 5180 5 5 Large Afr 50/42 168 5200N 5 6 CAY Of W Clay their ge day 125 21 169 10960E 5200N 4 6 Clay . tss. 170 5180 5 6 Cap . them . gfs 171 5160 T 6 Of W CAY - Carbo? 172 5140 T 6 Of W CAY - Carbo? 173 5120 T 6 Green Chi Cay them st 174 5100N 4 6 Green chi St Commerce) 174 5100N 4 6 Green for Green Chi Cay Cay Them St Commerce) 174 5100N 4 6 Green for Green Chi Cay Cay T 6 Green for Green Chi Cay Cay T 6 Green for Chi Cay Cay T 6 Green for Chi Cay Cay T 6 Green for Chi Cay T 6 Green for Chi Cay T 6 Green for Chi Cay T 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	qfe v H qv dKred silfet. e dKred br silfet.	x		//	12
50/42 68 5200N 5 theige day 125 21 169 10960E 5200N 4 6 0/w Ch1-carb 170 5180 5 6 0/w Ch1-carb 171 5160 5 6 0/w Ch1-carb 172 5140 T. 6 0/w Ch1-carb 173 5120 T. 6 0/w Ch1-carb 174 5100N 4 6 0/w Ch1-carb 175 0/w Ch1-carb 176 0/w Ch1-carb 177 0/w Ch1-carb 177 0/w Ch1-carb 178 0/w Ch1-carb 179 0/w Ch1-carb 170 0/w Ch1-carb 170 0/w Ch1-carb 170 0/w Ch1-carb 171 0/w Ch1-carb 171 0/w Ch1-carb 172 0/w Ch1-carb 173 0/w Ch1-carb 174 0/w Ch1-carb 175 0/w Ch1-carb 177 0/w Ch1-carb 177 0/w Ch1-carb 177 0/w Ch1-carb 178 0/w Ch1-carb 179 0/w Ch1-carb 170 0/w Ch1-carb 170 0/w Ch1-carb 170 0/w Ch1-carb 171 0/w Ch1-carb 170 0/w Ch1-carb 170	silfet. t dKred br silf st.	 	X	···	, ,
125 21 169 10960E 5200N 4 6 0/w Ch1-carbo 275 170 5180 5 6 0/w Ch1-carbo 171 5160 5 6 0/w Ch1-carbo 171 5160 5 6 0/w Ch1-carbo 172 5140 T. 6 0/w Ch1-carbo 173 5120 T. 6 green Ch1 174 5100N 4 6 green b ofw 174 5100N 4 6 green b ofw T 6 green b ofw	br sill st.	1	+	6	8
170 5180 5 6 0/w chl-carb: 171 5160 5 6 0/w chl-carb: 171 5160 5 6 0/w chl-carb: 172 5140 4 6 0/w chl-carb: 173 5120 T 6 green chl change them st cmines) 174 5100N 4 6 green book T 6 green book			х	4	10
171 5160 5 6 Carb. themst. 172 5140 T. 6 9/w chl-carb? 173 5120 T 6 green chi ciay them st 5120 T 6 green chi st cmines) 174 5100N 4 6 green by of w CN Clay. T 6 greenish Car	derdl	X	X	9	9
172 5140 T. 6 Ofwcht-corb? 173 5120 T 6 Green chi ciay them st ciay them st chines? 174 5100N 4 6 Green by ofw Chi Clay. T 6 green is Car.	purple cal	1	X	6	IZ
173 5120 T 6 green chi ciay them st cmines) 174 5100N 4 6 green 6 gw T 6 green 6 gw T 6 green is A CW	<u>برا مرد ارم</u>	х	x	6	10
174 5100N 4 6 green to gw T (green is h CW	beige br sillst	x	X	4	9
T (greenish CW	purple breitst.	,	2	4	10
	dkred silfst.	,	1	15	17
176 5060 T. 6 green. Ch!	dk red by silfst. 55 gfs	1	x	3	13
177 5040 4 6 green. Ch1 5040 4 6 green. Ch1 5040 55. 29 65. 55. 29 65. 56.	dered	1	,	3	8
- 178 5020 4 6 0/c gr. CAI-Carl	dkred Breik.	x	×	4	9
179 5000 4 6 clay + people clay	purple br sillet	×	×	3	7
180 4980 T 6 4	4-	X	×	5	15
- 181 4960 T 6 greenish todk	chi.dk purple bi.c.itst	,	×	4	9
182 4940 4 6 Sayt beige day		/	1	3_	7
183 4920 4 6 gt = skinger	beige sittst.	,	X	5	8
184 4900N. 4 6 beige Chi Clay	beige be silt	1	×	13	7
185 4880 4 6 Purple chi Clay	bs hope sittst.	1	×	10	16
186 4860 T 6 Purple Children Color Chistoricals:	br purple silt st.	1	×	12	34
187 POR 4840 \$5 45 Perple CAICHY	VH profe silfst	×	2	6	41
188 4820 4 6 Carb? Hem+ ssgt2st.	purple	1	×	6	12
189 4000 L 6	Silfsf.				1

PERKOCK GEOCHEMICHE

17.47.12.

DICILL HOLE LOG.

		BEDROCK	GEOC	エグてこへ	AL	RAB. Dr	ZILL HA	> L€	La	۰ ت	(8
375/12	SAMPLE	GRID RET		SOIL	HOLE HOLE	ALTERMION	ROCK TYPE	Åυ	BL	<u>د</u>	PР	
15.10.91	190	11040E	HETRES N 4800N	TYPE	6	Ofw Chi Calo 6 itc : beige day	beigebi Sitt st.	\ PP	Ppm /	PPM 6	PPM 16	
	191		4820	4 T 4	6		purple cisitist.	×	×	5	//	!
	192		4840	7	6	O/w Chl. Silc beige clay.	purple cal sit	1	Х	10	10	;
	193		4860	T 4	6	ير	4	2	X	3	11	
	194	10R	4880	73	5	hem. St. Ofw Chl. Clay +5i/c	beige Siltst.	1	×	8	12	:
-	195		4900N	T 4	6	minor hem st. beige Chl. Clay	beige sitet.	1	1	6	19	1
	196		4920	T 4	6	hen st. beige clay	beige Silfst.	1	x	<i>3</i> 3	5	
Change	197	Pok 5m	4940	T 4	4	hem st. beige clay	beige bish	2	/	8	7	3
Changes 6	198		4960	7	6	Gray hearst	brown broth 3:11 st.	/	X	4_	5	
-	199		4980	4	6	clay-cht mino, hem Laltesat.	pint po brawn	1	,	5	4	
_	200		5000N	4	6	parple CN ? Clay+creamst.	gw61.	2	x	7	8	
	201		5020	7 4	6	Cream to green Chi Clay St. beige Clay	Perple	1	X	4	7	
	GR 202		5040	4	6	Cr fogs clay-	4	1	X	2	9	
-	203		5060	7 4	6	Cr to gr Chi Clay-silc hemst	dk jed sitt st.	1	x	7	10	
	204		5080	7	6	Cr. to gr. Chi clayst, beige clayst hem st	br dkred gw.	1	×	3	5	
•	205		5100	7	6	goverish Chi Clay.	#	X	×	4	7	
	206		5120	7 4	6	greenish-cr.	61	1	×	3	7	
***	207		5140	7 4	6	Silc clay. t 9 to Frage.	dKred toberje gw. J	1	X	7	7_	
	208		5160	7 4	6	aceastaces	60	/	×	6	10	
_	209		5180	74	0	green to ceam st chi.?	heige sitst.	1.	×	7	8	
d.498/84	210	POR Gm	5200N	7	6	* - / C	g.,	1	X	5	10	
16.10-91	211	11120E	5200N	7 4-	4	gtz frags tcarb Coll. cream corb	Collu.	1	×	! //	//	
-	212		5180	4		Crean Carb	siltst.	X	X	6	16	
-	213		5160	4-	6	St-calcrete? purplechiclay Cr. Carb St.	Siltst		×	5	8	
	214		5140	T 5	6	beige clay Cream Carb St	beige		2	6	8	
	215		5120	4	6	Cr-gr.carbsf	gw.		×	2	7	
21,10	216		5100	4	6	afs.large	siltst.	1	'	7	11	

ì		BEDROCK	G EOC	エロてこへ	AL	RAB, Dr	ZILL HA	PLE	La	»Ст .	9	7
		GRIB RET	,	SOIL	HOLE	ALTERATION	ROCK	Αυ	Bi	Cu	РЬ	
-r-	GR	Matres E	METRES N	TYPE	·	Cream Carb	TYPE ak red	9dحا	Ppm	PPM	PPm	
:6.10.91	217	11120	5080 N	4	6	st. beige clay	Sillst.		X	5	//	
	218		5060	T 4	6	e,		/	X	6	7	
	219		5040	14	<u> </u>	cream Carbst hom St.	,,,	1	X	4	7	
	220		5020	7 4	6	carb.calc.? hem.st gfs	dicred for silfst.	/	×	ス	11	
	221		5000N	4	6	а	beige silfst.	1	X	2	5	
	222		4 9 80	7	6	beige clay	سر	1	1	4	4	\bar{\}
	223		4960	T 4	6	+	۵	1	x	12	8	
,	224		4840	T 4	6	beijeclay	•	ス	×	7	9	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	225		4820	7	6	beige clay erean cate. hem st.	beige silfst.	2	×	8	9	, , ,
	226		4900	T 4	6	**		1	1	6	11	
	227		4880	T. 4	6	calc+carb st	beige siltst.	2	Х	6	10	
. –	228		4860	7	6	calcrete	<i>u</i>	/	×	3	9	
	229		4840	T 4.	6	ctay cream	akred cisilist br.	/	x	2	19	
	230		4820	T 4	6	cream-calc 5t. minor heast beige clay	siltet.	1	×	1	15	
124/21	231		4800	T 4	6		altred silfst.	/	7	3	60	·
- *	232	11200 E	4800N	4	6	4	,,	1	2	5	66	
	233		4820	7	6	greenishelay	Siltst.	l	X	8	21)
	234		4840	4	6	dk purple clay, grey desilercate.	ditpurple Sillet	1	2	10	21	\
-	235		4860	4	6	O/w grey calc	<u> </u>	/	×	3	19	
-	236		4880	т ч-	G	calcretest. Greacy tale.	beige clsittst	1	×	5	9	; 1 1
,	237		4900	4	6	calc. St. hem St. beige clay.	beize Clow.	1	×	4	10	
1	238		4920	4	6	н		1	×	5	13	, , ,
	2.39		4940	<i>T</i>	6	calc st. mnorher sl	beige gw.	1	X	5	6	
	240		4960	<i>T</i>	6	*	<i>A</i>	1	X	7	8	,
_	241		4980	4	6	<i>A</i>	beige br	2	×	5	7	
	242		5000	4	G	Calc-carlost hem st.	4	1	×	3	6	ī
1/1/ /22	243		5020	7	6	ss q Ps Calcothem st.	dkred wsilf	,	X	4	9	ļ

6.10.91		BEDROCK		HEMIC	Ąь	RAB. D	RILL H	PLE	La	РСт .	10.
		GRIB RET	METRES N	SOIL	HOLE	ALTERATION	ROCK	Au Ppb	Bi. Ppm	Cu Ppm	Pb
796/33	GR		,	7.		Calc = carb	1k red				PPM
with b h solver thicker	244	112001	5040	5	6	St. hem st.	Clor Sulfet		X	4	7
f	245		5060	T. 4	6	-	-	1	×	5	7
	246		5080	7	6	calc-talcose clay (st.		,			
`				ア	6	dKpwAcch	dkred		×	4	9
_	247		5/00	4		cate/carb st.	silfst.	/	×	3	6
	248		5120	7	6	~	dKred brgw.	1	×	4	7
	249		5140	7	6	green clay Tolo cream - cale. b. carb.		1	1	5	8
	250		5160	7	6	ofw calc-carb drowple chi day. at 2 frage	akred CIBA Silfst.	/	x	5	13
	251		5180	7. 4	6	Of Calc-carb	L	1	×	7	14
50/42	252		5200	7	6	Large 9 fs of calk-carb.		X	X	4	4
	<i>25</i> 3	11280	5200 N	7	6	of calc-carb. hematite	dk red hem silfst fresh	1	1	フ	<i>仅</i>
	254		5190	7	6	Cream Carb veining (1cm) 2Fi	dk red br sillst		×	4	23
	255		5160	7	6	Cream of w Cash Clay take beine chi Clay	"	1	×	8	20
	256		5180	T 4	6	be je perple CN	dkpsple butst.	1	×	3	8
•	257		5/20	T. 4	6	ofwealc.	greybr silfst.	1	×	4	4
	258		5100	7	6	carbucing beige Chiclay.	beige.	1	×	6	7
٠,	259		5080	75.5	G	interface Collung	weathered wown	2	X	9	9
	260		5060	75	6	Cs/de Calc- Carbon Calc- dk purple d/ Clay	dured	/	×	6	//
	261		5040	T 4	6	4	•	1	×	5	14
	262		5020	T 4	6	ham banding of a calc-care beige chillay	dkred banded silfsf.	/	×	5	8
	263		5000	T 4-	6	creductarb.	akted br siltst.	1	X	4	8
	264		4980	7	6	cr. ca(c./ca/6	gw 6c	/	×	/3	6
	265		4960	7 55	6	hen rodules gf	brown weathered	/	×	8	10
*	266		4940	6	9	Lean radule 1951. afe.	brgw.	1	×	10	13
-	267		4920	5	6	greenish Clay -carb?calc	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	x	//	19
	268		4900	7. 5	6	Purple Chi Clay, Cr. Calcrete Carbonete	Silf st	/	<i>x</i>	8	14
*	269		4880	76	9	perple chi Clay cream calcr carb	purpok bu sitt St	/	×	1	16
-	270		4860	7. 4		cream calc -	dkred sitet.	1	×	5	//

1		BEDROCK	GEOC	エ何てこ	AL	RAB. D	RILL H	O LE	L	کارت .	//	,
		GRID RE	FERENCE METRES N	SOIL TYPE	HOLE	ALTERATION	ROCK	Au	Bi	Cu	РЬ	<u>.</u> I
16 10 01	271			7	6	 	 	9 طحا	Ppm	PPM	PPm	*
16.10.91	271	11280E	····· '	<u>4</u> T	6	dark purple CN clay, greenish tall - earls clay	br silf st.		<u>×</u>	4	17	
	272		4820	4		calc-cerb.br.	chisitet.	1	×	4	36	
782/63	273		4800	4	6	95t.			×	7	13	Ş
<i>-</i> /	274	11360	4800N	7	6	Carplech Clay	مو	1	×	4	10	1
	275		4820	T 4 T	6	dk purple chickay.	Chl sitt	/	×	6	9	/
*	276		4840	T 6	9	dkpuple cht clay. Hemst. cirb-calce.	dk puple CKI SH St.	1	×	4	34)
	277		4860	T. 4	6	4	7	1	X	4	15	}
	278		4880 N.	4	6	cake-carb- talcose? St. beige clay.	dkred brittst	/_	2	5	27	
	279		4900	7	6	calc-carb St. hem rodules Purple chi Clay	dkpurple brsittst tqtzfrage		×	9	/2	;
	280		4920	T 4	6	u	dk purple brsittst	1	×	5	11	
	281		4940	T. 4	6	calc + carb v. beige Chi Clay	brgw.	1	×	4	12	
	282		4960	4	G	calc. tearby. beige chi clay	dkred bisilfst.	1	X	7	2/	1
	283		4980	4	6	minor Carb.	dkred brsilfst.	1	X	//	8	
	284		5000	7 4	6	u	"	1	×	3	フ	,
	285		5020	4	6	green-olu calc. talc. day		1	X	6	6	
*	286		5040	T G	9	dk purple Chi Clay. cale. Febrica.	dkpurple Usilt st.	1	×	4	4	1
	287		5060	4	6	Yer calc. Leige CH Clag	brown weathered gw.	1	1	4	6	1
*	288	· ·	5080	6	B	beige chi Clay	purple gw.	X	×	2	4	
	289	·	5100	5	6	Calc-carbo Clay-ofwgr.	gw.		×	7	9	/
	290		5120	7. 5	6	grey gr. carlo fall clay t q.E's	gw.	1	X_	4	5	<u> </u>
	291		5140	<i>T</i> 5	6	4	۵	X	×	8	8	
	292	.	5160	5	6	-	4	1	X .	7	7	
i	293		5180	T. 5		grey-grtale carb Hem. nod + st. gfs	red gw.	X	1	12	7	
84/517.	294		5200N.	4	6	grey-greate?	de silfst	1	×	5	15	
ina.]							
-												
•	ŀ	ı	ı	l	ı	(·	ľ			!	