ARTMENT OF MINERALS

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (7,02) 885-5050 Orig - NDOM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Producer Peppermill									
Peppermili	Hotel and Casino Month of December , 19 91								
Address 2707 S. Vi	2707 S. Virginia Street, Reno, Nevada 89502								
Show each injection well separately. File not later than the last day of the month for the preceding month.									
Field and lease name	Well No.	Geothermal Gallons per day x 1000	Fluids Injected Gallons per month x 1000	Injection pressure	Reservoir formation	Reservoi			
Commercial well on private property	.4	181.6	5084.3	136	Alta (?)	~2800-300			
		·							
			ļ						

Remarks: Data are for the 4-week period of December 2, 1991 through January 6, 1992.

I certify this information to be true, correct, and complete and that no pertinent matter inquired about in this report has been omitted.

Signature _	GHEMUS
Position	Hydrogeologist
Date	3-20-92

PARTMENT OF MINERALS

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (7,02) 885-5050 Orig - NDOM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Producer _	Peppermill	Hotel a	nd Casino	Month	of Nove	mher	10 0 1		
Address _	2707 S. Vi	rginia S	treet, Reno	Month of November, 19 91 Nevada 89502					
	Show each injection well separately. File not later than the last day of the month for the preceding month.								
Field and lease name		Well No.	Geothermal F Gallons per day x 1000	luids Injected Gallons per month x 1000	Injection pressure	Reservoir formation			
	al well on property	4	182.0	5095.7	137.4	Alta (?)			
		***************************************			THE REAL PROPERTY OF THE PROPE				
,									

Remarks: Data are for the 4-week period of November 4, 1991 through December 2, 1991.

1 certi	fy this i	nformatio	on to b	e true.	correct.	and	complete and	that no	nnütinant
matter	inquired	about in	this r	eport h	as been c	mitte	d.	chat HU	percinent
							/ 1///		11

Signature	- CHALL
Position	Hydrogeologist
Date	3-20-92

WILLIAM E. NORK, Inc.

1026 W. First Street • Reno, Nevada 89503

CONSULTING SERVICES IN HYDROLOGY AND GEOLOGY Phone (702) 322-2604

January 16, 1992 92-422-01

JAN 17 1992

Marcia Graybeck Division of Environmental Protection 123 W. Nye Lane, Rm. #241 Carson City, Nevada 89710 Dopt. of ininerals

RE: UIC PERMIT NV 70064 - PEPPERMILL HOTEL AND CASINO.

Dear Marcia:

Attached is the updated version of the annual report for the Peppermill Injection Well #4 which contains the complete water chemistry data. Please do not hesitate to contact us if you have any questions.

Sincerely,

WILLIAM E. NORK, INC.

Chris Wessel Hydrogeologist

attachments

cc: Department of Minerals
Division of Water Resources
Becky Perkey - NBOM&G



PEPPERMILL HOTEL CASINO INJECTION WELL #4 PERMIT NEV 70064

ANNUAL REPORT SUPPLEMENT

January 16, 1992

Submitted to:

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

Prepared by: WILLIAM E. NORK, INC.

William E. Nork, President

William Edah

You will notice that the injection meter reading starts at zero. This is due to the installation of a new meter directly following the last semi-annual report.

During the week of 8/12-19//91 the water meter failed and had to be replaced.

WATER CHEMISTRY DATA



ANNUAL REPORT INJECTION WELL 4

PEPPERMILL HOTEL AND CASINO 2707 South Virginia Street Reno, Nevada 89502

1. PERMIT NO.: NV 70064

2. REPORTING PERIOD: from 91 / 05 / 06 to 91 / 11 / 04 yr. mo. day

3. CHEMICAL ANALYSES SUMMARY

a. Sample Location: Peppermill Hotel Casino Injection Well #4

b. Sample Date: 91/12/03 Sample Time: 0930 hr.

c. Laboratory: Sierra Environmental Analyst: S.Poole/J.Seher

Monitoring Labora- R.Potts/A.Van Artsdalen

tory

đ.	Parameter Res	sults	* (Unfiltere	ed) Precision/Accuracy	Date Analyzed
2. 3. 4. 5. 6. 7. 8.	Potassium Chloride Sulfate Bicarbonate Flouride	2	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	± 0.05 SU / + 1.0 mg/1/ + 0.2 " + 5 " + 10 " + 10 " + 10 "	12/09/91 12/24/91 12/26/91 12/16/91 12/12/91 12/26/91 12/30/91 01/09/92 12/31/91
10.	Boron		1.1	+ 0.2"	12718791
11. 12.	Arsenic Silica	<u>0</u> •	1 5	+ 0.01"	72706797
13.	Total Dis-	8		+ 5 11	01702792
	solved Solids Electrical	3	6 6 3	+ 10 mg/1/	12/19/91
	Conductivity		9 5 0	+ 20 umhos/cm	12/31/91

^{* (}Analyses as per 40 CFR Part 136)

e. Analytical Method used: pH 150.1 HCO₃ 310.1 215.1 Ca 340.2 Mq 242.1 В Na 273.1 206.3 As 370. K 258.1 SiO₂ C1sm 4500CL.B 375.4 E.C.

4. Injection Rate

- a. Average = 104 gal/day x 1000 b. Lowest Flow = 80 gal/day x 1000
- c. Highest Flow = 130 ____ gal/day x 1000

5. Injection Pressure

- a. Average = 115 psig
- 90 psig b. Lowest =
- c. Highest = 145 psig
- * (Analyses as per 40 CFR Part 136)
 - 6. Totallizing Meter Reading : 13,016,500 ending

Period 91 /05 /06 to 91 /11 /04; 00,000,000 initial yr. mo. day

13,016,500 total (for report period)

- 7. Instantaneous Readings**:
 - a. Injection Rate, gpm (weekly)
 - b. Injection Pressure, psig (weekly)
 - c. Injection Volume gallons (weekly)
- ** Summary Tabluation to be attached to this report.

SUMMARY OF INJECTION RATES



Peppermill Injection Well #4__

Weekly Injection Summary* Permit No. 70064

Date	Meter Reading	Weekly Total
(yr./mo/day)	(gallons)	(gallons)
91/05/06	00000000 **	0,000,000
_91_705713_	00651000	651,000
<u> 91 </u>	01590900	939,900
_91_405427_	02424400	833,500
_91_406403_	<u>03280700</u>	856,300
-91-406/10-	03970600	689,900
91/06/18_ _91_/06/24	-04583800	613,200
91/06/24_ _91_/07/01	<u>05284000</u>	$\frac{700,200}{500}$
_91_Z0ZZ08_	<u>05993500</u>	709,500
_91_707/15	$\begin{array}{c} -06720700 \\ -07290700 \end{array}$	$\frac{727,200}{570,000}$
_91_707722	08079600	788,900
91 /07/29	08644800	565,200
<u>91_/08/05</u>	09297600	652,800
91/08/12	* * *	* * *
$\frac{91}{300}$	<u>00618000 ***</u>	***
$-\frac{91}{208} + \frac{08}{26} = \frac{91}{208} + \frac{08}{26} = \frac{91}{208} + \frac{91}{208} = \frac{91}{208} = \frac{91}{208} + \frac{91}{208} = 91$	<u>01350100</u>	732,100
$\frac{-91}{91} \frac{/09/02}{/09/09}$	<u> </u>	720,700
<u>91 /09/09</u> 91 /09/16	$\frac{03099600}{04337400}$	1,028,800
$\frac{91}{91}$ $\frac{709}{23}$	$\frac{04337400}{05567800}$	$\frac{1,237,800}{230,400}$
91 709730	06792400	$\frac{1,230,400}{1,234,600}$
91 710707	08013200	$\frac{1,224,600}{1,220,800}$
91 710714	09238700	1,225,500
91 / 10/21	10463100	$\frac{1,224,400}{1,224,400}$
91/10/28	11789300	1,326,200
91/11/04	13016500	1,230,700

^{*} Must be submitted with semi-annual report; meter to be read on same day of the week and time of day for each entry submitted; weekly total to equal meter reading minus meter reading for previous week.

^{**} New meter installed at discharge to measure injectate.

^{***} No reading attainable.

^{****} New meter installed.

SEMI-ANNUAL SUMMARY Permit No. NV 70064

INSTANTANEOUS READINGS INJECTION WELL #4

Date (yr./mo./day)	Rate (gpm)	Pressure (psig)	Meter Reading (gallons)
(11.7 mo.7 day)	(3bm)	(psig)	(garions)
$\frac{91/05/06}{91/05/13}$	<u>80</u> 80	118	0.0.0.0.0.0
$\frac{-91}{91}$ $\frac{05}{05}$ $\frac{73}{20}$	100	107	00651000
$\frac{-31705720}{91705727}$	100	110	01590900
91706703	80	90 100	$\begin{array}{r} -02427400 \\ \hline 03280700 \end{array}$
91706710	100	95	03200700
91 / 06 / 18	98	95	04583800
91 7 06 7 24	100	100	05284000
91707701	100	100	05284000
91 707 708	100	100	06720700
91707715	100	100	07290700
91 707 722	100	100	08079600
$\frac{1}{91}$ $\frac{1}{707}$ $\frac{1}{729}$	100	95	08644800
91 708 705	100	100	09297600
91.708.712	*	95	***
91708719	95	92	00618000 ****
91 708 726	80	92	01350100
91 709 702	75	145	02070800
91 709 709	130	145	03099600
_91_709_716_	120	142	04337400
_91_709_723_	120	145	05567800
91 709 730	120	140	06792400
91_710_707_	120	140	08013200
_91_Z10_Z14_	120	140	09238700
_91_710_721	130	140	10463100
91_710_728_	130	142	11789300
_91_Z11_Z04_	120	140	13016500
			and and the second an

^{***} No reading attainable.

^{****} New meter installed.

GRAPHICAL SUMMARY OF INJECTION RATES AND PRESSURES

111

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050

urig - nuun Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Peppermill Hotel and Casino

Producer

		Geothermal	luids injected	1		
Field and lease name	Well No.	Geothermal F Gallons per day x 1400	Ulus Injected Gallons per month x 000	Injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	1031.9	35083	138.2	Λlta (?)	~2800-3000
				- ·		
	of Plane and Addison and Addis					
	,					

I certify this information to be true, correct, and complete and that no pertinent

Signature

Position

Date

Hydrogeologist

12-09-91

matter inquired about in this report has been omitted.

100 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050

- AUUT - NBM&G

REPORT OF GEOTHERIML SUBSURFACE INJECTIONS

Honth of

Peppermill Hotel and Casino

	1	Geothermal F	luids Injected	1		
Field and lease name	Well No.	Gallons per day x	Gallons per month x	injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	178.475	4,997.300	140.5 psig	Alta (?)	~2800-3000
·	,					
			·			·

I certify this information to be true, correct, and complete and that no pertinent

Signature

Position

Date

Hydrogeologist

11-8-91

matter inquired about in this report has been omitted.

THE OF HEMON DEPARTMENT OF MINERALS

100 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050

urig - NDUM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Producer Peppermill Hotel and Casino

matter inquired about in this report has been omitted.

Field and lease name	Well No.	Geothermal F Gallons per day x 1000	luids Injected Gallons per month x	injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	168.6	4721.6	144.25		~2800-300
	1 .					

Signature

Position

Date

Hydrogeologist

10-4-91

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050

יוועטיד יי אויטיד Dup - NBM&G Trip - DWR Quad - DEP

1991

Month of AUGUST

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Peppermill Hotel and Casino

Producer

0- 1 0 h		Geothermal	luids Injected	-		*
Field and lease name	Well No.	Gallons per day x 1400	Gallons per	Injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	103.7	2,905.6	93 psig	Λ1ta (?)	~2800-300
,	The state of the s					
						•
					:	

I certify this information to be true, correct, and complete and that no pertinent

Signature

Position

Date

Hydrogeologist

9-12-91

matter inquired about in this report has been omitted.

PARTMENT OF MINERALS

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050 Orig - NDOM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

		- · · · · · - · ·		MODILITION THOUGH	TORS		
Producer _	PEPPERMILL	HOTEL A	ND CASINO	Month (of Jul	У	, 19 91
Address _	2707 S. Vir	ginia S	treet, Reno,	Nevada 89502	2		
	Show each injection month for the	ection wel preceding	ll separately. month.	File not late	r than the	last day o	f the
Field a	and lease name	Well No.	Geothermal F Gallons per day x	luids Injected Gallons per month x	Injection pressure	Reservoir formation	Reservoir depth
	ial well on property	4	94.4	3304.1	99 psig	Alta (?)	~2800-3000

Remarks: Data are for the five (5) week period of July 1 through August 5, 1991.

certify this information to	be true, correct, and co	omplete and	that no	perfinent
matter inquired about in this	report has been omitted	· DA		per unient

Signature

Position

Hydrogeologist

Date

8/6/91

100 W. King Street, Suite 106 Carson City, Nevada 89710 - (702) 885-5050

orige = noon Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERIMAL SUBSURFACE INJECTIONS

Show each injection month for the	ection well preceding	l separately. month.	File not late	r than the	last day o	F the
Field and lease name	Well No.	Geothermal F Gallons per day x 1700	luids Injected Gallons per month x	Injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	96.9	2,712.8	97.5	Λlta (?)	~2800-300
				,		
					·	d .
·						
				-		

Producer

I certify this information to be true, correct, and complete and that no pertinent matter inquired about in this report has been omitted.

Signatu <u>re</u>	Dule C. B.	
Positio <u>n</u>	Hydrogeologist	
Date	7/5/91	

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050 Urig - NUM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Producer Peppermill Hotel and Casino

month for the	preceding		File not late		idst day of	cire
Field and lease name	Well No.	Geothermal F Gallons per day x	lvids Injected Gallons per month x	Injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	126.5	3,541.1	105	Alta (?)	~2800-300
*				`		
				,		
			·			

I certify this information to be true, correct, and complete and that no pertinent matter inquired about in this report has been omitted.

Signatu <u>re</u>	Dalel. S_		
Positio <u>n</u>	Hydrogeologist		· · · · · · · · · · · · · · · · · · ·
Date	6/5/91	************	

EPARTMENT OF MINERALS

400 W. King Street, Suite 106 Carson City, Nevada 89710 - (702) 885-5050 Orig - NDOM
Dup - NBM&G
Trip - DWR
Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

							ea.	n n n n n		
Producer	PEPPERMILL	HOTEL A	ND CASIN	0	 Month of	April	WAY 11	<u>.</u> 9	19	91
Address	2707 S. Vir	ginia S	treet, R	eno,			100 just 1		-	
							セーラ ひ か か か か か か か か か か か か か か か か か か	Description of the Contract of		

Show each injection well separately. File not later than the last day of the month for the preceding month.

Field and lease name	Well No.	Geothermal F Gallons per day x 1000		Injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	310.7	8699.9	112	Alta (?)	2300-3000
				THE REAL PROPERTY OF THE PROPE		
			:			

Remarks:

I certify this information to be true, correct, and complete and that no pertinent matter inquired about in this report has been omitted.

Signature	Dile CB	gardin.
Position	Hydrogeologist	
Date	5/9/91	

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050

Urig - NUUM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERIMAL SUBSURFACE INJECTIONS

Peppermill Notel and Casino

matter inquired about in this report has been omitted.

		Geothermal F	lvids_Injected			
Field and lease name	Well No.	Gallons per day x 1700	Gallons per month x	Injection pressure (are)	Reservoir formation	Reservoir depth
Commercial well on private property	4	317.2	8881.0	116	Λ1t _a (?)	~2800-300
					,	
				-		•
·						
.• .						
			·			

Position

Date

Signature Toman W. Melvin

4/09/91

Hydrogeologist

EPARTMENT OF MINERALS

400 W, King Street, Suite 106 Carson City, Nevada 89710 - (7.02) 885-5050

Orig - NDOM Dup - NBM&G Trip - DWR Quad - DEP

	ection wel	reet, Reno, separately. month.	Nevada 895		last day o	f the
Field and lease name	Well No.	Geothermal F Gallons per day x	luids Injected Gallons per month x	Injection pressure	Reservoir formation	Reservoir depth
Commercial well on private property	4	319.41	8943.6	116	Alta (?)	2300-300

I certify this information to be true, correct, and complete and that no pertinent matter inquired about in this report has been omitted.

Signature	
Position	
Date	

EPARTMENT OF MINERALS

400 W. King Street, Suite 106 Carson City, Nevada 89710 . (702) 885-5050 Orig - NDOM Dup - NBM&G Trip - DWR Quad - DEP

REPORT OF GEOTHERMAL SUBSURFACE INJECTIONS

Producer	Peppermill	Hotel an	d Casino	Month	of Janua	ar ý	, 19 91
Address	2707 S. Virginia Street, Reno, Nevada 89502						
	Show each in month for the	Show each injection well separately. File not later than the last day of the month for the preceding month.					
Field	and lease name	Well No.	Geothermal F Gallons per day x 1000	luids Injected Gallons per month x	Injection pressure	Reservoir formation	Reservoir depth
Commerc. private	ial well on property	4	294.03	9114.9	115	Alta(?)	2300-3000
						MARKET STATE OF THE STATE OF TH	
					Continued in the contin		
	•						

Remarks:

I certify this information to be true, correct, and complete and that no pertinent matter inquired about in this report has been omitted.

Signature	-
Position	
Date	