680791

ROBB LAKE PRELIMINARY REPORT

DIAMOND DRILLING PROGRAM

MAY - JULY, 1980

ON

CLAIMS Cleo 2, 4, 6
MV 73
Rob 16, 41, 42, 43, 44

LIARD MINING DIVISION

NTS 94B 13E

Approx. 56°55'N 123°42'W

OWNERS: Texasgulf Canada Ltd.
Arrow Inter-America Corp.
Barrier Reef Resources Ltd. (N.P.L.)

MANAGER: Texasgulf Inc.

AUTHOR: R.A.F. Graham

DATE SUBMITTED: September 26, 1980.

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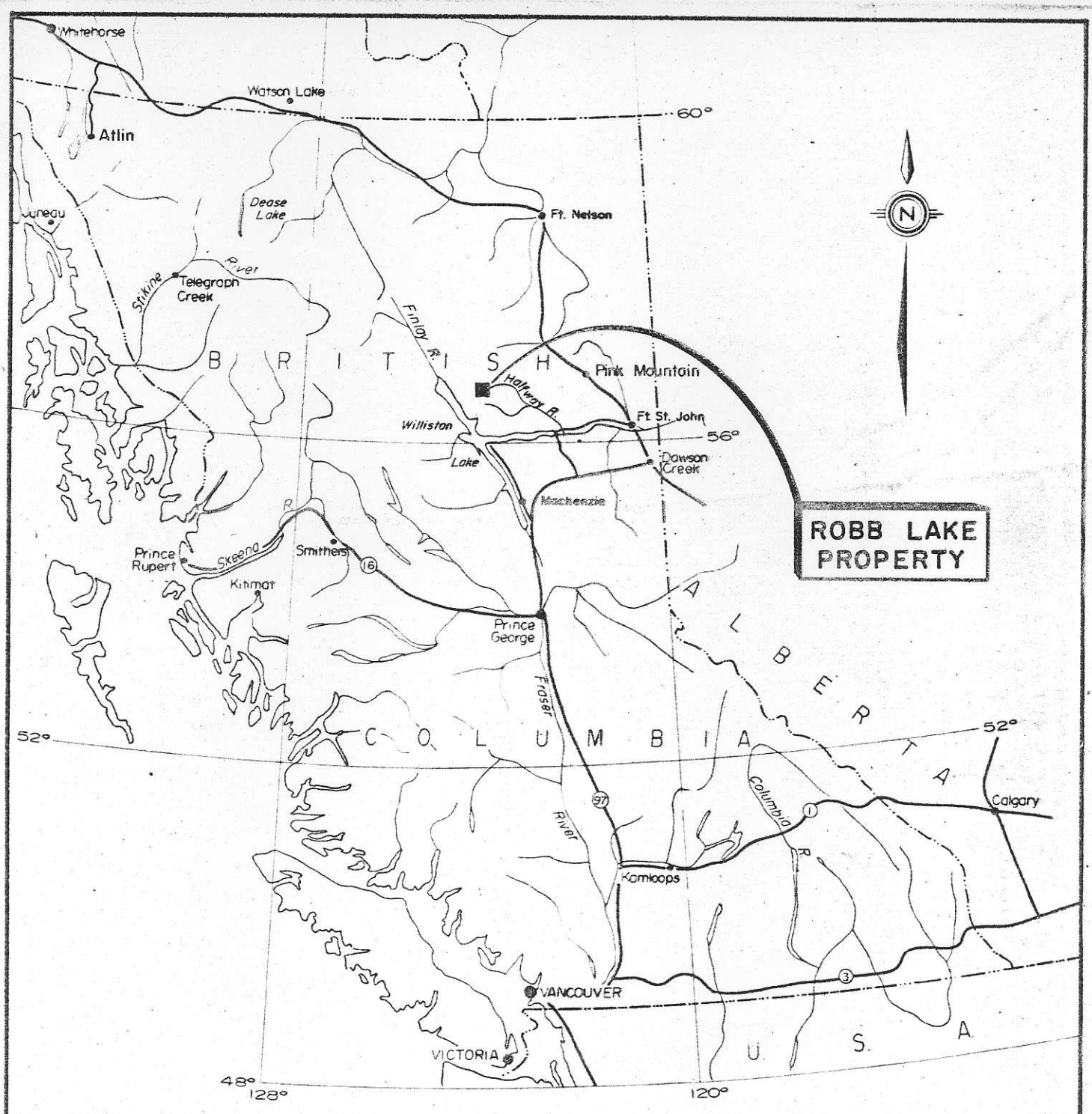
INTRODUCTION

The Robb Lake property is situated near the headwaters of the Halfway River in the Rocky Mountains of northeastern B.C. about 200 km west-northwest of Fort St. John, and about the same distance north of Mackenzie. The closest highway point is on the Alaska Highway about 72 km to the east-northeast of the property near the very small community of Pink Mountain.

Access to the property is by air and the most suitable points of departure are Fort St. John or Mackenzie. A 915 m gravel airstrip was constructed on the property in 1972 and can be used by a limited number of aircraft types. Robb Lake, 6 km west of camp, can be used to a limited extent by float planes. Good docking facilities are available at the lake.

The Robb Lake claims were staked in 1971, with a few later additions, by Peregrine Exploration (now Barrier Reef Resources), Arrow Inter-America Corp. and Ecstall Mining (now Texasgulf Canada). The three companies later pooled their claims and formed a joint venture to explore them. A total of 427 two-post claims and 16 units of one mineral claim remain in good standing. Each of the three companies owns some of the claims outright. The rest are held jointly by the three. Texasgulf Inc. is manager of the project.

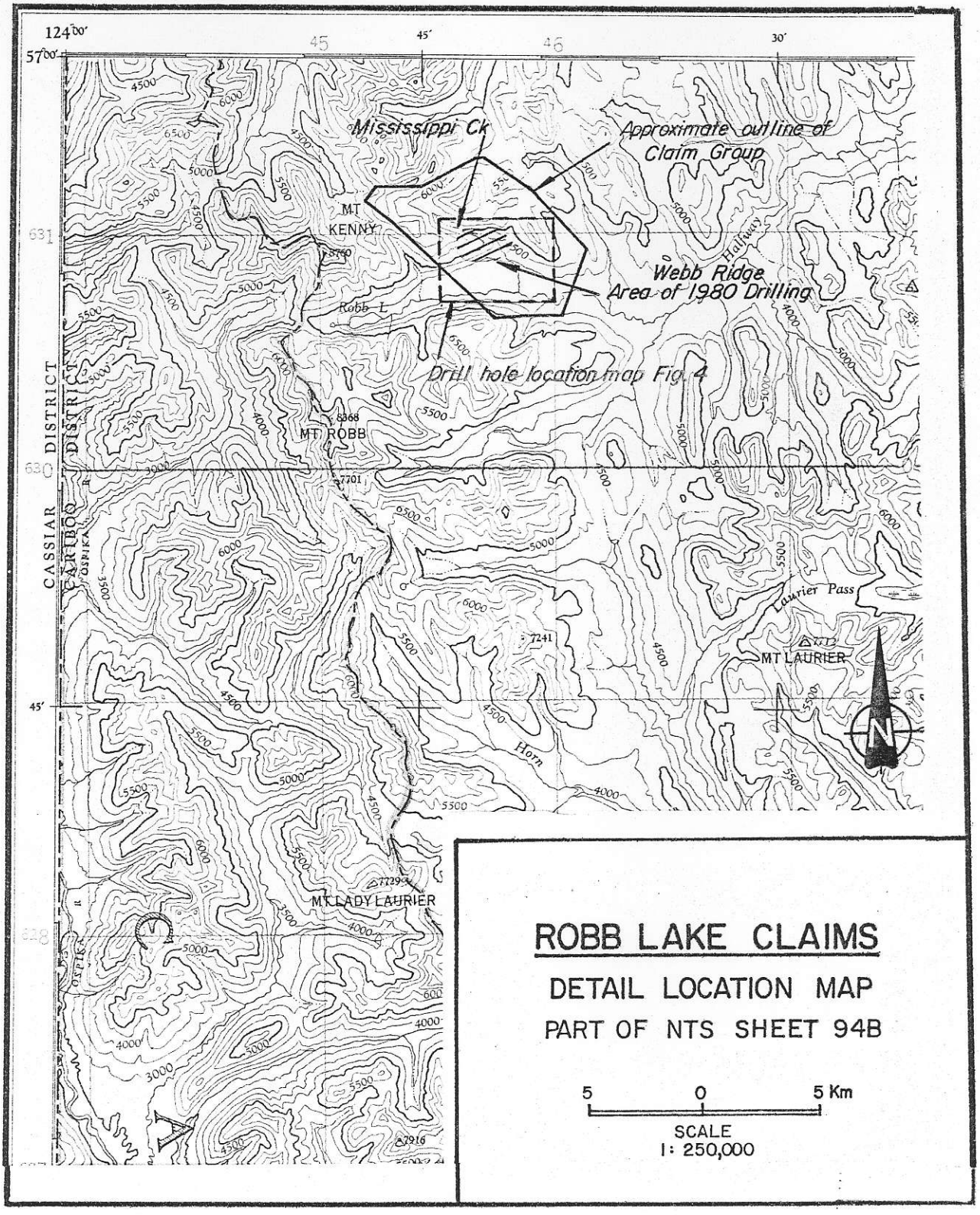
The claims were staked originally to cover lead-zinc showings in carbonates of assumed Middle Devonian age. From 1972 until 1975, successive field programs of geological mapping and diamond drilling added much information on the structure, stratigraphy and mineralization controls in the area. Over the four year period 91 holes totalling 43,478 ft were diamond drilled. Drilling was aimed at a number of showings and in three of them significant mineralization was found. A total of 6.1 million short tons grading 7.3% combined lead and zinc was inferred.



LOCATION MAP

ROBB LAKE JOINT VENTURE

NATIONAL TOPOGRAPHIC SERIES



From 1976 until 1979, the project was dormant. It was reactivated in 1980 when it was decided to carry out a grid diamond drilling program to explore for further zones of mineralization in an area where the potentially mineralized horizons lie at some depth below surface. This was a new approach to exploration at Robb Lake and was taken because mineralization associated with the known surface showings was insufficient to make a viable mining operation.

Mobilization of camp and drill equipment took palce in late May. The drilling contract was awarded to Longyear Canada Ltd. One drill machine, a Longyear 38, was engaged continuously on the program from early June till the end of July. In that time ten holes totalling 3502.77 m were drilled. The holes were drilled on nine different claims as follows:

Hole No.	Claim	Total depth (m)
81-80	Rob 16	471.53
82-80	Rob 41	370.94
83-80	Cleo 6	306.93
84-80	Cleo 4	279.81
85-80	MV 73	337.11
86-80	MV 73	325.22
87-80	Rob 44	340.16
88-80	Rob 43	385.88
89-80	Cleo 2	320.34
90-80	Rob 42	364.85

The size of all core is BQ and it is stored at the camp beside the airstrip on the property.

Near the end of the program a survey was made of the collar location and elevation of the first 9 holes.

RESULTS OF DIAMOND DRILLING

Earlier work had shown that the Devonian carbonate succession in the Robb Lake area is about 700 m thick and that it could be divided into four units: A,B,C,D in descending order. The units of particular economic interest are B and C and each is about 300 m thick. Strata on the property are only slightly folded but had been affected by extensive thrust faulting.

Previous diamond drilling had indicated that the highest grade and most extensive mineralization occurred as continuations of showings found on Webb Ridge. It was also shown that mineralization occurred at two stratigraphic levels, one in mid Unit C, the other in Unit B. Because it appeared that both these units had considerable lateral extensions at a fairly constant level below surface to the south of Webb Ridge it was decided to start a grid drilling program in 1980 to explore both units in this region for further zones of mineralization.

The first hole, No. 81-80 was drilled on Webb Ridge where Unit B mineralization had already been discovered. It confirmed the occurrence of sphalerite and galena in Unit B though grade was much lower than expected. Unit C, which was not previously explored, was found to contain extensive sphalerite and galena and the best intersection over a mineable width was 9.68% Pb and 4.65% Zn over 4 m. Results show a high Pb:Zn ratio, a feature previously noted in Unit B mineralization of this area and so far unique to west Webb Ridge.

Hole 82-80 after passing through two sections of unidentified shale separated by a carbonate resembling Unit B, entered a major breccia body and remained in it over a depth of 298 m to the bottom of the hole. Over about 30 m the breccia contains minor sphalerite and galena. The breccia is probably of solution collapse origin and is presumably part of a body that had been encountered in previous drilling.

9.68
4.65
1433

Hole 83-80 located close to Mississippi Creek intersected 36 m of overburden, probably morainic material, before entering bedrock of Unit B. The B-C contact was encountered at 64 m and Unit C continues to a fault at 149 m. From the fault to the bottom of the hole at 307 m the section is all part of Unit B. The fault repeats the section and appears to be a thrust which was not recognised during field mapping. No significant mineralization was found in hole 83-80.

Holes 84-80 to 90-80 all intersected essentially the same sequence. They were collared at slightly different stratigraphic levels in Unit B and were drilled to below the central part of Unit C. Significant mineralization was found in Units B and C in hole 84-80. The best section was 0.01% Pb and 5.87% Zn over 4 m in Unit C. In other holes mineralization, mainly sphalerite, is scattered over a thick section in the central part of Unit C but in no case does it approach ore grade. In holes 87-80 and 89-80 none was of great enough significance to assay. In most holes traces of sphalerite and galena occur in Unit B but it was rarely of sufficient importance to assay.

Characteristics of Units B and C are consistent over the area drilled. Both units consist of cyclical shallow water carbonates which have been entirely dolomitized. The base of a typical cycle is represented by sandy grainstones or mudstones deposited, probably, under fairly high energy subtidal conditions. These pass gradually upwards to supratidal carbonate mudstones. The grey colour of the carbonates becomes lighter upwards. The main differences between cycles in the two units is that in Unit B the lower and middle parts of cycles commonly contain quartz sand whereas they do not in Unit C, and the basal part of each cycle in Unit B is much darker than the corresponding part of the cycle in Unit C.

The upper parts of cycles everywhere have been affected by solution activity which has dissolved certain parts of the sedimentary sequence, led to minor stratiform collapse brecciation, and left cavities which have been filled by secondary dolomite. This type of solution effect

is particularly strongly developed in the central and upper part of Unit C. Most of Unit C mineralization occurs in association with this secondary dolomite, though large areas showing solution effects remained unmineralized.

The long section of breccia encountered in hole 82-80 is probably part of a major breccia body cutting much or all of the B-C succession. The breccia appears to have a steeply dipping wall and may be related to solution and collapse along a major joint or fault. It was previously concluded that Unit B mineralization was related to margins and minor offshoots of this body. However current drilling has indicated that some Unit B mineralizatien may have controls similar to that in Unit C.

CONCLUSIONS

Drilling has shown that stratigraphy and structure south of Webb Ridge are close to what was predicted from surface mapping and previous drilling.

Two zones of significant mineralization were discovered in Unit C, one below known Unit B mineralization and the other remote from any previously known occurrences.

The discoveries show that reconnaissance drilling can be an effective means of exploration.

Evidence of solution activity with associated scattered mineralization is very widespread in the central and upper part of Unit C. Higher grade concentrations of mineralization are small in comparison with the extent of tho zone of "alteration". Solution features are less widespread in Unit B and mineralization is much more restricted than in Unit C in the area explored.

R.A.F. Graham

APPENDIX 1

Statement of Qualficiations

R.A.F. GRAHAM

APPENDIX 1

Statement of Qualifications

R.A.F. GRAHAM

B.Sc. (Geology) 1962. Queen's University of Belfast

M.Sc. (Geology) 1967. University of Western Ontario

Ph.D. (Geology) 1970. University of Western Ontario

Since 1970, employed in mineral exploration or related geological work.

APPENDIX 2

Statement of Expenditure

APPENDIX 2

SUMMARY OF EXPENDITURES FOR 1980 PROGRAM

Salaries and fringe benefits		US$ 23,530
Fees		19,780
Helicopter and fixed wing support		85,657
Diamond drilling		176,796
Supplies and equipment		34,215
Surveying		5,107
Services		18,663
Government fees		16,152
	TOTAL	US$ 379,900

APPENDIX 3

Surveyed co-ordinates and elevations

of diamond drill-holes 81-80 to 89-80.

TEXAS GULF INC.

ROBB LAKE JOINT VENTURE

Co-ordinates and Elevation of Drill Holes 81-80 to 89-80 (in feet)

Drill Hole	North	East	Elevation
DDH 81-80	74339	57232	5895.2
DDH 82-80	73742	56599	5616.1
" 83-80	72209	62071	4651.9
" 84-80	72259	60773	4775.8
" 85-80	72397	59627	4789.5
" 86-80	72245	58488	4805.5
" 87-80	72207	57038	4929.6
" 88-80	73248	57027	5313.8
" 89-80	73328	59397	5097.4

APPENDIX 4

Summary logs of diamond drill-core

PROPERTY: Robb Lake

LOCATION(grid) Northeast B.C. NTS 94B

LOCATION(survey) 74339N 57232E

AZIM: ELEV: 5895.2 ft DIP: Vert

DEPTH: 471.53 m CORE SIZE: BQ

STARTED: June 8, 1980

COMPLETED: June 13, 1980

CORE RECOVERY:

TEXASGULF INC.

DRILL HOLE LOG

HOLE NO. 81-80

CLAIM: Rob 16

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: June 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
316 m	0	89.1°
468 m	30°	88.2°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	1.22		Overburden - residual soil and rubble.
1.22	226.52		Unit B Dolostones and breccias
			1.22-18.252; Dolostone: Strongly rhythmic color and texture variations.
			Silty, peloidal cryptalgal laminates intercalated with paler, crystalline, burrowed
			peloidal wackestone, sometimes showing birdseye textures. Occasional amphipora
			fragments, well rounded. 20 cm. amphipora wackestone at 9 m. Some burrows
			impregnated with pyrobitumen and quartz. Pale intervals characterized by weak,
			spotty porphyrtopic textures, zebroid fabric. Scattered pyrobitumen. Sparse quartz
			cemented fractures.
			18.252-36.17; Dolostone: Rhythmic, with birdseye textured cryptalgal laminite
			between intervals of crystalline, porphyrtopic dolostone with pseudobreccia
			and zebroid textures.
			36.17-48.77; Dolostone, rhythmic color and texture variations, medium-dark to
			medium-light grey. Largely laminated peloidal wackestones, some burrowed intervals.
			Stylolites common. Porphyrtopic textures common in light coloured sections. Scattered
			crackle breccia. Occasional bitumen, quartz, and dolomite cemented mosaic breccia
			pods. Some weak fracturing.
			48.77-62.17; Dolostone: strongly rhythmic,sandy,silty, frequently birdseye textured,with

DEPTH FROM	DEPTH TO	DESCRIPTION
		occasional burrowing. 160-165 is characterized by abundance of pseudobreccia and zebroid fabrics.
		Remainder is stylolitic, and some crackle breccia cemented by quartz and dolomite. Possibly pale
		sand marker.
		62.17-76.2; Rhythmic, silty, birdseye textured and burrowed peloidal dolostones. Breccia, mostly
		rubble breccia but locally crackle breccia. Pods of black insoluble residues at base of rubble
		zones contain sphalerite and galena. Cements are dominantly white dolomite but quartz is present.
		75.5-76.2 is dirty rock matrix breccia.
		76.2-101.1; Dolostone: rhythmic sequence of birdseye textured, intraclastic intervals and peloidal,
		silty, burrowed intraclastic wackestones gradational to pseudobreccias. Variable amounts of sand
		and burrows in dolomitic mudstone. Scattered stylolites increasingly common toward base of intervals.
		101.1-112.77; Dolostone: broadly rhythmic, medium and dark grey, sandy, silty peloidal packstone
		with occasional burrows and birdseye textures. Some intercalated sandy and silty laminites,
		occasional cryptalgal textures. Frequent stylolites.
		112.77-117.95; Dolostone: light grey, peloidal, dolomitic mudstone with sandy lamina; relic
		birdseyes in generally crystalline, porphrytopic and pseudobreccia textured dolostones. Locally
		silicified and pyrobituminous.
		117.95-158.19; Dolostone: Rhythmic sequence, marginally intertidal-supratidal. Rarely silty,
		burrowed peloidal packstones and wackestones, some birdseyed intervals, intraclasts and dessication
		cracks. Widespread weak porphrytopic texture, locally well developed zebroid and pseudobreccia
		fabrics. Stylolites common. 145.7-150.9 contains shines PbS and ZnS in crackle and rubble breccia,
		particularly in pyrobituminous matrix at base.
		158.19-190.19; Dolostone: Rhythmic subtidal-intertidal facies. Burrowed peloidal wackestones and
		packstones, some amphipora, packstones and bafflestones. Occasional peloid-grapestone wackestone.
		Lower parts of interval characterized by birdseye texture. Porphrytopic texture is widespread.

DEPTH FROM	DEPTH TO	DESCRIPTION
		Pyrobituminous stylolites common. Minor crackle and mosaic breccia.
		190.19-226.52; Dolostone: uniform (only faintly rhythmic) medium to dark grey, subtidal, burrowed
		peloidal wackestones. Scattered grapestones, amphipora relics, intraclasts. Lower 30 m contains
		silty, sandy beds. Rare birdseyes. Occasional stylolites. Sparse crackle breccia is the only
		secondary feature observed.
226.52	471.53	Unit C
		226.52-241.42; Dolostone: medium to dark grey. Sparse silt and sand. B/C contact marked by
		intraclastic peloid-grapestone packstone with superimposed nodular anhydrite texture, followed
		by peloidal cryptalgal boundstone/peloidal grapestone, wackestone in rhythmic repetitions.
		241.52-263.34; Dolostone: medium to light grey rhythmic sequence of intertidal and supratidal
		facies. Birdseye textured cryptalgal boundstones, occasionally intraclast bearing grapestone peloid
		packstone. Common porphrytopic, pseudobreccia, and zebroid fabrics. Common evidence for hard-
		ground in the form of silicified, pyrobituminous, or selectively neomorphosed burrows.
		263.34-302.05; Dolostone: Weakly rhythmic sequence with early diagenetic sabkha features super-
		imposed over subtidal-intertidal rhythms. Burrowed pale grey peloidal wackestones, frequently
		bearing minor but environmentally sensitive bioclastic elements. Sparse amphipora, scattered
		brachiopod molds. One massive stromatoporoid at 273.1 some gastropods up to 4 cm in diameter.
		Occasional birdseye textured cryptalgal laminite. Short pseudobreccia intervals, locally vuggy,
		grade into rubble breccia and breccia-moldic fabrics. Common zebroid texture. Occasional stylolites.
		Sparse pyrobitumen. Pervasive neomorphism in pale intervals. Traces pyrite and sphalerite.
		302.05-347.17; Dolostone: strongly rhythmic color and textural variations. Burrowed peloidal wackestone
		local birdseye textures, rare grapestones. Scattered, zebroid and pseudobreccia textures. Porphrytopic
		texture widespread. Pale, crystalline rocks dominant over medium-dark grey, peloidal laminites.

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 81-80	PAGE NO. 4 of 5

DEPTH FROM	DEPTH TO	DESCRIPTION
		Some pods of vuggy dolomite cemented rubble and crackle breccia. Common stylolites. Rare silt.
		traces Zns, Pbs.
		347.17-355.12; Dolostone: mostly breccia. Pyrobituminous pseudobreccia grading into crackle,
		then rubble breccia with sphalerite, pyrite, galena, and dolomite cement and some pyrobituminem.
		Overall grades of Pb + Zn less than 2% for any 2 metre interval.
		355.12-366.17; Dolostone, PbS and ZnS in breccia. Weakly burrowed, peloidal wackestones in an
		interval dominated by crystalline, neomorphic fabrics. Some birdseye textured cryptalgal
		laminites. Dolomite cemented crackle breccia with pockets of sphalerite and galena. Sulphides
		occur in good grades as rims and void fillings with dolomite in rubble breccia 363-366.
		366.37-366.67; Dolostone breccia, galena and dolomite cement. Angular sand marker represented
		by about 7% floating quartz sand grains in clasts.
		366.67-386.18; Dolostone, mostly crackle to rubble breccia. Locally rich in PbS, ZnS. PbS
		occurs alone in multiply fractured clasts and dolomite cement without contemporaneous carbonate
		gangue. Lower grades of ZnS and PbS occur with dolomite cements in rubble breccia. Fragments
		frequently neomorphic, often porphrytopic. ZnS occurs disseminated in rubble breccia and
		impregnating small patches of zebroid fabric. Pyrobitumen occurs in breccia, fractures and along
		stylolites. Primary lithology is generally burrowed peloidal packstone with some gastropods and
		amphipora relics.
		386.18-402.64; Dolostone, generally pale, neomorphic with vague burrows and rubble breccia in
		significant intervals and isolated pods. Spots of zebroid texture mineralized with traces of
		sphalerite, pyrite, and pyrobitumen. Some intervals of pyrobituminous pseudobreccia. Stylolites
		with finely disseminated pyrite. Minor pyrite with dolomite cementing breccia. Minor birdseye
		textured peloidal laminite.
		402.64-406.30; Dolostone: rubble and mosaic breccia. Neomorphic, vaguely burrowed crystalline
		clasts. Dolomite cement with abundant vugs. Late pyrobitumen and pyrite. Disseminated ZnS less

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 81-80	PAGE NO. 5 of 5
DEPTH		DESCRIPTION		
FROM	TO			
		than 1%. Unbrecciated septa contain stylolites. 405.8-406.w has abundant dark matrix.		
		406.3-343.03; Dolostone: uniform, with diffuse rhythmic grey and light grey subunits. Generally		
		burrowed peloidal packstone-wackestone with occasional grapestones. Most is crystalline, variably		
		porphrytopic, with 1-2 cm isolated vugs lined with grey isopachous dolomite. Several short		
		intervals of rubble and crackle breccia contain ZnS (less than 2%), pyrobitumen, traces of pyrite.		
		Texture and color is progressively more uniferm as depth increases.		
		434.03-437.4; Dolostone: mosaic and rubble breccia. Light grey, crystalline burrowed peloidal		
		wackestones in clasts of breccia with finely disseminated sphalerite in cement and along stylolites		
		and a secondary clay seam. Pyrobitumen in vugs and stylolites.		
		437.4-470.92; Dolostone: crystalline grey and light grey, peloidal wackestones with vague burrows		
		and occasional intraclasts. Sparse dolomite cemented crackle breccia. Scattered intervals of		
		porphrytopic,nodular, and pseudobreccia texture. Numerous stylolites. 1-2 cm elipsoidal vugs		
		lined with grey isopoachous dolomite.		
	471.53	END OF HOLE		

TEXASGULF INC.
DRILL HOLE LOG

PROPERTY:	ROBB LAKE
LOCATION (grid)	Northeast B.C. N.T.S. 94B
LOCATION (survey)	73742N 56599E
AZIM:	ELEV: 5616.1 DIP: vertical
DEPTH	370.94 m CORE SIZE: BQ
STARTED:	June 14, 1980
COMPLETED:	June 19, 1980
CORE RECOVERY:	

HOLE NO. 82-80

CLAIM: Rob 41

SECTION:

LOGGED BY: D. Bending

DATE LOGGED: June 1980

DRILLING CO.: Longyear Canada Inc.

DIP TEST

DEPTH	AZIM	DIP
346 m	355°	88.3
368 m	18°	88°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	5.6		Overburden.
5.6	21.2		Besa River Shale (?)
			Very dark grey and black, with lenses and laminae of disseminated pyrite. Lower contact
			is brecciated. Probably Besa River Fm., infilling a sinkhole in the karsted upper
			surface of the carbonates.
21.2	47.1		Unit B dolostone. Minor rubble breccia at contact with shale. 2 generations of
			fractures; early, dolomite cemented, and later, quartz cemented. Primary lithology
			is rhythmic repetitions of sandy, silty, subtidal dark grey, burrowed, peloidal
			dolostone and pale crystalline peritidal dolostone with cryptalgal and evaporitic
			textures. Scattered gastropods and amphipora relics. Small shears at 29 m are the
			beginning of a weakly sheared interval that continues with gradually increasing intensity
			to a tectonic breccia at 47.1 m that comprises the Lower contact.
47.1	48.6		Tectonic Breccia, the Lower contact of which is a fault plane.
48.6	76.2		Besa River Shale (?)
			Dark grey to black shale. Well laminated, locally deformed but generally gently dipping.
			Some synsedimentary breccias and slumps. Common wisps and disseminations of pyrite.
			Scattered traces of pale brown sphalerite. Interpreted as infilling a large sink hole
			in the upper surface of the carbonate platform.

DEPTH FROM	DEPTH TO	DESCRIPTION
76.2	272	Brecciated Unit B dolostones
		76.2-80.2: Rubble Breccia. Sandy, burrowed, and birdseye textured clasts, mixed and randomly oriented in a dirty, dark grey, pyrobituminous matrix with sphalerite, galena, and abundant pyrobitumen in voids between 76.2 and 78.
		80.2-103.8: Rubble Breccia. Dark grey insoluble residue matrix and sparry dolomite cement are present in variable quantities but cement is dominant. Clasts are mixtures of sandy and birdseye dolostone. Sparry dolomite fragments indicate several episodes of brecciation. Zebroid fragments rotated during collapse, indicated collapse followed destruction of early diagenetic cements.
		102-103.8: breccia is less collapsed, grading into mosaic habit.
		103.8-146.2: Rubble and Mosaic breccia with consistent lithologies, in contrast to more chaotic collapse structure above. Color varies in a broadly rhythmic pattern more diffuse than an unbrecciated "B" unit. Generally sandy, silty birdseye textured peloidal packstones and wackestones. Scattered stylolites and pyritic seams. Two distinct phases of dolomite cement; early light grey along contacts between these phases at 119.0-121.9. Pyrite occurs as disseminations in sandy clasts and in fractures. Nodular anhydrite moulds occur at 116. Zebroid and pseudobreccia fabrics occur more frequently towards base of interval. Pale sandstone clasts at 118 may be collapsed relics of the pale sand marker.
		146.2-150: Rubble Breccia. Cements distinctive and significant. Early, isopachous grey dolomite is similar to elsewhere in the breccia. Later, dark grey pyrobituminous dolomite fills remaining voids. Sparry grey cement is locally rebrecciated. Clasts are mixed, light colored, finely crystalline, sandy, silty, variably burrowed. Some birdseyes.
		150-200: Rubble Bneccia. Late, pyrobituminous cement is less abundant, but hydrocarbon stain and residue persists. Clast color varies in a weakly rhythmic pattern as above. Primary lithologies are silty, locally sandy, burrowed or birdseye textured dolomite mudstones and wackestones. Some

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 82-80	PAGE NO. 3 of 4

DEPTH FROM	DEPTH TO	DESCRIPTION
		birdseye textured crysalgal boundstones. Rare pseudobreccia. Some late voids are filled with
		pyrabituminous, laminated internal sediments, which at 180 is rebrecciated. Some post-brecciation
		stylolites exist at 188.
		200-204.6: Rubble breccia. Same as 150-200 except pyrabitumen is grading down to minor amounts
		(traces). Slickensided fractures at 90° to core suggest minor displacement.
		204.6-250: Rubble breccia, overprinted by crackle breccia and small faults. Traces of pyrite
		sphalerite and galena 206-210, 226-250. Sulphide occurrences significantly occur below hydro-
		carbon stain interval. Thin, tight faults 212-213, 35, 30, and 32° to core; pervasive hairline
		fractures 220-221, 225-228; small faults at 227, with 15 cm of tectonic breccia; 240.8, 80°
		to core, 246, 25° to core. Primary Lithologies show weakly rhythmic variation typical for lower
		parts of Unit "B", with pattern blurred by mixing and collapse. Silty, peloidal, sometimes
		birdseyed mudstone, scattered crystalized, birdseyed, bourdstones, parpyrtopic and zebroid
		fragments, some sandy intervals.
		250-267.5: Rubble Breccia, white sparry dolomite cement, with proportions of grey insoluble
		residues irregularly increasing with depth. Porphyrtopic fabric in some clasts is gradational
		with early cements. 264-267.5 weakly mineralized with PbS and ZnS. (about 2% sulphide - 1.2%
		combined metals). Lower contact defined by coallescence of rock fabrics to mosaic breccia. Primary
		lithologies generally uniform, silty, variably laminated peloidal, burrowed dolostone typical
		for lowest parts of Unit B.
		267.5-272: Mosaic Breccia; probably large broken blocks within a rubble breccia. Burrowed
		peloidal medium grey finely crystalline wackestone.
272	370.0	Unit C Lithologies in Breccia Body
		Contact zone generalized by uniform silty interval above and change to clean birdseyed carbonate
		below.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 82-80	PAGE NO. 4 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		272-284.5: Mosaic and Rubble Breccia. Pyrite occurs as fracture linings and impregnations.		
		ZnS, PbS, and white sparry dolomite cement breccias. Total Pb + Zn less than 1%. Primary		
		lithologies typical for upper parts of "C" unit: Burrowed peloidal wackestones, scattered		
		grapestones, short intervals of birdseye textured cryptalgal boundstones, rare amphipora and		
		stachyodes relics. 325-328 is vuggy, with euhedra of sphalerite and dolomite.		
		343-370: Rubble Breccia. Dolomite cement. Some pseudobreccia. Clasts mostly pale grey,		
		crystalline, uniform. Diffuse burrows, amphipora and gastropod relics, short birdseye textured		
		intervals; generally, peloidal wackestones. Base is mosaic breccia.		
		370-370.9. Pseudobreccia. Traces ZnS.		
	370.9	END OF HOLE.		

TEXASGULF INC.
DRILL HOLE LOG

HOLE NO. 83-80

PROPERTY: ROBB LAKE
LOCATION (grid) Northeast B.C. NTS 94B
LOCATION (survey) 72209N 62071E
AZIM: ELEV: 4651.9 ft DIP: Vert.
DEPTH: 306.92 m CORE SIZE: BQ
STARTED: June 20, 1980
COMPLETED: June 26, 1980
CORE RECOVERY: > 95%

CLAIM: Cleo 6
SECTION:
LOGGED BY: D.A. Bending
DATE LOGGED: June 1980
DRILLING CO.: Longyear Canada Inc.

DIP TEST

DEPTH	AZIM	DIP
203 m	310°	89.5
307 M	345°	89°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	36.62		Morrain; large boulders and sand.
36.4	41.1		Tectonic Breccia;
			Intensely sheared dolostone gouge and dolomite cement with fragments of Unit "B"
			dolostone showing peloidal, birdseye textures and diffuse pseudobreccia.
41.1	63.6		Unit B pelostones
			41.1-46.45 : Dolostone. Medium to dark grey rhythmic variations roughly 2 metres
			thick, silty, peloidal, bearing indistinct birdseye textures, scattered intervals
			of pseudobreccia and zebroid fabrics, some pyrobituminous stain.
			46.45-49.0: Dark grey dolostone. Several lithologies; Pyrobituminous slump breccia
			with lithoplasts, dark matrix, white dolomite cement; lenses of amphipora packstones.
			Many dark pyritic partings. Diffuse sedimentary bandinage.
			49.0-63.6 (Basal part of Unit B). Uniformly medium to dark grey, weakly rhythmic
			silty peloidal packstone with sparse sandy lenses, rare pelecypod and thamnopora relics.
			Widespread, weak dolomite cemented crackle breccia is overprinted by locally prominent
			shattering and shearing, with distinct faults at 52 M (45° to core), 53 (80°),
			55 (50°), and 57.
			62.25-62.5 is 60% quartz sand and silt with traces sphalerite.
			62.5-63.6 is burrowed dolomitc quartz sandstone. Lower contact is marked by pronounced
			color change and scour surface.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 83-80	PAGE NO. 2 of 4
DEPTH		DESCRIPTION		
FROM	TO			
63.6	157.9	Unit C. Dolostones.		
		63.6-66.2. Very light grey orthoquartzite. Some worn pelecypod clasts.		
		66.2-79.8. Sandy dolostone. Small pockets of pseudobreccia and zebroid texture. Occasional		
		gastropod, pelecypod, and rugose coral relics. Quartz and dolomite cementing crackle breccia		
		and occasionally filling vugs.		
		78.9-125, Dolostone. Frequently silty, with weakly rhythmic color and texture variations.		
		Birdseye textured, peloidal, silty intervals alternating with amphipora bearing, burrowed, peloidal,		
		lithologies. Occasional zebroid, pseudobreccia, and porphyrtopic intervals. Crackle and rare		
		rubble breccia cemented with white sparry dolomite and, in two locations (100, 105-106) traces		
		of sphalerite and galena.		
		125-156.3. Dolostone, with rare siliciclastics (present in silty, sandy laminations 152.4-153.9).		
		Rhythmic medium and light grey color variation, repeated transgressive-progradational sequences.		
		Transgressive phases are peloidal, medium grey birdseye textured, locally amphipora bearing		
		wackestones. Prograding sequence is progressively lighter, peloidal, sometimes burrowed, with		
		pseudobreccia and zebroid fabrics dominant specially at tops of rhythmic subunits. Weak crackle		
		breccia 133-135. Tectonic brecciation increases gradually from weak fracturing at 147 to tectonic		
		breccia at 156.3.		
		156.3-156.65. Tectonic breccia, dolomite and quartz cement		
		156.65-157.9. Heavily sheared zebroid dolostone.		
		157.9-158.45. Tectonic breccia, dolomite and quartz cement.		
158.45	306.93	Unit B Dolostone		
		158.45-188.9. Rhythmic, only occasionally sandy and silty dolostone. Strongly rhythmic		
		alternations of sandy, silty, peloidal, birdseye textured sections with burrowed intervals, and		
		variably (rarely well) developed porphyrotopic pseudobreccia, and zebroid fabrics. Sparse		

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 83-80	PAGE NO. 3 of 4

DEPTH FROM	DEPTH TO	DESCRIPTION
		crackle breccia cemented with white dolomite . Common stylolites.
		188.9-206.5 Weakly rhythmic silty, peloidal, locally sandy, locally burrowed, generally well
		laminated packstone-wackestone. 197-198 is dinstinctive vuggy, bioclastic (gastropods,
		thamnopora) with nodular massess suggestive of anhydrite relics. Many well developed stylolites,
		pods of zebroid and pseudobreccia texture.
		206.5-239.5 Rhythmic, frequently silty, locally sandy dolostones. Birdseye textured
		cryptalgal boundstones, peloidal wackestones, commonly burrowed. Occasional amphipora relics.
		Locally prominent porphyrtopic and pseudobreccia textures. Widespread crackle and mosaic
		breccia with numerous 1-2 metre sections of rubble breccia. Pyrite occurs along stylalties and
		disseminated, impregnating clasts. Rare quartz cement.
		239.5-246.4. Rubble breccia with short intervals of mosaic breccia. Encompasses three
		transgressive-progradational cycles, in contrast to the breccia intervals higher in this block
		of unit "B". Base of breccia contains a "trash zone" with laminated cave, fill between clasts,
		of insoluble residues, carbonate mud, and fine pyrite. Primary fabrics identical to rhythmic
		sequence above.
		246.4-254.5. Dolostone: several rhythmic color sequences of medium and light grey. Laminated,
		silty peloidal wackestone, some sandy, silty laminae. Some intervals burrowed. Sparse crackle
		breccia, white dolomite cement. Occasional stylolites with localized bleaching of host dolostone
		along lower margin of seams.
		254.5-269.6: Dolostone, dominantly rubble breccia with some mosaic and crackle breccia in an
		interval bounded below by prominent pseudobreccia. Spotty pods of insoluble residue matrix
		and post-breccia stylalties. Scattered galena euhedra - very low percentages. Finely crystalline
		pyrite impregnating and rimming clasts. Primary fabrics generally silty, burrowed, peloidal,
		light grey; 259-260 is sandy, silty intraclastic packstone.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 83-80	PAGE NO. 4 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		269.6-277: Dolostone; mostly mosaic breccia with intervals of rubble and crackle breccia,		
		some pseudobreccia. Primary lithology is silty, locally sandy, frequently burrowed peloidal		
		wackestone.		
		277-287.5. Dolostone; Sparse crackle breccia, dolomite cement. Rhythmic (medium grey) color		
		variations in silty, burrowed, peloidal, locally birdseye textured wackestones with some		
		grapestones.		
		287.5-293.5: Dolostone. Primary lithology same as above. Mosaic and rubble breccia, dolomite		
		cement, some fragments impregnated and rimmed with finely crystalline pyrite, scattered		
		(about 1% sulphide) PbS and Zns.		
		293.5-299.5. Dolostone. Grey and light grey rhythmic repetitions of silty cryptalgal		
		bourdstones and burrowed peloidal wackestones with pods of pseudobreccia. Occasional stylolites.		
		Very weak, sparse, crackle breccia.		
		299.5-306.9. Dolostone. Rubble and mosaic breccia. Primary lithology as above. Scattered		
		ZnS and PbS in dolomite cement. Interpreted as representing Unit B mineralization, equivalent		
		to West Webb Zone.		

PROPERTY: Robb Lake

LOCATION (grid) Northeast B.C. NTS 94B

LOCATION (survey) 72259N 60773E

AZIM: ELEV: 4775.8ft DIP: Vert.

DEPTH: 279.81 m CORE SIZE: BQ

STARTED: June 26, 1980

COMPLETED: June 30, 1980

CORE RECOVERY: > 95%

TEXASGULF INC.

DRILL HOLE LOG

HOLE NO. 84-80

CLAIM: Cleo 4

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: July 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
154 m	130°	89°
276 m	160°	89°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
20.4	82.8		Unit B. Dolostones, minor mineralization
			20.4-25; Dolostone: medium grey silty peloidal wackestone; Rubble, crackle, and mosaic breccia with dolomite, galena, spahlerite, and pyrite cement. Many stylolites in mosaic breccia at base of interval.
			25-35.2; Dolostone: medium and dark grey (weakly rhythmic on broad scale) burrowed silty peloidal packstone-wackestone. Small pods of mosaic and rubble breccia with disseminated pyrite, dolomite cement. Stylolites and secondary clay seams. Weak crackle breccia.
			35.2-41.2; Dolostone: medium to dark grey silty peloidal wackestone, in clasts in rubble breccia with .5 m of dolomite fill open space at 35.2. Dolomite cement. disseminated PbS and AnS (traces).
			41.2-82.8; Dolostone: Silty, locally sandy, peloidal wackestone. Generally uniform, weakly rhythmic medium and medium to dark grey. Occasional grapestone, amphipora relics, short intervals of intraclastic packstone. Sparse, very delicate stylolites. Widespread weak dolomite cemented crackle breccia. Traces of sphalerite and galena in crackle and rubble breccia 60-66 m. 30 cm tectonic breccia at 68 metres.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 84-80	PAGE NO. 2 of 4
DEPTH		DESCRIPTION		
FROM	TO			
82.8	279.9	Unit C		
		82.8-100; Dolostone: medium to dark grey peloidal birdseye textured laminites, peloidal		
		(grapestone) wackestone. Common crackle breccia, short intervals mosaic and rubble breccia.		
		Scattered traces ZnS in dolomite cement. Wispy disseminated pyrite.		
		100-134; Dolostone: Rubble breccia. Clasts mixed and chaotic. Lithologies include peloidal,		
		grapestone wackestones, birdseye textured laminites. Pseudobreccias. 100-101.5 is open, coarse		
		breccia with light grey and white dolomite cements. 101.5-114 is a rubble breccia with high		
		proportion of fine (3-4 cm) clasts, often platy. Also re-brecciated sparry dolomite. Spotty		
		pyrobitumen in vugs. 114-125 grey insoluble-rich matrix is increasing in proportion. Spotty		
		disseminated sphalerite occurs between grey and white cement phases. Breccia-moldic fabric		
		locally prominent. 125-127 contains up to 3% reddish orange ZnS. Insoluble residues increase		
		to a "trash zone" 127-134 in which almost all sparry dolomite is rebrecciated and surrounded		
		by grey insoluble residues.		
		134-140.3; Dolostone: weakly rhythmic, medium and light grey, crystalline. Upper contact is		
		pseudobreccia gradational to breccia body. Some small rubble breccia pods, locally moldic		
		textures. Sparse crackle breccia.		
		140.3-163.8; Dolostone: rhythmic alternations of birdseye textured laminites and burrowed		
		peloidal wackestones. Some amphipora bafflestone, possible moldic relics of cabbage stromatoporoids.		
		Sparse grapestones. 158-163.8 dominantly birdseye textured. Numerous stylolites. Sparse crackle		
		breccia. Minor pseudobreccia. Small pods dolomite cemented rubble breccia. Traces sphalerite.		
		163.8-164; Tectonic breccia		
		164-166; Dolostone: burrowed peloidal wackestone, stylolites, crackle breccia.		
		166-169.5; Dolostone: Rubble breccia. Clasts are peloidal wackestones and birdseyed laminites.		
		Dolomite cement with sparse sphalerite. 168.5-169.5 shows small pockets of pyrobituminous		

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 84-80	PAGE NO. 3 of 4

DEPTH FROM	DEPTH TO	DESCRIPTION
		residues with neomorphic rhombs.
		169.5-181; Dolostone: generally neomorphic peloidal wackestones. Irregular pseudobreccia and
		porphrytopic intervals. Fine pockets of rubble breccia. Evaporitic, weakly nodular towards
		lower contact. Common stylolites. Finely disseminated pyrite, traces sphalerite.
		181-207; Dolostone: rhythmic alternation of burrowed peloidal wackestones and birdseye textured
		cryptalgal boundstones. Selective oxidation of burrows gives locally prominant color variations.
		Locally coarse pseudobreccia. Frequent stylolites, frequently pyrobituminous, occasionally with
		disseminated sphalerite. Fine dolomite cemented fractures.
		207-231.3; Dolostone: Weakly rhythmic, frequently neomorphic. No primary textures 217-231.
		Burrowed, peloidal wackestones, occasional grapestones; numerous gastropods up to 3 cm in
		diameter. Occasional short intervals of birdseyed cryptalgal laminites. Finely porphrytopic
		and pseudobreccia textured intervals. Common stylolites. Pyrite as disseminations and a
		colloform cement in small breccia pod at 214.4-214.6. Matrix-rich rubble breccia 217.6-220.6,
		with sphalerite and pyrite disseminated in insoluble-rich matrix. 225.6-229.8 is a weakly mineralized
		rubble breccia with fabric that suggests collapse of pseudobreccia, gradational downward into
		pseudobreccia.
		231-255; Dolostone: weakly rhythmic, grey and light grey burrowed peloidal wackestones.
		234.5-235 is intraclastic packstone. 236-floating sand grains are the angular sand marker.
		Common porphrytopic, neomorphic textures, occasional pseudobreccias and patches of zebroid fabric.
		Common stylolites and stylolitic clay seams.
		255-256.38; Mislatch: remaining material is weakly mineralized rubble breccia-about 5% ZnS-
		but very little remains.
		256.38-260.2; Dolostone: Strongly mineralized matrix-rich rubble breccia. Sphalerite with
		dark grey insolubles and variably porphrytopic clasts. 2 cm of tectonic breccia crosscutting

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 84-80	PAGE NO. 4 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		mineralization. Pseudobreccia at base of rubble breccia zone is mineralized, with grades		
		dropping as it becomes more finely crystalline. 7-10% (estimate) pale brown sphalerite over		
		interval of 3.8 metres.		
		260.2-267; Dolostone; Medium and light grey locally burrowed peloidal wackestone. Occasional		
		birdseye texture. Sparse floating sand grains at 265. Rare gastropods. Subhorizontal shears		
		form tectonic breccia at 262. Weakly mineralized pseudobreccia 265.5-268. Frequent stylolites.		
		267-279.9; Dolostone: uniform, light grey, faintly burrowed, neomorphic. Small isolated pods		
		of pseudobreccia. Common stylolites, some dark grey secondary clay seams. Minor pyrobituminous		
		silt in fracture at 277.		
	279.9	END OF HOLE.		

PROPERTY: Robb Lake

LOCATION(grid) Northeast B.C. NTS 94B

LOCATION(survey) 72397N 59627E

AZIM: ELEV:4789.5 ft DIP: Vert.

DEPTH: 337.11 m CORE SIZE: BQ

STARTED: July 1, 1980

COMPLETED: July 4, 1980

CORE RECOVERY: >95%

TEXASGULF INC.

DRILL HOLE LOG

HOLE NO. 85-80

CLAIM: MV 73

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: July 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
163 m	285°	86.6°
325 M	322°	85°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	13.9		Overburden.
13.9	82		Unit B Dolostone
			13.9-24.2; Dolostone, strongly rhythmic medium to light grey, generally burrowed, locally
			birdseye textured, peloidal wackestones. Many stylolites. Some intervals of coarse,
			locally vuggy pseudobreccia. Variably neomorphosed. Sparse dolomite cemented fractures.
			24.2-82; Dolostone: weakly rhythmic, generally uniform grey and dark grey, burrowed
			(some places delicately laminated) silty. Locally sandy peloidal (grapestone) wackstones.
			Abundant, often pyritic stylolites that inplaces coallesce to secondary pryobituminous
			clay seams. Sparse dolomite cemented fractures. Traces sphalerite and pyrite.
			Unit C
			82-84; Dolostone: silty, locally sandy grey and dark grey. Locally birdseye textured.
			crackle breccia and a small pod of rubble breccia are cemented with dolomite, quartz,
			galena and sphalerite. Some tight tectonic breccia.
			84-113.8; Dolostone: Rubble and mosaic breccia. Angular fragments. Dolomite cement
			Silty, birdseye textured, peloidal, sometimes burrowed. Weakly rhythmic color and texture
			variations. Traces pyrite, sphalerite.
			113.8-143.4; Dolostone: rubble breccia. Clasts mixed and randomly oriented. Light grey
			and white dolomite cement. Primary lithologies dominantly peloidal wackestones, birdseye

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 85-80	PAGE NO. 2 of 3
DEPTH		DESCRIPTION		
FROM	TO			
		textured laminites. Crystallinity increases with depth. Some chicken wire and moldic fabrics,		
		especially toward base of interval. Several 10-20 cm intervals of grey insoluble residue matrix,		
		increasing common near base of interval. Some fragments platy, like collapsed zebroid bands,		
		traces pyrite.		
		143.4-193.1; Dolostone: rubble breccia short intervals of mosaic breccia at 165-		
		165.5, and 177.5-180; Clasts consist of grey and light grey crystalline dolostone, faintly burrowed		
		peloidal wackestones, birdseye textured, sometimes amphipora bearing. Some pods of pseudobreccia		
		and moldic textured spar. Occasional short intervals with abundant grey matrix, some of which has		
		geopetal structures indicating rotation after brecciation. Scattered post brecciation stylolites,		
		locally pyrobituminous.		
		193.1-205.4; Dolostone: medium-light grey peloidal, occasionally amphipora-bearing contact defined		
		by increase in crystallinity and lighter dolor. Some well developed pseudobreccia, spotty rubble		
		breccia, dolomite cemented fractures. Pryobituminous stylolites.		
		205.4-236.8; Dolostone: light grey, unifrom, medium to finely crystalline. Scattered faint burrows		
		and peloids. Some pseudobreccia, locally corase, gradational with pods of rubble breccia. Widespread		
		porphrytopic texture. Many cm-sized voids with rotated geopetals.		
		236.8-237; Angular sand marker. Light grey peloidal crystalline dolostone with 10% floating sand		
		grains.		
		237-253.2; Dolostone: mottled (variably oxidized) grey and light grey burrowed peloidal wackestone.		
		Several slump structures, forming matrix-rich breccias with deformed clasts occur toward base of		
		interval. Weak crackle breccia, small pods of pseudobreccia, occasional stylolites.		
		253.2-253.5; Dolostone grading to very dark grey shale. Conformable gradation from burrowed		
		peloidal light grey dolostone, through increase in organic components and clays. to shale.		

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 85-80	PAGE NO. 3 of 3
DEPTH		DESCRIPTION		
FROM	TO			
		253.5-269.35; Shale: black and very dark grey grey, delicately laminated, locally carbonate-rich shale. Finely disseminated pyrite in irregular wisps and along laminations. Bedding is tilted 25° but not deformed. Lower contact is gradational with delicately laminated grey carbonate.		
		269.35-283; Delostone: burrowed peloidal wackestone. Primary textures diffuse, due to crystallinity, uniform light grey color. Numerous short (less than 1 metre) intervals of dolomite cemented mosaic and rubble breccia, some with platy clasts suggestive of settling of zebroid fabrics. Breccias locally matrix-rich. Lower contact is defined by a small fault, 75° to core.		
		283-310; Dolostone: grey and medium to light grey burrowed peloidal wackestone. Weakly rhythmic color variations. Spotty, widespread pseudobreccia and porphrytopic texture. Several small slumps 283-288. 10 cm tectonic breccia at 294.6. Spotty pyrobitumen and relic chicken-wire fabric 306-309.		
		310-328.25; Dolostone: Primary textures very faint. Uniformly finely crystalline, light grey, weakly defined burrows, weakly rhythmic color variations. Numerous intervals of matrix-rich rubble breccias.		
	328.25	END OF HOLE		

TEXASGULF INC.
DRILL HOLE LOG

PROPERTY:	Robb Lake
LOCATION (grid)	Northeast B.C. NTS 94B
LOCATION (survey)	72245N 58488E
AZIM:	ELEV: 4805.5 ft DIP: Vert.
DEPTH:	325.22 m CORE SIZE: BQ
STARTED:	July 5, 1980
COMPLETED:	July 8, 1980
CORE RECOVERY:	>95%

HOLE NO. 86-80

CLAIM: MV 73

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: July 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
160 m	75°	89°
318 m	218.5°	88.5°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	11		Overburden.
11	131.9		Unit B. Dolostones.
			11-22.6: Dolostone: strongly rhythmic color and texture variations. burrowed peloidal wackestones. occasional birdseye textured cryptalgal laminite. Common, locally coarse zebroid bands. Locally vuggy pseudobreccia.
			22.6-54.5; Dolostone; strongly rhythmic color and texture variations reflecting transgressive-progradational sequences. Burrowed, silty, peloidal wackestones, well laminated silty peloidal mudstone, birdseye textured cryptalgal laminites. Occasional grapestone. Dessication cracks at 29-30. Rubble breccia 25.5-27.5. Common pseudobreccia, frequent stylolites. Some very light grey intervals display no primary texture. 51-53 contains numerous banded void fillings that crosscut the zebroid fabric. 53-54.5 is dolomite cemented rubble breccia.
			54.5-82.6; Dolostone: strongly rhythmic color and texture variations. Dark to light grey. Dominantly silty, burrowed peloidal wackestone and birdseye textured cryptalgal laminites. Short intervals pseudobreccia best developed at 69-72. Sparse crackle breccia fine stylolites.
			82.6-125.8; Dolostone: rhythmic, with light grey subunits progressively less common

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 86-80	PAGE NO. 2 of 3
DEPTH		DESCRIPTION		
FROM	TO			
		with depth, and 115-125.8 uniformly grey and medium to dark grey. Frequently silty, some sandy		
		intervals (sand less than 10%). Occasional birdseye textures progressively less common, with		
		none below 107.2. Lithologies dominantly burrowed variably silty peloidal wackestones, silty		
		delicately laminated dolomite mudstones. Common stylolites 87.5 to 93, some of which develop into		
		secondary clay seams. Small pods of mosaic and rubble breccia with shones of pyrite and sphalerite		
		in snow-on-the-roof habit.		
		125.8-131.9; Dolostone: B/c contact zone. Silty, medium to dark grey, occasionally birdseye		
		textured; some burrowed, some delicately laminated.		
131.9	328.2	Unit C . Dolostones.		
		131.9-140.82; Dolostone: medium and medium-dark grey, silty, birdseye textured cryptalgal laminite,		
		minor dolomitic sandstone, some delicately laminated silty dolostone. Weak dolomite cemented		
		crackle breccia.		
		140.82-166; Dolostone, breccia and pseudobreccia. Ligh grey, variably crystalline, generally		
		neomorphic. Relic primary textures include peloids, grapestones, faint birdseyes. Widespread		
		well developed pseudobreccia and rubble breccia. 140.82-166 is dominantly rubble breccia with		
		pseudobreccia and crackle breccia intervals. Multiple collapse events are reflected		
		by brecciated dolomite cement. Traces sphalerite. Weak but widespread shearing.		
		166-175; Dolostone: medium and light grey; sparse birdseye textures, peloids, occasional grapestones.		
		Much is neomorphic. Stylolites, sparse sphalerite cemented crackle breccia, nodular sparry dolomite		
		pods, pseudobreccia; rubble breccia 171-172.5.		
		175-198.6; Dolostone: medium to very light grey weakly rhythmic, dominantly neomorphic. Faint		
		birdseye textures, amphipora, pelecypod, and peloid relics in crystalline dolostone. Dominantly		
		porphrytopic, with pods of pseydobreccia, minor rubble breccia, widespread dolomite cemented		

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 86-80	PAGE NO. 3 of 3
DEPTH		DESCRIPTION		
FROM	TO			
		fractures. Some stylolites. Traces sphalerite.		
		198.6-200; Dolostone: grey, silty, sandy, peloidal packstone. Upper contact is 5 cm of tightly		
		cemented gouge.		
		200-227.6; Dolostone: medium and light grey, peloidal, locally birdseye textured, bioclastic in		
		places (pelocypod, amphipora, stachyoids and recrystallized relics and moulds). Several intervals		
		well developed pseudobreccia, some spotty zebroid fabric. 215-220 contains numerous stylalites		
		along which secondary clay seams formed.		
		227.6-254,8; Dolostone: weakly rhythmic, medium and light grey. Generally neomorphic. Diffuse		
		mottles and peloids are dominanty relic textures. Porphrytopic, patches of zebroid fabric,		
		frequent intervals of pseudobreccia. 239-241 is pseudobreccia with sphalerite and galena in late		
		pores (less than 1% over 2 metres). Some breccia-moldic fabric, minor crackle breccia adjacent		
		to breccia pods. 252-254.8 is peloidal, birdseye textured.		
		254.255.8; Dolostone: grey, finely crystalline, with several lamina 10-15 cm wide bearing up to		
		10% sand grains..Angular sand marker.		
		255.8-295.75; Dolostone: grey and light grey, weakly rhythmic, burrowed peloidal wackestone.		
		Burrows are in some places prominantly highlighted by color variations and selective neomorphism.		
		Frequent stylolites. Scattered pods pseudobreccia and zebroid texture. 256-263 is notably		
		porphrytopic.		
		294.75-328.2; Dolostone: uniform, light grey, locally very faint burrows and peloids. Small		
		pockets of dolomite cemented breccia, Pyritic stylolites. Pods pseudobreccia, widespread, weakly		
		porphrytopic texture. Numerous small (1-2 cm) ovoid vugs lined with uniform light grey dolomite.		
	328.2	END OF HOLE		

TEXASGULF INC.
DRILL HOLE LOG

HOLE NO. 87-80

PROPERTY: Robb Lake
LOCATION (grid) Northeast, B.C. NTS 94B
LOCATION (survey) 72207N 57038E
AZIM: ELEV: 4929.6 ft DIP: Vert.
DEPTH: 340.16 CORE SIZE: BQ
STARTED: July 9, 1980
COMPLETED: July 13, 1980
CORE RECOVERY: >95%

CLAIM: Rob 44
SECTION:
LOGGED BY: D.A. Bending
DATE LOGGED: July 1980
DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
169.2 m	50°	-89.5°
326.9 m	65°	-89°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	17.4		Overburden.
17.4	163		Unit B Dolostone
			17.4-47.4; Dolostone: Rhythmic color and texture variations. Generally silty, with decreasing silt abundance downward. Grey and light grey burrowed silty peloidal wackestones, birdseye textured laminites. Occasional pelcypod fragments. Some grapestones. Frequent stylolites, widespread porphrytopic texture, some pseudobreccia. 32-35 is coarsely crystalline, vuggy in places, zebroid and pseudobreccia textured.
			47.7-72.55; Dolostone: Rhythmic color and texture variations, dominantly light grey, neomorphic, finely crystalline. Burrowed peloidal wackestone, some intervals birdseye textured cryptalgal bourdstone, locally silty. Spotty pseudobreccia, locally pervasive and coarse, widespread porphrytopic texture, small pods rubble breccia. Many dry, tight, weakly leached fractures. Traces sphalerite.
			72.55-76.8; Fault-dominant shear direction is about 30° to axis of core. Completely shattered and leached.
			76.8-96.5; Dolostone: medium to light grey, rhythmic sequence of burrowed peloidal wackestones and neomorphic, crystalline dolostones. Widespread pseudobreccia, zebroid, and porphrytopic textures, weak crackle breccia, pyrite and dolomite cement.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 87-80	PAGE NO. 2 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		96.5-110.1; Dolostone: rhythmic, medium-dark grey to medium-light grey, dominantly burrowed		
		peloidal packstone and wackestone. 101-101.8 is finely laminated, up to 40% silt. Several		
		short (20 cm) intervals of birdseye textures. Pervasive crackle breccia, short intervals of		
		rubble breccia with gradations into mosaic and pseudobreccia habit. Scattered traces of PbS		
		and ZnS occur with dolomite, quartz, and pyrite as cements. Numerous stylalties. Best intervals		
		for sulphides is 104.2-105.2, with estimated 1.0 to 1.5% combined Pb + Zn.		
		110.1-111.2; Gouge-Fault zone. Shears about 10° to core.		
		111.2-123.5; Dolostone: rhythmic color and texture variations from grey, peloidal birdseye-		
		textured bourdstones, light grey burrowed peloidal wackestones, and pale crystalline dolostone.		
		Fine zebroid and pseudobreccia textured pockets, widespread crackle breccia with traces of galena		
		in dominantly dolomite cement.		
		123.5-140.6; Dolostone: weakly rhythmic, dominantly birdseye textured, grey, peloidal.		
		Occasional grapestones. Sparse crackle breccia, pods of dolomite cemented rubble breccia.		
		140.6-163; Dolostone: weakly rhythmic, generally very uniform silty peloidal wackestone.		
		Burrowed, massive intervals alternate with delicately laminated beds. Sparse dolomite cemented		
		crackle breccia. Occasional stylolites.		
163	341.2	Unit C		
		163-177; Dolostone: silty, weakly rhythmic, peloidal, medium and dark grey, frequently birdseye		
		textured dolostone. Sparse crackle breccia cemented with dolomite and pyrite. Traces sphalerite,		
		galena.		
		177-219; Dolostone; rhythmic color and texture variation but dominantly light grey. Light grey		
		burrowed and peloidal wackestones, grey and medium-dark grey birdseye textured cryptalgal laminite		
		interbeds. Pelecypod moulds up to 15 cm in diameter. Short intervals intraclastic wackestones.		
		Occasional grapestones. Slump structure at 195. Amphipora relics at 202.5. Widespread neomorphic		

DEPTH FROM	DEPTH TO	DESCRIPTION
		texture, pseudobreccia, locally coarsely crystalline, crackle breccia, short (1-2 m) intervals
		of rubble breccia. Traces sphalerite and galena.
		219-231; Dolostone, medium and light grey, rhythmic, grapestone-peloid packstones and wackestones,
		locally silty, sparse sand, birdseye textures prominant in some intervals. Burrowing locally
		prominant. Nodular anhydrite moulds 230-231. Pervasive dolomite cemented crackle breccia, some
		mosaic breccia, pods pseudobreccia and zebroid fabric.
		231-245.4; Dolostone: Rubble and mosaic breccia. Dolomite cement. Upper contact characterized
		by increase in crystallinity. Tectonic breccia 240.2-240.4 with no significant lithologic
		change. Clasts dominantly light grey, peloidal, generally neomorphic but some peloidal grapestone
		wackestone.
		245.4-281.05; Dolostone: weakly rhythmic, light grey and very light grey. Grapestone bearing
		peloidal packstones, some birdseye textured intervals, mostly burrowed peloidal rocks. Amphipora
		rubble, one gastropod 5 cm in diameter, and 1 pelecypod 10 cm in diameter occur in this sequence.
		Two short sandy intervals occur, one of which is labelled as the angular sand marker. 2701.1-
		270.4 - angular sand marker; 273.0-274.1 - sandy, silty interval. Pseudobreccias occur in several
		2-3 metre intervals. 250-252.5 is rubble breccia, gradational at both contacts with pseudobreccia.
		Scattered stylolites. Short intervals crackle breccia. Traces ZnS in steep fracgures 277-279.
		281.05-312; Dolostone: grey and light grey, rhythmic, dominantly neomorphic, burrowed peloidal
		wackestone with short birdseye textured laminated intervals. Generally porphrytopic, some zebroid
		and collapsed zebroid structures, common pseudobreccias that vary from spotty to coarse and well
		developed.
		312-216.85; Dolostone: rhythmic, grey and light grey, silty, with sand content varying (up to
		1-2 cm lenses of dolomitic sandstone); peloidal, silty wackestones, some prominantly birdseye
		textured intervals.
		316.85-341.2; Dolostone; light grey, uniform (becoming progessively more uniform with depth)

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 87-80	PAGE NO. 4 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		burrowed, peloidal, finely crystalline. Occasional dessication cracks. Small pods pseudobreccia,		
		common porphrytopic texture. Many stylolites, some of which form secondary clay seams. Minor		
		mosaic and rubble breccia.		
	341.2	END OF HOLE.		

PROPERTY: Robb Lake

LOCATION (grid) Northeast B.C. NTS 94B

LOCATION (survey) 73248N 57027E

AZIM: ELEV: DIP: Vert

DEPTH: 385.88 m CORE SIZE: BQ

STARTED: July 15, 1980

COMPLETED: July 19, 1980

CORE RECOVERY: > 95%

TEXASGULF INC.

DRILL HOLE LOG

HOLE NO. 88-80

CLAIM: Rob 43

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: July 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
190.5	315°	-88°
382.9	330°	-87.5

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	2.5		Overburden.
2.5	167.5		Unit B
			2.5-17.4; Dolostone: medium and light grey, rhythmic; silty, sometimes birdseye textured
			peloidal wackestones, some crystalline intervals; many fire zebroid bands, pseudobreccia
			that is usually patchy but locally coarse and gradational with mosaic breccia. Scattered
			traces pyrobitumen. Very weakly developed crackle breccia.
			174.-72; Dolostone: generally silty and sandy, with some very pale intervals devoid
			of silt. Strongly rhythmic color and texture variations; medium-dark grey to light
			grey. Silty, sandy birdseye textured cryptalgal laminites, laminated silty peloidal
			packstones (bedding 63° to core), crystalline, vaguely peloidal wackestones. Small
			areas of zebroid and pseudobreccia fabric, accompanied by pyrobitumen. Hairline fractures.
			Sparse stylolites.
			72-107.0; Dolostone: (unit distinction is frequency of breccias). Primary lithology
			is a weakly rhythmic sequence, medium dark grey to light grey, silty, peloidal, burrowed
			or delicately laminated. Some slump textures over short intervals occasional interclasts.
			The interval is mostly sparse crackle breccia with numerous intervals of rubble and
			mosaic breccia: 72-77.5 is dolomite cemented rubble breccia with disseminated pyrite

DEPTH FROM	DEPTH TO	DESCRIPTION
		in and rimming clasts, traces of sphalerite, traces of pyrobitumen. Several other intervals
		are matrix-rich mosaic and rubble breccia:
		89-91 has traces sphalerite, 92.5-93.5 has traces ZnS, 95-97 contains sphalerite and galena providing
		a maximum of 1.5 metres with 0.5% Pb, 0.5% Zn. Spotty pseudobreccia and zebroid textures are
		scattered through the crackle breccia and unbrecciated intervals.
		107.0-128.0; Dolostone: silty, peloidal, rhythmic, medium-dark grey to light grey, short intervals
		with diffuse birdseye textures. Locally well laminated. 10 cm amphipora. Bafflestone at 123°.
		Many stylalites, sparse crackle breccia, short intervals pseudobreccia, mosaic and rubble breccia.
		128.0-136.6; Dolostone: Generally silty, peloidal. Dominantly rubble breccia with sparry dolomite
		cement. 131.2-133.9 is not brecciated, is characterized by peloidal wackestone overlain by peloidal
		birdseye textured cryptalgal laminite.
		136.6-148.5; Dolostone: strongly rhythmic texture and color variations. Burrowed peloidal wackestones
		interbedded with birdseye textured cryptalgal laminites. Some short intervals silty. Zebroid,
		pseudobreccia, and crackle breccia textures occur irregularly.
		148.5-167.5; Dolostone: weakly rhythmic, very finely crystalline. Burrowed silty peloidal wackestones,
		some sandy intervals, rare stylolites. Locally delicate laminae.
167.5	385.1	Unit C
		167.5-174; Dolostone: Rhythmic, medium and dark grey, silty, birdseye textured cryptalgal laminites
		and peloid-grapestone wackestones. Sparse fractures, dolomite cement.
		174-186.9; Dolostone: grey silty, locally sandy, birdseye textured cryptalgal laminites.
		Lower contact is a sharp hiatus, overlain by very sandy, silty, dolostone.
		186.9-198.5; Dolostone: medium and light grey, (occasionally silty, sandy), rhythmic, faintly
		burrowed peloidal wackestones, short intervals birdseye textured laminites. Pervasive dolomite
		cemented crackle breccia below an interval 186.9-190 that is crystalline, neomorphic dolostone

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 88-80	PAGE NO. 3 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		with zebroid, pseudobreccia, and rubble breccia textures. Upper contact is a scour surface, with		
		a truncated nodular texture. Scattered traces ZnS, PbS. Widespread, irregular rubble and mosaic		
		breccia, zebroid and pseudobreccia textures. Pyrobituminous stylolites.		
		198.5-228; Dolostone: dominantly rubble breccia, some intervals crackle and mosaic breccia.		
		Primary lithologies weakly rhythmic, light to medium-dark grey; short intervals with birdseye-		
		textures. Occasional sand, silt. 217-225 contains scattered grapestones in peloidal wackestone.		
		Breccias cemented with dolomite-grey and white sequence common to major breccia bodies. Some tabular		
		neomorphosed clasts. Sparse disseminated pyrite, some brecciated pyrobitumen, traces sphalerite.		
		228-246.65; Dolostone: Peloidal wackestone, birdseye textured peloidal laminites, vaguely mottled		
		crystalline dolostone. Textures frequently neomorphic, secondary. Zebroid and pseudobreccia		
		fabrics are prominant. Scatter probituminous stylolites. 239-242 is rubble and mosaic breccia,		
		pyrite and dolomite cement, traces sphalerite with grey and pyritic residues along stylolites.		
		246.65-272.5; Dolostone: rhythmic color and texture variations; medium dark grey to medium light		
		grey. Birdseye textured cryptalgal laminites intercalated with burrowed peloidal wackestones.		
		Occasional grapestone. Short intervals with floating sand grains. Occasional hairline fractures,		
		stylolites. Widespread weakly porphrytopic texture; well developed zebroid and pseudobreccia		
		textures in some intervals. ZnS occurs in crackle breccia and rubble breccia in the interval		
		259.5-260.5 to grades of about 2% Zn over 1 metre.		
		272.5-302.9; Dolostone: Rhythmic. Medium-light grey to medium-dark grey. Mostly burrowed peloidal		
		wackestones, short intervals birdseye textured laminites, occasional grapestones. Widespread		
		crackle breccia. Sparse, spotty zebroid and pseudobreccia textures. Widespread prophrytopic		
		texture. Widespread, trace amounts of sphalerite. Numerous pyritic stylolites.		
		302.9-304.05; Sandy, peloidal packstone. Angular sand marker. Mosaic breccia, stylolites.		
		304.05-312.8; Dolostone: Pale, generally crystalline. Prominant pseudobreccia, rubble breccia		

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 88-80	PAGE NO. 4 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		with dolomite cement and matrix of dark insoluble residues at base. Traces sphalerite, with		
		best concentrations at 307-309 with two metres about 0.9% Zn.		
		312.8-324.7; Dolostone: Rhythmic, medium light grey to medium dark grey, burrowed peloidal		
		wackestone. Some pseudobreccia, widespread prophrytopic texture. Several black stylolitic		
		clay seams.		
		324.7-359.5; Dolostone: light grey, locally very light grey, dominantly neomorphic, but primary		
		lithology is peloidal, burrowed wackestones, occasional grapestones, one pelecypod mould at 338.		
		Porphrytopic and pseudobreccia textures are prominant; sparse, patchy zebroid texture. Numerous		
		stylolites. Sphalerite occurs finely disseminated in prophrytopic intervals, as cement with pyrite		
		in rubble breccia, and along pyritic secondary clay seams.		
		359.5-370.5; Dolostone: Rhythmic color variations, very little primary fabric. Faint burrows,		
		possible amphipora relics. Rubble breccia, short intervals undisturbed porphrytopic dolostone.		
		Breccias has dolomite cement, pyrobituminous matrix, traces and shines of sphalerite.		
		370.5-385.1; Dolostone: Weakly rhythmic, tending toward uniform, light grey, weakly burrowed		
		and birdseye textured, frequently porphrytopic dolostone. Irregular, small pods of pseudobreccia.		
		Many fine vugs lined with isopachous grey dolomite. Traces pyrite in late voids in pseudobreccia.		
		Some pyrobituminous stylolites.		
	385.1	END OF HOLE.		

PROPERTY: Robb Lake

LOCATION (grid) Northeast B.C. NTS 94B

LOCATION (survey) 73328N 59397E

AZIM: ELEV: 5097.4ft DIP: Vert

DEPTH: 320.34 m CORE SIZE:

STARTED: July 20, 1980

COMPLETED: July 23, 1980

CORE RECOVERY:

TEXASGULF INC.

DRILL HOLE LOG

HOLE NO. 89-80

CLAIM: Cleo 2

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: July 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
160 m	190°	-89°
318.6		90°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	21.4		Overburden
21.4	142.4		Unit B Dolostones
			21.4 45.15; Dolostone: rhythmic, peloidal, burrowed, some places silty, wackestone.
			Occasional birdseye textures. Intraclasts present at 37 m. 30-35 is neomorphic
			pseudobreccia, with many stylolites.
			45.15-64; Dolostone: rhythmic color and texture variations. Silty, peloidal,
			locally laminated but generally burrowed grey, light grey, and medium to dark grey
			wackestones and packstones. Some stylolites. Sparse crackle breccia. Short interval
			pseudobreccia 50.2-50.8. Clay-rich laminae 58.1-58.3.
			64-70; Dolostone: peloidal and silty peloidal wackestone-packstone clasts in mosaic
			and rubble breccia. Pyrite rims and impregnations. Dolomite cement except for short
			intervals with pyrite cement.
			70-121.2; Dolostone: strongly rhythmic color and texture variations; medium dark grey
			to medium light grey, silty (except for light grey, faintly birdseye textured dolostone
			at 90-95) birdseye textured cryptalgal laminites, burrowed peloidal wackestones and
			packstones, silty, laminated dolostones. Widespread sparse crackle breccia, dolomite
			and pyrite cement. Traces sphalerite. Minor isolated pockets of pseudobreccia and
			porphrytopic texture.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 89-80	PAGE NO. 2 of 4
DEPTH		DESCRIPTION		
FROM	TO			
		121.2-128; Dolostone: silty, peloidal, locally birdseye textured, frequently delicately laminated; clasts in rubble breccia with disseminated pyrite, scattered sphalerite and galena subhedra, minor quartz, dolomite cement.		
		128-142.4; Dolostone: (generally a B/C contact zone, in this hole the contact is difficult to pinpoint). Silty, peloidal, locally burrowed, rarely birdseye textured grey and medium-dark grey wackestone. (139.2-142.4 contains sphalerite, up to 1.5% Zn over 1 metre)		
142.4	322.8	Unit C		
		142.4-148.5; Dolostone. Medium-dark grey, silty, locally birdseye textured wackestone. Upper contact is mosaic breccia, grading into crackle breccia, with traces sphalerite in dolomite cement. 147.5-148.5 is rubble and crackle breccia with pyrobitumen clasts and traces sphalerite.		
		148.95-191.6; Dolostone: rubble breccia, short intervals of mosaic breccia and pseudobreccia. Primary lithology very weakly rhythmic in color and crystallinity; textures dominantly peloidal, locally silty, some birdseyes, some intervals priminantly burrowed. The characteristic sequence of early grey isopachous cement, traces sphalerite, and later white spar occurs, but is dominated by the early isopachous cement. Some pods contain abundant grey insolubles. 165-170 is characterized by abundant pyrobituminous matrix, and subrounded fragments of early sparry dolomite cement. The matrix grades downward to grey, more carbonate-rich material that is neomorphosed in places. 174-175 shows breccia-moldic fabric. 173-175 contains disseminated sphalerite and honey-colored sphalerite euhedra in vugs. 175-190 is characterized by pods of grey matrix in dominantly spar-cemented breccia, and scattered sphalerite euhedra in vugs in dolomite.		
		191.6-223; Dolostone: weakly rhythmic sequence of grey and light grey, birdseye textured cryptalgal laminites, occasionally sandy burrowed peloidal wackestones; occasional grapestones and intraclasts. Primary textures become less distinct with depth, with progressive increases in crystallinity along with brecciation, to 223. Crackle breccias are widespread; 197-199.2,		

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 89-80	PAGE NO. 3 of 4

DEPTH FROM	DEPTH TO	DESCRIPTION
		202.1-202.8, 204-205.3, 212.9-213.4, 218.0-218.6, and 219.5-220.8 are rubble breccia. Scattered
		porphrytopic and pseudobreccia lenses. Traces sphalerite.
		223-240.6; Dolostone: grey and light grey, weak color variations. Primary textures lost in
		crystallinity, excepting zebroid and pseudobreccia fabrics gradational with rubble breccias.
		Most clasts in rubble breccias that dominate the interval are zebroid textured. Light grey
		and white dolomite cement, with milimetre sized sphalerite euhedra and scattered traces of
		galena.
		240.6-242.3; Sandy peloidal wackestone-dolostone: Angular sand marker.
		242.2-289.8; Dolostone: dominantly burrowed peloidal wackestone, locally in crackle and
		rubble breccias, with porphrytopic and pseudobreccia intervals. The interval 242.3-250 is
		crystalline dolostone, with porphrytopic, pseudobreccia, and rubble breccia textures and breccia
		moldic fabric. Traces ZnS in breccia at 298-249.5. Numerous pyritic stylolites 261.5-264.
		Several short, strata-bound rubble breccia pods occur between 266-289, none of which is thicker
		than 2 metres. Traces of sphalerite occur in breccias.
		289.8-201.9; Dolostone: light grey, uniform, finely crystalline dolostone fragments and un-
		rotated septa in a rubble breccia body. 291-292, overlying an unbrecciated septum at 292-292.5,
		has a dark matrix and some breccia moldic texture. Many clasts in the breccia are platy. About
		30% of the interval displays a dark grey matrix. Pyrite and sphalerite are present in trace
		amounts.
		301.9-322.9; Dolostone: faintly rhythmic color and texture variations, progressively more
		uniformly medium-light grey towards base of interval. Faint peloids, occasional faint birdseye
		textures, in dominantly burrowed wackestones. Burrowing is sometimes accentuated by crystallinity
		and color variations. Short intervals (less than 1 metre) of rubble breccia, some moldic fabric,
		short intervals of weakly mineralized pseudobreccia, widespread porphrytopic texture.

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 89-80	PAGE NO. 4 of 4

DEPTH FROM	DEPTH TO	DESCRIPTION
		317-322.9 is finely crystalline peloidal, with numerous dark grey secondary clay seams along stylolites.

PROPERTY: Robb Lake

LOCATION (grid) Northeast B.C. NTS 94B

LOCATION (survey) not surveyed

AZIM: ELEV: 6813.3ft DIP: Vert

DEPTH: 364.92 m CORE SIZE: BQ

STARTED: July 24, 1980

COMPLETED: July 29, 1980

CORE RECOVERY: > 95%

TEXASGULF INC.

DRILL HOLE LOG

HOLE NO. 90-80

CLAIM: Rob 42

SECTION:

LOGGED BY: D.A. Bending

DATE LOGGED: July 1980

DRILLING CO.: Longyear Canada Ltd.

DIP TEST

DEPTH	AZIM	DIP
207.30	50°	-88.5
364.92	50°	-88°

DEPTH FROM	DEPTH TO	REC'Y	DESCRIPTION
0	7.6		Overburden
7.6	217.8		Unit B Dolostones
			7.6-46.8; Dolstone: strongly rhythmic, medium-dark grey to light grey, silty, locally
			sandy; birdseye textured cryptalgal laminites intercalated with peloildal, occasional
			grapestone bearing wackestone. Locally delicately laminated. Occasional gastropod
			and pelecypod relics. Some intervals are very sandy, gradational with dolomitic
			sandstone never more than 0.2 metres). Some spotty pseudobreccia and zebroid textures,
			mosaic breccia, crackle breccia. Dolomite and quartz cement. Traces sphalerite.
			Breccia more common towards base of interval.
			46.8-140; Dolostone: Strongly rhythmic grey to light grey, silty, locally sandy,
			birdseye textured peloidal cryptalgal laminites intercalated with burrowed, sometimes
			silty, peloidal wackestones and delicately laminated silty peloidal wackestone-packstone.
			About 75% of the interval has silt or sand in small quantities. Short (less than 3
			metres) pseudobreccia intervals occur throughout. Gradational through
			porphrytopic intervals to the generally very finely crystalline dolostone. Occasional
			zebrod texture. Scattered short intervals of crackle breccia in the dolomite and rarely
			quartz cement. 82.6-87.3 is coarsely crystalline, pale, pseudobreccia.

TEXASGULF INC.		DRILL HOLE LOG	HOLE NO. 90-80	PAGE NO. 2 of 3
DEPTH		DESCRIPTION		
FROM	TO			
		140.7-144; Dolostone: light grey, weakly peloidal, neomorphic; pseudobreccia and porphrytopic		
		textures. Pyritic stylolites and secondary clay seams.		
		144-173; Dolostone: rhythmic, light grey to medium dark grey, frequently silty, locally sandy,		
		peloidal wackestones and birdseye textured cryptalgal laminites. 164.8-165.2 is amphipora		
		bafflestone. Scattered pods of pseudobreccia and zebroid texture, weak dolomite cemented		
		cemented crackle breccia. Small-2 cm brachiopod molds at 162.		
		173-191.1; Dolostone: generally silty, weakly rhythmic, medium to light grey. Birdseye textured,		
		locally burrowed, peloidal cryptalgal laminites. Frequent stylolites, some black secondary clay		
		seams. Very sparse dolomite cemented fractures.		
		191.1-217.8; Dolostone: very weakly rhythmic, grey and medium-dark grey, silty, peloidal laminated,		
		some burrows. Stylolites.		
217.8	364.92	Unit C		
		217.8-226.3; Dolostone: medium and light grey, silty, locally peloidal, with prominant birdseye		
		textures, grading down through a silty, burrowed peloidal wackestone te a transgressive basal		
		contact.		
		226.3-250; Dolostone: rhythmic, medium-light grey with short medium grey intervals, peloidal		
		wackestone and birdseye textured cryptalgal laminites. Much is crystalline, faintly peloidal,		
		with pseudobreccia and porphrytopic textures. Small pods of zebroid texture. Short intervals		
		of locally vuggy rubble breccia. Minor pyrite. Traces sphalerite.		
		250-259.5; Dolostone: rubble breccia with medium-light grey clasts, peloidal and birdseye		
		textured or light grey, crystalline, with dolomite cement, pyritic and pyrobituminous stylolites,		
		and pyrite in late stage voids in breccia and in late cross-cutting fractures.		
		259.5-305.4: Dolostone: variably light grey, weakly rhythmic, medium to finely crystalline,		

TEXASGULF INC.	DRILL HOLE LOG	HOLE NO. 90-80	PAGE NO. 3 of 3

DEPTH FROM	DEPTH TO	DESCRIPTION
		burrowed peloidal wackestone, birdseye textured peloidal dolostones, some cryptalgal laminites.
		Occasional grapestone, pelecypod molds. Common short intervals pseudobreccia, zebroid texture,
		widespread dolomite cemented crackle breccia, pods of rubble and mosaic breccia. The interval
		278-279 is coarse pseudobreccia, gradational with mosaic and rubble breccia, prominantly vuggy,
		with some chickenwire textures.
		305.4-339.2; Dolostone: rhythmic, medium and light grey, occasionally silty, burrowed peloidal
		wackestone and birdseye textured cryptalgal laminites. 320-321 contains lenses of amphipora
		baffiestone. Widespread porphrytopic and pseudobreccia texture, sparse creackle breccia with
		dolomite cement. 336-338 contains several intervals peloid-grapestone wackestone. Traces
		sphalerite and galena in porphrytopic textures and along stylolites.
		339.2-349.8; Dolostone: rubble breccia with dolomite cement. Traces sphalerite. Best PbS + ZnS
		mineralization is 345.5-347, with an estimated 1% combined metals over 1.5 metres. Clasts are
		mixed lithologies but dominantly very pale, crystalline or weakly peloidal.
		349.8-359.0; Dolostone: medium and light grey, weakly rhythmic color variations; pale crystalline
		dolostone and burrowed, peloidal, (354.2-355.2 is silty) wackestone. Most has porphrytopic to
		pseudobreccia texture. 351.9-353.2 is rubble breccia with dolomite cement, abundant pryobituminous
		matrix.
		359.0-364.92; Dolostone: medium-light grey to medium-dark grey, weakly rhythmic color and texture
		variations with sandy peloid grapestone wackestone, birdseye textured laminites; sand as sparse,
		isolated grains, less than 10%. Numerous stylolites.
	364.92	END OF HOLE.

LEGEND

BEARINGS ARE ASTRONOMIC AND ARE DERIVED BY SOLAR OBSERVATION REFERRED TO THE MERIDIAN THROUGH STA. 8101.

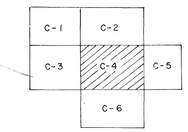
CO-ORDINATES WERE DERIVED BY MATCHING PHYSICAL FEATURES ON 1" = 500' TOPOGRAPHIC SHEET Nº 4 (BY M.S.E.L. DATED MAY 12, 1972).

ELEVATIONS ARE BY TRIG. HEIGHTING AND ARE REFERRED TO PHOTOGRAMMETRIC SPOT HEIGHTS ON M.S.E.L. SHEET Nº 4. ELEVATIONS ARE APPROXIMATELY GEODETIC.

● IP 8202	DENOTES STANDARD B.C.L.S. IRON SURVEY POST WITH NUMBERED ALUMINUM IDENTIFICATION TAG.
● SP 8167	DENOTES 12" SPIKE SET IN ROCK WITH NUMBERED ALUMINUM IDENTIFICATION TAG.
○ 8145	DENOTES TRAVERSE HUB
1	DENOTES Nº 1 LOCATION POST
2	DENOTES Nº 2 LOCATION POST
WP	DENOTES WITNESS POST
WT	DENOTES WITNESS
n	DENOTES TRUE POSITION OF WITNESSED CLAIM POST — NO POST SET IN FIELD.
■	DENOTES CLAIM POST

FOR CO-ORDINATES OF TRUE CLAIM CORNERS ADJACENT TO WT. IP'S SET DURING SURVEY, SEE TABULATED LIST DATED , 1972.

KEY MAP



NOTE: Original drawing done using measurements of the imperial system and at a scale of 1in = 500ft. Scale has been changed to 1 : 5,000 but grid and elevations are still given in feet

1980 Robb Lake Assessment Report Figure 4
Index see Figure 2

REV. Nº	DATE	REVISION	DR	CH	APP
2	FEB/81	1980 drilling, I.e. DDH. 81-80 to 90-80, added	RAFG		
1	AUG/74	D.H. Nº 30 — Nº 52 ADDED	J.S.	J.S.	J.M.

TEXASGULF INC.
ROBB LAKE JOINT VENTURE

LOCATION LINE SURVEY OF MINERAL CLAIMS

McELHANNEY ASSOCIATES
PROFESSIONAL LAND SURVEYORS
VANCOUVER, B.C.

DESIGNED J.W.K.S.	SCALE : 1 5,000
DRAWN K.M.S.	DATE : NOV. 1972
CHECKED J.W.K.S.	JOB Nº : 03649-0
APPROVED D.S.M.	
CLIENT DWG. Nº	McASSOC. DWG. Nº C-4 / REV.

40,000 E
50,000 E
60,000 E
70,000 E
90,000 N
80,000 N
70,000 N
60,000 N

UNION CLAIM

ROBB 80
RIDGE 80
UNION 80
WEBB 80
TENNESSEE 80
UNION 80
CLEO 80
RIDGE 80
UNION 80
ROBB 80
PEREGRINE 80
HALFWAY 80
AIRSTRIP 80

ROBB LAKE

L E G E N D

EXPIRY DATES BY YEAR

1980	1984	1988
1981	1985	1989
1982	1986	1990
1983	1987	1991 +

N

inches
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

1980 Robb Lake Assessment Report Figure 3

Texasgulf Inc.

ROBB LAKE JOINT VENTURE

COMPOSITE PLAN OF MINERAL CLAIMS
SHOWING 1980 GROUPING

WORK BY	DRAWN BY	DATE	DRW,G NO.
R A F G		SEPT. 11, 1980	

500 250 0 500 1000 1500 2000 M
2000 1000 0 2000 4000 6000 FT