Physical Properties Instrumentation
1 hysical 1 toperates instrumentation
Multi-sensor Track (whole core)
Whole Core Multisensor track
GEOTEK Gamma Ray Attenuation
·
Bartington MS2C Magnetic Susceptibility
ODP Natural Gamma Radiation
GEOTEK P-wave velocity logger
D'and Marana (1.1. and l'ann)
Discrete Measurements (whole or split core)
TK04 Thermal Conductivity
VSR Track
ODP P-wave velocity (PWS1, PWS2, PWS3)
ODP Vane Shear (AVS)
Discrete Measurments (extracted samples)
Quantachrome penta-pycnometer
Cahn Balance
WC-MST Subsystems
Parker/Compumotor Indexer w/VM50Terminal Strip
Parker/Compumotor Microstep Drive - S Series
EG&G NIM Bin w/12 module Connectors &160 watt Power Supply
EG&G Preamplifier SCA
EG&G MST Module - Multi Channel Buffer w/ Option 5 Card
EG&G High Voltage Power Supply
Bicron Detectors - NAI
Perkin Elmer Internal Card - PCI, Trump-PCI-2K
Magma Bus Expander - 7 slot PCI Expansion System
EG&G ADCAM Multichannel Buffer (917-918A Option E)
Parker/Compumotor Step Motor
National Inst. Signal Breakout Box
EG&G Pulser
Water Pump
EG&G Photomultiplier
EG&G High Voltage Fan-Out
EG&G Dual Spectroscopy Amplifier
EG&G Dual Sum and Inverter Amplifier
•
VSR-Track Subsystems
Nulogic Motion Control Board - PCI Step-4CL, 4 axis closed loop
Panametrics Ultrasonic Pulser-Receiver
Magnetek Linear Voltage Displacement Transducer (LVDT)
OMEGA Digital Thermometer
National Inst. Oscilloscope Boards
National Inst. PCI 4A Encoder Interface Board
OMEGA Linear Velocity Transducer Signal Conditioner
OMEGA Panel Meter
OHABOA I MICH HOLD

	Instrument	Whole Core Multisensor Track
	ODP #	04027
	Model	N/A
Α	Vendor	ODP Fabricated
	Date of purchase	7/26/1995
	Date of installation	Leg 163, Sept. 95
	Date of installation	Leg 103, Зерг. 93
	Vendor manual	N/A
В	schematic	N/A
	Schematic	19/74
	Cookbook (STD)	Physical Properties Tech Help
С	COCKBOOK (C1D)	Thysical Properties Teel Proper
	Cookbook (special)	WC-MST IMS User's Manual v. 188
_	Software	LabVIEW IMS WC-MST application
D	version	188
	installation date	Leg 188, Jan. 00
Е	Instrument hardware setup	
=	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
		Track supports NGR, GRAPE, P-wave,
		and Magnetic Susceptibility
G	Appliaction/operational use	Measurements
	sample type	Whole Core
	specification/accuracy	N/A
	Spare parts	
H	Consumables	N/A
	Supporting system	N/A
	Comments	

		Gamma Ray Attenuation Densiometer	
	Instrument	Shield and Detector	
	ODP #	04800	04801
Α	Model	N/A	0.001
^	Vendor	GEOTEK	
	Date of purchase	3/16/1999	
	Date of installation	Leg 188, Jan. 00	
	Date of installation	Leg 166, Jan. 00	
	Vendor manual	N/A	
В	schematic	N/A	
	Cookbook (STD)	Physical Properties Tech Help	
С	Cookbook (special)	WC-MST IMS User's Manual v. 188	
D	Software	LabVIEW IMS WC-MST application	
U	version	188	
	installation date	Leg 188, Jan. 00	
Е	Instrument hardware setup		
_	Instrument upgrade		
	Maintenance log		
F			
-	vendor repair log		
		Gamma Ray Attenuation	
	Appliaction/operational use	Measurement on whole core	
G	sample type	Whole Core	
	specification/accuracy	N/A	
	Specification/accuracy	IVA	
	Spare parts		
н	Consumables		
••	Supporting system	WC-MST Track	
	- Sphorting of ottom		
	Comments		

		Magnetic Susceptibility Sensor Loop	
	Instrument	(2)	
	ODP #	04052	04702
Α	Model	MS2C	MS2
	Vendor	Bartington	Bartington
	Date of purchase	7/8/1995	1/13/1997
	Date of installation	Leg 163, Sept. 95	1710/1007
	Date of installation	Leg 103, Зерг. 93	
В		Barington Operations Manual for MS2	
	Vendor manual	Magnetic Susceptibility System	
	schematic	Yes	
	Cookbook (STD)	Physical Properties Tech Help	
С	COOKDOOK (STD)	Filysical Floperties Tech Fleip	
	Cookbook (special)	WC-MST IMS User's Manual v. 188	
D	Software	LabVIEW IMS WC-MST application	
U	version	188	
	installation date	Leg 188, Jan. 00	
	Instrument hardware setup		
E	Instrument upgrade		
	Maintenance log		
F	vendor repair log		
	vendor repair log		
		Magnetic Susceptibility Measurement	
_	Appliaction/operational use	on Whole Core	
G	sample type	Whole Core	
	specification/accuracy	N/A	
	Spare parts		
н	Consumables		
• • •	Supporting system	WC-MST Track	
	Comments		

		Natural Gamma Ray Detection System	
	Instrument	with Shield	
	ODP#	02379	
Α	Model	N/A	
	Vendor	EG&G Instuments	
	Date of purchase	9/15/1992	
	Date of installation	Leg 148, Jan. 92	
		,	
В	Vendor manual	N/A	
ь	schematic	N/A	
	Cookbook (STD)	Physical Properties Tech Help	
С	Cookbook (special)	WC-MST IMS User's Manual v. 188	
_	Software	LabVIEW IMS WC-MST application	Maestro (Used for tuning NGR)
D	version	188	V. 5.31
	installation date	Leg 188, Jan. 00	
Е	Instrument hardware setup		
	Instrument upgrade		
	Maintenance log		
F			
	vendor repair log		
		Measurement of Natural Gamma	
G	Appliaction/operational use	Radiation of Whole Core	
-	sample type	Whole Core	
	specification/accuracy	N/A	
	Spare parts		
Н	Consumables		
	Supporting system	WC-MST Track	
	Comments		

	Instrument	P-wave Velocity Logger
	ODP#	N/A
	Model	N/A
A		
	Vendor	ODP Fabrication w/ GEOTEK parts
	Date of purchase	N/A
	Date of installation	Leg 188, Jan. 00
		5
	Vendor manual	N/A
В	schematic	N/A
	Cookbook (STD)	Physical Properties Tech Help
С	,	
	Cookbook (special)	WC-MST IMS User's Manual v. 188
	Software	LabVIEW IMS WC-MST application
D	version	188
	installation date	Leg 188, Jan. 00
_	Instrument hardware setup	
E	Instrument upgrade	
	Maintenance log	
F		
Г	vendor repair log	
		P-wave velocity measurement on whole
G	Appliaction/operational use	cores
l G	sample type	Whole Core
	specification/accuracy	N/A
	Spare parts	
н	Consumables	GEOTEK PWL Transducers
"		Neumatics Air Control Valves
	Supporting system	WC-MST Track
	Comments	

		Non-Contact Resistivity Meter and
A	Instrument	Control Electronics
	ODP #	N/A
	Model	NCR
_ ^	Vendor	GEOTEK
	Date of purchase	GLOTER
	Date of installation	
	Date of installation	
	Vendor manual	N/A
В	schematic	N/A
	Schematic	IV/A
	Cookbook (STD)	Physical Properties Tech Help
С	COORDOOK (STD)	Thysical Toperties Tech Help
	Cookbook (special)	WC-MST IMS User's Manual v. 188
	COORDOOK (Special)	VVC-IVIST TIVIS OSETS IVIATIDAL V. 100
_	Software	LabVIEW IMS WC-MST application
D	version	188
	installation date	Leg 188, Jan. 00
		259 100, 00 00
	Instrument hardware setup	
E	Instrument upgrade	
	3	
	Maintenance log	
_		
F	vendor repair log	
	1 0	
	Appliaction/operational use	Resistivity Measurement
G	sample type	Whole Core
	specification/accuracy	N/A
	•	
	Spare parts	
Н	Consumables	
	Supporting system	WC-MST Track
	Comments	

		Thermal Conductivity Meter w/ VLQ	
	Instrument	Needle Probe	
	ODP #	03364	
Α	Model	TK04	
'`	Vendor	TeKa	
	Date of purchase	4/27/1995	
	Date of installation	,,	
		TK04 Thermal Conductivity Meter	
В	Vendor manual	Software	
	schematic	N/A	
	Cookbook (STD)	Physical Properties Tech Help	
С	Cookbook (special)	Thermal Conductivity Cookbook	
		TK04 Thermal Conductivity Meter	
_	Software	Software	
D	version	3.20	
	installation date		
_	Instrument hardware setup		
E	Instrument upgrade		
	Maintenance log		
_			
F	vendor repair log		
	Appliaction/operational use	Thermal Conductivity	
G	sample type	Whole Core or Split Core	
	specification/accuracy	N/A	
	Spare parts		
Н	Consumables		
	Supporting system	N/A	
	Comments	Additional Peripheral	ODP#
		TeKa Pressure Device	03365
		TeKa HLQ Probe	03891

	Instrument	Velocity/Strength/Resistivity Track
A	ODP#	03498
	Model	N/A
	Vendor	ODP Fabricated
	Date of purchase	11/30/1994
	Date of installation	Leg 160, March 95
_	Vendor manual	N/A
В	schematic	N/A
	Cookbook (STD)	Physical Properties Tech Help
С	,	IMS Velocity and Shear Strength User's
	Cookbook (special)	Manual
	``'	
	Software	LabVIEW IMS VS application
D	version	191
	installation date	Leg 191
Е	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
'	vendor repair log	
_		Track Supports Velocity and Strength
G	Appliaction/operational use	Measurements on Split Core
	sample type	Split Core
	specification/accuracy	N/A
		N/A
l	Spare parts	N/A
Н	Consumables	N/A
	Supporting system	N/A
	0	
	Comments	

	Instrument	Sonic Velocity (PWS1, PWS2, PWS3)
	ODP #	03539
A	Model	N/A
	Vendor	ODP Fabricated
	Date of purchase	12/14/1994
	Date of installation	Leg 160, March 95
		<u> </u>
	Vendor manual	N/A
В	schematic	N/A
	Cookbook (STD)	Physical Properties Tech Help
С		IMS Velocity and Shear Strength User's
	Cookbook (special)	Manual
	Software	LabVIEW IMS VS application
D	version	191
	installation date	Leg 191
E	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
'	vendor repair log	
		Measure P-wave Velocity along and
G	Appliaction/operational use	across core axis
	sample type	Split Core
	specification/accuracy	N/A
		21/2
	Spare parts	N/A
Н	Consumables	N/A
	Supporting system	VSR Track
	0	
	Comments	

	Instrument	Automated Vane Shear
	ODP #	N/A
	Model	N/A
Α	Vendor	ODP Fabricated
	Date of purchase	
	Date of installation	
Б	Vendor manual	N/A
В	schematic	N/A
	Cookbook (STD)	Physical Properties Tech Help
С	, ,	IMS Velocity and Shear Strength User's
	Cookbook (special)	Manual
	` · · ·	
	Software	LabVIEW IMS VS application
D	version	191
	installation date	Leg 191
l E	Instrument hardware setup	
-	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Appliaction/operational use	Measures Shear Strength of core
G	sample type	Split Core
	specification/accuracy	N/A
	Spare parts	N/A
H	Consumables	SIMAN
	Supporting system	VSR Track
	Comments	

PhysProp instrument database.xls

ODP # Model	05780	03836	2224
Model		03030	03341
Widaei	02077-110	994-7	PPY-7
Vendor	Quantachrome Corp.		
Date of purchase	6/9/2000	5/10/1995	12/19/1994
Date of installation	Leg 191,	Leg 160, March 95	
Vendor manual	Penta-Pycnometer Manual		
schematic	yes		
Cookbook (STD)	Physical Properties Tech Help		
Cookbook (special)	MAD COOKDOOK		
Software	MAD application in LabVIEW		
version	200.3		
installation date	Leg 200		
Instrument hardware setun			
Instrument upgrade			
Maintenance log			
vendor repair log			
Appliaction/operational use	Moisture and Density (MAD) measurements		
	Extracted Core Sample		
specification/accuracy			
Spare parts			
Consumables	SIMAN		
Supporting system			
Comments			
	Date of purchase Date of installation Vendor manual schematic Cookbook (STD) Cookbook (special) Software version installation date Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy Spare parts Consumables	Date of purchase Date of installation Leg 191,	Date of purchase 6/9/2000 5/10/1995

	L	Delenes Fleetes with BO 000 O	
	Instrument	Balance Electro with RS-232-C ports	
_	ODP #	00359	
A	Model	C29	
	Vendor	Cahn	
	Date of purchase	8/1/1984	
	Date of installation		
В	Vendor manual	N/A	
	schematic	N/A	
•	Cookbook (STD)	Physical Properties Tech Help	
С	Cookbook (special)	MAD Cookbook	
	, , ,		
	Software	MAD application in LabVIEW	
D	version	200.3	
	installation date	Leg 200	
F	Instrument hardware setup		
E	Instrument upgrade		
	Maintenance log		
_			
F	vendor repair log		
		Moisture and Density (MAD)	
	Appliaction/operational use	measurements	
G	sample type	Extracted Core Sample	
	specification/accuracy	N/A	
		1.3.	
	Spare parts		
Н	Consumables		
l	Supporting system	N/A	
	- Capporting Oyotom		
	Comments		
	Comments		

		Compumotor Indexer w/VM50Terminal	
	Instrument	Strip	
	ODP#	03572	
Α	Model	6200	
	Vendor	Parker/Compumotor	
	Date of purchase	1/6/1995	
	Date of installation	Leg 163, Sept. 95	
		J .	
В	Vendor manual		
В	schematic		
С	Cookbook (STD)		
C	Cookbook (special)		
	Software		
D	version		
	installation date		
E	Instrument hardware setup		
-	Instrument upgrade		
	Maintenance log		
F			
	vendor repair log		
	Appliaction/operational use	Part of WC-MST track	
G	sample type	I alt of WO-WOT track	
G	specification/accuracy		
	Specification/accuracy		
	Spare parts		
н	Consumables		
	Supporting system		
	Comments		

	Instrument	Microstep Drive - S Series	
	ODP #	03573	
		S106-178-E	
Α	Model		
	Vendor	Parker/Compumotor	
	Date of purchase	1/23/1995	
	Date of installation	Leg 163, Sept. 95	
В	Vendor manual		
	schematic		
С	Cookbook (STD)		
	Cookbook (special)		
	Software		
D	version		
	installation date		
Е	Instrument hardware setup		
=	Instrument upgrade		
	Maintenance log		
-			
F	vendor repair log		
	Appliaction/operational use	Part of WC-MST track	
G	sample type		
	specification/accuracy		
	Spare parts		
Н	Consumables		
	Supporting system		
	Comments		
1			

		NIM Bin w/12 module Connectors &160
	Instrument	watt Power Supply
	ODP#	03578
Α	Model	4001A/4002D
	Vendor	EG&G Ortec
	Date of purchase	1/12/1995
	Date of installation	Leg 163, Sept. 95
		Model 4002D 160-W NIM Bin Power
В	Vendor manual	Supply Operating Manual
	schematic	Yes
_	Cookbook (STD)	
С	Cookbook (special)	
	(-poola.)	
	Software	
D	version	
	installation date	
	333	
_	Instrument hardware setup	
E	Instrument upgrade	
	and a second sec	
	Maintenance log	
_	149	
F	vendor repair log	
	Appliaction/operational use	Part of WC-MST track
G	sample type	
	specification/accuracy	
	Spare parts	
Н	Consumables	
"	Supporting system	
	Comments	
I	Comments	

	Instrument	Preamplifier SCA
	ODP #	03579
	Model	4890
Α		EG&G Ortec
	Vendor	1/12/1995
	Date of purchase	
	Date of installation	Leg 163, Sept. 95
		NA - 1-1 4000
		Model 4890
В	Van language	Preamplifier/Amplifier/Single Channal
	Vendor manual	Analyzer Operating and Service Manual
	schematic	Yes
	Cookbook (CTD)	
С	Cookbook (STD)	
	Cookbook (special)	
	Cofficient	
_	Software	
D	version	
	installation date	
	Instrument hardware cotum	
E	Instrument hardware setup	
	Instrument upgrade	
	Maintenance log	
	Maintenance log	
F	vendor repair log	
	vendor repair log	
	Appliaction/operational use	Part of WC-MST track
G	sample type	r art or the men track
	specification/accuracy	
	- cpositioation/accuracy	
	Spare parts	
l н	Consumables	
	Supporting system	
	Comments	
	The state of the s	T.

		MST Module - Multi Channel Buffer w/
	Instrument	Option 5 Card
	ODP #	04391
Α	Model	918A
_ ^	Vendor	EG&G
	Date of purchase	9/1/1995
	Date of installation	Leg 163, Sept. 95
	Date of installation	Leg 105, 5ерг. 95
	Vendor manual	
В	schematic	
	Schematic	
	Cookbook (STD)	
С	Cookbook (special)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
	installation date	
	Instrument hardware setup	
E	Instrument upgrade	
	instrument upgrade	
	Maintenance log	
	Walltellance log	
F	vendor repair log	
	vendor repair log	
	Appliaction/operational use	Part of WC-MST track
G	sample type	
	specification/accuracy	
	Spare parts	
Н	Consumables	
	Supporting system	
	Comments	

	Instrument	High Voltage Power Supply
	ODP #	04404
	Model	556
Α	Vendor	EG&G
	Date of purchase	9/1/1995
	Date of installation	Leg 163, Sept. 95
		Model 556 High Voltage Power Supply
В	Vendor manual	Operating and Service Manual
	schematic	Yes
	Cookbook (STD)	
С	Cookbook (special)	
	(-1	
	Software	
D	version	
	installation date	
_	Instrument hardware setup	
E	Instrument upgrade	
	Maintenance log	
_		
F	vendor repair log	
	Appliaction/operational use	Part of WC-MST track
G	sample type	
	specification/accuracy	
	•	
	Spare parts	
Н	Consumables	
	0 41	
1	Supporting system	
	Supporting system	
	Comments	

	Instrument	Detectors - NAI
	ODP #	04767
	Model	3M3/3
Α	Vendor	Bicron
	Date of purchase	2/5/1997
	Date of installation	
В	Vendor manual	N/A
	schematic	N/A
С	Cookbook (STD)	
C	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
		De de CIMO MOT (m.)
	Appliaction/operational use	Part of WC-MST track
G	sample type	
	specification/accuracy	
	Chara narta	
	Spare parts	
Н	Consumables	
	Supporting system	
	Comments	
	Comments	

	Instrument	Internal Card - PCI, Trump-PCI-2K
	ODP#	05816
	Model	N/A
Α	Vendor	Perkin Elmer - Ortec
	Date of purchase	6/15/2000
	Date of installation	
В	Vendor manual	
	schematic	
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Appliaction/operational use	Part of WC-MST track
G	sample type	
	specification/accuracy	
	Spare parts	
Н	Consumables	
	Supporting system	
	0	
	Comments	

		Bus Expander - 7 slot PCI Expansion
	Instrument	System
	ODP#	50133
Α	Model	01-04645-01
	Vendor	Magma
	Date of purchase	2/27/2002
	Date of installation	
В	Vendor manual	
Ь	schematic	
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
	Instrument upgrade	
	Maintenance log	
F	vendor repair log	
	vendor repair log	
	Appliaction/operational use	Part of WC-MST track
G	sample type	
	specification/accuracy	
	Spare parts	
Н	Consumables	
	Supporting system	
	Comments	

		ADCAM Multichannel Buffer (917-918A	
	Instrument	Option E)	
	ODP#	03516	03577
Α	Model	917-918A	
	Vendor	EG&G Ortec	
	Date of purchase	2/3/1995	33249
	Date of installation		
		Model 918A ADCAM Multichannel	
	Vendor manual	Buffer Service Package	
		Model 918A ADCAM Multichannel	
В		Buffer Operator's Manual	
		ADCAM Model 917 Hardware	
		Operator's Manual	
	schematic	Yes	
	Cookbook (STD)		
С	Cookbook (special)		
	· · · · · ·		
	Software		
D	version		
	installation date		
Е	Instrument hardware setup		
-	Instrument upgrade		
	Maintenance log		
F			
	vendor repair log		
_	Appliaction/operational use	Part of WC-MST track	
G	sample type		
	specification/accuracy		
1	Spare parts		
Н	Consumables		
	Supporting system		
	Comments		

	Instrument	Step Motor
	ODP #	03514
1	Model	S106-178-E
Α	Vendor	Parker/Compumotor
	Date of purchase	3/9/1995
	Date of installation	
В	Vendor manual	
_ B	schematic	
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Annilla d'anta	
	Appliaction/operational use	
G	sample type	
	specification/accuracy	
	Cuara nauta	
_ п	Spare parts Consumables	
Н		
	Supporting system	
	Comments	
	Comments	

	Instrument	Signal Breakout Box	
	ODP #	N/A	
	Model	SCB-68	
Α	Vendor	National Instruments	
	Date of purchase		
	Date of installation		
-	Vendor manual		
В	schematic		
С	Cookbook (STD)		
	Cookbook (special)		
	Software		
D	version		
	installation date		
E	Instrument hardware setup		
_	Instrument upgrade		
	Maintenance log		
F			
	vendor repair log		
	Application/operational	Dort of D. Woyo Logger Cysters	
G	Appliaction/operational use	Part of P-Wave Logger System	
G	sample type specification/accuracy		
	Specification/accuracy		
	Spare parts		
Н	Consumables		
''	Supporting system	WC-MST Track	
	Oupporting system	VVO WOT TROK	
	Comments		
	Committee		

	Instrument	Pulser
_	ODP#	N/A
	Model	480
A	Vendor	EG&G Ortec
	Date of purchase	
	Date of installation	
		Model 480 Pulser Operating and
В	Vendor manual	Service Manual
	schematic	Yes
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Application/approximations	Test Equipment for NCD and CDADE
G	Appliaction/operational use	Test Equipment for NGR and GRAPE
	sample type	
	specification/accuracy	
	Spare parts	
н	Consumables	
''	Supporting system	WC-MST
	Capporting System	
	Comments	
I		

	Instrument	Water Pump
	ODP#	N/A
	Model	FPU-255
Α	Vendor	
	Date of purchase	
	Date of installation	
В	Vendor manual	N/A
В	schematic	N/A
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
—	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Appliaction/operational use	Used with P-Wave Logger System
G	sample type	
	specification/accuracy	
	Smara marta	
	Spare parts	
H	Consumables	WC-MST Track
	Supporting system	VVC-IVIST TRACK
	Comments	
	Comments	

	Instrument	Photomultiplier
	ODP#	N/A
	Model	276
Α	Vendor	EG&G Ortec
	Date of purchase	
	Date of installation	
		Model 276 Photomultiplier Base
В	Vendor manual	Operating and Service Manual
	schematic	Yes
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
_	Appliaction/operational use	Part of NGR & GRAPE system
G	sample type	N/A
	specification/accuracy	N/A
	Spare parts	
Н	Consumables	
	Supporting system	WC-MST Track
	Comments	

	Instrument	High Voltage Fan-Out
	ODP#	N/A
	Model	HVF
Α	Vendor	EG&G Ortec
	Date of purchase	
	Date of installation	
В	Vendor manual	
	schematic	
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Application/operational	Part of NCB System
	Appliaction/operational use	Part of NGR System N/A
G	sample type	N/A
	specification/accuracy	IN/A
	Spare parts	
l н	Consumables	
	Supporting system	WC-MST Track
	Supporting system	VVO-IVIO I ITACK
	Comments	
I	Comments	

	Instrument	Dual Spectroscopy Amplifier	
	ODP#	N/A	
	Model	885	
Α	Vendor	EG&G Ortec	
	Date of purchase		
	Date of installation		
		Model 885 Dual Spectroscopy	
В		Amplifier Operating and Service	
	Vendor manual	Manual	
	schematic	Yes	
	(0=5)		
С	Cookbook (STD)		
	Cookbook (special)		
	Software		
D	version		
	installation date		
Е	Instrument hardware setup		
	Instrument upgrade		
	Maintenance log		
F			
	vendor repair log		
	Appliaction/operational use	Part of NGR & GRAPE system	
G	sample type	N/A	
	specification/accuracy	N/A	
	0		
Н	Spare parts Consumables		
"		WC MST Trook	
	Supporting system	WC-MST Track	
	Comments		
	O CHARLETTES		

	1	D -10 II t A I'C
Δ	Instrument	Dual Sum and Inverter Amplifier
	ODP #	N/A
	Model	533
^	Vendor	EG&G Ortec
	Date of purchase	
	Date of installation	
		Model 533 Dual Sum and Inverter
_		Amplifier Operating and Service
В	Vendor manual	Manual
	schematic	Yes
	Cookbook (STD)	
С	Cookbook (special)	
	(
	Software	
D	version	
	installation date	
_	Instrument hardware setup	
E	Instrument upgrade	
	Maintenance log	
F	Maintenance log	
F		
F	Maintenance log	
F	Maintenance log	
F	Maintenance log vendor repair log	Part of NGR & GRAPE system
F	Maintenance log vendor repair log Appliaction/operational use	Part of NGR & GRAPE system N/A
	Maintenance log vendor repair log Appliaction/operational use sample type	
	Maintenance log vendor repair log Appliaction/operational use	N/A
	Maintenance log vendor repair log Appliaction/operational use sample type	N/A
	Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy	N/A
G	Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy Spare parts	N/A
	Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy Spare parts Consumables	N/A N/A
G	Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy Spare parts	N/A
G	Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy Spare parts Consumables	N/A N/A

Instrument axis closed loop ODP # 04912 Model N/A Vendor Nulogic Date of purchase 8/28/1997 Date of installation B Vendor manual N/A schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			Motion Control Board - PCI Step-4CL, 4
A Model N/A Vendor Nulogic Date of purchase 8/28/1997 Date of installation B Vendor manual N/A schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use sample type specification/accuracy N/A Appliaction/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track	Α	Instrument	
Vendor Nulogic Date of purchase 8/28/1997 Date of installation B Vendor manual N/A schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log F vendor repair log Appliaction/operational use sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		ODP#	
Date of purchase 8/28/1997 Date of installation B Vendor manual N/A schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log wendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Byare parts N/A Consumables N/A Supporting system VSR Track		Model	N/A
Date of purchase 8/28/1997 Date of installation B Vendor manual N/A schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log wendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Byare parts N/A Consumables N/A Supporting system VSR Track		Vendor	Nulogic
Date of installation B Vendor manual N/A schematic N/A C Cookbook (STD) Cookbook (special) D Software version installation date E Instrument hardware setup Instrument upgrade F Maintenance log F Vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A H Consumables N/A Supporting system VSR Track		Date of purchase	
Schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A H Spare parts N/A Consumables N/A Supporting system VSR Track			
Schematic N/A C Cookbook (STD) Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A H Spare parts N/A Consumables N/A Supporting system VSR Track			
Schematic N/A Cookbook (STD) Cookbook (special) Software Version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type specification/accuracy N/A Byare parts N/A Consumables N/A Supporting system VSR Track	D	Vendor manual	
Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		schematic	N/A
Cookbook (special) Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			
Software version installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type specification/accuracy N/A Spare parts Consumables Supporting system VSR Track	C		
E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		Cookbook (special)	
E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			
installation date E Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track	_		
F Instrument hardware setup Instrument upgrade Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type specification/accuracy N/A Spare parts Consumables N/A Supporting system VSR Track	D	101011	
F Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		installation date	
F Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			
F Maintenance log vendor repair log Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track	E		
Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track	_	Instrument upgrade	
Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			
Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		Maintenance log	
Appliaction/operational use Part of VSR-Track sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track	F	vender reneir les	
G sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		vendor repair log	
G sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			
G sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track			
G sample type N/A specification/accuracy N/A Spare parts N/A Consumables N/A Supporting system VSR Track		Appliaction/operational use	Part of VSR-Track
Spare parts Consumables Supporting system N/A N/A N/A VSR Track	G		
Spare parts N/A Consumables N/A Supporting system VSR Track			
H Consumables N/A Supporting system VSR Track			
H Consumables N/A Supporting system VSR Track			
H Consumables N/A Supporting system VSR Track		Spare parts	N/A
	Н		N/A
		Supporting system	VSR Track
On manufacture of the control of the		_	
Comments		Comments	

	Instrument	Ultrasonic Pulser-Receiver
	ODP#	50249
	Model	5077PR
Α	Vendor	Panametrics
	Date of purchase	6/26/2003
	Date of installation	
В	Vendor manual	N/A
	schematic	N/A
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Appliaction/operational use	Part of VSR-Track
G	sample type	N/A
0	specification/accuracy	N/A
	- Specification/accuracy	13//3
	Spare parts	N/A
Н	Consumables	N/A
	Supporting system	VSR Track
	, , , , , , , , , , , , , , , , , , ,	
	Comments	

		Linear Voltage Displacement
	Instrument	Transducer (LVDT)
	ODP#	N/A
Α	Model	P-200A
	Vendor	Magnetek
	Date of purchase	
	Date of installation	
В	Vendor manual	N/A
•	schematic	N/A
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
<u> </u>	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
		Measures transducer displacement for
G	Appliaction/operational use	PWS3
	sample type	N/A
	specification/accuracy	N/A
	Sucre marte	N/A
	Spare parts Consumables	N/A N/A
Н		VSR Track
	Supporting system	VOR HAUK
	Comments	
	Comments	

	Instrument	Digital Thermometer
	ODP #	N/A
Α	Model	DP41-TC
	Vendor	Omega
	Date of purchase	- Cinings
	Date of installation	
	Date of metanation	
		DP41-TC/DP41-RTD High
_		Performance Temperature Indicator
В	Vendor manual	Operator's Manual
	schematic	Yes
	Cookbook (STD)	Phys.Props. Tech Help
С	Cookbook (special)	. пуст торы толь тыр
	Common (openial)	
	Software	
D	version	
	installation date	
_	Instrument hardware setup	
E	Instrument upgrade	
	Maintenance log	
_		
F	vendor repair log	
	Appliaction/operational use	Part of VSR Track
G	sample type	N/A
	specification/accuracy	N/A
	Spare parts	N/A
Н	Consumables	N/A
	Supporting system	VSR Track
	Comments	

	Instrument	Oscilloscope Boards
	ODP #	N/A
	*=: "	
Δ	Model	N/A
	Vendor	National Instruments
	Date of purchase	
	Date of installation	
В	Vendor manual	N/A
	schematic	N/A
•	Cookbook (STD)	
С	Cookbook (special)	
	Software	
D	version	
	installation date	
	motanation data	
	Instrument hardware setup	
E	Instrument upgrade	
	mstrument apgrade	
	Maintenance log	
	Maintenance log	
F	vendor repair log	
	vendor repair log	
		Digitizes received essentia signal from
	Application/operational	Digitizes received acoustic signal from PWS stations and LVDT
G	Appliaction/operational use	N/A
	sample type	N/A
	specification/accuracy	N/A
	<u> </u>	N/A
1	Spare parts	N/A
H	Consumables	N/A
	Supporting system	VSR Track
	Comments	

	Instrument	PCI 4A Encoder Interface Board
A	ODP #	N/A
	Model	PCI 4A
	Vendor	Natioanl Instuments
	Date of purchase	Natioani instuments
	Date of purchase Date of installation	
	Date of installation	
	Van Ian na anna I	NI/A
В	Vendor manual	N/A
	schematic	N/A
	0 11 1 (075)	
С	Cookbook (STD)	
	Cookbook (special)	
	0.6	
_	Software	
D	version	
	installation date	
Е	Instrument hardware setup	
	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
		Interface to three encoders for position
G	Appliaction/operational use	and Vane Shear
	sample type	N/A
	specification/accuracy	N/A
	Spare parts	N/A
н	Consumables	N/A
	Supporting system	VSR Track
	Comments	

		Linear Velocity Transducer Signal
A	Instrument	Conditioner
	ODP#	N/A
	Model	LDX-3A
	Vendor	OMEGA
	Date of purchase	
	Date of installation	
	Vendor manual	N/A
В	schematic	N/A
	Cookbook (STD)	
С	Cookbook (special)	
	, ,	
	Software	
D	version	
	installation date	
Е	Instrument hardware setup	
_	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
G	Appliaction/operational use	Part of VSR Track
	sample type	N/A
	specification/accuracy	N/A
н	Spare parts	N/A
	Consumables	N/A
	Supporting system	VSR Track
	Comments	

A	Instrument	Panel Meter
	ODP#	N/A
	Model	DP41-TC-S2AR
	Vendor	OMEGA
	Date of purchase	
	Date of installation	
В	Vendor manual	N/A
	schematic	N/A
С	Cookbook (STD)	
	Cookbook (special)	
	Software	
D	version	
	installation date	
E	Instrument hardware setup	
L	Instrument upgrade	
	Maintenance log	
F		
	vendor repair log	
	Anniadiantanadian	Down of VCD Track
	Appliaction/operational use	Part of VSR Track N/A
G	sample type	-
	specification/accuracy	N/A
	Cuara manta	N/A
н	Spare parts Consumables	N/A
		VSR Track
	Supporting system	VOK HACK
	Comments	
	Comments	