People's Republic of Mozambique
GSECHI · Cabinet of State Secretariat
for Coal and Hydrocarbons

Mucanha · Vuzi Coal Development Program

Final Report — Phase 1

Drilling Campaign
Geophysical Logging
Hydrogeological Research
Laboratory Analysis and Tests
Data Compilation
Supervision and Final Report
Acquisition of Equipment and Materials

CPRM · Companhia de Pesquisa de Recursos Minerais
GEIPOT · Empresa Brasileira de Planejamento de Transportes
COBRAPI · Companhia Brasileira de Projetos Industriais

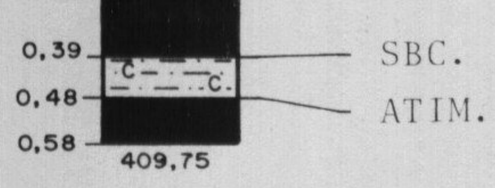
Volume

3 . H — Annexes

April, 1983

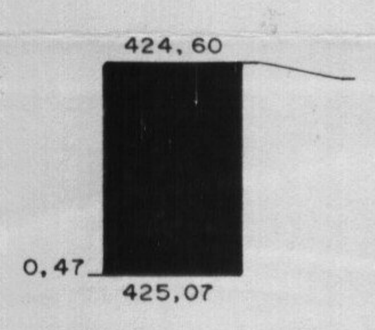
COMPANIES ON PRODUCTION PRODUCING
PRODUCTION PRODUCING
PRODUCTION PRODUCING
PRODUCTION PRODUCING

| | | |



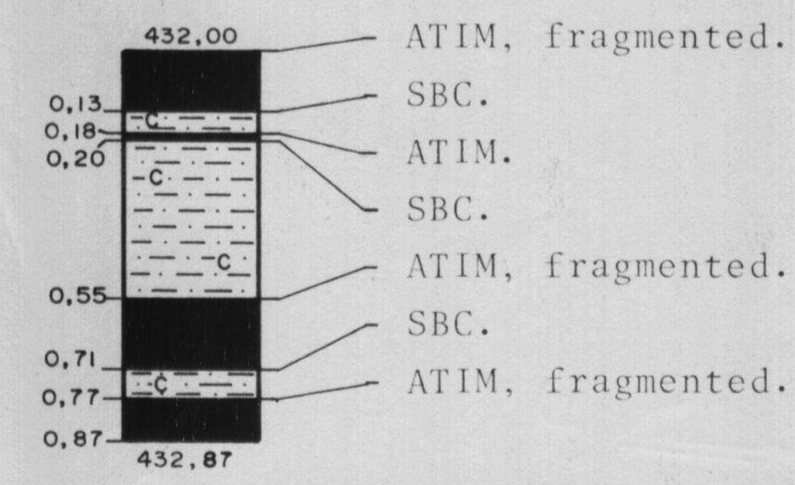
Coal seam B_1S Upper (detailed below)

Top = 424,50 m Base = 425,07 m Ct = 0,47 m Cc = 0,47 m Rec = 80%



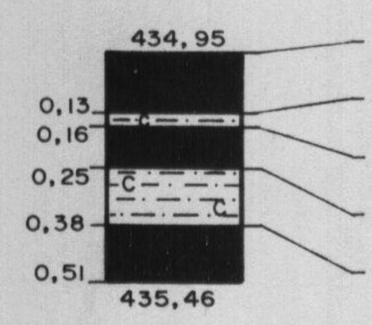
Coal seam B_1S Upper (detailed below)

Top = 432,00 m Base = 432,87 m Ct = 0,87 m Cc 0,41 m Rec = 80%



Coal seam B_1S Upper (detailed below)

Top = 434,95 m Base = 435,46 m Ct 0,51 m Cc = 0,35 m Rec = 80%



COMPANHIA DE PESQUISA DE RECURSOS MINERAIS

PROGRAMA MUCAMPA-VUZI

MUCAMPA - VUZI PROGRAM

PERFIL COMPOSITO DO FURO
DDH COMPOSITE LOG

FURO: 35-VB-82

Coordenadas Utm:	9.000.000	1.000.000	
Cota:	1.000	Azimute:	
Inclinação:	-90°	Data:	1.9.82

Cliente:	Mineração Mucampa	Área:	Vuzi
Projeto:	Mucampa-Vuzi	Prospecto:	
Seção:		Furo:	35-VB-82
Coordenadas:		Cota:	
Data:	1.9.82	Operador:	

Data:	1.9.82	Hora:	
Operador:		Equipamento:	
Sondagem:		Diâmetro:	
Profundidade:		Nível d'água:	
Observações:	

CAPITAL & TRUST BUILDING BOND
CHANGE BLOCKHOUSE
CHANGE BLOCKHOUSE
CHANGE BLOCKHOUSE

Schlumberger

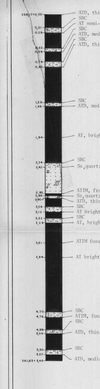
Schlumberger Well Services
Schlumberger Educational Services
Houston, Texas USA

COMPENSATED NEUTRON LOG

Company	Amoco Production Company		
Well	Ft. Lupton Unit 1		
Field	Wildcat	County	Weld
Location	1980' FSL & 1980' FEL	State	Colorado
Other Services	DIL, BHC, FDC, CNL, Cal, Gr		
Sec. 31	Twp. 1N	Rge. 66W	
Permanent Datum	Ground Level	Elevation	4980 ft
Log Measured From	Kelly Bushing	14 ft above Perm. Datum	
Drilling Measured From	Kelly Bushing		
Date	12-Jan-1981		
Run No.	ONE		
Depth-Driller	7500 ft		
Depth-Logger	7500 ft		
Bottom Log Interval	7500 ft		
Top Log Interval	3500 ft		
Casing-Driller	8 5/8 @ 3500 ft		
Casing-Logger	3500 ft		
Bit Size	7 7/8 in		
Type Fluid in Hole	Gel Chem		
Density	9.4 lb/gal	Viscosity	40 s
pH	10.5	Fluid Loss	6.0 cc
Source of Sample	Flowline		
Rm @ Meas. Temp.	1.25 @ 75 F		
Rmf @ Meas. Temp.	1.00 @ 75 F		
Rmc @ Meas. Temp.	1.50 @ 75 F		
Rm @ BHT	0.75 @ 150 F		
Time Since Circulation	12 hrs		
Time Since Stop	1 hr		
Max. Rec. Temp.	150 F		
Equipment Number	5-1		
Location	Ft. Lupton		
Recorded By	Hoffman		
Witnessed By	Mr. Smith		

COAL SEAM by S

Top: 356,17 m Base: 361,63 m CT: 5-46 m CC: 4,25 m REC: 07%



COAL SEAM by S

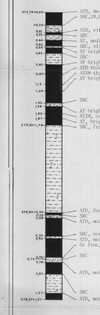
Top: 367,26 m Base: 367,95 m CT:0,45 m CC: 0-45 REC:96%

COAL SEAM by S

Top: 373,24 m Base: 373,32 m CT: 1,78 m CC: 0,01 m REC: 96%

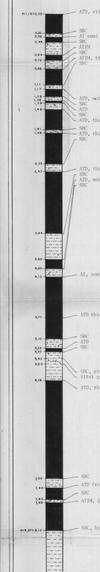
COAL SEAM by S

Top: 374-90 m Base: 374,27 m CT: 1,37 m CC: 0,90 m REC: 96%



COAL SEAM B_1 upper

Top: 411,15 m Base: 426,45 m CT: 15,80 m CC: 8,74 m REC: 100%

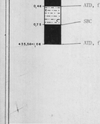


COAL SEAM B_1 Medium

Top: 429,37 m Base: 429,98 m CT:0,41 CC:0,41 m REC: 80%

COAL SEAM B_1 Medium

Top: 434,50 m Base: 435,56 m CT:1,06 m CC: 0,62 m REC: 80%



CPRM

COMPANHIA DE PESQUISA DE RECURSOS MINERAIS

PROGRAMA RECURSOS-FLUIDOS

MUCUGÊ/BA - VULCÃO PROGRAMA

PERFIL COMPOSITO DO FURO

1-MU-01-BA

FURO	1-MU-01-BA	COORDENADAS	13°00'00"S 41°22'00"W	ÁREA	MUCUGÊ - BAHIA
DATA	1	2	3	4	5
1	1-MU-01-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-01-BA
2	1-MU-02-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-02-BA
3	1-MU-03-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-03-BA
4	1-MU-04-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-04-BA
5	1-MU-05-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-05-BA
6	1-MU-06-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-06-BA
7	1-MU-07-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-07-BA
8	1-MU-08-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-08-BA
9	1-MU-09-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-09-BA
10	1-MU-10-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-10-BA
11	1-MU-11-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-11-BA
12	1-MU-12-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-12-BA
13	1-MU-13-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-13-BA
14	1-MU-14-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-14-BA
15	1-MU-15-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-15-BA
16	1-MU-16-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-16-BA
17	1-MU-17-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-17-BA
18	1-MU-18-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-18-BA
19	1-MU-19-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-19-BA
20	1-MU-20-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-20-BA
21	1-MU-21-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-21-BA
22	1-MU-22-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-22-BA
23	1-MU-23-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-23-BA
24	1-MU-24-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-24-BA
25	1-MU-25-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-25-BA
26	1-MU-26-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-26-BA
27	1-MU-27-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-27-BA
28	1-MU-28-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-28-BA
29	1-MU-29-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-29-BA
30	1-MU-30-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-30-BA
31	1-MU-31-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-31-BA
32	1-MU-32-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-32-BA
33	1-MU-33-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-33-BA
34	1-MU-34-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-34-BA
35	1-MU-35-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-35-BA
36	1-MU-36-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-36-BA
37	1-MU-37-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-37-BA
38	1-MU-38-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-38-BA
39	1-MU-39-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-39-BA
40	1-MU-40-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-40-BA
41	1-MU-41-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-41-BA
42	1-MU-42-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-42-BA
43	1-MU-43-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-43-BA
44	1-MU-44-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-44-BA
45	1-MU-45-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-45-BA
46	1-MU-46-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-46-BA
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53	1-MU-53-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-53-BA
54	1-MU-54-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-54-BA
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58	1-MU-58-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-58-BA
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61	1-MU-61-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-61-BA
62	1-MU-62-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-62-BA
63	1-MU-63-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-63-BA
64	1-MU-64-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-64-BA
65	1-MU-65-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-65-BA
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70	1-MU-70-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-70-BA
71	1-MU-71-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-71-BA
72	1-MU-72-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-72-BA
73	1-MU-73-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-73-BA
74	1-MU-74-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-74-BA
75	1-MU-75-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-75-BA
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82	1-MU-82-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-82-BA
83	1-MU-83-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-83-BA
84	1-MU-84-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-84-BA
85	1-MU-85-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-85-BA
86	1-MU-86-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-86-BA
87	1-MU-87-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-87-BA
88	1-MU-88-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-88-BA
89	1-MU-89-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-89-BA
90	1-MU-90-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-90-BA
91	1-MU-91-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-91-BA
92	1-MU-92-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-92-BA
93	1-MU-93-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-93-BA
94	1-MU-94-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-94-BA
95	1-MU-95-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-95-BA
96	1-MU-96-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-96-BA
97	1-MU-97-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-97-BA
98	1-MU-98-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-98-BA
99	1-MU-99-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-99-BA
100	1-MU-100-BA	13°00'00"S 41°22'00"W	13°00'00"S 41°22'00"W	MUCUGÊ - BAHIA	1-MU-100-BA

CPRM

COMPANHIA DE PESQUISA DE RECURSOS MINERAIS

PROGRAMA MUCANHA-VUZI

MUCANHA - VUZI PROGRAM

PERFIL COMPOSTO DO FURO DDH COMPOSITE LOG

FURO DDH: **39-VB-82**

ESCALA VERTICAL: 1:500 - VERTICAL SCALE 0,00 m - 60,00m

ESCALA HORIZONTAL: 1:100 - HORIZONTAL SCALE 0,00 - 60,00m

ANEXO ANNEX 6.30

Coordenadas Coordinates		Cota do furo Hole elevation		Comprimento Length	Recuperação % Recovery
Coal Seams		Final with	Coal seam Coal thickness		
39	379,40	9,15	5,24	60	100

PERFILAGEM GEOFÍSICA - GEOPHYSICAL LOGGING

SONDA - GAMMA		SP	RTC
ESCALA DE SENSIBILIDADE SENSITIVITY SCALE	20 cps/div	-	20 Ω/div
CONSTANTE DE TEMPO TIME CONSTANT	1 s	-	1 s
VELOCIDADE DE REGISTRO RECORDING VELOCITY	10 m/min	-	10 m/min
NÍVEL INICIAL DA FINAL FIRST AND LAST READING	22,00/0,00m	-	22,00/16,00m
DATA DATE	06/07	-	06/07

COORDENADAS PLANAS UTM COORDINATES: 7.379.941,9 N / 0.0 E / 0.0 Z

COTA DA BOCA CLEVATION: 379,40m

PROFUNDIDADE FINAL DEPTH: 60 m

DIÂMETRO DIAMETER: HQ - NQ

INÍCIO / TÉRMINO 06/10/00 / 06/10/00

START DATE / COMPLETION DATE

CONVÇÕES
LEGEND

COVEIROS / COVERS: SOLO SOIL; CONCRETO CONCRETE; PALHÇO PALLET; ARGILA MÉDIA MEDIUM CONSISTENCE; ARGILA MOLE SOFT CONSISTENCE; ARGILA ORGÂNICA ORGANIC CONSISTENCE

LAMITO DA ARGILA MUDSTONE; CONGLOMERADO CONGLOMERATE; ARENITO FINO FINE SANDSTONE; ARENITO MÉDIO MEDIUM SANDSTONE; ARENITO GROSSO COARSE SANDSTONE; ARENITO GRAUVACA GRAUVACKE; ARENITO MUITO GROSSO VERY