COMPETENT PERSON'S REPORT

PREPARED FOR

ROSE PETROLEUM PLC

Estimated Prospective Resources

Attributable to Certain

Leasehold and Royalty Interests

Grand and Emery Counties, Utah

As of

April 30, 2014

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May 19, 2014

Mr. John M. Blair,
Head of New Ventures
Rose Petroleum plc
837 Good Hope Drive
Castle Rock, Colorado 80108

Dear Mr. Blair,

At the request of Rose Petroleum plc (Rose), Ryder Scott Company, L.P. (Ryder Scott) has prepared an evaluation of interests in the Paradox Clastics and Mancos Shale formations located on lease holdings of Rose in Grand and Emery Counties, Utah as of April 30, 2014 (Figure 1). All of the estimated recoverable hydrocarbon volumes in this report are classified as undiscovered Prospective Resources. Additional resources that may exist in other stratigraphic intervals, in both conventional and unconventional plays, on these lease holdings are not included in this report.

This competent person's report has been compiled in accordance with the requirements set forth in the AIM Guidance Note for Mining, Oil and Gas Companies dated March 2006.

This report has been prepared using the standards and definitions of the SPE-PRMS published by the Society of Petroleum Engineers, the American Association of Petroleum Geologists, the World Petroleum Council and the Society of Petroleum Evaluation Engineers in 2007. In PRMS Prospective Resources are defined as "Those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations." Prospective Resources can become Contingent Resources once a well is drilled and a discovery is made. According to PRMS, a discovery requires that the collected data establish the existence of a significant quantity of potentially moveable hydrocarbons. The November 2011 Guidelines for Application of the Petroleum Resources Management System notes that several criteria should be considered before an accumulation can be considered "discovered". The first is a well test, which may require fracture stimulation that produces enough hydrocarbons to surface to be of commercial interest. The second is core and log data that provide convincing evidence of a significant volume of moveable hydrocarbons. The third is identification of a commercially-productive analog with sufficient similarity to the subject reservoir to conclude that the reservoir being evaluated should be able to produce hydrocarbons at comparable rates and recoveries.

The figures in this report are representative examples. All of the maps used by Ryder Scott in this evaluation are included in Appendix III.

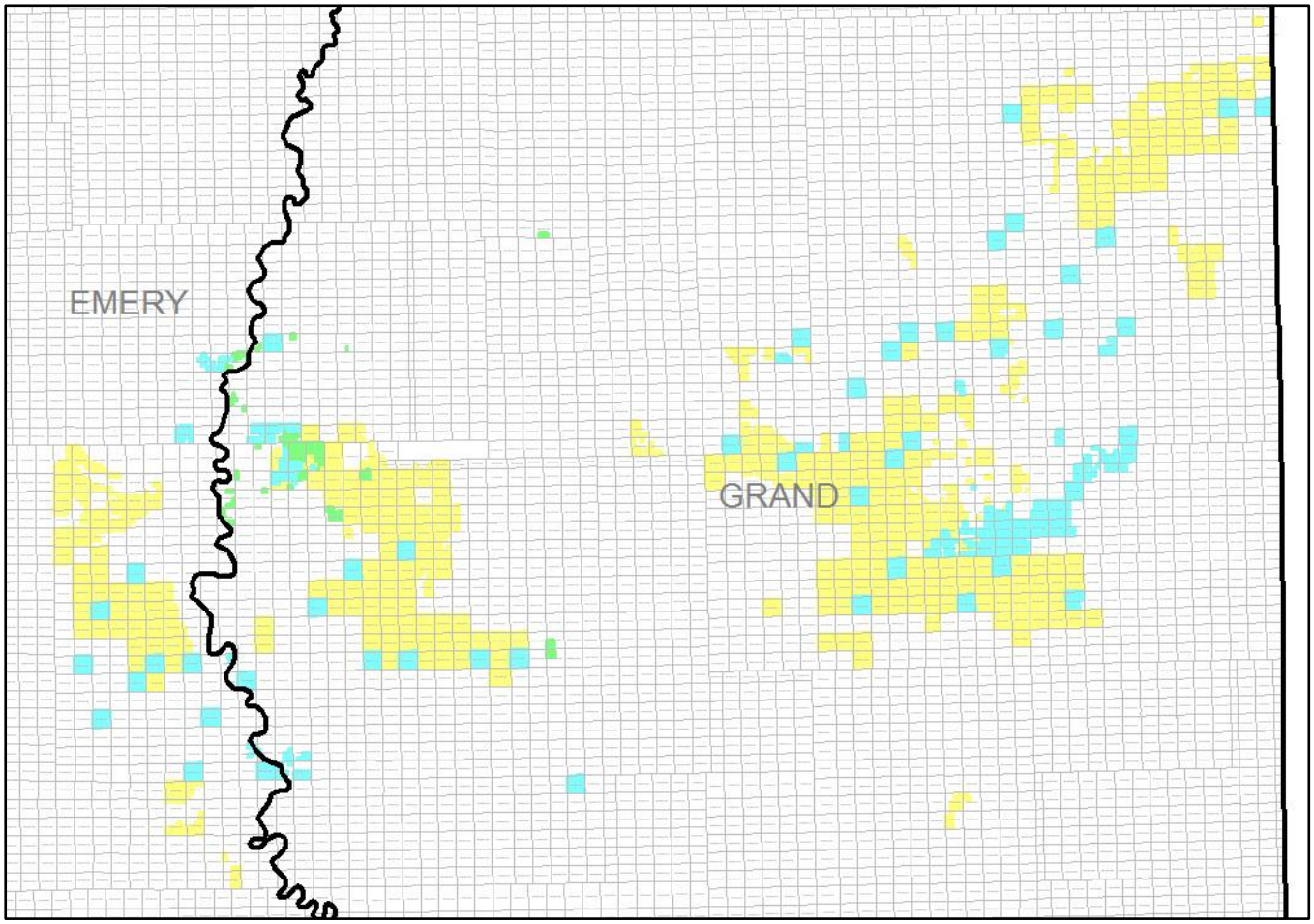

Figure 1: Utah Lease Holdings of Rose evaluated in this report. On all maps Federal leases in yellow, State leases in blue and Fee leases in green. On all maps, small squares are sections, generally 1 square mile (640 acres).

Introduction

Paradox Clastics

The Middle Pennsylvanian Paradox formation in the Paradox Basin of Utah and Colorado contains organic rich source rocks having total organic carbon contents ranging from 0.5 to 11.0 percent. Source rocks in the formation contain kerogen types I, II and III and are known sources of both oil and gas production in the basin both from conventional reservoirs and unconventional accumulations. The Paradox formation is composed of repeating cycles of dolomitic silts, black shale, anhydrite, halite and other salts. Halite and anhydrite are the dominant lithologies but the interbedded silty dolostones and black shales, known locally as the “clastic breaks”, contain source, conventional reservoir and unconventional reservoir intervals in various areas of the basin. The clastic breaks are continuous and highly correlative across the basin. Continuous or “unconventional” accumulations within these clastic breaks are the focus of this evaluation on the acreage within the Paradox Basin.

Oil and gas production has been established from the Paradox Clastics in the Paradox Basin but, as of the date of this report, only the Cane Creek interval within the Cane Creek Unit some 18 to 27 miles south – southeast of the main Rose lease blocks has exhibited the characteristics of a continuous-type accumulation with multiple productive wells over a significant area.

Multiple wells in the area of the Rose leases have produced oil and gas to surface from various Paradox Clastics. The most significant of these is the Delta Federal 28-11 well adjacent to the Rose lease area in Section 28-T22S-R17E which has produced 60.1 MBO and 211.7 MMCF through February, 2014. Between 2006 and 2008, Delta Petroleum attempted to establish production from the Paradox Clastics in multiple, mostly vertical wellbores in their Greentown State area located along the Green River between Rose's two major lease blocks in Emery and Grand Counties. Two wells, Greentown State 32-42 and Greentown State 36-11, produced 1374 barrels and 364 barrels of oil or condensate and an unmeasured amount of gas from various commingled intervals in 2006 – 2007. Well files available on the Utah state website indicate the wells were lost due to casing problems. In 2009, within the confines of the Rose lease block, the Fidelity Gunnison Valley 22-9 well swabbed approximately 84 barrels of crude in 11 hours from perforations across multiple zones in the vertical wellbore. In 1971 and 1981, two wells drilled in the northwest corner of Section 14-T22S-R16E flowed gas to surface at rates between 1.27 and 5.28 MMCF/D from the upper part of the Paradox Clastic section.

There is no significant historical production directly from the leasehold analyzed in this report and for that reason production data from surrounding properties was used to estimate hydrocarbon recoverable volumes. For the Paradox formation the production data comes from other Paradox producers primarily from wells in the Cane Creek Unit. That information was utilized to calibrate the recovery factor distribution and to sense check the results of the volumetric analysis.

It is Ryder Scott's opinion that the information currently available is insufficient to establish the presence of a "discovery" on the acreage being evaluated as defined in the SPE-PRMS. Consequently, all the potentially recoverable volumes from the Paradox Clastics on the Rose lease position are classified as Prospective Resources in this report.

For the purposes of this evaluation, Ryder Scott has divided the Paradox Basin acreage into five "prospect areas" based on the continuity of the lease positions as shown in Figure 2. Conceptually, the five prospect areas are intended to represent independent exploration and appraisal areas; i.e. success in one area does not change the resource classification in the others.

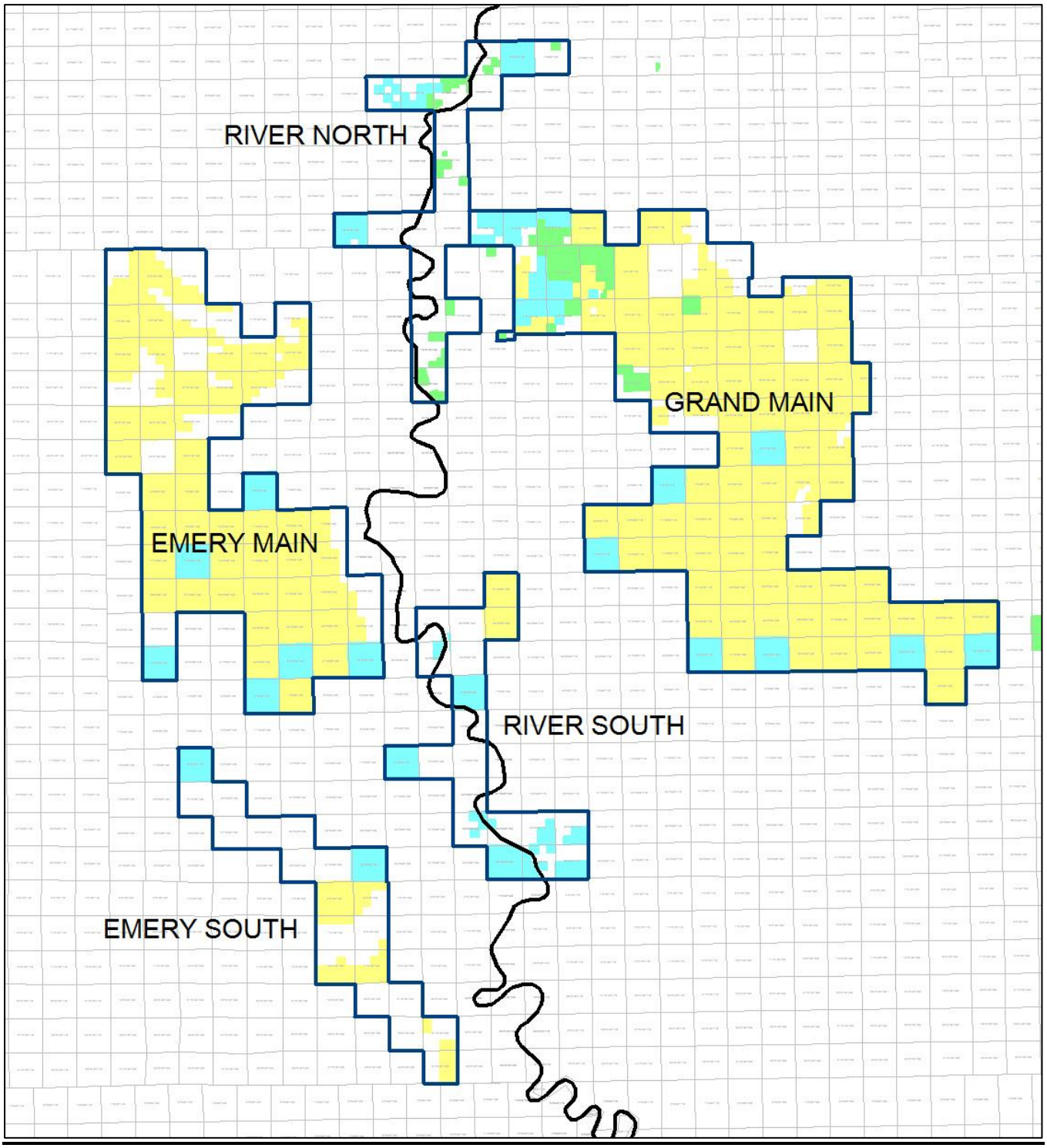

Figure 2: Ryder Scott Paradox Basin Prospect Areas.

Mancos Shale

The Cretaceous Mancos Shale formation is located in the Uinta Basin of Utah. The members that make up the Mancos Shale are composed of interbedded claystone, siltstone, fine- to very-fine grained sandstone, and kerogen-rich shale. The shale units in the formation generally contain type II and III kerogen. Outcrop and sample cuttings show the Mancos Shale source rock have total organic carbon contents that range from less than 1, to 20%. The total organic carbon in the region of investigation ranges from 0.5 to 4.0%, with little deviation from the average of 2.0%.

The Mancos Shale is the source rock for the underlying Dakota Sandstone in the southern Uinta Basin and is thought to be contributing to production from that interval in many wells. In the area being evaluated thermal maturity studies carried out by the Utah Geological Survey indicate potential for the Mancos along the southern rim of the basin to remain in the oil window.

There is little historical production data for the Mancos proper in the area being evaluated but several shallow unstimulated vertical open hole completion wells offsetting the Mancos Flats prospect area in Section 1-T18S-R24E have produced 976 to 8906 barrels of oil from fractured Mancos shale. The most significant Mancos producers in the evaluation area are the Peak Magnum 258-2 well in Section 5-T18S-R24E which has produced 38.0 MBO and the Parker Energy Western Federal 14-5 well in Section 5-T20S-R23E which has produced nearly 120.0 MBO. Of note, the Western Federal well is the only cased completion (non-open hole completion) in the study area as well as the only well that was stimulated (31,000 pounds of sand).

It is Ryder Scott's opinion that the information currently available for the Mancos Shale on the acreage being evaluated is insufficient to establish the presence of a "discovery" on the Rose lease holdings. Consequently, all the potentially recoverable volumes from the Mancos Shale on the Rose lease position are classified as Prospective Resources in this report.

For the purpose of this evaluation, Ryder Scott has divided the Mancos Shale acreage into eleven prospect areas based on the continuity of the lease positions as shown in Figure 3. Conceptually, the eleven prospect areas are intended to represent independent exploration and appraisal areas; i.e. success in one area does not change the resource classification in the others.

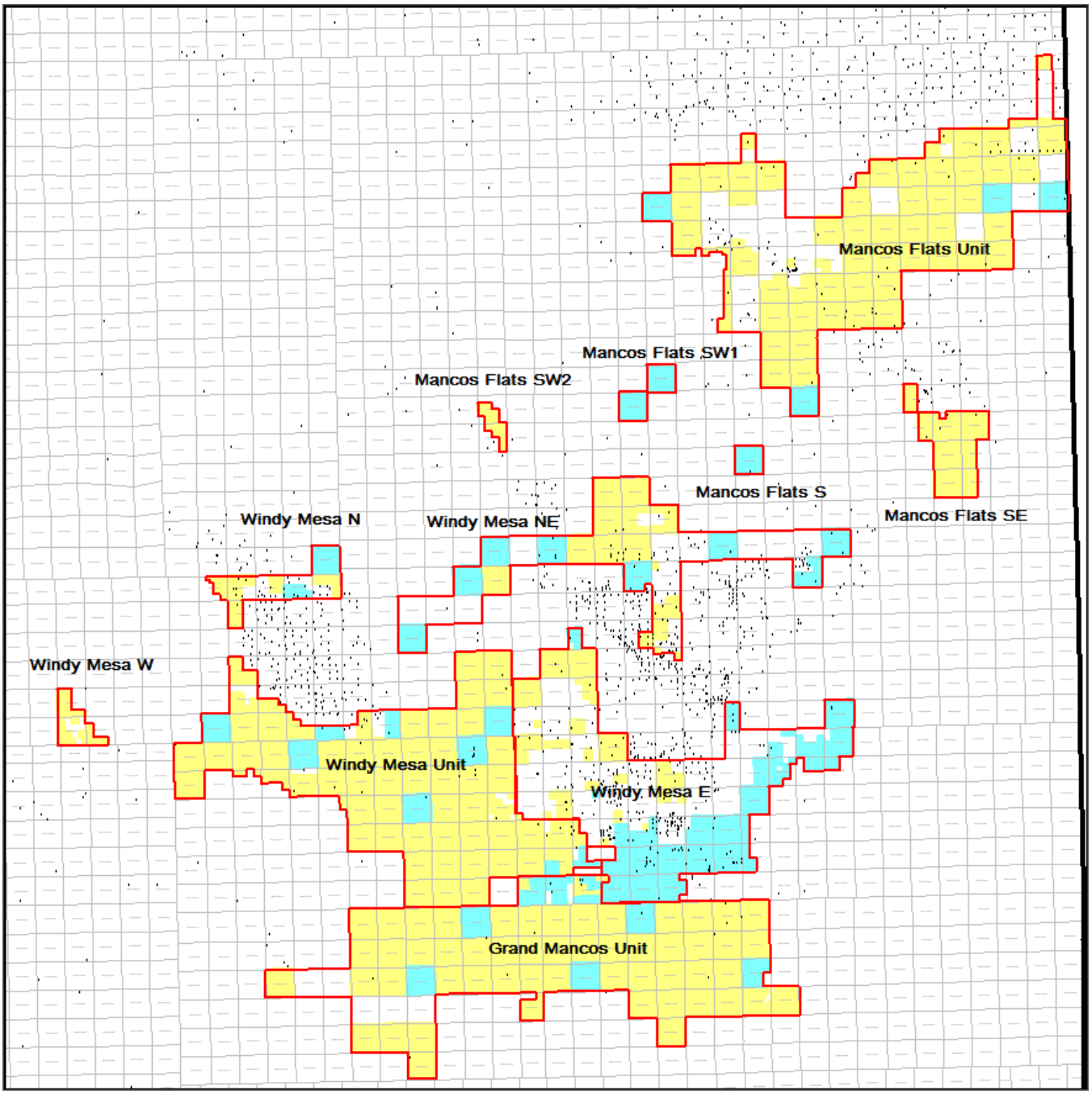

Figure 3: Ryder Scott Mancos Shale Prospect Areas.

Results of Evaluation

The unrisked results of our evaluation are summarized in the following tables. Tables 1 and 2 show the results for the in place volumes in the prospective areas and the prospective resources in the Paradox Formation in the Paradox Basin. Tables 3 and 4 show the results for the in place volumes in the prospective areas and the prospective resources in the Mancos Shale in the Uinta Basin.

The resource volumes for each zone in each prospect area were determined probabilistically. The totals shown for each prospect area are simple arithmetic summations of the Low, Best, High and Mean values. These totals are provided for the reader's convenience only and

are not meant to imply that every prospective formation will be productive in every well in the given prospect area. This fact is indicated in the COS column, as each zone has a different level of risk.

Liquid hydrocarbons are expressed in millions of standard 42 gallon barrels (MMBO), unless noted otherwise. Gas volumes are reported in billions of cubic feet (BCF) at the official temperature and pressure bases of the area evaluated.

Ryder Scott used probabilistic methods to conduct the analysis from a technical standpoint and did not consider the expiration of leases nor have we calculated net sales volumes or income for these plays as is our standard practice for Prospective Resources. These items are addressed in a separate document prepared by an independent consultant.

In keeping with the guidelines of the SPE-PRMS, the P90 volumes of the resource distribution for accumulations classified as Prospective Resources are reported as the Low Estimate; the P50 volumes are reported as the Best Estimate and the P10 volumes are reported as the High Estimate.

All resource volumes presented in this report; Low Estimate, Best Estimate, and High Estimate, are unrisked volumes. These volumes are intended to represent a reasonable range of potentially recoverable volumes should accumulations be discovered and developed.

Ryder Scott has estimated a geologic Chance of Success (COS) for the Prospective Resources in this report. The chance of success describes only the probability that a discovery will be made if a particular prospect is drilled; it does not address whether any particular discovery will be of sufficient volume to support subsequent development or whether that development will occur.

The resource volumes in this report are evaluated as potential unconventional shale oil and shale gas plays. These unconventional plays are by definition “regionally pervasive” and are attributed, in some cases, to very large areas. These volumes may or may not be economically viable or technically feasible to produce. If producible, the productivity across these large areas may vary significantly and significant investment will be required to appraise the lateral continuity of these accumulations. If continuous, the accumulations will require significant additional investment to develop. Ultimate recovery from these accumulations is highly dependent on the development strategy. There is no certainty that development will occur or, if it does occur, that it will be sufficient to achieve the recoveries estimated in this report. This “chance of development” is not evaluated in this report as is our standard practice.

Table 1
Estimated 100% Gross Volumes
Unrisked Undiscovered Original Hydrocarbon in Place Volumes
In the Paradox Formation
Leasehold Interests of
Rose Petroleum plc
As of April 30, 2014

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Grand Main								
5	674	849	1,059	858	1,055	1,393	1,827	1,418
6	633	780	973	791	849	1,110	1,457	1,133
7	744	869	1,008	875	1,090	1,383	1,702	1,393
8	797	934	1,098	943	1,638	2,000	2,406	2,015
9	434	507	582	508	840	1,023	1,238	1,030
10	685	812	962	819	1,707	2,122	2,579	2,134
11	665	776	913	783	1,804	2,190	2,667	2,215
12	797	996	1,231	1,010	2,051	2,649	3,352	2,679
13	586	723	884	731	1,582	2,023	2,510	2,038
14	366	443	525	444	1,073	1,321	1,617	1,334
16	153	186	222	187	514	635	772	641
18	131	157	186	158	474	574	696	580
19	527	645	770	647	2,028	2,512	3,060	2,538
20	304	358	426	361	1,219	1,477	1,750	1,487
CANE CREEK	920	1,121	1,362	1,133	3,883	4,764	5,859	4,824
Totals*	8,416	10,156	12,201	10,248	21,807	27,176	33,492	27,459

*Totals may differ due to rounding

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Emery Main								
5	573	716	879	723	191	285	394	290
6	515	623	770	634	173	250	339	253
7	619	723	850	729	202	289	386	292
8	699	817	963	824	231	324	436	330
9	373	437	512	441	115	169	248	177
10	585	692	822	699	244	346	487	356
11	536	632	741	637	308	412	560	425
12	624	789	981	797	368	570	810	586
13	449	549	679	558	311	462	643	471
14	260	318	383	320	236	329	441	335
16	105	128	155	129	117	156	201	158
18	83	101	121	102	113	147	187	149
Totals	5,421	6,525	7,856	6,593	2,609	3,739	5,132	3,822

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Emery South								
5	73	92	113	92	25	36	50	37
6	66	80	97	81	22	32	44	32
7	79	92	108	93	26	36	49	37
8	88	104	123	105	29	41	55	42
9	48	56	66	56	16	22	30	22
10	77	92	109	93	25	36	49	37
11	75	89	104	89	25	35	47	36
12	91	113	139	114	31	44	61	46
13	66	83	100	83	23	33	44	33
14	42	50	60	51	14	20	27	20
16	18	21	26	22	6	9	11	9
18	15	18	22	18	5	7	10	7
Totals	738	890	1,067	897	247	351	477	358

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
River South								
5	80	101	126	102	27	40	56	41
6	72	89	108	90	24	35	48	36
7	88	102	120	103	29	41	53	41
8	96	112	131	113	41	52	66	53
9	53	62	72	62	17	25	33	25
10	85	101	120	102	28	40	55	41
11	83	98	116	99	27	39	52	39
12	100	125	152	126	34	49	68	50
13	73	90	111	92	25	36	49	37
14	45	53	63	53	20	28	37	28
16	17	21	25	21	10	15	20	15
18	14	16	19	16	12	17	22	17
19	15	19	23	19	16	22	28	22
20	8	10	12	10	10	14	17	14
CANE CREEK	25	31	37	31	35	45	57	45
Totals	854	1,030	1,235	1,039	355	498	661	504

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
River North								
5	41	52	64	52	37	53	70	53
6	34	42	51	42	40	53	69	54
7	40	47	56	48	48	62	79	63
8	44	52	61	52	59	74	93	75
9	22	26	31	26	38	46	57	47
10	36	42	51	43	66	82	101	83
11	35	41	48	41	71	86	105	87
12	41	51	64	52	96	123	157	125
13	30	37	46	37	76	95	121	97
14	19	23	27	23	54	66	81	67
16	8	9	11	10	26	32	39	32
18	7	8	9	8	23	29	35	29
19	27	33	39	33	99	124	151	125
20	16	18	22	18	60	73	88	74
CANE CREEK	47	57	69	58	194	237	292	241
Totals	447	538	649	543	987	1,235	1,538	1,252

Collective Total Table 1	15,876	19,139	23,008	19,320	26,005	32,999	41,300	33,395

Table 2
Estimated 100% Gross Volumes
Unrisked Prospective (Recoverable) Hydrocarbon Resources
In the Paradox Formation
Leasehold Interests of
Rose Petroleum plc
As of April 30, 2014

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Grand Main									
5	22.45	47.32	98.93	55.01	35.86	79.14	167.67	91.13	.36
6	19.66	41.55	86.10	48.44	27.67	59.28	124.40	69.13	.36
7	22.50	47.93	98.76	55.52	35.16	76.42	154.49	88.56	.21
8	25.98	54.42	113.20	62.83	52.91	118.04	238.87	134.65	.30
9	13.79	29.19	59.55	33.69	28.14	58.93	123.55	68.36	.21
10	22.48	48.58	99.79	55.55	59.09	124.03	256.91	144.60	.36
11	21.58	46.70	95.70	53.65	61.95	131.92	270.87	151.48	.36
12	27.41	59.89	122.44	68.60	72.66	157.54	323.26	181.32	.36
13	20.35	43.36	88.97	49.91	55.89	121.17	247.90	139.38	.21
14	12.28	26.57	54.23	30.66	36.54	79.42	164.48	92.08	.42
16	5.34	11.29	23.26	13.08	18.01	38.47	80.13	44.73	.25
18	4.47	9.65	19.93	11.11	16.26	35.56	73.39	40.95	.21
19	18.61	39.82	81.50	46.11	74.08	157.51	319.09	180.96	.56
20	10.40	22.53	46.35	25.97	43.04	92.31	189.84	106.88	.21
CANE CREEK	33.44	71.50	144.10	81.68	139.47	299.16	618.77	347.62	.56
Totals	280.74	600.30	1,232.81	691.81	756.73	1,628.90	3,353.62	1,881.83	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Emery Main									
5	12.34	26.53	56.02	31.13	4.82	10.29	22.85	12.47	.35
6	11.14	23.69	49.57	27.39	4.13	9.16	20.22	10.96	.25
7	12.84	27.07	56.31	31.31	4.96	10.61	23.18	12.49	.18
8	14.49	30.95	64.55	35.50	5.42	12.15	25.78	14.17	.30
9	7.78	16.53	34.13	19.01	2.76	6.25	14.23	7.68	.21
10	12.77	26.83	55.80	31.30	6.06	13.51	29.55	16.01	.30
11	12.28	26.51	54.91	30.29	7.65	17.42	36.60	20.22	.30
12	15.36	33.19	69.29	38.80	10.79	23.64	53.54	28.52	.42
13	11.34	24.35	51.60	28.24	8.57	19.94	46.07	23.94	.29
14	7.11	14.91	30.89	17.28	7.08	15.47	32.78	18.17	.42
16	3.04	6.47	12.99	7.39	3.58	7.66	16.31	9.03	.24
18	2.58	5.44	11.43	6.29	3.59	7.94	16.84	9.20	.18
Totals	123.07	262.47	547.49	303.93	69.41	154.04	337.95	182.86	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Emery South									
5	1.53	3.37	7.06	3.91	0.58	1.34	2.92	1.57	.25
6	1.41	2.99	6.26	3.44	0.52	1.20	2.51	1.37	.25
7	1.65	3.43	7.09	3.94	0.60	1.34	2.92	1.58	.18
8	1.83	3.83	7.95	4.46	0.69	1.49	3.33	1.79	.30
9	0.97	2.08	4.34	2.40	0.37	0.81	1.69	0.95	.21
10	1.61	3.46	6.93	3.96	0.58	1.34	2.92	1.59	.30
11	1.58	3.32	6.77	3.81	0.59	1.33	2.81	1.52	.30
12	1.99	4.23	8.80	4.88	0.72	1.70	3.62	1.96	.25
13	1.41	3.07	6.44	3.56	0.54	1.16	2.57	1.42	.18
14	0.88	1.91	3.86	2.17	0.33	0.73	1.62	0.87	.30
16	0.38	0.81	1.67	0.93	0.15	0.31	0.68	0.37	.21
18	0.33	0.69	1.42	0.79	0.12	0.27	0.58	0.32	.21
Totals	15.57	33.19	68.59	38.25	5.79	13.02	28.17	15.31	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
River South									
5	1.72	3.75	7.94	4.35	0.63	1.45	3.29	1.75	.30
6	1.55	3.29	6.78	3.83	0.60	1.25	2.90	1.53	.30
7	1.80	3.78	7.82	4.37	0.67	1.50	3.15	1.75	.21
8	2.03	4.33	9.01	4.95	0.94	1.99	4.12	2.31	.30
9	1.09	2.32	4.79	2.66	0.40	0.90	2.01	1.06	.21
10	1.74	3.79	7.94	4.38	0.64	1.52	3.23	1.76	.30
11	1.72	3.67	7.58	4.23	0.63	1.43	3.13	1.69	.30
12	2.19	4.73	9.64	5.41	0.81	1.85	3.90	2.16	.36
13	1.57	3.39	6.92	3.93	0.59	1.33	2.90	1.57	.21
14	0.98	2.07	4.40	2.43	0.50	1.07	2.44	1.29	.42
16	0.42	0.89	1.84	1.03	0.26	0.62	1.34	0.74	.21
18	0.35	0.76	1.56	0.88	0.35	0.78	1.69	0.91	.21
19	0.44	0.92	1.93	1.08	0.47	1.02	2.24	1.23	.56
20	0.25	0.52	1.08	0.60	0.33	0.71	1.47	0.82	.21
CANE CREEK	0.77	1.64	3.47	1.91	1.08	2.41	5.11	2.82	.56
Totals	18.62	39.85	82.70	46.04	8.90	19.83	42.92	23.39	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
River North									
5	1.15	2.44	5.06	2.80	1.07	2.41	5.23	2.84	.36
6	0.98	2.13	4.34	2.47	1.22	2.70	5.67	3.15	.36
7	1.18	2.45	4.98	2.83	1.48	3.24	6.61	3.72	.21
8	1.30	2.76	5.70	3.20	1.85	3.95	8.26	4.58	.30
9	0.70	1.50	3.09	1.72	1.24	2.65	5.59	3.08	.21
10	1.15	2.49	5.18	2.83	2.19	4.78	9.92	5.48	.36
11	1.10	2.38	4.88	2.73	2.35	4.94	10.40	5.82	.36
12	1.39	3.01	6.22	3.50	3.34	7.23	15.12	8.44	.36
13	1.02	2.17	4.54	2.55	2.59	5.71	11.85	6.58	.21
14	0.64	1.36	2.78	1.56	1.87	3.97	8.23	4.62	.56
16	0.27	0.58	1.21	0.67	0.92	1.95	4.12	2.26	.25
18	0.23	0.49	1.03	0.57	0.82	1.76	3.64	2.05	.21
19	0.93	2.04	4.16	2.35	3.55	7.68	16.09	8.90	.36
20	0.54	1.16	2.36	1.32	2.16	4.55	9.39	5.27	.21
CANE CREEK	1.69	3.60	7.38	4.16	6.95	15.15	30.77	17.28	.49
Totals	14.27	30.56	62.91	35.26	33.60	72.67	150.89	84.07	

Collective Total Table 2	452.27	966.37	1,994.50	1,115.29	874.43	1,888.46	3,913.55	2,187.46

TABLE 3
Estimated 100% Gross Volumes
Unrisked Undiscovered Original Hydrocarbons In Place
In the Mancos Shale
Leasehold Interests of
Rose Petroleum plc
As of April 30, 2014

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Mancos Flats								
M-400	1,489	1,765	2,070	1,775	8,264	10,542	13,042	10,640
M-300	802	966	1,121	968	4,474	5,749	7,094	5,807
M-200	802	946	1,096	948	4,448	5,634	6,997	5,687
M-150	286	344	405	345	1,626	2,026	2,581	2,066
M-100	333	409	493	412	1,878	2,449	3,090	2,473
Totals	3,712	4,430	5,185	4,448	20,690	26,400	32,804	26,673

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Windy Mesa								
M-400	666	790	921	792	3,744	4,684	5,829	4,750
M-300	644	762	906	770	3,634	4,565	5,669	4,614
M-200	763	883	1,046	895	4,199	5,284	6,690	5,369
M-150	485	584	695	588	2,667	3,514	4,420	3,532
M-100	530	651	786	654	3,011	3,856	4,900	3,924
Totals	3,088	3,670	4,354	3,699	17,255	21,903	27,508	22,189

Prospect/ Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Grand Mancos								
M-400	2,085	2,450	2,868	2,465	11,505	14,673	18,133	14,797
M-300	1,020	1,210	1,427	1,220	5,645	7,232	9,229	7,317
M-200	919	1,098	1,271	1,096	5,138	6,519	8,123	6,573
M-150	471	573	686	579	2,641	3,436	4,328	3,475
M-100	523	636	763	640	2,941	3,779	4,810	3,841
Totals	5,018	5,967	7,015	6,000	27,870	35,639	44,623	36,003

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Mancos Flats S								
M-400	15	18	20	18	82	105	129	106
M-300	18	22	26	22	105	129	163	132
M-200	17	21	24	21	98	123	155	125
M-150	7	9	10	9	41	52	64	53
M-100	8	9	11	10	44	56	72	57
Totals	65	79	91	80	370	465	583	473

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Mancos Flats SE								
M-400	44	53	62	53	247	315	386	317
M-300	8	9	11	9	44	55	69	56
M-200	27	31	37	32	149	188	234	189
M-150	20	24	28	24	110	142	178	144
M-100	19	23	28	23	106	138	175	140
Totals	118	140	166	141	656	838	1,042	846

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Mancos Flats SW1								
M-400	74	87	102	87	412	515	640	523
M-300	36	42	49	42	197	252	315	254
M-200	31	37	43	37	174	219	271	221
M-150	12	15	18	15	71	90	114	91
M-100	14	18	21	18	81	106	135	107
Totals	167	199	233	199	935	1,182	1,475	1,196

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Mancos Flats SW2								
M-400	29	34	40	34	162	204	251	206
M-300	14	17	20	17	82	103	129	104
M-200	12	14	17	14	68	85	107	86
M-150	5	6	8	7	30	39	49	39
M-100	7	8	10	8	37	48	61	48
Totals	67	79	95	80	379	479	597	483

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Windy Mesa NE								
M-400	462	545	644	551	2,567	3,239	4,134	3,305
M-300	252	299	350	300	1,414	1,782	2,208	1,801
M-200	229	270	316	271	1,287	1,619	1,985	1,626
M-150	125	149	180	150	685	886	1,129	903
M-100	129	159	190	159	734	943	1,200	955
Totals	1,197	1,422	1,680	1,431	6,687	8,469	10,656	8,590

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Windy Mesa N								
M-400	126	150	176	150	711	892	1,107	902
M-300	65	77	90	78	364	460	579	467
M-200	55	66	76	66	307	390	490	394
M-150	29	35	42	35	162	210	262	212
M-100	35	43	53	44	200	260	335	264
Totals	310	371	437	373	1,744	2,212	2,773	2,239

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Windy Mesa W								
M-400	58	68	80	69	319	410	513	412
M-300	28	33	39	33	155	195	250	199
M-200	24	29	34	29	134	170	213	173
M-150	12	14	17	14	66	84	109	86
M-100	14	17	21	18	79	103	133	105
Totals	136	161	191	163	753	962	1,218	975

Prospect / Formation	OOIP - MMBO				OGIP – BCF			
	P90	P50	P10	MEAN	P90	P50	P10	MEAN
Windy Mesa E								
M-400	211	247	292	250	1,171	1,478	1,855	1,499
M-300	137	162	192	164	761	970	1,222	982
M-200	142	167	195	168	793	997	1,230	1,007
M-150	116	140	167	141	653	828	1,071	844
M-100	61	75	90	75	342	443	574	452
Totals	667	791	936	798	3,720	4,716	5,952	4,784

Collective Total Table 3	**14,545**	**17,309**	**20,383**	**17,412**	**81,059**	**103,265**	**129,231**	**104,451**

TABLE 4
Estimated 100% Gross Volumes
Unrisked Prospective (Recoverable) Hydrocarbon Resources
In the Mancos Shale
Leasehold Interests of
Rose Petroleum plc
As of April 30, 2014

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Mancos Flats									
M-400	17.06	49.92	138.47	67.84	105.56	301.50	821.48	406.70	.3
M-300	9.17	26.94	77.68	36.95	52.93	158.50	457.34	222.54	.3
M-200	8.99	26.11	75.48	36.33	52.49	158.81	451.26	217.42	.3
M-150	3.30	9.61	27.19	13.19	20.28	58.51	160.27	78.59	.3
M-100	4.04	11.59	33.48	15.79	23.43	68.76	201.23	94.10	.3
Totals	42.56	124.17	352.30	170.10	254.69	746.08	2,091.58	1,019.35	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Windy Mesa									
M-400	7.83	21.78	61.39	30.16	46.76	131.04	372.30	180.19	.3
M-300	7.71	21.65	61.29	29.51	44.94	129.60	384.12	176.94	.3
M-200	8.62	25.11	70.75	34.29	52.59	151.16	428.47	204.40	.3
M-150	5.47	16.59	46.33	22.65	33.07	96.68	276.93	135.74	.3
M-100	6.50	18.24	51.72	25.06	36.09	107.35	312.45	150.97	.3
Totals	36.13	103.37	291.48	141.67	213.45	615.83	1,774.27	848.24	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Grand Mancos									
M-400	23.17	69.54	196.00	94.37	136.93	410.02	1,162.91	567.95	.3
M-300	11.90	33.84	98.55	46.71	69.46	204.88	579.48	281.42	.3
M-200	10.78	30.51	85.96	41.79	62.56	180.13	520.84	251.73	.3
M-150	5.68	15.92	44.54	22.04	33.76	94.34	268.85	131.77	.3
M-100	6.08	17.87	50.04	24.47	37.44	108.33	309.02	147.35	.3
Totals	57.61	167.68	475.09	229.38	340.15	997.70	2,841.10	1380.22	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Mancos Flats S									
M-400	0.17	0.49	1.40	0.67	1.02	2.95	8.36	4.05	.3
M-300	0.21	0.61	1.80	0.84	1.24	3.59	10.59	5.06	.3
M-200	0.21	0.59	1.67	0.80	1.21	3.46	9.78	4.80	.3
M-150	0.08	0.24	0.69	0.33	0.49	1.46	4.19	2.00	.3
M-100	0.09	0.27	0.75	0.37	0.53	1.59	4.50	2.18	.3
Totals	0.76	2.20	6.31	3.01	4.49	13.05	37.42	18.09	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Mancos Flats SE									
M-400	0.51	1.47	4.23	2.02	3.15	9.02	24.79	12.09	.3
M-300	0.09	0.25	0.72	0.36	0.53	1.53	4.28	2.15	.3
M-200	0.30	0.89	2.49	1.21	1.84	5.22	15.46	7.24	.3
M-150	0.23	0.66	1.86	0.91	1.35	4.01	11.20	5.50	.3
M-100	0.23	0.64	1.86	0.88	1.38	3.83	10.95	5.30	.3
Totals	1.36	3.91	11.16	5.38	8.25	23.61	66.68	32.28	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Mancos Flats SW1									
M-400	0.83	2.42	6.87	3.35	4.90	14.57	41.20	20.13	.3
M-300	0.41	1.18	3.33	1.61	2.40	7.01	19.79	9.64	.3
M-200	0.37	1.03	2.91	1.41	2.13	6.13	17.68	8.44	.3
M-150	0.14	0.43	1.19	0.58	0.85	2.55	7.31	3.46	.3
M-100	0.17	0.51	1.39	0.68	1.01	2.97	8.64	4.09	.3
Totals	1.92	5.57	15.69	7.63	11.29	33.23	94.62	45.76	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Mancos Flats SW2									
M-400	0.34	0.96	2.79	1.32	2.04	5.71	16.34	7.91	.3
M-300	0.17	0.50	1.35	0.66	0.99	2.90	8.15	3.99	.3
M-200	0.14	0.40	1.16	0.55	0.82	2.42	7.16	3.30	.3
M-150	0.06	0.18	0.51	0.25	0.37	1.07	3.08	1.49	.3
M-100	0.08	0.22	0.61	0.31	0.46	1.32	3.76	1.85	.3
Totals	0.79	2.26	6.42	3.09	4.68	13.42	38.49	18.54	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Windy Mesa NE									
M-400	5.39	15.68	43.17	21.06	31.08	93.68	272.34	126.82	.3
M-300	2.99	8.52	23.15	11.53	17.42	49.95	142.64	69.27	.3
M-200	2.65	7.57	21.76	10.40	15.76	45.58	131.30	62.67	.3
M-150	1.48	4.18	11.64	5.74	8.84	24.77	70.78	34.42	.3
M-100	1.56	4.34	13.04	6.11	9.16	26.17	76.92	36.74	.3
Totals	14.07	40.29	112.76	54.84	82.26	240.15	693.98	329.92	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Windy Mesa N									
M-400	1.47	4.14	11.62	5.77	8.59	25.11	72.05	34.61	.3
M-300	0.75	2.18	6.14	2.98	4.24	13.11	36.43	17.91	.3
M-200	0.63	1.81	5.14	2.51	3.80	10.90	31.55	15.10	.3
M-150	0.35	1.00	2.79	1.35	2.03	5.87	16.52	8.15	.3
M-100	0.43	1.22	3.29	1.68	2.52	7.27	20.95	10.05	.3
Totals	3.63	10.35	28.98	14.29	21.18	62.26	177.50	85.82	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Windy Mesa W									
M-400	0.69	1.92	5.40	2.63	4.04	11.44	33.13	15.77	.3
M-300	0.32	0.94	2.62	1.26	1.91	5.53	15.93	7.56	.3
M-200	0.28	0.80	2.32	1.10	1.65	4.80	14.07	6.67	.3
M-150	0.14	0.40	1.12	0.55	0.85	2.38	6.59	3.27	.3
M-100	0.17	0.49	1.41	0.67	0.99	2.85	8.36	4.06	.3
Totals	1.60	4.55	12.87	6.21	9.44	27.00	78.08	37.33	

Prospect / Formation	EUR Oil/Condensate - MMBO				EUR Gas – BCF				COS
	Low	Best	High	MEAN	Low	Best	High	MEAN	
Windy Mesa E									
M-400	2.48	6.98	19.36	9.50	14.41	40.42	115.40	56.87	.3
M-300	1.59	4.50	13.04	6.26	9.07	26.99	80.56	37.56	.3
M-200	1.63	4.58	13.63	6.44	9.54	27.87	80.51	38.67	.3
M-150	1.34	3.99	11.14	5.42	7.92	23.23	67.46	32.72	.3
M-100	0.73	2.09	5.88	2.89	4.31	12.55	35.34	17.35	.3
Totals	7.77	22.14	63.05	30.51	45.25	131.06	379.27	183.17	

Collective Total Table 4	168.20	486.49	1,376.11	666.11	995.13	2,903.39	8,272.99	3,998.72

Resource Estimates

The resource estimates presented herein have been prepared in accordance with the standards and definitions of the Petroleum Resources Management System (SPE-PRMS) published jointly by the Society of Petroleum Engineers, the American Association of Petroleum Geologists, the World Petroleum Council and the Society of Petroleum Evaluation Engineers in 2007. In the Guidelines for Application of the Petroleum Management System published in November, 2011; "*Petroleum is defined as a naturally occurring mixture consisting predominantly of hydrocarbons in the gaseous, liquid or solid phase*". The term "*resources"* encompasses "*all quantities of petroleum (recoverable and unrecoverable) naturally occurring on or within the Earth's crust, discovered and undiscovered, plus those quantities already produced."*

Undiscovered hydrocarbon resource volumes are presented in various tables in this report as "*Unrisked Undiscovered Hydrocarbons Initially-in-Place".* Prospective Resources are presented as "*Unrisked Prospective (Recoverable) Hydrocarbon Resources".* Prospective Resources have both an associated chance of discovery and a chance of development. The term *"unrisked"* means that no risk that a discovery will be made nor that a discovery will be sufficient to support development has been incorporated into the hydrocarbon volume estimates.

A copy of the Petroleum Resources Classification and Definitions from the 2007 SPE-PRMS is included in this report as Appendix 1.

The Hydrocarbons-Initially-in-Place volumes in this report have been estimated probabilistically. The potential ranges for each parameter in the standard volumetric equation for hydrocarbons in place have been estimated from available log and core information, regional information, mapping and / or information in Ryder Scott's files. The parameter ranges, distribution types and resulting resource distributions are discussed in the report and included in the Appendix section of this report.

Properties Included in this Report

Rose has a 75 percent working interest in all Federal and State leases which, in total, account for 98.06 percent of the total acreage position. Rose's net revenue interest in the Federal and State leases is 79 percent of their working interest or 59.25 percent net. The remaining 1.94 percent of the leases are Fee acreage. Rose's average working interest in the Fee leases is 53.2034 percent. The overall average Rose working interest therefore exceeds 74 percent. The Prospective Resources evaluated in this report are located in multiple leases in Grand and Emery Counties, Utah in which Rose has a working interest as shown in the table below:

Table 5: Summary of Lease Terms

Lessor	Total # Leases	Rose WI% / NRI%	Gross Acres	Operator	Term
Federal	144	75.00 / 59.25	182,663.08	Rose	10 years
State	66	75.00 / 59.25	44,120.25	Rose	10 years
Fee	29	53.20 / 42.03	3,818.41	Rose	Varies

Four federal units have been formed on the federal leases as shown in the table below:

Federal Unit	*Expiration Year	Gross Acres	Net Acres
Gunnison Valley	2016	64,482.97	53,662.97
Mancos Flats	2019	39,989.45	25,638.98
Windy Mesa	2018	39,558.74	33,717.20
Grand Mancos	2019	31,820.73	31,604.23

*All lease expirations currently suspended by terms of Units. Primary Term extended once production established then through life of production.

Regional Geology

The Rose leases are located in Grand and Emery Counties, Utah which are separated by the Green River. In Emery County and the western part of Grand County, the primary formation of interest is the Middle Pennsylvanian Paradox formation near the northern limit of the Paradox Basin as shown in Figure 4. Further east in Grand County, the primary formation of interest is the Cretaceous Mancos Shale along the southern limit of the Uinta Basin.

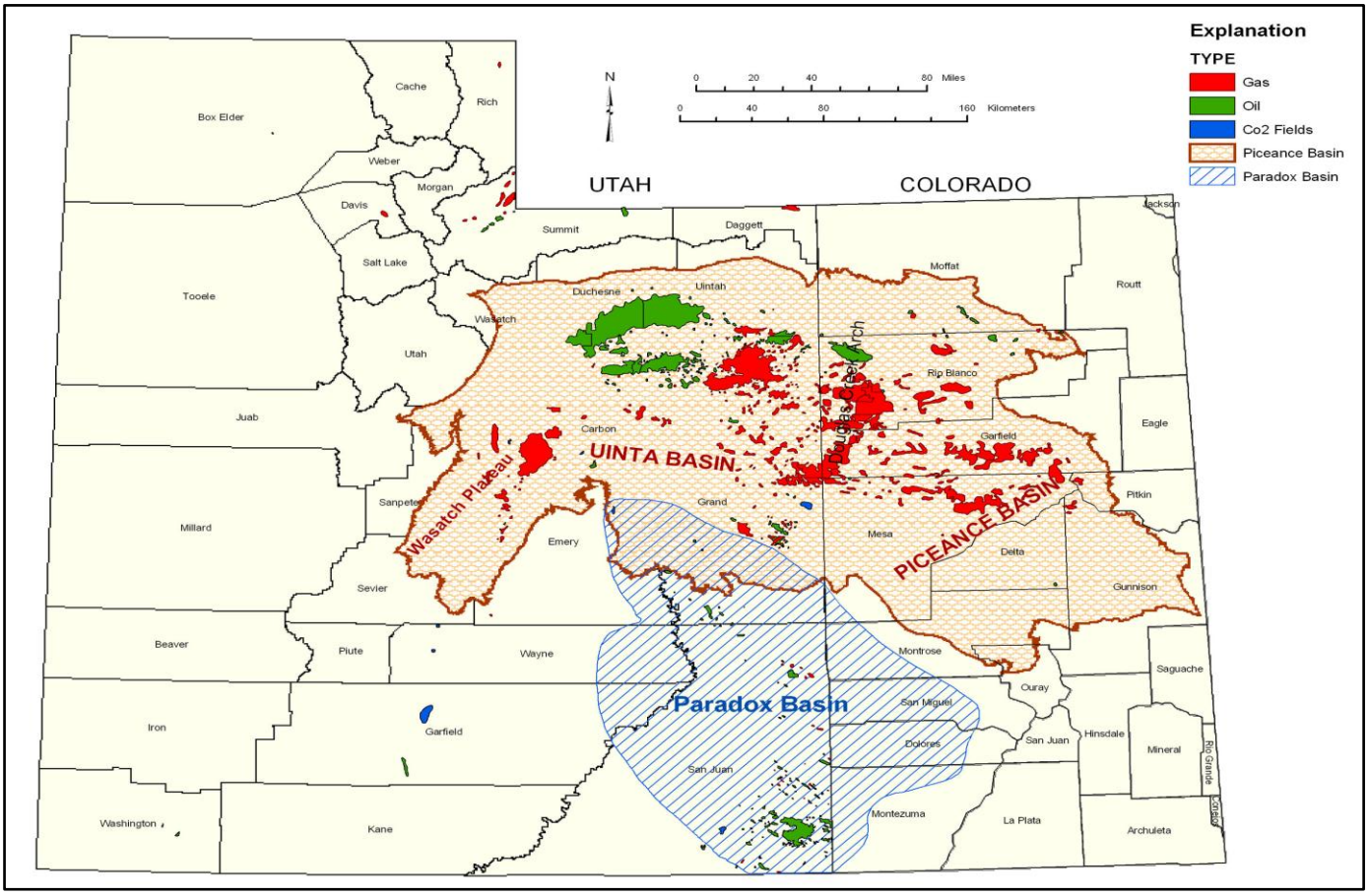

Figure 4: Petroleum Basins of Utah (Utah Geological Survey July, 2004).

Paradox Basin – Paradox Clastics

The Paradox Basin is an elongate, northwest-southeast trending, evaporitic basin that predominantly developed during the Pennsylvanian (Figure 5). The basin is bounded on the northeast by the Uncompahgre uplift and on the west by the San Rafael Swell. The two compressional events created a series of Northwest – Southeast folds in the form of plunging anticlines and synclines.

The Paradox Basin formed as a foreland basin in accompaniment with the rise of the Uncompahgre uplift. Rapid basin subsidence accommodated large volumes of evaporitic and marine sediments in the central basin that intertongue with non-marine arkosic material shed from the highland area to the northeast near the uplift. Deposition in the basin produced the thick cyclical sequence of carbonates, sandstones, mudstones, siltstones, evaporites and organic-rich shale of the 500 to 5000 foot thick Paradox Formation. These cycles consist of clastic intervals and salt couplets. The clastic intervals are typically interbedded dolostone, dolomitic siltstone, anhydrite and black, organic-rich shale, the sources of petroleum in the basin.

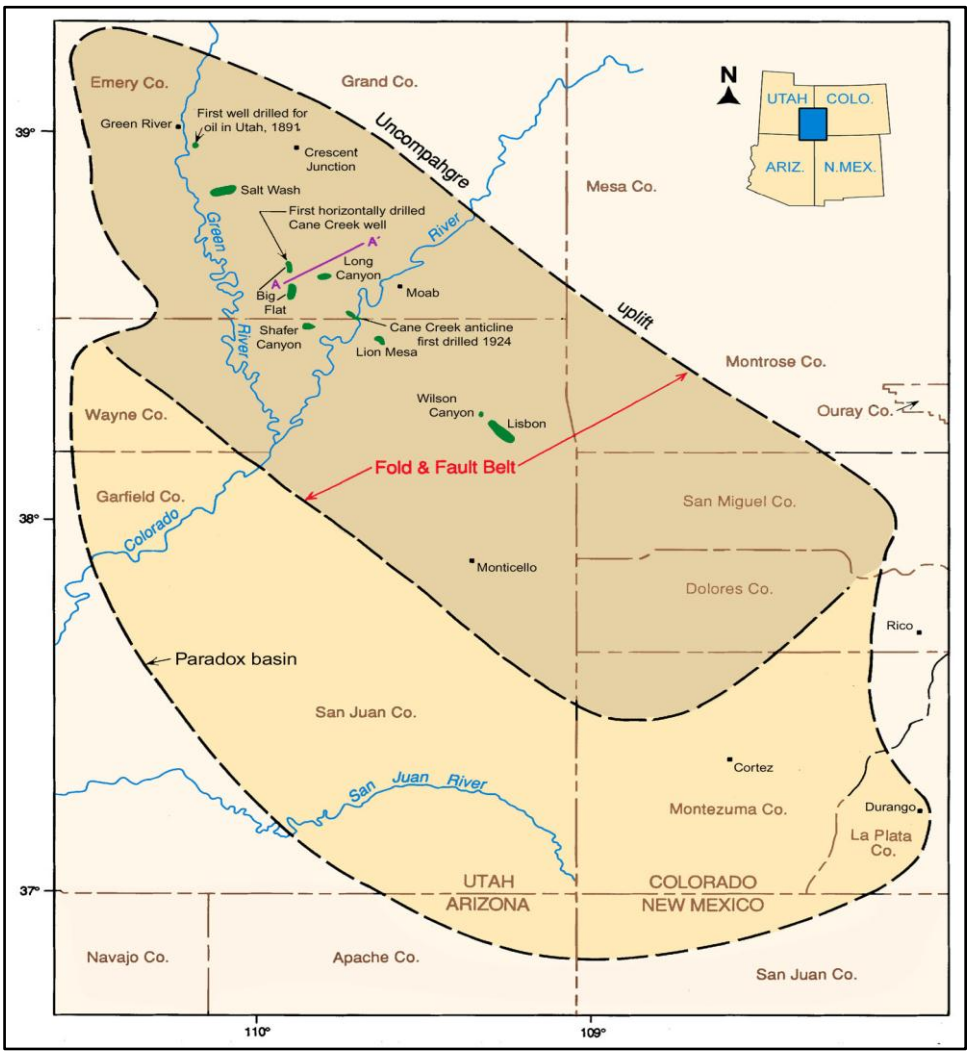

Figure 5: Location Map of the Paradox Basin Showing the Fold and Fault Belt. Field Areas Shown in Green are Productive in the Cane Creek Shale of Paradox Formation. (Utah Geological Survey, July 2004).

The Paradox Basin can generally be divided into three areas: the Paradox fold and fault belt in the north, the Blanding sub-basin in the south-southwest and the Aneth platform in the southernmost part of Utah. Conventional accumulations in reef-like buildups or carbonate mounds developed in the Desert Creek and Ismay zones of the Paradox formation are the main hydrocarbon producers in the Blanding sub-basin and Aneth platform. Oil in these zones is sourced above, below, or within by the organic-rich Gothic, Chimney Rock, Hovenweep and Cane Creek shales members of the Paradox formation which are all members of the Paradox formation.

The leaseholds evaluated in this report are located in the fold and fault belt. The conventional reservoirs are generally not developed in this area. Instead the shale source rock intervals are confined vertically and laterally by overlying salt and anhydrite layers and are folded and faulted by late Pennsylvanian salt movement as well as later tectonic events. This folding and faulting is expected to contribute to natural fracturing of the shales and enclosing dolostones and dolomitic silts enhancing their viability as an unconventional resource play.

The Cane Creek shale (Figure 6) has been a target for exploration since the 1960's and produces oil from several fields. The successful introduction of horizontal drilling in the 1990's has revived interest in the Cane Creek as well as the other clastic intervals in the Paradox as potential unconventional exploration targets.

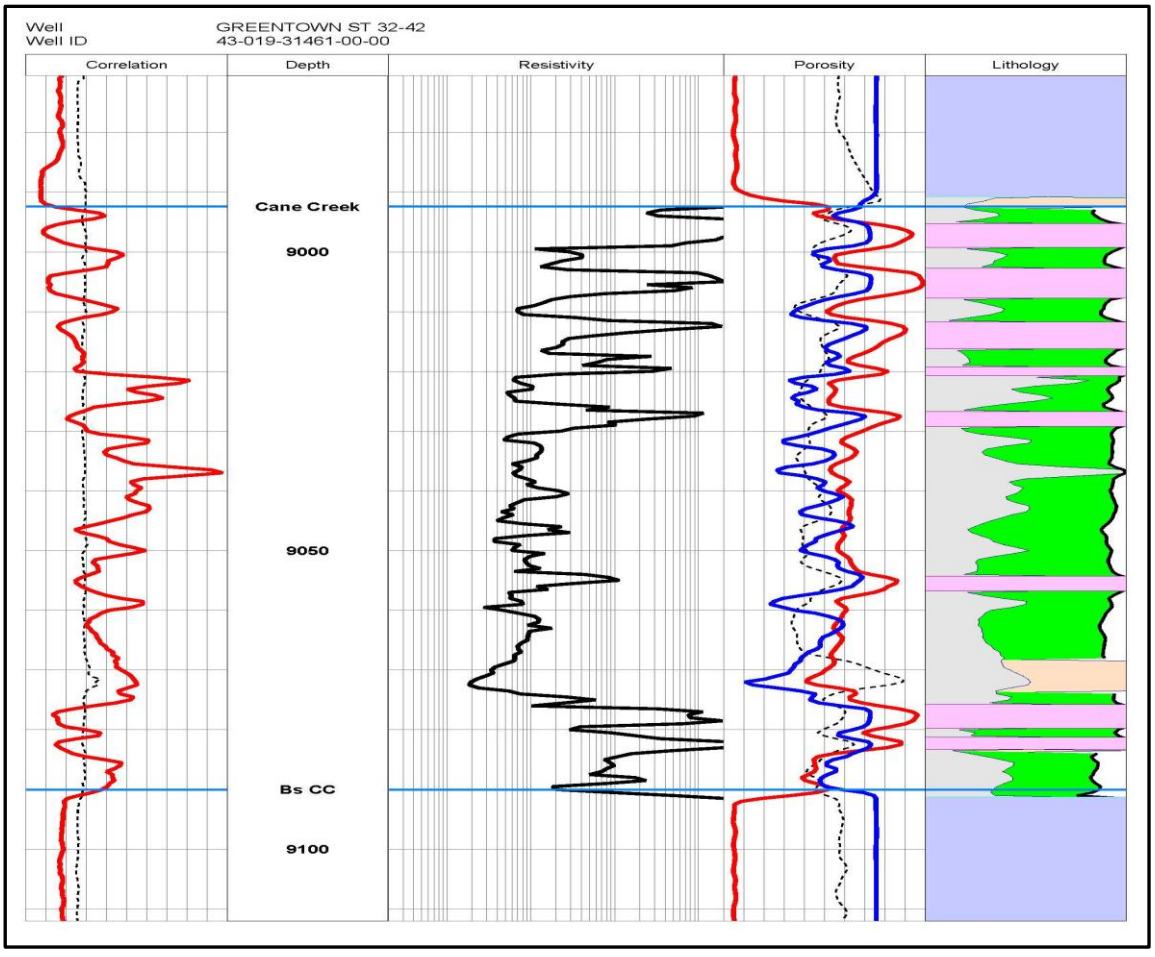

Figure 6: Type Log of Cane Creek Shale Showing Typical Salt (blue), Anhydrite (pink), Dolomite (green) and Shale (gray) Clastic / Evaporite Cycle. Orange in Areas of Rugose Hole Typically Associated with High Shale Content.

Through February 2014, Fidelity Exploration has produced 5.2 MMBO of 44 API oil and 4.2 BCF of gas from 20 wells completed in the Cane Creek Shale zone of the Paradox Clastics in and

around their Cane Creek Unit south of Rose's lease position. Initial production was from a single well starting in 1963 which was followed by five additional wells completed in the early 1990's. Since 2004, Fidelity has been further developing the Cane Creek Unit with 14 additional wells completed through February 2014. Reported average peak daily rates from these wells were 670 BOPD and 371 MCFGPD. In February, 2014, 18 active wells produced 127,769 BO and 68,496 MCF for an average daily rate of 4,563 BO/D and 2.4 MMCFG/D. Figures 7 and 8 below show the continuity of the clastic intervals from the Cane Creek producing area to Rose's Grand Main prospect area.

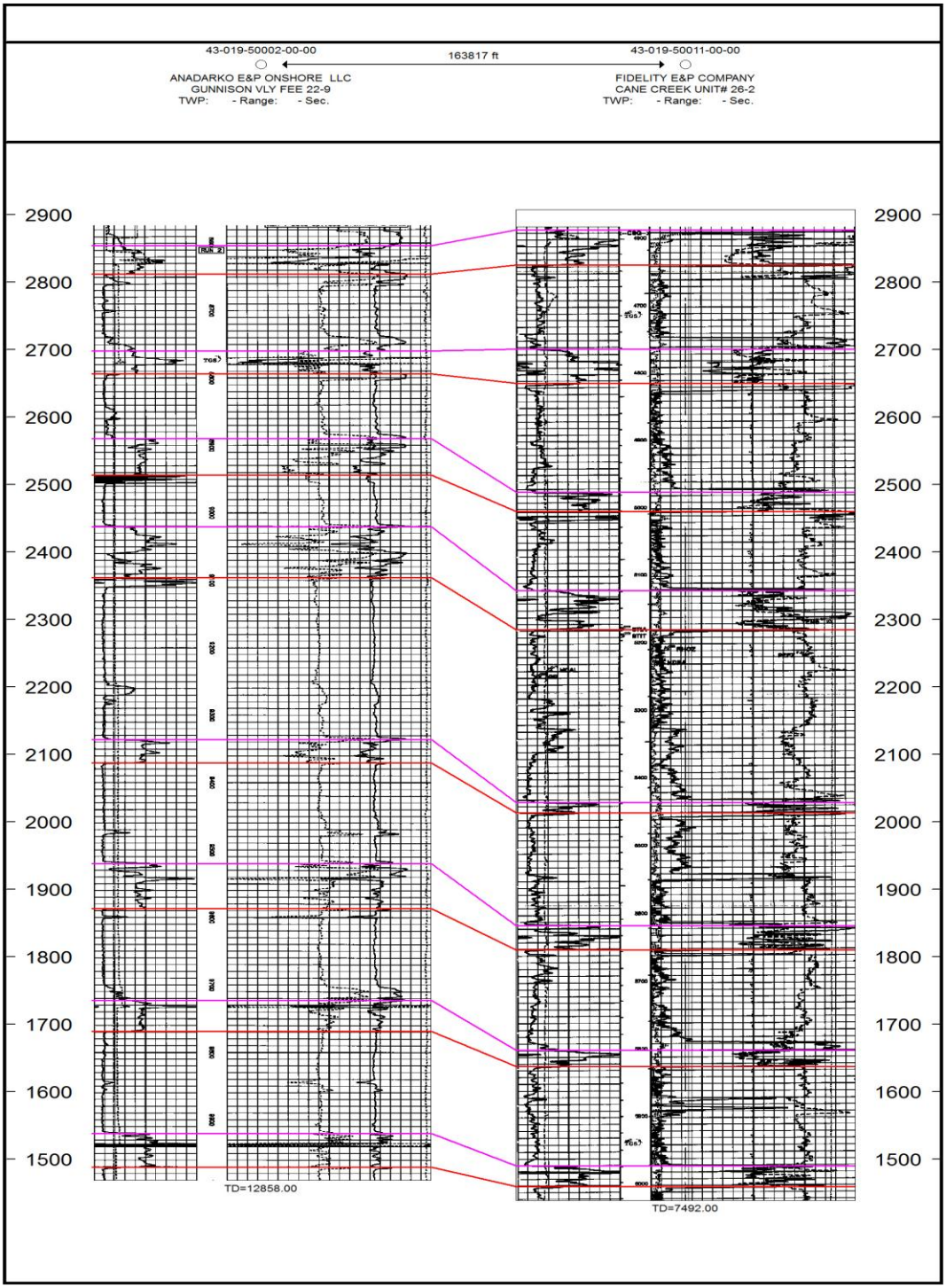

Figure 7: Continuity of ZOI 5-12.

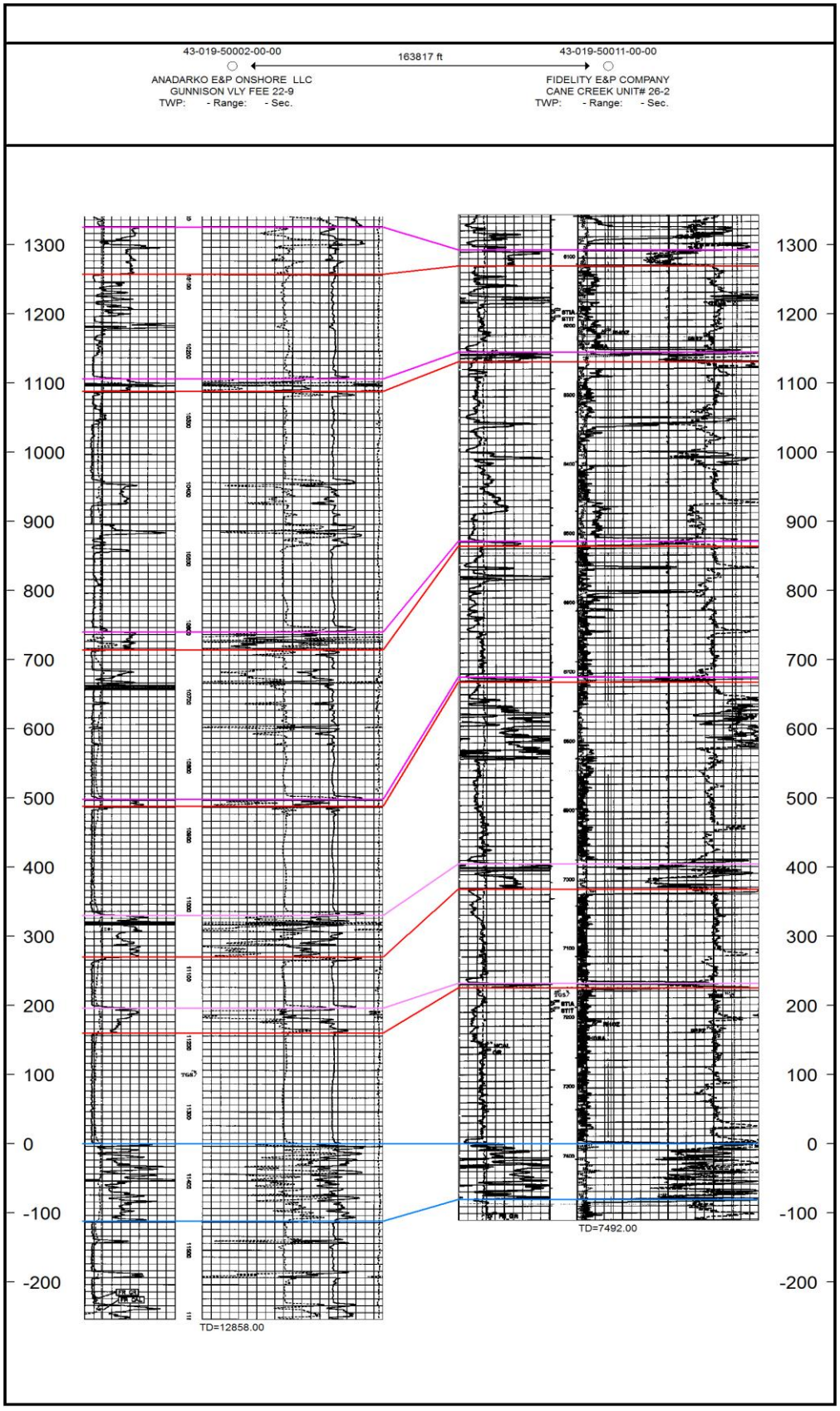

Figure 8: Continuity of ZOI 13-21. Cane Creek producing interval in blue.

Uinta Basin – Mancos Shale

The Uinta Basin is located in northeastern Utah, bounded by the Uinta Mountains to the north. The basin narrows and shallows to the west, and the basin fill gradually thins against the Wasatch Range where older Mesozoic and Paleozoic rocks crop out. The southern margin is the Book Cliffs where the Mancos crops out. The eastern margin is the Douglas Creek arch which separates the Uinta from the Piceance Basin in Colorado.

All of the potential shale reservoirs of Cretaceous age in Utah are portions of the Mancos Shale group. Throughout the Uinta Basin the Mancos Shale is generally composed of four members: the Prairie Canyon Member, the Lower Blue Gate Shale, the Juana Lopez Member, and the Tununk Shale. These members are composed of interbedded claystone, siltstone, fine to very-fine grained sandstone, and kerogen-rich shale.

The Mancos Shale was deposited in the foredeep basin of the Sevier thrustbelt during a time of continental flooding in the middle and early late Cretaceous. During this time the basin was at its broadest and deepest. When global sea levels started to fall in the early Campanian, kerogen-rich shale deposition ended. The Laramide uplift created an array of internally-drained basins on the Sevier foredeep. These basins contained perennial lakes, one of which was the early Eocene Lake Uinta located in the Uinta Basin.

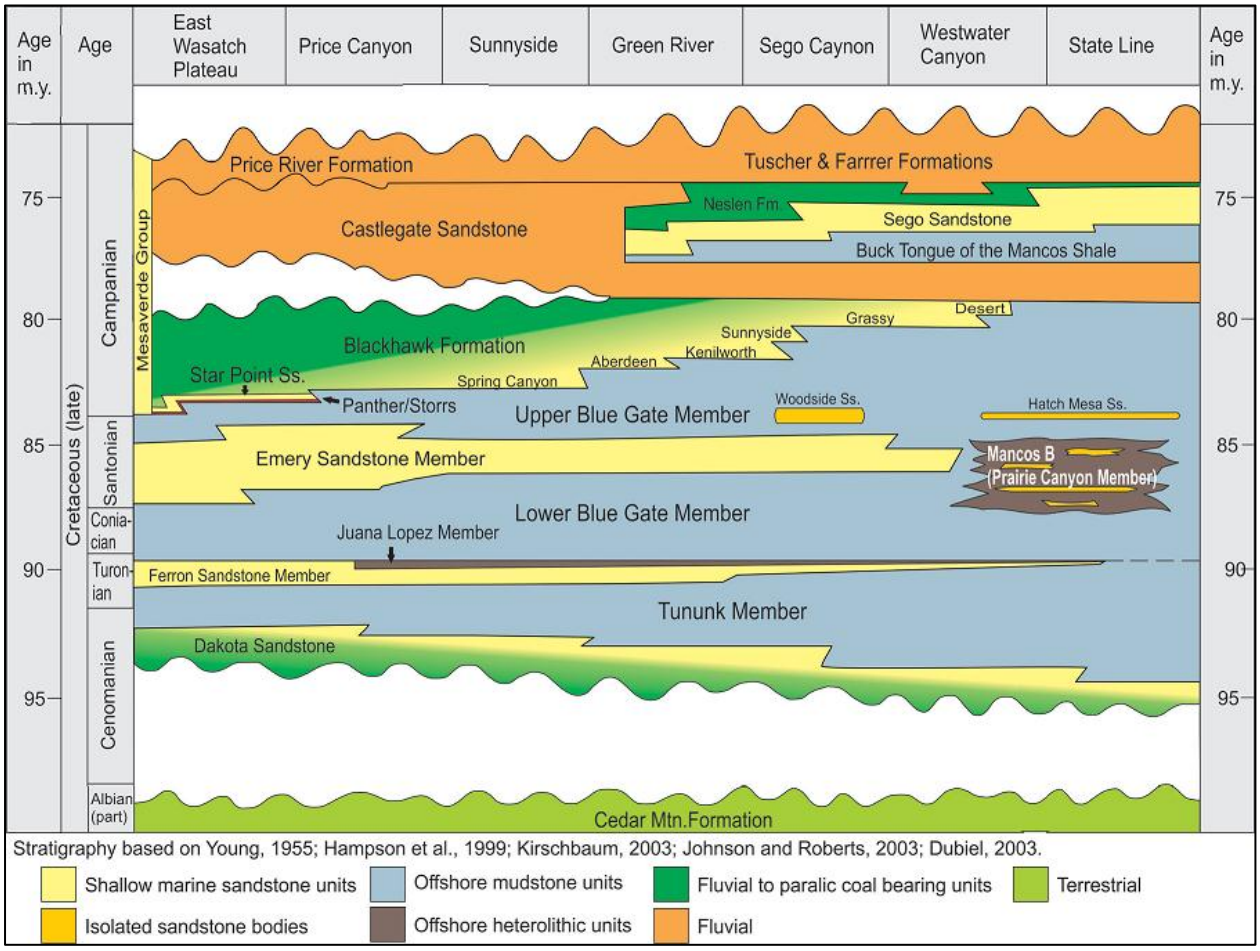

Figure 9: Stratigraphy of the Mancos Shale across Utah.
Technical Discussion

Paradox Basin – Paradox Clastics

Ryder Scott evaluated the Prospective Resources associated with the Paradox Clastics probabilistically using primarily the volumetric method. The equation used for the calculation of Original Oil in Place (OOIP) is:

OOIP (barrels) = 7758 X Area X Gross Thickness X N/G X Porosity X Oil Saturation / FVF

Where:

7758 is a constant to convert acre-feet to standard barrels
Area is in acres
Gross Thickness is in feet from top of interval to base of interval
N/G is the ratio of net thickness (hydrocarbon productive) to gross thickness
FVF is the Formation Volume Factor to correct from reservoir conditions to surface conditions

With the exception of area, a range of values for each parameter was derived from available information. Distributions of the parameters were then combined using a Monte Carlo approach to arrive at original oil in place volumes for each zone in each prospect area. A range of recovery factors was then applied to the in place volumes, again using a Monte Carlo approach, in order to calculate the Prospective Resource volumes for each zone in each prospect area.

Data Available

The geological data available to Ryder Scott for this evaluation consisted of various exhibits prepared by the previous leaseholder, well files and well log images obtained from the Utah Department of Natural Resources website and various publications from the Utah Geological Survey, United States Geological Survey and other sources. A limited amount of digital well log data, core analyses and geochemistry data was available either from the aforementioned publications or from the previous leaseholder. 2-D seismic data is available in and around the prospect areas; Ryder Scott did not review this information.

Production data from other Paradox Formation (primarily Cane Creek shale) wells in the area was utilized to calibrate the recovery factor distribution and to sense check the results of the volumetric analysis.

Methodology

Ryder Scott evaluated an area of 554,452 acres in the vicinity of the Paradox Basin prospects using the logs of thirty-one wells that penetrated the entire Paradox salt section as shown in Figure 10. Fifteen “Zones of Interest” were identified that could be correlated across the area evaluated. These zones correspond in part to the “clastic breaks” originally correlated across the area by Hite and others and summarized in the Utah Geological Survey’s Open-File Report 581 published in 2011. In the published correlations the clastic breaks are generally confined above and below by salt. In general, the upper and lower parts of most of the clastic breaks consist of anhydrite. The zones of interest, as defined by Ryder Scott, exclude the upper and basal anhydrite where present; other, minor anhydrites within the gross interval so defined are accounted for with the net to gross parameter (Figure 11).

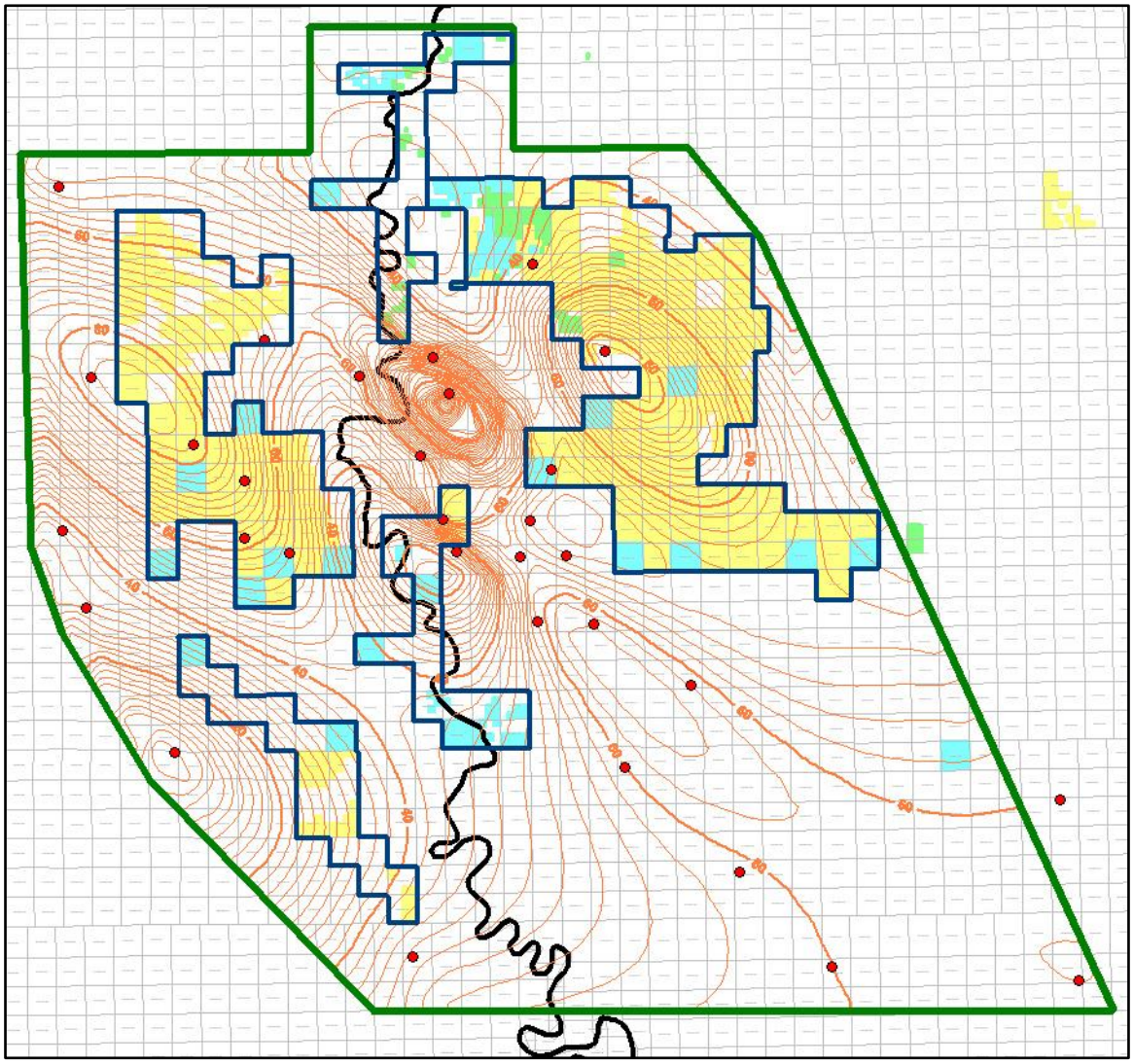

Figure 10: Gross Thickness Isochore of Zone of Interest 5 Showing Evaluation Area Polygon (green), Ryder Scott Prospect Areas (dark blue) and 31 Points of Well Control Utilized.

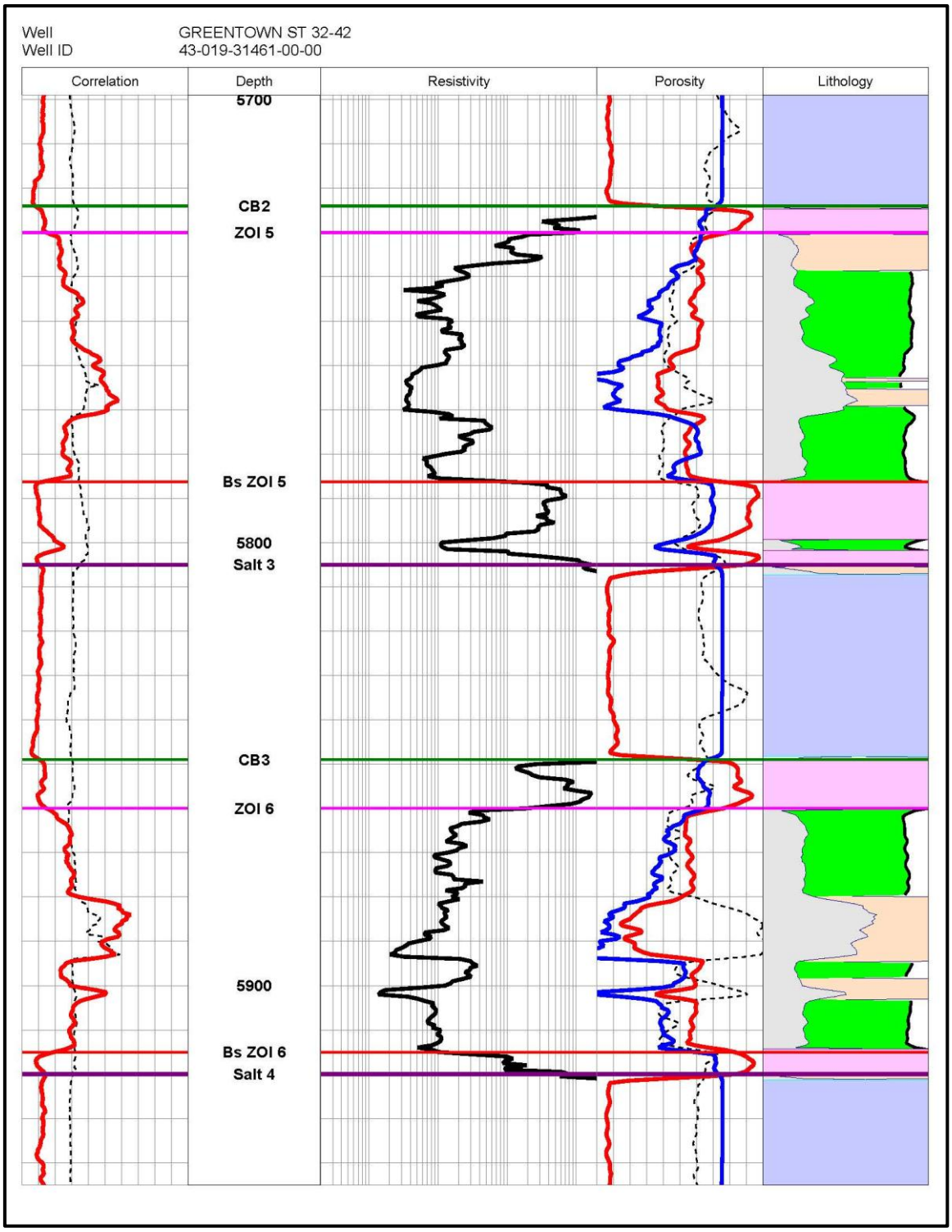

Figure 11: Type Log with Clastic Breaks 2 and 3 as Defined in the Literature and Ryder Scott Zones of Interest 5 and 6 Excluding Top and Base Anhydrites. Lithology key: salt (blue), anhydrite (pink), dolomite (green) shale (gray). Orange in areas rugose hole typically associated with high shale content.

The fifteen zones of interest evaluated display very consistent stratigraphy across the evaluation area. Lithological correlation of the organic shale and anhydrite intervals in and adjacent to the various clastic breaks is relatively easy even with the various vintages of wells and with well log types ranging from gamma ray – neutron logs to sonic logs to modern lithodensity – neutron

logs. The total Paradox section thins from east to west across the area of interest but most of the thickness variation occurs in the salt layers. However, the three deepest zones evaluated in this report progressively pinch out from west to east with the deepest, the Cane Creek, virtually absent in Emery County. Additionally, towards the western limit of the evaluation area, the salt layers are absent, replaced generally by thinner layers of anhydrite.

The table below relates the Ryder Scott zones of interest to the "clastic break" numbers and other interval names that appear in the literature and well files. The Oil Zone column refers to the stratigraphic intervals that contain the conventional reservoirs of those names that are productive in the Blanding sub-basin and the Aneth platform.

Table 6
Correlation of Zones of Interest
Based on tops in Mountain Fuel Geyser #1-25 well (43-019-30124)
From Utah Geological Survey Open-File Report 581

Zone of Interest #	Clastic Break #	Shale Name	Oil Zone
5	2	Hovenweep	Ismay
6	3	Gothic	
7	4		Desert Creek
8	5	Chimney Rock	
9	6		Akah
10	8		Akah
11	9		Akah
12	10	"A" Marker	
13	11		Barker Creek
14	13		Barker Creek
16	16		Barker Creek
18	18		Barker Creek
19	19	"C" Marker, "O" Clastic	
20	20		Alkali Gulch
Cane Creek	21	Cane Creek	

Ryder Scott developed gross interval isochores for each of the fifteen zones of interest evaluated. Other clastic breaks are present in the area, particularly zones below the Cane Creek in the eastern part of the evaluation area but were not mapped due to lack of well control. Selected isochores and a regional cross-section showing the continuity of the zones of interest are shown below.

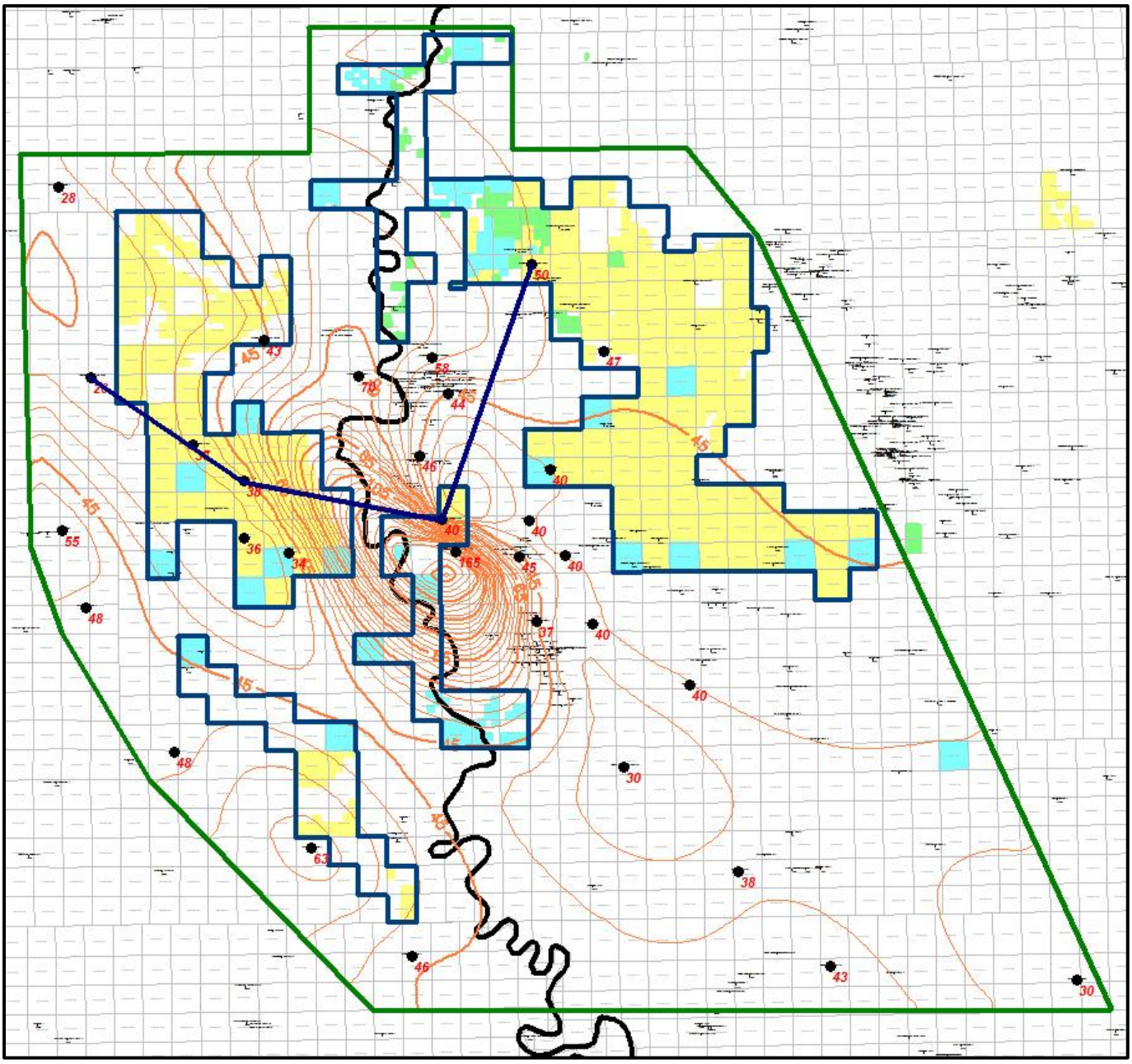

Figure 12: Gross Isochore of ZOI 6 (Gothic Shale) with Cross-Section Location.

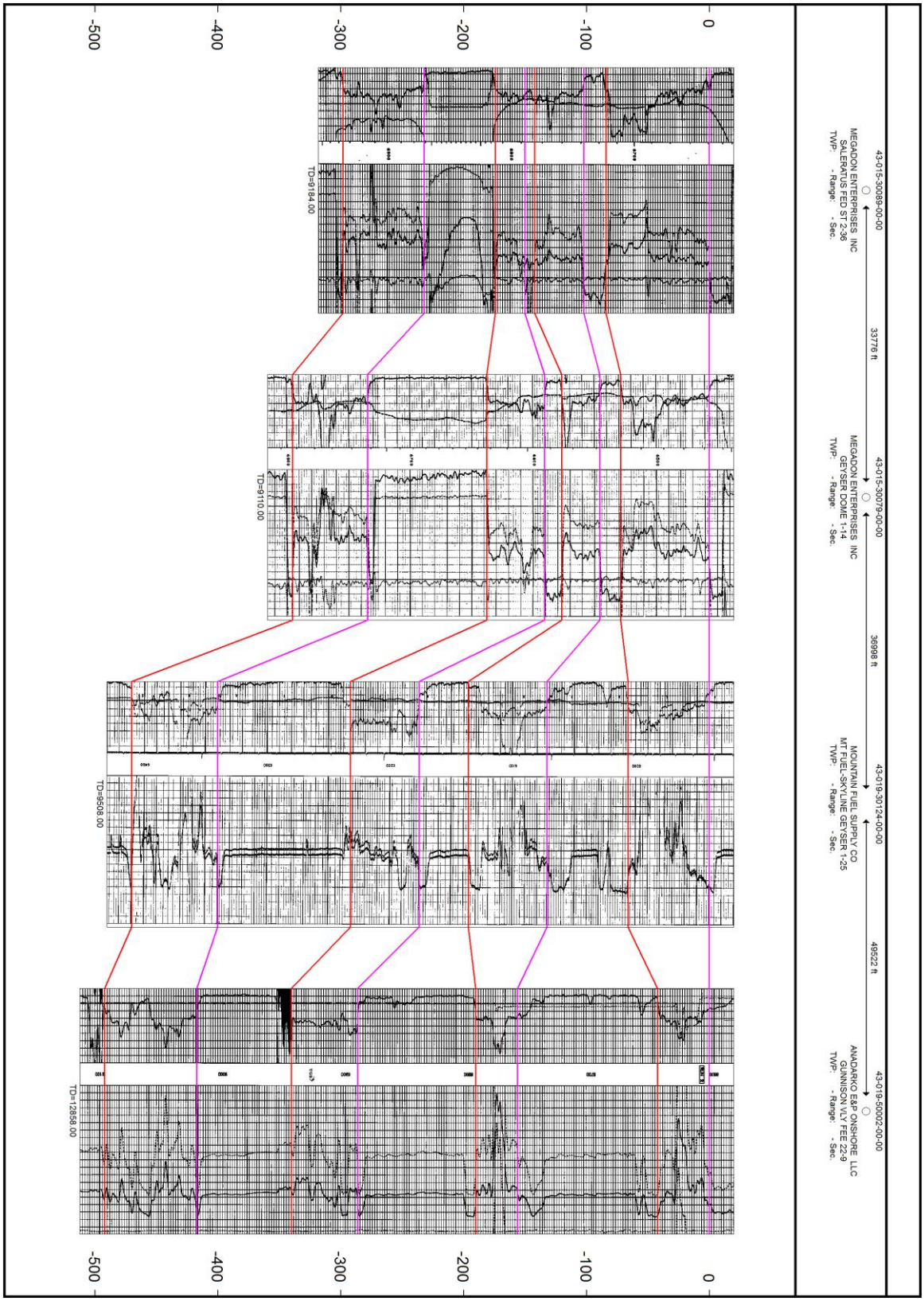

Figure 13: Cross-Section showing Continuity of ZOI 5 (Hovenweep), ZOI 6 (Gothic), ZOI 7 and ZOI 8 (Chimney Rock) Across Evaluation Area.

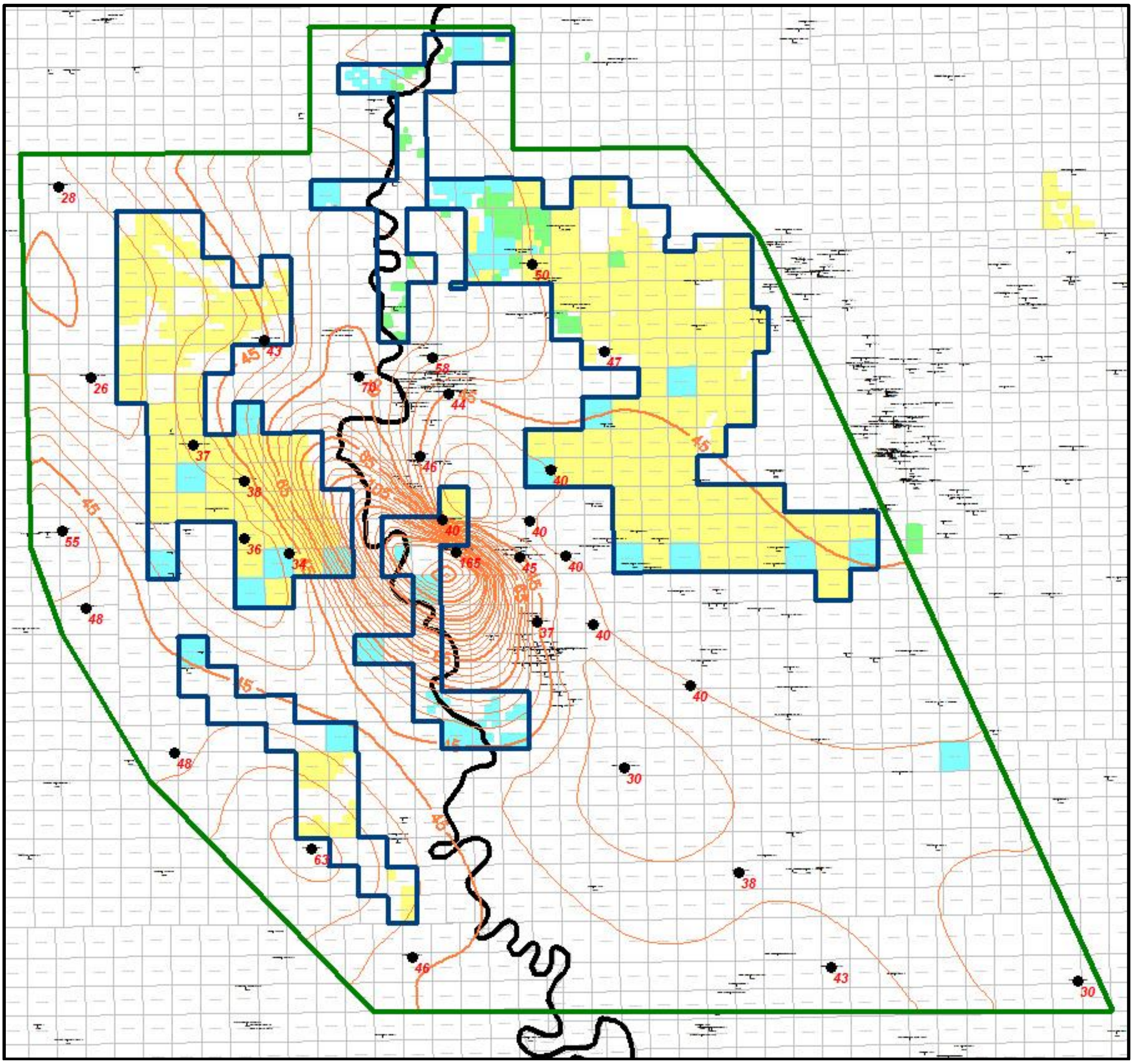

Figure 14: Gross Isochore of ZOI 12 (“A” Marker in local correlations).

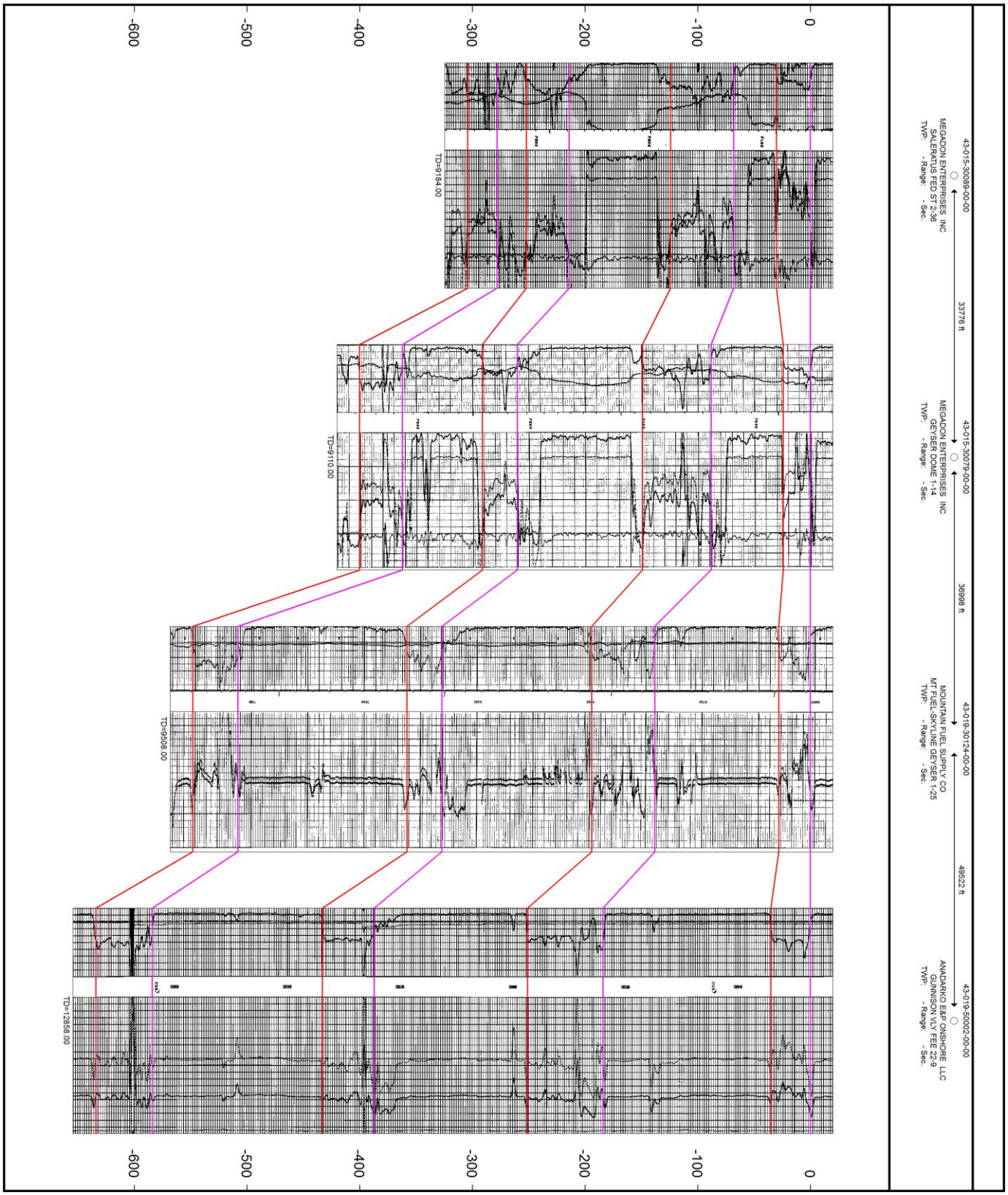

Figure 15: Cross-Section Showing Continuity of ZOI 9, 10, 11 and 12 Across Evaluation Area.

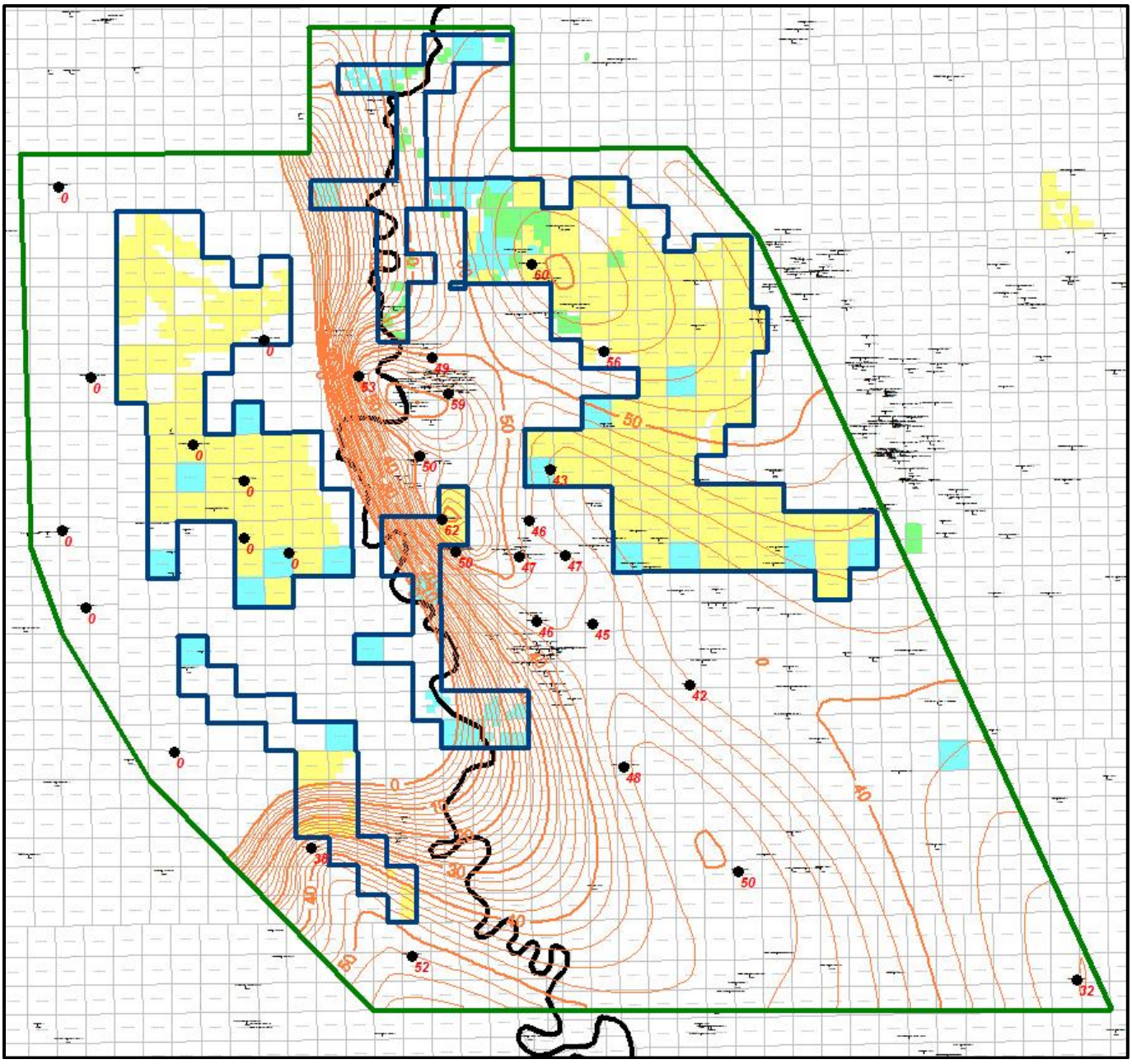

Figure 16: Gross Isochore of ZOI 19 (variously named "C" Marker or "O" Clastic in local correlations).

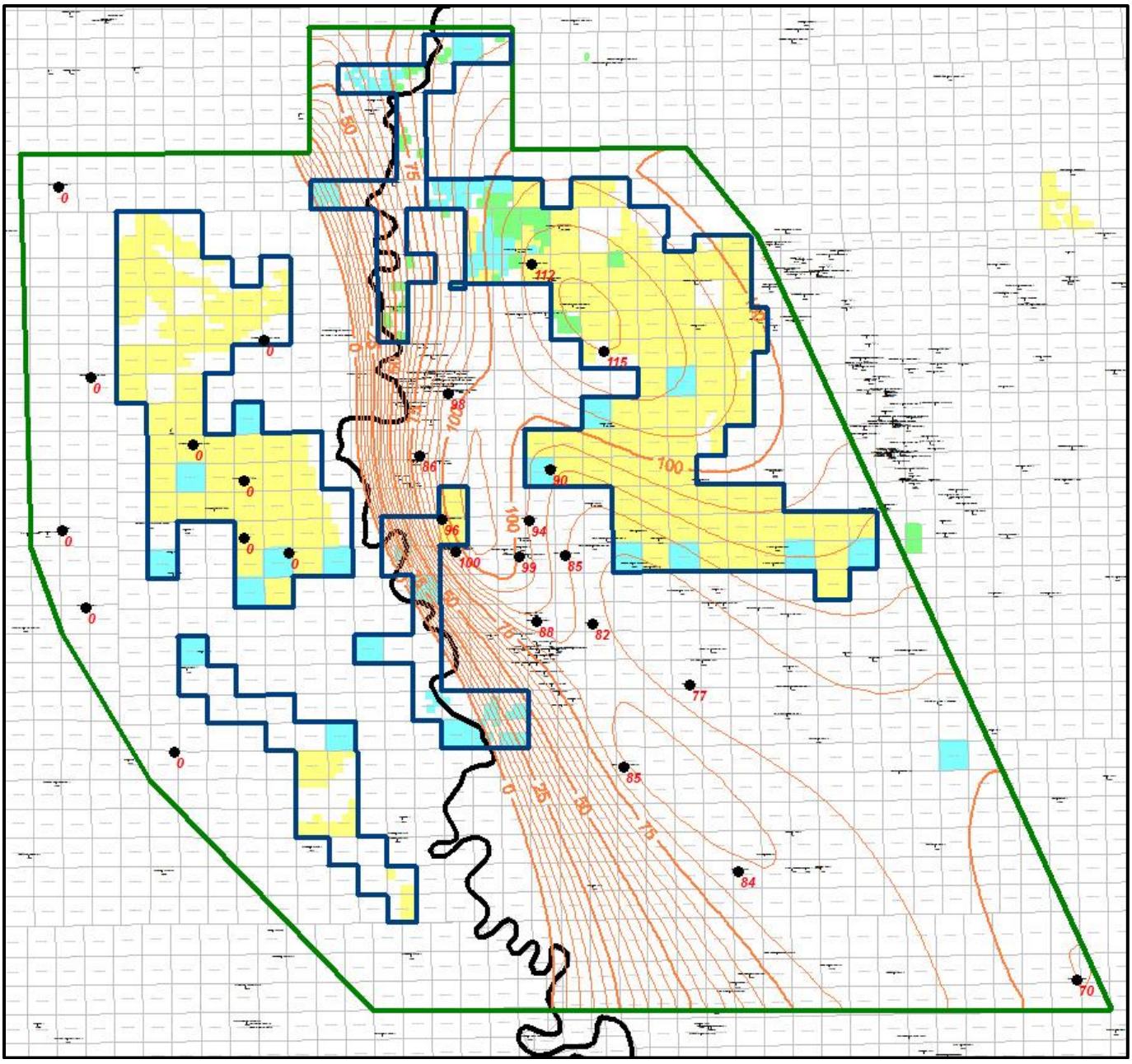

Figure 17: Gross Isochore of the Cane Creek Shale across the Evaluation Area.

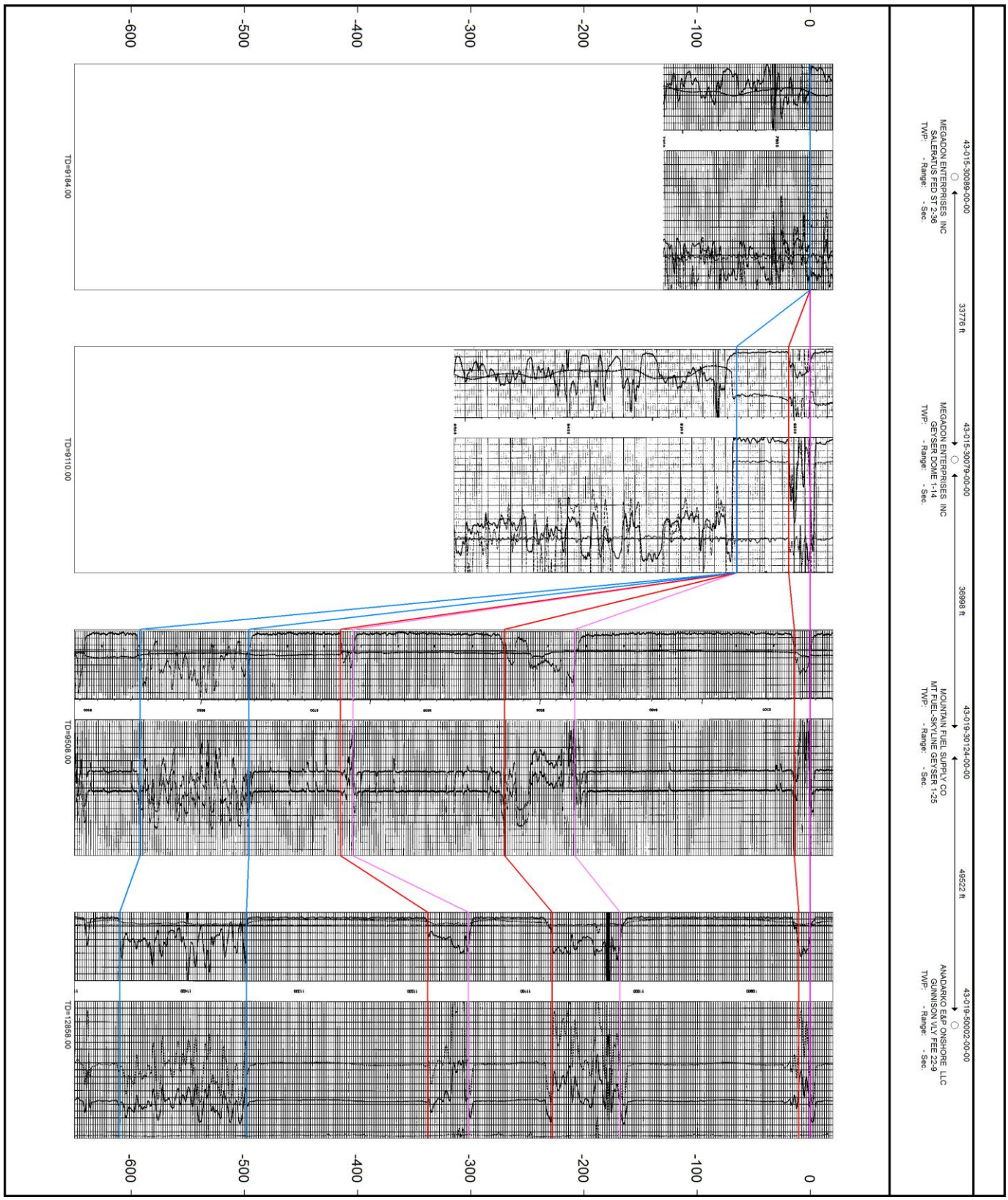

Figure 18: Cross-Section Showing Continuity of ZOI 18, 19, 20 and Cane Creek in Grand County and Pinchout to West.

As shown in Figure 2, Ryder Scott has divided the prospective area in the Paradox Basin into five prospect areas. The polygons shown on the isochores were used to calculate the average

gross thickness of each unit in each prospect area. Potential variability in the average gross thickness due to amount of well control used is addressed as a range in the probabilistic analysis. Ryder Scott calculated the mean gross thickness of each zone for all five polygons along with the standard deviation of the five averages. The mean gross thickness of each zone was used as the P50 value for that zone. The P90 gross thickness was set at the mean minus one standard deviation and the P10 at the mean plus one standard deviation.

Where the zone isochores indicates a zone is continuous across a prospect area the prospective area assigned is based on the area under lease in the polygon as shown in the table below. The area was adjusted where the zone isochore indicates the zone is not present across the entire prospect area. The adjusted area represents the area under lease considered to be prospective for the zone in the polygon.

Table 7

Prospect Area	Polygon Area - acres	Area Under Lease - acres
Grand Main	62,877	54,931
Emery Main	40,968	30,955
Emery South	13,217	3,901
River North	12,747	2,796
River South	12,286	4,331

The Paradox Clastics in the area being evaluated is considered a potential continuous-type resource play. The lateral continuity of accumulations that may be discovered in this area may be affected by faulting, folding and / or stratigraphic discontinuities resulting from salt movement in the basin or subsequent tectonic events. The information available to Ryder Scott for this report is insufficient to establish that any particular portion of the area is more prospective than any other. Consequently, the prospective area is held constant in the probabilistic evaluation for each prospect area. Lateral continuity is considered instead in the chance of success calculation.

The organic shales and enclosing silty dolostones within the zones of interest are both potential reservoirs in this play. Ryder Scott has defined net reservoir as any lithology other than anhydrite or salt. The net to gross ratio was calculated for each zone using the digital log data from the Delta Petroleum Greentown State 32-42 well located in Section 32–T22S–R17E. This well logged all the zones of interest with a modern array induction – lithodensity – neutron log suite. Net to gross in the various zones ranged from a low of 56% to 100%, averaging 85%. Correlation of 31 points of well control across the area indicates the individual zones have very consistent stratigraphy. The zone average net to gross calculated in the 32-42 well was used as the P50 value for each individual zone. The P90 value was calculated as 97% of the P50 and the P10 was calculated as 103% of the P50 constrained to 100%.

Porosity and saturation were calculated for each of the 15 zones of interest from the log of the Greentown State 32-42 well. No core data was available for this well. A mixed group of 61 whole core and rotary sidewall core porosity values were available from four wells in the basin; mostly from the Cane Creek shale. The 61 core porosity values ranged from 2.4% to 17.6% averaging 8.4%. Ryder Scott calculated the average porosity for each of the zones of interest in the 32-42 well from the density log. A dolomite matrix (2.85 g/cc) was assumed for the clastic intervals. The gamma ray was corrected for Total Organic Content (TOC) and then used to calculate the shale volume. The density porosity was corrected for both shale and TOC. Organic shales and / or intervals with large caliper or PE curve excursions were excluded from the averages. The average porosity values for the 15 zones of interest ranged from 8% to 15% averaging 11% with a standard deviation of 2%. A normal distribution was fitted to this data resulting in P10 / P50 / P90 porosity values of 14% / 11% / 9%.

Water saturation was calculated using the Modified Simandoux equation with standard parameters, a = 1, m = n = 2. No appropriately measured core saturation values were available. The formation brine was assumed to be near salt saturated (300,000 ppm NaCl from Schlumberger's Chart Gen-9). The reservoir temperature was calculated for each zone and Rw was adjusted for temperature for each zone. The average water saturation values for the 15 zones of interest ranged from 8% to 36% averaging 26% with a standard deviation of 8%. A normal distribution was fitted to this data resulting in P10 / P50 / P90 water saturation values of 17% / 26% / 36%.

Mapping from well control of the 15 zones of interest in this evaluation indicates potential to encounter reservoirs at average depths ranging from 5200' to 10,500' below surface in the various zones and prospect areas. In U.S. Geological Survey Bulletin 2000-O published in 1996, the authors estimated that the Paradox formation in the evaluation area had reached maximum depths of burial ranging from 14,000' to 15,400' during the Eocene and postulated that the Paradox had passed very quickly from the oil window into the dry gas window. However, only 12 samples in the study were from the clastic breaks in the study area. The results from these samples are inconsistent but, based on Ryder Scott's experience in other basins; generally indicate the zones sampled are in the late oil / wet gas window.

Due to the complex history of the Paradox Basin, most of the thermal maturity indicators derived from pyrolysis data (Tmax, Production Index and Hydrocarbon Index) provided in the USGS report does not correlate well with current depth. The vitrinite reflectance data in the report, however, does have a reasonable correlation to depth as shown in Figure 19.

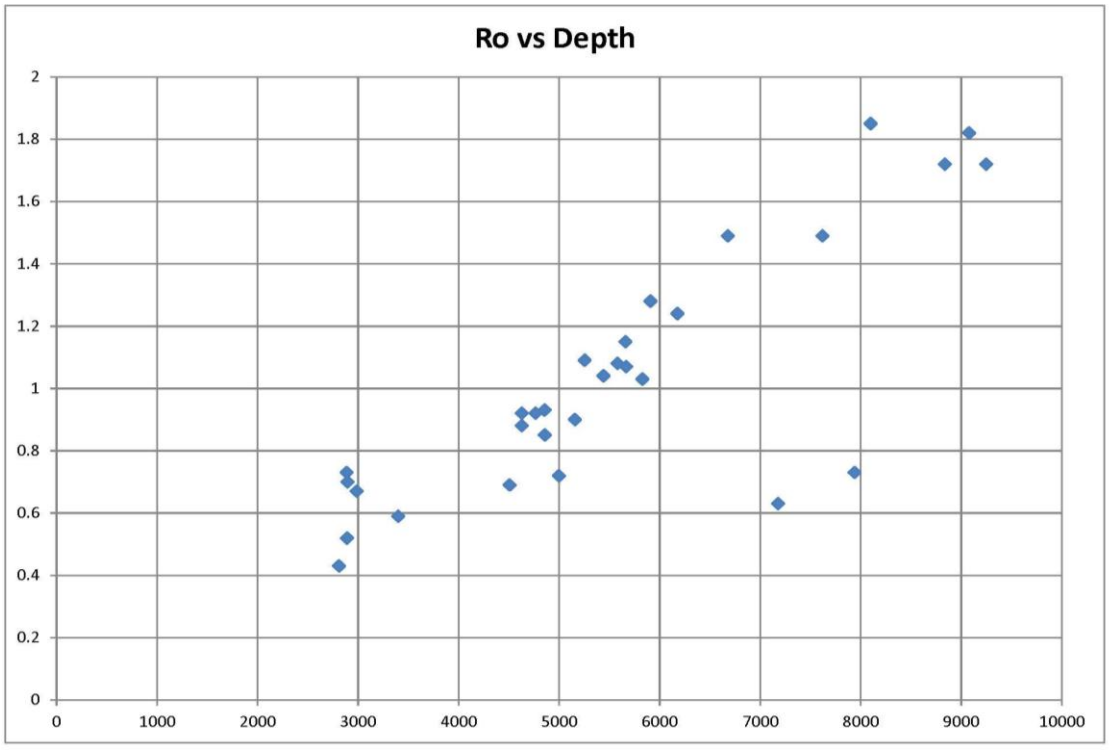

Figure 19: Vitrinite Reflectance versus Current Depth Below Surface from USGS Bulletin 2000-O.

The only well in the evaluation area with significant production is the Delta Federal 28-11 in Section 28 – T22S – R17E. This well was completed over a large interval primarily in the Cane

Creek at an average depth of around 9400'. On December 17, 2007 the well was tested at rates of 269 BOPD, 55 API, 1.7 MMCFPD. Cumulative production through 2/28/2014 was 60,122 BO, 211,733 MCF and 14,718 BW.

Based on the results of this well and the limited geochemistry data, Ryder Scott has chosen to evaluate the Paradox formation as a light oil play. Expected variations in the reservoir fluid are accounted for by increasing GOR with depth which results in a higher formation volume factor in the volumetric equation.

Uinta Basin - Mancos Shale

Ryder Scott evaluated the Prospective Resources associated with the Mancos Shale probabilistically using primarily the volumetric method. The equation used for the calculation of Original Oil in Place (OOIP) is:

OOIP (barrels) = 7758 X Area X Gross Thickness X N/G X Porosity X Oil Saturation / FVF

Where:

7758 is a constant to convert acre-feet to standard barrels
Area is in acres
Gross Thickness is in feet from top of interval to base of interval
N/G is the ratio of net thickness (hydrocarbon productive) to gross thickness
FVF is the Formation Volume Factor to correct from reservoir conditions to surface conditions

With the exception of area, a range of values for each parameter was derived from available information. Distributions of the parameters were then combined using a Monte Carlo approach to arrive at original oil in place volumes for each zone in each prospect area. A range of recovery factors was then applied to the in place volumes, again using a Monte Carlo approach, in order to calculate the Prospective Resource volumes for each zone in each prospect area.

Data Available

The geological data available to Ryder Scott for this evaluation consisted of various exhibits prepared by the previous leaseholder, well files and well log images obtained from the Utah Department of Natural Resources website and various publications from the Utah Geological Survey, United States Geological Survey and other sources. A limited amount of digital well log data, core analyses and geochemistry data was available either from the aforementioned publications or from the previous leaseholder. Additional log analysis for the Mancos Shale was performed by The Discovery Group and provided to Ryder Scott. 2-D seismic data is available in and around the prospect areas; Ryder Scott did not review this information.

There is no significant historical production from the properties analyzed in this report and for that reason production data from surrounding properties was used to estimate hydrocarbon recoverable volumes. That information was utilized to calibrate the recovery factor distribution and to sense check the results of the volumetric analysis.

Methodology

Ryder Scott used the log analysis provided by The Discovery Group to evaluate the Mancos Shale in the eleven prospect areas. The Discovery Group evaluated 436 wells in Grand County; however, many of these wells fall outside the prospect areas used in this evaluation. The Mancos was divided into five units of interest, the M400, M300, M200, M150, and M100. Analysis of the

gross thickness, net to gross, and porosity by The Discovery Group was provided in XYZ grid data. The grid data was used to build isomap layers for each of the parameters.

In Grand County the Mancos Shale can be found at very shallow depths. In the evaluation wells the uppermost M400 Mancos Shale unit was found as shallow as 150' below the surface. The ability to fracture stimulate the Mancos Shale at such shallow depths is uncertain. As a result of this concern, any gross volume above 1200' was excluded from the volume calculations. The figure below shows an example of the M400 gross volume map with the exclusion. Using the depth exclusion, the gross volume was calculated for the 5 Mancos Shale units in each of the prospect areas. Using the gross volume and area, an average gross thickness was calculated for each unit and prospect area. The final gross volumes were further constrained using the area under lease in each prospect area. For each prospect area, the area under lease was multiplied by the average thickness to determine the gross volume on lease. The P50 case for each prospect area and unit is the average thickness of the unit. The P10 case is the reservoir thickness plus 10% and the P90 case is the average thickness minus 10%.

Maps of the net to gross values were built for each of the units. The average net to gross for each prospect area was calculated for all the Mancos Shale units. The average net to gross for each unit was used as the P50 net to gross case. The P90 case used the minimum net to gross value found in any of the units, while the P10 case used the maximum net to gross value found in any of the units.

Porosity was determined in a similar manner to net to gross. The porosity XYZ grid data was used to build a porosity map for each Mancos Shale unit. The porosity for each well in each reservoir in the study area was then extracted from the porosity map. The mean value of porosity of the wells in each prospective reservoir was used as the P50 case. The P50 values varied from 5.8% to 7.8%. The P90 case used the mean porosity minus one standard deviation, while the P10 case used the mean porosity plus one standard deviation. The P90 range of porosity values was 4.4% to 6.5% while the P10 ranged from 7.0% to 9.1%.

Water saturation was calculated by The Discovery Group. The average for all the Mancos Shale units was calculated to be 63% with a standard deviation of 14%. For all the Mancos Shale prospects and units, the P50 case used the average of 63% water saturation. For the P90 case the average water saturation minus one standard deviation was used, for a water saturation of 49%. The P10 case used the average water saturation plus one standard deviation, for a water saturation of 77%. However, it should be noted that the vast majority of the water present is bound water associated with clays and is not movable water and thus will not be produced with the oil. This is supported by very little produced water in adjacent Mancos producing wells.

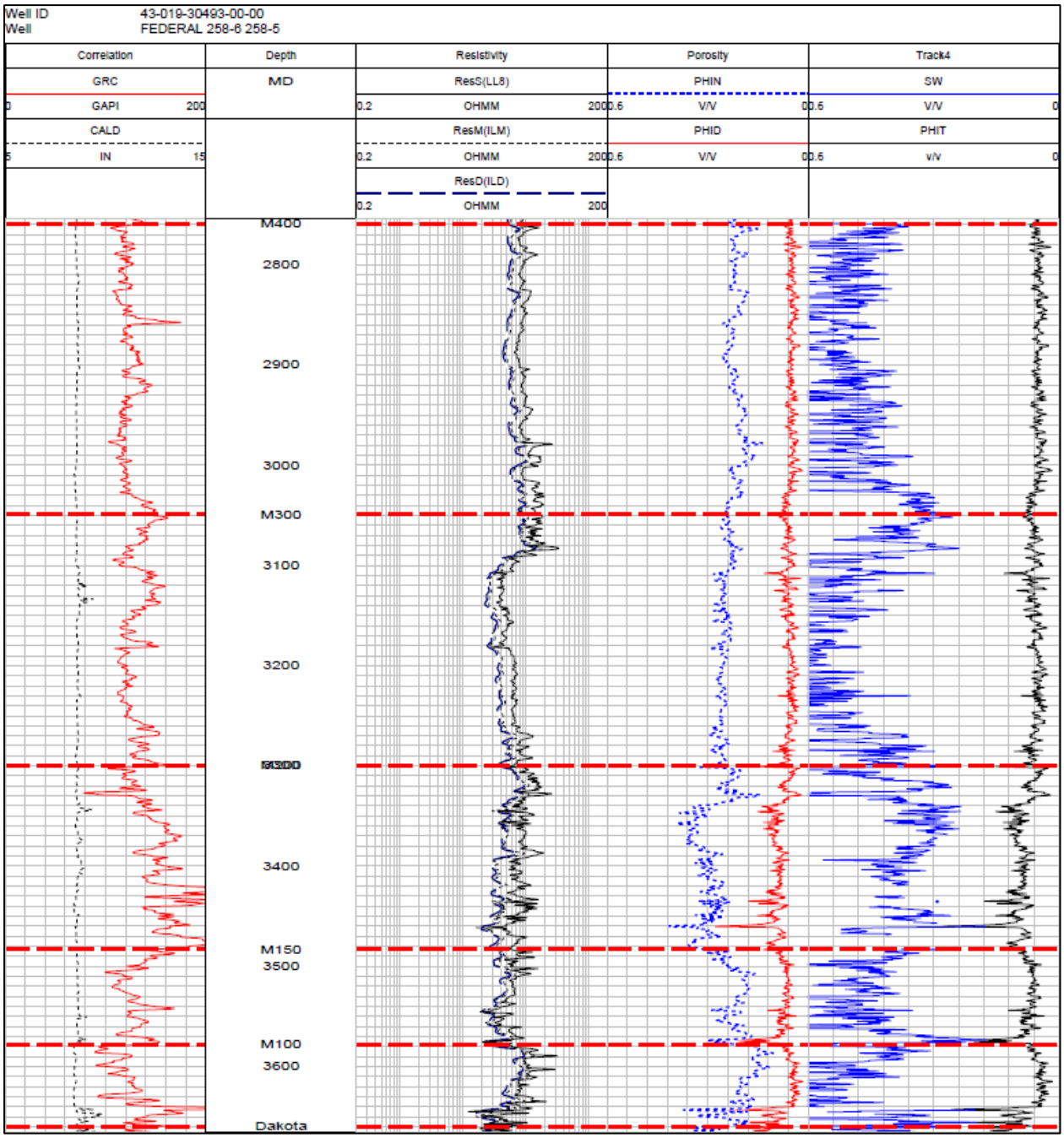

Figure 20: Federal 258-5 Type Log with Mancos Shale Units.

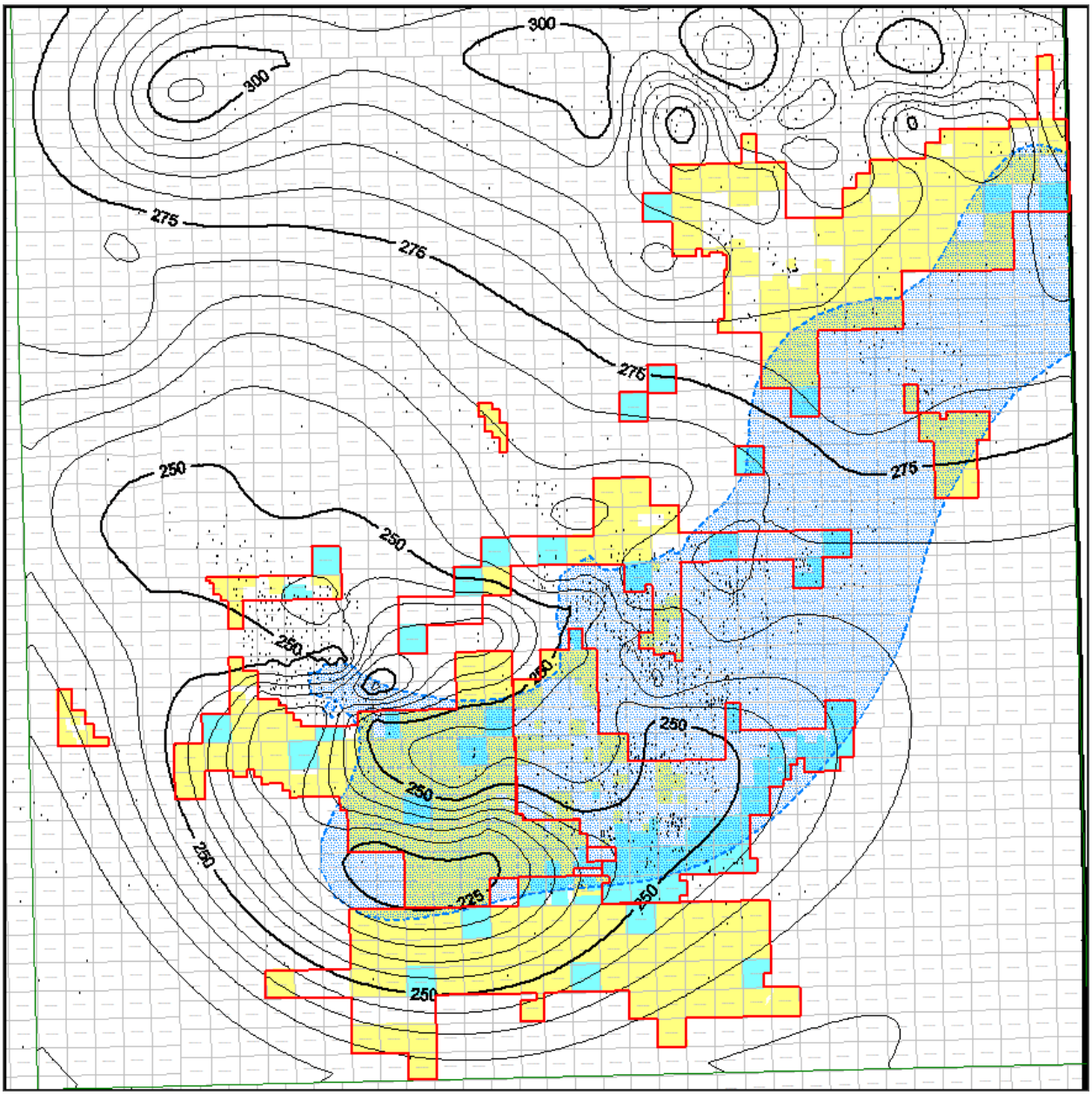

Figure 21: M400 Gross Thickness Isochore with Above 1200' Exclusion Highlighted in Blue. Ryder Scott Prospect Areas are highlighted in red.

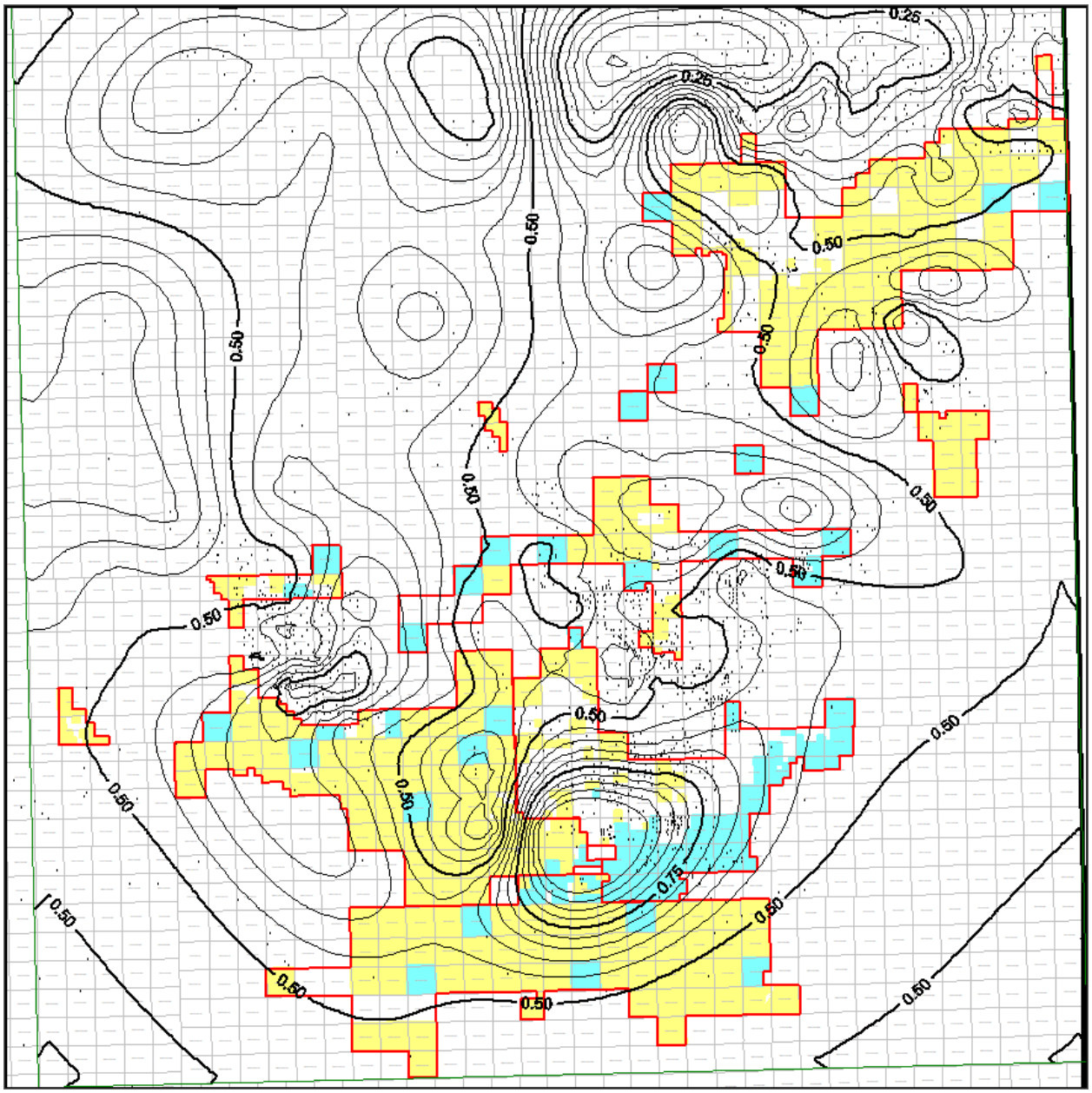

Figure 22: M300 Net to Gross Map.

Reserves and Resources Uncertainty

All reserve and resource estimates involve an assessment of the uncertainty relating the likelihood that the actual remaining quantities recovered will be greater or less than the estimated quantities determined as of the date the estimate is made. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. Estimates will generally be revised only as additional geologic or engineering data becomes available or as economic conditions change.

The prospective resources included in this report indicate exploration and development opportunities in the event a petroleum discovery is made and should not be construed as reserves or contingent resources. Prospective resources are those quantities of petroleum that are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. This report does not include any economic analysis for these prospective resources which is standard. Economics are addressed separately by an

independent third party consultant. The prospective resources shown in this report have been estimated using probabilistic methods and are dependent on economic petroleum discoveries being made. If a discovery is made, the probability that the unrisked quantities of oil and gas discovered will equal or exceed the estimated amounts is at least 90 percent for the low estimate, at least 50 percent for the best estimate and at least 10 percent for the high estimate. The prospective resources presented herein were prepared using the cumulative approach. Therefore, the high estimate includes the best estimate, and the best estimate includes the low estimate.

The primary risk in this unconventional play is reservoir quality, which is discussed for the Paradox and Mancos respectively in the report on pages 37-38 and 40-41, which has a direct impact on reservoir productivity and thus the commerciality of the prospective acreage. As in most unconventional plays, the presence and continuity of natural fractures and the susceptibility of the formation to fracture stimulation are likely to be the key determinants of the viability of both the Paradox and Mancos plays. The results presented herein are unrisked and thus should not be construed as the ultimate outcome of exploration activities. Please refer to the discussion both previously in the report as well as below on Chance of Success as well as that found above in the Resource Estimate section of the report.

Estimates of resources may increase or decrease as a result of future operations, effects of regulation by governmental agencies or geopolitical risks. As a result, the estimates of oil and gas prospective resources have an intrinsic uncertainty. The prospective resources included in this report are therefore estimates only and should not be construed as being exact quantities. They may or may not be actually recovered, and if recovered, the revenues therefrom and the actual costs related thereto could be more or less than the estimated amounts.

Estimates of Resources

The estimation of reserve and resource quantities involves two distinct determinations. The first determination results in the estimation of the quantities of recoverable oil and gas and the second determination results in the estimation of the uncertainty associated with those estimated quantities. The process of estimating the quantities of recoverable oil and gas reserves and resources relies on the use of certain generally accepted analytical procedures. These analytical procedures fall into three broad categories or methods: (1) performance-based methods, (2) volumetric-based methods and (3) analogy. These methods may be used singularly or in combination by the reserve evaluator in the process of estimating the quantities of reserves and/or resources. Reserve evaluators must select the method or combination of methods which in their professional judgment is most appropriate given the nature and amount of reliable geoscience and engineering data available at the time of the estimate, the established or anticipated performance characteristics of the reservoir being evaluated, and the stage of development or producing maturity of the property.

In many cases, the analysis of the available geoscience and engineering data and the subsequent interpretation of this data may indicate a range of possible outcomes in an estimate, irrespective of the method selected by the evaluator. When a range in the quantity of recoverable hydrocarbons is identified, the evaluator must determine the uncertainty associated with the incremental quantities of those recoverable hydrocarbons. If the quantities are estimated using the deterministic or probabilistic cumulative approach, the level of uncertainty is addressed for the cumulative volume based on the resource category assigned by the evaluator. Therefore, it is the categorization of the cumulative recoverable quantities that addresses the inherent uncertainty in the estimated quantities reported.

To develop the analogies in the Paradox formation, Ryder Scott included in its analysis wells from nearby properties with similar types of completions to what Rose proposes to implement for the development of the properties that are the subject of this report. Also, wells with significant historical production were considered to provide a better adjustment of the potential of recoverable hydrocarbon volumes. This latter group of wells may not have a similar type of completion as those

planned by Rose Petroleum. The wells used as analogies produce mainly from Cane Creek interval. To estimate ultimate recoverable resources of each analog well we used decline curve analysis which utilized extrapolations of the historical production data available. We observed that, in general, these wells are declining hyperbolically with the initial decline rates in the range of 15 to 80 percent per year, minimum decline rate of approximately 6 percent per year and hyperbolic exponent factor (b) of approximately 1.00. In general, wells with the higher initial oil rates will recover more hydrocarbons. As a result, a distribution of ultimate recoveries is obtained and normalized by reservoir rock volume (bbl/ac-ft.) The estimated recoverable hydrocarbon volume per rock volume is applied to the reservoirs of interest and a total recoverable hydrocarbon volume is calculated. Gas production was estimated from the analogs and adjusted by depth and pressure for the intervals of interest. All the results for this exercise are tabulated in Appendix II.

To estimate the ultimate recoverable hydrocarbons in the Mancos Shale, wells drilled in the leases evaluated in this report as well as nearby blocks were analyzed. In general, the development scheme (well type, completions, spacing, etc.) observed is different from that visualized by Rose. In addition, proximal historical production data is limited and scattered. These shortcomings prevented us from constructing a reliable analogy to be utilized to estimate ultimate recoveries of hydrocarbons. Instead, we relied on our previous general knowledge of the area and assigned an oil recovery factor distribution where most of the values occur between 1.0% (P90) and 8.0% (P10) see Figure 23. This recovery factor distribution was applied to the original oil in place distributions to obtain the recoverable hydrocarbon volumes. For gas recovery, a range of gas-oil ratio distribution was estimated from nearby wells with significant production. All the parameter distributions are tabulated in Appendix II. The resulting distributions of the estimated ultimate recoveries are included in Appendix II

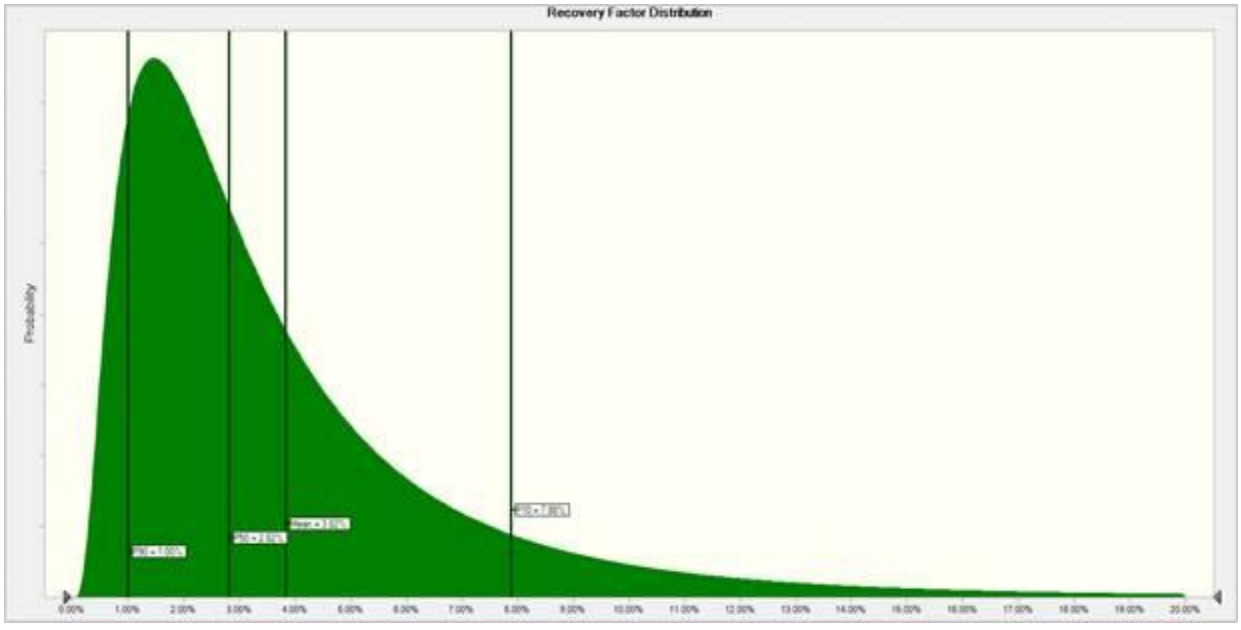

Figure 23: Recovery Factor Distribution for Mancos Shale.

Estimates of resource quantities and their associated categories or classifications may be revised in the future as additional geoscience or engineering data become available. Furthermore, estimates of the recoverable quantities and their associated categories or classifications may also be revised due to other factors such as changes in economic conditions, results of future operations, effects of regulation by governmental agencies or geopolitical or economic risks as previously noted herein.

Chance of Success

Ryder Scott has estimated a Chance of Success (COS) for each zone in each prospect area. In the context of the assessment of an unconventional shale play such as the Paradox Clastics or the Mancos Shale, the COS is intended to represent the total probability that the essential elements of such a play are present in each zone in each prospect area. The COS estimated for each block is based on our assessment of five independent risk factors which are defined as follows:

Presence: The probability that target units of the prospective formation are present in the area being evaluated.

Organics: The probability that the target units of the prospective formation will contain sufficient organic material of appropriate kerogen type to provide for the generation of hydrocarbons.

Maturity: The probability that the organic material contained in the target units of the prospective formation has sufficient thermal maturity to allow for the conversion of kerogen to oil and gas.

Producibility: The probability that there are sufficient intervals within the target units of the prospective formation of sufficiently brittle composition and that the regional stress field is such that the application of hydraulic fracturing techniques may provide for movement of hydrocarbons in the reservoir to a wellbore at significant rates.

Continuity: The probability that the other risk factors are favorable over a sufficient lateral area to allow for potential development of the target units of the prospective formation.

The COS does not include the likelihood that a development project in the area evaluated will be economically viable or, if viable, the likelihood that development will occur.

Probabilistic Analysis of Prospective Resources

As described in the Geologic section of this discussion, the volumes in this report were estimated probabilistically utilizing distributions estimated for the various parameters in the standard volumetric equation. By definition, the term “Prospective Resources” includes the geologic and development risks.

Prospective Resources should include the geologic chance of success and the chance of development. The total chance of commerciality is the product of these two factors. The geologic risk factor was calculated and is presented in this report but was not applied to the resource volumes. We have not calculated the development risk associated with this project as it is not standard to do so.

Crystal Ball^{tm} software was utilized to randomly select variable values in proportion to the probability density functions, and to calculate the estimated resources in place. The input assumption variables utilized in the Monte Carlo simulation for the Paradox and Mancos prospects are included in an Appendix to this report.

To estimate the ultimate recovery we applied a recovery factor to the calculated original in place volumes. We anticipate the recovery for these oil shales to range from a minimum of 0.6% to a maximum of 16.8% for the Paradox and a minimum of 0.1% to a maximum of 20.5% for the Mancos. We believe that these expected recoveries are reasonable and consistent with other shale basins. Once wells are in place, on line and produced, a better estimate may be possible for the recovery factors.

As described in the geologic section of this discussion, the geologic chance of success in a shale play is based on risk factors that are different than the four risk factors used in a conventional

reservoir (timing and migration, source rock, reservoir and trap). In a shale play, the shale is the source, reservoir and the trap. However, there are significant risks with shale plays. These include: Presence of shale, Significant Organic Carbon, Thermal Maturity, Producibility, and Continuity. In our analysis we assigned each of these parameters a value and the resulting geologic risk is the multiplication of all factors.

An individual parameter value of 0.5 indicates an equal probability that the Risk Factor is present or absent over a significant portion of the prospect area being considered. Values greater than 0.5 indicate less risk; values less than 0.5 indicate more risk. Positive information, a well finding the prospective reservoir present for example, results in parameter values greater than 0.5. Negative information, a well finding the prospective reservoir absent for example, results in parameter values less than 0.5.

Table 8: Geologic Chance of Success Input Parameters
Paradox Clastics Prospects

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Emery South						
5	1	1	1	.5	.5	.25
6	1	1	1	.5	.5	.25
7	1	.7	1	.5	.5	.18
8	1	1	1	.5	.6	.30
9	1	.7	1	.5	.6	.21
10	1	1	1	.5	.6	.30
11	1	1	1	.5	.6	.30
12	1	1	1	.5	.5	.25
13	1	.7	1	.5	.5	.18
14	1	1	1	.5	.6	.30
16	1	.7	1	.5	.6	.21
18	1	.7	1	.5	.6	.21

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Emery Main						
5	1	1	1	.7	.5	.35
6	1	1	1	.5	.5	.25
7	1	.7	1	.5	.5	.18
8	1	1	1	.5	.6	.30
9	1	.7	1	.5	.6	.21
10	1	1	1	.5	.6	.30
11	1	1	1	.5	.6	.30
12	1	1	1	.7	.6	.42
13	1	.7	1	.7	.6	.29
14	1	1	1	.7	.6	.42
16	1	.7	1	.7	.5	.24
18	1	.7	1	.5	.5	.18

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
River South						
5	1	1	1	.5	.6	.30
6	1	1	1	.5	.6	.30
7	1	.7	1	.5	.6	.21
8	1	1	1	.5	.6	.30
9	1	.7	1	.5	.6	.21
10	1	1	1	.5	.6	.30
11	1	1	1	.5	.6	.30
12	1	1	1	.6	.6	.36
13	1	.7	1	.5	.6	.21
14	1	1	1	.7	.6	.42
16	1	.7	1	.5	.6	.21
18	1	.7	1	.5	.6	.21
19	1	1	1	.8	.7	.56
20	1	.7	1	.5	.6	.21
CANE CREEK	1	1	1	.8	.7	.56

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
River North						
5	1	1	1	.6	.6	.36
6	1	1	1	.6	.6	.36
7	1	.7	1	.5	.6	.21
8	1	1	1	.5	.6	.30
9	1	.7	1	.5	.6	.21
10	1	1	1	.6	.6	.36
11	1	1	1	.6	.6	.36
12	1	1	1	.6	.6	.36
13	1	.7	1	.5	.6	.21
14	1	1	1	.7	.6	.56
16	1	.7	1	.6	.6	.25
18	1	.7	1	.5	.6	.21
19	1	1	1	.6	.6	.36
20	1	.7	1	.5	.6	.21
CANE CREEK	1	1	1	.7	.7	.49

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Grand Main						
5	1	1	1	.6	.6	.36
6	1	1	1	.6	.6	.36
7	1	.7	1	.5	.6	.21
8	1	1	1	.5	.6	.30
9	1	.7	1	.5	.6	.21
10	1	1	1	.6	.6	.36
11	1	1	1	.6	.6	.36
12	1	1	1	.6	.6	.36
13	1	.7	1	.5	.6	.21
14	1	1	1	.7	.6	.42
16	1	.7	1	.6	.6	.25
18	1	.7	1	.5	.6	.21
19	1	1	1	.8	.7	.56
20	1	.7	1	.5	.6	.21
CANE CREEK	1	1	1	.8	.7	.56

Table 9: Geologic Chance of Success Input Parameters
Mancos Shale Prospects

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Mancos Flats						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Windy Mesa						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Grand Mancos						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Mancos Flats S						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Mancos Flats SE						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Mancos Flats SW1						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Mancos Flats SW2						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Windy Mesa NE						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Windy Mesa N						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Windy Mesa W						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Prospect / Formation	Risk Factor					COS
	Presence	Organics	Maturity	Producibility	Continuity	
Windy Mesa E						
M400	1	1	1	.6	.5	.3
M300	1	1	1	.6	.5	.3
M200	1	1	1	.6	.5	.3
M150	1	1	1	.6	.5	.3
M100	1	1	1	.6	.5	.3

Note, in our opinion the multiplication of the geologic chance of success and the unrisked volumes is an inappropriate application of risk in an exploration play. To correctly account for the probability that a dry hole will be drilled, (a failure in the geologic chance of success) a binomial variable should be incorporated with the probability of a "yes" input into the distribution equal to the chance of geologic success. When a "yes" is returned, the project drilled a successful well. When a "no" is returned, the project was not successful and there was a failure in one or more of the geological risks. The result of such a simulation is to incorporate the geologic chance of success along with the uncertainty of each of the assumption variables.

The Crystal Ball results presented in Appendix II present a case where the geologic risk is removed, a "success case", perhaps as a result of drilling wells. The range of potential outcomes of the recoverable major product is presented for each area.

Assumptions and Data Considered for Estimates of Resources

To estimate recoverable oil and gas contingent and prospective resources we consider many factors and assumptions including, but not limited to, the use of reservoir parameters derived from geological, geophysical and engineering data which cannot be measured directly, economic criteria based on the cost assumptions, as noted herein, and forecasts of future production rates.

Rose has informed us that they have furnished us all of the material accounts, records, geological and engineering data, and reports and other data required for this investigation. In preparing our estimates of oil and gas prospective resources, we have relied upon data furnished by Rose with respect to property interests owned, production and well tests from examined wells provided by the State of Utah, geological structural and isochore maps constructed by Ryder Scott and The Discovery Group, well logs, third party core analyses, and pressure measurements reported to the State of Utah by the respective operators. Ryder Scott reviewed such factual data for its reasonableness; however, we have not conducted an independent verification of the data supplied by Rose regarding property interest owned.

In summary, we consider the assumptions, data, methods and analytical procedures used in this report appropriate for the purpose hereof, and we have used all such methods and procedures that we consider necessary and appropriate to prepare the estimates of prospective resources herein.

Standards of Independence and Professional Qualification

Ryder Scott is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world for over seventy-five years. Ryder Scott is employee-owned and maintains offices in Houston, Texas; Denver, Colorado; and Calgary, Alberta, Canada. We have over eighty engineers and geoscientists on our permanent staff. By virtue of the size of our firm and the large number of clients for which we provide services, no single client or job

represents a material portion of our annual revenue. We do not serve as officers or directors of any privately-owned or publicly-traded oil and gas company and are separate and independent from the operating and investment decision-making process of our clients. This allows us to bring the highest level of independence and objectivity to each engagement for our services.

Ryder Scott actively participates in industry-related professional societies and organizes an annual public forum focused on the subject of reserves evaluations and SEC regulations. Many of our staff have authored or co-authored technical papers on the subject of reserves related topics. We encourage our staff to maintain and enhance their professional skills by actively participating in ongoing continuing education.

Prior to becoming an officer of the Company, Ryder Scott requires that staff engineers and geoscientists have received professional accreditation in the form of a registered or certified professional engineer's license or a registered or certified professional geoscientist's license, or the equivalent thereof, from an appropriate governmental authority or a recognized self-regulating professional organization.

We are independent petroleum engineers with respect to Rose and Rockies-Standard Oil. Neither we nor any of our employees have any interest in the subject properties and neither the employment to do this work nor the compensation is contingent on our estimates of reserves for the properties which were reviewed.

The results of this study, presented herein, are based on technical analysis conducted by teams of geoscientists and engineers from Ryder Scott. The professional qualifications of the undersigned, the technical person primarily responsible for overseeing the evaluation of the reserves information discussed in this report, are included as an attachment to this letter.

Terms of Usage

We have provided Rose with a digital version of the original signed copy of this report letter. In the event there are any differences between the digital version included in filings made by Rose and the original signed report letter, the original signed report letter shall control and supersede the digital version.

This report was prepared for the exclusive use and sole benefit of Rose Petroleum plc and may not be put to other use without our prior written consent for such use. The data and work papers used in the preparation of this report are available for examination by authorized parties in our offices. Please contact us if we can be of further service.

Very truly yours,

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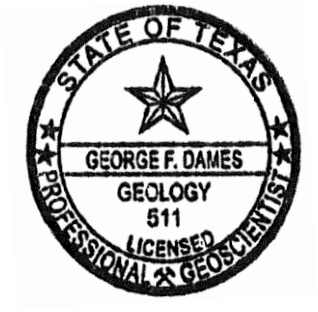

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APPENDIX I

PETROLEUM RESERVES AND RESOURCES CLASSIFICATION AND DEFINITIONS

As Adapted From:
2007 PETROLEUM RESOURCES MANAGEMENT SYSTEM (SPE-PRMS)[1]
Sponsored by:
SOCIETY OF PETROLEUM ENGINEERS (SPE),
WORLD PETROLEUM CONGRESS (WPC)
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS (AAPG)
AND
SOCIETY OF PETROLEUM EVALUATION ENGINEERS (SPEE)

Reserve and resource classification systems are intended to allow the evaluator to follow the progression of changes in the exploration and production life cycle of a reservoir, field, or project that arise as a result of obtaining more technical information or as a result of a change in the economic status. Most systems incorporate terminology to describe the progression of a project from the delineation of an initial prospect, to the confirmation of the prospect through exploration drilling, onto the appraisal and development phase, and finally from initial production through depletion. These reserve and resource definitions thus provide the decision making framework to manage risk and uncertainty through the classification and categorization of the recoverable hydrocarbon volumes.

The term “resources” is generally applied to “all quantities of petroleum (recoverable and unrecoverable) naturally occurring on or within the Earth’s crust, discovered and undiscovered, plus those quantities already produced”.

The term “reserves” is a subset of resources generally applied to the discovered “quantities of petroleum anticipated to be commercially recoverable from known accumulations from a given date forward under defined conditions”.

All reserve and resource estimates involve some degree of uncertainty. The uncertainty depends chiefly on the amount of reliable geologic and engineering data available at the time of the estimate and the interpretation of these data. Estimates will generally be revised as additional geologic or engineering data becomes available or as economic conditions change.

Estimation of reserves and resources is done under conditions of uncertainty. The method of estimation is called deterministic if a single best estimate of reserves and resources is made based on known geological, engineering, and economic data. The method of estimation is called probabilistic when the known geological, engineering, and economic data are used to generate a range of estimates and their associated probabilities. Because of the differences in uncertainty, caution should be exercised when aggregating quantities of petroleum from different reserves and/or resource classifications.

Reserves and resources may be attributed to either natural energy or improved recovery methods. Improved recovery methods include all methods for supplementing natural energy or altering natural forces in the reservoir to increase ultimate recovery. Examples of such methods are pressure maintenance, cycling, waterflooding, thermal methods, chemical flooding, and the use of miscible and immiscible displacement fluids. Other improved recovery methods may be developed in the future as petroleum technology continues to evolve.

Reserves and resources may be attributed to either conventional or unconventional petroleum accumulations under the SPE-PRMS. Petroleum accumulations are considered as either conventional or unconventional based on the nature of their in-place characteristics, extraction method applied, or degree of processing prior to sale. Examples of unconventional petroleum accumulations include coalbed or coalseam methane (CBM/CSM), basin-centered gas, shale gas, gas hydrates, natural bitumen and oil shale deposits. These unconventional accumulations may

require specialized extraction technology and/or significant processing prior to sale. The SPE-PRMS acknowledges unconventional petroleum accumulations as reserves and resources regardless of their in-place characteristics, the extraction method applied, or the degree of processing required.

Reserves and resources do not include quantities of petroleum being held in inventory and may be reduced for usage, processing losses and/or non-hydrocarbons that must be removed prior to sale.

SPE-PRMS

In March 2007, the Society of Petroleum Engineers (SPE), World Petroleum Council (WPC), American Association of Petroleum Geologists (AAPG), and Society of Petroleum Evaluation Engineers (SPEE) jointly approved the "Petroleum Resources Management System" (SPE-PRMS). The SPE-PRMS consolidates, builds on, and replaces guidance previously contained in the 2000 "Petroleum Resources Classification and Definitions" and the 2001 "Guidelines for the Evaluation of Petroleum Reserves and Resources" publications.

Reference should be made to the full SPE-PRMS for the complete definitions and guidelines as the following definitions, descriptions and explanations rely wholly or in part on excerpts from the SPE-PRMS document (passages excerpted in their entirety from the SPE-PRMS document are denoted in italics herein). For convenience, Table 1: "Recoverable Resources Classes and Sub-Classes" from the SPE-PRMS has been reproduced in full and included as an attachment to this document.

The SPE-PRMS incorporates the petroleum initially-in-place as well as the recoverable and unrecoverable petroleum quantities into a common resource classification framework. *Petroleum is defined as a naturally occurring mixture consisting of hydrocarbons in the gaseous, liquid, or solid phase.*

The SPE-PRMS defines the major resources classes: Production, Reserves, Contingent Resources, and Prospective Resources, as well as Unrecoverable petroleum. The basic classification scheme requires establishment of criteria for a petroleum discovery and thereafter the distinction between commercial (Reserves) and sub-commercial projects (Contingent Resources) in known accumulations. Under this classification scheme, estimated recoverable quantities from accumulations that have yet to be discovered are termed Prospective Resources. Further, the SPE-PRMS includes all types of petroleum whether currently considered "conventional" or "unconventional".

Figure 1 shown at the end of this document is a graphical representation of the SPE, WPC, AAPG and SPEE resources classification system. The SPE-PRMS "classifies" reserves and resources according to project maturity and increasing chance of commerciality (vertical axis) and "categorizes" reserves and resources according to the *range of uncertainty* (horizontal axis) *of the estimated quantities potentially recoverable from an accumulation by a project*. The following definitions apply to the major subdivisions within the resources classification:

RESOURCES CLASSIFICATION (SPE-PRMS)

Recoverable petroleum resources as described herein may be classified into one of three principal resource classifications: Prospective Resources, Contingent Resources, or Reserves. The distinction between Prospective and Contingent Resources depends on whether or not there exists one or more wells and other data indicating the potential for moveable hydrocarbons (e.g. the discovery status). Discovered petroleum resources may be classified as either Contingent Resources or as Reserves depending on the chance that if a project is implemented it will reach

commercial producing status (e.g. chance of commerciality). The distinction between various "classifications" of Resources and Reserves relates to their discovery status and increasing chance of commerciality as described herein.

The SPE-PRMS Section 1.1 and Appendix A define the following terms:

TOTAL PETROLEUM-INITIALLY-IN-PLACE

Total Petroleum-Initially-in-Place is that quantity of petroleum which is estimated to exist originally in naturally occurring accumulations. Total Petroleum-Initially-in-Place is, therefore, that quantity of petroleum which is estimated, as of a given date, to be contained in known accumulations, plus those quantities already produced therefrom, plus those estimated quantities in accumulations yet to be discovered.

Total Petroleum-Initially-in-Place may be subdivided into Discovered Petroleum-Initially-in-Place and Undiscovered Petroleum-Initially-in-Place, with Discovered Petroleum-Initially-in-Place being limited to known accumulations.

It is recognized that not all of the Petroleum-Initially-in-Place quantities may constitute potentially recoverable resources since the estimation of the proportion which may be recoverable can be subject to significant uncertainty and will change with variations in commercial circumstances, technological developments and data availability.

Given the aforementioned constraints, a portion of the Petroleum-Initially-in-Place may need to be classified as Unrecoverable.

DISCOVERED PETROLEUM-INITIALLY-IN-PLACE

Discovered Petroleum-Initially-in-Place is that quantity of petroleum which is estimated, as of a given date, to be contained in known accumulations prior to production.

Discovered Petroleum-Initially-in-Place may be subdivided into Commercial and Sub-commercial categories, with the estimated potentially recoverable portion being classified as Reserves and Contingent Resources respectively, as defined below.

KNOWN ACCUMULATION

The SPE-PRMS defines an accumulation as *an individual body of petroleum-in-place*. For an accumulation to be considered as "known", it must have been discovered. A discovery is defined as *one petroleum accumulation or several petroleum accumulations collectively, which have been penetrated by one or several exploratory wells which have established through testing, sampling, and/or logging the existence of a significant quantity of potentially moveable hydrocarbons*. The SPE-PRMS states in this context, *"significant" implies that there is evidence of a sufficient quantity of petroleum to justify estimating the in-place volume demonstrated by the well(s) and for evaluating the potential for economic recovery.* Known accumulations may contain Reserves and/or Contingent Resources.

RESERVES

Reserves are defined as those quantities of petroleum which are anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must further satisfy the following criteria: they must be discovered, recoverable, commercial, and remaining (as of the evaluation date) based on the development project(s) applied.

Reserves are categorized in *accordance with the level of certainty associated with the estimates* (horizontal axis shown in Figure 1) *and may be further sub-classified based on project maturity and/or characterized by development and production status* (Refer to Figure 2 at the end of this document). Reference should be made to the full SPE-PRMS for the complete definitions and guidelines.

ADDITIONAL TERMS USED IN RESERVES EVALUATIONS (SPE-PRMS DEFINITIONS)

The SPE-PRMS Sections 2.3, 2.3.4, 2.4 and Appendix A define the following terms as follows:

Improved recovery. *Improved Recovery is the extraction of additional petroleum, beyond Primary Recovery, from naturally occurring reservoirs by supplementing the natural forces in the reservoir. It includes waterflooding and gas injection for pressure maintenance, secondary processes, tertiary processes and any other means of supplementing natural reservoir recovery processes. Improved recovery also includes thermal and chemical processes to improve the in-situ mobility of viscous forms of petroleum. (Also called Enhanced Recovery.)*

Improved recovery projects must meet the same Reserves commerciality criteria as primary recovery projects. There should be an expectation that the project will be economic and that the entity has committed to implement the project in a reasonable time frame (generally within 5 years; further delays should be clearly justified). If there is significant project risk, forecast incremental recoveries may be similarly categorized but should be classified as Contingent Resources.

The judgment on commerciality is based on pilot testing within the subject reservoir or by comparison to a reservoir with analogous rock and fluid properties and where a similar established improved recovery project has been successfully applied.

Incremental recoveries through improved recovery methods that have yet to be established through routine, commercially successful applications are included as Reserves only after a favorable production response from the subject reservoir from either (a) a representative pilot or (b) an installed program, where the response provides support for the analysis on which the project is based.

Similar to improved recovery projects applied to conventional reservoirs, successful pilots or operating projects in the subject reservoir or successful projects in analogous reservoirs may be required to establish a distribution of recovery efficiencies for non-conventional accumulations. Such pilot projects may evaluate both the extraction efficiency and the efficiency of unconventional processing facilities to derive sales products prior to custody transfer.

These incremental recoveries in commercial projects are categorized into Proved, Probable, and Possible Reserves based on certainty derived from engineering analysis and analogous applications in similar reservoirs.

Commercial. *When a project is commercial, this implies that the essential social, environmental and economic conditions are met, including political, legal, regulatory and contractual conditions. In addition, a project is commercial if the degree of commitment is such that the accumulation is expected to be developed and placed on production within a reasonable time frame. While 5 years is recommended as a benchmark, a longer time frame could be applied where for example, development of economic projects are deferred at the option of the producer for, among other things, market-related reasons, or to meet contractual or strategic objectives. In all cases, the justification for classification as Reserves should be clearly documented.*

PROVED RESERVES (SPE-PRMS DEFINITIONS)

The SPE-PRMS Section 2.2.2 and Table 3 define proved oil and gas reserves as follows:

Proved oil and gas reserves. *Proved Reserves are those quantities of petroleum, which by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs under defined economic conditions, operating methods, and government regulations. If deterministic methods are used, the term reasonable certainty is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate.*

The area of the reservoir considered as Proved includes:

(1) the area delineated by drilling and defined by fluid contacts, if any, and

(2) adjacent undrilled portions of the reservoir that can reasonably be judged as continuous with it and commercially productive on the basis of available geoscience and engineering data.

In the absence of data on fluid contacts, Proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless otherwise indicated by definitive geoscience, engineering, or performance data. Such definitive information may include pressure gradient analysis and seismic indicators. Seismic data alone may not be sufficient to define fluid contacts for Proved reserves (see "2001 Supplemental Guidelines", Chapter 8).

Reserves in undeveloped locations may be classified as Proved provided that:

- *The locations are in undrilled areas of the reservoir that can be judged with reasonable certainty to be commercially productive.*
- *Interpretations of available geoscience and engineering data indicate with reasonable certainty that the objective formation is laterally continuous with the drilled Proved locations.*

For Proved Reserves, the recovery efficiency applied to these reservoirs should be defined based on a range of possibilities supported by analogs and sound engineering judgment considering the characteristics of the Proved area and the applied development program.

UNPROVED RESERVES (SPE-PRMS DEFINITIONS)

The SPE-PRMS Section 2.2.2 and Appendix A define unproved oil and gas reserves as follows:

Unproved oil and gas reserves*. Unproved Reserves are based on geoscience and/or engineering data similar to that used in estimates of Proved Reserves, but technical or other uncertainties preclude such reserves being classified as Proved. Unproved Reserves may be further categorized as Probable Reserves or Possible Reserves. Based on additional data and updated interpretations that indicate increased certainty, portions of Possible and Probable Reserves may be re-categorized as Probable and Proved Reserves.*

PROBABLE RESERVES (SPE-PRMS DEFINITIONS)

The SPE-PRMS Section 2.2.2 and Table 3 define probable oil and gas reserves as follows:

Probable oil and gas reserves. *Probable Reserves are those additional reserves which analysis of geoscience and engineering data indicate are less likely to be recovered than Proved Reserves but more certain to be recovered than Possible Reserves. It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated Proved plus Probable reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate.*

Probable Reserves may be assigned to areas of a reservoir adjacent to Proved where data control or interpretations of available data are less certain. The interpreted reservoir continuity may not meet the reasonable certainty criteria. Probable estimates also include incremental recoveries associated with project recovery efficiencies beyond that assumed for Proved.

POSSIBLE RESERVES (SPE-PRMS DEFINITIONS)

The SPE-PRMS Section 2.2.2 and Table 3 define possible oil and gas reserves as follows:

Possible oil and gas reserves. *Possible Reserves are those additional reserves which analysis of geoscience and engineering data indicate are less likely to be recoverable than Probable Reserves. The total quantities ultimately recovered from the project have a low probability to exceed the sum of Proved plus Probable plus Possible (3P), which is equivalent to the high estimate scenario. When probabilistic methods are used, there should be at least a 10% probability that the actual quantities recovered will equal or exceed the 3P estimate.*

Possible Reserves may be assigned to areas of a reservoir adjacent to Probable Reserves where data control and interpretations of available data are progressively less certain. Frequently, this may be in areas where geoscience and engineering data are unable to clearly define the area and vertical reservoir limits of commercial production from the reservoir by a defined project. Possible estimates also include incremental quantities associated with project recovery efficiencies beyond that assumed for Probable.

CONTINGENT RESOURCES

Contingent Resources are those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from known accumulations, but the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies. Contingent Resources may include, for example, projects for which there is currently no viable market, or where commercial recovery is dependent on the development of new technology, or where evaluation of the accumulation is insufficient to assess commerciality.

Contingent Resources are categorized according to the range of technical uncertainty associated with the estimates (horizontal axis shown in Figure 1) may be further sub-classified based on project maturity and/or characterized by their economic status (Refer to Figure 2 at the end of this document). Reference should be made to the full SPE-PRMS for the complete definitions and guidelines.

UNDISCOVERED PETROLEUM-INITIALLY-IN-PLACE

Undiscovered Petroleum-Initially-in-Place is that quantity of petroleum which is estimated, as of a given date, to be contained in accumulations yet to be discovered.

The estimated potentially recoverable portion of Undiscovered Petroleum-Initially-in-Place is classified as Prospective Resources, as defined below.

PROSPECTIVE RESOURCES

Prospective Resources are those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future projects. Prospective Resources have both an associated chance of discovery and a chance of development.

Prospective Resources are categorized in accordance with the level of certainty associated with recoverable estimates assuming their discovery and development and may be further sub-classified based on project maturity (Refer to Figure 2 at the end of this document). Reference should be made to the full SPE-PRMS for the complete definitions and guidelines.

UNRECOVERABLE

Unrecoverable is a term that refers to that portion of Discovered or Undiscovered Petroleum Initially-in-Place quantities which is estimated, as of a given date, not to be recoverable by future development projects. A portion of these quantities may become recoverable in the future as commercial circumstances change or technological developments occur; the remaining portion may never be recovered due to physical/chemical constraints represented by subsurface interaction of fluids and reservoir rocks.

ADDITIONAL TERMS USED IN RESOURCES CLASSIFICATION (SPE-PRMS)

CHANCE OF COMMERCIALITY

The SPE-PRMS Section 2.1, Table 1 and Appendix A define the following terms relating to commerciality:

The "Chance of Commerciality", as denoted in the SPE-PRMS and as shown in Figure 1, *is the chance that the project will be developed and reach commercial producing status*.

The chance of commerciality is determined by the probability of a discrete event occurring. In the context of the SPE-PRMS, the discrete event is comprised of one of several conditions, as noted below, which impact the project's commercial viability.

The commercial viability of a development project is dependent on a forecast of the conditions that will exist during the time period encompassed by the project's activities. Commerciality is not solely determined based on the economic status of a project which refers to the situation where the income from an operation exceeds the expenses involved in, or attributable to, that operation. Conditions as noted in the SPE-PRMS include *technological, economic, legal, environmental, social, and governmental factors. While economic factors can be summarized as forecast costs and product prices, the underlying influences include, but are not limited to, market conditions, transportation and processing infrastructure, fiscal terms and taxes.*

A development project *may include one or many wells and associated production and processing facilities. One project may develop many reservoirs, or many projects may be applied to one reservoir. An accumulation or potential accumulation may be subject to several separate and distinct projects that are at different stages of exploration or development. Thus, an accumulation may have recoverable quantities in several resource classes simultaneously.*

COMMERCIALITY APPLIED TO RESERVES

Commerciality as applied to Reserves must be based upon all of the following criteria:

- *Evidence to support a reasonable timetable for development.*

- *A reasonable assessment of the future economics of such development projects meeting defined investment and operating criteria.*
- *A reasonable expectation that there will be a market for all or at least the expected sales quantities of production required to justify development.*
- *Evidence that the necessary production and transportation facilities are available or can be made available.*
- *Evidence that legal, contractual, environmental and other social and economic concerns will allow for the actual implementation of the recovery project being evaluated.*
- *High confidence in the commercial producibility of the reservoir.*

To be included in a Reserves class, a project must be sufficiently defined to establish its commercial viability. There must be a reasonable expectation that all required internal and external approvals will be forthcoming.

In general, quantities should not be classified as Reserves unless there is *evidence of firm intention that the accumulation will be developed and placed on production within a reasonable time frame.* In certain circumstances, reserves may be assigned even though development may not occur for some time. *A reasonable time frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project.* The SPE-PRMS recommends *five years as a benchmark, but notes that a longer time frame could be applied where, for example, development of economic projects are deferred at the option of the producer for, among other things, market-related reasons, or to meet contractual or strategic objectives.*

For a project to be included in a Reserves class *there must be a high confidence in the commercial producibility of the reservoir as supported by actual production or formation tests. In certain cases, Reserves may be assigned on the basis of well logs and/or core analysis that indicate that the subject reservoir is hydrocarbon-bearing and is analogous to reservoirs in the same area that are producing or have demonstrated the ability to produce on formation tests.*

COMMERCIALITY APPLIED TO CONTINGENT RESOURCES

Estimated recoverable quantities from known accumulations that are not yet considered mature enough for commercial development as denoted by meeting all of the aforementioned conditions should be classified as Contingent Resources.

Based on assumptions regarding future conditions and their impact on economic viability, projects currently classified as Contingent Resources may be broadly divided into two groups:

- ***Marginal Contingent Resources*** *are those quantities associated with technically feasible projects that are either currently economic or projected to be economic under reasonably forecasted improvements in commercial conditions but are not committed for development because of one or more contingencies.*

- ***Sub-Marginal Contingent Resource****s are those quantities associated with discoveries for which analysis indicates that technically feasible development projects would not be economic and/or other contingencies would not be satisfied under current or reasonable forecasted improvements in commercial conditions. These projects nonetheless should be retained in the inventory of discovered resources pending unforeseen major changes in commercial conditions.*

Those discovered in-place volumes for which a feasible development project cannot be defined using current or reasonably forecast improvements in technology are classified as Unrecoverable.

RESOURCES CATEGORIZATION (SPE-PRMS)

All estimates of the quantities of petroleum potentially recoverable from an accumulation classified as having Prospective or Contingent Resources or Reserves involve uncertainty. The relative degree of uncertainty may be conveyed by placing the estimated quantities into one of several "categories" as described herein.

The SPE-PRMS Section 2.2 and Appendix A define the following terms:

RANGE OF UNCERTAINTY

The Range of Uncertainty, as denoted in the SPE-PRMS and as shown in Figure 1, reflects a range of estimated quantities potentially recoverable from an accumulation by a project. *Evaluators may assess recoverable quantities and categorize results by uncertainty using the deterministic incremental (risk-based) approach, the deterministic scenario (cumulative) approach, or probabilistic methods.*

DETERMINISTIC METHODS (SPE-PRMS)

RESERVES

For reserves, the range of uncertainty can be reflected as discrete incremental quantities termed Proved, Probable and Possible or expressed in cumulative terms as 1P (Proved), 2P (Proved plus Probable), and 3P (Proved plus Probable plus Possible), respectively.

CONTINGENT RESOURCES

For Contingent Resources, the range of uncertainty is generally expressed in deterministic scenario (cumulative) terms as 1C, 2C, 3C, respectively or in terms of probability using probabilistic methods. While the SPE-PRMS categorization scheme does not specifically prohibit the use of discrete incremental quantities for Contingent Resources, the SPE-PRMS does not denote the terms to be applied to these discrete incremental quantities.

PROSPECTIVE RESOURCES

For Prospective Resources, the range of uncertainty is generally expressed in deterministic scenario (cumulative) terms as low, best and high estimates or in terms of probability using probabilistic methods. As in the case of Contingent Resources, the SPE-PRMS categorization scheme does not specifically denote terms to be applied to discrete incremental quantities for Prospective Resources.

INCREMENTAL TERMS FOR CONTINGENT AND PROSPECTIVE RESOURCES (RYDER SCOTT)

Should evaluators choose to characterize the range of uncertainty for Contingent Resources or Prospective Resources in discrete incremental quantities, they should denote such quantities as such and provide sufficient detail in their report to allow an independent evaluator or auditor to clearly understand the basis for estimation and categorization of the recoverable quantities. For reports prepared by Ryder Scott Company (Ryder Scott), the range of uncertainty for discrete incremental quantities of Contingent Resources shall be termed 1C Incremental (1Ci), 2C Incremental (2Ci) and 3C Incremental (3Ci) and in the case of Prospective Resources shall be termed Low Estimate Incremental (LEi), Best Estimate Incremental (BEi) and High Estimate Incremental (HEi) where (i) denotes a specific incremental quantity.

BEST ESTIMATE

Uncertainty in resource estimates is best communicated by reporting a range of potential results. However, if it is required to report a single representative result, the "best estimate" is considered the most realistic assessment of recoverable quantities. The term "best estimate" is used here as a generic expression for the estimate considered being closest to the quantity that will actually be recovered from the accumulation between the date of the estimate and the time of abandonment. In the case of reserves, the best estimate is generally considered to represent *the sum of Proved and Probable estimates (2P). It should be noted that under the incremental (risk-based) approach for Reserves, discrete estimates are made for the quantities in each category for Proved and Probable, and they should not be aggregated without due consideration of their associated risk.* In the case of Contingent Resources and Prospective Resources, the best estimate would be represented by the 2C and Best Estimate, respectively. If probabilistic methods are used, this term would generally be a measure of central tendency of the uncertainty distribution (most likely/mode, median/P50 or mean). The terms "Low Estimate" and "High Estimate" should provide a reasonable assessment of the range of uncertainty in the Best Estimate.

PROBABILISTIC METHODS (SPE-PRMS)

If probabilistic methods are used, these estimated quantities should be based on methodologies analogous to those applicable to the definitions of Reserves, Contingent Resources and Prospective Resources; therefore, in general, the resulting probabilities should correspond to the deterministic terms as follows:

- There should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the 1P, 1C or Low Estimate.
- There should be at least a 50% probability (P50) that the quantities actually recovered will equal or exceed the 2P, 2C or Best Estimate.
- There should be at least a 10% probability (P10) that the quantities actually recovered will equal or exceed the 3P, 3C or High Estimate.

COMPARABILITY OF SIMILAR RESERVES AND RESOURCE CATEGORIES

As indicated in Figure 1, the 1C, 2C and 3C Contingent Resource estimates and the Low, Best and High Prospective Resource estimates of potentially recoverable volumes should reflect some comparability with the reserves categories of Proved (1P), Proved plus Probable (2P) and Proved plus Probable plus Possible (3P), respectively. *While there may be a significant risk that sub-commercial or undiscovered accumulations will not achieve commercial production, it is useful to consider the range of potentially recoverable volumes independently of such a risk.*

Without new technical information, there should be no change in the distribution of technically recoverable volumes and their categorization boundaries when conditions are satisfied sufficiently to reclassify a project from Contingent Resources to Reserves.

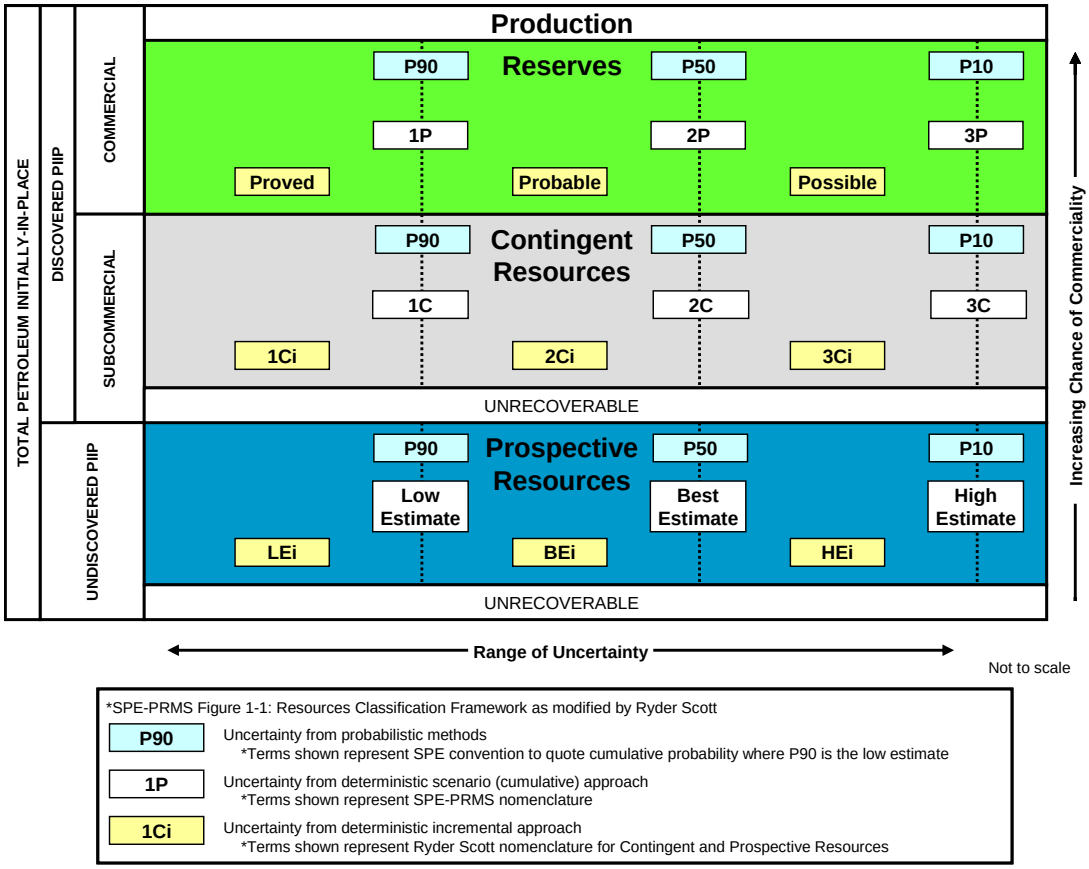
AGGREGATION

Petroleum quantities classified as Reserves, Contingent Resources or Prospective Resources should not be aggregated with each other without due consideration of the significant differences in the criteria associated with their classification. In particular, there may be a significant risk that accumulations containing Contingent Resources or Prospective Resources will not achieve commercial production. Similarly, reserves and resources of different categories should not be aggregated with each other without due consideration of the significant differences in the criteria associated with their categorization.

RESOURCES CLASSIFICATION SYSTEM (SPE-PRMS) GRAPHICAL REPRESENTATION

Figure 1 is a graphical representation of the SPE, WPC, AAPG, SPEE resources classification system. The horizontal axis represents the "Range of Uncertainty" in the estimated potentially recoverable volume for an accumulation by a project, whereas the vertical axis represents the "Chance of Commerciality", that is, the chance that the project will be developed and reach commercial producing status.

Figure 1
SPE, WPC, AAPG, SPEE
RESOURCES CLASSIFICATION SYSTEM*



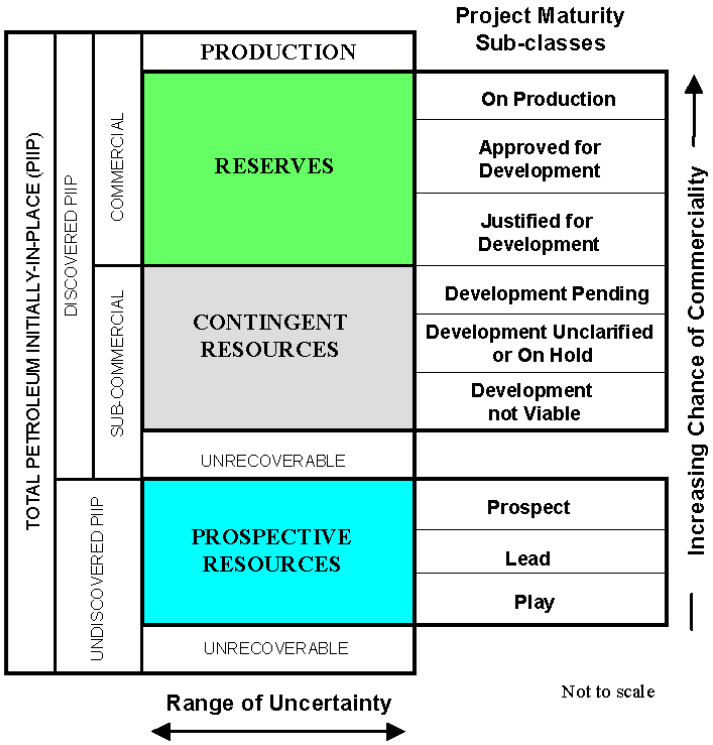
INCREMENTAL TERMS FOR CONTINGENT AND PROSPECTIVE RESOURCES AS DEFINED BY RYDER SCOTT

Should evaluators choose to characterize the range of uncertainty for Contingent Resources or Prospective Resources in discrete incremental quantities, they should denote such quantities as such and provide sufficient detail in their report to allow an independent evaluator or auditor to clearly understand the basis for estimation and categorization of the recoverable quantities. For reports prepared by Ryder Scott Company (Ryder Scott), the range of uncertainty for discrete incremental quantities of Contingent Resources shall be termed 1C Incremental (1Ci), 2C Incremental (2Ci) and 3C Incremental (3Ci) and in the case of Prospective Resources shall be termed Low Estimate Incremental (LEi), Best Estimate Incremental (BEi) and High Estimate Incremental (HEi) where (i) denotes a specific incremental quantity.

RESOURCES CLASSIFICATION SYSTEM (SPE-PRMS)

GRAPHICAL REPRESENTATION

Figure 2
SPE, WPC, AAPG, SPEE
PROJECT MATURITY SUB-CLASSES



[1] Petroleum Resources Management System prepared by the Oil and Gas Reserves Committee of the Society of Petroleum Engineers (SPE); reviewed and jointly sponsored by the World Petroleum Council (WPC), the American Association of Petroleum Geologists (AAPG), and the Society of Petroleum Evaluation Engineers (SPEE), March 2007.

Table 1: Recoverable Resources Classes and Sub-Classes

Class/ Sub-Class	Definition	Guidelines
Reserves	Reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions.	Reserves must satisfy four criteria: they must be discovered, recoverable, commercial and remaining based on the development project(s) applied. Reserves are further subdivided in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their development and production status. To be included in the Reserves class, a project must be sufficiently defined to establish its commercial viability. There must be a reasonable expectation that all required internal and external approvals will be forthcoming, and there is evidence of firm intention to proceed with development within a reasonable time frame. A reasonable time frame for the initiation of development depends on the specific circumstances and varies according to the scope of the project. While 5 years is recommended as a benchmark, a longer time frame could be applied where, for example, development of economic projects are deferred at the option of the producer for, among other things, market-related reasons, or to meet contractual or strategic objectives. In all cases, the justification for classification as Reserves should be clearly documented. To be included in the Reserves class, there must be a high confidence in the commercial producibility of the reservoir as supported by actual production or formation tests. In certain cases, Reserves may be assigned on the basis of well logs and/or core analysis that indicate that the subject reservoir is hydrocarbon-bearing and is analogous to reservoirs in the same area that are producing or have demonstrated the ability to produce on formation tests
On Production	The development project is currently producing and selling petroleum to market.	The key criterion is that the project is receiving income from sales, rather than the approved development project necessarily being complete. This is the point at which the project "chance of commerciality" can be said to be 100%. The project "decision gate" is the decision to initiate commercial production from the project.
Approved for Development	All necessary approvals have been obtained, capital funds have been committed, and implementation of the development project is under way.	At this point, it must be certain that the development project is going ahead. The project must not be subject to any contingencies, such as outstanding regulatory approvals or sales contracts. Forecast capital expenditures should be included in the reporting entity's current or following year's approved budget. The project "decision gate" is the decision to start investing capital in the construction of production facilities and/or drilling development wells.

Class/ Sub-Class	Definition	Guidelines
Justified for Development	Implementation of the development project is justified on the basis of reasonable forecast commercial conditions at the time of reporting, and there are reasonable expectations that all necessary approvals/contracts will be obtained.	In order to move to this level of project maturity, and hence have reserves associated with it, the development project must be commercially viable at the time of reporting, based on the reporting entity's assumptions of future prices, costs, etc. ("forecast case") and the specific circumstances of the project. Evidence of a firm intention to proceed with development within a reasonable time frame will be sufficient to demonstrate commerciality. There should be a development plan in sufficient detail to support the assessment of commerciality and a reasonable expectation that any regulatory approvals or sales contracts required prior to project implementation will be forthcoming. Other than such approvals/contracts, there should be no known contingencies that could preclude the development from proceeding within a reasonable timeframe (see Reserves class). The project "decision gate" is the decision by the reporting entity and its partners, if any, that the project has reached a level of technical and commercial maturity sufficient to justify proceeding with development at that point in time.
Contingent Resources	Those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable due to one or more contingencies.	Contingent Resources may include, for example, projects for which there are currently no viable markets, or where commercial recovery is dependent on technology under development, or where evaluation of the accumulation is insufficient to clearly assess commerciality. Contingent Resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their economic status.
Development Pending	A discovered accumulation where project activities are ongoing to justify commercial development in the foreseeable future.	The project is seen to have reasonable potential for eventual commercial development, to the extent that further data acquisition (e.g. drilling, seismic data) and/or evaluations are currently ongoing with a view to confirming that the project is commercially viable and providing the basis for selection of an appropriate development plan. The critical contingencies have been identified and are reasonably expected to be resolved within a reasonable time frame. Note that disappointing appraisal/evaluation results could lead to a re-classification of the project to "On Hold" or "Not Viable" status. The project "decision gate" is the decision to undertake further data acquisition and/or studies designed to move the project to a level of technical and commercial maturity at which a decision can be made to proceed with development and production.

Class/ Sub-Class	Definition	Guidelines
Development Unclarified or on Hold	A discovered accumulation where project activities are on hold and/or where justification as a commercial development may be subject to significant delay.	The project is seen to have potential for eventual commercial development, but further appraisal/evaluation activities are on hold pending the removal of significant contingencies external to the project, or substantial further appraisal/evaluation activities are required to clarify the potential for eventual commercial development. Development may be subject to a significant time delay. Note that a change in circumstances, such that there is no longer a reasonable expectation that a critical contingency can be removed in the foreseeable future, for example, could lead to a re-classification of the project to "Not Viable" status. The project "decision gate" is the decision to either proceed with additional evaluation designed to clarify the potential for eventual commercial development or to temporarily suspend or delay further activities pending resolution of external contingencies.
Development Not Viable	A discovered accumulation for which there are no current plans to develop or to acquire additional data at the time due to limited production potential.	The project is not seen to have potential for eventual commercial development at the time of reporting, but the theoretically recoverable quantities are recorded so that the potential opportunity will be recognized in the event of a major change in technology or commercial conditions. The project "decision gate" is the decision not to undertake any further data acquisition or studies on the project for the foreseeable future.
Prospective Resources	Those quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations.	Potential accumulations are evaluated according to their chance of discovery and, assuming a discovery, the estimated quantities that would be recoverable under defined development projects. It is recognized that the development programs will be of significantly less detail and depend more heavily on analog developments in the earlier phases of exploration.
Prospect	A project associated with a potential accumulation that is sufficiently well defined to represent a viable drilling target.	Project activities are focused on assessing the chance of discovery and, assuming discovery, the range of potential recoverable quantities under a commercial development program.
Lead	A project associated with a potential accumulation that is currently poorly defined and requires more data acquisition and/or evaluation in order to be classified as a prospect.	Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to confirm whether or not the lead can be matured into a prospect. Such evaluation includes the assessment of the chance of discovery and, assuming discovery, the range of potential recovery under feasible development scenarios.
Play	A project associated with a prospective trend of potential prospects, but which requires more data acquisition and/or evaluation in order to define specific leads or prospects.	Project activities are focused on acquiring additional data and/or undertaking further evaluation designed to define specific leads or prospects for more detailed analysis of their chance of discovery and, assuming discovery, the range of potential recovery under hypothetical development scenarios.

[1]Petroleum Resources Management System, prepared by the Oil and Gas Reserves Committee of the Society of Petroleum Engineers (SPE); reviewed and jointly sponsored by the World Petroleum Council (WPC), the American Association of Petroleum Geologists (AAPG), and the Society of Petroleum Evaluation Engineers (SPEE), March 2007

PETROLEUM RESERVES and RESOURCES STATUS DEFINITIONS and GUIDELINES

As Adapted From:
PETROLEUM RESOURCES MANAGEMENT SYSTEM (SPE-PRMS)
Sponsored and Approved by:
SOCIETY OF PETROLEUM ENGINEERS (SPE),
WORLD PETROLEUM COUNCIL (WPC)
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS (AAPG)
SOCIETY OF PETROLEUM EVALUATION ENGINEERS (SPEE)

RESERVES

Reserves status categories define the development and producing status of wells and reservoirs. The SPE-PRMS Table 2 defines the reserves status categories as follows:

DEVELOPED RESERVES (SPE-PRMS DEFINITIONS)

Developed Reserves are expected quantities to be recovered from existing wells and facilities.

Reserves are considered developed only after the necessary equipment has been installed, or when the costs to do so are relatively minor compared to the cost of a well. Where required facilities become unavailable, it may be necessary to reclassify Developed Reserves as Undeveloped. Developed Reserves may be further sub-classified as Producing or Non-Producing.

Developed Producing

Developed Producing Reserves are expected to be recovered from completion intervals that are open and producing at the time of the estimate.

Improved recovery reserves are considered producing only after the improved recovery project is in operation.

Developed Non-Producing

Developed Non-Producing Reserves include shut-in and behind-pipe Reserves.

Shut-In

Shut-in Reserves are expected to be recovered from:

(1) completion intervals which are open at the time of the estimate but which have not yet started producing;
(2) wells which were shut-in for market conditions or pipeline connections; or
(3) wells not capable of production for mechanical reasons.

Behind-Pipe

Behind-pipe Reserves are expected to be recovered from zones in existing wells which will require additional completion work or future re-completion prior to start of production.

In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

UNDEVELOPED RESERVES (SPE-PRMS DEFINITIONS)

Undeveloped Reserves are quantities expected to be recovered through future investments.

Undeveloped Reserves are expected to be recovered from:

- *(1) new wells on undrilled acreage in known accumulations;*
- *(2) deepening existing wells to a different (but known) reservoir;*
- *(3) infill wells that will increase recovery; or*
- *(4) where a relatively large expenditure (e.g. when compared to the cost of drilling a new well) is required to*
  - *(a) recomplete an existing well; or*
  - *(b) install production or transportation facilities for primary or improved recovery projects.*

CONTINGENT RESOURCES

Contingent Resources may include, for example, projects for which there are currently no viable markets, or where commercial recovery is dependent on technology under development, or where evaluation of the accumulation is insufficient to clearly assess commerciality. Contingent resource status categories may address the development and producing status of wells and reservoirs or may reflect the project maturity and/or be characterized by their economic status as noted in the SPE-PRMS Table 1 and Figure 2.

PROSPECTIVE RESOURCES

Prospective resources are by definition undeveloped as they are potentially recoverable from undiscovered accumulations. Prospective resource status categories reflect project maturity as noted in the SPE-PRMS Table 1 and Figure 2.

APPENDIX II

PARADOX AREA

BLOCK EMERY SOUTH

Zone	5				6				7				8				9			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	45	59	45	31	40	50	40	30	46	51	46	41	66	41	40	30	31	34	31	28
Net to Gross	0.987	1.000	0.995	0.966	0.978	1.000	0.981	0.952	0.975	1.000	0.977	0.948	0.769	0.769	0.769	0.746	0.878	0.904	0.878	0.852
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	9%	9%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	17%	26%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	136	140	136	132	148	152	148	143	145	149	145	141	148	145	144	141	153	158	153	149
Reservoir Pressure (psi)	3,911	4,107	3,911	3,715	4,258	4,471	4,258	4,045	4,177	4,386	4,177	3,969	4,269	4,177	4,055	3,969	4,410	4,631	4,410	4,190
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.218	1.310	1.218	1.127	1.224	1.316	1.224	1.132	1.223	1.314	1.222	1.131	1.224	1.222	1.133	1.131	1.226	1.318	1.226	1.135
Zone	10				11				12				13				14			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	59	69	59	49	44	50	44	38	56	72	56	40	55	70	55	40	25	30	25	20
Net to Gross	0.761	0.784	0.761	0.738	0.985	1.000	0.992	0.962	0.990	1.000	1.000	0.970	0.733	0.755	0.733	0.711	0.990	1.000	1.000	0.970
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	155	160	155	151	159	164	159	154	162	167	162	157	164	169	164	159	169	174	169	164
Reservoir Pressure (psi)	4,470	4,694	4,470	4,247	4,581	4,810	4,581	4,352	4,666	4,900	4,666	4,433	4,727	4,963	4,727	4,491	4,867	5,110	4,867	4,624
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	1.227	1.319	1.227	1.136	1.229	1.321	1.229	1.137	1.230	1.322	1.230	1.139	1.231	1.323	1.231	1.140	1.233	1.325	1.233	1.142
Zone	16				18															
	Mean	Low	Best	High	Mean	Low	Best	High												
Gross Thickness - ft	19	23	19	15	11	13	11	9												
Net to Gross	0.557	0.574	0.557	0.540	0.818	0.842	0.818	0.793												
Porosity	11%	14%	11%	9%	11%	14%	11%	9%												
Saturation	26%	17%	26%	36%	26%	17%	26%	36%												
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735												
Reservoir Temperature (F)	172	177	172	167	179	184	179	174												
Reservoir Pressure (psi)	4,952	5,200	4,952	4,705	5,156	5,414	5,156	4,898												
Gravity API	40	42	40	38	40	42	40	38												
Bo	1.235	1.327	1.235	1.143	1.238	1.330	1.238	1.146												

BLOCK EMERY MAIN

Zone	5				6				7				8				9			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	45	59	45	31	40	50	40	30	46	51	46	41	66	41	40	30	31	34	31	28
Net to Gross	0.987	1.000	0.995	0.966	0.978	1.000	0.981	0.952	0.975	1.000	0.977	0.948	0.769	0.769	0.769	0.746	0.878	0.904	0.878	0.852
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	9%	9%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	17%	26%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	171	176	171	166	186	191	186	180	174	179	174	169	178	174	172	169	183	188	183	177
Reservoir Pressure (psi)	4,915	5,161	4,915	4,669	5,341	5,608	5,341	5,074	5,010	5,260	5,010	4,759	5,114	5,010	4,858	4,759	5,261	5,524	5,261	4,998
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.234	1.326	1.234	1.143	1.241	1.333	1.241	1.149	1.236	1.327	1.236	1.144	1.237	1.236	1.146	1.144	1.241	1.380	1.197	1.148
Zone	10				11				12				13				14			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	59	69	59	49	44	50	44	38	56	72	56	40	55	70	55	40	25	30	25	20
Net to Gross	0.761	0.784	0.761	0.738	0.985	1.000	0.992	0.962	0.990	1.000	1.000	0.970	0.733	0.755	0.733	0.711	0.990	1.000	1.000	0.970
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	185	191	185	180	189	195	189	184	193	198	193	187	195	201	195	189	200	206	200	194
Reservoir Pressure (psi)	5,331	5,598	5,331	5,064	5,451	5,724	5,451	5,179	5,544	5,822	5,544	5,267	5,615	5,896	5,615	5,335	5,749	6,036	5,749	5,461
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	1.291	1.433	1.246	1.194	1.367	1.528	1.332	1.242	1.402	1.603	1.401	1.204	1.456	1.661	1.454	1.252	1.559	1.774	1.557	1.345
Zone	16				18															
	Mean	Low	Best	High	Mean	Low	Best	High												
Gross Thickness - ft	19	23	19	15	11	13	11	9												
Net to Gross	0.557	0.574	0.557	0.540	0.818	0.842	0.818	0.793												
Porosity	11%	14%	11%	9%	11%	14%	11%	9%												
Saturation	26%	17%	26%	36%	26%	17%	26%	36%												
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735												
Reservoir Temperature (F)	204	210	204	198	209	215	209	203												
Reservoir Pressure (psi)	5,865	6,159	5,865	5,572	6,023	6,325	6,023	5,722												
Gravity API	40	42	40	38	40	42	40	38												
Bo	1.652	1.876	1.650	1.429	1.776	2.000	1.782	1.547												

BLOCK RIVER NORTH

Zone	5				6				7				8				9			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	45	59	45	31	40	50	40	30	46	51	46	41	66	41	40	30	31	34	31	28
Net to Gross	0.987	1.000	0.995	0.966	0.978	1.000	0.981	0.952	0.975	1.000	0.977	0.948	0.769	0.769	0.769	0.746	0.878	0.904	0.878	0.852
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	9%	9%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	17%	26%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	199	205	199	193	205	211	205	199	206	212	206	200	209	205	202	200	217	223	217	210
Reservoir Pressure (psi)	5,731	6,018	5,731	5,445	5,901	6,196	5,901	5,606	5,925	6,222	5,925	5,629	6,008	5,901	5,707	5,629	6,242	6,554	6,242	5,930
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.545	1.759	1.543	1.333	1.681	1.909	1.679	1.455	1.701	1.930	1.699	1.473	1.767	1.679	1.535	1.473	1.878	2.029	1.885	1.721
Zone	10				11				12				13				14			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	59	69	59	49	44	50	44	38	56	72	56	40	55	70	55	40	25	30	25	20
Net to Gross	0.761	0.784	0.761	0.738	0.985	1.000	0.992	0.962	0.990	1.000	1.000	0.970	0.733	0.755	0.733	0.711	0.990	1.000	1.000	0.970
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	220	227	220	214	225	231	225	218	231	238	231	224	235	242	235	228	243	251	243	236
Reservoir Pressure (psi)	6,338	6,655	6,338	6,022	6,465	6,788	6,465	6,142	6,648	6,980	6,648	6,315	6,764	7,103	6,764	6,426	7,010	7,360	7,010	6,659
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	1.902	2.042	1.896	1.767	1.917	2.058	1.911	1.780	1.938	2.082	1.932	1.799	1.951	2.097	1.946	1.811	1.980	2.129	1.974	1.837
Zone	16				18				19				20				CANE CREEK			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	19	23	19	15	11	13	11	9	45	56	45	34	23	27	23	19	90	112	90	68
Net to Gross	0.557	0.574	0.557	0.540	0.818	0.842	0.818	0.793	0.828	0.853	0.828	0.803	0.911	0.939	0.911	0.884	0.734	0.756	0.734	0.712
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	253	261	253	245	258	266	258	250	262	270	262	254	267	275	267	259	271	279	271	263
Reservoir Pressure (psi)	7,282	7,646	7,282	6,918	7,432	7,804	7,432	7,060	7,550	7,927	7,550	7,172	7,687	8,072	7,687	7,303	7,799	8,189	7,799	7,409
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	2.011	2.163	2.005	1.864	2.028	2.182	2.022	1.879	2.041	2.196	2.035	1.891	2.056	2.213	2.050	1.905	2.069	2.227	2.062	1.916

BLOCK RIVER SOUTH

Zone	5				6				7				8				9			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	45	59	45	31	40	50	40	30	46	51	46	41	66	41	40	30	31	34	31	28
Net to Gross	0.987	1.000	0.995	0.966	0.978	1.000	0.981	0.952	0.975	1.000	0.977	0.948	0.769	0.769	0.769	0.746	0.878	0.904	0.878	0.852
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	9%	9%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	17%	26%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	145	150	145	141	154	159	154	149	149	154	149	145	156	149	149	145	158	163	158	153
Reservoir Pressure (psi)	4,183	4,392	4,183	3,974	4,434	4,656	4,434	4,213	4,299	4,514	4,299	4,084	4,494	4,299	4,269	4,084	4,544	4,771	4,544	4,316
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.223	1.314	1.223	1.131	1.227	1.318	1.227	1.135	1.225	1.316	1.224	1.133	1.258	1.224	1.181	1.133	1.228	1.320	1.228	1.137
Zone	10				11				12				13				14			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	59	69	59	49	44	50	44	38	56	72	56	40	55	70	55	40	25	30	25	20
Net to Gross	0.761	0.784	0.761	0.738	0.985	1.000	0.992	0.962	0.990	1.000	1.000	0.970	0.733	0.755	0.733	0.711	0.990	1.000	1.000	0.970
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	162	167	162	157	168	173	168	163	174	180	174	169	178	183	178	172	185	190	185	179
Reservoir Pressure (psi)	4,672	4,905	4,672	4,438	4,826	5,067	4,826	4,584	5,020	5,271	5,020	4,769	5,111	5,366	5,111	4,855	5,314	5,580	5,314	5,049
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	1.230	1.322	1.230	1.139	1.233	1.325	1.233	1.141	1.236	1.328	1.236	1.144	1.237	1.329	1.237	1.146	1.300	1.421	1.286	1.194
Zone	16				18				19				20				CANE CREEK			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	19	23	19	15	11	13	11	9	45	56	45	34	23	27	23	19	90	112	90	68
Net to Gross	0.557	0.574	0.557	0.540	0.818	0.842	0.818	0.793	0.828	0.853	0.828	0.803	0.911	0.939	0.911	0.884	0.734	0.756	0.734	0.712
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	192	198	192	186	199	205	199	193	202	208	202	196	207	213	207	201	210	216	210	203
Reservoir Pressure (psi)	5,527	5,803	5,527	5,251	5,740	6,027	5,740	5,453	5,813	6,104	5,813	5,522	5,953	6,251	5,953	5,655	6,032	6,333	6,032	5,730
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	1.391	1.589	1.388	1.197	1.552	1.767	1.550	1.339	1.610	1.830	1.608	1.391	1.724	1.956	1.722	1.494	1.781	2.001	1.789	1.554

BLOCK GRAND MAIN

Zone	5				6				7				8				9			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	45	59	45	31	40	50	40	30	46	51	46	41	66	41	40	30	31	34	31	28
Net to Gross	0.987	1.000	0.995	0.966	0.978	1.000	0.981	0.952	0.975	1.000	0.977	0.948	0.769	0.769	0.769	0.746	0.878	0.904	0.878	0.852
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	9%	9%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	17%	26%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	214	220	214	207	209	215	209	202	212	219	212	206	225	212	209	206	222	229	222	216
Reservoir Pressure (psi)	6,148	6,456	6,148	5,841	6,003	6,303	6,003	5,703	6,109	6,415	6,109	5,804	6,468	6,109	6,003	5,804	6,396	6,716	6,396	6,076
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.845	2.017	1.873	1.645	1.764	1.997	1.764	1.532	1.827	2.011	1.856	1.614	1.917	1.781	1.764	1.614	1.908	2.049	1.903	1.773
Zone	10				11				12				13				14			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	59	69	59	49	44	50	44	38	56	72	56	40	55	70	55	40	25	30	25	20
Net to Gross	0.761	0.784	0.761	0.738	0.985	1.000	0.992	0.962	0.990	1.000	1.000	0.970	0.733	0.755	0.733	0.711	0.990	1.000	1.000	0.970
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	235	242	235	228	240	248	240	233	236	244	236	229	240	247	240	232	244	252	244	237
Reservoir Pressure (psi)	6,776	7,114	6,776	6,437	6,922	7,268	6,922	6,576	6,807	7,147	6,807	6,467	6,898	7,242	6,898	6,553	7,037	7,389	7,037	6,685
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	1.953	2.099	1.947	1.813	1.970	2.118	1.964	1.828	1.956	2.103	1.951	1.816	1.967	2.114	1.961	1.825	1.983	2.132	1.977	1.839
Zone	16				18				19				20				CANE CREEK			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	19	23	19	15	11	13	11	9	45	56	45	34	23	27	23	19	90	112	90	68
Net to Gross	0.557	0.574	0.557	0.540	0.818	0.842	0.818	0.793	0.828	0.853	0.828	0.803	0.911	0.939	0.911	0.884	0.734	0.756	0.734	0.712
Porosity	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%	11%	14%	11%	9%
Saturation	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%	26%	17%	26%	36%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	254	262	254	246	260	268	260	252	266	274	266	258	270	278	270	262	273	281	273	265
Reservoir Pressure (psi)	7,315	7,681	7,315	6,950	7,486	7,860	7,486	7,112	7,645	8,028	7,645	7,263	7,770	8,159	7,770	7,382	7,867	8,260	7,867	7,474
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38	40	42	40	38
Bo	2.014	2.167	2.009	1.868	2.034	2.189	2.028	1.885	2.051	2.208	2.045	1.901	2.065	2.224	2.059	1.913	2.076	2.236	2.070	1.923

MANCOS AREA

BLOCK MANCOS FLATS

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	285	314	285	257	242	266	242	217	182	200	182	164	93	93	93	84	75	82	75	67
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	37%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	50	52	50	49	57	59	57	55	64	66	64	62	68	62	59	57	68	70	68	66
Reservoir Pressure (psi)	868	911	868	825	986	1,035	986	937	1,102	1,157	1,102	1,047	1,184	1,047	1,035	986	1,184	1,243	1,184	1,125
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.112	1.137	1.111	1.088	1.132	1.160	1.131	1.106	1.152	1.183	1.150	1.123	1.166	1.134	1.131	1.123	1.166	1.199	1.164	1.134

BLOCK WINDY MESA

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	236	260	236	213	211	232	211	190	156	172	156	141	142	142	141	128	104	114	104	93
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	31	32	31	30	36	37	36	35	42	44	42	41	46	41	37	36	50	51	50	48
Reservoir Pressure (psi)	544	571	544	517	624	655	624	593	731	768	731	695	802	695	655	624	865	909	865	822
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.055	1.070	1.054	1.040	1.069	1.087	1.068	1.052	1.088	1.109	1.087	1.068	1.101	1.079	1.068	1.068	1.111	1.136	1.110	1.088

BLOCK GRAND MANCOS

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	252	277	252	227	223	245	223	200	166	182	166	149	129	129	129	116	96	105	96	86
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	37%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	43	44	43	41	44	45	44	43	48	49	48	46	52	46	45	44	53	55	53	51
Reservoir Pressure (psi)	736	773	736	699	764	802	764	726	825	867	825	784	904	802	784	764	918	964	918	872
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.089	1.110	1.088	1.069	1.094	1.116	1.093	1.073	1.105	1.128	1.103	1.082	1.118	1.094	1.093	1.082	1.121	1.147	1.119	1.096

BLOCK MANCOS FLATS S

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	269	296	269	243	221	244	221	199	181	199	181	163	115	115	115	104	85	94	85	77
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	30	31	30	29	40	41	40	39	46	48	46	45	51	45	41	40	56	58	56	55
Reservoir Pressure (psi)	526	552	526	500	689	723	689	655	799	839	799	759	883	759	723	689	972	1,021	972	924
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.052	1.067	1.051	1.037	1.081	1.100	1.079	1.062	1.100	1.123	1.099	1.078	1.115	1.091	1.079	1.078	1.130	1.158	1.129	1.104

BLOCK MANCOS FLATS SE

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	274	301	274	247	222	244	222	200	183	201	183	164	105	105	105	95	80	88	80	72
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	27	28	27	26	22	23	22	21	26	26	26	25	30	25	23	22	30	31	30	29
Reservoir Pressure (psi)	465	489	465	442	379	398	379	360	444	466	444	422	527	422	398	379	513	539	513	487
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.041	1.054	1.040	1.028	1.025	1.036	1.025	1.015	1.037	1.050	1.036	1.025	1.052	1.036	1.025	1.025	1.049	1.064	1.048	1.035

BLOCK MANCOS FLATS SW1

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	273	300	273	246	233	256	233	210	175	192	175	157	109	109	109	98	86	95	86	77
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	66	68	66	64	74	77	74	72	82	84	82	79	86	79	77	74	90	93	90	87
Reservoir Pressure (psi)	1,148	1,206	1,148	1,091	1,287	1,352	1,287	1,223	1,413	1,484	1,413	1,343	1,492	1,352	1,343	1,287	1,559	1,637	1,559	1,481
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.160	1.192	1.158	1.129	1.183	1.218	1.181	1.149	1.203	1.242	1.201	1.167	1.216	1.181	1.178	1.167	1.227	1.268	1.225	1.187

BLOCK MANCOS FLATS SW2

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	265	292	265	239	235	258	235	211	167	184	167	150	114	114	114	102	92	102	92	83
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	95	98	95	93	102	105	102	99	108	111	108	105	112	105	105	102	102	105	102	99
Reservoir Pressure (psi)	1,651	1,733	1,651	1,568	1,769	1,858	1,769	1,681	1,869	1,962	1,869	1,775	1,945	1,848	1,775	1,769	1,762	1,850	1,762	1,674
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.241	1.284	1.239	1.199	1.259	1.305	1.257	1.216	1.274	1.322	1.272	1.229	1.286	1.257	1.239	1.229	1.258	1.304	1.256	1.214

BLOCK WINDY MESA NE

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	255	281	255	230	223	245	223	201	165	181	165	148	123	123	123	111	92	101	92	83
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	36	37	36	35	43	44	43	42	49	50	49	47	53	47	44	43	55	57	55	53
Reservoir Pressure (psi)	626	658	626	595	742	779	742	705	842	884	842	799	918	799	779	742	953	1,001	953	905
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.069	1.088	1.068	1.052	1.090	1.111	1.089	1.070	1.107	1.131	1.106	1.085	1.121	1.096	1.089	1.085	1.127	1.154	1.125	1.101

BLOCK WINDY MESA N

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	247	271	247	222	224	246	224	201	163	179	163	146	132	132	132	119	111	122	111	100
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	60	62	60	58	66	68	66	64	73	75	73	71	77	71	68	66	81	83	81	78
Reservoir Pressure (psi)	1,034	1,085	1,034	982	1,146	1,203	1,146	1,089	1,268	1,332	1,268	1,205	1,341	1,205	1,203	1,146	1,400	1,470	1,400	1,330
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.140	1.170	1.139	1.113	1.159	1.191	1.158	1.129	1.180	1.215	1.178	1.146	1.192	1.158	1.157	1.146	1.201	1.239	1.199	1.165

BLOCK WINDY MESA W

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	265	291	265	238	223	246	223	201	166	183	166	149	125	125	125	112	104	114	104	93
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	52	53	52	50	57	59	57	55	60	62	60	59	65	59	59	57	70	73	70	68
Reservoir Pressure (psi)	895	939	895	850	986	1,036	986	937	1,045	1,098	1,045	993	1,125	1,036	993	986	1,220	1,281	1,220	1,159
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.117	1.142	1.115	1.092	1.132	1.160	1.131	1.106	1.142	1.172	1.141	1.114	1.156	1.131	1.126	1.114	1.172	1.205	1.170	1.140

BLOCK WINDY MESA E

Zone	M-400				M-300				M-200				M-150				M-100			
	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High	Mean	Low	Best	High
Gross Thickness - ft	252	278	252	227	210	231	210	189	172	189	172	155	132	132	132	119	96	105	96	86
Net to Gross	0.980	0.990	0.980	0.970	0.560	0.600	0.560	0.520	0.510	0.520	0.510	0.500	0.370	0.380	0.370	0.320	0.687	0.740	0.690	0.630
Porosity	6%	7%	6%	5%	6%	7%	6%	5%	8%	9%	8%	6%	7%	6%	6%	5%	6%	7%	6%	4%
Saturation	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	37%	51%	37%	23%	23%	23%	37%	23%	37%	51%
Gas specific gravity	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.700	0.735	0.703	0.665	0.665	0.700	0.703	0.665	0.700	0.735
Reservoir Temperature (F)	22	22	22	21	21	22	21	21	22	23	22	22	27	22	22	21	24	24	24	23
Reservoir Pressure (psi)	374	393	374	355	369	388	369	351	389	409	389	370	466	388	370	369	408	429	408	388
Gravity API	40	42	40	38	40	42	40	38	40	42	40	38	40	40	38	38	40	42	40	38
Bo	1.024	1.035	1.024	1.014	1.023	1.034	1.023	1.014	1.027	1.038	1.026	1.017	1.041	1.026	1.023	1.017	1.030	1.042	1.030	1.019

PARADOX AREA

BLOCK EMERY SOUTH

Zone	5				6				7			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	51,475,927	15,622,255	309,894	95,548	45,496,358	12,518,526	403,528	125,016	62,881,896	16,742,668	459,707	157,697
P90	72,704,626	24,594,848	1,534,792	578,005	65,846,100	22,034,457	1,410,057	518,834	78,976,126	25,813,197	1,646,127	601,864
P80	78,348,285	28,179,031	2,028,848	755,696	70,031,644	25,145,588	1,787,987	688,365	83,862,484	29,431,991	2,137,490	791,788
P70	83,154,371	31,253,466	2,479,614	981,746	73,780,736	27,611,410	2,189,428	843,377	86,826,893	31,908,280	2,506,726	964,415
P60	87,225,665	33,651,868	2,857,775	1,143,173	76,772,218	29,596,457	2,568,279	994,860	89,212,477	34,179,145	2,959,824	1,142,841
P50	91,517,035	35,885,841	3,373,866	1,341,054	80,004,307	31,573,428	2,987,202	1,204,010	91,843,830	36,455,915	3,434,782	1,340,381
P40	95,486,923	38,554,544	3,901,485	1,538,152	83,497,506	33,639,979	3,453,118	1,373,367	94,502,545	39,037,864	3,997,683	1,588,630
P30	99,532,041	41,663,073	4,633,619	1,828,325	86,687,383	36,349,027	3,941,259	1,572,264	97,751,680	41,595,489	4,694,999	1,880,551
P20	104,664,888	45,279,403	5,628,273	2,245,236	91,132,483	39,570,578	4,934,980	1,918,947	101,986,382	44,307,284	5,557,414	2,217,660
P10	112,678,126	50,440,009	7,056,476	2,922,117	97,496,398	43,541,020	6,260,182	2,514,843	107,756,727	49,273,996	7,089,256	2,920,273
P0	138,125,052	65,189,518	15,013,600	6,755,365	126,084,155	63,723,162	12,215,476	5,017,562	131,604,663	64,543,626	11,697,918	5,878,943
Mean	92,119,881	36,882,017	3,914,923	1,573,772	80,840,550	32,366,579	3,439,857	1,368,471	92,776,127	37,124,664	3,937,807	1,576,606
Std Deviation	15,098,771	9,778,155	2,259,630	995,301	12,321,722	8,419,261	1,960,675	822,404	11,052,480	8,920,380	2,179,222	947,429
Zone	**8**				**9**				**10**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	72,569,788	19,200,872	530,297	251,270	39,910,488	10,201,309	246,802	134,876	62,427,787	15,942,737	500,719	204,014
P90	88,441,251	28,927,635	1,832,882	691,825	47,686,014	15,633,152	973,873	372,327	77,455,225	25,175,558	1,609,306	580,597
P80	93,304,427	32,941,834	2,383,047	924,859	50,240,904	17,812,217	1,273,811	490,793	81,622,618	29,025,826	2,081,947	789,960
P70	97,564,445	35,938,615	2,846,042	1,083,761	52,152,660	19,207,256	1,526,982	577,016	85,163,961	31,389,477	2,474,901	968,205
P60	100,912,293	38,739,817	3,320,806	1,255,277	53,888,118	20,792,499	1,797,712	695,618	89,046,788	34,025,468	2,945,466	1,149,481
P50	104,171,756	41,151,553	3,826,313	1,486,230	55,695,405	22,028,742	2,078,868	813,059	92,172,079	36,491,614	3,455,458	1,337,936
P40	107,750,105	44,340,305	4,470,664	1,733,676	57,326,012	23,551,627	2,406,717	953,466	95,303,539	39,093,143	4,032,157	1,573,907
P30	111,150,397	47,374,426	5,242,900	2,074,456	59,174,942	25,066,770	2,792,476	1,113,793	97,993,192	41,875,848	4,628,665	1,861,156
P20	116,581,983	50,774,869	6,295,283	2,599,572	62,017,189	27,136,435	3,333,199	1,351,789	102,933,316	44,867,593	5,446,143	2,231,724
P10	122,883,655	55,312,448	7,946,706	3,327,528	66,088,379	29,856,905	4,335,976	1,692,089	109,035,057	49,310,591	6,926,336	2,920,133
P0	142,068,208	75,772,020	13,593,326	6,747,634	77,911,264	39,969,880	7,494,600	3,618,166	129,997,162	65,770,795	13,559,544	6,834,188
Mean	104,908,496	42,020,897	4,461,546	1,787,086	56,168,326	22,464,424	2,395,548	952,606	92,547,582	37,052,055	3,957,844	1,590,042
Std Deviation	13,000,055	10,310,972	2,504,563	1,094,007	6,835,552	5,357,287	1,346,465	571,898	11,981,059	9,124,135	2,260,602	992,138

Zone	11				12				13			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	57,900,115	17,182,176	353,211	135,956	66,180,417	18,023,772	492,587	149,059	48,191,860	13,294,979	469,174	143,987
P90	75,259,883	24,671,389	1,583,790	590,442	90,870,535	30,941,585	1,985,206	719,286	66,275,205	22,501,260	1,410,768	535,508
P80	79,457,266	27,977,925	2,021,188	757,281	98,306,626	34,649,809	2,493,635	937,368	71,694,764	25,632,892	1,835,107	708,948
P70	82,506,138	30,565,141	2,429,942	934,842	104,127,314	38,226,980	3,087,619	1,171,594	75,337,220	28,269,468	2,227,973	860,585
P60	85,692,060	33,020,642	2,852,085	1,112,495	108,688,342	41,387,017	3,632,737	1,433,959	78,902,052	30,725,460	2,631,833	1,032,968
P50	88,779,546	34,904,466	3,318,197	1,327,094	112,844,569	44,325,414	4,231,677	1,702,624	82,542,727	32,749,304	3,069,702	1,162,150
P40	91,999,782	37,283,528	3,820,363	1,512,976	117,521,921	47,982,040	4,864,840	1,982,005	85,760,090	34,828,669	3,595,554	1,394,717
P30	95,432,830	39,808,270	4,467,905	1,782,719	122,671,558	51,721,899	5,668,819	2,320,513	89,269,520	37,027,810	4,213,676	1,674,350
P20	98,623,241	42,679,038	5,313,372	2,106,074	129,544,559	55,993,247	6,940,172	2,774,715	93,465,852	39,844,584	4,973,447	2,032,163
P10	104,082,502	47,118,941	6,771,033	2,806,170	138,922,022	61,374,614	8,795,522	3,615,794	100,029,736	44,409,952	6,443,431	2,573,699
P0	121,637,845	65,502,891	13,137,970	7,730,900	180,746,903	89,359,903	17,312,574	7,533,333	125,411,993	64,084,135	11,785,048	5,609,628
Mean	89,200,370	35,659,710	3,811,477	1,521,106	113,999,428	45,611,213	4,879,403	1,958,592	82,850,883	33,118,389	3,557,900	1,421,829
Std Deviation	11,129,588	8,561,614	2,151,307	924,518	18,503,649	12,056,482	2,804,039	1,206,370	13,155,063	8,495,728	2,056,796	889,361
Zone	**14**				**16**				**18**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	35,056,612	9,083,770	204,555	83,801	14,080,235	3,980,862	89,139	20,909	12,164,123	3,357,152	99,456	44,142
P90	42,084,337	13,864,880	883,738	333,969	17,837,750	5,951,448	381,463	147,850	15,305,598	5,037,294	332,956	117,757
P80	44,805,313	15,811,248	1,166,899	443,843	19,044,595	6,824,800	484,677	187,907	16,166,694	5,753,711	418,900	157,665
P70	46,725,975	17,257,705	1,402,035	524,998	19,799,424	7,504,354	590,276	226,049	16,838,424	6,261,765	501,856	196,568
P60	48,260,132	18,745,211	1,609,617	626,531	20,687,303	8,084,443	697,981	264,913	17,552,455	6,783,860	596,975	228,608
P50	49,975,024	20,090,097	1,909,799	730,515	21,393,275	8,560,725	806,441	309,214	18,210,663	7,238,523	693,462	266,526
P40	51,778,166	21,600,941	2,185,045	846,590	22,204,397	9,076,143	919,074	367,850	18,871,593	7,720,305	779,108	313,974
P30	54,343,199	22,957,126	2,566,654	1,026,645	23,178,473	9,659,896	1,100,785	439,769	19,512,004	8,217,502	927,239	363,613
P20	56,844,748	24,546,186	3,028,702	1,239,892	24,246,049	10,342,012	1,307,994	531,304	20,524,126	8,886,193	1,115,917	446,162
P10	60,255,700	26,580,531	3,858,386	1,623,071	25,761,568	11,357,042	1,672,545	677,549	21,819,723	9,802,822	1,422,242	582,123
P0	74,962,413	36,661,897	7,455,677	3,273,457	32,665,444	18,320,941	3,041,122	1,393,016	27,314,450	13,663,654	2,480,957	1,143,456
Mean	50,753,021	20,297,997	2,173,665	869,535	21,675,852	8,662,203	929,739	371,095	18,380,380	7,356,461	791,125	318,713
Std Deviation	7,034,768	4,994,453	1,222,336	529,154	3,071,573	2,129,292	523,761	225,426	2,494,290	1,827,339	448,246	201,439

BLOCK EMERY MAIN

Zone	5				6				7			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	420,563,022	103,247,036	3,082,911	1,074,393	396,133,211	99,140,234	3,630,240	1,009,837	507,342,000	138,348,885	4,492,870	1,288,429
P90	572,742,531	190,686,086	12,336,801	4,821,819	514,860,647	173,371,272	11,143,445	4,129,732	619,085,327	201,828,702	12,838,087	4,964,884
P80	620,112,263	220,312,982	16,508,313	6,196,887	549,558,178	196,076,050	14,364,247	5,602,150	652,050,022	229,058,949	16,705,914	6,462,174
P70	658,670,304	242,404,548	19,410,861	7,541,585	576,402,325	213,367,056	17,269,478	6,767,649	679,743,723	250,612,609	20,036,023	7,702,395
P60	688,964,379	263,662,332	23,205,568	8,835,711	597,645,840	231,463,994	20,042,777	7,857,301	701,760,129	270,836,098	23,743,930	9,176,020
P50	715,867,862	284,949,288	26,527,414	10,285,966	622,646,287	249,959,804	23,686,040	9,164,680	723,369,218	288,901,992	27,071,700	10,613,166
P40	745,961,817	305,835,991	31,069,854	12,097,125	646,818,814	264,331,370	27,447,986	10,956,313	748,190,248	309,724,186	31,702,874	12,352,096
P30	779,992,716	329,836,882	36,275,483	14,288,064	678,605,784	281,855,220	32,402,876	12,735,205	774,651,788	327,401,774	36,850,659	14,760,424
P20	822,516,386	355,808,259	43,040,566	17,772,375	716,500,248	304,312,283	38,835,765	15,223,647	806,158,079	350,235,761	43,605,943	17,691,460
P10	878,988,344	393,571,829	56,015,915	22,850,018	770,282,915	338,742,393	49,569,282	20,222,094	849,841,337	385,912,689	56,308,090	23,181,548
P0	1,140,596,602	664,343,040	116,920,377	59,212,352	960,876,597	480,414,354	93,845,521	47,991,703	964,644,658	521,269,845	98,209,040	54,183,336
Mean	722,723,660	289,846,280	31,133,690	12,471,419	633,619,151	253,451,373	27,387,098	10,963,173	729,416,603	291,846,405	31,305,038	12,493,495
Std Deviation	119,612,548	79,417,048	18,294,607	8,038,785	98,113,256	65,733,833	15,791,531	6,886,550	87,543,115	69,562,175	17,475,717	7,504,404
Zone	**8**				**9**				**10**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	578,888,737	152,959,412	3,485,673	1,441,414	300,844,082	82,065,801	2,722,773	824,238	468,340,257	171,589,102	3,615,599	1,826,188
P90	698,971,771	231,487,067	14,485,798	5,417,626	372,663,805	115,405,450	7,777,056	2,756,453	584,838,617	243,730,831	12,765,815	6,063,455
P80	739,706,705	260,844,147	19,046,081	7,204,326	397,129,129	131,068,652	10,114,486	3,761,582	622,430,610	274,393,799	16,786,252	7,930,538
P70	766,436,945	285,189,631	22,798,389	8,710,472	410,928,442	142,676,686	12,281,177	4,608,080	644,306,584	299,483,949	20,189,659	9,715,613
P60	790,791,896	307,009,855	26,687,252	10,392,669	423,843,345	156,962,103	14,160,385	5,494,853	668,126,032	319,922,062	23,539,075	11,557,755
P50	817,141,657	323,846,579	30,953,611	12,150,265	437,479,871	169,251,418	16,527,230	6,250,180	691,596,374	346,102,841	26,827,614	13,509,093
P40	841,902,070	344,165,068	35,478,240	13,969,121	450,981,861	185,314,858	19,084,284	7,462,866	718,866,003	370,544,175	31,333,621	15,857,059
P30	870,487,617	365,351,196	41,980,799	16,439,592	466,562,618	203,085,866	22,257,010	8,894,272	748,404,592	395,858,568	36,925,035	18,273,401
P20	909,856,974	393,807,709	50,224,435	19,680,855	486,614,145	226,119,234	26,806,927	10,995,203	777,037,054	432,524,353	43,426,845	22,644,019
P10	963,245,513	435,568,419	64,547,170	25,776,918	512,264,711	248,009,489	34,130,640	14,232,614	822,072,943	487,459,433	55,797,072	29,548,207
P0	1,182,557,484	569,953,618	107,367,334	53,984,244	601,004,696	389,179,639	58,645,354	31,324,596	1,000,941,383	673,509,183	97,567,745	68,096,939
Mean	824,456,129	329,647,011	35,501,931	14,171,652	440,955,617	177,429,581	19,010,363	7,680,598	699,236,487	356,323,090	31,300,042	16,005,172
Std Deviation	101,770,534	78,867,749	19,907,455	8,626,028	53,036,611	51,849,645	10,592,163	4,937,347	91,398,069	92,207,126	17,528,735	10,011,983

Zone	11				12				13			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	434,466,180	225,711,396	3,215,166	2,002,162	446,570,065	208,538,214	5,064,575	3,296,064	309,725,291	184,117,092	2,690,017	2,939,190
P90	536,449,820	307,986,094	12,278,635	7,649,633	623,893,496	368,359,316	15,358,633	10,788,143	448,552,700	311,205,064	11,342,151	8,574,273
P80	570,067,050	340,017,048	16,075,620	9,969,963	678,200,030	441,392,868	20,310,231	14,029,424	480,480,504	356,813,523	14,620,327	11,831,161
P70	590,855,700	364,430,273	19,332,712	12,310,875	722,385,623	484,224,963	24,104,138	17,069,616	502,123,228	390,453,627	18,033,369	14,512,705
P60	612,029,092	389,093,387	22,895,633	14,643,707	755,765,710	525,850,397	28,617,027	20,065,134	523,485,399	426,004,145	20,866,350	17,101,486
P50	631,715,582	412,348,685	26,514,798	17,422,095	788,731,167	569,612,663	33,191,640	23,639,587	549,287,010	462,228,992	24,350,649	19,940,539
P40	651,493,325	439,530,781	30,676,364	20,409,324	819,926,495	621,673,970	39,535,705	27,419,582	574,125,314	497,599,251	28,118,578	23,055,447
P30	679,858,699	472,629,952	35,686,429	23,823,703	860,077,219	663,540,948	45,364,620	32,818,202	601,972,100	528,272,213	32,559,169	27,203,959
P20	703,464,736	512,292,682	42,984,312	28,421,055	907,745,671	739,586,016	54,352,674	40,319,260	637,826,054	575,726,781	40,214,203	34,032,086
P10	740,744,705	559,631,300	54,908,745	36,603,749	980,592,510	810,177,695	69,294,839	53,541,566	679,278,322	643,282,453	51,597,081	46,072,075
P0	935,545,666	762,172,689	88,385,960	69,398,048	1,286,168,149	1,111,094,354	144,432,246	131,739,078	920,684,814	1,026,656,123	104,436,433	108,999,205
Mean	637,291,503	425,243,162	30,285,295	20,224,031	796,677,755	585,827,312	38,798,166	28,515,751	557,885,449	471,170,852	28,244,740	23,936,113
Std Deviation	79,766,476	96,555,920	16,894,263	12,029,810	136,034,444	170,377,052	22,575,598	18,511,371	91,835,419	128,398,979	16,388,167	15,291,443

Zone	14				16				18			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	207,493,832	150,156,347	2,355,222	1,795,716	85,620,959	80,804,647	916,132	1,281,869	66,500,114	83,476,459	965,516	1,311,066
P90	259,970,014	235,727,389	7,107,731	7,078,081	104,805,559	116,860,693	3,036,237	3,579,142	82,963,978	112,828,647	2,581,407	3,587,863
P80	279,642,101	264,239,159	9,285,739	9,251,874	112,313,110	129,181,608	3,884,114	4,686,131	89,263,980	123,970,085	3,366,909	4,716,701
P70	290,886,940	286,780,996	11,059,506	11,111,155	118,197,866	138,229,338	4,705,350	5,582,086	93,399,227	132,021,030	3,984,433	5,709,647
P60	304,946,709	311,227,613	12,997,937	12,880,628	122,774,884	148,099,782	5,554,467	6,506,637	97,551,696	139,547,926	4,716,691	6,921,394
P50	318,290,734	328,565,967	14,909,980	15,470,181	127,603,770	155,801,595	6,465,089	7,662,138	101,317,174	146,516,845	5,443,831	7,936,075
P40	330,711,452	347,933,571	17,439,865	18,133,360	132,560,632	163,963,854	7,414,116	9,026,004	105,178,787	154,319,947	6,330,166	9,207,576
P30	341,550,043	372,859,788	20,117,301	21,417,040	137,389,093	173,603,981	8,595,119	10,646,861	109,332,432	162,724,687	7,458,329	10,862,551
P20	357,682,109	397,439,436	24,515,070	26,051,450	144,041,103	184,222,660	10,444,475	12,865,693	114,135,871	172,923,391	8,789,751	12,762,531
P10	383,028,259	441,419,882	30,886,122	32,778,116	155,395,003	200,802,139	12,991,405	16,306,194	120,955,306	187,407,535	11,432,397	16,835,721
P0	477,419,635	633,328,564	60,737,599	68,203,399	201,288,750	286,422,926	26,044,060	38,764,369	155,077,322	277,446,538	20,886,930	30,570,897
Mean	319,828,943	335,004,911	17,279,369	18,166,351	129,020,528	157,591,128	7,388,896	9,025,554	102,017,781	149,233,562	6,286,102	9,198,607
Std Deviation	46,477,700	78,736,827	9,707,128	10,973,812	19,289,601	32,407,577	4,167,384	5,346,144	14,755,875	29,172,705	3,526,758	5,323,099

BLOCK RIVER NORTH

Zone	5				6				7			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	29,079,788	19,624,523	304,599	261,114	26,415,137	26,033,873	324,507	332,047	33,239,799	33,762,182	356,372	399,525
P90	40,898,024	36,918,983	1,146,722	1,074,600	33,680,971	39,994,240	983,989	1,218,332	40,270,159	47,840,888	1,176,629	1,475,350
P80	44,236,465	41,666,489	1,465,793	1,429,027	36,564,198	44,032,092	1,308,896	1,607,106	42,713,517	52,292,831	1,492,663	1,944,195
P70	46,920,029	45,606,648	1,773,984	1,783,992	38,515,643	46,968,446	1,567,168	1,974,079	44,201,146	55,732,443	1,817,514	2,342,398
P60	49,415,810	48,834,927	2,093,425	2,088,989	40,329,045	49,761,003	1,841,991	2,293,599	45,661,266	58,751,726	2,132,924	2,732,190
P50	51,542,152	52,560,013	2,443,141	2,411,390	41,847,519	52,694,758	2,129,246	2,699,735	47,438,659	62,446,197	2,449,459	3,237,653
P40	53,958,571	55,130,126	2,817,927	2,836,903	43,612,840	56,263,247	2,438,590	3,111,465	49,034,311	65,619,893	2,827,838	3,759,853
P30	56,407,055	59,515,249	3,300,028	3,249,788	45,297,637	58,854,031	2,931,192	3,662,966	51,012,539	68,313,645	3,335,566	4,331,584
P20	59,450,246	63,689,547	3,859,112	4,041,319	47,713,768	63,224,089	3,512,413	4,506,445	53,009,182	72,900,649	3,940,904	5,180,150
P10	64,496,402	70,119,436	5,056,740	5,233,524	51,430,141	69,480,600	4,344,207	5,668,456	55,912,646	78,919,360	4,981,642	6,614,135
P0	86,914,839	113,771,125	9,990,191	11,571,326	64,186,169	89,599,981	8,735,380	11,742,941	70,820,926	106,058,839	9,443,384	15,369,292
Mean	52,226,041	53,199,151	2,796,619	2,843,903	42,263,251	53,949,473	2,466,232	3,149,860	47,906,891	62,931,943	2,826,588	3,717,850
Std Deviation	9,186,352	13,140,691	1,605,957	1,729,496	6,684,573	11,482,188	1,415,501	1,873,410	6,208,155	12,087,831	1,587,462	2,191,309

Zone	8				9				10			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	36,468,392	44,177,566	367,198	455,943	18,292,630	28,439,911	219,501	431,126	28,361,196	51,463,981	356,331	813,452
P90	43,927,700	58,841,581	1,302,255	1,852,445	22,344,678	37,786,576	701,977	1,235,259	35,605,677	65,798,513	1,152,656	2,188,187
P80	46,172,550	63,120,884	1,696,779	2,387,727	23,456,307	40,978,662	905,443	1,621,691	37,850,015	71,077,747	1,494,926	2,899,285
P70	48,092,182	66,847,142	2,073,552	2,894,000	24,425,486	42,872,012	1,095,438	1,935,063	39,490,862	74,805,370	1,819,903	3,505,612
P60	49,888,840	70,613,347	2,403,847	3,448,477	25,278,073	44,548,835	1,271,463	2,236,448	40,979,100	78,491,701	2,115,875	4,085,558
P50	51,607,626	73,666,692	2,763,980	3,949,638	26,023,454	46,485,952	1,504,874	2,652,894	42,379,602	82,261,726	2,494,654	4,775,476
P40	53,301,616	77,211,207	3,209,724	4,619,337	26,841,353	48,377,502	1,741,867	3,142,778	43,876,972	86,379,286	2,881,506	5,640,784
P30	55,323,088	81,184,811	3,777,677	5,384,421	27,760,668	50,526,899	2,004,284	3,640,414	45,561,114	89,988,928	3,324,674	6,439,041
P20	58,112,853	86,271,182	4,533,585	6,409,370	29,008,260	53,252,489	2,414,637	4,424,258	47,626,521	94,648,072	4,032,438	7,586,086
P10	61,273,261	92,952,816	5,704,075	8,258,347	30,818,414	57,482,570	3,088,297	5,589,230	50,731,209	101,238,717	5,176,001	9,915,343
P0	74,877,881	121,155,524	10,501,161	16,743,145	36,443,869	71,546,882	5,316,517	9,887,200	62,547,139	129,362,987	9,278,297	18,724,515
Mean	52,175,839	74,962,519	3,197,404	4,581,873	26,287,051	47,144,710	1,715,818	3,084,561	42,824,942	83,097,940	2,833,538	5,475,635
Std Deviation	6,837,281	13,368,106	1,788,560	2,617,254	3,184,189	7,554,115	958,953	1,770,784	5,700,752	13,756,467	1,592,579	3,089,030

Zone	11				12				13			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	27,734,601	50,689,863	426,400	876,965	32,624,850	69,566,819	457,372	1,207,342	22,302,304	52,352,365	407,325	897,935
P90	34,659,026	70,715,966	1,104,218	2,354,272	40,972,646	96,386,828	1,391,547	3,341,423	30,155,802	76,007,753	1,017,084	2,594,473
P80	36,835,108	75,649,426	1,465,189	3,062,728	44,058,249	104,024,552	1,824,541	4,391,897	32,107,458	81,465,915	1,307,935	3,386,494
P70	38,107,386	79,621,792	1,745,162	3,719,630	47,136,289	111,055,222	2,217,565	5,240,887	33,779,194	86,507,098	1,595,054	4,110,503
P60	39,442,075	82,959,236	2,044,437	4,351,116	49,272,228	117,731,225	2,593,636	6,292,711	35,537,352	90,785,094	1,857,768	4,824,041
P50	40,700,847	85,885,191	2,376,108	4,939,386	51,334,760	123,333,889	3,013,424	7,226,179	36,924,259	94,825,746	2,170,036	5,705,445
P40	41,748,837	89,644,173	2,734,273	5,895,925	53,550,915	129,551,222	3,500,072	8,379,486	38,517,959	99,652,063	2,587,007	6,685,754
P30	43,319,191	93,515,003	3,230,332	6,882,007	56,109,665	135,855,604	4,123,654	9,891,969	40,509,460	105,509,207	3,008,212	7,747,912
P20	45,039,504	99,626,371	3,909,077	8,287,462	59,566,829	143,939,583	4,914,177	11,810,842	42,467,203	111,886,798	3,648,842	9,302,402
P10	47,755,487	105,068,177	4,877,788	10,398,401	63,602,311	157,032,659	6,223,453	15,124,496	45,623,150	120,695,211	4,543,446	11,847,263
P0	57,418,137	136,669,637	8,708,623	18,702,929	83,847,471	227,868,379	11,559,215	31,173,331	59,069,631	159,640,856	8,373,089	21,972,118
Mean	40,978,859	87,377,295	2,728,655	5,820,103	51,885,126	125,084,855	3,498,325	8,442,646	37,483,105	96,979,089	2,547,628	6,582,785
Std Deviation	5,001,497	13,310,606	1,523,804	3,299,301	8,495,471	23,409,773	2,020,406	4,993,308	6,088,099	17,617,202	1,466,256	3,796,447
Zone	**14**				**16**				**18**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	14,761,509	41,929,603	125,910	369,591	5,729,913	16,744,086	83,629	287,846	5,162,037	16,837,547	75,098	283,351
P90	18,772,342	53,960,733	642,113	1,873,498	7,876,591	25,781,599	269,396	916,846	6,699,465	23,465,952	228,640	822,487
P80	19,896,791	58,204,021	829,093	2,402,957	8,400,199	27,830,126	352,637	1,167,078	7,086,447	25,415,690	293,829	1,044,534
P70	20,947,891	60,987,084	989,770	2,960,089	8,720,679	29,272,286	418,149	1,427,021	7,387,606	26,456,933	356,447	1,273,211
P60	21,779,160	63,512,099	1,169,159	3,456,272	9,106,604	30,535,659	493,618	1,673,715	7,721,464	27,398,594	421,040	1,518,111
P50	22,580,317	66,389,666	1,357,926	3,972,521	9,431,643	31,787,196	581,780	1,951,521	7,984,091	28,730,940	494,259	1,762,509
P40	23,358,591	69,622,162	1,539,286	4,527,849	9,798,142	33,047,190	659,947	2,225,481	8,275,303	29,810,463	574,859	2,059,268
P30	24,264,147	72,600,061	1,821,681	5,372,995	10,178,584	34,559,132	781,247	2,675,454	8,603,083	31,125,394	670,737	2,443,035
P20	25,194,447	75,946,234	2,163,686	6,342,294	10,661,701	36,451,636	955,793	3,271,673	9,023,395	32,612,454	807,467	2,887,739
P10	26,792,554	81,126,050	2,783,533	8,225,333	11,484,949	39,222,524	1,213,409	4,121,455	9,455,784	34,874,286	1,026,343	3,636,883
P0	31,773,425	98,465,461	5,142,104	15,950,561	15,298,151	58,660,206	2,153,828	7,471,664	11,704,573	45,487,593	1,795,896	6,961,236
Mean	22,662,006	67,091,797	1,557,933	4,615,163	9,548,014	32,215,881	669,071	2,257,046	8,043,637	28,974,780	568,225	2,045,462
Std Deviation	3,083,493	10,433,915	881,876	2,665,551	1,396,131	5,282,045	382,545	1,299,737	1,078,664	4,368,105	322,287	1,164,608

Zone	19				20				CANE CREEK			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	19,339,558	70,739,200	286,392	1,068,692	12,161,436	47,076,376	144,434	608,571	37,089,118	148,679,899	488,376	2,249,928
P90	26,805,732	99,446,825	929,617	3,552,105	15,525,922	60,135,085	541,350	2,156,387	47,170,955	193,594,185	1,693,172	6,950,450
P80	28,825,791	108,336,116	1,231,281	4,690,923	16,370,517	64,676,339	686,321	2,764,479	50,465,553	206,684,663	2,220,002	8,959,516
P70	30,428,650	114,473,486	1,499,685	5,565,047	17,131,020	67,325,195	845,890	3,353,655	52,656,511	217,569,692	2,659,950	11,098,415
P60	31,697,857	119,623,592	1,748,697	6,599,887	17,718,908	70,387,277	973,450	3,871,459	54,900,872	227,594,985	3,083,058	12,796,108
P50	32,810,515	123,737,850	2,037,494	7,682,358	18,441,470	73,325,159	1,160,181	4,548,904	57,208,497	236,527,505	3,604,955	15,145,169
P40	34,014,191	128,833,145	2,383,232	8,963,546	18,969,139	75,941,919	1,335,945	5,309,513	59,587,023	247,004,740	4,098,484	17,268,847
P30	35,156,966	133,722,082	2,773,205	10,458,868	19,590,833	78,861,484	1,561,620	6,306,881	61,796,171	258,592,319	4,940,303	20,373,947
P20	37,034,055	140,624,503	3,317,879	12,571,242	20,457,411	82,461,021	1,842,384	7,292,066	65,197,832	273,037,996	5,881,512	24,463,708
P10	39,404,050	150,747,254	4,162,808	16,094,442	21,625,436	87,934,537	2,362,996	9,387,183	69,247,519	292,247,852	7,382,285	30,767,683
P0	49,360,105	199,452,460	8,017,792	29,438,383	27,429,239	110,944,827	4,549,555	18,051,505	93,250,401	384,671,324	13,477,443	56,640,848
Mean	33,095,185	125,068,709	2,351,344	8,896,255	18,471,824	73,705,844	1,321,847	5,268,842	57,856,259	240,596,837	4,155,938	17,278,768
Std Deviation	4,934,538	20,088,282	1,343,578	5,136,713	2,395,844	10,701,950	752,277	3,015,021	8,606,669	38,776,220	2,356,263	9,862,385

BLOCK RIVER SOUTH

Zone	5				6				7			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	57,329,061	17,803,382	475,027	174,388	51,373,453	15,941,533	452,962	167,975	72,701,231	17,962,525	648,662	276,834
P90	80,265,511	26,698,817	1,716,591	634,352	71,880,529	24,286,209	1,554,869	595,084	87,652,983	28,767,562	1,798,055	665,971
P80	87,095,753	30,869,598	2,245,897	848,840	77,070,714	27,814,388	1,975,160	755,357	92,332,011	33,172,762	2,359,772	875,701
P70	91,788,202	34,305,794	2,708,234	1,044,468	81,863,615	30,205,678	2,438,084	909,215	95,581,852	35,687,161	2,809,719	1,063,613
P60	95,991,129	37,108,064	3,235,566	1,241,209	86,098,589	32,640,086	2,809,627	1,107,013	98,955,490	38,155,382	3,307,823	1,262,188
P50	100,763,209	39,745,172	3,753,417	1,451,256	89,375,379	34,816,999	3,287,760	1,248,948	101,630,129	40,814,943	3,775,861	1,504,248
P40	105,538,681	42,923,724	4,311,675	1,718,998	92,682,277	37,582,153	3,776,422	1,468,120	104,796,402	42,930,701	4,409,722	1,777,281
P30	111,090,332	47,019,290	5,136,982	2,055,180	96,630,540	39,946,433	4,487,642	1,764,291	108,570,515	45,451,900	5,130,416	2,085,265
P20	116,986,144	50,443,971	6,117,067	2,478,214	101,183,764	43,140,068	5,420,445	2,230,430	113,932,516	48,943,551	6,277,006	2,394,994
P10	125,635,586	55,719,170	7,942,262	3,291,398	107,928,494	48,348,532	6,777,677	2,897,106	119,589,233	53,263,400	7,817,385	3,153,855
P0	166,285,238	77,308,765	14,878,113	6,160,792	138,172,956	65,985,564	11,925,034	6,146,147	147,553,348	73,054,652	14,765,557	7,287,059
Mean	102,050,122	40,840,113	4,347,486	1,745,536	89,559,087	35,777,314	3,825,172	1,532,337	102,855,547	41,053,898	4,371,599	1,749,733
Std Deviation	17,539,398	11,018,579	2,519,770	1,089,080	13,596,429	9,070,282	2,188,758	959,181	12,385,959	9,404,815	2,427,784	1,060,420
Zone	**8**				**9**				**10**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	79,068,261	29,252,083	535,848	244,876	44,334,117	11,132,509	392,934	126,223	74,475,686	17,672,739	574,202	140,833
P90	96,001,321	40,634,878	2,029,319	939,228	53,288,783	17,343,767	1,085,012	397,414	85,384,717	28,306,786	1,744,224	642,056
P80	101,421,593	44,574,119	2,648,417	1,188,824	55,812,650	19,622,001	1,419,595	540,743	90,502,001	32,078,413	2,292,009	878,746
P70	105,481,526	47,536,630	3,167,349	1,456,662	57,855,310	21,421,136	1,682,356	652,355	94,850,834	35,127,162	2,830,211	1,088,165
P60	109,162,440	49,824,735	3,731,122	1,692,050	59,952,909	23,160,737	1,995,227	768,132	98,120,635	37,684,941	3,317,915	1,311,380
P50	112,491,296	52,252,081	4,325,459	1,987,540	61,706,917	24,658,127	2,316,154	901,831	101,346,257	40,470,399	3,787,142	1,516,127
P40	116,127,701	55,136,768	4,949,833	2,314,219	63,419,493	26,081,581	2,686,317	1,057,641	105,178,624	43,004,860	4,416,283	1,716,777
P30	119,668,332	58,102,648	5,791,030	2,694,040	65,545,383	27,877,983	3,142,521	1,232,438	109,213,612	45,721,727	5,160,630	2,043,789
P20	124,480,564	61,253,886	6,994,238	3,309,949	68,254,898	29,670,893	3,716,015	1,514,890	113,522,411	49,608,724	6,241,069	2,516,980
P10	131,298,408	65,743,735	9,011,800	4,124,847	72,135,128	33,006,653	4,786,380	2,014,863	120,218,915	54,501,002	7,940,340	3,227,958
P0	155,443,417	82,544,134	17,023,175	9,439,753	88,178,925	44,486,314	8,137,373	4,177,800	145,893,656	80,554,365	14,663,046	7,306,829
Mean	113,261,063	52,871,390	4,952,284	2,310,070	62,227,486	24,893,694	2,657,594	1,062,980	102,489,793	41,022,402	4,378,274	1,758,804
Std Deviation	13,682,875	9,646,793	2,774,518	1,340,744	7,371,689	5,922,071	1,487,580	638,184	13,424,646	10,148,139	2,434,033	1,077,105

Zone	11				12				13			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	67,762,596	15,550,672	596,943	237,631	74,921,045	19,448,565	710,626	223,276	58,187,813	14,102,208	361,712	134,175
P90	83,073,765	27,455,623	1,721,945	631,742	100,258,835	34,076,140	2,192,906	814,805	73,115,057	24,530,770	1,570,531	588,805
P80	87,542,514	31,206,290	2,263,367	849,650	107,596,610	38,510,062	2,787,181	1,049,073	79,020,252	28,194,235	2,066,387	783,770
P70	90,803,388	34,274,254	2,723,456	1,031,019	114,291,619	41,830,961	3,430,306	1,297,870	83,223,701	30,971,898	2,455,683	953,223
P60	94,883,958	36,700,616	3,165,458	1,220,558	119,053,578	45,832,455	4,046,080	1,566,207	87,069,166	33,645,032	2,919,286	1,142,997
P50	98,222,951	39,178,425	3,671,347	1,426,370	124,703,461	49,133,800	4,731,959	1,845,039	90,401,752	36,078,165	3,388,568	1,326,413
P40	101,100,275	41,569,257	4,216,882	1,675,582	130,277,768	53,344,620	5,474,151	2,157,760	93,777,068	38,832,769	3,962,387	1,561,125
P30	104,720,748	43,958,538	4,962,227	1,947,083	136,676,103	57,179,961	6,362,068	2,558,401	98,467,040	41,482,350	4,613,355	1,842,716
P20	109,538,062	47,593,217	5,905,130	2,432,427	143,249,249	61,920,230	7,676,326	3,111,374	103,677,792	44,575,389	5,528,229	2,280,940
P10	116,141,293	51,763,126	7,582,626	3,125,054	152,387,273	67,997,766	9,639,280	3,900,655	111,260,138	49,421,957	6,920,431	2,897,509
P0	141,675,123	72,055,816	14,225,300	6,703,747	193,334,545	99,743,693	19,456,128	7,997,525	138,496,589	72,005,803	12,793,359	5,518,403
Mean	98,756,373	39,473,385	4,228,150	1,689,060	125,979,209	50,437,361	5,407,364	2,156,848	91,560,239	36,620,468	3,931,341	1,572,638
Std Deviation	12,653,458	9,390,568	2,369,504	1,016,745	20,360,071	13,417,186	3,083,553	1,308,346	14,749,459	9,482,335	2,241,637	958,684
Zone	**14**				**16**				**18**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	33,179,370	12,932,158	295,164	152,569	12,535,446	5,650,578	127,119	76,618	10,981,377	7,454,088	104,826	112,811
P90	44,921,838	19,971,537	980,511	502,366	17,432,271	9,814,244	416,401	264,369	13,501,095	12,340,935	349,916	349,228
P80	47,060,192	22,434,096	1,283,546	641,482	18,819,120	11,535,545	549,380	366,339	14,249,558	13,661,047	466,637	461,385
P70	49,002,419	24,399,498	1,533,799	776,022	19,859,002	12,795,674	662,501	438,377	15,003,912	14,773,698	561,398	561,329
P60	50,810,254	25,966,078	1,774,382	914,432	20,545,936	14,053,028	767,687	524,891	15,600,812	15,766,021	661,971	649,215
P50	52,761,386	27,610,221	2,072,500	1,068,358	21,206,639	14,985,688	892,619	620,511	16,203,533	16,590,746	762,947	776,810
P40	54,835,923	29,563,641	2,408,004	1,278,305	21,967,712	16,240,046	1,039,692	731,448	16,752,893	17,466,109	892,019	906,305
P30	57,029,687	31,635,371	2,840,985	1,485,720	22,841,595	17,396,360	1,201,659	872,315	17,431,277	18,682,396	1,030,668	1,059,313
P20	59,301,136	33,902,963	3,404,411	1,798,117	23,960,437	18,566,879	1,440,934	1,053,073	18,289,085	19,773,845	1,227,021	1,291,328
P10	63,271,259	37,043,285	4,397,834	2,435,551	25,431,786	20,477,995	1,844,600	1,341,915	19,316,012	21,545,517	1,563,552	1,686,412
P0	78,489,686	51,340,787	8,315,066	5,380,728	30,672,638	32,035,209	3,746,260	3,285,040	25,037,910	32,116,745	2,930,058	3,274,544
Mean	53,418,292	28,331,273	2,425,941	1,289,746	21,391,777	15,220,734	1,033,285	739,426	16,308,477	16,833,791	877,757	908,685
Std Deviation	7,067,723	6,651,085	1,399,931	810,139	3,044,722	4,171,642	590,444	470,993	2,295,912	3,705,466	494,418	549,061

Zone	19				20				CANE CREEK			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	11,805,415	9,872,983	170,777	174,644	6,351,892	6,952,757	49,610	76,102	20,002,657	24,230,400	221,740	296,105
P90	15,495,394	16,130,497	441,952	473,793	8,315,238	10,334,371	249,520	325,274	24,866,311	34,636,096	773,950	1,078,004
P80	16,552,949	18,083,045	561,803	630,746	8,826,766	11,415,086	318,431	421,359	26,779,478	37,691,580	1,000,336	1,441,783
P70	17,539,505	19,317,262	680,462	771,034	9,256,861	12,193,183	385,909	519,751	28,234,962	40,110,990	1,216,051	1,737,491
P60	18,363,719	20,354,823	799,767	890,070	9,657,860	12,890,060	456,958	610,995	29,300,555	42,286,769	1,411,619	2,059,004
P50	19,113,012	21,600,712	917,868	1,024,307	10,067,875	13,538,676	523,085	712,999	30,615,579	44,716,591	1,639,790	2,407,595
P40	19,792,591	22,956,888	1,081,555	1,199,911	10,395,979	14,278,509	606,929	818,219	31,747,810	47,037,160	1,932,692	2,888,065
P30	20,653,727	24,121,175	1,279,920	1,467,256	10,851,753	14,987,828	704,012	971,115	33,048,287	49,480,870	2,247,835	3,348,047
P20	21,741,806	25,661,625	1,522,301	1,782,357	11,312,648	16,030,838	855,858	1,168,931	34,724,957	52,903,374	2,695,522	4,051,953
P10	23,287,981	28,340,151	1,933,160	2,242,547	11,989,648	17,383,618	1,081,169	1,472,914	37,133,927	57,367,956	3,469,675	5,106,664
P0	31,179,558	42,676,373	3,668,187	5,388,625	15,750,405	23,033,762	2,061,618	2,610,500	45,449,079	81,184,259	6,432,414	10,273,331
Mean	19,252,834	21,984,978	1,075,784	1,231,447	10,112,784	13,717,602	604,197	818,979	30,814,573	45,424,525	1,906,296	2,817,709
Std Deviation	3,016,882	4,794,668	614,163	741,868	1,430,712	2,724,889	339,222	470,767	4,738,818	8,980,680	1,088,592	1,648,336

BLOCK GRAND MAIN

Zone	5				6				7			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	519,227,666	792,747,826	5,974,621	11,738,681	469,145,002	512,370,039	5,023,819	7,130,068	585,612,681	820,478,570	5,542,086	9,127,711
P90	674,075,668	1,054,641,829	22,449,101	35,863,185	632,688,029	848,513,876	19,656,527	27,673,757	744,456,551	1,089,675,383	22,498,918	35,162,603
P80	730,173,342	1,146,189,335	28,396,684	46,322,621	684,614,411	935,099,703	25,353,089	35,914,571	786,575,741	1,186,071,604	30,229,819	46,496,359
P70	774,261,590	1,241,455,300	33,907,897	54,429,618	718,252,681	993,351,598	30,803,180	43,468,976	814,650,525	1,263,771,619	35,556,514	55,106,650
P60	813,003,602	1,316,610,858	40,686,584	65,293,989	750,920,083	1,052,522,011	35,674,564	49,848,544	841,777,821	1,321,019,924	41,210,742	65,540,386
P50	848,972,491	1,392,651,229	47,317,879	79,139,239	780,117,130	1,110,285,557	41,547,759	59,278,716	868,884,386	1,382,873,202	47,926,807	76,422,091
P40	888,294,124	1,468,309,371	55,037,618	89,951,508	809,613,163	1,170,969,792	48,420,780	67,840,614	895,567,973	1,443,292,415	56,468,115	89,763,583
P30	933,002,256	1,555,550,653	64,855,384	107,335,291	844,707,631	1,244,458,130	56,992,135	80,215,564	927,786,651	1,501,366,411	65,037,586	106,489,411
P20	980,538,435	1,666,488,824	77,841,417	128,264,608	895,618,381	1,323,613,596	68,400,046	98,118,071	963,059,787	1,575,331,338	78,011,310	125,066,463
P10	1,058,845,124	1,826,979,777	98,930,437	167,671,267	972,666,774	1,457,423,000	86,103,569	124,397,528	1,008,406,349	1,702,016,851	98,764,474	154,486,124
P0	1,340,650,323	2,444,492,528	186,672,317	339,040,649	1,238,640,531	2,026,518,057	166,152,529	237,902,261	1,255,887,543	2,278,091,720	185,201,595	311,078,761
Mean	858,173,660	1,418,439,819	55,008,397	91,130,060	791,290,492	1,132,505,392	48,436,306	69,128,867	874,647,964	1,393,275,096	55,516,968	88,558,297
Std Deviation	147,292,042	297,948,474	31,883,549	54,702,795	127,470,039	232,186,747	27,760,688	40,592,392	104,193,804	235,028,324	31,052,916	51,310,146
Zone	**8**				**9**				**10**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	620,733,222	1,315,995,123	8,544,276	19,900,384	363,292,465	645,329,294	3,061,863	6,135,946	534,051,368	1,282,852,930	8,145,026	19,221,083
P90	796,993,891	1,638,262,606	25,984,972	52,913,133	433,811,719	839,697,396	13,793,118	28,135,698	684,816,901	1,707,294,075	22,484,487	59,092,326
P80	844,005,006	1,746,086,008	33,712,625	70,327,051	458,088,858	899,478,198	17,893,005	35,918,246	721,990,548	1,836,966,246	29,410,425	76,207,658
P70	876,781,509	1,833,078,992	40,009,233	85,801,619	476,366,629	940,284,165	21,592,060	43,434,908	755,495,846	1,924,632,679	35,172,794	91,405,375
P60	907,387,952	1,922,923,062	47,180,147	99,977,475	490,980,005	977,351,342	25,488,775	51,156,786	788,673,472	2,024,942,033	41,433,885	108,437,269
P50	934,126,296	2,000,287,107	54,423,783	118,044,076	506,646,671	1,023,441,400	29,193,084	58,928,450	812,117,373	2,122,373,362	48,581,601	124,031,421
P40	962,086,820	2,077,254,169	63,020,322	137,321,866	519,929,734	1,060,360,018	33,831,287	68,440,294	839,196,470	2,208,253,754	56,025,502	145,377,382
P30	998,334,379	2,165,425,661	74,171,904	159,581,899	535,007,660	1,106,257,294	39,388,535	80,295,907	871,325,260	2,297,548,183	65,237,986	170,985,555
P20	1,040,168,579	2,267,562,684	88,151,315	188,195,348	552,505,243	1,155,437,569	47,329,031	95,427,330	907,923,100	2,425,651,164	78,331,169	205,128,683
P10	1,098,251,690	2,405,738,257	113,199,045	238,866,963	581,674,196	1,237,537,450	59,550,714	123,546,902	962,270,458	2,578,599,936	99,791,879	256,907,552
P0	1,299,189,097	3,108,670,172	209,026,321	480,964,709	700,211,284	1,625,617,405	107,132,305	226,558,805	1,198,619,441	3,224,280,516	185,596,980	486,654,953
Mean	942,997,295	2,014,845,109	62,827,101	134,648,456	507,646,185	1,029,842,608	33,694,667	68,359,969	819,136,814	2,134,229,355	55,550,185	144,600,475
Std Deviation	115,036,669	305,917,408	35,287,259	77,395,475	56,993,484	154,548,906	18,848,328	39,093,388	107,379,438	333,254,311	31,104,027	82,020,701

Zone	11				12				13			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	525,221,045	1,269,705,326	5,840,340	16,210,937	618,188,690	1,582,000,440	10,298,670	26,145,353	454,227,422	1,163,015,029	7,135,332	19,058,693
P90	665,243,330	1,804,375,301	21,584,121	61,954,818	797,447,145	2,051,203,535	27,410,437	72,664,224	585,510,545	1,581,861,458	20,347,145	55,891,519
P80	698,891,393	1,931,336,426	28,518,735	79,792,206	858,817,936	2,238,299,446	35,621,085	96,045,140	622,722,547	1,710,703,134	26,191,716	71,265,833
P70	724,956,181	2,033,558,331	34,587,506	97,455,040	907,961,691	2,381,981,599	43,108,477	112,553,221	659,753,529	1,808,262,996	31,553,698	88,142,424
P60	751,543,418	2,117,840,480	40,635,426	113,715,499	956,806,310	2,512,783,151	51,265,026	136,219,266	692,027,990	1,917,616,706	37,051,685	103,753,396
P50	776,195,629	2,189,614,139	46,698,791	131,919,832	996,169,056	2,648,955,556	59,890,516	157,536,862	722,647,023	2,022,575,732	43,358,218	121,169,075
P40	800,171,107	2,276,930,140	53,406,689	151,579,272	1,048,965,648	2,768,291,402	69,370,262	183,458,306	760,637,416	2,129,130,490	50,169,890	138,889,276
P30	833,258,421	2,372,503,868	62,732,070	177,934,385	1,093,080,554	2,911,298,068	80,220,755	214,053,856	795,571,918	2,233,053,821	57,857,151	163,171,893
P20	867,696,112	2,490,459,294	75,376,855	212,145,091	1,153,569,431	3,086,518,627	96,955,881	257,408,326	828,467,253	2,346,591,268	70,857,743	196,407,842
P10	912,754,741	2,666,782,294	95,696,681	270,865,151	1,230,707,175	3,352,097,567	122,440,175	323,255,375	884,178,707	2,510,097,779	88,974,346	247,904,679
P0	1,095,473,203	3,164,510,754	170,115,421	485,537,817	1,579,730,422	4,766,614,012	265,364,291	815,294,805	1,167,633,179	3,441,371,672	169,970,677	502,807,276
Mean	783,440,714	2,215,262,831	53,652,479	151,482,510	1,009,870,504	2,679,365,940	68,596,836	181,319,953	730,619,644	2,038,492,037	49,907,638	139,384,049
Std Deviation	95,985,466	320,976,296	30,084,867	85,327,689	167,077,996	500,173,179	39,092,933	103,967,984	118,274,168	365,807,567	28,571,457	81,318,263
Zone	**14**				**16**				**18**			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	284,968,378	806,843,200	4,305,073	13,706,645	119,385,600	374,301,426	1,787,089	6,059,357	104,186,183	339,154,627	1,551,998	5,305,875
P90	365,835,412	1,072,568,229	12,283,406	36,536,726	153,275,516	514,028,391	5,338,000	18,006,314	130,725,992	474,395,179	4,473,773	16,262,561
P80	392,364,943	1,148,416,182	15,903,397	47,984,759	163,514,744	548,843,520	7,017,999	24,024,109	138,572,016	504,468,118	5,927,779	21,814,153
P70	411,719,618	1,214,150,516	19,685,641	57,714,624	171,601,814	580,883,291	8,270,206	28,247,270	144,842,328	530,799,662	7,156,785	26,206,783
P60	425,049,061	1,267,892,208	22,960,428	69,028,690	179,219,945	605,566,279	9,704,259	33,197,144	150,589,107	551,499,980	8,377,806	30,854,107
P50	442,835,082	1,320,651,416	26,568,277	79,419,519	185,626,172	635,393,616	11,289,009	38,474,063	156,946,666	573,866,429	9,651,805	35,557,935
P40	456,648,054	1,376,140,886	30,873,064	92,465,822	193,538,304	663,430,046	13,202,062	44,800,829	162,694,319	598,790,929	11,201,491	41,588,518
P30	474,943,870	1,433,005,833	35,581,667	107,814,983	200,567,403	694,391,066	15,414,451	52,817,505	168,642,823	625,210,736	12,902,847	47,087,162
P20	498,863,716	1,508,636,459	42,995,540	130,370,560	209,438,629	729,704,648	18,470,431	63,545,146	176,259,698	655,517,697	15,640,912	56,877,417
P10	524,623,821	1,616,640,484	54,231,707	164,481,001	221,871,896	772,012,171	23,259,203	80,133,297	185,814,790	695,771,455	19,929,750	73,386,783
P0	635,827,669	1,985,361,445	104,695,294	325,607,768	284,674,170	1,003,161,056	41,461,917	148,361,472	222,310,495	866,929,250	36,694,483	149,168,259
Mean	444,342,353	1,334,245,402	30,663,766	92,082,272	187,127,678	640,753,207	13,084,983	44,725,141	157,590,191	580,411,823	11,105,236	40,953,961
Std Deviation	59,339,638	208,156,917	17,444,922	53,023,384	26,583,935	100,859,276	7,380,792	25,275,478	21,385,650	87,046,016	6,191,698	23,161,896

Zone	19				20				CANE CREEK			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	404,471,652	1,552,963,626	6,782,337	25,342,822	251,406,982	921,430,561	2,983,065	11,124,054	688,041,370	2,889,085,199	9,666,031	45,661,135
P90	526,627,595	2,028,123,537	18,609,139	74,079,036	303,669,699	1,218,822,047	10,397,097	43,038,375	919,951,697	3,882,675,421	33,436,899	139,467,385
P80	561,205,373	2,176,748,760	24,685,958	95,932,464	320,408,289	1,304,382,021	13,420,427	55,558,668	983,528,574	4,146,905,156	43,133,356	180,459,885
P70	587,496,977	2,304,438,175	29,061,922	113,765,808	333,343,420	1,357,687,707	16,614,674	67,761,674	1,033,642,025	4,378,553,261	52,196,791	220,924,030
P60	616,280,093	2,401,948,868	33,978,870	132,368,667	346,126,847	1,419,326,368	19,456,338	79,826,858	1,074,949,565	4,581,408,085	60,164,793	258,231,335
P50	644,825,975	2,511,504,008	39,815,473	157,509,344	357,915,680	1,477,437,963	22,526,643	92,314,399	1,120,709,635	4,764,155,689	71,499,569	299,158,172
P40	670,783,090	2,607,588,814	46,448,469	180,389,507	371,022,570	1,532,275,298	26,524,129	106,112,280	1,164,955,553	4,987,752,420	81,336,827	352,075,737
P30	698,383,911	2,746,339,160	54,215,331	214,072,413	383,573,158	1,592,782,249	31,043,175	126,462,304	1,213,165,708	5,182,274,518	96,724,337	412,544,114
P20	726,033,520	2,874,488,953	65,468,698	255,174,202	400,940,546	1,664,940,998	36,577,262	150,168,202	1,270,253,371	5,442,804,894	116,063,402	492,326,271
P10	770,322,226	3,059,550,798	81,501,506	319,087,144	425,512,725	1,750,324,053	46,350,732	189,844,494	1,361,524,885	5,858,904,217	144,096,271	618,773,013
P0	988,537,882	4,075,494,888	158,753,669	661,072,623	542,225,905	2,282,988,699	78,858,192	332,606,330	1,708,335,186	7,300,353,476	273,128,055	1,276,640,778
Mean	646,768,405	2,538,340,469	46,112,514	180,955,251	361,408,077	1,486,592,443	25,974,827	106,881,079	1,132,511,732	4,823,953,444	81,676,620	347,618,429
Std Deviation	95,700,990	406,391,880	26,225,727	103,846,460	47,877,956	211,625,220	14,637,655	60,674,761	168,173,234	753,279,144	46,370,113	197,808,581

MANCOS AREA

BLOCK MANCOS FLATS

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	1,217,553,378	5,772,041,035	3,539,653	21,303,889	598,341,437	3,104,592,278	1,201,157	8,655,204	654,290,940	3,112,150,831	2,018,045	12,121,574
P90	1,488,855,067	8,264,358,299	17,061,575	105,555,499	802,083,890	4,473,858,994	9,166,199	52,928,366	801,534,226	4,447,831,739	8,989,266	52,489,221
P80	1,582,520,777	9,013,116,938	24,311,914	149,911,603	858,619,372	4,910,672,638	13,068,740	81,909,359	846,282,348	4,808,545,511	12,964,639	78,061,451
P70	1,650,920,360	9,536,126,662	32,155,718	186,579,171	899,179,008	5,231,847,593	17,832,840	103,667,056	880,783,140	5,086,140,667	17,276,529	104,441,310
P60	1,704,737,875	10,052,506,914	39,914,138	236,504,347	933,044,587	5,475,638,996	22,183,782	129,388,769	917,141,952	5,372,212,582	22,009,988	129,297,944
P50	1,764,731,071	10,542,112,120	49,915,018	301,499,764	966,001,532	5,749,427,269	26,939,353	158,501,847	945,644,365	5,634,321,666	26,105,655	158,811,052
P40	1,823,183,692	11,064,011,092	61,445,073	370,167,258	996,392,172	6,037,942,189	33,135,330	202,983,140	976,242,812	5,896,789,455	32,456,711	195,275,120
P30	1,892,107,696	11,626,792,108	74,930,527	451,507,505	1,030,778,607	6,357,562,619	40,919,470	250,984,320	1,007,693,653	6,170,311,165	40,703,291	243,109,968
P20	1,975,224,427	12,174,753,072	98,413,016	570,537,474	1,071,520,329	6,672,027,267	54,652,023	328,628,955	1,044,308,199	6,482,062,743	54,478,258	317,757,736
P10	2,069,640,727	13,041,858,853	138,472,226	821,481,991	1,120,532,154	7,094,064,441	77,677,738	457,338,224	1,096,246,759	6,996,659,298	75,477,735	451,260,410
P0	2,477,225,123	17,615,618,735	442,957,579	3,335,521,014	1,356,549,941	9,725,354,671	221,667,633	1,390,809,064	1,312,040,559	9,285,332,544	264,458,528	1,532,523,369
Mean	1,774,573,548	10,639,881,260	67,838,359	406,700,491	967,704,157	5,806,676,467	36,947,697	222,542,664	947,614,285	5,686,562,147	36,330,974	217,421,707
Std Deviation	225,031,694	1,838,412,899	60,200,590	372,678,883	124,945,733	1,041,524,831	32,133,623	200,626,153	114,214,875	987,317,906	31,811,545	192,625,542
Zone	**M-150**				**M-100**							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	207,922,911	1,147,140,088	900,695	5,399,048	255,218,757	1,286,399,046	994,612	5,536,864				
P90	286,015,831	1,626,263,864	3,298,496	20,280,408	332,889,270	1,878,461,894	4,039,267	23,426,467				
P80	304,189,081	1,754,592,815	4,742,935	28,346,952	360,341,025	2,078,558,944	5,788,794	33,861,396				
P70	318,342,955	1,842,832,854	6,160,156	36,889,813	375,806,614	2,195,285,912	7,605,751	45,764,643				
P60	330,232,136	1,935,014,491	7,991,307	47,338,679	392,841,353	2,322,567,768	9,167,579	55,557,272				
P50	343,560,044	2,026,088,805	9,605,215	58,509,963	408,612,349	2,449,192,212	11,589,536	68,763,606				
P40	354,770,555	2,112,344,803	11,927,520	70,581,316	427,257,587	2,576,098,428	14,051,654	82,618,751				
P30	368,118,328	2,238,646,399	14,826,832	87,544,915	444,947,089	2,703,922,381	17,322,702	103,695,826				
P20	382,370,681	2,363,891,486	18,695,823	112,122,192	466,100,290	2,860,005,873	23,014,692	133,676,659				
P10	405,035,905	2,581,306,909	27,185,304	160,265,278	492,972,064	3,089,939,310	33,481,432	201,231,938				
P0	477,785,191	3,341,126,041	90,519,428	592,328,035	592,870,491	4,191,990,959	104,355,324	583,139,483				
Mean	344,587,933	2,066,194,529	13,187,669	78,587,703	412,448,960	2,472,688,136	15,791,819	94,098,242				
Std Deviation	46,721,486	373,522,349	11,772,474	70,991,913	61,714,197	467,872,481	14,159,600	83,076,327				

BLOCK WINDY MESA

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	526,587,562	2,777,548,648	2,132,885	13,218,377	513,743,603	2,555,227,757	1,113,862	6,211,677	614,346,794	3,071,699,922	1,710,700	9,367,784
P90	665,525,144	3,744,278,755	7,829,309	46,759,450	644,225,491	3,634,460,141	7,711,112	44,944,563	763,044,047	4,199,377,585	8,615,225	52,589,813
P80	709,927,105	4,035,492,155	11,057,740	65,839,637	683,806,240	3,884,642,555	10,900,683	64,285,208	800,030,874	4,558,668,916	12,623,281	72,912,605
P70	738,335,867	4,280,444,668	14,407,300	84,390,993	713,388,676	4,135,851,229	13,797,281	83,410,266	825,370,618	4,814,801,316	15,936,833	96,576,615
P60	761,472,759	4,490,644,156	17,652,982	105,523,491	734,748,953	4,357,668,637	17,421,160	103,089,573	853,553,168	5,050,432,089	20,231,837	118,697,913
P50	790,395,717	4,684,013,155	21,784,235	131,035,696	761,574,479	4,564,842,333	21,652,586	129,600,973	883,164,452	5,283,960,629	25,108,348	151,158,032
P40	813,323,884	4,904,850,471	27,530,865	162,556,158	787,059,406	4,768,789,988	26,114,001	156,722,742	918,089,756	5,518,418,508	31,218,332	184,631,629
P30	843,704,330	5,177,430,261	33,870,368	203,729,275	824,350,177	5,006,819,902	32,854,093	195,701,100	953,239,115	5,798,558,147	38,236,645	232,634,812
P20	874,863,873	5,432,146,545	44,750,207	263,683,361	856,698,194	5,260,643,748	42,637,375	253,852,201	995,566,338	6,140,914,361	48,494,073	291,031,106
P10	921,007,269	5,828,701,730	61,392,079	372,302,138	906,043,309	5,668,625,798	61,293,916	384,116,980	1,045,746,676	6,690,485,308	70,749,205	428,474,618
P0	1,112,119,971	7,558,914,146	198,302,851	1,055,210,053	1,124,337,721	7,171,013,860	209,927,652	1,264,188,983	1,257,278,963	8,376,432,394	215,824,335	1,327,173,713
Mean	792,268,474	4,749,710,922	30,164,641	180,194,183	770,395,912	4,614,031,164	29,513,891	176,943,671	894,702,871	5,369,311,529	34,285,893	204,398,859
Std Deviation	98,305,162	808,583,470	26,055,890	157,725,765	101,569,866	787,079,759	26,444,523	160,113,309	110,636,817	948,629,163	30,344,754	180,792,491
Zone	**M-150**				**M-100**							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	386,048,334	1,942,302,394	1,367,891	8,130,902	377,449,517	2,155,428,417	1,225,822	7,338,475				
P90	484,640,711	2,667,324,079	5,473,653	33,070,103	530,461,916	3,010,853,297	6,502,788	36,085,433				
P80	519,910,766	2,932,701,549	8,025,459	48,668,714	572,358,441	3,260,237,980	9,145,853	54,003,537				
P70	543,909,120	3,123,789,853	10,849,067	63,336,918	596,619,624	3,469,529,337	11,887,759	71,574,422				
P60	564,676,405	3,309,941,784	13,328,068	79,364,800	623,004,571	3,657,269,712	14,853,599	88,477,009				
P50	584,367,111	3,514,394,949	16,593,731	96,677,097	650,761,201	3,856,424,190	18,242,163	107,348,857				
P40	608,538,694	3,671,485,251	20,124,750	121,053,947	675,981,881	4,064,742,877	22,831,200	136,497,284				
P30	629,365,926	3,852,083,808	25,031,162	146,133,817	705,245,204	4,295,361,825	27,387,087	169,781,087				
P20	655,173,152	4,073,638,292	32,670,563	191,326,165	739,278,427	4,560,693,276	35,622,823	211,385,847				
P10	694,570,235	4,420,447,321	46,327,712	276,929,232	786,258,300	4,899,674,976	51,719,491	312,446,017				
P0	933,256,742	5,638,976,996	169,325,973	993,376,469	992,795,989	6,265,740,402	176,427,745	1,026,608,797				
Mean	588,354,304	3,531,910,285	22,647,703	135,738,191	654,200,399	3,923,902,392	25,055,783	150,965,674				
Std Deviation	81,443,785	666,539,403	20,425,081	124,018,985	95,605,219	746,706,486	22,558,190	139,377,083				

BLOCK GRAND MANCOS

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	1,674,347,627	7,559,981,458	6,710,315	42,455,341	797,652,316	4,196,124,496	2,089,198	15,217,389	746,835,879	3,818,491,881	2,159,001	11,331,021
P90	2,084,652,021	11,505,068,789	23,173,764	136,926,762	1,019,606,687	5,644,788,487	11,902,464	69,462,872	918,968,460	5,137,663,065	10,775,674	62,561,688
P80	2,187,009,299	12,521,146,077	34,471,592	198,761,119	1,076,565,631	6,192,608,625	16,937,104	100,166,125	970,767,439	5,536,482,355	15,444,499	91,162,814
P70	2,286,934,281	13,355,590,585	46,073,537	273,576,092	1,127,011,802	6,516,529,921	21,448,264	128,400,072	1,014,435,068	5,868,624,313	20,221,630	120,254,746
P60	2,370,822,404	13,999,368,727	57,228,686	341,606,189	1,171,976,031	6,871,692,189	27,900,437	163,475,885	1,054,121,997	6,177,600,329	24,362,455	145,462,717
P50	2,449,740,590	14,672,641,140	69,537,438	410,024,506	1,209,720,058	7,232,246,898	33,836,869	204,877,691	1,097,881,290	6,518,637,943	30,506,301	180,132,780
P40	2,532,953,378	15,398,051,051	83,969,774	509,534,501	1,254,893,825	7,520,737,033	41,886,664	252,157,508	1,125,366,127	6,812,192,248	37,170,382	224,376,594
P30	2,620,044,720	16,118,359,282	104,661,216	622,836,791	1,305,706,760	7,855,884,405	52,577,425	317,291,165	1,166,590,888	7,138,313,200	48,194,806	283,319,210
P20	2,737,156,038	16,924,579,436	134,601,410	804,374,910	1,357,288,860	8,342,159,386	66,358,496	402,659,974	1,210,926,836	7,567,115,603	61,113,016	371,458,738
P10	2,867,786,422	18,132,870,029	196,004,549	1,162,905,740	1,427,371,937	9,229,150,593	98,547,142	579,482,181	1,270,930,258	8,123,202,665	85,963,860	520,844,302
P0	3,462,595,486	23,934,949,750	560,863,604	4,094,295,848	1,815,316,421	11,976,775,271	343,813,920	2,299,726,762	1,588,247,113	10,811,294,778	291,905,527	1,825,949,022
Mean	2,465,020,017	14,797,372,146	94,365,838	567,953,906	1,219,653,725	7,316,588,561	46,709,343	281,420,056	1,095,555,421	6,572,954,362	41,794,204	251,734,749
Std Deviation	305,298,717	2,619,086,762	83,347,730	515,585,113	159,443,226	1,321,170,589	41,607,238	259,111,300	138,316,761	1,162,781,184	36,736,321	227,169,894
Zone	M-150				M-100							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	360,707,539	1,615,160,860	1,534,674	7,946,381	409,066,507	2,040,891,117	1,733,372	9,013,009				
P90	471,494,230	2,641,380,658	5,675,823	33,764,054	522,865,771	2,940,516,896	6,082,551	37,437,266				
P80	506,381,356	2,935,319,042	7,999,937	47,571,619	558,404,622	3,186,698,886	8,884,943	52,100,858				
P70	533,228,712	3,145,651,378	10,545,200	62,306,774	586,129,991	3,390,425,725	11,394,293	66,578,850				
P60	554,185,795	3,290,029,074	13,060,115	77,662,521	611,578,103	3,577,549,186	14,596,100	86,671,696				
P50	573,170,720	3,436,049,796	15,920,546	94,342,158	635,830,091	3,778,818,842	17,871,295	108,329,375				
P40	596,895,461	3,589,894,385	19,895,436	115,478,170	658,928,080	3,994,490,031	22,269,892	132,106,890				
P30	624,886,530	3,765,188,387	25,512,336	149,502,727	688,750,596	4,170,332,666	27,203,820	165,891,073				
P20	651,882,759	4,006,246,768	32,742,196	195,110,002	720,318,014	4,446,744,293	35,630,664	206,997,101				
P10	685,754,126	4,327,584,026	44,538,935	268,852,223	762,897,615	4,809,754,546	50,043,826	309,019,807				
P0	871,674,053	6,026,417,147	178,223,016	1,151,015,540	969,382,512	7,174,067,408	198,536,913	1,245,244,394				
Mean	579,218,847	3,474,694,663	22,041,649	131,768,613	639,859,456	3,841,253,047	24,466,932	147,353,523				
Std Deviation	84,384,970	657,794,882	19,385,354	117,972,181	91,843,252	741,986,271	22,106,265	136,040,859				

BLOCK MANCOS FLATS S

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	11,746,683	59,504,782	32,493	197,189	14,358,600	73,949,164	47,180	260,778	13,648,537	70,869,449	11,739	70,317
P90	14,780,639	81,569,843	171,794	1,019,757	18,178,990	104,581,964	210,803	1,244,512	17,469,144	97,988,471	208,570	1,211,410
P80	15,689,622	89,327,409	244,932	1,448,694	19,729,481	112,314,251	308,016	1,818,957	18,541,334	105,991,464	283,304	1,698,142
P70	16,463,168	95,288,203	317,954	1,841,587	20,526,484	118,530,113	408,860	2,378,353	19,376,651	112,074,900	379,389	2,164,899
P60	17,096,319	100,872,542	405,570	2,402,746	21,261,862	124,080,675	491,604	2,946,899	19,928,943	116,664,327	469,454	2,862,227
P50	17,571,773	104,704,560	492,417	2,949,171	21,844,311	129,246,159	607,914	3,593,745	20,654,440	122,747,612	592,525	3,464,426
P40	18,075,721	109,469,922	597,282	3,636,600	22,530,126	135,290,911	737,514	4,433,348	21,309,932	129,079,376	725,772	4,297,220
P30	18,657,925	113,958,271	756,315	4,456,274	23,283,901	143,112,716	936,879	5,578,822	22,021,307	135,043,613	888,672	5,254,641
P20	19,415,837	120,665,239	988,361	5,905,498	24,193,366	150,199,428	1,217,584	7,231,797	22,934,563	143,072,034	1,148,793	6,964,669
P10	20,406,865	129,209,301	1,402,652	8,359,433	25,600,143	163,376,409	1,795,903	10,593,085	24,349,632	155,087,845	1,666,644	9,779,072
P0	25,884,711	191,586,853	3,985,734	24,611,435	31,525,240	209,457,508	5,329,497	29,119,232	29,250,812	201,397,552	5,354,218	39,048,432
Mean	17,605,644	105,629,764	673,782	4,049,939	21,946,924	131,599,200	841,608	5,064,746	20,809,614	124,851,557	796,989	4,800,677
Std Deviation	2,194,221	18,563,388	596,335	3,623,631	2,792,245	22,942,564	749,114	4,613,489	2,608,882	22,001,980	712,664	4,389,654

Zone	M-150				M-100			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	5,533,477	30,873,262	17,799	106,997	5,871,498	28,716,116	13,174	83,714
P90	7,287,927	40,806,979	84,749	494,160	7,799,275	43,995,889	93,077	534,764
P80	7,717,699	44,530,280	125,323	709,115	8,379,345	48,224,658	132,575	801,129
P70	8,076,726	46,744,532	157,485	967,781	8,774,985	51,051,907	173,214	1,020,504
P60	8,392,825	49,246,281	198,345	1,192,325	9,138,139	53,825,170	215,332	1,289,591
P50	8,680,663	51,856,881	238,037	1,464,788	9,470,242	56,149,974	267,610	1,585,944
P40	8,966,508	54,489,021	299,352	1,782,138	9,822,809	58,939,588	322,510	1,945,917
P30	9,319,865	57,250,849	377,121	2,252,840	10,244,674	61,743,836	406,151	2,432,349
P20	9,720,258	60,261,476	489,116	2,859,616	10,729,231	66,220,870	537,882	3,284,484
P10	10,380,690	64,341,079	691,541	4,190,638	11,354,212	72,200,095	752,844	4,501,253
P0	13,695,174	98,265,124	2,087,827	12,127,745	14,664,586	104,349,904	2,452,123	12,992,930
Mean	8,759,280	52,508,529	333,927	1,999,249	9,542,595	57,263,584	365,118	2,180,384
Std Deviation	1,225,926	9,586,078	291,101	1,770,670	1,381,282	11,005,413	323,020	1,924,314

BLOCK MANCOS FLATS SE

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	33,290,438	183,202,265	117,956	653,702	5,929,864	31,109,463	21,705	123,670	21,606,660	105,890,716	34,419	195,675
P90	44,112,731	246,980,479	514,308	3,154,371	7,829,774	43,741,334	90,290	532,522	26,599,589	148,675,490	304,727	1,838,985
P80	46,889,585	268,460,765	731,927	4,303,199	8,331,277	47,311,182	130,592	759,878	28,150,977	159,789,842	447,202	2,650,159
P70	49,096,429	284,428,097	962,150	5,593,065	8,656,175	50,267,219	168,202	990,390	29,285,213	171,080,219	573,890	3,395,672
P60	50,703,242	299,649,629	1,220,730	7,241,095	8,929,465	52,571,900	212,315	1,261,334	30,391,774	179,120,223	711,477	4,344,675
P50	52,672,377	315,306,683	1,472,779	9,016,840	9,211,362	54,881,125	253,669	1,527,540	31,325,420	188,070,830	889,279	5,219,654
P40	54,371,779	328,858,855	1,790,571	10,654,577	9,546,774	57,604,802	316,127	1,908,308	32,473,336	195,553,623	1,076,893	6,337,847
P30	56,425,315	344,160,118	2,256,904	13,216,902	9,904,541	60,578,692	397,563	2,394,721	33,465,015	204,854,089	1,357,034	7,958,187
P20	58,185,386	363,552,364	2,869,642	17,762,716	10,280,111	63,713,087	520,434	3,084,048	34,859,804	217,088,574	1,719,188	10,294,774
P10	61,631,824	386,174,528	4,232,762	24,785,325	10,781,654	68,870,128	719,138	4,284,212	36,696,859	233,637,772	2,490,503	15,460,155
P0	77,663,346	577,863,895	13,811,301	88,125,704	13,298,524	94,942,888	2,855,252	16,755,463	43,702,970	310,026,767	9,028,870	46,891,515
Mean	52,813,292	316,688,289	2,021,357	12,090,041	9,298,163	55,806,070	359,426	2,151,084	31,539,019	189,317,874	1,212,466	7,244,779
Std Deviation	6,735,079	55,090,961	1,801,931	10,952,336	1,155,153	9,902,920	328,690	1,997,097	3,844,528	33,246,169	1,088,092	6,536,262

Zone	M-150				M-100							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	14,856,124	71,557,199	46,123	268,804	15,090,911	75,075,993	56,053	274,820				
P90	19,796,944	110,311,316	234,215	1,345,401	19,009,472	106,441,814	233,632	1,380,714				
P80	21,127,078	120,708,710	325,011	1,947,173	20,284,919	116,137,436	325,014	1,891,419				
P70	21,990,966	127,561,723	439,562	2,595,240	21,326,714	123,772,615	413,624	2,422,229				
P60	22,852,895	135,496,021	550,482	3,285,737	22,181,507	131,268,989	522,102	3,157,207				
P50	23,830,947	142,164,882	664,207	4,014,020	23,024,829	137,616,272	642,021	3,831,444				
P40	24,679,399	149,576,206	807,066	4,858,919	23,917,274	144,140,102	803,584	4,791,647				
P30	25,754,832	156,773,452	1,042,803	6,163,126	24,901,750	151,314,162	1,012,749	6,151,356				
P20	26,831,702	166,013,035	1,327,933	8,113,098	26,069,130	160,993,333	1,259,031	7,515,939				
P10	28,459,296	177,807,616	1,863,497	11,202,163	27,597,146	175,456,316	1,858,290	10,950,466				
P0	34,689,699	228,977,407	6,761,409	42,479,327	34,937,591	244,571,331	6,321,494	47,649,818				
Mean	23,988,156	143,919,696	912,639	5,500,903	23,245,680	139,544,188	883,801	5,304,018				
Std Deviation	3,360,978	26,911,393	800,350	5,022,581	3,362,162	26,954,951	769,123	4,753,394				

BLOCK MANCOS FLATS SW1

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	59,691,663	278,653,844	183,759	1,012,031	27,716,973	122,341,498	82,939	524,945	24,238,349	118,838,223	78,924	443,192
P90	73,543,657	411,616,973	825,818	4,898,155	35,735,797	197,103,288	410,114	2,398,826	31,173,219	173,574,689	366,216	2,132,718
P80	77,848,559	445,177,216	1,218,404	7,223,288	37,738,518	214,212,364	591,107	3,519,509	32,909,611	187,922,694	513,191	2,992,661
P70	81,258,539	472,899,654	1,571,075	9,236,314	39,126,606	227,466,513	768,051	4,681,110	34,294,259	199,458,050	661,400	4,029,277
P60	84,017,674	495,770,907	1,966,646	11,773,162	40,649,035	239,229,860	968,121	5,803,548	35,598,233	209,266,534	842,935	4,910,855
P50	86,973,207	514,783,041	2,423,422	14,571,742	41,806,698	252,211,363	1,181,813	7,012,633	36,717,068	218,704,816	1,032,106	6,127,781
P40	89,538,720	542,664,769	3,043,273	17,856,298	43,428,725	263,334,239	1,463,369	8,795,254	37,755,807	226,448,339	1,265,998	7,611,889
P30	92,329,143	568,269,114	3,743,775	22,505,232	45,047,994	276,415,162	1,790,138	10,999,051	38,899,256	238,016,331	1,607,358	9,585,684
P20	96,094,063	597,986,328	4,922,097	28,803,424	46,953,357	292,036,070	2,345,873	14,345,554	40,487,848	250,581,664	2,049,224	11,943,761
P10	102,131,450	639,821,655	6,865,408	41,203,404	49,464,673	315,408,439	3,328,466	19,790,797	42,523,440	270,581,190	2,906,402	17,680,336
P0	125,021,004	832,605,282	23,708,009	136,853,715	61,395,415	410,746,455	10,582,273	57,202,274	52,410,003	362,638,174	9,860,645	61,014,983
Mean	87,233,354	523,229,428	3,353,025	20,126,782	42,311,673	254,015,356	1,611,577	9,637,910	36,778,573	220,618,656	1,409,566	8,436,405
Std Deviation	10,737,057	89,852,564	3,002,438	18,457,243	5,396,799	45,590,207	1,381,510	8,264,270	4,415,851	37,869,955	1,253,995	7,571,334
Zone	**M-150**				**M-100**							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	9,686,289	52,289,851	30,445	195,694	11,441,865	54,757,113	46,934	259,790				
P90	12,472,959	70,865,799	144,045	848,788	14,442,630	81,296,765	168,577	1,007,590				
P80	13,318,325	76,207,853	211,005	1,268,078	15,533,286	89,009,348	246,020	1,474,560				
P70	13,955,097	80,869,451	268,855	1,615,809	16,315,003	94,806,651	323,438	1,894,083				
P60	14,525,446	85,704,292	343,754	2,082,622	17,002,339	99,659,271	388,165	2,279,714				
P50	15,059,434	90,116,209	428,482	2,553,985	17,667,747	105,506,534	506,010	2,965,540				
P40	15,667,213	94,234,153	531,861	3,121,120	18,233,942	110,718,964	628,235	3,655,821				
P30	16,369,361	99,379,094	653,605	3,777,700	19,031,080	116,683,376	764,624	4,590,047				
P20	17,059,738	105,194,458	851,506	5,078,764	19,837,156	123,741,659	978,970	5,967,248				
P10	18,150,500	113,616,781	1,187,213	7,310,987	21,045,004	134,556,054	1,394,923	8,636,101				
P0	23,507,557	161,107,611	3,658,497	21,823,312	25,332,796	172,782,774	5,063,664	25,426,292				
Mean	15,216,056	91,262,892	577,706	3,459,791	17,752,037	106,573,159	680,518	4,089,435				
Std Deviation	2,159,359	17,078,317	495,918	3,008,554	2,527,679	20,347,925	603,664	3,684,581				

BLOCK MANCOS FLATS SW2

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	22,410,495	105,358,833	69,024	395,653	12,061,393	54,444,343	39,186	193,815	10,319,120	50,520,165	19,058	113,221
P90	28,840,013	161,522,112	336,869	2,040,823	14,431,442	81,817,576	168,555	987,830	12,097,915	68,273,688	138,277	822,326
P80	30,789,175	175,475,188	481,389	2,851,215	15,442,671	87,735,599	239,835	1,431,415	12,833,623	73,532,467	202,450	1,209,576
P70	32,039,407	186,037,686	611,309	3,694,157	16,044,171	93,182,675	311,894	1,831,003	13,415,794	77,843,033	263,876	1,569,763
P60	33,087,540	195,145,470	779,927	4,674,347	16,564,762	98,037,115	398,360	2,356,450	13,908,493	81,233,335	319,398	1,913,668
P50	34,257,418	204,350,538	961,276	5,712,050	17,309,551	102,715,660	496,679	2,897,111	14,328,458	85,257,829	401,588	2,419,016
P40	35,416,810	213,108,574	1,184,432	6,909,186	17,887,452	107,495,984	605,505	3,679,339	14,831,773	89,238,278	496,336	2,953,658
P30	36,446,824	223,459,150	1,465,297	8,822,066	18,559,899	113,179,773	756,658	4,501,730	15,299,059	93,567,916	616,325	3,612,154
P20	37,844,051	236,860,470	1,885,740	11,020,825	19,279,550	119,419,502	953,899	5,772,823	15,988,864	98,966,602	794,597	4,856,341
P10	40,183,368	251,454,777	2,785,049	16,338,259	20,323,969	129,023,484	1,348,289	8,152,207	16,836,318	106,897,285	1,159,907	7,158,222
P0	47,124,527	352,427,994	9,230,236	68,480,746	24,636,865	172,882,157	4,712,026	29,247,482	20,448,772	143,724,416	4,217,302	23,903,586
Mean	34,375,564	206,262,401	1,318,279	7,905,373	17,366,891	104,214,181	662,090	3,986,820	14,407,460	86,398,859	553,236	3,299,348
Std Deviation	4,290,363	36,171,559	1,176,806	7,352,741	2,268,586	18,854,136	574,231	3,540,818	1,793,526	14,943,360	495,400	2,924,431

Zone	M-150				M-100							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	4,310,010	22,654,095	14,595	83,319	5,155,330	27,955,785	22,566	127,782				
P90	5,331,496	29,535,250	62,799	365,701	6,525,562	36,757,924	78,010	461,806				
P80	5,679,432	32,708,592	91,084	539,604	6,982,681	40,094,509	114,189	666,091				
P70	5,950,914	34,723,158	118,627	722,389	7,350,041	42,980,856	147,699	867,504				
P60	6,217,514	36,559,768	149,454	882,504	7,702,613	45,163,005	181,977	1,088,759				
P50	6,488,390	38,669,706	178,524	1,065,873	8,037,421	47,592,010	224,437	1,316,856				
P40	6,711,431	40,460,690	221,699	1,307,066	8,378,411	50,169,667	279,031	1,643,377				
P30	6,975,831	42,855,132	277,917	1,682,085	8,696,360	53,053,704	339,039	2,034,955				
P20	7,307,845	45,526,298	359,023	2,201,264	9,090,070	55,833,548	434,869	2,601,983				
P10	7,761,149	48,782,042	513,330	3,075,111	9,604,752	60,707,373	611,071	3,758,148				
P0	9,496,875	66,607,947	1,678,820	8,631,723	11,555,721	79,949,275	2,021,230	13,537,875				
Mean	6,507,474	39,061,186	248,413	1,487,108	8,066,606	48,367,599	307,275	1,845,617				
Std Deviation	922,352	7,443,050	217,491	1,307,100	1,198,317	9,229,982	276,010	1,710,954				

BLOCK WINDY MESA NE

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	377,324,585	1,803,838,386	1,233,689	8,289,557	208,075,214	933,173,073	626,096	3,970,150	187,273,098	945,846,516	557,142	2,841,863
P90	462,119,508	2,567,248,804	5,389,067	31,080,359	252,008,294	1,414,042,186	2,987,805	17,424,345	229,449,716	1,286,728,878	2,649,269	15,759,020
P80	486,333,525	2,784,401,854	7,806,063	45,486,142	267,938,781	1,540,039,770	4,178,462	24,649,656	240,623,036	1,388,470,127	3,788,159	22,112,039
P70	507,942,275	2,951,844,439	10,180,366	58,616,501	279,748,118	1,627,462,951	5,455,277	32,399,093	250,888,663	1,461,874,805	4,919,594	28,717,982
P60	527,522,268	3,099,251,131	12,536,724	73,575,974	289,850,513	1,700,900,538	6,783,641	40,597,781	259,437,602	1,539,479,487	6,233,806	36,528,407
P50	545,353,230	3,239,432,655	15,684,186	93,678,730	299,032,537	1,782,404,965	8,518,312	49,953,171	269,699,895	1,618,839,177	7,568,202	45,581,349
P40	566,380,154	3,421,877,861	18,827,782	113,327,346	309,629,249	1,863,346,063	10,108,117	61,586,380	279,491,613	1,676,784,852	9,225,164	54,901,622
P30	588,205,524	3,572,338,884	23,627,477	141,650,714	319,965,044	1,948,932,669	12,692,830	76,350,492	290,042,760	1,764,893,777	11,484,327	69,227,980
P20	612,653,251	3,796,323,360	30,124,884	181,213,982	332,925,092	2,059,275,844	16,539,484	99,853,660	301,416,704	1,849,706,895	15,191,887	89,726,803
P10	644,017,086	4,133,831,807	43,166,902	272,336,236	350,458,573	2,208,015,325	23,150,250	142,636,705	315,911,017	1,985,080,059	21,758,531	131,297,677
P0	785,978,913	5,472,842,599	135,899,045	825,262,807	431,738,608	3,011,318,843	85,877,620	537,198,862	380,706,125	2,531,475,636	72,261,078	518,098,506
Mean	550,813,818	3,304,753,848	21,055,415	126,819,315	300,264,213	1,801,195,431	11,528,636	69,270,682	271,317,262	1,625,964,169	10,402,836	62,673,103
Std Deviation	71,721,028	592,860,040	18,505,916	113,988,819	37,314,167	313,372,365	10,443,520	63,471,601	33,312,108	272,227,038	9,212,763	57,519,128

Zone	M-150				M-100							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	95,548,755	509,757,199	319,997	1,762,818	97,527,542	512,089,885	378,117	2,175,704				
P90	124,684,812	684,604,878	1,480,209	8,840,261	129,470,066	733,701,771	1,559,503	9,155,128				
P80	131,895,379	748,769,570	2,093,499	12,462,169	138,410,364	793,348,875	2,166,221	12,951,889				
P70	137,519,390	802,558,107	2,723,493	16,122,384	147,243,994	841,178,583	2,841,178	16,826,301				
P60	142,631,121	845,080,534	3,444,655	20,316,529	152,809,829	892,157,625	3,583,530	21,272,271				
P50	149,358,020	885,859,745	4,184,028	24,772,953	158,874,193	942,671,488	4,344,118	26,169,675				
P40	155,483,094	940,960,724	5,102,977	30,710,933	163,630,990	989,638,061	5,311,477	31,786,086				
P30	160,886,158	990,900,116	6,526,852	39,457,672	170,671,618	1,044,015,254	6,800,515	41,392,712				
P20	168,537,682	1,049,366,013	8,435,811	49,996,598	178,667,639	1,113,943,884	8,863,485	54,278,911				
P10	180,270,950	1,128,604,125	11,639,523	70,777,618	190,389,427	1,200,263,704	13,035,392	76,915,522				
P0	218,680,374	1,482,647,703	35,624,312	223,675,976	241,815,046	1,644,667,690	41,013,109	247,039,827				
Mean	150,448,426	902,719,257	5,743,715	34,424,499	159,102,077	954,993,946	6,113,386	36,742,822				
Std Deviation	21,186,926	169,042,348	5,046,454	31,020,849	23,212,667	184,892,217	5,484,805	33,456,118				

BLOCK WINDY MESA N

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	101,512,612	477,847,767	370,658	2,146,410	51,786,448	234,663,626	171,036	1,091,317	45,454,278	209,613,936	123,987	596,864
P90	126,278,531	711,085,688	1,474,673	8,586,980	64,947,950	363,998,497	754,725	4,243,325	54,943,253	307,177,446	634,437	3,798,547
P80	133,733,405	773,081,012	2,097,021	12,534,844	68,914,311	394,549,606	1,102,631	6,555,929	58,606,338	334,649,248	943,342	5,498,048
P70	139,882,971	814,798,646	2,681,309	16,425,015	72,158,769	417,586,293	1,435,388	8,359,357	61,317,191	352,942,349	1,177,349	7,234,627
P60	144,980,965	852,348,306	3,373,161	19,799,382	74,918,565	435,741,271	1,767,068	10,312,024	63,301,930	373,117,053	1,494,189	8,872,007
P50	150,068,334	891,534,713	4,142,804	25,113,789	77,113,820	460,311,932	2,183,850	13,105,718	65,512,530	390,376,859	1,811,136	10,904,312
P40	154,386,940	932,834,392	5,195,165	31,046,104	79,801,003	484,035,042	2,706,429	16,244,306	67,574,024	406,437,552	2,254,057	13,375,508
P30	159,475,241	974,083,176	6,430,824	39,318,571	83,001,836	508,804,532	3,349,426	20,115,551	69,632,945	426,807,890	2,764,605	16,664,012
P20	165,929,461	1,029,158,933	8,446,488	50,884,655	86,455,416	538,215,278	4,224,011	26,094,620	72,380,444	446,282,186	3,544,012	21,747,578
P10	175,534,178	1,107,225,089	11,615,918	72,053,156	90,195,094	578,946,400	6,141,855	36,434,659	75,943,639	489,840,969	5,140,809	31,546,824
P0	207,564,103	1,429,402,532	33,396,897	232,828,532	108,651,600	738,302,442	20,059,638	139,441,150	89,754,692	649,127,000	18,357,315	122,744,414
Mean	150,482,190	902,162,413	5,765,608	34,609,300	77,754,761	466,704,743	2,975,071	17,913,788	65,569,295	393,682,312	2,508,534	15,103,113
Std Deviation	19,045,905	154,954,624	5,053,841	31,003,013	9,840,384	83,691,565	2,611,184	16,078,858	7,870,454	69,629,784	2,257,501	13,809,475

Zone	M-150				M-100							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	20,632,239	113,441,549	79,242	489,560	26,703,441	145,698,763	87,401	578,928				
P90	29,085,865	161,533,531	345,221	2,028,863	35,450,729	200,279,774	429,952	2,520,651				
P80	31,022,719	178,965,270	505,062	2,917,552	38,391,475	217,178,882	605,728	3,749,428				
P70	32,565,428	190,298,827	638,743	3,699,821	40,146,489	233,295,109	788,226	4,701,119				
P60	33,778,624	199,520,396	798,437	4,749,124	41,977,741	245,099,933	1,010,482	6,029,464				
P50	35,042,357	209,564,490	999,786	5,869,829	43,456,147	259,652,999	1,218,868	7,270,329				
P40	36,465,316	219,253,583	1,224,201	7,371,201	45,276,326	272,121,977	1,494,253	9,058,586				
P30	37,739,627	231,826,466	1,514,209	9,077,476	47,475,750	290,251,400	1,908,743	11,150,820				
P20	39,347,562	245,224,860	1,886,887	11,467,377	49,791,804	308,363,629	2,437,044	14,717,252				
P10	42,099,475	262,158,099	2,791,558	16,523,472	52,663,173	334,809,910	3,294,750	20,948,803				
P0	54,307,631	363,385,190	10,142,634	69,381,757	68,448,449	440,210,123	12,648,194	76,401,249				
Mean	35,368,846	212,201,258	1,351,454	8,147,721	43,956,358	263,796,823	1,676,077	10,047,721				
Std Deviation	4,986,240	39,562,945	1,203,028	7,490,650	6,555,450	51,517,318	1,484,097	8,960,701				

BLOCK WINDY MESA W

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	44,092,729	237,423,300	35,705	207,533	22,682,244	106,743,382	78,096	472,533	19,432,654	89,403,968	45,672	288,198
P90	58,222,966	318,661,020	690,112	4,036,025	27,921,277	155,242,189	321,112	1,906,808	24,291,134	134,489,999	277,754	1,647,391
P80	61,187,328	344,120,120	952,536	5,531,372	29,231,587	168,574,584	467,847	2,836,886	25,746,338	146,293,020	400,820	2,371,166
P70	63,594,975	368,400,315	1,216,429	7,250,206	30,554,470	177,124,728	599,361	3,643,156	26,812,867	155,421,578	525,292	3,067,594
P60	65,985,133	388,369,485	1,550,749	9,333,158	31,888,688	186,802,218	752,665	4,455,220	27,790,554	162,469,287	659,858	3,908,026
P50	68,455,607	410,042,084	1,915,804	11,440,907	32,827,439	195,066,170	940,628	5,527,965	28,570,987	170,044,701	798,480	4,796,482
P40	70,659,866	429,075,863	2,383,141	14,347,967	34,131,862	204,485,973	1,132,840	6,812,014	29,486,016	179,362,147	979,921	5,861,363
P30	73,091,086	448,581,174	2,991,423	17,955,679	35,236,509	215,529,102	1,390,898	8,420,287	30,508,525	188,052,215	1,233,118	7,260,276
P20	76,106,702	475,068,214	3,826,813	22,687,240	36,748,931	230,105,520	1,837,380	10,463,732	31,834,754	198,234,514	1,612,975	9,738,735
P10	79,742,416	512,766,884	5,403,063	33,126,323	38,735,709	249,565,324	2,621,159	15,928,308	33,550,090	213,403,956	2,315,456	14,073,043
P0	94,966,740	653,448,960	15,887,026	99,338,994	46,953,044	316,987,082	7,810,928	54,046,393	41,769,298	288,555,628	7,384,412	48,421,381
Mean	68,680,753	412,321,739	2,626,516	15,770,703	33,119,384	198,664,087	1,259,935	7,558,426	28,795,838	172,812,334	1,103,834	6,666,843
Std Deviation	8,643,665	73,871,978	2,305,416	14,042,033	4,306,205	35,281,407	1,095,268	6,744,037	3,631,905	30,681,768	973,844	6,092,967

Zone	M-150				M-100			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	9,394,232	46,361,095	26,348	155,899	11,900,884	53,224,065	34,255	191,004
P90	11,851,772	66,089,830	136,697	850,362	14,226,834	79,424,648	172,102	994,674
P80	12,567,919	71,607,056	197,511	1,172,493	15,173,041	86,730,818	241,808	1,407,655
P70	13,163,424	76,522,786	259,619	1,521,783	15,899,628	92,649,417	320,409	1,874,230
P60	13,631,140	79,938,786	322,483	1,895,904	16,593,545	98,289,598	398,182	2,334,320
P50	14,126,256	83,919,573	396,516	2,383,794	17,309,927	103,359,061	492,218	2,846,804
P40	14,648,567	88,944,938	491,120	3,008,445	18,007,546	109,084,018	591,236	3,525,291
P30	15,237,186	93,505,181	618,681	3,683,041	18,819,047	115,161,828	741,072	4,605,592
P20	16,014,869	99,389,258	794,820	4,828,058	19,737,517	121,657,175	982,988	5,967,182
P10	16,993,285	109,219,231	1,122,842	6,593,289	21,072,401	132,883,555	1,414,232	8,361,583
P0	22,093,388	154,931,438	4,068,439	28,029,808	25,804,739	181,710,282	4,742,803	31,403,678
Mean	14,305,315	85,903,366	546,769	3,268,340	17,528,333	105,235,930	670,290	4,056,821
Std Deviation	2,007,544	16,526,325	481,749	2,935,635	2,646,826	20,892,817	593,832	3,778,832

BLOCK WINDY MESA E

Zone	M-400				M-300				M-200			
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)
P100	172,330,609	906,696,058	435,536	2,257,603	103,633,530	526,326,727	344,337	2,299,737	112,525,325	587,419,386	378,907	1,836,411
P90	211,006,699	1,170,945,325	2,482,224	14,414,827	136,952,413	760,608,299	1,593,039	9,070,342	141,887,699	793,312,836	1,628,736	9,540,298
P80	222,385,487	1,283,585,845	3,469,260	21,121,613	145,820,725	836,869,267	2,292,989	13,413,259	150,870,035	860,173,368	2,354,811	14,146,314
P70	231,384,731	1,349,916,275	4,502,799	26,721,085	152,098,539	885,555,091	2,982,520	17,723,726	155,708,160	907,038,375	2,992,834	17,407,762
P60	239,702,665	1,417,803,871	5,664,162	33,160,678	157,336,233	929,691,550	3,691,823	21,787,520	161,658,701	954,072,621	3,783,392	23,014,574
P50	247,351,574	1,477,741,693	6,981,223	40,416,251	161,956,836	969,976,457	4,504,653	26,987,595	166,577,795	996,669,292	4,576,940	27,869,822
P40	256,048,924	1,545,482,440	8,557,665	51,643,988	168,339,768	1,017,459,210	5,651,506	33,367,767	171,791,086	1,041,526,696	5,748,936	34,022,202
P30	265,180,873	1,613,690,967	10,877,670	65,074,861	174,237,927	1,061,528,101	7,004,229	41,575,947	177,701,474	1,091,463,929	7,167,627	43,417,705
P20	277,708,680	1,719,351,549	13,934,578	83,675,538	181,817,725	1,128,793,591	9,282,525	54,970,462	185,442,729	1,147,972,463	9,411,916	56,314,166
P10	292,256,073	1,854,972,678	19,364,794	115,398,178	192,165,692	1,221,553,259	13,040,768	80,558,047	195,284,049	1,229,982,992	13,629,000	80,511,055
P0	337,862,249	2,301,370,898	64,548,230	413,091,737	232,966,899	1,530,181,174	38,730,543	257,361,510	229,622,851	1,655,722,960	39,628,915	242,042,070
Mean	249,949,163	1,498,797,426	9,496,200	56,868,940	163,713,379	982,032,221	6,256,240	37,564,014	167,930,936	1,006,916,072	6,435,474	38,670,226
Std Deviation	30,970,705	257,428,668	8,327,546	50,616,704	20,882,479	172,632,481	5,461,398	33,412,253	20,464,397	170,906,141	5,637,472	34,658,779

Zone	M-150				M-100							
	OOIP	OIGP	Rec. Oil	Rec. Gas	OOIP	OIGP	Rec. Oil	Rec. Gas				
	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)	(BBL)	(mcf)				
P100	86,877,738	424,151,014	306,188	1,465,478	44,829,594	219,379,203	115,504	612,795				
P90	115,632,890	653,108,553	1,337,041	7,924,985	61,338,667	341,988,697	732,998	4,314,293				
P80	122,979,345	702,549,583	1,928,363	11,414,387	65,326,063	378,518,568	1,034,256	5,995,550				
P70	128,756,089	745,721,936	2,528,911	15,027,781	68,872,770	404,285,348	1,369,018	8,210,471				
P60	134,211,339	786,737,672	3,177,574	19,122,427	72,095,861	423,186,570	1,738,567	10,203,617				
P50	139,729,971	828,116,715	3,988,236	23,231,928	75,234,118	443,301,996	2,091,133	12,548,378				
P40	144,804,215	870,897,857	4,884,208	28,569,573	77,931,731	464,622,477	2,592,821	15,331,647				
P30	150,530,291	927,686,096	6,134,098	37,010,178	80,738,649	491,755,473	3,228,467	19,215,215				
P20	158,883,373	981,458,721	7,834,306	46,345,673	84,851,106	525,215,296	4,065,342	24,853,611				
P10	166,933,653	1,071,302,253	11,144,056	67,459,026	90,356,808	574,097,551	5,882,000	35,336,028				
P0	207,139,157	1,399,085,567	39,897,748	287,627,344	114,062,169	733,889,528	20,774,432	131,492,624				
Mean	140,609,827	844,124,778	5,417,272	32,717,669	75,324,255	452,060,122	2,885,126	17,351,183				
Std Deviation	19,919,183	161,775,822	4,912,552	30,738,273	11,109,189	87,887,359	2,583,565	15,839,062				

APPENDIX III

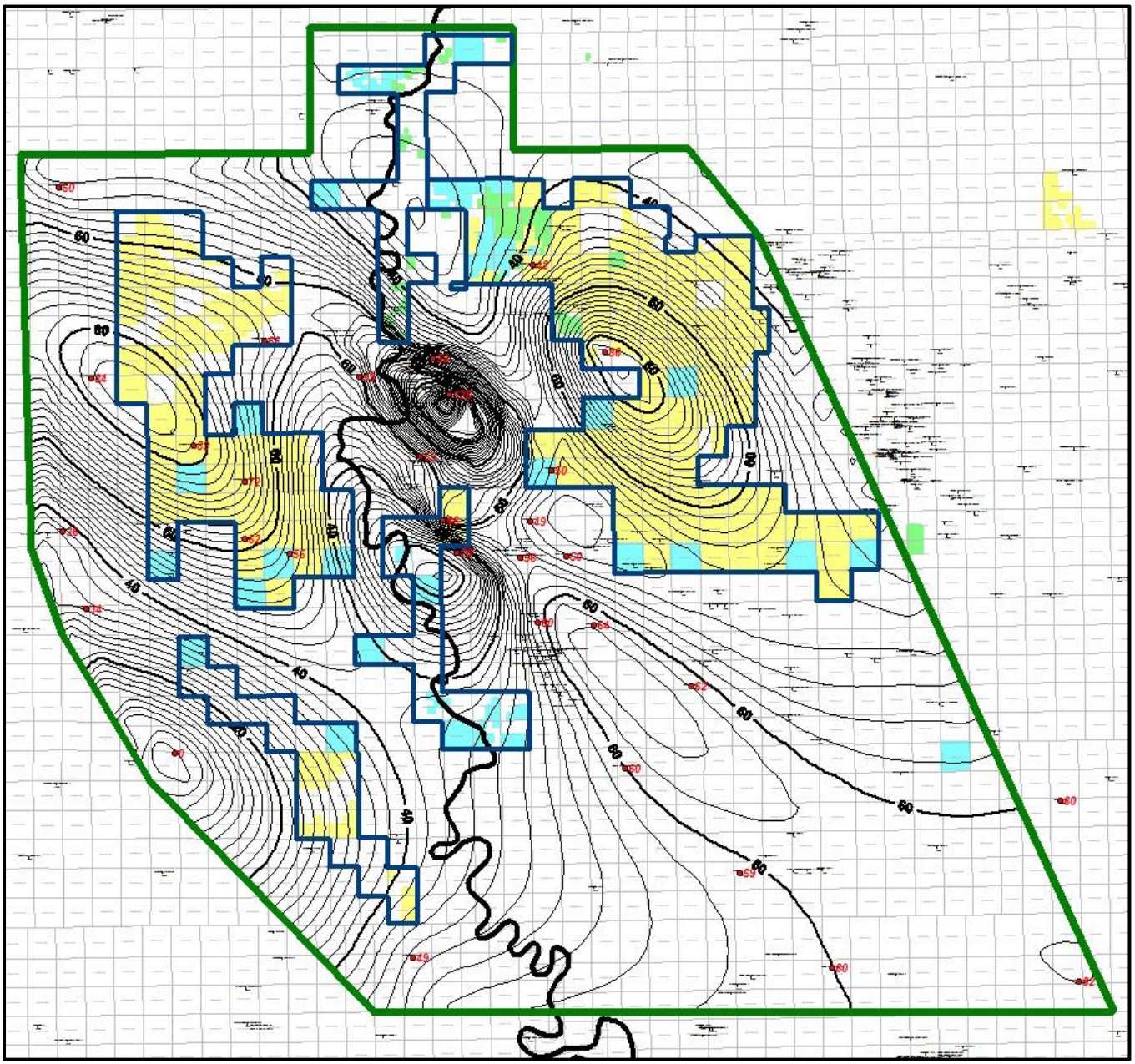


Figure 1: Paradox ZOI 5 Gross Isochore

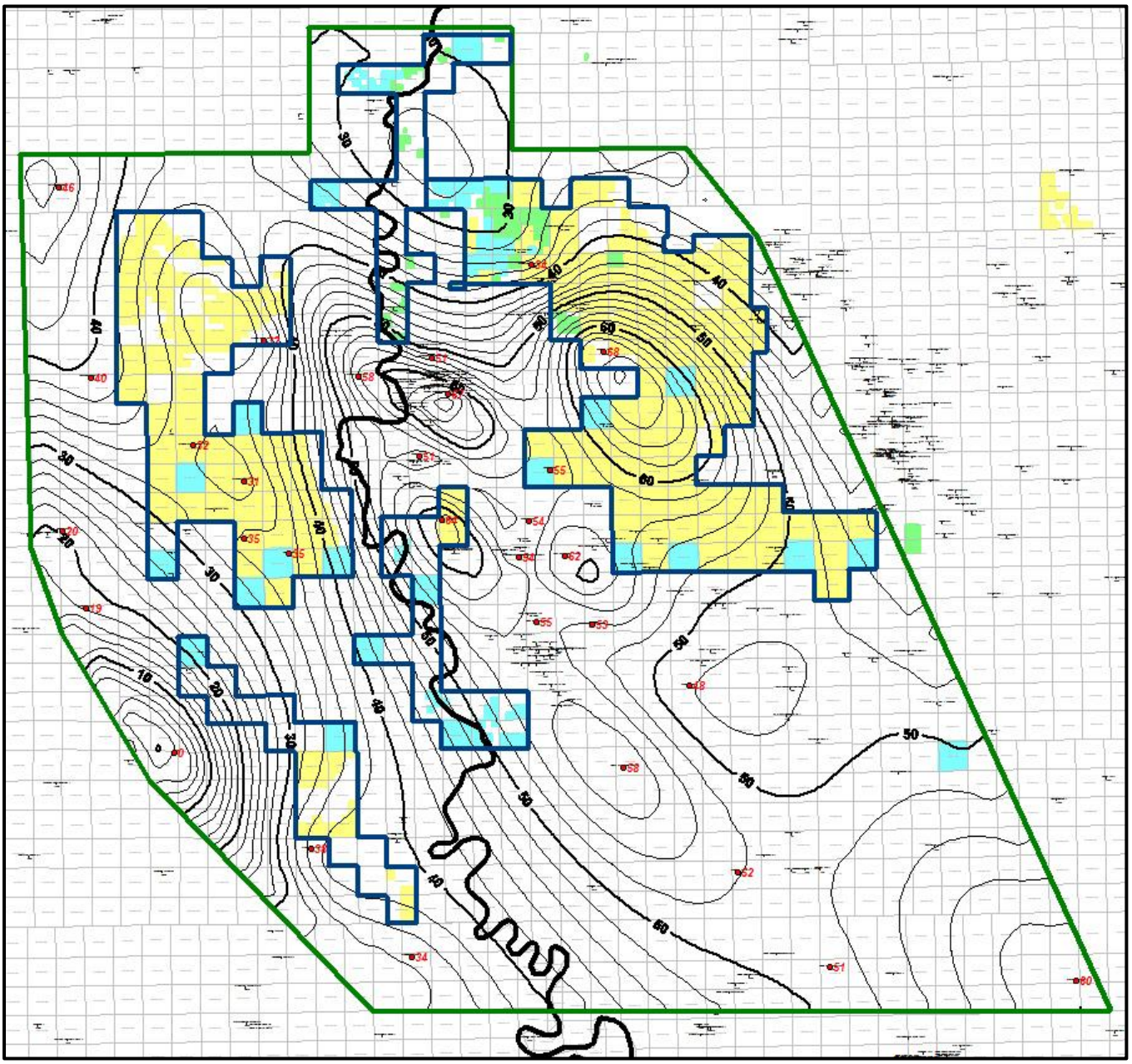


Figure 2: Paradox ZOI 6 Gross Isochore

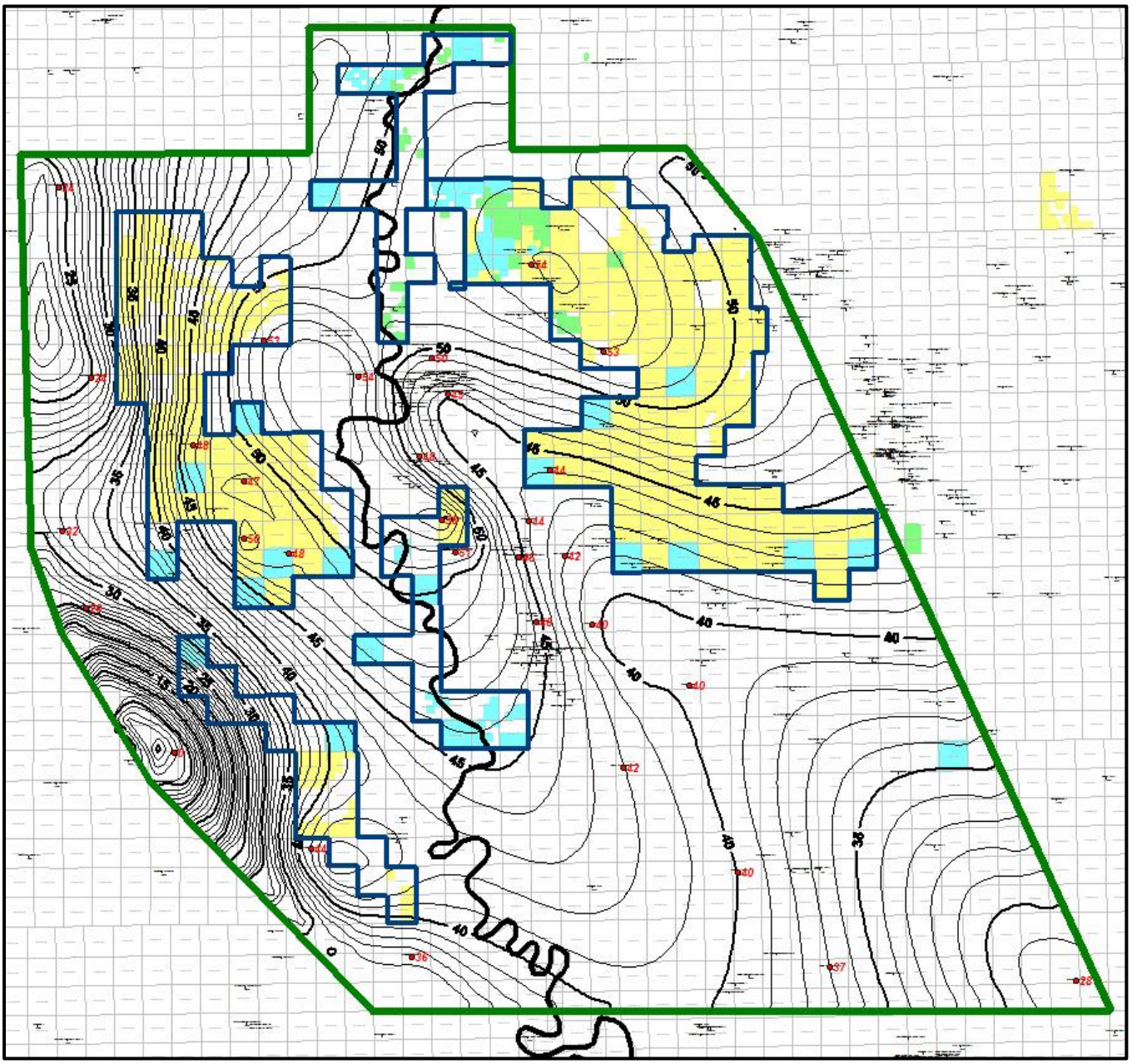


Figure 3: Paradox ZOI 7 Gross Isochore

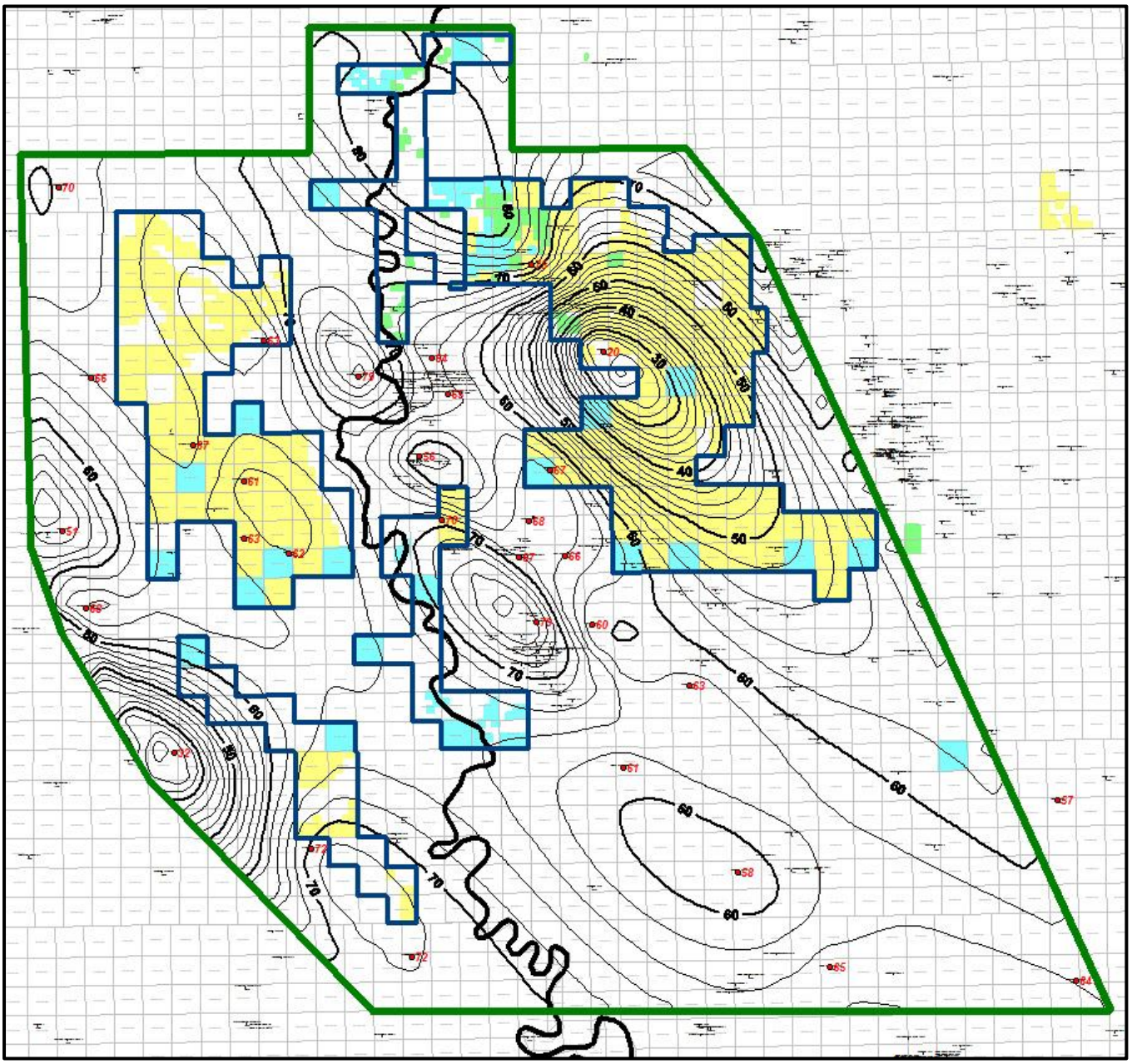


Figure 4: Paradox ZOI 8 Gross Isochore

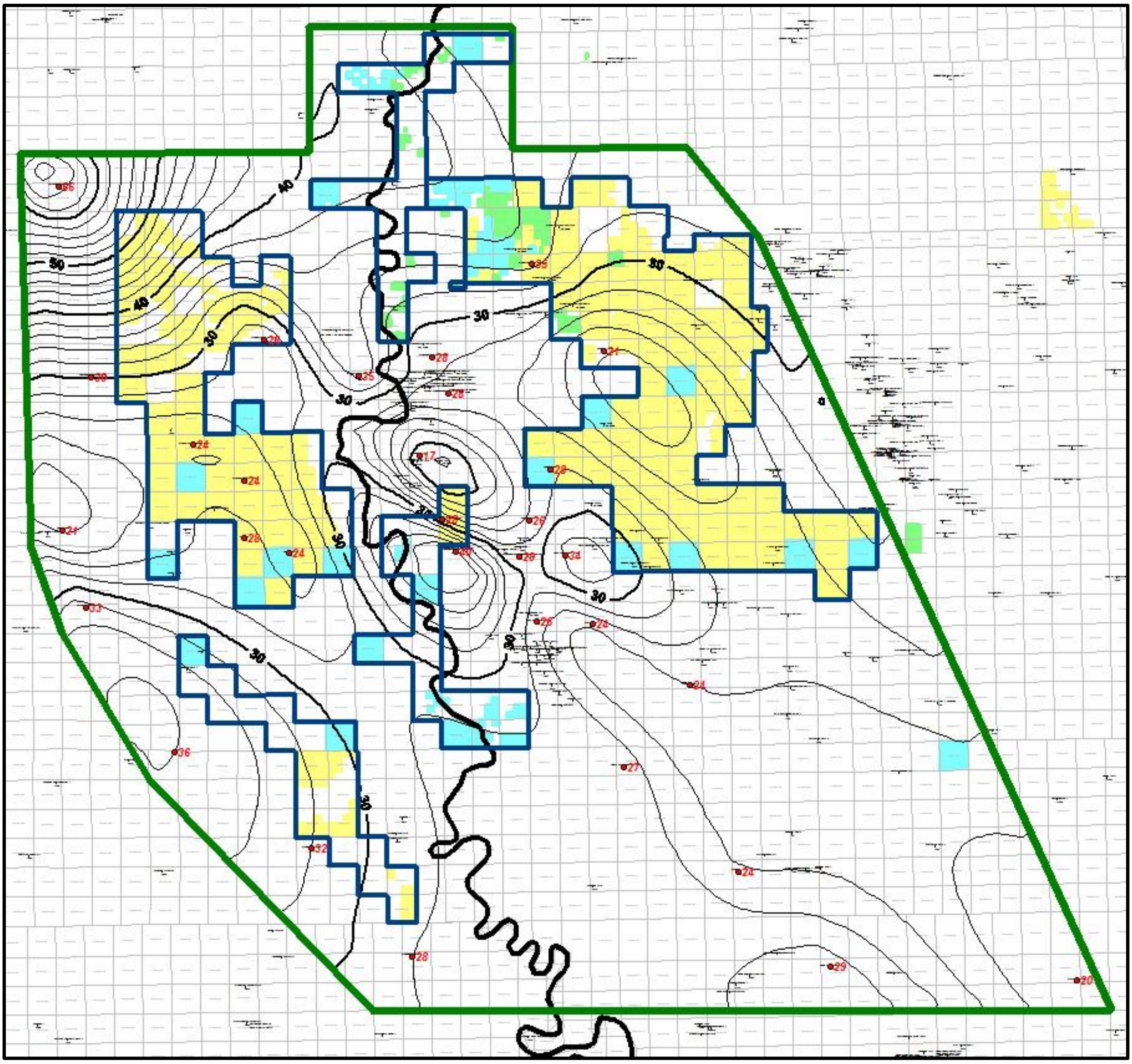


Figure 5: Paradox ZOI 9 Gross Isochore

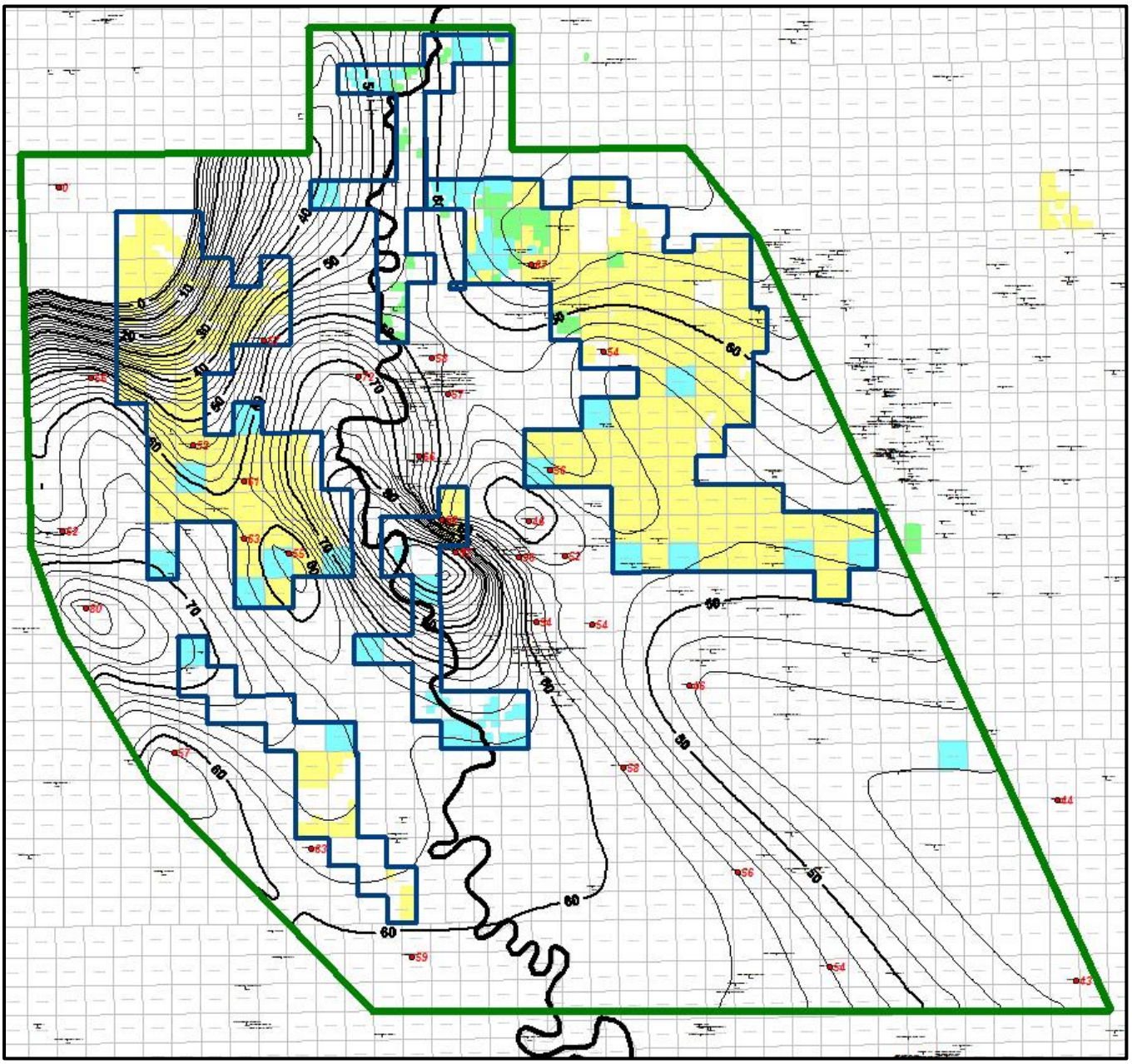


Figure 6: Paradox ZOI 10 Gross Isochore

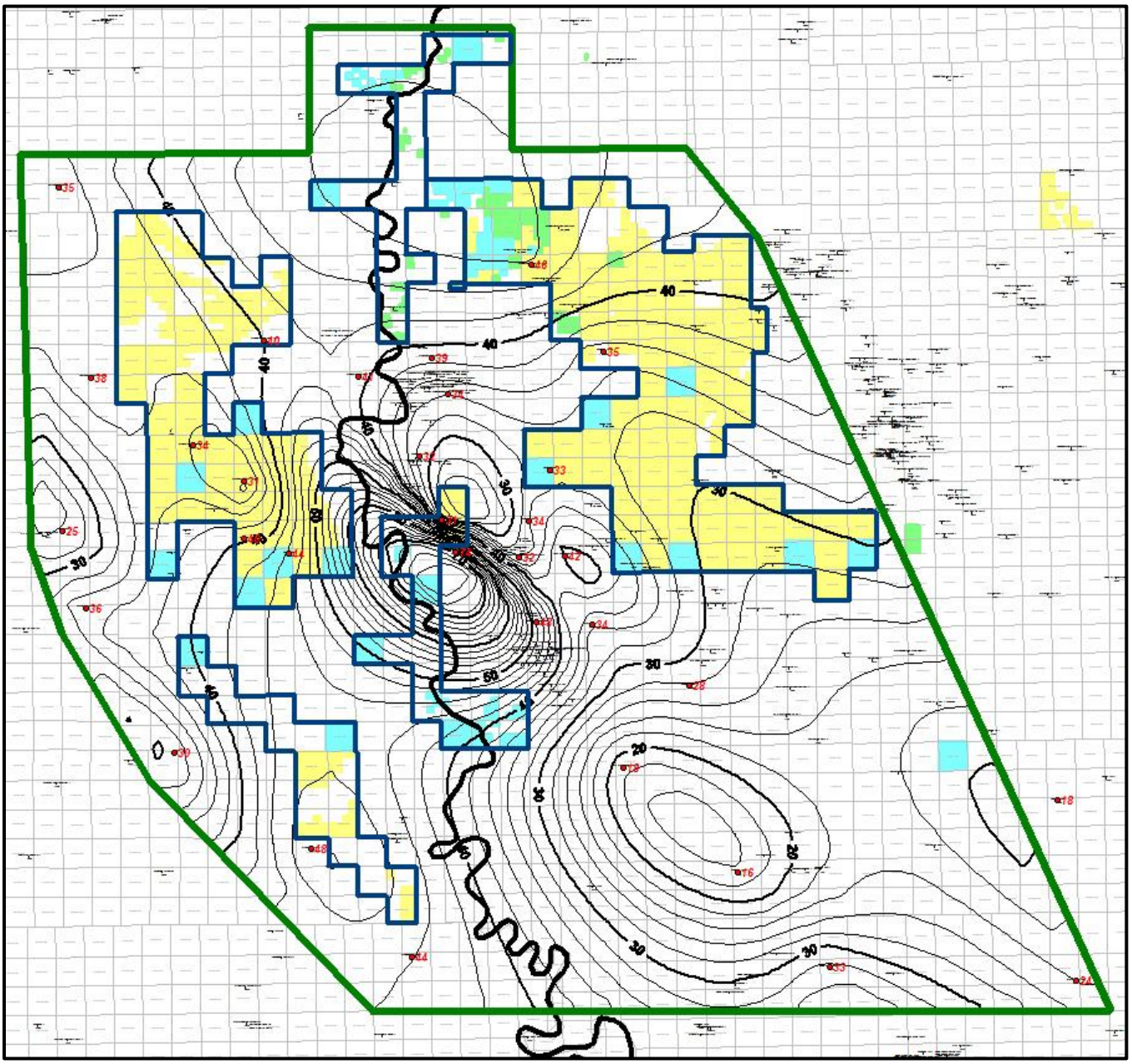


Figure 7: Paradox ZOI 11 Gross Isochore

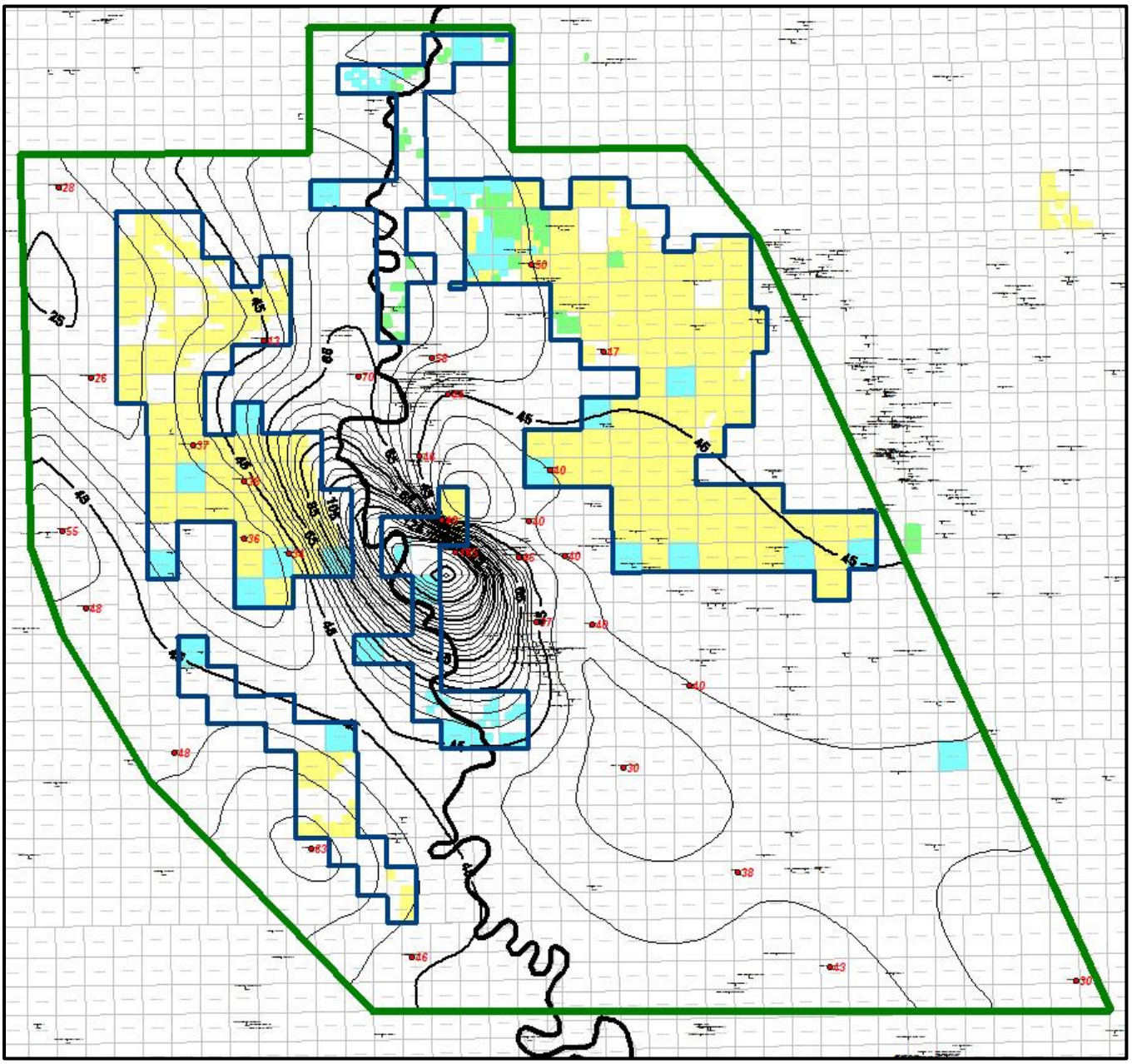


Figure 8: Paradox ZOI 12 Gross Isochore

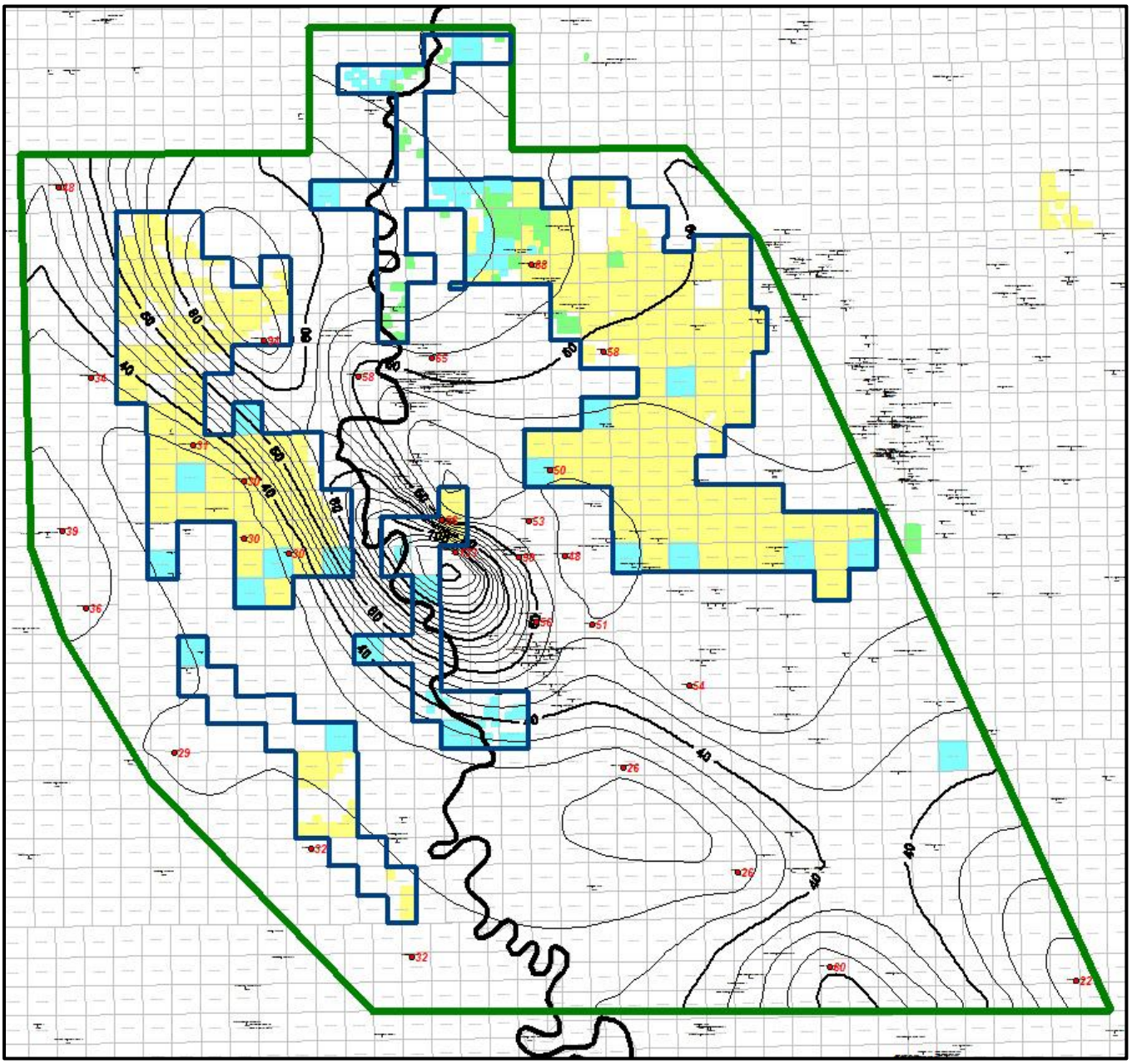


Figure 9: Paradox ZOI 13 Gross Isochore

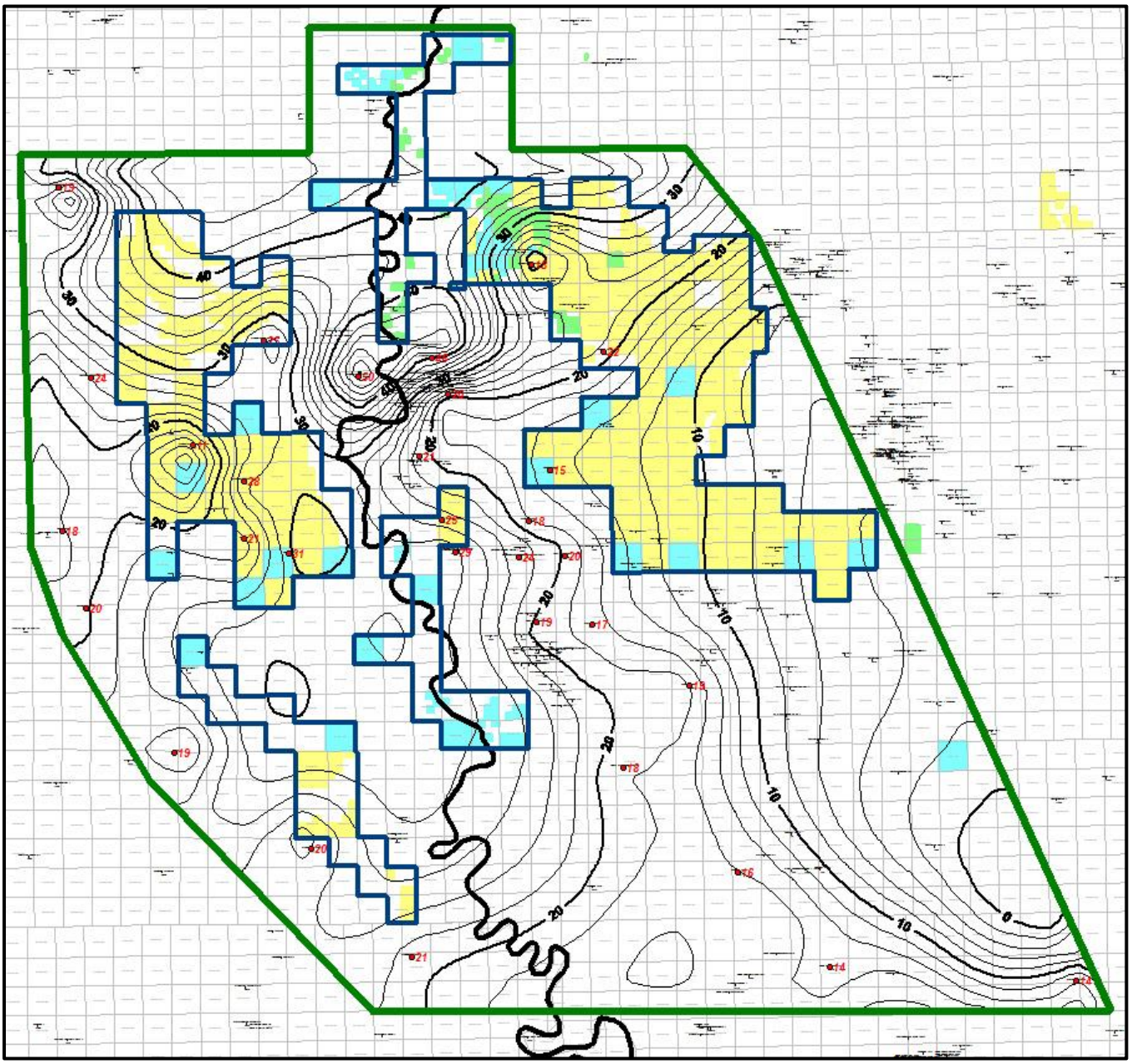


Figure 10: Paradox ZOI 14 Gross Isochore

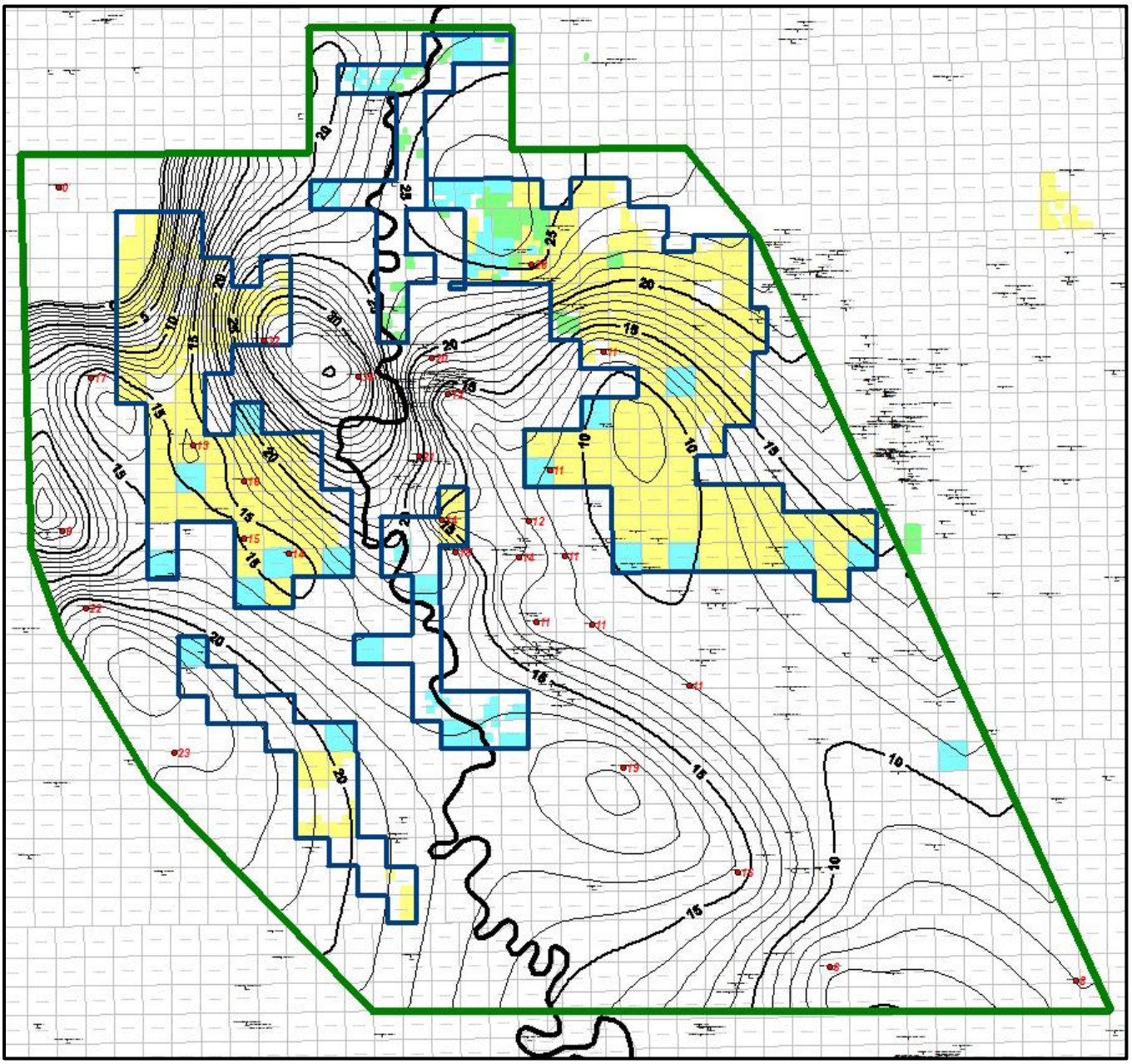


Figure 11: Paradox ZOI 16 Gross Isochore

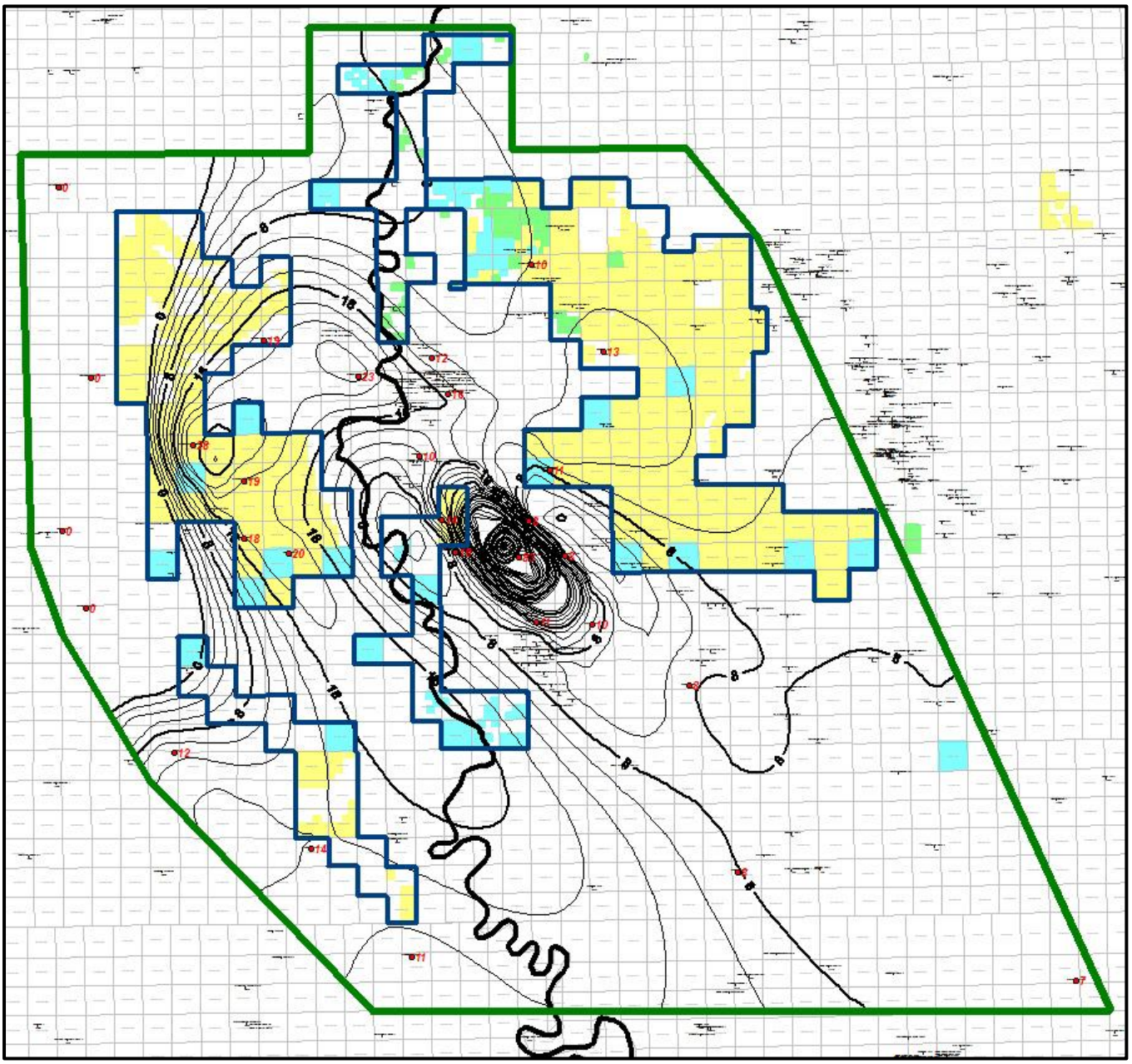


Figure 12: Paradox ZOI 18 Gross Isochore

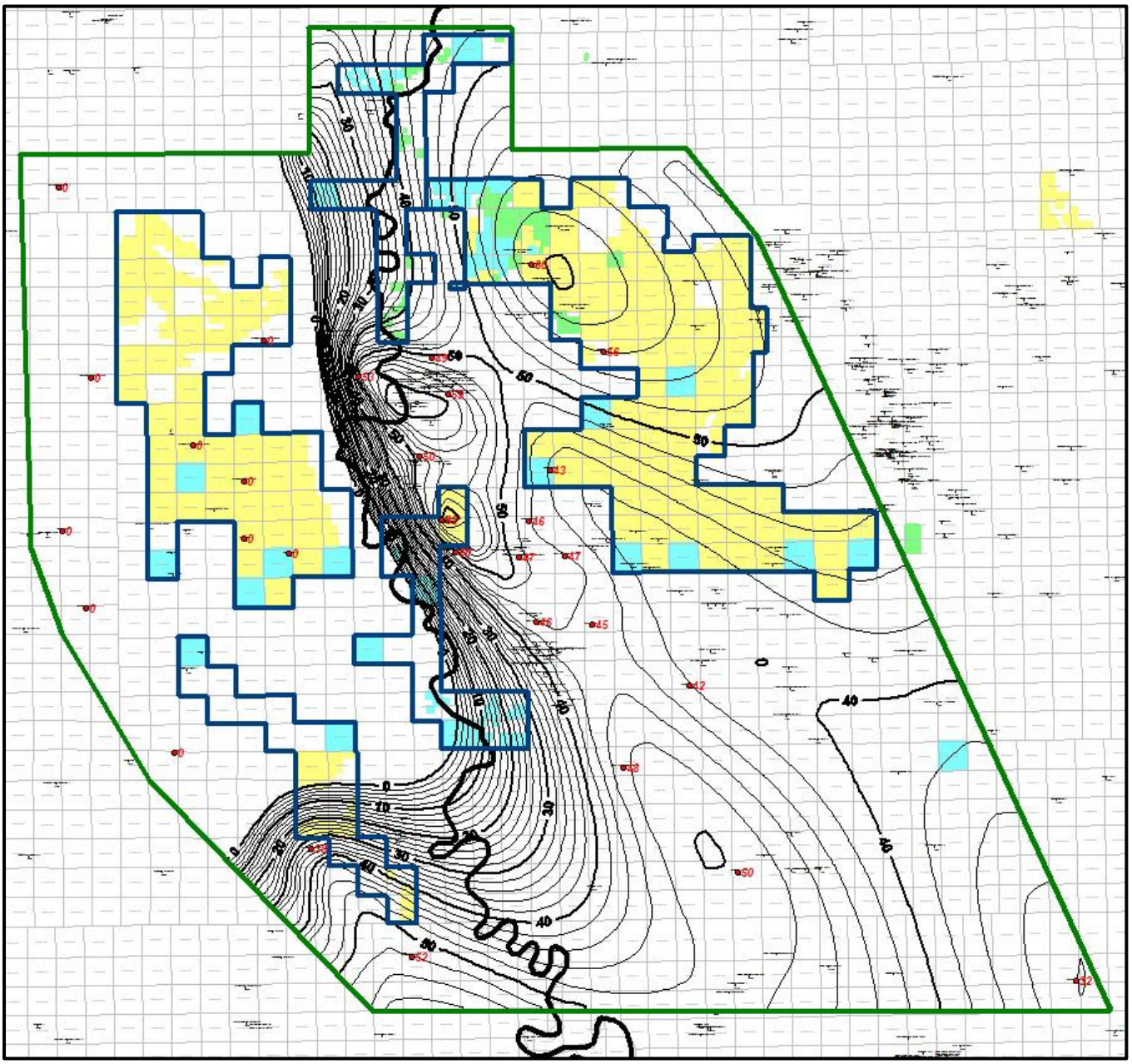


Figure 13: Paradox ZOI 19 Gross Isochore

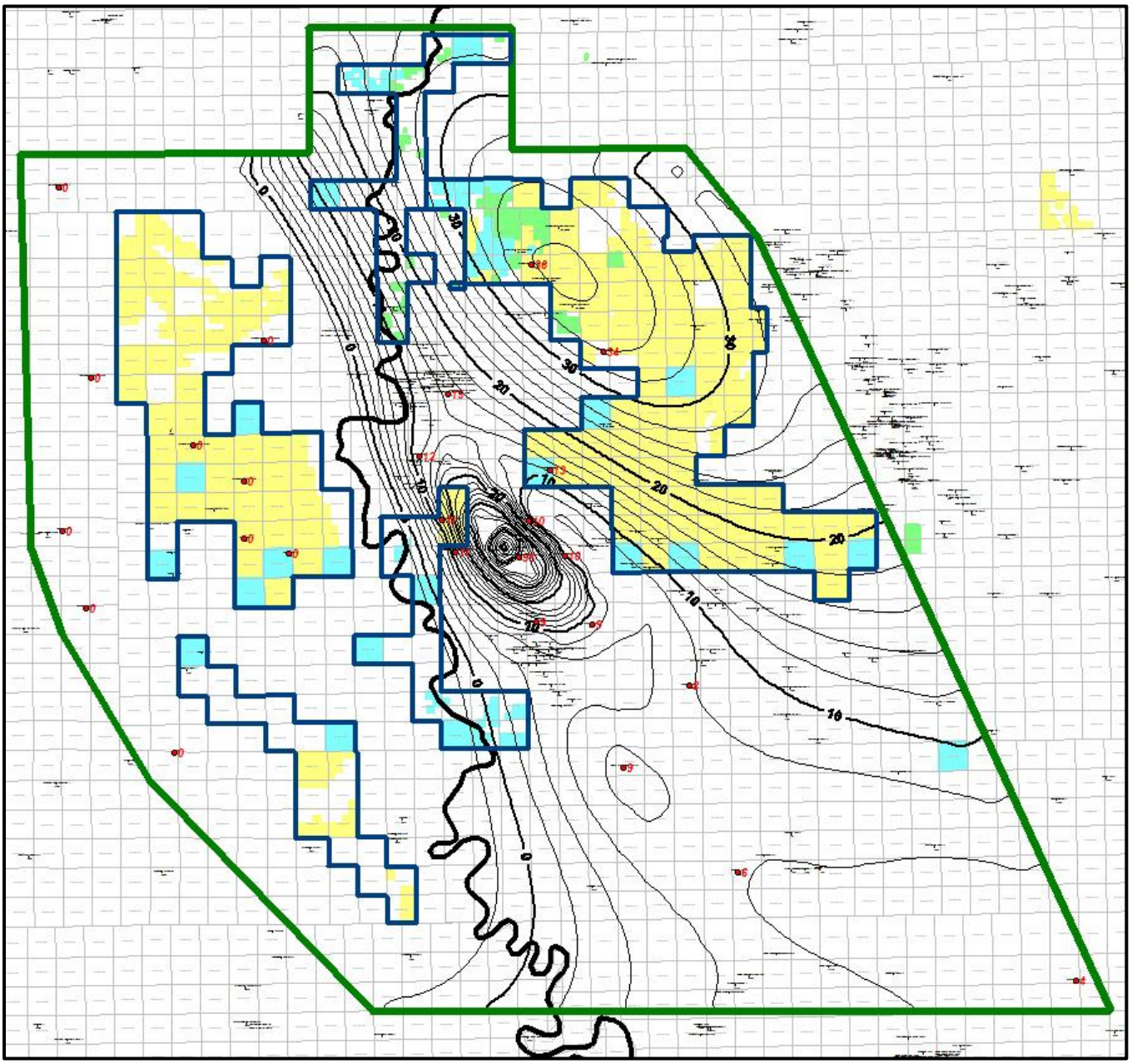


Figure 14: Paradox ZOI 20 Gross Isochore

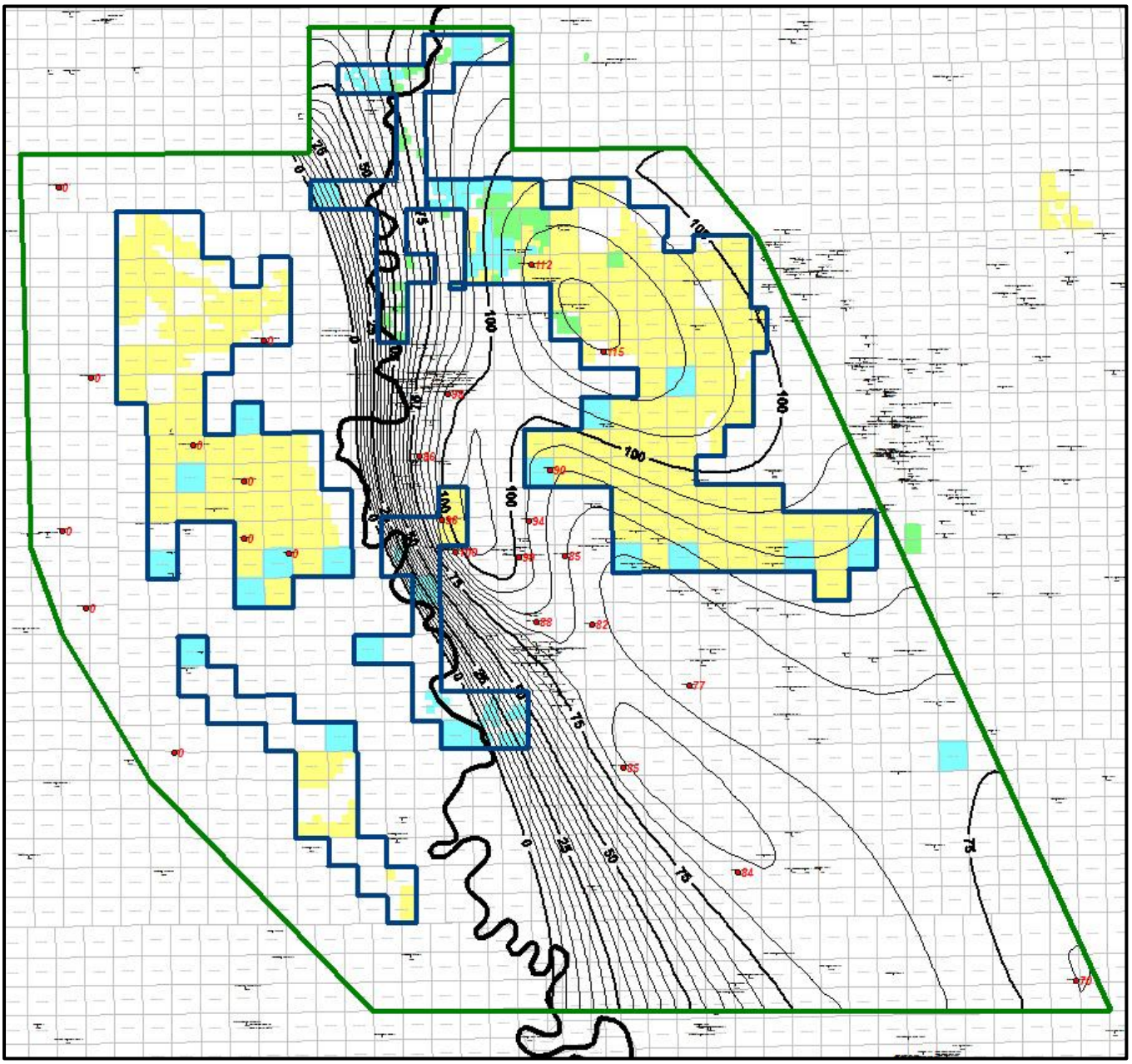


Figure 15: Paradox Cane Creek Shale Gross Isochore

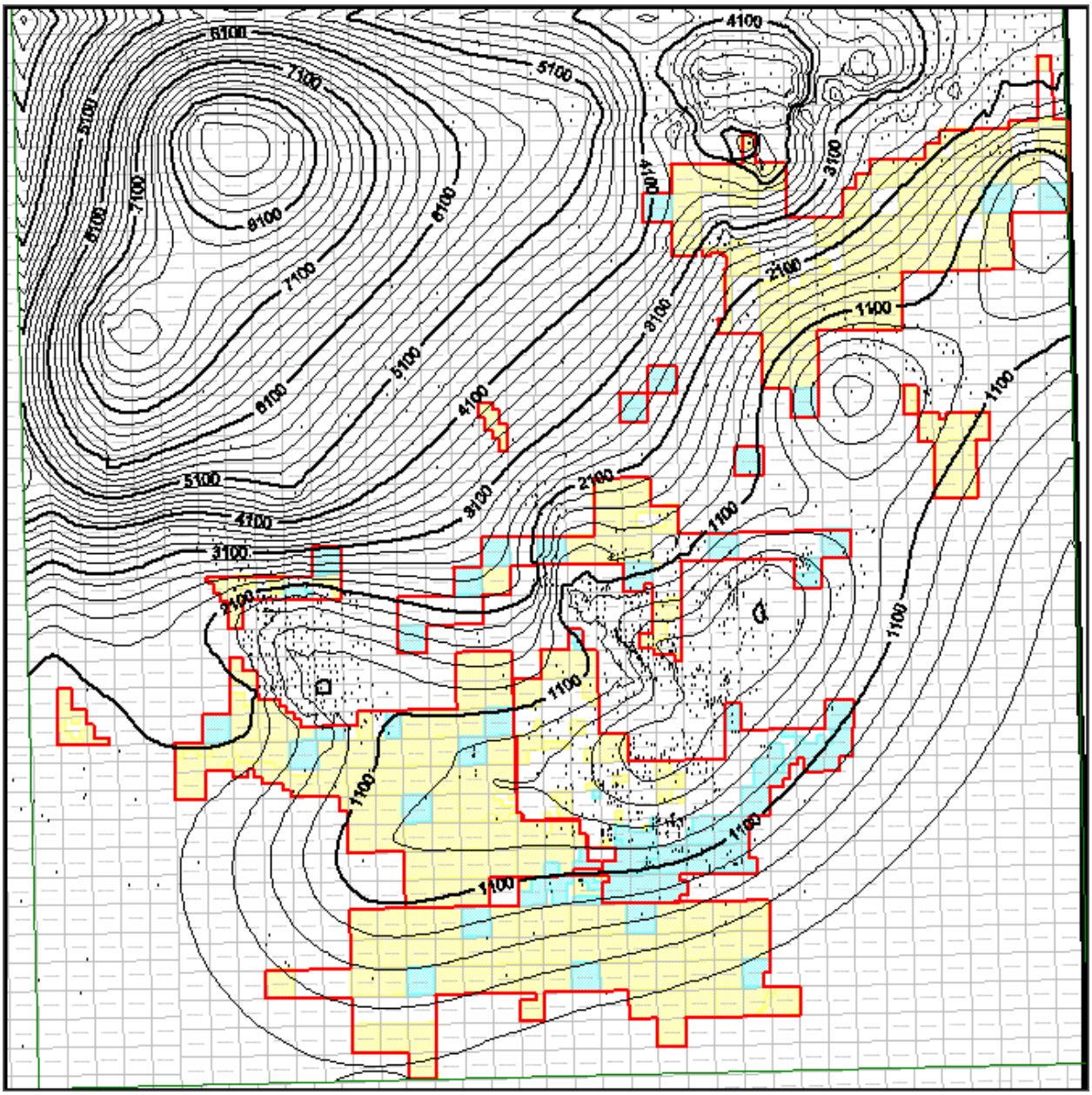


Figure 16: M400 Tops Surface

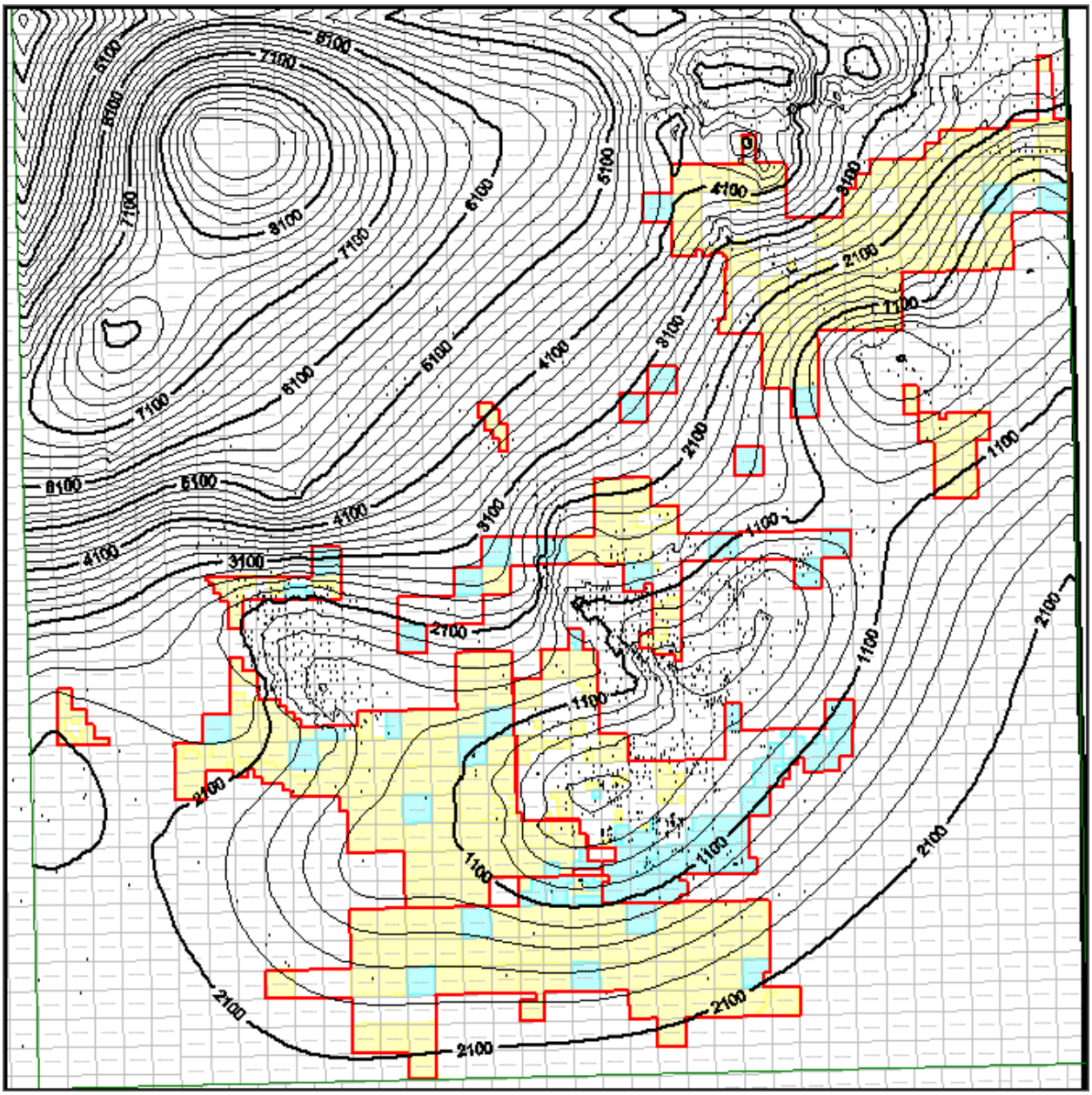


Figure 17: M300 Tops Surface

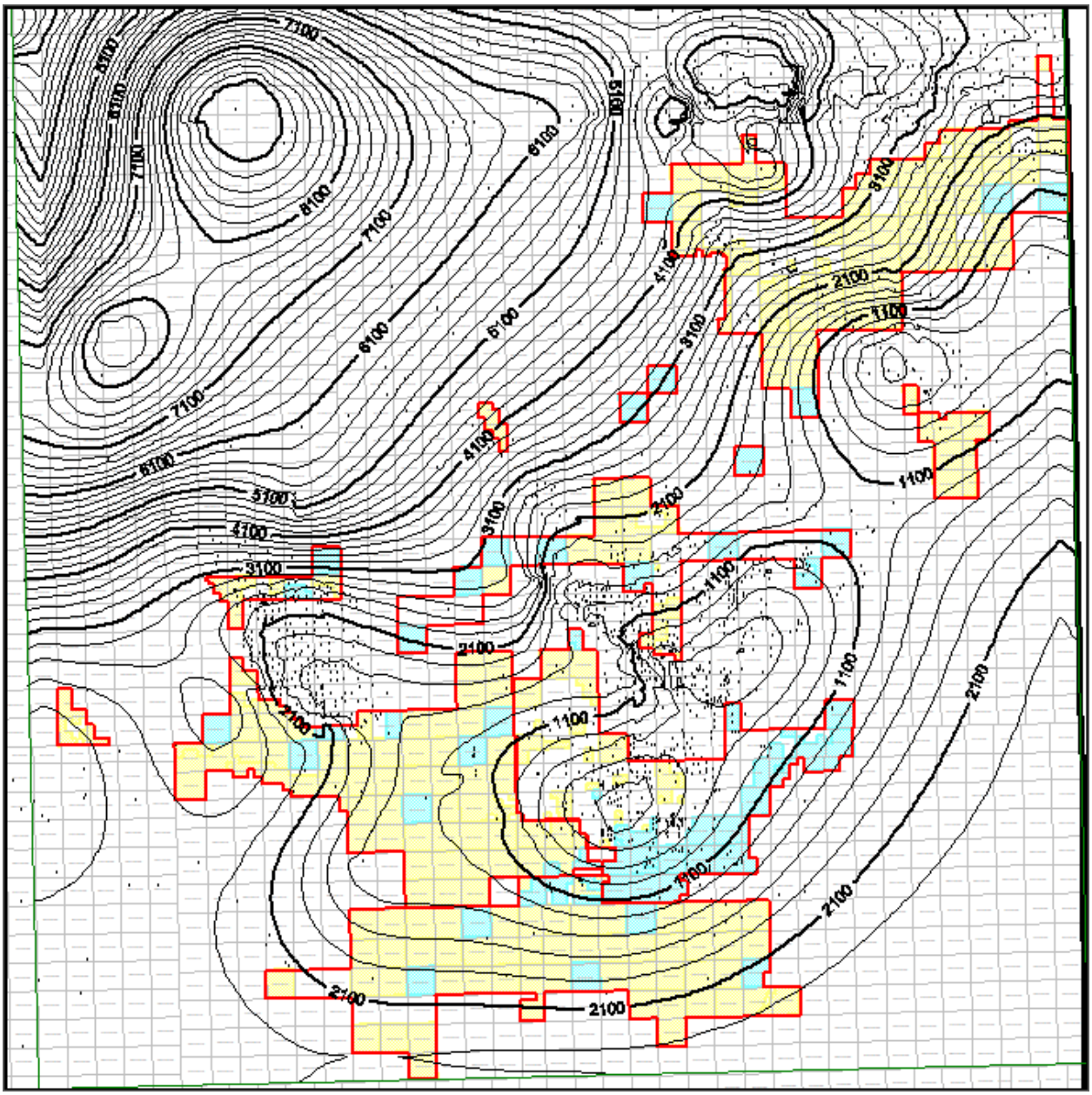


Figure 18: M200 Tops Surface

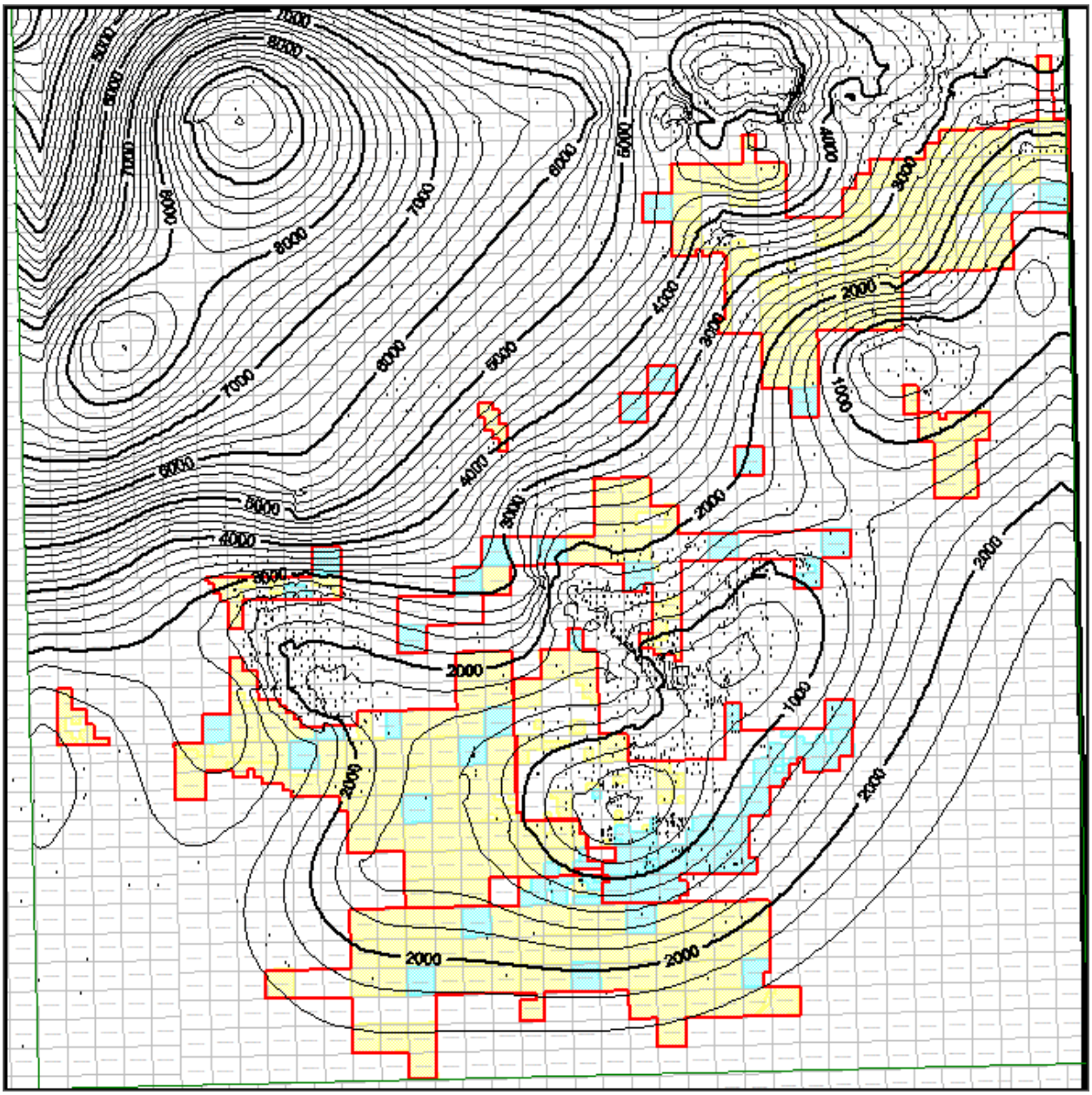


Figure 19: M150 Tops Surface

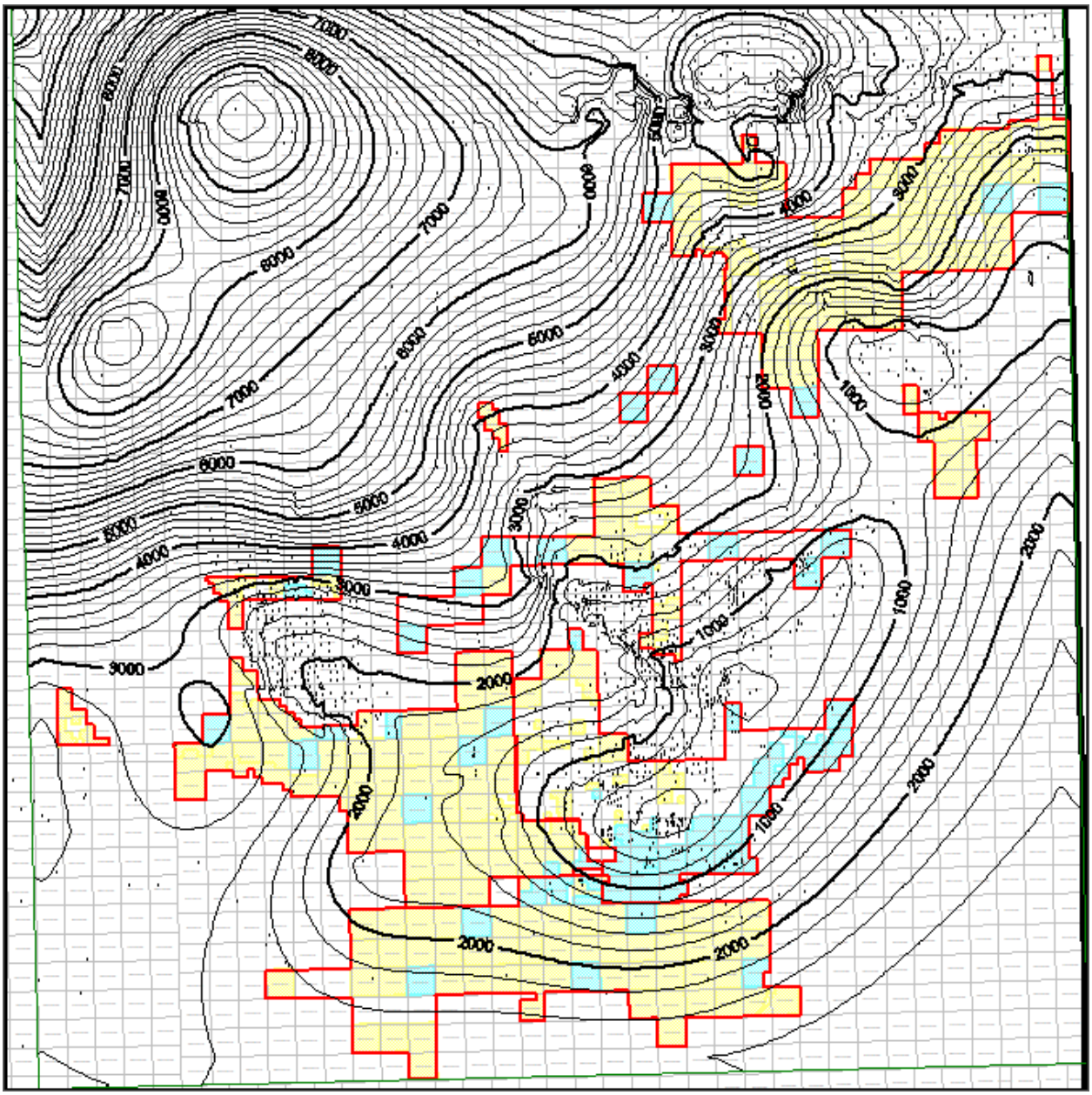


Figure 20: M100 Tops Surface

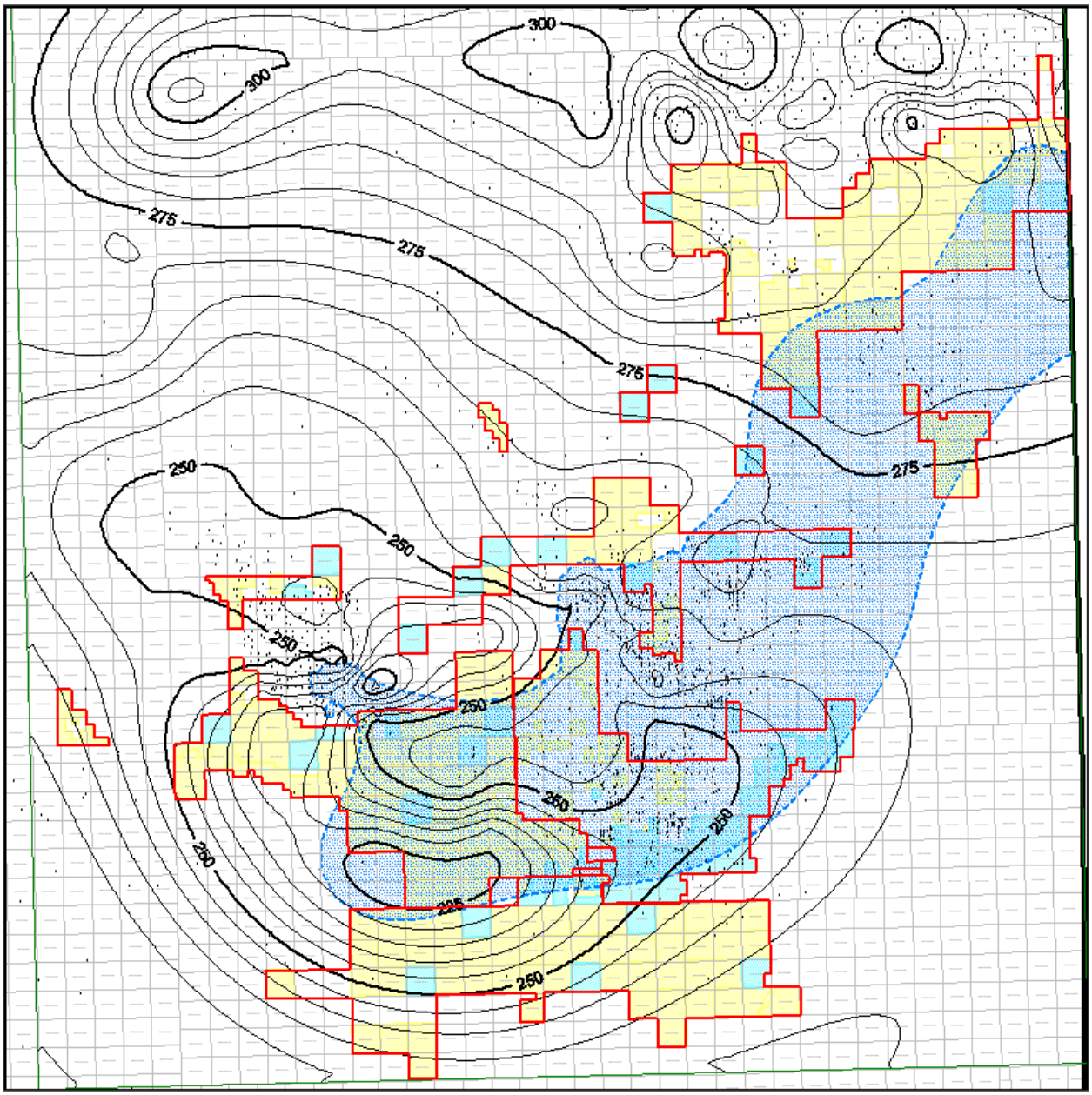


Figure 21: M400 Gross Thickness Isochore. The above 1200' exclusion area is highlighted in blue.

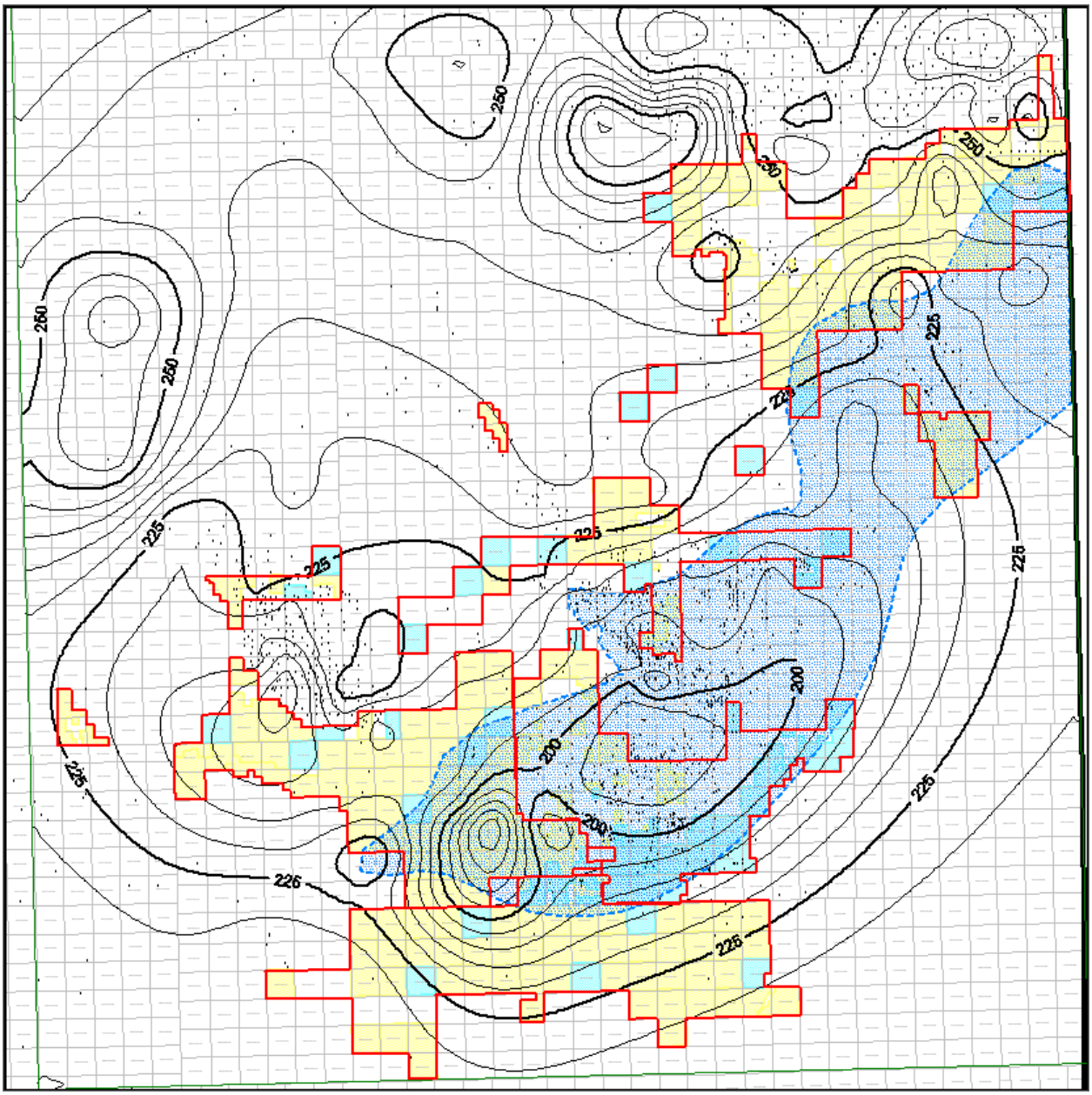


Figure 22: M300 Gross thickness Isochore. The above 1200' exclusion area is highlighted in blue.

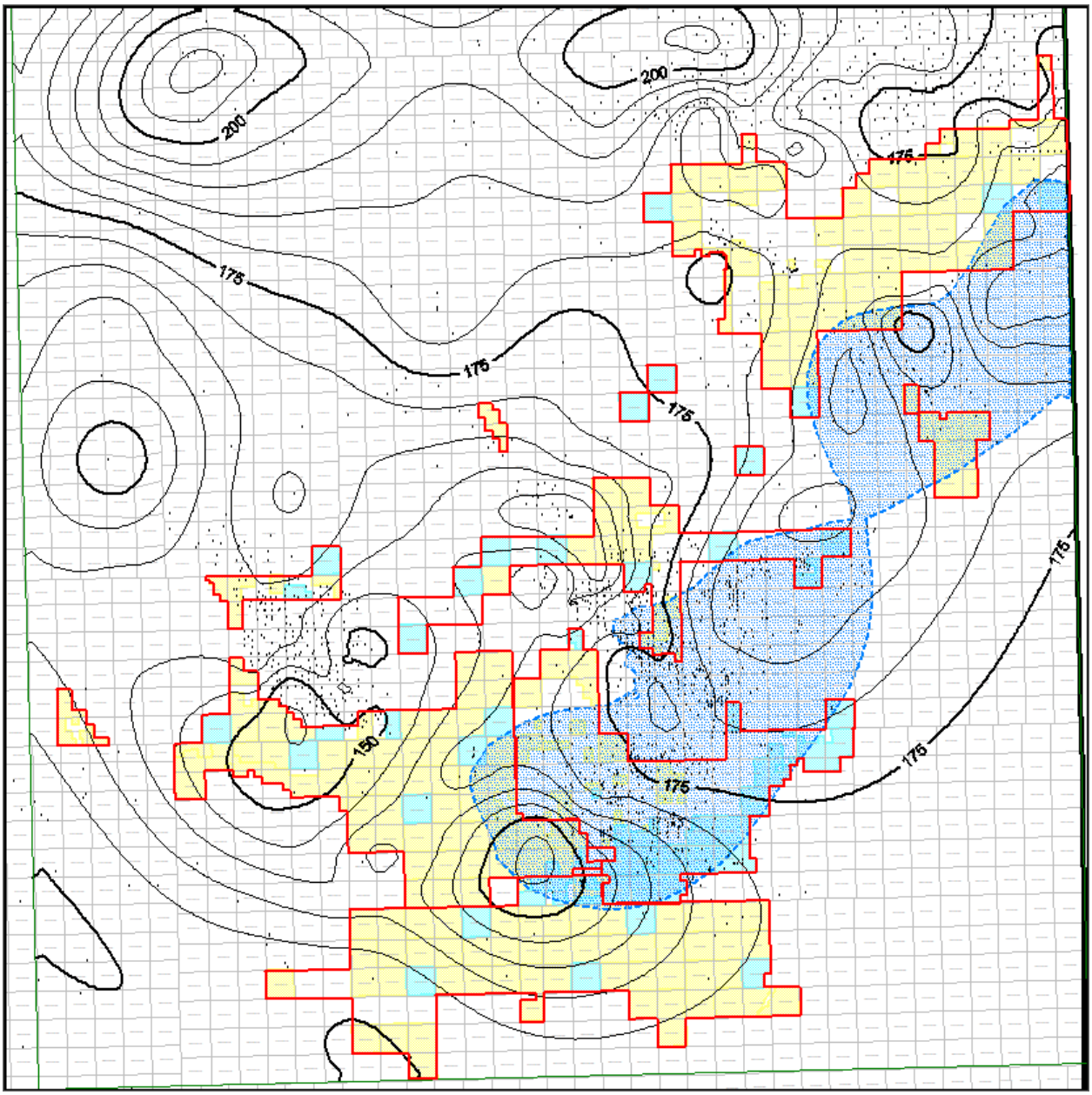


Figure 23: M200 Gross thickness Isochore. The above 1200' exclusion area is highlighted in blue.

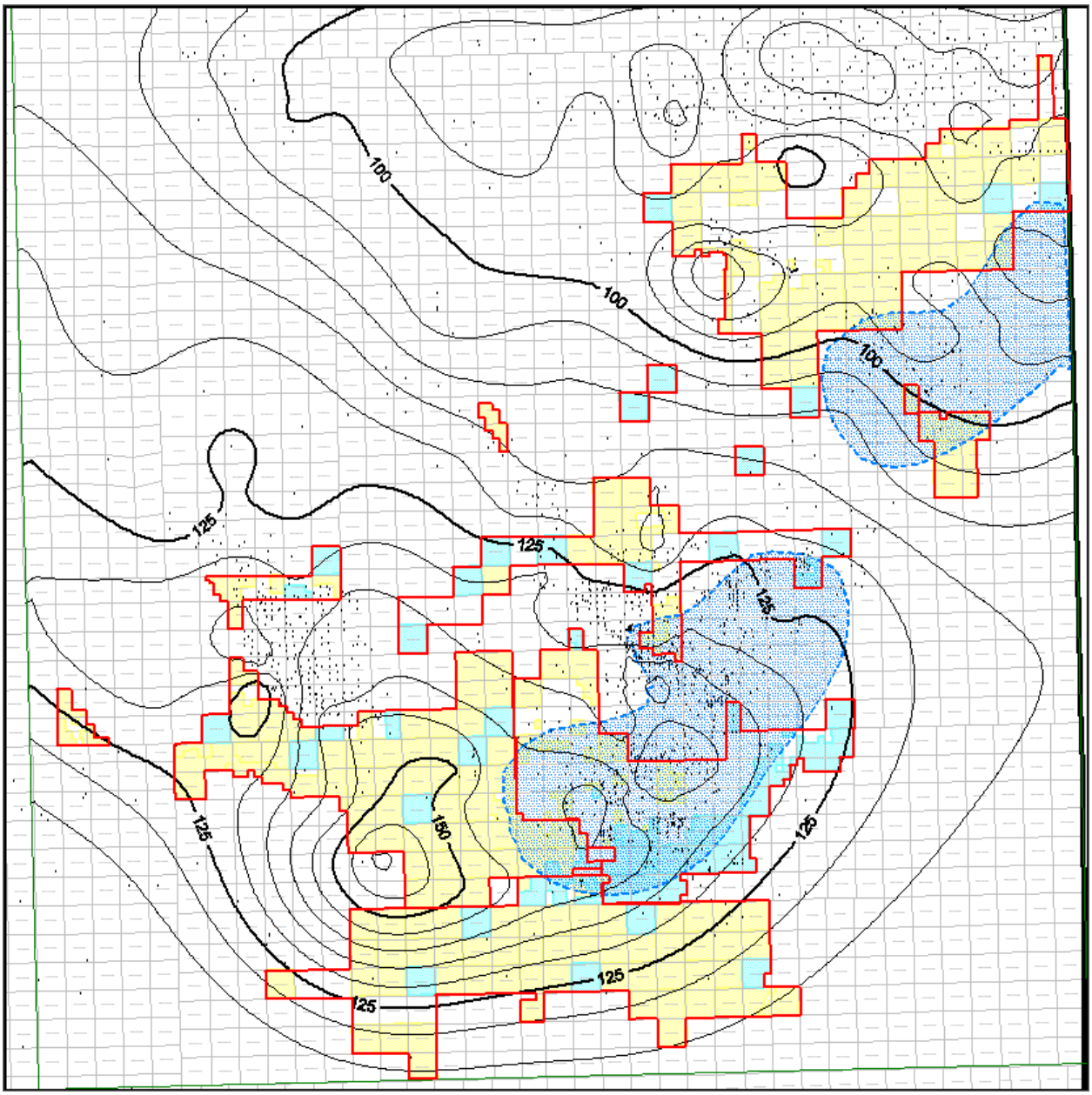


Figure 24: M150 Gross thickness Isochore. The above 1200' exclusion area is highlighted in blue.

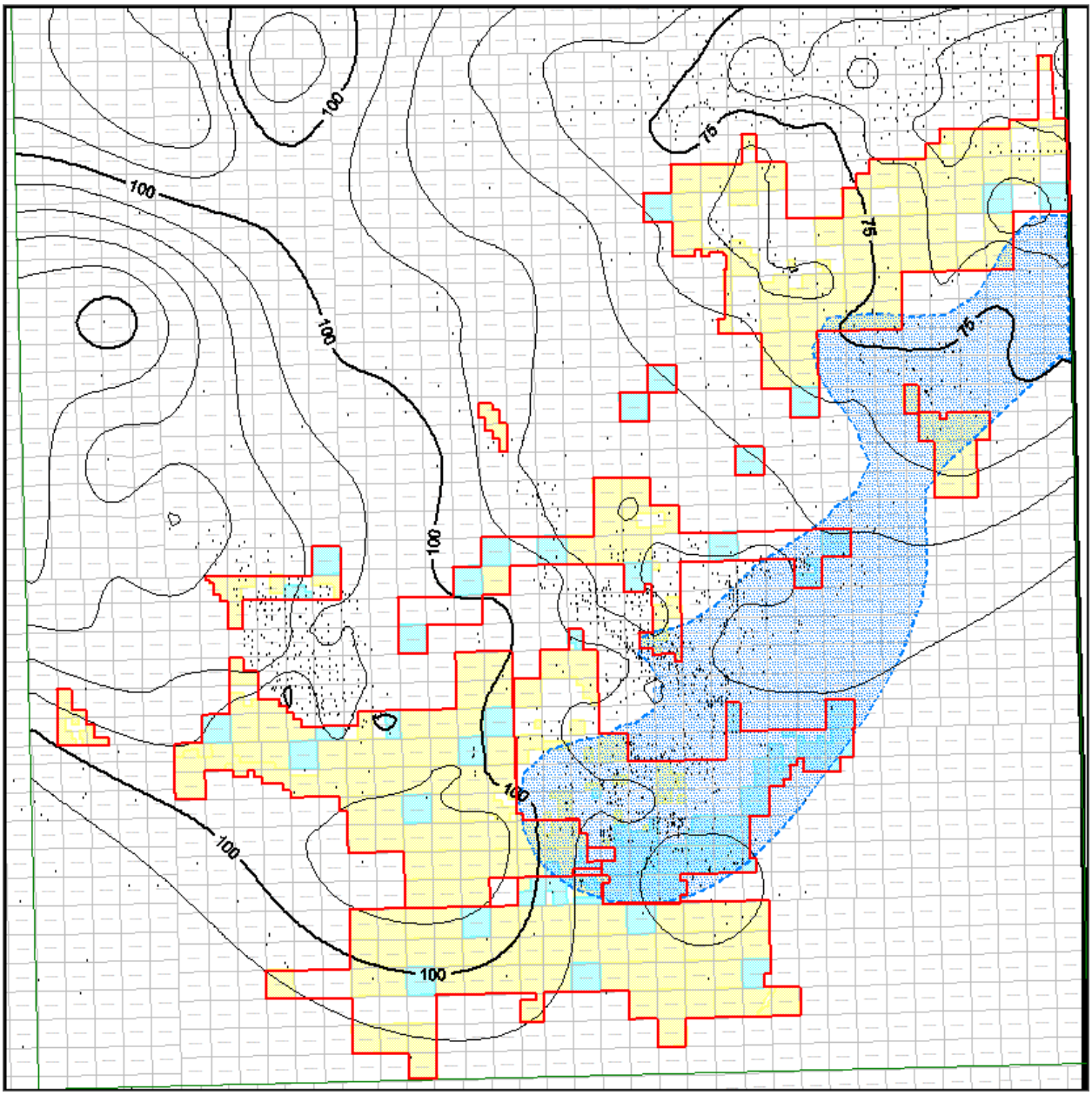


Figure 25: M100 Gross thickness Isochore. The above 1200' exclusion area is highlighted in blue.

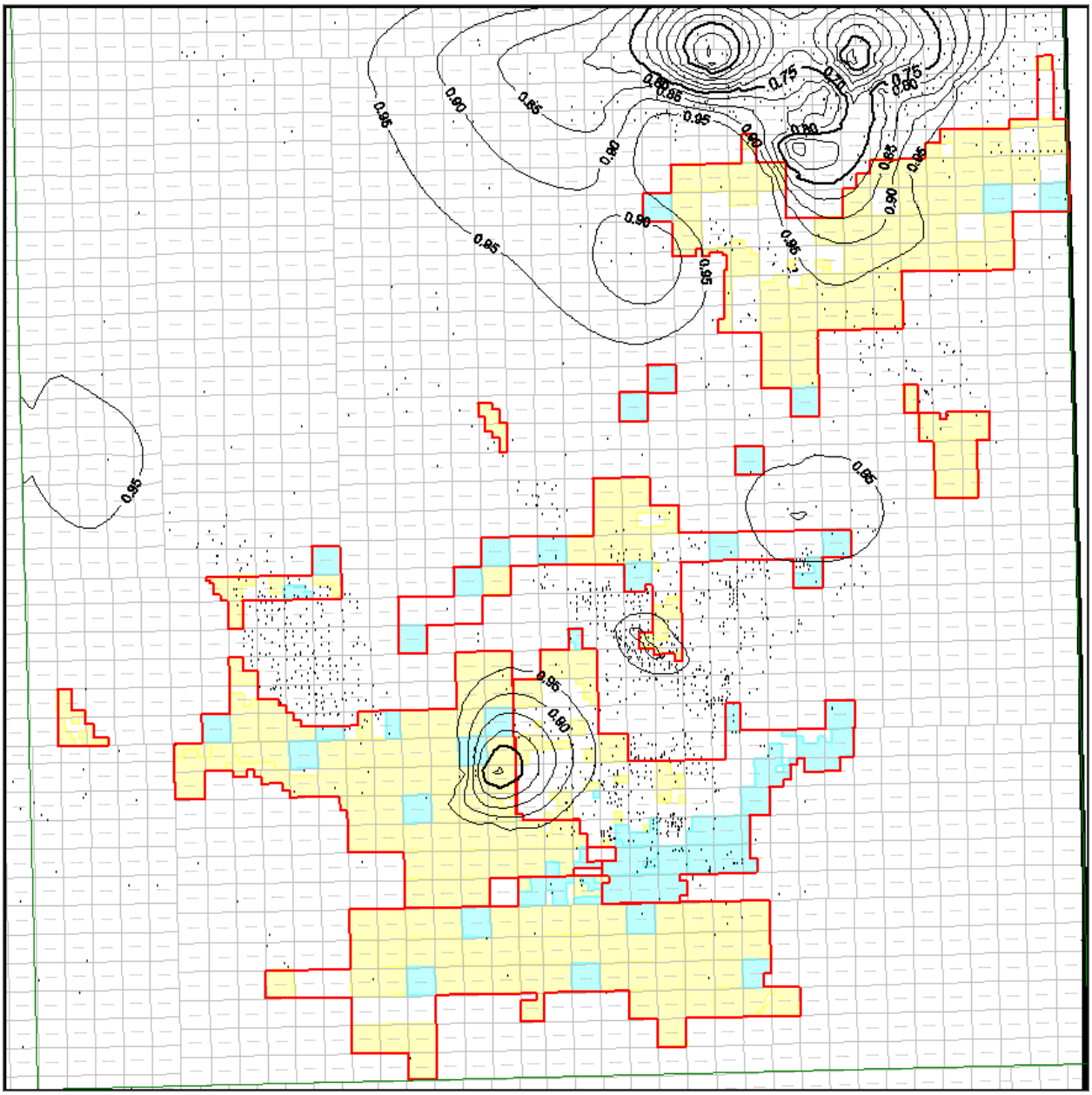


Figure 26: M400 Net to Gross Map.

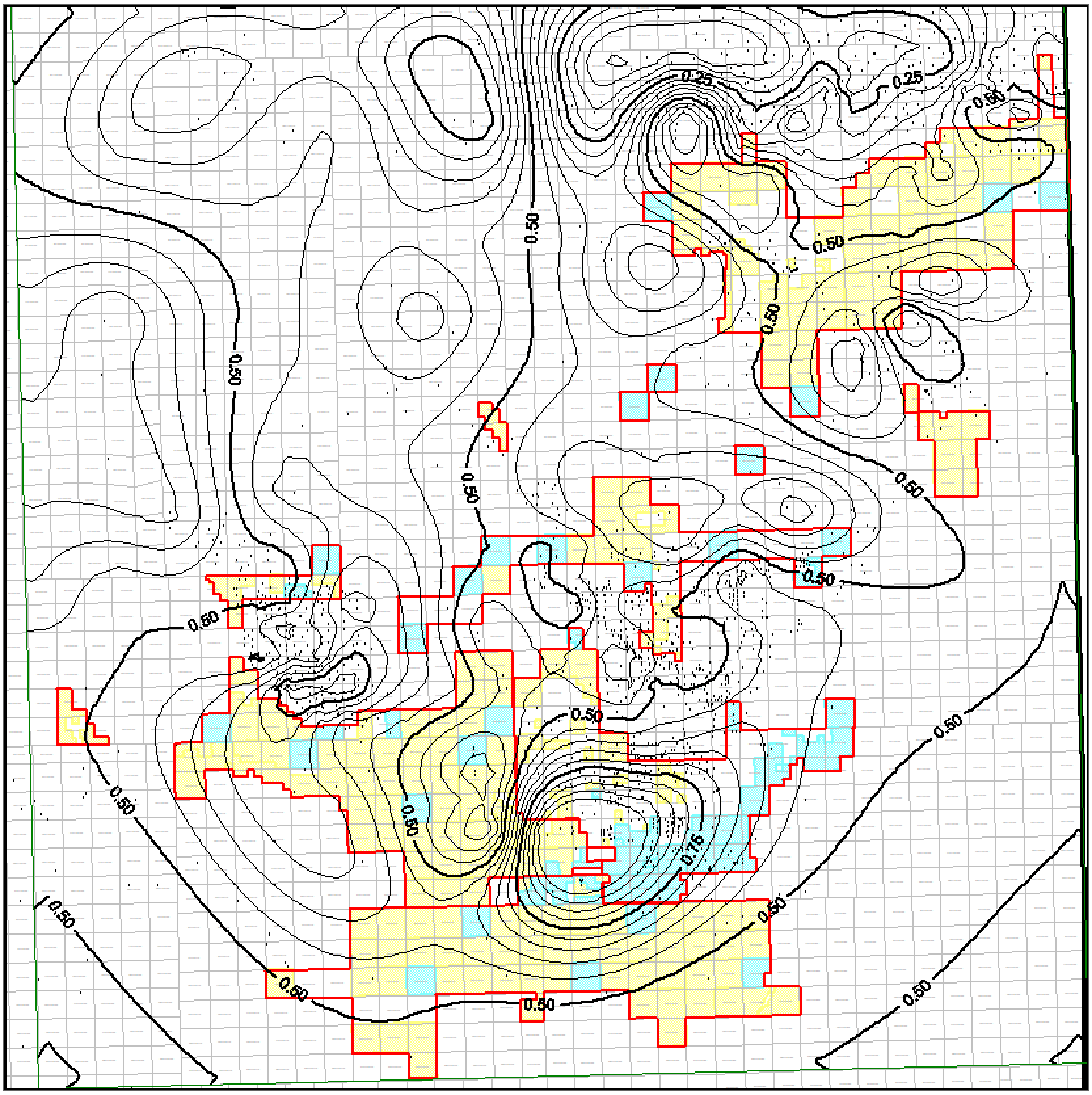


Figure 27: M300 Net to Gross Map.

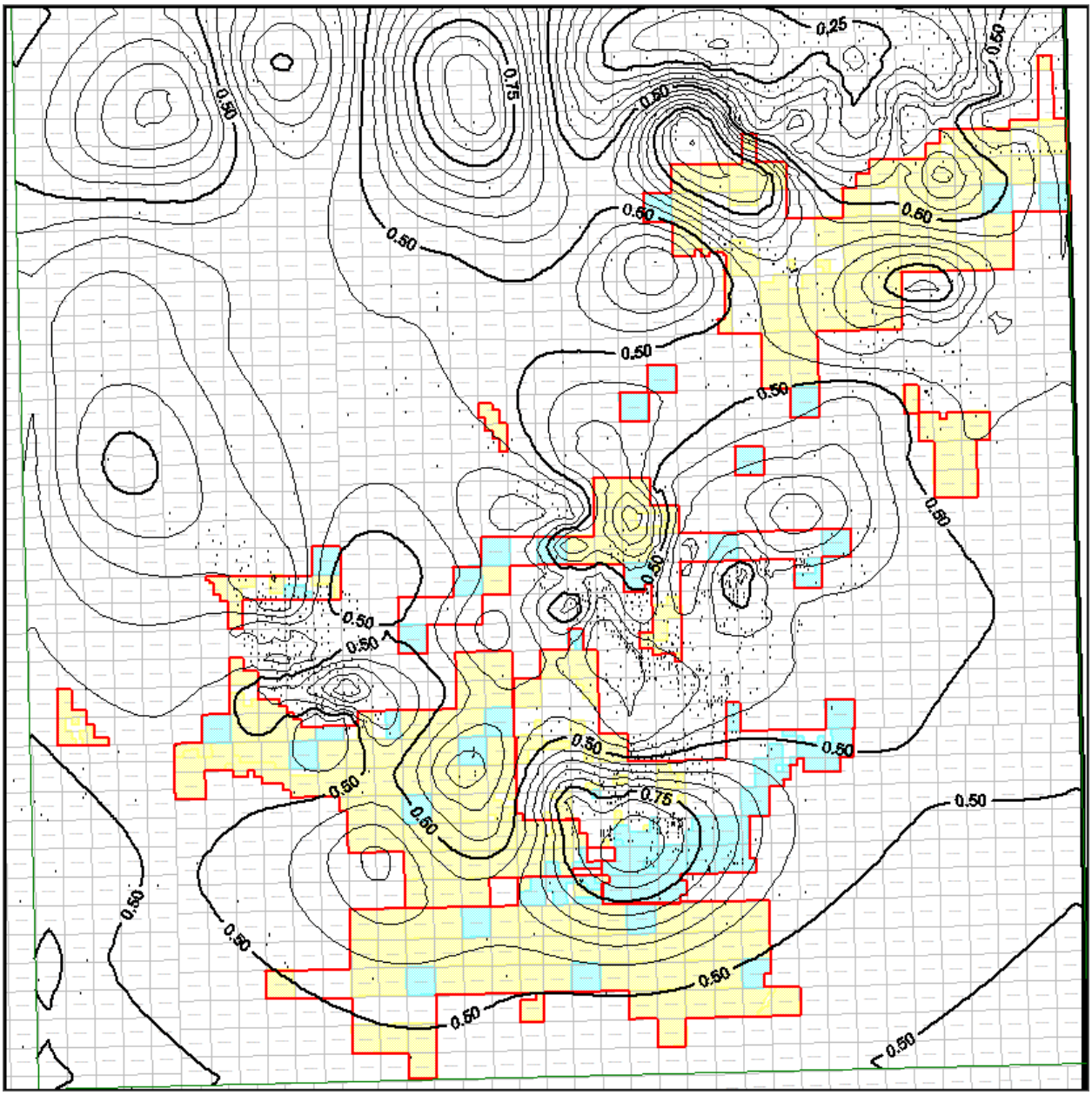


Figure 28: M200 Net to Gross Map.

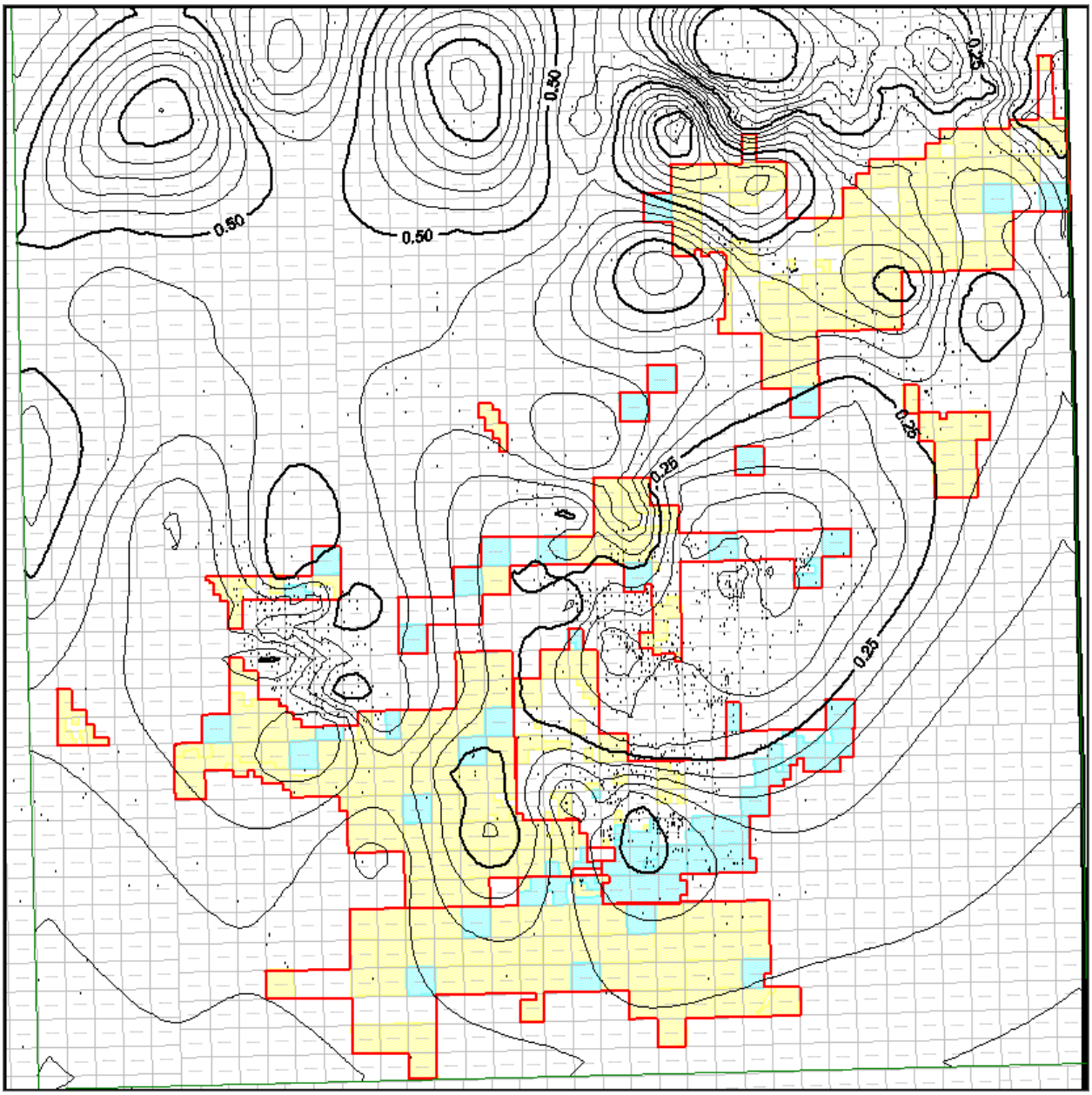


Figure 29: M150 Net to Gross Map.

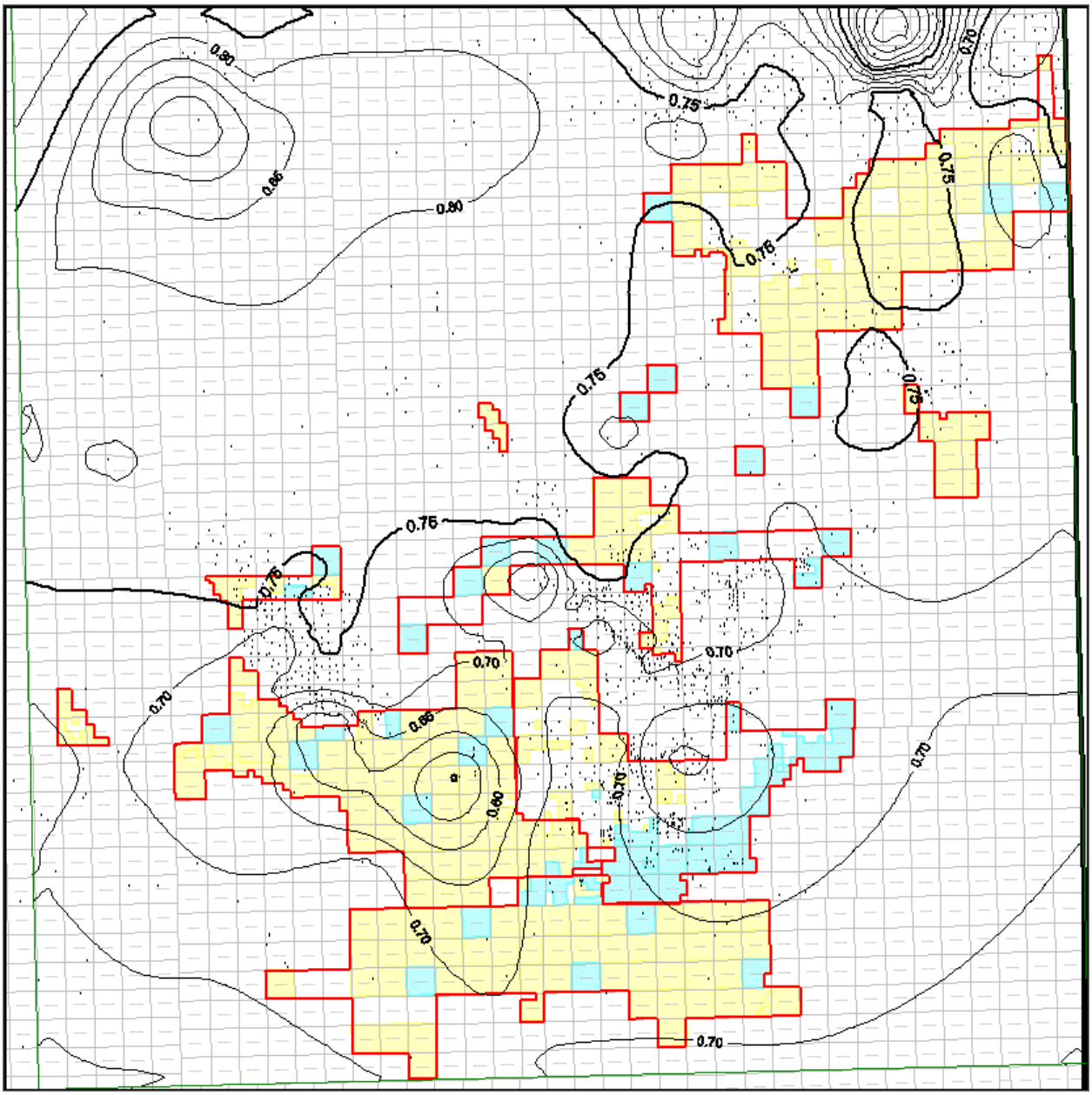


Figure 30: M100 Net to Gross Map.