

HIGH VOLATILE COAL  
EXPLORATION PROGRAM



P.O. Box 2000  
Sparwood, British Columbia  
Canada V0B 2G0

CONFIDENTIAL

Kootenay Land District  
N.T.S. Sheet 82J  
Centering Approx. - 5 556 000N, 651 200E (UTM)  
Lands Held and Operated by Westar Mining Ltd.  
Submitted for Work Completed  
Under the Terms of FAME grant #10963M-20

February 20, 1987

00730

*L.B. Samuelson*  
L. B. Samuelson, P. Eng.

*Chief Geologist  
Greenhills operations*

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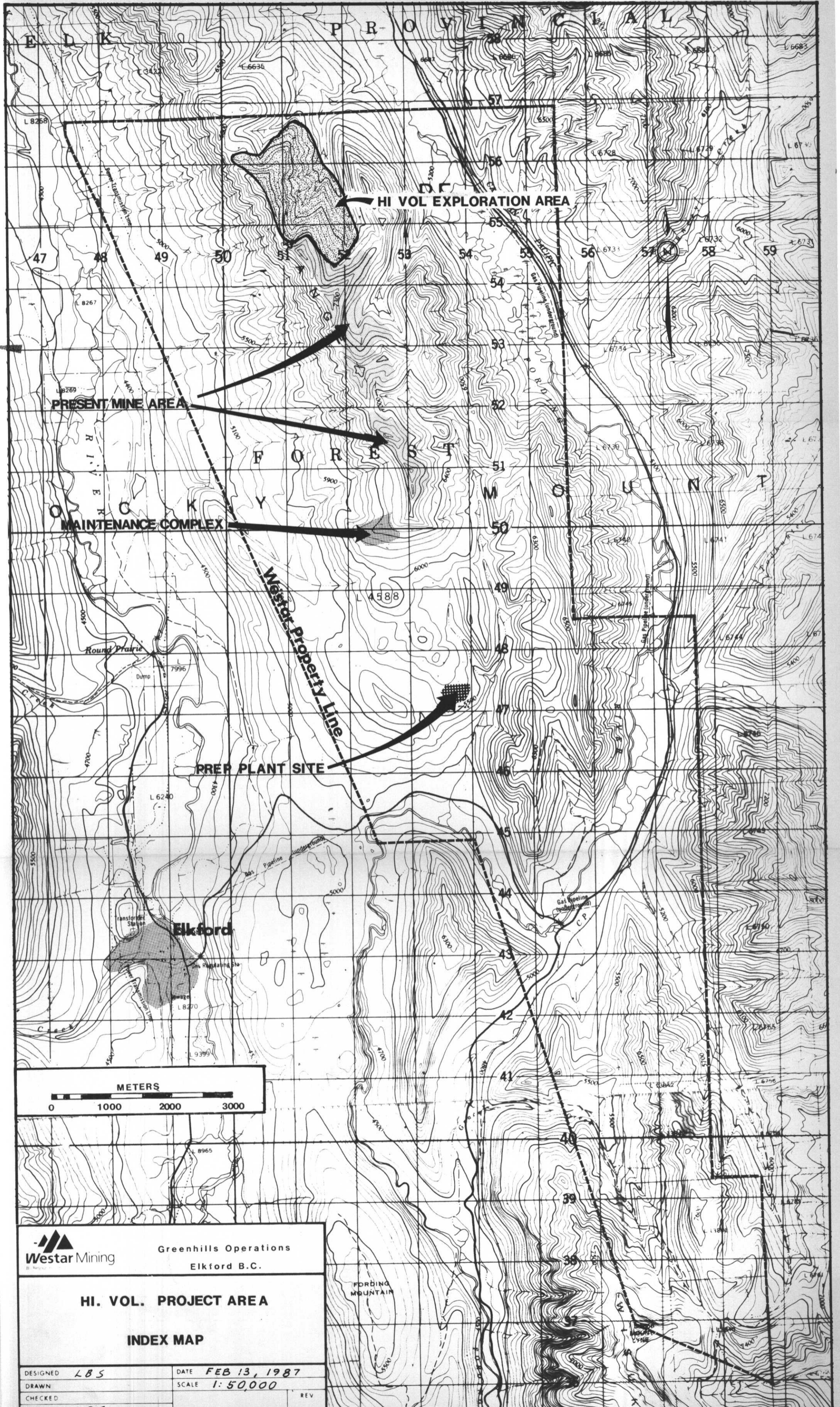
## SUMMARY


In July of 1986 a grant under the "Financial Assistance for Mineral Exploration" program was awarded to Westar Mining Ltd. The grant was used in an exploration program that was designed to establish proven reserves of high volatile met coal in the north end of Westar's Greenhills property. At the present time high volatile coal appears to be more marketable than our present products. During the program 9,400 metres of reverse circulation drilling was completed along with associated field and laboratory work.

Four main seams were encountered along with a myriad of minor seams which are generally lenticular and discontinuous in character. Quality of the seams encountered was generally as expected, i.e. high volatile, low difficulty coals that clean to a low ash.

Drilling density was sufficient to change about 70% of the coals in the area from the partially explored classification to the proven reserve category. A study on the feasibility and cost of mining this area is now underway. In total 74 million tonnes of high vol and borderline high vol coals were delineated, of which 52 million tonnes can be considered proven. Further development drilling is being planned for this area in the early summer of 1987.





		Greenhills Operations Elkford B.C.	
<b>HI. VOL. PROJECT AREA</b>			
<b>INDEX MAP</b>			
DESIGNED	LBS	DATE	FEB 13, 1987
DRAWN		SCALE	1:50,000
CHECKED		REV	
APPROVED	L.B.S.		



## **1.0 INTRODUCTION**

### **1.1 Location**

The project area is located north of the existing Greenhills Mining Operation and just south of the Fording Coal Operations. The area is approximately 13 kilometres north and 2.5 kilometres east of the town of Elkford and 51 kilometres north of Sparwood, B.C. (Figure 1).

### **1.2 Access**

A paved highway connects Elkford to the Fording Coal surface mine. Access to the project area is from this road via a secondary logging road through the south end of Fording Coal property. Access may also be gained via exploration roads from the north end of the Greenhills Mine.

### **1.3 Topography, Climate and Vegetation**

The topography of the project area is the same as that of the Greenhills Mine. Cataract Creek, a year-round drainage, flows to the north along the east edge of the project area. Several ephemeral streams flow into Cataract Creek from the Greenhills Ridge to the west. The general relief of the area is approximately 450 metres between Cataract Creek and Greenhills Ridge. The upper one-third of the project area, to the top of the ridge, is covered with conifers. The lower section of the ridge is mainly open due to clearcut logging. The climate is the same as the Greenhills Mine area with cool summers and falls, rainy and wet springs, and cold winters with moderate to high snow falls.

#### **1.4 Land Description and Ownership**

During February of 1968 Westar Mining Ltd., then Kaiser Coal Ltd., acquired the coal rights on 43,725 hectares of coal-bearing lands from Crows Nest Industries Ltd. The High Vol Project area covers approximately 600 hectares and is a part of this acquisition. It lies just to the north of the present Greenhills Operations and forms a natural extension of the present operating pits. The property is located within Lot 1, District 4588, Plan Kootenay District Certificate of Title 117880.

### **2.0 OBJECTIVE OF PRESENT PROGRAM**

#### **2.1 Mine Overview**

Westar's Greenhills Mine presently produces 2,100,000 tonnes of metallurgical coal and 800,000 tonnes of thermal coal per year. The market is extremely competitive and the current excess of supply will continue for several years. Recently coal prices have declined and markets have shrunk. To remain competitive, innovative means of increasing productivity and cost efficiency or developing new markets are continually under investigation.

#### **2.2 Objective**

A strong demand exists in the marketplace for high volatile coals with V.M. values greater than 30 percent. The objective of the program was to investigate the potential for high V.M. coals that existed in the north end of the Greenhills property. This potential was indicated by limited drilling performed in previous years. The target for this program is to identify these reserves, determine the potential for mining and if feasible, commence mining.

### 3.0 EXPLORATION WORK

- 3.1 Pre 1979 work in the project area was minimal. An access road was built in the early 70's and five rotary reverse circulation holes were drilled. In the mid 70's further bulldozer work for access and drillsites was completed and eleven core holes were drilled for structural and quality information.
- 3.2 Between 1980 and 1984, sixteen more rotary reverse circulation holes along with the associated cat work were completed using Greenhills' Schramm Reverse Circulation drill. This work was concentrated on the south and east sides of the present project area.
- 3.3 In 1985 another small program of twelve reverse circulation drillholes was undertaken with encouraging results. To carry out this program a contract drill rig and dozer were used.
- 3.4 During 1986 an extensive program was carried out with the aid of a Financial Assistance for Mineral Exploration (FAME) grant from the Provincial Government of B.C. Approximately 12,000 metres of road were built using a contracted D8K Caterpillar dozer. During the program fifty-six 13 cm diameter C.S.R. (centre sample return) drillholes were completed. Thirty-eight of these, for a total of 6,656 metres, were completed by S.D.S. Drilling on a per metre contract basis. The two contractor rigs utilized during the project were a Cyclone TH70 and a Gardner-Denver 1700. Both rigs were equipped with a top drive, reverse circulation pipe and 600 cfm, 250 psi air compressors. Eighteen holes for 2,751 metres were drilled utilizing our own Schramm T685D reverse circulation drill carrying a 750 cfm/350 psi compressor.

## 4.0 DRILLING, SAMPLING, ETC.

### 4.1 Drilling

The drilling was concentrated in areas of greatest potential for high volatile coal within the project area. Fifty-six holes were drilled for a total of 9,400 metres. The average hole depths were 168 metres and the maximum depth was 314 metres. All the holes drilled started off at 130 mm or 140 mm in diameter and were reduced as required down to a minimum of 120 mm in increments of either 3 or 6 mm. All holes were started vertically and no deviations were run on any of the fifty-six holes in this program. Table 1 lists the coordinates of all the holes drilled in the project area during the 1986 program. Map 481-1 (in pocket) shows the location of all the holes drilled as well as all the previously existing and new roads in the project area.

### 4.2 Sampling and Assaying

Assay work on all drill hole coal intercepts was performed by either Birtley Coal and Mineral Testing in Calgary or Westar's Central Laboratory in Sparwood, B.C. The same procedures were followed by both laboratories. Copies of the procedures are shown in plates 1, 2 and 3.

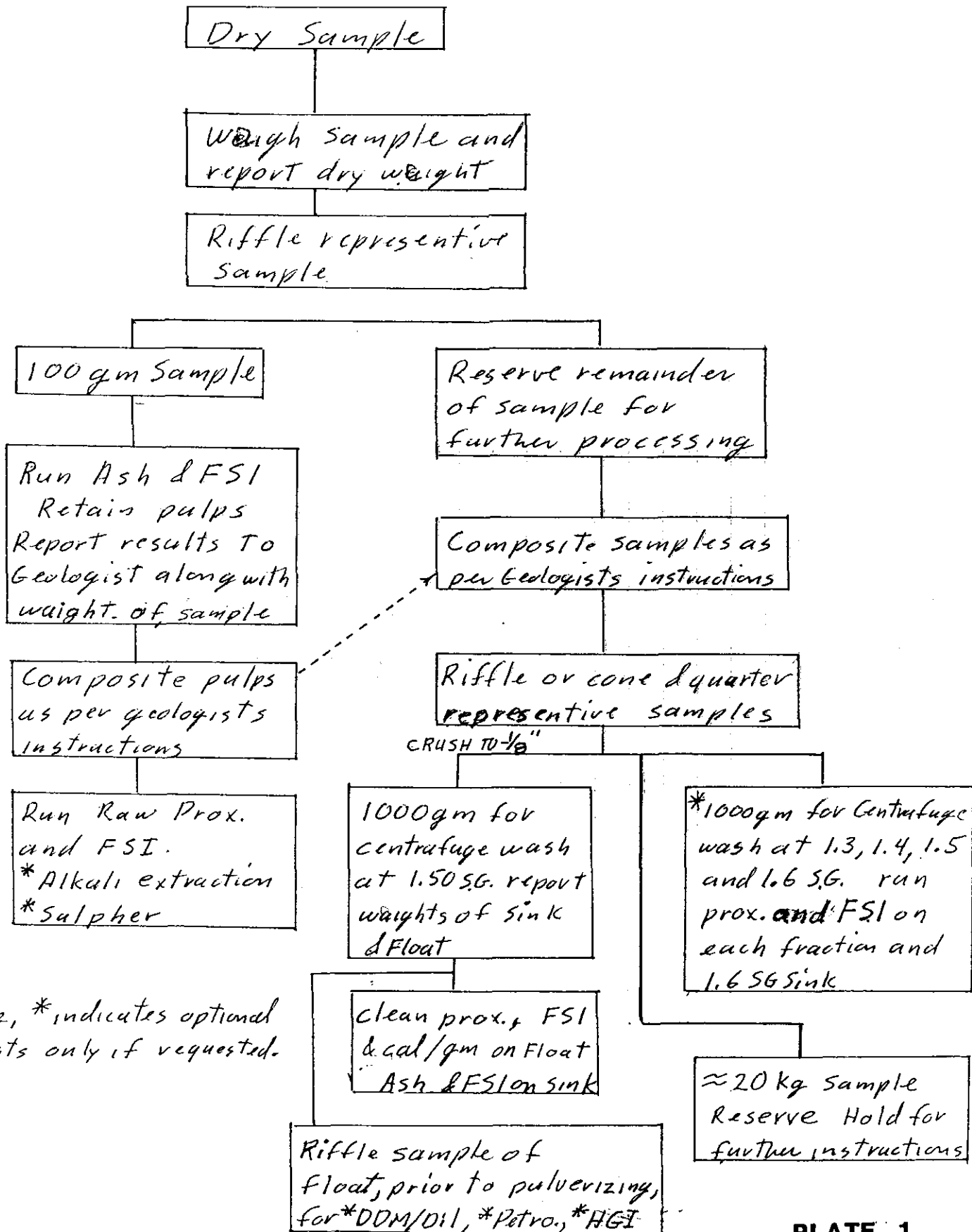
All coal zones were sampled in either two foot or 0.5 metre increments. These increments were then sent to the lab for analysis of ash and F.S.I. Lab results were then returned to the Geology Department and composites were determined based on these results. The incremental samples were combined by the lab to form composites to represent seam intervals. Composites were subjected to the standard tests as outlined in the procedures plus any optional test which was required.

# TABLE 1

Hole #	Lat.	Dep.	Elev.
EV184	5556070. 46'	651642. 31	1751. 72
EV185	5556700. 62.	651477. 76	1759. 45
EV186	5556217. 62'	651586. 10	1761. 46
EV187	5556416. 69.	651519. 04	1769. 82
EV188	5556521. 63	650937. 56	1855. 14
EV189	5556703. 13	651173. 36	1826. 52
EV190	5556534. 45	651140. 58	1884. 48
EV191	5556301. 56	651357. 43	1876. 46
EV192	5556443. 91	651314. 87	1872. 81
EV193	5556013. 76	651427. 59	1850. 73
EV194	5556160. 07	651480. 64	1833. 48
EV195	5556306. 37	651434. 65	1843. 97
EV196	5555496. 24	651592. 61	1864. 12
EV197	5555760. 80.	651710. 12	1807. 81
EV176	5556274. 56	651228. 23	1941. 24
EV199	5556056. 85	650717. 58	1993. 11
EV200	5556336. 15	650931. 45	1941. 31
EV201	5555979. 56	651272. 90	1934. 02
EV202	5555720. 84	651216. 31	1937. 11
EV203	5556299. 92	651072. 20	1988. 48
EV204	5556191. 23	651172. 48	1983. 47
EV205	5555734. 88	650852. 06	2081. 17
EV206	5555876. 49	650898. 16	2083. 47
EV207	5555766. 66	651085. 92	1977. 04
EV208	5555361. 03	651669. 85	1947. 70
EV209	5556160. 29	651037. 05	2039. 43
EV210	5555564. 74	651438. 14	1886. 18
EV211	5556435. 23	651199. 79	1918. 33
EV212	5555643. 12	651708. 91	1857. 79
RC-0344	5555405. 00	651446. 99	1877. 24
EV214	5555459. 96	651288. 43	1915. 95
EV215	5555828. 30	650961. 65	2041. 68
EV216	5556148. 00	650928. 29	2036. 93
EV217	5556002. 19	651002. 59	2040. 89
EV218	5555677. 71	650938. 39	2047. 30
EV219	5555840. 46	651341. 55	1886. 17
EV220	5555877. 56	651135. 50	1980. 22
EV221	5556200. 54	651314. 11	1914. 45
RC-0864	5554882. 19	651490. 37	2123. 96
RC-0865	5554643. 40	651530. 95	2124. 33
RC-0925	5555013. 58	651497. 32	2059. 37
RC-0926	5555028. 97	651561. 28	2060. 68
RC-0927	5554925. 44	651625. 68	2061. 06
RC-0928	5554792. 22	651627. 29	2063. 96
RC-0929	5554743. 38	651944. 97	1989. 24
RC-0930	5555033. 13	651787. 34	1951. 83
RC-0941	5555988. 78	650853. 24	2064. 70
RC-0942	5555685. 20	650616. 95	2205. 81
RC-0943	5555498. 46	650748. 90	2176. 79
RC-0944	5555293. 82	650927. 24	2132. 60
RC-0945	5555795. 41	650773. 87	2129. 22
RC-0952	5555996. 66	650434. 92	2080. 45
RC-0953	5555874. 92	650678. 21	2072. 99
RC-0954	5555318. 96	651251. 97	1940. 85
RC-0955	5555134. 38	651359. 99	1961. 81
RC-0956	5555164. 35	651557. 04	1998. 56
RC-0957	5555096. 44	651672. 22	2007. 71
RC-0958	5554906. 11	651714. 10	2013. 42

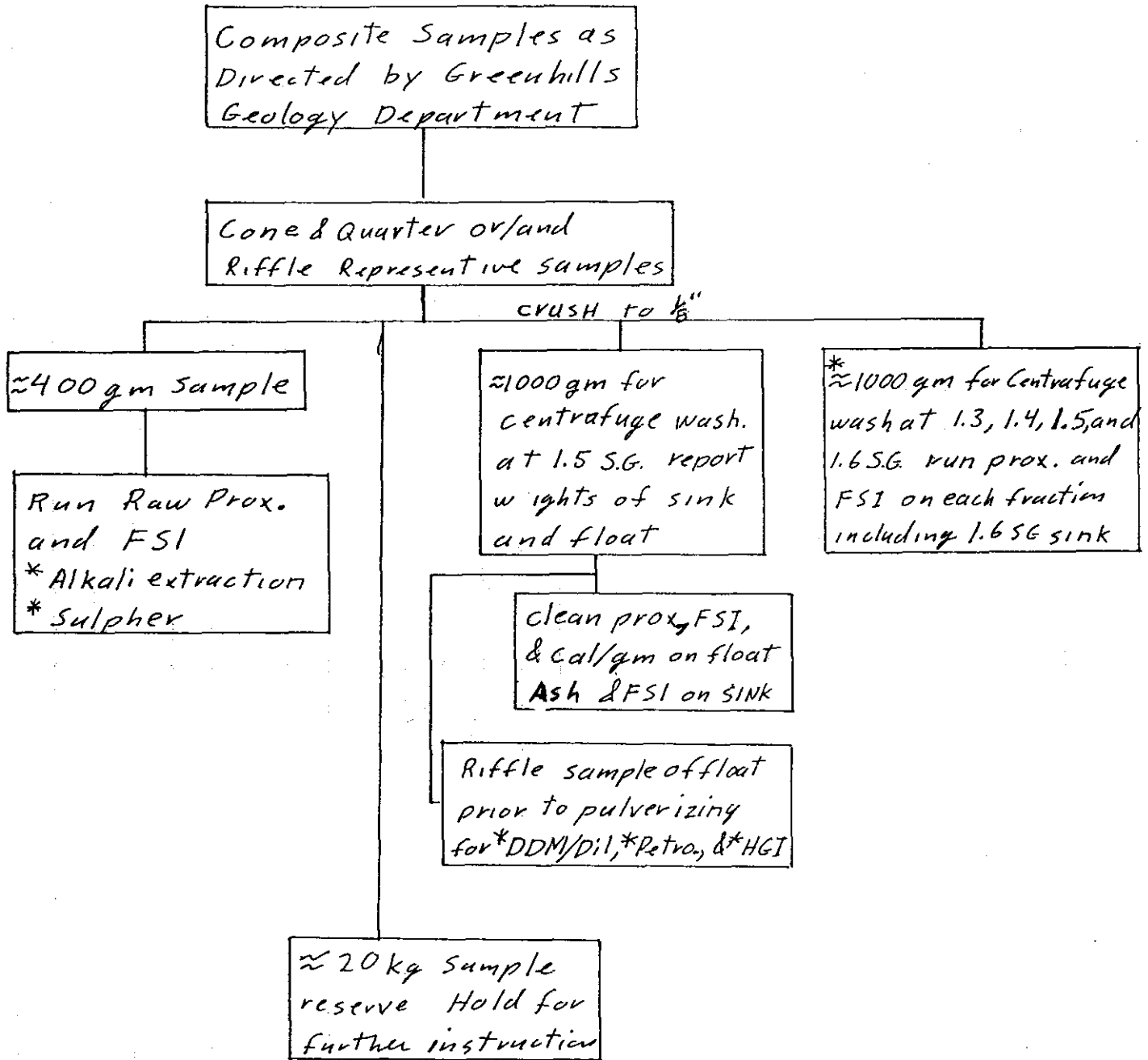


# PROCEDURE B-GH



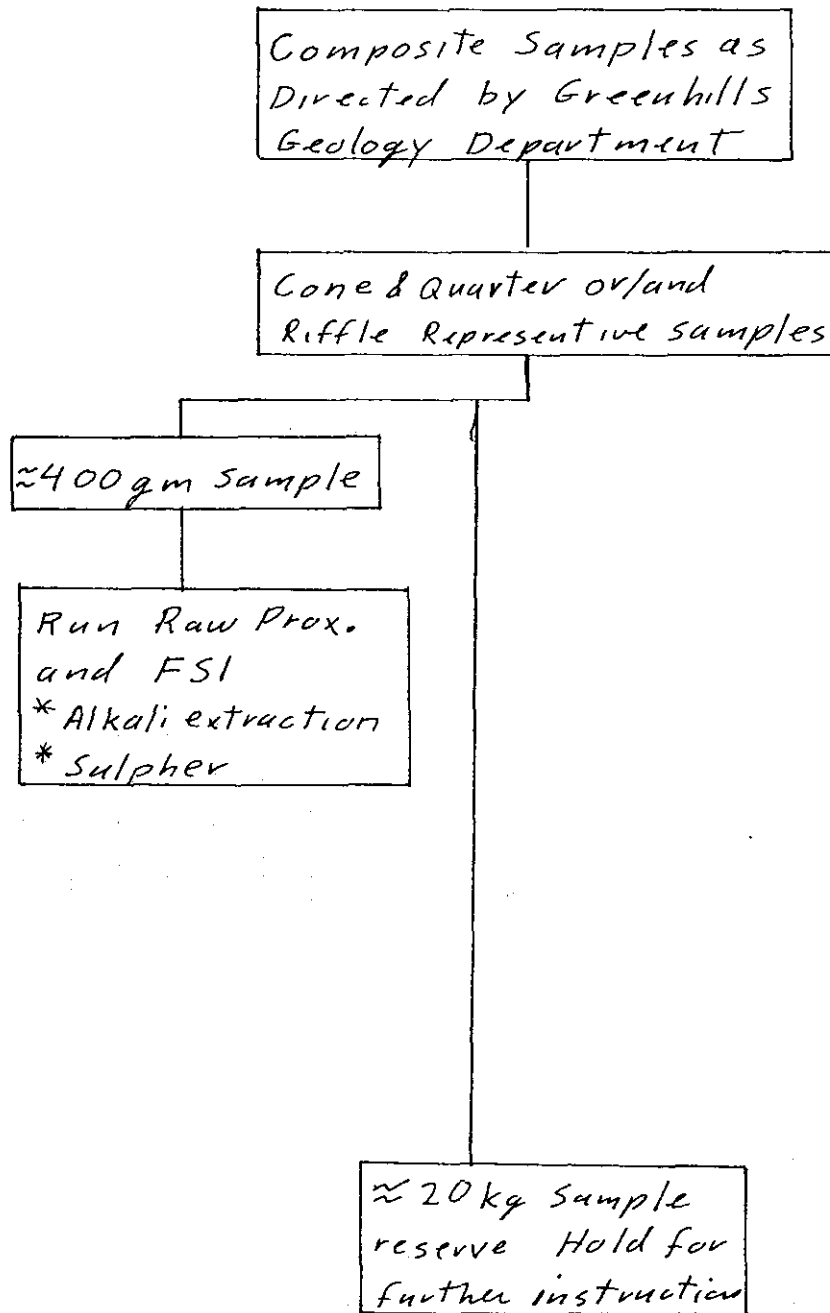
Note, \* indicates optional Tests only if requested.

# PROCEDURE C1-GH



Note; \* indicates optional tests to be performed only on request.

# PROCEDURE C2-GH



Note; \* indicates optional tests to be performed only on request.

Table 2 gives a summary of the Quality by Seam for the major seams of interest and Appendix I gives the available raw data for the coal intercepts encountered in the 1986 drilling program.

#### **4.3 Hole Logging**

All the holes drilled in the 1986 program have been logged using a Model T450-E S.I.E. Gamma ray downhole logger. A copy of all the logs for the holes drilled during the 1986 High Vol program are included in the pocket in the back. Because of manpower constraints, chip logs were not made and chips were not saved. Although it was realized that deviation logs would be useful for more accurate structural interpretation, they were not run at the time because of time and manpower constraints. Deviation surveys will be run during 1987 as time permits. Seam intercepts from the gamma logs were used in determining hanging wall depths and seam thicknesses for coal intervals.

### **5.0 GEOLOGY**

#### **5.1 General Geology**

The project area lies within the top half of the Mist Mountain Formation which is the coal-bearing horizon of the Kootenay Group of the upper Jurassic-Lower Cretaceous Era. The upper Mist Mountain Formation is interpreted to have been deposited in an upper deltaic-plain or alluvial plain depositional environment. The predominant lithology is fine-grained sandstones, siltstones and mudstones interspersed with carbonaceous zones and coal seams. Coal seams vary from regionally continuous to very limited in lateral extent resulting in the amount of coal in the stratigraphic section varying greatly from place to place within the project area. Plate 4 is a generalized stratigraphic column of the Mist Mountain Formation.

## 5.2 Structure

The major structure affecting the reserve area is the Greenhills syncline which is north-south trending and plunges gently to the north. The beds on the west side of the axis dip easterly up to 45° except in the vicinity of the axis where the structure has been complicated by drag folding, minor thrust faulting and late small scale normal faulting. The beds on the east limb dip steeply to the west and are cut off on the east by the Fording River normal fault which has a displacement of several hundred metres. The beds on the east limb have been structurally disturbed by numerous minor thrust and normal faults. Map 481-2 (in pocket) illustrates the major structural features and the projected seam outcrops of 16, 20, 22 and 25 Seams in the Hi-Vol project area. Cross-sections A-A through J-J, which are included in the pocket, are drawn between holes and show the structural configurations of the coal seams in relation to the major structural features of the project area.

Also include in the pocket in the back are copies of computer-generated hangwall and isopac maps for seams 16, 20, 22 and 25. These are the same maps that were used to generate the reserve volumes.

## 6.0 ECONOMIC GEOLOGY

### 6.1 Seam Descriptions

The main thrust of the project was to develop high volatile reserves and with this in mind only seams 16L and above were considered in the present program. The number of seams vary from drillhole to drillhole but four seams; 16, 20, 22 and 25, appear to be more or less continuous throughout the area.

#### 6.1.1 16 and 16L Seams

These are a continuation of 16 and 16L Seams in the Cougar North development. 16 Seam is the most continuous of all the seams in the north dump area. The thickness is variable from 11 metres to 5 metres and is generally thinning to the north. These seams range in ash from 12% up to 30% with 16L nearly always being higher in raw ash than 16 Seam. These seams are borderline High Vol with dry-ash-free V.M.'s of 30% to 32%.

#### 6.1.2 20 Seam

20 Seam varies between 0 and 7 metres thick and does not show any consistent thickness trends. It lies 30 to 50 metres above 16 Seam and sometimes occurs as split into an upper and lower seam. The seam(s) are generally quite clean with an ash of 14% to 20%. 20 Seam is the first seam in the section which consistently falls into the high vol classification of greater than 31% V.M. on air-dry mineral matter free basis.

#### 6.1.3 22 Seam

This is a zone rather than a single Seam and usually contains two or more seams of varying thickness over a 10-15 metre interval. Total coal in the zone can be as much as 6 to 8 metres. The zone lies 20 to 40 metres above 20 Seam on the west side of the syncline and only 5 to 20 metres above on the east side. Ash in the 22 seams varies from 8% up to 25% and V.M. in 22 Seam is about 33% on a dry mineral matter free basis (dmmf).

#### 6.1.4 25 Seam

Seam 25-26 is located 20 to 40 metres above 22 Seam and is occasionally over 5 metres thick. In some areas this seam is quite dirty due to numerous rock splits which occur. Raw ash varies dramatically between 10% and 45% in direct relation to the number and thickness of the splits which occur. V.M. on d.m.m.f. is in the range of 34%.

#### 6.1.5 Remaining Seams

A myriad of seams, other than those already mentioned, occur within the project area. The seams vary in thickness from a few tenths of a metre to over 7 metres. These seams are usually discontinuous and lenticular in shape making correlation difficult. Some of the thicker seams may extend up to several hundred metres in any given direction. These seams form part of the reserve base where they are over 1.5 metres thick but otherwise are excluded. In practice, however, seams with thicknesses less than 1.5 m thickness are presently being recovered.

### 6.2 Quality

The quality of the seams vary considerably with respect to parameters such as raw proximate, washability characteristics, and reological tests. All the seams above 16 Seam, however, have one thing in common, on the basis of reflectance and clean V.M.'s they are classed as High Volatile coals. The upper seams that are 16 and up have generally proven to be very easy coals to clean with difficulties ranging 10% to 20% at 1.55 S.G. and a clean ash of 6.5% to 7.5%. The exception which has been noted in the present mining operations is 20 Seam which gives a low yield when washed to a 7% ash.

Table 2 is a summation of the quality of the four main seams encountered in the project area. Appendix 1 gives a summary listing of all the available quality of all the coals by hole and by seam for the past summer's program. Appendix 2 is a compendium of all the available quality data by hole by seam for the high vol program in the North Dump area.

Table 2

		<u>16 Seam</u>	<u>20 Seam</u>	<u>22 Seam</u>	<u>25 Seam</u>
Seam Thickness					
Raw:	Ash %	12-30	14-20	8-25	10-40
	F.S.I.	7-8	6-8	7-9	7-9
Clean:	R.M.	1.0	1.0	1.1	1.1
at	Ash	6.3	7.5	7.4	6.2
1.50	V.M.	28.9	29.7	30.7	31.6
S.G.	F.C.	63.8	62.8	61.8	62.1
	F.S.I.	7-8	7-9	7-9	7-9

### 6.3 Reserves

Reserves for the project area referred to in this report are defined as follows. All coal in all seams starting at 16L Seam and working up-section until no more sections are encountered. Reserves of economic interest have not have been outlined at the present. Work will begin on this phase as soon as the data is in a suitable format for detailed mine planning.

Table 3 gives an estimate of the reserves by seam. These reserves are computer-generated based on grids created for the topographic surface, the hangwall of the coal and the seam isopach. The High Vol exploration program has moved about 70% of the North Dump area reserves from partially explored into the proven category.



Table 3

	<u>In-situ Volume</u> <u>(1,000 Tonnes)</u>	
16-16L	23,940	Metric Tonnes
20	15,133	
22	10,910	
25	7,829	
All Others	16,120	
	-----	
<b>Total</b>	<b>73,932</b>	<b>Metric Tonnes</b>

WESTAR MINING LTD.  
HIGH VOL EXPLORATION PROJECT  
STATEMENT OF COSTS

Reverse Circulation Drilling:

Contract - S.D.S. Ltd.	\$223,686
Greenhills' Drill	76,958

Dozer Work:

Rudy Johnson Ltd.	26,880
Elkford Industries Ltd.	22,046

Coal Sample Analysis	125,358
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Manpower:

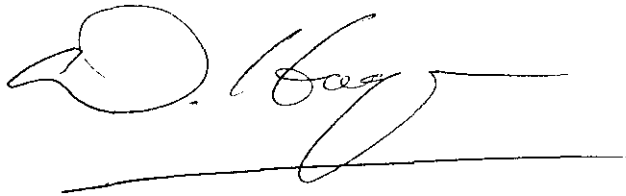
Geology and Supervision	59,604
Quality	3,570
Survey	2,762

Vehicles:

Logging Truck - 3.5 months	3,700
Pickup (rental rate) - 4.5 months	3,825

Computer Time	8,000
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TOTAL	----- \$556,389
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## STATEMENT OF QUALIFICATIONS

L. B. SAMUELSON

B.Sc. Geological Engineering, 1964  
Michigan Tech University  
Houghton, Michigan

Member of The Association of Professional  
Engineers of British Columbia 1979

17 years of practical experience in all aspects of  
coal exploration and development including:

- Mapping and structural interpretation.
- Design and execution of exploration programs for coal, entailing mapping, drilling, tunnelling and trenching.
- Pit geology quality control.
- Special studies related to coal development and quality.



Province of  
British Columbia  
Ministry of  
Energy, Mines and  
Petroleum Resources



# EXPLORATION BRITISH COLUMBIA

FINANCIAL ASSISTANCE FOR MINERAL EXPLORATION


Grant  
Identification  
No. 10963M-20

## FORM 3

### APPLICATION FOR PAYMENT

#### INSTRUCTIONS:

- Please type or print
- Please submit completed forms, with a copy of the final technical report, to:  
Manager, EXPLORATION BRITISH COLUMBIA, Mineral Resources Division  
Ministry of Energy, Mines and Petroleum Resources  
Parliament Buildings, Victoria, B.C. V8V 1X4

1. Date of this Application		
1986-10-21		
2. Applicant's Identification and Location		
Name Westar Mining Ltd.		
Address — Street Number and Name, Apt. No. P.O. Box 4000		Telephone No. 865-3303
City, Town, Village Elkford	Province B.C.	Postal Code V   0   B   1   H   0
3. Head Office Location		
Address — Street Number and Name, Apt. No. P.O. Box 2000		Telephone No. 425-8221
City, Town, Village Sparwood	Province B.C.	Postal Code V   0   B   2   G   0
4. Mailing Address (if different from above)		
Address — Street Number and Name, Apt. No.		Telephone No.
City, Town, Village	Province	Postal Code
5. British Columbia Free Miner Certificate No. C-80		
6. I/We, _____, hereby apply for payment of a grant under the Exploration British Columbia Financial Assistance for Mineral Exploration Program and declare the information given above to be true and accurate.		
 Signature of Applicant or Signing Officer		DENIS HORGAN Name (please print)
CORPORATE CONTROLLER Title/Occupation (please print)		High Volatile Coal Exploration Program Project Name (please print)
WESTAR MINING LTD. Company (please print)		Feb 19, 1987 Date

7. EXPENDITURES (N.B. Please provide actual all-inclusive costs, including salaries and wages, equipment and machinery rental, supplies, services, transportation and accommodation directly attributable to the field program.)

(a) For the following, the full cost (100% of expenditures) are eligible:

	Total Eligible Expenses
Geological Surveys, Map and Report Preparation and Related Costs	\$ 29,604
Geophysical Surveys (line-kilometres)	
Ground	
Magnetic .....	\$
Electromagnetic .....	\$
Induced Polarization .....	\$
Radiometric .....	\$
Seismic .....	\$
Other <u>Drillhole Gamma Logging</u> .....	\$ 36,462
Airborne .....	\$
	\$ 36,462
Geochemical Surveys (No. of samples analysed for _____)	
Soil .....	\$
Silt .....	\$
Rock .....	\$
Other .....	\$
	\$
Drilling	
Surface ..... m @ \$ ..... =	\$ 300,644
Underground ..... m @ \$ ..... =	\$
	\$ 300,644
Related Technical Surveys	
Sampling/Assaying .....	\$ 128,928
Petrographic .....	\$
Mineralogic .....	\$
Metallurgic .....	\$
	\$ 128,928
Preparatory/Physical	
<del>Dozer Work</del> <u>Roads &amp; Drillsites</u> .....	\$ 48,926
Trenching (metres) .....	\$
	\$ 48,926
Other Exploration Costs (attach detailed schedules)	
.....	\$
<u>Vehicles - 1 Pickup</u> .....	\$ 3,825
.....	\$
	\$ 3,825
<b>Total Eligible Expenses</b>	<b>\$ 548,389</b>

(b) For the following activities only 25% of total costs are eligible:

Tunnelling, Drifting, Other Lateral Excavation, Shaft Sinking (25% of total expenses are eligible)	
..... m @ \$ ..... = \$ x 25% = \$	
..... m @ \$ ..... = \$ x 25% = \$	
	\$

(c) TOTAL ELIGIBLE EXPENDITURES: \$ 548,389

8. SUPPLEMENTARY INFORMATION: The following information is required in order to help us determine the contribution which mineral exploration activity makes to the economy, and relates to the utilization of B.C. vs. outside labour and services. Only figures directly attributable to the funded program should be included (approximate figures acceptable, but please be as accurate as possible).

(a) Employment, wages and salaries

Type	No. Employed		No. Person-days		Salaries/Wages Paid	
	B.C.	Outside	B.C.	Outside	B.C.	Outside
Prospectors					\$	\$
Linecutters						
Technicians	6		195		34,125	
General Labourers Sample Prep.			120	220	24,000	30,000
Drillers/Helpers	4	5	116	345	27,840	62,100
Equipment Operators						
Geologists	3	-	124		25,792	
Geophysicists						
Geochemists						
Engineers						
Supervisory	1		30		7,500	
Consulting						
Secretarial						
Managerial						
Legal						
Accounting						
Others (specify) Equip. Cat	2		45		6,480	
Others (specify)						
<b>TOTALS</b>					<b>\$ 125,737</b>	<b>\$ 92,100</b>

These figures are an estimate of direct wages and salaries with no burden applied and before taxes.

(b) Goods and Services

Description	Expenditure	
	B.C.	Outside
Meals, Groceries, etc.	\$	\$
Camping Supplies, Equipment, etc.		
Accommodation		
Transportations — Scheduled Air		
— Air Charter		
— Vehicle Rentals		
— Vehicle O and M Costs		
— Other (specify)		
Equipment Rentals —		
Equipment Rentals — Trenching, etc.	48,826	
— Geophysical, etc.		
— Other (specify)		
Contract Drilling		223,686
Consultant Services		
Assays and Analyses	83,000	42,000
Communications		
Other (specify)		

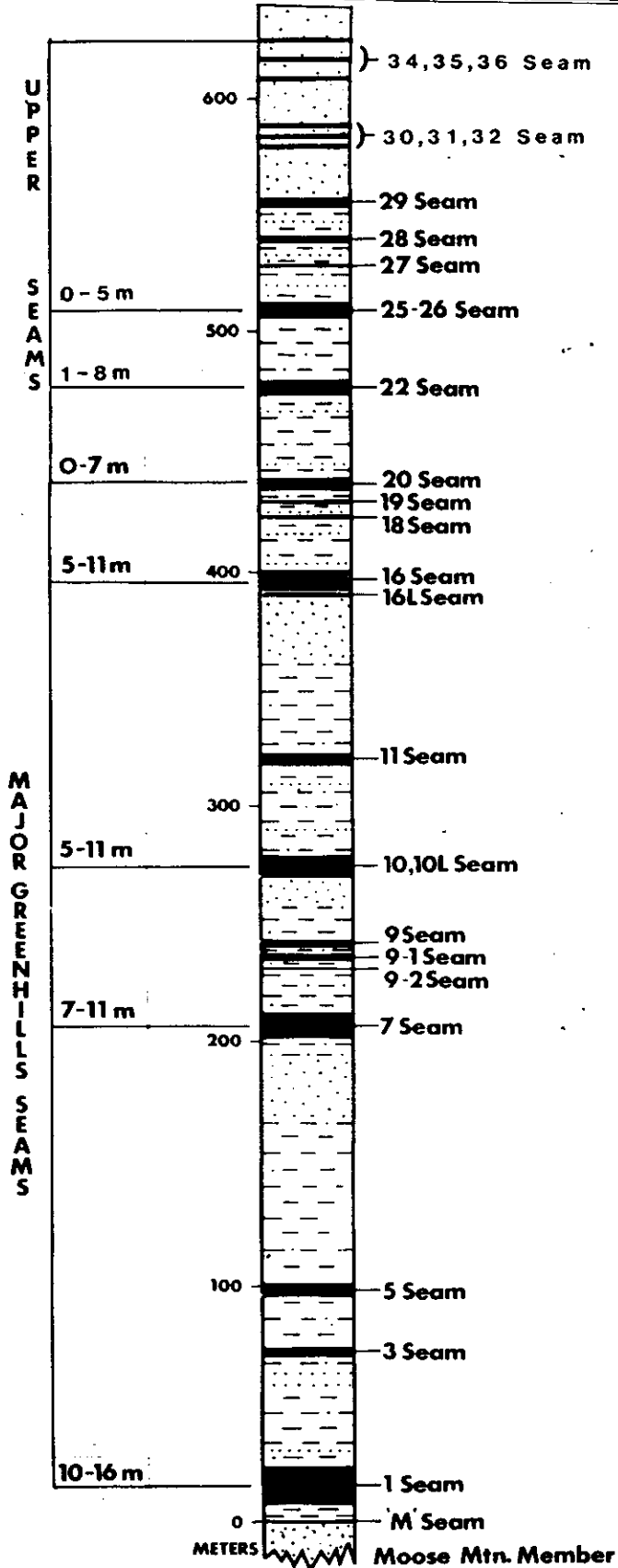
9. IMPACT OF FAME GRANT

(a) Please indicate what level of expansion of your project was attributable to receiving a FAME grant.

\$ 340,000 including grant  
700 person/days employment.


(b) Please indicate what you feel to be the main achievement of this FAME funded program.

To move the mine into a more marketable product 1 1/2 to 2 years earlier than would  
have otherwise been possible, therefore maintaining the viability of the operation  
through the ability of the mine to keep volumes up and unit costs down.

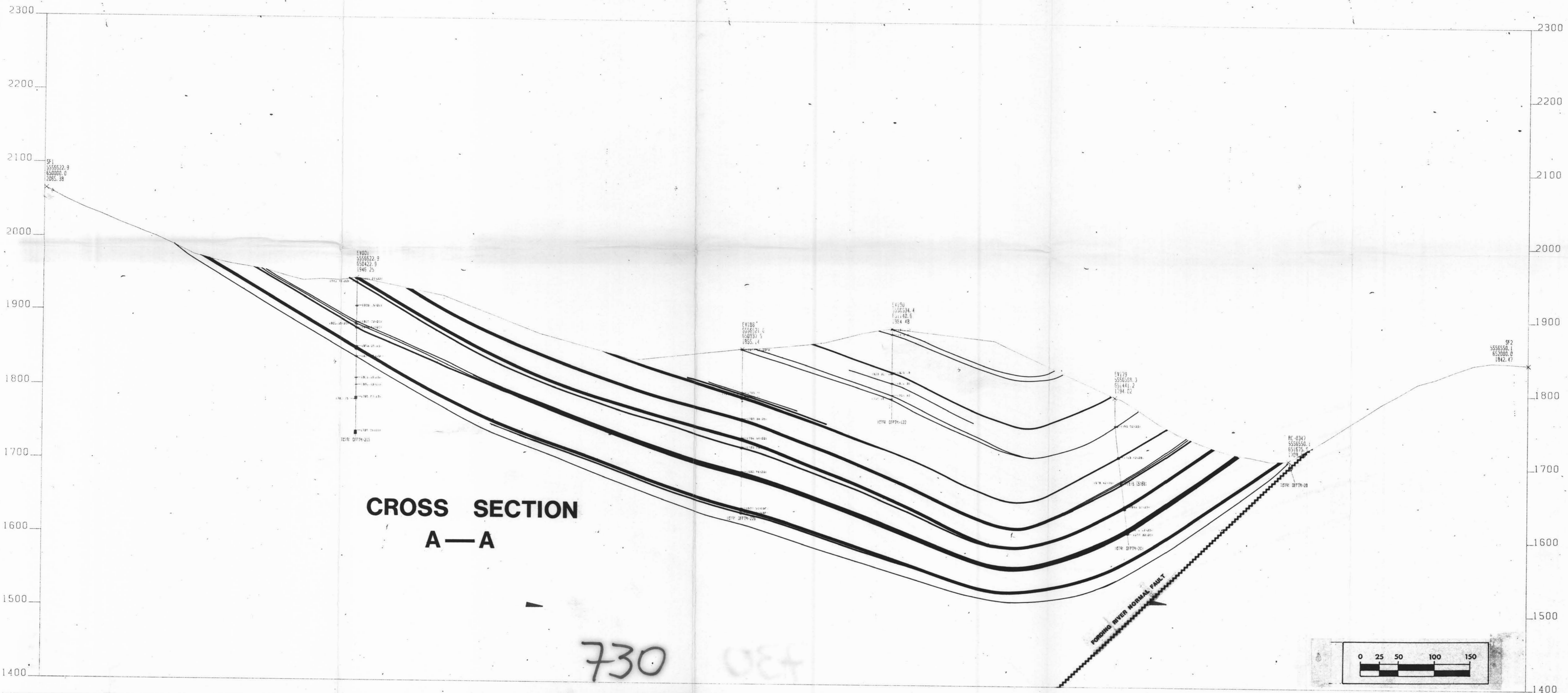


**STRATIGRAPHY  
MIST MOUNTAIN FORMATION**

730

 Westar	GREENHILLS OPERATIONS EIRIAD BC.
<b>GENERALIZED STRATIGRAPHIC COLUMN</b>	
DESIGNED BY DRAWN BY CHECKED BY APPROVED BY	<b>PLATE 4</b>



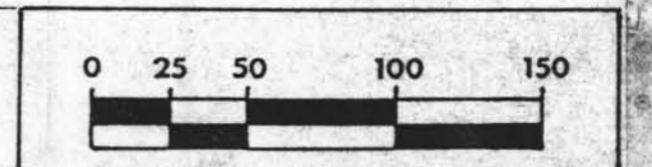


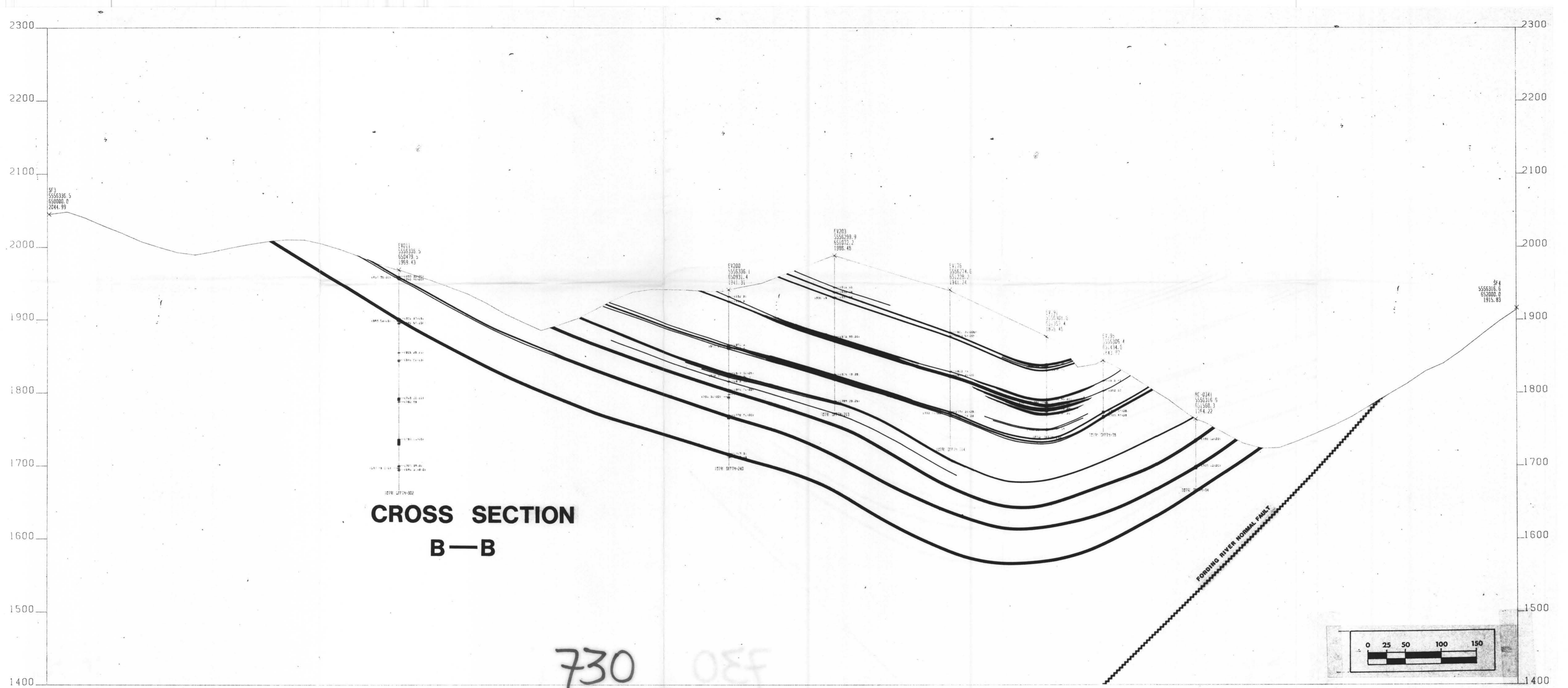
**CROSS SECTION  
A—A**

730

084

FORDING RIVER NORMAL FAULT

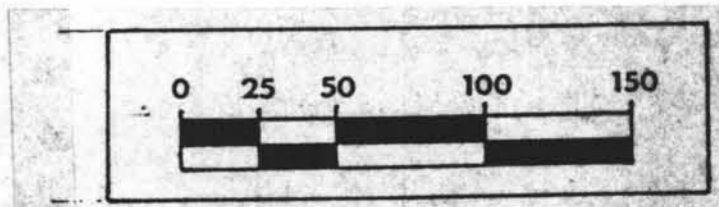




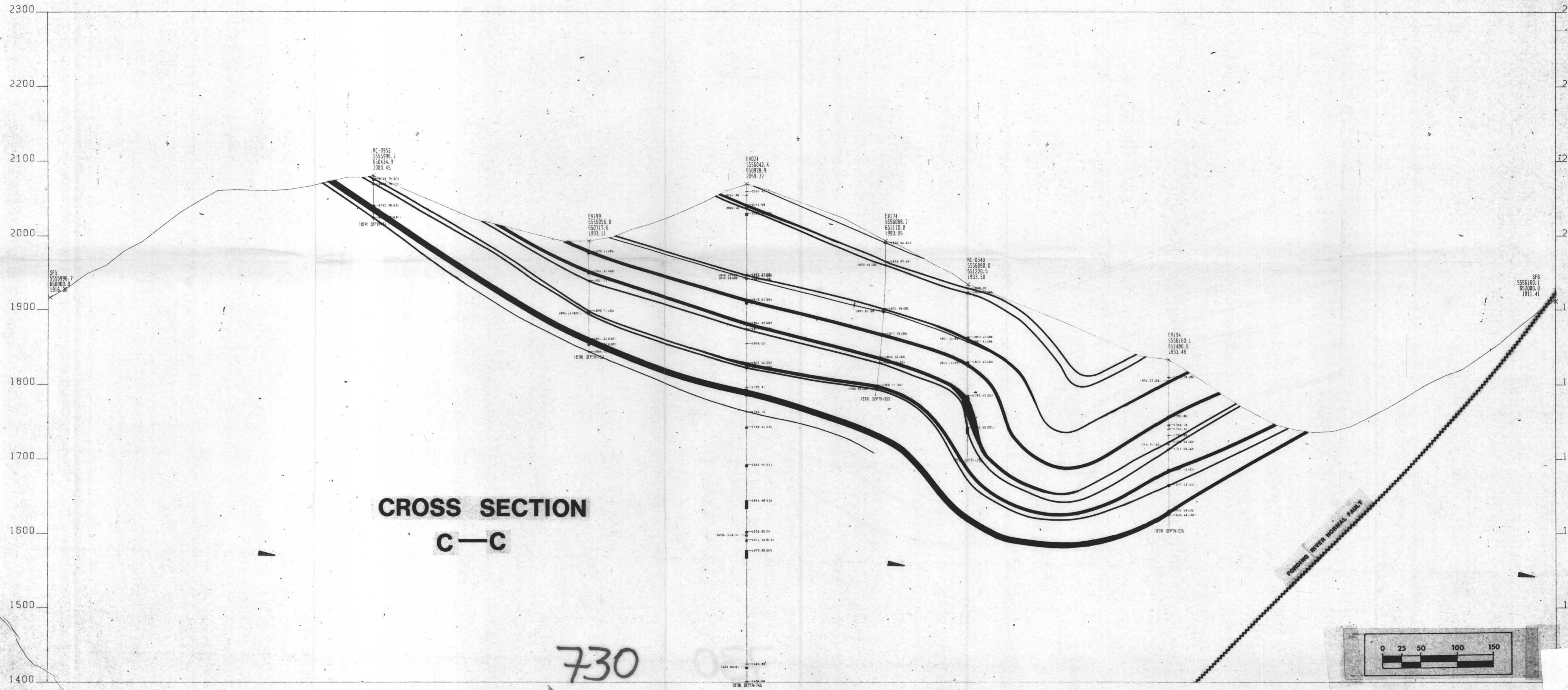
**CROSS SECTION  
B—B**

730

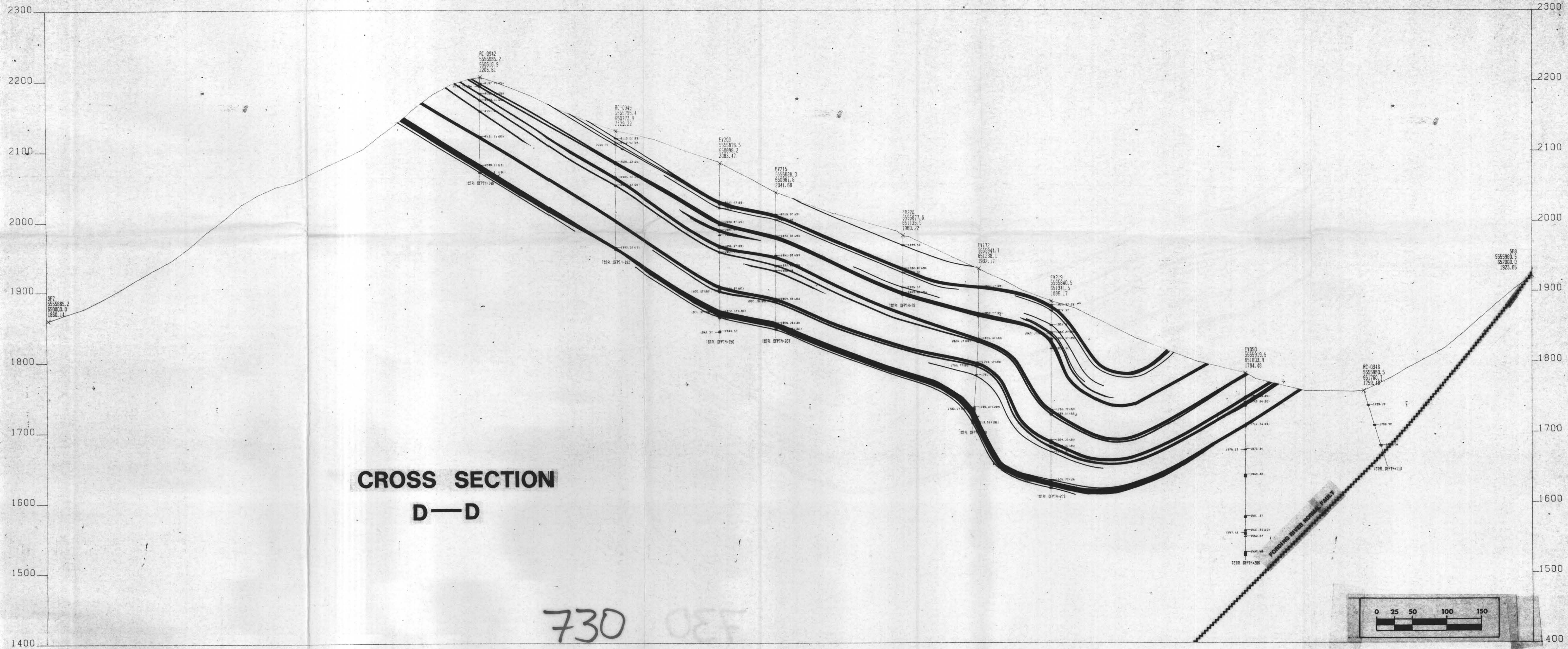
03F



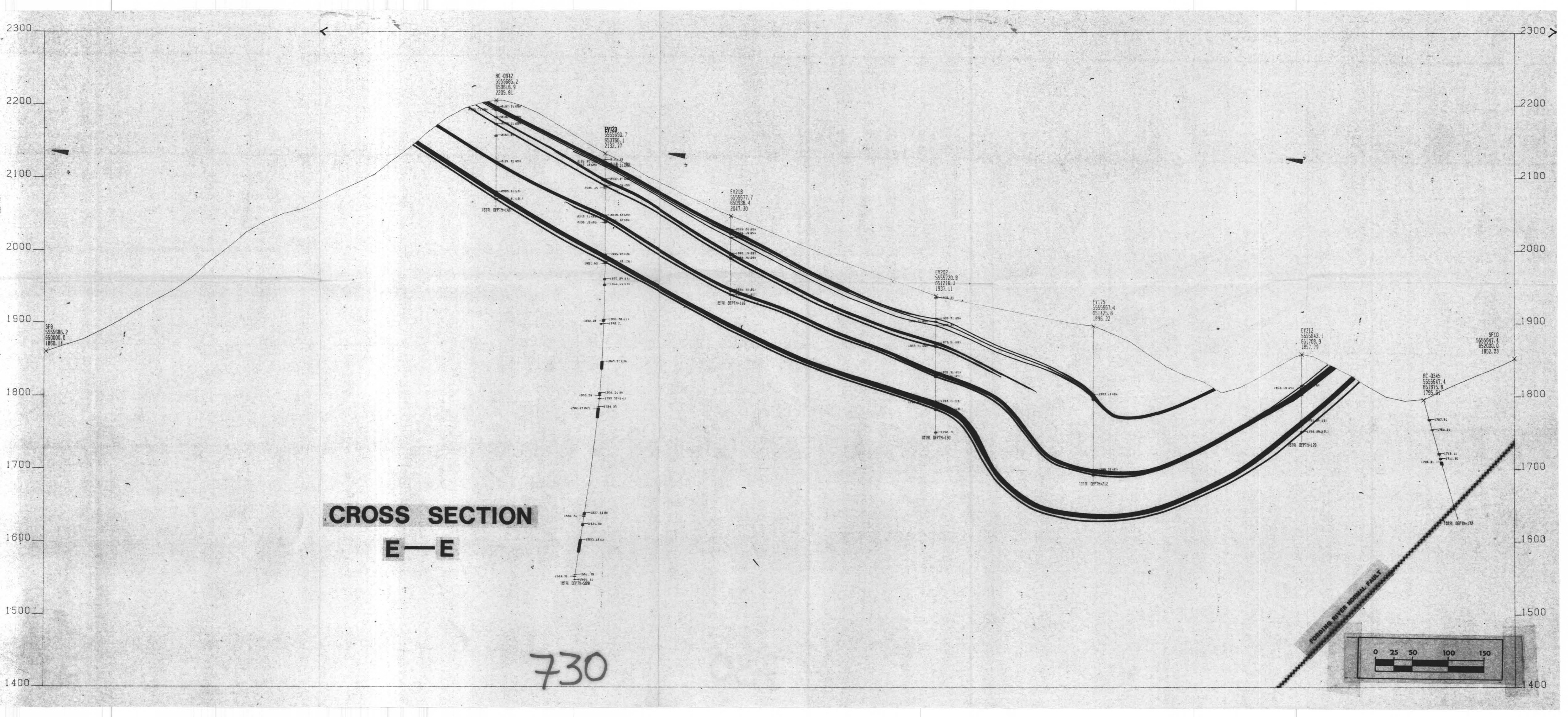




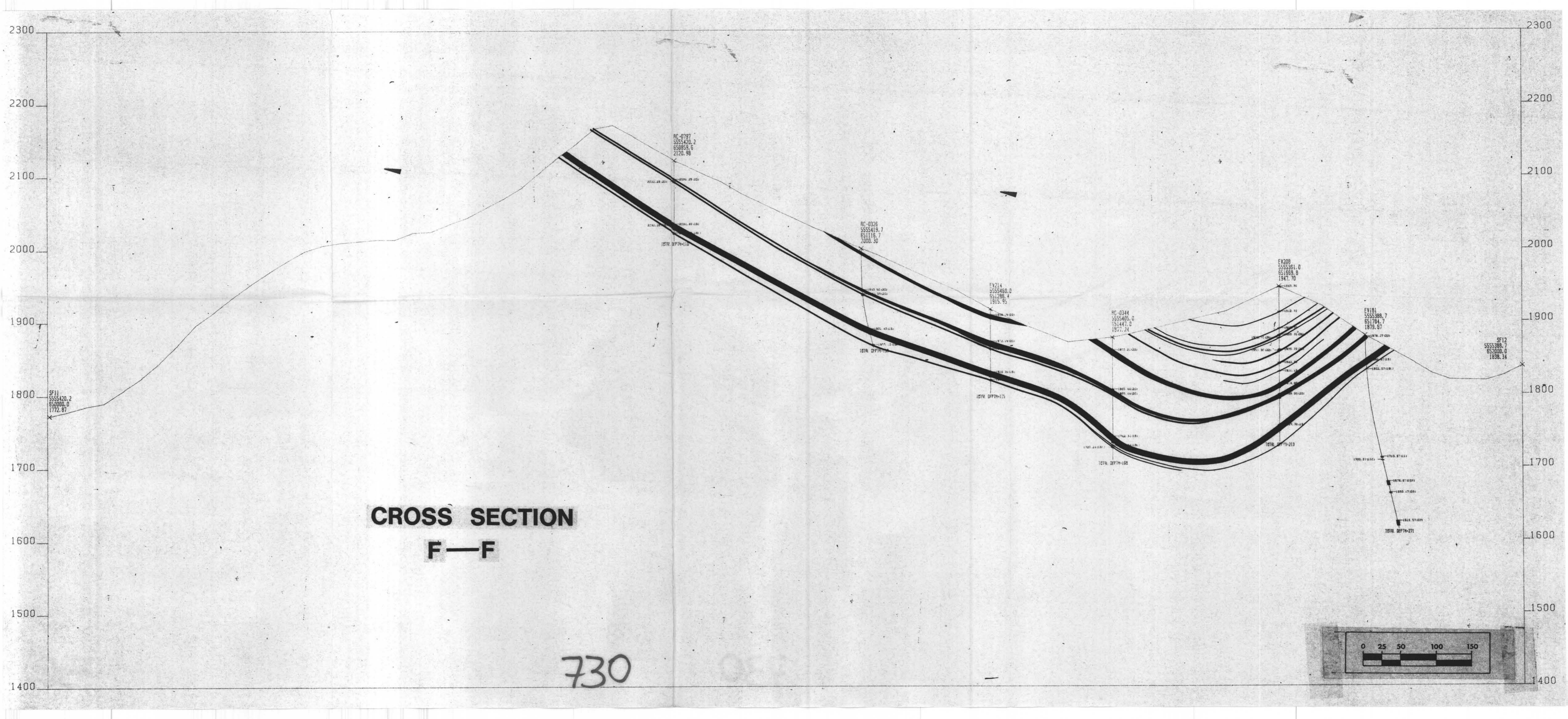




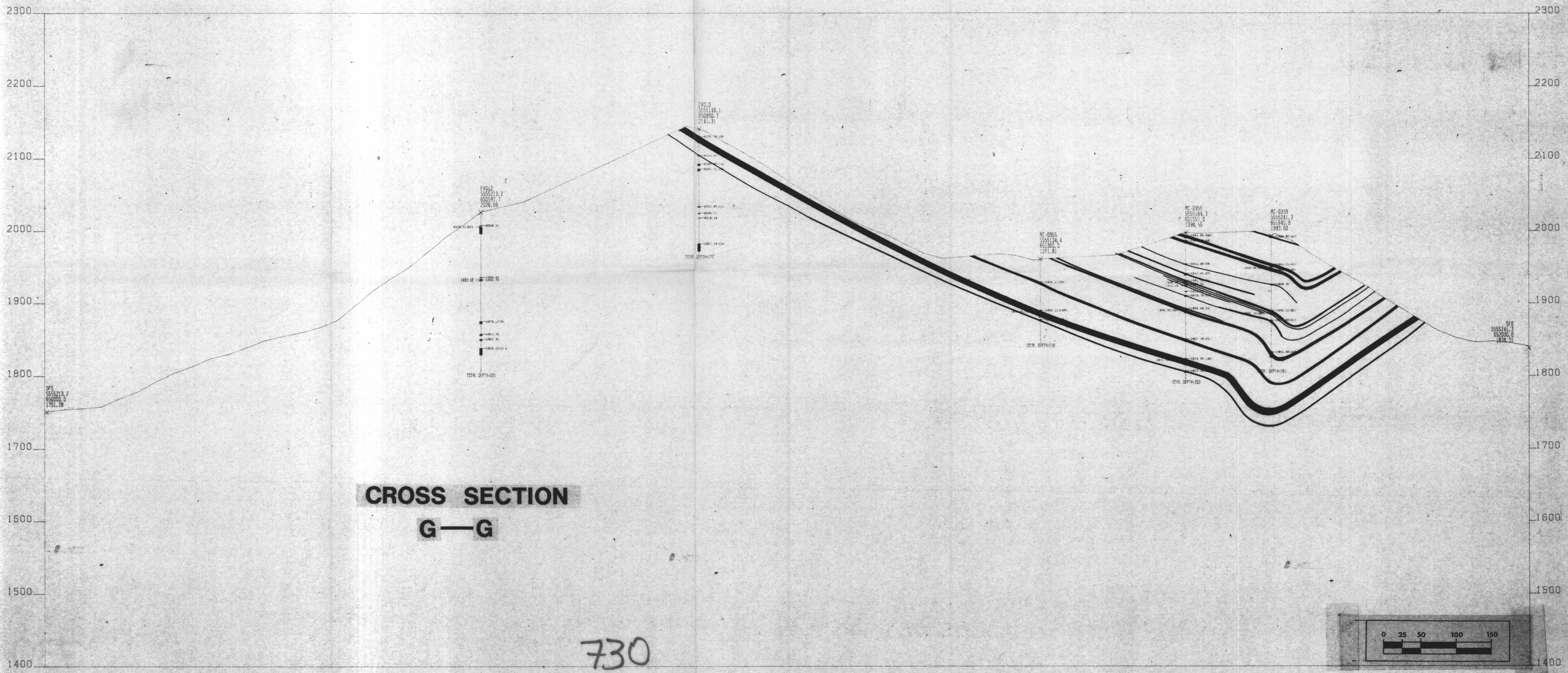




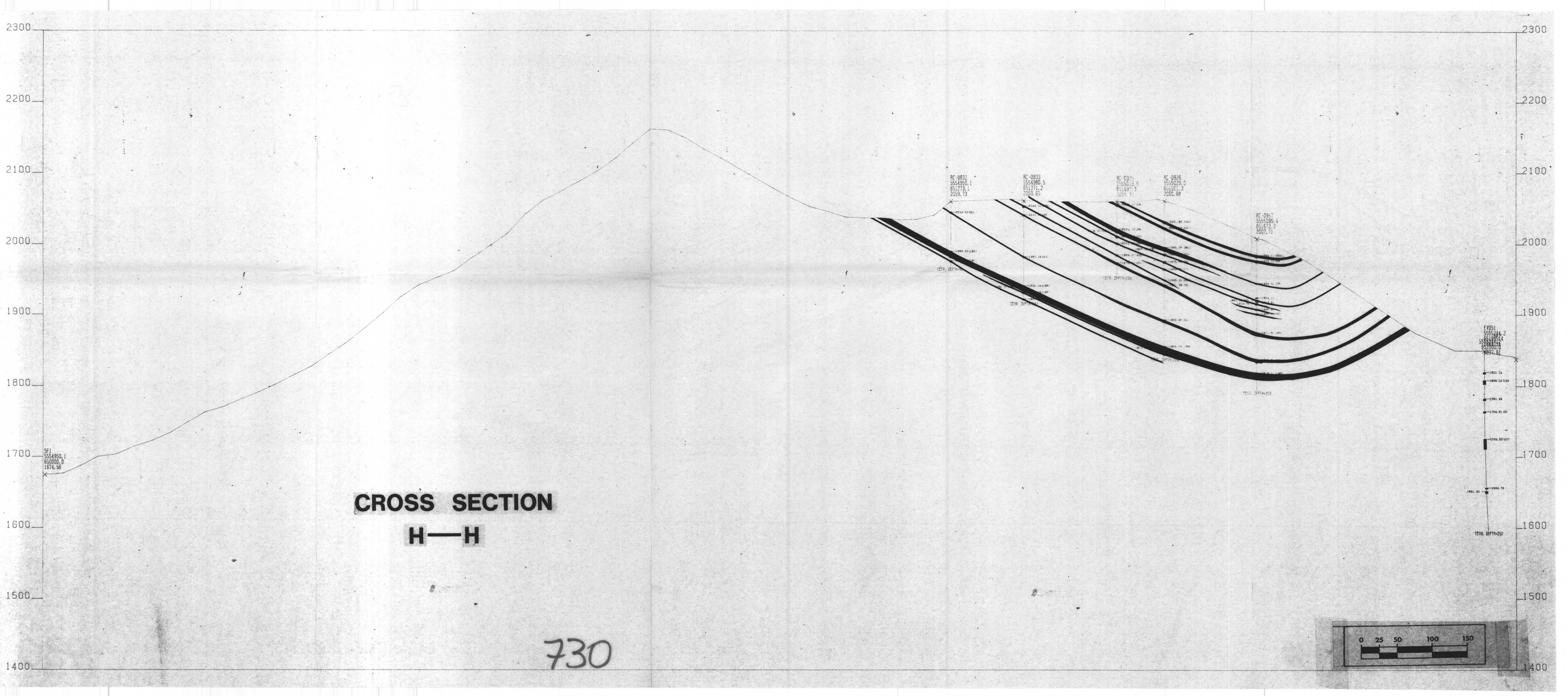




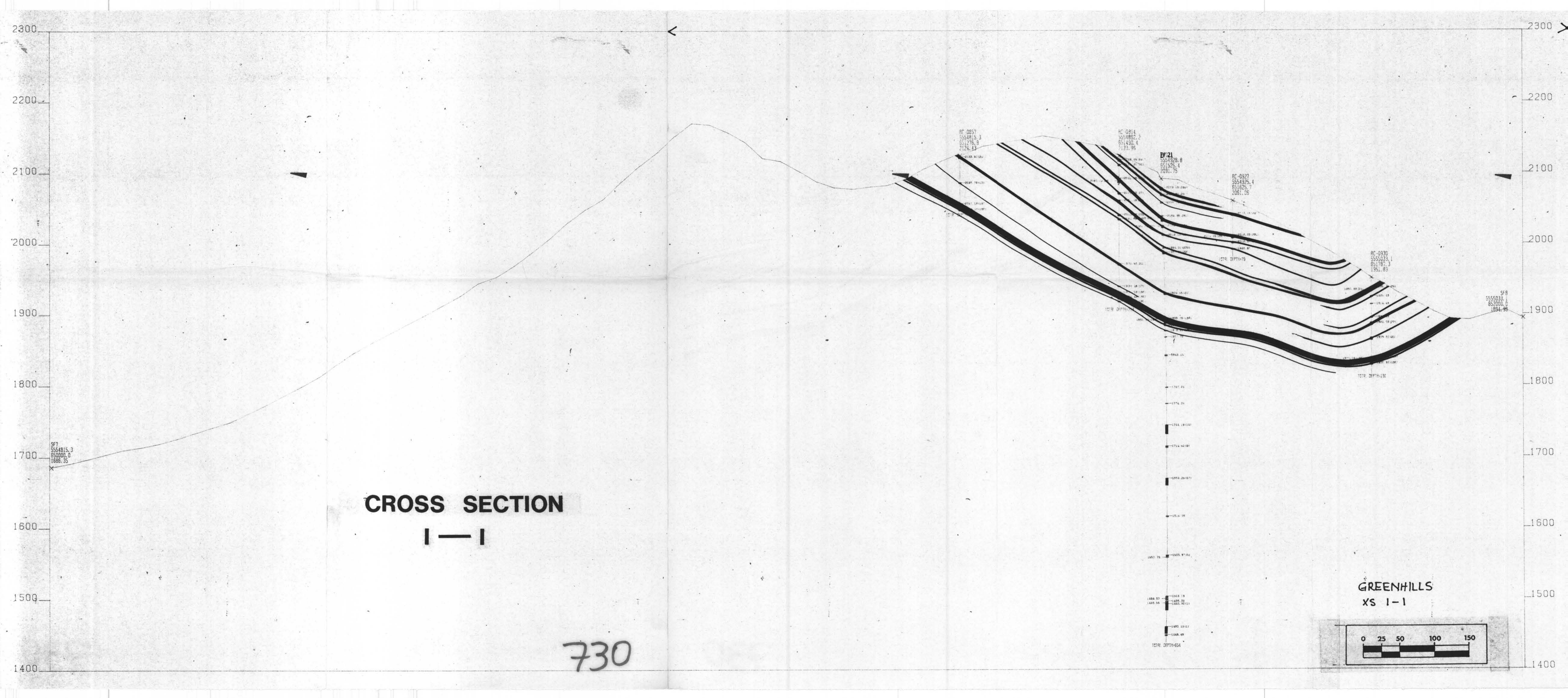


















## **APPENDIX 1**

FEBRUARY, 1987.

NORTH DUMP EXPLORATION AREA 16 SEAM QUALITY DATA

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA			CLEAN PROX. DATA @ 1.50 S. G.			
	FROM	TO	SEAM		RAW ASH %	RAW V.M. %	RAW FSI	CLEAN ASH %	CLEAN V.M. %	CLEAN F.C. %	CLEAN FSI
EV001	92.59	97.44	16	04.85	16.10	24.80	7.5				
EV002	67.66	68.18	16	00.52							
EV002	68.87	75.15	16	06.28	13.70	27.90	8				
EV010	10.52	19.36	16	08.84	14.90		2.5				
EV011	67.53	70.52	16	02.99	09.10	30.20	7.5				
EV011	67.53	72.13	16X	04.60							
EV011	70.85	72.13	16	01.28	19.10	28.80	6.5				
EV017	104.66	110.98	16A	05.92	10.90	26.70	7.5				
EV017	113.11	115.64	16C	02.53	27.00	25.60	7				
EV018	99.45	111.77	16	12.32	20.60	24.80	7.0				
EV019	37.74	43.60	16A	05.86	07.20	25.00	7.5				
EV019	51.01	54.39	16C	03.38	31.80	21.60	5.5				
EV020	29.76	30.64	16A	00.88	22.60	23.30	6.5				
EV020	31.71	38.93	16C	07.22			6.5				
EV020	42.96	44.76	16E	01.80	17.30	25.00	6.5				
EV021	197.99	198.93	16A	00.94	08.00	27.10	7.5				
EV021	199.85	205.49	16C	05.64			7.5				
EV021	207.62	208.54	16E	00.92	13.90	25.90	8				
EV023	138.17	144.81	16	06.64	12.00	25.20	7.5				
EV024	275.08	284.84	16	09.76	21.00	24.20	7				
EV027	167.64	191.32	16	23.68	12.10	27.60	7.5				
EV027	193.09	193.46	16	00.37			7.5				
EV050	72.74	76.86	16	04.12	10.00	26.50	6.5				
EV059	4.20	9.20	16C	05.00	20.80	22.60	1				
EV059	27.00	31.00	16E	04.00							
EV169	149.30	154.10	16	04.80							
EV170	178.10	187.00	16	08.90							
EV172	196.50	198.00	16A	01.50							
EV172	199.00	216.90	16	17.90							
EV173	116.20	123.60	16	07.40							
EV178	224.60	228.20	16C	03.60							
EV180	0.00	2.90	16	02.90							
EV181	34.00	40.80	16	06.80							
EV186	66.20	72.10	16	05.90	10.00	26.00	8.5				
EV187	142.50	147.80	16	05.30							
EV188	215.60	220.10	16C	04.50							
EV188	215.60	223.80	16X	08.20	15.90	25.90	7.5				
EV188	221.90	223.80	16E	01.90							
EV193	243.20	248.20	16	05.00	32.80	24.20	5.5				
EV193	249.20	250.60	16	01.40							
EV194	201.90	207.10	16	05.20							
EV194	201.90	209.60	16X	07.70	13.50	25.30	7.5				
EV197	24.40	25.80	16	01.40	28.70	24.20	7.0				
EV197	28.00	29.70	16	01.70	23.90	23.70	8.0				
EV199	131.90	137.80	16C	05.90	12.30	27.70	8.0				
EV199	139.40	141.20	16E	01.80	17.90	22.80	7.0				
EV200	223.70	229.90	16X	06.20	38.80	21.30	5.0				
EV202	143.70	144.70	16								
EV202	145.20	152.40	16	07.20							

FEBRUARY, 1987.

NORTH DUMP EXPLORATION AREA 16 SEAM QUALITY DATA

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		RAW FSI
	FROM	TO	SEAM		RAW ASH %	RAW V. M. %	
EV205	149.20	149.90	16	00.70			
EV205	150.50	155.90	16C	05.40			
EV206	211.00	212.00	16A				
EV206	212.50	218.80	16C	06.30			
EV207	141.60	148.70	16	07.10			
EV208	190.00	198.70	16	08.70			
EV209	296.30	299.10	16	02.80			
EV209	3	302.30	16	02.30			
EV212	90.40	97.40	16	07.00	09.80	26.30	7.5
EV214	86.00	93.00	16	07.00	27.90	24.80	6.5
EV215	185.90	187.80	16	01.90			
EV215	185.90	191.80	16	05.90			
EV215	187.80	191.80	16	04.00			
EV219	253.40	254.50	16	01.10			
EV219	255.50	262.60	16	07.10			
FC1302	186.00	187.60	16	01.60			
FC1302	188.50	190.10	16	01.60			
FC1302	191.10	193.00	16	01.90			
FC1303	297.80	304.10	16	06.30			
FC1304	133.00	135.60	16	02.60			
RC-0326	111.90	119.60	16	07.70	15.00	28.40	8
RC-0327	150.80	159.50	16	08.70	20.80	25.20	4.5
RC-0342	95.00	100.80	16	05.80	25.70	25.70	4.5
RC-0342	105.60	111.00	16	05.40	09.20	28.70	7
RC-0344	134.90	144.10	16	09.20			
RC-0483	31.70	37.60	16C	05.90			
RC-0483	31.70	42.60	16	10.90	07.47		7.5
RC-0483	37.60	42.60	16E	05.00			
RC-0484	31.50	36.80	16C	05.30			
RC-0484	37.60	42.00	16E	04.40			
RC-0485	48.40	54.20	16C	05.80			
RC-0485	48.40	60.00	16	11.60	09.16		7.5
RC-0485	54.20	60.00	16E	05.80			
RC-0710	0.80	6.40	16C	05.60			
RC-0710	7.00	12.00	16E	05.00			
RC-0735	7.70	13.50	16C	05.80	17.50		7.5
RC-0735	14.40	19.50	16E	05.10	17.50		3.5
RC-0736	6.10	11.80	16C	05.70	16.60		6.5
RC-0736	12.50	15.60	16	03.10	16.60		
RC-0736	12.50	17.30	16E	04.80			
RC-0737	3.30	8.70	16C	05.40	13.50		7
RC-0737	9.40	14.00	16E	04.60	13.50		7
RC-0743	24.20	29.90	16C	05.70	12.00		7
RC-0743	30.80	37.40	16E	06.60	13.65		7
RC-0797	86.60	87.30	16	00.70	12.80		7.0
RC-0797	88.00	94.70	16	06.70	20.50		4.0
RC-0798	39.60	46.30	16	06.70	19.70		7.0
RC-0815	61.50	67.40	16C	05.90	16.20		7.3
RC-0815	68.30	74.20	16E	05.90	16.20		7.2

## NORTH DUMP EXPLORATION AREA 16 SEAM QUALITY DATA

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO	SEAM		RAW ASH %	RAW V. M. %	RAW FSI
RC-0827	36.10	42.20	16C	06.10	26.90		5.9
RC-0827	43.10	48.00	16E	04.90	08.60		6.5
RC-0828	30.00	36.20	16C	06.20	07.40		8.1
RC-0828	37.10	42.80	16E	05.70	24.30		6.7
RC-0829	71.10	76.80	16C	05.70	09.20		8.5
RC-0829	79.40	83.90	16E	04.50	22.00		7.8
RC-0832	70.10	79.20	16X	09.10			7.8
RC-0833	120.20	121.00	16A	00.80			
RC-0833	121.80	127.80	16C	06.00			
RC-0833	129.50	131.60	16E	02.10			
RC-0857	67.40	74.00	16C	06.60	15.20	07.80	7.8
RC-0857	75.40	78.00	16E	02.60			
RC-0864	192.90	198.40	16C	05.50			
RC-0864	199.50	203.10	16E	03.60			
RC-0865	114.80	120.40	16C	05.60	13.10		6.9
RC-0865	121.20	124.20	16E	03.00	39.60		5.0
RC-0875	80.80	89.90	16	09.10			
RC-0913	31.70	38.60	16X	06.90			
RC-0926	205.20	206.70	16A	01.50	13.56	27.23	8.0
RC-0926	207.20	217.60	16C	10.40	33.20	23.30	7.0
RC-0928	145.20	153.00	16C	07.80			
RC-0928	145.20	157.30	16X	12.30	11.61	27.66	8.0
RC-0928	154.20	155.60	16E	01.40			
RC-0928	156.40	157.50	16E	01.10			
RC-0929	62.10	69.60	16C	07.50	08.42	27.86	7.5
RC-0930	112.80	113.50	16A	00.70	16.60		7.5
RC-0930	112.80	120.40	16X	07.60			
RC-0930	114.80	120.40	16C	05.60	16.60		7.5
RC-0930	121.00	123.80	16E	02.80	16.60		7.5
RC-0942	124.90	131.80	16	06.90	18.90	27.90	7.5
RC-0943	105.90	113.00	16	07.10	24.30	23.80	5.5
RC-0944	75.60	84.20	16	08.60			
RC-0945	165.90	170.40	16	04.50	59.30	17.00	1.0
RC-0952	39.70	48.20	16	08.50	21.25	26.46	8.0
RC-0953	93.80	100.50	16	06.70			
RC-0954	61.00	62.20	16A	01.20			
RC-0954	62.60	68.60	16C	06.00			
RC-0955	71.80	73.20	16A	01.40			
RC-0955	73.80	81.40	16C	07.60			
RC-0956	174.90	176.20	16A	01.30			
RC-0956	176.80	183.50	16C	06.70			
RC-0957	189.20	190.30	16A	01.10			
RC-0957	190.80	198.40	16C	07.60			
RC-0958	137.90	139.30	16A	01.40			
RC-0958	140.40	146.50	16C	06.10			

OK, COMO -END

## NORTH DUMP EXPLORATION AREA 20 SEAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV001	60.03	60.91 20	00.88	24.20	25.60	7.5
EV001	62.90	64.33 20	01.43	19.30	26.90	8
EV001	67.68	69.45 20	01.77	20.80	24.00	7
EV002	21.62	23.32 20	01.70	14.20	28.20	7.5
EV002	25.00	26.07 20	01.07	13.50	27.80	2
EV002	28.17	28.96 20	00.79	27.30	26.50	6.5
EV002	29.76	30.79 20	01.03	12.10	30.50	8.5
EV011	9.10	9.60 20	00.50			
EV011	10.37	11.49 20	01.12			
EV011	13.02	13.93 20	00.91	19.80	28.80	7
EV017	62.10	65.98 20L	03.88	39.00	22.70	4.5
EV018	44.20	46.46 20L	02.26	31.90	24.40	6
EV019	1.50	5.00 20L	03.50			
EV021	162.20	164.88 20L	02.68	21.80	24.70	7.5
EV023	84.34	85.62 20	01.28	33.50	25.10	5
EV023	86.40	87.26 20	00.86			
EV023	91.30	93.10 20	01.80			
EV023	94.61	95.40 20	00.79	11.40	28.90	8
EV024	239.76	244.75 20	04.99	24.60	28.40	6.5
EV024	245.67	248.11 20	02.44	13.90	30.70	7
EV027	95.31	111.86 20	16.55	24.10	25.20	7.5
EV050	32.99	36.89 20	03.90	07.60	31.10	7.5
EV050	40.64	47.44 20	06.80	11.70	28.30	7.5
EV169	105.70	108.40 20	02.70			
EV169	110.90	113.40 20	02.50			
EV170	120.80	124.80 20	04.00			
EV170	125.70	128.60 20	02.90			
EV171	256.80	262.70 20	05.90			
EV172	132.70	136.20 20	03.50			
EV172	137.40	139.80 20	02.40			
EV173	77.80	81.60 20	03.80			
EV173	82.30	84.20 20	01.90			
EV174	194.40	197.60 20	03.20			
EV174	199.50	201.40 20	01.90			
EV175	196.50	201.40 20	04.90			
EV175	202.70	205.80 20	03.10			
EV178	223.20	223.80 20	00.60			
EV178	236.70	240.30 20	03.60			
EV179	179.90	185.70 20	05.80			
EV179	186.70	187.40 20	00.70			
EV181	1.60	6.20 20	04.60			
EV185	151.80	154.50 20	02.70	40.90	19.70	5.0
EV186	41.00	46.50 20	05.50	20.50	25.70	8.0
EV187	99.40	105.20 20	05.80	21.60	25.10	8.0
EV188	166.20	173.20 20	07.00	13.90	27.90	8.0
EV193	207.60	210.50 20	02.90			
EV194	146.90	150.80 20	03.90	15.90	28.90	7.5
EV194	167.20	170.20 20	03.00	22.00	25.10	7.5
EV196	122.40	127.00 20	04.60	11.90	28.00	8.0

## NORTH DUMP EXPLORATION AREA 20 SEAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		RAW FSI
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	
EV199	94.50	97.00 20	02.50	28.90	26.00	7.0
EV199	98.00	100.20 20L	02.20			
EV200	171.30	176.70 20	05.40	16.70	27.60	7.0
EV201	235.40	240.00 20	04.60	19.40	28.30	7.5
EV201	242.60	245.60 20L	03.00	12.00	30.40	7.0
EV202	104.20	108.60 20	04.40			
EV202	109.50	111.80 20L	02.30			
EV205	104.90	107.80 20	02.90			
EV205	110.80	113.20 20L	02.40			
EV206	179.10	181.60 20	02.50			
EV206	183.00	185.20 20L	02.20			
EV207	95.80	99.10 20	03.30			
EV207	103.80	110.20 20L	06.40			
EV208	133.90	140.00 20	06.10			
EV208	147.90	154.50 20	06.60			
EV209	248.40	255.20 20	06.80			
EV212	45.60	55.90 20	10.30	13.40	18.00	8.5
EV214	43.80	51.30 20	07.50	20.70	26.90	7.5
EV214	54.10	55.40 20L	01.30			
EV215	152.00	154.40 20	02.40			
EV215	152.00	157.90 20X	05.90			
EV215	155.40	157.50 20L	02.10			
EV216	212.80	216.80 20	04.00			
EV216	220.60	221.90 20	01.30			
EV218	101.40	103.90 20	02.50			
EV218	108.00	109.20 20L	01.20			
EV219	196.90	202.60 20	05.70			
EV219	205.80	208.70 20	02.90			
FC1303	269.20	272.80 20	03.60			
FC1303	276.30	278.10 20	01.80			
FC1304	112.60	113.60 20	01.00			
FC1304	116.00	117.00 20	01.00			
FC1304	117.90	119.00 20	01.10			
RC-0326	56.80	59.30 20	02.50	24.80	24.70	1
RC-0326	62.70	65.50 20	02.80	18.80	27.40	3
RC-0327	99.90	104.50 20	04.60	31.60		7
RC-0327	106.00	109.30 20	03.30	19.32		5.5
RC-0341	64.10	68.80 20	04.70	32.40	22.10	3.5
RC-0342	18.40	22.30 20U	03.90			
RC-0342	25.60	27.00 20L	01.40			
RC-0344	70.80	75.70 20	04.90	15.70	27.20	8
RC-0344	76.80	79.50 20	02.70			
RC-0490	15.10	16.70 20L	01.60	23.30		3
RC-0493	38.90	41.50 20L	02.60	21.60		7
RC-0497	10.70	12.80 20L	02.10	30.30		2
RC-0719	6.70	8.20 20L	01.50	33.05		NC
RC-0720	8.20	10.40 20L	02.20	25.25		5.5
RC-0721	6.10	7.60 20L	01.50	27.40		6.5
RC-0722	6.40	8.40 20L	02.00	22.25		6



## NORTH DUMP EXPLORATION AREA 20 SEAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
RC-0797	25.70	26.90 20	01.20			
RC-0797	28.70	30.30 20	01.60	48.00		
RC-0815	0.80	3.10 20L	02.30			
RC-0829	16.20	21.70 20U	05.50	25.90		6.2
RC-0832	15.20	16.70 20L	01.50	57.90		3.5
RC-0833	78.60	79.60 20L				
RC-0834	38.00	40.20 20L	02.20			
RC-0857	1.60	4.40 20L	02.80	32.50		0.0
RC-0864	152.40	154.90 20L	02.50			
RC-0865	54.80	56.70 20L	01.90	33.10		7.0
RC-0875	15.80	17.40 20L	01.60			
RC-0926	168.00	171.60 20L	03.60			
RC-0928	105.80	109.00 20L	03.20	21.40	26.95	8.0
RC-0929	14.30	15.90 20U	01.60			
RC-0929	22.40	25.80 20L	03.40			
RC-0930	85.00	86.90 20L	01.90			
RC-0930	85.00	88.60 20X	03.60	18.90	27.00	8.0
RC-0930	86.90	88.60 20L	01.70			
RC-0942	84.10	86.90 20	02.80			
RC-0943	58.30	59.40 20	01.10			
RC-0944	47.30	48.30 20L				
RC-0952	4.10	6.80 20	02.70			
RC-0952	11.20	12.30 20L	01.10			
RC-0953	35.40	36.50 20	01.10			
RC-0953	38.60	39.60 20L				
RC-0954	12.40	13.40 20				
RC-0955	32.70	35.60 20L	02.90			
RC-0956	147.80	151.40 20L	03.60			
RC-0957	170.90	174.90 20L	04.00			
RC-0958	111.60	115.20 20L	03.60			

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## NORTH DUMP EXPLORATION AREA 22 SI

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA	
	FROM	TO SEAM		RAW ASH %	RAW V. M. %
EV001	1.98	2.96 22	00.98		
EV001	5.79	7.50 22	01.71	22.30	
EV017	17.10	24.70 22UL	07.60	17.30	26.40
EV021	97.74	98.72 22U	00.98		
EV021	103.96	106.86 22L	02.90	13.70	29.00
EV023	34.90	38.44 22	03.54	23.30	25.80
EV023	43.68	45.29 22	01.61	08.20	28.00
EV024	186.69	189.79 22	03.10	11.50	29.50
EV024	194.52	196.69 22	02.17	05.50	31.20
EV027	56.06	61.33 22	05.27	09.60	28.50
EV169	43.20	46.50 22	03.30		
EV169	55.40	59.00 22	03.60		
EV170	76.10	78.40 22	02.30		
EV170	85.50	88.10 22	02.60		
EV171	221.40	223.90 22	02.50		
EV171	228.00	230.00 22	02.00		
EV172	98.80	101.70 22	02.90		
EV172	103.00	105.20 22	02.20		
EV173	39.00	42.20 22	03.20		
EV173	43.50	45.30 22	01.80		
EV174	156.70	159.20 22	02.50		
EV174	164.00	165.70 22	01.70		
EV176	58.50	60.10 22U	01.60		
EV176	63.70	65.40 22L	01.70		
EV178	183.10	184.00 22	00.90		
EV178	186.20	187.40 22	01.20		
EV179	148.40	153.80 22	05.40		
EV185	115.20	119.90 22	04.70	17.80	27.70
EV186	3.40	6.80 22	03.40	17.00	26.30
EV187	70.80	76.80 22	06.00	20.40	27.00
EV188	120.60	124.60 22	04.00	22.30	25.70
EV188	133.00	135.40 22L	02.40	13.50	30.30
EV193	173.60	175.20 22	01.60	28.20	25.90
EV193	179.40	183.00 22L	03.60		
EV194	109.90	111.20 22	01.30		
EV194	113.60	114.40 22	00.80		
EV194	119.40	120.70 22	01.30		
EV196	101.60	104.70 22	03.10		
EV199	41.20	45.10 22	03.90		
EV199	54.00	55.80 22	01.80	40.90	23.40
EV200	136.30	139.40 22	03.10	18.10	28.30
EV200	146.00	148.20 22	02.20	30.50	27.20
EV202	63.50	66.80 22	03.30		
EV202	68.10	70.50 22	02.40		
EV205	45.90	50.30 22	04.40	27.60	
EV205	56.10	57.90 22	01.80		
EV206	118.50	121.60 22	03.10		
EV206	126.80	128.60 22	01.80		

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NORTH DUMP EXPLORATION AREA 22 SEAM QUALITY

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV207	64.80	67.90 22	03.10			
EV207	71.60	73.50 22	01.90			
EV208	87.00	87.60 22	00.60			
EV208	88.40	89.80 22	01.40			
EV209	214.60	217.40 22	02.80			
EV209	220.80	222.70 22	01.90			
EV211	266.00	268.90 22	02.90			
EV211	270.20	275.40 22	05.20			
EV214	7.80	13.20 22	05.40	10.80	31.30	0.0
EV215	90.00	94.40 22	04.40			
EV215	104.40	107.00 22	02.60			
EV216	177.40	180.00 22	02.60	20.50		7.2
EV216	184.90	187.00 22	02.10			
EV218	51.20	54.60 22	03.40			
EV218	57.60	59.40 22	01.80			
EV219	153.40	157.20 22	03.80			
EV219	159.60	162.20 22L	02.60			
EV221	254.20	254.80 22	00.60			
EV221	258.30	259.10 22	00.80	24.20	26.90	6.5
FC1303	218.80	220.90 22	02.10			
FC1304	64.80	66.70 22	01.90			
FC1885	221.60	226.80 22	05.20			
FC1885	236.00	239.80 22	03.80			
RC-0327	58.50	62.40 22	03.90	21.10	27.60	7
RC-0327	66.40	68.70 22	02.30			7
RC-0339	160.80	168.20 22	07.40	38.30	30.00	3
RC-0340	148.10	176.50 22	28.40	18.60	27.90	7
RC-0340	191.00	200.20 22L	09.20			
RC-0341	27.70	31.50 22	03.80	51.20	18.10	2
RC-0344	17.00	24.70 22	07.70	12.60	29.20	8
RC-0501	2.70	7.60 22U	04.90	12.70		5
RC-0690	25.20	26.90 22U	01.70			
RC-0690	25.20	29.80 22	04.60			
RC-0690	27.60	29.80 22L	02.20			
RC-0698	7.20	12.00 22U	04.80	12.89		0.0
RC-0699	8.20	13.40 22U	05.20	16.53		3
RC-0732	35.60	37.40 22U	01.80	19.80		3.5
RC-0732	35.60	40.00 22	04.40			
RC-0732	37.90	40.00 22L	02.10			
RC-0734	32.30	34.10 22U	01.80	16.45		0.0
RC-0734	36.60	39.30 22L	02.70	15.10		0.0
RC-0738	15.30	19.60 22U	04.30	19.70		5.5
RC-0739	3.80	8.40 22U	04.60	25.45		6
RC-0740	2.20	6.70 22U	04.50	13.33		5
RC-0741	3.80	8.20 22U	04.40	18.60		1
RC-0742	2.80	7.50 22U	04.70	22.94		0.0
RC-0833	7.00	9.50 22U	02.50			
RC-0833	19.70	21.60 22L	01.90			

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NORTH DUMP EXPLORATION AREA 22 SEAM QUAL

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO	SEAM		RAW ASH %	RAW V. M. %	RAW FSI
RC-0864	83.00	85.20	22U	02.20	14.50	30.25	7.5
RC-0864	89.20	91.20	22L	02.00	19.30	30.05	7.0
RC-0925	74.40	76.10	22U	01.70			
RC-0925	85.80	87.20	22L	01.40	13.80	21.00	7.5
RC-0925	85.80	88.40	22L	02.60	13.70	30.80	7.5
RC-0925	87.20	88.40	22L	01.20	10.50	32.20	8.5
RC-0926	111.80	112.70	22U	00.90			
RC-0926	118.70	121.50	22L	02.80	09.60	27.00	6.0
RC-0928	50.80	57.20	22	06.40	28.25	25.15	6.0
RC-0930	63.80	67.80	22	04.00	17.60		7.5
RC-0942	23.10	24.40	22	01.30			
RC-0942	32.20	34.10	22	01.90	19.00	28.30	5.5
RC-0943	6.40	8.00	22	01.60			
RC-0943	8.80	10.00	22	01.20			
RC-0943	10.90	12.80	22	01.90			
RC-0945	65.20	68.30	22	03.10	23.40	26.60	1.0
RC-0945	76.60	78.90	22	02.30	46.20	20.50	3.5
RC-0956	105.60	106.70	22	01.10			
RC-0956	108.20	111.80	22	03.60			
RC-0957	132.90	136.90	22	04.00			
RC-0958	75.40	78.90	22	03.50			

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NORTH DUMP EXPLORATION AREA 25 SEAM QUALITY DATA

CLEAN PROX. DATA @ 1.50 S. G.

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		RAW FSI
	FROM	TO	SEAM		RAW ASH %	RAW V. M. %	
EV023	11.09	13.96	25	02.87	34.00	25.60	3.5
EV023	13.96	15.64	25	01.68	72.80	19.60	0.0
EV023	15.64	16.77	25	01.13	20.20	28.00	0.5
EV023	17.53	17.99	25	00.46			
EV024	155.49	162.04	25	06.55	22.80	27.20	7.5
EV025	209.16	209.58	25	00.42			
EV027	22.60	24.40	25	01.80			
EV027	28.40	31.70	25	03.30			
EV169	14.50	16.30	25	01.80			
EV170	51.30	54.00	25	02.70			
EV171	198.00	200.10	25	02.10			
EV172	63.50	69.00	25	05.50			
EV173	11.20	12.60	25	01.40			
EV173	15.50	16.30	25	00.80			
EV174	125.30	128.80	25	03.50			
EV175	93.10	101.70	25	08.60			
EV178	48.00	50.40	25L	02.40			
EV178	164.00	165.00	25	01.00			
EV178	164.00	168.30	25	04.30			
EV178	171.20	172.10	25	00.90			
EV179	114.30	114.80	25	00.50			
EV179	115.60	116.10	25	00.50			
EV179	117.50	118.80	25	01.30			
EV185	79.30	83.00	25	03.70	23.00	24.80	7.0
EV187	39.90	40.30	25	00.40			
EV187	44.80	45.60	25	00.80			
EV188	94.30	97.70	25	03.40	23.20	26.50	7.0
EV189	176.00	177.40	25	01.40			
EV193	146.80	151.40	25	04.60	29.20	26.40	6.0
EV199	14.00	17.80	25	03.80	38.80	23.70	5.0
EV200	114.00	116.70	25	02.70	22.80	27.60	7.0
EV201	94.40	101.60	25	07.20	24.90	27.30	6.0
EV202	30.30	31.30	25	01.00			
EV202	34.40	35.80	25	01.40			
EV203	199.20	202.20	25	03.00			
EV204	177.90	180.80	25	02.90			
EV205	12.40	15.10	25	02.70			
EV205	18.10	19.20	25	01.10			
EV205	22.40	24.80	25	02.40			
EV206	83.60	88.80	25	05.20			
EV207	36.40	40.90	25	04.50			
EV208	67.00	69.00	25	02.00	28.80		5.8
EV208	71.20	72.00	25	00.80	38.00		6.0
EV209	188.70	192.80	25	04.10			
EV210	37.00	39.60	25	02.60			
EV215	62.00	66.80	25	04.80			
EV216	146.20	149.90	25	03.70			
EV217	128.30	133.20	25	04.90			

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NORTH DUMP EXPLORATION AREA 25 SEAM QUALITY DATA

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV218	18.10	20.80 25	02.70			
EV218	23.20	25.00 25	01.80			
EV219	43.90	45.10 25	01.20			
EV219	46.00	48.20 25	02.20			
EV219	52.50	57.40 25	04.90			
EV220	81.80	86.50 25	04.70	28.59	26.67	6.5
EV221	233.30	234.80 25	01.50			
EV221	233.30	238.60 25	05.30	25.20	26.92	0.5
EV221	235.30	238.60 25	03.30			
EV221	240.80	241.90 25	01.10	25.00	26.50	7.0
FC1301	242.40	244.20 25	01.80			
FC1301	245.40	246.60 25	01.20			
FC1301	248.40	249.30 25	00.90			
FC1303	166.90	168.90 25	02.00			
FC1304	17.20	19.50 25	02.30			
FC1885	183.50	186.00 25	02.50			
FC1885	191.30	193.50 25	02.20			
RC-0327	25.30	28.90 25	03.60	23.40	25.10	0.0
RC-0327	29.80	31.80 25	02.00			
RC-0339	103.60	106.90 25	03.30	22.20	28.40	5
RC-0339	107.70	109.30 25	01.60			5
RC-0340	102.90	103.90 25				5
RC-0340	104.40	107.20 25	02.80	46.00	20.90	4
RC-0690	6.00	8.80 25	02.80			4
RC-0732	15.30	17.00 25	01.70	28.53		1
RC-0733	15.80	17.40 25	01.60	13.50		0.0
RC-0734	14.00	15.80 25	01.80	29.75		0.0
RC-0738	6.20	7.40 25	01.20			
RC-0864	62.90	67.20 25	04.30	35.70	25.22	6.0
RC-0925	58.10	59.70 25	01.60	14.10	30.90	8.0
RC-0926	85.10	87.60 25	02.50			
RC-0928	20.00	21.40 25	01.40	20.67	26.51	0.0
RC-0930	13.50	16.40 25	02.90	24.30		0.0
RC-0930	13.50	19.50 25X	06.00			
RC-0930	16.90	19.50 25	02.60	28.90		2.5
RC-0941	89.00	93.60 25	04.60	41.30	26.10	6.5
RC-0942	8.50	11.20 25	02.70	28.40	25.10	0.0
RC-0942	12.80	14.50 25	01.70	22.00	27.00	0.0
RC-0945	43.60	47.90 25	04.30	35.20	24.80	1.0
RC-0956	67.00	68.90 25	01.90			
RC-0957	87.20	89.20 25	02.00			
RC-0958	38.10	40.20 25	02.10			

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1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
NORTH DUMP EXPLORATION PROGRAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV176	58.50	60.10 22U	01.60			
EV176	63.70	65.40 22L	01.70			
EV176	111.80	113.00	01.20			
EV176	117.00	120.20 29	03.20	14.60	31.00	7.5
EV176	167.00	168.20 28	01.20	30.20	24.90	5.0
EV176	168.80	170.00 28	01.20	29.40	25.00	5.0
EV176	172.60	173.60 28	01.00			
EV184	20.10	21.00	00.90			
EV184	59.20	59.90	00.70			
EV184	60.00	63.40	03.40			
EV184	67.50	67.90	00.40			
EV185	8.30	9.20	00.90			
EV185	10.20	11.00	00.80			
EV185	41.80	42.40	00.60			
EV185	42.90	43.10	00.20			
EV185	53.60	55.60	02.00			
EV185	65.20	66.80	01.60			
EV185	70.10	70.80	00.70			
EV185	79.30	83.00 25	03.70	23.00	24.80	7.0
EV185	115.20	119.90 22	04.70	17.80	27.70	
EV185	151.80	154.50 20	02.70	40.90	19.70	5.0
EV185	168.50	169.10	00.60			
EV186	3.40	6.80 22	03.40	17.00	26.30	0.0
EV186	41.00	46.50 20	03.50	20.50	25.70	8.0
EV186	66.20	72.10 16	03.90	10.00	26.00	8.5
EV186	77.10	78.30 16L	01.20	17.70	23.80	8.0
EV187	6.30	7.20	00.90			
EV187	8.00	9.10	01.10			
EV187	20.70	21.70	01.00			
EV187	36.00	36.30	00.30			
EV187	39.90	40.30 25	00.40			
EV187	44.80	45.60 25	00.80			
EV187	70.80	76.80 22	06.00	20.40	27.00	8.0
EV187	99.40	105.20 20	05.80	21.60	25.10	8.0
EV187	142.50	147.80 16	05.30			
EV187	149.10	150.50 16L	01.40	16.50	27.20	8.0
EV188	0.60	1.60 29FW	01.00			
EV188	58.80	59.40	00.60			
EV188	60.60	62.00	01.40	21.40	31.00	6.5
EV188	64.40	67.80	03.40			
EV188	94.30	97.70 25	03.40	23.20	26.50	7.0
EV188	120.60	124.60 22	04.00	22.30	25.70	7.0
EV188	133.00	135.40 22L	02.40	13.50	30.30	7.0
EV188	166.20	173.20 20	07.00	13.90	27.90	8.0
EV188	215.60	220.10 16C	04.50			
EV188	215.60	223.80 16X	08.20	15.90	25.90	7.5
EV188	221.90	223.80 16E	01.90			

1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
NORTH DUMP EXPLORATION PROGRAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV189	1.80	3.30	01.50			
EV189	16.40	18.00	01.60			
EV189	20.20	21.40	01.20			
EV189	94.20	97.20 29	03.00	15.00	34.30	5.0
EV189	98.80	99.50	00.70			
EV189	141.00	143.00 28	02.00	12.80	33.60	5.5
EV189	176.00	177.40 25	01.40			
EV190	0.80	1.80	01.00			
EV190	7.60	8.70	01.10			
EV190	58.30	59.90	01.60			
EV190	60.60	61.40	00.80	39.80	24.70	4.0
EV190	73.10	74.60	01.50	25.50	29.00	6.5
EV190	89.50	90.20	00.70			
EV190	94.30	95.00	00.70			
EV191	37.20	40.20	03.00	33.30	26.90	6.0
EV191	41.00	43.00	02.00			
EV191	45.50	47.00	01.50	09.70	33.30	7.5
EV191	84.90	87.60 29	02.70	19.10	31.70	6.5
EV191	89.50	90.80 29	01.30			
EV191	92.50	96.40 29	03.90	15.50	31.80	7.0
EV191	97.90	102.60 29	04.70			
EV191	104.60	107.20 29	02.60	17.40	31.50	7.5
EV191	125.80	126.40	00.60			
EV191	127.10	128.20	01.10			
EV192	10.80	13.00	02.20			
EV192	17.90	20.40	02.50	32.80	25.10	0.0
EV192	84.80	85.20	00.40			
EV192	91.50	93.00	01.50	19.10	31.20	6.5
EV192	105.00	109.60	04.60	18.80	31.10	7.0
EV192	112.00	113.20	01.20			
EV193	7.60	9.00	01.40			
EV193	17.40	18.00	00.60			
EV193	19.40	20.50	01.10			
EV193	23.00	25.30	02.30			
EV193	58.00	61.00 29	03.00			
EV193	66.90	69.00 29A	02.10	11.80	31.30	7.0
EV193	106.90	110.20 28	03.30			
EV193	146.80	151.40 25	04.60	29.20	26.40	6.0
EV193	156.40	157.30	00.90			
EV193	162.80	163.60	00.80	21.20	29.30	8.0
EV193	167.70	168.80	01.10	29.20	26.00	7.0
EV193	173.60	175.20 22	01.60	28.20	25.90	7.0
EV193	179.40	183.00 22L	03.60			
EV193	184.40	185.20	00.80			
EV193	188.60	189.40	00.80			
EV193	190.80	191.90	01.10			
EV193	207.60	210.50 20	02.90			
EV193	243.20	248.20 16	05.00	32.80	24.20	5.5
EV193	249.20	250.60 16	01.40			



1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
NORTH DUMP EXPLORATION PROGRAM

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO	SEAM		RAW ASH %	RAW V.M. %	RAW FSI
EV194	23.00	24.50	28	01.50			
EV194	27.80	31.40	28	03.60	22.80	28.10	7.0
EV194	75.60	78.60		03.00			
EV194	87.30	89.20		01.90	33.50	24.00	4.0
EV194	92.60	93.80		01.20			
EV194	101.20	101.80		00.60			
EV194	109.90	111.20	22	01.30			
EV194	113.60	114.40	22	00.80			
EV194	119.40	120.70	22	01.30			
EV194	146.90	150.80	20	03.90	15.90	28.90	7.5
EV194	167.20	170.20	20	03.00	22.00	25.10	7.5
EV194	201.90	207.10	16	05.20			
EV194	201.90	209.60	16X	07.70	13.50	25.30	7.5
EV194	208.20	209.60	16L	01.40			
EV195	27.50	28.40		00.90			
EV195	41.00	42.00		01.00			
EV195	69.00	72.10	28	03.10	15.80	31.10	7.5
EV195	75.00	78.90	28	03.90	14.80	30.20	7.5
EV196	0.00	2.60		02.60			
EV196	11.00	12.10		01.10			
EV196	30.00	31.50		01.50	19.20	28.70	8.0
EV196	61.60	62.70		01.10			
EV196	101.60	104.70	22	03.10			
EV196	122.40	127.00	20	04.60	11.90	28.00	8.0
EV197	24.40	25.80	16	01.40	28.70	24.20	7.0
EV197	28.00	29.70	16	01.70	23.90	23.70	8.0
EV197	89.00	89.80		00.80			
EV197	90.60	93.70		03.10			
EV199	14.00	17.80	25	03.80	38.80	23.70	5.0
EV199	41.20	45.10	22	03.90			
EV199	54.00	55.80	22	01.80	40.90	23.40	4.5
EV199	94.50	97.00	20	02.50	28.90	26.00	7.0
EV199	98.00	100.20	20L	02.20			
EV199	131.90	137.80	16C	05.90	12.30	27.70	8.0
EV199	139.40	141.20	16E	01.80	17.90	22.80	7.0
EV199	149.00	150.00	16L	01.00			
EV200	9.00	9.90		00.90			
EV200	15.50	17.00		01.50	16.50	30.00	6.5
EV200	75.50	76.80		01.30			
EV200	75.50	81.90	28	06.40	34.80	24.20	3.5
EV200	77.50	79.50		02.00			
EV200	80.50	81.90		01.40			
EV200	114.00	116.70	25	02.70	22.80	27.60	7.0
EV200	117.50	118.20		00.70			
EV200	119.00	119.90		00.90			
EV200	125.00	126.20		01.20			
EV200	136.30	139.40	22	03.10	18.10	28.30	8.0
EV200	142.90	143.50		00.60			
EV200	146.00	148.20	22	02.20	30.50	27.20	4.5

1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
NORTH DUMP EXPLORATION PROGRAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV200	171.30	176.70 20	05.40	16.70	27.60	7.0
EV200	223.70	227.50	03.80			
EV200	223.70	229.90 16X	06.20	38.80	21.30	5.0
EV200	228.85	229.90	01.05			
EV201	3.40	5.40 29	02.00	17.30	27.20	0.0
EV201	25.40	27.20 29A	01.80	16.60	27.60	0.5
EV201	30.80	32.00	01.20			
EV201	61.00	63.10 28	02.10	34.20	26.60	5.0
EV201	89.60	90.40	00.80			
EV201	94.40	101.60 25	07.20	24.90	27.30	6.0
EV201	113.00	114.00	01.00			
EV201	235.40	240.00 20	04.60	19.40	28.30	7.5
EV201	242.60	245.60 20L	03.00	12.00	30.40	7.0
EV202	1.80	2.80	01.00			
EV202	30.30	31.30 25	01.00			
EV202	34.40	35.80 25	01.40			
EV202	39.80	40.90	01.10			
EV202	63.50	66.80 22	03.30			
EV202	68.10	70.50 22	02.40			
EV202	104.20	108.60 20	04.40			
EV202	109.50	111.80 20L	02.30			
EV202	143.70	144.70 16	01.00			
EV202	145.20	152.40 16	07.20			
EV202	154.50	156.80 16L	02.30			
EV202	186.40	187.80	01.40			
EV203	43.90	44.90	01.00			
EV203	50.20	52.00	01.80	11.10		6.5
EV203	57.40	58.80	01.40	33.80		5.5
EV203	58.30	59.40	01.10	16.80		7.0
EV203	111.50	118.40 29	06.90			
EV203	163.00	171.00 28	08.00			
EV203	199.20	202.20 25	03.00			
EV204	45.20	47.00	01.80			
EV204	50.00	51.20	01.20			
EV204	51.20	52.90	01.70			
EV204	52.40	54.30	01.90			
EV204	89.00	90.60 29	01.60			
EV204	142.80	143.50 28	00.70			
EV204	144.30	147.20 28	02.90			
EV204	148.20	149.40 28	01.20			
EV204	177.90	180.80 25	02.90			
EV205	12.40	15.10 25	02.70			
EV205	18.10	19.20 25	01.10			
EV205	22.40	24.80 25	02.40			
EV205	45.90	50.30 22	04.40	27.60		0.0
EV205	56.10	57.90 22	01.80			
EV205	104.90	107.80 20	02.90			
EV205	110.80	113.20 20L	02.40			

1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
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HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		RAW FSI
	FROM	TO	SEAM		RAW ASH %	RAW V. M. %	
EV205	149.20	149.90	16	00.70			
EV205	150.50	155.90	16C	05.40			
EV205	161.00	162.40	16L	01.40			
EV206	56.00	59.50	28	03.50			
EV206	64.30	64.90		00.60	26.50		
EV206	83.60	88.80	25	05.20			
EV206	94.90	98.80		03.90			
EV206	102.40	103.40		01.00			
EV206	118.50	121.60	22	03.10			
EV206	126.80	128.60	22	01.80			
EV206	179.10	181.60	20	02.50			
EV206	183.00	185.20	20L	02.20			
EV206	211.00	212.00	16A	01.00			
EV206	212.50	218.80	16C	06.30			
EV206	220.30	221.90	16L	01.60			
EV206	239.00	239.70		00.70			
EV206	240.80	241.60		00.80			
EV207	2.40	3.60		01.20			
EV207	36.40	40.90	25	04.50			
EV207	64.80	67.90	22	03.10			
EV207	71.60	73.50	22	01.90			
EV207	95.80	99.10	20	03.30			
EV207	103.80	110.20	20L	06.40			
EV207	141.60	148.70	16	07.10			
EV207	151.30	152.80	16L	01.50			
EV208	0.00	1.00		01.00			
EV208	35.00	36.50		01.50			
EV208	58.00	58.80		00.80			
EV208	67.00	69.00	25	02.00	28.80		5.8
EV208	71.20	72.00	25	00.80	38.00		6.0
EV208	87.00	87.60	22	00.60			
EV208	88.40	89.80	22	01.40			
EV208	104.90	107.00		02.10			
EV208	116.60	117.50		00.90			
EV208	133.90	140.00	20	06.10			
EV208	147.90	154.50	20	06.60			
EV208	190.00	198.70	16	08.70			
EV209	32.50	34.00		01.50			
EV209	38.10	39.20		01.10			
EV209	46.40	48.60		02.20			
EV209	67.00	67.90		00.90			
EV209	92.80	93.80		01.00			
EV209	97.00	99.20	29	02.20			
EV209	151.60	158.00	28	06.40			
EV209	188.70	192.80	25	04.10			
EV209	214.60	217.40	22	02.80			
EV209	220.80	222.70	22	01.90			
EV209	248.40	255.20	20	06.80			
EV209	296.30	299.10	16	02.80			
EV209	300.00	302.30	16	02.30			

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HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		RAW FSI
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	
EV210	6.00	7.70	01.70			
EV210	37.00	39.60 25	02.60			
EV211	7.90	10.10	02.20			
EV211	23.50	24.30	00.80	16.30		6.5
EV211	30.80	31.20	00.40	29.40		3.3
EV211	61.20	62.40	01.20	38.80		6.5
EV211	73.50	74.30	00.80	44.90		1.0
EV211	85.80	89.00	03.20			
EV211	90.60	91.20	00.60			
EV211	93.10	94.30	01.20	23.20		5.5
EV211	98.50	99.20	00.70			
EV211	109.60	110.30	00.70			
EV211	115.40	116.00	00.60			
EV211	146.80	149.60	02.80	24.70		7.0
EV211	154.00	156.10 29	02.10			
EV211	182.40	183.60	01.20			
EV211	194.30	195.00	00.70	34.00		6.8
EV211	196.50	197.80 28	01.30	30.10		5.0
EV211	201.00	202.20 28	01.20			
EV211	266.00	268.90 22	02.90			
EV211	270.20	275.40 22	05.20			
EV211	270.20	278.00	07.80			
EV211	276.40	278.00	01.60			
EV212	42.20	43.70	01.50	45.40	19.50	
EV212	45.60	55.90 20	10.30	13.40	18.00	8.5
EV212	90.40	97.40 16	07.00	09.80	26.30	7.5
EV212	105.50	107.00 16L	01.50			
EV214	7.80	13.20 22	05.40	10.80	31.30	0.0
EV214	43.80	51.30 20	07.50	20.70	26.90	7.5
EV214	54.10	55.40 20L	01.30			
EV214	86.00	93.00 16	07.00	27.90	24.80	6.5
EV214	96.30	98.20 16L	01.90	40.70	19.50	4.0
EV215	30.80	34.00 28	03.20			
EV215	38.70	39.30	00.60			
EV215	62.00	66.80 25	04.80			
EV215	90.00	94.40 22	04.40			
EV215	104.40	107.00 22	02.60			
EV215	111.90	113.60	01.70			
EV215	152.00	154.40 20	02.40			
EV215	152.00	157.90 20X	05.90			
EV215	155.40	157.50 20L	02.10			
EV215	185.90	187.80 16	01.90			
EV215	185.90	191.80 16	05.90			
EV215	187.80	191.80 16	04.00			
EV215	194.30	196.10 16L	01.80	34.00		4.0
EV216	43.00	44.00	01.00			
EV216	47.90	49.80 29	01.90			
EV216	109.10	113.80 28	04.70			

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HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		RAW FSI
	FROM	TO	SEAM		ASH %	RAW V.M. %	
EV216	146.20	149.90	25	03.70			
EV216	177.40	180.00	22	02.60	20.50		7.2
EV216	184.90	187.00	22	02.10			
EV216	212.80	216.80	20	04.00			
EV216	220.60	221.90	20	01.30			
EV217	9.50	10.50		01.00			
EV217	14.30	16.00		01.70	12.30		0.0
EV217	19.20	21.70		02.50			
EV217	26.90	30.80	29	03.90			
EV217	48.20	50.00	29A	01.80			
EV217	99.70	102.50	28	02.80			
EV217	128.30	133.20	25	04.90			
EV217	137.40	138.00		00.60			
EV218	18.10	20.80	25	02.70			
EV218	23.20	25.00	25	01.80			
EV218	29.10	30.20		01.10			
EV218	51.20	54.60	22	03.40			
EV218	57.60	59.40	22	01.80			
EV218	101.40	103.90	20	02.50			
EV218	108.00	109.20	20L	01.20			
EV219	5.20	9.60	28	04.40			
EV219	13.20	13.90		00.70			
EV219	33.30	34.80		01.50			
EV219	43.90	45.10	25	01.20			
EV219	43.90	48.20		04.30			
EV219	46.00	48.20	25	02.20			
EV219	52.50	57.40	25	04.90			
EV219	66.80	67.70		00.90			
EV219	153.40	157.20	22	03.80			
EV219	159.60	162.20	22L	02.60			
EV219	196.90	202.60	20	05.70			
EV219	205.80	208.70	20	02.90			
EV219	213.80	214.40		00.60			
EV219	253.40	254.50	16	01.10			
EV219	255.50	262.60	16	07.10			
EV219	255.50	266.30		10.80			
EV219	264.00	266.30	16L	02.30			
EV220	13.80	15.40		01.60	09.16	33.20	7.5
EV220	47.40	50.10	28	02.70	32.59	26.21	5.0
EV220	53.60	54.20		00.60	26.11	26.92	5.5
EV220	74.60	75.30		00.70	09.62	30.67	5.0
EV220	81.80	86.50	25	04.70	28.59	26.67	6.5
EV221	6.20	7.60		01.40			
EV221	12.80	14.00		01.20	50.90	20.80	0.0
EV221	15.60	16.60		01.00			
EV221	17.80	18.30		00.50	17.80	30.60	1.0
EV221	23.90	24.80		00.90			
EV221	33.20	34.00		00.80	11.60	29.20	2.5

1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
 NORTH DUMP EXPLORATION PROGRAM

HOLE #	INTERCEPT DATA		VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO SEAM		RAW ASH %	RAW V. M. %	RAW FSI
EV221	41.00	41.50	00.50			
EV221	66.70	69.60	02.90	41.20	24.90	4.0
EV221	74.20	80.70	06.50	18.46	32.15	7.5
EV221	198.20	199.20 28	01.00	18.69	31.21	8.0
EV221	233.30	234.80 25	01.50			
EV221	233.30	238.60 25	05.30	25.20	26.92	0.5
EV221	235.30	238.60 25	03.30			
EV221	240.80	241.90 25	01.10	25.00	26.50	7.0
EV221	254.20	254.80 22	00.60			
EV221	258.30	259.10 22	00.80	24.20	26.90	6.5
EV221	260.40	262.20	01.80	24.00	27.60	8.0
RC-0344	17.00	24.70 22	07.70	12.60	29.20	8
RC-0344	70.80	75.70 20	04.90	15.70	27.20	8
RC-0344	76.80	79.50 20	02.70			8
RC-0344	134.90	144.10 16	09.20			
RC-0344	147.40	148.30 16L	00.90			
RC-0344	150.00	151.00 16L	01.00			
RC-0864	5.50	8.00 29L	02.50			
RC-0864	12.60	14.80 00	02.20	70.30		0.0
RC-0864	32.00	34.60 28U	02.60	12.40		0.0
RC-0864	35.60	37.40 28L	01.80	31.30		4.0
RC-0864	52.40	54.60 27	02.20	30.50	24.24	0.5
RC-0864	62.90	67.20 25	04.30	35.70	25.22	6.0
RC-0864	83.00	85.20 22U	02.20	14.50	30.25	7.5
RC-0864	89.20	91.20 22L	02.00	19.30	30.05	7.0
RC-0864	152.40	154.90 20L	02.50			
RC-0864	184.50	185.50 17	01.00	64.40		3.0
RC-0864	192.90	198.40 16C	05.50			
RC-0864	199.50	203.10 16E	03.60			
RC-0864	206.00	207.20 16L	01.20	16.50		5.5
RC-0865	54.80	56.70 20L	01.90	33.10		7.0
RC-0865	82.40	83.80 17	01.40			
RC-0865	114.80	120.40 16C	05.60	13.10		6.9
RC-0865	121.20	124.20 16E	03.00	39.60		0.5
RC-0865	128.10	129.40 16L	01.30			
RC-0925	3.40	6.20 29L	02.80			
RC-0925	38.40	40.90 28U	02.50	07.80	32.10	5.0
RC-0925	38.40	43.60 28X	05.20			5.0
RC-0925	40.90	43.60 28L	02.70	12.50	29.20	6.0
RC-0925	48.40	50.80 27	02.40	15.90	28.50	3.0
RC-0925	58.10	59.70 25	01.60	14.10	30.90	8.0
RC-0925	74.40	76.10 22U	01.70			
RC-0925	85.80	87.20 22L	01.40	13.80	21.00	7.5
RC-0925	85.80	88.40 22L	02.60	13.70	30.80	7.5
RC-0925	87.20	88.40 22L	01.20	10.50	32.20	8.5
RC-0926	28.80	31.10 29U	02.30			
RC-0926	37.60	40.00 29L	02.40			

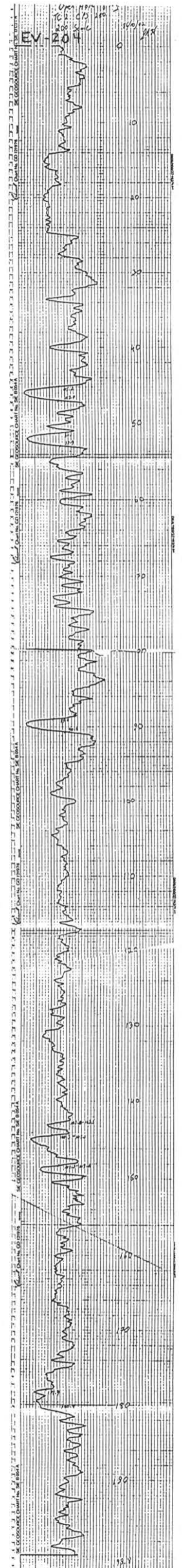
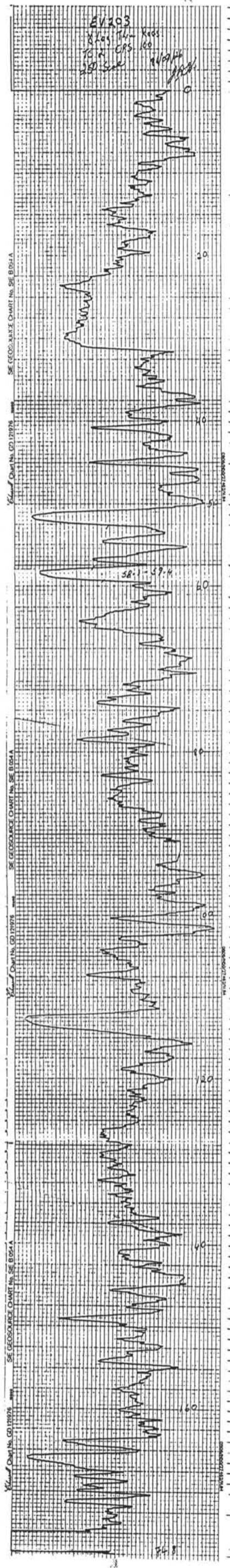
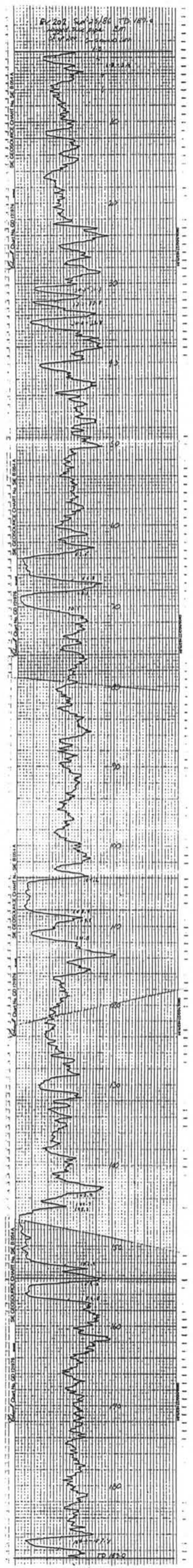
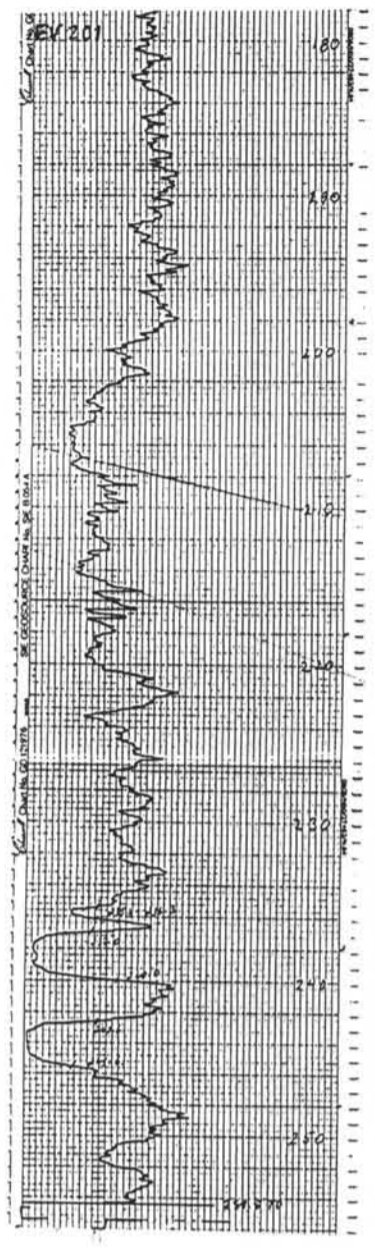
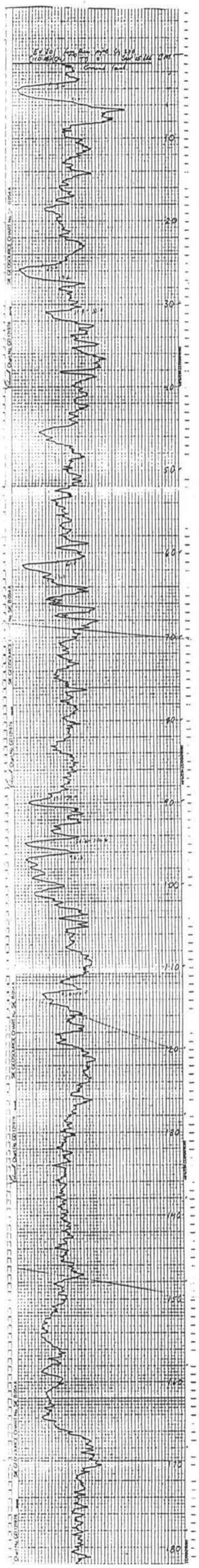
1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
NORTH DUMP EXPLORATION PROGRAM

HOLE #	INTERCEPT DATA			VERTICAL THICKNESS	RAW PROX. DATA		
	FROM	TO	SEAM		RAW ASH %	RAW V. M. %	RAW FSI
RC-0926	65.00	66.40	28U	01.40			
RC-0926	65.00	70.40	28X	05.40			
RC-0926	67.20	70.40	28L	03.20			
RC-0926	74.30	76.60	27	02.30			
RC-0926	85.10	87.60	25	02.50			
RC-0926	95.80	97.40	00	01.60			
RC-0926	111.80	112.70	22U	00.90			
RC-0926	118.70	121.50	22L	02.80	09.60	27.00	6.0
RC-0926	168.00	171.60	20L	03.60			
RC-0926	205.20	206.70	16A	01.50	13.56	27.23	8.0
RC-0926	207.20	217.60	16C	10.40	33.20	23.30	7.0
RC-0927	18.60	21.90	29L	03.30	08.10	32.20	0.0
RC-0927	48.80	50.30	28U	01.50	20.40		6.5
RC-0927	48.80	53.80	28X	05.00	16.00	29.30	6.0
RC-0927	50.80	53.80	28L	03.00	20.40	28.90	6.5
RC-0927	58.40	60.70	27	02.30	25.50	28.30	4.5
RC-0927	68.20	69.90		01.70			
RC-0928	11.10	13.00	27	01.90	15.20	29.78	0.0
RC-0928	20.00	21.40	25	01.40	20.67	26.51	0.0
RC-0928	50.80	57.20	22	06.40	28.25	25.15	6.0
RC-0928	84.20	85.80		01.60	26.00	25.60	7.5
RC-0928	105.80	109.00	20L	03.20	21.40	26.95	8.0
RC-0928	125.80	127.50	17	01.70	11.42	30.45	8.5
RC-0928	145.20	153.00	16C	07.80			
RC-0928	145.20	157.50	16X	12.30	11.61	27.66	8.0
RC-0928	154.20	155.60	16E	01.40			
RC-0928	156.40	157.50	16E	01.10			
RC-0928	163.80	165.20	16L	01.40			
RC-0929	14.30	15.90	20U	01.60			
RC-0929	22.40	25.80	20L	03.40			
RC-0929	33.40	34.30		00.90			
RC-0929	49.40	50.60	17	01.20			
RC-0929	62.10	69.60	16C	07.50	08.42	27.86	7.5
RC-0929	82.00	83.80	16L	01.80	34.80		7.0
RC-0930	13.50	16.40	25	02.90	24.30		0.0
RC-0930	13.50	19.50	25X	06.00			
RC-0930	16.90	19.50	25	02.60	28.90		2.5
RC-0930	26.40	28.00		01.60			
RC-0930	37.40	38.10		00.70			
RC-0930	55.90	57.50		01.60			
RC-0930	63.80	67.80	22	04.00	17.60		7.5
RC-0930	85.00	86.90	20L	01.90			
RC-0930	85.00	88.60	20X	03.60	18.90	27.00	8.0
RC-0930	86.90	88.60	20L	01.70			
RC-0930	112.80	113.50	16A	00.70	16.60		7.5
RC-0930	112.80	120.40	16X	07.60			
RC-0930	114.80	120.40	16C	05.60	16.60		7.5
RC-0930	121.00	123.80	16E	02.80	16.60		7.5

1986 DRILLHOLE SAMPLE RESULTS SUMMARY  
NORTH DUMP EXPLORATION PROGRAM

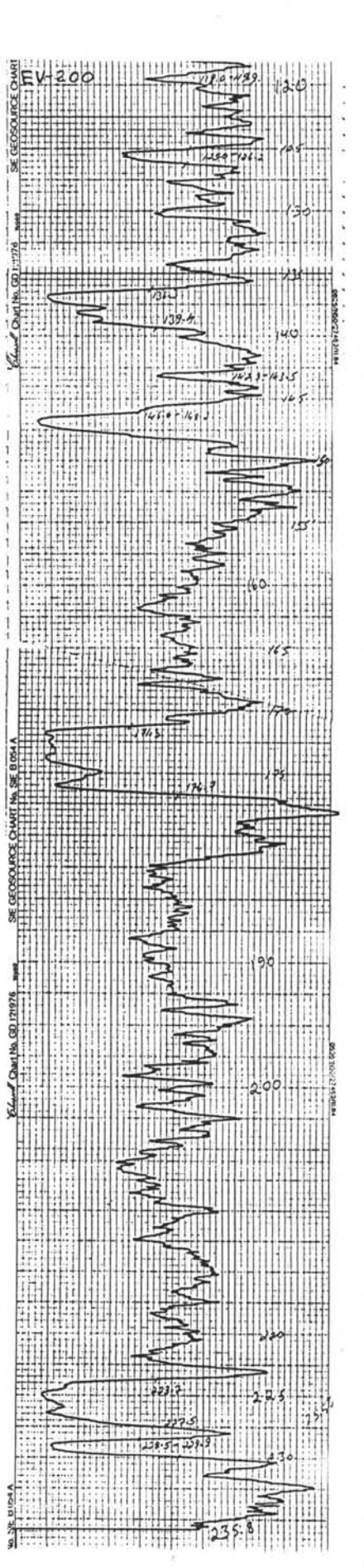
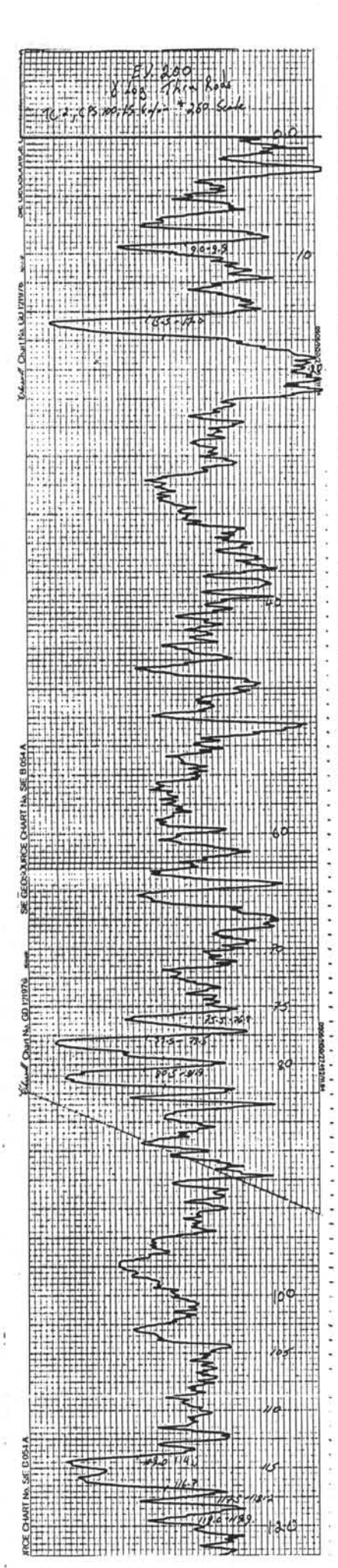
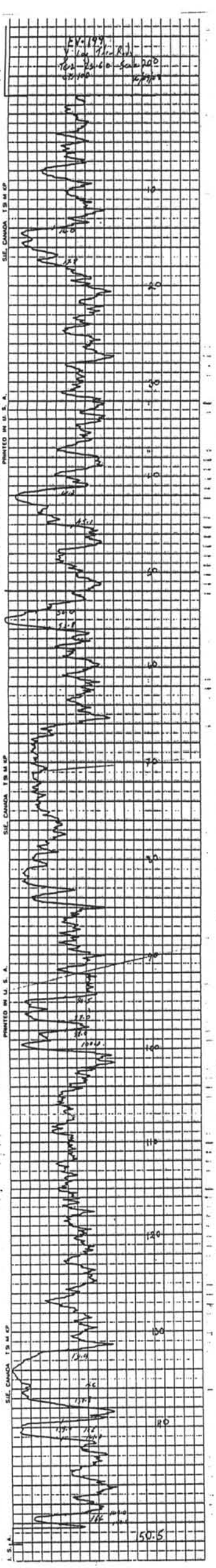
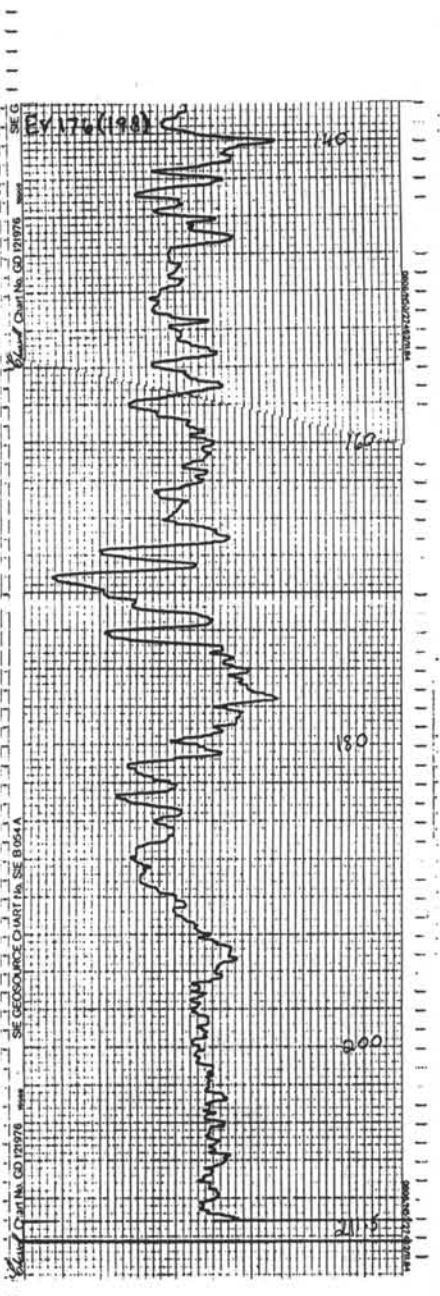
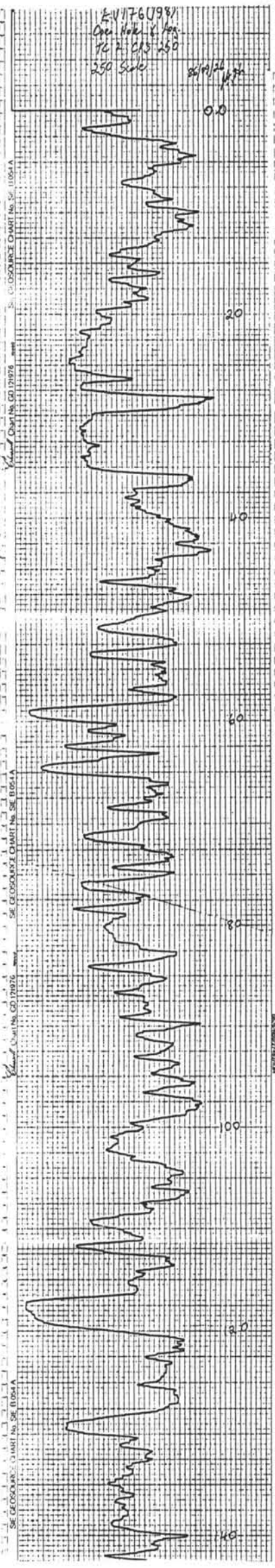
HOLE #	INTERCEPT DATA			RAW PROX. DATA			
	FROM	TO	SEAM	VERTICAL THICKNESS	RAW ASH %	RAW V. M. %	RAW FSI
RC-0941	0.00	1.00	30	01.00	22.60	28.70	6.5
RC-0941	62.00	65.60	28	03.60	23.20	28.90	4.5
RC-0941	67.80	68.60	28	00.80	32.30	25.90	6.0
RC-0941	89.00	93.60	25	04.60	41.30	26.10	6.5
RC-0942	8.50	11.20	25	02.70	28.40	25.10	0.0
RC-0942	12.80	14.50	25	01.70	22.00	27.00	0.0
RC-0942	23.10	24.40	22	01.30			
RC-0942	32.20	34.10	22	01.90	19.00	28.30	5.5
RC-0942	48.00	50.00		02.00	05.50	26.70	2.5
RC-0942	84.10	86.90	20	02.80			
RC-0942	124.90	131.80	16	06.90	18.90	27.90	7.5
RC-0942	135.00	136.60	16L	01.60			
RC-0943	6.40	8.00	22	01.60			
RC-0943	8.80	10.00	22	01.20			
RC-0943	10.90	12.80	22	01.90			
RC-0943	58.30	59.40	20	01.10			
RC-0943	105.90	113.00	16	07.10	24.30	23.80	5.5
RC-0943	115.60	117.20	16L	01.60	12.40		7.0
RC-0944	47.30	48.30	20L	01.00			
RC-0944	75.60	84.20	16	08.60			
RC-0945	10.40	11.20	28	00.80			
RC-0945	16.70	17.20	28	00.50			
RC-0945	19.50	20.00		00.50			
RC-0945	43.60	47.90	25	04.30	35.20	24.80	1.0
RC-0945	65.20	68.30	22	03.10	23.40	26.60	1.0
RC-0945	76.60	78.90	22	02.30	46.20	20.50	3.5
RC-0945	165.90	170.40	16	04.50	59.50	17.00	1.0
RC-0952	4.10	6.80	20	02.70			7.0
RC-0952	11.20	12.30	20L	01.10			7.0
RC-0952	39.70	48.20	16	08.50	21.25	26.46	8.0
RC-0952	55.60	57.20	16L	01.60	32.70	23.52	6.5
RC-0953	14.40	15.70		01.30			
RC-0953	35.40	36.50	20	01.10			
RC-0953	38.60	39.60	20L	01.00			
RC-0953	93.80	100.50	16	06.70			
RC-0953	103.60	105.30	16L	01.70			
RC-0954	12.40	13.40	20	01.00			
RC-0954	61.00	62.20	16A	01.20			
RC-0954	62.60	68.60	16C	06.00			
RC-0954	76.60	78.20	16L	01.60			
RC-0955	32.70	35.60	20L	02.90			
RC-0955	71.80	73.20	16A	01.40			
RC-0955	73.80	81.40	16C	07.60			
RC-0955	84.30	86.40	16L	02.10			
RC-0956	4.20	7.80	29U	03.60			
RC-0956	11.50	14.70	29L	03.20			
RC-0956	43.60	44.60	28	01.00			
RC-0956	57.00	59.60	27	02.60			
RC-0956	67.00	68.90	25	01.90			
RC-0956	69.90	70.60		00.70			
RC-0956	72.20	73.00		00.80			
RC-0956	74.40	75.20		00.80			
RC-0956	82.20	83.10		00.90			
RC-0956	87.80	89.40	27	01.60			





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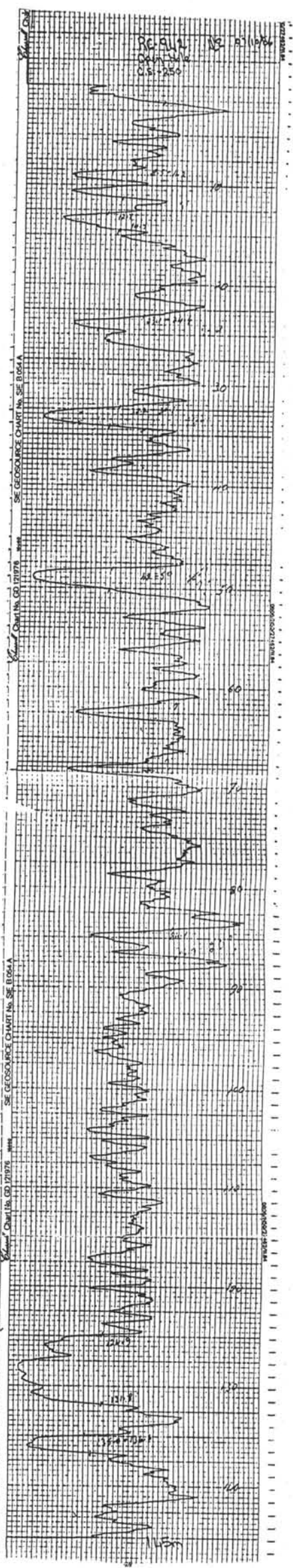
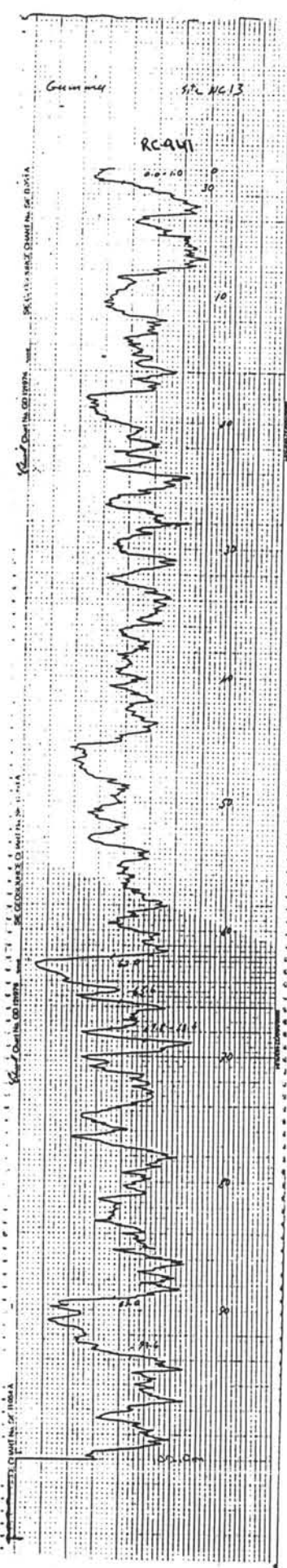
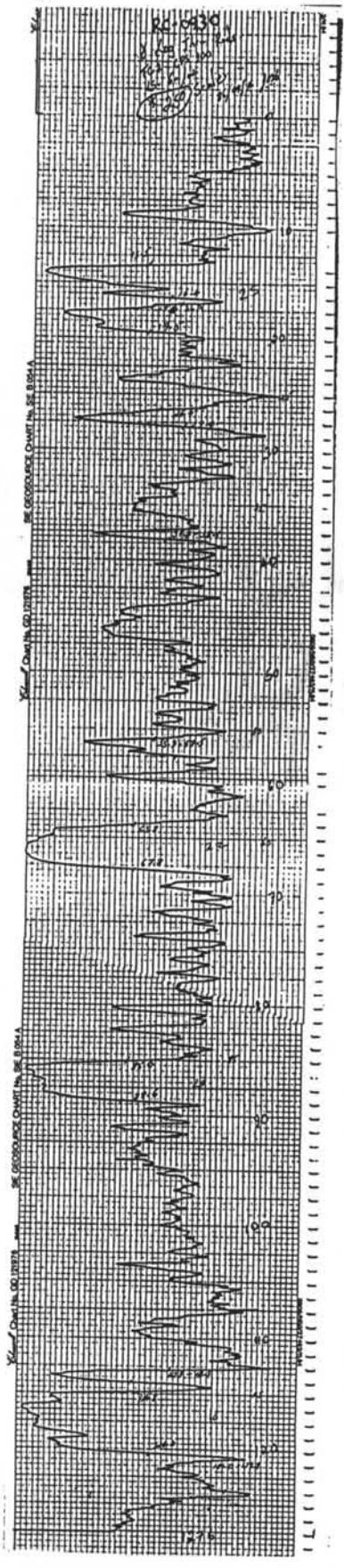
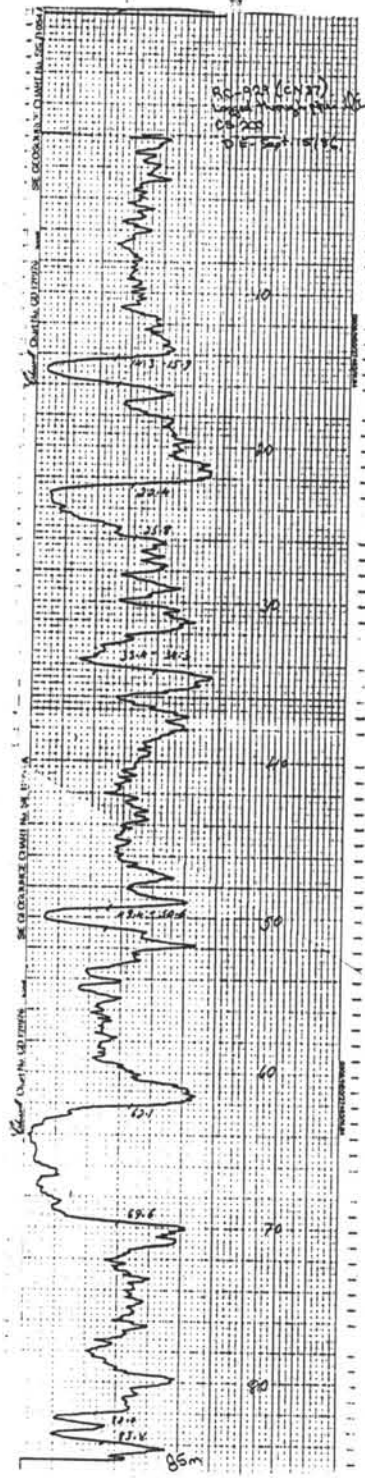
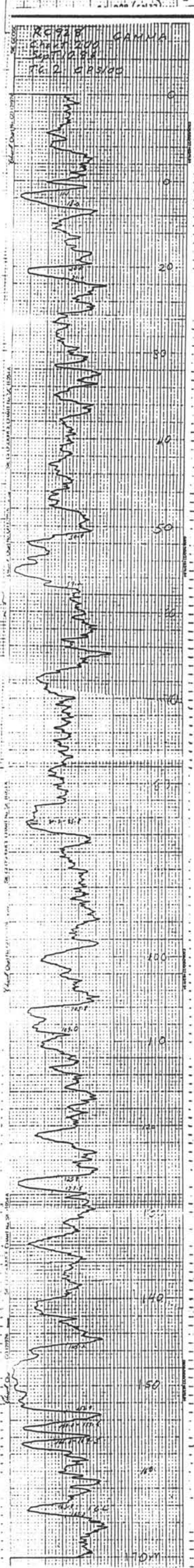
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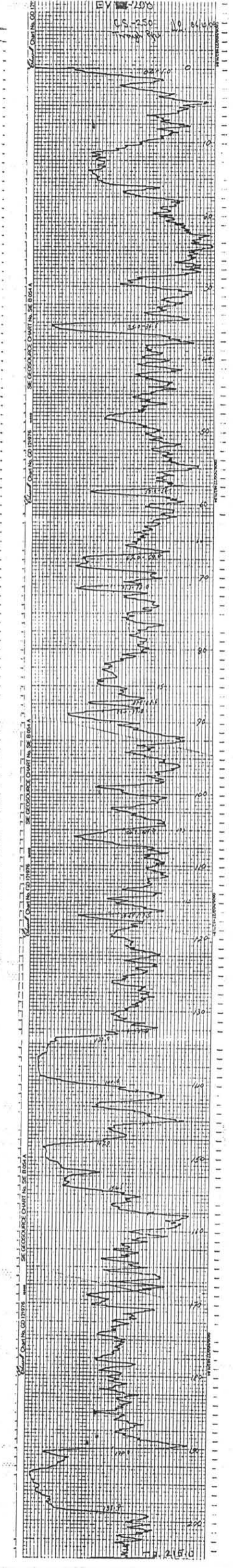
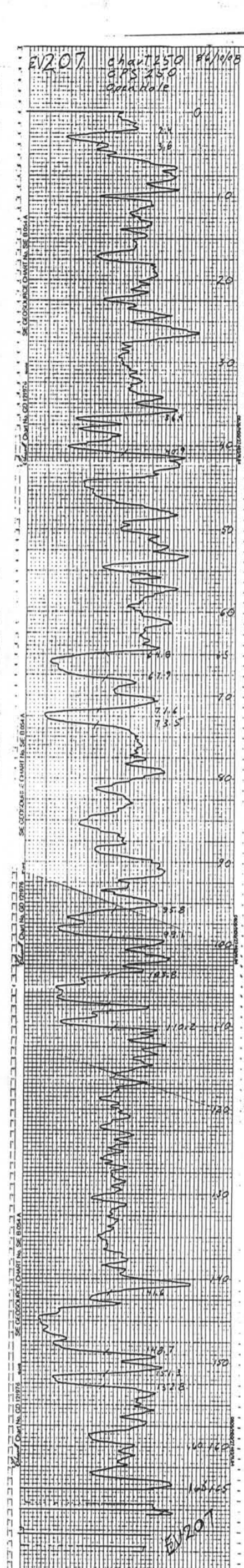
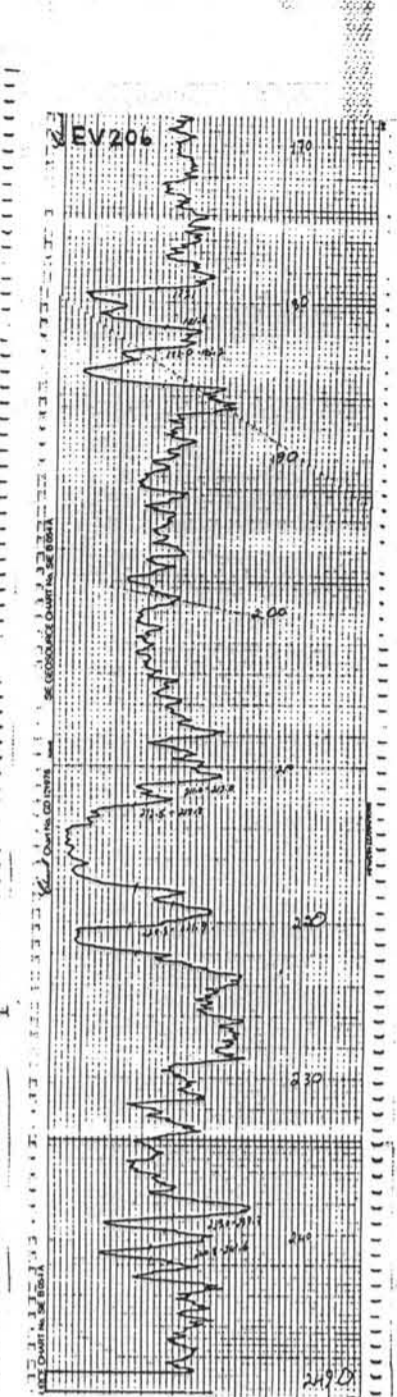
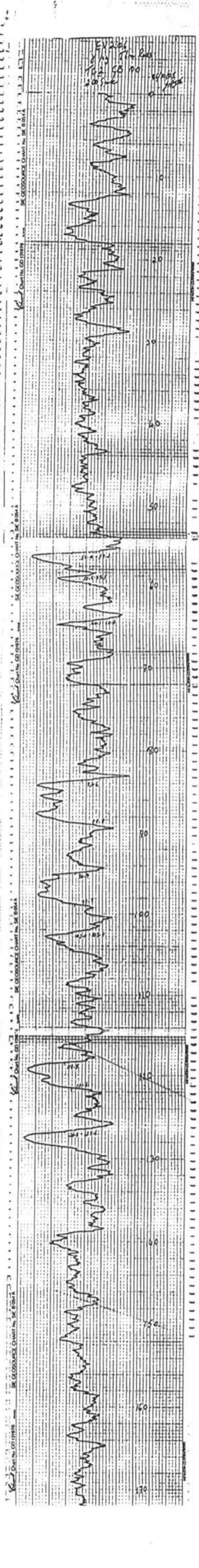
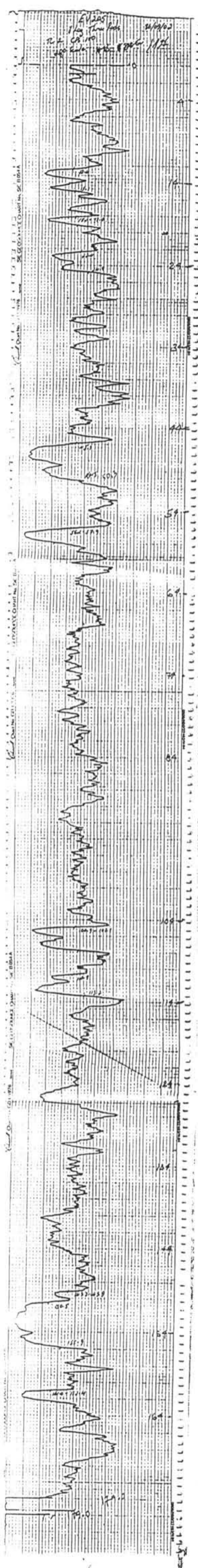






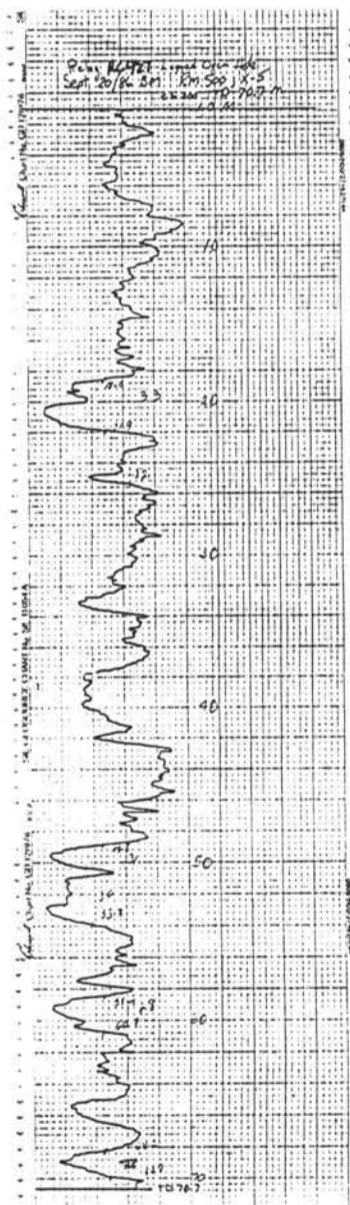
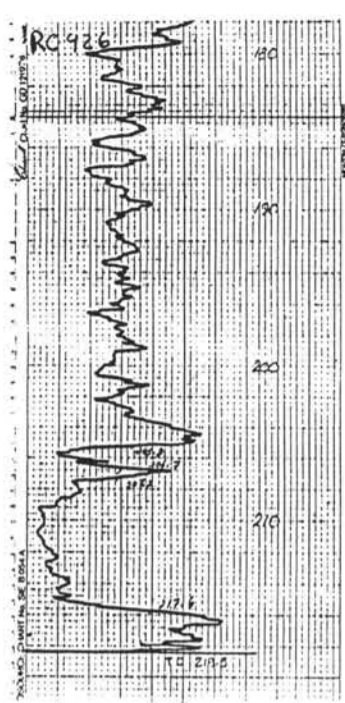
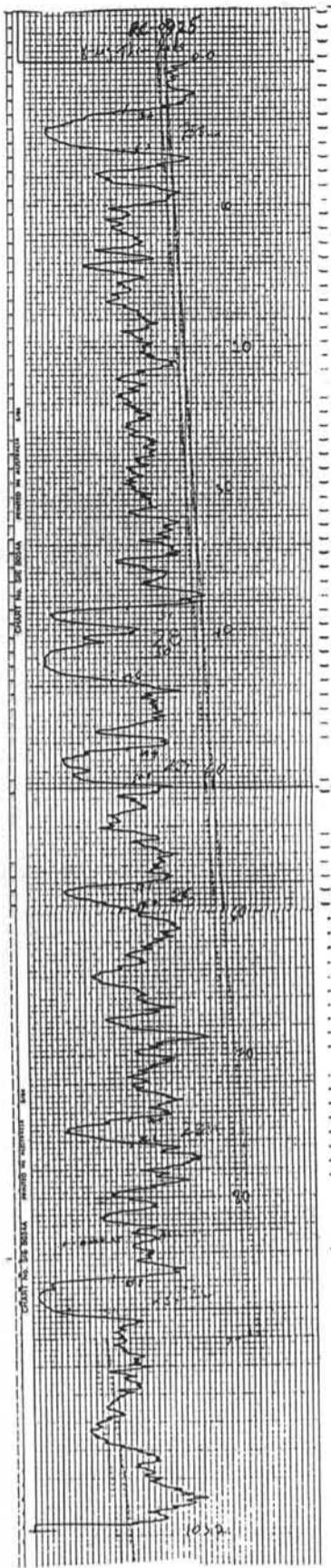
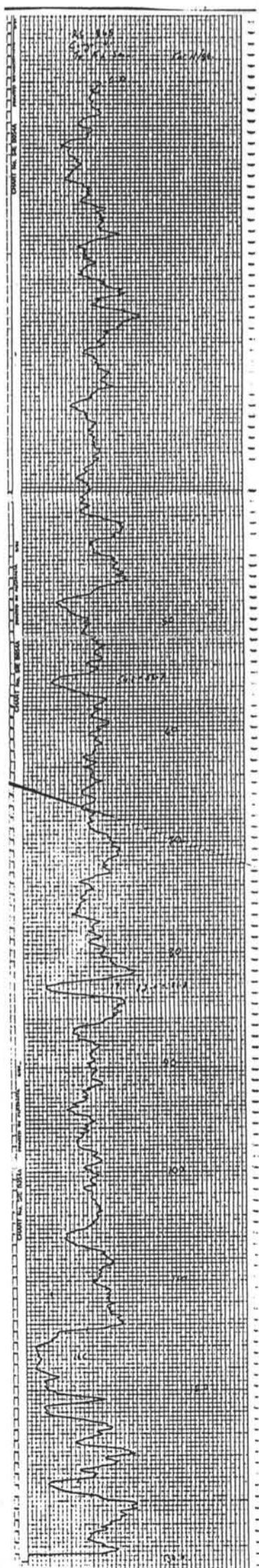
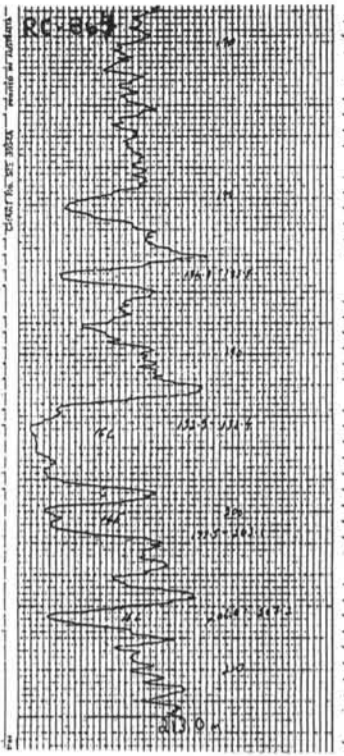
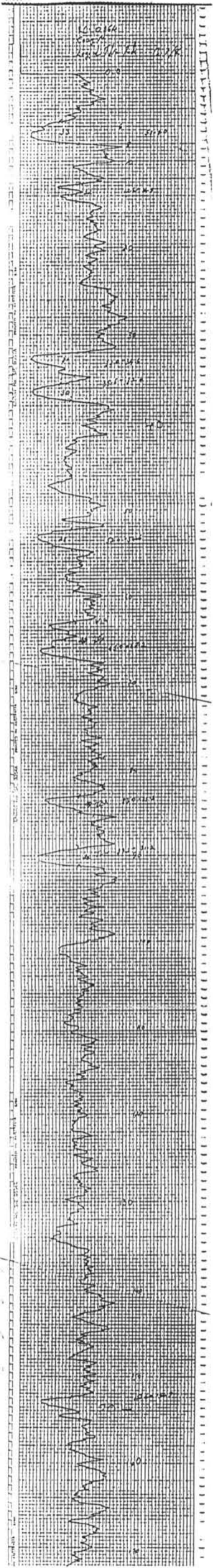
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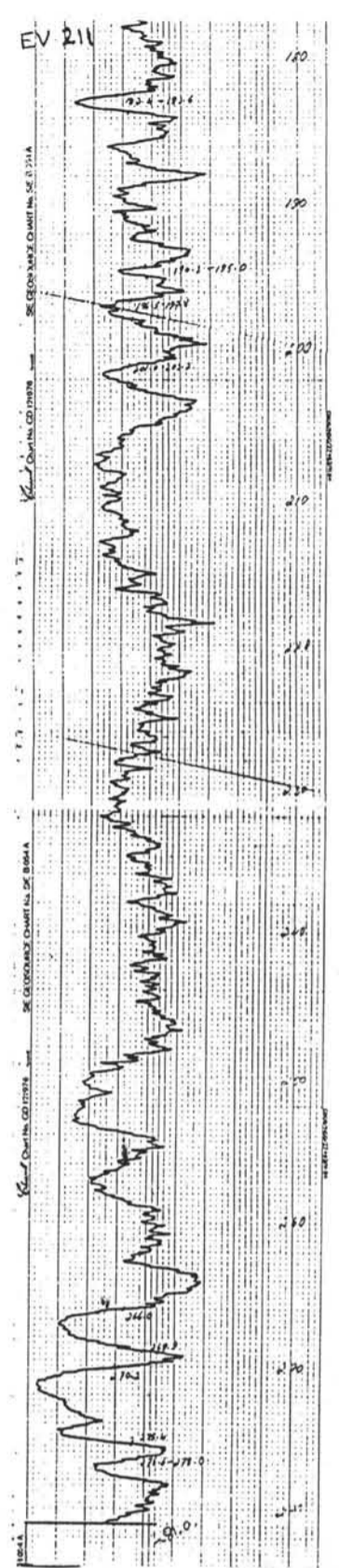
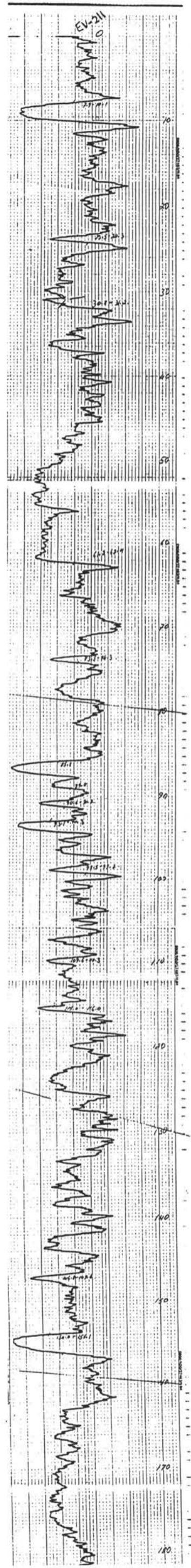
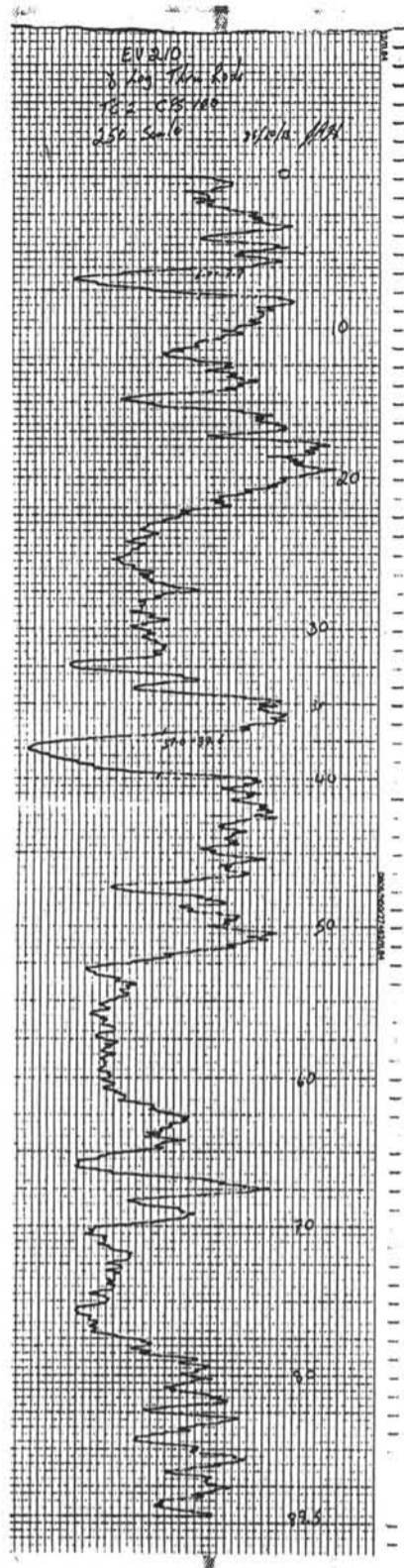
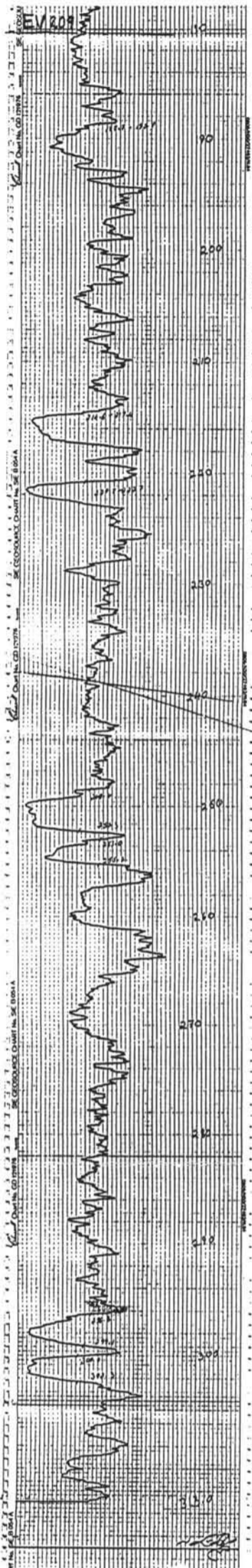
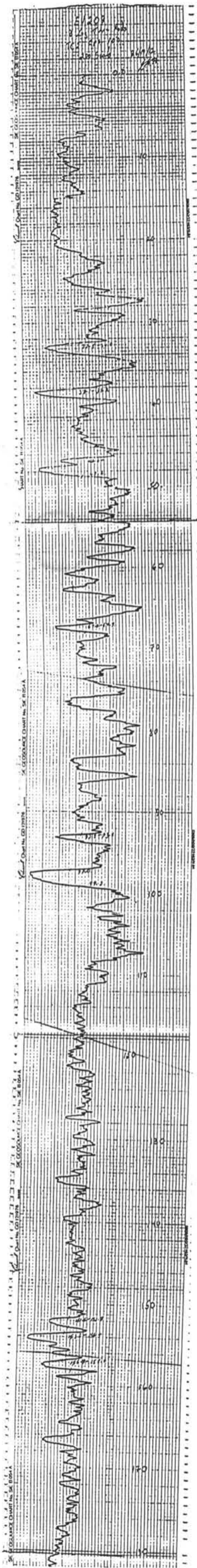






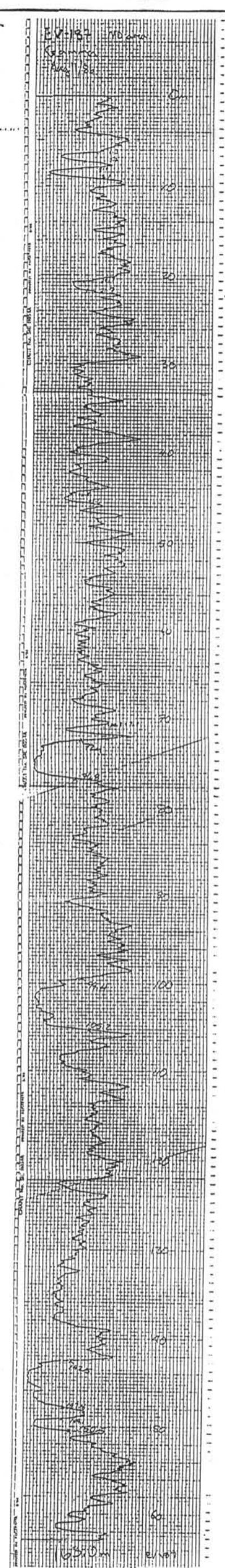
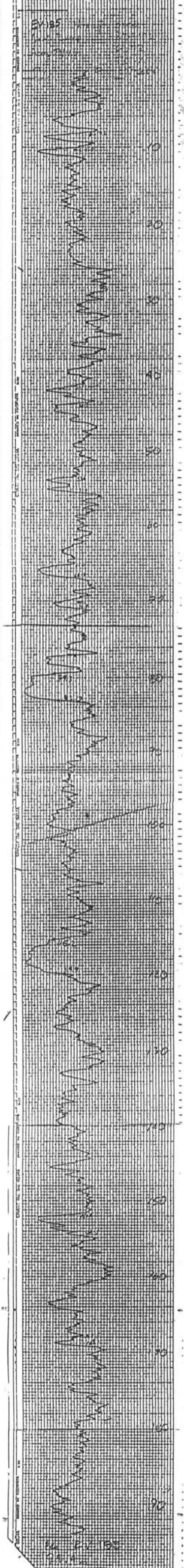
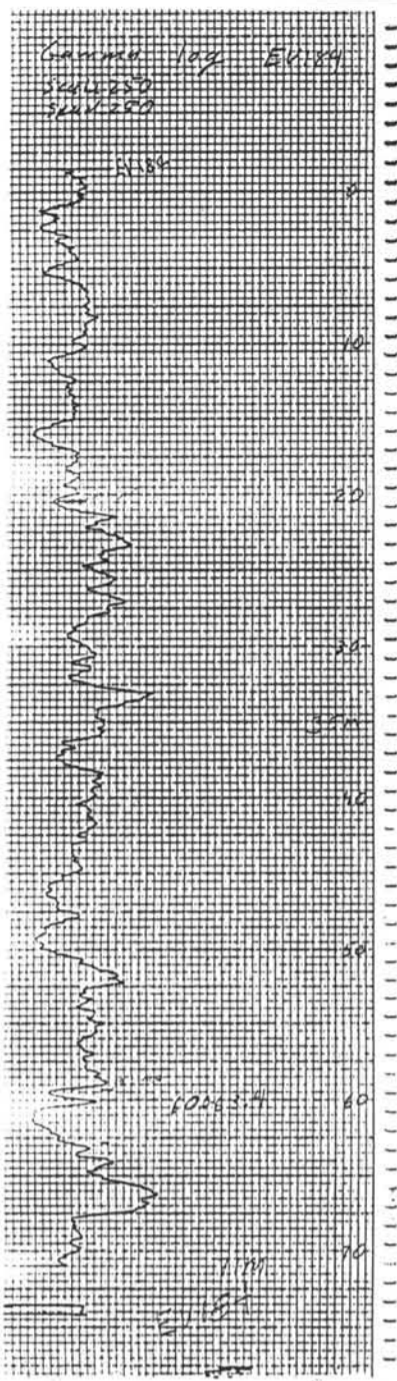






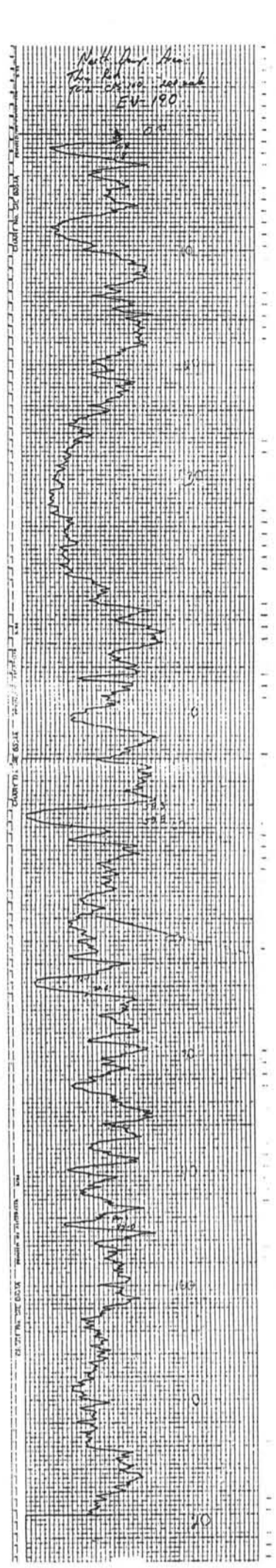
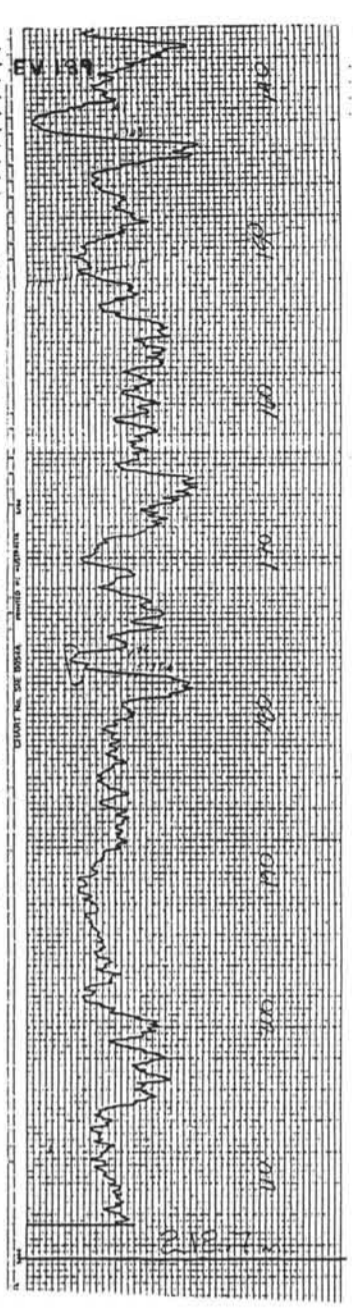
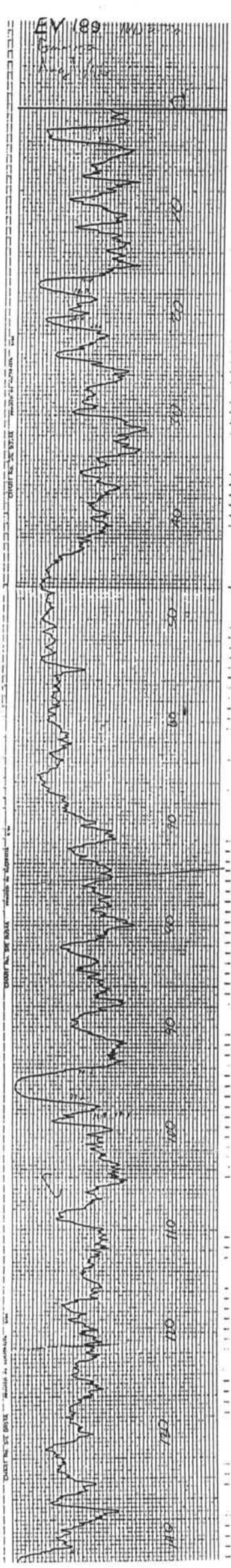
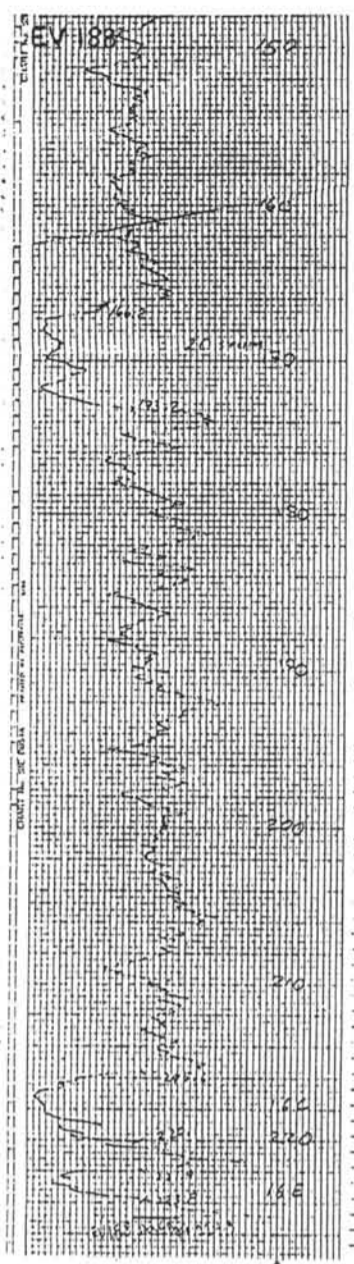
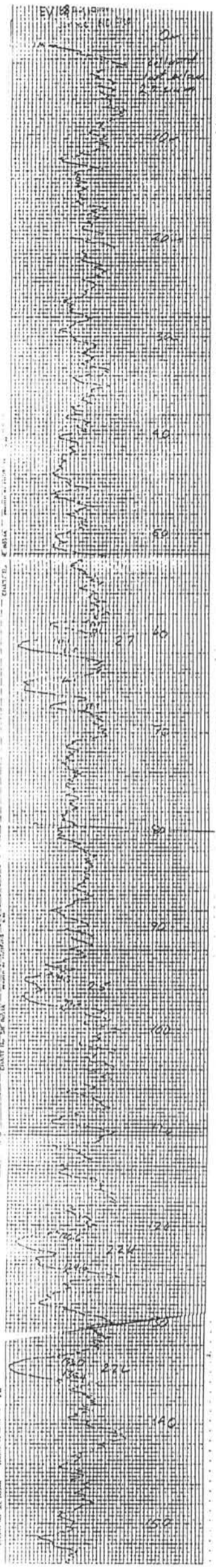
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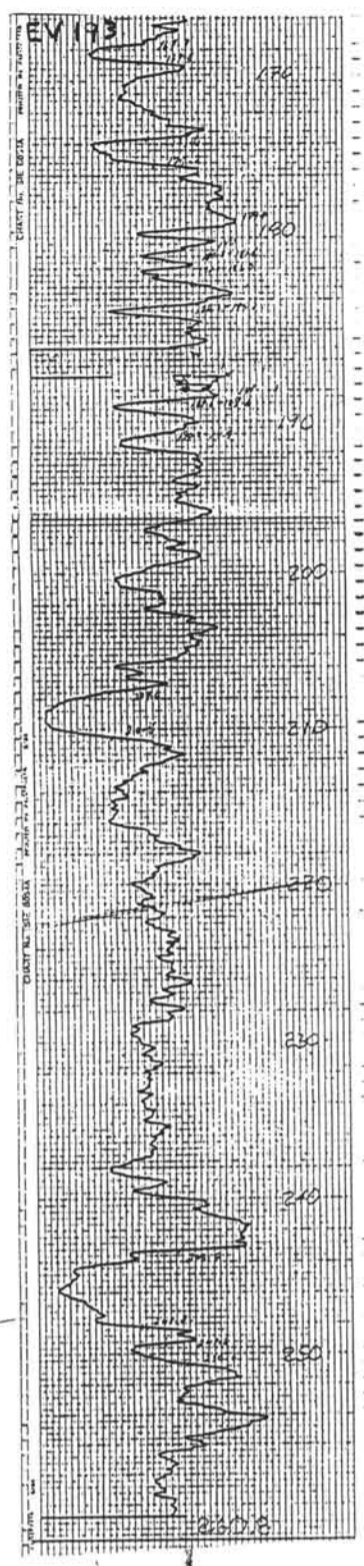
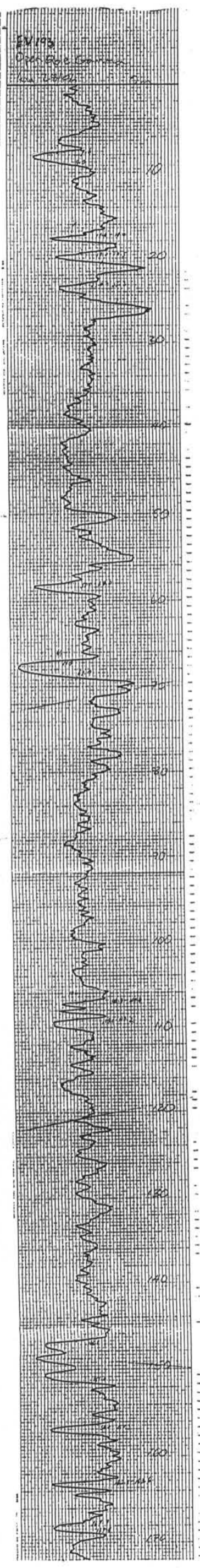
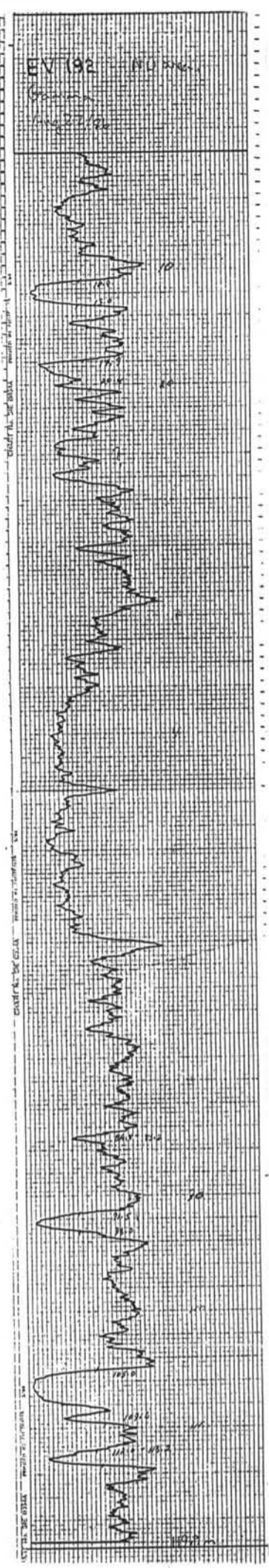
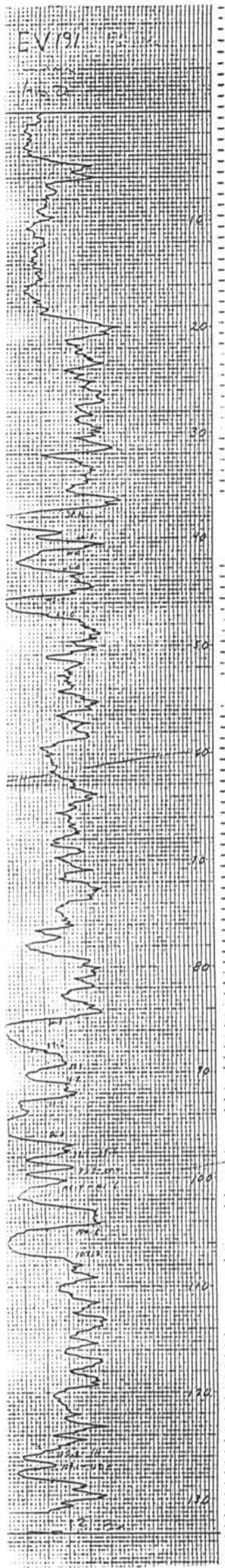
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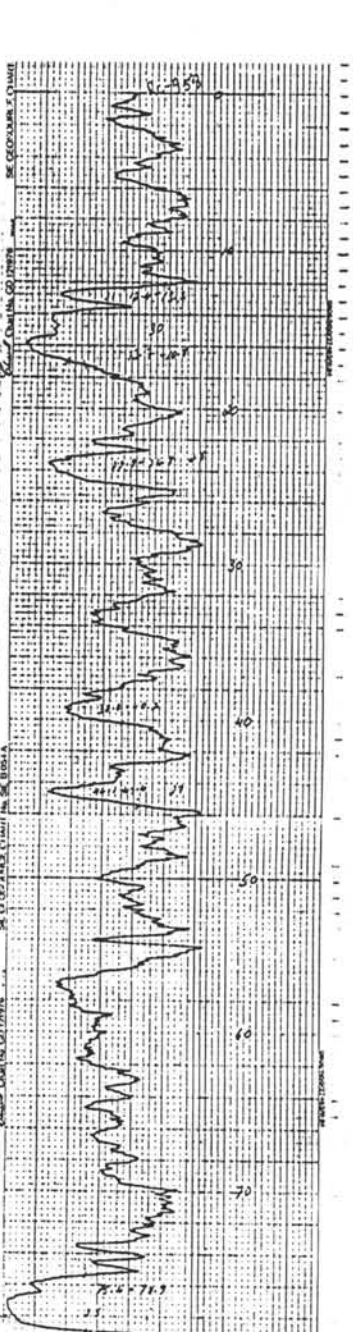
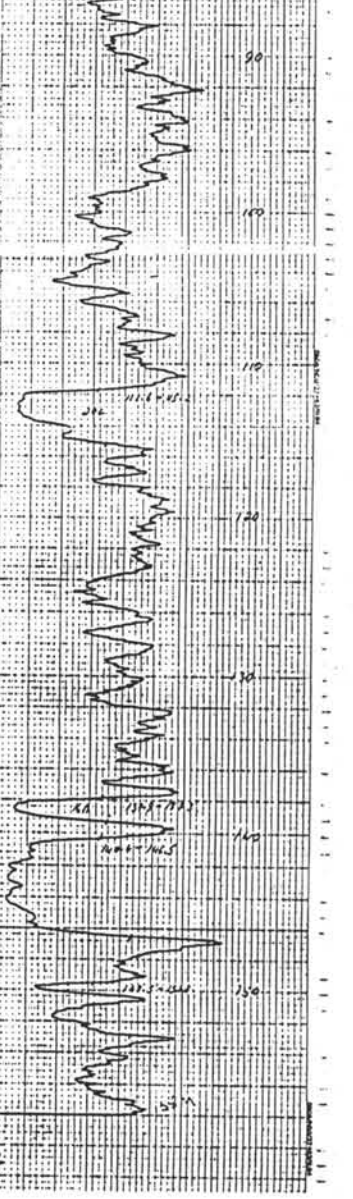
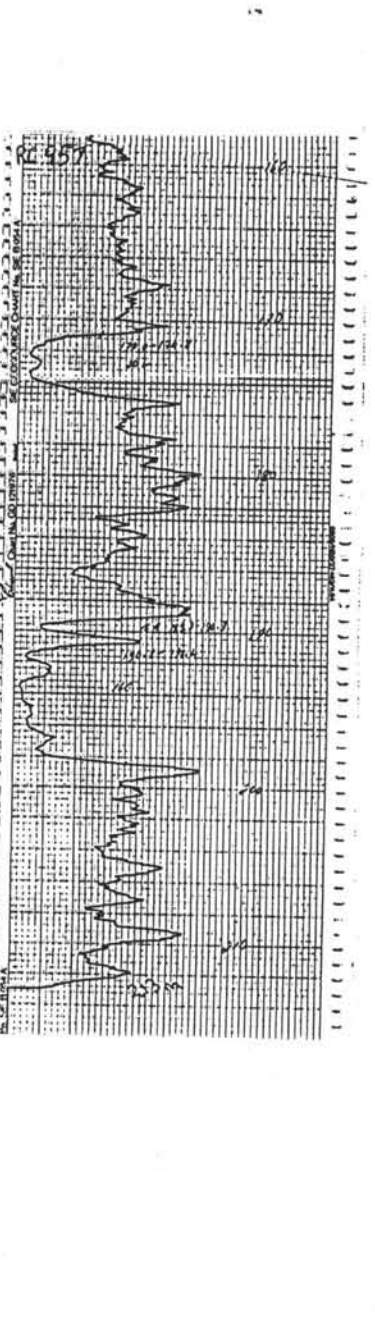
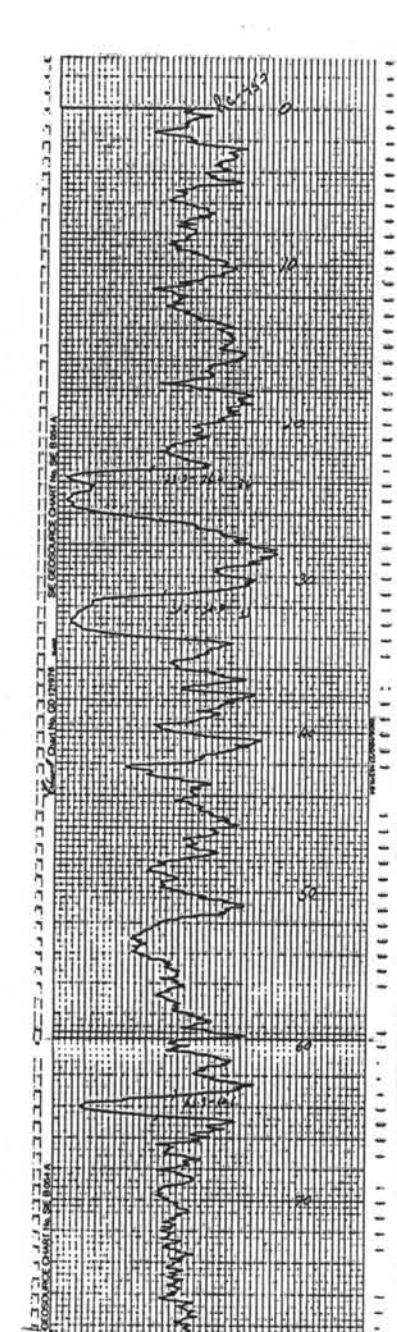
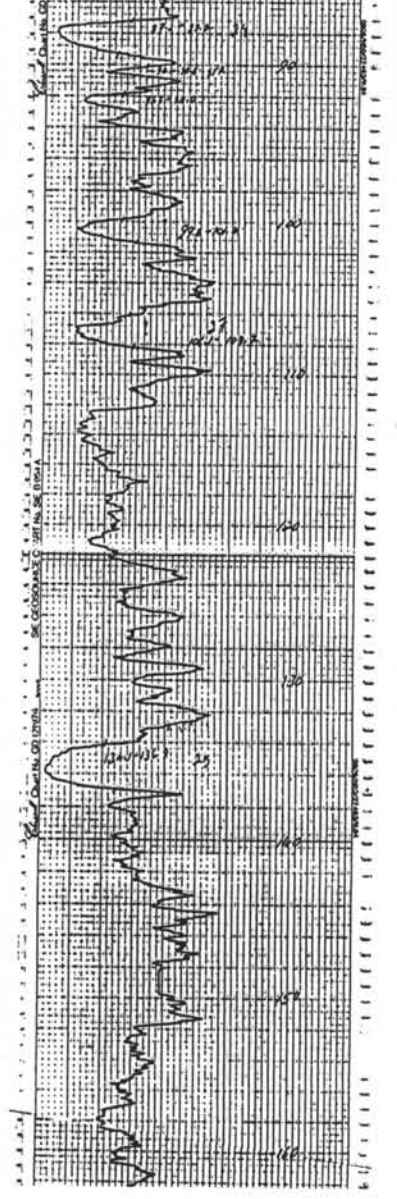
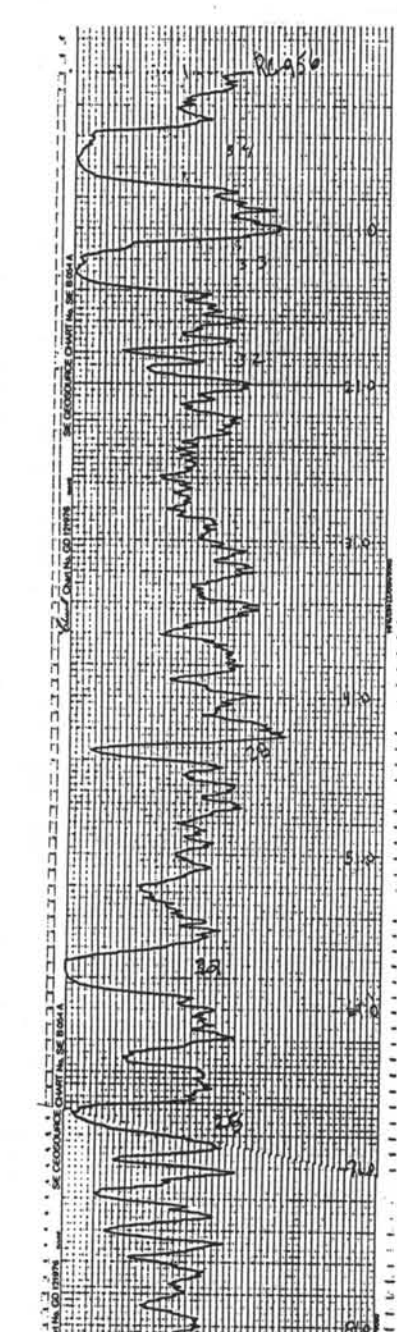
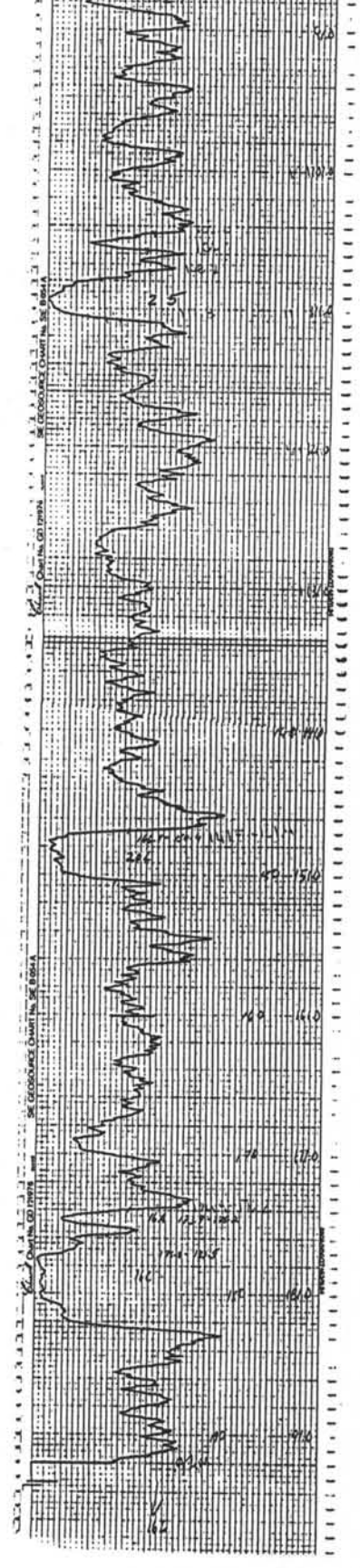
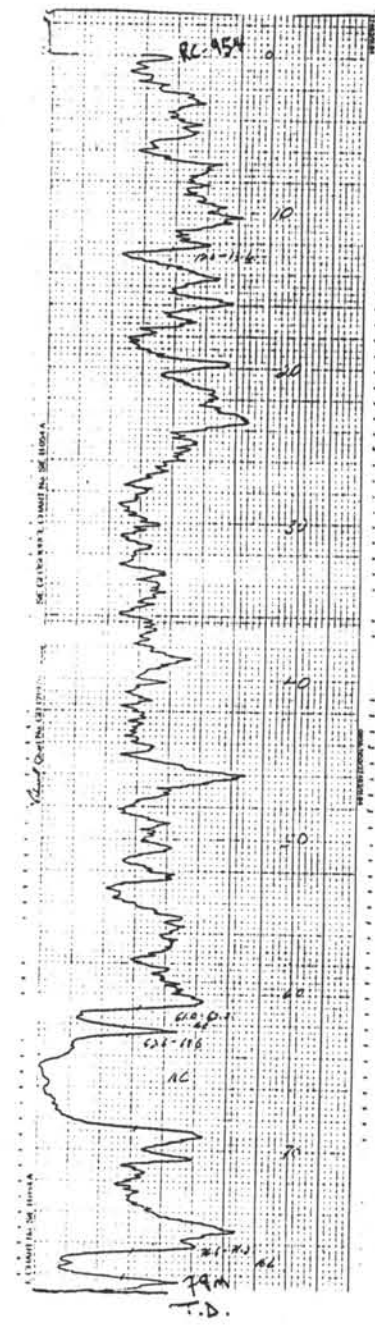
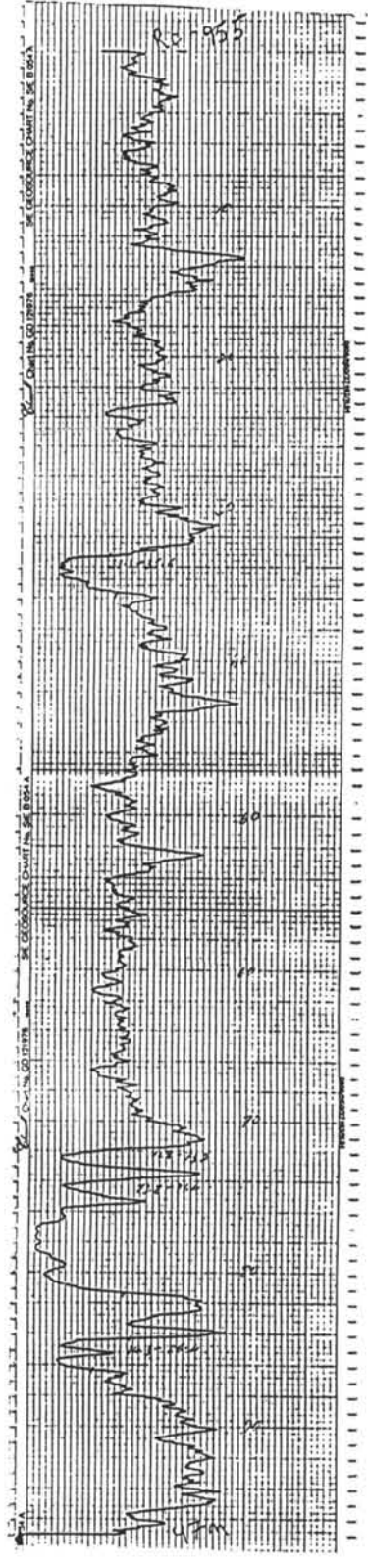


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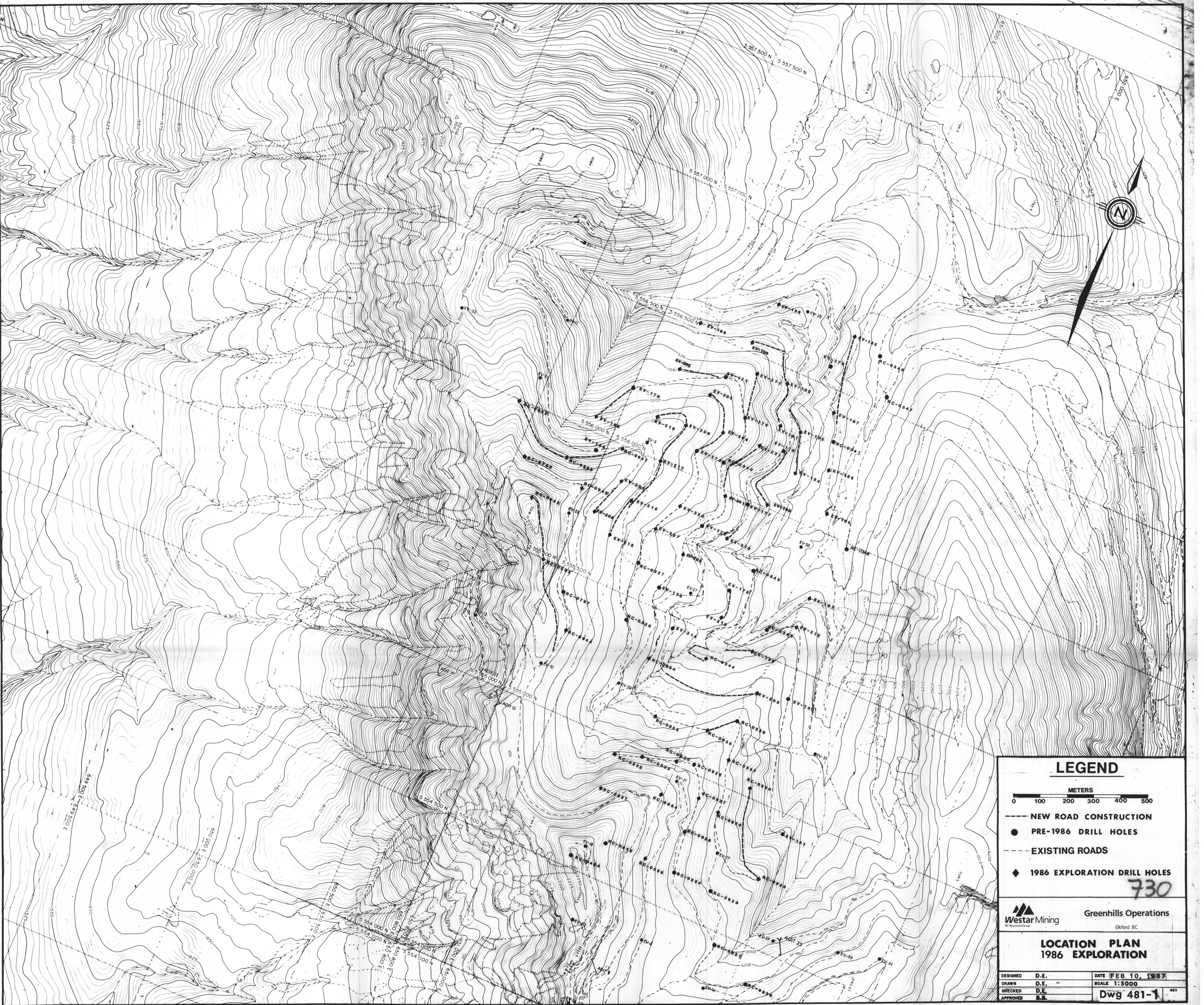






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**LEGEND**

- 0 100 200 300 400 500  
METERS
- NEW ROAD CONSTRUCTION
- PRE-1986 DRILL HOLES
- EXISTING ROADS
- ◆ 1986 EXPLORATION DRILL HOLES

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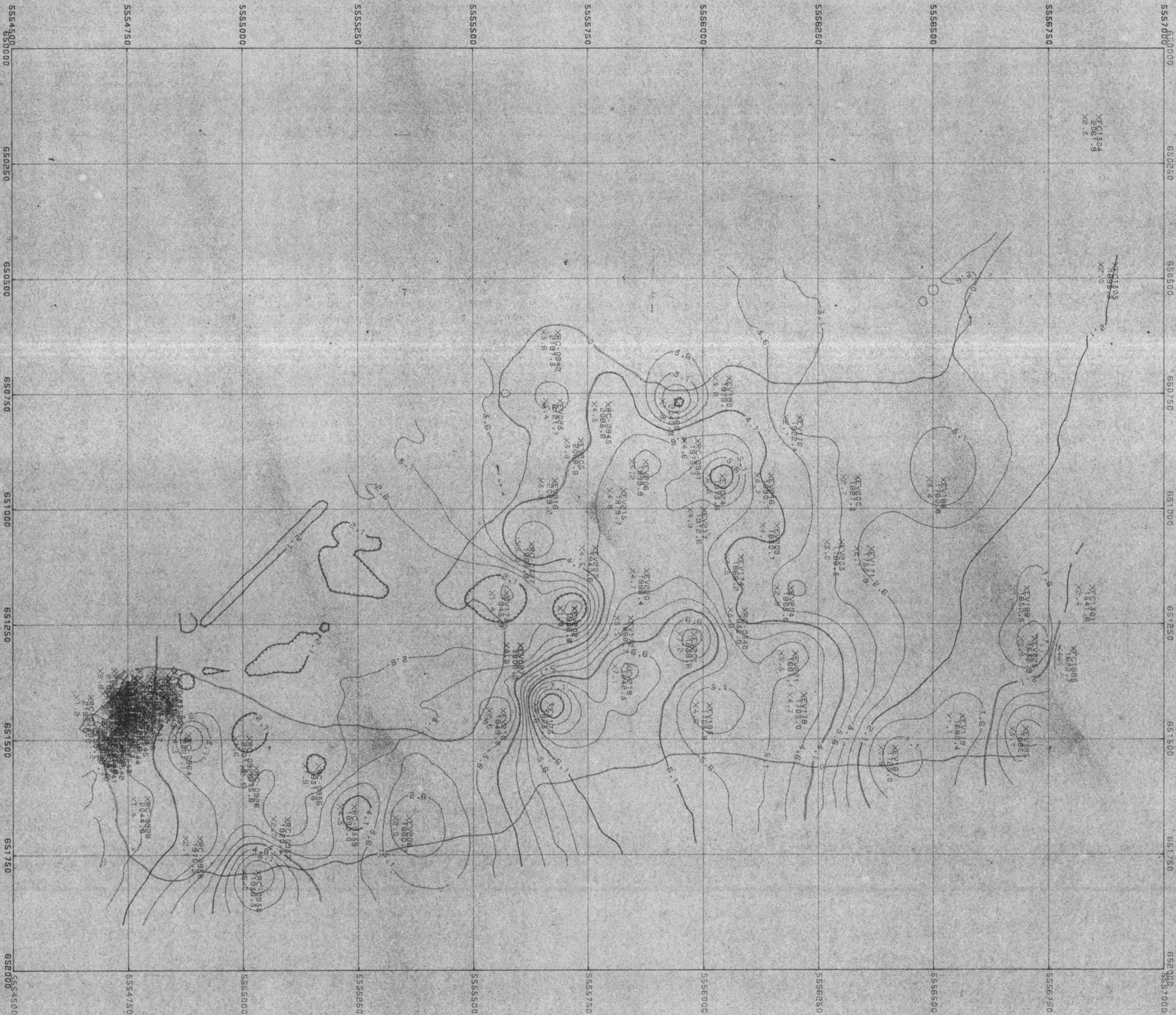
**Westar Mining** Greenhills Operations  
Elkford BC

**LOCATION PLAN  
1986 EXPLORATION**

DESIGNED	D.E.	DATE	FEB 10, 1987
DRAWN	D.E.	SCALE	1:5000
CHECKED	D.E.		
APPROVED	B.L.		Dwg 481-1



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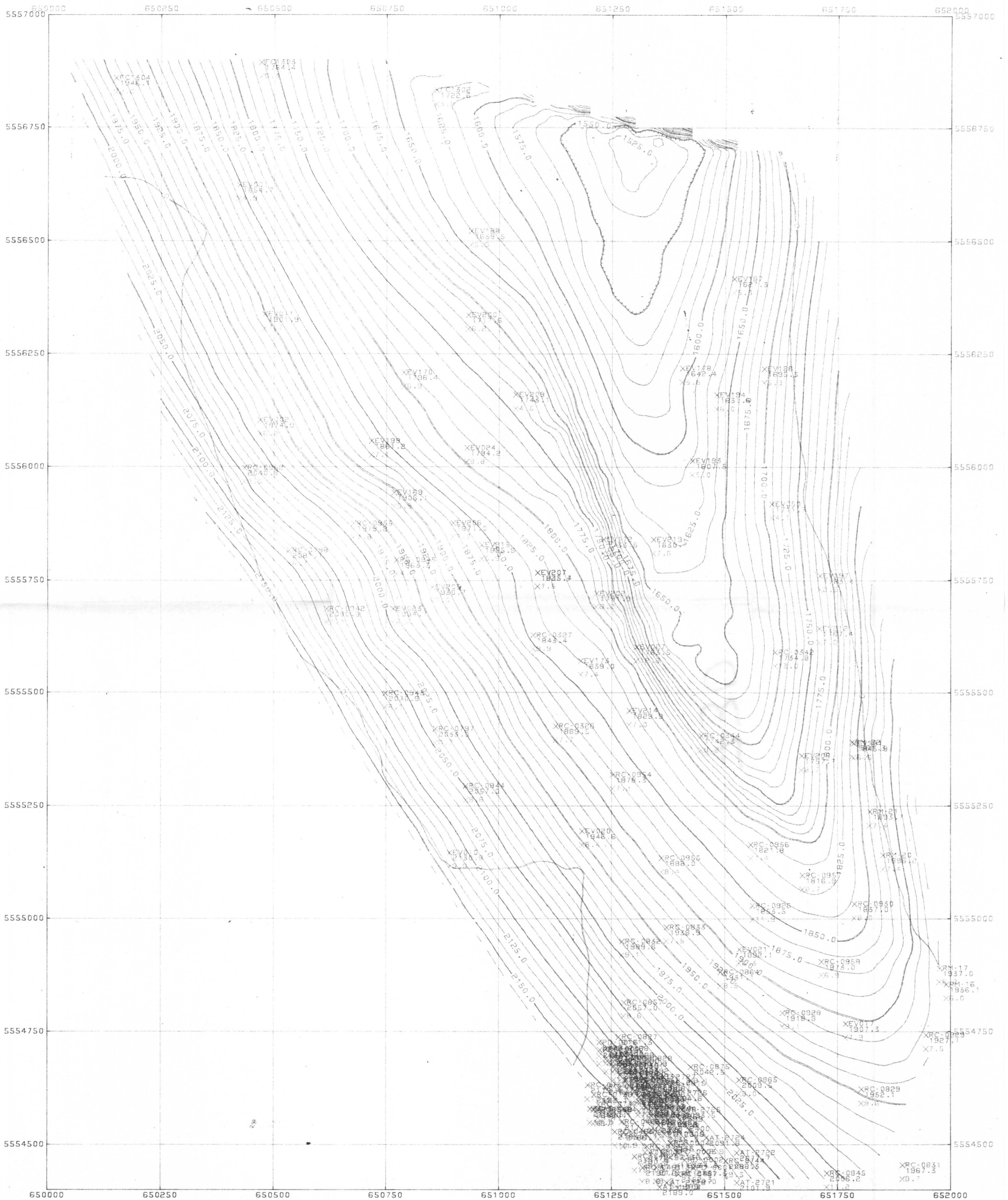












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FBI, FEB 13 1987 09 44-39



NORTH DUMP AREA 16 SEAM HW CONTOURS 1:5000 FEB. 1987  
 PLOT NO. 2 DATE 02/15/87 TIME 09:46:58



XRC-0831  
1967.3  
X8.7