

G102194

Tuscarora #1
D-1.

AREA
NV E/RD
Tuscarora
AMAX TGs

Explanation of Logs

$\nabla 2$ = Gradient of 2d segment based on a least squares analysis of interval gradients.

& = \pm followed by standard deviation

k = Thermal conductivity $\times 10^3$.

HF = Heat flow in H.F.U. computed from gradient and conductivity assigned for starred segment. Heat flows for other segments are set equal and their conductivities deduced.

T at 100 m, as measured or extrapolated from gradient indicated by \dagger

Z (200 C) = Depth to 200°C isotherm determined by extrapolating gradient marked \dagger

S.I. = Surface intercept temperature (\approx mean annual) determined from uppermost segment.

22 04 78 = 22 April 1978, date logged

22 AP 78 = Date plotted

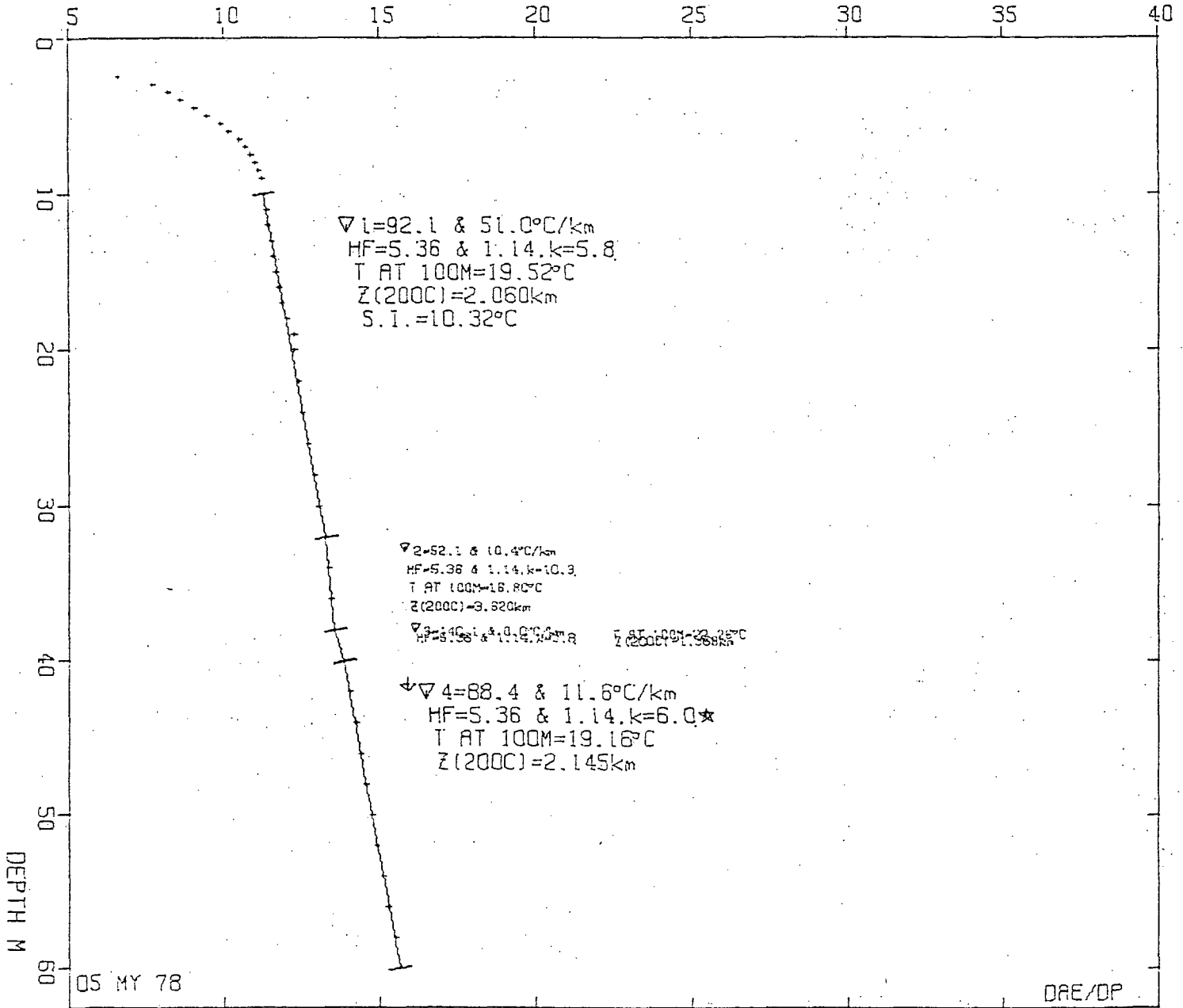
DAE/DP = Initials of logger/editor.

TUSCARORA, NV
4 KM WNW SPANISH RANCH
PROJ. 860 WELL 3

N. LAT 41.435, W. LONG 116.170

21 04 78

TEMPERATURE °C



05 MY 78

PROJECT: TUSCARORA, NV

PROJ WELL DA MO YR WELL TITLE EDITOR TERRAIN LP LI ISZ IST
 860 3 21 04 78 4 KM WNW SPANISH RANCH DAE/DP 0.0 C 0 1 1

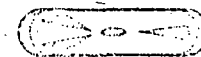
YCH XCM N-LAT W-LONG ELEV
 32.8000 10.7000 41.4354 116.1700 1746.2

J	BEG START	SEG END	CONDUCTVY & STD DEV.	
1	10.000	32.000	0.000	0.000
2	32.000	38.000	0.000	0.000
3	38.000	40.000	0.000	0.000
4	40.000	60.000	6.000	0.500

PRECEDING CONDUCTIVITY USED TO COMPUTE OTHERS

*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
860	3 21 04 78				2.500	6.600	999.999	1
					3.000	7.690	2180.000	2
					3.500	8.190	1000.000	3
					4.000	8.610	840.000	4
					4.500	9.060	900.000	5
					5.000	9.450	780.000	6
					5.500	9.900	900.000	7
					6.000	10.160	520.000	8
					6.500	10.490	660.000	9
					7.000	10.700	420.000	10
860	3 21 04 78				7.500	10.870	340.000	11
					8.000	10.990	240.000	12
					8.500	11.100	219.999	13
					9.000	11.180	160.000	14
					10.000	11.290	110.001	15
					11.000	11.350	59.999	16
					12.000	11.410	60.000	17
					13.000	11.480	70.000	18
					14.000	11.560	80.000	19
					15.000	11.640	80.000	20
860	3 21 04 78				16.000	11.750	110.001	21
					17.000	11.850	99.999	22
					18.000	11.980	130.000	23
					19.000	12.240	260.000	24
					20.000	12.270	30.000	25
					22.000	12.380	55.000	26
					24.000	12.520	70.000	27
					26.000	12.720	100.000	28
					28.000	12.880	80.000	29
					30.000	13.050	85.000	30
860	3 21 04 78				32.000	13.260	105.000	31
					34.000	13.340	40.000	32
					36.000	13.450	55.000	33
					38.000	13.570	60.000	34
					40.000	13.850	140.000	35
					42.000	14.050	100.000	36
					44.000	14.230	90.000	37
					46.000	14.400	85.000	38



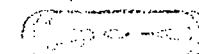
	48.000	14.570	85.000	39	
	50.000	14.740	85.000	40	
860	3 21 04 78	52.000	14.920	90.000	41
		54.000	15.090	85.000	42
		56.000	15.270	90.000	43
		58.000	15.490	110.000	44
		60.000	15.620	65.000	45

SURFACE INTERCEPT FOR SEGMENT 1 = 10.324

SEG	ZSTART	TSTART	ZEND	TEND	COND & DCON	GRADIENT & S.D.	HFL &	DHF	T AT 100M	KM
1	10.000	11.290	32.000	13.260	5.824 0.000	92.101 50.989	5.364	1.136	19.523	2.060
2	32.000	13.260	38.000	13.570	10.306 0.000	52.051 10.419	5.364	1.136	16.797	3.620
3	38.000	13.570	40.000	13.850	3.828 0.000	140.137 0.000	5.364	1.136	22.258	1.368
4	40.000	13.850	60.000	15.620	6.000 0.500	88.440 11.559	5.364	1.136	19.158	2.145

PRECEDING SEGMENT USED FOR EXTRAPOLATION

DATA FOR THIS WFLC AND PROJECT # ALREADY ON DISK!!



MINCOM
CORPORATION

LITHOLOGIC LOG

Tuscarora - 3

Total depth - 61 meters

Hole produces 10 gpm of 16°C(?) at 55 meters

Depth (m)

DESCRIPTION

0 - 3

Brown clay and gravel.

3 - 61

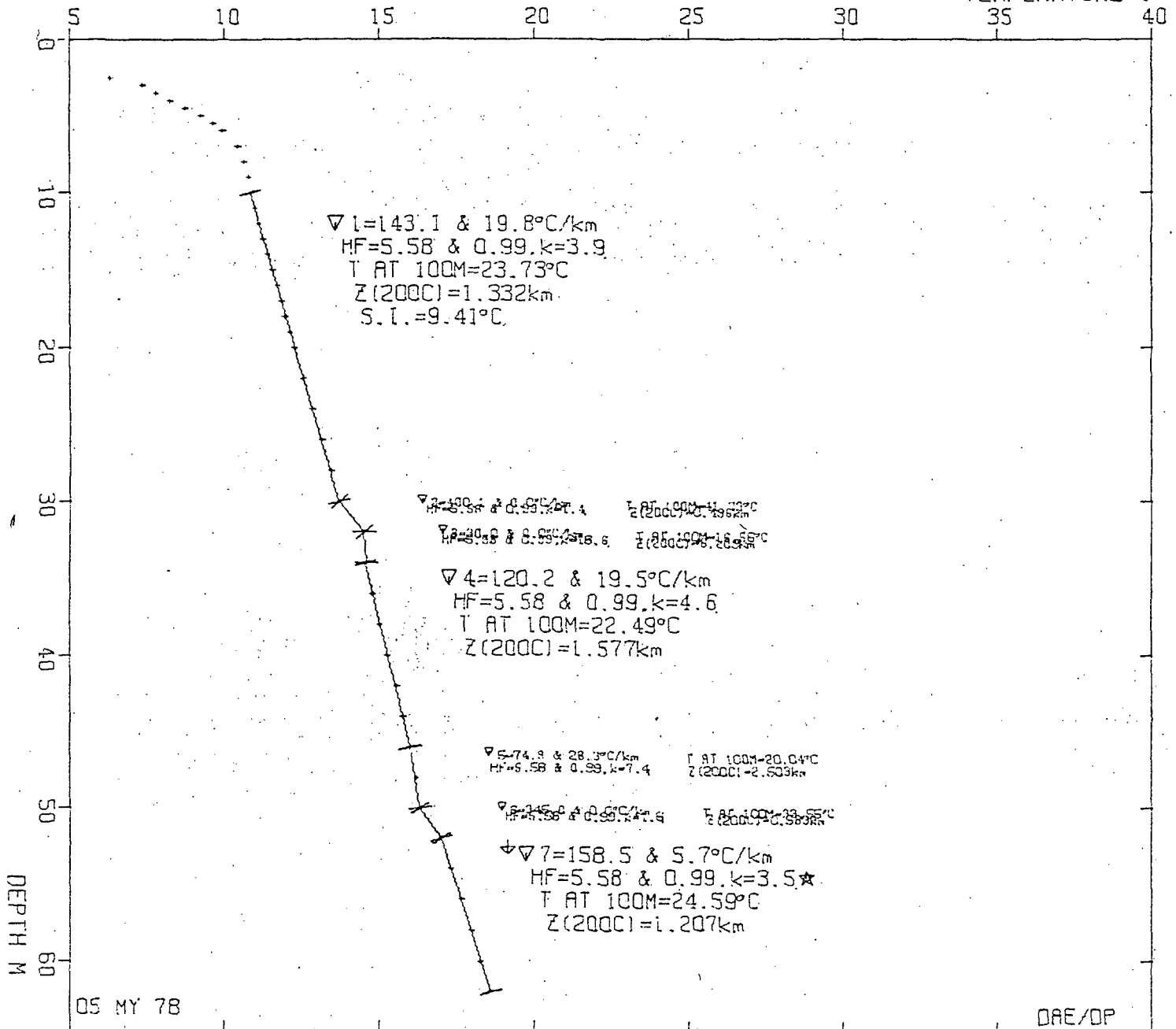
Gray andesite with megascopic plagioclase and very minor olivine. Altered to clay in one meter fracture zone at 12 meters. Chips are generally fresh and unaltered.

TUSCARORA, NV
 3.7 KM NW SPANISH RANCH
 PROJ. 860 WELL 4

N.LAT 41.451; W.LONG 116.153

21 04 78

TEMPERATURE °C



PROJECT: TUSCARORA, NV

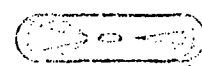
PROJ WELL DA MO YR WELL TITLE EDITOR TERRAIN LP LI ISZ IST
 860 4 21 04 78 3.7 KM NW SPANISH RANCH DAE/SP 0.0 0 0 1 1

YCH XCH N.LAT W.LONG ELEV
 35.6000 13.0000 41.4512 116.1528 1755.6

J	REQ START	SEG END	CONDIVITY & STD DEV.	
1	10.000	30.000	0.000	0.000
2	30.000	32.000	0.000	0.000
3	32.000	34.000	0.000	0.000
4	34.000	46.000	0.000	0.000
5	46.000	50.000	0.000	0.000
6	50.000	52.000	0.000	0.000
7	52.000	62.000	3.500	0.500

PRECEDING CONDUCTIVITY USED TO COMPUTE OTHERS
 *** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
860	4 21 04 78	2.500	6.310	99999.000	1			
		3.000	7.370	2120.001	2			
		3.500	7.780	820.000	3			
		4.000	8.230	900.000	4			
		4.500	8.750	1040.001	5			
		5.000	9.270	1039.999	6			
		5.500	9.630	720.000	7			
		6.000	9.950	640.001	8			
		7.000	10.440	490.000	9			
		8.000	10.670	230.000	10			
860	4 21 04 78	9.000	10.810	140.000	11			
		10.000	10.900	90.000	12			
		11.000	11.000	100.000	13			
		12.000	11.120	120.000	14			
		13.000	11.260	139.999	15			
		14.000	11.400	140.000	16			
		15.000	11.540	140.000	17			
		16.000	11.690	150.000	18			
		17.000	11.860	170.000	19			
		18.000	11.960	99.999	20			
860	4 21 04 78	19.000	12.090	130.000	21			
		20.000	12.240	150.001	22			
		22.000	12.550	155.000	23			
		24.000	12.840	145.000	24			
		26.000	13.140	150.000	25			
		28.000	13.440	150.000	26			
		30.000	13.720	140.000	27			
		32.000	14.520	400.000	28			
		34.000	14.580	30.000	29			
		36.000	14.770	95.000	30			
860	4 21 04 78	38.000	15.020	125.000	31			
		40.000	15.230	105.000	32			
		42.000	15.530	150.000	33			
		44.000	15.750	110.000	34			
		46.000	16.000	125.000	35			



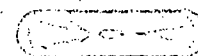
	48.000	16.190	94.994	36
	50.000	16.300	55.000	37
	52.000	16.990	345.001	38
	54.000	17.310	140.004	39
	56.000	17.640	165.001	40
860	58.000	17.960	159.996	41
4 21 04 78	60.000	18.270	154.999	42
	62.000	18.570	150.002	43

SURFACE INTERCEPT FOR SEGMENT 1 = 9.409

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
1	10.000	10.900	30.000	13.720	3.898	0.000	143.060	19.844	5.577	0.993	23.734	1.332
2	30.000	13.720	32.000	14.520	1.394	0.000	400.144	0.000	5.577	0.993	41.730	0.496
3	32.000	14.520	34.000	14.580	18.571	0.000	30.029	0.000	5.577	0.993	16.562	6.209
4	34.000	14.580	46.000	16.000	4.641	0.000	120.163	19.511	5.577	0.993	22.483	1.577
5	46.000	16.000	50.000	16.300	7.447	0.000	74.888	28.280	5.577	0.993	20.044	2.503
6	50.000	16.300	52.000	16.990	1.617	0.000	344.971	0.000	5.577	0.993	33.549	0.583
7	52.000	16.990	62.000	18.570	3.500	0.500	158.516	5.730	5.577	0.993	24.594	1.207

PRECEDING SEGMENT USED FOR EXTRAPOLATION

DATA FOR THIS WELL AND PROJECT # ALREADY ON DISK!!



MINCORP
CORPORATION

LITHOLOGIC LOG

Tuscarora - 4

Total depth - 62 meters

Completely dry

Depth (m)

DESCRIPTION

0 - 62

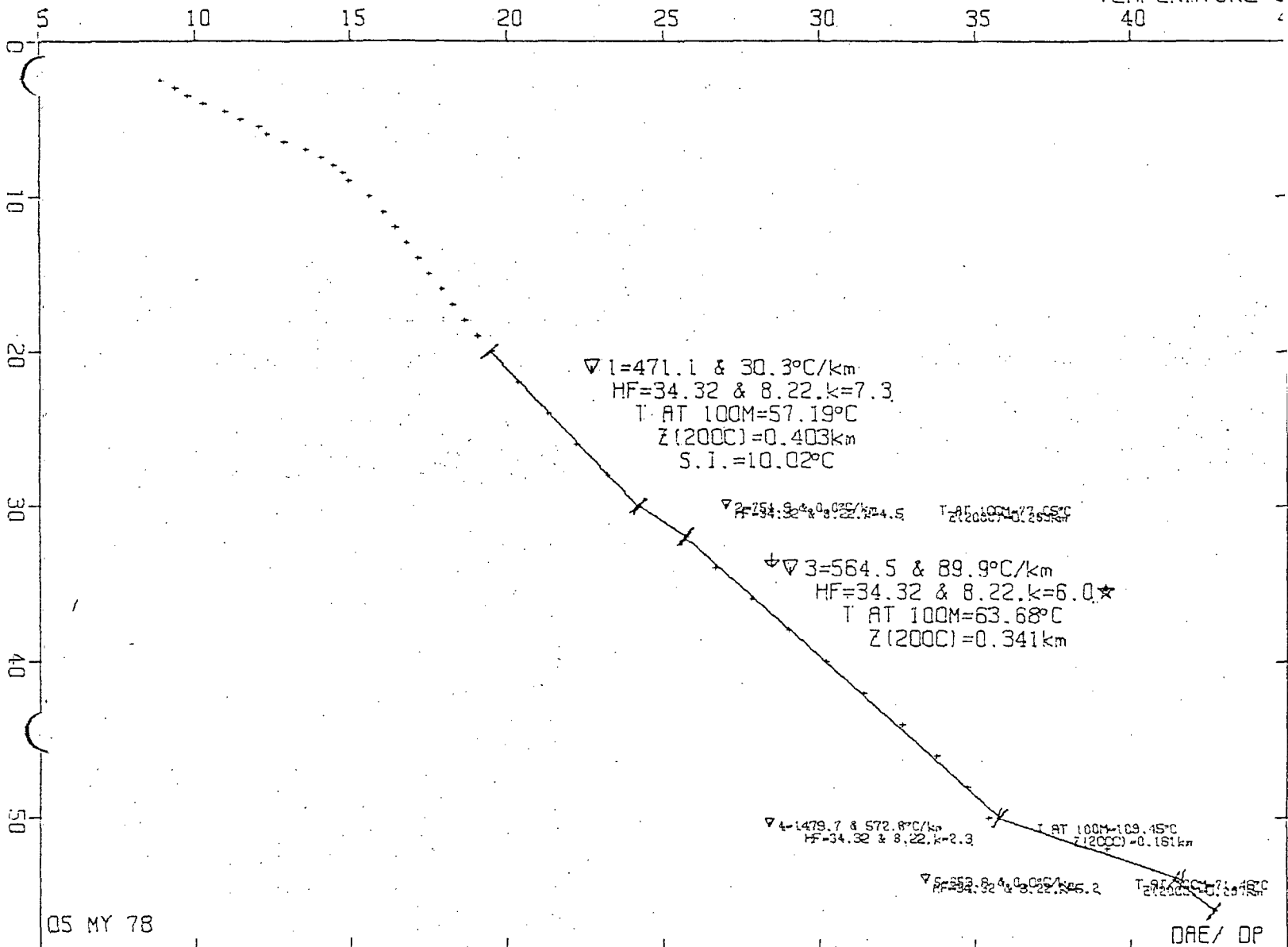
Brown-red clay with pebbles of various volcanics,
sandstone and siltstone.

TUSCARORA, NV
5 KM NW SPANISH RANCH
PROJ. 860 WELL 7

N. LAT 41.465, W. LONG 116.151

21 04 78

TEMPERATURE °C



05 MY 78

PROJECT: TUSCARORA, NV

PROJ	WELL	DA	MO	YR	WELL TITLE	EDITOR	TERRAIN	LP	LI	ISZ	IST
860	7	21	04	78	5 KM NW SPANISH RANCH	DAE/ DP	C.0	C	0	1	1

YCM	XCM	N. LAT	W. LONG	ELEV
38.1000	13.2000	41.4654	116.1512	1761.7

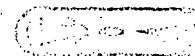
J	SEG START	SEG END	CONDUCTIVITY & STD DEV.	
1	20.000	30.000	0.000	0.000
2	30.000	32.000	0.000	0.000
3	32.000	50.000	6.000	0.500

PRECEDING CONDUCTIVITY USED TO COMPUTE OTHERS

*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***

4	50.000	54.000	0.000	0.000
5	54.000	56.000	0.000	0.000

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.
860	7	21	04	78	2.500	8.920	99999.000	1
					3.000	9.350	860.000	2
					3.500	9.740	780.000	3
					4.000	10.270	1060.000	4
					4.500	10.930	1320.000	5
					5.000	11.450	1040.001	6
					5.500	12.030	1160.000	7
					6.000	12.280	500.000	8
					6.500	12.870	1180.000	9
					7.000	13.560	1379.999	10
860	7	21	04	78	7.500	14.070	1020.000	11
					8.000	14.440	740.000	12
					8.500	14.750	620.001	13
					9.000	14.950	400.000	14
					10.000	15.590	640.000	15
					11.000	16.060	469.998	16
					12.000	16.460	399.994	17
					13.000	16.780	320.007	18
					14.000	17.130	349.991	19
					15.000	17.520	390.000	20
860	7	21	04	78	16.000	17.910	390.000	21
					17.000	18.260	350.006	22
					18.000	18.640	380.005	23
					19.000	19.040	399.994	24
					20.000	19.500	460.007	25
					22.000	20.360	429.993	26
					24.000	21.300	470.001	27
					26.000	22.210	455.002	28
					28.000	23.200	495.003	29
					30.000	24.210	504.997	30
860	7	21	04	78	32.000	25.720	754.997	31
					34.000	26.660	470.001	32
					36.000	27.800	570.000	33
					38.000	28.990	595.001	34
					40.000	30.180	595.001	35
					42.000	31.420	620.003	36
					44.000	32.670	625.000	37



MINGOMF CORPORATION

		46.000	33.770	549.996	38
		48.000	34.730	480.003	39
		50.000	35.460	364.998	40
860	7 21 04 78	52.000	39.230	1885.002	41
		54.000	41.380	1074.997	42
		56.000	42.690	664.999	43

SURFACE INTERCEPT FOR SEGMENT 1 = 10.018

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
1	20.000	19.500	30.000	24.210	7.284	0.000	471.132	30.293	34.319	8.218	57.189	0.403

2	30.000	24.210	32.000	25.720	4.546	0.000	754.883	0.000	34.319	8.218	77.052	0.263
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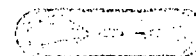
3	32.000	25.720	50.000	35.460	6.000	0.500	564.483	89.934	34.319	8.218	63.684	0.341
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PRECEDING SEGMENT USED FOR EXTRAPOLATION

4	50.000	35.460	54.000	41.380	2.319	0.000	1479.722	572.760	34.319	8.218	109.447	0.161
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5	54.000	41.380	56.000	42.690	5.249	0.000	653.809	0.000	34.319	8.218	71.458	0.297
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DATA FOR THIS WELL AND PROJECT # ALREADY ON DISK!!



LITHOLOGIC LOG

Tuscarora - 7

Total depth - 57 meters

Hole produces 10 gpm of 22°C(?) water at 52 meters

Depth (m)

DESCRIPTION

0 - 3

Gravel and cream colored clay.

3 - 57

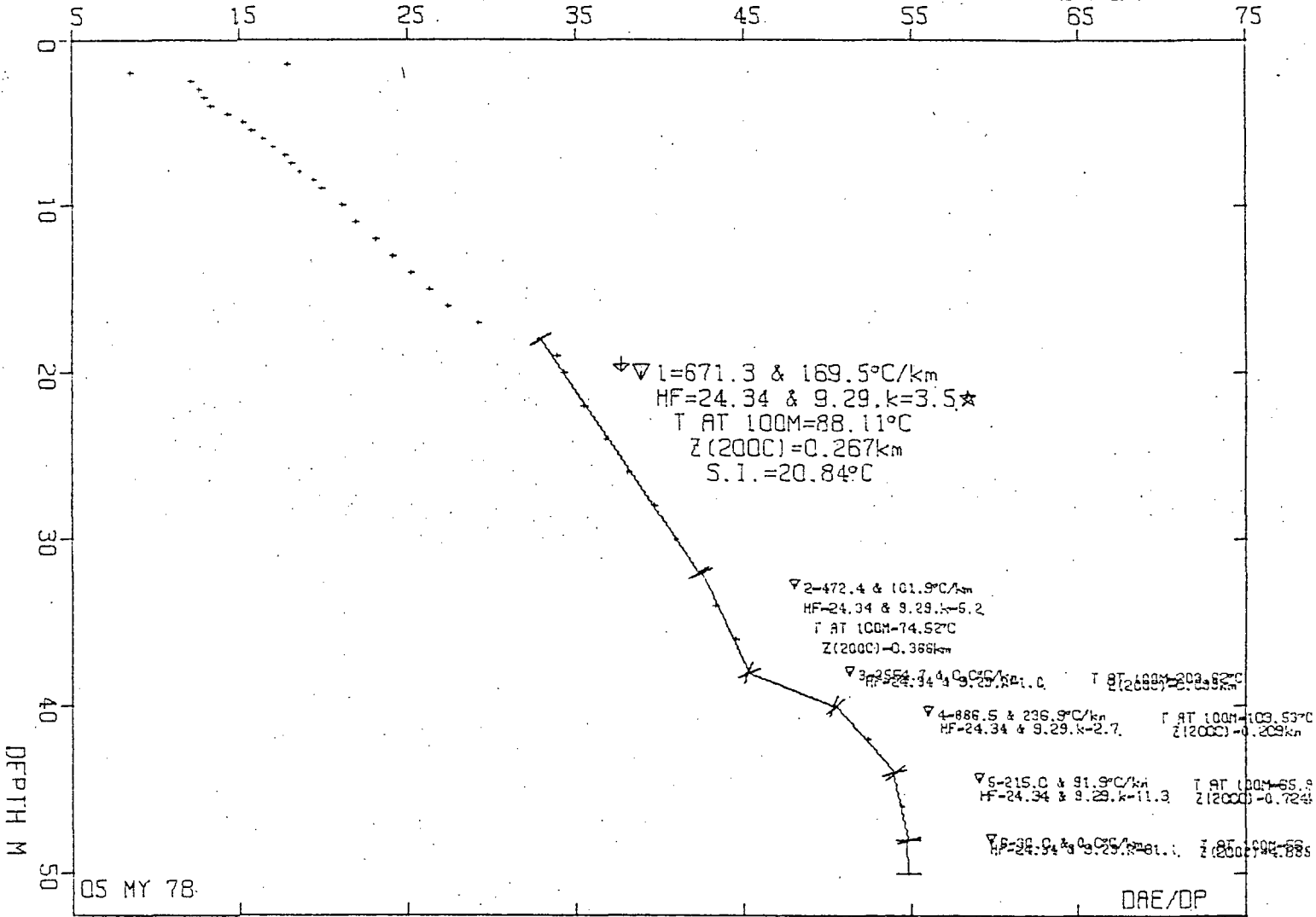
Arkosic sandstone with abundant mica flakes. Quartz grains are angular to subrounded. Minor fragments of green-black chert.

TUSCARORA, NV
 5.4 KM NNW SPANISH RANCH
 PROJ. 860 WELL 8

N. LAT 41.474, W. LONG 116.140

21 04 78

TEMPERATURE °C



05 NY 78

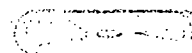
PROJECT TUSCARORA, NV

PROJ WELL DA MO YR WELL TITLE EDITOR TERPAIR LP LI ISZ IST
 860 8 21 04 78 5.4 KM NNW SPANISH RANCH DAE/DP 0.0 0 0 1 1

YCM XCM N.LAT W.LONG ELEV
 39.6000 14.7000 41.4738 116.1400 1795.3

J	SEG START	SEG END	CONDUCTIVITY & STD DEV.	
1	18.000	32.000	3.500	0.500
PRECEDING CONDUCTIVITY USED TO COMPUTE OTHERS				
*** PREVIOUS SEGMENT USED TO EXTRAPOLATE TO DEPTH ***				
2	32.000	38.000	0.000	0.000
3	38.000	40.000	0.000	0.000
4	40.000	44.000	0.000	0.000
5	44.000	48.000	0.000	0.000
6	48.000	50.000	0.000	0.000

PROJ	WELL	DA	MO	YR	DEPTH (M)	DEG C	DEG C/KM	SAMPLE NO.	
860		8	21	04	78	1.500	17.860	9999.000	1
						2.000	8.540	18639.369	2
						2.500	12.060	7340.000	3
						3.000	12.590	1070.000	4
						3.500	12.920	860.000	5
						4.000	13.310	780.000	6
						4.500	14.250	1880.001	7
						5.000	15.250	2000.000	8
						5.500	15.680	859.999	9
						6.000	16.360	1359.972	10
860		8	21	04	78	6.500	17.050	1380.005	11
						7.000	17.720	1339.997	12
						7.500	18.130	820.007	13
						8.000	18.650	1040.009	14
						8.500	19.370	1440.002	15
						9.000	19.940	1139.984	16
						10.000	21.100	1160.004	17
						11.000	21.910	809.998	18
						12.000	23.150	1240.006	19
						13.000	24.110	959.991	20
860		8	21	04	78	14.000	25.220	1110.001	21
						15.000	26.320	1100.006	22
						16.000	27.440	1119.995	23
						17.000	29.200	1760.010	24
						18.000	32.850	3649.994	25
						19.000	33.870	1020.004	26
						20.000	34.310	440.002	27
						22.000	35.480	584.999	28
						24.000	36.830	674.996	29
						26.000	38.150	660.004	30
860		8	21	04	78	28.000	39.690	769.997	31
						30.000	40.950	630.005	32
						32.000	42.460	754.997	33
						34.000	43.350	445.000	34
						36.000	44.490	570.000	35
						38.000	45.230	970.003	36



	40.000	50.340	2555.000	37	
	42.000	52.450	1055.000	38	
	44.000	53.830	720.001	39	
	46.000	54.450	279.999	40	
860	8 21 04.78	48.000	54.750	150.002	41
		50.000	54.810	29.999	42

SURFACE INTERCEPT FOR SEGMENT 1 = 20.842

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
1	18.000	32.850	32.000	42.460	3.500	0.500	671.281	169.512	24.342	9.289	88.107	0.267

PRECEDING SEGMENT USED FOR EXTRAPOLATION

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
2	32.000	42.460	38.000	45.230	5.153	0.000	472.363	101.881	24.342	9.289	74.517	0.366

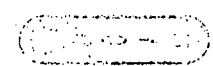
SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
3	38.000	45.230	40.000	50.340	0.953	0.000	2554.688	0.000	24.342	9.289	203.621	0.099

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
4	40.000	50.340	44.000	53.890	2.746	0.000	886.478	236.885	24.342	9.289	103.533	0.209

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
5	44.000	53.890	48.000	54.750	11.324	0.000	214.959	91.922	24.342	9.289	65.928	0.724

SEG	ZSTART	TSTART	ZEND	TEND	COND	DCON	GRADIENT	S.D.	HFL	DHF	T AT 100M	KM
6	48.000	54.750	50.000	54.810	81.062	0.000	30.029	0.000	24.342	9.289	56.311	4.885

DATA FOR THIS WELL AND PROJECT # ALREADY ON DISK!!



LITHOLOGIC LOG

Tuscarora - 8

Total depth - 50 meters

Holes makes about 50 gpm of 62°C water at 47 meters

Depth (m)

DESCRIPTION

0 - 13.7

Brown sandy clay.

13.7 - 50

Rhyolite flow (?) altered in part to a blue gray clay.