

3/4/2010

LUNA LAW GROUP

ATTORNEYS AT LAW

333 UNION STREET
SUITE 300
NASHVILLE, TENNESSEE 37201

A PROFESSIONAL LIMITED LIABILITY COMPANY

TELEPHONE (615) 254-9146
TELECOPIER (615) 254-7123
WWW.LUNALAWNASHVILLE.COM

Jennifer L. Brundige
jbrundige@LunaLawNashville.com

March 4, 2010

VIA EMAIL AND U.S. MAIL

Chairman Sara Kyle
c/o Sharla Dillon
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243-00505

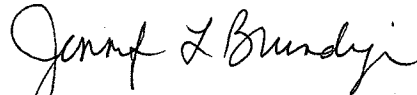
Re: Docket No. 09-00183

Dear Chairman Kyle:

As a follow up to conversations with the CAPD, Chattanooga Gas Company is filing the attached supplemental response to discovery request no. 150 of the CAPD's first set of discovery requests.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,



Jennifer L. Brundige

Enclosures

cc: Gary Hotvedt, Esq.
Pat Murphy
Cynthia Kinser, Esq.
C. Scott Jackson, Esq.
Ryan McGehee, Esq.
T. Jay Warner, Esq.
Henry M. Walker, Esq.
Elizabeth Wade, Esq.
Archie Hickerson

DISCOVERY REQUEST NO. 150:

Please provide supporting workpapers and source documents for each of the following Exhibits: MHS-1, MHS-2, MHS-3, MHS-4, MHS-5, MHS-6, and MHS-7. Provide any associated documentation for the information provided in response to this request and explain all assumptions used. Provide workpapers in electronic spreadsheet form, with all links and formulas intact, source data used, and explain all assumptions and calculations used. To the extent the data does not exist in the exact format requested, please provide it in the format in which it is available and explain why it is not available in the format requested.

Response:

Please see CAPD Discovery request 1 for copies of the above referenced exhibits in electronic format. For Exhibits MHS-1, MHS-2, and MHS-6, please reference MFG-25 for source data. Attachment 150-1 contains workpapers for Exhibits MHS-3 and MHS-4. There are no workpapers associated with Exhibit MHS-5 as they are screenprints from Forecast Pro XE 5, the statistical forecasting software package used to obtain the regressions. Please see Attachment 150-2 for workpapers associated with Exhibit MHS-7.

Revised Response:

Please see Attachment 150-3 for the input data used to run the regressions provided in Exhibit MHS-5.

Vertical

MRD	CGCTRD	SDD55	SDD65	SDD72	SDD80	SalesTemp	SDD55MRD	SDD65MRD	SDD72MRD
Average Cycle billed Days per Month	Trend	SDD 55	SDD 65	SDD 72	SDD 80	Monthly Sales Temp	SDD Per MRD	SDD Per MRD	SDD Per MRD
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1	1	1	1	1	1	1	1	1	1
12	12	12	12	12	12	12	12	12	12
12	12	12	12	12	12	12	12	12	12
33.2	1	318	618	833	1083	41	9.578313	18.614458	25.090361
28.6	2	424	698	897	1125	38.6	14.825175	24.405594	31.363636
29.6	3	113	340	548	786	55	3.817568	11.486486	18.513514
31	4	51	241	454	702	60.8	1.645161	7.774194	14.645161
30.4	5	9	101	240	469	63.4	0.296053	3.322368	7.894737
30.9	6	0	1	30	183	75.1	0	0.032362	0.970874
31.9	7	0	0	5	57	82.3	0	0	0.15674
29.7	8	0	0	0	31	75.7	0	0	0
31.8	9	0	1	14	100	81.1	0	0.031447	0.440252
29.5	10	15	74	186	395	55.4	0.508475	2.508475	6.305085
29.6	11	61	158	319	555	58.3	2.060811	5.337838	10.777027
31.1	12	342	619	823	1060	42.3	10.996785	19.903537	26.463023
28.9	13	650	999	1193	1449	45.8	22.491349	33.529412	41.280277
30.4	14	412	694	897	1128	39.6	13.552632	22.828947	29.506579
31.4	15	189	462	668	903	50	6.019108	14.713376	21.273885
30.1	16	142	383	576	826	57.5	4.717608	12.724252	19.136213
30.9	17	14	71	189	422	64.2	0.453074	2.297735	6.116505
31.9	18	0	7	81	275	71.9	0	0.219436	2.539185
29.8	19	0	0	9	109	79.8	0	0	0.302013
31.9	20	0	0	0	27	75.5	0	0	0
29.4	21	0	1	9	97	81	0	0.034014	0.306122
29.6	22	3	71	201	411	50.1	0.101351	2.398849	6.790541
29.4	23	46	235	428	662	54.8	1.564626	7.993197	14.557823
30.5	24	65	299	505	748	54.3	2.131148	9.803279	16.557377
31.4	25	401	702	922	1174	39.3	12.770701	22.356688	29.363057
29.2	26	274	538	742	974	45.1	9.383562	18.424658	25.410959
30.4	27	264	531	732	967	47.7	8.684211	17.467105	24.078947
30.8	28	85	269	451	691	60.4	2.75974	8.733766	14.642857
29.4	29	4	64	176	372	63.9	0.136054	2.176871	5.986395
30.8	30	0	45	116	283	71.7	0	1.461039	3.766234
30.4	31	0	0	3	63	77.8	0	0	0.098684
29.8	32	0	0	0	10	77.1	0	0	0
30.8	33	0	0	0	31	81.3	0	0	0

Vertical

MRD	CGCTRD	SDD55	SDD65	SDD72	SDD80	SalesTemp	SDD55MRD	SDD65MRD	SDD72MRD
Average Cycle billed Days per Month	Trend	SDD 55	SDD 65	SDD 72	SDD 80	Monthly Sales Temp	SDD Per MRD	SDD Per MRD	SDD Per MRD
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1	1	1	1	1	1	1	1	1	1
12	12	12	12	12	12	12	12	12	12
12	12	12	12	12	12	12	12	12	12
30.7	34	0	12	53	206	58.2	0	0.390879	1.726384
28.7	35	51	187	352	574	55.8	1.777003	6.515679	12.264808
29.8	36	299	582	785	1023	44.1	10.033557	19.530201	26.342282
30.7	37	391	705	925	1176	40.3	12.736156	22.964169	30.130293
29.8	38	536	833	1041	1280	36.8	17.986577	27.95302	34.932886
30.4	39	300	582	788	1023	45.8	9.868421	19.144737	25.921053
31.1	40	66	273	487	736	59.8	2.122186	8.778135	15.659164
30.5	41	19	89	252	491	62.9	0.622951	2.918033	8.262295
30.7	42	0	4	101	321	70	0	0.130293	3.289902
30.4	43	0	0	19	149	74.5	0	0	0.625
29.9	44	0	0	1	70	73.8	0	0	0.033445
30.4	45	0	0	2	58	78.5	0	0	0.065789
30.4	46	2	51	135	349	51.7	0.065789	1.677632	4.440789
29.4	47	18	137	324	559	58	0.612245	4.659864	11.020408
31.3	48	195	452	666	916	51.4	6.230032	14.440895	21.277955
30.5	49	435	735	952	1202	42.8	14.262295	24.098361	31.213115
30.6	50	486	785	999	1244	40.3	15.882353	25.653595	32.647059
29.7	51	295	565	770	1008	47.2	9.93266	19.023569	25.925926
29.7	52	84	297	500	738	55.9	2.828283	10	16.835017
30.2	53	24	140	288	524	61	0.794702	4.635762	9.536424
30.4	54	2	17	42	207	73	0.065789	0.559211	1.381579
30.6	55	0	0	2	91	77.1	0	0	0.065359
30	56	0	0	4	85	73.9	0	0	0.133333
31	57	0	0	14	133	77.2	0	0	0.451613
28.3	58	0	7	67	261	51.9	0	0.24735	2.367491
29.7	59	8	71	209	441	61.8	0.26936	2.390572	7.037037
33.4	60	112	358	558	806	54.5	3.353293	10.718563	16.706587
32.9	61	347	614	808	1031	53.4	10.547112	18.662614	24.559271
30.5	62	361	649	867	1117	44.3	11.836066	21.278689	28.42623
31	63	252	529	724	948	44	8.129032	17.064516	23.354839
30.1	64	173	422	647	908	58	5.747508	14.019934	21.495017
29.5	65	28	162	361	604	57.3	0.949153	5.491525	12.237288
30.8	66	8	58	165	381	66.6	0.25974	1.883117	5.357143

Vertical

MRD	CGCTRD	SDD55	SDD65	SDD72	SDD80	SalesTemp	SDD55MRD	SDD65MRD	SDD72MRD
Average Cycle billed Days per Month	Trend	SDD 55	SDD 65	SDD 72	SDD 80	Monthly Sales Temp	SDD Per MRD	SDD Per MRD	SDD Per MRD
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1	1	1	1	1	1	1	1	1	1
12	12	12	12	12	12	12	12	12	12
12	12	12	12	12	12	12	12	12	12
30.8	67	0	1	17	127	76.1	0	0.032468	0.551948
29.4	68	0	0	0	28	81	0	0	0
30.7	69	0	0	0	37	82.4	0	0	0
30.4	70	0	3.571428571	30.57142857	168.2380952	73.26868496	0	0.117481	1.005639
30.7	71	43.71428571	172.8571429	322.7142857	559.2857143	61.41932501	1.423918	5.630526	10.511866
31.7	72	279.1904762	549.5714286	765.3809524	1019.095238	49.12775466	8.807271	17.336638	24.14451
32.1	73	423.8571429	727.2380952	945.2380952	1194.380952	41.17611489	13.204272	22.655392	29.44667
32	74	322.3333333	631.3333333	855	1110.619048	48.34687052	10.072917	19.729167	26.71875
30.9	75	274.0952381	537.5714286	748.4761905	995.3333333	50.80131363	8.870396	17.397134	24.22253
31.9	76	101.047619	292.7142857	481.5238095	732.3809524	61.98602308	3.167637	9.175996	15.09479
30	77	1.19047619	67.0952381	211.5238095	445	63.18740399	0.039683	2.236508	7.050794
32.2	78	0.571428571	28.04761905	84.57142857	191	78.29664325	0.017746	0.871044	2.626442
30.6	79	0	0	0	0	79.66496045	0	0	0
31	80	0	0	0	0	79.27135299	0	0	0
30.6	81	0	11	75	6.047619048	86.48339599	0.197635	0.197635	0.197635
30.3	82	12.61904762	65.0952381	180.6190476	399.7619048	66.72500788	0.41647	2.148358	5.961025
30.8	83	102.7619048	340.7619048	544.2857143	789.2857143	54.09924488	3.336425	11.063698	17.671614
30.2	84	221.3809524	501.7142857	709.047619	950.5714286	47.40021575	7.330495	16.613056	23.478398
32.5	85	250.8571429	559.1904762	786.5238095	1046.333333	48.81783825	8.149451	17.63663	24.631502
29.6	86	456.5238095	743.4285714	950.7619048	1187.714286	42.63656633	12.554698	21.973134	28.977638
30.3	87	202.9047619	449.1904762	653.1904762	895.3809524	54.89490969	4.828697	12.696841	19.429514
30.8	88	74.71428571	214	371.7619048	616.1904762	62.67024216	2.425788497	2.4318182	4.975780752
29.6	89	18.23809524	79.28571429	191	413.3333333	63.34869432	0.616151866	0.890850722	10.47258486
30.6	90	0	3.714285714	30.9047619	150.2857143	75.52849336	0	0.121382	1.00996
30.8	91	0	0	0	45.33333333	79.40282302	0	0	0
29.5	92	0	0	0	30.52380952	76.98412698	0	0	0
32.1	93	1.428571429	1.428571429	7.952380952	55	90.33364662	0.044503783	0.044503783	0.247737724
30.3	94	0	14	67	222	70.9902239	0.003143171	0.471475719	2.214364294
30.8	95	59	232	416	647	56.84543073	1.91249227	7.546382189	13.50185529
30.2	96	187	439	655	902	50.69194021	6.188899401	14.54746137	21.69977925
32.5	97	348	632	850	1,099	44.30990174	10.71208791	19.43443223	26.15238095
29.6	98	381	674	885	1,127	43.08807135	12.88770914	22.77187902	29.91151866
30.3	99	236	525	741	988	51.04433498	7.790350464	17.34087694	24.46958982

Vertical

MRD	CGCTRD	SDD55	SDD65	SDD72	SDD80	SalesTemp	SDD55MRD	SDD65MRD	SDD72MRD
Average Cycle billed Days per Month	Trend	SDD 55	SDD 65	SDD 72	SDD 80	Monthly Sales Temp	SDD Per MRD	SDD Per MRD	SDD Per MRD
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
1	1	1	1	1	1	1	1	1	1
12	12	12	12	12	12	12	12	12	12
12	12	12	12	12	12	12	12	12	12
30.8	100	61	250	446	688	59.0931253	1.965058751	8.121521336	14.49134199
29.6	101	12	82	233	465	61.29953917	0.402187902	2.757400257	7.858751609
30.6	102	0	8.095238095	55.9047619	189.4761905	74.59640906	0	0.264550265	1.826953003
30.8	103	0	0	2	58	78.74980611	0	0	0.064935065
29.5	104	0	0	0	36	73.36961451	0	0	0
32.1	105	0	0	8	95	88.55263158	0	0	0.249221184
29.4	106	1.714285714	29.23809524	102.8571429	306.047619	67.71050142	0.058309038	0.994493035	3.498542274
30.7	107	99.85714286	332.1904762	523.952381	767.2857143	54.56464787	3.252675663	10.82053668	17.0668528
30.5	108	339.2380952	631.1904762	844.8571429	1089.047619	43.78178456	11.1225605	20.69476971	27.70023419
30.7	109	328.8095238	619.047619	834.047619	1079.761905	43.72637944	10.71040794	20.16441756	27.16767489
30.5	110	425	721	934.6666667	1178.857143	42.24239529	13.93442623	23.63934426	30.64480874
30.2	111	222.8095238	472.9047619	678.2857143	919.8095238	51.56650246	7.377798802	15.65909808	22.45979186
30.3	112	57.42857143	266.8571429	471.7142857	714.3809524	58.43978547	1.89533239	8.807166431	15.56812824
30.1	113	7.142857143	72.38095238	183.9047619	416.3333333	64.35791091	0.237304224	2.404682803	6.109792754
30.5	114	0	10.19047619	44.47619048	192.6666667	74.23887588	0	0.334113973	1.458235753
30.7	115	0	0	2.238095238	40.42857143	80.17527532	0	0	0.072902125
31	116	0	0	1.714285714	38.47619048	78.36281179	0	0	0.055299539

Vertical

	SDD80MRD	Knot5565 Cubil Spline Knot Base65	Knot5572 Spline Knot Base72	Knot5580 Spline Knot Base80	RSAC Avg upc per MRD	CSAC Com Avg UPC per MRD	PGA R1	RPGA R1	CPI	UER	ECON	Nymex
	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Jan-00	1	1	1	1	1	1	1	1	1	1	1	1
Feb-00	12	12	12	12	12	12	12	12	12	12	12	12
Mar-00	12	12	12	12	12	12	12	12	12	12	12	12
Apr-00	32.620482	936	2019	2019	4.093	21.488	0.4843	0.4843	164.1	3.7	0	2.338
May-00	39.335664	691	805	805	5.5347	28.9465	0.4284	0.42658034	164.8	3.4	0	2.583
Jun-00	26.554054	3957	4181	4181	2.92	19.3415	0.4284	0.422224865	166.5	3.5	0	2.56067
Jul-00	22.645161	7898	9585	9585	1.9882	12.1429	0.468	0.46070066	166.7	3	0	2.92567
Aug-00	15.427632	17383	57268	74221	1.1896	9.44054	0.468	0.46070066	166.7	3	0	3.112
Sep-00	5.92233	30751	132818	246890	0.616	7.55232	0.486	0.476134925	167.5	3.7	0	4.23833
Oct-00	1.786834	31905	153342	416319	0.4849	4.94857	0.5712	0.55794	168	3.5	0	4.53833
Nov-00	1.043771	29667	145752	413449	0.4379	6.06668	0.5712	0.55794	168	3.7	0	3.74767
Dec-00	3.144654	31567	148056	360968	0.5184	6.40962	0.5484	0.534079763	168.5	3.3	0	4.64367
Jan-01	13.389831	22137	72084	106140	0.9115	7.99631	0.5484	0.534079763	168.5	3.3	0	5.304
Feb-01	18.75	17593	37087	37087	1.599	9.36211	0.6888	0.670415658	168.6	3.2	0	4.62133
Mar-01	34.083601	1413	2466	2466	4.5109	22.1931	0.7814	0.761447387	168.4	3	0	6.32
Apr-01	50.138408	0	0	0	6.9422	36.4891	0.7814	0.757399527	169.3	3.5	0	9.79
May-01	37.105263	242	242	242	4.7835	32.1788	1.0068	0.970716099	170.2	3.2	0	6.93967
Jun-01	28.757962	805	805	805	3.2008	18.3461	0.7788	0.749127081	170.6	3.6	0	5.09033
Jul-01	27.44186	6106	19757	21703	2.8539	17.2957	0.6671	0.638687923	171.4	3.2	0	5.44233
Aug-01	13.656958	22366	68493	76947	0.9319	8.82584	0.6467	0.618074956	171.7	2.9	0	4.98333
Sep-01	8.62069	29240	104874	165671	0.5563	6.26579	0.622	0.59274216	172.2	4	0	3.922
Oct-01	3.657718	31857	150379	340687	0.5254	6.66078	0.533	0.509704545	171.6	3.8	0	3.34167
Nov-01	0.846395	29762	146220	420788	0.4455	5.54432	0.4987	0.477181749	171.5	4.2	0	3.19033
Dec-01	3.29932	31764	151127	361721	0.5582	5.88393	0.5082	0.484295122	172.2	4	0	2.418
Jan-02	13.885135	19901	60297	91159	0.8497	7.37532	0.5082	0.485705416	171.7	4.1	0	1.888
Feb-02	22.517007	7803	13642	14662	1.8747	10.8836	0.5082	0.487693684	171	4.4	0	3.06
Mar-02	24.52459	4541	6764	6764	2.2741	12.8748	0.4861	0.468402877	170.3	4.3	0	2.539
Apr-02	37.388535	470	641	641	4.8006	22.2357	0.4861	0.467579191	170.6	4.7	0	2.787
May-02	33.356164	1314	1314	1314	4.0278	23.1778	0.4861	0.466485439	171	4.4	0	1.984
Jun-02	31.809211	1808	4115	4115	3.8552	21.7923	0.4192	0.399713655	172.1	4.7	0	2.381
Jul-02	22.435065	10391	26181	33288	2.0555	14.281	0.611	0.579232236	173.1	4.2	0	3.418
Aug-02	12.653061	21105	69805	114987	1.0153	8.47823	0.6358	0.602394804	173.2	4.1	0	3.344
Sep-02	9.188312	24731	103586	198466	0.6616	6.91483	0.6358	0.601353199	173.5	4.9	0	3.349
Oct-02	2.072368	30381	147271	381088	0.484	5.55753	0.6638	0.627474539	173.6	4.5	0	3.386
Nov-02	0.33557	29762	146220	449844	0.4211	5.39437	0.6638	0.626752474	173.8	4.5	0	2.938
Dec-02	1.006494	30762	151094	429653	0.434	5.76231	0.6638	0.625313318	174.2	4	0	3.463

Vertical

	SDD80MRD	Knot5565	Knot5572	Knot5580	RSAC	CSAC	PGA	RPGA	CPI	UER	ECON	Nymex
	Spline Knot Base65	Spline Knot Base72	Spline Knot Base80	Avg upc per MRD	Com Avg UPC per MRD	R1	R1	R1	CPI Urban	Unemployment rate	Recession Dummy	Nxmex Strip
	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Oct-02	6.710098	29299	124367	236905	0.5574	6.4351	0.76	0.713070326	174.9	4	0	3.641
Nov-02	20	12094	31597	39098	1.5705	9.13114	0.76	0.713070326	174.9	4.2	0	4.11
Dec-02	34.328859	1111	3975	4500	4.1675	19.4705	0.76	0.714295533	174.6	4.1	0	4.22
Jan-03	38.306189	0	0	0	4.6809	23.1077	0.76	0.712255854	175.1	4.4	0	5.032
Feb-03	42.95302	0	0	0	5.8638	31.0653	0.76	0.707006803	176.4	4.4	0	5.5
Mar-03	33.651316	215	215	215	3.7263	21.8036	0.8361	0.772980338	177.5	4.3	0	9.282
Apr-03	23.665595	5726	7268	7268	1.8519	12.6967	0.8361	0.773416065	177.4	4.1	0	5.107
May-03	16.098361	20374	44568	51119	1.0637	9.38545	0.8361	0.776040781	176.8	4.2	0	5.358
Jun-03	10.456026	29952	88936	118036	0.6224	7.97512	0.8361	0.774288995	177.2	5.2	0	5.988
Jul-03	4.901316	30429	136352	271562	0.5119	4.79444	0.726	0.671949239	177.3	4.6	0	5.582
Aug-03	2.341137	29857	146068	359421	0.4866	7.02786	0.726	0.669682968	177.9	4.7	0	4.7
Sep-03	1.907895	30331	147334	389356	0.4724	5.88167	0.726	0.668180595	178.3	4.3	0	5.016
Oct-03	11.480263	24714	95819	139511	0.6817	6.23809	0.7174	0.661006962	178.1	4.5	0	4.52
Nov-03	19.013605	13054	21937	21937	1.1616	8.66404	0.7174	0.663241352	177.5	4.4	0	4.486
Dec-03	29.265176	3805	6582	6582	2.9933	14.0784	0.7174	0.663241352	177.5	4	0	4.725
Jan-04	39.409836	1238.1952	1688.862	1688.862	4.8412	24.2497	0.7174	0.660636027	178.2	4.6	0	6.224
Feb-04	40.653595	761.90476	1039.238	1039.238	5.2405	27.5654	0.7174	0.657316248	179.1	4.4	0	5.739
Mar-04	33.939394	1608.6667	2522.19	2522.19	4.0473	23.3493	0.7038	0.641274736	180.1	4.6	0	5.118
Apr-04	24.848485	5818.1429	7620.429	7620.429	2.107	13.3519	0.7038	0.638438806	180.9	4	0	5.365
May-04	17.350993	16099.714	48314.05	53914.1	1.1792	9.17475	0.7038	0.63458011	182	4	0	5.858
Jun-04	6.809211	28579.381	131398.9	224073.8	0.5953	6.35959	0.7038	0.631457518	182.9	4.7	0	6.69
Jul-04	2.973856	30619.048	148795	344180.5	0.4955	6.0032	0.8228	0.739438554	182.6	4.4	0	6.326
Aug-04	2.833333	30000	144811.3	343115.3	0.4712	6.0852	0.8228	0.739438554	182.6	4.5	0	5.998
Sep-04	4.290323	30952.381	142577.1	298935.2	0.4789	5.88617	0.8228	0.73862954	182.8	4.4	0	5.19
Oct-04	9.222615	27998.762	106131.3	150863.2	0.5957	6.60041	0.8228	0.735010778	183.7	4.6	0	5.459
Nov-04	14.848485	21369	54180	57087.29	0.8361	6.85291	0.8228	0.735010778	183.7	4.7	0	7.973
Dec-04	24.131737	4758	13443.71	14535.14	2.1901	10.7608	0.9715	0.869738953	183.3	4.6	0	7.177
Jan-05	31.337386	341.09524	341.0952	341.0952	4.0192	20.346	0.8204	0.733266013	183.6	5.2	0	6.347
Feb-05	36.622951	1145.9524	1145.952	1145.952	4.2188	22.467	0.8204	0.728898971	184.7	5.1	0	6.36
Mar-05	30.580645	32.761905	32.7619	32.7619	3.6458	20.1925	0.765	0.675290479	185.9	4.9	0	6.239
Apr-05	30.166113	5359.7143	6324.238	6324.238	2.6777	16.9561	0.765	0.670242926	187.3	4.7	0	7.128
May-05	20.474576	13136.048	19569.76	20486.14	1.2812	9.28135	0.7593	0.665248959	187.3	4.6	0	7.007
Jun-05	12.37013	23407.619	75370.95	101558.8	0.7987	7.47057	0.7593	0.663477796	187.8	5.2	0	6.262

Vertical

	SDD80MRD	Knot5565	Knot5572	Knot5580	RSAC	CSAC	PGA	RPGA	CPI	UER	ECON	Nymex
	Spline Knot Base65	Cubil Spline Knot Base72	Spline Knot Base80	Spline Knot Base80	Avg upc per MRD	Com Avg UPC per MRD	R1	R1	CPI Urban	Unemployment rate	Recession Dummy	Nxmex Strip
	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Jul-05	4.123377	30776.143	142399.9	315142.5	0.4817	5.56078	0.7593	0.661013952	188.5	12	1	1
Aug-05	0.952381	30854.762	151589.4	435553.5	0.4807	5.84938	0.7593	0.657872914	189.4	12	12	12
Sep-05	1.205212	31669.048	155590	435674.2	0.4504	5.64856	0.9518	0.813491563	192	12	12	12
Oct-05	5.534148	29980.19	135822	270450.7	0.4807	5.65728	1.4278	1.217153143	192.5	4.4	0	0
Nov-05	18.217776	16863.19	51575.33	61104.62	1.147	7.96978	1.42775	1.228598715	190.7	4.4	0	0
Dec-05	32.148115	3714.2857	6220.333	6220.333	3.2418	15.8665	1.21992	1.053071394	190.1	4.3	0	0
Jan-06	37.208129	205.47619	205.4762	205.4762	4.1387	23.0729	1.34138	1.149454089	191.5	4.7	0	0
Feb-06	34.706845	140.2381	140.2381	140.2381	3.5775	20.3387	1.1831	1.012235193	191.8	4.7	0	0
Mar-06	32.211435	2505.2381	4700.619	4700.619	3.3829	20.5685	1.1831	1.00698501	192.8	4.6	0	0
Apr-06	22.958651	18874.571	52155.05	60019.38	1.8873	13.4605	1.06677	0.899111233	194.7	4.4	0	0
May-06	14.833333	10134.905	26773.1	31399.95	0.6997	7.88022	1.06677	0.895432005	195.5	4.3	0	0
Jun-06	5.931677	27538.333	116063.5	238175	0.5373	5.0888	1.2313	1.029324147	196.3	4.9	0	0
Jul-06	0	30571.429	148813.5	382742.3	0.4425	4.77455	1.0891	0.907214772	197.0	4.7	0	0
Aug-06	0.197635	32269.429	147587	364852.2	0.4222	4.6857	1.0891	0.90675449	197.1	4.5	0	0
Sep-06	13.193462	23150.286	73195.81	97.859	0.7486	6.00494	1.0891	0.912774821	195.8	3.9	0	0
Oct-06	25.62616	4623.3333	10523.14	11,629	2.1113	10.0208	0.9348	0.917931741	194.7	4	0	0
Nov-06	31.475875	1443.5714	3187.571	3,188	3.1757	15.2814	0.9348	0.789504272	194.3	4.1	0	0
Dec-06	32.625641	543	543	543	3.3888	15.9415	0.9191	0.787477823	194.8	3.8	0	0
Jan-07	36.982786	418.71429	418.7143	419	5.027	23.115	0.9191	0.773374713	195.0	4.4	0	0
Feb-07	27.422599	3538	7366.857	7,454	3.0541	20.2243	0.9191	0.76970814	196.0	4.3	0	0
Mar-07	2.879394749	14598.238	44183.14	45,015	1.5185	10.3643	0.9191	0.762108447	197.9	4	0	0
Apr-07	5.213213213	21533.81	72091.24	88,701	0.8974	8.25938	0.98094	0.806401497	199.6	3.6	0	0
May-07	4.911298	29831.619	133096.8	286,288	0.4788	5.71528	0.98094	0.801638682	200.804	3.7	0	0
Jun-07	1.471861	30761.905	151133.2	407,211	0.4239	5.39866	0.9510	0.798176541	201.675	3.9	0	0
Jul-07	1.034705408	29571.429	145284.4	413,510	0.4012	5.61808	0.9510	0.774246613	201.571	3.8	0	0
Aug-07	1.713395639	33434.762	160261.7	453,250	0.3985	5.26498	0.9510	0.776287742	201.041	3.6	0	0
Sep-07	7.311016816	27085.333	110068	210600.4	0.4615	6.14445	0.9510	0.773762941	201.697	3.9	0	0
Oct-07	21.01576994	8978.6667	22754.14	32730.52	1.4357	8.7717	0.8906	0.722906953	202.155	4	0	0
Nov-07	29.87385683	3333	3333	3333	2.8587	15.6307	0.8906	0.718351406	203.437	4.4	0	0
Dec-07	33.83003663	82.809524	82.80952	82.80952	3.7191	20.0004	0.9405	0.758584526	203.457	4.3	0	0
Jan-08	38.07110682	303.04762	303.0476	303.0476	4.4647	25.2156	0.9345	0.749864222	204.51	4.6	0	0
Feb-08	32.61669024	732.04762	732.0476	732.0476	3.3675	19.1191	0.9345	0.74785298	205.06	5.3	0	0
Mar-08								0.742005516	206.676	5.4	0	0

SDD80MRD	Knot5565 Cubill	Knot5572 Spline Knot Base 72	Knot5580 Spline Knot Base80	RSAC Avg upc per MRD	CSAC Com Avg UPC per MRD	PGA R1	RPGA R1	CPI	UER	ECON	Nymex
SDD Per MRD	2000	2000	2000	2000	2000	2000	2000	South Urban	Unemployment rate	Recession Dummy	Nxmex Strip
	1	1	1	1	1	1	1	2000	2000	2000	2000
	12	12	12	12	12	12	12	12	12	12	12
	12	12	12	12	12	12	12	12	12	12	12
Apr-08	22.32529375	7744.4762	14900.81	1.6883	11.0702	0.9809	0.773557392	208.085		4.5	0
May-08	15.72393822	19444.286	47192.57	0.8056	7.79048	0.9809	0.766481386	210.006		5.2	0
Jun-08	6.192032369	28985.429	120245.1	0.4815	6.02668	1.2174	0.940898532	212.324		6	0
Jul-08	1.883116883	30652.095	127927.7	0.4201	5.53058	1.2084	0.929651765	213.304		5.9	0
Aug-08	1.220338983	28809.524	141502.3	0.4127	5.71459	1.2084	0.926628224	214		6	0
Sep-08	2.95901558	34494	164637	0.4115	5.69373	1.048	0.808731719	212.65		5.9	0
Oct-08	10.40978296	25391.714	94454.05	0.5538	6.52536	1.048	0.818516192	210.108		6	0
Nov-08	24.99302001	5148.619	16729.81	1.895	10.4405	1.048	0.836629873	205.559		6.2	0
Dec-08	35.70647931	431.28571	431.2857	3.7532	19.5159	0.99296	0.800707299	203.501		7	1
Jan-09	35.17139755	688.33333	688.3333	3.8708	20.3804	0.99296	0.79762265	204.288		8	1
Feb-09	38.65105386	167.52381	167.5238	4.5681	24.5813	0.94011	0.751289555	205.343		8.7	1
Mar-09	30.457269	2477.2381	5141.762	3.1013	19.1176	0.87972	0.700783258	206.001		9	1
Apr-09	23.57692912	14997.571	71517.47	1.7665	11.0151	0.74961	0.595242363	206.657		8.6	1
May-09	13.8316722	24765.871	107598.8	0.8249	7.59782	0.74961	0.593496254	207.265		9.20	1
Jun-09	6.316939891	28715.619	126846.4	0.4894	5.74284	0.74961	0.587605036	209.343		9.8	1
Jul-09	1.316891577	30666.667	148950	0.41	5.11081	0.72621	0.56926222	208.819		9.8	1
Aug-09	1.241167435	31000	150957.3	0.3999	5.1921	0.72621	0.56926222	208.819		9.8	1