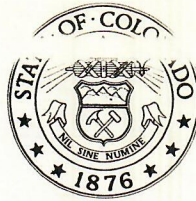


RICHARD D. LAMM
Governor



RECEIVED

JERIS A. DANIELSON
State Engineer
MAR 27 1985



OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

COLO. OIL & GAS CONS. COMM.

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581

March 22, 1985

Mr. Ed DiMatteo
Colorado Oil and Gas Conservation Commission
Logan Tower Building, Room 388
1580 Logan Street
Denver, CO 80203

#9 Bledsoe
~ 5/8 mile SW
of Bledsoe 7

Dear Ed:

With respect to convert No. 7 Bledsoe 31-31 well in the NW1/4, NE1/4, Section 31, Township 12 South, Range 50 West, Cheyenne County, Colorado, to an injection well, we have the following comments:

Known and/or potential aquifers in the area are all surficial deposits and sandstones/siltstones in the underlying Pierre Formation.

Our well files reveal that thickness of the region's surficial deposits ranges from about 20 to about 200 feet. Relatively poor driller's records suggest that many shallow wells (20-30 feet deep) might not penetrate the entire surficial aquifer. The presence of fresh-water yielding sandstone/siltstone beds in the upper part of the underlying Pierre Formation should be suspected until proven absent.

The 341 feet of cemented surface casing should protect all of the area's surficial deposits and at least 141 feet of any water yielding zones in the uppermost Pierre Formation (if any are present).

Our records reveal that the nearest registered water well is about one-half mile northwest in Section 19 (refer to accompanying map). The nearest well downgradient from the proposed injection well is about three miles south in Section 6, T13S, R50W. Note that a surface spill on the injection well site would ultimately migrate to Wild Horse Creek.

If you have any questions, please contact me.

Sincerely,

John C. Romero
Supervising Water Resource Engineer

JCR:ma/4445H

Enclosures

NUMBER	APR-DATE	ADJ-DATE	PRIORITY	D	D	D	D	P	RANGE	TOWN	SHIP	SEC	SEC LOCAT'N COORDINATES	QUARTER SECTIONS	USE	DATE	WELL YIELD	WELL DPTH	WATR LEVEL	ANNUAL APPROP	IRR. ACRES	GEOL. AQUIFER
2-09-00233																						
2-09-009621																						
2-09-049234																						
2-09-118296																						
2-09-118294																						
2-09-118293																						
2-09-016583																						
2-09-003713																						
2-09-013143																						
2-09-048836																						
2-09-020873																						
2-09-084170																						
2-09-084171																						
2-09-020874																						
2-09-084172																						
2-09-028189																						
2-09-031718																						
2-09-041807																						
2-09-007063																						
2-09-081467																						
2-09-054199																						
2-09-054194																						

DATE OF UPDATE IS 12-29-83

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**** 8 14 ****

IGAR-WT, DIVISION OF WATER RESOURCES, GROUND WATER SECTION, MASTER EXTRACT LIST

FULL MASTER LIST BY LOCATION

FILE CONTROL	D-CY-PERMIT	OWNER NAME/S	STREET ADDRESS										CITY	ZIP	ST							
NUMBER	APR-DATE	ADJ-DATE	PRIORITY	D	D	D	D	P	RANGE	TOWN	SHIP	SEC	SEC LOCAT'N COORDINATES	QUARTER SECTIONS	USE	DATE	WELL YIELD	WELL DPTH	WATR LEVEL	ANNUAL APPROP	IRR. ACRES	GEOL. AQUIFER
2-09-054201				67	99	99	8	051	OW	12	08	04	2300S,2400W	NE SW 3	03-01-51		5.0	12	0	.0	0	
2-09-054200				67	99	99	8	051	OW	12	08	13	2100N,2200R	SW NE 2	07-20-68		3.0	HUGO 80	0	.0	0	
2-09-078433				67	99	99	8	051	OW	12	08	14	3000N,2300W BOX 314	NE SW 2	06-01-36		5.0	HUGO 35	0	.0	0	
2-09-078434				67	99	99	8	051	OW	12	08	22	1800E,1000W BOX 516	NE SE 2	03-02-75		5.0	HUGO 30	13	1.0	80821	CO
2-09-017571				67	99	99	8	051	OW	12	08	23	1400S,1700R	NW SE 2	05-10-75		2.0	HUGO 28	10	1.0		
1-32-045652				67	99	99	8	051	OW	12	08	28	PO BOX 263	NE NE 2	09-24-63		5.0	WICH HORSE 19	11	0	0	
1-32-017378				49	99	99	8	051	OW	11	08	04	4050N,1287W	SW SW 2	11-05-74		3.0	FLAGLER 61	32	2.4	80813	CO NO SHU
1-32-028330				49	99	01	8	051	OW	11	08	08		SE SE 2	09-12-63		2.0	KINLEY 30	16	.0	0	
1-32-044928				49	99	01	8	051	OW	11	08	09	BOX 654	NE NW 1	08-04-66		12.0	FLAGLER 86	100	.0	0	
1-32-032538				49	99	01	8	051	OW	11	08	09		NW NE 2	07-02-71		2.0	LITTON 107	97	.0	0	
1-32-033331				49	99	01	8	051	OW	11	08	10		SE NE 1	12-15-67		2.0	FLAGLER 130	126	.0	0	
1-32-037990				49	99	01	8	051	OW	11	08	10		NE NW 2	10- -68		5.0	FLAGLER 115	101	.0	0	
1-32-054193				49	99	01	8	051	OW	11	08	12		NE SE 2	08- -69		6.0	REIDERT 142	122	.0	0	
1-32-067271				49	99	01	8	051	OW	11	08	14	0150W,2300W BOX 1	NE SW 2	05-01-54		14.0	HUGO 14	0	80821	CO	
1-32-041214				49	99	01	8	051	OW	11	08	17	2640N,1320E	SE NE 2	02-12-74		25.0	FLAGLER 144	118	5.0	700	
1-32-047589				49	99	01	8	051	OW	11	08	20	BOX 8	SE NE 2	08- -70		10.0	HUGO 160	168	.0	0	
1-32-054197				49	99	01	8	051	OW	11	08	25		NW SW 2	07- -71		10.0	FLAGLER 163	131	.0	0	
1-32-054194				49	99	01	8	051	OW	11	08	26	1500S,1500W	NE SW 2	06-01-36		5.0	HUGO 135	5	.0	0	
1-32-035682				49	99	01	8	051	OW	11	08	27	1000S,1000W	SW SW 2	08-01-67		5.0	HUGO 130			CO	
1-32-047213				49	99	01	8	051	OW	11	08	28		SE SW 2	10- -68		10.0	HUGO 115	102	.0	0	
1-32-054198				49	99	01	8	051	OW	11	08	29	1313 SHERMAN	NE NE 2	06- -70		10.0	HUGO 127	115	.0	0	
1-32-016917				49	99	01	8	051	OW	11	08	38	0500E,0900W	SW SW 2	07-01-68		8.0	DEWEY 135	0	.0	0	
1-32-044244				49	99	01	8	051	OW	10	08	13		SW NE 2	08-02-63		5.0	FLAGLER 79	70	.0	0	
				49	99	01	8	051	OW	10	08	14		NE SE 1	02- -71		10.0	FLAGLER 80	58	.0	0	

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COLO. OIL & GAS CONS. COMM.

FT, DIVISION OF WATER RESOURCES, GROUND WATER SECTION, MASTER EXTRACT LIST FULL MASTER LIST BY LOCATION

CONTROL PERMIT	OWNER NAME/S	STREET ADDRESS										CITY	ZIP	ST						
IR	PRIORITY	APR-DATE	ADJ-DATE	W	D	O	M	RANGE	YOUNG SHIP	SEC	SEC LOCAT'N COORDINATES	QUARTER SECTIONS	USE	DATE	WELL YIELD	WELL DPTH	WATER LEVEL	ANNUAL APPROX	INR. ACRES	SEAL. AQUIFER
308031	JOHNSON MACK	67	99	99	8	050	0W	13	08	10		SW NE 3	03-16-61	8.0	WILDHORSE	34	28	.0	CO	0
211215	JOHNSON MACK	67	99	99	8	050	0W	13	08	10		SW NE 1	04-08-62	5.0	WILDHORSE	24	15	.0	CO	0
315030	COLORADO STATE	67	99	99	8	050	0W	13	08	14	207 ST	SERV BL06	04-30-63	5.0	DENVER	3	19	.0	CO	0
014770	SANDERS MARCO	67	99	99	8	050	0W	13	08	21		SW SW 2	04-11-63	5.0	WILD HORSE	35	17	.0	CO	0
024534	PRICE MILTON	67	99	99	8	050	0W	13	08	26		NE NE 2	07-06-63	5.0	WILD HORSE	31	26	.0	CO	0
040061	HARRIS WILLIAM	67	99	99	8	050	0W	13	08	27		SW SE 3	01- -70	10.0	FOHLER	32	15	.0	KS	0
028448	PRICE WILSON	67	99	99	8	050	0W	13	08	33		SE SW 2	08-15-66	5.0	WILD HORSE	32	23	.0	CO	0
040062	HARRIS WILLIAM	67	99	99	8	050	0W	12	08	01		NE SE 2	01- -70	10.0	FOHLER	142	122	.0	CO	0
028327	HARRIS G W	69	99	99	8	050	0W	12	08	02	RT 2	NW NW 2	07-28-66	10.0	FOHLER	144	158	.0	CO	0
017189	HARRIS WILLIAM	69	99	99	8	050	0W	12	08	05		NW NW 2	08-21-63	5.0	FOHLER	178	136	.0	KS	0
017188	HARRIS WILLIAM	67	99	99	8	050	0W	12	08	08		SE SE 2	08-26-63	5.0	FOHLER	30	36	.0	KS	0
040059	HARRIS WILLIAM	67	99	99	8	050	0W	12	08	09		SE SE 1	01- -70	10.0	FOHLER	44	24	.0	KS	0
040063	HARRIS WILLIAM	67	99	99	8	050	0W	12	08	13		NW SW 2	01- -70	10.0	FOHLER	28	15	.0	KS	0
025787	BLEDSOE WILLIAM	67	99	99	8	050	0W	12	08	19		SE NW 2	11-09-63	5.0	WILD	24	20	.0	CO	0
040060	HARRIS WILLIAM	67	99	99	8	050	0W	12	08	23		NE SE 2	01- -70	10.0	FOHLER	40	20	.0	KS	0
007364	STATE COL BOARD LAND COM.	67	99	99	8	050	0W	12	08	36	1313 SHERMAN ST	SW SE 2	12-08-60	8.0	DENVER	22	14	.0	CO	0
030894	SHORT BESSIE	69	99	01	8	050	0W	11	08	11		NE NW 2	03-16-67	8.0	SEIBERT	170	141	.0	CO	0
064418	MATFIELD, HARRY L	69	99	99	8	050	0W	11	08	12		NW SW 1	09-20-72	15.0	SEIBERT	140	109	.0	CO	NO SBU
038328	KOENIGER WAYNE	69	99	01	8	050	0W	11	08	13		SE NW 2	06-19-69	8.0	WILSON	146	124	.0	KS	0
062794	COLORADO STATE BOARD LAND COM.	69	99	01	8	050	0W	11	08	36	1313 SHERMAN	NE SW 2	03-12-73	15.0	DENVER	174	123	.0	CO	0
004727	WOLFF J H	69	99	01	8	050	0W	10	08	01	18000, 20000	SE NE 1	12-29-99	5.0	SEIBERT	203	179	.0	CO	0
028228	AMOS MARCO	69	99	01	8	050	0W	10	08	03		SE SE 2	04-17-66	6.0	SEIBERT	54	34	.0	CO	0
000149	REED FLOYD V	69	99	01	8	050	0W	10	08	06		SE SE 1	07-27-57	5.0	FLAHER	38	42	.0	CO	0
028328	HARGROVE DALE	69	99	01	8	050	0W	10	08	06				5.0	SEIBERT	808	34	.0	CO	0

OF UPDATE IS 12-29-83

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IGRE-WT, DIVISION FULL MASTER

FILE CONTROL D-CT-PERMIT	OWNER
1-61-008413	KOUNI
1-61-079739A	SCHAI
1-61-073104	COLO
1-61-017001F	UMLEI
1-61-017167F	BY O
1-61-035394	BRUCI
1-61-043101	COLO
1-61-010467	KJELI
1-61-123110	SIMP SIMP
1-61-019197F	KUNT
1-61-077388	KUNT
1-61-128845A	HUBE
1-61-087302	SEBA
1-61-111100	KUNT
1-61-075448	ETTE
1-61-075449	ETTE
1-61-112641	NICH
1-61-084432	PIOW
1-61-004162F	BOE
00597 05-26-83	BOE
1-61-017037F	TOMH
1-61-101594	STAT
1-61-073103	BOE

DATE OF UPDATE IS

WT, DIVISION OF WATER RESOURCES, GROUND WATER SECTION, MASTER EXTRACT LIST FULL MASTER LIST BY LOCATION

CONTROL PERMIT		OWNER NAME/S		STREET ADDRESS										CITY		ZIP		ST			
== PRIORITY ==		W	M	D	P																
IR	APR-DATE	ADJ-DATE	D	O	O	M	RANGE	YOUNG	SHIP	SEC	SEC LOCAT'N	QUARTER	SECTIONS	USE	DATE	WELL	WELL	WATER	ANNUAL	INR.	SEAL.
											COORDINATES					YIELD	DEPTH	LEVEL	APPROX	ACRS	AQUIFER
034270		REED BLANCHE	49	99	01	8	050 0W	10	00	00		NW 1/4	2	00-04-88		8.0	84	88	.0	0	
			09	99	01	8	050 0W	10	00	00	100 FILDERT ST	SW 1/4	2	00- -88		10.0	85	88	.0	0	CO

IGRE-WT, DIVISION FULL MASTER

FILE CONTROL D-CT-PERMIT	OWNER
1-61-094569	KUNT
1-61-113585	CARRI

2-09-012472 WOMBLES IRA 1
67 99 99 8 050 0W 15 08 22

SE NE 2 07-25-62 1.0 35 29 .0 0

1-61-01816

DATE OF UPDATE IS 12-29-83

**** N 10 ****

MAR 27 1985

IGAE-WT, DIVISION OF WATER RESOURCES, GROUND WATER SECTION, MASTER EXTRACT LIST

WILDLIFE & GAS CONS. COMM.

FULL MASTER LIST BY LOCATION

FILE CONTROL D-CT-PERMIT	OWNER NAME/S	STREET ADDRESS	CITY	ZIP	ST							
----- PRIORITY ----- NUMBER APR-DATE ADJ-DATE	W M D P D D B M	TOWN SHIP	SEC COORDINATES	QUARTER SECTIONS	USE	DATE	WELL YIELD	WELL DEPTH	WATER LEVEL	ANNUAL APPROX	INR. ACRS	SECL. AQUIFER
2-09-032526	JOHNSON ADOLPH M				NE NW 2	11-18-67	2.0	WILD HORSE			CO	0
2-09-021302	PERMERTON M C				SE SE 2	08-19-64	10.0	KIT CARSON			CO	0
2-09-034554	JOHNSON ADOLPH				SW NW 2	07- -68	7.0	WILD HORSE	80862		CO	0
2-09-044016	WAMBLES RAY				SW SW 2	12- -70	2.0	KIT CARSON			CO	0
2-09-040749	JOHNSON, ADOLPH				NW NW 2	05-01-72	15.0	WILD HORSE	80862		CO	NO SRU
2-09-035539	KELLER BURR				NE SE 2	12- -68	6.0	KIT CARSON			CO	0
2-09-124076	KELLEN, CHUCK	333 S. IVV			SE NE 2	03-03-82	10.0	YUMA	80759		CO	0
2-09-043124	FLYING DIAMOND RANCH	2500N, 0200E			SE SE 2	09- -70	15.0	KIT CARSON			CO	0
2-09-025904	NORDQUIST ERNEST				NW NW 2	11-22-65	3.0	WILD HORSE			CO	0
2-09-043308	J O D	833 LIVESTOCK EXCH.			SE SE 1	10- -70	10.0	KANSAS CITY	64102		MO	0
2-09-043307	J O D	833 LIVESTOCK EXCH.			NE NE 1	10- -70	10.0	KANSAS CITY	64102		MO	0
2-09-042946	KOPSTAD A L	0000N, 0575E			SE SE 1	09- -70	4.0	WILD HORSE			CO	0
2-09-020877	STATE COL BOARD LAND COMM	1313 SHERMAN ST N 620			NE NW 1	07-22-64	15.0	DENVER	80203		CO	0
2-09-049530	HAYMAN, ELMER				SE SW 2	10-00-71	15.0	WILD HORSE			CO	0
2-09-118293	HEWNER, VERN MITCHELL, ALLEN	BOX 268 BOX 268						CHEYENNE W 80810 CO CHEYENNE W 80810 CO			CO	0
2-09-044732	BERRIDGE CARL A	0775E, 0930W			SW SW 3	12-31-50	3.0	WILD HORSE			CO	0
2-09-030884	WILDHORSE CATTLE CO				NW NW 2	03- -71	20.0	WILD HORSE	80862		CO	0
2-09-020746	WILD HORSE CATTLE CO				SE SW 2	05-24-67	10.0	WILD HORSE			CO	0
2-09-042881	K. LER BRUCE				NW NW 2	07-13-64	6.0	WILD HORSE			CO	0
2-09-022720	MITCHELL, ALLEN HEWNER, VERN	BOX 268 BOX 268			NE NW 2	08- -70	10.0	WILD HORSE			CO	0
2-09-031649	CARR JAMES				NW NE 2	01-27-65	10.0	CHEYENNE W 80810 CO CHEYENNE W 80810 CO			CO	0
2-09-043832	SCHALLENBERGER, BARREL H. SCHALLENBERGER, YVONNE V.	BOX 141 BOX 141			SW NE 3	08-02-67	6.0	WILDHORSE	80862		CO	0
		2000S, 0850W			NW SW 2	06-07-73	8.0	WILD HORSE	80862		CO	0

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**** N 10 ****

IGAE-WT

FILE CO
D-CT-PE

NUMBER

1-61-01

1-61-07

1-61-06

1-61-06

1-61-01

1-61-11

1-61-01

1-61-01

1-61-01

1-61-01

1-61-01

1-61-01

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DATE 0

Cenref Labs

Analytical Chemistry Laboratories

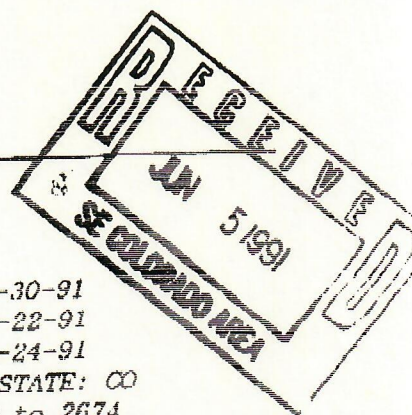
FORMATION WATER ANALYSIS

LAB NO.: K91FW-015
 COMPANY: Union Pacific Resources
 REQ. BY: G. Hargis
 WELL NAME: Gray Slate #4
 COUNTY: Chey
 SAMP. FROM: 2nd swab run wellhead

LOCATION: 36-12S-51W

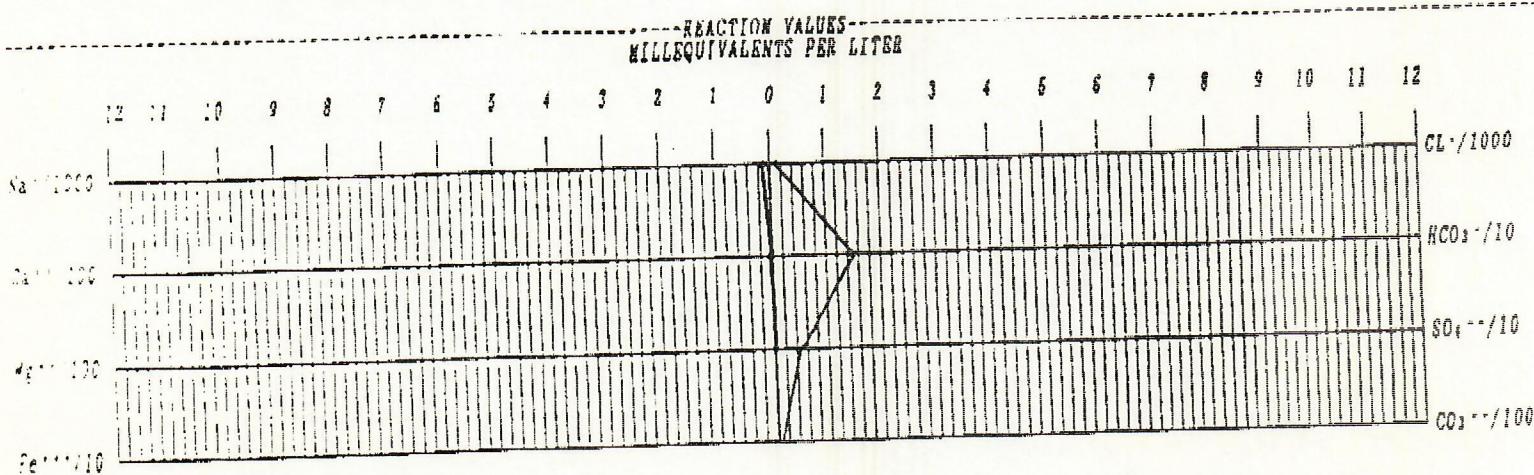
FORMATION: Dakota

COMPLETED: 5-30-91
 SAMPLED: 5-22-91
 RECEIVED: 5-24-91
 STATE: CO
 DEPTH: 2670 to 2674
 SAMP. BY: L. Bryant



pH	8.1	SPECIFIC GRAVITY 1.0052 @ 60° F			
RESISTIVITY (Calc.)		1.200 OHM METERS @ 60° F			
CATIONS		Mg/L	PPM	Me/L	RV %
SODIUM, Na (Calc.)		2542.6	2529.5	110.60	48.68
CALCIUM, Ca		32.1	31.9	1.60	0.70
MAGNESIUM, Mg		17.0	16.9	1.40	0.62
IRON, Fe					
BARIUM, Ba					
STRONTIUM, Sr					
ANIONS					
CHLORIDE, Cl		3299.0	3281.9	93.06	40.96
BICARBONATE, HCO ₃		927.2	922.4	15.20	6.69
CARBONATE, CO ₃		24.8	24.7	0.83	0.36
HYDROXIDE, OH		0.0	0.0	0.00	0.00
SULFATE, SO ₄		217.0	215.9	4.52	1.99
TOTAL		7059.7	7023.2	227.20	100.00

PRIMARY SALINITY 85.90 % Total Reaction Value
 SECONDARY SALINITY 0.00 % Total Reaction Value
 PRIMARY ALKALINITY 11.46 % Total Reaction Value
 SECONDARY ALKALINITY 2.64 % Total Reaction Value
 CaCl₂/MgCl₂ RATIO 1.33



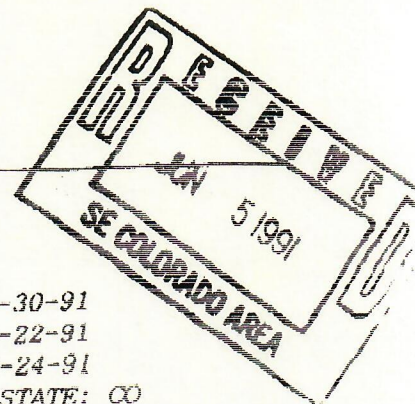
REMARKS:

CC:

Union Pacific Resources
 Att: G. Hargis
 INVOICE 15562 Hwy. 365
 Cheyenne Wells, WY 80810

[Signature]
 ANALYST

FORMATION WATER ANALYSIS



LAB NO.: K91FW-016
 COMPANY: Union Pacific Resources
 REQ. BY: G. Hargis
 WELL NAME: Gray State #4
 COUNTY: Chey
 SAMP. FROM: 1st swab run wellhead

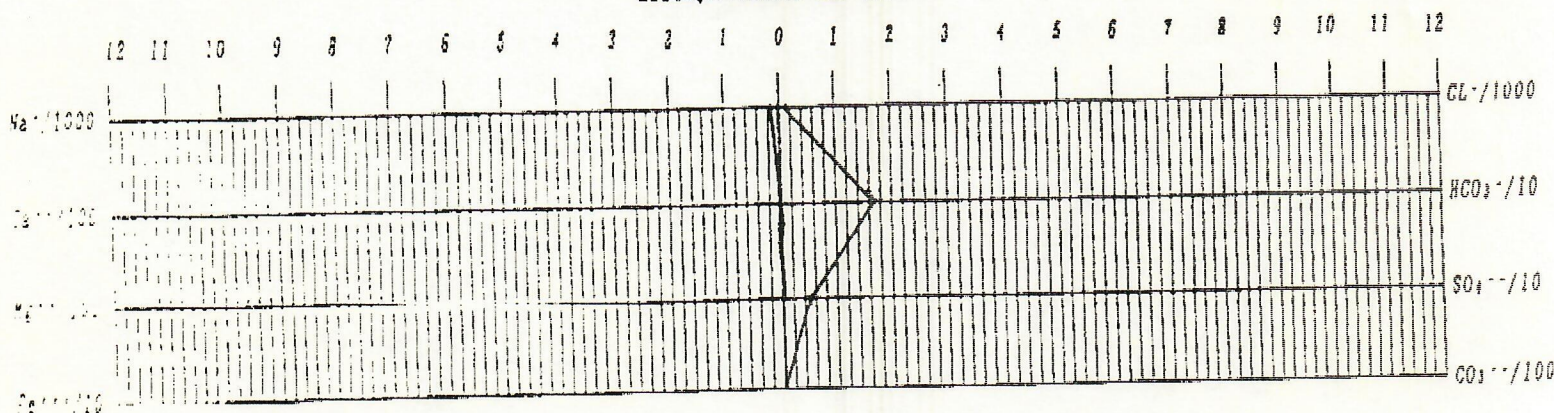
LOCATION: 36-12S-51W

FORMATION: Dakota

COMPLETED: 5-30-91
 SAMPLED: 5-22-91
 RECEIVED: 5-24-91
 STATE: CO
 DEPTH: 2670 to 2674
 SAMP. BY: L. Bryant

PH	8.02	SPECIFIC GRAVITY 1.007 @ 60° F			
RESISTIVITY (Calc.)	0.800 OHM METERS @ 60° F				
CATIONS	Me/L	PPM	Me/L	RV %	
SODIUM, Na (Calc.)	3180.5	3456.3	151.39	48.46	
CALCIUM, Ca	56.1	55.7	2.80	0.90	
MAGNESIUM, Mg	24.3	24.2	2.00	0.64	
IRON, Fe					
BARIUM, Ba					
STRONTIUM, Sr					
ANIONS					
CHLORIDE, Cl	4848.5	4814.8	136.77	43.78	
BICARBONATE, HCO ₃	1012.6	1005.6	16.59	5.31	
CARBONATE, CO ₃	0.0	0.0	0.00	0.00	
HYDROXIDE, OH	0.0	0.0	0.00	0.00	
SULFATE, SO ₄	136.0	135.1	2.83	0.91	
TOTAL	9558.1	9491.6	312.39	100.00	
PRIMARY SALINITY	89.38 % Total Reaction Value				
SECONDARY SALINITY	0.00 % Total Reaction Value				
PRIMARY ALKALINITY	7.55 % Total Reaction Value				
SECONDARY ALKALINITY	3.07 % Total Reaction Value				
CaCl ₂ /MgCl ₂ RATIO	1.63				

REACTION VALUES MILLEQUIVALENTS PER LITER



REMARKS:

CC:

Union Pacific Resources
 Att: G. Hargis
 INVOICE 15562 Hwy. 385
 Cheyenne Wells, WY 80810

[Signature]
 ANALYST