Wilson / Phil

TEXAS WATER COMMISSION

B. J. Wynne, III, Chairman
Paul Hopkins, Commissioner
John O. Houchins, Commissioner

Allen Beinke, Executive Director
Michael E. Field, General Counsel
Brenda W. Foster, Chief Clerk

February 2, 1989

RECEIVED
FEB 7 1989
EPA 6W-S
REGION VI

Mr. Phil Dellinger
State Coordinator (6W-SU)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Texas Water Commission Permit No. UR02914-031

Dear Mr. Dellinger:

Enclosed please find the Underground Injection Control Permit issued by the Texas Water Commission under provisions of Chapters 26 and 27 of the Texas Water Code. This document is being provided in accordance with the current UIC Workplan. Should you have any questions please call Ms. Katherine Nelson at (512)463-8274.

Sincerely,

Charles J. Greene

Charles J. Greene, Head
In Situ Uranium Mining Unit
Ground Water Conservation Section

Enclosure

cc: Texas Department of Health - Bureau of Radiation Control

Wat 12-2-5-4

Wilson / Phil

TEXAS WATER COMMISSION

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Enclosed please find the Underground Injection Control Permit issued by the Texas Water Commission under provisions of Chapters 26 and 27 of the Texas Water Code. This document is being provided in accordance with the current UIC Workplan. Should you have any questions please call Ms. Katherine Nelson at (512)463-8274.

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Ground Water Conservation Section

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Wat 12-2-5-4

TEXAS WATER COMMISSION
Stephen F. Austin State Office Building
Austin, Texas

PRODUCTION AREA AUTHORIZATION
Mine: Gruy - 7B
Production Area: UR02914-031

AUTHORIZATION to conduct underground injection under provisions of Permit No. URO UR02914-031

I. Name of Permittee:

A. Name Everest Exploration, Inc.

B. Address P.O. Box 1339
Corpus Christi, Texas 78403

II. Name of Mine: Gruy - 7B

III. Standard Provisions

A. Restoration Table
B. Control Parameter Upper Limits Table
C. Designated Monitor Well Table
D. Permit Area Map
E. Mining and Restoration Schedule
F. Plan View of Mine Area
G. Baseline Water Quality Table

CONTINUED on Pages 2 through 11.

The permittee is authorized to conduct injection activity in accordance with limitations, requirements, and other conditions set forth herein. This Authorization is granted subject to the provisions of Permit No. UR02914. This Authorization is valid until amended or revoked by the Commission.

APPROVED, ISSUED AND EFFECTIVE this 16th day of January, 19 89.

ATTEST: Brenda W. Foster

For the Commission

TDWR-0076C

IV. Special Provisions

1. Mechanical integrity for all injection wells shall be demonstrated by a single point resistivity test and cementing records.

2. Monitor wells have been installed to monitor the upper production zones. The upper production zones consist of sands which will not be mined by the permittee but are not separated from the production interval by a continuous clay layer. The monitor wells have been installed to detect any vertical migration of leaching fluids from the production zone. The upper production zone monitor wells shall be monitored in accordance with 31 TAC 331.105. Corrective action, as per 31 TAC 331.106 shall be taken if leaching fluids are detected in any of these wells.

ATTACHMENT A

RESTORATION TABLE

Parameter	Unit	Concentration
Calcium	mg/l	121
Magnesium	mg/l	43
Sodium	mg/l	239
Potassium	mg/l	22
Carbonate	mg/l	0
Bicarbonate	mg/l	235
Sulfate	mg/l	144
Chloride	mg/l	471
Fluoride	mg/l	0.6
Nitrate-N	mg/l	2.84
Silica	mg/l	66
pH	Std. Unit	7.94
TDS	mg/l	1261
Conductivity	µmhos	2100
Alkalinity	Std. Unit	193
Arsenic	mg/l	0.043
Cadmium	mg/l	0.0001
Iron	mg/l	0.073
Lead	mg/l	0.001
Manganese	mg/l	0.04
Mercury	mg/l	0.0001
Selenium	mg/l	0.008
Ammonia	mg/l	0.1
Molybdenum	mg/l	0.01
Radium 226	pCi/l	159
Uranium	mg/l	0.739

ATTACHMENT B

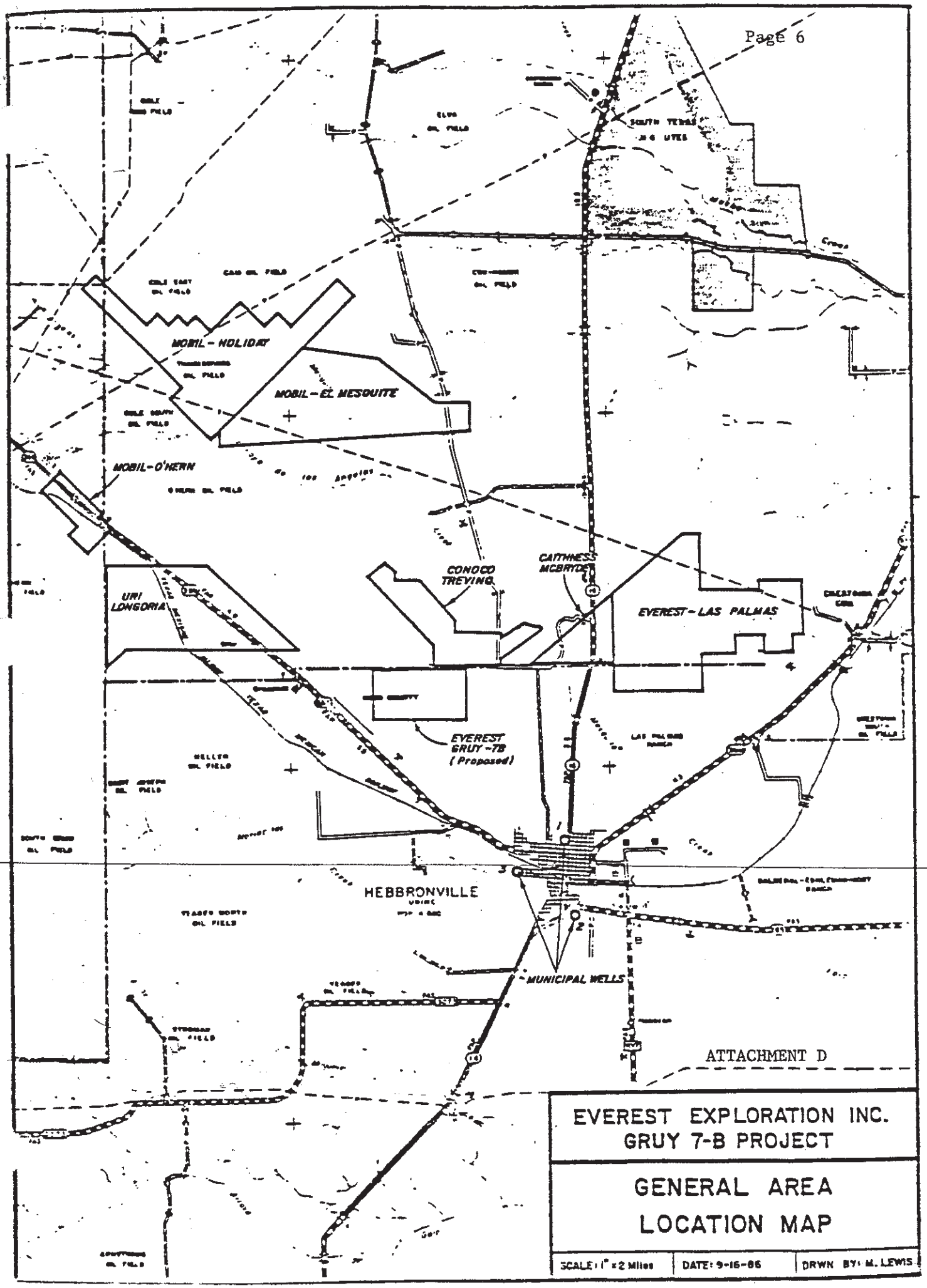
CONTROL PARAMETER UPPER LIMITS TABLE

	Production Zone	Non Production Zone		
Control Parameter		1st Upper Production Zone	2nd Upper Prod. Zone	1st Overlying Aquifer
Uranium, mg/l	6	5.005	5.003	5.003
Conductivity, µmhos/cm	2713	2550	2375	1575
Chloride, mg/l	630	585	534	265

ATTACHMENT C

DESIGNATED MONITOR WELL TABLE

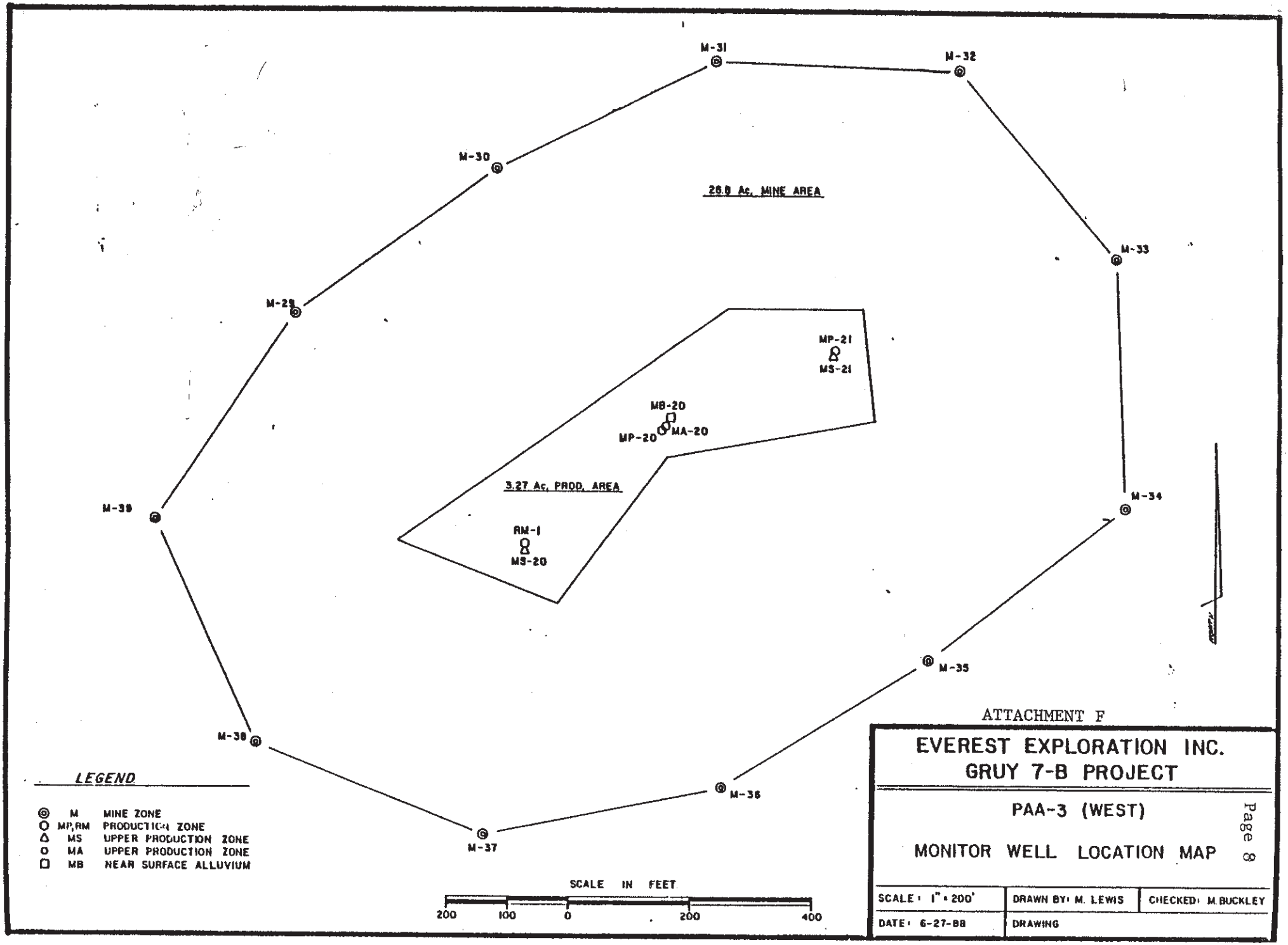
Production Zone	Non-Production Zone
M-29	First Upper Production Zone
M-30	MS-20
M-31	MS-21
M-32	Second Upper Production Zone
M-33	MA-20
M-34	First Overlying Production Zone
M-35	MB-20
M-36	
M-37	
M-38	
M-39	


MOBIL - HOLIDAY
MOBIL - EL MESQUITE
MOBIL - O'KERN
URI LONGORIA
CONOCO TREVINO
CAITHNESS MCBRYDE
EVEREST - LAS PALMAS
EVEREST GRUY - 7B (Proposed)
HEBBRONVILLE
MUNICIPAL WELLS
ATTACHMENT D
EVEREST EXPLORATION INC.
GRUY 7-B PROJECT
GENERAL AREA
LOCATION MAP
SCALE: 1" = 2 Miles
DATE: 9-16-86
DRWN BY: M. LEWIS

ATTACHMENT E

MINING AND RESTORATION SCHEDULE

	Mining Phase		Restoration Phase	
Production Area	Begin	End	Begin	End
1	September, 1988	March, 1990	July, 1990	December, 1993
2	January, 1989	June, 1990	July, 1990	December, 1993
3	January, 1989	June, 1990	July, 1990	December, 1993



ATTACHMENT F

EVEREST EXPLORATION INC.
GRUY 7-B PROJECT

PAA-3 (WEST)

MONITOR WELL LOCATION MAP

SCALE: 1" = 200'	DRAWN BY: M. LEWIS	CHECKED: M. BUCKLEY
DATE: 6-27-88	DRAWING	

TEX[illegible] DEPARTMENT OF WATER RESOURCES

GRO[illegible] WATER ANALYSIS REPORT SUMMARY

BASELINE WATER QUALITY – Solution Mining

Company: Everest Explora[illegible] Inc.

Mine Name: Gruy-7B

Mine Area: PAA-3 (West)

Date Summarized: 8/25/88

ATTACHMENT G

	PARAMETER	UNIT		Upper ~~NON~~ PRODUCTION ZONE**		MS	PRODUCTION ZONE						WELL I.D. BY AREA*		
							MINE AREA**			PRODUCTION AREA			Upper ~~NON~~ PROD. ZONE	PROD. ZONE	
				Low	Average	High	Low	Average	High	Low	Average	High		Mine	Product.
1	Calcium	mg/l		118	122	125	107	121	129	118	121	123	MS-20	M-29	MP-20
2	Magnesium	mg/l		47	48	48	38	43	47	39	40	42	~~MS-21~~	~~M-30~~	~~MP-21~~
3	Sodium	mg/l		200	209	218	215	232	251	231	239	243		M-31	RM-1
4	Potassium	mg/l		13	14	14	13	16	26	17	22	28		M-32	
5	Carbonate	mg/l		0	0	0	0	0	0	0	0	0		M-33	
6	Bicarbonate	mg/l		251	251	251	210	225	238	231	235	240		M-34	
7	Sulfate	mg/l		117	117	117	115	132	152	142	144	146		M-35	
8	Chloride	mg/l		442	455	468	434	471	504	458	470	480		M-36	
9	Fluoride	mg/l		.62	.62	.62	.55	.59	.65	.57	.60	.65		M-37	
10	Nitrate - N	mg/l		3.3	3.4	3.5	.14	2.84	4.00	.48	1.16	1.8		M-38	
11	Silica	mg/l		78	81	83	47	66	77	45	50	56		M-39	
12	pH	Std. unit		7.82	7.86	7.90	7.77	7.83	7.94	7.94	7.94	7.95			
13	TDS	mg/l		1200	1225	1250	1220	1261	1330	1240	1260	1280			
14	Conductivity	µmhos		1960	2000	2040	1970	2059	2170	2060	2100	2120			
15	Alkalinity	Std. unit		206	206	206	172	184	195	189	193	197			
16	Arsenic	mg/l		.006	.008	.009	.006	.018	.048	.039	.043	.048			
17	Cadmium	mg/l		<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001			
18	Iron	mg/l		.01	.01	.01	<.01	.01	.01	<.01	.073	.20			
19	Lead	mg/l		<.001	.001	.001	<.001	.001	.001	<.001	.001	.001			
20	Manganese	mg/l		<.01	.01	.01	<.01	.03	.10	.03	.04	.04			
21	Mercury	mg/l		<.0001	<.0001	<.0001	<.0001	.0001	.0001	<.0001	<.0001	<.0001			
22	Selenium	mg/l		<.001	<.001	<.001	<.001	.005	.015	.004	.008	.016			
23	Ammonia	mg/l		.06	.07	.08	.07	.08	.09	.05	.10	.19			
24	Uranium	mg/l		.005	.005	.005	.005	.076	.241	.539	.739	1.00			
25	Molybdenum	mg/l		<.01	<.01	<.01	.01	.01	.01	<.01	.01	.01			
26	Radium 226	pCi/l		.8	1.2	1.5	1.1	9.3	74.0	140	159	197			

* LIST THE IDENTIFICATION NUMBERS OF WELLS USED TO OBTAIN THE LOW, AVERAGE AND HIGH VALUES. **MONITOR WELLS

TDWR 0296 (Rev. 12-14-83)

TEXAS DEPARTMENT OF WATER RESOURCES

GROUND WATER ANALYSIS REPORT SUMMARY

BASELINE WATER QUALITY — Solution Mining

Company: Everest Exploration Inc

Mine Name: Gruy-7B

Mine Area: PAA-3 (West)

Date Summarized: 8/25/88

ATTACHMENT G CONTINUED

	PARAMETER	UNIT		Upper ~~NON~~ PRODUCTION ZONE** MA			PRODUCTION ZONE						WELL I.D. BY AREA*		
							MINE AREA**			PRODUCTION AREA			Upper ~~NON~~ PROD. ZONE	PROD. ZONE	
				Low	Average	High	Low	Average	High	Low	Average	High		Mine	Product.
1	Calcium	mg/l		119	119	119							MA-20		
2	Magnesium	mg/l		44	44	44									
3	Sodium	mg/l		194	194	194									
4	Potassium	mg/l		12	12	12									
5	Carbonate	mg/l		0	0	0									
6	Bicarbonate	mg/l		232	232	232									
7	Sulfate	mg/l		110	110	110									
8	Chloride	mg/l		427	427	427									
9	Fluoride	mg/l		.73	.73	.73									
10	Nitrate - N	mg/l		1.3	1.3	1.3									
11	Silica	mg/l		102	102	102									
12	pH	Std. unit		7.85	7.85	7.85									
13	TDS	mg/l		1200	1200	1200									
14	Conductivity	µmhos		1900	1900	1900									
15	Alkalinity	Std. unit		190	190	190									
16	Arsenic	mg/l		.006	.006	.006									
17	Cadmium	mg/l		<.0001	<.0001	<.0001									
18	Iron	mg/l		< .01	< .01	< .01									
19	Lead	mg/l		.001	.001	.001									
20	Manganese	mg/l		.02	.02	.02									
21	Mercury	mg/l		<.0001	<.0001	<.0001									
22	Selenium	mg/l		<.001	<.001	<.001									
23	Ammonia	mg/l		.08	.08	.08									
24	Uranium	mg/l		.003	.003	.003									
25	Molybdenum	mg/l		< .01	< .01	< .01									
26	Radium 226	pCi/l		.20	.20	.20									

* LIST THE IDENTIFICATION NUMBERS OF WELLS USED TO OBTAIN THE LOW, AVERAGE AND HIGH VALUES. **MONITOR WELLS

TDWR 0296 (Rev. 12-14 83)

TEX[illegible] EPARTMENT OF WATER RESOURCES

GROU[illegible] WATER ANALYSIS REPORT SUMMARY

BASELINE WATER QUALITY – Solution Mining

Company: Everest Explorat[illegible] Inc.

Mine Name: Gruy-7B

Mine Area: PAA-1

Date Summarized: 8/25/88

ATTACHMENT G CONTINUED

	PARAMETER	UNIT		NON PRODUCTION ZONE**			PRODUCTION ZONE						WELL I.D. BY AREA*		
							MINE AREA**			PRODUCTION AREA			~~NON~~ PROD. ZONE	PROD. ZONE	
				Low	Average	High	Low	Average	High	Low	Average	High		Mine	Product.
1	Calcium	mg/l		61	61	61							MB-20		
2	Magnesium	mg/l		22	22	22									
3	Sodium	mg/l		173	173	173									
4	Potassium	mg/l		8.6	8.6	8.6									
5	Carbonate	mg/l		0	0	0									
6	Bicarbonate	mg/l		282	282	282									
7	Sulfate	mg/l		81	81	81									
8	Chloride	mg/l		212	212	212									
9	Fluoride	mg/l		1.0	1.0	1.0									
10	Nitrate - N	mg/l		4.0	4.0	4.0									
11	Silica	mg/l		106	106	106									
12	pH	Std. unit		8.21	8.21	8.21									
13	TDS	mg/l		861	861	861									
14	Conductivity	µmhos		1260	1260	1260									
15	Alkalinity	Std. unit		231	231	231									
16	Arsenic	mg/l		.011	.011	.011									
17	Cadmium	mg/l		<.0001	<.0001	<.0001									
18	Iron	mg/l		.01	.01	.01									
19	Lead	mg/l		<.001	<.001	<.001									
20	Manganese	mg/l		< .01	< .01	< .01									
21	Mercury	mg/l		<.0001	<.0001	<.0001									
22	Selenium	mg/l		<.001	<.001	<.001									
23	Ammonia	mg/l		.07	.07	.07									
24	Uranium	mg/l		.003	.003	.003									
25	Molybdenum	mg/l		.01	.01	.01									
26	Radium 226	pCi/l		.4	.4	.4									

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TDWR 0296 (Rev. 12-14 83)