

ATTACHMENT 1

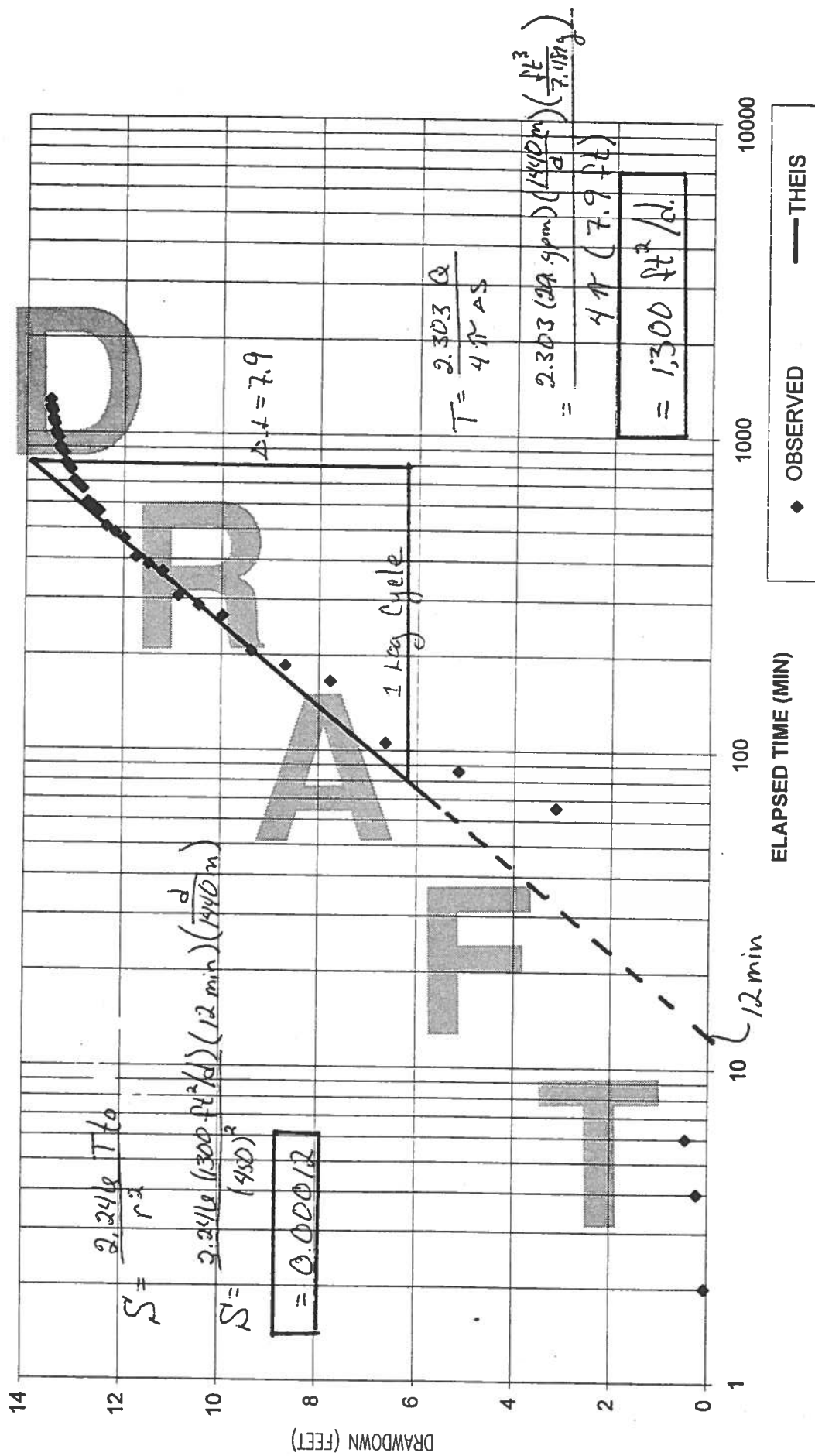
Analysis of PW-1 10 year Drawdown at 200 gpm Pumping Rate

Schafer Well Name	Q gpm	T ft ² /d	r ft	S	t days	u	W(u)	s ft
4	150	227.2423	2700	1.00E-03	3652.5	0.002196	5.546213	56.07787
9	150	227.2423	4500	1.00E-03	3652.5	0.006099	4.528449	45.78724
16	150	227.2423	5200	1.00E-03	3652.5	0.008145	4.241318	42.88405
18	150	227.2423	4300	1.00E-03	3652.5	0.005569	4.618847	46.70125
4	200	227.2423	2700	1.00E-03	3652.5	0.002196	5.546213	74.77049
9	200	227.2423	4500	1.00E-03	3652.5	0.006099	4.528449	61.04965
16	200	227.2423	5200	1.00E-03	3652.5	0.008145	4.241318	57.17873
18	200	227.2423	4300	1.00E-03	3652.5	0.005569	4.618847	62.26834

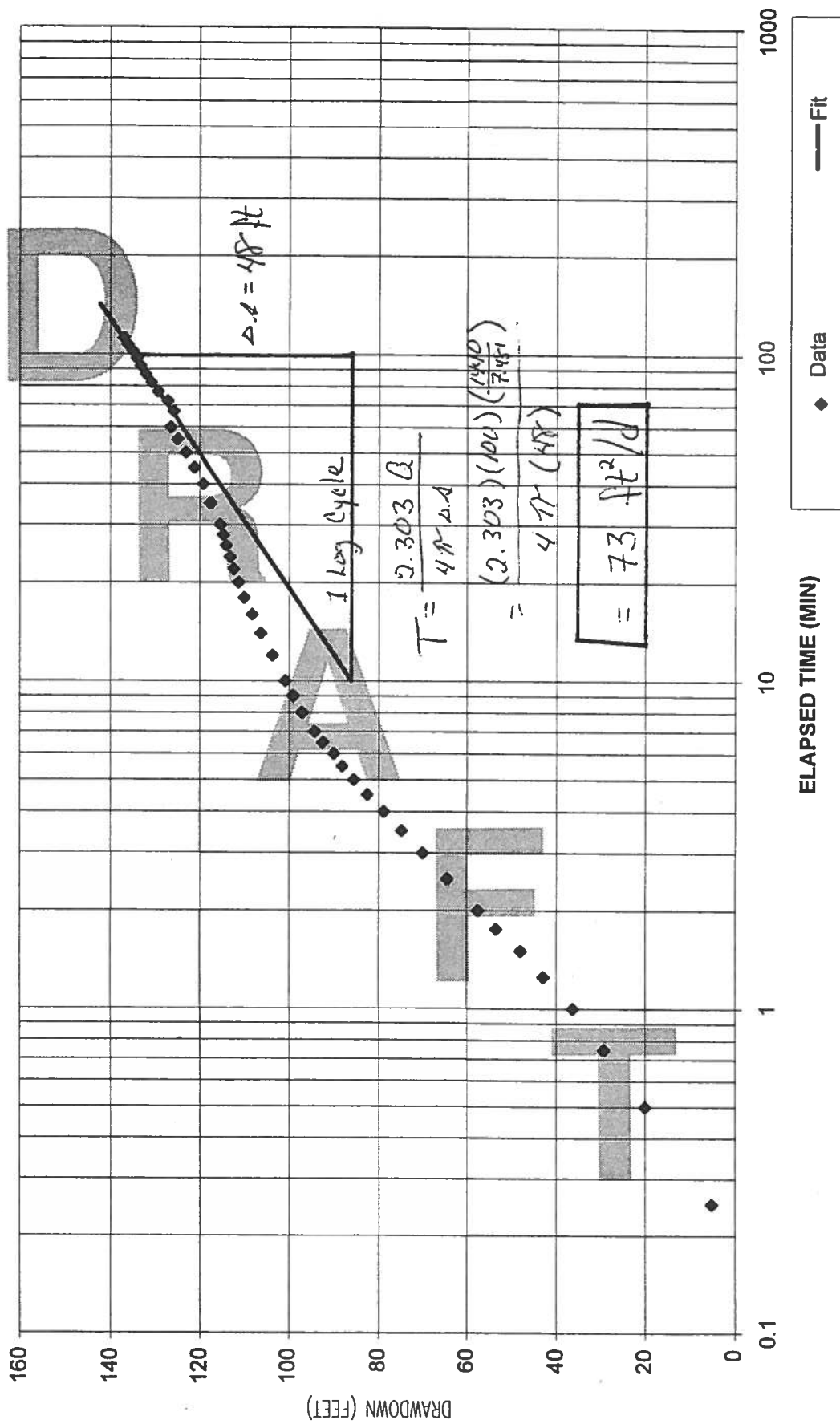
This Solution to drawdown induced by radial flow to a well.

$$S = \frac{Q}{4\pi T} W(u)$$

PUMPING-DRAWDOWN TEST
DRAWDOWN TEST AT 22-2
BY C3 PUMPING



PUMPING-DRAWDOWN TEST COBRE WELL 22-5





SHEPHERD MILLER
INCORPORATED

Phone: (303) 477-5338 Fax: (303) 477-5318

CLIENT Cobre Mining JOB NO. 100-029 PAGE 1 OF 1
PROJECT Continental P.T. Expansion DATE 1/12/98 DATE CHECKED _____
DETAIL Precis/Recharge Estimate COMPUTED BY DTE CHECKED BY WKN

Task: Estimate amount of recharge necessary to supply total well production assuming continuous pumping rates of 332 gpm for well 22-2, 292 gpm for City well C-3, and 180 gpm for well 22-5

Needed recharge volume:

$$332 + 180 + 292 \text{ gpm} = 804 \text{ gpm total max rates}$$

$$804 \text{ gal/min} \cdot \frac{60 \text{ min}}{\text{hr}} \cdot \frac{24 \text{ hr}}{\text{day}} \cdot \frac{365 \text{ days}}{\text{yr}} = 422,582,400 \text{ gal/yr}$$

$$422,582,400 \text{ gal} \cdot \frac{0.1337 \text{ ft}^3}{\text{gal}} = 56,500,000 \text{ ft}^3/\text{yr}$$

$$\text{Grant county annual average ppt.} = 14.5 \text{ inches/yr.}$$

$$= 1.21 \text{ ft/yr.}$$

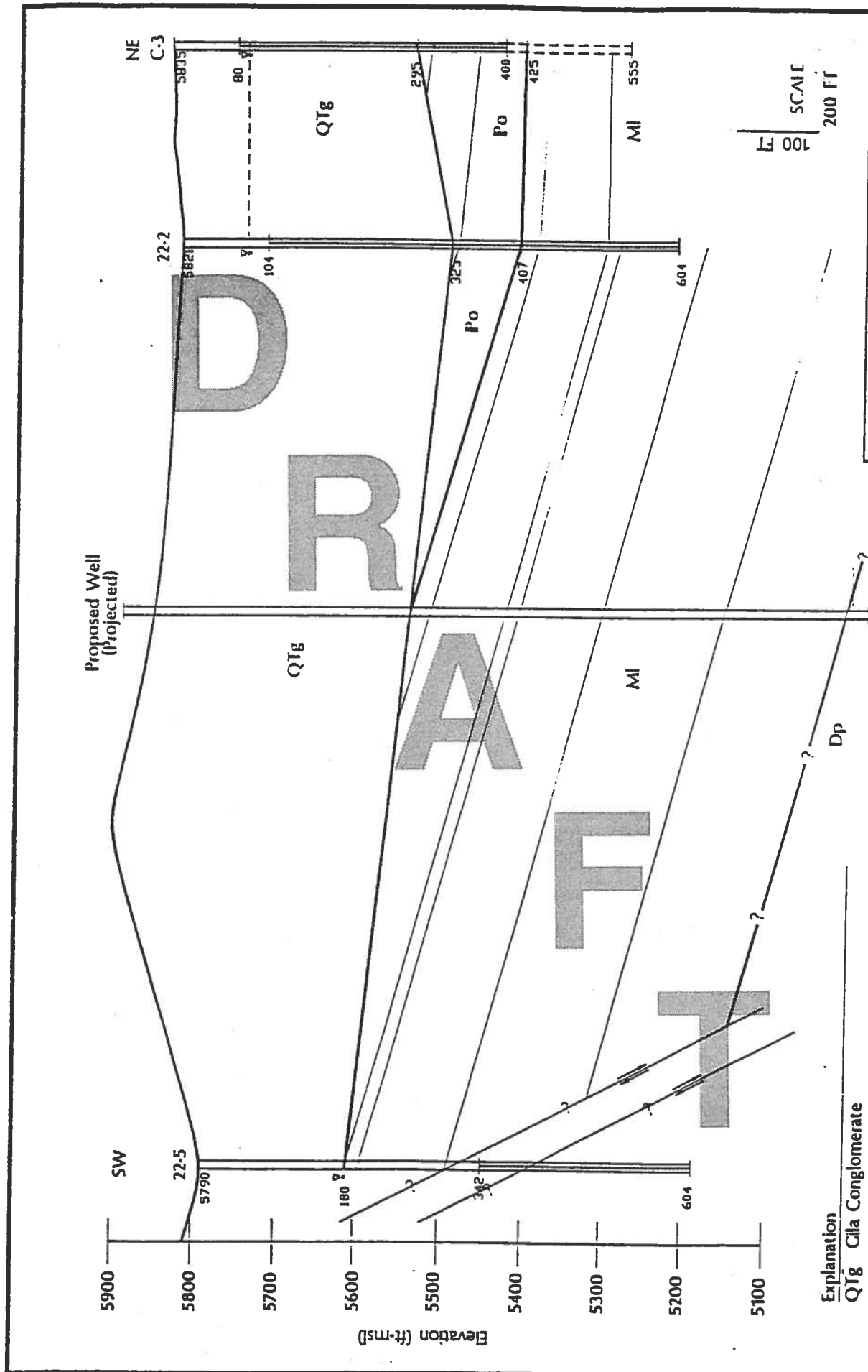
Assuming 5% infiltration to groundwater recharge

$$1.21 \text{ ft/yr} \cdot (.05) = .060 \text{ ft/yr}$$

$$\frac{56,500,000 \text{ ft}^3/\text{yr}}{.060 \text{ ft/yr}} = 941,666,666 \text{ ft}^2$$

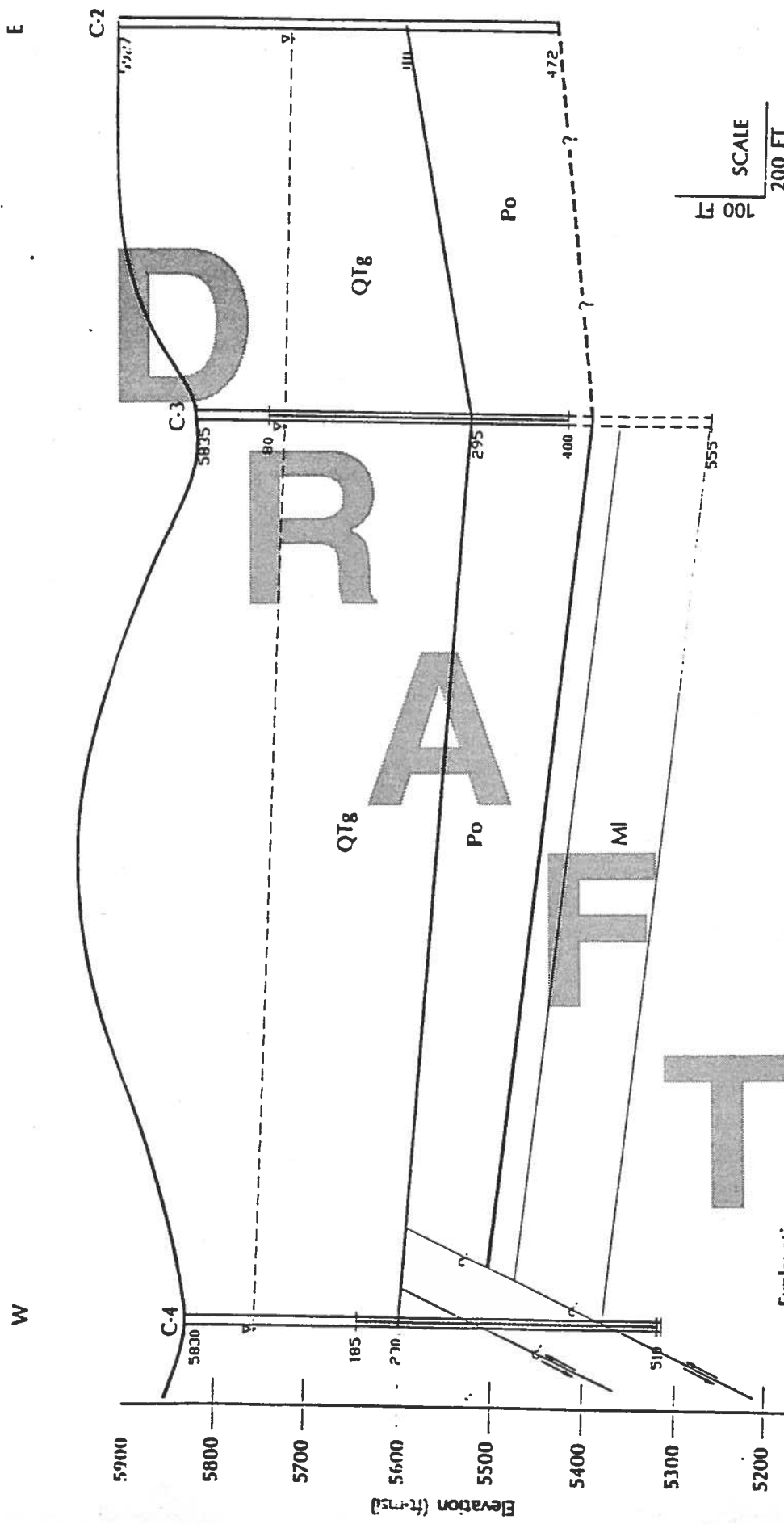
$$\sqrt{\frac{941,666,666}{\pi}} = \text{radius of capture zone} = 3.28 \text{ mi}$$

$$5280'$$



COBRE MINING COMPANY, INC.		DATE	10/98
DESIGNED:	ROW	CHECKED:	JRK
APPROVED:	JRK	DRAWN:	TBL
PROJECT: 2148		FIGURE:	

- Explanation
- QTg Gila Conglomerate
 - Po Oswaldo Limestone
 - MI Lake Valley Limestone
 - Dp Percha Shale
 - ? Water Surface
 - ? — Geologic Contact, dashed where approximately located; queried where inferred.



Explanation

- QIg Gila Conglomerate
- Po Oswaldo Limestone
- MI Lake Valley Limestone
- Dp Percha Shale
- OEb Bliss Sandstone
- ? Water Surface
- ? --- Geologic Contact, dashed where approximately located; queried where inferred.

COBRE MINING COMPANY, INC.		DATE: 07/06	DESIGNED: ROW
EAST - WEST GEOLOGIC CROSS-SECTION OF CRON RANCH		CHECKED:	DRAWN: JRK
		APPROVED:	TBL
		PROJECT: 2140	
Hydro-Search, Inc. A Tech Tech Company Reno • Berkeley • San Francisco • Seattle • Tucson • Washington, D.C.		FIGURE: 5	

Table 2

Summary of Well Field Activities at Cron Ranch for the Period May 29 through June 4, 1996

Date	Time	Flow Rate (gpm)				Comments
		Well C-2	Well C-3	Well C-4	Well 22-2	Well 22-5
29-May-96	16:17:00	0	292	0	0	0 Well C-3 turned on.
29-May-96	16:19:00	0	292	100	0	0 Well C-4 turned on.
29-May-96	16:20:00	13	292	100	0	0 Well C-2 turned on.
30-May-96	06:00:00	13	292	100	425	-- Cobre personnel turn on Wells 22-2 and 22-5.
30-May-96	09:00:00	13	292	100	0	0 Well 22-5 trips off and Well 22-2 turned off.
30-May-96	08:31:00	0	292	100	0	0 Well C-2 turned off.
30-May-96	08:40:00	0	292	0	0	0 Well C-4 turned off.
30-May-96	08:51:00	0	0	0	0	0 Well C-3 turned off.
30-May-96	14:30:00	0	0	0	332	0 Begin 72-hour aquifer test with Well 22-2 pumping.
30-May-96	20:00:00	0	292	0	332	0 Well C-3 turns on.
31-May-96	11:45:00	13	292	100	332	0 Water line break. Wells C-2 and C-4 turned on.
01-Jun-96	77	13	0	100	332	0 Well C-3 tripped off at unknown time.
01-Jun-96	17:13:00	13	292	150	332	0 Well C-3 turned on.
02-Jun-96	18:00:00	0	0	0	0	0 All wells turned off. End 72-hour aquifer test.
02-Jun-96	22:12:00	13	292	100	0	0 Wells C-2, C-3, and C-4 turned on.
03-Jun-96	08:32:00	0	0	0	0	0 Wells C-2, C-3, and C-4 turned off.
03-Jun-96	11:15:00	0	292	0	0	0 Well C-3 turned on.
03-Jun-96	15:15:00	0	0	0	0	0 Well C-3 turned off.
03-Jun-96	17:31:00	13	292	100	0	0 Wells C-2, C-3, and C-4 turned on.
04-Jun-96	06:00:00	13	292	100	0	100 Well 22-5 turned on for step-drawdown test.
04-Jun-96	07:55:00	13	292	100	0	0 Well 22-5 trips off.
04-Jun-96	08:00:00	0	0	0	0	0 All wells turned off.
04-Jun-96	08:12:00	0	0	0	0	100 Well 22-5 restarted.
04-Jun-96	08:45:00	0	0	0	0	0 Well 22-5 trips off. Cobre personnel bypass controller.
04-Jun-96	12:00:00	0	0	0	0	108 Well 22-5 restarted.
04-Jun-96	14:00:00	0	0	0	0	180 Well 22-5 discharge valve opened.
04-Jun-96	17:28:00	0	0	0	0	0 Step-drawdown test ended.

Cobre Well 22-2

Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	10:58:35	30.947	27.779
06/03/96	10:59:05	30.958	27.779
06/03/96	10:59:35	30.99	27.779
06/03/96	11:00:05	31.001	27.779
06/03/96	11:00:35	31.033	27.774
06/03/96	11:01:05	31.055	27.774
06/03/96	11:01:35	31.077	27.774
06/03/96	11:02:05	31.098	27.779
06/03/96	11:02:35	31.109	27.779
06/03/96	11:03:05	31.131	27.779
06/03/96	11:03:35	31.153	27.774
06/03/96	11:04:05	31.174	27.774
06/03/96	11:04:35	31.185	27.774
06/03/96	11:05:05	31.217	27.774
06/03/96	11:05:35	31.239	27.774
06/03/96	11:06:05	31.25	27.774
06/03/96	11:06:35	31.282	27.774
06/03/96	11:07:05	31.293	27.774
06/03/96	11:07:35	31.315	27.774
06/03/96	11:08:05	31.337	27.774
06/03/96	11:08:35	31.358	27.774
06/03/96	11:09:05	31.369	27.774
06/03/96	11:09:35	31.402	27.774
06/03/96	11:10:05	31.423	27.774
06/03/96	11:10:35	31.445	27.774
06/03/96	11:11:05	31.445	27.774
06/03/96	11:11:35	31.488	27.774
06/03/96	11:12:05	31.51	27.774
06/03/96	11:12:35	31.532	27.774
06/03/96	11:13:05	31.532	27.774
06/03/96	11:13:35	31.564	27.769
06/03/96	11:14:05	31.586	27.769
06/03/96	11:14:35	31.596	27.774
06/03/96	11:15:05	31.618	27.769
06/03/96	11:15:35	31.629	27.769
06/03/96	11:16:05	31.651	27.764
06/03/96	11:16:35	31.672	27.769
06/03/96	11:17:05	31.683	27.769
06/03/96	11:17:35	31.694	27.774
06/03/96	11:18:05	31.705	27.774
06/03/96	11:18:35	31.694	27.774
06/03/96	11:19:05	31.672	27.774
06/03/96	11:19:35	31.672	27.769
06/03/96	11:20:05	31.64	27.769
06/03/96	11:20:35	31.596	27.769
06/03/96	11:21:05	31.575	27.769
06/03/96	11:21:35	31.521	27.774
06/03/96	11:22:05	31.488	27.774
06/03/96	11:22:35	31.423	27.774
06/03/96	11:23:05	31.391	27.774
06/03/96	11:23:35	31.326	27.774
06/03/96	11:24:05	31.272	27.769
06/03/96	11:24:35	31.196	27.774
06/03/96	11:25:05	31.142	27.764
06/03/96	11:25:35	31.077	27.764
06/03/96	11:26:05	31.001	27.769
06/03/96	11:26:35	30.936	27.769
06/03/96	11:27:05	30.871	27.769
06/03/96	11:27:35	30.795	27.769
06/03/96	11:28:05	30.719	27.769
06/03/96	11:28:35	30.654	27.769

Pump on. Well C-3
turned on.

Drawdown response well 22-2

Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	10:58:35	30.947	27.779
06/03/96	10:59:05	30.958	27.779
06/03/96	10:59:35	30.99	27.779
06/03/96	11:00:05	31.001	27.779
06/03/96	11:00:35	31.033	27.774
06/03/96	11:01:05	31.055	27.774
06/03/96	11:01:35	31.077	27.774
06/03/96	11:02:05	31.098	27.779
06/03/96	11:02:35	31.109	27.779
06/03/96	11:03:05	31.131	27.779
06/03/96	11:03:35	31.153	27.774
06/03/96	11:04:05	31.174	27.774
06/03/96	11:04:35	31.185	27.774
06/03/96	11:05:05	31.217	27.774
06/03/96	11:05:35	31.239	27.774
06/03/96	11:06:05	31.25	27.774
06/03/96	11:06:35	31.282	27.774
06/03/96	11:07:05	31.293	27.774
06/03/96	11:07:35	31.315	27.774
06/03/96	11:08:05	31.337	27.774
06/03/96	11:08:35	31.358	27.774
06/03/96	11:09:05	31.369	27.774
06/03/96	11:09:35	31.402	27.774
06/03/96	11:10:05	31.423	27.774
06/03/96	11:10:35	31.445	27.774
06/03/96	11:11:05	31.445	27.774
06/03/96	11:11:35	31.488	27.774
06/03/96	11:12:05	31.51	27.774
06/03/96	11:12:35	31.532	27.774
06/03/96	11:13:05	31.532	27.774
06/03/96	11:13:35	31.564	27.769
06/03/96	11:14:05	31.586	27.769
06/03/96	11:14:35	31.596	27.774
06/03/96	11:15:05	31.618	27.769
06/03/96	11:15:35	31.629	27.769
06/03/96	11:16:05	31.651	27.764
06/03/96	11:16:35	31.672	27.769
06/03/96	11:17:05	31.683	27.769
06/03/96	11:17:35	31.694	27.774
06/03/96	11:18:05	31.705	27.774
06/03/96	11:18:35	31.694	27.774
06/03/96	11:19:05	31.672	27.774
06/03/96	11:19:35	31.672	27.769
06/03/96	11:20:05	31.64	27.769
06/03/96	11:20:35	31.596	27.769
06/03/96	11:21:05	31.575	27.769
06/03/96	11:21:35	31.521	27.774
06/03/96	11:22:05	31.488	27.774
06/03/96	11:22:35	31.423	27.774
06/03/96	11:23:05	31.391	27.774
06/03/96	11:23:35	31.326	27.774
06/03/96	11:24:05	31.272	27.769
06/03/96	11:24:35	31.196	27.774
06/03/96	11:25:05	31.142	27.764
06/03/96	11:25:35	31.077	27.764
06/03/96	11:26:05	31.001	27.769
06/03/96	11:26:35	30.936	27.769
06/03/96	11:27:05	30.871	27.769
06/03/96	11:27:35	30.795	27.769
06/03/96	11:28:05	30.719	27.769
06/03/96	11:28:35	30.654	27.774

Pump on. Well C-3
turned on.

Drawdown response well 22-2

well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	11:29:05	30.579	27.774
06/03/96	11:29:35	30.503	27.763
06/03/96	11:30:05	30.438	27.769
06/03/96	11:30:35	30.362	27.774
06/03/96	11:31:05	30.286	27.769
06/03/96	11:31:35	30.221	27.769
06/03/96	11:32:05	30.156	27.769
06/03/96	11:32:35	30.07	27.769
06/03/96	11:33:05	30.005	27.769
06/03/96	11:33:35	29.94	27.769
06/03/96	11:34:05	29.864	27.769
06/03/96	11:34:35	29.788	27.769
06/03/96	11:35:05	29.712	27.769
06/03/96	11:35:35	29.637	27.769
06/03/96	11:36:05	29.572	27.769
06/03/96	11:36:35	29.507	27.769
06/03/96	11:37:05	29.431	27.764
06/03/96	11:37:35	29.366	27.769
06/03/96	11:38:05	29.301	27.764
06/03/96	11:38:35	29.236	27.769
06/03/96	11:39:05	29.171	27.764
06/03/96	11:39:35	29.095	27.769
06/03/96	11:40:05	29.03	27.764
06/03/96	11:40:35	28.976	27.769
06/03/96	11:41:05	28.911	27.769
06/03/96	11:41:35	28.857	27.769
06/03/96	11:42:05	28.792	27.769
06/03/96	11:42:35	28.738	27.764
06/03/96	11:43:05	28.662	27.769
06/03/96	11:43:35	28.597	27.764
06/03/96	11:44:05	28.532	27.769
06/03/96	11:44:35	28.478	27.764
06/03/96	11:45:05	28.413	27.764
06/03/96	11:45:35	28.359	27.769
06/03/96	11:46:05	28.294	27.764
06/03/96	11:46:35	28.24	27.769
06/03/96	11:47:05	28.186	27.769
06/03/96	11:47:35	28.131	27.764
06/03/96	11:48:05	28.088	27.764
06/03/96	11:48:35	28.023	27.769
06/03/96	11:49:05	27.947	27.769
06/03/96	11:49:35	27.893	27.769
06/03/96	11:50:05	27.839	27.769
06/03/96	11:50:35	27.796	27.769
06/03/96	11:51:05	27.731	27.769
06/03/96	11:51:35	27.688	27.769
06/03/96	11:52:05	27.633	27.769
06/03/96	11:52:35	27.579	27.764
06/03/96	11:53:05	27.525	27.769
06/03/96	11:53:35	27.471	27.764
06/03/96	11:54:05	27.428	27.764
06/03/96	11:54:35	27.395	27.764
06/03/96	11:55:05	27.341	27.764
06/03/96	11:55:35	27.287	27.769
06/03/96	11:56:05	27.222	27.764
06/03/96	11:56:35	27.179	27.764
06/03/96	11:57:05	27.124	27.769
06/03/96	11:57:35	27.092	27.764
06/03/96	11:58:05	27.027	27.764
06/03/96	11:58:35	26.995	27.764
06/03/96	11:59:05	26.94	27.764

Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	15:02:35	20.27	27.675
06/03/96	15:03:05	20.27	27.675
06/03/96	15:03:35	20.259	27.675
06/03/96	15:04:05	20.259	27.675
06/03/96	15:04:35	20.249	27.675
06/03/96	15:05:05	20.238	27.675
06/03/96	15:05:35	20.238	27.675
06/03/96	15:06:05	20.238	27.675
06/03/96	15:06:35	20.216	27.675
06/03/96	15:07:05	20.227	27.675
06/03/96	15:07:35	20.216	27.675
06/03/96	15:08:05	20.194	27.675
06/03/96	15:08:35	20.194	27.67
06/03/96	15:09:05	20.194	27.675
06/03/96	15:09:35	20.184	27.675
06/03/96	15:10:05	20.194	27.675
06/03/96	15:10:35	20.184	27.67
06/03/96	15:11:05	20.173	27.67
06/03/96	15:11:35	20.173	27.675
06/03/96	15:12:05	20.162	27.675
06/03/96	15:12:35	20.162	27.675
06/03/96	15:13:05	20.14	27.675
06/03/96	15:13:35	20.14	27.675
06/03/96	15:14:05	20.14	27.675
06/03/96	15:14:35	20.129	27.67
06/03/96	15:15:05	20.129	27.675
06/03/96	15:15:35	20.129	27.67
06/03/96	15:16:05	20.119	27.675
06/03/96	15:16:35	20.108	27.675
06/03/96	15:17:05	20.108	27.675
06/03/96	15:17:35	20.108	27.675
06/03/96	15:18:05	20.108	27.67
06/03/96	15:18:35	20.108	27.67
06/03/96	15:19:05	20.108	27.675
06/03/96	15:19:35	20.119	27.67
06/03/96	15:20:05	20.129	27.67
06/03/96	15:20:35	20.151	27.67
06/03/96	15:21:05	20.162	27.675
06/03/96	15:21:35	20.194	27.67
06/03/96	15:22:05	20.238	27.67
06/03/96	15:22:35	20.27	27.67
06/03/96	15:23:05	20.314	27.67
06/03/96	15:23:35	20.379	27.67
06/03/96	15:24:05	20.444	27.664
06/03/96	15:24:35	20.498	27.664
06/03/96	15:25:05	20.552	27.664
06/03/96	15:25:35	20.617	27.664
06/03/96	15:26:05	20.693	27.664
06/03/96	15:26:35	20.758	27.664
06/03/96	15:27:05	20.833	27.664
06/03/96	15:27:35	20.909	27.664
06/03/96	15:28:05	20.985	27.664
06/03/96	15:28:35	21.082	27.664
06/03/96	15:29:05	21.158	27.664
06/03/96	15:29:35	21.245	27.664
06/03/96	15:30:05	21.353	27.664
06/03/96	15:30:35	21.429	27.664
06/03/96	15:31:05	21.515	27.659
06/03/96	15:31:35	21.602	27.664
06/03/96	15:32:05	21.7	27.659
06/03/96	15:32:35	21.797	27.659

Pumping ceased at well C-3

Drawdown ceases, water rising in well

Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	15:02:35	20.27	27.675
06/03/96	15:03:05	20.27	27.675
06/03/96	15:03:35	20.259	27.675
06/03/96	15:04:05	20.259	27.675
06/03/96	15:04:35	20.249	27.675
06/03/96	15:05:05	20.238	27.675
06/03/96	15:05:35	20.238	27.675
06/03/96	15:06:05	20.238	27.675
06/03/96	15:06:35	20.216	27.675
06/03/96	15:07:05	20.227	27.675
06/03/96	15:07:35	20.216	27.675
06/03/96	15:08:05	20.194	27.675
06/03/96	15:08:35	20.194	27.67
06/03/96	15:09:05	20.194	27.675
06/03/96	15:09:35	20.184	27.675
06/03/96	15:10:05	20.194	27.675
06/03/96	15:10:35	20.184	27.67
06/03/96	15:11:05	20.173	27.67
06/03/96	15:11:35	20.173	27.675
06/03/96	15:12:05	20.162	27.675
06/03/96	15:12:35	20.162	27.675
06/03/96	15:13:05	20.14	27.675
06/03/96	15:13:35	20.14	27.675
06/03/96	15:14:05	20.14	27.675
06/03/96	15:14:35	20.129	27.67
06/03/96	15:15:05	20.129	27.675
06/03/96	15:15:35	20.129	27.67
06/03/96	15:16:05	20.119	27.675
06/03/96	15:16:35	20.108	27.675
06/03/96	15:17:05	20.108	27.675
06/03/96	15:17:35	20.108	27.675
06/03/96	15:18:05	20.108	27.67
06/03/96	15:18:35	20.108	27.67
06/03/96	15:19:05	20.108	27.675
06/03/96	15:19:35	20.119	27.67
06/03/96	15:20:05	20.129	27.67
06/03/96	15:20:35	20.151	27.67
06/03/96	15:21:05	20.162	27.675
06/03/96	15:21:35	20.194	27.67
06/03/96	15:22:05	20.238	27.67
06/03/96	15:22:35	20.27	27.67
06/03/96	15:23:05	20.314	27.67
06/03/96	15:23:35	20.379	27.67
06/03/96	15:24:05	20.444	27.664
06/03/96	15:24:35	20.498	27.664
06/03/96	15:25:05	20.552	27.664
06/03/96	15:25:35	20.617	27.664
06/03/96	15:26:05	20.693	27.664
06/03/96	15:26:35	20.758	27.664
06/03/96	15:27:05	20.833	27.664
06/03/96	15:27:35	20.909	27.664
06/03/96	15:28:05	20.985	27.664
06/03/96	15:28:35	21.082	27.664
06/03/96	15:29:05	21.158	27.664
06/03/96	15:29:35	21.245	27.664
06/03/96	15:30:05	21.353	27.664
06/03/96	15:30:35	21.429	27.664
06/03/96	15:31:05	21.515	27.659
06/03/96	15:31:35	21.602	27.664
06/03/96	15:32:05	21.7	27.659
06/03/96	15:32:35	21.797	27.659

Pumping ceased at well C-3

Drawdown ceases, water rising in well 22-

well 22-2

Date	Time	H2O abv TRM (ft)	BarP (ft H2O)
06/03/96	15:33:05	21.900	27.659
06/03/96	15:33:35	21.981	27.659
06/03/96	15:34:05	22.068	27.659
06/03/96	15:34:35	22.176	27.659
06/03/96	15:35:05	22.273	27.664
06/03/96	15:35:35	22.371	27.659
06/03/96	15:36:05	22.458	27.659
06/03/96	15:36:35	22.544	27.659
06/03/96	15:37:05	22.642	27.659
06/03/96	15:37:35	22.75	27.664
06/03/96	15:38:05	22.837	27.659
06/03/96	15:38:35	22.923	27.659
06/03/96	15:39:05	23.021	27.659
06/03/96	15:39:35	23.118	27.659
06/03/96	15:40:05	23.205	27.659
06/03/96	15:40:35	23.302	27.659
06/03/96	15:41:05	23.378	27.659
06/03/96	15:41:35	23.486	27.659
06/03/96	15:42:05	23.573	27.659
06/03/96	15:42:35	23.659	27.659
06/03/96	15:43:05	23.735	27.659
06/03/96	15:43:35	23.833	27.654
06/03/96	15:44:05	23.909	27.659
06/03/96	15:44:35	24.006	27.654
06/03/96	15:45:05	24.093	27.654
06/03/96	15:45:35	24.179	27.659
06/03/96	15:46:05	24.266	27.654
06/03/96	15:46:35	24.342	27.654
06/03/96	15:47:05	24.439	27.654
06/03/96	15:47:35	24.526	27.654
06/03/96	15:48:05	24.602	27.654
06/03/96	15:48:35	24.688	27.654
06/03/96	15:49:05	24.764	27.654
06/03/96	15:49:35	24.851	27.649
06/03/96	15:50:05	24.948	27.649
06/03/96	15:50:35	25.013	27.649
06/03/96	15:51:05	25.089	27.649
06/03/96	15:51:35	25.165	27.649
06/03/96	15:52:05	25.24	27.649
06/03/96	15:52:35	25.316	27.649
06/03/96	15:53:05	25.403	27.649
06/03/96	15:53:35	25.457	27.649
06/03/96	15:54:05	25.544	27.649
06/03/96	15:54:35	25.619	27.649
06/03/96	15:55:05	25.684	27.649
06/03/96	15:55:35	25.76	27.649
06/03/96	15:56:05	25.836	27.649
06/03/96	15:56:35	25.901	27.654
06/03/96	15:57:05	25.988	27.649
06/03/96	15:57:35	26.063	27.649
06/03/96	15:58:05	26.128	27.649
06/03/96	15:58:35	26.193	27.649
06/03/96	15:59:05	26.258	27.649
06/03/96	15:59:35	26.334	27.649
06/03/96	16:00:05	26.399	27.649
06/03/96	16:00:35	26.464	27.649
06/03/96	16:01:05	26.551	27.644
06/03/96	16:01:35	26.594	27.644
06/03/96	16:02:05	26.67	27.644
06/03/96	16:02:35	26.735	27.644
06/03/96	16:03:05	26.8	27.638

well 22-2
rising water level,
well C-3 off



Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	16:03:35	26.854	27.644
06/03/96	16:04:05	26.93	27.644
06/03/96	16:04:35	27.005	27.644
06/03/96	16:05:05	27.038	27.638
06/03/96	16:05:35	27.114	27.638
06/03/96	16:06:05	27.157	27.638
06/03/96	16:06:35	27.211	27.638
06/03/96	16:07:05	27.276	27.644
06/03/96	16:07:35	27.33	27.638
06/03/96	16:08:05	27.395	27.638
06/03/96	16:08:35	27.449	27.644
06/03/96	16:09:05	27.514	27.638
06/03/96	16:09:35	27.558	27.638
06/03/96	16:10:05	27.612	27.638
06/03/96	16:10:35	27.677	27.638
06/03/96	16:11:05	27.72	27.638
06/03/96	16:11:35	27.785	27.638
06/03/96	16:12:05	27.839	27.644
06/03/96	16:12:35	27.882	27.644
06/03/96	16:13:05	27.947	27.638
06/03/96	16:13:35	27.991	27.638
06/03/96	16:14:05	28.045	27.638
06/03/96	16:14:35	28.099	27.638
06/03/96	16:15:05	28.153	27.638
06/03/96	16:15:35	28.196	27.638
06/03/96	16:16:05	28.251	27.638
06/03/96	16:16:35	28.305	27.638
06/03/96	16:17:05	28.337	27.638
06/03/96	16:17:35	28.402	27.638
06/03/96	16:18:05	28.435	27.638
06/03/96	16:18:35	28.489	27.638
06/03/96	16:19:05	28.532	27.638
06/03/96	16:19:35	28.575	27.644
06/03/96	16:20:05	28.619	27.638
06/03/96	16:20:35	28.662	27.633
06/03/96	16:21:05	28.705	27.638
06/03/96	16:21:35	28.76	27.638
06/03/96	16:22:05	28.803	27.638
06/03/96	16:22:35	28.846	27.638
06/03/96	16:23:05	28.889	27.638
06/03/96	16:23:35	28.933	27.638
06/03/96	16:24:05	28.976	27.638
06/03/96	16:24:35	29.03	27.638
06/03/96	16:25:05	29.052	27.638
06/03/96	16:25:35	29.095	27.633
06/03/96	16:26:05	29.149	27.633
06/03/96	16:26:35	29.193	27.633
06/03/96	16:27:05	29.214	27.638
06/03/96	16:27:35	29.268	27.633
06/03/96	16:28:05	29.312	27.633
06/03/96	16:28:35	29.333	27.633
06/03/96	16:29:05	29.377	27.628
06/03/96	16:29:35	29.388	27.633
06/03/96	16:30:05	29.398	27.633
06/03/96	16:30:35	29.42	27.628
06/03/96	16:31:05	29.442	27.628
06/03/96	16:31:35	29.442	27.633
06/03/96	16:32:05	29.453	27.633
06/03/96	16:32:35	29.463	27.628
06/03/96	16:33:05	29.485	27.633
06/03/96	16:33:35	29.496	27.633

well 22-2
rising water level
well C-3 off

DRAFT

Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	17:04:35	31.358	27.623
06/03/96	17:05:05	31.38	27.617
06/03/96	17:05:35	31.412	27.617
06/03/96	17:06:05	31.445	27.617
06/03/96	17:06:35	31.456	27.623
06/03/96	17:07:05	31.488	27.617
06/03/96	17:07:35	31.51	27.617
06/03/96	17:08:05	31.532	27.617
06/03/96	17:08:35	31.564	27.617
06/03/96	17:09:05	31.596	27.617
06/03/96	17:09:35	31.618	27.617
06/03/96	17:10:05	31.64	27.617
06/03/96	17:10:35	31.672	27.617
06/03/96	17:11:05	31.694	27.617
06/03/96	17:11:35	31.716	27.623
06/03/96	17:12:05	31.748	27.617
06/03/96	17:12:35	31.759	27.617
06/03/96	17:13:05	31.791	27.617
06/03/96	17:13:35	31.813	27.617
06/03/96	17:14:05	31.835	27.617
06/03/96	17:14:35	31.867	27.617
06/03/96	17:15:05	31.878	27.617
06/03/96	17:15:35	31.9	27.612
06/03/96	17:16:05	31.921	27.612
06/03/96	17:16:35	31.943	27.612
06/03/96	17:18:05	32.04	27.612
06/03/96	17:20:05	32.105	27.617
06/03/96	17:22:05	32.192	27.612
06/03/96	17:24:05	32.268	27.617
06/03/96	17:26:05	32.354	27.617
06/03/96	17:28:05	32.43	27.612
06/03/96	17:30:05	32.506	27.617
06/03/96	17:32:05	32.571	27.612
06/03/96	17:34:05	32.625	27.607
06/03/96	17:36:05	32.56	27.612
06/03/96	17:38:05	32.398	27.612
06/03/96	17:40:05	32.16	27.612
06/03/96	17:42:05	31.921	27.612
06/03/96	17:44:05	31.64	27.612
06/03/96	17:46:05	31.347	27.612
06/03/96	17:48:05	31.066	27.607
06/03/96	17:50:05	30.774	27.607
06/03/96	17:52:05	30.503	27.607
06/03/96	17:54:05	30.243	27.607
06/03/96	17:56:05	29.972	27.602
06/03/96	17:58:05	29.723	27.602
06/03/96	18:00:05	29.485	27.602
06/03/96	18:02:05	29.225	27.602
06/03/96	18:04:05	29.019	27.596
06/03/96	18:06:05	28.803	27.596
06/03/96	18:08:05	28.575	27.602
06/03/96	18:10:05	28.381	27.602
06/03/96	18:12:05	28.175	27.596
06/03/96	18:14:05	27.98	27.596
06/03/96	18:16:05	27.807	27.596
06/03/96	18:18:05	27.623	27.596
06/03/96	18:20:05	27.46	27.602
06/03/96	18:22:05	27.298	27.602
06/03/96	18:24:05	27.114	27.596
06/03/96	18:26:05	26.962	27.596
06/03/96	18:28:05	26.81	27.596

Pumping begins wells C-3, C-2, C-4 (17:31)

well 22-2 drawdown response begins

Well 22-2

Date	Time	H2O abv TRN (")	BarP (ft H2O)
06/03/96	18:30:05	26.659	27.596
06/03/96	18:32:05	26.597	27.596
06/03/96	18:34:05	26.366	27.591
06/03/96	18:36:05	26.247	27.591
06/03/96	18:38:05	26.107	27.596
06/03/96	18:40:05	25.977	27.591
06/03/96	18:42:05	25.847	27.596
06/03/96	18:44:05	25.728	27.596
06/03/96	18:46:05	25.598	27.596
06/03/96	18:48:05	25.489	27.591
06/03/96	18:50:05	25.37	27.596
06/03/96	18:52:05	25.262	27.591
06/03/96	18:54:05	25.165	27.591
06/03/96	18:56:05	25.045	27.591
06/03/96	18:58:05	24.948	27.596
06/03/96	19:00:05	24.851	27.596
06/03/96	19:02:05	24.742	27.596
06/03/96	19:04:05	24.645	27.591
06/03/96	19:06:05	24.537	27.591
06/03/96	19:08:05	24.45	27.596
06/03/96	19:10:05	24.363	27.591
06/03/96	19:12:05	24.277	27.591
06/03/96	19:14:05	24.179	27.596
06/03/96	19:16:05	24.103	27.596
06/03/96	19:18:05	24.017	27.596
06/03/96	19:20:05	23.941	27.596
06/03/96	19:22:05	23.854	27.596
06/03/96	19:24:05	23.779	27.591
06/03/96	19:26:05	23.703	27.596
06/03/96	19:28:05	23.649	27.591
06/03/96	19:30:05	23.562	27.591
06/03/96	19:32:05	23.486	27.591
06/03/96	19:34:05	23.421	27.591
06/03/96	19:36:05	23.367	27.596
06/03/96	19:38:05	23.291	27.596
06/03/96	19:40:05	23.237	27.596
06/03/96	19:42:05	23.172	27.596
06/03/96	19:44:05	23.107	27.596
06/03/96	19:46:05	23.042	27.596
06/03/96	19:48:05	22.977	27.596
06/03/96	19:50:05	22.923	27.596
06/03/96	19:52:05	22.858	27.596
06/03/96	19:54:05	22.804	27.596
06/03/96	19:56:05	22.75	27.596
06/03/96	19:58:05	22.696	27.596
06/03/96	20:00:05	22.642	27.602
06/03/96	20:02:05	22.598	27.596
06/03/96	20:04:05	22.544	27.602
06/03/96	20:06:05	22.49	27.602
06/03/96	20:08:05	22.447	27.602
06/03/96	20:10:05	22.403	27.602
06/03/96	20:12:05	22.338	27.602
06/03/96	20:14:05	22.284	27.602
06/03/96	20:16:05	22.263	27.602
06/03/96	20:18:05	22.208	27.607
06/03/96	20:20:05	22.154	27.607
06/03/96	20:22:05	22.111	27.607
06/03/96	20:24:05	22.057	27.607
06/03/96	20:26:05	22.035	27.607
06/03/96	20:28:05	21.97	27.607
06/03/96	20:30:05	21.938	27.607

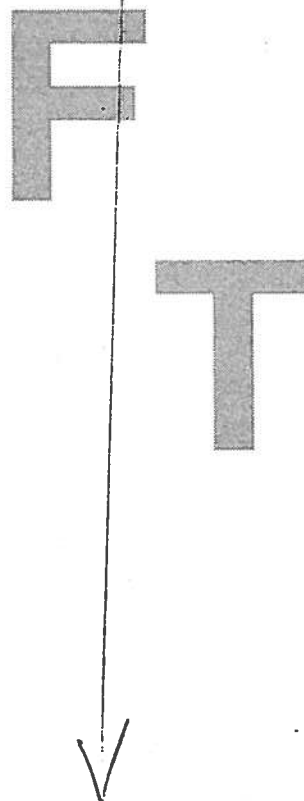
well 22-2

drawdown response
to pumping well C-3

Well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	20:32:05	21.905	27.612
06/03/96	20:34:05	21.851	27.607
06/03/96	20:36:05	21.83	27.607
06/03/96	20:38:05	21.786	27.607
06/03/96	20:40:05	21.732	27.612
06/03/96	20:42:05	21.71	27.607
06/03/96	20:44:05	21.656	27.612
06/03/96	20:46:05	21.645	27.607
06/03/96	20:48:05	21.602	27.612
06/03/96	20:50:05	21.559	27.617
06/03/96	20:52:05	21.537	27.612
06/03/96	20:54:05	21.494	27.617
06/03/96	20:56:05	21.483	27.617
06/03/96	20:58:05	21.429	27.617
06/03/96	21:00:05	21.407	27.617
06/03/96	21:02:05	21.375	27.617
06/03/96	21:04:05	21.342	27.617
06/03/96	21:06:05	21.299	27.617
06/03/96	21:08:05	21.288	27.623
06/03/96	21:10:05	21.256	27.617
06/03/96	21:12:05	21.223	27.623
06/03/96	21:14:05	21.191	27.623
06/03/96	21:16:05	21.169	27.623
06/03/96	21:18:05	21.137	27.623
06/03/96	21:20:05	21.115	27.623
06/03/96	21:22:05	21.093	27.623
06/03/96	21:24:05	21.061	27.623
06/03/96	21:26:05	21.05	27.628
06/03/96	21:28:05	21.007	27.628
06/03/96	21:30:05	20.974	27.628
06/03/96	21:32:05	20.952	27.628
06/03/96	21:34:05	20.942	27.628
06/03/96	21:36:05	20.909	27.628
06/03/96	21:38:05	20.877	27.628
06/03/96	21:40:05	20.866	27.628
06/03/96	21:42:05	20.844	27.628
06/03/96	21:44:05	20.812	27.628
06/03/96	21:46:05	20.79	27.633
06/03/96	21:48:05	20.779	27.633
06/03/96	21:50:05	20.747	27.633
06/03/96	21:52:05	20.725	27.633
06/03/96	21:54:05	20.693	27.633
06/03/96	21:56:05	20.682	27.638
06/03/96	21:58:05	20.66	27.638
06/03/96	22:00:05	20.628	27.638
06/03/96	22:02:05	20.628	27.638
06/03/96	22:04:05	20.595	27.638
06/03/96	22:06:05	20.584	27.638
06/03/96	22:08:05	20.563	27.638
06/03/96	22:10:05	20.541	27.644
06/03/96	22:12:05	20.519	27.644
06/03/96	22:14:05	20.498	27.649
06/03/96	22:16:05	20.476	27.644
06/03/96	22:18:05	20.454	27.649
06/03/96	22:20:05	20.444	27.644
06/03/96	22:22:05	20.422	27.649
06/03/96	22:24:05	20.4	27.644
06/03/96	22:26:05	20.389	27.649
06/03/96	22:28:05	20.368	27.649
06/03/96	22:30:05	20.357	27.649
06/03/96	22:32:05	20.335	27.649

drawdown response in
well 22-2



D

R

A

T

T

Cobre Well 22-5

05/30/96	04:13:25	30.654	27.555
05/30/96	04:23:25	30.665	27.555
05/30/96	04:33:25	30.665	27.555
05/30/96	04:43:25	30.687	27.555
05/30/96	04:53:25	30.676	27.555
05/30/96	05:03:25	30.687	27.549
05/30/96	05:13:25	30.687	27.549
05/30/96	05:23:25	30.676	27.555
05/30/96	05:33:25	30.676	27.555
05/30/96	05:43:25	30.687	27.555
05/30/96	05:53:25	30.687	27.555
05/30/96	06:03:25	30.687	27.555
05/30/96	06:13:25	30.73	27.56
05/30/96	06:23:25	30.6	27.56
05/30/96	06:33:25	30.579	27.55
05/30/96	06:43:25	30.557	27.56
05/30/96	06:53:25	30.557	27.565
05/30/96	07:03:25	30.557	27.565
05/30/96	07:13:25	30.557	27.576
05/30/96	07:23:25	30.579	27.576
05/30/96	07:33:25	30.568	27.576
05/30/96	07:43:25	30.557	27.576
05/30/96	07:53:25	30.579	27.576
05/30/96	08:03:25	30.579	27.576
05/30/96	08:13:25	30.589	27.581
05/30/96	08:23:25	30.579	27.581
05/30/96	08:33:25	30.568	27.581
05/30/96	08:43:25	30.579	27.581
05/30/96	08:53:25	30.579	27.581
05/30/96	09:03:25	30.579	27.581
05/30/96	09:13:25	30.589	27.581
05/30/96	09:23:25	30.589	27.581
05/30/96	09:33:25	30.589	27.581
05/30/96	09:43:25	30.589	27.581
05/30/96	09:53:25	30.6	27.576
05/30/96	10:03:25	30.589	27.576
05/30/96	10:13:25	30.611	27.576
05/30/96	10:23:25	30.622	27.57
05/30/96	10:33:25	30.622	27.57
05/30/96	10:43:25	30.611	27.57
05/30/96	10:53:25	30.622	27.57
05/30/96	11:03:25	30.633	27.57
05/30/96	11:13:25	30.633	27.57
05/30/96	11:23:25	30.633	27.576
05/30/96	11:33:25	30.654	27.57
05/30/96	11:43:25	30.644	27.57
05/30/96	11:53:25	30.654	27.565
05/30/96	12:03:25	30.654	27.565
05/30/96	12:13:25	30.665	27.56
05/30/96	12:23:25	30.665	27.565
05/30/96	12:33:25	30.676	27.56
05/30/96	12:43:25	30.665	27.56
05/30/96	12:53:25	30.698	27.555
05/30/96	13:03:25	30.687	27.555
05/30/96	13:13:25	30.687	27.549
05/30/96	13:28:27	30.709	27.555
05/30/96	13:38:27	30.698	27.544
05/30/96	13:48:27	30.73	27.544
05/30/96	13:58:27	30.73	27.544
05/30/96	14:08:27	30.73	27.544
05/30/96	14:18:27	30.752	27.539

copy

vwell 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
05/30/96	14:28:27	30.741	27.534
05/30/96	14:30:00	30.752	27.539
05/30/96	14:30:05	30.741	27.534
05/30/96	14:30:10	30.752	27.534
05/30/96	14:30:15	30.752	27.534
05/30/96	14:30:20	30.741	27.534
05/30/96	14:30:25	30.741	27.534
05/30/96	14:30:30	30.763	27.534
05/30/96	14:30:35	30.763	27.528
05/30/96	14:30:40	30.763	27.528
05/30/96	14:30:45	30.763	27.528
05/30/96	14:30:50	30.741	27.528
05/30/96	14:30:55	30.752	27.528
05/30/96	14:31:00	30.741	27.528
05/30/96	14:31:05	30.763	27.528
05/30/96	14:31:10	30.763	27.528
05/30/96	14:31:15	30.763	27.534
05/30/96	14:31:20	30.763	27.534
05/30/96	14:31:25	30.763	27.534
05/30/96	14:31:30	30.763	27.534
05/30/96	14:31:35	30.763	27.534
05/30/96	14:31:40	30.763	27.534
05/30/96	14:31:45	30.741	27.534
05/30/96	14:31:50	30.741	27.528
05/30/96	14:31:55	30.741	27.528
05/30/96	14:32:00	30.763	27.534
05/30/96	14:32:10	30.752	27.534
05/30/96	14:32:20	30.752	27.534
05/30/96	14:32:30	30.763	27.534
05/30/96	14:32:40	30.763	27.534
05/30/96	14:32:50	30.763	27.534
05/30/96	14:33:00	30.774	27.534
05/30/96	14:33:10	30.752	27.534
05/30/96	14:33:20	30.763	27.534
05/30/96	14:33:30	30.752	27.539
05/30/96	14:33:40	30.763	27.534
05/30/96	14:33:50	30.752	27.534
05/30/96	14:34:00	30.752	27.534
05/30/96	14:34:10	30.752	27.539
05/30/96	14:34:20	30.763	27.534
05/30/96	14:34:30	30.763	27.534
05/30/96	14:34:40	30.763	27.539
05/30/96	14:34:50	30.763	27.534
05/30/96	14:35:00	30.752	27.539
05/30/96	14:35:30	30.774	27.539
05/30/96	14:36:00	30.752	27.534
05/30/96	14:36:30	30.763	27.534
05/30/96	14:37:00	30.741	27.534
05/30/96	14:37:30	30.741	27.534
05/30/96	14:38:00	30.752	27.534
05/30/96	14:38:30	30.763	27.534
05/30/96	14:39:00	30.741	27.534
05/30/96	14:39:30	30.763	27.534
05/30/96	14:40:00	30.73	27.534
05/30/96	14:40:30	30.752	27.534
05/30/96	14:41:00	30.741	27.528
05/30/96	14:41:30	30.741	27.534
05/30/96	14:42:00	30.763	27.534
05/30/96	14:42:30	30.752	27.528
05/30/96	14:43:00	30.763	27.534
05/30/96	14:43:30	30.752	27.528

Start pumping well 22-5

Well 22-5

Date	Time	H2O abv TRN (")	BarP (ft H2O)
05/30/96	14:44:00	30.763	27.528
05/30/96	14:44:30	30.773	27.523
05/30/96	14:45:00	30.741	27.528
05/30/96	14:46:00	30.774	27.528
05/30/96	14:47:00	30.752	27.523
05/30/96	14:48:00	30.763	27.528
05/30/96	14:49:00	30.774	27.523
05/30/96	14:50:00	30.774	27.528
05/30/96	14:51:00	30.763	27.523
05/30/96	14:52:00	30.774	27.528
05/30/96	14:53:00	30.763	27.528
05/30/96	14:54:00	30.763	27.528
05/30/96	14:55:00	30.774	27.528
05/30/96	14:56:00	30.763	27.523
05/30/96	14:57:00	30.763	27.523
05/30/96	14:58:00	30.774	27.528
05/30/96	14:59:00	30.763	27.528
05/30/96	15:00:00	30.784	27.523
05/30/96	15:01:00	30.774	27.534
05/30/96	15:02:00	30.763	27.528
05/30/96	15:03:00	30.774	27.528
05/30/96	15:04:00	30.774	27.528
05/30/96	15:05:00	30.774	27.528
05/30/96	15:07:00	30.784	27.523
05/30/96	15:09:00	30.784	27.523
05/30/96	15:11:00	30.784	27.528
05/30/96	15:13:00	30.763	27.528
05/30/96	15:15:00	30.774	27.523
05/30/96	15:17:00	30.774	27.523
05/30/96	15:19:00	30.784	27.528
05/30/96	15:21:00	30.795	27.523
05/30/96	15:23:00	30.795	27.518
05/30/96	15:25:00	30.784	27.513
05/30/96	15:27:00	30.795	27.518
05/30/96	15:29:00	30.774	27.518
05/30/96	15:31:00	30.784	27.513
05/30/96	15:33:00	30.795	27.518
05/30/96	15:35:00	30.795	27.518
05/30/96	15:37:00	30.795	27.518
05/30/96	15:39:00	30.784	27.513
05/30/96	15:41:00	30.795	27.518
05/30/96	15:43:00	30.795	27.518
05/30/96	15:45:00	30.795	27.513
05/30/96	15:47:00	30.795	27.513
05/30/96	15:49:00	30.795	27.508
05/30/96	15:51:00	30.806	27.513
05/30/96	15:53:00	30.828	27.508
05/30/96	15:55:00	30.806	27.508
05/30/96	15:57:00	30.806	27.508
05/30/96	15:59:00	30.817	27.508
05/30/96	16:01:00	30.817	27.502
05/30/96	16:03:00	30.817	27.508
05/30/96	16:05:00	30.828	27.508
05/30/96	16:07:00	30.828	27.508
05/30/96	16:09:00	30.828	27.502
05/30/96	16:11:00	30.828	27.497
05/30/96	16:13:00	30.828	27.502
05/30/96	16:15:00	30.817	27.508
05/30/96	16:17:00	30.828	27.502
05/30/96	16:19:00	30.828	27.502
05/30/96	16:21:00	30.828	27.502

well 22-5 response
to pumping well 22-2

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
05/30/96	18:25:00	30.914	27.476
05/30/96	18:27:00	30.925	27.481
05/30/96	18:29:00	30.903	27.476
05/30/96	18:31:00	30.903	27.481
05/30/96	18:33:00	30.903	27.481
05/30/96	18:35:00	30.903	27.481
05/30/96	18:37:00	30.914	27.481
05/30/96	18:39:00	30.903	27.481
05/30/96	18:41:00	30.914	27.481
05/30/96	18:43:00	30.925	27.476
05/30/96	18:45:00	30.925	27.481
05/30/96	18:49:14	31.055	27.481
05/30/96	18:51:14	31.055	27.481
05/30/96	18:53:14	31.055	27.481
05/30/96	18:55:14	31.066	27.481
05/30/96	18:57:14	31.077	27.481
05/30/96	18:59:14	31.066	27.481
05/30/96	19:01:14	31.077	27.481
05/30/96	19:03:14	31.077	27.481
05/30/96	19:05:14	31.088	27.481
05/30/96	19:07:14	31.088	27.481
05/30/96	19:09:14	31.088	27.481
05/30/96	19:11:14	31.077	27.481
05/30/96	19:13:14	31.098	27.487
05/30/96	19:15:14	31.088	27.481
05/30/96	19:17:14	31.088	27.481
05/30/96	19:19:14	31.088	27.481
05/30/96	19:21:14	31.088	27.492
05/30/96	19:23:14	31.088	27.487
05/30/96	19:25:14	31.098	27.487
05/30/96	19:27:14	31.098	27.487
05/30/96	19:29:14	31.098	27.492
05/30/96	19:31:14	31.109	27.487
05/30/96	19:33:14	31.109	27.487
05/30/96	19:35:14	31.098	27.492
05/30/96	19:37:14	31.12	27.492
05/30/96	19:39:14	31.109	27.492
05/30/96	19:41:14	31.109	27.492
05/30/96	19:43:14	31.109	27.492
05/30/96	19:45:14	31.12	27.492
05/30/96	19:47:14	31.109	27.492
05/30/96	19:49:14	31.109	27.492
05/30/96	19:51:14	31.109	27.492
05/30/96	19:53:14	31.109	27.497
05/30/96	19:55:14	31.109	27.492
05/30/96	19:57:14	31.12	27.497
05/30/96	19:59:14	31.109	27.497
05/30/96	20:01:14	31.12	27.497
05/30/96	20:03:14	31.109	27.492
05/30/96	20:05:14	31.12	27.497
05/30/96	20:07:14	31.12	27.497
05/30/96	20:09:14	31.12	27.497
05/30/96	20:11:14	31.12	27.497
05/30/96	20:13:14	31.098	27.492
05/30/96	20:15:14	31.109	27.497
05/30/96	20:17:14	31.098	27.497
05/30/96	20:19:14	31.109	27.497
05/30/96	20:21:14	31.131	27.492
05/30/96	20:23:14	31.12	27.497
05/30/96	20:25:14	31.098	27.497
05/30/96	20:27:14	31.12	27.502

Well 22-5 response
to pumping

Well C-3 pumping
begins

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
05/30/96	20:29:14	31.109	27.497
05/30/96	20:31:14	31.109	27.497
05/30/96	20:33:14	31.098	27.497
05/30/96	20:35:14	31.109	27.502
05/30/96	20:37:14	31.109	27.502
05/30/96	20:39:14	31.12	27.502
05/30/96	20:41:14	31.098	27.502
05/30/96	20:43:14	31.098	27.502
05/30/96	20:45:14	31.109	27.502
05/30/96	20:47:14	31.109	27.502
05/30/96	20:49:14	31.12	27.502
05/30/96	20:51:14	31.109	27.502
05/30/96	20:53:14	31.109	27.508
05/30/96	20:55:14	31.109	27.508
05/30/96	20:57:14	31.12	27.508
05/30/96	20:59:14	31.109	27.502
05/30/96	21:01:14	31.109	27.508
05/30/96	21:03:14	31.131	27.508
05/30/96	21:05:14	31.142	27.508
05/30/96	21:07:14	31.131	27.508
05/30/96	21:09:14	31.131	27.513
05/30/96	21:11:14	31.142	27.513
05/30/96	21:13:14	31.142	27.513
05/30/96	21:15:14	31.142	27.513
05/30/96	21:17:14	31.131	27.513
05/30/96	21:19:14	31.131	27.513
05/30/96	21:21:14	31.131	27.513
05/30/96	21:23:14	31.142	27.518
05/30/96	21:25:14	31.131	27.513
05/30/96	21:27:14	31.142	27.513
05/30/96	21:29:14	31.142	27.513
05/30/96	21:31:14	31.131	27.518
05/30/96	21:33:14	31.131	27.513
05/30/96	21:35:14	31.142	27.518
05/30/96	21:37:14	31.131	27.513
05/30/96	21:39:14	31.131	27.518
05/30/96	21:41:14	31.131	27.513
05/30/96	21:43:14	31.142	27.518
05/30/96	21:45:14	31.131	27.518
05/30/96	21:47:14	31.142	27.518
05/30/96	21:49:14	31.142	27.518
05/30/96	21:51:14	31.142	27.518
05/30/96	21:53:14	31.153	27.518
05/30/96	21:55:14	31.142	27.513
05/30/96	21:57:14	31.131	27.518
05/30/96	21:59:14	31.142	27.518
05/30/96	22:01:14	31.142	27.518
05/30/96	22:03:14	31.142	27.513
05/30/96	22:05:14	31.142	27.518
05/30/96	22:07:14	31.142	27.513
05/30/96	22:09:14	31.142	27.518
05/30/96	22:11:14	31.142	27.518
05/30/96	22:13:14	31.142	27.518
05/30/96	22:15:14	31.142	27.518
05/30/96	22:17:14	31.131	27.518
05/30/96	22:19:14	31.153	27.523
05/30/96	22:21:14	31.142	27.523
05/30/96	22:23:14	31.131	27.523
05/30/96	22:25:14	31.142	27.523
05/30/96	22:27:14	31.131	27.528
05/30/96	22:29:14	31.142	27.528

Well 22-5 response
to pumping wells
22-2 and C-3

F
T
V

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
05/30/96	22:31:14	31.131	27.523
05/30/96	22:33:14	31.131	27.528
05/30/96	22:35:14	31.142	27.534
05/30/96	22:37:14	31.131	27.534
05/30/96	22:39:14	31.153	27.534
05/30/96	22:41:14	31.142	27.534
05/30/96	22:43:14	31.142	27.534
05/30/96	22:45:14	31.131	27.539
05/30/96	22:47:14	31.142	27.539
05/30/96	22:49:14	31.142	27.539
05/30/96	22:51:14	31.153	27.539
05/30/96	22:53:14	31.142	27.539
05/30/96	22:55:14	31.142	27.544
05/30/96	22:57:14	31.142	27.544
05/30/96	22:59:14	31.131	27.544
05/30/96	23:01:14	31.142	27.544
05/30/96	23:03:14	31.142	27.544
05/30/96	23:05:14	31.142	27.544
05/30/96	23:07:14	31.142	27.544
05/30/96	23:09:14	31.142	27.549
05/30/96	23:11:14	31.142	27.544
05/30/96	23:13:14	31.142	27.544
05/30/96	23:15:14	31.142	27.544
05/30/96	23:17:14	31.142	27.544
05/30/96	23:19:14	31.131	27.544
05/30/96	23:21:14	31.142	27.544
05/30/96	23:23:14	31.142	27.539
05/30/96	23:25:14	31.153	27.544
05/30/96	23:27:14	31.131	27.539
05/30/96	23:29:14	31.153	27.539
05/30/96	23:31:14	31.153	27.534
05/30/96	23:33:14	31.163	27.539
05/30/96	23:35:14	31.153	27.534
05/30/96	23:37:14	31.163	27.534
05/30/96	23:39:14	31.163	27.534
05/30/96	23:41:14	31.153	27.534
05/30/96	23:43:14	31.153	27.534
05/30/96	23:45:14	31.174	27.534
05/30/96	23:47:14	31.153	27.534
05/30/96	23:49:14	31.153	27.534
05/30/96	23:51:14	31.174	27.539
05/30/96	23:53:14	31.163	27.534
05/30/96	23:55:14	31.153	27.534
05/30/96	23:57:14	31.153	27.534
05/30/96	23:59:14	31.163	27.539
05/31/96	00:01:14	31.163	27.534
05/31/96	00:03:14	31.163	27.534
05/31/96	00:05:14	31.163	27.534
05/31/96	00:07:14	31.174	27.534
05/31/96	00:09:14	31.163	27.534
05/31/96	00:11:14	31.163	27.534
05/31/96	00:13:14	31.163	27.534
05/31/96	00:15:14	31.153	27.534
05/31/96	00:17:14	31.174	27.534
05/31/96	00:19:14	31.174	27.534
05/31/96	00:21:14	31.174	27.534
05/31/96	00:23:14	31.174	27.534
05/31/96	00:25:14	31.174	27.534
05/31/96	00:27:14	31.174	27.534
05/31/96	00:29:14	31.174	27.534
05/31/96	00:31:14	31.174	27.534

Well 22-5 response
to pumping wells
22-2, C-3

Well 22-5

Date	Time	H2O abv TRN (")	BarP (ft H2O)
05/31/96	10:43:14	31.272	27.612
05/31/96	10:45:14	31.261	27.612
05/31/96	10:47:14	31.261	27.612
05/31/96	10:49:14	31.261	27.612
05/31/96	10:51:14	31.272	27.612
05/31/96	10:53:14	31.261	27.617
05/31/96	10:55:14	31.272	27.617
05/31/96	10:57:14	31.272	27.617
05/31/96	10:59:14	31.272	27.612
05/31/96	11:01:14	31.272	27.617
05/31/96	11:03:14	31.261	27.617
05/31/96	11:05:14	31.272	27.617
05/31/96	11:07:14	31.272	27.617
05/31/96	11:09:14	31.261	27.617
05/31/96	11:11:14	31.272	27.617
05/31/96	11:13:14	31.272	27.617
05/31/96	11:15:14	31.272	27.617
05/31/96	11:17:14	31.261	27.617
05/31/96	11:19:14	31.25	27.617
05/31/96	11:21:14	31.272	27.617
05/31/96	11:23:14	31.272	27.617
05/31/96	11:25:14	31.261	27.617
05/31/96	11:27:14	31.272	27.617
05/31/96	11:29:14	31.272	27.612
05/31/96	11:31:14	31.272	27.612
05/31/96	11:33:14	31.282	27.612
05/31/96	11:35:14	31.272	27.617
05/31/96	11:37:14	31.272	27.617
05/31/96	11:39:14	31.272	27.612
05/31/96	11:41:14	31.272	27.612
05/31/96	11:43:14	31.282	27.612
05/31/96	11:45:14	31.272	27.607
05/31/96	11:47:14	31.272	27.607
05/31/96	11:49:14	31.282	27.612
05/31/96	11:51:14	31.282	27.612
05/31/96	11:53:14	31.272	27.612
05/31/96	11:55:14	31.25	27.612
05/31/96	11:57:14	31.282	27.612
05/31/96	11:59:14	31.282	27.612
05/31/96	12:01:14	31.282	27.612
05/31/96	12:03:14	31.272	27.612
05/31/96	12:05:14	31.282	27.607
05/31/96	12:07:14	31.272	27.617
05/31/96	12:09:14	31.272	27.612
05/31/96	12:11:14	31.282	27.612
05/31/96	12:13:14	31.282	27.617
05/31/96	12:15:14	31.272	27.612
05/31/96	12:17:14	31.272	27.612
05/31/96	12:19:14	31.293	27.612
05/31/96	12:21:14	31.282	27.612
05/31/96	12:23:14	31.282	27.607
05/31/96	12:25:14	31.282	27.612
05/31/96	12:27:14	31.293	27.612
05/31/96	12:29:14	31.293	27.607
05/31/96	12:31:14	31.293	27.607
05/31/96	12:33:14	31.282	27.602
05/31/96	12:35:14	31.282	27.607
05/31/96	12:37:14	31.293	27.602
05/31/96	12:39:14	31.293	27.602
05/31/96	12:41:14	31.304	27.602
05/31/96	12:43:14	31.293	27.607

Well 22-5 response
to pumping wells
22-2, C-3

Wells C-2, C-4 turned on

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
05/31/96	12:45:14	31.293	27.607
05/31/96	12:47:14	31.304	27.607
05/31/96	12:49:14	31.315	27.607
05/31/96	12:51:14	31.304	27.602
05/31/96	12:53:14	31.304	27.602
05/31/96	12:55:14	31.304	27.602
05/31/96	12:57:14	31.304	27.602
05/31/96	12:59:14	31.315	27.607
05/31/96	13:01:14	31.315	27.607
05/31/96	13:03:14	31.293	27.602
05/31/96	13:05:14	31.304	27.602
05/31/96	13:07:14	31.315	27.602
05/31/96	13:09:14	31.304	27.602
05/31/96	13:11:14	31.326	27.607
05/31/96	13:13:14	31.315	27.607
05/31/96	13:15:14	31.304	27.602
05/31/96	13:17:14	31.315	27.602
05/31/96	13:19:14	31.315	27.602
05/31/96	13:21:14	31.315	27.602
05/31/96	13:23:14	31.304	27.596
05/31/96	13:25:14	31.337	27.596
05/31/96	13:27:14	31.315	27.602
05/31/96	13:29:14	31.326	27.607
05/31/96	13:31:14	31.315	27.602
05/31/96	13:33:14	31.326	27.596
05/31/96	13:35:14	31.315	27.596
05/31/96	13:37:14	31.326	27.602
05/31/96	13:39:14	31.326	27.602
05/31/96	13:41:14	31.304	27.596
05/31/96	13:43:14	31.337	27.596
05/31/96	13:45:14	31.326	27.596
05/31/96	13:47:14	31.326	27.602
05/31/96	13:49:14	31.337	27.596
05/31/96	13:51:14	31.337	27.596
05/31/96	13:53:14	31.337	27.596
05/31/96	13:55:14	31.347	27.596
05/31/96	13:57:14	31.337	27.596
05/31/96	13:59:14	31.326	27.596
05/31/96	14:01:14	31.326	27.596
05/31/96	14:03:14	31.347	27.596
05/31/96	14:05:14	31.347	27.591
05/31/96	14:07:14	31.347	27.591
05/31/96	14:09:14	31.347	27.591
05/31/96	14:11:14	31.347	27.591
05/31/96	14:13:14	31.347	27.596
05/31/96	14:15:14	31.347	27.586
05/31/96	14:17:14	31.347	27.596
05/31/96	14:19:14	31.326	27.591
05/31/96	14:21:14	31.337	27.596
05/31/96	14:23:14	31.347	27.591
05/31/96	14:25:14	31.347	27.591
05/31/96	14:27:14	31.347	27.586
05/31/96	14:29:14	31.358	27.581
05/31/96	14:31:14	31.347	27.591
05/31/96	14:33:14	31.347	27.591
05/31/96	14:35:14	31.358	27.591
05/31/96	14:37:14	31.347	27.591
05/31/96	14:39:14	31.358	27.596
05/31/96	14:41:14	31.347	27.591
05/31/96	14:43:14	31.347	27.586
05/31/96	14:45:14	31.347	27.586

Well 22-5 response
to pumping wells C-3,
22-2, C-4, C-2.

Date	Time	H2O abv TRN (ft H2O)	BarP (ft H2O)
05/31/96	22:55:14	31.423	27.638
05/31/96	22:57:14	31.423	27.638
05/31/96	22:59:14	31.423	27.633
05/31/96	23:01:14	31.423	27.638
05/31/96	23:03:14	31.434	27.638
05/31/96	23:05:14	31.412	27.638
05/31/96	23:07:14	31.423	27.638
05/31/96	23:09:14	31.423	27.638
05/31/96	23:11:14	31.412	27.638
05/31/96	23:13:14	31.423	27.638
05/31/96	23:15:14	31.434	27.633
05/31/96	23:17:14	31.423	27.633
05/31/96	23:19:14	31.423	27.638
05/31/96	23:21:14	31.434	27.633
05/31/96	23:23:14	31.423	27.638
05/31/96	23:25:14	31.445	27.638
05/31/96	23:27:14	31.434	27.638
05/31/96	23:29:14	31.434	27.638
05/31/96	23:31:14	31.434	27.633
05/31/96	23:33:14	31.423	27.638
05/31/96	23:35:14	31.434	27.638
05/31/96	23:37:14	31.445	27.638
05/31/96	23:39:14	31.434	27.638
05/31/96	23:41:14	31.434	27.638
05/31/96	23:43:14	31.423	27.638
05/31/96	23:45:14	31.434	27.638
05/31/96	23:47:14	31.445	27.638
05/31/96	23:49:14	31.434	27.638
05/31/96	23:51:14	31.434	27.638
05/31/96	23:53:14	31.434	27.638
05/31/96	23:55:14	31.445	27.638
05/31/96	23:57:14	31.445	27.638
05/31/96	23:59:14	31.445	27.633
06/01/96	00:01:14	31.456	27.638
06/01/96	00:03:14	31.445	27.638
06/01/96	00:05:14	31.445	27.638
06/01/96	00:07:14	31.434	27.638
06/01/96	00:09:14	31.445	27.638
06/01/96	00:11:14	31.456	27.638
06/01/96	00:13:14	31.445	27.638
06/01/96	00:15:14	31.445	27.638
06/01/96	00:17:14	31.434	27.638
06/01/96	00:19:14	31.434	27.638
06/01/96	00:21:14	31.434	27.638
06/01/96	00:23:14	31.445	27.638
06/01/96	00:25:14	31.445	27.633
06/01/96	00:27:14	31.445	27.638
06/01/96	00:29:14	31.456	27.633
06/01/96	00:31:14	31.445	27.633
06/01/96	00:33:14	31.445	27.633
06/01/96	00:35:14	31.456	27.633
06/01/96	00:37:14	31.445	27.633
06/01/96	00:39:14	31.445	27.633
06/01/96	00:41:14	31.456	27.633
06/01/96	00:43:14	31.445	27.638
06/01/96	00:45:14	31.445	27.633
06/01/96	00:47:14	31.456	27.638
06/01/96	00:49:14	31.456	27.633
06/01/96	00:51:14	31.456	27.633
06/01/96	00:53:14	31.445	27.633
06/01/96	00:55:14	31.456	27.633

Well 22-5 response
to pumping wells C-3,
C-2, C-4, 22-2.

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/01/96	00:57:14	31.456	27.633
06/01/96	00:59:14	31.445	27.633
06/01/96	01:01:14	31.456	27.633
06/01/96	01:03:14	31.456	27.633
06/01/96	01:05:14	31.467	27.628
06/01/96	01:07:14	31.467	27.633
06/01/96	01:09:14	31.456	27.633
06/01/96	01:11:14	31.456	27.628
06/01/96	01:13:14	31.456	27.633
06/01/96	01:15:14	31.456	27.633
06/01/96	01:17:14	31.467	27.633
06/01/96	01:19:14	31.467	27.633
06/01/96	01:21:14	31.467	27.633
06/01/96	01:23:14	31.456	27.633
06/01/96	01:25:14	31.456	27.633
06/01/96	01:27:14	31.477	27.628
06/01/96	01:29:14	31.456	27.628
06/01/96	01:31:14	31.488	27.633
06/01/96	01:33:14	31.467	27.628
06/01/96	01:35:14	31.477	27.633
06/01/96	01:37:14	31.456	27.628
06/01/96	01:39:14	31.467	27.633
06/01/96	01:41:14	31.477	27.633
06/01/96	01:43:14	31.477	27.633
06/01/96	01:45:14	31.467	27.633
06/01/96	01:47:14	31.456	27.633
06/01/96	01:49:14	31.477	27.638
06/01/96	01:51:14	31.488	27.638
06/01/96	01:53:14	31.467	27.638
06/01/96	01:55:14	31.488	27.638
06/01/96	01:57:14	31.467	27.638
06/01/96	01:59:14	31.467	27.638
06/01/96	02:01:14	31.477	27.638
06/01/96	02:03:14	31.477	27.638
06/01/96	02:05:14	31.467	27.638
06/01/96	02:07:14	31.477	27.633
06/01/96	02:09:14	31.467	27.638
06/01/96	02:11:14	31.467	27.638
06/01/96	02:13:14	31.488	27.638
06/01/96	02:15:14	31.477	27.638
06/01/96	02:17:14	31.467	27.638
06/01/96	02:19:14	31.488	27.633
06/01/96	02:21:14	31.477	27.638
06/01/96	02:23:14	31.467	27.638
06/01/96	02:25:14	31.477	27.633
06/01/96	02:27:14	31.488	27.638
06/01/96	02:29:14	31.477	27.633
06/01/96	02:31:14	31.488	27.633
06/01/96	02:33:14	31.499	27.633
06/01/96	02:35:14	31.499	27.633
06/01/96	02:37:14	31.521	27.633
06/01/96	02:39:14	31.499	27.633
06/01/96	02:41:14	31.477	27.633
06/01/96	02:43:14	31.51	27.633
06/01/96	02:45:14	31.499	27.633
06/01/96	02:47:14	31.51	27.633
06/01/96	02:49:14	31.499	27.633
06/01/96	02:51:14	31.499	27.633
06/01/96	02:53:14	31.467	27.633
06/01/96	02:55:14	31.477	27.633
06/01/96	02:57:14	31.51	27.633

Well 22-5 respons
to pumping wells C-
C-2, C-4, 22-2.

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/01/96	05:01:14	31.532	27.644
06/01/96	05:03:14	31.51	27.644
06/01/96	05:05:14	31.521	27.649
06/01/96	05:07:14	31.51	27.649
06/01/96	05:09:14	31.51	27.649
06/01/96	05:11:14	31.521	27.649
06/01/96	05:13:14	31.521	27.649
06/01/96	05:15:14	31.542	27.649
06/01/96	05:17:14	31.521	27.649
06/01/96	05:19:14	31.532	27.649
06/01/96	05:21:14	31.532	27.649
06/01/96	05:23:14	31.51	27.649
06/01/96	05:25:14	31.51	27.649
06/01/96	05:27:14	31.51	27.654
06/01/96	05:29:14	31.532	27.654
06/01/96	05:31:14	31.532	27.654
06/01/96	05:33:14	31.521	27.654
06/01/96	05:35:14	31.542	27.654
06/01/96	05:37:14	31.521	27.649
06/01/96	05:39:14	31.499	27.654
06/01/96	05:41:14	31.499	27.654
06/01/96	05:43:14	31.521	27.659
06/01/96	05:45:14	31.521	27.659
06/01/96	05:47:14	31.521	27.659
06/01/96	05:49:14	31.51	27.659
06/01/96	05:51:14	31.532	27.659
06/01/96	05:53:14	31.499	27.659
06/01/96	05:55:14	31.51	27.659
06/01/96	05:57:14	31.521	27.659
06/01/96	05:59:14	31.521	27.659
06/01/96	06:01:14	31.521	27.659
06/01/96	06:03:14	31.51	27.659
06/01/96	06:05:14	31.51	27.659
06/01/96	06:07:14	31.51	27.664
06/01/96	06:09:14	31.51	27.664
06/01/96	06:11:14	31.51	27.664
06/01/96	06:13:14	31.521	27.664
06/01/96	06:15:14	31.521	27.664
06/01/96	06:17:14	31.51	27.664
06/01/96	06:19:14	31.532	27.67
06/01/96	06:21:14	31.51	27.67
06/01/96	06:23:14	31.521	27.67
06/01/96	06:25:14	31.51	27.67
06/01/96	06:27:14	31.499	27.67
06/01/96	06:29:14	31.499	27.67
06/01/96	06:31:14	31.499	27.67
06/01/96	06:33:14	31.51	27.67
06/01/96	06:35:14	31.521	27.67
06/01/96	06:37:14	31.488	27.675
06/01/96	06:39:14	31.488	27.675
06/01/96	06:41:14	31.51	27.675
06/01/96	06:43:14	31.51	27.68
06/01/96	06:45:14	31.499	27.68
06/01/96	06:47:14	31.488	27.68
06/01/96	06:49:14	31.499	27.68
06/01/96	06:51:14	31.499	27.68
06/01/96	06:53:14	31.51	27.68
06/01/96	06:55:14	31.51	27.68
06/01/96	06:57:14	31.499	27.68
06/01/96	06:59:14	31.499	27.68
06/01/96	07:01:14	31.499	27.685

Well 22-5 response
to jumping wells C-
C-3, C-4, 22-2

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/01/96	17:13:14	31.661	27.67
06/01/96	17:15:14	31.661	27.67
06/01/96	17:17:14	31.661	27.67
06/01/96	17:19:14	31.672	27.664
06/01/96	17:21:14	31.661	27.67
06/01/96	17:23:14	31.661	27.67
06/01/96	17:25:14	31.683	27.67
06/01/96	17:27:14	31.672	27.67
06/01/96	17:29:14	31.672	27.67
06/01/96	17:31:14	31.661	27.67
06/01/96	17:33:14	31.672	27.67
06/01/96	17:35:14	31.683	27.67
06/01/96	17:37:14	31.661	27.67
06/01/96	17:39:14	31.672	27.67
06/01/96	17:41:14	31.661	27.67
06/01/96	17:43:14	31.672	27.67
06/01/96	17:45:14	31.672	27.67
06/01/96	17:47:14	31.672	27.67
06/01/96	17:49:14	31.672	27.67
06/01/96	17:51:14	31.672	27.67
06/01/96	17:53:14	31.661	27.67
06/01/96	17:55:14	31.683	27.67
06/01/96	17:57:14	31.672	27.67
06/01/96	17:59:14	31.672	27.67
06/01/96	18:01:14	31.672	27.67
06/01/96	18:03:14	31.683	27.67
06/01/96	18:05:14	31.672	27.67
06/01/96	18:07:14	31.672	27.67
06/01/96	18:09:14	31.672	27.67
06/01/96	18:11:14	31.672	27.67
06/01/96	18:13:14	31.683	27.664
06/01/96	18:15:14	31.694	27.67
06/01/96	18:17:14	31.672	27.67
06/01/96	18:19:14	31.694	27.67
06/01/96	18:21:14	31.672	27.67
06/01/96	18:23:14	31.672	27.67
06/01/96	18:25:14	31.683	27.67
06/01/96	18:27:14	31.683	27.67
06/01/96	18:29:14	31.672	27.67
06/01/96	18:31:14	31.683	27.67
06/01/96	18:33:14	31.683	27.675
06/01/96	18:35:14	31.683	27.67
06/01/96	18:37:14	31.683	27.67
06/01/96	18:39:14	31.683	27.67
06/01/96	18:41:14	31.694	27.67
06/01/96	18:43:14	31.694	27.67
06/01/96	18:45:14	31.672	27.67
06/01/96	18:47:14	31.694	27.67
06/01/96	18:49:14	31.683	27.67
06/01/96	18:51:14	31.683	27.67
06/01/96	18:53:14	31.694	27.67
06/01/96	18:55:14	31.694	27.675
06/01/96	18:57:14	31.672	27.67
06/01/96	18:59:14	31.694	27.675
06/01/96	19:01:14	31.683	27.675
06/01/96	19:03:14	31.683	27.675
06/01/96	19:05:14	31.694	27.675
06/01/96	19:07:14	31.694	27.675
06/01/96	19:09:14	31.694	27.67
06/01/96	19:11:14	31.694	27.575
06/01/96	19:13:14	31.683	27.675

Pumping stops at wells C-2, C-3,
C-4, 22-2 Total pumping
test 11:45 5/31/96 to 18:00 6/1/96
(30.25 hrs.)

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/01/96	17:13:14	31.661	27.67
06/01/96	17:15:14	31.661	27.67
06/01/96	17:17:14	31.661	27.67
06/01/96	17:19:14	31.672	27.664
06/01/96	17:21:14	31.661	27.67
06/01/96	17:23:14	31.661	27.67
06/01/96	17:25:14	31.683	27.67
06/01/96	17:27:14	31.672	27.67
06/01/96	17:29:14	31.672	27.67
06/01/96	17:31:14	31.661	27.67
06/01/96	17:33:14	31.672	27.67
06/01/96	17:35:14	31.683	27.67
06/01/96	17:37:14	31.661	27.67
06/01/96	17:39:14	31.672	27.67
06/01/96	17:41:14	31.661	27.67
06/01/96	17:43:14	31.672	27.67
06/01/96	17:45:14	31.672	27.67
06/01/96	17:47:14	31.672	27.67
06/01/96	17:49:14	31.672	27.67
06/01/96	17:51:14	31.672	27.67
06/01/96	17:53:14	31.661	27.67
06/01/96	17:55:14	31.683	27.67
06/01/96	17:57:14	31.672	27.67
06/01/96	17:59:14	31.672	27.67
06/01/96	18:01:14	31.672	27.67
06/01/96	18:03:14	31.683	27.67
06/01/96	18:05:14	31.672	27.67
06/01/96	18:07:14	31.672	27.67
06/01/96	18:09:14	31.672	27.67
06/01/96	18:11:14	31.672	27.67
06/01/96	18:13:14	31.683	27.664
06/01/96	18:15:14	31.694	27.67
06/01/96	18:17:14	31.672	27.67
06/01/96	18:19:14	31.694	27.67
06/01/96	18:21:14	31.672	27.67
06/01/96	18:23:14	31.672	27.67
06/01/96	18:25:14	31.683	27.67
06/01/96	18:27:14	31.683	27.67
06/01/96	18:29:14	31.672	27.67
06/01/96	18:31:14	31.683	27.67
06/01/96	18:33:14	31.683	27.675
06/01/96	18:35:14	31.683	27.67
06/01/96	18:37:14	31.683	27.67
06/01/96	18:39:14	31.683	27.67
06/01/96	18:41:14	31.694	27.67
06/01/96	18:43:14	31.694	27.67
06/01/96	18:45:14	31.672	27.67
06/01/96	18:47:14	31.694	27.67
06/01/96	18:49:14	31.683	27.67
06/01/96	18:51:14	31.683	27.67
06/01/96	18:53:14	31.694	27.67
06/01/96	18:55:14	31.694	27.675
06/01/96	18:57:14	31.672	27.67
06/01/96	18:59:14	31.694	27.675
06/01/96	19:01:14	31.683	27.675
06/01/96	19:03:14	31.683	27.675
06/01/96	19:05:14	31.694	27.675
06/01/96	19:07:14	31.694	27.675
06/01/96	19:09:14	31.694	27.67
06/01/96	19:11:14	31.694	27.675
06/01/96	19:13:14	31.683	27.675

Pumping stops at wells C-2, C-3,
C-4, 22-2 Total pumping
test 11:45 5/31/96 to 18:00 6/1/96
(30.25 hrs.)

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/01/96	19:15:14	31.694	27.575
06/01/96	19:17:14	31.693	27.575
06/01/96	19:19:14	31.694	27.575
06/01/96	19:21:14	31.694	27.575
06/01/96	19:23:14	31.694	27.575
06/01/96	19:25:14	31.672	27.68
06/01/96	19:27:14	31.694	27.575
06/01/96	19:29:14	31.694	27.575
06/01/96	19:31:14	31.683	27.68
06/01/96	19:33:14	31.694	27.68
06/01/96	19:35:14	31.683	27.68
06/01/96	19:37:14	31.683	27.68
06/01/96	19:39:14	31.672	27.68
06/01/96	19:41:14	31.683	27.68
06/01/96	19:43:14	31.683	27.685
06/01/96	19:45:14	31.694	27.68
06/01/96	19:47:14	31.683	27.685
06/01/96	19:49:14	31.694	27.685
06/01/96	19:51:14	31.694	27.685
06/01/96	19:53:14	31.694	27.691
06/01/96	19:55:14	31.683	27.691
06/01/96	19:57:14	31.694	27.691
06/01/96	19:59:14	31.672	27.691
06/01/96	20:01:14	31.672	27.691
06/01/96	20:03:14	31.672	27.691
06/01/96	20:05:14	31.672	27.691
06/01/96	20:07:14	31.683	27.691
06/01/96	20:09:14	31.683	27.696
06/01/96	20:11:14	31.683	27.696
06/01/96	20:13:14	31.683	27.696
06/01/96	20:15:14	31.672	27.696
06/01/96	20:17:14	31.672	27.701
06/01/96	20:19:14	31.672	27.696
06/01/96	20:21:14	31.683	27.701
06/01/96	20:23:14	31.672	27.701
06/01/96	20:25:14	31.672	27.701
06/01/96	20:27:14	31.683	27.706
06/01/96	20:29:14	31.672	27.706
06/01/96	20:31:14	31.651	27.706
06/01/96	20:33:14	31.672	27.706
06/01/96	20:35:14	31.683	27.706
06/01/96	20:37:14	31.672	27.706
06/01/96	20:39:14	31.672	27.706
06/01/96	20:41:14	31.683	27.706
06/01/96	20:43:14	31.683	27.706
06/01/96	20:45:14	31.672	27.706
06/01/96	20:47:14	31.672	27.706
06/01/96	20:49:14	31.683	27.711
06/01/96	20:51:14	31.672	27.711
06/01/96	20:53:14	31.661	27.711
06/01/96	20:55:14	31.683	27.711
06/01/96	20:57:14	31.661	27.711
06/01/96	20:59:14	31.672	27.711
06/01/96	21:01:14	31.683	27.711
06/01/96	21:03:14	31.651	27.717
06/01/96	21:05:14	31.672	27.717
06/01/96	21:07:14	31.672	27.717
06/01/96	21:09:14	31.683	27.717
06/01/96	21:11:14	31.672	27.722
06/01/96	21:13:14	31.672	27.722
06/01/96	21:15:14	31.672	27.722

Well 22-5 response
to cessation of pumping
at wells 22-2, C-3, C-2
and C-2

Well 22-5

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/02/96	22:10:08	31.943	27.785
06/02/96	22:12:08	31.932	27.785
06/02/96	22:14:08	31.932	27.79
06/02/96	22:16:08	31.932	27.785
06/02/96	22:18:08	31.943	27.785
06/02/96	22:20:08	31.921	27.79
06/02/96	22:22:08	31.943	27.785
06/02/96	22:24:08	31.932	27.785
06/02/96	22:26:08	31.932	27.79
06/02/96	22:28:08	31.932	27.79
06/02/96	22:30:08	31.932	27.785
06/02/96	22:32:08	31.932	27.79
06/02/96	22:34:08	31.943	27.785
06/02/96	22:36:08	31.943	27.79
06/02/96	22:38:08	31.943	27.79
06/02/96	22:40:08	31.921	27.785
06/02/96	22:42:08	31.921	27.785
06/02/96	22:44:08	31.932	27.785
06/02/96	22:46:08	31.943	27.785
06/02/96	22:48:08	31.921	27.785
06/02/96	22:50:08	31.932	27.785
06/02/96	22:52:08	31.943	27.785
06/02/96	22:54:08	31.932	27.785
06/02/96	22:56:08	31.932	27.785
06/02/96	22:58:08	31.932	27.785
06/02/96	23:00:08	31.943	27.785
06/02/96	23:02:08	31.932	27.785
06/02/96	23:04:08	31.932	27.785
06/02/96	23:06:08	31.932	27.785
06/02/96	23:08:08	31.954	27.785
06/02/96	23:10:08	31.943	27.785
06/02/96	23:12:08	31.954	27.785
06/02/96	23:14:08	31.921	27.785
06/02/96	23:16:08	31.943	27.779
06/02/96	23:18:08	31.943	27.785
06/02/96	23:20:08	31.943	27.785
06/02/96	23:22:08	31.943	27.785
06/02/96	23:24:08	31.943	27.785
06/02/96	23:26:08	31.932	27.785
06/02/96	23:28:08	31.943	27.785
06/02/96	23:30:08	31.932	27.785
06/02/96	23:32:08	31.943	27.785
06/02/96	23:34:08	31.943	27.779
06/02/96	23:36:08	31.954	27.785
06/02/96	23:38:08	31.954	27.779
06/02/96	23:40:08	31.921	27.785
06/02/96	23:42:08	31.954	27.785
06/02/96	23:44:08	31.943	27.779
06/02/96	23:46:08	31.965	27.779
06/02/96	23:48:08	31.943	27.779
06/02/96	23:50:08	31.954	27.779
06/02/96	23:52:08	31.943	27.779
06/02/96	23:54:08	31.943	27.779
06/02/96	23:56:08	31.954	27.774
06/02/96	23:58:08	31.943	27.779
06/03/96	00:00:08	31.954	27.774
06/03/96	00:02:08	31.954	27.774
06/03/96	00:04:08	31.954	27.779
06/03/96	00:06:08	31.943	27.774
06/03/96	00:08:08	31.954	27.774
06/03/96	00:10:08	31.954	27.779

Wells C-3, C-2, C-4 turned on

Well 22-5 response

Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	09:45:31	175.2
06/04/96	09:46:01	174.98
06/04/96	09:46:31	174.77
06/04/96	09:47:01	174.77
06/04/96	09:47:31	174.33
06/04/96	09:48:01	174.33
06/04/96	09:48:31	174.77
06/04/96	09:49:01	175.85
06/04/96	09:49:31	175.2
06/04/96	09:50:01	174.33
06/04/96	09:50:31	173.68
06/04/96	09:51:01	173.47
06/04/96	09:51:31	173.03
06/04/96	09:52:01	172.38
06/04/96	09:53:01	171.73
06/04/96	09:54:01	170.22
06/04/96	09:55:01	169.78
06/04/96	09:56:01	169.14
06/04/96	09:57:01	168.49
06/04/96	09:58:01	167.84
06/04/96	09:59:01	166.97
06/04/96	10:00:01	166.1
06/04/96	10:01:01	165.24
06/04/96	10:02:01	164.8
06/04/96	10:03:01	164.37
06/04/96	10:04:01	163.72
06/04/96	10:05:01	163.5
06/04/96	10:06:01	162.64
06/04/96	10:07:01	162.42
06/04/96	10:08:01	161.99
06/04/96	10:09:01	161.56
06/04/96	10:10:01	161.34
06/04/96	10:11:01	161.12
06/04/96	10:12:01	160.91
06/04/96	10:13:01	160.69
06/04/96	10:14:01	187.98
06/04/96	10:15:01	210.28
06/04/96	10:16:01	219.81
06/04/96	10:17:01	226.31
06/04/96	10:18:01	232.37
06/04/96	10:19:01	236.7
06/04/96	10:20:01	239.73
06/04/96	10:21:01	241.9
06/04/96	10:22:01	243.63
06/04/96	10:27:01	250.78
06/04/96	10:32:01	256.63
06/04/96	10:37:01	262.91
06/04/96	10:42:01	267.02
06/04/96	10:47:01	271.14
06/04/96	10:52:01	274.17
06/04/96	10:57:01	276.55
06/04/96	11:02:01	278.72
06/04/96	11:07:01	280.45
06/04/96	11:12:01	281.96
06/04/96	11:17:01	283.26
06/04/96	11:22:01	284.35
06/04/96	11:27:01	285.21
06/04/96	11:32:01	285.65
06/04/96	11:37:01	286.3
06/04/96	11:42:01	286.73
06/04/96	11:55:53	287.38

Well 22-5 pump off

Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	11:57:54	287.6
06/04/96	11:59:54	287.6
06/04/96	12:00:01	287.6
06/04/96	12:00:03	287.6
06/04/96	12:00:05	287.81
06/04/96	12:00:06	287.6
06/04/96	12:00:09	287.6
06/04/96	12:00:11	287.6
06/04/96	12:00:13	269.62
06/04/96	12:00:15	284.13
06/04/96	12:00:17	281.75
06/04/96	12:00:18	279.37
06/04/96	12:00:20	277.2
06/04/96	12:00:23	275.25
06/04/96	12:00:25	273.52
06/04/96	12:00:27	271.57
06/04/96	12:00:29	270.05
06/04/96	12:00:30	268.32
06/04/96	12:00:33	266.59
06/04/96	12:00:35	265.29
06/04/96	12:00:37	263.99
06/04/96	12:00:39	262.47
06/04/96	12:00:41	261.39
06/04/96	12:00:43	261.61
06/04/96	12:00:45	259.44
06/04/96	12:00:47	258.36
06/04/96	12:00:49	257.49
06/04/96	12:00:50	256.41
06/04/96	12:00:53	255.54
06/04/96	12:00:55	254.68
06/04/96	12:00:57	253.81
06/04/96	12:00:59	252.73
06/04/96	12:01:01	252.08
06/04/96	12:01:06	250.13
06/04/96	12:01:11	248.18
06/04/96	12:01:16	246.45
06/04/96	12:01:21	244.5
06/04/96	12:01:26	242.98
06/04/96	12:01:31	241.47
06/04/96	12:01:36	239.95
06/04/96	12:01:41	238.65
06/04/96	12:01:46	237.14
06/04/96	12:01:51	236.05
06/04/96	12:01:56	234.75
06/04/96	12:02:01	233.45
06/04/96	12:02:06	232.16
06/04/96	12:02:11	230.86
06/04/96	12:02:16	229.56
06/04/96	12:02:21	228.04
06/04/96	12:02:26	226.96
06/04/96	12:02:31	225.87
06/04/96	12:02:36	224.58
06/04/96	12:02:41	223.49
06/04/96	12:02:46	222.63
06/04/96	12:02:51	221.33
06/04/96	12:02:55	220.46
06/04/96	12:03:01	219.59
06/04/96	12:03:06	218.73
06/04/96	12:03:11	217.86
06/04/96	12:03:16	217
06/04/96	12:03:21	216.35

Well 22-5 pumping rate increases
to 108 gpm

Well 22-5 drawdown response

Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	12:47:01	176.07
06/04/96	12:48:01	175.85
06/04/96	12:49:01	175.63
06/04/96	12:50:01	175.63
06/04/96	12:51:01	175.63
06/04/96	12:52:01	175.42
06/04/96	12:53:01	175.2
06/04/96	12:54:01	175.2
06/04/96	12:55:01	174.98
06/04/96	12:56:01	174.77
06/04/96	12:57:01	174.55
06/04/96	12:58:01	176.72
06/04/96	12:59:01	176.07
06/04/96	13:00:01	175.2
06/04/96	13:01:01	174.98
06/04/96	13:02:01	174.33
06/04/96	13:03:01	174.12
06/04/96	13:04:01	173.25
06/04/96	13:05:01	172.38
06/04/96	13:06:01	171.73
06/04/96	13:07:01	171.52
06/04/96	13:08:01	171.3
06/04/96	13:09:01	170.87
06/04/96	13:10:01	170.65
06/04/96	13:11:01	170.43
06/04/96	13:12:01	170.22
06/04/96	13:13:01	169.78
06/04/96	13:14:01	169.57
06/04/96	13:15:01	169.35
06/04/96	13:16:01	169.14
06/04/96	13:18:01	168.49
06/04/96	13:20:01	168.05
06/04/96	13:22:01	167.4
06/04/96	13:24:01	166.97
06/04/96	13:26:01	166.54
06/04/96	13:28:01	166.1
06/04/96	13:30:01	165.67
06/04/96	13:32:01	165.45
06/04/96	13:34:01	165.02
06/04/96	13:36:01	164.8
06/04/96	13:38:01	164.37
06/04/96	13:40:01	163.94
06/04/96	13:42:01	163.72
06/04/96	13:44:01	163.5
06/04/96	13:46:01	162.85
06/04/96	13:48:01	162.64
06/04/96	13:50:01	162.42
06/04/96	13:52:01	161.99
06/04/96	13:54:01	161.77
06/04/96	13:56:01	161.56
06/04/96	13:58:01	161.34
06/04/96	14:00:01	161.12
06/04/96	14:00:02	161.12
06/04/96	14:00:04	161.12
06/04/96	14:00:07	161.12
06/04/96	14:00:09	161.12
06/04/96	14:00:11	161.12
06/04/96	14:00:12	160.91
06/04/96	14:00:14	161.12
06/04/96	14:00:16	160.91
06/04/96	14:00:18	161.12

Well 22-5 increase pumping rate
to 180 gpm

Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	14:00:21	161.12
06/04/96	14:00:23	161.12
06/04/96	14:00:25	160.91
06/04/96	14:00:26	160.91
06/04/96	14:00:28	161.12
06/04/96	14:00:30	160.91
06/04/96	14:00:32	160.91
06/04/96	14:00:35	161.12
06/04/96	14:00:37	160.91
06/04/96	14:00:39	160.91
06/04/96	14:00:40	160.91
06/04/96	14:00:42	160.91
06/04/96	14:00:44	160.91
06/04/96	14:00:47	160.91
06/04/96	14:00:49	160.91
06/04/96	14:00:51	160.91
06/04/96	14:00:53	160.91
06/04/96	14:00:54	160.91
06/04/96	14:00:56	160.91
06/04/96	14:00:58	160.91
06/04/96	14:01:01	160.91
06/04/96	14:01:05	160.91
06/04/96	14:01:10	160.91
06/04/96	14:01:15	160.91
06/04/96	14:01:20	160.91
06/04/96	14:01:26	160.91
06/04/96	14:01:31	160.91
06/04/96	14:01:36	160.91
06/04/96	14:01:41	160.69
06/04/96	14:01:45	160.91
06/04/96	14:01:50	160.69
06/04/96	14:01:55	160.69
06/04/96	14:02:00	160.69
06/04/96	14:02:06	160.69
06/04/96	14:02:11	160.69
06/04/96	14:02:16	160.69
06/04/96	14:02:20	160.69
06/04/96	14:02:25	160.69
06/04/96	14:02:30	160.69
06/04/96	14:02:35	160.47
06/04/96	14:02:41	160.69
06/04/96	14:02:46	160.47
06/04/96	14:02:51	160.69
06/04/96	14:02:56	160.47
06/04/96	14:03:00	160.47
06/04/96	14:03:05	160.69
06/04/96	14:03:10	160.47
06/04/96	14:03:15	160.47
06/04/96	14:03:21	160.47
06/04/96	14:03:26	160.47
06/04/96	14:03:31	160.47
06/04/96	14:03:36	160.47
06/04/96	14:03:40	160.47
06/04/96	14:03:45	160.47
06/04/96	14:03:50	160.47
06/04/96	14:03:55	160.47
06/04/96	14:04:01	160.47
06/04/96	14:04:06	160.47
06/04/96	14:04:11	160.47
06/04/96	14:04:16	160.47
06/04/96	14:04:20	160.26

Well 22-5 drawdown
response to pumping at
180 gpm.

Date	Time	H2O abv TRN (ft)
06/04/96	16:15:01	133.13
06/04/96	16:15:11	133.13
06/04/96	16:15:21	133.19
06/04/96	16:15:31	133.19
06/04/96	16:15:41	133.19
06/04/96	16:15:51	133.19
06/04/96	16:16:01	133.19
06/04/96	16:17:01	132.97
06/04/96	16:18:01	132.75
06/04/96	16:19:01	132.75
06/04/96	16:20:01	132.54
06/04/96	16:21:01	132.54
06/04/96	16:22:01	132.54
06/04/96	16:23:01	132.32
06/04/96	16:24:01	132.32
06/04/96	16:25:01	132.1
06/04/96	16:26:01	131.89
06/04/96	16:27:01	131.89
06/04/96	16:28:01	131.89
06/04/96	16:29:01	131.67
06/04/96	16:30:01	131.45
06/04/96	16:31:01	131.45
06/04/96	16:32:01	131.24
06/04/96	16:33:01	131.24
06/04/96	16:34:01	131.02
06/04/96	16:35:01	131.02
06/04/96	16:36:01	130.8
06/04/96	16:37:01	130.8
06/04/96	16:38:01	130.8
06/04/96	16:39:01	130.8
06/04/96	16:40:01	130.59
06/04/96	16:41:01	130.37
06/04/96	16:42:01	130.15
06/04/96	16:43:01	130.15
06/04/96	16:44:01	130.15
06/04/96	16:45:01	129.94
06/04/96	16:46:01	129.94
06/04/96	16:47:01	129.72
06/04/96	16:48:01	129.72
06/04/96	16:49:01	129.72
06/04/96	16:50:01	129.5
06/04/96	16:51:01	129.29
06/04/96	16:52:01	129.29
06/04/96	16:53:01	129.29
06/04/96	16:54:01	129.07
06/04/96	16:55:01	129.07
06/04/96	16:56:01	129.07
06/04/96	16:57:01	128.85
06/04/96	16:58:01	128.64
06/04/96	16:59:01	128.64
06/04/96	17:00:01	128.42
06/04/96	17:01:01	128.42
06/04/96	17:02:01	128.21
06/04/96	17:03:01	128.21
06/04/96	17:04:01	127.99
06/04/96	17:05:01	127.99
06/04/96	17:06:01	127.77
06/04/96	17:07:01	127.77
06/04/96	17:08:01	127.56
06/04/96	17:09:01	127.56
06/04/96	17:10:01	127.34

Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	17:11:01	127.34
06/04/96	17:12:01	127.34
06/04/96	17:13:01	127.34
06/04/96	17:14:01	127.12
06/04/96	17:15:01	126.91
06/04/96	17:16:01	126.91
06/04/96	17:18:01	126.69
06/04/96	17:20:01	126.47
06/04/96	17:22:01	126.26
06/04/96	17:24:01	126.04
06/04/96	17:26:01	126.04
06/04/96	17:28:01	132.1
06/04/96	17:30:01	173.25
06/04/96	17:32:01	177.36
06/04/96	17:34:01	185.59
06/04/96	17:36:01	195.56
06/04/96	17:38:01	201.19
06/04/96	17:40:01	206.38
06/04/96	17:42:01	210.5
06/04/96	17:44:01	213.31
06/04/96	17:46:01	215.91
06/04/96	17:48:01	218.08
06/04/96	17:50:01	219.81
06/04/96	17:52:01	221.33
06/04/96	17:54:01	222.84
06/04/96	17:56:01	223.93
06/04/96	17:58:01	225.01
06/04/96	18:00:01	226.09
06/04/96	18:00:03	225.87
06/04/96	18:00:04	226.09
06/04/96	18:00:06	226.09
06/04/96	18:00:08	226.09
06/04/96	18:00:11	226.09
06/04/96	18:00:13	226.09
06/04/96	18:00:15	226.09
06/04/96	18:00:17	226.09
06/04/96	18:00:18	226.09
06/04/96	18:00:20	226.09
06/04/96	18:00:23	226.09
06/04/96	18:00:25	226.09
06/04/96	18:00:27	226.09
06/04/96	18:00:29	226.09
06/04/96	18:00:31	226.09
06/04/96	18:00:32	226.09
06/04/96	18:00:34	226.09
06/04/96	18:00:37	226.31
06/04/96	18:00:39	226.09
06/04/96	18:00:41	226.31
06/04/96	18:00:43	226.31
06/04/96	18:00:44	226.31
06/04/96	18:00:46	226.31
06/04/96	18:00:48	226.31
06/04/96	18:00:50	226.31
06/04/96	18:00:53	226.31
06/04/96	18:00:55	226.31
06/04/96	18:00:57	226.31
06/04/96	18:00:58	226.31
06/04/96	18:01:01	226.31
06/04/96	18:01:05	226.31
06/04/96	18:01:11	226.52
06/04/96	18:01:16	226.52

Well 22-5 pump shut off

Well 22-5 drawdown response

DRAFT

Date	Time	H2O abv TRN (%)
05/31/96	10:17:37	30.524
05/31/96	10:19:37	30.524
05/31/96	10:21:36	30.524
05/31/96	10:23:36	30.524
05/31/96	10:25:36	30.524
05/31/96	10:27:36	30.524
05/31/96	10:29:36	30.524
05/31/96	10:31:37	30.524
05/31/96	10:33:37	30.524
05/31/96	10:35:37	30.524
05/31/96	10:37:37	30.524
05/31/96	10:39:36	30.535
05/31/96	10:41:36	30.524
05/31/96	10:43:36	30.524
05/31/96	10:45:36	30.524
05/31/96	10:47:36	30.524
05/31/96	10:49:37	30.524
05/31/96	10:51:37	30.535
05/31/96	10:53:37	30.524
05/31/96	10:55:37	30.524
05/31/96	10:57:36	30.524
05/31/96	10:59:36	30.524
05/31/96	11:01:36	30.524
05/31/96	11:03:36	30.524
05/31/96	11:05:36	30.524
05/31/96	11:07:37	30.524
05/31/96	11:09:37	30.524
05/31/96	11:11:37	30.524
05/31/96	11:13:37	30.524
05/31/96	11:15:36	30.524
05/31/96	11:26:29	30.524
05/31/96	11:28:29	30.524
05/31/96	11:30:29	30.524
05/31/96	11:32:30	30.524
05/31/96	11:34:30	30.514
05/31/96	11:36:30	30.524
05/31/96	11:38:30	30.524
05/31/96	11:40:30	30.524
05/31/96	11:42:29	30.524
05/31/96	11:44:29	30.524
05/31/96	11:45:01	30.524
05/31/96	11:45:02	30.524
05/31/96	11:45:03	30.47
05/31/96	11:45:04	30.362
05/31/96	11:45:05	30.286
05/31/96	11:45:06	30.2
05/31/96	11:45:07	30.113
05/31/96	11:45:07	30.005
05/31/96	11:45:09	29.907
05/31/96	11:45:09	29.81
05/31/96	11:45:11	29.712
05/31/96	11:45:12	29.615
05/31/96	11:45:12	29.539
05/31/96	11:45:14	29.431
05/31/96	11:45:15	29.333
05/31/96	11:45:16	29.247
05/31/96	11:45:16	29.16
05/31/96	11:45:18	29.074
05/31/96	11:45:18	28.976
05/31/96	11:45:19	28.879
05/31/96	11:45:21	28.792

Well C-2 pump turned on.

Well C-2

Date	Time	H2O abv TRN (ft)
05/31/96	11:45:21	28.695
05/31/96	11:45:23	28.608
05/31/96	11:45:23	28.51
05/31/96	11:45:25	28.424
05/31/96	11:45:25	28.326
05/31/96	11:45:26	28.229
05/31/96	11:45:28	28.142
05/31/96	11:45:28	28.056
05/31/96	11:45:30	27.969
05/31/96	11:45:31	27.861
05/31/96	11:45:32	27.688
05/31/96	11:45:35	27.503
05/31/96	11:45:37	27.33
05/31/96	11:45:39	27.157
05/31/96	11:45:40	26.984
05/31/96	11:45:42	26.8
05/31/96	11:45:44	26.626
05/31/96	11:45:47	26.453
05/31/96	11:45:49	26.28
05/31/96	11:45:51	26.107
05/31/96	11:45:53	25.933
05/31/96	11:45:54	25.76
05/31/96	11:45:56	25.587
05/31/96	11:45:58	25.414
05/31/96	11:46:01	25.24
05/31/96	11:46:03	25.056
05/31/96	11:46:05	24.883
05/31/96	11:46:06	24.731
05/31/96	11:46:09	24.547
05/31/96	11:46:10	24.374
05/31/96	11:46:12	24.212
05/31/96	11:46:15	24.038
05/31/96	11:46:17	23.876
05/31/96	11:46:19	23.714
05/31/96	11:46:20	23.551
05/31/96	11:46:22	23.378
05/31/96	11:46:24	23.226
05/31/96	11:46:27	23.042
05/31/96	11:46:29	22.88
05/31/96	11:46:31	22.717
05/31/96	11:46:36	22.317
05/31/96	11:46:41	21.938
05/31/96	11:46:45	21.548
05/31/96	11:46:51	21.147
05/31/96	11:46:55	20.779
05/31/96	11:47:00	20.411
05/31/96	11:47:06	20.021
05/31/96	11:47:11	19.653
05/31/96	11:47:16	19.285
05/31/96	11:47:20	18.917
05/31/96	11:47:26	18.527
05/31/96	11:47:30	18.159
05/31/96	11:47:35	17.791
05/31/96	11:47:41	17.433
05/31/96	11:47:46	17.076
05/31/96	11:47:51	16.708
05/31/96	11:47:56	16.34
05/31/96	11:48:00	15.982
05/31/96	11:48:05	15.614
05/31/96	11:48:10	15.246
05/31/96	11:48:15	14.9

Well C-2 response to
pumping.

05/31/96	11:48:26	14.353
05/31/96	11:48:31	14.103
05/31/96	11:48:36	13.838
05/31/96	11:48:40	13.492
05/31/96	11:48:45	13.145
05/31/96	11:48:50	12.81
05/31/96	11:48:55	12.496
05/31/96	11:49:01	12.171
05/31/96	11:49:11	11.846
05/31/96	11:49:21	11.175
05/31/96	11:49:31	10.525
05/31/96	11:49:41	9.8753
05/31/96	11:49:51	9.2147
05/31/96	11:50:01	8.5326
05/31/96	11:50:11	7.8829
05/31/96	11:50:21	7.244
05/31/96	11:50:31	6.616
05/31/96	11:50:41	5.9663
05/31/96	11:50:51	5.3383
05/31/96	11:51:01	4.7102
05/31/96	11:51:11	4.0822
05/31/96	11:51:21	3.465
05/31/96	11:51:31	2.8695
05/31/96	11:51:41	2.2523
05/31/96	11:51:51	1.6459
05/31/96	11:52:01	1.0612
05/31/96	11:52:11	0.48727
05/31/96	11:52:21	0.086625
05/31/96	11:52:31	0.11911
05/31/96	11:52:41	0.11911
05/31/96	11:52:51	0.10828
05/31/96	11:53:01	0.11911
05/31/96	11:53:11	0.11911
05/31/96	11:53:21	0.11911
05/31/96	11:53:31	0.10828
05/31/96	11:53:41	0.11911
05/31/96	11:53:51	0.10828
05/31/96	11:54:01	0.10828
05/31/96	11:54:11	0.10828
05/31/96	11:54:21	0.10828
05/31/96	11:54:31	0.10828
05/31/96	11:54:41	0.10828
05/31/96	11:54:51	0.10828
05/31/96	11:55:01	0.10828
05/31/96	11:55:11	0.10828
05/31/96	11:55:21	0.10828
05/31/96	11:55:31	0.10828
05/31/96	11:55:41	0.10828
05/31/96	11:55:51	0.10828
05/31/96	11:56:01	0.10828
05/31/96	11:56:11	0.10828
05/31/96	11:56:21	0.10828
05/31/96	11:56:31	0.10828
05/31/96	11:56:41	0.10828
05/31/96	11:56:51	0.10828
05/31/96	11:57:01	0.10828
05/31/96	11:57:11	0.10828
05/31/96	11:57:21	0.10828
05/31/96	11:57:31	0.10828
05/31/96	11:57:41	0.10828

Well C-2 response to
pumping

Well C-2

Date	Time	H2O abv TRN (ft)
06/02/96	18:55:31	0.10828
06/02/96	18:56:01	0.10828
06/02/96	18:56:31	0.10828
06/02/96	18:57:01	0.10828
06/02/96	18:57:31	0.10828
06/02/96	18:58:01	0.10828
06/02/96	18:58:31	0.10828
06/02/96	18:59:01	0.10828
06/02/96	18:59:31	0.10828
06/02/96	19:04:31	0.10828
06/02/96	19:09:31	0.10828
06/02/96	19:14:31	2.8045
06/02/96	19:19:31	9.9619
06/02/96	19:24:31	15.343
06/02/96	19:29:31	19.436
06/02/96	19:34:31	22.295
06/02/96	19:39:31	24.342
06/02/96	19:44:31	25.76
06/02/96	19:49:31	26.691
06/02/96	19:54:31	27.319
06/02/96	19:59:31	27.742
06/02/96	20:04:31	28.023
06/02/96	20:09:31	28.229
06/02/96	20:14:31	28.37
06/02/96	20:19:31	28.478
06/02/96	20:24:31	28.554
06/02/96	20:29:31	28.63
06/02/96	20:34:31	28.684
06/02/96	20:39:31	28.738
06/02/96	20:44:31	28.77
06/02/96	20:49:31	28.814
06/02/96	20:54:31	28.846
06/02/96	20:59:31	28.879
06/02/96	21:04:31	28.911
06/02/96	21:09:31	28.944
06/02/96	21:14:31	28.965
06/02/96	21:19:31	28.987
06/02/96	21:24:31	29.019
06/02/96	21:29:31	29.03
06/02/96	21:39:31	29.084
06/02/96	21:49:31	29.128
06/02/96	21:59:31	29.16
06/02/96	22:09:31	29.193
06/02/96	22:19:31	0.11911
06/02/96	22:29:31	0.086625
06/02/96	22:39:31	0.10828
06/02/96	22:49:31	0.10828
06/02/96	22:59:31	0.10828
06/02/96	23:09:31	0.10828
06/02/96	23:19:31	0.10828
06/02/96	23:29:31	0.10828
06/02/96	23:39:31	0.10828
06/02/96	23:49:31	0.10828
06/02/96	23:59:31	0.10828
06/03/96	00:09:31	0.10828
06/03/96	00:19:31	0.10828
06/03/96	00:29:31	0.10828
06/03/96	00:39:31	0.10828
06/03/96	00:49:31	0.10828
06/03/96	00:59:31	0.10828
06/03/96	01:09:31	0.10828

all wells turned off at 18:00 6/2/96

Pumping begins in
Wells C-2, C-3, C-4 at 22:12

Date	Time	H2O abv TRN (ft)	BarP (ft H2O)
06/03/96	08:20:08	32.019	27.811
06/03/96	08:22:08	32.008	27.813
06/03/96	08:24:08	32.019	27.816
06/03/96	08:26:08	32.008	27.816
06/03/96	08:28:08	32.019	27.816
06/03/96	08:30:08	32.008	27.816
06/03/96	08:32:08	32.019	27.816
06/03/96	08:34:08	32.019	27.816
06/03/96	08:36:08	32.019	27.816
06/03/96	08:38:08	32.019	27.816
06/03/96	08:40:08	32.019	27.816
06/03/96	08:42:08	32.019	27.816
06/03/96	08:44:08	32.019	27.816
06/03/96	08:46:08	32.008	27.816
06/03/96	08:48:08	32.019	27.816
06/03/96	08:50:08	32.019	27.816
06/03/96	08:52:08	32.008	27.816
06/03/96	08:54:08	32.019	27.816
06/03/96	08:56:08	32.019	27.821
06/03/96	08:58:08	32.03	27.821
06/03/96	09:00:08	32.019	27.826
06/03/96	09:02:08	32.03	27.821
06/03/96	09:04:08	32.03	27.821
06/03/96	09:06:08	32.019	27.821
06/03/96	09:08:08	32.019	27.821
06/03/96	09:10:08	32.008	27.821
06/03/96	09:12:08	32.03	27.816
06/03/96	09:14:08	32.03	27.816
06/03/96	09:16:08	32.04	27.821
06/03/96	09:18:08	32.03	27.821
06/03/96	09:20:08	32.03	27.821
06/03/96	09:22:08	32.03	27.821
06/03/96	09:24:08	32.019	27.816
06/03/96	09:26:08	32.03	27.821
06/03/96	09:28:08	32.019	27.821
06/03/96	09:30:08	32.019	27.821
06/03/96	09:32:08	32.03	27.821
06/03/96	09:34:08	32.03	27.821
06/03/96	09:36:08	32.03	27.821
06/03/96	09:38:08	32.019	27.821
06/03/96	09:40:08	32.03	27.826
06/03/96	09:42:08	32.019	27.821
06/03/96	09:44:08	32.03	27.821
06/03/96	09:46:08	32.04	27.821
06/03/96	09:48:08	32.03	27.826
06/03/96	09:50:08	32.03	27.826
06/03/96	09:52:08	32.03	27.826
06/03/96	09:54:08	32.019	27.821
06/03/96	09:56:08	32.03	27.821
06/03/96	09:58:08	32.03	27.821
06/03/96	10:00:08	32.019	27.826
06/03/96	10:02:08	32.04	27.821
06/03/96	10:04:08	32.03	27.826
06/03/96	10:06:08	32.03	27.826
06/03/96	10:08:08	32.03	27.826
06/03/96	10:10:08	32.04	27.821
06/03/96	10:12:08	32.03	27.826
06/03/96	10:14:08	32.03	27.821
06/03/96	10:16:08	32.04	27.821
06/03/96	10:18:08	32.03	27.821
06/03/96	10:20:08	32.04	27.821

Drawdown response in well 22-5 to cessation of pumping at 18:00 on 6/2/96 in wells C-3, C-4, C-2, and resumption of pumping at 22:12 on 6/2/96.

RAFT



Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	03:17:54	308.82
06/04/96	03:27:55	309.03
06/04/96	03:37:55	309.03
06/04/96	03:47:55	308.82
06/04/96	03:57:54	309.03
06/04/96	04:07:55	309.03
06/04/96	04:17:54	309.03
06/04/96	04:27:55	309.03
06/04/96	04:37:55	309.03
06/04/96	04:47:55	309.03
06/04/96	04:57:55	309.03
06/04/96	05:07:54	309.03
06/04/96	05:17:55	308.82
06/04/96	05:27:55	309.03
06/04/96	05:37:55	309.03
06/04/96	05:47:55	309.03
06/04/96	05:57:55	309.03
06/04/96	06:00:01	309.03
06/04/96	06:00:02	309.03
06/04/96	06:00:04	309.03
06/04/96	06:00:04	309.03
06/04/96	06:00:05	309.03
06/04/96	06:00:06	309.03
06/04/96	06:00:07	309.03
06/04/96	06:00:08	309.03
06/04/96	06:00:09	309.03
06/04/96	06:00:11	308.82
06/04/96	06:00:11	290.19
06/04/96	06:00:12	305.57
06/04/96	06:00:13	305.79
06/04/96	06:00:14	304.7
06/04/96	06:00:15	303.84
06/04/96	06:00:16	302.54
06/04/96	06:00:18	299.94
06/04/96	06:00:18	299.29
06/04/96	06:00:19	298.42
06/04/96	06:00:20	297.77
06/04/96	06:00:21	296.91
06/04/96	06:00:22	296.04
06/04/96	06:00:23	295.17
06/04/96	06:00:25	293.01
06/04/96	06:00:25	292.58
06/04/96	06:00:26	291.71
06/04/96	06:00:27	291.06
06/04/96	06:00:28	290.41
06/04/96	06:00:29	289.76
06/04/96	06:00:30	288.89
06/04/96	06:00:32	287.16
06/04/96	06:00:32	286.73
06/04/96	06:00:35	285.21
06/04/96	06:00:37	288.68
06/04/96	06:00:39	283.7
06/04/96	06:00:41	281.75
06/04/96	06:00:43	280.45
06/04/96	06:00:45	279.58
06/04/96	06:00:47	278.5
06/04/96	06:00:49	277.42
06/04/96	06:00:51	276.55
06/04/96	06:00:53	275.47
06/04/96	06:00:55	274.6
06/04/96	06:00:57	273.52

Begin pumping test in well 22-5 (pumping at 10)

Well 22-5 drawdown response

Well 22-5

Date	Time	H2O abv TRN (ft)
06/04/96	06:46:01	187.33
06/04/96	06:47:01	186.89
06/04/96	06:48:01	186.46
06/04/96	06:49:01	186.24
06/04/96	06:50:01	185.81
06/04/96	06:51:01	185.38
06/04/96	06:52:01	185.16
06/04/96	06:53:01	184.73
06/04/96	06:54:01	184.29
06/04/96	06:55:01	183.86
06/04/96	06:56:01	183.43
06/04/96	06:57:01	183.21
06/04/96	06:58:01	182.78
06/04/96	06:59:01	182.56
06/04/96	07:00:01	182.35
06/04/96	07:01:01	182.13
06/04/96	07:02:01	181.91
06/04/96	07:07:01	183
06/04/96	07:12:01	181.7
06/04/96	07:17:01	179.53
06/04/96	07:22:01	178.01
06/04/96	07:27:01	176.72
06/04/96	07:32:01	175.63
06/04/96	07:37:01	174.77
06/04/96	07:42:01	173.9
06/04/96	07:47:01	172.82
06/04/96	07:52:01	171.95
06/04/96	07:57:01	241.25
06/04/96	08:02:01	252.08
06/04/96	08:07:01	259.01
06/04/96	08:12:01	265.29
06/04/96	08:17:01	190.57
06/04/96	08:22:01	181.91
06/04/96	08:27:01	179.53
06/04/96	08:32:01	179.1
06/04/96	08:37:01	179.31
06/04/96	08:42:01	175.85
06/04/96	08:47:01	173.47
06/04/96	08:52:01	241.47
06/04/96	08:57:01	251.86
06/04/96	09:02:01	258.79
06/04/96	09:07:01	265.29
06/04/96	09:12:01	270.92
06/04/96	09:19:17	276.77
06/04/96	09:20:01	277.2
06/04/96	09:20:03	277.2
06/04/96	09:20:03	277.42
06/04/96	09:20:04	277.42
06/04/96	09:20:05	277.42
06/04/96	09:20:06	277.2
06/04/96	09:20:08	277.2
06/04/96	09:20:08	277.42
06/04/96	09:20:09	277.42
06/04/96	09:20:10	275.68
06/04/96	09:20:11	261.61
06/04/96	09:20:12	275.47
06/04/96	09:20:13	273.52
06/04/96	09:20:14	272.22
06/04/96	09:20:16	269.62
06/04/96	09:20:16	268.97
06/04/96	09:20:17	267.89

Pump off well 22-5

Well 22-5 pump on

Santa Clara Well C-2

Well C-2

Date	Time	H2O abv TRN (ft)
05/30/96	09:21:22	3.8873
05/30/96	09:31:22	19.122
05/30/96	09:41:23	27.947
05/30/96	09:51:22	32.441
05/30/96	10:01:23	34.509
05/30/96	10:11:23	35.44
05/30/96	10:21:22	35.679
05/30/96	10:31:23	35.679
05/30/96	10:41:22	35.679
05/30/96	13:44:47	30.297
05/30/96	13:54:47	30.319
05/30/96	14:04:48	30.351
05/30/96	14:14:47	30.373
05/30/96	14:24:48	30.395
05/30/96	14:30:01	30.416
05/30/96	14:30:05	30.416
05/30/96	14:30:10	30.416
05/30/96	14:30:16	30.416
05/30/96	14:30:21	30.416
05/30/96	14:30:26	30.416
05/30/96	14:30:31	30.416
05/30/96	14:30:36	30.416
05/30/96	14:30:40	30.416
05/30/96	14:30:45	30.416
05/30/96	14:30:51	30.416
05/30/96	14:30:55	30.416
05/30/96	14:31:01	30.416
05/30/96	14:31:06	30.416
05/30/96	14:31:11	30.416
05/30/96	14:31:16	30.416
05/30/96	14:31:21	30.416
05/30/96	14:31:25	30.416
05/30/96	14:31:30	30.416
05/30/96	14:31:36	30.416
05/30/96	14:31:41	30.416
05/30/96	14:31:46	30.416
05/30/96	14:31:51	30.416
05/30/96	14:31:55	30.416
05/30/96	14:32:01	30.416
05/30/96	14:32:11	30.416
05/30/96	14:32:21	30.416
05/30/96	14:32:31	30.416
05/30/96	14:32:41	30.416
05/30/96	14:32:51	30.416
05/30/96	14:33:01	30.416
05/30/96	14:33:11	30.416
05/30/96	14:33:21	30.416
05/30/96	14:33:31	30.416
05/30/96	14:33:41	30.416
05/30/96	14:33:51	30.416
05/30/96	14:34:01	30.416
05/30/96	14:34:11	30.416
05/30/96	14:34:21	30.416
05/30/96	14:34:31	30.416
05/30/96	14:34:41	30.416
05/30/96	14:34:51	30.416
05/30/96	14:35:01	30.416
05/30/96	14:35:31	30.416
05/30/96	14:36:01	30.427
05/30/96	14:36:31	30.427
05/30/96	14:37:01	30.427

Well C-2 - pump turned off at 9:00
5/30/96

Wells C-2, C-3, C-4 off, well

22-2 pumping at 332 gpm
well 22-5 off

DRAFT

Well C-2

Date	Time	H2O abv TRN (%)
05/30/96	14:37:31	30.438
05/30/96	14:38:01	30.438
05/30/96	14:38:31	30.438
05/30/96	14:39:01	30.438
05/30/96	14:39:31	30.438
05/30/96	14:40:01	30.438
05/30/96	14:40:31	30.438
05/30/96	14:41:01	30.438
05/30/96	14:41:31	30.438
05/30/96	14:42:01	30.438
05/30/96	14:42:31	30.438
05/30/96	14:43:01	30.438
05/30/96	14:43:31	30.449
05/30/96	14:44:01	30.438
05/30/96	14:44:31	30.449
05/30/96	14:45:01	30.449
05/30/96	14:46:01	30.449
05/30/96	14:47:01	30.449
05/30/96	14:48:01	30.449
05/30/96	14:49:01	30.449
05/30/96	14:50:01	30.449
05/30/96	14:51:01	30.449
05/30/96	14:52:01	30.449
05/30/96	14:53:01	30.449
05/30/96	14:54:01	30.449
05/30/96	14:55:01	30.449
05/30/96	14:56:01	30.449
05/30/96	14:57:01	30.449
05/30/96	14:58:01	30.46
05/30/96	14:59:00	30.46
05/30/96	15:00:01	30.46
05/30/96	15:01:01	30.449
05/30/96	15:02:01	30.46
05/30/96	15:03:01	30.46
05/30/96	15:04:01	30.46
05/30/96	15:05:01	30.46
05/30/96	15:07:01	30.46
05/30/96	15:09:01	30.46
05/30/96	15:11:01	30.46
05/30/96	15:13:01	30.46
05/30/96	15:15:01	30.47
05/30/96	15:17:01	30.47
05/30/96	15:19:01	30.47
05/30/96	15:21:01	30.47
05/30/96	15:23:01	30.47
05/30/96	15:25:01	30.481
05/30/96	15:27:01	30.481
05/30/96	15:29:01	30.481
05/30/96	15:31:01	30.481
05/30/96	15:33:01	30.492
05/30/96	15:35:01	30.481
05/30/96	15:37:01	30.492
05/30/96	15:39:01	30.492
05/30/96	15:41:01	30.492
05/30/96	15:43:01	30.492
05/30/96	15:45:01	30.492
05/30/96	15:47:01	30.503
05/30/96	15:49:01	30.503
05/30/96	15:51:01	30.503
05/30/96	15:53:01	30.503
05/30/96	15:55:01	30.503

Well C-2

Date	Time	H2O abv TRN (ft)
05/30/96	17:59:01	30.622
05/30/96	18:01:01	30.622
05/30/96	18:03:01	30.633
05/30/96	18:05:01	30.633
05/30/96	18:07:01	30.633
05/30/96	18:09:01	30.633
05/30/96	18:11:01	30.633
05/30/96	18:13:01	30.633
05/30/96	18:15:01	30.644
05/30/96	18:17:01	30.644
05/30/96	18:19:01	30.644
05/30/96	18:21:01	30.644
05/30/96	18:23:01	30.644
05/30/96	18:25:01	30.644
05/30/96	18:27:01	30.654
05/30/96	18:29:01	30.654
05/30/96	18:31:01	30.654
05/30/96	18:33:01	30.654
05/30/96	18:35:01	30.654
05/30/96	18:37:01	30.654
05/30/96	18:39:01	30.654
05/30/96	18:41:01	30.654
05/30/96	18:43:01	30.654
05/30/96	18:45:01	30.654
05/30/96	18:47:01	30.665
05/30/96	18:49:01	30.665
05/30/96	18:51:01	30.665
05/30/96	18:53:01	30.665
05/30/96	18:55:01	30.665
05/30/96	18:57:01	30.676
05/30/96	18:59:01	30.676
05/30/96	19:01:01	30.676
05/30/96	19:03:01	30.665
05/30/96	19:05:01	30.676
05/30/96	19:07:01	30.676
05/30/96	19:09:01	30.676
05/30/96	19:11:01	30.676
05/30/96	19:13:01	30.676
05/30/96	19:15:01	30.676
05/30/96	19:17:01	30.676
05/30/96	19:19:01	30.676
05/30/96	19:23:36	30.687
05/30/96	19:25:36	30.687
05/30/96	19:27:36	30.687
05/30/96	19:29:36	30.676
05/30/96	19:31:37	30.687
05/30/96	19:33:37	30.687
05/30/96	19:35:37	30.687
05/30/96	19:37:37	30.687
05/30/96	19:39:36	30.687
05/30/96	19:41:36	30.687
05/30/96	19:43:36	30.698
05/30/96	19:45:36	30.687
05/30/96	19:47:36	30.698
05/30/96	19:49:37	30.698
05/30/96	19:51:37	30.698
05/30/96	19:53:37	30.698
05/30/96	19:55:37	30.698
05/30/96	19:57:36	30.698
05/30/96	19:59:36	30.698
05/30/96	20:01:36	30.698

rising
water level

Drawdown response well C-2
wells C-3, C-4, 22-5 not
pumping, well 22-2 pumping
at 332 gpm.

Date	Time	H2O abv TRN (ft)
05/30/96	20:03:36	30.698
05/30/96	20:05:36	30.698
05/30/96	20:07:37	30.698
05/30/96	20:09:37	30.698
05/30/96	20:11:37	30.698
05/30/96	20:13:37	30.698
05/30/96	20:15:37	30.698
05/30/96	20:17:36	30.698
05/30/96	20:19:37	30.687
05/30/96	20:21:37	30.687
05/30/96	20:23:36	30.687
05/30/96	20:25:37	30.687
05/30/96	20:27:37	30.676
05/30/96	20:29:37	30.676
05/30/96	20:31:37	30.676
05/30/96	20:33:37	30.676
05/30/96	20:35:37	30.676
05/30/96	20:37:37	30.676
05/30/96	20:39:37	30.676
05/30/96	20:41:36	30.676
05/30/96	20:43:37	30.665
05/30/96	20:45:37	30.665
05/30/96	20:47:37	30.665
05/30/96	20:49:37	30.665
05/30/96	20:51:37	30.665
05/30/96	20:53:37	30.665
05/30/96	20:55:37	30.654
05/30/96	20:57:37	30.665
05/30/96	20:59:37	30.654
05/30/96	21:01:37	30.654
05/30/96	21:03:37	30.654
05/30/96	21:05:37	30.654
05/30/96	21:07:37	30.654
05/30/96	21:09:37	30.654
05/30/96	21:11:37	30.654
05/30/96	21:13:37	30.654
05/30/96	21:15:37	30.654
05/30/96	21:17:37	30.654
05/30/96	21:19:37	30.644
05/30/96	21:21:37	30.644
05/30/96	21:23:37	30.644
05/30/96	21:25:37	30.644
05/30/96	21:27:37	30.644
05/30/96	21:29:37	30.644
05/30/96	21:31:37	30.644
05/30/96	21:33:37	30.644
05/30/96	21:35:37	30.633
05/30/96	21:37:37	30.644
05/30/96	21:39:37	30.644
05/30/96	21:41:37	30.633
05/30/96	21:43:37	30.633
05/30/96	21:45:37	30.633
05/30/96	21:47:37	30.633
05/30/96	21:49:37	30.633
05/30/96	21:51:37	30.633
05/30/96	21:53:37	30.633
05/30/96	21:55:37	30.633
05/30/96	21:57:37	30.633
05/30/96	21:59:37	30.633
05/30/96	22:01:37	30.633
05/30/96	22:03:37	30.633

Well C-3 begins pumping at 2020pm

Well C-2 drawdown response to pumping from well C-3.

DRAFT



Santa Clara Well C-3

D
R
A
F
T

Date	Time	H2O abv TRN (ft)
05/29/96	18:31:03	226.09
05/29/96	18:32:20	225.87
05/29/96	18:42:21	224.14
05/29/96	18:52:20	222.84
05/29/96	19:02:21	221.54
05/29/96	19:12:20	220.68
05/29/96	19:22:21	220.03
05/29/96	19:32:20	218.51
05/29/96	19:42:21	217.65
05/29/96	19:52:20	216.35
05/29/96	20:02:20	215.48
05/29/96	20:12:21	215.05
05/29/96	20:22:20	214.61
05/29/96	20:32:21	213.31
05/29/96	20:42:20	212.88
05/29/96	20:52:21	212.45
05/29/96	21:02:20	211.58
05/29/96	21:12:21	210.93
05/29/96	21:22:20	210.28
05/29/96	21:32:20	209.85
05/29/96	21:42:21	209.42
05/29/96	21:52:20	209.2
05/29/96	22:02:21	208.77
05/29/96	22:12:20	208.33
05/29/96	22:22:21	207.68
05/29/96	22:32:20	207.47
05/29/96	22:42:21	207.03
05/29/96	22:52:20	207.03
05/29/96	23:02:20	206.38
05/29/96	23:12:21	206.17
05/29/96	23:22:20	205.73
05/29/96	23:32:21	205.3
05/30/96	10:28:44	453.27
05/30/96	10:28:55	453.27
05/30/96	10:29:05	453.27
05/30/96	10:29:15	453.27
05/30/96	10:30:18	453.7
05/30/96	10:40:19	455.65
05/30/96	10:50:18	457.6
05/30/96	10:57:44	459.33
05/30/96	11:07:44	460.85
05/30/96	11:17:45	462.36
05/30/96	11:27:44	463.66
05/30/96	11:37:45	464.74
05/30/96	11:47:44	465.83
05/30/96	11:57:45	466.69
05/30/96	12:07:44	467.34
05/30/96	12:17:45	467.99
05/30/96	12:27:44	468.64
05/30/96	12:37:44	469.29
05/30/96	12:47:45	469.72
05/30/96	12:57:44	470.16
05/30/96	13:07:45	470.59
05/30/96	13:17:44	470.81
05/30/96	13:27:45	471.24
05/30/96	13:37:44	471.46
05/30/96	13:47:45	471.67
05/30/96	13:54:45	472.11
05/30/96	14:04:46	472.32
05/30/96	14:14:45	472.32
05/30/96	14:24:46	472.54

Well C-3 *pumping*

Well C-3, *pump* shut off at 8:51 on 5/30/96

DRAFT

Date	Time	H2O adv	IKN (U)
05/30/96	14:30:01		472.76
05/30/96	14:30:01		472.76
05/30/96	14:30:03		472.76
05/30/96	14:30:03		472.76
05/30/96	14:30:05		472.76
05/30/96	14:30:06		472.76
05/30/96	14:30:07		472.76
05/30/96	14:30:09		472.76
05/30/96	14:30:09		472.76
05/30/96	14:30:10		472.76
05/30/96	14:30:11		472.76
05/30/96	14:30:12		472.76
05/30/96	14:30:12		472.76
05/30/96	14:30:14		472.76
05/30/96	14:30:16		472.76
05/30/96	14:30:16		472.76
05/30/96	14:30:17		472.76
05/30/96	14:30:18		472.76
05/30/96	14:30:19		472.76
05/30/96	14:30:20		472.76
05/30/96	14:30:21		472.76
05/30/96	14:30:23		472.76
05/30/96	14:30:23		472.76
05/30/96	14:30:24		472.76
05/30/96	14:30:25		472.76
05/30/96	14:30:26		472.76
05/30/96	14:30:26		472.76
05/30/96	14:30:28		472.76
05/30/96	14:30:30		472.76
05/30/96	14:30:30		472.76
05/30/96	14:30:31		472.76
05/30/96	14:30:33		472.76
05/30/96	14:30:35		472.76
05/30/96	14:30:36		472.76
05/30/96	14:30:39		472.76
05/30/96	14:30:41		472.76
05/30/96	14:30:43		472.76
05/30/96	14:30:45		472.76
05/30/96	14:30:47		472.76
05/30/96	14:30:48		472.76
05/30/96	14:30:50		472.76
05/30/96	14:30:52		472.76
05/30/96	14:30:55		472.76
05/30/96	14:30:57		472.76
05/30/96	14:30:59		472.76
05/30/96	14:31:01		472.76 - 0
05/30/96	14:31:03		472.76
05/30/96	14:31:04		472.76
05/30/96	14:31:06		472.76
05/30/96	14:31:08		472.76
05/30/96	14:31:11		472.76
05/30/96	14:31:13		472.76
05/30/96	14:31:15		472.76
05/30/96	14:31:17		472.76
05/30/96	14:31:18		472.76
05/30/96	14:31:20		472.76
05/30/96	14:31:23		472.76
05/30/96	14:31:25		472.76
05/30/96	14:31:27		472.76
05/30/96	14:31:29		472.76
05/30/96	14:31:31		472.76

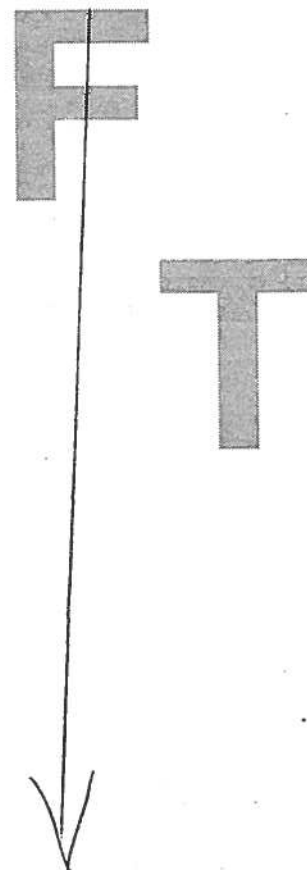
Pumping begins at well 22-2

DRAFT

Well C-3

Date	Time	H2O abv TRN (ft)
05/30/96	14:31:36	472.76
05/30/96	14:31:41	472.76
05/30/96	14:31:46	472.76
05/30/96	14:31:51	472.76
05/30/96	14:31:55	472.76
05/30/96	14:32:00	472.76
05/30/96	14:32:05	472.76
05/30/96	14:32:10	472.76
05/30/96	14:32:16	472.76
05/30/96	14:32:21	472.76
05/30/96	14:32:26	472.76
05/30/96	14:32:31	472.76
05/30/96	14:32:35	472.76
05/30/96	14:32:41	472.76
05/30/96	14:32:45	472.76
05/30/96	14:32:50	472.76
05/30/96	14:32:56	472.76
05/30/96	14:33:01	472.76
05/30/96	14:33:06	472.76
05/30/96	14:33:11	472.76
05/30/96	14:33:15	472.76
05/30/96	14:33:20	472.76
05/30/96	14:33:25	472.76
05/30/96	14:33:31	472.76
05/30/96	14:33:36	472.76
05/30/96	14:33:41	472.76
05/30/96	14:33:46	472.76
05/30/96	14:33:50	472.76
05/30/96	14:33:55	472.54
05/30/96	14:34:01	472.76
05/30/96	14:34:11	472.76
05/30/96	14:34:21	472.54
05/30/96	14:34:31	472.54
05/30/96	14:34:41	472.54
05/30/96	14:34:51	472.54
05/30/96	14:35:01	472.54 - 4
05/30/96	14:35:11	472.54
05/30/96	14:35:21	472.54
05/30/96	14:35:31	472.32
05/30/96	14:35:41	472.54
05/30/96	14:35:51	472.32
05/30/96	14:36:01	472.32
05/30/96	14:36:11	472.32
05/30/96	14:36:21	472.32
05/30/96	14:36:31	472.32
05/30/96	14:36:41	472.32
05/30/96	14:36:51	472.11
05/30/96	14:37:01	472.32
05/30/96	14:37:11	472.11
05/30/96	14:37:21	472.11
05/30/96	14:37:31	472.11
05/30/96	14:37:41	472.11
05/30/96	14:37:51	472.11
05/30/96	14:38:01	472.11
05/30/96	14:38:11	471.89
05/30/96	14:38:21	471.89
05/30/96	14:38:31	471.89
05/30/96	14:38:41	471.89
05/30/96	14:38:51	471.89
05/30/96	14:39:01	471.89 - 3
05/30/96	14:39:11	471.89

Drawdown response to pumping from well 22-2
begins at 14:34 (approx 4 minutes into test)



05/30/96	18:42:01	455.43
05/30/96	18:42:31	455.42
05/30/96	18:43:01	455.65
05/30/96	18:43:31	455.43
05/30/96	18:44:01	455.65
05/30/96	18:44:31	455.43
05/30/96	18:45:01	455.43
05/30/96	18:45:31	455.43
05/30/96	18:46:01	455.43
05/30/96	18:46:31	455.43
05/30/96	18:47:01	455.43
05/30/96	18:47:31	455.43
05/30/96	18:48:01	455.43
05/30/96	18:48:31	455.43
05/30/96	18:49:01	455.43
05/30/96	18:49:31	455.43
05/30/96	18:50:01	455.43
05/30/96	18:50:31	455.43
05/30/96	18:51:01	455.43
05/30/96	18:51:31	455.43
05/30/96	18:52:01	455.43
05/30/96	18:52:31	455.43
05/30/96	18:53:01	455.43
05/30/96	18:53:31	455.43
05/30/96	18:54:01	455.43
05/30/96	18:54:31	455.43
05/30/96	18:55:01	455.43
05/30/96	18:55:31	455.43
05/30/96	18:56:01	455.43
05/30/96	18:56:31	455.43
05/30/96	18:57:01	455.21
05/30/96	18:57:31	455.43
05/30/96	18:58:01	455.43
05/30/96	18:58:31	455.21
05/30/96	18:59:01	455.43
05/30/96	18:59:31	455.43
05/30/96	19:00:01	455.21
05/30/96	19:17:39	455
05/30/96	19:19:39	455
05/30/96	19:21:39	455
05/30/96	19:23:38	455
05/30/96	19:25:38	455
05/30/96	19:27:38	455
05/30/96	19:29:38	455
05/30/96	19:31:38	455
05/30/96	19:33:39	455
05/30/96	19:35:39	455
05/30/96	19:37:39	455
05/30/96	19:39:39	455
05/30/96	19:41:38	455
05/30/96	19:43:38	455
05/30/96	19:45:38	455
05/30/96	19:47:38	455
05/30/96	19:49:38	455
05/30/96	19:51:39	455
05/30/96	19:53:39	455
05/30/96	19:55:39	455
05/30/96	19:57:39	455
05/30/96	19:59:38	455
05/30/96	20:00:01	455
05/30/96	20:00:02	455

— 260 minutes into test — C-3 response
to jumping of well 22-2

D
R
A
F
T

Date	Time	H2O abv TRN (ft)
05/30/96	20:00:04	455
05/30/96	20:00:04	455
05/30/96	20:00:05	455
05/30/96	20:00:06	455
05/30/96	20:00:07	455
05/30/96	20:00:07	455
05/30/96	20:00:09	446.77
05/30/96	20:00:11	453.7
05/30/96	20:00:11	452.83
05/30/96	20:00:12	452.83
05/30/96	20:00:13	452.4
05/30/96	20:00:14	451.32
05/30/96	20:00:14	451.53
05/30/96	20:00:16	451.1
05/30/96	20:00:18	449.58
05/30/96	20:00:18	448.93
05/30/96	20:00:19	448.5
05/30/96	20:00:20	448.07
05/30/96	20:00:21	447.63
05/30/96	20:00:21	447.2
05/30/96	20:00:23	446.55
05/30/96	20:00:25	445.04
05/30/96	20:00:25	444.82
05/30/96	20:00:26	444.17
05/30/96	20:00:27	443.74
05/30/96	20:00:28	443.3
05/30/96	20:00:28	442.87
05/30/96	20:00:30	442.22
05/30/96	20:00:32	441.14
05/30/96	20:00:32	440.92
05/30/96	20:00:35	439.62
05/30/96	20:00:37	438.76
05/30/96	20:00:39	437.46
05/30/96	20:00:40	436.59
05/30/96	20:00:42	435.51
05/30/96	20:00:44	434.42
05/30/96	20:00:47	433.34
05/30/96	20:00:49	432.69
05/30/96	20:00:51	432.04
05/30/96	20:00:53	431.39
05/30/96	20:00:55	430.74
05/30/96	20:00:57	430.31
05/30/96	20:00:58	429.66
05/30/96	20:01:01	429.23
05/30/96	20:01:03	428.58
05/30/96	20:01:05	427.93
05/30/96	20:01:06	427.28
05/30/96	20:01:09	426.19
05/30/96	20:01:11	425.55
05/30/96	20:01:12	424.68
05/30/96	20:01:15	423.81
05/30/96	20:01:17	422.95
05/30/96	20:01:19	422.08
05/30/96	20:01:21	421.21
05/30/96	20:01:23	420.13
05/30/96	20:01:25	419.48
05/30/96	20:01:27	418.83
05/30/96	20:01:29	417.97
05/30/96	20:01:31	417.1
05/30/96	20:01:36	415.37
05/30/96	20:01:41	413.63

Well C-3 pumping begins

DRAFT

05/30/96	20:01:45	411.9
05/30/96	20:01:50	410.39
05/30/96	20:01:56	408.65
05/30/96	20:02:01	406.92
05/30/96	20:02:06	405.19
05/30/96	20:02:11	403.89
05/30/96	20:02:16	402.16
05/30/96	20:02:21	400.64
05/30/96	20:02:25	399.34
05/30/96	20:02:31	397.83
05/30/96	20:02:36	396.53
05/30/96	20:02:41	395.01
05/30/96	20:02:46	393.28
05/30/96	20:02:51	391.54
05/30/96	20:02:56	390.46
05/30/96	20:03:00	388.95
05/30/96	20:03:06	388.08
05/30/96	20:03:11	387
05/30/96	20:03:16	386.13
05/30/96	20:03:21	385.26
05/30/96	20:03:26	384.4
05/30/96	20:03:31	383.75
05/30/96	20:03:36	382.88
05/30/96	20:03:41	381.8
05/30/96	20:03:46	380.5
05/30/96	20:03:51	379.2
05/30/96	20:03:56	377.9
05/30/96	20:04:01	376.6
05/30/96	20:04:06	375.3
05/30/96	20:04:11	374.22
05/30/96	20:04:16	372.7
05/30/96	20:04:21	371.62
05/30/96	20:04:26	370.11
05/30/96	20:04:31	369.02
05/30/96	20:04:36	367.51
05/30/96	20:04:41	366.21
05/30/96	20:04:46	365.12
05/30/96	20:04:51	363.82
05/30/96	20:04:56	362.74
05/30/96	20:05:01	361.44
05/30/96	20:05:06	360.14
05/30/96	20:05:11	359.06
05/30/96	20:05:16	357.98
05/30/96	20:05:21	356.9
05/30/96	20:05:26	356.03
05/30/96	20:05:31	355.16
05/30/96	20:05:36	354.3
05/30/96	20:05:41	353.21
05/30/96	20:05:46	352.56
05/30/96	20:05:51	351.7
05/30/96	20:05:56	350.83
05/30/96	20:06:01	349.75
05/30/96	20:06:06	349.1
05/30/96	20:06:11	348.02
05/30/96	20:06:16	347.15
05/30/96	20:06:21	346.07
05/30/96	20:06:26	344.98
05/30/96	20:06:31	344.12
05/30/96	20:06:41	342.17
05/30/96	20:06:51	340.44
05/30/96	20:07:01	338.7

Well C-3

Date	Time	H2O abv TRN (ft)
05/30/96	21:17:01	203.57
05/30/96	21:22:01	200.75
05/30/96	21:27:01	198.8
05/30/96	21:32:01	196.86
05/30/96	21:37:01	194.91
05/30/96	21:42:01	193.17
05/30/96	21:47:01	191.44
05/30/96	21:52:01	189.71
05/30/96	21:57:01	188.84
05/30/96	22:02:01	187.76
05/30/96	22:07:01	186.24
05/30/96	22:12:01	185.38
05/30/96	22:17:01	183.86
05/30/96	22:22:01	182.78
05/30/96	22:27:01	181.48
05/30/96	22:32:01	180.18
05/30/96	22:37:01	179.31
05/30/96	22:42:01	178.23
05/30/96	22:47:01	177.58
05/30/96	22:52:01	176.28
05/30/96	22:57:01	174.98
05/30/96	23:02:01	174.12
05/30/96	23:07:01	173.9
05/30/96	23:12:01	172.6
05/30/96	23:17:01	171.95
05/30/96	23:22:01	171.08
05/30/96	23:27:01	169.78
05/30/96	23:32:01	170
05/30/96	23:42:01	168.27
05/30/96	23:52:01	167.4
05/31/96	00:02:01	166.1
05/31/96	00:12:01	164.8
05/31/96	00:22:01	164.37
05/31/96	00:32:01	163.07
05/31/96	00:42:01	162.21
05/31/96	00:52:01	161.34
05/31/96	01:02:01	161.12
05/31/96	01:12:01	160.04
05/31/96	01:22:01	158.52
05/31/96	01:32:01	158.31
05/31/96	01:42:01	158.03
05/31/96	01:52:01	157.01
05/31/96	02:02:01	156.79
05/31/96	02:12:01	155.71
05/31/96	02:22:01	155.49
05/31/96	02:32:01	154.63
05/31/96	02:42:01	153.98
05/31/96	02:52:01	155.06
05/31/96	03:02:01	153.33
05/31/96	03:12:01	153.11
05/31/96	03:22:01	152.89
05/31/96	03:32:01	152.24
05/31/96	03:42:01	152.03
05/31/96	03:52:01	151.38
05/31/96	04:02:01	151.16
05/31/96	04:12:01	150.94
05/31/96	04:22:01	150.73
05/31/96	04:32:01	150.29
05/31/96	05:02:01	149.64
05/31/96	05:32:01	148.56
05/31/96	06:02:01	149

Well C-3

Date	Time	H2O abv TRN (ft)
06/02/96	16:41:29	119.54
06/02/96	16:43:29	119.54
06/02/96	16:45:29	119.76
06/02/96	16:47:28	118.89
06/02/96	16:49:28	118.89
06/02/96	16:51:28	119.11
06/02/96	16:53:28	118.68
06/02/96	16:55:29	118.46
06/02/96	16:57:29	118.46
06/02/96	16:59:29	118.03
06/02/96	17:01:29	118.24
06/02/96	17:03:29	118.24
06/02/96	17:05:28	117.38
06/02/96	17:07:28	117.59
06/02/96	17:09:28	117.38
06/02/96	17:11:28	117.16
06/02/96	17:13:29	116.51
06/02/96	17:15:29	116.51
06/02/96	17:17:29	117.16
06/02/96	17:19:29	116.51
06/02/96	17:21:29	116.51
06/02/96	17:23:28	117.59
06/02/96	17:25:28	118.24
06/02/96	17:27:28	117.81
06/02/96	17:29:28	116.29
06/02/96	17:31:29	116.94
06/02/96	17:33:29	116.51
06/02/96	17:35:29	116.51
06/02/96	17:37:29	115.43
06/02/96	17:39:29	115.43
06/02/96	17:41:28	115.43
06/02/96	17:43:28	114.78
06/02/96	17:45:28	114.56
06/02/96	17:47:28	115.21
06/02/96	17:49:29	114.34
06/02/96	17:51:29	114.34
06/02/96	17:53:29	114.56
06/02/96	17:55:29	113.91
06/02/96	17:57:29	114.34
06/02/96	17:59:28	113.7
06/02/96	18:00:01	113.7
06/02/96	18:00:01	114.13
06/02/96	18:00:03	113.91
06/02/96	18:00:04	113.48
06/02/96	18:00:04	113.7
06/02/96	18:00:06	113.7
06/02/96	18:00:07	113.7
06/02/96	18:00:08	114.13
06/02/96	18:00:09	125.61
06/02/96	18:00:10	114.56
06/02/96	18:00:11	115.43
06/02/96	18:00:11	116.51
06/02/96	18:00:13	115.64
06/02/96	18:00:13	116.94
06/02/96	18:00:15	116.73
06/02/96	18:00:16	117.38
06/02/96	18:00:17	117.81
06/02/96	18:00:18	118.46
06/02/96	18:00:18	118.89
06/02/96	18:00:20	119.11

All well pumps turned off

Well C-3 not pumping

Well C-3

Date	Time	H2O abv TRN (ft)
06/02/96	18:00:22	120.63
06/02/96	18:00:22	120.41
06/02/96	18:00:24	120.41
06/02/96	18:00:25	121.28
06/02/96	18:00:26	121.28
06/02/96	18:00:27	122.57
06/02/96	18:00:28	122.57
06/02/96	18:00:29	122.79
06/02/96	18:00:29	123.01
06/02/96	18:00:32	123.44
06/02/96	18:00:32	123.66
06/02/96	18:00:34	124.52
06/02/96	18:00:36	124.74
06/02/96	18:00:39	124.96
06/02/96	18:00:41	125.39
06/02/96	18:00:43	125.61
06/02/96	18:00:44	126.04
06/02/96	18:00:46	126.26
06/02/96	18:00:48	126.69
06/02/96	18:00:50	127.34
06/02/96	18:00:53	127.34
06/02/96	18:00:55	127.34
06/02/96	18:00:57	127.99
06/02/96	18:00:58	128.21
06/02/96	18:01:00	128.42
06/02/96	18:01:02	128.85
06/02/96	18:01:05	129.72
06/02/96	18:01:07	129.72
06/02/96	18:01:09	130.59
06/02/96	18:01:11	130.37
06/02/96	18:01:12	130.8
06/02/96	18:01:14	131.67
06/02/96	18:01:16	132.32
06/02/96	18:01:19	132.1
06/02/96	18:01:21	132.75
06/02/96	18:01:23	132.75
06/02/96	18:01:24	133.19
06/02/96	18:01:26	133.4
06/02/96	18:01:28	134.49
06/02/96	18:01:31	134.49
06/02/96	18:01:35	136
06/02/96	18:01:40	136.65
06/02/96	18:01:45	138.17
06/02/96	18:01:51	139.9
06/02/96	18:01:56	140.77
06/02/96	18:02:01	141.85
06/02/96	18:02:06	143.36
06/02/96	18:02:10	144.23
06/02/96	18:02:15	145.1
06/02/96	18:02:20	146.83
06/02/96	18:02:25	148.56
06/02/96	18:02:31	150.51
06/02/96	18:02:36	151.59
06/02/96	18:02:41	153.54
06/02/96	18:02:46	155.06
06/02/96	18:02:50	157.01
06/02/96	18:02:55	158.74
06/02/96	18:03:00	160.47
06/02/96	18:03:06	162.42
06/02/96	18:03:11	164.15
06/02/96	18:03:16	165.67

Well C-3 not pumping

Well C-3

Date	Time	H2O abv TRN (ft)
06/02/96	18:10:21	281.31
06/02/96	18:10:31	282.51
06/02/96	18:10:41	284.13
06/02/96	18:10:51	285.65
06/02/96	18:11:01	286.95
06/02/96	18:11:11	288.46
06/02/96	18:11:21	289.98
06/02/96	18:11:31	291.28
06/02/96	18:11:41	292.79
06/02/96	18:11:51	294.31
06/02/96	18:12:01	296.04
06/02/96	18:12:11	297.56
06/02/96	18:12:21	299.07
06/02/96	18:12:31	300.59
06/02/96	18:12:41	302.1
06/02/96	18:12:51	303.4
06/02/96	18:13:01	304.92
06/02/96	18:13:11	306.22
06/02/96	18:13:21	307.74
06/02/96	18:13:31	309.25
06/02/96	18:13:41	310.33
06/02/96	18:13:51	311.85
06/02/96	18:14:01	313.15
06/02/96	18:14:11	314.45
06/02/96	18:14:21	315.96
06/02/96	18:14:31	317.05
06/02/96	18:14:41	318.56
06/02/96	18:14:51	319.65
06/02/96	18:15:01	320.73
06/02/96	18:15:11	321.81
06/02/96	18:15:21	323.11
06/02/96	18:15:31	323.98
06/02/96	18:15:41	325.06
06/02/96	18:15:51	326.58
06/02/96	18:16:01	327.44
06/02/96	18:16:11	328.53
06/02/96	18:16:21	329.61
06/02/96	18:16:31	330.69
06/02/96	18:16:41	331.77
06/02/96	18:16:51	332.86
06/02/96	18:17:01	333.72
06/02/96	18:17:31	336.97
06/02/96	18:18:01	340.22
06/02/96	18:18:31	343.04
06/02/96	18:19:01	345.85
06/02/96	18:19:31	348.45
06/02/96	18:20:01	350.83
06/02/96	18:20:31	353
06/02/96	18:21:01	355.16
06/02/96	18:21:31	357.11
06/02/96	18:22:01	359.28
06/02/96	18:22:31	361.44
06/02/96	18:23:01	363.61
06/02/96	18:23:31	365.77
06/02/96	18:24:01	367.51
06/02/96	18:24:31	369.46
06/02/96	18:25:01	371.19
06/02/96	18:25:31	372.92
06/02/96	18:26:01	374.44
06/02/96	18:26:31	375.95
06/02/96	18:27:01	377.47

Well C-3

Date	Time	H2O abv TRN (ft)
06/02/96	18:27:31	378.77
06/02/96	18:28:01	380.07
06/02/96	18:28:31	381.37
06/02/96	18:29:01	382.45
06/02/96	18:29:31	383.53
06/02/96	18:30:01	384.4
06/02/96	18:30:31	385.05
06/02/96	18:31:01	385.7
06/02/96	18:31:31	386.56
06/02/96	18:32:01	387.43
06/02/96	18:33:01	389.16
06/02/96	18:34:01	391.33
06/02/96	18:35:01	393.93
06/02/96	18:36:01	396.09
06/02/96	18:37:01	397.83
06/02/96	18:38:01	399.56
06/02/96	18:39:01	401.07
06/02/96	18:40:01	402.81
06/02/96	18:41:01	404.54
06/02/96	18:42:01	405.62
06/02/96	18:43:01	406.92
06/02/96	18:44:01	408.44
06/02/96	18:45:01	409.95
06/02/96	18:46:01	411.25
06/02/96	18:47:01	412.33
06/02/96	18:48:01	413.42
06/02/96	18:49:01	414.28
06/02/96	18:50:01	415.58
06/02/96	18:51:01	416.67
06/02/96	18:52:01	417.53
06/02/96	18:53:01	418.62
06/02/96	18:54:01	419.48
06/02/96	18:55:01	420.56
06/02/96	18:56:01	421.21
06/02/96	18:57:01	422.08
06/02/96	18:58:01	423.16
06/02/96	18:59:01	423.81
06/02/96	19:00:01	424.68
06/02/96	19:01:01	425.33
06/02/96	19:02:01	426.19
06/02/96	19:07:01	429.23
06/02/96	19:12:01	431.61
06/02/96	19:17:01	434.21
06/02/96	19:22:01	436.81
06/02/96	19:27:01	439.19
06/02/96	19:32:01	441.14
06/02/96	19:37:01	442.87
06/02/96	19:42:01	444.6
06/02/96	19:47:01	446.34
06/02/96	19:52:01	447.63
06/02/96	19:57:01	448.93
06/02/96	20:02:01	450.02
06/02/96	20:07:01	451.1
06/02/96	20:12:01	452.18
06/02/96	20:17:01	453.05
06/02/96	20:22:01	453.92
06/02/96	20:27:01	454.56
06/02/96	20:32:01	455.43
06/02/96	20:37:01	455.86
06/02/96	20:42:01	456.73
06/02/96	20:47:01	457.16

Date	Time	H2O abv TRN (ft)
06/02/96	20:52:01	457.81
06/02/96	20:57:01	458.43
06/02/96	21:02:01	459.11
06/02/96	21:07:01	459.55
06/02/96	21:12:01	459.98
06/02/96	21:17:01	460.41
06/02/96	21:22:01	461.06
06/02/96	21:27:01	461.49
06/02/96	21:32:01	461.93
06/02/96	21:42:01	462.79
06/02/96	21:52:01	463.44
06/02/96	22:02:01	464.09
06/02/96	22:12:01	464.74
06/02/96	22:22:01	336.32
06/02/96	22:32:01	289.98
06/02/96	22:42:01	264.21
06/02/96	22:52:01	251
06/02/96	23:02:01	241.25
06/02/96	23:12:01	233.89
06/02/96	23:22:01	228.26
06/02/96	23:32:01	223.49
06/02/96	23:42:01	221.11
06/02/96	23:52:01	217.86
06/03/96	00:02:01	214.83
06/03/96	00:12:01	212.66
06/03/96	00:22:01	210.72
06/03/96	00:32:01	208.98
06/03/96	00:42:01	207.47
06/03/96	00:52:01	206.17
06/03/96	01:02:01	204.87
06/03/96	01:12:01	204
06/03/96	01:22:01	202.92
06/03/96	01:32:01	202.27
06/03/96	01:42:01	201.62
06/03/96	01:52:01	200.75
06/03/96	02:02:01	200.1
06/03/96	02:12:01	199.67
06/03/96	02:22:01	198.8
06/03/96	02:32:01	198.59
06/03/96	03:02:01	197.5
06/03/96	03:32:01	196.64
06/03/96	04:02:01	195.56
06/03/96	04:32:01	195.34
06/03/96	05:02:01	194.69
06/03/96	05:32:01	194.47
06/03/96	06:02:01	193.82
06/03/96	06:32:01	193.61
06/03/96	07:02:01	193.39
06/03/96	07:32:01	193.61
06/03/96	08:02:01	193.82
06/03/96	08:32:01	193.61
06/03/96	09:02:01	377.69
06/03/96	09:32:01	443.52
06/03/96	11:07:15	464.96
06/03/96	11:09:16	465.18
06/03/96	11:11:16	465.39
06/03/96	11:13:16	465.39
06/03/96	11:15:01	465.39
06/03/96	11:15:01	465.61
06/03/96	11:15:04	465.61
06/03/96	11:15:04	465.61

All wells turned off
Well C-3
not pumping

Well C-3 pump turned on

Well C-3 pumping

All well pumps turned off

Well C-3

Date	Time	H2O abv TRN (ft)
06/03/96	11:15:05	465.61
06/03/96	11:15:06	465.39
06/03/96	11:15:07	465.61
06/03/96	11:15:08	465.61
06/03/96	11:15:09	462.36
06/03/96	11:15:11	464.31
06/03/96	11:15:11	464.09
06/03/96	11:15:12	463.44
06/03/96	11:15:13	463.23
06/03/96	11:15:14	463.44
06/03/96	11:15:15	462.58
06/03/96	11:15:16	462.36
06/03/96	11:15:18	461.49
06/03/96	11:15:18	461.28
06/03/96	11:15:19	461.06
06/03/96	11:15:20	460.85
06/03/96	11:15:21	460.63
06/03/96	11:15:22	460.41
06/03/96	11:15:23	459.98
06/03/96	11:15:25	459.33
06/03/96	11:15:25	459.33
06/03/96	11:15:26	459.11
06/03/96	11:15:27	458.9
06/03/96	11:15:28	458.46
06/03/96	11:15:29	458.46
06/03/96	11:15:30	458.25
06/03/96	11:15:32	457.38
06/03/96	11:15:32	457.16
06/03/96	11:15:35	456.73
06/03/96	11:15:37	456.3
06/03/96	11:15:39	455.65
06/03/96	11:15:41	455
06/03/96	11:15:43	454.35
06/03/96	11:15:45	453.48
06/03/96	11:15:46	452.83
06/03/96	11:15:48	451.97
06/03/96	11:15:50	451.1
06/03/96	11:15:53	449.8
06/03/96	11:15:55	448.93
06/03/96	11:15:57	447.85
06/03/96	11:15:59	446.77
06/03/96	11:16:00	445.69
06/03/96	11:16:02	444.6
06/03/96	11:16:05	443.52
06/03/96	11:16:07	442.65
06/03/96	11:16:09	441.79
06/03/96	11:16:11	440.92
06/03/96	11:16:12	439.84
06/03/96	11:16:14	438.97
06/03/96	11:16:16	438.11
06/03/96	11:16:19	437.24
06/03/96	11:16:21	436.16
06/03/96	11:16:23	435.51
06/03/96	11:16:25	434.42
06/03/96	11:16:27	433.77
06/03/96	11:16:29	432.91
06/03/96	11:16:31	432.26
06/03/96	11:16:35	431.18
06/03/96	11:16:41	429.88
06/03/96	11:16:45	428.79
06/03/96	11:16:51	427.06

Well C-3 pump turned on, all other wells turned off

Well C-3 response to

pumping

Well C-3

Date	Time	H2O abv TRN (ft)
06/03/96	11:16:56	425.11
06/03/96	11:17:01	423.38
06/03/96	11:17:06	421.21
06/03/96	11:17:11	419.7
06/03/96	11:17:15	417.75
06/03/96	11:17:20	416.23
06/03/96	11:17:26	414.72
06/03/96	11:17:31	413.42
06/03/96	11:17:36	411.9
06/03/96	11:17:41	410.6
06/03/96	11:17:46	408.87
06/03/96	11:17:51	407.35
06/03/96	11:17:56	406.05
06/03/96	11:18:01	404.97
06/03/96	11:18:06	403.46
06/03/96	11:18:11	402.16
06/03/96	11:18:16	400.86
06/03/96	11:18:21	399.56
06/03/96	11:18:26	398.26
06/03/96	11:18:31	397.18
06/03/96	11:18:36	395.88
06/03/96	11:18:41	394.36
06/03/96	11:18:46	393.06
06/03/96	11:18:51	391.76
06/03/96	11:18:56	390.46
06/03/96	11:19:01	389.38
06/03/96	11:19:06	388.73
06/03/96	11:19:10	387.65
06/03/96	11:19:16	387
06/03/96	11:19:21	386.13
06/03/96	11:19:26	385.48
06/03/96	11:19:31	384.83
06/03/96	11:19:36	384.18
06/03/96	11:19:41	383.53
06/03/96	11:19:45	382.67
06/03/96	11:19:50	381.8
06/03/96	11:19:56	380.72
06/03/96	11:20:01	379.63
06/03/96	11:20:06	378.55
06/03/96	11:20:11	377.47
06/03/96	11:20:16	376.39
06/03/96	11:20:21	375.3
06/03/96	11:20:25	374.22
06/03/96	11:20:31	373.14
06/03/96	11:20:35	372.05
06/03/96	11:20:41	370.97
06/03/96	11:20:46	372.27
06/03/96	11:20:51	370.54
06/03/96	11:20:56	369.24
06/03/96	11:21:01	368.16
06/03/96	11:21:06	367.07
06/03/96	11:21:11	365.77
06/03/96	11:21:15	364.91
06/03/96	11:21:21	363.82
06/03/96	11:21:26	362.96
06/03/96	11:21:31	361.88
06/03/96	11:21:41	359.93
06/03/96	11:21:51	357.98
06/03/96	11:22:01	356.68
06/03/96	11:22:11	354.95
06/03/96	11:22:21	353.65

Santa Clara Well C-4

Well C-4

Date	Time	H2O abv TRN (ft)
05/30/96	15:43:01	60.204
05/30/96	15:45:01	60.183
05/30/96	15:47:01	60.183
05/30/96	15:49:01	60.183
05/30/96	15:51:01	60.183
05/30/96	15:53:01	60.204
05/30/96	15:55:01	60.204
05/30/96	15:57:01	60.204
05/30/96	15:59:01	60.204
05/30/96	16:01:01	60.226
05/30/96	16:03:01	60.204
05/30/96	16:05:01	60.226
05/30/96	16:07:01	60.226
05/30/96	16:09:01	60.226
05/30/96	16:11:01	60.204
05/30/96	16:13:01	60.226
05/30/96	16:15:01	60.226
05/30/96	16:17:01	60.269
05/30/96	16:19:01	60.248
05/30/96	16:21:01	60.226
05/30/96	16:23:01	60.248
05/30/96	16:25:01	60.226
05/30/96	16:27:01	60.226
05/30/96	16:29:01	60.226
05/30/96	16:31:01	60.269
05/30/96	16:33:01	60.226
05/30/96	16:35:01	60.226
05/30/96	16:37:01	60.248
05/30/96	16:39:01	60.248
05/30/96	16:41:01	60.226
05/30/96	16:43:01	60.226
05/30/96	16:45:01	60.226
05/30/96	16:47:01	60.226
05/30/96	16:49:01	60.226
05/30/96	16:51:01	60.226
05/30/96	16:53:01	60.226
05/30/96	16:55:01	60.226
05/30/96	16:57:01	60.226
05/30/96	16:59:01	60.226
05/30/96	17:01:01	60.226
05/30/96	17:03:01	60.248
05/30/96	17:05:01	60.226
05/30/96	17:07:01	60.226
05/30/96	17:09:01	60.226
05/30/96	17:11:01	60.226
05/30/96	17:13:01	60.226
05/30/96	17:15:01	60.226
05/30/96	17:17:01	60.226
05/30/96	17:19:01	60.226
05/30/96	17:21:01	60.226
05/30/96	17:23:01	60.248
05/30/96	17:25:01	60.248
05/30/96	17:27:01	60.226
05/30/96	17:29:01	60.248
05/30/96	17:31:01	60.248
05/30/96	17:33:01	60.248
05/30/96	17:35:01	60.226
05/30/96	17:37:01	60.248
05/30/96	17:39:01	60.248
05/30/96	17:41:01	60.248
05/30/96	17:43:01	60.248

Well C-4 turned off, all wells off

DRAFT



Date	Time	H2O abv TRN (ft)
05/30/96	17:45:01	60.248
05/30/96	17:47:01	60.269
05/30/96	17:49:01	60.248
05/30/96	17:51:01	60.248
05/30/96	17:53:01	60.248
05/30/96	17:55:01	60.269
05/30/96	17:57:01	60.248
05/30/96	17:59:01	60.248
05/30/96	18:01:01	60.248
05/30/96	18:03:01	60.248
05/30/96	18:05:01	60.248
05/30/96	18:07:01	60.248
05/30/96	18:09:01	60.269
05/30/96	18:11:01	60.248
05/30/96	18:13:01	60.248
05/30/96	18:15:01	60.269
05/30/96	18:17:01	60.248
05/30/96	18:19:01	60.248
05/30/96	18:21:01	60.248
05/30/96	18:23:01	60.248
05/30/96	18:25:01	60.248
05/30/96	18:27:01	60.269
05/30/96	18:29:01	60.248
05/30/96	18:31:01	60.248
05/30/96	18:33:01	60.269
05/30/96	18:35:01	60.269
05/30/96	18:37:01	60.269
05/30/96	18:39:01	60.269
05/30/96	18:41:01	60.269
05/30/96	18:43:01	60.269
05/30/96	18:45:01	60.269
05/30/96	18:47:01	60.269
05/30/96	18:49:01	60.269
05/30/96	18:51:01	60.269
05/30/96	20:39:00	ERR
05/30/96	22:29:00	ERR
05/31/96	01:08:00	ERR
05/31/96	04:09:00	ERR
05/31/96	08:48:00	ERR
05/31/96	11:34:44	59.988
05/31/96	11:36:44	59.966
05/31/96	11:38:44	59.966
05/31/96	11:40:44	59.966
05/31/96	11:42:43	59.966
05/31/96	11:44:43	59.966
05/31/96	11:45:01	59.316
05/31/96	11:45:02	59.706
05/31/96	11:45:03	59.511
05/31/96	11:45:04	59.36
05/31/96	11:45:06	59.057
05/31/96	11:45:06	58.97
05/31/96	11:45:07	58.84
05/31/96	11:45:08	58.775
05/31/96	11:45:09	58.667
05/31/96	11:45:11	58.407
05/31/96	11:45:11	58.32
05/31/96	11:45:12	58.212
05/31/96	11:45:13	58.125
05/31/96	11:45:14	58.06
05/31/96	11:45:15	57.93
05/31/96	11:45:16	57.887

Pumps on wells C-3, C-2, C-4 turned on



VVE: 5-77

Date	Time	H2O abv TRN)
05/31/96	11:47:56	48.553
05/31/96	11:48:01	48.39
05/31/96	11:48:06	48.229
05/31/96	11:48:11	48.034
05/31/96	11:48:16	47.982
05/31/96	11:48:21	47.73
05/31/96	11:48:26	47.579
05/31/96	11:48:31	47.427
05/31/96	11:48:36	47.297
05/31/96	11:48:41	47.146
05/31/96	11:48:46	47.016
05/31/96	11:48:51	46.864
05/31/96	11:48:56	46.756
05/31/96	11:49:01	46.626
05/31/96	11:49:06	46.496
05/31/96	11:49:11	46.388
05/31/96	11:49:16	46.279
05/31/96	11:49:21	46.149
05/31/96	11:49:26	46.041
05/31/96	11:49:31	45.933
05/31/96	11:49:36	45.846
05/31/96	11:49:41	45.738
05/31/96	11:49:46	45.651
05/31/96	11:49:51	45.543
05/31/96	11:49:56	45.456
05/31/96	11:50:01	45.348
05/31/96	11:50:06	45.305
05/31/96	11:50:11	45.218
05/31/96	11:50:16	45.132
05/31/96	11:50:21	45.045
05/31/96	11:50:26	44.958
05/31/96	11:50:31	44.872
05/31/96	11:50:36	44.807
05/31/96	11:50:41	44.742
05/31/96	11:50:46	44.677
05/31/96	11:50:51	44.612
05/31/96	11:50:56	44.547
05/31/96	11:51:01	44.504
05/31/96	11:51:06	44.439
05/31/96	11:51:11	44.374
05/31/96	11:51:16	44.33
05/31/96	11:51:21	44.265
05/31/96	11:51:26	44.222
05/31/96	11:51:31	44.179
05/31/96	11:51:41	44.07
05/31/96	11:51:51	43.984
05/31/96	11:52:01	43.897
05/31/96	11:52:11	43.832
05/31/96	11:52:21	43.746
05/31/96	11:52:31	43.659
05/31/96	11:52:41	43.572
05/31/96	11:52:51	43.507
05/31/96	11:53:01	43.421
05/31/96	11:53:11	43.377
05/31/96	11:53:21	43.334
05/31/96	11:53:31	43.269
05/31/96	11:53:41	43.204
05/31/96	11:53:51	43.161
05/31/96	11:54:01	43.118
05/31/96	11:54:11	43.053
05/31/96	11:54:21	43.031

05/31/96	12:10:01	42.078
05/31/96	12:10:31	42.056
05/31/96	12:11:01	42.078
05/31/96	12:11:31	42.078
05/31/96	12:12:01	42.078
05/31/96	12:12:31	42.056
05/31/96	12:13:01	42.056
05/31/96	12:13:31	42.035
05/31/96	12:14:01	42.035
05/31/96	12:14:31	42.035
05/31/96	12:15:01	42.013
05/31/96	12:15:31	41.991
05/31/96	12:16:01	41.991
05/31/96	12:16:31	41.991
05/31/96	12:17:01	42.035
05/31/96	12:18:01	42.013
05/31/96	12:19:01	42.035
05/31/96	12:20:01	42.013
05/31/96	12:21:01	42.013
05/31/96	12:22:01	41.991
05/31/96	12:23:01	41.97
05/31/96	12:24:01	41.97
05/31/96	12:25:01	41.948
05/31/96	12:26:01	41.97
05/31/96	12:27:01	41.97
05/31/96	12:28:01	41.97
05/31/96	12:29:01	41.948
05/31/96	12:30:01	41.991
05/31/96	12:31:01	41.948
05/31/96	12:32:01	41.991
05/31/96	12:33:01	41.905
05/31/96	12:34:01	41.905
05/31/96	12:35:01	41.948
05/31/96	12:36:01	41.883
05/31/96	12:37:01	41.948
05/31/96	12:38:01	41.927
05/31/96	12:39:01	41.927
05/31/96	12:40:01	41.927
05/31/96	12:41:01	41.927
05/31/96	12:42:01	41.927
05/31/96	12:43:01	41.927
05/31/96	12:44:01	41.927
05/31/96	12:45:01	41.883
05/31/96	12:46:01	41.883
05/31/96	12:47:01	41.883
05/31/96	12:52:01	41.927
05/31/96	12:57:01	41.905
05/31/96	13:02:01	41.883
05/31/96	13:07:01	41.818
05/31/96	13:12:01	41.84
05/31/96	13:17:01	41.818
05/31/96	13:22:01	41.797
05/31/96	13:27:01	41.775
05/31/96	13:32:01	41.797
05/31/96	13:37:01	41.775
05/31/96	13:42:01	41.753
05/31/96	13:47:01	41.775
05/31/96	13:52:01	41.732
05/31/96	13:57:01	41.753
05/31/96	14:02:01	41.732
05/31/96	14:07:01	41.753

Well C-4

Date	Time	H2O abv TRN (ft)
06/01/96	05:17:01	41.104
06/01/96	05:47:01	41.104
06/01/96	06:17:01	41.082
06/01/96	06:47:01	41.06
06/01/96	07:17:01	41.017
06/01/96	07:47:01	41.082
06/01/96	08:17:01	41.06
06/01/96	08:47:01	41.017
06/01/96	09:17:01	41.039
06/01/96	09:47:01	41.039
06/01/96	10:17:01	41.017
06/01/96	10:47:01	40.995
06/01/96	11:17:01	40.995
06/01/96	12:17:01	41.017
06/01/96	13:17:01	40.93
06/01/96	14:17:01	40.995
06/01/96	15:17:01	40.995
06/01/96	16:17:01	41.017
06/01/96	17:17:01	41.104
06/01/96	18:17:01	41.428
06/01/96	19:17:01	41.45
06/01/96	20:17:01	41.385
06/01/96	21:17:01	41.385
06/01/96	22:17:01	41.32
06/01/96	23:17:01	41.277
06/02/96	00:17:01	41.234
06/02/96	01:17:01	41.255
06/02/96	02:17:01	41.212
06/02/96	03:17:01	41.19
06/02/96	04:17:01	41.169
06/02/96	05:17:01	41.212
06/02/96	06:17:01	41.125
06/02/96	07:17:01	41.125
06/02/96	08:17:01	41.125
06/02/96	09:17:01	40.67
06/02/96	10:17:01	40.649
06/02/96	11:17:01	40.627
06/02/96	12:17:01	40.67
06/02/96	13:03:44	40.649
06/02/96	13:05:45	40.605
06/02/96	13:07:45	40.605
06/02/96	13:09:45	40.649
06/02/96	13:11:45	40.649
06/02/96	13:13:44	40.605
06/02/96	13:15:44	40.627
06/02/96	13:17:44	40.627
06/02/96	13:19:44	40.692
06/02/96	13:21:44	40.67
06/02/96	13:23:45	40.627
06/02/96	13:25:45	40.605
06/02/96	13:27:45	40.627
06/02/96	13:29:45	40.649
06/02/96	13:31:44	40.627
06/02/96	13:33:44	40.649
06/02/96	13:35:44	40.649
06/02/96	13:37:44	40.649
06/02/96	13:39:44	40.67
06/02/96	13:41:45	40.649
06/02/96	13:43:45	40.627
06/02/96	13:45:45	40.649
06/02/96	13:47:45	40.649

Well C-4 pumping rate increased 50% to 150 gpm at 17:13 on 6/1/96, well C-3 begins pumping at 292 gpm

DRAFT

Well C-4

Date	Time	H2O abv TRN (ft)
06/02/96	17:52:33	40.735
06/02/96	17:54:33	40.735
06/02/96	17:56:34	40.692
06/02/96	17:58:34	40.714
06/02/96	18:00:01	40.714
06/02/96	18:00:03	41.363
06/02/96	18:00:04	41.515
06/02/96	18:00:04	41.688
06/02/96	18:00:05	41.84
06/02/96	18:00:06	41.991
06/02/96	18:00:07	42.165
06/02/96	18:00:08	42.36
06/02/96	18:00:09	42.555
06/02/96	18:00:11	42.966
06/02/96	18:00:11	43.096
06/02/96	18:00:12	43.248
06/02/96	18:00:13	43.377
06/02/96	18:00:14	43.507
06/02/96	18:00:16	43.897
06/02/96	18:00:17	44.006
06/02/96	18:00:17	44.157
06/02/96	18:00:18	44.287
06/02/96	18:00:19	44.395
06/02/96	18:00:20	44.547
06/02/96	18:00:21	44.72
06/02/96	18:00:22	44.893
06/02/96	18:00:24	45.283
06/02/96	18:00:24	45.392
06/02/96	18:00:25	45.543
06/02/96	18:00:26	45.673
06/02/96	18:00:27	45.781
06/02/96	18:00:29	46.106
06/02/96	18:00:29	46.236
06/02/96	18:00:30	46.366
06/02/96	18:00:31	46.496
06/02/96	18:00:33	46.713
06/02/96	18:00:35	47.016
06/02/96	18:00:37	47.276
06/02/96	18:00:39	47.535
06/02/96	18:00:41	47.774
06/02/96	18:00:43	48.034
06/02/96	18:00:45	48.25
06/02/96	18:00:47	48.488
06/02/96	18:00:49	48.705
06/02/96	18:00:51	48.9
06/02/96	18:00:53	49.095
06/02/96	18:00:55	49.268
06/02/96	18:00:57	49.441
06/02/96	18:00:59	49.593
06/02/96	18:01:01	49.744
06/02/96	18:01:03	49.896
06/02/96	18:01:05	50.004
06/02/96	18:01:07	50.134
06/02/96	18:01:09	50.243
06/02/96	18:01:11	50.372
06/02/96	18:01:13	50.502
06/02/96	18:01:15	50.611
06/02/96	18:01:17	50.741
06/02/96	18:01:19	50.871
06/02/96	18:01:21	51
06/02/96	18:01:23	51.109

all well pumps turned off at 18:00 6/2/96

D
R
A
F
T

Well C-4

Date	Time	H2O abv TRN (ft)
06/02/96	18:59:01	59.1
06/02/96	19:00:01	59.1
06/02/96	19:01:01	59.1
06/02/96	19:02:01	59.1
06/02/96	19:07:01	59.122
06/02/96	19:12:01	59.143
06/02/96	19:17:01	59.143
06/02/96	19:22:01	59.165
06/02/96	19:27:01	59.165
06/02/96	19:32:01	59.187
06/02/96	19:37:01	59.187
06/02/96	19:42:01	59.208
06/02/96	19:47:01	59.208
06/02/96	19:52:01	59.208
06/02/96	19:57:01	59.23
06/02/96	20:02:01	59.23
06/02/96	20:07:01	59.23
06/02/96	20:12:01	59.252
06/02/96	20:17:01	59.273
06/02/96	20:22:01	59.273
06/02/96	20:27:01	59.273
06/02/96	20:32:01	59.273
06/02/96	20:37:01	59.295
06/02/96	20:42:01	59.316
06/02/96	20:47:01	59.316
06/02/96	20:52:01	59.316
06/02/96	20:57:01	59.338
06/02/96	21:02:01	59.338
06/02/96	21:07:01	59.338
06/02/96	21:12:01	59.338
06/02/96	21:17:01	59.338
06/02/96	21:22:01	59.338
06/02/96	21:27:01	59.36
06/02/96	21:32:01	59.36
06/02/96	21:42:01	59.36
06/02/96	21:52:01	59.381
06/02/96	22:02:01	59.381
06/02/96	22:12:01	59.403
06/02/96	22:22:01	42.381
06/02/96	22:32:01	41.407
06/02/96	22:42:01	41.298
06/02/96	22:52:01	41.234
06/02/96	23:02:01	41.19
06/02/96	23:12:01	41.147
06/02/96	23:22:01	41.082
06/02/96	23:32:01	41.125
06/02/96	23:42:01	41.104
06/02/96	23:52:01	41.104
06/03/96	00:02:01	41.06
06/03/96	00:12:01	41.082
06/03/96	00:22:01	41.039
06/03/96	00:32:01	41.039
06/03/96	00:42:01	41.039
06/03/96	00:52:01	41.039
06/03/96	01:02:01	41.039
06/03/96	01:12:01	41.039
06/03/96	01:22:01	41.039
06/03/96	01:32:01	41.039
06/03/96	01:42:01	41.039
06/03/96	01:52:01	41.039
06/03/96	02:02:01	41.017

all well pumps off

Pumps on wells C-2, C-3, C-4 turned on at 22:12 on 6/2/96

C-4 pumping

Date	Time	H2O abv TR. (")
06/03/96	02:12:01	41.017
06/03/96	02:22:01	40.115
06/03/96	02:32:01	40.935
06/03/96	03:02:01	40.952
06/03/96	03:32:01	40.974
06/03/96	04:02:01	40.974
06/03/96	04:32:01	40.995
06/03/96	05:02:01	40.995
06/03/96	05:32:01	40.995
06/03/96	06:02:01	40.952
06/03/96	06:32:01	40.909
06/03/96	07:02:01	40.887
06/03/96	07:32:01	40.93
06/03/96	08:02:01	40.952
06/03/96	08:32:01	40.909
06/03/96	09:02:01	58.97
06/03/96	09:32:01	59.187
06/03/96	10:02:01	59.252
06/03/96	10:32:01	59.316
06/03/96	11:02:01	59.36
06/03/96	11:32:01	59.403
06/03/96	12:02:01	59.425
06/03/96	12:32:01	59.446
06/03/96	13:02:01	59.49
06/03/96	13:32:01	59.511
06/03/96	14:02:01	59.533
06/03/96	14:32:01	59.576
06/03/96	15:02:01	59.598
06/03/96	15:32:01	59.663
06/03/96	16:02:01	59.685
06/03/96	16:32:01	59.728
06/03/96	17:02:01	59.771
06/03/96	17:12:22	59.771
06/03/96	17:14:21	59.771
06/03/96	17:16:21	59.771
06/03/96	17:18:21	59.771
06/03/96	17:20:21	59.771
06/03/96	17:22:22	59.793
06/03/96	17:24:22	59.771
06/03/96	17:26:22	59.771
06/03/96	17:28:22	59.771
06/03/96	17:30:22	59.793
06/03/96	17:32:21	52.668
06/03/96	17:34:21	47.427
06/03/96	17:36:21	44.785
06/03/96	17:38:21	43.507
06/03/96	17:40:22	42.771
06/03/96	17:42:22	42.338
06/03/96	17:44:22	42.121
06/03/96	17:46:22	42.013
06/03/96	17:48:22	41.97
06/03/96	17:50:21	41.883
06/03/96	17:52:21	41.883
06/03/96	17:54:21	41.797
06/03/96	17:56:21	41.797
06/03/96	17:58:22	41.818
06/03/96	18:00:22	41.797
06/03/96	18:02:22	41.775
06/03/96	18:04:22	41.753
06/03/96	18:06:22	41.71
06/03/96	18:08:21	41.71

well C-4 pumping

Well C-4 pump turned off

Well C-4 off

Well C-4 pump turned on, wells C-2, C-3

also pumping

C-4 pumping

Well C-4

Date	Time	H2O abv TRN (ft)
06/03/96	18:10:21	41.732
06/03/96	18:12:22	41.732
06/03/96	18:14:21	41.732
06/03/96	18:16:22	41.688
06/03/96	18:18:22	41.688
06/03/96	18:20:22	41.688
06/03/96	18:22:22	41.688
06/03/96	18:24:22	41.688
06/03/96	18:26:21	41.667
06/03/96	18:28:22	41.623
06/03/96	18:30:21	41.667
06/03/96	18:32:21	41.645
06/03/96	18:34:22	41.667
06/03/96	18:36:22	41.667
06/03/96	18:38:22	41.602
06/03/96	18:40:22	41.623
06/03/96	18:42:22	41.645
06/03/96	18:44:21	41.667
06/03/96	18:46:21	41.645
06/03/96	18:48:21	41.623
06/03/96	18:50:21	41.602
06/03/96	18:52:22	41.58
06/03/96	18:54:22	41.623
06/03/96	18:56:22	41.602
06/03/96	18:58:22	41.602
06/03/96	19:00:22	41.558
06/03/96	19:02:21	41.58
06/03/96	19:04:21	41.558
06/03/96	19:06:21	41.58
06/03/96	19:08:21	41.58
06/03/96	19:10:22	41.558
06/03/96	19:12:22	41.558
06/03/96	19:14:22	41.58
06/03/96	19:16:22	41.515
06/03/96	19:18:22	41.537
06/03/96	19:20:21	41.537
06/03/96	19:22:21	41.58
06/03/96	19:24:21	41.602
06/03/96	19:26:21	41.58
06/03/96	19:28:22	41.58
06/03/96	19:30:22	41.537
06/03/96	19:32:22	41.558
06/03/96	19:34:22	41.558
06/03/96	19:36:22	41.537
06/03/96	19:38:21	41.515
06/03/96	19:40:21	41.493
06/03/96	19:42:21	41.537
06/03/96	19:44:21	41.515
06/03/96	19:46:22	41.515
06/03/96	19:48:22	41.493
06/03/96	19:50:22	41.472
06/03/96	19:52:22	41.515
06/03/96	19:54:22	41.493
06/03/96	19:56:21	41.472
06/03/96	19:58:21	41.493
06/03/96	20:00:21	41.493
06/03/96	20:02:21	41.515
06/03/96	20:04:22	41.493
06/03/96	20:06:22	41.472
06/03/96	20:08:22	41.472
06/03/96	20:10:22	41.493

Well C-4

Date	Time	H2O abv TRN (ft)
06/04/96	06:22:22	41.169
06/04/96	06:24:22	41.169
06/04/96	06:26:21	41.147
06/04/96	06:28:21	41.147
06/04/96	06:30:21	41.147
06/04/96	06:32:21	41.19
06/04/96	06:34:22	41.19
06/04/96	06:36:22	41.169
06/04/96	06:38:22	41.147
06/04/96	06:40:22	41.169
06/04/96	06:42:22	41.147
06/04/96	06:44:21	41.169
06/04/96	06:46:21	41.169
06/04/96	06:48:21	41.147
06/04/96	06:50:21	41.147
06/04/96	06:52:22	41.169
06/04/96	06:54:22	41.169
06/04/96	06:56:22	41.147
06/04/96	06:58:22	41.169
06/04/96	07:00:22	41.19
06/04/96	07:02:21	41.19
06/04/96	07:04:21	41.147
06/04/96	07:06:21	41.169
06/04/96	07:08:21	41.147
06/04/96	07:10:22	41.169
06/04/96	07:12:22	41.19
06/04/96	07:14:22	41.169
06/04/96	07:16:22	41.147
06/04/96	07:18:22	41.147
06/04/96	07:20:21	41.19
06/04/96	07:22:21	41.19
06/04/96	07:24:21	41.19
06/04/96	07:26:21	41.169
06/04/96	07:28:22	41.169
06/04/96	07:30:22	41.169
06/04/96	07:32:22	41.19
06/04/96	07:34:22	41.169
06/04/96	07:36:22	41.125
06/04/96	07:38:21	41.147
06/04/96	07:40:21	41.19
06/04/96	07:42:21	51.195
06/04/96	07:44:21	56.155
06/04/96	07:46:22	58.212
06/04/96	07:48:22	58.883
06/04/96	07:50:22	59.122
06/04/96	07:52:22	59.23
06/04/96	07:54:22	59.273
06/04/96	07:56:21	59.295
06/04/96	07:58:21	59.316
06/04/96	08:00:21	59.338
06/04/96	08:02:21	59.338
06/04/96	08:04:22	59.36
06/04/96	08:06:22	59.381
06/04/96	08:08:22	59.381
06/04/96	08:10:22	59.403
06/04/96	08:12:22	59.403
06/04/96	08:14:21	59.403
06/04/96	08:16:21	59.425
06/04/96	08:18:21	59.425
06/04/96	08:20:21	59.425
06/04/96	08:22:22	59.425

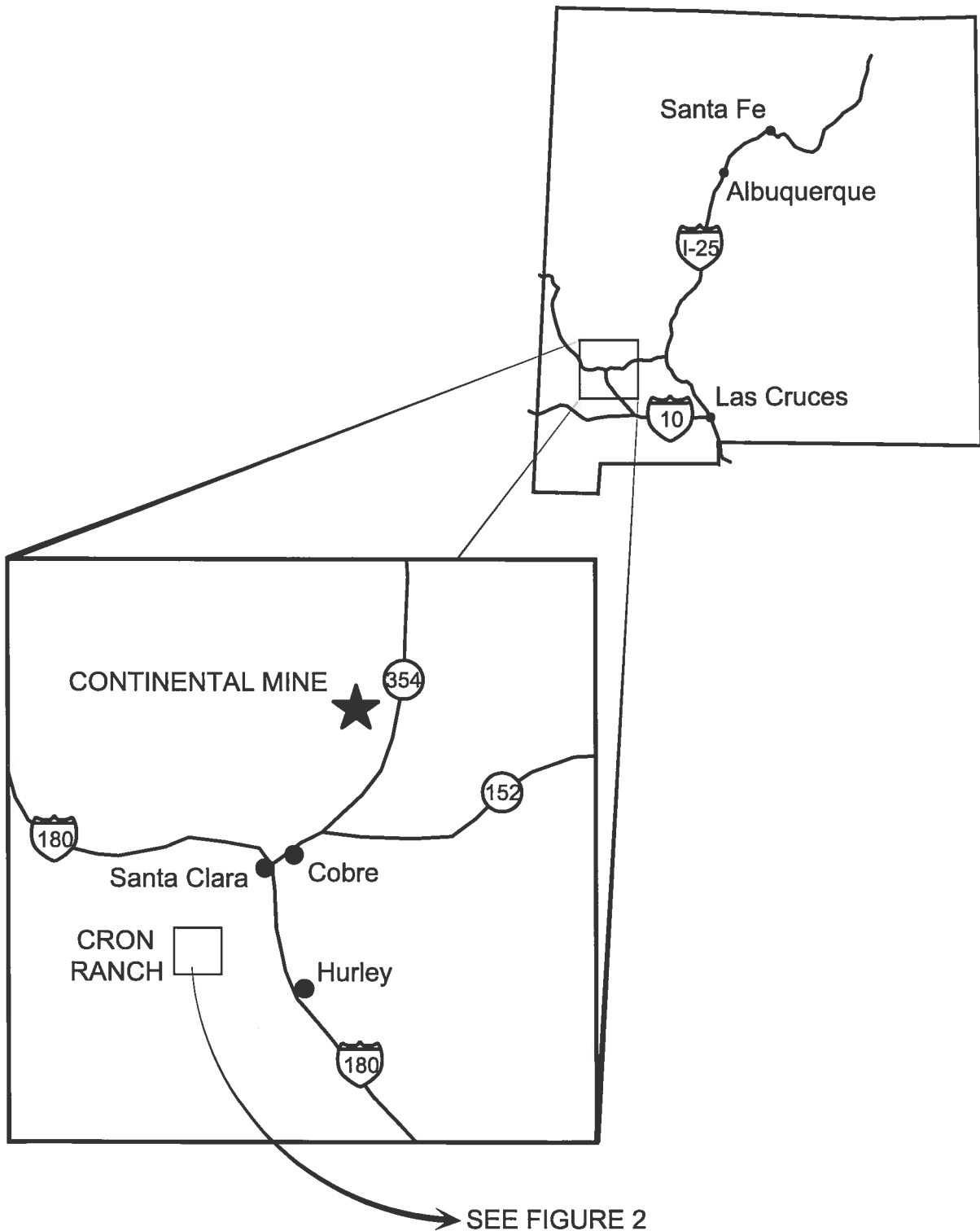
well C-4 turned off?

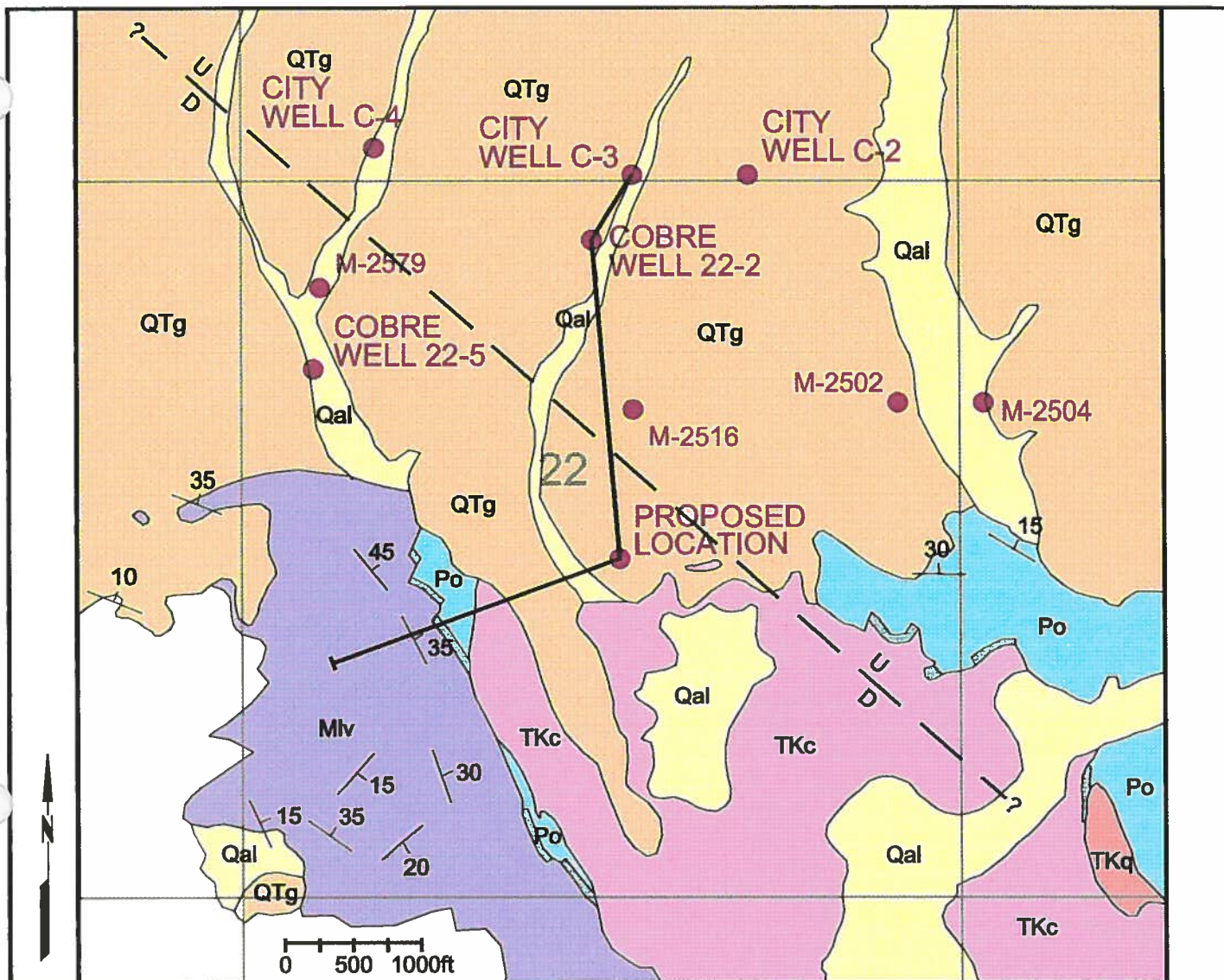
All Well-pumps turned off 8:00 6/4/96

Well 22-5 begins pumping at 100 gpm

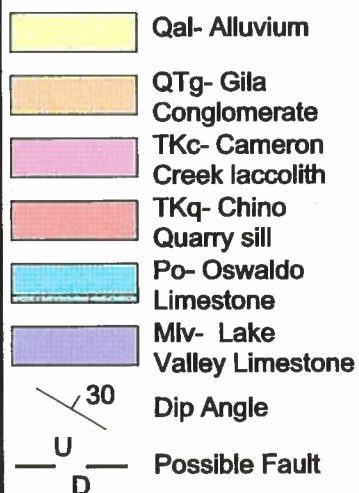
FIGURES

NEW MEXICO





LEGEND:



SOUTHWEST

NORTH

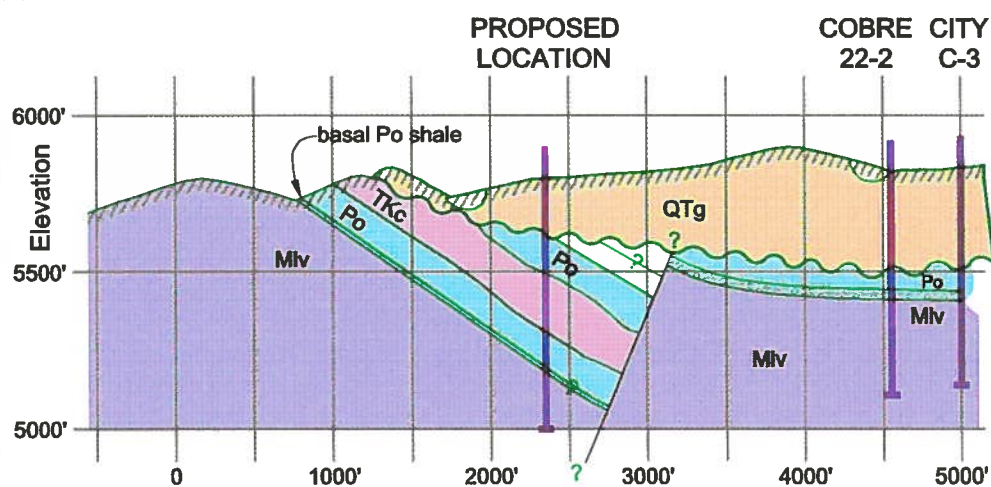
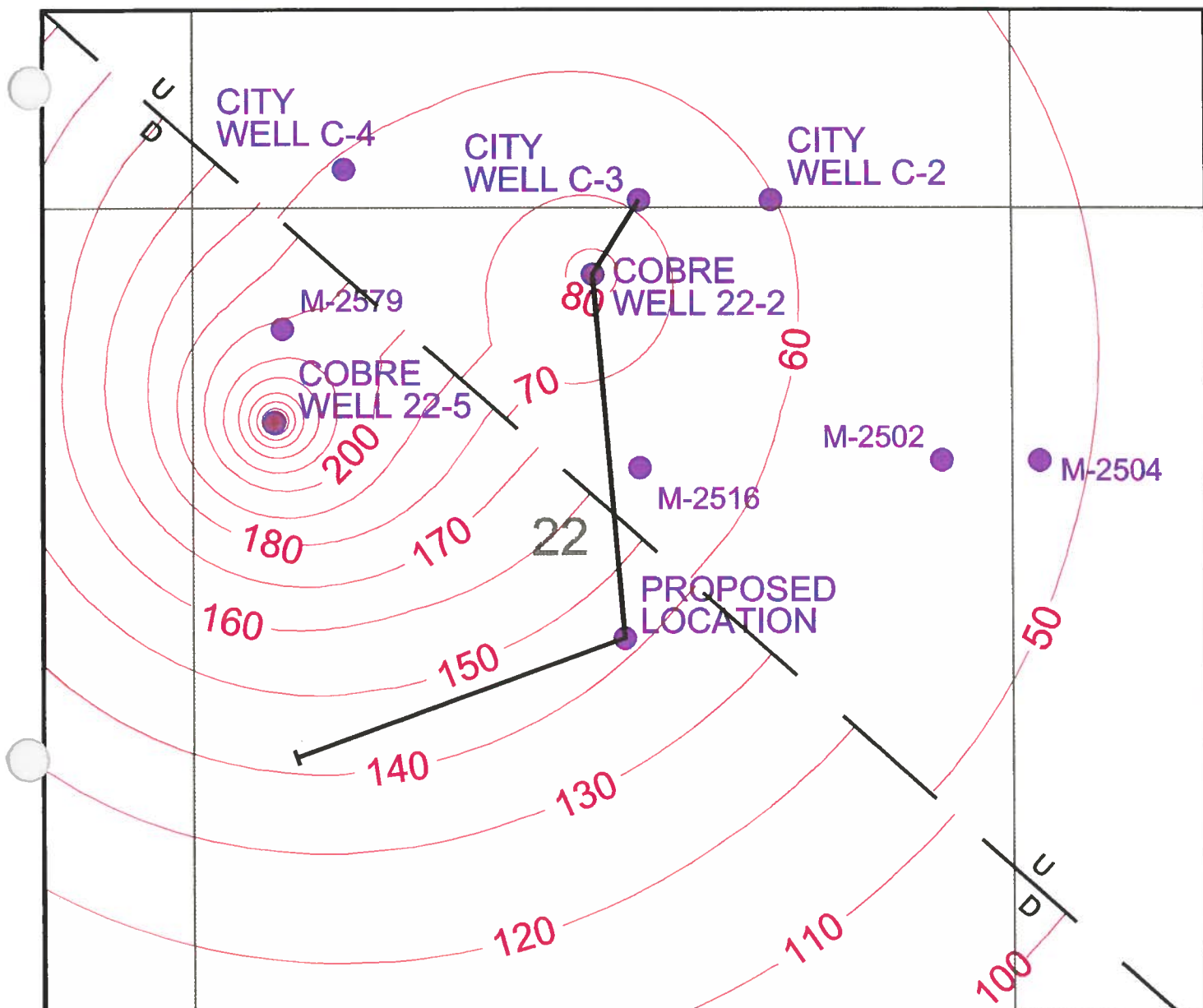


FIGURE B-2
WELL LOCATION AND GENERALIZED
GEOLOGIC MAP AND CROSS SECTION

Date: JANUARY 1998

Project: 100029/TASK3

File: SECT-22



WELL 22-2 PUMPING AT 332 GPM.
WELL 22-5 PUMPING AT 180 GPM.

EXPLANATION

— Up
— Down

POSSIBLE FAULT

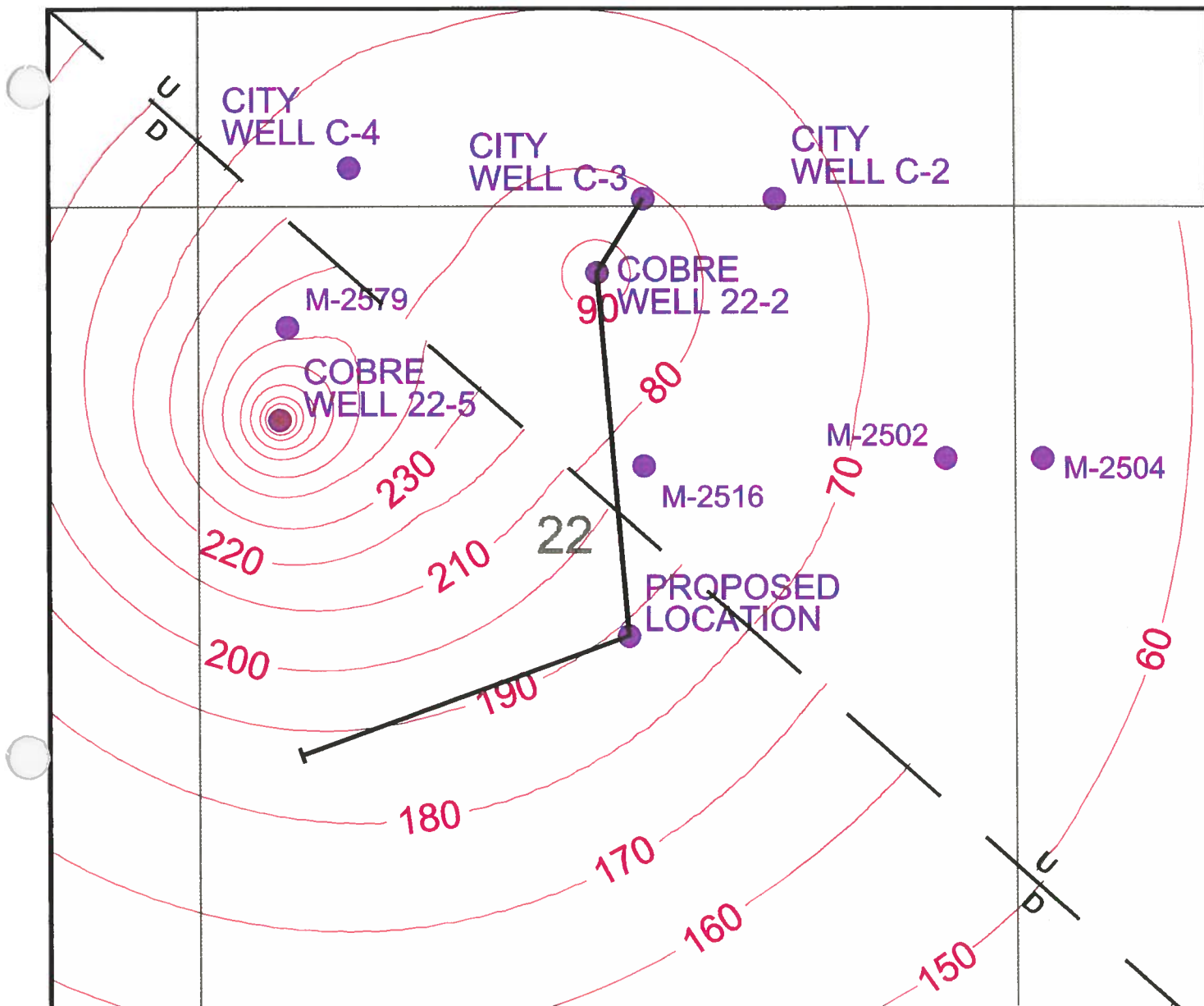
0 500 1000ft

— 110 —

LINE OF EQUAL-DRAWDOWN

● C-4

WELL



WELL 22-2 PUMPING AT 332 GPM.
WELL 22-5 PUMPING AT 180 GPM.

EXPLANATION

— Up —
Down

POSSIBLE FAULT

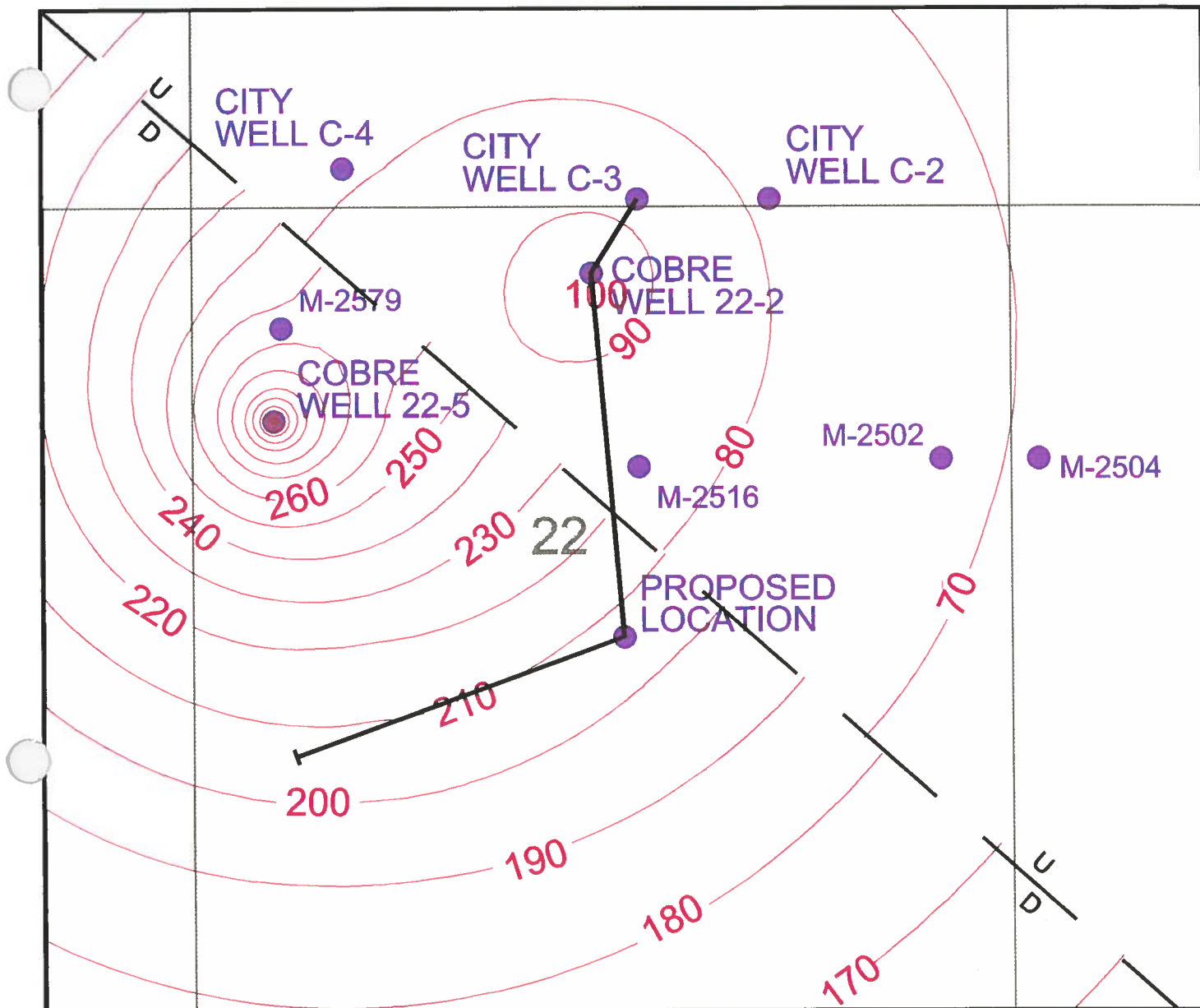
0 500 1000ft

110

LINE OF EQUAL-DRAWDOWN

● C-4

WELL



WELL 22-2 PUMPING AT 332 GPM.
WELL 22-5 PUMPING AT 180 GPM.

EXPLANATION

— Up
— Down

POSSIBLE FAULT

0 500 1000ft

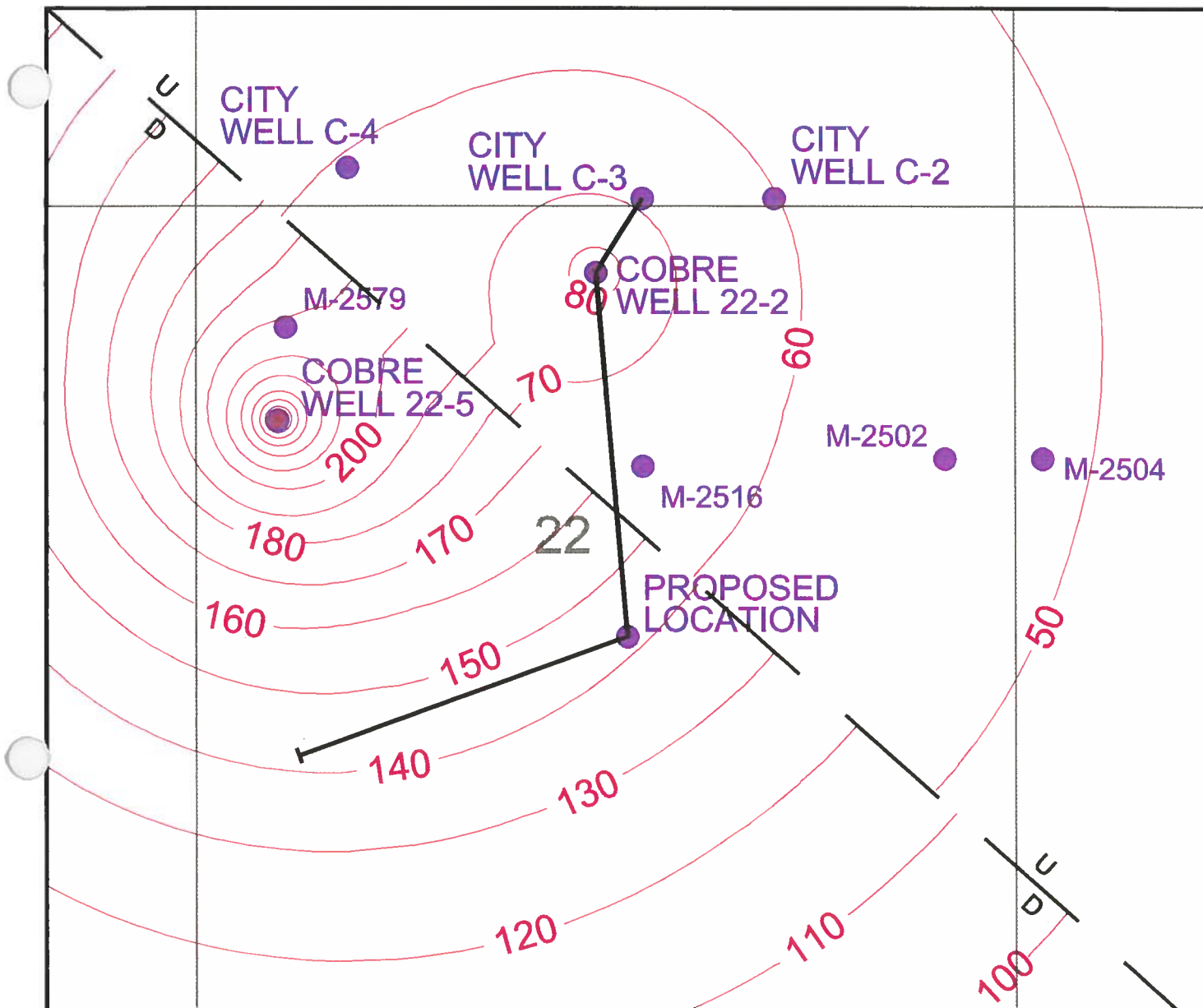
— 110 —

LINE OF EQUAL-DRAWDOWN

● C-4

WELL





WELL 22-2 PUMPING AT 332 GPM.
WELL 22-5 PUMPING AT 180 GPM.

EXPLANATION

— Up —
Down

POSSIBLE FAULT

0 500 1000ft

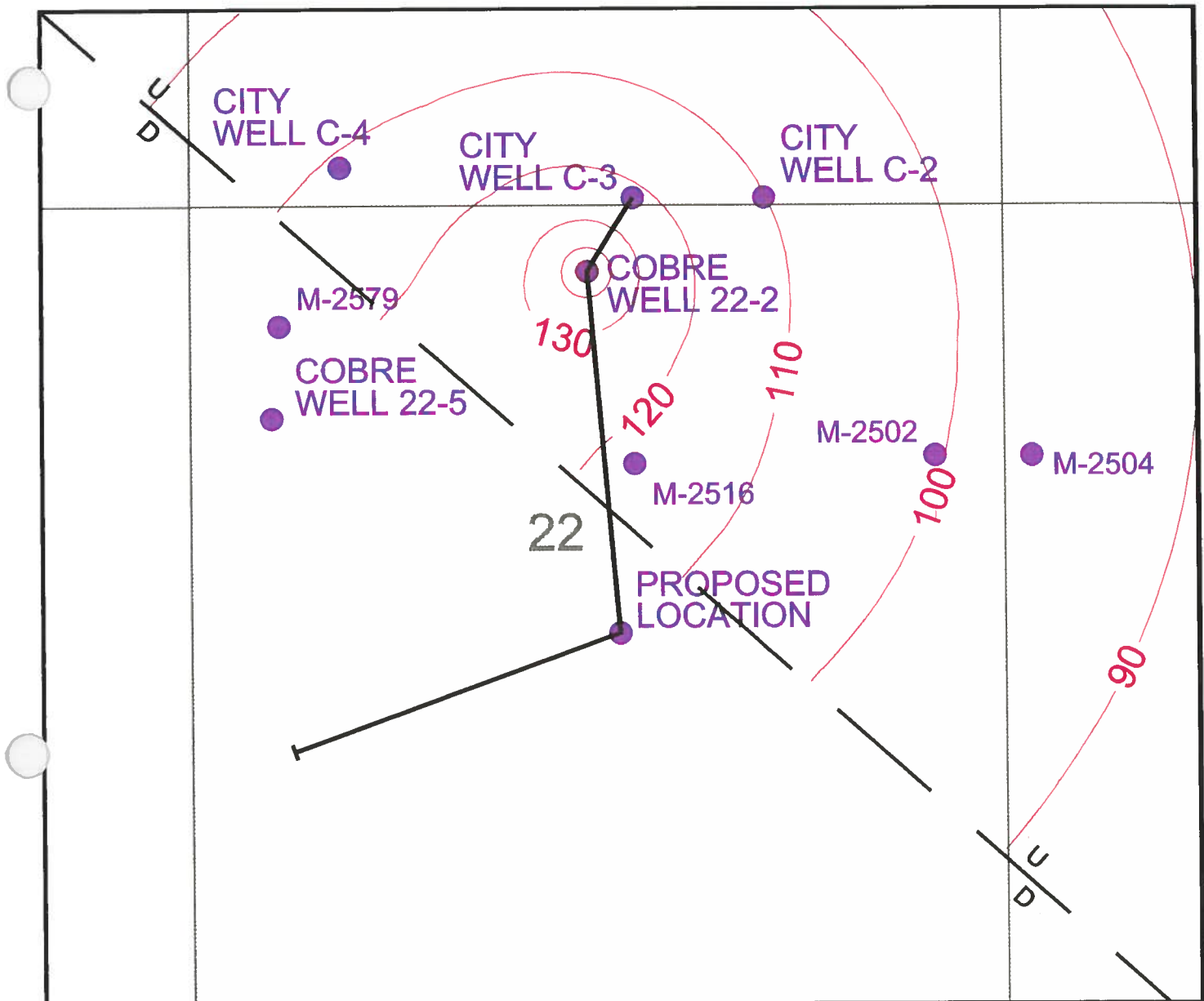
110

LINE OF EQUAL-DRAWDOWN

● C-4

WELL





WELL 22-2 PUMPING AT 500 GPM.
WELL 22-5 NOT PUMPING.

EXPLANATION

— Up —
Down

POSSIBLE FAULT

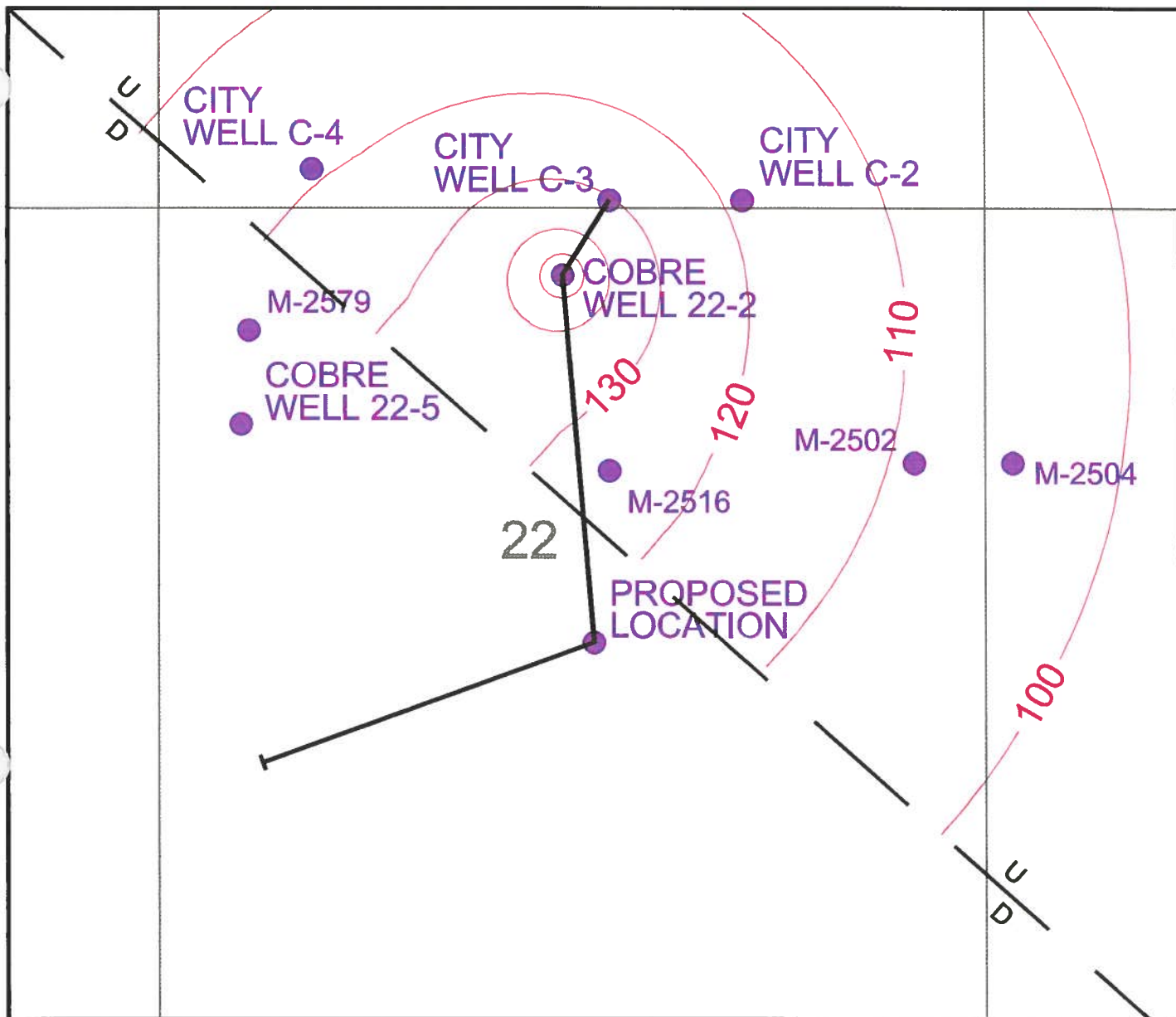
0 500 1000ft

110

LINE OF EQUAL-DRAWDOWN

● C-4

WELL



WELL 22-2 PUMPING AT 500 GPM.
WELL 22-5 NOT PUMPING.

EXPLANATION

Up
Down

POSSIBLE FAULT

0 500 1000ft

110

LINE OF EQUAL-DRAWDOWN

● C-4

WELL

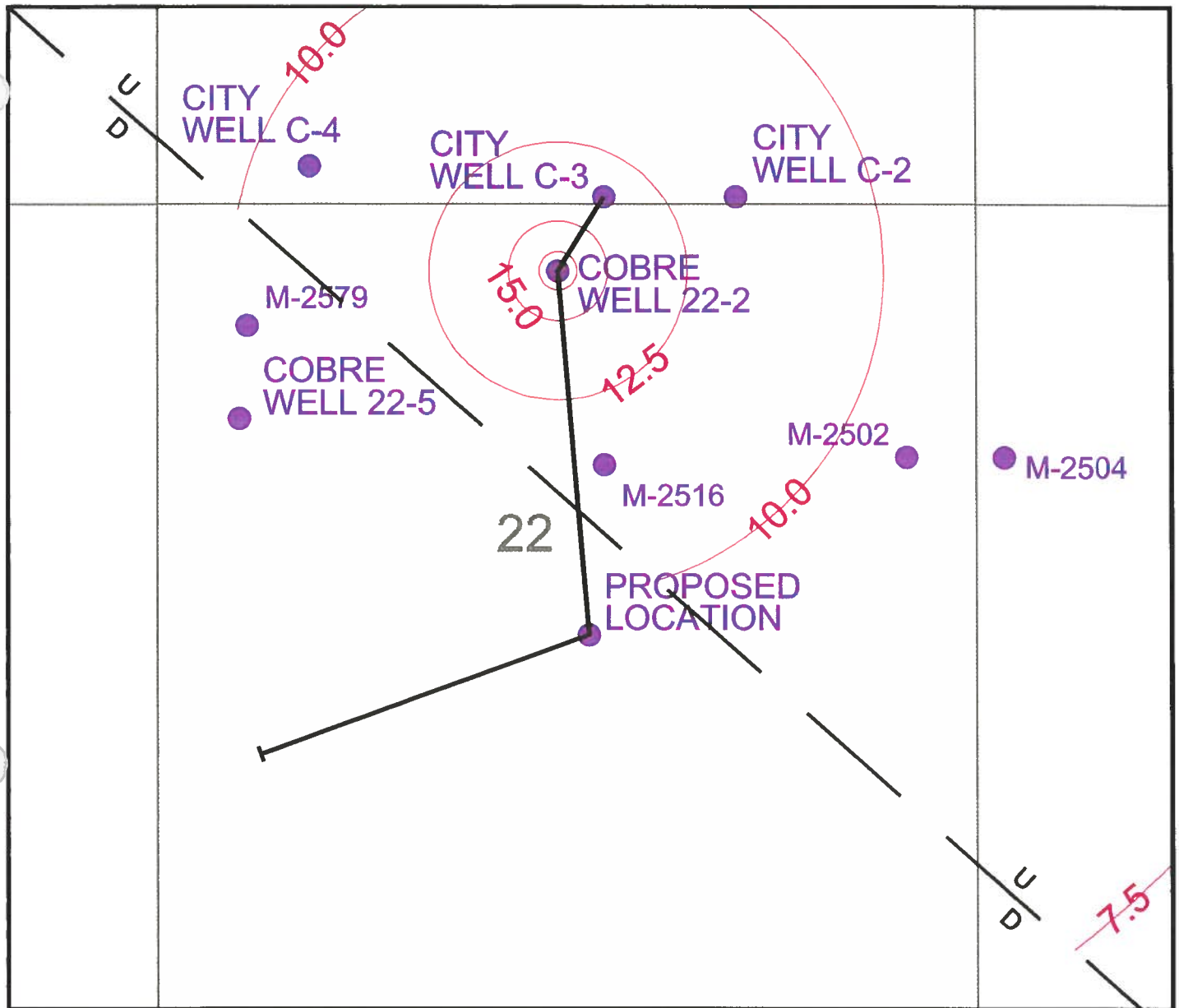


FIGURE B-8
500 gpm DRAWDOWN
10 YEARS

Date: JANUARY 1998

Project: 100029\TASK3

File: DRAWDOWN



WELL 22-2 PUMPING AT 112 GPM.
WELL 22-5 NOT PUMPING.

EXPLANATION

Up
Down

POSSIBLE FAULT

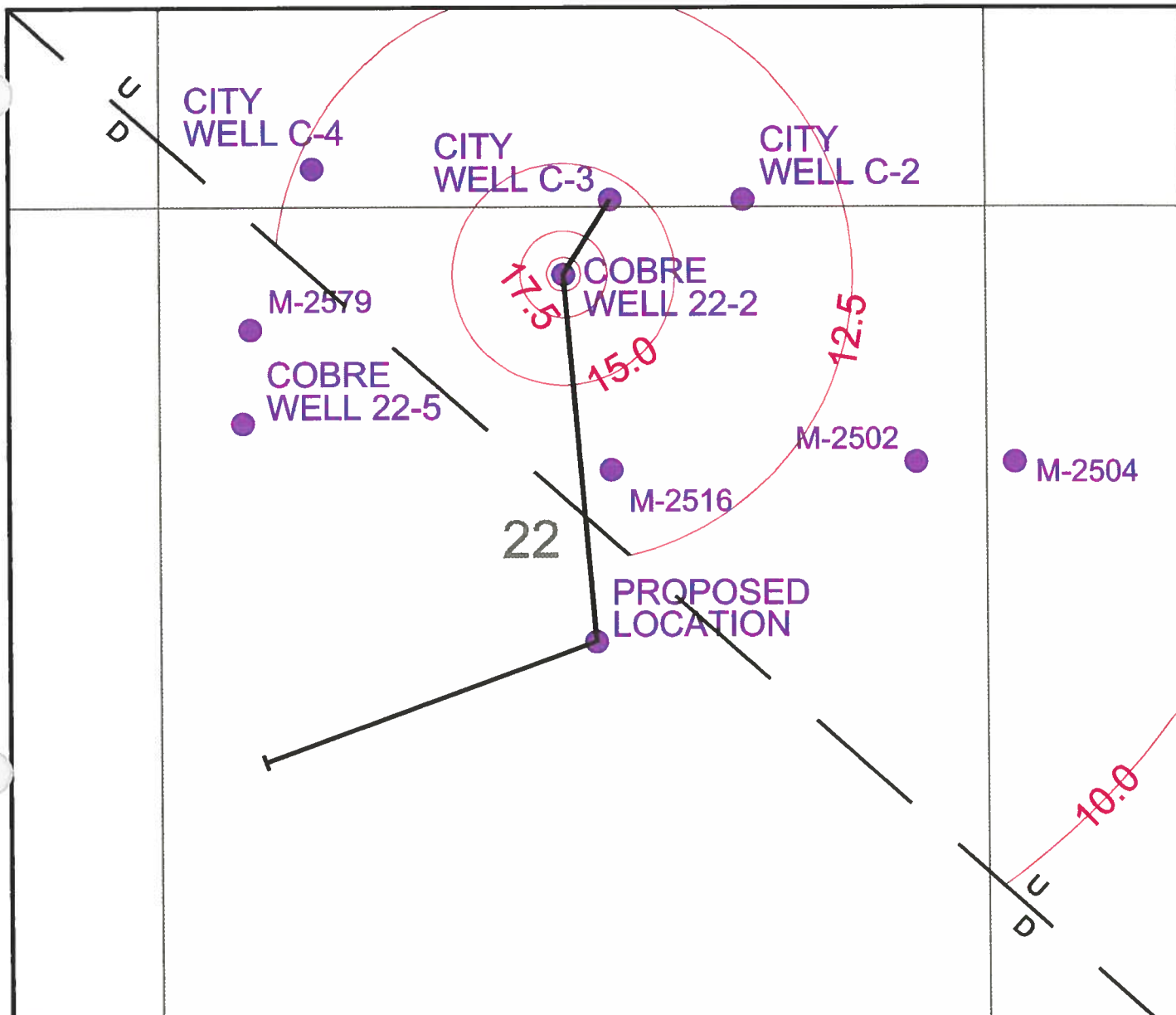
0 500 1000ft

10.0

LINE OF EQUAL-DRAWDOWN

● C-4

WELL



WELL 22-2 PUMPING AT 112 GPM.
WELL 22-5 NOT PUMPING.

EXPLANATION

Up
Down

POSSIBLE FAULT

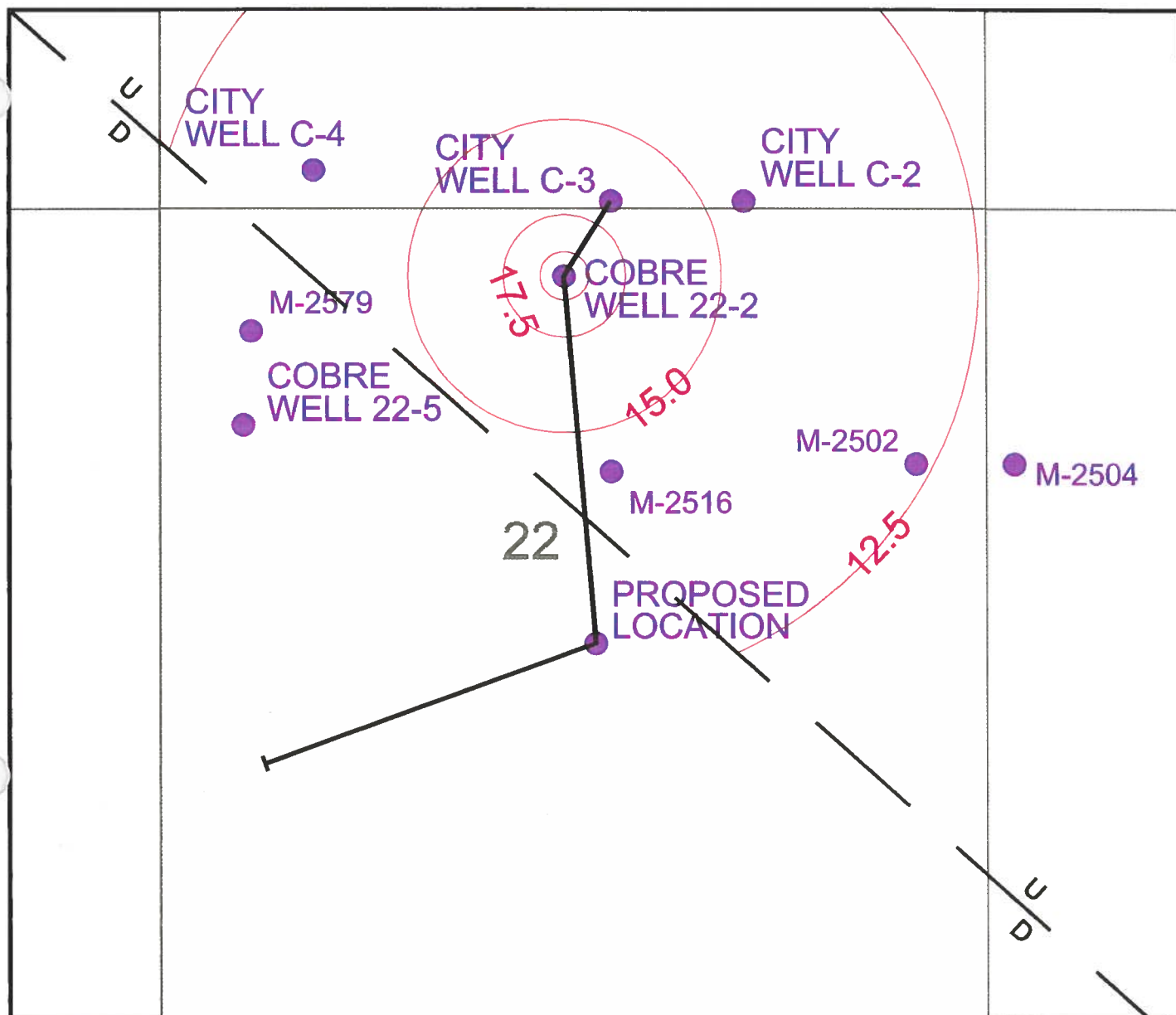
0 500 1000ft

10.0

LINE OF EQUAL-DRAWDOWN

● C-4

WELL



WELL 22-2 PUMPING AT 112 GPM.
WELL 22-5 NOT PUMPING.

EXPLANATION

— Up —
Down

POSSIBLE FAULT

0 500 1000ft

— 10.0 —

LINE OF EQUAL-DRAWDOWN

● C-4

WELL

TABLES

Table B-1 Summary of Well Completion Data

Well Name	Water Rights Number	Location				Well Surface Elevation (feet)	Well Depth (feet)	TD Elev. (feet)	Screened Interval Formation Name	Top Screen (feet) (bgs)	Base Screen (feet) (bgs)	Top Screen Elevation (feet)	Base Screen Elevation (feet)	Screen Thickness (feet)
		1\4	1\4	Sec	TWP	RNG								
City of Santa Clara 2 (C-2)		sw	se	15	18S	13W	5,927	472	Gila Congl. & Osw. Ls.?	0	472	5,972	5,455	472
City of Santa Clara 3 (C-3)		se	sw	15	18S	13W	5,835	555	Gila Congl.	80	400	5,755	5,435	320
City of Santa Clara 4 (C-4)		sw	sw	15	18S	13W	5,830	510	Gila & Osw. & LV Ls.	185	510	5,645	5,320	325
Cobre 22-2	M-2575	ne	nw	22	18S	13W	5,821	604	Gila & Oswaldo Ls.	104	604	5,717	5,217	500
Cobre 22-5	M-2575	nw	nw	22	18S	13W	5,790	604	Paleozoic?	342	604	5,448	5,186	262
Cobre Proposed	M-2575	nw	sw	22	18S	13W	5,800	800	Gila & Osw. * Lv. Ls.	150?	790	5,650	5,010	640

Table B-2 Summary of Water Level Responses Between Wells

Well Name	Well Depth (feet)	Max Known Yield (gpm)	Depth to Water (feet)	Approx. Static Water Elev. (feet)	Observed Well Flow Rate (gpm)	Well Communication Interpreted by (Hydro-Search)	Well Communication Interpreted by (SMI)
City of Santa Clara (C-2)	472	375	30.5	5,897	13	None	None
City of Santa Clara 3 (C-3)	555	300	90	5,745	292	Cobre 22-2, C-2	Cobre 22-2
City of Santa Clara 4 (C-4)	510	343	70-94	5,736	150	None	22-2?
Cobre 22-2	604	425	70-94	5,727	332	C-3	C3, C4?
Cobre 22-5	604	350	180	5,610	180	None	None
Cobre Proposed	800	NA	NA	NA	NA	Cobre 22-2, C-3, C2	Cobre 22-2?, C-3?

Table B-3 Theis Time-Drawdown Modeling - Predicted Results at City Well C-3

Pumping Well Name	City C-2	City C-3	City C-4	Cobre 22-2	Cobre 22-2	Cobre 22-2	Cobre 22-5	Cobre Proposed
Pumping Rate (gpm)	13	292	100	500	332	500	180	500
Radial Distance to City Well C-3 (feet)	850	0	1,950	450	450	450	2,700	2,750
Transmissivity (H-Search) (ft ² /day)	895	895	895	895	895	895	895	895
Storativity (H-Search)	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04
H-Search Predicted 1-Day Drawdown (feet) at well C-3	None	NA	None	35	23	35	None	7
Observed 1 Day Drawdown (feet) at well C-3	None	280?	None	NA	18	NA	None	NA
H-Search Predicted 1-Year Drawdown (feet) at well C-3	None	NA	None	85	56	85	None	54
Transmissivity (SMI) (ft ² /day)	113	1,300	1,300	1,300	1,300	1,300	73	Not Predicted
Storativity (SMI)	3.02E-06	1.20E-04	1.20E-04	1.20E-04	1.20E-04	1.20E-04	1.20E-04	Not Predicted
SMI Predicted 1-Day Drawdown (feet) at well C-3	None	68	8.2?	28.2	18.8	28.2	None	NA
Observed 1-Day Drawdown (feet) at well C-3	None	>20	NA	NA	18	NA	None	NA
SMI Predicted 1-Year Drawdown (feet) at well C-3	None	102	17	63	68	63	None	NA

Table B-4 Their Modeling Predicted Drawdowns

Drawdown (feet) at Specified Well and Time																			
With Fault Separation		C3			C4			C2			22-2			22-5					
		1 year	5 years	10 years	1 year	5 years	10 years	1 year	5 years	10 years	1 year	5 years	10 years	1 year	5 years	10 years			
Pumping Scenario		68	80	86	60	73	78	60	73	78	119	132	137	461	523	555			
Normal Scenario																			
Well 22-2 @ 332 gpm and Well 22-5 @ 180 gpm (with fault)																			
Well 22-2 Maximum Scenario @ 500 gpm (with fault)		102	121	129	91	110	118	90	109	118	180	199	207	0	0	0			
Average Rate Scenario Well 22-2 @ 332 gpm, Well C3 @ 292 gpm, Well C4 @ 100 gpm, and Well 22-5 @ 180 gpm (with fault)		187	Not Analyzed	227	149	Not Analyzed	188	Not Analyzed	Not Analyzed	Not Analyzed	189	Not Analyzed	228	48	58	62			
Without Fault Separation		C3			C4			C2			22-2			22-5					
		1 year	5 years	10 years	1 year	5 years	10 years	1 year	5 years	10 years	1 year	5 years	10 years	1 year	5 years	10 years			
Pumping Scenario		55	65	69	48	58	62	48	57	62	105	117	119	490	557	586			
Normal Scenario																			
Well 22-2 @ 332 gpm and Well 22-5 @ 180 gpm (without fault)																			
Well 22-2 Maximum Scenario@ 500 gpm (without fault)		60	70	74	47	56	61	51	60	65	135	144	149	44	53	57			
Well 22-2 @ 332 gpm, Well C3 @ 292 gpm, Well C4 @ 100 gpm, and Well 22-5 @ 180 gpm (without fault)		143	Not Analyzed	165	102	Not Analyzed	126	Not Analyzed	Not Analyzed	Not Analyzed	142	Not Analyzed	166	111	Not Analyzed	136			

Table B-5 Summary of Theis Time-Drawdown Modeling By SMI

Well Name	City C-3	Cobre 22-2	Cobre 22-2	Cobre 22-2	Cobre 22-5
Pumping Rate (gpm)	292	332	500		180
Transmissivity (SMI) (ft ² /day)	1,300	1,300	1,300		73
Storativity (SMI)	1.20E-04	1.20E-04	1.20E-04		1.20E-04
SMI Predicted 1-Day Drawdown (feet) at the well	68	78	179		249
SMI Predicted 1-Year Drawdown (feet) at the well	88	100	233		328
SMI Predicted Radius of 10-foot Drawdown Cone at 1 Year (feet)	22,500	27,000	42,600		30,700
SMI Predicted Radius of 10-foot Drawdown Cone at 5 Years (feet)	49,100	60,400	95,000		69,500
SMI Predicted Radius of 10-foot Drawdown Cone at 10 Years (feet)	70,800	85,200	135,000		98,300

Note: All drawdowns are at the pumped well; all radii in feet from pumped well.

APPENDIX B

IMPACT ANALYSIS OF GROUND WATER WITHDRAWALS RELATED TO EXPANSION OF THE CONTINENTAL MINE, GRANT COUNTY, NEW MEXICO

Prepared for:

**Cobre Mining Company, Inc.
c/o Chino Mines
No.14 Chino Boulevard
Hurley, New Mexico 88043**

Prepared by:

**Shepherd Miller, Inc.
3801 Automation Way, Suite 100
Fort Collins, Colorado 80525**

December 1999



SHEPHERD MILLER

INCORPORATED

APPENDIX B

IMPACT ANALYSIS OF GROUND WATER WITHDRAWALS RELATED TO EXPANSION OF THE CONTINENTAL MINE GRANT COUNTY, NEW MEXICO

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Objective and Purpose	1
1.2 Background - Cron Ranch	1
1.3 Cron Ranch Aquifer Geology	2
2.0 PREVIOUS WORK.....	5
2.1 Hydro-Search Pumping Test Study - Purpose and Scope.....	5
2.2 Hydro-Search Pumping Tests and Well Communication Evaluation.....	5
2.3 Hydro-Search Well Drawdown Modeling	6
2.4 Hydro-Search Additional Cron Ranch Well Recommendation.....	6
2.5 Discussion of Previous Work - Need for an Additional Cron Ranch Well	7
3.0 SMI MODELING AND INTERPRETATION OF 1996 PUMPING TEST RESULTS	8
3.1 Impact Analysis - Interpretation and Results.....	8
3.1.1 Well Communication	8
3.1.1.1 Cobre Cron Ranch Well 22-2	8
3.1.1.2 Cobre Cron Ranch Well 22-5	9
3.1.2 Evaluation of 1996 Pumping Tests and Aquifer Property Estimates.....	9
3.2 Potential Impacts from Pumping of the Cron Ranch Wellfield.....	10
3.2.1 Pumping Scenarios and Drawdown Predictions	11
3.2.2 Discussion of Drawdown Modeling Results at 1 and 10 years.....	12
3.2.2.1 City Well C-3	12

3.2.2.2 City Well CC-44	13
4.0 GENERAL DISCUSSION AND CONCLUSIONS - CRON RANCH	14
4.1 Interpretation of 10-Foot Drawdown Cone of Influence - Cron Ranch.....	15
5.0 WATER AVAILABILITY FROM THE PRINCESS SHAFT AND WELL PW-1 ...	17
5.1 Princess Shaft.....	17
5.2 Water Supply Well PW-1	17
6.0 REFERENCES	19

LIST OF TABLES

Table B-1	Summary of Well Completion Data	B-23
Table B-2	Summary of Water Level Responses Between Wells.....	B-23
Table B-3	Theis Time-Drawdown Modeling - Predicted Results at City Well C-3	B-25
Table B-4	Theis Modeling Predicted Drawdowns.....	B-26
Table B-5	Summary of Theis Time-Drawdown Modeling By SMI.....	B-27

LIST OF FIGURES

Figure B-1	Location Map
Figure B-2	Well Location and Generalized Geologic Map and Cross Section
Figure B-3	Normal Drawdown 1 Year
Figure B-4	Normal Drawdown 5 Years
Figure B-5	Normal Drawdown 10 Years
Figure B-6	500 gpm Drawdown 1 Year
Figure B-7	500 gpm Drawdown 5 Years
Figure B-8	500 gpm Drawdown 10 Years
Figure B-9	112 gpm Drawdown 1 Year
Figure B-10	112 gpm Drawdown 5 Years
Figure B-11	112 gpm Drawdown 10 Years

1.0 INTRODUCTION

1.1 Objective and Purpose

Cobre Mining Company, Inc. (Cobre) requires additional water supplies for continued mining operations and planned expansion at the Continental Mine, located in Grant County, New Mexico (Figure B-1). Cobre currently has ground water rights for 740 acre feet per year (equivalent to approximately 460 gpm) beneath the Cron Ranch, located approximately 10 miles southwest of the Continental Mine site. Shepherd Miller, Inc. (SMI) reviewed 1996 pumping data and aquifer drawdown modeling of existing and proposed Cron Ranch wells (Hydro-Search, 1996) to assess potential impacts to City of Santa Clara water supply wells.

Additional water supplies for the Continental are also available from the Princess shaft and water supply well PW-1. Water supply information available on these two sources presented in reports by Hydro-Search, Inc. (1996) and Schafer and Associates (1996) are reviewed and discussed in Section 5.0 of this report.

This report documents the SMI evaluation of the pumping tests and aquifer modeling results, and addresses hydrogeological issues related to ground water resources in the Princess shaft, water supply well PW-1, and Cron Ranch area. It also satisfies, in part, the deliverable requirement of Task 5.3 specified in *Work Plan, Baseline Characterization of the Hydrogeology, Geology, and Geochemistry of the Proposed Continental Pit Expansion Project*.

1.2 Background - Cron Ranch

The Cron Ranch area is located approximately 3.4 miles southwest of the City of Santa Clara (formerly Central), New Mexico (referred to as City throughout) and approximately 10 miles southwest of the Continental Mine (Figure B-1). Cobre currently operates two water wells (Wells 22-2 and 22-5) in Section 22 on the Cron Ranch (Figure B-2). Water rights associated with the two wells allow Cobre to appropriate up to 740 acre-feet of

ground water per year for mining and milling purposes. Annual withdrawal of 740 acre-feet is equivalent to a continuous flow of 458 gpm. Cobre may transfer an additional 69.9 acre-feet per year of ground water irrigation water rights and withdraw this water from the two existing Cron Ranch wells (Hydro-Search, 1996). Annual withdrawal of 69.9 acre-feet is equivalent to a continuous flow of 43 gpm. Following transfer of the irrigation rights, Cobre mining-use ground water withdrawal rights in Section 22 would total 810 acre-feet per year or 501 gpm of continuous flow.

The City currently operates three municipal water supply wells (wells C-2, C-3, and C-4) located just north of Section 22 (Figure B-2). The City wells are between 450 and 2,700 feet from the existing Cobre Cron Ranch wells. The water rights associated with the City wells are senior to Cobre Cron Ranch water rights. The close proximity of the City wells to the Cobre wells requires evaluation of possible drawdown interference between the wells to ensure that the exercise of the Cobre water rights does not adversely impact the more senior City water rights.

1.3 Cron Ranch Aquifer Geology

Cobre Cron Ranch and City wells produce ground water from the Lake Valley Limestone, the Oswaldo Limestone, and the Gila Conglomerate (Hydro-Search, 1996). Table B-1 presents well completion data, including geologic units within the screened interval for each of the wells. Cross-sections from the Hydro-Search report showing well depths and screened intervals are included in the Attachments to this report.

The Lake Valley Limestone is a Lower Mississippian-age crinoidal (fossiliferous) limestone up to 500 feet thick (Pratt, 1967). Gentle folding and high-angle normal faulting are present in outcrops of Lake Valley Limestone within a mile of the Cron Ranch. One-half mile south of the Cobre Cron Ranch wells, the Lake Valley Limestone has been intruded by the Cameron Creek latite laccolith of probable Tertiary-Cretaceous age. Static water levels and well testing results indicate that the Lake Valley Limestone acts as a semi-confined aquifer and is the primary aquifer in the Cron Ranch area (Hydro-Search, 1996).

Overlying the Lake Valley Limestone is the Pennsylvanian-age Oswaldo Limestone. The Oswaldo Limestone is a micritic (very fine-grained) limestone with shaly partings. Although exposures are incomplete, the Oswaldo Limestone may be over 200 feet thick 1 mile south of the Cron Ranch area. The upper part of the Oswaldo Limestone has been removed by post-Cretaceous and later erosion (Pratt, 1967). In the southern portion of Section 22, the Oswaldo Limestone has been intruded by the Chino Quarry sill and the younger Cameron Creek laccolith. The shaly basal member of the Oswaldo Limestone has been baked by contact with the laccolith. On the Cron Ranch, the Oswaldo Limestone is likely a poor aquifer due to the micritic lithology and presence of shaly partings, although faulting-related fractures may locally enhance porosity and permeability.

Intrusive rocks in the Cron Ranch area include the biotite latite Chino Quarry sill, the hornblende latite Hurley sill, and the Cameron Creek biotite-quartz latite laccolith. The Cameron Creek laccolith is the youngest of these upper Cretaceous to lower Tertiary-age intrusives. The sills and laccolith are approximately conformable with bedding in the Paleozoic and Cretaceous units into which they intrude (Pratt, 1967). The intrusives are truncated by a regional post-Cretaceous/pre-Miocene unconformity. The aquifer characteristics of the intrusives are not known.

The surficial geologic unit at the Cron Ranch is the Plio-Pleistocene age Gila Conglomerate. This unit is a semi-consolidated gravel composed of predominantly angular volcanic rock fragments (Pratt, 1967). At the Cron Ranch, the Gila Conglomerate unconformably overlies older Paleozoic and Mesozoic units, including the Oswaldo and Lake Valley Limestones, which have been truncated by a post-Cretaceous, pre-Miocene angular unconformity (Figure B-2). The Gila Conglomerate is an unconfined aquifer. The Gila Conglomerate thickens to the north across the Cron Ranch area and has been removed by erosion in the south half of Section 22. Due to erosional thinning and probable low permeability due the local presence of volcanic clastics, the Gila Conglomerate may have only limited ground water potential in the Cron Ranch area.

The Lake Valley Limestone was encountered at a depth of approximately 180 feet in well 22-5 and a depth of 407 feet in well 22-2 (Hydro-Search, 1996). Surface exposures of the Lake Valley Limestone in the southern portion of Section 22 have northeast dips of approximately 45 degrees (Pratt, 1967) (Figure B-1). Projecting these outcrops into the subsurface at the observed dips would place the Lake Valley Limestone as deep as 2,600 feet below ground surface (bgs) at well 22-2. However, the cross-section provided in the Hydro-Search report shows the top of the Lake valley Limestone at a depth of 407 feet bgs and the cross-section between wells C-3 and 22-2 indicates northward dip of approximately 2 degrees. The discordance between projected and observed depths to the Lake Valley Limestone is not consistent with the gentle folding described and mapped by Pratt. A normal fault, with a northwest strike and downthrown on the southwest, likely separates well 22-5 from wells 22-2 and C-3. The approximate location of this proposed fault is shown on Figure B-2. Further geologic investigation is needed to verify the exact position of the possible fault.

2.0 PREVIOUS WORK

2.1 Hydro-Search Pumping Test Study - Purpose and Scope

In 1996, Hydro-Search explored the feasibility of obtaining additional ground water from the Cron Ranch for use at the Continental Mine. Hydro-Search also evaluated mine shafts in the vicinity of the Continental Mine as potential water supply sources; these are discussed in Section 5 of this report. The Hydro-Search study included pumping and drawdown data from the existing Cron Ranch wells and the City wells. The study included aquifer modeling to evaluate a proposed additional Cobre Cron Ranch well to be located in the center of Section 22 (Figure B-2). The primary objective of the Hydro-Search modeling was to evaluate the potential impact of proposed Cobre ground water withdrawals on City water supply well C-3. Aquifer geology at the proposed Cron Ranch well location is discussed in the Hydro-Search report (1996). The report does not discuss the drawdown impacts of the proposed or existing Cobre wells on other wells and windmills shown on the Hydro-Search report map. Because the depths, screened intervals, and flow rates of these wells is not known, these wells were not evaluated in this report.

2.2 Hydro-Search Pumping Tests and Well Communication Evaluation

Pumping tests of existing Cobre Cron Ranch water wells 22-2 and 22-5 in 1996 indicate a combined capacity of 512 gallons per minute (gpm). Based on drawdown data collected during a series of short-term pumping tests, Hydro-Search concluded that pumping of Cobre well 22-2 affected water levels in City well C-3 (Figure B-2). The distance between these wells is approximately 450 feet. No responses were observed in City well C-4 and Cobre well 22-5 following 3 hours of pumping from City well C-3. Hydro-Search also concluded that wells 22-5, C-2, and C-4 were not affected during a 6-hour pumping test of well 22-2. Hydro-Search identified slower recovery at City well C-2 due to pumping tests of well C-3. Table B-2 summarizes observed water level responses as

interpreted by Hydro-Search (1996). The Hydro-Search (1996) pumping test and drawdown data are included in Attachment 1 of this report.

2.3 Hydro-Search Well Drawdown Modeling

The Hydro-Search report includes predictions of the 24-hour and 1-year drawdowns at City well C-3 based on Theis equation time-drawdown modeling of pumping at Cobre well 22-2. Hydro-Search concluded that pumping Cobre well 22-2 at 500 gpm would result in 35 feet of drawdown at City well C-3 in 24 hours and in 85 feet of drawdown after 1 year of continuous pumping. Transmissivities, based on matching Theis curves with drawdown measurements, were estimated by Hydro-Search as: 829 ft²/day for well 22-2 and 895 ft²/day for well C-3. The storativity (S) used in the models was 0.00017 for Cobre well 22-2 and 0.00012 for City well C-3 (Hydro-Search, 1996). The modeling assumed the Lake Valley Limestone aquifer was uniform and infinite (i.e., that no low-permeability boundaries exist). Hydro-Search interpreted the lack of drawdown response in Cobre well 22-5 during pumping of City well C-3 and Cobre well 22-2 as indicative of a lack of communication between those wells and Cobre well 22-5. Therefore, Hydro-Search performed no modeling of drawdown impacts caused by Cobre well 22-5.

From these results, Hydro-Search concluded that pumping of the existing Cobre wells would not cause adverse effects on the City wells. Table B-3 summarizes the results of modeling by Hydro-Search and includes well flow rates during pumping tests, drawdown predictions, and aquifer properties estimated by Hydro-Search.

2.4 Hydro-Search Additional Cron Ranch Well Recommendation

Hydro-Search proposed that Cobre drill an additional Cron Ranch well near the center of Section 22. The proposed additional well, to be located 2,750 feet south of City well C-3, was recommended to allow Cobre to maximize ground water withdrawals and minimize impacts on City wells. Hydro-Search performed Theis modeling to predict the drawdown impacts on well C-3 when the proposed Cobre well was pumped at 500 gpm. Hydro-Search states that the proposed well, if installed, would produce 7 feet of drawdown at

City well C-3 in 24 hours, and 54 feet of drawdown after 1 year of continuous pumping, assuming a transmissivity (T) of 895 ft²/day and a storativity (S) of 0.00017 for the proposed well. The modeling assumed the Lake Valley Limestone aquifer was uniform and infinite. Table B-3 includes the Hydro-Search drawdown predictions for the proposed and existing wells.

2.5 Discussion of Previous Work - Need for an Additional Cron Ranch Well

The combined pumping capacity of the existing Cobre Cron Ranch wells 22-2 and 22-5 is 512 gpm based on pumping tests of the wells performed by Hydro-Search in 1996. These current pumping capacities exceed the allowable withdrawal rate of 458 gpm currently granted by Cobre Cron Ranch water rights (prorated from annual withdrawal limits). The pumping capacity also exceeds the 501 gpm allowable rate assuming transfer of irrigation rights to the Cron Ranch wells. Because existing Cron Ranch wells have sufficient capacity to withdraw ground water at allowable rates, an additional well is not needed at this time.

The Hydro-Search report recommended installation of an additional Cobre Cron Ranch well to be located in the center of Section 22. This location is south of existing Cobre wells and approximately 2,750 feet south of the City wells. An SMI review of geologic mapping of the Cron Ranch area by Pratt (1967) indicates that favorable aquifer characteristics are potentially absent at the Hydro-Search proposed location.

Because existing Cron Ranch wells have sufficient capacity to withdraw ground water at allowable rates, and aquifer quality is questionable to the south of the existing wells, installation of an additional well at the proposed location is not recommended by SMI.

3.0 SMI MODELING AND INTERPRETATION OF 1996 PUMPING TEST RESULTS

For this evaluation, SMI utilized a Theis time-drawdown analysis to verify previous aquifer parameter estimates and drawdown modeling of the proposed new well and existing City and Cron Ranch wells. Well water level data presented in the Hydro-Search report were evaluated to identify well drawdowns in response to pumping of adjacent wells. Additional Theis modeling was conducted to evaluate potential well interactions and impacts; modeled pumping rates included the four year average rates and the maximum pumping rate for each well. Modeling to determine the radius of the 10-foot drawdown cone of influence at 1, 5, and 10 years for the existing Cobre wells was also performed by SMI.

3.1 Impact Analysis - Interpretation and Results

3.1.1 Well Communication

3.1.1.1 Cobre Cron Ranch Well 22-2

The lengths of the pumping tests, test interruptions, and data gaps in water level measurements performed for the Hydro-Search study limit the conclusions that can be drawn from the data; however, aquifer communication issues can be assessed from the available information. Data presented in the Hydro-Search report indicate a drawdown response in City well C-3 approximately 4 minutes after the start of pumping from well 22-2. Based on this information, Cobre Cron Ranch well 22-2 is in communication with City well C-3. A connection between Cobre well 22 -2 and City well C-4 (Figure B-2) cannot be evaluated from the time-drawdown data available in the Hydro-Search report.

Data presented in the Hydro-Search report indicate no drawdown response in City well C-2 during the 5.5 hours after the start of pumping from well 22-2. Based on this information, City well C-2 does not appear to be in communication with either City well C-3 or Cobre well 22-2. Communication between wells in relation to aquifer modeling is

discussed further in Section 3.2 of this report. The 1996 Hydro-Search drawdown data are included in Attachment 1 of this report.

3.1.1.2 Cobre Cron Ranch Well 22-5

Pump test data included in the Hydro-Search report indicate that ground water elevations in Cobre well 22-5 were static during pumping of City well C-3 and Cobre well 22-2. A drawdown of 0.07 feet in well 22-5 is expected after 88 minutes of pumping City well

C-3 at a rate of 292 gpm; a drawdown of 0.5 feet in well 22-5 is expected after 1 day of pumping well C-3. The lack of these drawdown responses indicates that Cobre well 22-5 does not effectively communicate with well C-3. Geologic mapping (Pratt, 1967) indicates the potential presence of faulting and/or igneous intrusions between Cobre well 22-5 and wells C-3 and 22-2. Based on the available information, SMI agrees with the Hydro-Search conclusion that pumping of Cobre well 22-5 is not expected to produce drawdown at City well C-3.

Pumping of Cobre well 22-5 is not expected to produce drawdown at City well C-4 located approximately 1,750 feet north of well 22-5. An anticipated drawdown of 0.5 feet was not seen in well C-4 after approximately 5.5 hours of pumping of Cobre well

22-5 on June 4, 1996 at rates of 100 to 180 gpm. Pumping of well C-4 at rates of 150 gpm had no measurable effect on water levels in Cobre well 22-5; approximately 1 foot of drawdown in well 22-5 would be expected after 3 hours of pumping if the wells were in communication. Based on data in the Hydro-Search report, Cobre well 22-5 does not appear to communicate with any of the monitored wells (C-2, C-3, C-4, and 22-2). Table B-2 summarizes the communication between the wells interpreted by SMI. The Hydro-Search drawdown data are included in Attachment 1 of this report.

3.1.2 Evaluation of 1996 Pumping Tests and Aquifer Property Estimates

A storativity (S) of 0.00017 and a transmissivity of 895 ft²/day (Table B-3) were estimated by Hydro-Search based on Theis Time-Drawdown curve matching. An independent analysis of observed drawdowns in Cobre well 22-2 and City well C-3 by

SMI resulted in an estimated transmissivity of 1,300 ft²/day, and a storativity of 0.00012 for each well. A Jacob-Straightline analysis by SMI using observed drawdowns in Cobre well 22-5 resulted in an estimated transmissivity of approximately 73 ft²/day (see Attachments). Wellbore diameters were not provided in the Hydro-Search report and so were assumed to be 6 inches for all wells.

3.2 Potential Impacts from Pumping of the Cron Ranch Wellfield

Three ground water withdrawal scenarios were modeled using the following assumptions:

- Cobre well 22-5 is separated from Cobre well 22-2 and City wells C-2, C-3, and C-4 by a no-flow or low-flow boundary (a fault) as shown on Figures B-2 through B-11. Because a no-flow boundary reduces that area of aquifer contributing ground water to a pumping well, drawdown impacts will be overestimated and therefore more conservative in models that assume the presence of a fault separating well 22-5 from Cobre well 22-2 and City wells C-2, C-3, and C-4.
- Aquifer boundaries (other than the suspected fault separating 22-5 [see Figure B-2]) are assumed to be sufficiently distant from wells C-3 and 22-2 to have no effect on drawdown responses in the wells.
- Neither ground water nor meteorological recharge occurs. Trauger (1972) shows that the water table in this area has only a gentle gradient to the South. Ignoring the gradient implies that there is no ground water recharge. Assuming no recharge is a conservative assumption causing overestimation of the predicted drawdown.
- The transmissivity associated with wells C-3 and 22-2 is 1,300 feet²/day; this value is justified by aquifer pumping test analysis of wells C-3 and 22-2 (see Attachments).
- The transmissivity associated with well 22-5 is 73 feet²/day for areas near well 22-5; this value is supported by aquifer pumping test analysis of the well.
- The storativity is 0.00012; this value is justified by analysis of aquifer pumping tests of wells C-3 and 22-2.
- A connection between Cobre well 22-2 and City well C-4 (Figure B-2) cannot be directly evaluated from the data available in the Hydro-Search report.

Therefore City well C-4 was assumed to communicate with Cobre well 22-2 as a worst case scenario.

3.2.1 Pumping Scenarios and Drawdown Predictions

The normal drawdown pumping scenario model included Cobre wells 22-2 and 22-5 pumping at 332 and 180 gpm, respectively. These pumping rates are the maximum continuous rates achieved during the pumping tests conducted in 1996. The predicted drawdown in City well C-3 for this scenario is 68 feet and 86 feet, for 1 and 10 years, respectively (Table B-4). Assuming communication exists between Cobre well 22-2 and City well C-4, 60 feet of drawdown are predicted in well C-4 at 1 year and 78 feet of drawdown is predicted after 10 years of normal capacity pumping of Cobre well 22-2. Figures B-3, B-4, and B-5 show the drawdown contours at 1, 5, and 10 years for this pumping scenario. The predicted 10-foot drawdown contour is over 5 miles from well 22-2 after 1 year and over 16 miles from well 22-2 after 10 years of pumping at 332 gpm. No drawdown is predicted at City well C-3 or C-4 due to Cobre well 22-5 pumping because of the suspected fault separation (no-flow boundary) as discussed in Section 3.1.1.2.

The second drawdown scenario (Well 22-2 Maximum) considered pumping from well 22-2 at 500 gpm and no pumping of well 22-5. This scenario assumes well 22-2 is capable of producing at the maximum allowable continuous pumping rate granted by current Cron Ranch water rights. Figures B-6, B-7, and B-8 show the predicted drawdowns near City well C-3 from this scenario at 1, 5, and 10 years respectively. Drawdowns of 102 feet and 129 feet are predicted at City well C-3 at 1 and 10 years, respectively. The predicted 1-year and 10-year drawdowns in City well C-4 are 91 feet and 118 feet, respectively. The predicted 10-foot drawdown contour is over 8 miles from well 22-2 after 1 year and over 25.5 miles from well 22-2 after 10 years of pumping at 500 gpm.

The third drawdown scenario (Average Rate) considered pumping from well 22-2 at 332 gpm, the average pumping rate for the Cron Ranch between 1993 and 1996. For this

scenario, all ground water produced from the Cron Ranch is assumed to be pumped from Cobre well 22-2; Cobre well 22-5 is not included in this drawdown scenario. Drawdowns of 14 feet, 16 feet, and 17 feet are predicted at City well C-3 at 1, 5, and 10 years, respectively (Figures B-9, B-10, and B-11). Assuming aquifer communication exists between well 22-2 and City well C-4, the predicted 1-year, 5-year, and 10-year drawdowns in City well C-4 are 10 feet, 13 feet, and 14 feet, respectively (Figures B-9, B-10, and B-11) under this pumping scenario. The predicted 10-foot drawdown contour is approximately 1/3 mile from well 22-2 after 1 year, and approximately 1.3 miles from well 22-2 after 10 years of pumping at the 4-year Cron Ranch average flow of 112 gpm.

3.2.2 Discussion of Drawdown Modeling Results at 1 and 10 years

3.2.2.1 City Well C-3

Pumping City well C-3 alone at its current capacity of 292 gpm is predicted to result in 102 feet of drawdown after 1 year of pumping (Table B-3). Concurrent continuous pumping of wells 22-2 and C-3 at 332 and 292 gpm, respectively, would give an estimated total drawdown of 170 feet in well C-3 after 1 year (Table B-3, 102 + 68 ft). According to well completion information reported by Hydro-Search, the pump in well C-3 is set approximately 443 feet below the static water level. Therefore, over 273 feet additional available drawdown would remain in well C-3 after 1 year of continuous pumping of the two wells. However, continuous pumping of both wells at the current maximum rates will not likely occur. Because the drawdown modeling did not assume ground water or meteorological recharge, the actual drawdown in City well C-3 is likely to be less than the computed 170-foot value. Continuous capacity pumping of City well C-3 and Cobre well 22-2 for 10 years would produce a total drawdown of 204 feet at well C-3. Approximately 240 feet of additional available drawdown would remain in well C-3 after 10 years of continuous pumping of both wells. The lower pumping rates considered in other pumping scenarios (as discussed in Section 3.2.1) would produce lesser drawdown impacts on City well C-3.

3.2.2.2 City Well C-4

Data presented in the Hydro-Search report indicate that no drawdown was observed in City well C-4 during an approximately 21 hour period when Cron Ranch well 22-2 was pumping at a rate of 332 gpm. However, if no physical separation exists between the wells, modeling predicts over 7 feet of drawdown in City well C-4 when well 22-2 is pumping at 332 gpm rate for that period. Therefore, an effective connection between City well C-4 and Cron Ranch well 22-2 may not exist. The Hydro-Search report states that static water is between 70 and 94 feet bgs in City well C-4. The pump is set at 524 feet bgs in the well. Pumping the well at 100 gpm produced an observed drawdown of approximately 19 feet during a 24-hour test on May 31, 1996 (Hydro-Search, 1996). Pumping of Cobre well 22-2 at 332 gpm for 1 year would result in an additional 60 feet of drawdown in well C-4 if these wells are in communication. Under these conditions, 370 feet of additional drawdown would remain available in well C-4 if communication exists (Figure B-3). Pumping of Cobre well 22-2 at 500 gpm continuously for 1 year would leave approximately 340 feet of drawdown available at well C-4 if communication exists (Figure B-6). Modeling a flow rate of 500 gpm from Cobre well 22-2 is of interest if an attempt is made to withdraw all of the Cobre water rights from one well location; however, the 1996 tests on well 22-2 indicate that 332 gpm may be a more sustainable flow rate for this well.

Ten years of continuous pumping of Cobre well 22-2 at 332 gpm would produce 78 feet of drawdown at City well C-4 if communication exists (Figure B-5). After 10 years of continuous pumping, approximately 350 feet of additional available drawdown would remain in well C-4. Pumping of Cobre well 22-2 at 500 gpm would produce 118 feet of drawdown at well C-4 if communication exists (Figure B-8). Approximately 312 feet of additional available drawdown would remain available in well C-4 after 10 years of pumping Cobre well 22-2. The lower pumping rates considered in other pumping scenarios (discussed in Section 3.2.1), would produce lesser drawdown impacts on well C-4. Because no communication can be demonstrated between the wells, pumping of Cron Ranch well 22-5 is not expected to have any impact on City well C-4.

4.0 GENERAL DISCUSSION AND CONCLUSIONS - CRON RANCH

Assuming no recharge, exercise of Cobre water rights by pumping of Cron Ranch well 22-2 is predicted to result in 68 feet of drawdown in City well C-3 after 1 year of continuous pumping and 86 feet of drawdown after 10 years of continuous pumping at the current maximum tested rate of 332 gpm (Table B-4). Pumping 332 gpm from well 22-2 is predicted to result in 60 feet of drawdown in City well C-4 after 1 year of continuous pumping, and 78 feet of drawdown after 10 years in communication between the wells exists. Pumping well 22-2 at 332 gpm is predicted to result in 60 feet of drawdown in City well C-2 after 1 year of continuous pumping and 78 feet of drawdown after 10 years. The presence of a no-flow boundary due to faulting is assumed for these drawdown scenarios.

Known geologic factors that likely limit aquifer extent in the Cron Ranch area include faulting and the presence of intrusives; the presence of possible no-flow and low-permeability boundaries introduces uncertainty into the drawdown predictions. If a no-flow boundary, such as a fault, separates well 22-5 from all other wells, drawdown effects around 22-5 may be increased but the impact on the City well field would be reduced. The fault, however, would also increase drawdown effects from the pumping of well 22-2.

The presence of a no-flow boundary/fault increases the conservatism of these drawdown predictions over models that do not assume a fault between well 22-5 and the City well field. If no fault-separation exists between the City well field and well 22-5, a total drawdown of 55 feet, as compared to 68 feet is predicted in well C-3 after 1 year of continuous pumping of wells 22-2 and 22-5 (Table B-4). A total drawdown of 69 feet is predicted after 10 years of continuous pumping of wells 22-2 and 22-5 assuming no fault separation exists (Table B-4). This prediction compares to a predicted drawdown of 86 feet at well C-3 after 10 years of continuous pumping at the current maximum tested rate assuming well 22-5 is fault-separated from the City well field. These predictions are considered conservative because no meteoric recharge of the aquifer is assumed, and

because continuous pumping at maximum tested rates is not likely. Table B-4 also contains estimated drawdowns for the other City wells for the no fault separation, 1 and 10 year pumping scenarios.

The distance between a well and a no-flow or low flow boundary is a significant factor in determination of drawdown effect. Drawdown effects within a fault block are decreased with increasing distance between pumping wells and the low-flow boundary. A hydrogeologic investigation would be required to determine the extent and locations of these geologic features and incorporate the information into modeling analyses. Investigations of such detail are not warranted at this time because the drawdown predictions performed for this analysis are more conservative than predictions assuming no fault separation between wells, and because existing wells are capable of ground water withdrawals at rates equal to rates granted by Cobre water rights.

4.1 Interpretation of 10-Foot Drawdown Cone of Influence - Cron Ranch

The radius of the 10-foot drawdown contour at 1 year was modeled for Cobre wells 22-2 and 22-5 and for City well C-3. The radius was estimated assuming an infinite aquifer without fault boundaries and assumes no recharge. The modeling results are summarized in Table B-5. The drawdown models utilized the current pumping capabilities of each well (332 gpm for well 22-2, 180 gpm for well 22-5, and 292 gpm for well C-3). Flow rates of 112 gpm and 500 gpm from Cobre well 22-2 were also assessed. The 112 gpm represents the average Cron Ranch ground water production rate between 1993 and 1996, 500 gpm represents the maximum allowable rate granted by Cron Ranch water rights. Aquifer parameters used in the analysis were: (1) a transmissivity of 1,300 ft²/day for wells 22-2 and C-3, and 200 ft²/day for well 22-5 and (2) a storativity of 0.00012 for all three wells. The modeling results indicate that the radial distance to 10-foot drawdown contour is approximately 1.3 miles when well 22-2 is pumped at 112 gpm for 10 years. When pumping well 22-2 at 332 gpm or 500 gpm, the modeling results indicate that the radial distance to the 10-foot drawdown contours are in excess of 4 miles, assuming that the aquifers are uniform and infinite. However, these assumptions are not consistent with

suspected, but unmapped limitations to aquifer continuity including the presence of faults and intrusives. Further definition of these aquifer parameters is needed to more accurately constrain drawdown predictions. Additionally, assuming meteoric recharge of 0.06 feet per year (corresponding to 5 percent of total annual average precipitation), a circular capture zone (radius of influence) of 3.3 miles would provide enough flow to supply wells 22-5, 22-2, and C-3 at the prescribed maximum observed pumping rates. Meteoric recharge of the Cron Ranch area is likely; therefore, this analysis of potential drawdown effects can be considered conservative. Calculations of estimated recharge are included in Attachment 1 of this report.

5.0 WATER AVAILABILITY FROM THE PRINCESS SHAFT AND WELL PW-1

Additional water supplies for continued mining operations and planned expansion at the Cobre Continental mine, Grant county, New Mexico (Figure B-1) are available from the Princess shaft and water supply well PW-1. The following summarizes water supply information available on these two sources.

5.1 Princess Shaft

Cobre currently has access to 50 acre feet per year (equivalent to continuous flow of 30 gpm) from the Princess Shaft, located approximately 7 miles south of the Continental Mine site and approximately one-half mile west-northwest of the Santa Rita Mine pit. Withdrawal of this ground water is however, limited to a maximum withdrawal of 120 acre-feet over 5 years. Therefore, the average annual Princess Shaft pumping rates would be limited to 24 acre-feet per year (approximately 15 gpm) which is approximately one-half of the allowable flow rate.

Ground water flowing from the Princess shaft may be sourced from Paleozoic limestones or fractures in intrusives. The nearby Santa Rita mine pit locally influences the ground water gradient; water levels in the Princess shaft may respond to the water level in the mine pit. A video camera survey of the Princess shaft conducted on April 23, 1996 indicated that the static water level was at 470 feet below the ground surface (bgs). Anecdotal information on the history of the Princess Shaft included in the Water Supply Development Study (Hydro-Search, 1996) indicates that continuous pumping at approximately 250 gpm was sufficient to maintain the water level at the 1,300-foot level of the shaft. Cobre would need to acquire additional water rights to withdraw at this rate.

5.2 Water Supply Well PW-1

Ground water well PW-1 is located 1 mile southwest of the Continental Mine on the northwest flank of Humbolt Mountain. The well is 1,200 feet deep and is screened with 12-inch diameter casing from 500 to 1,200 feet bgs. Prior to pumping tests, the well was

stimulated with explosives set between 500 and 1,140 bgs, and then acidized to open fractures with hydrochloric acid and carbon dioxide pumped under pressure. The well produced at a constant rate of 242 gpm during a 72 hour constant rate discharge test in 1996. The anticipated pumping rate is 200 gpm. The static water level in the well rose approximately 213 feet above the first water bearing zone encountered in the well indicating confining conditions in the aquifers (Schafer and Associates, 1996).

The PW-1 well penetrated over 410 feet of the Lake Valley Limestone and 370 feet of Oswaldo Limestone. The Oswaldo Limestone contained two intrusions in the PW-1 well which may reduce permeability. Schafer and Associates (1996) interpreted water chemistry analyses to indicate that water produced from the PW-1 well was sourced in the Lake Valley Limestone although the screened interval includes the Oswaldo Limestone which may also be a water source in the well.

Schafer and Associates (1996) predicted impacts on nearby water rights from pumping of well PW-1 at a rate of 150 gpm. They identified three springs and 15 wells that have water rights filed with the State Engineer's Office. Because of geologic separation and distance from PW-1, Schafer and Associates concluded that the springs and 11 wells would see no effect from the pumping of PW-1. They analyzed the drawdown impacts in the remaining four wells from PW-1 pumping at 150 gpm, ignoring recharge and suspected geologic barriers. Interpolation of 10 year drawdown predictions from continuous pumping (end of mine life) by Schafer and Associates, indicates that there would be 56, 46, 43, and 47 feet of drawdown at wells 4, 9, 16, and 18, respectively. Using the same type of analyses, drawdown from PW-1 pumping continuously at 200 gpm (the proposed pumping rate), would be 75, 61, 57, and 62 feet for wells 4, 9, 16, and 18, respectively (see Attachments). Wells 4, 9, and 16 are private wells and well 18 is the water supply well for the City of Hanover, New Mexico. No completion information is available for well 4, but the remaining wells would have sufficient water depths within the well and could still produce at their permitted rates without going dry; however, pumping costs at these wells would increase.

6.0 REFERENCES

- Hydro-Search, Inc. 1996. *Water Supply Development Study, Continental Mine, Grant County, New Mexico*. Report prepared for Cobre Mining Company, Inc. October 31.
- Pratt, W.P. 1967. *Geology of the Hurley West Quadrangle, Grant County, New Mexico*. Geological Survey Bulletin 1241-E. Washington, D.C.: U. S. Government Printing Office.
- Schafer and Associates. 1996. *Construction Report, Ground Water Supply Well PW-1 for the Continental Mine, Grant County, New Mexico*. Report prepared for Cobre Mining Company, Inc. January 19, 1996.
- Trauger, F.D. 1972. *Water Resources and General Geology of Grant County, New Mexico*. Hydrologic Report 2, New Mexico State Bureau of Mines and Mineral Resources. Prepared in Cooperation with the U.S. Geological Survey, the New Mexico State Engineers Office, and the Grant County Commission.