

LEGEND

BUILDING	---
ROAD, HARD SURFACE	---
LOOSE SURFACE	---
CART TRACK	---
TRAIL	---
RAILROAD BED	---
RIVER	---
STREAM, DEFINITE	---
STREAM, APPROXIMATE	---
SPLIT	---
LAKE	---
WATER LEVEL	---
SWAMP	---
BEAVER DAM	---
TREE LINE	---
CUT LINE	---
CONTOURS, INDEX	---
INTERMEDIATE	---
DEPRESSION	---
APPROXIMATE	---
SPOT ELEVATION	---
FORM LINES	---
CUT/FILL	---
FIELD CONTROL POINT	---
COAL LICENCE	---

NOTES

MAPPING PRODUCED FROM PHOTOGRAPHIC ENLARGEMENTS OF 1:10,000 NEGATIVES.

CONTOUR INTERVAL: 10 M, WITH FORM LINES INTERVAL: 5 M.

ACCURACY OF 5M FORM LINES IS EQUAL TO THE ACCURACY OF THE 10M CONTOURS - 15.0 METERS FOR GROUND NOT OBSCURED BY TREES OR VEGETATION.

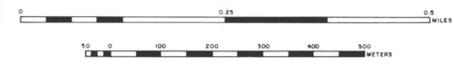
SURVEY CONTROL TAKEN FROM EXISTING PHOTO IDENTIFIABLE GOVERNMENT SURVEY MONUMENTS AND N.T.S. MAPS. MAPPING IS BASED ON UNIVERSAL TRANSVERSE MERCATOR GRID AND GEODETIC DATUM.

RAILROAD BED LOCATION BASED ON SEPT/82 AERIAL PHOTOGRAPHY.

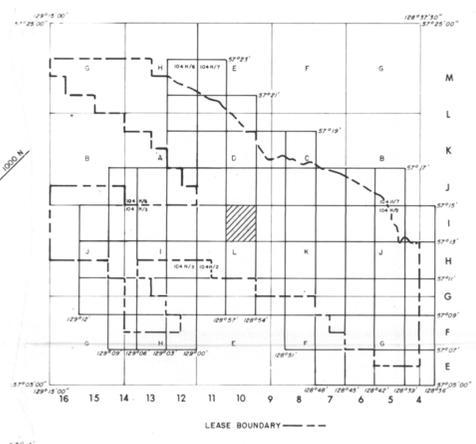
COMPILED BY: WESTERN PHOTOGRAMMETRY, A DIVISION OF UNDERWOOD MCELLEAN LTD., FROM FEDERAL GOVERNMENT AERIAL PHOTOGRAPHY FLOWN IN AUGUST/67 AT A SCALE OF 1:60,000 (APPROXIMATE).



SCALE 1:5000



MT. KLAPPAN AREA
INDEX MAP



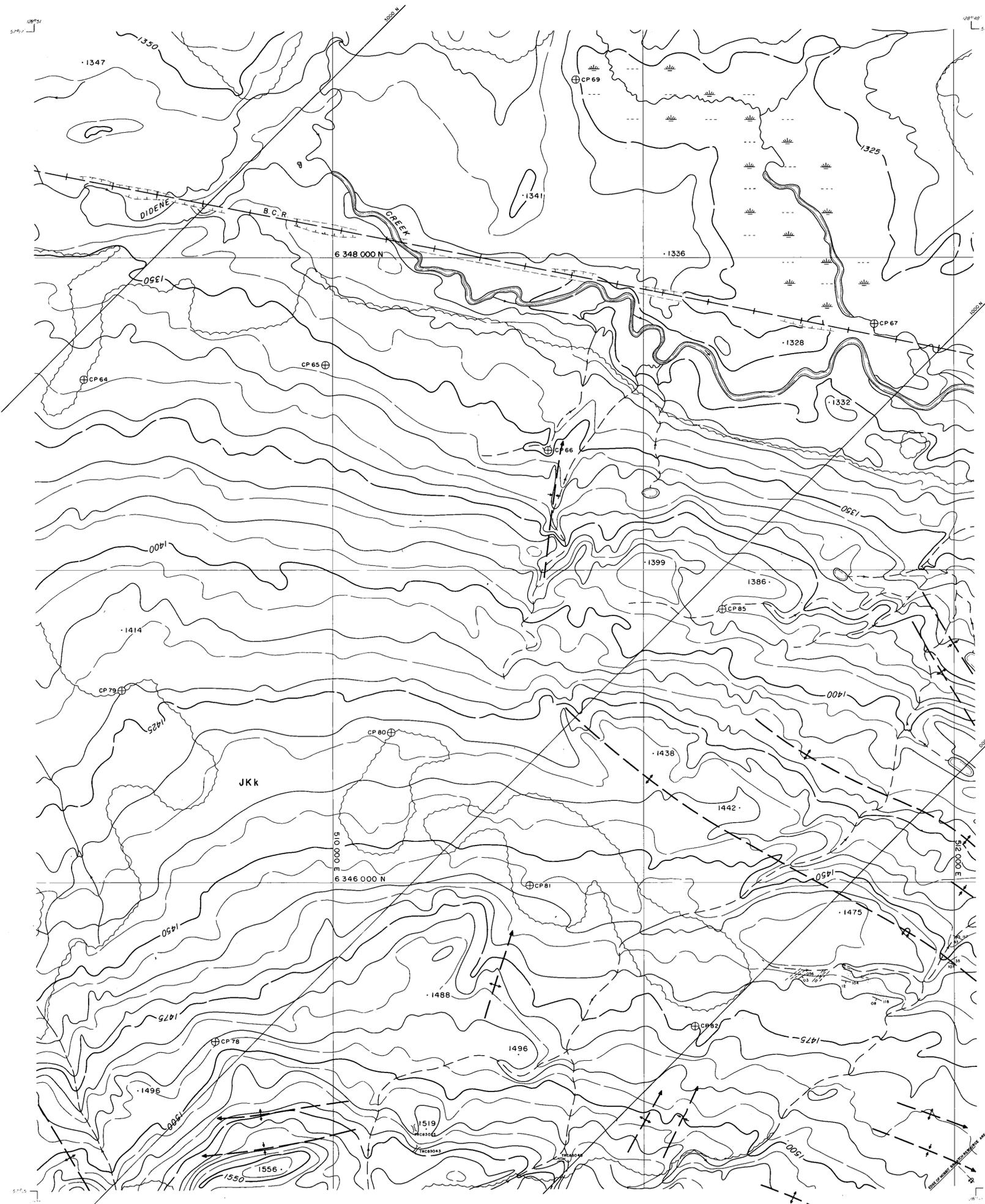
- RHONDDA SEQUENCE**
- Kr** Sequence of thick chert pebble conglomerates and minor gritty sandstones interbedded with an increasing number of siltstones and mudstones towards the basal contact. Large scale trough and tabular cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.
- MALLOCH SEQUENCE**
- Km** Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering nodular siltstones. Many conglomerate beds display large scale cross bedding and tend to be laterally discontinuous. Thick clean sandstone beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.
- KLAPPAN SEQUENCE (main coal-bearing unit)**
- JKk** Fine to coarse grained sandstones interbedded with mudstones, siltstones, occasional thin bands of orange weathering calcareous siltstones, conglomerates and abundant coal seams. Conglomerate beds grade laterally into sandstone. Sandstones often display tabular or trough cross bedding. Rhythmites occur in the middle of the sequence. Twenty-three species of pelecypods and twenty-two species of plants occur throughout. Petrified wood and rare coquina may be present towards the upper contact.
- SPATSIZI SEQUENCE**
- Js** Predominantly a marine sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. Nineteen species of bivalves are present. Belemnites are rare. Plant debris may occur near the upper gradational contact.

LEGEND

---	LICENCE BOUNDARY
---	GEOLOGICAL CONTACT (APPROXIMATE, INFERRED)
---	COAL SEAM (DEFINED, INFERRED)
---	ANTICLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
---	SYNCLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
---	OVERTURNED ANTICLINE (DEFINED, APPROXIMATE)
---	OVERTURNED SYNCLINE (DEFINED, APPROXIMATE)
---	MONOCLINE (DEFINED, APPROXIMATE)
---	BEDDING (HORIZONTAL, INCLINED, OVERTURNED, VERTICAL, UPRIGHT, ESTIMATED)
---	FOLIATIONS (INCLINED, VERTICAL, HORIZONTAL)
---	JOINTS (INCLINED, VERTICAL, HORIZONTAL)
---	THRUST FAULT (DEFINED, APPROXIMATE) TEETH INDICATE UPTHROW SIDE
---	FAULT (DEFINED, APPROXIMATE) UPTHROWN, DOWNTHROWN SIDE
---	FAULT (DEFINED, APPROXIMATE) SHOWING RELATIVE MOVEMENT
---	ADIT TRENCH COAL SPOIL
---	DIAMOND, ROTARY, WINKIE DRILL HOLE (VERTICAL, INCLINED WITH SURFACE PROJECTION)
---	MEASURED SECTION
---	SURVEY CAIRN
---	CROSS SECTION LINE

707

GULF CANADA RESOURCES INC.	
Calgary	Alberta
MT. KLAPPAN COAL PROPERTY	
1985	
GEOLOGY MAP	
LOST - FOX AREA	
MAP I-10	
PREPARED BY: E.S.	SCALE 1:5000
APPROVED BY: E.S.	DATE: JAN, 1986 DWG. NO. KPN85L-F-65



LEGEND

BUILDING	[Symbol]
ROAD, HARD SURFACE	[Symbol]
LOOSE SURFACE	[Symbol]
CART TRACK	[Symbol]
TRAIL	[Symbol]
RAILROAD BED	[Symbol]
RIVER	[Symbol]
STREAM, DEFINITE	[Symbol]
APPROXIMATE	[Symbol]
SPLIT	[Symbol]
LAKE	[Symbol]
WATER LEVEL	[Symbol]
SWAMP	[Symbol]
BEAVER DAM	[Symbol]
FREE LINE	[Symbol]
CUT LINE	[Symbol]
CONTOURS, INDEX	[Symbol]
INTERMEDIATE	[Symbol]
DEPRESSION	[Symbol]
APPROXIMATE	[Symbol]
SPOT ELEVATION	[Symbol]
FORM LINES	[Symbol]
CUT/FILL	[Symbol]
FIELD CONTROL POINT	[Symbol]
COAL LICENCE	[Symbol]

NOTES

MAPPING PRODUCED FROM PHOTOGRAPHIC ENLARGEMENTS OF 1:10,000 NEGATIVES

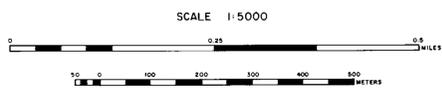
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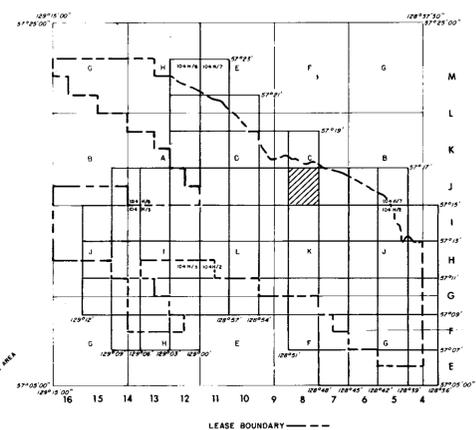
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MT. KLAPPAN AREA
INDEX MAP



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LEGEND

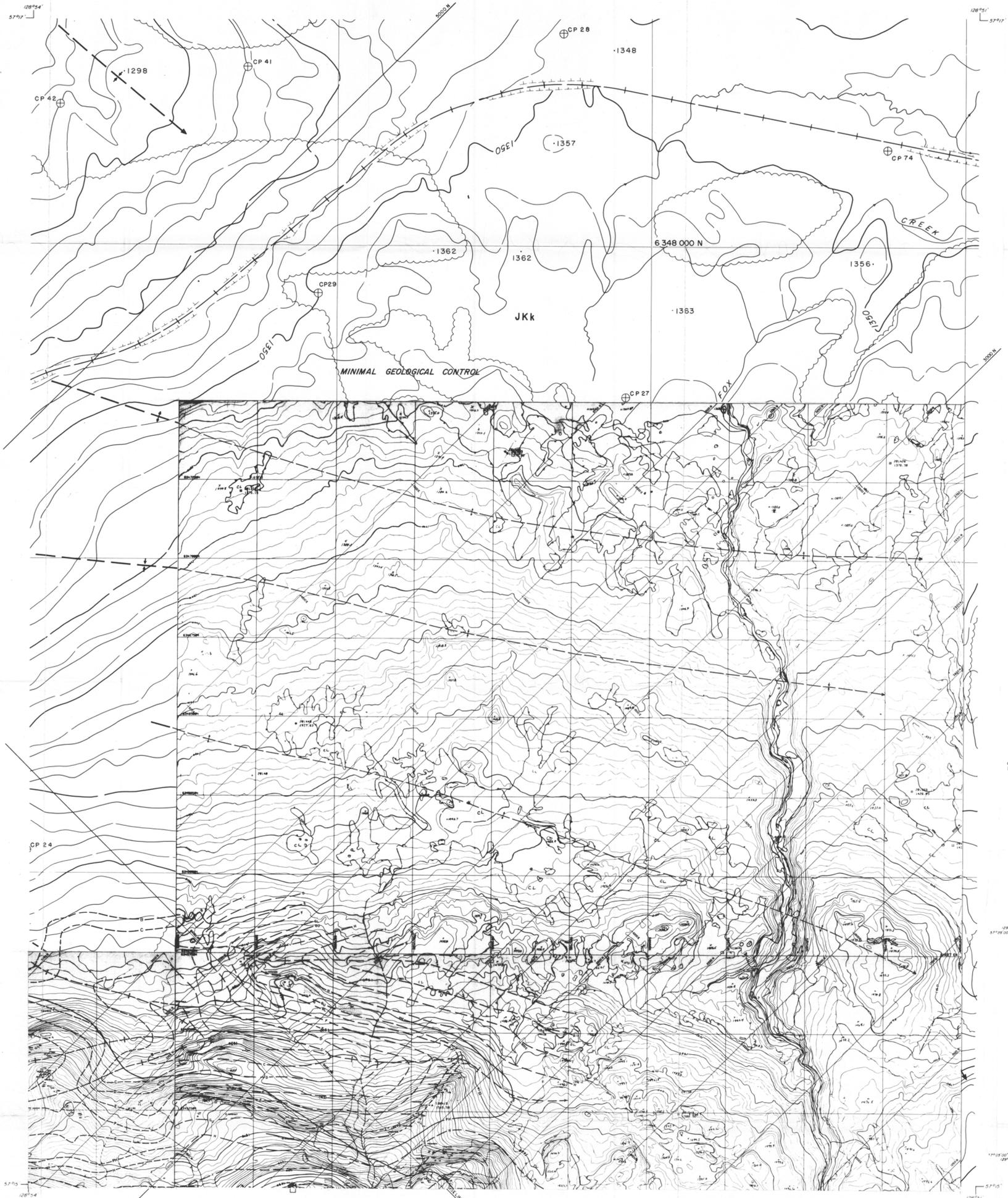
[Symbol]	LICENCE BOUNDARY
[Symbol]	GEOLOGICAL CONTACT (APPROXIMATE, INFERRED)
[Symbol]	COAL SEAM (DEFINED, INFERRED)
[Symbol]	ANTICLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
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[Symbol]	FAULT (DEFINED, APPROXIMATE) SHOWING RELATIVE MOVEMENT
[Symbol]	ADIT TRENCH COAL SPOIL
[Symbol]	DIAMOND, ROTARY, WINKIE DRILL HOLE (VERTICAL, INCLINED WITH SURFACE PROJECTION)
[Symbol]	MEASURED SECTION
[Symbol]	SURVEY CAIRN
[Symbol]	CROSS SECTION LINE

GULF CANADA RESOURCES INC.
Calgary Coal Division Alberta

MT. KLAPPAN COAL PROPERTY
1985
GEOLOGY MAP
LOST-FOX AREA
MAP J-8

PREPARED BY: J.T. SCALE 1:5000
APPROVED BY: E.S. DATE: JAN. 1985 DWG. No. KPN85LF-68

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LEGEND

BUILDING	---
ROAD, HARD SURFACE	---
LOOSE SURFACE	---
CART TRACK	---
TRAIL	---
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RIVER	---
STREAM, DEFINITE	---
APPROXIMATE	---
SPLIT	---
LAKE	---
WATER LEVEL	---
SWAMP	---
BEAVER DAM	---
TREE LINE	---
CUT LINE	---
CONTOURS, INDEX	---
INTERMEDIATE	---
DEPRESSION	---
APPROXIMATE	---
SPOT ELEVATION	---
FORM LINES	---
CUT/FILL	---
FIELD CONTROL POINT	---
COAL LICENCE	---

NOTES

MAPPING PRODUCED FROM PHOTOGRAPHIC ENLARGEMENTS OF 1:10,000 NEGATIVES

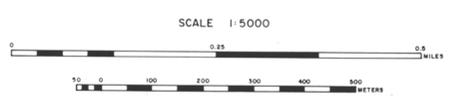
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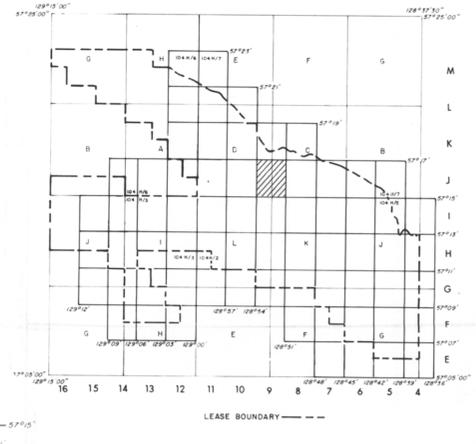
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MT. KLAPPAN AREA
INDEX MAP



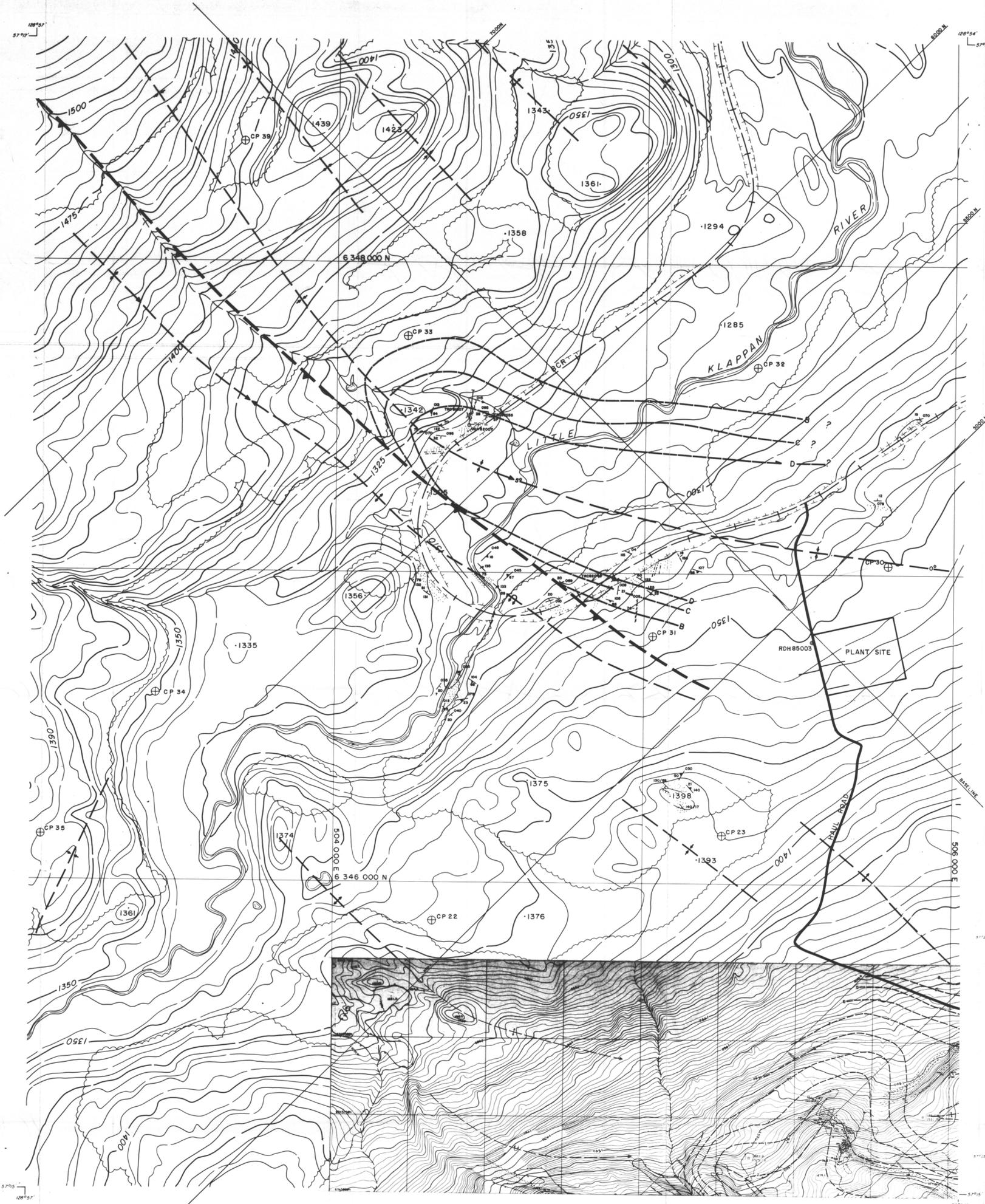
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---	COAL SEAM (DEFINED, INFERRED)
←	ANTICLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
→	SYNCLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
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⊕	MEASURED SECTION
⊕	SURVEY CAIRN
---	CROSS SECTION LINE

707

GULF CANADA RESOURCES INC.	
CALGARY	ALBERTA
MT. KLAPPAN COAL PROPERTY	
1985	
GEOLOGY MAP	
LOST-FOX AREA	
MAP J-9	
PREPARED BY: E.S.	SCALE 1:5000
APPROVED BY: E.S.	DATE: JAN. 1986, DWS. No. KPN85/F-67



LEGEND

BUILDING	---
ROAD, HARD SURFACE	---
LOOSE SURFACE	---
CART TRACK	---
TRAIL	---
RAILROAD BED	---
RIVER	---
STREAM, DEFINITE	---
APPROXIMATE	---
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LAKE	---
WATER LEVEL	---
SWAMP	---
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INTERMEDIATE	---
DEPRESSION	---
APPROXIMATE	---
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FORM LINES	---
CUT/FILL	---
FIELD CONTROL POINT	---
COAL LICENCE	---

NOTES

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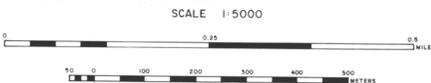
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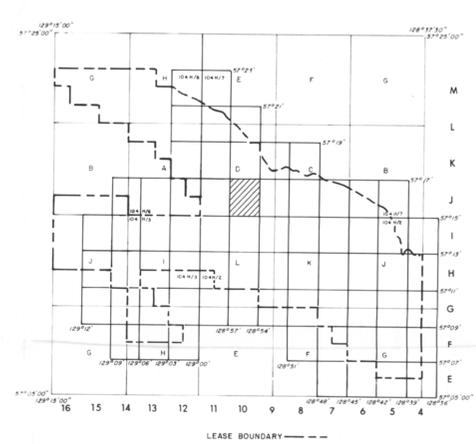
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FROM FEDERAL GOVERNMENT AERIAL PHOTOGRAPHY FLOWN IN AUGUST/67
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MT. KLAPPAN AREA
INDEX MAP



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LEGEND

---	LICENCE BOUNDARY
---	GEOLOGICAL CONTACT (APPROXIMATE, INFERRED)
---	COAL SEAM (DEFINED, INFERRED)
---	ANTICLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
---	SYNCLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
---	OVERTURNED ANTICLINE (DEFINED, APPROXIMATE)
---	OVERTURNED SYNCLINE (DEFINED, APPROXIMATE)
---	MONOCLINE (DEFINED, APPROXIMATE)
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---	SURVEY CAIRN
---	CROSS SECTION LINE

707

GULF CANADA RESOURCES INC.

CALGARY Coal Division ALBERTA

MT. KLAPPAN COAL PROPERTY

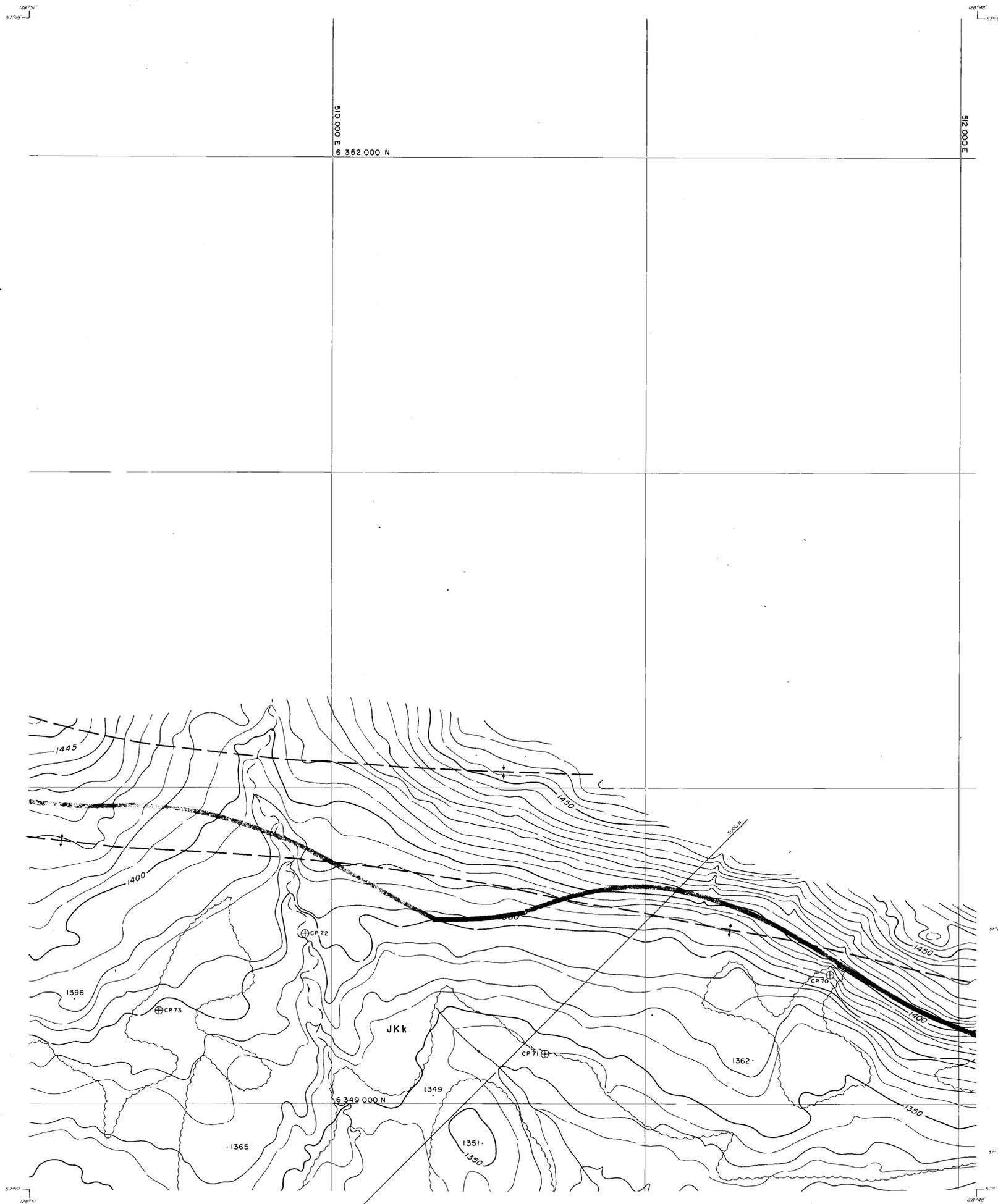
1985

GEOLOGY MAP

SUMMIT AREA

MAP J-10

PREPARED BY: E.S. SCALE 1:5000
APPROVED BY: E.S. DATE: JAN. 1986 DWS. NO. KPN85LF-68



LEGEND

BUILDING	---
ROAD, HARD SURFACE	---
LOOSE SURFACE	---
CART TRACK	---
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RIVER	---
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STREAM, APPROXIMATE	---
SPILT	---
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FORM LINE	---
CUT/FILL	---
FIELD CONTROL POINT	---
CORRELIGENCE	---

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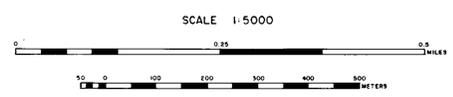
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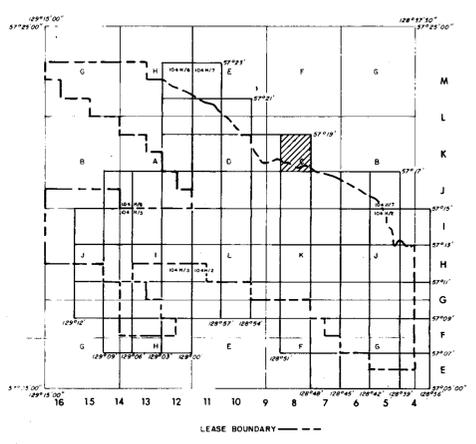
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MT. KLAPPAN AREA
INDEX MAP



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---	COAL SEAM (DEFINED, INFERRED)
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---	SYNCLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
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---	MONOCLINE (DEFINED, APPROXIMATE)
---	BEDDING (HORIZONTAL, INCLINED, OVERTURNED, VERTICAL, UPRIGHT, ESTIMATED)
---	FOLIATIONS (INCLINED, VERTICAL, HORIZONTAL)
---	JOINTS (INCLINED, VERTICAL, HORIZONTAL)
---	THRUST FAULT (DEFINED, APPROXIMATE) TEETH INDICATE UP THRUST SIDE
---	FAULT (DEFINED, APPROXIMATE) UPTHROWN, DOWNTHROWN SIDE
---	FAULT (DEFINED, APPROXIMATE) SHOWING RELATIVE MOVEMENT
---	ADIT TRENCH COAL SPOIL
---	DIAMOND, ROTARY, WINKIE DRILL HOLE (VERTICAL, INCLINED WITH SURFACE PROJECTION)
---	MEASURED SECTION
---	SURVEY CAIRN
---	CROSS SECTION LINE

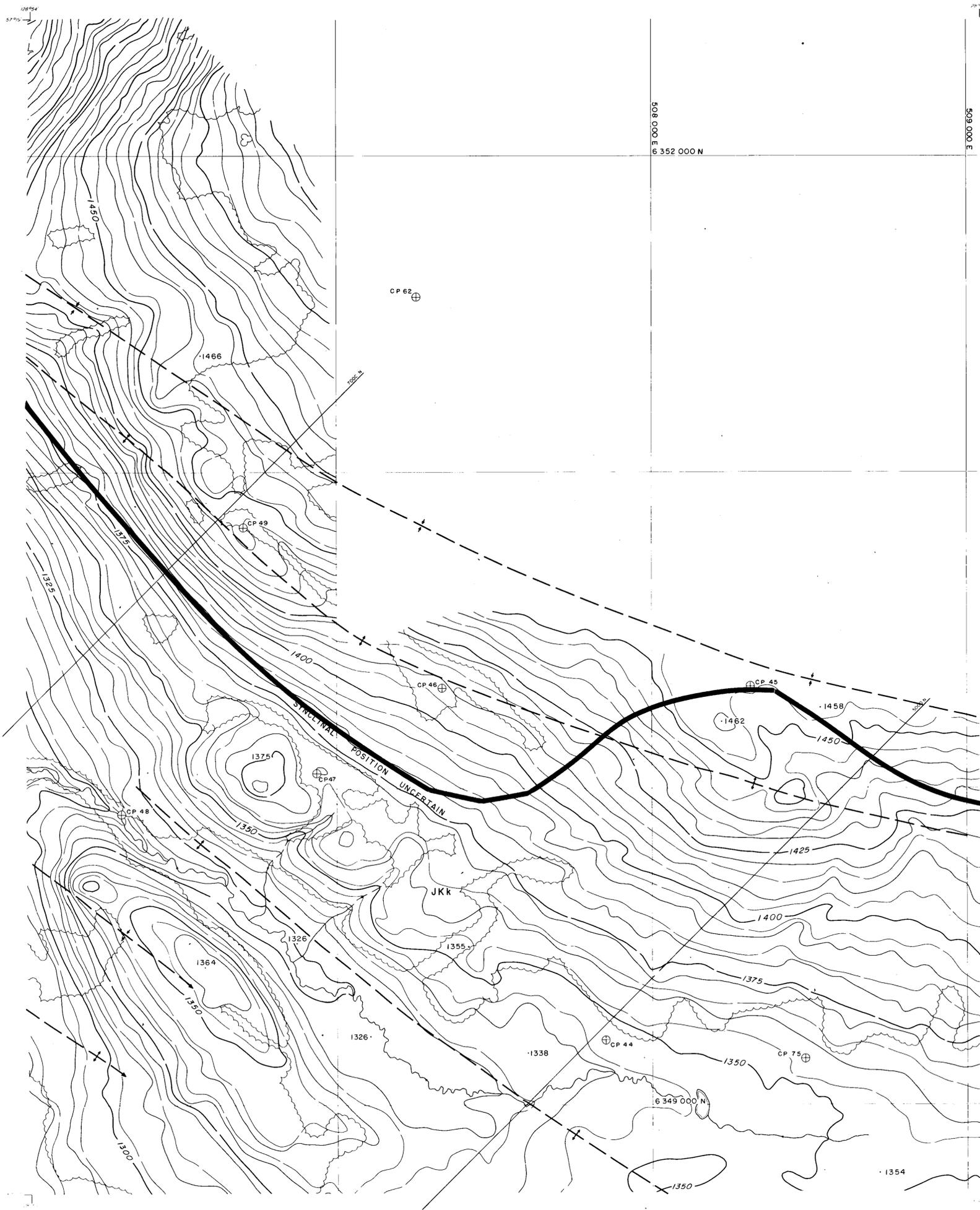
707

GULF CANADA RESOURCES INC.
Coal Division

CALGARY ALBERTA

MT. KLAPPAN COAL PROPERTY
1985
GEOLOGY MAP
LOST-FOX AREA
MAP K-8

PREPARED BY: J.T. SCALE 1:5000
APPROVED BY: E.S. DATE: JAN. 1985 DWG. NO. KPN85LF-69



LEGEND

BUILDING	---
ROAD, HARD SURFACE	---
LOOSE SURFACE	---
CART TRACK	---
TRAIL	---
RAILROAD BED	---
RIVER	---
STREAM, DEFINITE	---
APPROXIMATE	---
SPLIT	---
LAKE	---
WATER LEVEL	---
SWAMP	---
BEAVER DAM	---
TREE LINE	---
COE LINE	---
CONTOURS, INDEX	---
INTERMEDIATE	---
DEPRESSION	---
APPROXIMATE	---
SPOT ELEVATION	---
FORM LINES	---
CUTFFILL	---
FILE CONTROL POINT	---
...	---

NOTES

MAPPING PRODUCED FROM PHOTOGRAPHIC ENLARGEMENTS OF 1:40,000 NEGATIVES

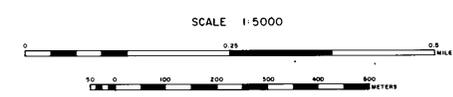
CONTOUR INTERVAL: 10 M., WITH FORM LINES INTERVAL: 5 M.

ACCURACY OF 5 M. FORM LINES IS EQUAL TO THE ACCURACY OF THE 10 M. CONTOURS. 15.0 METERS FOR GROUND NOT OCCURRED BY TREES OR VEGETATION

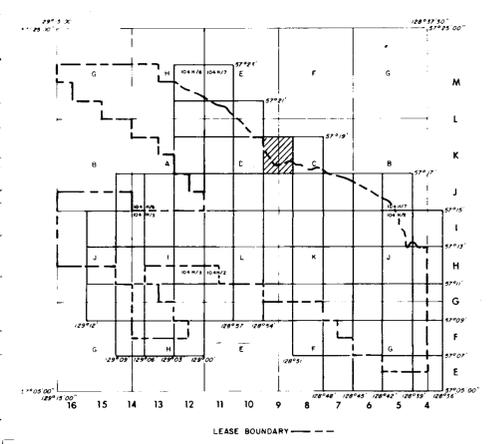
SURVEY CONTROL TAKEN FROM EXISTING PHOTO SURVEY BY GOVERNMENT SURVEY MONUMENTS AND N.T.S. MAPPING IS BASED ON UNIVERSAL TRANSVERSE MERCATOR GRID AND GEODETIC DATUM

RAILROAD BED LOCATED ON SEPT/82 AERIAL PHOTOGRAPHY

COMPILED BY WESTERN PHOTOGRAMMETRY, A DIVISION OF UNIVOOD McLELLAN LTD. FROM FEDERAL GOVERNMENT AERIAL PHOTOGRAPHY TAKEN IN AUGUST/76 AT A SCALE OF 1:40,000 (APPROXIMATE)



MT. KLAPPAN AREA
INDEX MAP



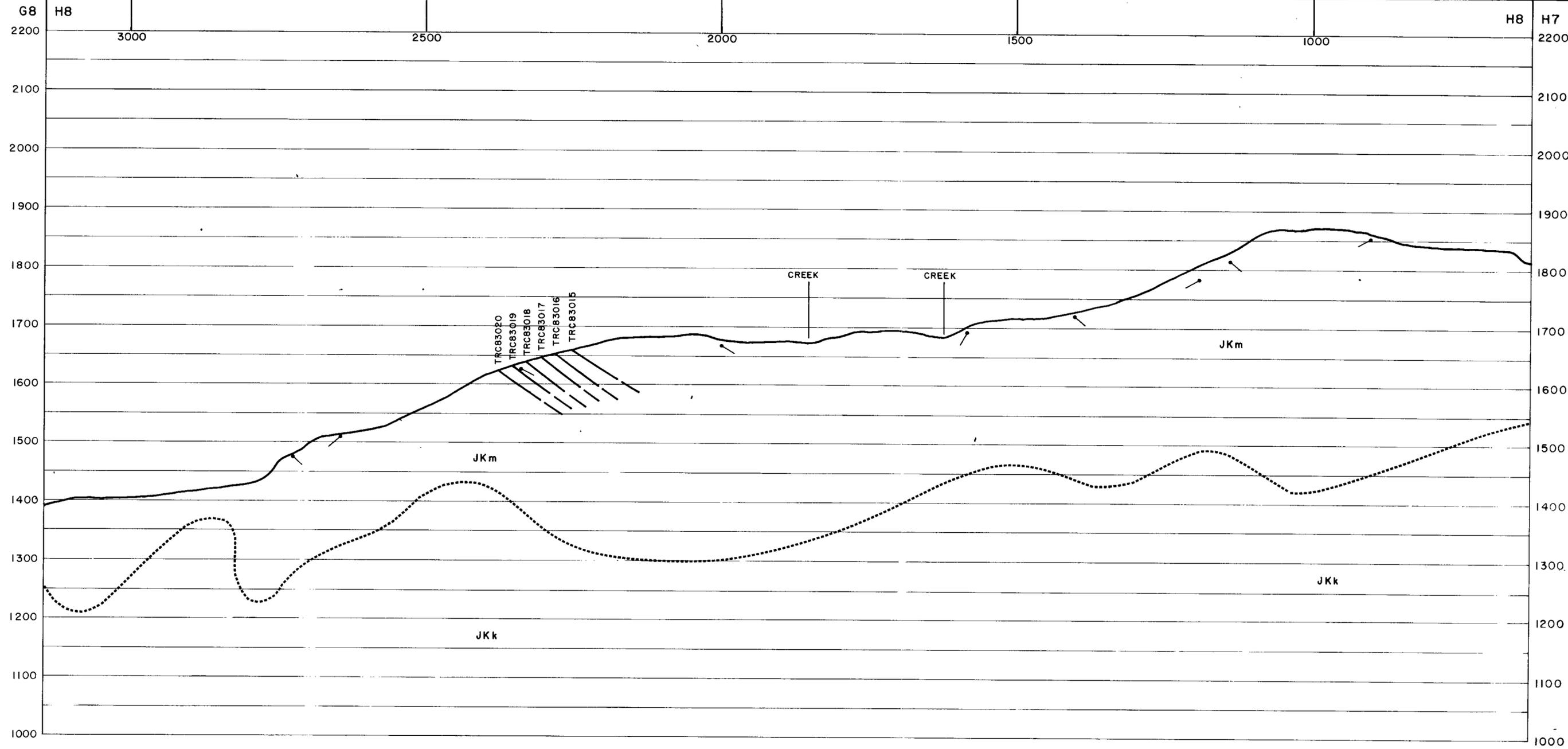
- RHONDDA SEQUENCE**
- Kr** Sequence of thick chert pebble conglomerates and minor gritty sandstones interbedded with an increasing number of siltstones and mudstones towards the basal contact. Large scale trough and tabular cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.
- MALLOCH SEQUENCE**
- Km** Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering nodular siltstones. Many conglomerate beds display large scale cross bedding and tend to be laterally discontinuous. Thick clean sandstone beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.
- KLAPPAN SEQUENCE (main coal-bearing unit)**
- JKk** Fine to coarse grained sandstones interbedded with mudstones, siltstones, occasional thin bands of orange weathering calcareous siltstones, conglomerates and abundant coal seams. Conglomerate beds grade laterally into sandstone. Sandstones often display tabular or trough cross bedding. Rhythmites occur in the middle of the sequence. Twenty-three species of pelecypods and twenty-two species of plants occur throughout. Petrified wood and rare coquina may be present towards the upper contact.
- SPATSZI SEQUENCE**
- Js** Predominantly a marine sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. Nineteen species of bivalves are present. Belemnites are rare. Plant debris may occur near the upper gradational contact.

LEGEND

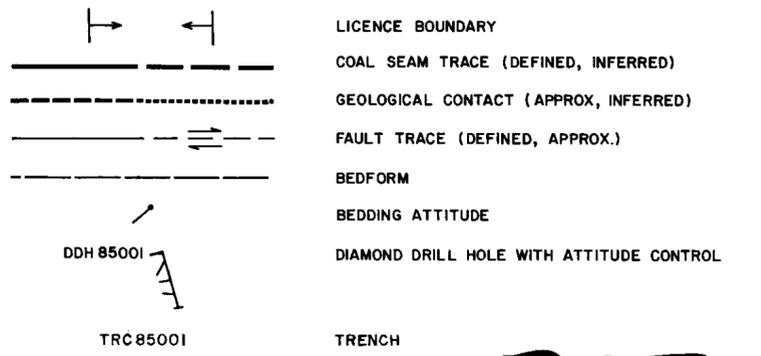
---	LICENCE BOUNDARY
---	GEOLOGICAL CONTACT (APPROXIMATE, INFERRED)
---	COAL SEAM (DEFINED, INFERRED)
---	ANTICLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
---	SYNCLINE (DEFINED, APPROXIMATE) ARROW INDICATES PLUNGE DIRECTION
---	OVERTURNED ANTICLINE (DEFINED, APPROXIMATE)
---	OVERTURNED SYNCLINE (DEFINED, APPROXIMATE)
---	MONOCLINE (DEFINED, APPROXIMATE)
---	BEDDING (HORIZONTAL, INCLINED, OVERTURNED, VERTICAL, UPRIGHT, ESTIMATED)
---	FOLIATIONS (INCLINED, VERTICAL, HORIZONTAL)
---	JOINTS (INCLINED, VERTICAL, HORIZONTAL)
---	THRUST FAULT (DEFINED, APPROXIMATE) TEETH INDICATE UP THRUST SIDE
---	FAULT (DEFINED, APPROXIMATE) UPTHROWN, DOWNTOWN SIDE
---	FAULT (DEFINED, APPROXIMATE) SHOWING RELATIVE MOVEMENT
---	ADIT TRENCH COAL SPOIL
---	DIAMOND, ROTARY, WINKIE DRILL HOLE (VERTICAL, INCLINED WITH SURFACE PROJECTION)
---	MEASURED SECTION
---	SURVEY CAIRN
---	CROSS SECTION LINE

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GULF CANADA RESOURCES INC.	
CALGARY	ALBERTA
MT. KLAPPAN COAL PROPERTY	
1985	
GEOLOGY MAP	
LOST-FOX AREA	
MAP K-9	
PREPARED BY: J.T.	SCALE 1:5000
APPROVED BY: E.S.	DATE: JAN. 1986 DWS No. KPN85LF-70



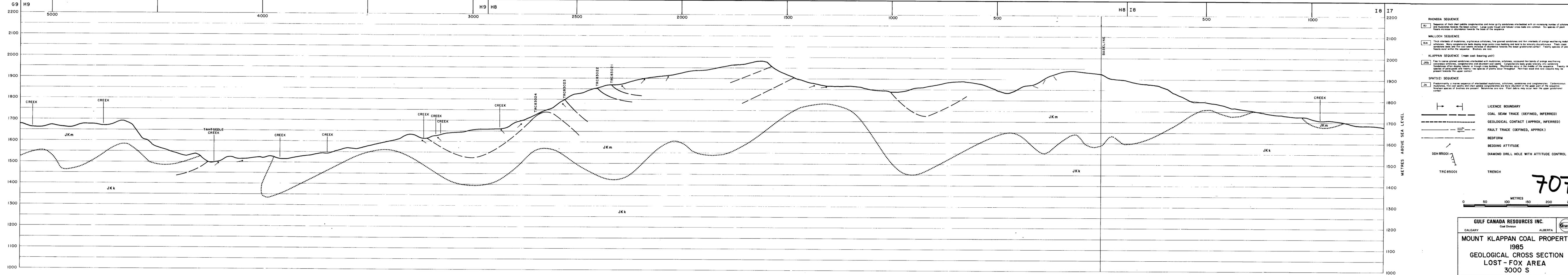
- RHONDA SEQUENCE**
- Kr** Sequence of thick chert pebble conglomerates and minor gritty sandstones interbedded with an increasing number of siltstones and mudstones towards the basal contact. Large scale trough and tabular cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.
- MALLOCH SEQUENCE**
- Km** Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering nodular siltstones. Many conglomerate beds display large scale cross bedding and tend to be laterally discontinuous. Thick clean sandstone beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.
- KLAPPAN SEQUENCE (main coal-bearing unit)**
- Jkk** Fine to coarse grained sandstones interbedded with mudstones, siltstones, occasional thin bands of orange weathering calcareous siltstones, conglomerates and abundant coal seams. Conglomerate beds grade laterally into sandstone. Sandstones often display tabular or trough cross bedding. Rhythmites occur in the middle of the sequence. Twenty-three species of pelecypods and twenty-two species of plants occur throughout. Petrified wood and rare caudex may be present towards the upper contact.
- Js** Predominantly a marine sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. Nineteen species of bivalves are present. Belemnites are rare. Plant debris may occur near the upper gradational contact.



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GULF CANADA RESOURCES INC.		
Coal Division		
CALGARY	ALBERTA	
MOUNT KLAPPAN COAL PROPERTY		
1985		
GEOLOGICAL CROSS SECTION		
LOST-FOX AREA		
5000 S		
PREPARED BY: J.T., L.S.	SCALE 1:5000	
APPROVED BY: E.S.	DATE: JAN. 1986	DWG. No. KPN85LF-81



- RHONDA SEQUENCE**
Kr Sequence of thick chert pebble conglomerates and minor gritty sandstones interbedded with an increasing number of siltstones and mudstones towards the base contact. Large scale trough and tabular cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.
- MALLOCH SEQUENCE**
Km Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering nodular siltstones. Many conglomerate beds display large scale cross bedding and tend to be laterally discontinuous. Thick chert sandstone beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.
- KLAPPAN SEQUENCE (main coal-bearing unit)**
JKk Fine to coarse grained sandstones interbedded with mudstones, siltstones, occasional thin bands of orange weathering calcareous siltstones, conglomerates and abundant coal seams. Conglomerate beds grade laterally into sandstone. Sandstones often display tabular or trough cross bedding. Rhythmites occur in the middle of the sequence. Twenty three species of pelecypods and twenty-two species of plants occur throughout. Petrified wood and rare corals may be present towards the upper contact.
- SPATSZI SEQUENCE**
Jk Predominantly a marine sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. Nineteen species of bivalves are present. Belemnites are rare. Plant debris may occur near the upper gradational contact.

- LICENCE BOUNDARY**
 LICENCE BOUNDARY
- COAL SEAM TRACE (DEFINED, INFERRED)**
 COAL SEAM TRACE (DEFINED, INFERRED)
- GEOLOGICAL CONTACT (APPROX, INFERRED)**
 GEOLOGICAL CONTACT (APPROX, INFERRED)
- FAULT TRACE (DEFINED, APPROX.)**
 FAULT TRACE (DEFINED, APPROX.)
- BEDFORM**
 BEDFORM
- BEDDING ATTITUDE**
 BEDDING ATTITUDE
- DIAMOND DRILL HOLE WITH ATTITUDE CONTROL**
 DDH 85001
- TRENCH**
 TRC 85001

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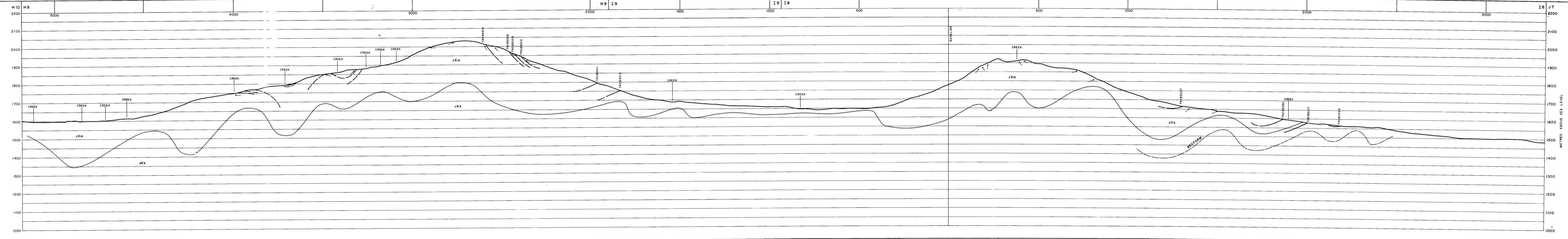


GULF CANADA RESOURCES INC.
 Coal Division



CALGARY ALBERTA
MOUNT KLAPPAN COAL PROPERTY
 1985
GEOLOGICAL CROSS SECTION
LOST-FOX AREA
3000 S

PREPARED BY: J.T., L.S. SCALE 1:5000
 APPROVED BY: E.S. DATE: JAN. 1986 DWG. No. KP85LF-82



RHONDA SEQUENCE
 [Kz] Sequence of thick chert pebble conglomerates and minor gritty sandstones interbedded with an increasing number of siltstones and mudstones towards the basal contact. Large scale trough and tubular cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.

MALLOCH SEQUENCE
 [Km] Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering nodular siltstones. Many conglomerate beds display large scale cross bedding and tend to be laterally discontinuous. Thick clean siltstone beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.

KLAPPAN SEQUENCE (main coal-bearing unit)
 [JKk] 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 of fine to medium grain, trough cross bedding. Rhythmites occur in the middle of the sequence. Twenty three species of palaeopods and twenty two species of plants occur throughout. Petrified wood and rare coquina may be present towards the upper contact.

SPATSIZI SEQUENCE
 [Js] Predominantly a fine sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. No recent species of bivalves are present. Bivalves are rare. Plant debris may occur near the upper gradational contact.

LEGEND:
 ← → LICENCE BOUNDARY
 ——— COAL SEAM TRACE (DEFINED, INFERRED)
 - - - - - GEOLOGICAL CONTACT (APPROX, INFERRED)
 - - - - - FAULT TRACE (DEFINED, APPROX.)
 - - - - - BEDFORM
 - - - - - BEDDING ATTITUDE
 / \ DIAMOND DRILL HOLE WITH ATTITUDE CONTROL
 / \ TRENCH

DDH 85001
 TRC 85001

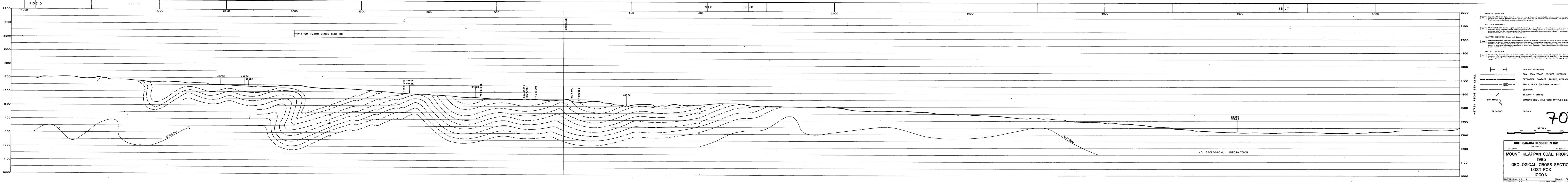
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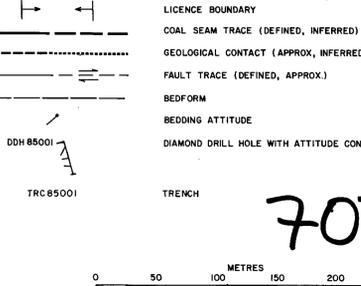
GULF CANADA RESOURCES INC.
 Coal Division
 CALGARY ALBERTA

MOUNT KLAPPAN COAL PROPERTY
 1985
GEOLOGICAL CROSS SECTION
LOST - FOX AREA
 1000 S

PREPARED BY: J.T., L.S. SCALE: 1:5000
 APPROVED BY: E.S. DATE: JAN. 1986 DWG. No. KPN85LF-83



- RHONEDA SEQUENCE**
 [K] Sequence of thick chert pebble conglomerates and minor gritty sandstones interbedded with an increasing number of siltstones and mudstones towards the basal contact. Large scale trough and shallow cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.
- MALLOCH SEQUENCE**
 [KM] Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering nodular siltstones. Many conglomerate beds display large scale cross bedding and may be vertically discontinuous. Thick sandstone beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.
- KLAPPAN SEQUENCE** (main coal-bearing unit)
 [JKL] 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 sandstone. Sandstones often display tabular to trough cross bedding. They thin out in the middle of the sequence. Species of pelecypods and twenty two species of plants occur throughout. Petrified wood and rare corals may be present towards the upper contact.
- SPATSIZI SEQUENCE**
 [JL] Predominantly a more sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. Numerous species of bivalves are present. Bivalves are rare. Plant debris may occur near the upper gradational contact.

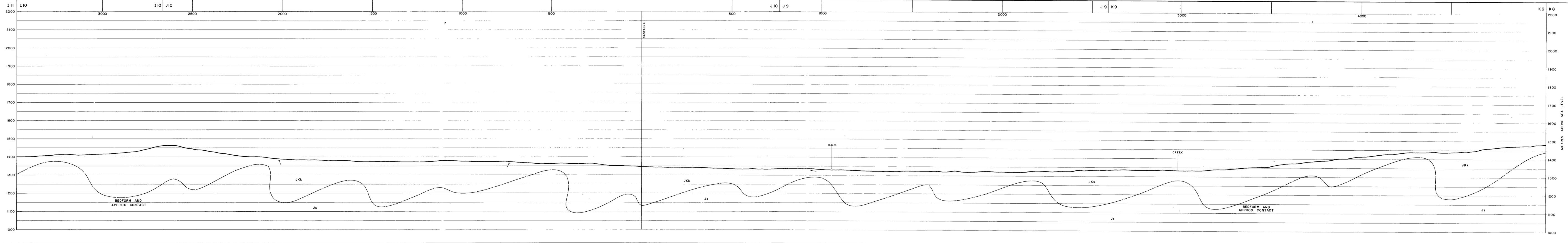


GULF CANADA RESOURCES INC.
 Coal Division

MOUNT KLAPPAN COAL PROPERTY
 1985
GEOLOGICAL CROSS SECTION
 LOST FOX
 1000 N

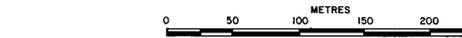
PREPARED BY: J. T. L. S. SCALE 1:5000
 APPROVED BY: E. S. DATE: JAN. 1986 DWS. No. KPN85LF-B1

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- RHONDA SEQUENCE**
 Kr Sequence of thick chert pebble conglomerates and minor gray sandstones interbedded with an increasing number of siltstones and mudstones towards the basal contact. Large scale ripple and tabular cross beds are common. Six species of plant fossils increase in abundance towards the base of the sequence.
- MALLOCH SEQUENCE**
 Km Thick interbeds of mudstones, argillaceous siltstones, fine grained sandstones and thin interbeds of orange weathering pebbly siltstones. Many conglomerate beds display large scale cross bedding and tend to be laterally discontinuous. Thin carbonaceous beds and thin coal seams increase in abundance towards the basal gradational contact. Twenty species of plant fossils exist within the sequence. Bivalves are rare.
- KLAPPAN SEQUENCE (main coal-bearing unit)**
 Jkk 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. Sometimes they display tabular or trough cross bedding. Rhynchonellid occur in the middle of the sequence. Twenty three species of pelecypods and twenty two species of plants occur throughout. Petrified wood and rare corals may be present towards the upper contact.
- SPATZLI SEQUENCE**
 Js Predominantly a massive sequence of interbedded mudstones, siltstones, sandstones and conglomerates. Carbonaceous mudstones, thin coal seams and chert pebble conglomerates are more abundant in the upper part of the sequence. Nineteen species of bivalves are present. Bivalves are rare. Plant debris may occur near the upper gradational contact.

- LICENCE BOUNDARY
 COAL SEAM TRACE (DEFINED, INFERRED)
 GEOLOGICAL CONTACT (APPROX, INFERRED)
 FAULT TRACE (DEFINED, APPROX.)
 BEDFORM
 BEDDING ATTITUDE
 DIAMOND DRILL HOLE WITH ATTITUDE CONTROL
 TRENCH



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GULF CANADA RESOURCES INC.		
CALGARY	ALBERTA	
MOUNT KLAPPAN COAL PROPERTY		
1985		
GEOLOGICAL CROSS SECTION		
LOST-FOX AREA		
5000 N		
PREPARED BY: J.T., L.S.	SCALE: 1:5000	
APPROVED BY: E.S.	DATE: JAN. 1986	DWG. NO. KP85LF-86