

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

CONFIDENTIAL

#15

AM: Wayne Monger
PM: Mike McLaughlin

TRANS-PACIFIC GEOTHERMAL
ESI Vale #A-S-ALT

DATE:	Sunday	Feb. 20, 1994	TEMPERATURE			
TIME:	06:00 hrs	DEPTH	IN	OUT	IN	OUT
STATUS:	OOH	3015	101	117		
PRESENT DEPTH: 3015'						
PREVIOUS DEPTH: 3015'						
FOOTAGE CUT: 0'						
Midnight Depth: 2950'						
DRILL RATE						
MAX:	0.0	FT/HR				
MIN:	0.0	FT/HR				
AVE:	0.0	FT/HR				
CURRENT:	0	FT/HR				
Drill Hrs: 16.50 hrs						

GASES

CO2: 550-1050 PPM
H2S: 0 PPM
Methane: 0-3 PPM

Bottom-up temp after trip = 120 F.

SURVEYS

MUD LOSSES/DRILLING NOTES

No downhole mud loss OR fluid gains during past 24 hrs.

Trip @ 3015', Bit #9 299'/13.0 hrs.

DEPTH	LITHOLOGY/REMARKS
2950'-3015'	80-100% fresh-sl altered Basalt, tr-20% Sandstone

Trip OOH @ 3015', change stabs & RIH on wiper run. Find 2' fill & circ 10a.m. to 5 p.m. waiting on Schlumberger, POOH. Rig-up Schlumberger & run logs 6:30p.m. to 12:30a.m. R/D Schlumberger & RIH. Circ & rig-up lay-down machine. Currently L/D 4.5" D.P. to prepare to run casing.

BOPE Test record: Function test BOPE during trip at 3015' on 2/19 at 6:30 p.m.

3010'
Ran casing 2/20/94 (7"). No returns on cement. Prob. lost at LC zone @ 800'. But it was > 13 ppg cement, so could have been lost at shoe of 9 5/8" I squeezed 24 bbl cem down 9 5/8 x 7" annulus (400 psi) filled up but dropped after 3 hours. additional squeeze 8 bbl. (2 run 2/21/94). Preheated wellhead to ~1000°F, welded into csg, postheated, posted down 3 hrs (took most of 2/21/94 day light)

TECTON GEOLOGIC INC.
Daily 08:00 AM Morning Report

CONFIDENTIAL #13

AM: Wayne Monger
PM: Mike McLaughlin

TRANS-PACIFIC GEOTHERMAL
ESI Vale #A-S-ALT

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DATE: <u>Friday</u> <u>Feb. 18, 1994</u>	TIME: <u>06:00 hrs</u>	STATUS: <u>Drilling</u>	DEPTH	TEMPERATURE			
				IN	OUT	IN	OUT
			<u>2400</u>	<u>106</u>	<u>109</u>		
			<u>2450</u>	<u>105</u>	<u>109</u>		
PRESENT DEPTH: <u>2675'</u>			<u>2500</u>	<u>107</u>	<u>110</u>		
PREVIOUS DEPTH: <u>2399'</u>			<u>2550</u>	<u>108</u>	<u>112</u>		
FOOTAGE CUT: <u>276'</u>			<u>2600</u>	<u>107</u>	<u>112</u>		
Midnight Depth: <u>2615'</u>			<u>2650</u>	<u>108</u>	<u>113</u>		
DRILL RATE			<u>2670</u>	<u>108</u>	<u>113</u>		
MAX: <u>157.3 FT/HR</u>							
MIN: <u>1.0 FT/HR</u>							
AVE: <u>24.6 FT/HR</u>							
CURRENT: <u>40-85 FT/HR</u>							
Drill Hrs: <u>11.25 hrs</u>							

GASES

CO2: 550-1050 PPM
H2S: 0 PPM
Methane: 0-3 PPM

Bottom-up temp after trip = 114 F.

SURVEYS

2358' 3.25deg N81E No⁰F
2425' 4.25deg S31E No⁰F
2514' 4.75deg N28E 122 F
2550' 5.25deg N30E No F
2612' 6.25deg N31E No F

MUD LOSSES/DRILLING NOTES

No downhole mud loss OR fluid gains
during past 24 hrs.
Trip @ 2408'. Bit #7 74'/16 hrs
NB#8 Reed EHP-43A w/ rotary drilling.

DEPTH	LITHOLOGY/REMARKS
<u>2390'-2510'</u>	<u>100% Basalt (com unaltered to incr moderate bleached/alterd w/ depth.)</u>
<u>2510'-2560'</u>	<u>20-80% altered Basalt, 20-80% Siltstone.</u>
<u>2560'-2610'</u>	<u>100% altered/chlorzd Basalt</u>
<u>2610'-2630'</u>	<u>20-30% altered Basalt, 70-80% Tuff/Tuff Seds</u>
<u>2630'-2670'</u>	<u>100% Tuff/Tuff Seds (very soft, v com clay)</u>

End Directional drilling w/ mud motor @ 2408'.

BOPE Test record: Function test Blind & Pipe rams during trip
at 2408' on 2/17/94.

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TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

AM: Wayne Monger
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TRANS-PACIFIC GEOTHERMAL
ESI Vale #A-S-ALT

DATE: <u>Thursday Feb. 17, 1994</u>	TIME: <u>06:00 hrs</u>	DEPTH	TEMPERATURE			
			IN	OUT	IN	OUT
STATUS: <u>Drilling</u>		<u>2350</u>	<u>102</u>	<u>104</u>		
		<u>2390</u>	<u>106</u>	<u>109</u>		
PRESENT DEPTH: <u>2399'</u>						
PREVIOUS DEPTH: <u>2315'</u>						
FOOTAGE CUT: <u>84'</u>						
Midnight Depth: <u>2374'</u>						
DRILL RATE						
MAX: <u>23.7 FT/HR</u>						
MIN: <u>1.0 FT/HR</u>						
AVE: <u>4.5 FT/HR</u>						
CURRENT: <u>3-7 FT/HR</u>						
Drill Hrs: <u>18.50 hrs</u>						

GASES

CO2: 550-1050 PPM
H2S: 0 PPM
Methane: 0-tracePPM

Bottom-up temp after trip = 107 F.

SURVEYS

2294' 3.25deg N74E No⁰F
2326' 3.25deg S66E No⁰F

MUD LOSSES/DRILLING NOTES

No downhole mud loss OR fluid gains during past 24 hrs since 2325'.

Trip @ 2334'. No gains after trip.

DEPTH	LITHOLOGY/REMARKS
<u>2310'-2390'</u>	<u>100% Basalt (pred unaltered to locally moderate bleached appr. hard-very hard).</u>

Trip @ 2334' Blt #6 200'/17.5 hrs. NB#7 Reed HD13G w/ Mud Motor

BOPE Test record: Function test Blind & Pipe rams during trip at 2334' @ 11:30 am 2/16/94.

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

#11

AM: Wayne Monger
PM: Mike McLaughlin

TRANS-PACIFIC GEOTHERMAL
Vale ESI #A-S-ALI

DATE: Wednesday Feb. 16, 1994

TIME: 06:00 hrs

STATUS: Drilling

PRESENT DEPTH: 2315'

PREVIOUS DEPTH: 2132'

FOOTAGE CUT: 183'

Midnight Depth: 2256'

DRILL RATE

MAX: 79.7 FT/HR

MIN: 0.8 FT/HR

AVE: 11.1 FT/HR

CURRENT: 11-17 FT/HR

Drill Hrs: 16.50 hrs

GASES

CO2: 450-820 PPM

H2S: 0 PPM

Methane: 0-1 PPM

SURVEYS

2112' 3.75deg S26E No F

2143' 3.75deg S43E 112 F

2176 3.50deg S60E No F

2206 3.50deg S60E No F

2236 3.50deg S76E No F

2267 3.50deg N87E No F

TEMPERATURE

IN OUT IN OUT

2150 100 104

2200 103 106

2250 102 105

2300 99 103

2100 105 110

2130 103 106

Bottom-up temp after trip = 110 F.

MUD LOSSES/DRILLING NOTES

No downhole mud loss noted during

past 24 hrs.

At 6 am, all water to pits off.

Gaining volume approx 1 bbl per min.

DEPTH

LITHOLOGY/REMARKS

2130'-2310' 100% Basalt (pred unalt-loc hiv alt)

Trip @ 2134' Bit #5 81'/9.5 hrs. NB#6 HTC ATJ-1-S w/ Mud Motor

BOPE Test record: Function test Blind & Pipe rams during trip
at 2134' @ 10:00 am 2/15/94.

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

#10

AM: Wayne Monger TRANS-PACIFIC GEOTHERMAL
PM: Mike McLaughlin Vale ESI #A-S-ALT

DATE: Tuesday Feb. 15, 1994	TIME: 06:00 hrs	DEPTH	TEMPERATURE			
			IN	OUT	IN	OUT
STATUS: Drilling		1900	106	109		
		1950	107	111		
PRESENT DEPTH: 2132'		2000	109	112		
PREVIOUS DEPTH: 1877'		2050	109	113		
FOOTAGE CUT: 255'		2100	105	110		
Midnight Depth: 2114'		2130	103	106		
DRILL RATE						
MAX: 117.3 FT/HR						
MIN: 1.1 FT/HR						
AVE: 15.0 FT/HR						
CURRENT: 1-4 FT/HR						
Drill Hrs: 17.00 hrs						

GASES

CO2: 450-820 PPM
H2S: 0 PPM
Mothane: 0-1 PPM

Bottom-up temp after trip = 114 F.

SURVEYS

1931' 3.25deg S05E 122 °F
2053' 2.75deg S02E 122 °F

MUD LOSSES/DRILLING NOTES

No downhole mud loss noted during past 24 hrs.

Trip @ 2053'. Bit #4 353'/18.5 hrs.
NB#5 Smith MFDSH w/ Mud Motor.

DEPTH	LITHOLOGY/REMARKS
1860'-1940'	100% Basalt
1940'-2000'	10-80% Basalt (loc v strngly alt), 20-60% Siltstone, tr-50% Sandstone (tuff seds).
2000'-2060'	60-80% Basalt, 20-40% Siltstone
2060'-2070'	100% Basalt
2070'-2110'	60-80% hvly alt Basalt, 20-40% Siltstone
2110'-2130'	100% Basalt

KOP ~ 2114' 8 3/4"

BOPE Test record: Function test during trip @ 2083' on 2/14/94.

2168' on 2/15, pm
may ream + log 2/18

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

CONFIDENTIAL

#9

AM: Wayne Monger
PM: Mike McLaughlin

TRANS-PA...
Vale ESI #A-S-ALT

DATE: Monday Feb. 14, 1994	TIME: 06:00 hrs	STATUS: Drilling	DEPTH	TEMPERATURE			
				IN	OUT	IN	OUT
			1650	98	100		
			1700	99	102		
PRESENT DEPTH: 1877'			1750	97	101		
PREVIOUS DEPTH: 1620'			1800	102	105		
FOOTAGE CUT: 257'			1850	104	107		
Midnight Depth: 1780'			1870	105	108		
DRILL RATE							
MAX: 185.1 FT/HR							
MIN: 1.8 FT/HR							
AVE: 13.1 FT/HR							
CURRENT: 16-25 FT/HR							
Drill Hrs: 18.75 hrs							

GASES
CO2: 450-820 PPM
H2S: 0 PPM
Methane: 0-1 PPM

Bottom-up temp after trip = 105 F.

SURVEYS
1620' 1.00deg S02W 108°F
1777' 2.50deg S22E 111°F

MUD LOSSES/DRILLING NOTES
Downhole mud loss from 818' now fully stopped. No further downhole mud losses noted in past 24 hrs.
Trip @ 1695'. NB#4 Reed HP12J.

DEPTH	LITHOLOGY/REMARKS
1620'-1660'	40-90% hvly chloritized Siltstone (tuff seds), 10-60% hvly chloritized Basalt.
1660'-1720'	90-100% Basalt, tr-10% Siltstone
1720'-1760'	40-90% tuffaceous Siltstone, 10-60% Basalt
1760'-1860'	90-100% Basalt (pred unalt/ hvly mnrlizd w/ sulfides?/hematite 1810-20'), tr-10% Siltstone

Trip @ 1695':
Bit #3 508'/39.5 hrs. Ream last 15' to bottom.
BOPE Test record: Function test during trip @ 1695' at 15:30 hrs on 2/13/93.

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

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#8

AM: Wayne Monger
PM: Mike McLaughlin

TRANS PACIFIC GEOTHERMAL
Vale ESI #A-S-ALT

DATE: Sunday Feb. 13, 1994	TIME: 06:00 hrs	STATUS: Drilling	DEPTH	TEMPERATURE			
				IN	OUT	IN	OUT
			1300	86	89		
			1350	89	94		
			1400	91	95		
			1450	93	96		
			1500	91	94		
			1550	88	91		
			1600	95	98		
			1620	87	100		

GASES
CO2: 450-820 PPM
H2S: 0 PPM
Methane: 0-1 PPM

thermometer malfunction

SURVEYS	MUD LOSSES/DRILLING NOTES
1311' 1.00deg S40E 158 F	Downhole mud loss nearly eliminated with rate at less than 5 bbbls/hr.
1465' 1.00deg S78E 148 F	

DEPTH	LITHOLOGY/REMARKS
1250' - 1310'	100% Basalt (unaltered - locally highly mineralized w/ hematite, chlorite, opal/qtz, calc, gyp xls.)
1310' - 1350'	70-90% Basalt, 10-30% red-brn Claystone
1350' - 1430'	100% Basalt (mod-com hematite mineralized)
1430' - 1540'	30-100% Siltstone, tr-30% Sandstone, tr-80% Basalt
1540' - 1620'	100% Basalt (unalt-moderately mineralized w/ hematite, chlorite, opal/qtz, gyp xls)

BOPE Test record: **Function test** at 06:00 hrs 2/13.

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

#7

AM: Wayne Monger
PM: Mike McLaughlin

TRANS-PACIFIC GEOTHERMAL
Vale ESI #A-S-ALT

DATE: Saturday Feb. 12, 1994	TIME: 06:00 hrs	STATUS: Drilling	DEPTH	TEMPERATURE			
				IN	OUT	IN	OUT
			1000	69	72		
			1050	70	72		
PRESENT DEPTH: 1254'			1100	73	75		
PREVIOUS DEPTH: 983'			1150	77	79		
FOOTAGE CUT: 271'			1200	80	81		
			1250	83	86		
DRILL RATE							
	MAX: 232.7 FT/HR						
	MIN: 1.8 FT/HR						
	AVE: 13.7 FT/HR						
	CURRENT: 23-37 FT/HR						

GASES
CO2: 450-820 PPM
H2S: 0 PPM
Methane: 0-2 PPM

SURVEYS
1001' 1.00deg S27W 90 F
1155' 1.00deg S10E F

MUD LOSSES/DRILLING NOTES
Trip @ 1187'. Bit #2 662'/20 hrs.
NB#3 Sec S33S. Resume drilling w/ mud loss starting at 25 bbls/hr but reduce to 10-13 bbls/hr loss by 6 AM.

DEPTH	LITHOLOGY/REMARKS
980'-1250'	100% Grassy Mt. Basalt (locally highly mineralized w/ hematite, chlorite, opal/gtz, calc.) (red oxidized soil horizon at 1220')

BOPE Test record: Function test at 19:30 hrs 2/11.

TECTON GEOLOGIC INC.
Daily 06:00 AM Morning Report

CONFIDENTIAL

#6

AM: Wayne Monger
PM: Mike McLaughlin

TRANS-PACIFIC GEOTHERMAL
Vale ESI #A-S-ALT

DATE: Friday Feb. 11, 1994	TIME: 06:00 hrs	STATUS: Drilling	DEPTH	TEMPERATURE			
				IN	OUT	IN	OUT
			550	50	52		
			600	52	55		
PRESENT DEPTH: 983'			650	53	57		
PREVIOUS DEPTH: 525'			700	55	59		
FOOTAGE CUT: 458'			750	57	60		
			800	59	61		
DRILL RATE			850	59	61		
MAX: 310.0 FT/HR			900	60	62		
MIN: 2.6 FT/HR			950	63	65		
AVE: 105.0 FT/HR			980	67	69		
CURRENT: 13-17FT/HR							

GASES

CO2: 320-670 PPM
H2S: 0 PPM
Methane: 0-2 PPM

SURVEYS

572' 0.00deg No dir No F
755' 0.50deg N02W 74 F
924' No dir 85 F

MUD LOSSES/DRILLING NOTES

Possible loss zone @ 695'? (35 bbis)
Partial to 100% Loss zone @ 818'.
After setting high vis pill, continue to drill ahead w/ 50-90 bbis/hr losses

DEPTH	LITHOLOGY/REMARKS
520'-550'	60-10% fn gr Sandstone, 40-90% gray Siltstone
550'-660'	100% gray Siltstone
660'-730'	10-70% fn gr Sandstone, 30-90% gray Siltstone
730'-850'	100% gray Siltstone w/ heavy clay
850'-860'	60-90% brown silty Limestone, 10-40% Siltstone
860'-920'	80-100% greenish gray Siltstone, tr-20% Sandstone.
920'	90% brown silty Limestone, 10% Siltstone
930'	80% med gr silic Sandstone, 20% brn Limestone
940'	100% Tuffaceous sediments/white clay with abnt hvly rexin/chloritized basalt frags.
950'-980'	100% mod-heavily mineralized/chloritized Basalt

BOPE Test record: Leak-off test at 10:30 hrs 2/9 - shoe holds, 0.68 psi/ft. = 13 ppq mud.