

GLO1940

**RESEARCH CORING IN CASCADES
PROGRESS REPORT**

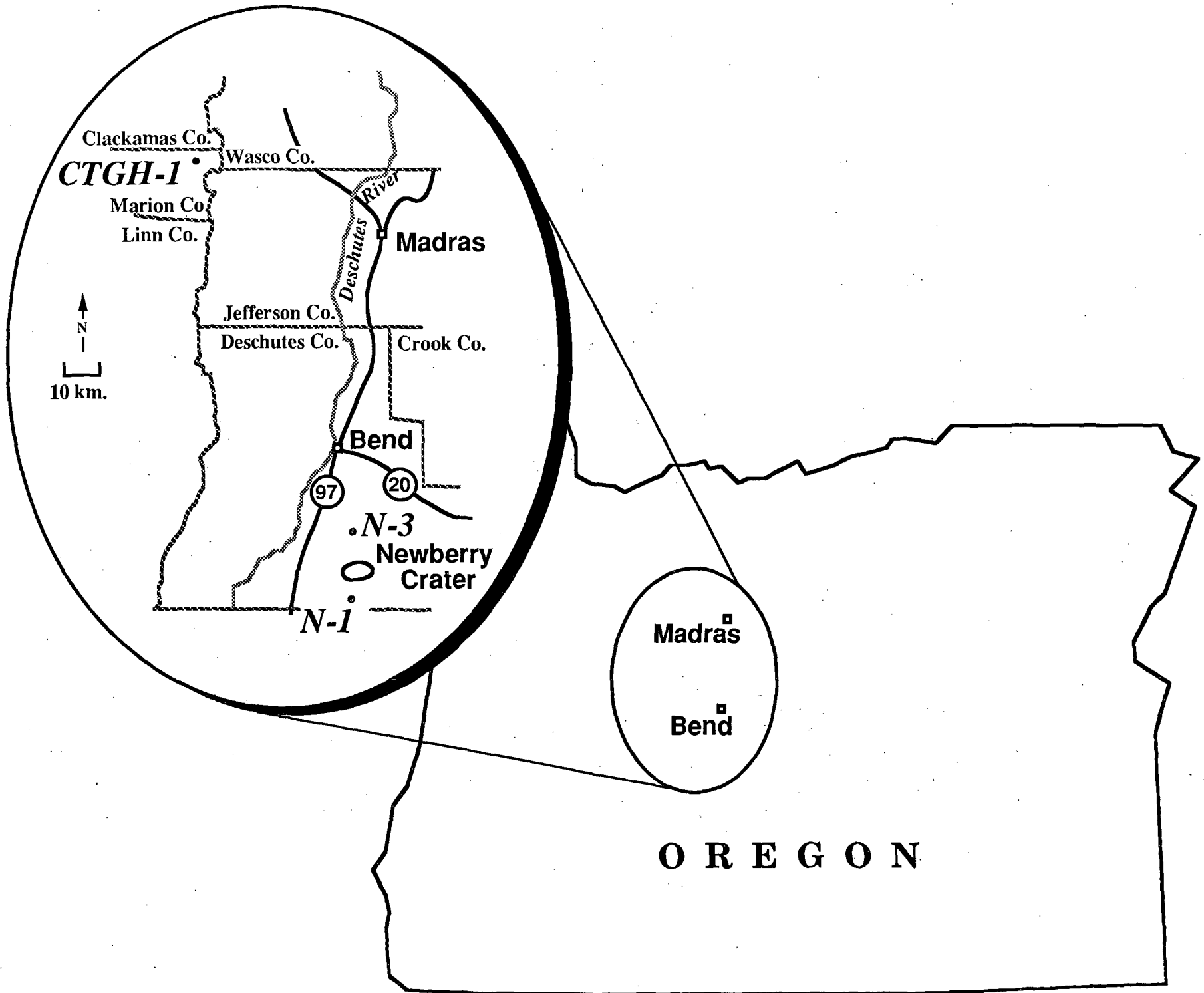
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OBJECTIVES: 1. Evaluate Shallow Hydrologic Regime
2. Collect Scientific Data

PROGRAM ELEMENTS

- SHARE COST WITH INDUSTRY
- DATA ACQUISITION
- DATA INTERPRETATION
- OPEN FILE RELEASE OF DATA
- PUBLICATION OF REPORTS



DRILLING SUMMARY

	<u>CTGH-1</u>	<u>GEON-1</u>	<u>GEON-3</u>
ROTARY DRILLED TO	427'	487'	454'
CORED TO	4800'	4550'	4002'

COMMON DRILLING PROBLEMS

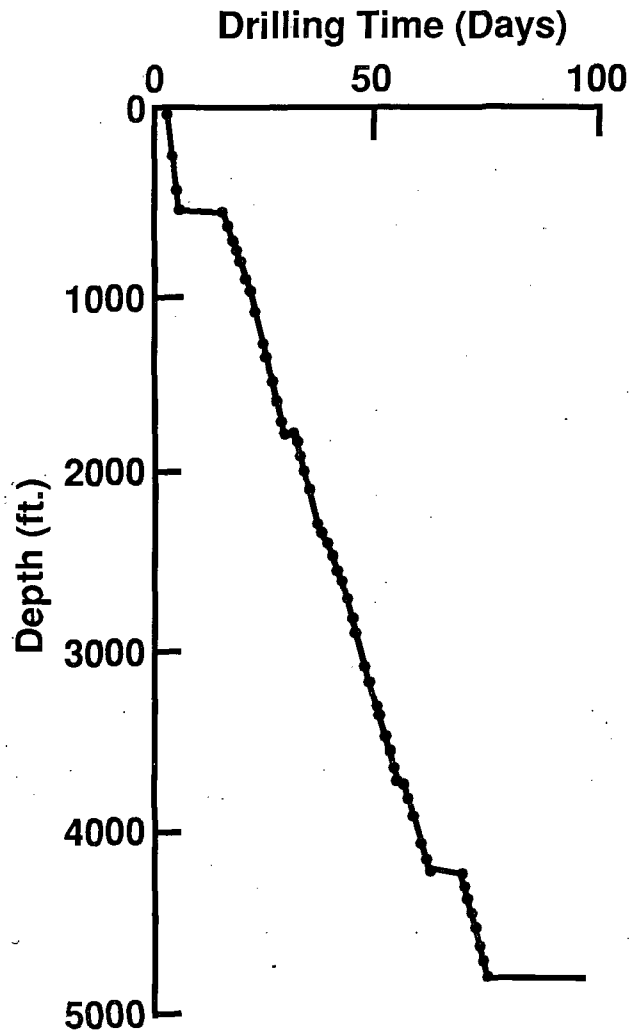
	<u>CTGH-1</u>	<u>GEON-1</u>	<u>GEON-3</u>
SETTING CONDUCTOR	x	—	—
SETTING CASING	x	x	x
BOP TEST	x	x	x
CAVING	—	x	x
STUCK DRILL RODS	x	—	x
GEOPHYSICAL LOGGING DIFFICULTIES	x	x	x

COMPARISON OF DRILLING HISTORIES

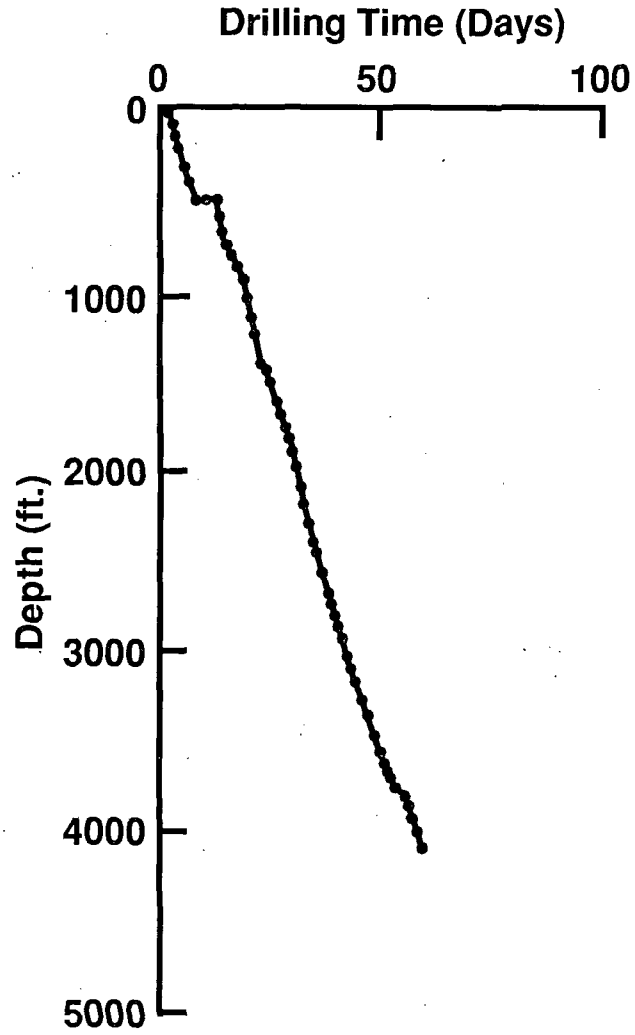
	<u>CTGH-1</u>	<u>GEON-1</u>	<u>GEON-3</u>
DAILY PENETRATION RATE	88 ft/day	69 ft/day	68 ft/day
CORE RECOVERY	100%	100%	93%
TOTAL COST	\$456,456	\$515,241	\$478,038
COST/FT	\$95/ft	\$113/ft	\$119/ft

DEPTH PENETRATION PROFILE

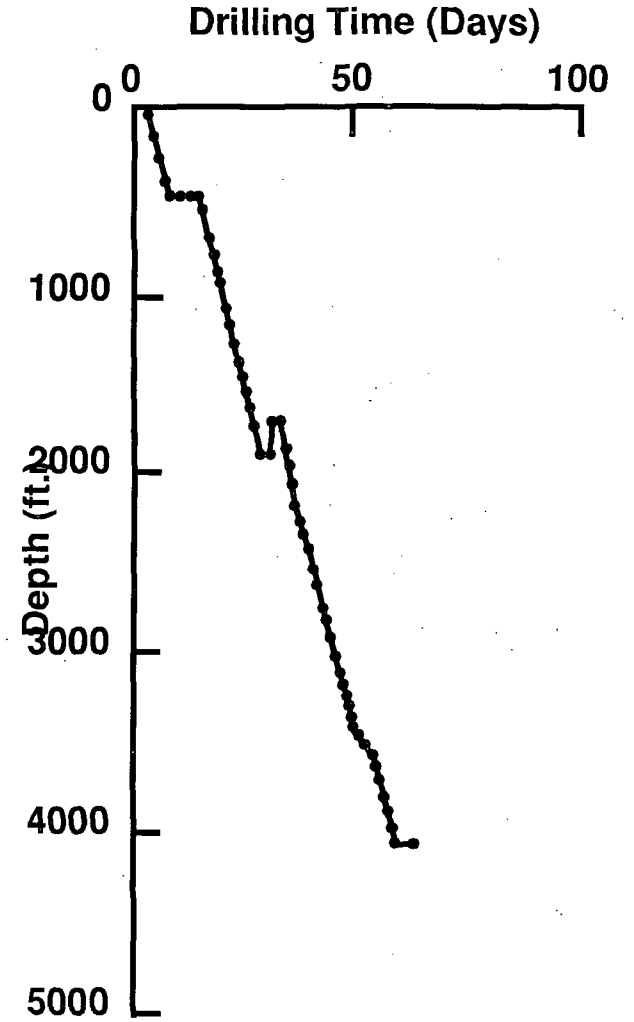
CTGH - 1



GEO N-1



GEO N-3



WELL LOGS AVAILABLE

	<u>CTGH - 1</u>	
TEMPERATURE	16' - 516'	0' - 4785'
CALIPER	10' - 514'	4100' - 4800'
GAMMA RAY	0' - 4800'	
SPONTANEOUS POTENTIAL	35' - 516'	4200' - 4798'
RESISTIVITY 16" - 64"	35' - 515.5'	4200' - 4799'
INDUCTION		--
ACOUSTIC		--
ACOUSTIC FRACLOG		--
NEUTRON		0' - 4800'
GAMMA - GAMMA DENSITY		0' - 510'
INDUCED POLARIZATION		4200' - 4799'
LATERALOG		4200' - 4798'
DENSILOG, NEUTRON		--
GUARD RESISTIVITY		20' - 514'

WELL LOGS AVAILABLE

	<u>GEO N-1</u>
TEMPERATURE	0' - 4000'
CALIPER	454' - 1249; 1788 - 3430
GAMMA RAY	0' - 4000'
SPONTANEOUS POTENTIAL	1788' - 4000'
RESISTIVITY 16" - 64"	--
INDUCTION	491' - 1250'; 1788' - 4000'
ACOUSTIC	1788' - 4000'
ACOUSTIC FRACLOG	1788' - 4000'
NEUTRON	--
GAMMA - GAMMA DENSITY	--
INDUCED POLARIZATION	--
LATERALOG	--
DENSILOG, NEUTRON	--
GUARD RESISTIVITY	--

WELL LOGS AVAILABLE

	<u>GEO N-3</u>
TEMPERATURE	50' - 4002'
CALIPER	1690' - 3999'
GAMMA RAY	50' - 1692'
SPONTANEOUS POTENTIAL	--
RESISTIVITY 16" - 64"	--
INDUCTION	--
ACOUSTIC	--
ACOUSTIC FRACLOG	1700' - 4001'
NEUTRON	50' - 4000'
GAMMA - GAMMA DENSITY	--
INDUCED POLARIZATION	--
LATERALOG	--
DENSILOG, NEUTRON	50' - 1692'
GUARD RESISTIVITY	--

**GEOPHYSICAL WELL LOGS
AVAILABLE FROM:**

ROCKY MOUNTAIN WELL LOG SERVICE

**P.O. BOX 3150
DENVER COLORADO
80120**

SCIENTIFIC STUDIES

	<u>CTGH-1</u>	<u>GEO N-1</u>	<u>GEO N-2</u>
HEAT FLOW	SMU	SMU GEO	SMU GEO
DOWNHOLE Hg	--	GEO	GEO
ALTERATION	USGS	USGS GEO	USGS GEO
VOLCANIC STRATIGRAPHY	DOGAMI	U of Wy.	U of Wy.
LOG ANALYSIS	UURI	UURI	UURI
GEOCHEMISTRY	--	GEO	GEO
AGE DATES	--	GEO	GEO
PETROGRAPHIC	--	GEO	GEO
PHYSICAL PROPERTIES	UURI	UURI	UURI

OPEN FILE DATA

	<u>CTGH-1</u>	<u>GEON-1</u>	<u>GEON-3</u>
DAILY DRILL. REPORT	X	X	X
DRILL & COMPL. HIST.	X	—	—
LITH. LOG	X	X	X
CORE RECOVERY	X	X	X
CORE PHOTOS	—	X	X
TEMP. DURING DRILL.	X	X	X
FLUID LEVEL	X	X	X
TEMP. LOG	—	X	X
GRAPHIC DRILLING LOG	X	—	—
SECONDARY MINERALS	X	X	X
COMPLETION SCHEM.	X	X	X
THERMAL CONDUCTIVITY	—	X	X
FINAL REPORTS	X	X	X

RESULTS

- **SUCCESSFULLY COMPLETED THREE CORE HOLES**
- **SHALLOW HYDROLOGIC REGIME DEFINED**
- **OBTAINED SCIENTIFIC DATA ON TEMP., LITHOLOGY,
AND HEAT FLOW OF UPPER 4000 ft. OF CENTRAL
OREGON CASCADES**
- **OBTAINED EXTENSIVE GEOPHYSICAL LOGS**
- **MADE DATA AVAILABLE TO PUBLIC**