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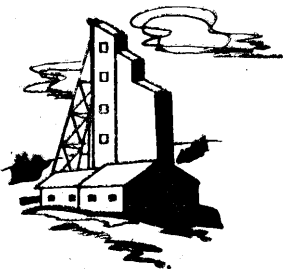
GEOLOGICAL REPORT
JUBILEE MOUNTAIN PROSPECT
BRITISH COLUMBIA

R. A. BUCKLEY, P.ENG.

JANUARY 1977

PROPERTY FILE

9.



DEKALB MINING CORPORATION

CALGARY, ALBERTA

GEOLOGICAL REPORT
JUBILEE MOUNTAIN PROSPECT
BRITISH COLUMBIA

LAT. $50^{\circ}55'$ N LONG. $116^{\circ}27'$ W

R. A. BUCKLEY, P.ENG.

JANUARY 1977

COPY SEVEN

I N D E X

	PAGE NUMBER
INTRODUCTION	1
INDEX MAP	3
DISCUSSION OF DRILL RESULTS	4
FUTURE EXPLORATION	6
REFERENCES	8
QUALIFICATIONS	11
APPENDIX	
DRILL LOGS JM 31 TO JM 38	
MAPS IN POCKET	
FIGURE 1	
FIGURE 2	

INTRODUCTION

As a follow-up to the 1974 and 1975 exploration program on Jubilee Mountain additional diamond drilling on the prospect has been done. The location of the 1976 drill holes were based on previous drilling data supplemented with gravity and Induced Polarization information. A gravity survey was conducted in July while the I.P. survey was done just prior to drilling in September. These reports are referenced in the bibliography of this report.

Mineral exploration on Jubilee Mountain began in the latter part of the 19th Century with the prospecting of lead-silver-barite surface showings in the Jubilee Mountain limestone. One mine, the Giant Silver Mine recovered lead, silver, zinc and barite from the contact between the Jubilee Mountain carbonate and the overlying black shale McKay Formation. Baroid Mud Company is continuing to recover barite during the summer months from surface outcroppings at the mine site.

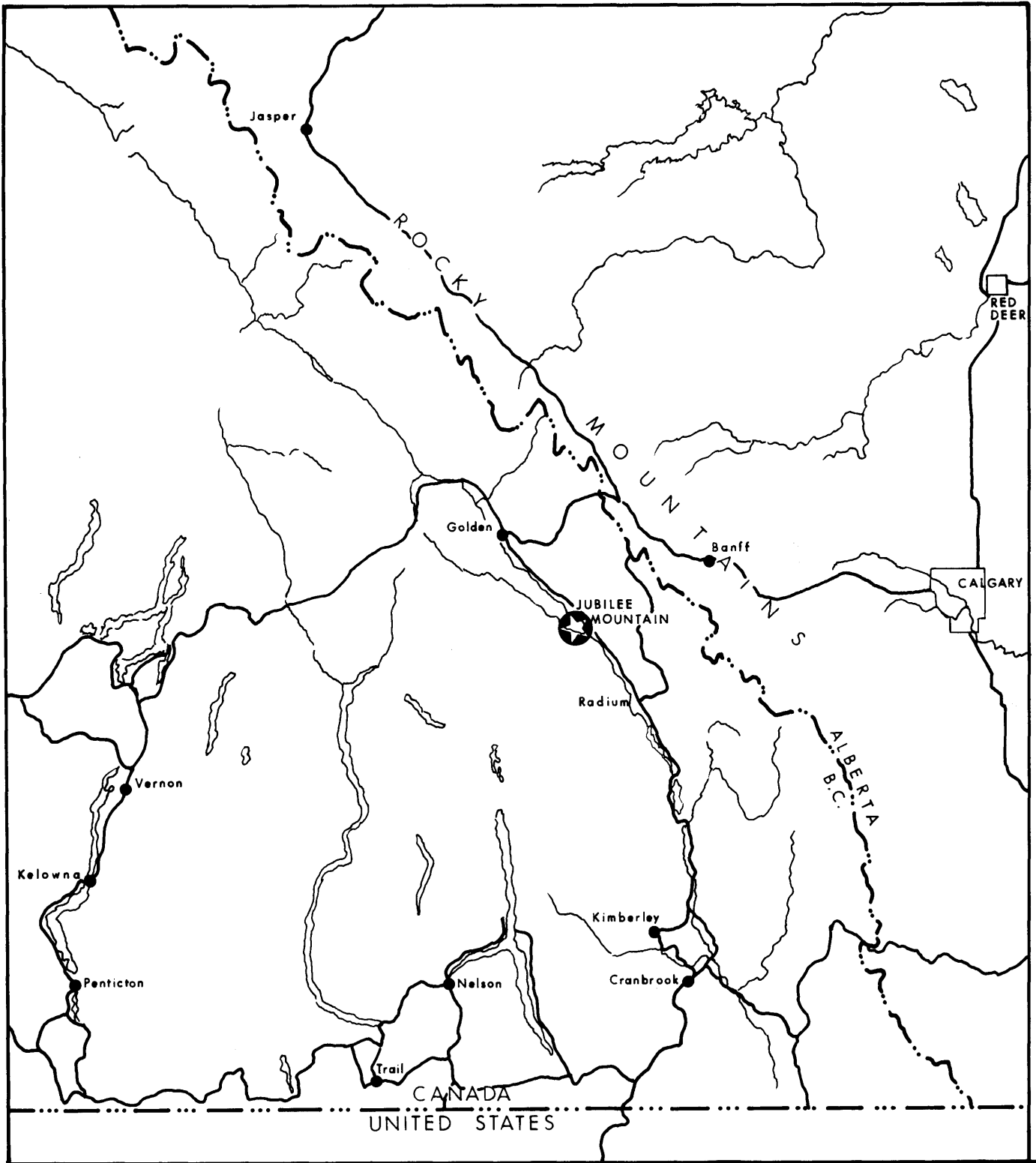
Prospecting on the Crown grants has consisted of pitting, shaft sinking and trenching up until the late 1960's. Several spectacular highly mineralized zones were uncovered during this period.

In the late 1960's geophysical exploration was done with several weak, although significant, anomalies being recorded and mapped. Follow-up diamond drilling did not discover a large mineralized zone.

In 1974 a series of pattern diamond drill holes, based on previous I.P. and geological information, discovered a significant lead-silver-barite zone in 2 widely spaced drill holes. One hole intersected 27.5 feet of sulfides while a second hole found 61 feet of mineralization in association with brecciated Jubilee Mountain Formation carbonate. Follow-up drilling in 1975 and 1976 has attempted to map and delineate the lateral extent of this brecciation and its associated sulfide mineralization.

The regional geology and the geology of the prospect area will not be dealt with further in this report as reference is made to the two previous reports by the author in the bibliography.

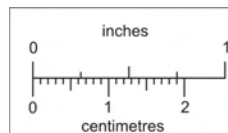
The purpose of this report is to summarize the results of the 1976 drill program.



DEKALB MINING CORPORATION

JUBILEE MOUNTAIN
BRITISH COLUMBIA

INDEX MAP



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.

SCALE: 1" = 40 mi.

FEB. 1977

DISCUSSION OF DRILL RESULTS

Eight drill holes, JM 31 to JM 38, were drilled on this project between October 7th and October 23rd, 1976, with 2642 feet of hole being drilled, by Wright Drilling Ltd., Kamloops.

Cross sections of all drill holes have been plotted and are to be found in the map pocket of this report.

Mineralization of varying concentrations was found in six of the eight holes drilled. One of these holes, JM 35, was drilled outside the exploration target to check a strong gravity feature. The carbonate (Jubilee Mountain Formation) was found to be regionally high in this hole which would account for the gravity feature.

Mineralization was confined to the upper portion of the Jubilee Mountain Formation and as previously noted associated with brecciation of the carbonate. This observation confirms the author's earlier thesis that the brecciation is probably due to the collapse of solution caverns and resultant brecciation of the Jubilee Mountain carbonate. The top of the carbonate would therefore exhibit Karst topography of a pock mark surface where the various caverns collapsed. Such caverns might also exhibit elongated features if these solution caverns developed along fractures in the carbonate.

Map Figure 1 (in pocket) is a structure contour map of the carbonate surface. The diagnostic feature of this map is the prominent low feature in the vicinity of diamond drill hole JM 17 and JM 19. This is interpreted as being a collapse feature that was developed after the carbonate was dissolved by fluids introduced along fractures in the carbonate.

An additional map was constructed by contouring the structural elevation of the mineralized zone. The resulting structural contour map confirms that the mineralized portion of the carbonate also shows a structural pattern similar to the structure on top of the carbonate formation.

It is therefore concluded that if the structure on the top of the carbonate (Jubilee Mountain formation) displays Karst topographic features and if the mineralization especially since it is often associated with carbonate breccia also displays similar features, then it must be concluded that the control for the mineralization is the existence of solution cavities.

FUTURE EXPLORATION

Future exploration must attempt to map the location of these paleo-caverns. It appears that such caverns will be associated with the larger regional fractures. This would be logical since such fractures would provide the passageways or the mechanism by which the carbonate dissolving solutions would gain access to the carbonate. Secondly these same fractures would also provide the means to introduce the metal sulfides to the pore space.

It appears that the fractures mapped today at Jubilee Mountain are very old probably dating to Pre Cambrian time. The most convincing argument for this statement is that the Jubilee Mountain carbonate varies from area to area consisting of fine grain carbonate, stromatolite-like matts, pelloidite banks and bars along with zones that appear to be of coral origin.

These features in the rock sequence demonstrates that a variety of environments existed during the deposition of the carbonate and are all indicative of an irregular sea bottom floor. An irregular sea bottom floor was caused by fracturing of the underlying rock. Movement along these fractures produce cliffs or escarpments which modify and disturb the normal water currents. Rocks produced under these conditions consist of carbonate pellets (See photo, Buckley 1975 p. 13), fine grain carbonates, algal mats and stromatoporoidea-like mats (See photo, Buckley 1975 p. 12) depending on sea water currents and nutrient supply. Other features such as coral fragments and vuggy carbonates have also been mapped indicating the possibility of the existence of larger organic reefs.

In conclusion additional Karst Topography will be located if exploration is carried out along the major fractures. The locating of fractures, Karst topography, breccia zones and mineralized carbonate will be dependant on very careful mapping of such features as reef and reefoid structures, pelletoid banks and deep water facies in the carbonate.

Respectively submitted,

R. A. Buckley, P. Eng.

REFERENCES

1. Agarwal, R.G. Electromagnetic Survey, Vertical Loop, Jubilee Mountain, B.C., Company Report, July 1974
2. B.C. Department Mines Minister of Mines Report 1927, pp 261-263
3. B.C. Department Mines Minister of Mines Report 1949, pp 200-204
4. B.C. Department Mines Minister of Mines Report 1954, pp 148-150
5. B.C. Department Mines Minister of Mines Report 1955, pp 72-73
6. Buckley, R.A. Evaluation of the Jubilee Mountain Prospect, B.C., Company Internal Report, February 1975
7. Buckley, R.A. Geochemical Survey, Jubilee Mountain, B.C., Company Internal Report, March 1976
8. Buckley, R.A. Geological Report, 1975 Work Program, Jubilee Mountain, B.C., March 1976
9. Collins, Jon A., Smith, Leigh Zinc Deposits Related to Diagenesis and Intrakastic Sedimentation in the Lower Ordovician St. George Formation, Western Newfoundland. Bull. Cdn. Pet. Geol., Vol. 23, No. 3, September 1975, pp 393-427
10. Ditto, A.G. Engineer's Reports on Jubilee Mountain Property for Calix Mines Ltd., Alrae Exploration Ltd., September 9, 1968

11. Finney, W.A.,
Prior, J.W. IP Survey, Jubilee Mountain Property,
50°-116° NE, for Calix Mines Ltd.,
Huntec, April 1968
12. Geological Survey
of Canada Summary Report 1932, Part A II,
pp 172-176
13. Hendry, K.N. Evaluation of Jubilee Mountain, B.C.
Horizontal Loop EM Survey, Kenting
Exploration Service Ltd., Company Report,
October 23, 1975
14. Lepeltier, Claude A Simplified Statistical Treatment
of Geochemical Data by Graphical
Representation, Ec. Geol., Vol. 64
1969, pp 538-550
15. McKelvie, D.L. Engineer's Report on Jubilee Mountain
Property for Calix Mines Ltd., Alrae
Exploration Ltd., May 17, 1968
16. McKelvie, D.L. Engineer's Report on Jubilee Mountain
Property for Calix Mines Ltd., Alrae
Exploration Ltd., September 24, 1968
17. Rawlyk, D.W. Geology, Mineralogy and Paragenesis
of the Giant Mascot Lead-Zinc Mine.
Student mineralogical study,
University of Manitoba, April 9, 1956
18. Reesor, J.E. Map 12 - Pre-publication map of
Mem. 369 - 1957
19. Reesor, J.E. Geology of the Lardeau Map Area,
East Half, B.C. Mem 369 - 1973
20. Sale, Wm. T. Gravity Survey, Spillimacheen District
Overland Exploration Services (1969) Ltd.
June 1976. Internal Company Report
21. Sangster, D.F. Lancaster, R.D. Geology of Canadian Lead
Zinc Deposits. Project #650056. Geol. Surv.
Can. Paper 76-1A. pp 301-310

- 22. Skall, Herb The Paleoenvironment of The Pine Point
Lead-Zinc District, N.W.T. Economic
Geology Vol. 70 No. 1 pp 22-44 February
1975

- 23. White, Glen E. Induced Polarization Survey, Jubilee
Mountain, B.C. September 25, 1976.
Internal Company Report

- 24. N.T.S. Map 82 K/16

- 25. Air Photos Line A-11111, photo numbers 110-111

Q U A L I F I C A T I O N S

R. A. BUCKLEY

- A. I, Ronald A. Buckley, am by profession a Geologist, residing at R.R. #2, Cochrane, TOL OWO, in the Province of Alberta.
- B. I graduated in the year 1957 from Acadia University, Wolfville, Nova Scotia, with a Bachelor of Science Degree in Geology, with a minor in Chemistry and Physics.
- C. I graduated in the year 1959 from McGill University, Montreal, in the Province of Quebec, with a Master of Science Degree in Geology.
- D. Since graduation I have taken updating courses through the Department of Continuing Education at the University of Calgary in Structural Geology (PhD credit course), Sedimentary Geology (PhD credit course), Geochemical Surveying, Property Evaluation, Geology of Stratibound Lead Zinc Deposits, Geology of Reefs (2 courses) and Air Photo Interpretation.
- E. Since graduation, I have been employed by a Mining Company, a Provincial Department of Mines, and three Oil Companies in the search for oil, gas and metallic minerals.
- F. I am a member:
 - The Alberta Association of Petroleum Geologists
 - Mineralogical Association of Canada
 - Society of The Sigma XI
 - Canadian Institute of Mining and Metallurgy
 - Association of Professional Engineers of Alberta
 - Professional Engineers of British Columbia

R.A. Buckley, B.Sc.,M.Sc.,P.Geol.,P.Eng.

A P P E N D I X

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No.	JM-31	Length	363'	Hor. Comp.	256.7
Property	JUBILEE MTN.	Bearing	043	Ver. Comp.	256.7
Project No.	4029	Dip	45°	Etch. at	Nil
Commenced	October 10, 1976	Lat.	1283.09 N	True Dip	
Completed	October 12, 1976	Dep.	1325.56 E	Logged by	T. Morris
		Elev.	4966.3	Date Logged	October 12, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	12'	Overburden.						
	12'	27'	Mackay Shale - brown color (mud shale)						
	27'	36'	As above, dark grey w/brown lenses.						
	36'	40'	As above, dark grey with some small lime veins 1/8" -						
			also lime lenses up to 3/4" (2 per foot) - angle of						
			bedding to core axis 90°.						
	40'	65'	As above, lime lenses, 3 per foot						
	65'	98'	As above, no lime lenses, bedding angle to core axis						
			90°. 96 - 98' ground core.						
	98'	102'	As above, with lime lenses (3 per foot).						
	102'	121'	As above, no lime lenses, but occasional white						
			carbonate vein (1/16" to 1/4" thick) cross cutting						
			bedding.						
	121'	123'	As above, change in angle of bedding to core axis -						
			now 45° - lime lenses - large - up to 2" thick, some						
			containing pyrite knots.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-31
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 10, 1976
 Completed October 12, 1976

Length 363'
 Bearing 043
 Dip 45°
 Lat. 1283.09 N
 Dep. 1325.56 E
 Elev. 4966.3

Hor. Comp. 256.7
 Ver. Comp. 256.7
 Etch. at Nil
 True Dip
 Logged by T. Morris
 Date Logged October 12, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	123'	136'	As above, Mackay shale w/lime lenses which appear to follow bedding - with pyrite knots - angle of bedding to core axis steepens from $\approx 30^\circ$ at 123 to 20° at 135'						
	136'	141.5'	As above, angle of bedding to axis varies from 90° at 136' to 70° at 141'.						
	141.5'	142'	Thick lime lense (6").						
	142'	162'	Mackay shale - dark grey - lime lenses $\frac{1}{2}$ " to 2" thick (4 per foot); occasional stringer of quartz; angle bedding to axis - 60° .						
	162'	172'	As above, slight steepening of bedding.						
	172'	179'	As above, dark grey - black shale, extremely soft and broken up.						
	179'	181'	Detrital Zone, light grey carbonate with some barite in fillings, well fractured and healed, rusty fractures.						
	181'	184'	Mackay shale - as in 172-179 above.						
	184'	186'	Lost core.						

Diamond Drill Record

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Hole No. JM-31
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 10, 1976
 Completed October 12, 1976

Length 363'
 Bearing 043
 Dip 45°
 Lat. 1283.09 N
 Dep. 1325.56 E
 Elev. 4966.3

Hor. Comp. 256.7
 Ver. Comp. 256.7
 Etch. at Nil
 True Dip
 Logged by T. Morris
 Date Logged October 12, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
4834.8	186'	188'	Jubilee Formation, extremely fractured and rusty.						
	188'	193'	As above, less fractured, light grey carbonate - barite lenses with malachite and azurite stain.						
	198'	200'	As above - well fractured, slightly brecciated, rusty; contains malachite and azurite stain.						
	200'	202.5'	As in 188 to 198 above.						
	202.5'	211'	As above, slightly darker grey carbonate. No copper stain, slight fracturing.						
	211'	212'	As above, well fractured, rusty, small 1/8" vugs.						
	212'	217'	As above, lighter grey carbonate with barite lenses, malachite and azurite stain.						
	217'	219'	As above, darker grey, carbonate - well fractured & rusty.						
	219'	232'	As above, brecciated zone.						
	232'	244'	As above, somewhat mottled look; rusty fractures, with barite infillings..						

Diamond Drill Record

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Hor. Comp. 256.7
 Ver. Comp. 256.7
 Etch. at Nil
 True Dip
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 Date Logged October 12, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	244'	262'	As above, not infilled at 256 - darker grey and possible fossiliferous carbonate.						
	262'	267'	As above, dark grey, less fractures, pinkish cast.						
	267'	268'	As above, well fractured.						
	268'	274'	As in 262 - 267 above.						
	274'	284'	As above, lighter grey, pinkish cast - some fractures.						
	284'	294'	As above, some fractures.						
	294'	308'	As above, well fractured zone - healed in places, rusty with barite infillings @ 299 and 301, large barite knot (≈ 2-3").						
	308'	312'	As above, dark grey carbonate, rusty fractures.						
	312'	319'	As above, lighter grey, less fractured.						
	319'	325'	As above, light grey carbonate, extremely fractured, rusty with barite infillings.						
	325'	327'	As above, darker grey, slightly less fractured, larger barite veins and lenses - reddish cast.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-32
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 12, 1976
 Completed October 13, 1976

Length 358'
 Bearing 043°
 Dip 50°
 Lat. 1016.29 N
 Dep. 1347.06 E
 Elev. 4930.4

Hor. Comp. 230.1
 Ver. Comp. 274.2
 Etch. at Nil
 True Dip --
 Logged by T. Morris
 Date Logged October 13, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	17'	Overburden.						
	17'	21.5'	Mackay Shale - dark grey, lime lenses (2 per foot).						
	21.5'	22'	Light grey limey section - fractured and healed.						
	22'	39'	Mackay shale - dark grey; lime lenses (5 per foot).						
			@ 26.5 - light grey lime section (healed & fractured)						
			@ 36 - light grey - fractured & healed lime section -						
			containing small 1/8" pyrite knots, Occasional 1/32"						
			stringer of white carbonate - angle of bedding to core						
			axis - 90°.						
	39'	54'	As above, Mackay Shale - dark grey - lime lenses						
			≈ 2 per foot.						
	54'	55'	Light grey limey section; fractured, healed.						
	55'	74'	Mackay Shale - dark grey; lime lenses (≈3 per foot).						
	74'	77'	Mackay Shale - dark grey, several fracture veins,						
			infilled with white carbonate.						
	77'	98'	Mackay shale - dark grey, angle of bedding to core						
			axis 90°.						

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 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 12, 1976
 Completed October 13, 1976

Length 358'
 Bearing 043°
 Dip 50°
 Lat. 1016.29 N
 Dep. 1347.06 E
 Elev. 4930.4

Hor. Comp. 230.1
 Ver. Comp. 274.2
 Etch. at Nil
 True Dip --
 Logged by T. Morris
 Date Logged October 13, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	228'	241'	As above, less vuggy - small 1/8" - 1/16" vugs, stylolitic structures.						
	241'	244'	As above, small rusty fractures.						
	244'	246'	Vein of barite - with tetrahedrite, malachite and azurite.						
	246'	257'	Jubilee - light grey carbonate - occasional large vug (1") quartz filled @ 248-250 - barite vein, bearing tetrahedrite, malachite, azurite and galena.						
	257'	261.5'	Large zone of barite - bearing galena, tetrahedrite, malachite and azurite.						
	261.5'	263'	Jubilee - light grey carbonate highly fractured - overall reddish cast.						
	263'	275'	As above, light grey carbonate - very vuggy (1/16" up to 1" vugs).						
	275'	291'	As above, darker grey carbonate - very few vugs.						
	291'	300'	As above, chowdered look - stylolitic structures.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-33
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 13, 1976
 Completed October 14, 1976

Length 265'
 Bearing 043°
 Dip 70°
 Lat. 1016.29 N
 Dep. 1347.06 E
 Elev. 4930.4

Hor. Comp. 90.6
 Ver. Comp. 249.0
 Elch. at Nil
 True Dip --
 Logged by T. Morris
 Date Logged October 14, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	16'	Overburden.						
	16'	57.5'	Mackay shale - dark grey shale, light grey lime lenses (3 per foot) angle of bedding/core axis ~ 85°-90° @ 27-27.5 - larger lime lenses, fractured & healed 1/8" knots of pyrite. @ 38.5 - 3/4" knots of pyrite. @ 44 - 1/2" pyrite knot. @ 50-50.5 - light grey lime lense fractured & healed - pyrite knots. @ 55-56 - Light grey lime layer - fractured & healed.						
	57.5'	69'	As above - lenses - 3 per foot - disseminated pyrite knots.						
	69'	123'	As above, lime lenses only 2 per foot; occasional 1/8" pyrite knot; bedding/core axis - 85-90°.						
	123'	123.5'	Lime lense - fractured - healed; pyrite knots.						
	123.5'	137'	Mackay shale - dark grey; lime bands up to 1" conformable to bedding (3 per foot).						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-34
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 14, 1976
 Completed October 15, 1976

Length 261'
 Bearing 043°
 Dip 65°
 Lat. 1283.09 N
 Dep. 1325.56 E
 Elev. 4966.3

Hor. Comp. 110.3'
 Ver. Comp. 236.5
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 15, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	17'	Overburden						
	17'	28'	Mackay shale - medium grey - extremely limey, rusty fractures.						
	28'	48'	As above, dark grey shale, with light grey lime lenses 1/8" - 1" (1 per foot), angle of bedding to core axis 70° @ 42.5-43 - zone of rusty fractures parallel to bedding.						
	48'	69'	As above, lime lenses increase to 2 per foot @ 56.5-57 - light grey lime lense - fractured & healed, occasional fracture - cross cutting bedding.						
	69'	93'	As above @ 70' - angle of bedding to core axis lessens to 80-85° - no lime lenses - @ 79 & 84-85 - fractures 1/4" steeply cutting bedding (90°) infilled with white carbonate or possible barite; one of fracture-bearing pyrite.						
	93'	108'	As above, softer shale - easily broken; lime lenses						

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 True Dip --
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Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	Contd. 93'	108'	(2 per foot) - angle core axis to bedding - 75°.						
	108'	125'	As above, no lime lenses - tiny fractures - cross cutting bedding - bedding/core axis \approx 85-90°.						
	125'	128'	As above, darker shale & softer; broken up.						
	128'	131'	As above, lime lenses, 3 per foot.						
	131'	137'	As above, no lime lenses. @ 136-137 - bands of pyrite 1/8" to 1/2".						
	137'	145'	As above, lime lenses (4 per foot) @ 138-138.75 - light grey lime lens containing 2" vein or lense of white carbonate or possible barite with knots of pyrite; @ 144.5 - 4" lime lense w/pyrite						
	145'	152'	As above, lime lenses 2 per foot.						
	152'	171'	As above, no lime lenses, white carbonate fracture infillings - one 1" pyrite bearing lime lense @ 156 and @ 158 - 3" healed - fractured lime lense @ 168 - 3/4" pyrite knot, @ 169 - 2" pyrite knot,						

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 Ver. Comp. 236.5
 Etch. at Nil
 True Dip ---
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			Description	Assay No.	Length Feet	Analysis				
Elev.	From	To								
	Contd. 152'	171'	gradual steepening of bedding to core axis angle - until 20° at 171'.							
	171'	173'	As above, soft broken up black shale.							
	173'	178'	<u>Contact or Detrital Zone</u> - mixed shale and carbonate, broken up - healed carbonate.							
4804.9	178'	188'	<u>Carbonate Zone</u> - Brecciated - healed - very vuggy; trace azurite & malachite.							
4795.9	188'	199'	<u>Jubilee Formation</u> - light grey carbonate; rusty frac- tures.							
	199'	201'	As above, 1/16 to 1/4" vugs.							
	201'	217.5'	As above, with rusty fractures, increasing in number to 217.5.							
	217.5'	230'	As above, well fractured, rusty zone - disseminated galena @ 218 - 3" barite vein adjacent to 2" galena vein; @ 220 - trace malachite; @ 220.5-221.5 - vein of galena - brecciated appearance; @ 223.5-226 - vein of							

Diamond Drill Record

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 Dip 65°
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Hor. Comp. 110.3'
 Ver. Comp. 236.5
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 15, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis				
	Contd. 217.5'	230'	barite w/occasional galena knot; @ 226-226.5 - vein							
			of galena - brecciated appearance; @ 227-230 - several							
			small (1-2") barite veins; disseminated tetrahedrite,							
			malachite, azurite; galena knots, pyrite knots.							
	230'	236'	Jubilee limestone - rusty fractures some w/pyrite							
			knots.							
	236'	244'	As above, mottled appearance; stylolitic structures.							
	244'	248'	As above; tiny rusty fractures, 1/8" - 1/4" vugs.							
	248'	255.5'	As above, stylolitic structures.							
	255.5'	261'	As above; rusty fractures; 1/8 to 1" vugs.							
	261'	---	End of hole.							

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-34
 Property _____
 Project No. _____
 Commenced _____
 Completed _____

Length _____
 Bearing _____
 Dip _____
 Lat. _____
 Dep. _____
 Elev. _____

Hor. Comp. _____
 Ver. Comp. _____
 Etch. at _____
 True Dip _____
 Logged by _____
 Date Logged _____

Elev.	From	To	Description	Assay No.	Length Feet	Analysis					
						Au	Ag	Cu	Pb	Zn	BaSO ₄
	217'	219'	Light grey, dense, fractured & healed doloc limestone barite coarse xenolith vein with associated galena	0517	2.0	Tr.	.50	.06	4.10	.005	15.14
	219'	220.5'	Similar to above with limonite on fractures	Not Assd.							
	220.5'	222'	Breccia with vuggy rounded (abradal) fragments with galena matrix. fragments light brown/limonite colour	0518	1.5	Tr.	.60	.09	4.70	.005	.01
	222'	223.5'	Light grey, hard, dense dolo'c limestone, fractured & healed. No mineralization.	Not Assd.							
	223.5'	226'	Barite vein with galena on boundaries	0519	2.5						
	226'	226.5'	Light grey, hard, dense dolo'c limestone no mineraliza- tion.	Not Assd.							
	226.5'	229'	Intermixture of barite/carbonate indistinct boundaries perhaps a vein. Disemminated galena, azurite, malachite stain.	0520	2.5	Tr.	.44	.21	.22	.01	32.03
	229'	231.5'	Similar to above, less barite. End of Detail Description.	0521	2.5	Tr.	.24	.09	.03	.005	12.37

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-35
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 16, 1976
 Completed October 18, 1976

Length 421'
 Bearing ---
 Dip Vertical
 Lat. 1008.09 N
 Dep. 1086.32 E
 Elev. 4970.1

Hor. Comp. 0
 Ver. Comp. 0
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 18, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	133'	138'	As above, increase in lime lenses (5 per foot) @ 138.5 - 3" lime lense - fractured & healed, contains disseminated pyrite.						
	138'	183'	As above w/disseminated pyrite @ 150-151 - limey sections - fractured & healed w/disseminated pyrite. @ 168.5-169 - limey section - fractured, healed - w/disseminated pyrite.						
	183'	220'	As above, lime lenses, 3 per foot, disseminated pyrite still, but less frequent, @ 193 - well fractured 2" vein of white carbonate or barite? angle of bedding - core axis - 70°; @ 198-199 - limey section, fractured, healed, w/dis- seminated pyrite.						
	220'	238'	As above, lime lenses only, 1 per 2 feet, occasional band or knot of pyrite (1/8").						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-35
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 16, 1976
 Completed October 18, 1976

Length 421'
 Bearing ---
 Dip Vertical
 Lat. 1008.09 N
 Dep. 1086.32 E
 Elev. 4970.1

Hor. Comp. Ø
 Ver. Comp. Ø
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 18, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis				
	238'	267'	As above, lime lenses 2 per ft., angle of bedding to core axis - 80° occasional knot of pyrite.							
	267'	276'	As above, increased lime lenses (4 per foot) large pyrite knots (1/4" thick) @ 170'.							
	276'	303'	As above, no lime lenses, occasional pyrite knot, angle bedding to core axis \approx 84°.							
	303'	316.5'	As above, lime lenses, 3 per foot, scattered pyrite knots.							
	316.5'	336'	As above, no lime lenses.							
	336'	360'	As above, limy shale w/lime lenses 3 per foot, scattered pyrite knots; @ 343-345 - limy section, fractured; with disseminated pyrite; @ 352-353 - lime section - fractured, w/disseminated pyrite.							
	360'	367.5'	As above, lime lenses - 1 per 2 ft.; @ 362 & 363 - pyrite knots, disseminated pyrite also; @ 367-367.5 - lime section - fractured.							

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-35
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 16, 1976
 Completed October 18, 1976

Length 421'
 Bearing ---
 Dip Vertical
 Lat. 1008.09 N
 Dep. 1086.32 E
 Elev. 4970.1

Hor. Comp. \emptyset
 Ver. Comp. \emptyset
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 18, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	367.5'	375'	As above, no lime lenses, occasional pyrite knot.						
	375'	381'	Zone of Soft fractured black shale - with many pyrite knots (up to 3/4") - bedding to core axis angle - variable but approximately 60° steepening to 30° @						
			Detrital Zone.						
	381'	384'	Detrital Zone - @ 382.5-383 = 3" lense of pyrite.						
4586.1	384'	407'	Jubilee Formation - light grey, carbonate, vugs up to 1" - stylolitic structures, some fracturing and healing, @ 385-388 - pyrite knots w/barite infillings at fractures; @ 357 - 1/8" galena knots w/barite; @ 391 - 4" vein of barite w/pyrite knots; 391-391.5 - disseminated galena specks - occasional pyrite knot - generally restricted to infills of fractures or vugs.						
	407'	421'	As above; increase in vugs (1/16 - 1/4") (possible reefoid) - stylolitic structures - fracturing & healing.						
	421'	---	End of hole.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-36
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 18, 1976
 Completed October 20, 1976

Length 294'
 Bearing 043°
 Dip 45°
 Lat. 945.49 N
 Dep. 1420.46 E
 Elev. 4927.8

Hor. Comp. 207.9
 Ver. Comp. 207.9
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 20, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	34'	Overburden.						
	34'	63'	Mackay shale - dark grey, lime lenses (2 per foot), broken upcore fractures - often rusty, or infilled with white carbonate (barite?) or pyrite angle of core axis to bedding $\approx 70^\circ$ @ 46.5 - 47 - light grey lime lense, fractured (rusty) - trace pyrite.						
	63'	76'	As above, bedding/core axis $\approx 65^\circ$.						
	76'	87.5'	As above, lime lenses - 1 per 2 feet.						
	87.5'	106'	As above, lime lenses, 2 per foot, angle of bedding/ core axis $\approx 60^\circ$						
	106'	120'	As above, lime lenses 4 per foot; @ 106.5-107 - lime lense fractured w/pyrite infillings; angle of bedding/ core axis 65° .						
	120'	151'	As above, no lime lenses, angle of bedding to core axis 70° ; @ 145-147 - broken core (lost 2' - 148-150)						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-36
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 18, 1976
 Completed October 20, 1976

Length 294'
 Bearing 043°
 Dip 45°
 Lat. 945.49 N
 Dep. 1420.46 E
 Elev. 4927.8

Hor. Comp. 207.9
 Ver. Comp. 207.9
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 20, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	151'	156'	As above, lime lenses - 2 per foot.						
	156'	176'	As above; no lime lenses; occasional fracture infilled with white carbonate or barite? @ 157-159 - bedding steepens to $\approx 10^\circ$, then back to 70° . (Drillers reported hard drilling - mud or clay seams.)						
	176'	178'	As above; lime lenses - 4 per foot.						
	178'	185'	As above, no lenses.						
	185'	203.5'	As above; lime lenses 3 per foot; @ 187-188 - light grey lense - steepening of bedding to core axis $\approx 30^\circ$ @ 195-197 - lime bed - fractured, contains pyrite infillings and knots up to 1/4" - occasional pyrite band; @ 202-203 - 4 - 1 to 2" lime beds, fractured, with pyrite infillings (up to 1/8" knots).						
	203.5'	218'	As above, no lime lenses - occasional pyrite knot up to 1/8" or 1/16" band of pyrite, angle of bedding to core axis $\approx 40^\circ$.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-36
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 18, 1976
 Completed October 20, 1976

Length 294'
 Bearing 043°
 Dip 45°
 Lat. 945.49 N
 Dep. 1420.46 E
 Elev. 4927.8

Hor. Comp. 207.9
 Ver. Comp. 207.9
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 20/76

Elev. From To			Description	Assay No.	Length Feet	Analysis				
	218'	228'	As above, great variations in bedding angle - almost parallel to core axis in places (218 to 222) - shows plasticity - possible drag folding.							
	228'	233'	As above, soft, black-broken shale, w/pyrite beds (1/2") and knots or lenses (1/2").							
4763.0	233'	239.5'	<u>Jubilee Formation</u> - light grey carbonate, vugs 1/16" 1/4", rusty fractures; @ 238-239 - grey clay (clastic) bed; @ 239.5 - large, up to 1 1/2" vugs quartz filled.							
	239.5'	251'	As above, light grey "clean" carbonate.							
	251'	260'	As above, with 1/16 - 1/2" vugs; @ 255-255.5 - 6" vein of barite with 1/4" galena knots; malachite and azurite stain; brownish contact aureole.							
	260'	273'	As above, well fractured & "healed" zone from 260-262-- "brownish" aureoles - w/trace malachite stain @ 262 -1" "blob" of barite w/malachite stain; @ 273 - 3/4" barite vein w/brownish aureole.							

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-37
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 20, 1976
 Completed October 21, 1976

Length 288'
 Bearing 043
 Dip 62°
 Lat. 945.49 N
 Dep. 1420.46 E
 Elev. 4927.8

Hor. Comp. 135.2
 Ver. Comp. 254.3
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 21, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	32'	Overburden.						
	32'	65'	Mackay Shale - dark grey shale; lime lenses - up to 3/4" (3 per foot); angle of bedding to core axis 85° @ 43-44 - light grey lime lense, fractured healed.						
	65'	82'	As above, lime lenses - 1 per 2 feet.						
	82'	108'	As above, lime lenses - 3 per foot.						
	108'	113'	As above; lime lenses - 5 per foot.						
	113'	137'	As above, no lime lenses.						
	137'	152'	As above; lime lenses - 2 per foot @ 142 - tube not locked - 1 foot lost.						
	152'	169'	As above; no lime lenses; "varied" - thinly bedded, lighter grey.						
	169'	171'	As above, lime lenses - 4 per foot.						
	171'	174.5'	As above; no lime lenses.						
	174.5'	192.5'	As above, lime lenses \approx 3 per foot @ 176.5-178 - lime bed; angle of bedding - core axis - 75° "varied" shale.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-37
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 20, 1976
 Completed October 21, 1976

Length 288'
 Bearing 043
 Dip 62°
 Lat. 945.49 N
 Dep. 1420.46 E
 Elev. 4927.8

Hor. Comp. 135.2
 Ver. Comp. 254.3
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 21, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	192.5'	209'	As above, no lime lenses (except one - 3" lense @ 200') - increase of bedding/core axis angle - 70°.						
	209'	214'	As above, darker shale, great variations in bedding/core axis angle.						
	214'	216'	As above, soft black shale - with pyrite knots up to 1/2".						
	216'	219'	Detrital Zone.						
4734.4	219'	250'	Jubilee Formation - light grey carbonate, fractured @ 232.5-233 - zone bearing 1/4" galena knots. @ 233-233.5 - soft black shale layer. @ 238.5 - 3" barite vein, with galena knots 1/4", & pyrite knots 1/8"; @ 241-245 - lost core tube not locked.						
	250'	261'	As above, slightly darker grey, @ 251-260 - mineralized zone with barite veins (up to 4") galena knots up to 1/2", disseminated pyrite knots - malachite and azurite stain - core ground up & broken; 260-261 - well fractured rusty zone.						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-37
 Property _____
 Project No. _____
 Commenced _____
 Completed _____

Length _____
 Bearing _____
 Dip _____
 Lat. _____
 Dep. _____
 Elev. _____

Hor. Comp. _____
 Ver. Comp. _____
 Etch. at _____
 True Dip _____
 Logged by _____
 Date Logged _____

Elev.	From	To	Description	Assay No.	Length Feet	Analysis					
						Au	Ag	Cu	Pb	Zn	BaSO ₄
	238'	239'	Light grey dolo'c limestone hard, dense. Barite knots Disemminated pyrite.	0508	1.0	Tr.	.24	.48	.43	.05	.47
	239'	240.25'	Light grey similar to above, no barite, pyrite, no base metal sulfides.	0509	1.25	Tr.	.24	.28	.07	.05	.01
	240.25'	245.5'	Lost core, tube didn't lock.	No Assay	5.25						
	245.5'	248'	Light grey, hard dense with black hairline frac, in part with pyrite in fractures, Some stylonitic structures.	0510	2.5	Tr.	.26	.06	.02	.01	.05
	248'	250'	As above. Fracture pattern indicates rock has been crushed. Fractures contain black bitumen-like material also larger knots of same soft black material.	0511	2.0	Tr.	.06	.19	.08	.03	.02
	250'	252.5'	Limestone, medium grey with white vein quartz infilling containing pyrite.	0512	2.5	Tr.	.30	.97	.07	.11	.02
	252.5'	255'	Quartz, white barite carbonate with some areas cont- aining 30% pyrite, 10% grey metallic lustre sulfide probably tetrahydrite. Azurite stain.	0513	2.5	Tr.	1.00	2.90	1.79	.07	21.35

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-38
 Property JUBILEE MTN.
 Project No. 4029
 Commenced October 21, 1976
 Completed October 23, 1976

Length 392'
 Bearing 043
 Dip 48°
 Lat. 1087.49 N
 Dep. 1239.86 E
 Elev. 4960.1

Hor. Comp. 262.3
 Ver. Comp. 291.3
 Etch. at Nil
 True Dip ---
 Logged by T. Morris
 Date Logged October 23, 1976

Elev.	From	To	Description	Assay No.	Length Feet	Analysis			
	0'	55'	Overburden.						
	55'	66'	Mackay shale - dark grey, lime lenses (up to 3/4") 3 per foot; angle of bedding to core axis $\approx 80^\circ$						
	66'	84'	As above @69-70 - light lime lense bed (10") - fractured, healed lime lenses 6 per foot.						
	84'	119'	As above; lime lenses - 3 per foot; angle of bedding - core axis - 70° ; @ 94.5-6" lime bed - fractured with 1/8" pyrite knots. @ 97.5 - 3" lime bed fractured with 1/4" pyrite knots. @ 100-101 - 12" lime bed fractured w/1/4" pyrite knots						
	119'	138'	As above, lime lenses only 1 per foot - limier shale - lighter grey						
	138'	175'	As above, lime lenses 3 per foot @ 161 - 4" lime lense - fractured/healed, angle of bedding/core axis - 80° .						

Diamond Drill Record

DEKALB MINING CORPORATION

Hole No. JM-38
 Property _____
 Project No. _____
 Commenced _____
 Completed _____

Length _____
 Bearing _____
 Dip _____
 Lat. _____
 Dep. _____
 Elev. _____

Hor. Comp. _____
 Ver. Comp. _____
 Etch. at _____
 True Dip _____
 Logged by _____
 Date Logged _____

Elev.	From	To	Description	Assay No.	Length Feet	Analysis Coring Laboratories Ltd.					
						Au	Ag	Cu	Pb	Zn	BaSO ₄
	343.5'	345.5'	DETAIL CORE DESCRIPTION Jubilee Formation, light grey limestone, dolo'c with quartz infilling, two staged (2)(1.) Grey carbonate colour, probably should be classified as siliceous dolo'c limestone and (2) white vein quartz infilling. Galena knots appear to be associated with white quartz infill.	0522	2.0	Tr.	.24	.01	.29	.005	1.10
	345.5'	348'	Carbonate as above mottled appearance, light brown and grey carbonate. Light brown is limestone, grey portion dolo'c limestone/dolomite.	0523	2.5	Tr.	.36	.005	.30	.005	.03
	348'	350'	Mottled dolo'c limestone as above, no sulfides Styolotic. Galena along 1/16 inch quartz, white veinlets.	Not Assd.							
	350'	352.5'	Rounded fragments giving mottle appearance consisting of light & dark dol'c limestone, darker portions being harder and probably dolo'c. Darker sections appear as matrix, lighter sections as fragments. Occ. drussy vug	0524	2.5	Tr.	.04	.005	.02	.005	.01

Diamond Drill Record

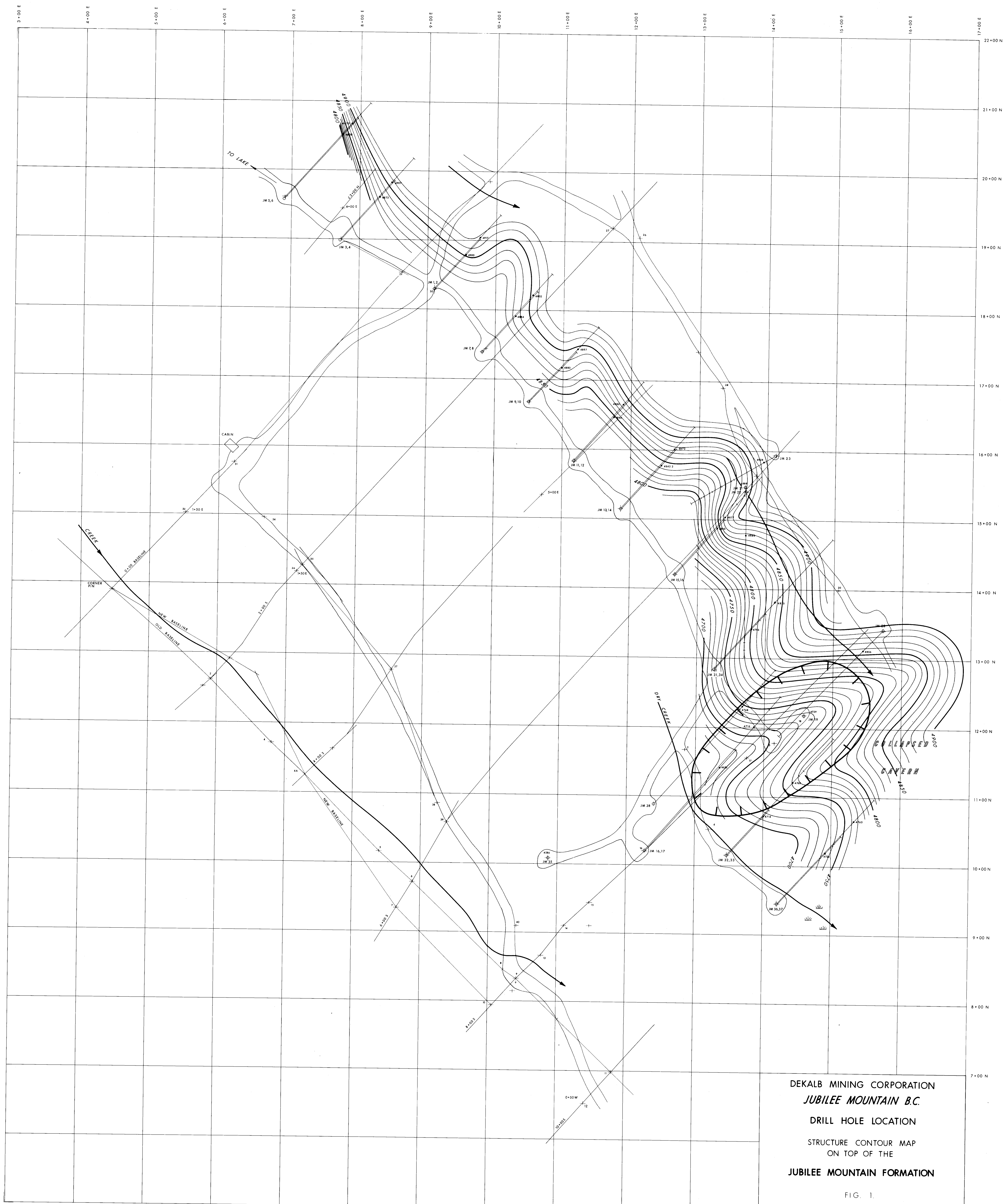
DEKALB MINING CORPORATION

Hole No. JM-38
 Property _____
 Project No. _____
 Commenced _____
 Completed _____

Length _____
 Bearing _____
 Dip _____
 Lat. _____
 Dep. _____
 Elev. _____

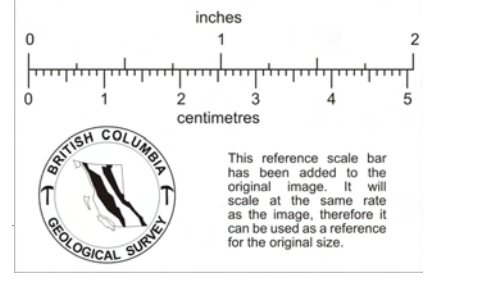
Hor. Comp. _____
 Ver. Comp. _____
 Etch. at _____
 True Dip _____
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 Date Logged _____

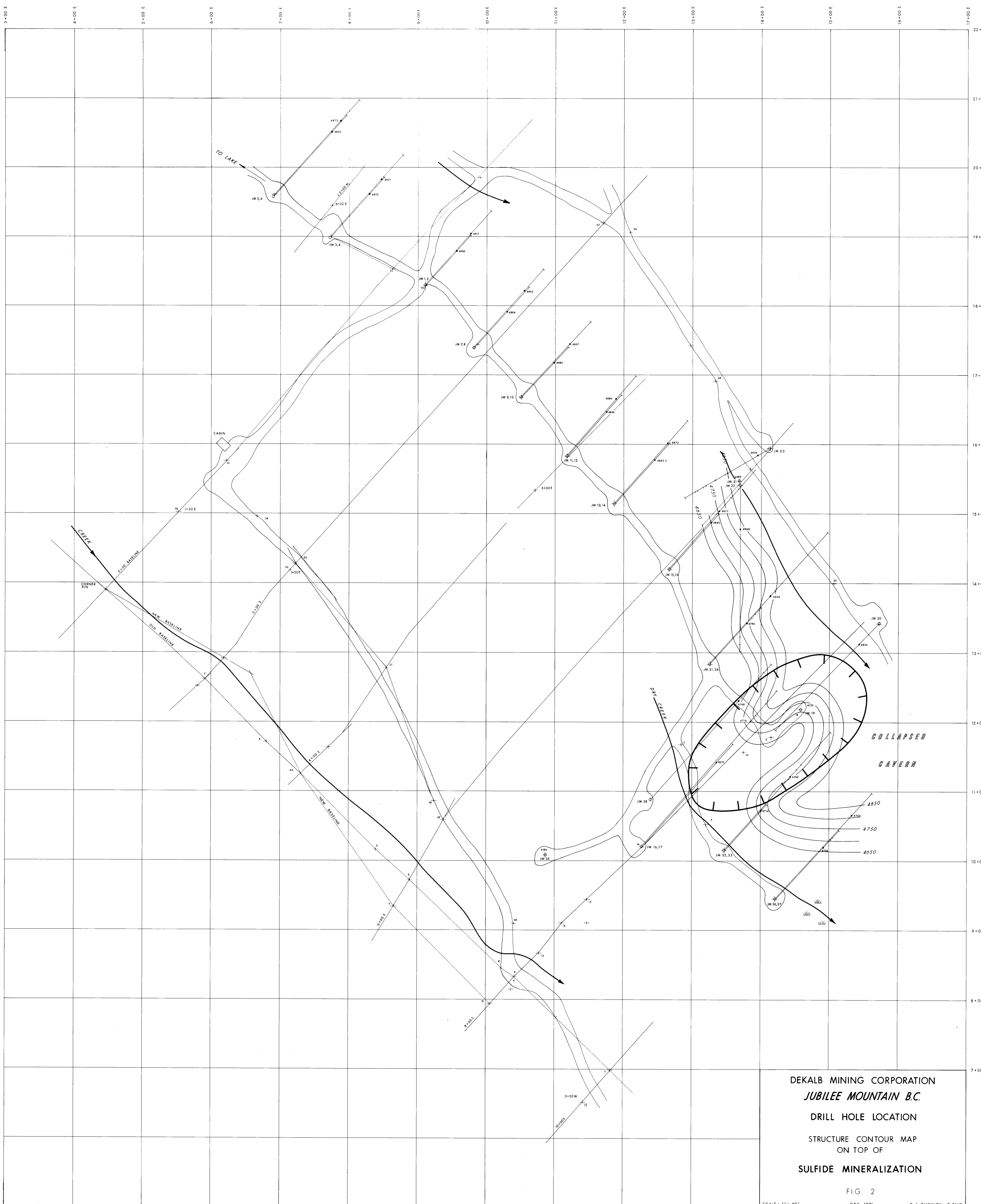
Elev.	From	To	Description	Assay No.	Length Feet	Analysis Coring Laboratories Ltd.					
						Au	Ag	Cu	Pb	Zn	BaSO ₄
	Cont'd. 350'	352.5'	consisting of well x1'd calcite. Occ. know galena in siliceous portions of rock.								
	352.5'	354	Similar to above except barite veinlette (1/2") crosses core. Some associated galena.	0525	1.5	Tr.	.02	Tr.	.43	.01	18.26
	354'	355.5'	Similar to above with barite veinletts. Galena associated with barite.	0526	1.5	Tr.	.04	.01	.45	.005	8.62
	355.5'	357'	15" white barite zone with galena bearing wall rock.	0527	1.5	Tr.	Tr.	.01	.25	.005	66.59
	357'	359.5'	Similar appearing rock, although lower portion has a sedimentary appearance. Brecciated zone with matrix consisting of barite and galena. Vuggy fine pyrite scattered in bedded portion of core sample.	0528	2.5	Tr.	1.54	.16	6.69	.01	21.98
	359.5'	361.5'	Sedimentary carbonate appearance, with knots of barite. Disseminated chalcopyrite.	0529	2.0	Tr.	.40	.81	.13	.03	7.74
	361.5'	362'	Mottled light & dark carbonate, organic origin?	0530	0.5	Tr.	.14	.10	.10	.005	.08
	362'	364'	Mottled organic appearance, vuggy 3% Ø.	Not Assd.							



DEKALB MINING CORPORATION
JUBILEE MOUNTAIN B.C.
 DRILL HOLE LOCATION
 STRUCTURE CONTOUR MAP
 ON TOP OF THE
JUBILEE MOUNTAIN FORMATION

FIG. 1.
 SCALE: 1" = 40'
 DEC., 1976
 R. A. BUCKLEY P. ENG.





DEKALB MINING CORPORATION
JUBILEE MOUNTAIN B.C.
 DRILL HOLE LOCATION
 STRUCTURE CONTOUR MAP
 ON TOP OF
SULFIDE MINERALIZATION

FIG. 2

SCALE: 1" = 40' DEC, 1976 R. A. BUCKLEY P. ENG

