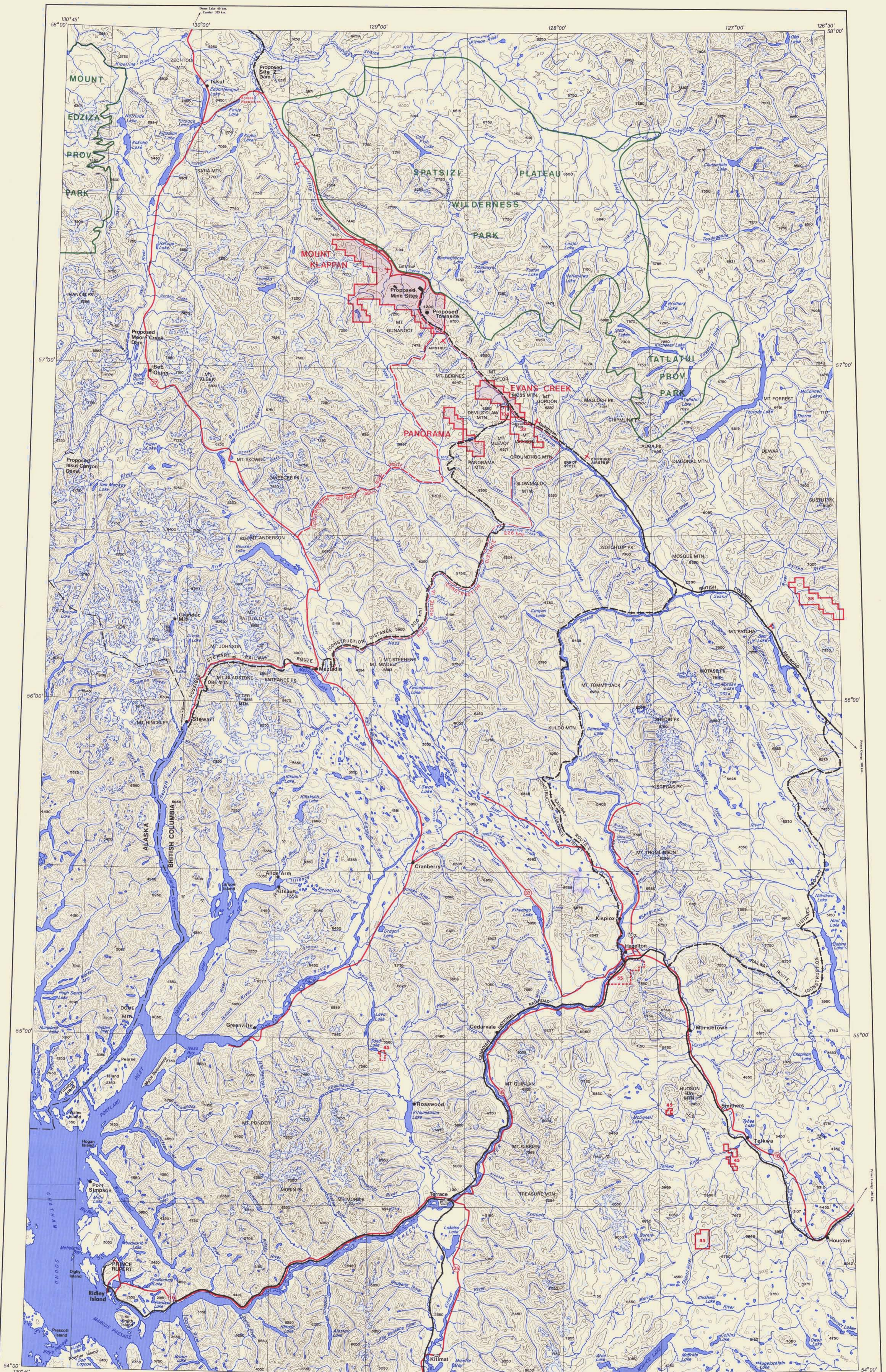


APPENDIX F

1:500 000 NORTHWESTERN BRITISH COLUMBIA MAP



Produced jointly by GULF CANADA DRAFTING DEPT. and HARRY ASSOC. (1978) LTD., MAPPING SECTION. Revised to June, 1984.

LEGEND	
Highway	
Road, possible	
Road, alternate	
Railway	
Possible Railway Route	
Proposed Dam Site	
Proposed Pits, Mt. Klappan property	
Proposed Townsite, Mt. Klappan property	
Boundary, Park or Reserve	
Boundary, International	
Spot Elevation (feet above sea level)	
Contours (1000 Foot Interval)	
Mine (see separate list)	
Prospect	
City, Town	

COAL PROPERTIES	
	GULF CANADA RESOURCES INC.
	SUNCOR INC.
	GROUNDHOG COAL LTD.
	SHELL CANADA RESOURCES LTD.
	D. GROOT LOGGING LTD.
	COAL LICENCES UNDER APPLICATION

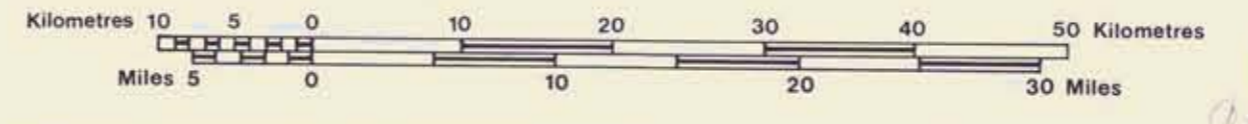
MINES	
1	DOME MOUNTAIN — Ag, Pb, Zn
2	DUTHIE — Ag, Pb, Zn, Au, Cd, Cu
3	SILVER STANDARD — Ag, Pb, Zn, Au, Cu
4	KITSAULT — Mo
5	SCOTTIE GOLD — Au, Ag
6	GRANDUC — Cu, Ag, Au
7	BAKER — Au, Ag



NORTHWEST BRITISH COLUMBIA

710

SCALE 1:500,000

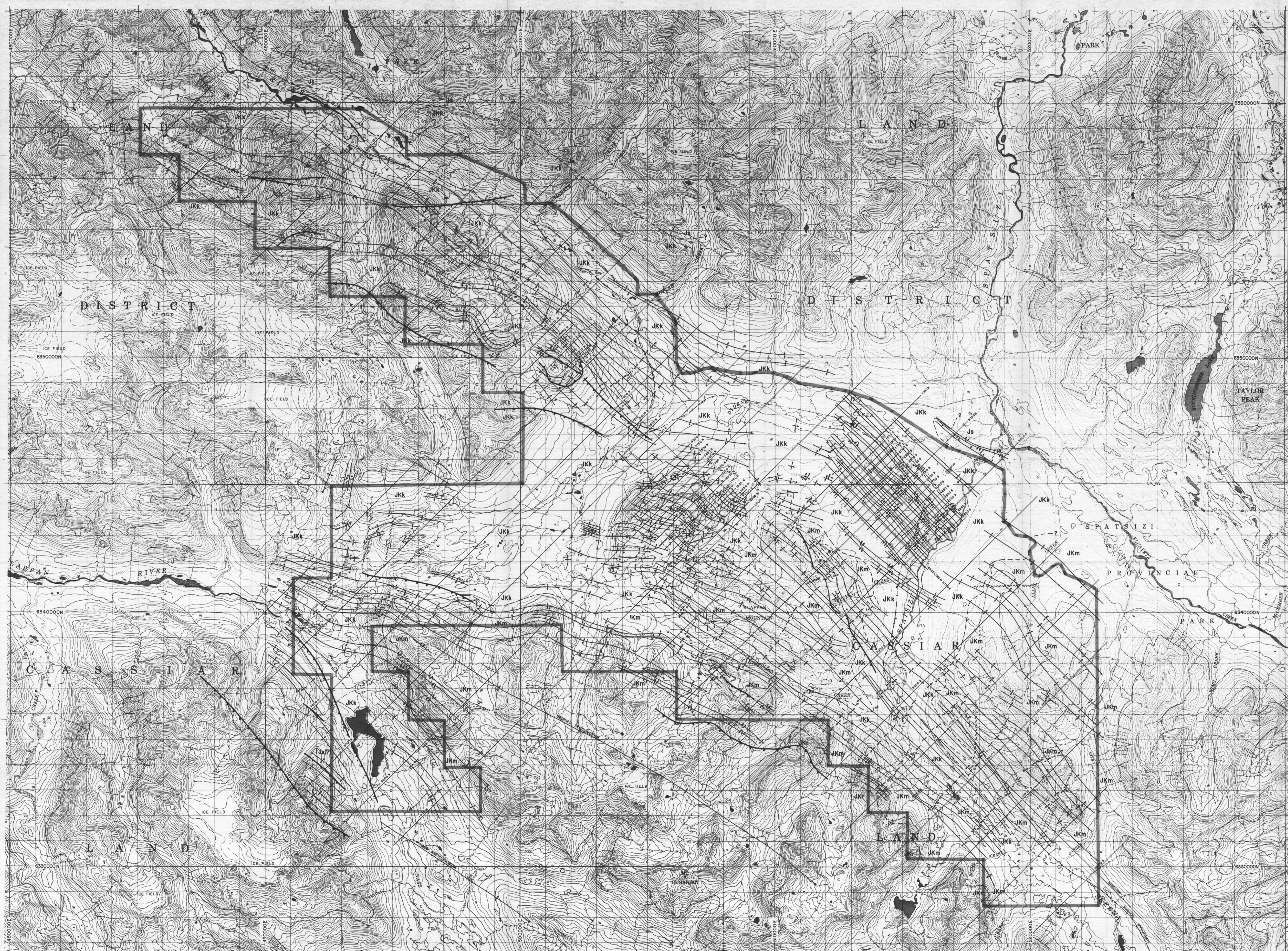


REFERENCE NOTE

Mines from The Northwest Region — B.C. Regional Economic Study, 1982.
Prospects from Kitimat-Stikine Regional Resource Map, 1981.
Base Map from Dept. of Energy, Mines and Resources, Surveys and Mapping Branch, current N.T.S. series maps.

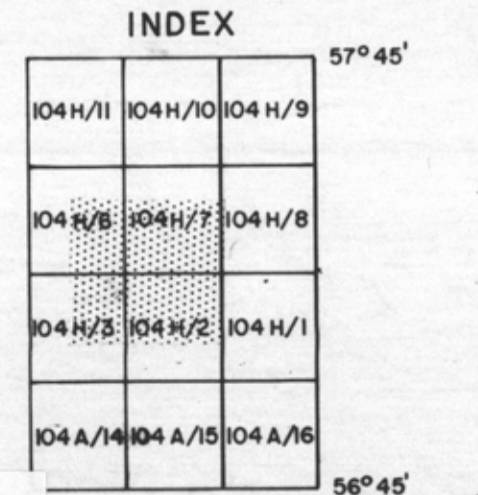
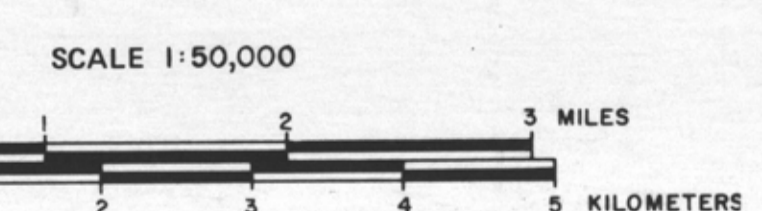


GR. MT. KLAPPAN B4(2)A(1)



MAP SYMBOLS

- ROADS AND RELATED FEATURES
 - HARD SURFACE, ALL WEATHER
 - LOOSE SURFACE
 - CART TRACK, WINTER ROAD
 - TRAIL, CUTLINE, PORTAGE
 - BUILT UP AREA
 - RAILWAY, SIGNAL STATION, STOP
 - BRIDGE
 - SEAPLANE BASE, ANCHORAGE
- LANDMARK FEATURES
 - HOUSE, BARN
 - CHURCH, SCHOOL
 - POST OFFICE
 - HISTORICAL SITE
 - TOWERS, FIRE RADIO
 - WELL, OIL, GAS
 - TANK, OIL, GASOLINE, WATER
 - TELEPHONE LINE
 - POWER TRANSMISSION LINE
 - MINE
 - CUTTING, EMBANKMENT
 - GRAVEL PIT
- BOUNDARIES AND CONTROL
 - INTERNATIONAL, PROVINCIAL, MUNICIPALITY
 - COUNTY, DISTRICT
 - TOWNSHIP, PARISH - SURVEYED
 - TOWNSHIP, OIL - SURVEYED
 - MUNICIPALITY
 - INDIAN RESERVE, PARK, ETC.
 - HORIZONTAL CONTROL POINT
 - BENCH MARK
 - SPOT ELEVATION, ELEVATION APPROXIMATE
- DRAINAGE AND RELATED FEATURES
 - STREAM, SHORELINE, INDEFINITE
 - DIRECTION OF FLOW
 - LAKE, INTERMITTENT
 - IRREGULARLY FLOODED LAND
 - MARSH, SWAMP, WOODS
 - DRY RIVER BED WITH CHANNELS
 - SAND, ABOVE IN WATER
 - STRING BOG
 - TUNDRA PONDS, POLYDONS
 - RAPIDS
 - FORESHORE FLATS
 - ROCK
 - DAM
 - WHARF
 - DITCH
- RELIEF FEATURES
 - CONTOUR
 - APPROXIMATE CONTOUR
 - DEPRESSION
 - ESKER
 - PINGO
 - SAND, SAND DUNES
 - PALSA BOG
 - WOODED AREA
- FIELD CAMP LOCATION



129°20'00" 129°15'00" 129°00'00" 128°45'00"

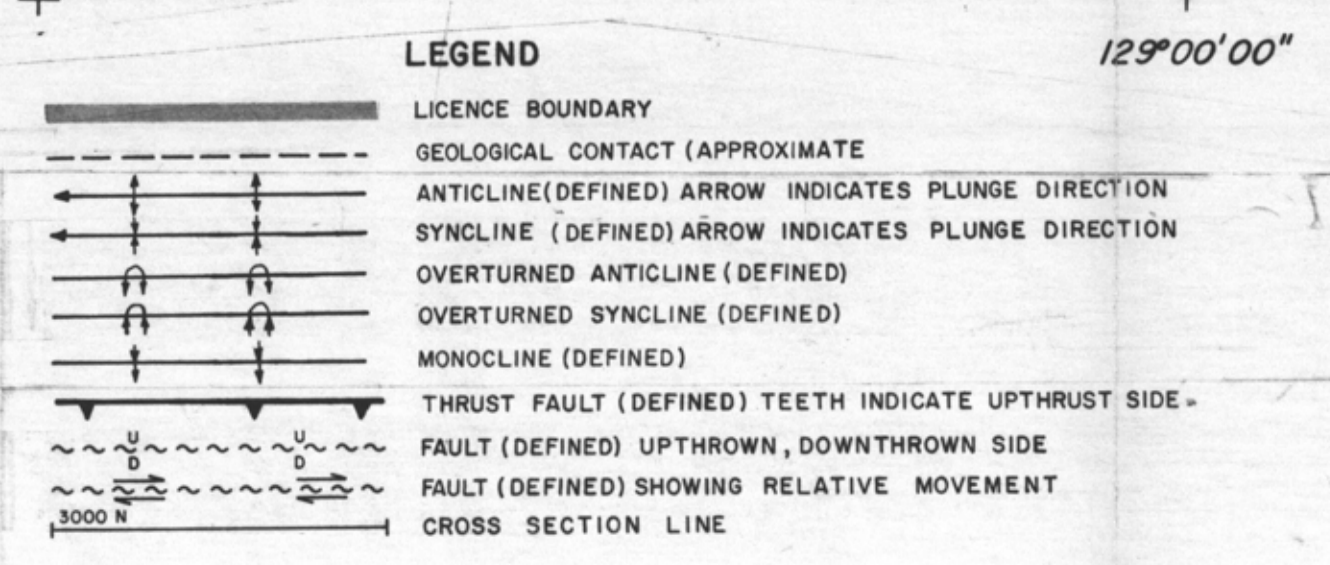


TABLE OF FORMATIONS

- RHONDA SEQUENCE**
 - JKr** Sequence of thick massive conglomerates and minor gritty sandstones interbedded with an increasing abundance of siltstones and mudstones towards the basal contact.
- MALLOCH SEQUENCE**
 - JKm** Thick interbeds of mudstones, argillaceous siltstones, fine grained argillaceous sandstones and thin beds of orange weathering siliceous nodular siltstones. Conglomerate beds tend to be laterally discontinuous. Thick clean sandstone beds and thin coal seams increase in abundance towards the basal gradational contact. Sequence can contain bivalved wood and plant fossils. Bivalves are rare.
- KLAPPAN SEQUENCE (main coal-bearing unit)**
 - JKk** Sequence of fine to coarse grained sandstones interbedded with mudstones, siltstones, occasional thin beds of orange weathering calcareous siltstones, conglomerates and abundant coal seams. Conglomerate beds grade laterally into sandstones. Sandstones often display tabular or trough cross-bedding. Several species of paleozooids and plants are common. Bivalves and ammonites are rare.
- SPATSIZI SEQUENCE**
 - Js** Predominantly a marine sequence comprised of beds of mudstones, siltstones and lesser amounts of sandstones and conglomerates. The upper contact is defined on the first occurrence of a non-marine bed. Discontinuous massive conglomerate beds lie in the upper portion of the sequence. Bivalves are abundant and bivalves are rare.

APPENDIX I

710

GULF CANADA RESOURCES INC.
Coal Division

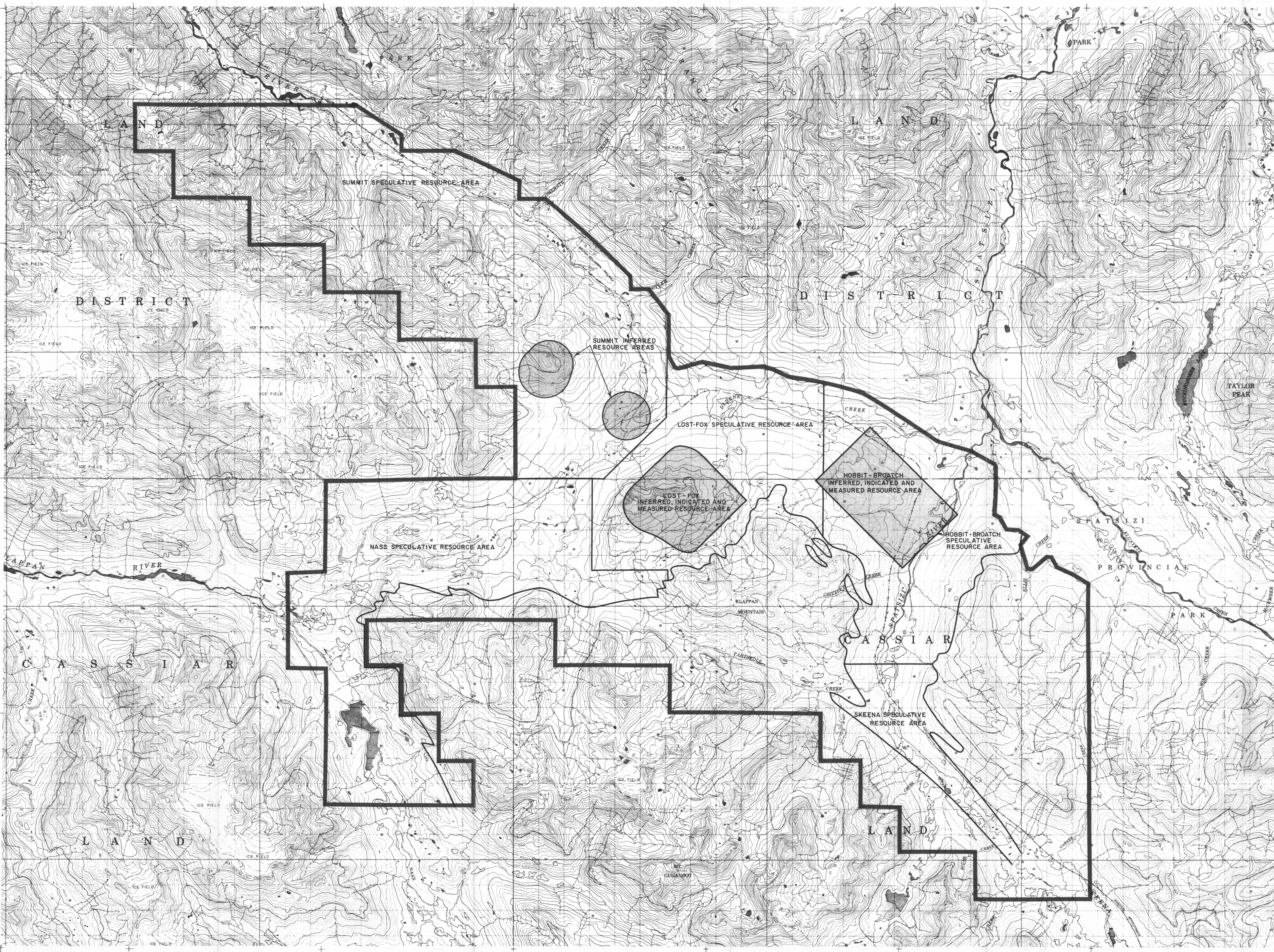
CALGARY ALBERTA

MOUNT KLAPPAN COAL PROPERTY

1984

REGIONAL GEOLOGY MAP

PREPARED BY: 1984 GEOLOGICAL STAFF DRAWING No. KPN 84 A 001
APPROVED BY: DATE: DEC. 1984



LEGEND

ROADS AND RELATED FEATURES

- ROAD SURFACE ALL WEATHER
- LOOSE SURFACE
- CART TRACK WINTER ROAD UNDER CONSTRUCTION
- TRAIL CUTLINE PORTAGE
- BUILT UP AREA
- RAILWAY - STATION STOP
- BRIDGE
- SEAPLANE BASE ANCHORAGE

LANDMARK FEATURES

- HOUSE BARN
- CHURCH SCHOOL
- POST OFFICE
- HISTORICAL SITE
- TOWERS FIRE RADIO
- WELL OIL GAS
- TANK OIL GASLINE WATER
- TELEPHONE LINE
- POWER TRANSMISSION LINE
- MINE
- CUTTING EMBANKMENT
- GRAVEL PIT

BOUNDARIES AND CONTROL

- INTERNATIONAL PROVINCIAL BOUNDARY MONUMENT
- COUNTY DISTRICT
- TOWNSHIP PARISH - SURVEYED
- TOWNSHIP DLS - SURVEYED
- MUNICIPALITY
- INDIAN RESERVE PARK ETC
- HORIZONTAL CONTROL POINT
- BENCH MARK
- SPOT ELEVATION ELEVATION APPROXIMATE

DRAINAGE AND RELATED FEATURES

- STREAM SHORELINE INDEFINITE
- DIRECTION OF FLOW
- LAKE INTERMITTENT
- INUNDATED FLOODED LAND
- MARSH OR SWAMP (WOODED)
- DRY RIVER BED WITH CHANNELS
- SAND ABOVE IN WATER
- STRONG BOG
- TUNDRA PONDS POLYTONS
- PAPUS
- FORESHORE FLATS
- ROCK
- DAM
- RIFFLE
- SPICE

RELIEF FEATURES

- CONTOURS
- APPROXIMATE CONTOUR
- DEPRESSION
- ESKER
- FRINGE SAND DUNES
- SAND SAND DUNES
- PALSA BOG
- WOODED AREA
- LICENCE BOUNDARY
- FIELD CAMP LOCATION

SCALE 1:50,000

0 1 2 3 4 5 MILES
0 1 2 3 4 5 KILOMETERS

129°20'00" 129°15'00" 129°00'00" 128°45'00" 128°30'00" 128°15'00" 128°00'00"

57°25' 57°20' 57°15' 57°10' 57°05'

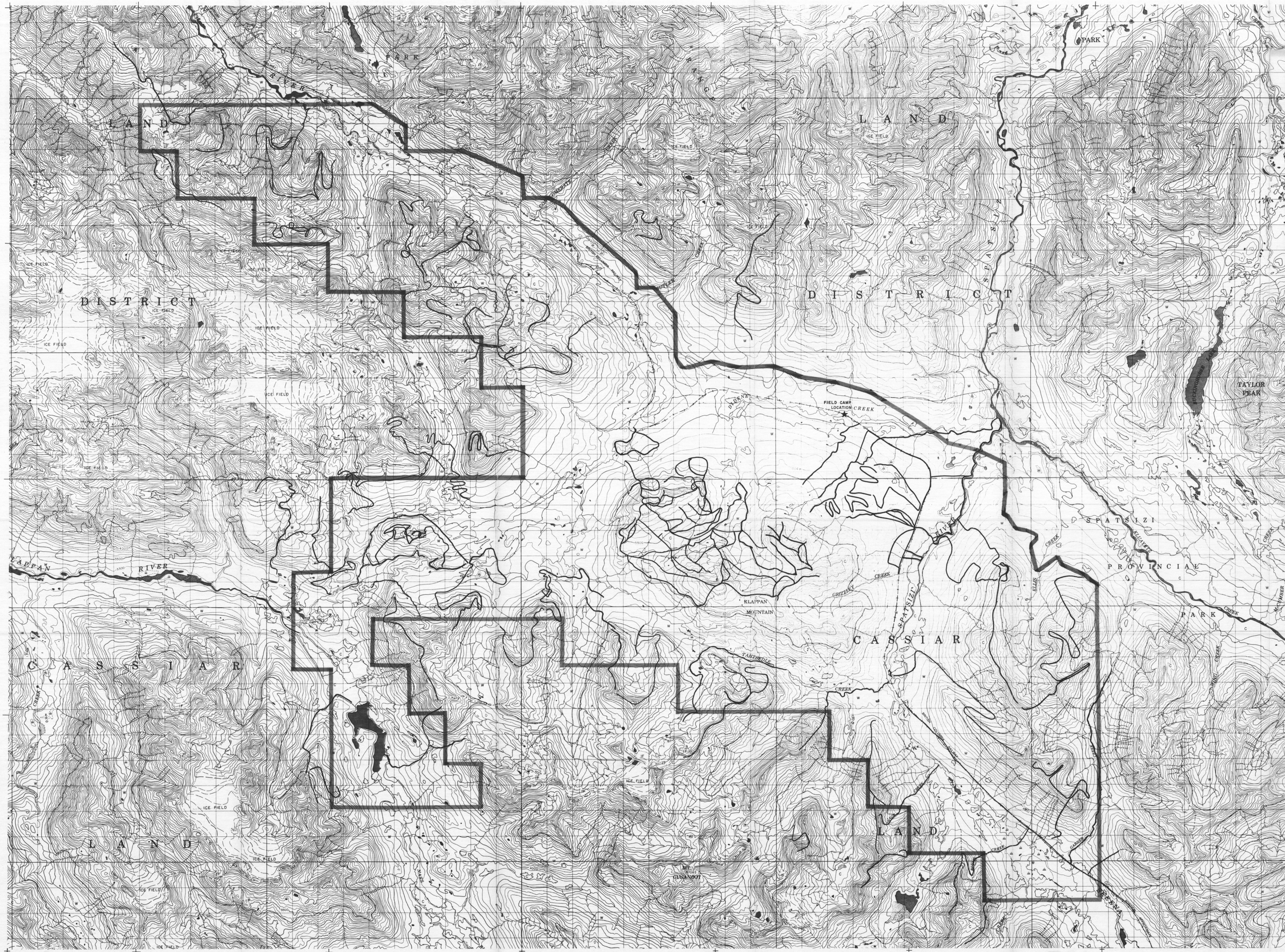
104 H/1 104 H/2 104 H/3 104 H/4 104 H/5 104 H/6 104 H/7 104 H/8 104 H/9

710 GULF CANADA RESOURCES INC. (71)

GULF CANADA RESOURCES INC.
Coal Division ALBERTA

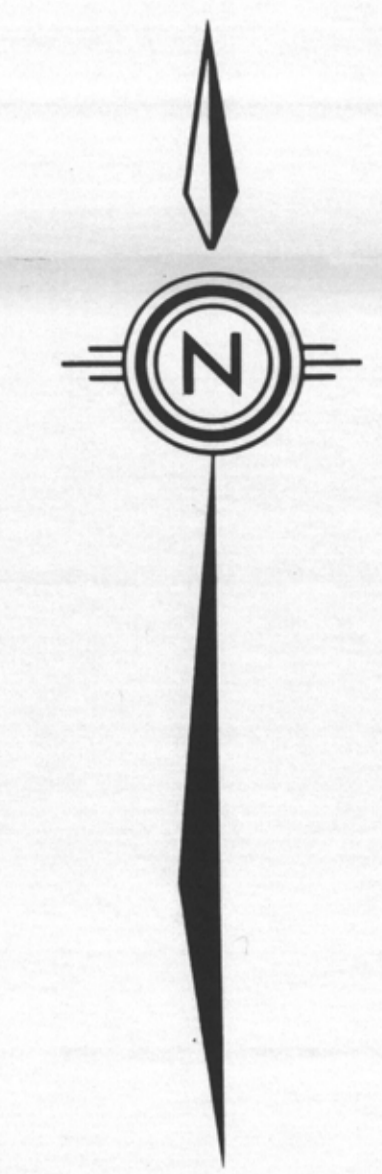
MOUNT KLAPPAN COAL PROPERTY
1984
COAL RESOURCE AREA MAP

PREPARED BY: K. J. APPROVED BY: G.S., E.S., V.L.D. DATE: FEB, 1985 DRAWING No. KPN84A02



57°25'
57°20'
57°15'
57°10'

129°20'00"
129°15'00"
129°00'00"
128°45'00"



LEGEND

ROADS AND RELATED FEATURES

- HARD SURFACE, ALL WEATHER
- LOOSE SURFACE
- CART TRACK, WINTER ROAD
- TRAIL, CUTLINE, PORTAGE
- BUILT UP AREA
- RAILWAY, SIGNAL, STATION, STOP
- BRIDGE
- SEAPLANE BASE, ANCHORAGE

LANDMARK FEATURES

- HOUSE, BARN
- CHURCH, SCHOOL
- POST OFFICE
- HISTORICAL SITE
- TOWER, FIRE, RADIO
- WELL, OIL, GAS
- TANK, OIL, GASOLINE, WATER
- TELEPHONE LINE
- POWER TRANSMISSION LINE
- MINI
- CUTTING, EMBANKMENT
- GRAVEL, PIT

BOUNDARIES AND CONTROL

- INTERNATIONAL, PROVINCIAL, COUNTY, DISTRICT, TOWNSHIP, PARISH, SURVEYED, UN-SURVEYED, SECTION CORNERS
- MUNICIPALITY
- INDIAN RESERVE, PARK, ETC.
- HORIZONTAL CONTROL POINT
- BENCH MARK
- SPOT ELEVATION, ELEVATION APPROXIMATE

DRAINAGE AND RELATED FEATURES

- STREAM, SHORELINE, INDEFINITE
- DIRECTION OF FLOW
- LAKE, INTERMITTENT
- HUNDREDS, FLOODING, LAND
- MARSH, (OR SWAMP) (WOODS)
- DRY RIVER BED WITH CHANNELS
- SAND, ABOVE, IN WATER
- STRING BOG
- TUNDRA, PONDS, POLYTONS
- RAPIDS
- FORESHORE FLATS
- ROCK
- DAM
- WHARF
- DITCH

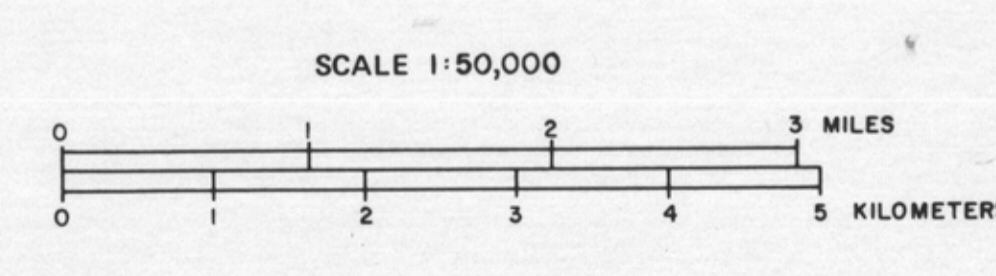
RELIEF FEATURES

- CONTOUR
- APPROXIMATE CONTOUR
- DEPRESSION
- ESKER
- FRIGO
- SAND, SAND DUNES
- PALSA BOG
- WOODED AREA

PROPERTY BOUNDARY

TRAVERSE LOCATION

FIELD CAMP LOCATION



1044/1	1044/2	1044/3	1044/4	1044/5	1044/6	1044/7	1044/8
1044/9	1044/10	1044/11	1044/12	1044/13	1044/14	1044/15	1044/16

APPENDIX I **710**

GULF CANADA RESOURCES INC.
Coal Division ALBERTA

MOUNT KLAPPAN COAL PROPERTY

1984 TRAVERSE LOCATION MAP

PREPARED BY: _____ DRAWING No. _____
APPROVED BY: _____ DATE: DEC. 1984 KPN 8-4 B02

GULF CANADA RESOURCES INC.
 COAL DIVISION
 KLAPPAN PROJECT
 STRATIGRAPHIC LOG
 KPN SN OTC84001

710

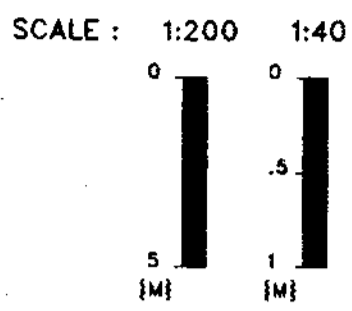
APPENDIX I

GEOLOGIST : MCKENZIE

DATE : DEC 06/84

DRAWING NO. :

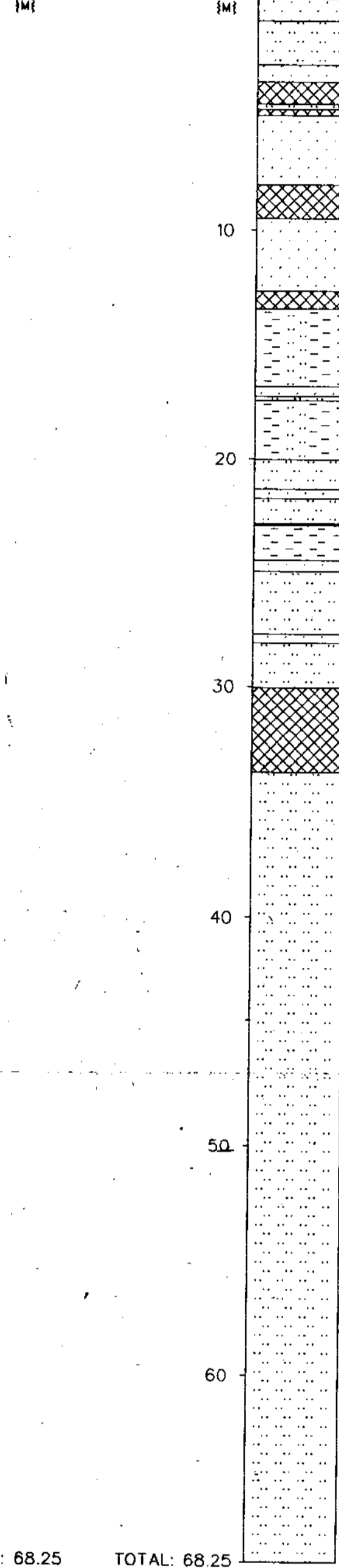
LITHOLOGIC SYMBOLS



NORTHING: 6353600.0 N
 EASTING: 501100.0 E

	SANDSTONE		BENTONITE
	SILTSTONE		BRECCIA
	COAL		CARBONACEOUS
	OVERBURDEN		QUARTZ
	MUDSTONE, CLAYSTONE		PYRITE
	TUFF		FERRUGINOUS
	LIMESTONE		CONGLOMERATE
	COVERED		FOSSIL BED

MEASURED INTERVAL TRUE 1:200 INTERVAL



48-171 Klappan 84/6/72 '11

GULF CANADA RESOURCES INC.
COAL DIVISION

710
635

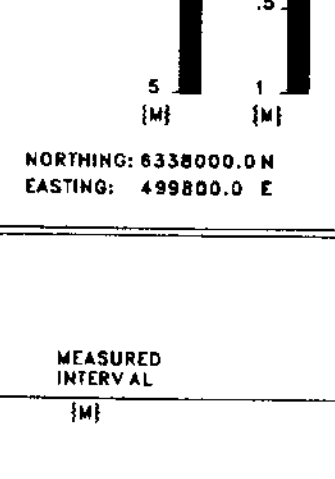
APPENDIX I

KLAPPAN PROJECT
STRATIGRAPHIC LOG
KPN NR OTC84002

GEOLOGIST : SWANBERGSON

DATE : DEC 06/84

DRAWING NO. :

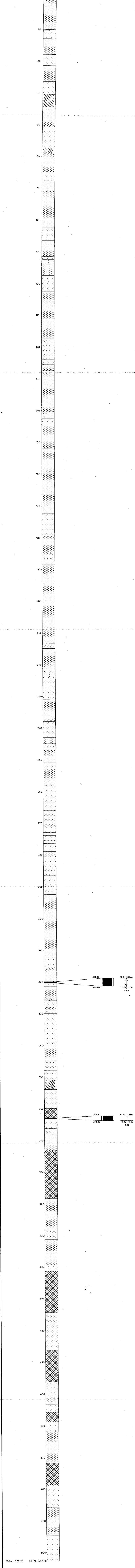


NORTHING: 6338000.0 M
EASTING: 499800.0 E

LITHOLOGIC SYMBOLS

	SANDSTONE		BENTONITE
	SILTSTONE		BRECCIA
	COAL		CARBONACEOUS
	OVERBURDEN		QUARTZ
	MUDSTONE, CLAYSTONE		PYRITE
	TUFF		FERRUGINOUS
	LIMESTONE		CONGLOMERATE
	COVERED		FOSSIL BED

SEAM DETAIL



TOTAL: 502.70 TOTAL: 502.70

GR-Mt Klappan 84(3)A *(1)

GULF CANADA RESOURCES INC.
 COAL DIVISION
 KLAPPAN PROJECT
 STRATIGRAPHIC LOG
 KPN SN OTC84003

710
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APPENDIX I

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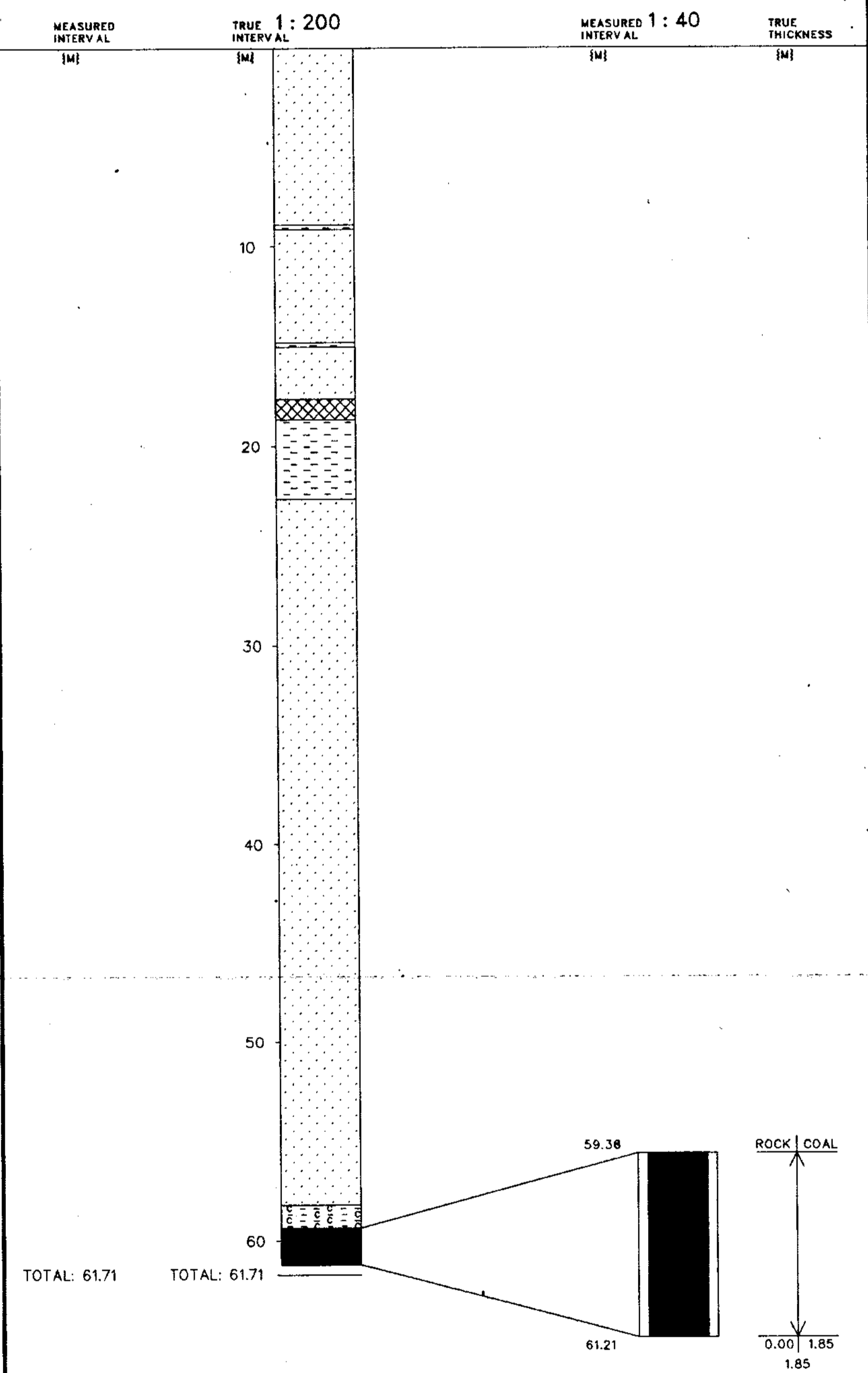
LITHOLOGIC SYMBOLS

	SANDSTONE		BENTONITE
	SILTSTONE		BRECCIA
	COAL		CARBONACEOUS
	OVERBURDEN		QUARTZ
	MUDSTONE, CLAYSTONE		PYRITE
	TUFF		FERRUGINOUS
	LIMESTONE		CONGLOMERATE
	COVERED		FOSSIL BED

SCALE : 1:200 1:40

NORTHING: 6353000.0 M
 EASTING: 498330.0 E

SEAM DETAIL



GR: Mt Klappan 04(3)A (1)*

GULF CANADA RESOURCES INC.
 COAL DIVISION
 KLAPPAN PROJECT
 STRATIGRAPHIC LOG
 KPN SS OTC84004

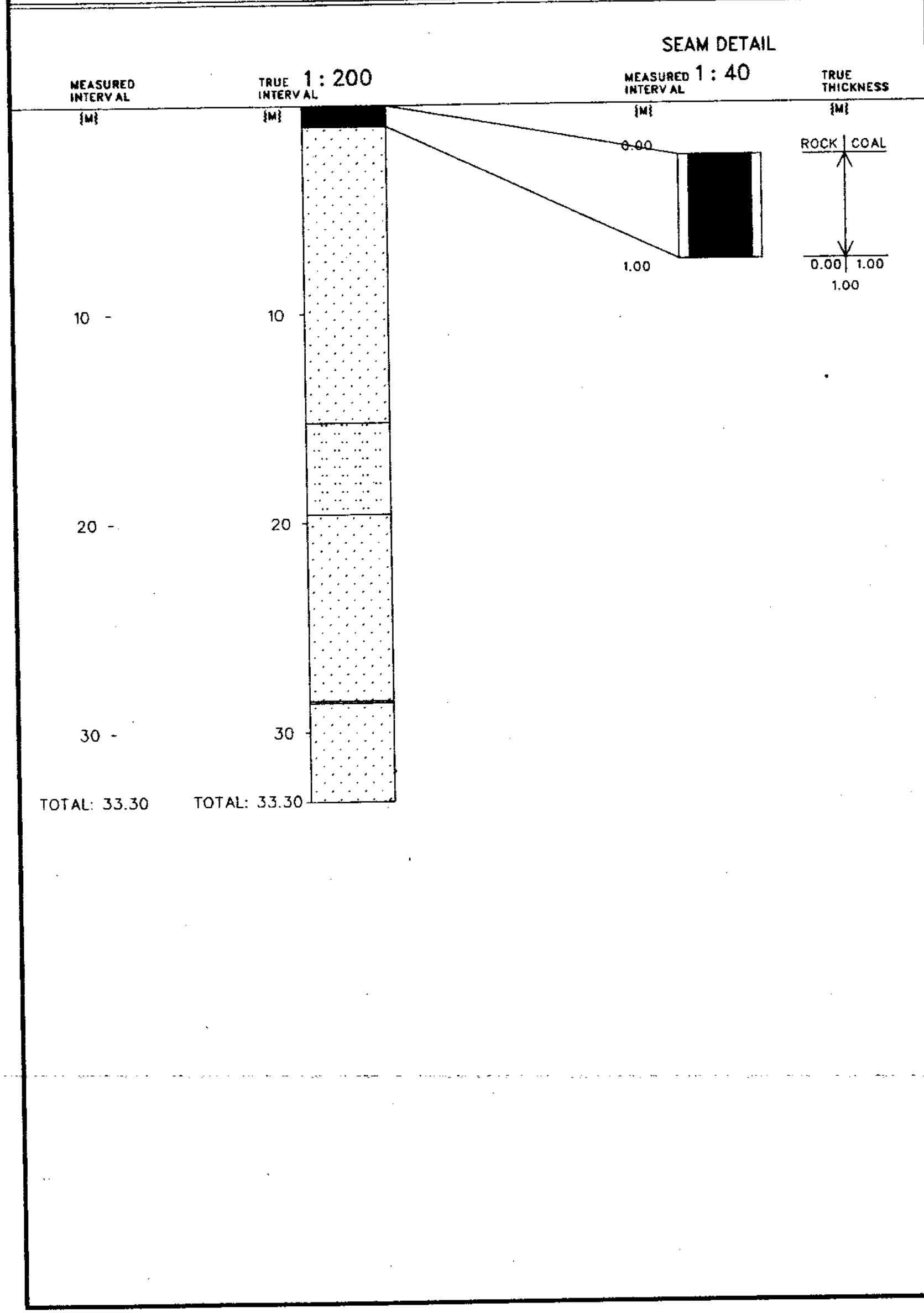
710 ~~675~~

APPENDIX I

GEOLOGIST : SAVOIE DATE : DEC 12/84 DRAWING NO. :

LITHOLOGIC SYMBOLS

SCALE : 1:200 1:40 NORTHING: 834995.0 N EASTING: 501325.0 E		SANDSTONE		BENTONITE
		SILTSTONE		BRECCIA
		COAL		CARBONACEOUS
		OVERBURDEN		QUARTZ
		MUDSTONE, CLAYSTONE		PYRITE
		TUFF		FERRUGINOUS
		LIMESTONE		CONGLOMERATE
		COVERED		FOSSIL BED



PLOT 1 11:32.06 WED 12 DEC, 1984 JOB-TSTCE80 GULF CANADA DISPLA 9.0

66-10X Klappan 84/10/2-11

GULF CANADA RESOURCES INC.
 COAL DIVISION
 KLAPPAN PROJECT
 STRATIGRAPHIC LOG
 KFN SS OTCB4005

710
~~575~~

APPENDIX I

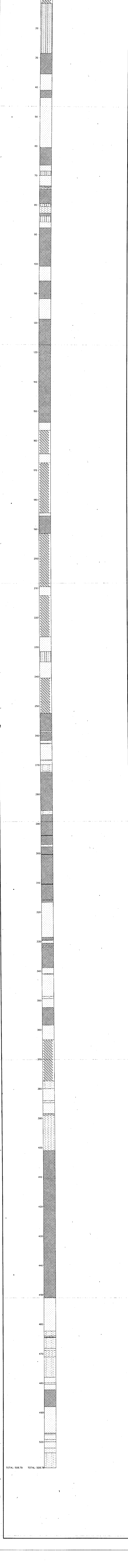
GEOLOGIST : MCKENZIE DATE : DEC 06/84 DRAWING NO. :

SCALE : 1:200 1:40

NORTHING: 8355000.0 N
 EASTING: 510000.0 E

LITHOLOGIC SYMBOLS

[Symbol]	SANDSTONE	[Symbol]	BENTONITE
[Symbol]	SILTSTONE	[Symbol]	BRECCIA
[Symbol]	COAL	[Symbol]	CARBONACEOUS
[Symbol]	OVERBURDEN	[Symbol]	QUARTZ
[Symbol]	MUDSTONE, CLAYSTONE	[Symbol]	PYRITE
[Symbol]	TUFF	[Symbol]	FERRUGINOUS
[Symbol]	LIMESTONE	[Symbol]	CONGLOMERATE
[Symbol]	COVERED	[Symbol]	FOSSIL BED



710

GR-Mt Klappan Pt (3)A (1)

GULF CANADA RESOURCES INC.
COAL DIVISION
KLAPPAN PROJECT
STRATIGRAPHIC LOG
KPN SS OTC84006

~~85~~

APPENDIX I

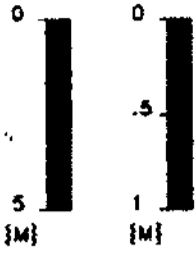
GEOLOGIST : DAKIN

DATE : DEC 12/84

DRAWING NO. :

LITHOLOGIC SYMBOLS

SCALE : 1:200 1:40



NORTHING: 8345000.0 N
EASTING: 505000.0 E

	SANDSTONE		BENTONITE
	SILTSTONE		BRECCIA
	COAL		CARBONACEOUS
	OVERBURDEN		QUARTZ
	MUDSTONE, CLAYSTONE		PYRITE
	TUFF		FERRUGINOUS
	LIMESTONE		CONGLOMERATE
	COVERED		FOSSIL BED

MEASURED INTERVAL [M] TRUE INTERVAL [M] 1:200

10 -

10

20 -

20

30 -

30

40 -

40

50 -

50

60 -

60

70 -

70

80 -

80

TOTAL: 89.62

TOTAL: 89.62

710

GULF CANADA RESOURCES INC.
COAL DIVISION
KLAPPAN PROJECT
STRATIGRAPHIC LOG
KPN SS OTC84007

APPENDIX I

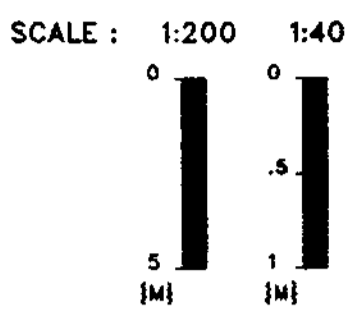
~~675~~

GEOLOGIST : DAKIN/KONG

DATE : DEC 06/84

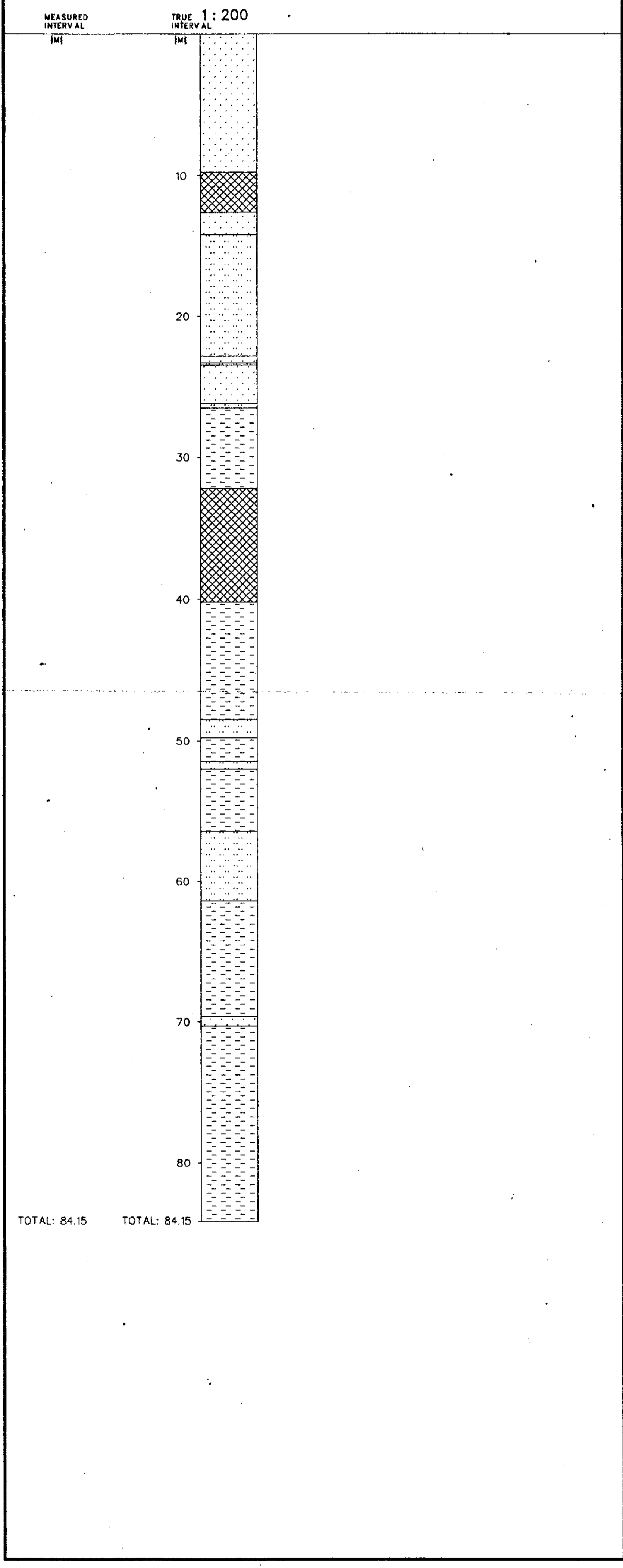
DRAWING NO. :

LITHOLOGIC SYMBOLS



NORTHING: 6352050.0 N
EASTING: 502550.0 E

	SANDSTONE		BENTONITE
	SILTSTONE		BRECCIA
	COAL		CARBONACEOUS
	OVERBURDEN		QUARTZ
	MUDSTONE, CLAYSTONE		PYRITE
	TUFF		FERRUGINOUS
	LIMESTONE		CONGLOMERATE
	COVERED		FOSSIL BED



710

GULF CANADA RESOURCES INC.
COAL DIVISION
KLAPPAN PROJECT
STRATIGRAPHIC LOG
KPN NR OTCB4008

APPENDIX I

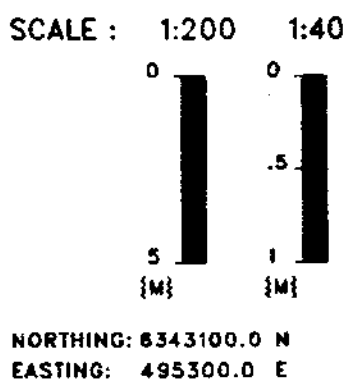
~~675~~

GEOLOGIST : SWANBERGSON

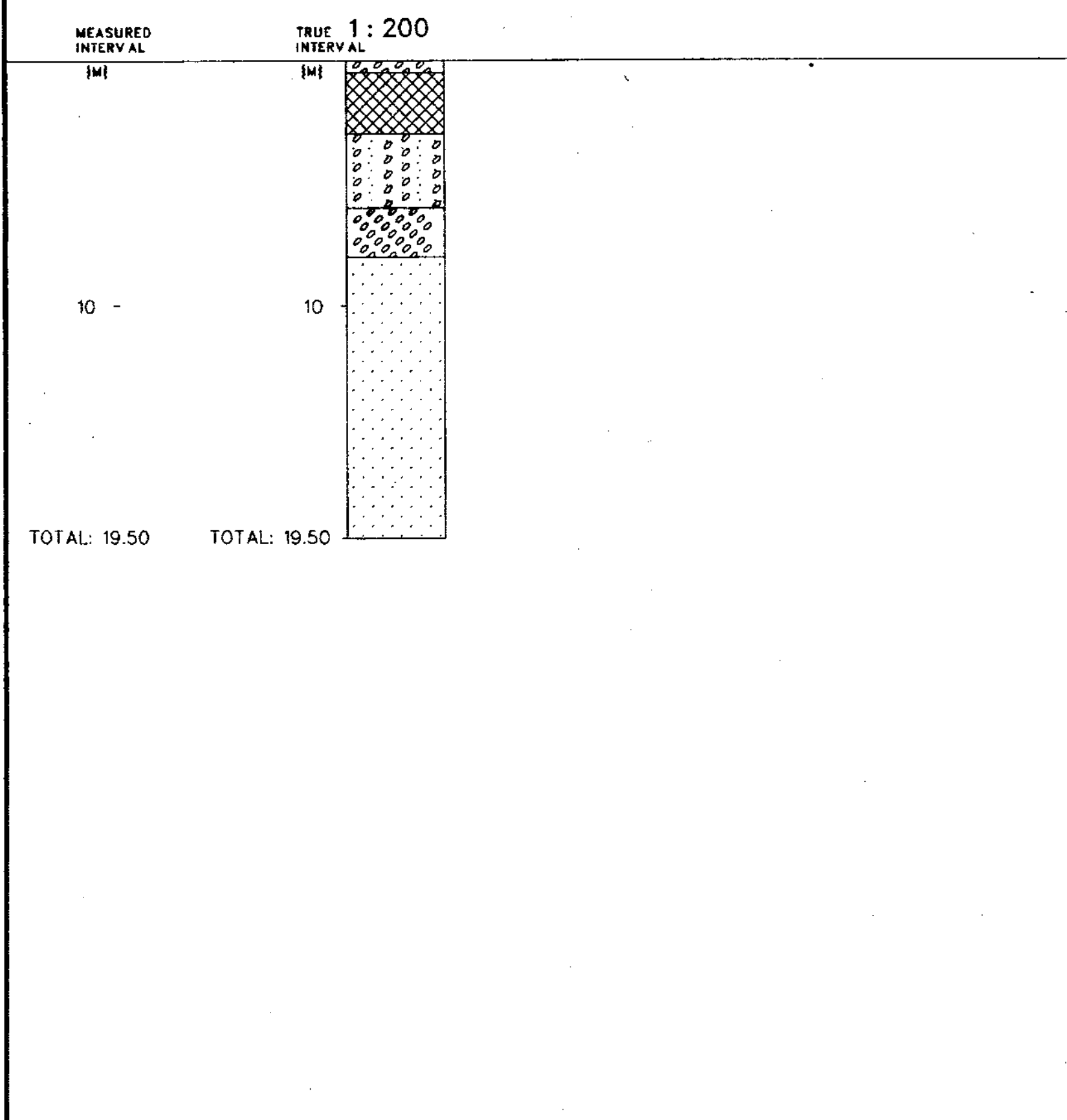
DATE : DEC 12/84

DRAWING NO. :

LITHOLOGIC SYMBOLS



	SANDSTONE		BENTONITE
	SILTSTONE		BRECCIA
	COAL		CARBONACEOUS
	OVERBURDEN		QUARTZ
	MUDSTONE, CLAYSTONE		PYRITE
	TUFF		FERRUGINOUS
	LIMESTONE		CONGLOMERATE
	COVERED		FOSSIL BED



PLOT 3 11.32.82 WED 12 DEC, 1984 JOB-TST080 GULF CANADA DISPLAY 9.0