

Rule 908.b(6) Waste Profile

**Piceance Energy LLC
Harrison Creek Water Treatment
Facility – DAF Unit**

OA Project No. 014-0465

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Representative Mass Flow Balance at Full Build-Out

Piceance Energy LLC
Harrison Creek Water Treatment Facility
Mesa County, Colorado

Facility Influent (Production Water, Flowback Water)			
Type			
Water	99.96%	985,885 BPM	41.40719 MGM
Condensate	0.04%	395 BPM	0.0165695 MGM
Total	100.00%	986,280 BPM	41.42376 MGM

Surge Tanks, Gun Barrels, DAF Unit			
Type			
Water	99.96%	985,885 BPM	41.40719 MGM
Condensate	0.04%	395 BPM	0.0165695 MGM
Solid Waste	0.00%	9.86 TPM	19717.71 PPM
Total	100.00%	986,280 BPM	41.42376 MGM

DAF Influent Solid Waste			
Type			
Surge Tank & Gun Barrel Bottoms	100.00%	9.86 TPM	19717.71 PPM

DAF Effluent (Treated Water and Emulsion)			
Type			
Water	99.98%	985,688 BPM	41.398909 MGM
DAF Emulsions	2.50%	24,647 BPM	1.0351798 MGM
Total	100.00%	985,885 BPM	41.40719 MGM

Filter Press			
Type			
Filter Cake	100.00%	22.50 TPM	45000 PPM

Ponds 2, 3, 4/Reuse			
Type			
Water	100.00%	985,688 BPM	41.398909 MGM
Condensate	0.00%	0 BPM	0 MGM
Evaporation	0.01%	99 BPM	0.0041399 MGM
Total	100.00%	985,688 BPM	41.398909 MGM

Solid Waste Disposal			
Type			
Filter Cake	100.00%	32.36 TPM	64717.71 PPM

Explanation

BPM = Barrels Per Month

MGM = Million Gallons Per Month

TPM = Tons Per Month

PPM = Pounds Per Month



**FIGURE
MB-1**

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					Location:					Analysis Attached?	Transported to disposal site via:	
PAD	Well Name & No:	API No:	Operator Name:	Operator No:	QtrQtr:	Section:	Township:	Range:	Producing Formation:	YES/NO	Pipeline/Truck	TDS:
Pad BCU14B	Buzzard Creek 14-01	05-077-08728	Piceance Energy	10433	NWNE	14	09S	93W	Mesaverde (MVRD)	YES	Truck	25,100
	Buzzard Creek 14-08	05-077-08753	Piceance Energy	10433	NWNE	14	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
	Buzzard Creek 14-02	05-077-08637	Piceance Energy	10433	NWNE	14	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
Pad BCU14L	Buzzard Creek 14-06	05-077-07331	Piceance Energy	10433	NWSW	14	09S	93W	Mesaverde (MVRD)	YES	Truck	28,435
	Werne 14-12	05-077-08836	Piceance Energy	10433	NWSW	14	09S	93W	Mesaverde (MVRD)	YES	Truck	31,018
Pad BCU15C	Currier Federal 10-15	05-077-08844	Piceance Energy	10433	NENW	15	09S	93W	Mesaverde (MVRD)	YES	Truck	27,479
Pad BCU15O	Buzzard Creek 15-10	05-077-08730	Piceance Energy	10433	SWSE	15	09S	93W	Mesaverde (MVRD)	YES	Truck	30,094
	Buzzard Creek 15-15	05-077-08627	Piceance Energy	10433	SWSE	15	09S	93W	Mesaverde (MVRD)	YES	Truck	40,524
	Buzzard Creek 15-16	05-077-08754	Piceance Energy	10433	SWSE	15	09S	93W	Mesaverde (MVRD)	YES	Truck	25,194
	Buzzard Creek 22-03	05-077-08765	Piceance Energy	10433	SWSE	22	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
Pad BCU16H	Buzzard Creek 16-01	05-077-08731	Piceance Energy	10433	SENE	16	09S	93W	Mesaverde (MVRD)	YES	Truck	6,275
	Buzzard Creek 16-08	05-077-08733	Piceance Energy	10433	SENE	16	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
Pad BCU16L	Buzzard Creek 16-12	05-077-08737	Piceance Energy	10433	NWSW	16	09S	93W	Mesaverde (MVRD)	YES	Truck	26,159
Pad BCU16P	Buzzard Creek 16-10	05-077-08750	Piceance Energy	10433	SESE	16	09S	93W	Mesaverde (MVRD)	YES	Truck	24,305
	Buzzard Creek 21-01	05-077-08746	Piceance Energy	10433	SESE	16	09S	93W	Mesaverde (MVRD)	YES	Truck	36,352
	Buzzard Creek 15-12	05-077-08732	Piceance Energy	10433	SESE	16	09S	93W	Mesaverde (MVRD)	YES	Truck	10,081
Pad BCU1K	Currier 01-13	05-077-08850	Piceance Energy	10433	NESW	1	09S	93W	Mesaverde (MVRD)	YES	Truck	20,135
Pad NBC16B	Currier 09-15	05-077-08881	Piceance Energy	10433	NWNE	16	09S	93W	Mesaverde (MVRD)	YES	Truck	21,690
	Currier Family 16-03	05-077-08757	Piceance Energy	10433	NWNE	16	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
Pad BCU12E	Buzzard Creek 12-05	05-077-08722	Piceance Energy	10433	SWNW	12	09S	93W	Mesaverde (MVRD)	YES	Truck	18,265
	Buzzard Creek 12-12	05-077-08723	Piceance Energy	10433	SWNW	12	09S	93W	Mesaverde (MVRD)	YES	Truck	16,812
Pad BCU12B	Buzzard Creek 12-02	05-077-08721	Piceance Energy	10433	NWNE	12	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
Pad 8C	Currier Federal 07-06	05-077-08740	Piceance Energy	10433	SENW	7	09S	92W	Mesaverde (MVRD)	NO	Truck	NA
Pad BCU11M	P&A Buzzard Creek 11-13	05-077-08625	Piceance Energy	10433	SWSW	11	09S	93W	Mesaverde (MVRD)	NO	Truck	NA
Pad BCU12D SI	Buzzard Creek 12-04	05-077-05106	Piceance Energy	10433	NWNW	12	09S	93W	Mesaverde (MVRD)	YES	Truck	30,203
Pad BCU13A	Buzzard Creek 13-01	05-077-08629	Piceance Energy	10433	NENE	13	09S	93W	Mesaverde (MVRD)	NO	Truck	NA

					Location:					Analysis Attached?	Transported to disposal site via:	
PAD	Well Name & No:	API No:	Operator Name:	Operator No:	QtrQtr:	Section:	Township:	Range:	Producing Formation:	YES/NO	Pipeline/Truck	TDS:
Pad 1B												
	North Vega 27-341	05-077-09289	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,718
	DLC 27-241	05-077-09323	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,858
	DLC 27-441	05-077-09321	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	32,012
	DLC 27-331	05-077-09322	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	27,554
	DLC 27-244	05-077-09371	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	NO	Pipeline	NA
	DLC 27-344	05-077-09374	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,424
	DLC 27-444	05-077-09373	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,878
	DLC 27-234	05-077-09375	Piceance Energy	10433	SWSE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	24,017
Pad 1D												
	North Vega 27-431	05-077-09288	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	33,191
	Delta 27-321	05-077-09334	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,393
	Delta 27-421	05-077-09336	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	19,753
	Delta 27-314	05-077-09335	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	27,997
	Delta 27-334	05-077-09383	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,846
	Delta 27-324	05-077-09382	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	25,593
	Delta 27-434	05-077-09381	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,890
	Delta 27-424	05-077-09380	Piceance Energy	10433	NESE	27	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,691
Pad 2B												
	Nvega 22-331	05-077-09721	Piceance Energy	10433	NESW	22	09S	93W	Mesaverde (MVRD)	NO	Pipeline	NA
	Nvega 22-231	05-077-09719	Piceance Energy	10433	NESW	22	09S	93W	Mesaverde (MVRD)	NO	Pipeline	NA
	Nvega 22-334	05-077-09711	Piceance Energy	10433	NESW	22	09S	93W	Mesaverde (MVRD)	NO	Pipeline	NA
	Nvega 22-324	05-077-09715	Piceance Energy	10433	NESW	22	09S	93W	Mesaverde (MVRD)	NO	Pipeline	NA
	Nvega 22-341	05-077-09712	Piceance Energy	10433	NESW	22	09S	93W	Mesaverde (MVRD)	NO	Pipeline	NA
Pad 3A												
	Delta 26-124	05-077-09355	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,555
	Delta 26-121	05-077-09354	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,265
	Delta 26-131	05-077-09356	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	30,321
	North Vega 26-221	05-077-09287	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	27,156
	Delta 26-134	05-077-09357	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	32,532
	Delta 26-224	05-077-09359	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,221
	Delta 26-231	05-077-09361	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	37,169
	Delta 26-241	05-077-09360	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	47,047
	Delta 26-141	05-077-09358	Piceance Energy	10433	NWSW	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,659
Pad 3B												
	Nvega 26-324	05-077-09460	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	34,153
	Nvega 26-331	05-077-09441	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	43,394
	Nvega 26-334	05-077-09463	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	40,749
	Nvega 26-341	05-077-09445	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	35,286

					Location:					Analysis Attached?	Transported to disposal site via:	
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	Nvega 26-244	05-077-09444	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	24,997
	Nvega 35-311	05-077-09446	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	40,745
	Nvega 26-344	05-077-09466	Piceance Energy	10433	SWSE	26	09S	93W	Mesaverde (MVRD)	YES	Pipeline	39,717
Pad 4A												
	Nvega 23-231	05-077-09552	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	32,472
	Nvega 23-324	05-077-09550	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,754
	Nvega 23-234	05-077-09551	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,095
	Nvega 23-331	05-077-09628	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,910
	Nvega 23-141	05-077-09633	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	30,411
	Nvega 23-334	05-077-09627	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,496
	Nvega 23-144	05-077-09637	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	30,421
	Nvega 23-341	05-077-09631	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	34,131
	Nvega 23-241	05-077-09632	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,901
	Nvega 23-344	05-077-09629	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	32,329
	Nvega 26-111	05-077-09635	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,309
	Nvega 26-311	05-077-09634	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,621
	Nvega 23-244	05-077-09630	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,873
Nvega 26-211	05-077-09636	Piceance Energy	10433	NESW	23	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,387	
Pad 5A												
	Nvega 23-414	05-077-09467	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	25,433
	Nvega 24-114	05-077-09516	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,837
	Nvega 23-411	05-077-09518	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,265
	Nvega 23-421	05-077-09517	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,495
	Nvega 24-121	05-077-09514	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	27,126
	Nvega 24-124	05-077-09515	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	31,319
	Nvega 24-111R	05-077-09684	Piceance Energy	10433	NWNW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,628
Pad 5B												
	Nvega 23-434	05-077-09468-01	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	35,414
	Nvega 23-441	05-077-09503	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	24,311
	Nvega 23-431	05-077-09504	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,422
	Nvega 23-444	05-077-09510	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	25,986
	Nvega 23-424	05-077-09505	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	27,451
	Nvega 24-144	05-077-09509	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,489
	Nvega 24-131	05-077-09508	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,125
	Nvega 24-141	05-077-09507	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	29,578
	Nvega 24-134	05-077-09506	Piceance Energy	10433	NWSW	24	09S	93W	Mesaverde (MVRD)	YES	Pipeline	28,281
Pad												

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Pad 1												
P&A	Vega Unit #1	05-077-08096	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	16,369
	Vega Unit 9-21	05-077-08918	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	16,369
	Vega Unit 9-32	05-077-08951	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	16,369
	Vega Unit 4-244	05-077-09194	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	16,920
	Vega Unit 9-31	05-077-08929	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	21,232
	Vega Unit 9-211	05-077-09195	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	16,369
	Vega Unit 9-221	05-077-09192	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	17,538
	Vega Unit 9-224	05-077-09193	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	17,679
	Vega Unit 9-321	05-077-09190	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	18,092
	Vega Unit 4-341	05-077-09191	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	21,436
Vega Unit 4-34	05-077-08928	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	18,998	
Vega Unit 9-41	05-077-08930	Piceance Energy	10433	NWNE	9	10S	93W	Mesaverde (MVRD)	YES	Pipeline	16.369	
Pad 2												
	Vega Unit #2	05-077-08132	Piceance Energy	10433	NWSW	34	09S	93W	Mesaverde (MVRD)	YES	Pipeline	12,241
	Vega Unit 34-14	05-077-08920	Piceance Energy	10433	NWSW	34	09S	93W	Mesaverde (MVRD)	YES	Pipeline	25,157
	Vega Unit 34-13	05-077-08919	Piceance Energy	10433	NWSW	34	09S	93W	Mesaverde (MVRD)	YES	Pipeline	12,241
	Vega Unit 34-23	05-077-08923	Piceance Energy	10433	NWSW	34	09S	93W	Mesaverde (MVRD)	YES	Pipeline	12,241
	Vega Unit 34-24	05-077-08921	Piceance Energy	10433	NWSW	34	09S	93W	Mesaverde (MVRD)	YES	Pipeline	12,241
Pad 3												
	Vega Unit #3	05-077-08179	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	14,709
	Vega Unit 10-23	05-077-08934	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	22,568
	Vega Unit 10-32	05-077-08926	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	14,709
	Vega Unit 10-324	05-077-09245	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	14,709
	Vega Unit 10-33	05-077-08933-01	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	22,000
	Vega Unit 10-214	05-077-09244	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	14,709
	Vega Unit 10-114	05-077-09243	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	14,709
	Vega Unit 10-22	05-077-08927	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	26,067
	Vega Unit 10-124	05-077-09242	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	24,460
	Vega Unit 10-134	05-077-09241	Piceance Energy	10433	SENW	10	10S	93W	Mesaverde (MVRD)	YES	Pipeline	14,709
Pad 4												
	Vega Unit #4	05-077-08189	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde Coal (MVRDC)	YES	Pipeline	15,027
	Vega Federal 35-24	05-077-09014	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	23,545
	Vega Federal 35-13	05-077-09012	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	20,081
	Vega Federal 35-23	05-077-09015	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	19,379
	Vega Federal 35-33	05-077-09013	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	26,850
	Vega Federal 35-244	05-077-09217	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	27,191
	Vega Federal 35-341	05-077-09215	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	23,840
	Vega Federal 35-144	05-077-09221	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	24,643
	Vega Federal 35-141	05-077-09220	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)	YES	Pipeline	21,563

PAD	Well Name & No:	API No:	Operator Name:	Operator No:	Location:				Producing Formation:	Analysis Attached?		Transported to disposal site via:		TDS:
					QtrQtr:	Section:	Township:	Range:		YES/NO		Pipeline/Truck		
Pad 5	Vega Federal 35-131	05-077-09218	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		20,903
	Vega Federal 35-124	05-077-09219	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		23,665
	Vega Federal 35-224	05-077-09216	Piceance Energy	10433	NESW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		22,591
Pad 5	Vega Federal 35-211	05-077-09476	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		29,425
	Vega Federal 35-214	05-077-09497	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		28,788
	Vega Unit 35-111	05-077-09498	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		31,080
	Vega Federal 35-114	05-077-09499	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		33,744
	Vega Federal 35-121	05-077-09496	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		29,445
	Vega Federal 35-321	05-077-09500	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		29,683
	Vega Federal 35-221	05-077-09501	Piceance Energy	10433	NENW	35	09S	93W	Mesaverde (MVRD)		YES	Pipeline		31,809
Pad 6	Vega Unit 10-334	05-077-09298	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Unit 10-234	05-077-09297	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Unit 10-431	05-077-09295	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Unit 10-434	05-077-09296	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Federal 10-441	05-077-09388-01	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Federal 10-241	05-077-09390	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Federal 10-444	05-077-09389	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Federal 10-244	05-077-09386	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Federal 10-341	05-077-09387	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega Federal 10-344	05-077-09391	Piceance Energy	10433	SWSE	10	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
Pad 11	Vega Unit 10-131	05-077-09093	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		17,876
	Vega Unit 9-434	05-077-09125	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		19,580
	Vega Unit 9-424	05-077-09126	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		19,580
	Vega Unit 10-121	05-077-09122	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		19,580
	Vega Unit 9-414	05-077-09127	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		19,580
	Vega Unit 9-431	05-077-09124	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		19,580
	Vega Unit 9-421	05-077-09123	Piceance Energy	10433	SENE	9	10S	93W	Mesaverde (MVRD)		YES	Pipeline		20,429
Pad 13	Vega Unit 33-42	05-077-09001	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		26,008
	Vega Unit 34-12	05-077-09002	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		12,101
	Vega Unit 33-43	05-077-09000	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		12,101
	Vega Unit 34-124	05-077-09003	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		16,777
	Vega Unit 33-431	05-077-09084	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		12,101
	Vega Unit 33-421	05-077-09090	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		12,101
	Vega Unit 33-441	05-077-09091	Piceance Energy	10433	SENE	33	09S	93W	Mesaverde (MVRD)		YES	Pipeline		12,101
Pad 14	Vega Unit 34-424	05-077-09135	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		28,376
	Vega Unit 34-431	05-077-09117	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		27,088

PAD	Well Name & No:	API No:	Operator Name:	Operator No:	Location:				Producing Formation:	Analysis Attached?		Transported to disposal site via:		TDS:
					QtrQtr:	Section:	Township:	Range:		YES/NO	YES	Pipeline/Truck		
	Vega Unit 34-414	05-077-09132	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		28,376
	Vega Unit 34-331	05-077-09136-01	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		21,127
	Vega Unit 34-411	05-077-09131	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		21,127
	Vega Unit 34-324	05-077-09128-01	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		21,127
	Vega Unit 34-311	05-077-09130	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		34,640
	Vega Unit 34-314	05-077-09129	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		34,640
	Vega Unit 34-421	05-077-09134	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		28,824
	Vega Unit 34-321	05-077-09133	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		30,559
	Vega Federal 34-224	05-077-09452	Piceance Energy	10433	SENE	34	09S	93W	Mesaverde (MVRD)		YES	Pipeline		26,842
Pad 17														
	Vega 4-231	05-077-09464	Piceance Energy	10433	NESW	4	10S	93W	Mesaverde (MVRD)		NO	Pipeline		NA
	Vega 4-331	05-077-09461	Piceance Energy	10433	NESW	4	10S	93W	Mesaverde (MVRD)		YES	Pipeline		17,190
	Vega 4-234	05-077-09465	Piceance Energy	10433	NESW	4	10S	93W	Mesaverde (MVRD)		YES	Pipeline		20,265
	Vega Unit 4-241	05-077-09238	Piceance Energy	10433	NESW	4	10S	93W	Mesaverde (MVRD)		YES	Pipeline		21,925



Water Analysis Report

07-Aug-08
Date Sampled : 26-Oct-07
Date Received : 31-Oct-07
Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Pad #11

Attention :

Sample Point : water tank #2

cc1 :

Salesman : Matt Merkel

cc2 :

Analyst : Karen Hawkins Allen

cc3 :

Comments :

C A T I O N S

Calcium : 278 mg/l
Magnesium : 29 mg/l
Barium : 0 mg/l
Strontium : 0 mg/l
Iron : 2.0 mg/l
Manganese : mg/l
Sodium : 7219 mg/l

A N I O N S

Chloride : 10,920 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,220 mg/l
Sulfate : 108 mg/l

pH (field) :	6.50	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	19,776 ppm
Ionic Strength :	0.33	CO2 in Water :	264 mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :	mole %
Ammonia :	ppm	H2S in Water :	mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.42	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.27	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.06	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.16	Calcite PTB @ 140 F :	49.4
Calcite (CaCO3) SI @ 160 F :	0.39	Calcite PTB @ 160 F :	106.4
Calcite (CaCO3) SI @ 180 F :	0.62	Calcite PTB @ 180 F :	149.1
Calcite (CaCO3) SI @ 200 F :	0.86	Calcite PTB @ 200 F :	182.3
Gypsum (CaSO4) SI :	-2.14	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Vernal District Technical Services

34-414, 34-321, 34-411



Water Analysis Report

Date Sampled : 07-Aug-08
 Date Received : 26-Oct-07
 Date Reported : 31-Oct-07
 Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
 Lease : Vega

Location : Pad #14

Attention :

Sample Point : water tank #1

cc1 :

Salesman : Matt Merkel

cc2 :

Analyst : Karen Hawkins Allen

cc3 :

Comments :

C A T I O N S

Calcium : 412 mg/l
 Magnesium : 2 mg/l
 Barium : 0 mg/l
 Strontium : 0 mg/l
 Iron : 3.0 mg/l
 Manganese : mg/l
 Sodium : 7793 mg/l

A N I O N S

Chloride : 12,160 mg/l
 Carbonate : 0 mg/l
 Bicarbonate : 780 mg/l
 Sulfate : 188 mg/l

pH (field) :	6.50	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	21,338 ppm
Ionic Strength :	0.36	CO2 in Water :	308 mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :	mole %
Ammonia :	ppm	H2S in Water :	mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.75	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.60	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.39	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.17	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.06	Calcite PTB @ 160 F :	19.7
Calcite (CaCO3) SI @ 180 F :	0.29	Calcite PTB @ 180 F :	81.6
Calcite (CaCO3) SI @ 200 F :	0.53	Calcite PTB @ 200 F :	137.9
Gypsum (CaSO4) SI :	-1.75	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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 Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Oct-07
Date Received : 31-Oct-07
Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Pad #1

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : water tank #2

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments :

C A T I O N S

Calcium : 204 mg/l
Magnesium : 93 mg/l
Barium : 0 mg/l
Strontium : 0 mg/l
Iron : 5.0 mg/l
Manganese : mg/l
Sodium : 5876 mg/l

A N I O N S

Chloride : 8,560 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,220 mg/l
Sulfate : 575 mg/l

pH (field) :	6.50	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	16,533 ppm
Ionic Strength :	0.27	CO2 in Water :	264 mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :	mole %
Ammonia :	ppm	H2S in Water :	mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.45	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.30	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.09	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.13	Calcite PTB @ 140 F :	33.4
Calcite (CaCO3) SI @ 160 F :	0.36	Calcite PTB @ 160 F :	79.4
Calcite (CaCO3) SI @ 180 F :	0.59	Calcite PTB @ 180 F :	112.9
Calcite (CaCO3) SI @ 200 F :	0.83	Calcite PTB @ 200 F :	137.3
Gypsum (CaSO4) SI :	-1.53	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Oct-07
Date Received : 31-Oct-07
Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Pad #3

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : water tank #1

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments :

C A T I O N S

Calcium : 231 mg/l
Magnesium : 53 mg/l
Barium : 0 mg/l
Strontium : 0 mg/l
Iron : 11.0 mg/l
Manganese : mg/l
Sodium : 5326 mg/l

A N I O N S

Chloride : 8,200 mg/l
Carbonate : 0 mg/l
Bicarbonate : 854 mg/l
Sulfate : 108 mg/l

pH (field) :	6.50	Specific Gravity :	1.005 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	14,783 ppm
Ionic Strength :	0.25	CO2 in Water :	132 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.37	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.21	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.00	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.22	Calcite PTB @ 140 F :	50.5
Calcite (CaCO3) SI @ 160 F :	0.44	Calcite PTB @ 160 F :	91.5
Calcite (CaCO3) SI @ 180 F :	0.67	Calcite PTB @ 180 F :	124.7
Calcite (CaCO3) SI @ 200 F :	0.91	Calcite PTB @ 200 F :	149.9
Gypsum (CaSO4) SI :	-2.16	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Oct-07
Date Received : 31-Oct-07
Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Pad #2

Attention :

Sample Point : water tank #1

cc1 :

Salesman : Matt Merkel

cc2 :

Analyst : Karen Hawkins Allen

cc3 :

Comments :

C A T I O N S

Calcium : 367 mg/l
Magnesium : 53 mg/l
Barium : 0 mg/l
Strontium : 0 mg/l
Iron : 8.0 mg/l
Manganese : mg/l
Sodium : 4167 mg/l

A N I O N S

Chloride : 6,440 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,220 mg/l
Sulfate : 108 mg/l

pH (field) :	6.50	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	12,363 ppm
Ionic Strength :	0.20	CO2 in Water :	220 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	0.03	Calcite PTB :	10.0
Calcite (CaCO3) SI @ 100 F :	0.19	Calcite PTB @ 100 F :	67.7
Calcite (CaCO3) SI @ 120 F :	0.40	Calcite PTB @ 120 F :	127.9
Calcite (CaCO3) SI @ 140 F :	0.62	Calcite PTB @ 140 F :	180.5
Calcite (CaCO3) SI @ 160 F :	0.84	Calcite PTB @ 160 F :	221.9
Calcite (CaCO3) SI @ 180 F :	1.07	Calcite PTB @ 180 F :	253.2
Calcite (CaCO3) SI @ 200 F :	1.31	Calcite PTB @ 200 F :	277.7
Gypsum (CaSO4) SI :	-1.94	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Champion Technologies, Inc.
Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Oct-07
Date Received : 31-Oct-07
Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Pad #13

Attention :

Sample Point : water tank #2

cc1 :

Salesman : Matt Merkel

cc2 :

Analyst : Karen Hawkins Allen

cc3 :

Comments :

C A T I O N S

Calcium : 296 mg/l
Magnesium : 69 mg/l
Barium : 0 mg/l
Strontium : 0 mg/l
Iron : 6.0 mg/l
Manganese : mg/l
Sodium : 4185 mg/l

A N I O N S

Chloride : 6,460 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,098 mg/l
Sulfate : 108 mg/l

pH (field) :	6.50	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	12,222 ppm
Ionic Strength :	0.20	CO2 in Water :	176 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.05	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	0.10	Calcite PTB @ 100 F :	32.4
Calcite (CaCO3) SI @ 120 F :	0.31	Calcite PTB @ 120 F :	87.0
Calcite (CaCO3) SI @ 140 F :	0.53	Calcite PTB @ 140 F :	135.5
Calcite (CaCO3) SI @ 160 F :	0.75	Calcite PTB @ 160 F :	171.9
Calcite (CaCO3) SI @ 180 F :	0.99	Calcite PTB @ 180 F :	201.2
Calcite (CaCO3) SI @ 200 F :	1.23	Calcite PTB @ 200 F :	222.4
Gypsum (CaSO4) SI :	-2.03	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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 Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Oct-07
Date Received : 31-Oct-07
Date Reported : 12-Nov-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Pad #4

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : water tank #2

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments :

CATIONS

Calcium : 470 mg/l
Magnesium : 53 mg/l
Barium : 0 mg/l
Strontium : 0 mg/l
Iron : 51.0 mg/l
Manganese : mg/l
Sodium : 5245 mg/l

ANIONS

Chloride : 8,640 mg/l
Carbonate : 0 mg/l
Bicarbonate : 610 mg/l
Sulfate : 108 mg/l

pH (field) :	6.00	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	15,177 ppm
Ionic Strength :	0.26	CO2 in Water :	528 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.97	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.82	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.61	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.39	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.16	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	0.07	Calcite PTB @ 180 F :	19.3
Calcite (CaCO3) SI @ 200 F :	0.31	Calcite PTB @ 200 F :	77.1
Gypsum (CaSO4) SI :	-1.89	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Champion Technologies, Inc.
Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 26-Nov-07
Date Reported : 29-Nov-07
20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 10-33 PAD #3

Attention :

cc1 :
cc2 :
cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium : 239 mg/l
Magnesium : 16 mg/l
Barium : 40 mg/l
Strontium : 17 mg/l
Iron : 6.0 mg/l
Manganese : 0.5 mg/l
Sodium : 8184 mg/l

A N I O N S

Chloride : 12,180 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,220 mg/l
Sulfate : 318 mg/l

pH (field) :	6.00	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	22,220 ppm
Ionic Strength :	0.37	CO2 in Water :	352 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.67	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.52	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.31	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.09	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.14	Calcite PTB @ 160 F :	39.2
Calcite (CaCO3) SI @ 180 F :	0.37	Calcite PTB @ 180 F :	91.4
Calcite (CaCO3) SI @ 200 F :	0.61	Calcite PTB @ 200 F :	130.6
Gypsum (CaSO4) SI :	-1.76	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.28	Barite PTB :	22.9
Celestite (SrSO4) SI :	-0.91	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Nov-07
Date Received : 29-Nov-07
Date Reported : 20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 09-321 PAD #11

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

CATIONS

Calcium : 205 mg/l
Magnesium : 61 mg/l
Barium : 27 mg/l
Strontium : 14 mg/l
Iron : 77.0 mg/l
Manganese : 0.5 mg/l
Sodium : 6623 mg/l

ANIONS

Chloride : 10,060 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,098 mg/l
Sulfate : 108 mg/l

pH (field) :	6.50	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	18,273 ppm
Ionic Strength :	0.30	CO2 in Water :	255 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.58	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.43	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.22	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.00	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.23	Calcite PTB @ 160 F :	53.2
Calcite (CaCO3) SI @ 180 F :	0.46	Calcite PTB @ 180 F :	93.8
Calcite (CaCO3) SI @ 200 F :	0.70	Calcite PTB @ 200 F :	123.9
Gypsum (CaSO4) SI :	-2.25	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.74	Barite PTB :	15.5
Celestite (SrSO4) SI :	-1.39	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Nov-07
Date Received : 29-Nov-07
Date Reported : 20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 04-244 PAD #2

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium : 162 mg/l
Magnesium : 69 mg/l
Barium : 15 mg/l
Strontium : 16 mg/l
Iron : 10.0 mg/l
Manganese : 0.5 mg/l
Sodium : 6163 mg/l

A N I O N S

Chloride : 9,080 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,464 mg/l
Sulfate : 110 mg/l

pH (field) :	6.00	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	17,089 ppm
Ionic Strength :	0.28	CO2 in Water :	220 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.33	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.18	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.03	Calcite PTB @ 120 F :	6.6
Calcite (CaCO3) SI @ 140 F :	0.25	Calcite PTB @ 140 F :	50.9
Calcite (CaCO3) SI @ 160 F :	0.48	Calcite PTB @ 160 F :	84.1
Calcite (CaCO3) SI @ 180 F :	0.71	Calcite PTB @ 180 F :	105.7
Calcite (CaCO3) SI @ 200 F :	0.95	Calcite PTB @ 200 F :	120.1
Gypsum (CaSO4) SI :	-2.33	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.52	Barite PTB :	8.3
Celestite (SrSO4) SI :	-1.30	Celestite PTB :	N/A

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Water Analysis Report

07-Aug-08
Date Sampled : 26-Nov-07
Date Received : 29-Nov-07
Date Reported : 20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 09-421 PAD #11

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium : 236 mg/l
Magnesium : 36 mg/l
Barium : 26 mg/l
Strontium : 20 mg/l
Iron : 61.0 mg/l
Manganese : 0.5 mg/l
Sodium : 7518 mg/l

A N I O N S

Chloride : 11,140 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,586 mg/l
Sulfate : 112 mg/l

pH (field) :	6.50	Specific Gravity :	1.015 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	20,735 ppm
Ionic Strength :	0.34	CO2 in Water :	1,144 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.92	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.76	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.55	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.33	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.11	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	0.12	Calcite PTB @ 180 F :	35.5
Calcite (CaCO3) SI @ 200 F :	0.36	Calcite PTB @ 200 F :	93.5
Gypsum (CaSO4) SI :	-2.20	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.68	Barite PTB :	14.9
Celestite (SrSO4) SI :	-1.26	Celestite PTB :	N/A

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Water Analysis Report

07-Aug-08
Date Sampled : 26-Nov-07
Date Received : 29-Nov-07
Date Reported : 20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 04-34 PAD #1

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

CATIONS

Calcium :	212	mg/l
Magnesium :	5	mg/l
Barium :	18	mg/l
Strontium :	18	mg/l
Iron :	10.0	mg/l
Manganese :	0.5	mg/l
Sodium :	7029	mg/l

ANIONS

Chloride :	10,280	mg/l
Carbonate :	0	mg/l
Bicarbonate :	1,403	mg/l
Sulfate :	213	mg/l

pH (field) :	6.50	Specific Gravity :	1.010	grams/ml	
Temperature :	85	degrees F	Total Dissolved Solids :	19,188	ppm
Ionic Strength :	0.32		CO2 in Water :	220	mg/l
			Mole % CO2 in Gas:		mole %
Conductivity:	micromho/centimeters		H2S in Water :	0.0	mg/l
Ammonia :	ppm		Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.32	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.17	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.04	Calcite PTB @ 120 F :	11.6
Calcite (CaCO3) SI @ 140 F :	0.26	Calcite PTB @ 140 F :	65.2
Calcite (CaCO3) SI @ 160 F :	0.49	Calcite PTB @ 160 F :	105.7
Calcite (CaCO3) SI @ 180 F :	0.72	Calcite PTB @ 180 F :	134.7
Calcite (CaCO3) SI @ 200 F :	0.96	Calcite PTB @ 200 F :	154.2
Gypsum (CaSO4) SI :	-1.95	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.83	Barite PTB :	10.2
Celestite (SrSO4) SI :	-1.00	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 26-Nov-07
Date Reported : 29-Nov-07
20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 34-124 PAD #13

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

CATIONS

Calcium : 588 mg/l
Magnesium : 158 mg/l
Barium : 0 mg/l
Strontium : 38 mg/l
Iron : 36.0 mg/l
Manganese : 0.5 mg/l
Sodium : 5649 mg/l

ANIONS

Chloride : 9,880 mg/l
Carbonate : 0 mg/l
Bicarbonate : 488 mg/l
Sulfate : 108 mg/l

pH (field) :	6.00	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	16,945 ppm
Ionic Strength :	0.29	CO2 in Water :	220 mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.75	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.59	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.38	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.16	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.06	Calcite PTB @ 160 F :	15.3
Calcite (CaCO3) SI @ 180 F :	0.29	Calcite PTB @ 180 F :	65.7
Calcite (CaCO3) SI @ 200 F :	0.53	Calcite PTB @ 200 F :	109.5
Gypsum (CaSO4) SI :	-1.84	Gypsum PTB :	N/A
Barite (BaSO4) SI :	-0.09	Barite PTB :	N/A
Celestite (SrSO4) SI :	-1.00	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 26-Nov-07
Date Reported : 29-Nov-07
20-Dec-07

Delta Petroleum

Field : Vega

Lease : Vega

Location : Well No. 09-224 PAD #14

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

CATIONS

Calcium : 163 mg/l
Magnesium : 48 mg/l
Barium : 17 mg/l
Strontium : 17 mg/l
Iron : 8.0 mg/l
Manganese : 0.5 mg/l
Sodium : 6464 mg/l

ANIONS

Chloride : 9,340 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,586 mg/l
Sulfate : 213 mg/l

pH (field) :	6.00	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	17,856 ppm
Ionic Strength :	0.29	CO2 in Water :	220 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.28	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.12	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.09	Calcite PTB @ 120 F :	20.0
Calcite (CaCO3) SI @ 140 F :	0.30	Calcite PTB @ 140 F :	60.1
Calcite (CaCO3) SI @ 160 F :	0.53	Calcite PTB @ 160 F :	90.2
Calcite (CaCO3) SI @ 180 F :	0.76	Calcite PTB @ 180 F :	110.2
Calcite (CaCO3) SI @ 200 F :	1.00	Calcite PTB @ 200 F :	123.6
Gypsum (CaSO4) SI :	-2.04	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.86	Barite PTB :	10.0
Celestite (SrSO4) SI :	-1.00	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

07-Aug-08
Date Sampled : 26-Nov-07
Date Received : 29-Nov-07
Date Reported : 20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 10-22 PAD #3

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium : 401 mg/l
Magnesium : 131 mg/l
Barium : 53 mg/l
Strontium : 45 mg/l
Iron : 69.0 mg/l
Manganese : 0.5 mg/l
Sodium : 9469 mg/l

A N I O N S

Chloride : 14,800 mg/l
Carbonate : 0 mg/l
Bicarbonate : 915 mg/l
Sulfate : 575 mg/l

pH (field) :	6.50	Specific Gravity :	1.015 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	26,458 ppm
Ionic Strength :	0.44	CO2 in Water :	264 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.67	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.51	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.30	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.08	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.14	Calcite PTB @ 160 F :	46.6
Calcite (CaCO3) SI @ 180 F :	0.37	Calcite PTB @ 180 F :	109.6
Calcite (CaCO3) SI @ 200 F :	0.61	Calcite PTB @ 200 F :	167.1
Gypsum (CaSO4) SI :	-1.35	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.54	Barite PTB :	30.3
Celestite (SrSO4) SI :	-0.32	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 26-Nov-07
Date Reported : 29-Nov-07
20-Dec-07

Delta Petroleum

Field : Vega

Lease : Vega

Location : Well No. 09-31 PAD #10

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium : 214 mg/l
Magnesium : 83 mg/l
Barium : 23 mg/l
Strontium : 26 mg/l
Iron : 43.0 mg/l
Manganese : 0.5 mg/l
Sodium : 7804 mg/l

A N I O N S

Chloride : 11,680 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,464 mg/l
Sulfate : 213 mg/l

pH (field) :	6.50	Specific Gravity :	1.015 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	21,550 ppm
Ionic Strength :	0.36	CO2 in Water :	220 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.34	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.19	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.02	Calcite PTB @ 120 F :	5.8
Calcite (CaCO3) SI @ 140 F :	0.24	Calcite PTB @ 140 F :	61.4
Calcite (CaCO3) SI @ 160 F :	0.46	Calcite PTB @ 160 F :	102.3
Calcite (CaCO3) SI @ 180 F :	0.70	Calcite PTB @ 180 F :	134.5
Calcite (CaCO3) SI @ 200 F :	0.93	Calcite PTB @ 200 F :	154.2
Gypsum (CaSO4) SI :	-1.98	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.88	Barite PTB :	13.4
Celestite (SrSO4) SI :	-0.89	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 26-Nov-07
Date Reported : 29-Nov-07
20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 10-124 PAD #3

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium : 312 mg/l
Magnesium : 61 mg/l
Barium : 55 mg/l
Strontium : 21 mg/l
Iron : 8.0 mg/l
Manganese : 0.5 mg/l
Sodium : 9020 mg/l

A N I O N S

Chloride : 13,540 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,220 mg/l
Sulfate : 590 mg/l

pH (field) :	6.50	Specific Gravity :	1.015 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	24,827 ppm
Ionic Strength :	0.41	CO2 in Water :	264 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.49	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.33	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.12	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.10	Calcite PTB @ 140 F :	34.1
Calcite (CaCO3) SI @ 160 F :	0.32	Calcite PTB @ 160 F :	98.0
Calcite (CaCO3) SI @ 180 F :	0.55	Calcite PTB @ 180 F :	149.2
Calcite (CaCO3) SI @ 200 F :	0.79	Calcite PTB @ 200 F :	189.7
Gypsum (CaSO4) SI :	-1.42	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.61	Barite PTB :	31.0
Celestite (SrSO4) SI :	-0.60	Celestite PTB :	N/A

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Water Analysis Report

07-Aug-08
Date Sampled : 26-Nov-07
Date Received : 29-Nov-07
Date Reported : 20-Dec-07

Delta Petroleum

Field : Vega
Lease : Vega

Location : Well No. 04-341 PAD #1

Attention :

Sample Point : wellhead

cc1 :

Salesman : Matt Merkel

cc2 :

Analyst : Karen Hawkins Allen

cc3 :

Comments : METALS ANALYZED BY ICP/AA.

C A T I O N S

Calcium :	203	mg/l
Magnesium :	10	mg/l
Barium :	47	mg/l
Strontium :	18	mg/l
Iron :	5.0	mg/l
Manganese :	0.5	mg/l
Sodium :	7979	mg/l

A N I O N S

Chloride :	11,720	mg/l
Carbonate :	0	mg/l
Bicarbonate :	1,403	mg/l
Sulfate :	265	mg/l

pH (field) :	6.00	Specific Gravity :	1.010	grams/ml	
Temperature :	85	degrees F	Total Dissolved Solids :	21,650	ppm
Ionic Strength :	0.36		CO2 in Water :	220	mg/l
			Mole % CO2 in Gas:		mole %
Conductivity:		micromho/centimeters	H2S in Water :	0.0	mg/l
Ammonia :	ppm		Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.40	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.25	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.04	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.18	Calcite PTB @ 140 F :	45.8
Calcite (CaCO3) SI @ 160 F :	0.40	Calcite PTB @ 160 F :	88.8
Calcite (CaCO3) SI @ 180 F :	0.64	Calcite PTB @ 180 F :	120.6
Calcite (CaCO3) SI @ 200 F :	0.87	Calcite PTB @ 200 F :	142.1
Gypsum (CaSO4) SI :	-1.90	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.29	Barite PTB :	27.4
Celestite (SrSO4) SI :	-0.95	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 26-Nov-07
Date Reported : 29-Nov-07
20-Dec-07

Delta Petroleum

Field : Vega

Lease : Vega

Location : Well No. 09-221 PAD #11

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : METALS ANALYZED BY ICP/AA.

CATIONS

Calcium :	191	mg/l
Magnesium :	15	mg/l
Barium :	15	mg/l
Strontium :	15	mg/l
Iron :	16.0	mg/l
Manganese :	0.5	mg/l
Sodium :	6417	mg/l

ANIONS

Chloride :	9,140	mg/l
Carbonate :	0	mg/l
Bicarbonate :	1,586	mg/l
Sulfate :	318	mg/l

pH (field) :	6.50	Specific Gravity :	1.010	grams/ml	
Temperature :	85	degrees F	Total Dissolved Solids :	17,713	ppm
Ionic Strength :	0.29	CO2 in Water :	220	mg/l	
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :		mole %	
Ammonia :	ppm	H2S in Water :	0.0	mg/l	
		Dissolved Oxygen :		ppm	

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.21	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.06	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.16	Calcite PTB @ 120 F :	40.4
Calcite (CaCO3) SI @ 140 F :	0.37	Calcite PTB @ 140 F :	80.9
Calcite (CaCO3) SI @ 160 F :	0.60	Calcite PTB @ 160 F :	112.2
Calcite (CaCO3) SI @ 180 F :	0.83	Calcite PTB @ 180 F :	133.1
Calcite (CaCO3) SI @ 200 F :	1.07	Calcite PTB @ 200 F :	146.8
Gypsum (CaSO4) SI :	-1.80	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.98	Barite PTB :	8.6
Celestite (SrSO4) SI :	-0.88	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 18-Jul-08
Date Reported : 23-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 16-12

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 258 mg/l
Magnesium : 5 mg/l
Barium : 167 mg/l
Strontium : 76 mg/l
Iron : 37.0 mg/l
Manganese : 0.6 mg/l
Sodium : 9767 mg/l

ANIONS

Chloride : 15,420 mg/l
Carbonate : 0 mg/l
Bicarbonate : 366 mg/l
Sulfate : 63 mg/l

pH (field) :	6.40	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	26,159 ppm = 25,900 mg/l
Ionic Strength :	0.44	CO2 in Water :	220 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-1.57	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.42	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-1.21	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.99	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.77	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.53	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.30	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-2.47	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.11	Barite PTB :	49.8
Celestite (SrSO4) SI :	-1.02	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

07-Aug-08

Date Sampled : 18-Jul-08

Date Received : 23-Jul-08

Date Reported : 04-Aug-08

Delta Petroleum

Field : Buzzard Creek

Lease : Buzzard Creek

Location : Buzzard Creek 16-10

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium :	183	mg/l
Magnesium :	15	mg/l
Barium :	309	mg/l
Strontium :	84	mg/l
Iron :	11.0	mg/l
Manganese :	0.2	mg/l
Sodium :	8945	mg/l

ANIONS

Chloride :	13,860	mg/l
Carbonate :	0	mg/l
Bicarbonate :	854	mg/l
Sulfate :	44	mg/l

pH (field) :	6.80	Specific Gravity :	1.015	grams/ml
Temperature :	85	degrees F	Total Dissolved Solids :	24,305 ppm = 23,946 mg/l
Ionic Strength :	0.41	CO ₂ in Water :	220	mg/l
Conductivity :	micromho/centimeters	Mole % CO ₂ in Gas :		mole %
Ammonia :	ppm	H ₂ S in Water :	0.0	mg/l
		Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO ₃) SI :	-0.95	Calcite PTB :	N/A
Calcite (CaCO ₃) SI @ 100 F :	-0.80	Calcite PTB @ 100 F :	N/A
Calcite (CaCO ₃) SI @ 120 F :	-0.58	Calcite PTB @ 120 F :	N/A
Calcite (CaCO ₃) SI @ 140 F :	-0.37	Calcite PTB @ 140 F :	N/A
Calcite (CaCO ₃) SI @ 160 F :	-0.14	Calcite PTB @ 160 F :	N/A
Calcite (CaCO ₃) SI @ 180 F :	0.09	Calcite PTB @ 180 F :	20.0
Calcite (CaCO ₃) SI @ 200 F :	0.33	Calcite PTB @ 200 F :	62.5
Gypsum (CaSO ₄) SI :	-2.75	Gypsum PTB :	N/A
Barite (BaSO ₄) SI :	2.26	Barite PTB :	35.0
Celestite (SrSO ₄) SI :	-1.10	Celestite PTB :	N/A

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Water Analysis Report

07-Aug-08

Date Sampled : 18-Jul-08

Date Received : 23-Jul-08

Date Reported : 04-Aug-08

Delta Petroleum

Field : Buzzard Creek

Lease : Buzzard Creek

Location : Buzzard Creek 21-01

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium :	928	mg/l
Magnesium :	85	mg/l
Barium :	1,053	mg/l
Strontium :	863	mg/l
Iron :	616.0	mg/l
Manganese :	13.6	mg/l
Sodium :	11546	mg/l

ANIONS

Chloride :	20,180	mg/l
Carbonate :	0	mg/l
Bicarbonate :	268	mg/l
Sulfate :	813	mg/l

pH (field) :	6.00	Specific Gravity :	1.020	grams/ml
Temperature :	85	degrees F	Total Dissolved Solids :	36,352 ppm
Ionic Strength :	0.59	CO2 in Water :	792	mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :		mole %
Ammonia :	ppm	H2S in Water :	0.0	mg/l
		Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-2.00	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.84	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-1.63	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-1.41	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-1.19	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.96	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.72	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-0.95	Gypsum PTB :	N/A
Barite (BaSO4) SI :	3.80	Barite PTB :	574.4
Celestite (SrSO4) SI :	0.97	Celestite PTB :	343.6

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 18-Jul-08
Date Reported : 23-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 16-01

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 97 mg/l
Magnesium : 10 mg/l
Barium : 62 mg/l
Strontium : 1 mg/l
Iron : 140.0 mg/l
Manganese : 1.7 mg/l
Sodium : 2209 mg/l

A N I O N S

Chloride : 3,460 mg/l
Carbonate : 0 mg/l
Bicarbonate : 244 mg/l
Sulfate : 52 mg/l

pH (field) : 6.00
Temperature : 85 degrees F
Ionic Strength : 0.10

Specific Gravity : 1.005 grams/ml
Total Dissolved Solids : 6,275 ppm = 6,244 mg/l
CO2 in Water : 440 mg/l
Mole % CO2 in Gas : mole %
H2S in Water : 0.0 mg/l
Dissolved Oxygen : ppm

Conductivity : micromho/centimeters
Ammonia : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI : -1.93
Calcite (CaCO3) SI @ 100 F : -1.78
Calcite (CaCO3) SI @ 120 F : -1.57
Calcite (CaCO3) SI @ 140 F : -1.35
Calcite (CaCO3) SI @ 160 F : -1.12
Calcite (CaCO3) SI @ 180 F : -0.89
Calcite (CaCO3) SI @ 200 F : -0.65
Gypsum (CaSO4) SI : -2.67
Barite (BaSO4) SI : 2.24
Celestite (SrSO4) SI : -2.52

Calcite PTB : N/A
Calcite PTB @ 100 F : N/A
Calcite PTB @ 120 F : N/A
Calcite PTB @ 140 F : N/A
Calcite PTB @ 160 F : N/A
Calcite PTB @ 180 F : N/A
Calcite PTB @ 200 F : N/A
Gypsum PTB : N/A
Barite PTB : 34.7
Celestite PTB : N/A

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Water Analysis Report

07-Aug-08

Date Sampled : 17-Jul-08

Date Received : 22-Jul-08

Date Reported : 04-Aug-08

Delta Petroleum

Field : Buzzard Creek

Lease : Buzzard Creek

Location : Buzzard Creek 12-12

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 118 mg/l
Magnesium : 12 mg/l
Barium : 1,113 mg/l
Strontium : 2,945 mg/l
Iron : 452.0 mg/l
Manganese : 11.9 mg/l
Sodium : 3297 mg/l

ANIONS

Chloride : 7,060 mg/l
Carbonate : 0 mg/l
Bicarbonate : 732 mg/l
Sulfate : 1,083 mg/l

pH (field) : 6.00
Temperature : 85 degrees F
Ionic Strength : 0.23
Conductivity : micromho/centimeters
Ammonia : ppm

Specific Gravity : 1.005 grams/ml
Total Dissolved Solids : 16,812 ppm = 16,728 mg/l
CO2 in Water : 220 mg/l
Mole % CO2 in Gas : mole %
H2S in Water : 0.0 mg/l
Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI : -0.97
Calcite (CaCO3) SI @ 100 F : -0.82
Calcite (CaCO3) SI @ 120 F : -0.61
Calcite (CaCO3) SI @ 140 F : -0.39
Calcite (CaCO3) SI @ 160 F : -0.16
Calcite (CaCO3) SI @ 180 F : 0.07
Calcite (CaCO3) SI @ 200 F : 0.31
Gypsum (CaSO4) SI : -1.64
Barite (BaSO4) SI : 4.27
Celestite (SrSO4) SI : 1.82

Calcite PTB : N/A
Calcite PTB @ 100 F : N/A
Calcite PTB @ 120 F : N/A
Calcite PTB @ 140 F : N/A
Calcite PTB @ 160 F : N/A
Calcite PTB @ 180 F : 11.3
Calcite PTB @ 200 F : 41.1
Gypsum PTB : N/A
Barite PTB : 567.6
Celestite PTB : 438.5

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 12-05

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 192 mg/l
Magnesium : 9 mg/l
Barium : 38 mg/l
Strontium : 48 mg/l
Iron : 241.0 mg/l
Manganese : 8.4 mg/l
Sodium : 6740 mg/l

ANIONS

Chloride : 10,560 mg/l
Carbonate : 0 mg/l
Bicarbonate : 415 mg/l
Sulfate : 22 mg/l

pH (field) :	6.50	Specific Gravity :	1.015 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	18,265 ppm = 17,995 mg/l
Ionic Strength :	0.31	CO2 in Water :	35 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.61	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.45	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.24	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.03	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.20	Calcite PTB @ 160 F :	30.2
Calcite (CaCO3) SI @ 180 F :	0.43	Calcite PTB @ 180 F :	58.4
Calcite (CaCO3) SI @ 200 F :	0.67	Calcite PTB @ 200 F :	83.3
Gypsum (CaSO4) SI :	-2.96	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.20	Barite PTB :	14.5
Celestite (SrSO4) SI :	-1.54	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 14-01

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : water tank

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium :	318	mg/l
Magnesium :	5	mg/l
Barium :	186	mg/l
Strontium :	79	mg/l
Iron :	36.0	mg/l
Manganese :	2.4	mg/l
Sodium :	9263	mg/l

ANIONS

Chloride :	14,740	mg/l
Carbonate :	0	mg/l
Bicarbonate :	439	mg/l
Sulfate :	34	mg/l

pH (field) :	7.00	Specific Gravity :	1.020	grams/ml
Temperature :	85	degrees F	Total Dissolved Solids :	25,100 ppm = 24,608 mg/l
Ionic Strength :	0.42	CO2 in Water :	70	mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :		mole %
Ammonia :	ppm	H2S in Water :	0.0	mg/l
		Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.80	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.65	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.44	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.22	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.01	Calcite PTB @ 160 F :	2.2
Calcite (CaCO3) SI @ 180 F :	0.24	Calcite PTB @ 180 F :	43.4
Calcite (CaCO3) SI @ 200 F :	0.48	Calcite PTB @ 200 F :	80.4
Gypsum (CaSO4) SI :	-2.64	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.91	Barite PTB :	26.4
Celestite (SrSO4) SI :	-1.26	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 15-16

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 304 mg/l
Magnesium : 22 mg/l
Barium : 338 mg/l
Strontium : 118 mg/l
Iron : 40.0 mg/l
Manganese : 2.6 mg/l
Sodium : 9168 mg/l

ANIONS

Chloride : 14,720 mg/l
Carbonate : 0 mg/l
Bicarbonate : 439 mg/l
Sulfate : 45 mg/l

pH (field) : 7.00
Temperature : 85 degrees F
Ionic Strength : 0.42

Specific Gravity : 1.020 grams/ml
Total Dissolved Solids : 25,194 ppm = 24,700 mg/l
CO2 in Water : 150 mg/l
Mole % CO2 in Gas : mole %
H2S in Water : 0.0 mg/l
Dissolved Oxygen : ppm

Conductivity : micromho/centimeters
Ammonia : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI : -1.15
Calcite (CaCO3) SI @ 100 F : -1.00
Calcite (CaCO3) SI @ 120 F : -0.79
Calcite (CaCO3) SI @ 140 F : -0.57
Calcite (CaCO3) SI @ 160 F : -0.35
Calcite (CaCO3) SI @ 180 F : -0.11
Calcite (CaCO3) SI @ 200 F : 0.13
Gypsum (CaSO4) SI : -2.54
Barite (BaSO4) SI : 2.29
Celestite (SrSO4) SI : -0.97

Calcite PTB : N/A
Calcite PTB @ 100 F : N/A
Calcite PTB @ 120 F : N/A
Calcite PTB @ 140 F : N/A
Calcite PTB @ 160 F : N/A
Calcite PTB @ 180 F : N/A
Calcite PTB @ 200 F : 24.9
Gypsum PTB : N/A
Barite PTB : 34.9
Celestite PTB : N/A

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Water Analysis Report

07-Aug-08
Date Sampled : 17-Jul-08
Date Received : 22-Jul-08
Date Reported : 04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 14-06

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 664 mg/l
Magnesium : 160 mg/l
Barium : 259 mg/l
Strontium : 111 mg/l
Iron : 45.0 mg/l
Manganese : 2.6 mg/l
Sodium : 9838 mg/l

A N I O N S

Chloride : 16,560 mg/l
Carbonate : 0 mg/l
Bicarbonate : 731 mg/l
Sulfate : 67 mg/l

pH (field) : 6.00
Temperature : 85 degrees F
Ionic Strength : 0.48

Specific Gravity : 1.015 grams/ml
Total Dissolved Solids : 28,435 ppm = 28,015 mg/l
CO2 in Water : 158 mg/l
Mole % CO2 in Gas : mole %
H2S in Water : 0.0 mg/l
Dissolved Oxygen : ppm

Conductivity : micromho/centimeters
Ammonia : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI : -0.46
Calcite (CaCO3) SI @ 100 F : -0.31
Calcite (CaCO3) SI @ 120 F : -0.10
Calcite (CaCO3) SI @ 140 F : 0.12
Calcite (CaCO3) SI @ 160 F : 0.34
Calcite (CaCO3) SI @ 180 F : 0.58
Calcite (CaCO3) SI @ 200 F : 0.81
Gypsum (CaSO4) SI : -2.09
Barite (BaSO4) SI : 2.25
Celestite (SrSO4) SI : -0.90

Calcite PTB : N/A
Calcite PTB @ 100 F : N/A
Calcite PTB @ 120 F : N/A
Calcite PTB @ 140 F : 40.8
Calcite PTB @ 160 F : 106.6
Calcite PTB @ 180 F : 165.6
Calcite PTB @ 200 F : 213.2
Gypsum PTB : N/A
Barite PTB : 48.6
Celestite PTB : N/A

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 15-15

Attention :
cc1 :
cc2 :
cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium :	740	mg/l
Magnesium :	91	mg/l
Barium :	363	mg/l
Strontium :	154	mg/l
Iron :	314.0	mg/l
Manganese :	5.4	mg/l
Sodium :	14436	mg/l

A N I O N S

Chloride :	23,740	mg/l
Carbonate :	0	mg/l
Bicarbonate :	634	mg/l
Sulfate :	52	mg/l

pH (field) : 7.00
Temperature : 85 degrees F
Ionic Strength : 0.68

Specific Gravity : 1.020 grams/ml
Total Dissolved Solids : 40,524 ppm = 39,729 mg/l
CO2 in Water : 185 mg/l
Mole % CO2 in Gas : mole %
H2S in Water : 1.0 mg/l
Dissolved Oxygen : ppm

Conductivity : micromho/centimeters
Ammonia : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.79	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.63	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.42	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.20	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.02	Calcite PTB @ 160 F :	5.7
Calcite (CaCO3) SI @ 180 F :	0.25	Calcite PTB @ 180 F :	74.0
Calcite (CaCO3) SI @ 200 F :	0.49	Calcite PTB @ 200 F :	132.3
Gypsum (CaSO4) SI :	-2.23	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.12	Barite PTB :	39.8
Celestite (SrSO4) SI :	-0.98	Celestite PTB :	N/A



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 15-10

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 425 mg/l
Magnesium : 96 mg/l
Barium : 917 mg/l
Strontium : 895 mg/l
Iron : 49.0 mg/l
Manganese : 2.7 mg/l
Sodium : 9945 mg/l

ANIONS

Chloride : 17,270 mg/l
Carbonate : 0 mg/l
Bicarbonate : 464 mg/l
Sulfate : 33 mg/l

pH (field) : 7.00
Temperature : 85 degrees F
Ionic Strength : 0.50

Specific Gravity : 1.015 grams/ml
Total Dissolved Solids : 30,094 ppm = 29,649 mg/l
CO2 in Water : 123 mg/l
Mole % CO2 in Gas : mole %
H2S in Water : 0.0 mg/l
Dissolved Oxygen : ppm

Conductivity : micromho/centimeters
Ammonia : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI : -0.97
Calcite (CaCO3) SI @ 100 F : -0.81
Calcite (CaCO3) SI @ 120 F : -0.60
Calcite (CaCO3) SI @ 140 F : -0.38
Calcite (CaCO3) SI @ 160 F : -0.16
Calcite (CaCO3) SI @ 180 F : 0.07
Calcite (CaCO3) SI @ 200 F : 0.31
Gypsum (CaSO4) SI : -2.61
Barite (BaSO4) SI : 2.46
Celestite (SrSO4) SI : -0.32

Calcite PTB : N/A
Calcite PTB @ 100 F : N/A
Calcite PTB @ 120 F : N/A
Calcite PTB @ 140 F : N/A
Calcite PTB @ 160 F : N/A
Calcite PTB @ 180 F : 14.5
Calcite PTB @ 200 F : 62.4
Gypsum PTB : N/A
Barite PTB : 23.6
Celestite PTB : N/A

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Champion Technologies, Inc.
Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 12-04

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 410 mg/l
Magnesium : 75 mg/l
Barium : 343 mg/l
Strontium : 183 mg/l
Iron : 21.0 mg/l
Manganese : 2.4 mg/l
Sodium : 10909 mg/l

ANIONS

Chloride : 17,840 mg/l
Carbonate : 0 mg/l
Bicarbonate : 390 mg/l
Sulfate : 32 mg/l

pH (field) :	6.00	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	30,203 ppm
Ionic Strength :	0.51	CO2 in Water :	352 mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :	mole %
Ammonia :	ppm	H2S in Water :	0.0 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-1.60	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.45	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-1.23	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-1.02	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.79	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.56	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.32	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-2.62	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.04	Barite PTB :	24.4
Celestite (SrSO4) SI :	-1.00	Celestite PTB :	N/A

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Champion Technologies, Inc.
Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 18-Jul-08
Date Reported : 23-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Buzzard Creek

Location : Buzzard Creek 15-12

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 83 mg/l
Magnesium : 2 mg/l
Barium : 103 mg/l
Strontium : 24 mg/l
Iron : 0.0 mg/l
Manganese : 1.4 mg/l
Sodium : 3746 mg/l

A N I O N S

Chloride : 5,820 mg/l
Carbonate : 0 mg/l
Bicarbonate : 268 mg/l
Sulfate : 35 mg/l

pH (field) :	6.50	Specific Gravity :	1.005 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	10,081 ppm = 10,031 mg/l
Ionic Strength :	0.17	CO2 in Water :	343 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-2.04	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.89	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-1.68	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-1.46	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-1.23	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-1.00	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.76	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-2.99	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.11	Barite PTB :	27.6
Celestite (SrSO4) SI :	-1.44	Celestite PTB :	N/A

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Champion Technologies, Inc.
Vernal District Technical Services



Water Analysis Report

07-Aug-08

Date Sampled : 18-Jul-08

Date Received : 23-Jul-08

Date Reported : 04-Aug-08

Delta Petroleum

Field : Buzzard Creek

Lease : Currier

Location : Currier 10-15

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 374 mg/l
Magnesium : 26 mg/l
Barium : 262 mg/l
Strontium : 139 mg/l
Iron : 33.0 mg/l
Manganese : 0.7 mg/l
Sodium : 10017 mg/l

ANIONS

Chloride : 16,140 mg/l
Carbonate : 0 mg/l
Bicarbonate : 439 mg/l
Sulfate : 49 mg/l

pH (field) :	6.90	Specific Gravity :	1.020 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	27,479 ppm = 26,940 mg/l
Ionic Strength :	0.46	CO2 in Water :	264 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	85.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-1.36	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.20	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.99	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.77	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.55	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.32	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.08	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-2.44	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.17	Barite PTB :	37.9
Celestite (SrSO4) SI :	-0.89	Celestite PTB :	N/A

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Champion Technologies, Inc.

Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 18-Jul-08
Date Reported : 23-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Currier

Location : Currier 09-15

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : wellhead

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 202 mg/l
Magnesium : 9 mg/l
Barium : 148 mg/l
Strontium : 81 mg/l
Iron : 66.0 mg/l
Manganese : 1.2 mg/l
Sodium : 8045 mg/l

ANIONS

Chloride : 12,620 mg/l
Carbonate : 0 mg/l
Bicarbonate : 464 mg/l
Sulfate : 55 mg/l

pH (field) : 6.50
Temperature : 85 degrees F
Ionic Strength : 0.36

Specific Gravity : 1.015 grams/ml
Total Dissolved Solids : 21,690 ppm

CO₂ in Water : 264 mg/l
Mole % CO₂ in Gas : mole %

Conductivity : micromho/centimeters

H₂S in Water : 0.0 mg/l

Ammonia : ppm

Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO₃) SI : -1.45
Calcite (CaCO₃) SI @ 100 F : -1.29
Calcite (CaCO₃) SI @ 120 F : -1.08
Calcite (CaCO₃) SI @ 140 F : -0.86
Calcite (CaCO₃) SI @ 160 F : -0.64
Calcite (CaCO₃) SI @ 180 F : -0.41
Calcite (CaCO₃) SI @ 200 F : -0.17

Calcite PTB : N/A
Calcite PTB @ 100 F : N/A
Calcite PTB @ 120 F : N/A
Calcite PTB @ 140 F : N/A
Calcite PTB @ 160 F : N/A
Calcite PTB @ 180 F : N/A
Calcite PTB @ 200 F : N/A

Gypsum (CaSO₄) SI : -2.58

Gypsum PTB : N/A

Barite (BaSO₄) SI : 2.11

Barite PTB : 43.2

Celestite (SrSO₄) SI : -0.97

Celestite PTB : N/A

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Currier

Location : Currier 01-13

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium :	293	mg/l
Magnesium :	23	mg/l
Barium :	328	mg/l
Strontium :	149	mg/l
Iron :	115.0	mg/l
Manganese :	2.7	mg/l
Sodium :	7154	mg/l

ANIONS

Chloride :	11,660	mg/l
Carbonate :	0	mg/l
Bicarbonate :	366	mg/l
Sulfate :	47	mg/l

pH (field) :	6.00	Specific Gravity :	1.010	grams/ml
Temperature :	85	degrees F	Total Dissolved Solids :	20,135 ppm = 19,936 mg/l
Ionic Strength :	0.34	CO2 in Water :	185	mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :		mole %
Ammonia :	ppm	H2S in Water :	1.8	mg/l
		Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-1.31	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.15	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.94	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.72	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.50	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.27	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.03	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-2.49	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.39	Barite PTB :	35.6
Celestite (SrSO4) SI :	-0.78	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 07-Aug-08
Date Received : 17-Jul-08
Date Reported : 22-Jul-08
04-Aug-08

Delta Petroleum

Field : Buzzard Creek
Lease : Werne

Location : Werne 14-12

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 430 mg/l
Magnesium : 12 mg/l
Barium : 67 mg/l
Strontium : 49 mg/l
Iron : 16.0 mg/l
Manganese : 2.2 mg/l
Sodium : 11565 mg/l

ANIONS

Chloride : 18,440 mg/l
Carbonate : 0 mg/l
Bicarbonate : 390 mg/l
Sulfate : 49 mg/l

pH (field) :	6.50	Specific Gravity :	1.020 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	31,018 ppm = 30,410 mg/l
Ionic Strength :	0.53	CO2 in Water :	158 mg/l
		Mole % CO2 in Gas :	mole %
Conductivity :	micromho/centimeters	H2S in Water :	0.0 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-1.25	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.10	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.89	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.67	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.44	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.21	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	0.03	Calcite PTB @ 200 F :	5.2
Gypsum (CaSO4) SI :	-2.41	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.51	Barite PTB :	32.5
Celestite (SrSO4) SI :	-1.39	Celestite PTB :	N/A

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DELTA PETROLEUM CORP.

COLLBRAN, COLORADO

VEGA UNIT PAD/WELL:			Well Name	DATE	Chloride mg/l	Sulfate mg/l	Bicarbonate mg/l	Calcium mg/l	Magnesium mg/l	Iron mg/l	Manganese mg/l	Barium mg/l	Strontium mg/l	pH	CO ₂ IN WATER mg/l	H ₂ S mg/l	°F	TDS ppm	SATURATION INDICES - SCALE POTENTIAL AT LISTED TEMP				PTB				Bacteria 21 Days		
																			CaCO3	CaSO4	BaSO4	SrSO4	CaCO3	CaSO4	BaSO4	SrSO4	Aerobe:	APB:	SRB:
Pad 1	9	21																											
Pad 1	9	32																											
Pad 1	4	244	10/14/2008	10380	15	1513	227	7	0	10	65	35	6	53	0	85	19237	0.39	-3.07	1.24	-1.86	96.1	n/a	11	n/a	0/4	0/4	0/4	
Pad 1	9	31	10/14/2008	12100	36	1171	232	31	0	9.0	80	63	7	44	0	85	21634	0.20	-2.71	1.65	01.27	52.3	n/a	27.0	n/a	0/4	0/4	1/4	
Pad 1	9	211																											
Pad 1	9	221	10/14/2008	9380	50	1464	152	21	42	0.6	59	28	6	53	0	85	17606	0.24	-2.69	1.78	-1.40	47.8	n/a	32	n/a				
Pad 1	9	224	10/24/2008	8760	14	1708	143	70	1	0.3	46	1	6	36	0	85	16762	0.53	-3.27	1.13	-3.39	81.1	n/a	9.7	n/a	2/4	0/4	0/4	
Pad 1	9	321	10/14/2008	8800	14	1366	197	21	61	0.6	74	35	6	53	0	85	16487	0.33	-3,12	1.35	-1.83	74.0	n/a	10.3	n/a	2/4	1/4	2/4	
Pad 1	4	341	10/14/2008	10960	14	1415	166	19	43	0.8	82	40	6	62	0	85	20112	0.11	-3.23	1.30	-1.84	24.9	n/a	10.5	n/a	2/4	0/4	2/4	
Pad 1	4	34	10/14/2008	10520	23	1464	223	8	31	0.6	82	39	6	44	0	85	19456	0.44	-2.89	1.53	-1.63	103.6	n/a	17.4	n/a	2/4	0/4	0/4	
Pad 1	9	41	10/14/2008	10100	56	1561	144	31	75	0.9	70	44	6	71	0	85	18976	0,11	02,68	1,87	01,18	23,6	n/a	37.8	n/a	1/4	0/4	1/4	
Pad 2 Bulk Unit	34 34	13 23	8/13/2008										6.21		.1	85					n/a	n/a		n/a	1/4	3/4	3/4		
Pad 2 Test Unit	34	14	8/13/2008	14200	27	1420	139	6	3.0	0.0	27	21	6.09	127	.1	84	25409	-0.41	-3.08	1	-1.91	n/a	n/a	12.4	n/a	1/4	4/4	2/4	
Pad 3 Bulk Unit	10	23	8/13/2008	12920	18	976	188	9	8.0	0.0	206	32	6.05	32	.4	85	22794	0.06	-3.11	1.74	-1.88	12.8	n/a	14.2	n/a	0/4	3/4	4/4	
Pad 4	35	24	11/11/2008	13380	55	878	332	2	199	2.9	24	71	6.0	79	0	85	23545	-0.20	-2.39	1.27	-1.07	n/a	n/a	13.1	n/a	1/4	0/4	0/4	
Pad 4	35	13	11/11/2008	11460	60	732	656	19	164	2.3	0	89	6.0	167	0	85	20081	-0.31	-2.06	0	-0.92	n/a	n/a	n/a	n/a	0/4	0/4	2/4	
Pad 4	35	23	11/11/2008	11040	59	707	194	3	104	1.3	20	68	6.0	149	0	85	19379	-0.79	-2.54	1.33	-0.97	n/a	n/a	11.1	n/a	1/4	1/4	3/4	
Pad 4	35	33	11/11/2008	15100	745	659	334	25	29		0	0	6.0	62	0	85	26850	-0.41	-1.31	0	0	n/a	n/a	n/a	n/a	0/4	0/4	0/4	
	35	33	5/20/2009																							2/4	3/4	0/4	
Pad 4	35	244	11/11/2008	15740	41	805	287	25	78	1	33	82	6.0	79	0	85	27191	-0.42	-2.62	1.20	-1.19	n/a	n/a	17.0	n/a	2/4	3/4	1/4	
Pad 4	35	341	11/11/2008	13720	15	903	231	12	2		0	0	6.0	88	0	85	23840	-0.39	-3.11	0	0	n/a	n/a	n/a	n/a	2/4	2/4	2/4	
	35	341	5/20/2009																							0/4	2/4	2/4	
Pad 4	35	144	11/11/2008	14080	30	927	278	4	89	0.9	34	93	6.0	79	0	85	24643	-0.25	-2.74	1.14	-1.23	n/a	n/a	15.9	n/a	2/4	1/4	1/4	
Pad 4	35	141	11/11/2008	12260	49	902	225	10	31	0.5	24	69	6.0	161	0	85	21563	-0.61	-2.58	1.27	-1.09	n/a	n/a	13.1	n/a	1/4	0/4	1/4	
Pad 4	35	131	11/11/2008	11980	63	683	284	5	108	1.2	38	69	6.0	61	0	85	20903	-0.31	-2.37	1.58	-0.98	n/a	n/a	21.5	n/a	4/4	4/4	1/4	
Pad 4	35	124	5/20/2009	13500	188	829	185	36	10	1	40	28	6.0	163	1	85	23665	-0.83	-2.11	2.02	-0.94	n/a	n/a	23.2	n/a	0/4	3/4	4/4	
Pad 4	35	224	11/11/2008	12860	.42	854	230	44	166	1.8	28	88	6,0	158	0	85	22591	-0.67	-2.66	1.24	-1.08	n/a	n/a	14.9	n/a	0/4	0/4	1/4	
Pad 5	35	221	5/20/2009	18480	213	692	419	63	14	5.5	200	99	6.5	192	1	85	31809	-0.86	-1.79	2.60	-0.46	n/a	n/a	116.9	n/a	0/4	0/4	1/4	



DELTA PETROLEUM CORP.
COLLBRAN, COLORADO

COLLBRAN, COLORADO																		SATURATION INDICES - SCALE POTENTIAL AT LISTED TEMP										PTB				Bacteria 21 Days		
VEGA UNIT PAD/WELL:	Well Name		DATE	Chloride mg/l	Sulfate mg/l	Bicarbonate mg/l	Calcium mg/l	Magnesium mg/l	Iron mg/l	Manganese mg/l	Barium mg/l	Strontium mg/l	pH	CO ₂ IN WATER mg/l	H ₂ S mg/l	°F	TDS ppm	CaCO3	CaSO4	BaSO4	SrSO4	CaCO3	CaSO4	BaSO4	SrSO4	Aerobe:	APB:	SRB:						
Pad 5	35	221	2/6/2009	17040	41	634	377	55	13	0.5	139	0	6.29	246	0	85	29025	-1.04	-2.52	1.78	n/a	n/a	n/a	31.5	n/a	0/4	0/4	0/4						
Pad 5	35	321	5/20/2009	17080	370	680	496	8	8	6.8	123	71	6.5	134	1	85	29683	-0.60	-1.46	2.67	-0.34	n/a	n/a	71.5	n/a	0/4	0/4	1/4						
Pad 5	35	321	2/6/2009	18260	23	634	439	71	6	0.5	5	127	6.23	220	0	85	30951	-0.96	-2.73	0.04	-1.31	n/a	n/a	0.2	n/a	0/4	0/4	0/4						
Pad 5	35	121	5/20/2009	16880	265	715	249	73	252	6.1	96	58	6.5	284	1	85	29445	-1.18	-1.89	2.43	-0.56	n/a	n/a	23.8	n/a	0/4	0/4	1/4						
Pad 5	35	121	2/6/2009	19200	45	659	525	68	115	1.7	233	145	6.13	484	0	85	32826	-1.21	-2.38	1.98	-0.98	n/a	n/a	34.4	n/a	0/4	0/4	0/4						
Pad 5	35	114	5/20/2009	19600	355	562	549	20	72	6.2	179	89	6.5	158	1	85	33744	-0.86	-1.47	2.74	-0.31	n/a	n/a	104.5	n/a	1/4	0/4	0/4						
Pad 5	35	111	5/20/2009	17900	280	755	395	10	47	6.5	154	75	6.5	274	1	85	31080	-0.94	-1.69	2.63	-0.45	n/a	n/a	90.0	n/a	0/4	1/4	4/4						
Pad 5	35	111	2/6/2009	15580	15	586	363	51	13	0.5	157	125	6.09	325	0	85	26591	-1.20	-2.96	1.44	-1.44	n/a	n/a	11.2	n/a	0/4	0/4	0/4						
Pad 5	35	214	5/20/2009	16800	108	612	378	63	87	8.1	122	72	6.5	258	1	85	28788	-1.09	-2.11	2.14	-0.86	n/a	n/a	69.4	n/a	0/4	0/4	2/4						
Pad 5	35	214	2/6/2009	16100	213	610	342	39	9	0.6	95	100	6.03	352	0	85	27731	-1.25	-1.84	2.35	-0.40	n/a	n/a	55.5	n/a	0/4	0/4	0/4						
Pad 5	35	211	5/20/2009	17080	383	459	334	45	65	5.6	82	84	6.5	306	1	85	29425	-1.48	-1.62	47.6	-0.25	n/a	n/a	47.6	n/a	0/4	0/4	2/4						
Pad 5	35	211	2/6/2009	18720	41	610	446	59	14	0.5	149	154	6.23	264	0	85	31829	-1.08	-2.48	1.76	-0.99	n/a	n/a	31.2	n/a	0/4	0/4	0/4						
Pad 11 Bulk #1	109	131424	8/13/2008	9720	38	1318	83	16	7.0	0.0	106	42	6.09	229	.1	86	17965	-0.76	-3.07	1.9	-1.34	n/a	n/a	30.2	n/a	1/4	4/4	4/4						
Pad 11 Bulk #2	9	421	8/13/2008	12420	32	1366	166	1	86.0	1.0	87	48	5.82	216	.1	85	22544	-0.52	-2.9	1.63	-1.44	n/a	n/a	24.9	n/a	1/4	3/4	3/4						
Pad 13 Bulk Unit	3334	4212	8/13/2008	14380	19	1903	186	7	11.0	0.0	67	47	6.27	142	.1	81	26398	-0.13	-3.12	1.22	-1.74	n/a	n/a	14.1	n/a	1/4	2/4	2/5						
Pad 13 Test unit	34	124	8/13/2008	11800	20	781	182	30	30.0	1.0	66	74	6.2	123	.1	77	20613	-0.77	-3.06	1.37	-1.45	n/a	n/a	14.9	n/a	0/4	2/4	4/4						



DELTA PETROLEUM CORP.
COLLBRAN, COLORADO

COLLBRAN, COLORADO																		SATURATION INDICES - SCALE POTENTIAL AT LISTED TEMP								PTB				Bacteria 21 Days		
VEGA UNIT PAD/WELL:	Well Name	DATE	Chloride mg/l	Sulfate mg/l	Bicarbonate mg/l	Calcium mg/l	Magnesium mg/l	Iron mg/l	Manganese mg/l	Barium mg/l	Strontium mg/l	pH	CO ₂ IN WATER mg/l	H ₂ S mg/l	°F	TDS ppm	CaCO3	CaSO4	BaSO4	SrSO4	CaCO3	CaSO4	BaSO4	SrSO4	Aerobe:	APB:	SRB:					
Pad 14	34 224	8/14/2008	15580	51	976	242	2	22	0.2	47	34	6.16	93	.1	77	27135	-0.48	-2.6	1.49	-1.48	n/a	n/a	25.6	n/a	0/4	1/4	2/4					
Pad 14	34 331	8/14/2008	17460	48	786	302	0	21	.2	65	34	6.85	140	.1	75	29972	-0.82	-2.56	1.56	-1.55	n/a	n/a	32.4	n/a	1/4	2/4	2/4					
Pad 14	34 411	8/14/2008												.1	77					n/a	n/a		n/a									
Pad 14	34 421	8/14/2008	17160	38	639	326	24	27	.3	62	43	6.36	156	.1	78	29244	-0.98	-2.62	1.43	-1.54	n/a	n/a	26.6	n/a	1/4	4/4	4/4					
Pad 14	34 424	8/14/2008	16920	27	566	330	3	18	.2	80	41	6.92	104	.1	75	28752	-0.92	-2.76	1.42	-1.71	n/a	n/a	20.4	n/a	0/4	1/4	2/4					
Pad 14	34 311 34 314	8/14/2008	19260	59	522	663	8	34	0.5	109	44	6.37	104	.1	78	32579	-0.72	-2.16	1.80	-1.39	n/a	n/a	43.9	n/a	0/4	1/4	4/4					
Pad 14	34 321	5/20/2009	17700	300	675	301	59	9	6.5	92	71	6.5	154	1	85	30559	-0.91	-1.77	2.44	-0.44	n/a	n/a	53.7	n/a	0/4	0/4	2/4					
Pad 14 Bulk #1	34 331 34 324	8/14/2008	17460	48	786	302	0	21	.2	65	34	6.85	140	.1	77	29972	-0.82	-2.56	1.56	-1.55	n/a	n/a	32.4	n/a	1/4	2/4	2/4					
Pad 14 Bulk #2	34 414 34 424	8/14/2008	16920	27	566	330	3	18	.2	80	41	6.92	104	.1	75	28752	-0.92	-2.76	1.42	-1.71	n/a	n/a	20.4	n/a	0/4	1/4	2/4					
Pad 14 Test Unit	34 431	8/14/2008	15900	41	795	26	26	17	0.2	155	73	6.97	320	.1	76	27494	-2.17	-3.65	1.93	-1.24	n/a	n/a	33.5	n/a	1/4	4/4	4/4					
	34 431	5/20/2009																							1/4	4/4	4/4					
Pad 17	4 234	8/13/2008	11400	15	991	513	18	65	0.9	35	25	6.27	217	.1	87	20188	-0.25	-2.75	0.91	-2.05	n/a	n/a	8.8	n/a	0/4	2/4	0/4					
Pad 17	4 241	8/13/2008	12260	33	1064	166	0	38	0.6	41	23	6.12	251	.1	89	21776	-0.75	-2.87	1.32	-1.73	n/a	n/a	20.0	n/a	0/4	0/4	0/4					
Pad 17	4 331	8/13/2008	9220	38	1259	224	3	36.0	0.6	36	26	6.36	322	.1	85	17025	-0.49	-2.64	1.46	-1.54	n/a	n/a	19.3	n/a	0/4	1/4	0/4					

COLLBRAN, COLORADO				Chloride mg/l	Sulfate mg/l	Bicarbonate mg/l	Calcium mg/l	Magnesium mg/l	Iron mg/l	Manganese mg/l	Barium mg/l	Strontium mg/l	pH	CO ₂ IN WATER mg/l	H ₂ S mg/l	°F	TDS ppm	SATURATION INDICES - SCALE POTENTIAL AT LISTED TEMP				PTB				Bacteria 21 Days		
VEGA UNIT PAD/WELL:	Well Name	DATE	CaCO3															CaSO4	BaSO4	SrSO4	CaCO3	CaSO4	BaSO4	SrSO4	Aerobe:	APB:	SRB:	
NORTH VEGA UNIT																												
Pad 1b	27	241	8/14/2008	18540	25	766	327	20	54.0	0.8	67	43	6.27	298	.1	83	31708	-1.09	-2.82	1.22	-1.74	n/a	n/a	18.0	n/a	1/4	4/4	4/4
Pad 1b	27	331	8/14/2008	15880	22	771	382	41	55.0	1.1	83	43	6.22	226	.1	83	27310	-0.81	-2.77	1.33	-1.75	n/a	n/a	16.1	n/a	0/4	4/4	4/4
Pad 1b	27	341	8/14/2008	17260	21	722	385	8	53.0	0.8	78	44	6.26	242	.1	82	29540	-0.95	-2.81	1.25	-1.79	n/a	n/a	15.4	n/a	1/4	4/4	4/4
Pad 1b	27	344	8/14/2008	16600	28	678	331	34	40.0	0.4	41	38	6.21	238	.1	82	28346	-1.04	-2.74	1.12	-1.71	n/a	n/a	16.9	n/a	0/4	4/4	4/4
Pad 1b	27	441	8/14/2008	18640	10	742	443	95	23.0	0.5	105	54	6.31	256	.1	82	31733	-0.93	-3.1	1.01	-2.06	n/a	n/a	7.0	n/a	1/4	4/4	4/4
Pad 1b	27	444	8/14/2008	16720	25	805	340	43	32.0	0.3	74	41	6.3	278	.1	82	28721	-0.96	-2.78	1.31	-1.73	n/a	n/a	18.3	n/a	3/4	4/4	4/4
Pad 1b	27	234	5/20/2009	13700	155	606	226	24	348	6.5	76	52	6.0	288	1	85	24017	-1.26	-2.11	2.21	-0.76	n/a	n/a	44.3	n/a	1/4	3/4	4/4
Pad 1d	27	314	8/14/2008	15600	26	1454	340	25	60.0	0.8	85	41	6.55	233	.1	76	27821	-0.39	-2.76	1.45	-1.70	n/a	n/a	19.6	n/a	0/4	1/4	3/4
Pad 1d	27	321	8/14/2008	18060	25	893	459	14	70.0	1.1	117	51	6.23	354	.1	78	31131	-0.91	-2.67	1.5	-1.67	n/a	n/a	19.0	n/a	0/4	2/4	2/4
Pad 1d	27	324	8/14/2008	14640	16	869	311	2	21.0	0.2	83	42	6.45	219	.1	79	25403	-0.79	-2.98	1.25	-1.87	n/a	n/a	11.9	n/a	1/4	1/4	4/4
	27	324	5/20/2009																						1/4	2/4	3/4	
Pad 1d	27	334	8/14/2008	15400	18	922	330	35	23.0	0.2	83	41	6.43	286	.1	77	26701	-0.87	-2.92	1.29	-1.85	n/a	n/a	13.3	n/a	0/4	1/4	3/4
Pad 1d	27	421	8/14/2008	11060	15	1039	178	28	33.0	0.4	23	21	6.56	240	.1	77	19692	-0.79	-3.18	0.82	-2.10	n/a	n/a	7.8	n/a	0/4	1/4	2/4
Pad 1d	27	424	8/14/2008	16600	18	708	471	17	25.0	0.3	135	57	6.2	245	.1	78	28424	-0.90	-2.79	1.45	-1.74	n/a	n/a	13.5	n/a	0/4	1/4	3/4
	27	424	5/20/2009																						0/4	3/4	3/4	
Pad 1d	27	431	8/14/2008	19180	25	830	527	20	72.0	1.1	129	61	6.1	349	.1	78	32890	-0.95	-2.63	1.5	-1.62	n/a	n/a	19.0	n/a	1/4	2/4	2/4
Pad 1d	27	434	8/14/2008	17360	17	708	451	58	23.0	0.2	128	54	6.25	259	.1	79	29634	-0.96	-2.84	1.38	-1.80	n/a	n/a	12.7	n/a	0/4	0/4	3/4
Pad 3A	26	121	8/14/2008	18180	38	639	273	54	0.0	0.2	123	58	6.86	240	.1	79	30927	-1.25	-2.71	1.70	-1.43	n/a	n/a	29.6	n/a	2/4	1/4	3/4
Pad 3A	26	131	8/14/2008	17580	63	717	353	22	6.0	0.0	405	117	7.19	120	.1	78	30321	-0.74	-2.38	2.44	-0.9	n/a	n/a	49.6	n/a	2/4	2/4	3/4
Pad 3A	26	134	8/14/2008	18880	39	781	360	10	31.0	0.2	92	43	7.9	152	.1	78	32308	-0.80	-2.59	1.56	-1.57	n/a	n/a	29.7	n/a	4/4	3/4	4/4
Pad 3A	26	141	8/14/2008	18500	46	600	428	12	33.0	0.3	97	48	6.05	148	.1	79	31438	-0.91	-2.44	1.67	-1.44	n/a	n/a	34.8	n/a	3/4	3/4	3/4
Pad 3A	26	221	8/14/2008	15740	30	673	373	31	34.0	0.3	92	44	6.81	140	.1	78	26952	-0.78	-2.65	1.53	-1.61	n/a	n/a	22.6	n/a	3/4	2/4	3/4
NORTH VEGA UNIT																												
Pad 3A	26	124	5/20/2009	17140	213	659	339	10	29	6.6	114	66	6.5	114	1	85	29555	-0.73	-1.86	2.41	-0.73	n/a	n/a	66.6	n/a	0/4	2/4	2/4
Pad 3A	26	224	8/14/2008	18300	52	503	436	37	38.0	0.4	107	51	7.24	136	.1	78	30974	-1.03	-2.38	1.76	-1.36	n/a	n/a	39.4	n/a	0/4	0/4	3/4
Pad 3A	26	141	5/20/2009																						2/4	1/4	4/4	
Pad 3A	26	231	8/14/2008	21700	58	693	566	119	26.0	0.3	159	63	7.32	104	.1	78	36785	-0.60	-2.27	1.89	-1.29	n/a	n/a	44.4	n/a	2/4	3/4	4/4
	26	231	5/20/2009																						1/4	1/4	2/4	
Pad 3A	26	241	8/14/2008	26940	59	722	1150	20	42.0	0.6	350	121	6.31	206	.1	77	45638	-0.67	-2.02	2.13	-1.09	n/a	n/a	45.2	n/a	2/4	2/4	3/4



DELTA PETROLEUM CORP.

COLLBRAN, COLORADO

VEGA UNIT PAD/WELL:			Well Name	DATE	Chloride mg/l	Sulfate mg/l	Bicarbonate mg/l	Calcium mg/l	Magnesium mg/l	Iron mg/l	Manganese mg/l	Barium mg/l	Strontium mg/l	pH	CO ₂ IN WATER mg/l	H ₂ S mg/l	°F	TDS ppm	SATURATION INDICES - SCALE POTENTIAL AT LISTED TEMP				PTB				Bacteria 21 Days		
																			CaCO3	CaSO4	BaSO4	SrSO4	CaCO3	CaSO4	BaSO4	SrSO4	Aerobe:	APB:	SRB:
Pad 3b	26	331	8/14/2008	25300	59	708	853	66	23.0	0.2	234	83	6.45	144	.1	83	42803	-0.57	-2.13	1.96	-1.22	n/a	n/a	45.3	n/a	2/4	2/4	4/4	
Pad 3b	26	334	8/14/2008	23700	58	620	788	82	10.0	.7	1189	270	6.68	92	.1	82	40749	0.50	-2.17	2.68	-0.7	n/a	n/a	43.6	n/a	1/4	1/4	4/4	
Pad 3b	26	341	8/14/2008	20520	63	693	610	41	29.0	0.3	168	81	6.82	86	.1	82	34928	-0.42	-2.19	1.96	-1.12	n/a	n/a	48.3	n/a	1/4	1/4	4/4	
Pad 3b	26	344	8/14/2008	23380	62	439	847	67	32.0	0.4	266	89	6.57	96	.1	82	39305	-0.78	-2.09	2.08	-1.14	n/a	n/a	47.3	n/a	4/4	4/4	4/4	
Pad 3b	26	244	5/20/2009	14300	188	797	338	13	16	1.3	98	60	6.5	166	1	85	24997	-0.63	-1.87	2.37	-0.64	n/a	n/a	57.2	n/a	1/4	3/4	4/4	
Pad 3b	26	324	5/20/2009	20020	30	808	756	37	18	3.4	89	127	6.5	384	1	85	34153	-0.80	-2.42	1.35	-1.24	n/a	n/a	21.3	n/a	1/4	1/4	4/4	
Pad 3b	35	311	8/14/2008	23960	60	464	790	59	30.0	0.30	188	81	6.72	94	.1	83	40251	-0.75	-2.14	1.91	-1.20	n/a	n/a	45.8	n/a	2/4	2/4	3/4	
Pad 4a	26	211	5/20/2009	18000	338	771	427	51	93	5.3	176	107	6.5	484	1	85	31387	-1.15	-1.58	2.75	-0.23	n/a	n/a	102.7	n/a	1/4	3/4	4/4	
Pad 4a	23	244	5/20/2009	16620	265	693	285	32	79	3.9	131	69	6.5	196	1	85	28873	-0.98	-1.83	2.57	-0.48	n/a	n/a	76.5	n/a	0/4	4/4	4/4	
Pad 4a	26	311	5/20/2009	15300	280	683	315	13	8	3.2	104	53	6.0	188	1	85	26621	-0.89	-1.75	2.54	-0.54	n/a	n/a	60.6	n/a	4/4	1/4	0/4	
Pad 4a	26	111	5/20/2009	16100	370	793	315	69	74	5	178	93	6.5	342	1	85	28309	-1.04	-1.65	2.86	-0.20	n/a	n/a	103.4	n/a	3/4	2/4	4/4	
Pad 4a	23	344	5/20/2009	18460	425	809	371	43	112	4.5	137	95	6.0	276	1	85	32329	-0.93	-1.55	2.74	-0.18	n/a	n/a	79.6	n/a	2/4	0/4	3/4	
Pad 4a	23	241	5/20/2009	15320	338	748	208	25	68	4.4	93	83	6.0	226	1	85	26901	-1.07	-1.84	2.57	-0.26	n/a	n/a	54	n/a	2/4	2/4	1/4	
Pad 4a	23	341	5/20/2009	19500	410	987	364	51	36	4.4	86	61	6.5	390	1	85	34131	-0.92	-1.56	2.49	-0.41	n/a	n/a	50	n/a	2/4	2/4	2/4	
Pad 4a	23	144	5/20/2009	17200	395	898	224	177	264	5.6	193	94	6.0	304	1	85	30421	-1.07	-1.79	2.88	-0.20	n/a	n/a	112.3	n/a	1/4	2/4	3/4	
Pad 4a	23	334	5/20/2009	15000	245	809	284	42	220	6.8	161	93	6.5	274	1	85	26496	-0.94	-1.85	2.68	-0.35	n/a	n/a	93.9	n/a	1/4	1/4	4/4	
Pad 4a	23	141	5/20/2009	17480	338	752	283	50	27	4.2	129	70	6.0	268	1	85	30411	-1.07	-1.74	2.65	-0.39	n/a	n/a	75.2	n/a	2/4	1/4	2/4	
Pad 4a	23	331	5/20/2009	16660	155	800	411	2	26	3.4	171	80	6.0	306	1	85	28910	-0.89	-1.91	2.45	-0.65	n/a	n/a	99.1	n/a	1/4	4/4	3/4	
Pad 4a	23	234	5/20/2009	16880	188	688	320	63	9	3.6	145	85	6.0	310	1	85	29095	-1.14	-1.94	2.46	0.54	n/a	n/a	84.7	n/a	2/4	0/4	3/4	
Pad 4a	23	324	5/20/2009	17020	370	732	284	12	98	4.1	103	58	6.0	338	1	85	29754	-1.18	-1.69	2.60	-0.42	n/a	n/a	59.9	n/a	2/4	1/4	2/4	
Pad 4a	23	231	5/20/2009	18380	632	850	401	26	18	4.7	135	89	6.0	304	1	85	32472	-0.91	-1.35	2.89	-0.05	n/a	n/a	77.8	n/a	3/4	1/4	2/4	
Pad 5a	23	414	5/20/2009	14780	19	716	360	36	22	5.1	110	113	6.0	354	1	85	25443	-1.04	-2.85	1.41	-1.37	n/a	n/a	14.1	n/a	2/4	3/4	2/4	
Pad 5a	24	114	5/20/2009	17440	38	689	466	26	35	5.1	122	122	6.0	426	1	85	29837	-1.12	-2.47	1.68	-1.09	n/a	n/a	28.7	n/a	1/4	2/4	2/4	
Pad 5a	23	411	5/20/2009	17100	23	703	727	9	16	5.4	133	176	6.0	424	1	85	29265	-0.90	-2.51	1.49	-1.16	n/a	n/a	16.6	n/a	1/4	2/4	3/4	
Pad 5a	24	111	5/20/2009	15260	338	643	455	14	25	5.1	124	124	6.0	402	1	85	26628	-1.11	-1.52	2.68	-0.10	n/a	n/a	72.1	n/a	1/4	1/4	4/4	



DELTA PETROLEUM CORP.

COLLBRAN, COLORADO

COLLBRAN, COLORADO																		SATURATION INDICES - SCALE POTENTIAL AT LISTED TEMP										PTB				Bacteria 21 Days		
VEGA UNIT PAD/WELL:	Well Name		DATE	Chloride mg/l	Sulfate mg/l	Bicarbonate mg/l	Calcium mg/l	Magnesium mg/l	Iron mg/l	Manganese mg/l	Barium mg/l	Strontium mg/l	pH	CO ₂ IN WATER mg/l	H ₂ S mg/l	°F	TDS ppm	CaCO3	CaSO4	BaSO4	SrSO4	CaCO3	CaSO4	BaSO4	SrSO4	Aerobe:	APB:	SRB:						
Pad 5a	23	421	5/20/2009	16260	265	826	301	36	112	4.9	115	104	6.00	380	1	85	28495	-1.08	-1.81	2.52	-0.30	n/a	n/a	67.1	n/a	0/4	3/4	4/4						
Pad 5a	24	121	5/20/2009	15680	188	608	489	1	29	5.4	209	141	6.00	398	1	85	27126	-1.14	-1.75	2.64	-0.31	n/a	n/a	121.3	n/a	1/4	1/4	3/4						
Pad 5a	24	124	5/20/2009	18340	25	721	605	24	22	5.3	107	153	6.0	360	1	85	31319	-0.93	-2.56	1.40	-1.20	n/a	n/a	18.2	n/a	1/4	3/4	2/4						
Pad 5b	23	434	5/20/2009	20820	21	736	338	33	26	2	92	83	6.0	218	1	85	35414	-1.01	-2.91	1.22	-1.57	n/a	n/a	15.6	n/a	1/4	3/4	4/4						
Pad 5b	23	441	5/20/2009	13720	370	751	446	1	22	1.6	135	140	6.0	170	1	85	24311	-0.56	-1.47	2.80	0.02	n/a	n/a	78.1	3.1	0/4	1/4	4/4						
Pad 5b	23	431	5/20/2009	15400	14	745	290	78	19	1.8	72	71	6.0	208	1	85	26422	-0.89	-3.08	1.08	-1.71	n/a	n/a	9.8	n/a	0/4	1/4	4/4						
Pad 5b	23	444	5/20/2009	15280	20	595	523	11	4	1.9	5	58	6.5	204	1	85	25986	-0.81	-2.67	0.08	-1.65	n/a	n/a	0.4	n/a	2/4	1/4	2/4						
Pad 5b	23	424	5/20/2009	15620	383	732	394	24	50	1.6	131	146	6.5	252	1	85	27451	-0.87	-1.53	2.75	0.01	n/a	n/a	76	1.6	2/4	2/4	4/4						
Pad 5b	24	144	5/20/2009	16760	20	620	491	10	10	1.6	15	79	6.0	168	1	85	28489	-0.77	-2.72	0.51	-1.54	n/a	n/a	4.9	n/a	1/4	2/4	4/4						
Pad 5b	24	131	5/20/2009	17140	30	616	342	26	8	3.1	17	66	6.0	212	1	85	29125	-1.04	-2.70	0.74	-1.44	n/a	n/a	7.4	n/a	0/4	1/4	3/4						
Pad 5b	24	141	5/20/2009	17400	17	600	445	48	15	2.4	116	124	6.0	190	1	85	29578	-0.91	-2.84	1.31	-1.43	n/a	n/a	12.5	n/a	1/4	2/4	4/4						
Pad 5b	24	134	5/20/2009	16580	22	628	384	38	13	1.6	106	122	6.0	180	1	85	28281	-0.89	-2.78	1.41	-1.31	n/a	n/a	16.4	n/a	1/4	1/4	2/4						



Water Analysis Report

25-Aug-08
Date Sampled : 14-Aug-08
Date Received : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : North Vega
Lease : Pad ~~3A~~ 14

Location : Well No. 34-331/34-324

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 302 mg/l
Magnesium : 0 mg/l
Barium : 267 mg/l
Strontium : 93 mg/l
Iron : 9.0 mg/l
Manganese : 0.0 mg/l
Sodium : 11158 mg/l

A N I O N S

Chloride : 17,460 mg/l
Carbonate : 0 mg/l
Bicarbonate : 786 mg/l
Sulfate : 48 mg/l

pH (field) : 6.85
Temperature : 75 degrees F
Ionic Strength : 0.51

Specific Gravity : 1.020 grams/ml
Total Dissolved Solids : 30,123 ppm
CO2 in Water : 140 mg/l
Mole % CO2 in Gas : mole %

Conductivity : micromho/centimeters

H2S in Water : 0.1 mg/l

Ammonia : ppm

Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.82	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.57	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.36	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.14	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.09	Calcite PTB @ 160 F :	24.8
Calcite (CaCO3) SI @ 180 F :	0.32	Calcite PTB @ 180 F :	78.4
Calcite (CaCO3) SI @ 200 F :	0.56	Calcite PTB @ 200 F :	125.8
Gypsum (CaSO4) SI :	-2.56	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.17	Barite PTB :	38.4
Celestite (SrSO4) SI :	-1.12	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 14

Location : Well No. 34-414/34-424 /

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : bulk #2 separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 330 mg/l
Magnesium : 3 mg/l
Barium : 342 mg/l
Strontium : 108 mg/l
Iron : 4.0 mg/l
Manganese : 0.0 mg/l
Sodium : 10644 mg/l

A N I O N S

Chloride : 16,920 mg/l
Carbonate : 0 mg/l
Bicarbonate : 566 mg/l
Sulfate : 27 mg/l

pH (field) :	6.92	Specific Gravity :	1.020 grams/ml
Temperature :	75 degrees F	Total Dissolved Solids :	28,944 ppm
Ionic Strength :	0.49	CO2 in Water :	104 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.92	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.67	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.45	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.24	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.01	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	0.22	Calcite PTB @ 180 F :	48.5
Calcite (CaCO3) SI @ 200 F :	0.46	Calcite PTB @ 200 F :	92.4
Gypsum (CaSO4) SI :	-2.77	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.04	Barite PTB :	21.3
Celestite (SrSO4) SI :	-1.29	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 14

Location : Well No. 34-431

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : test unit separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 26 mg/l
Magnesium : 26 mg/l
Barium : 155 mg/l
Strontium : 73 mg/l
Iron : 17.0 mg/l
Manganese : 0.2 mg/l
Sodium : 10461 mg/l

A N I O N S

Chloride : 15,900 mg/l
Carbonate : 0 mg/l
Bicarbonate : 795 mg/l
Sulfate : 41 mg/l

pH (field) :	6.97	Specific Gravity :	1.015 grams/ml
Temperature :	76 degrees F	Total Dissolved Solids :	27,494 ppm
Ionic Strength :	0.46	CO2 in Water :	320 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-2.17	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-1.93	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-1.72	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-1.50	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-1.27	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-1.04	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	-0.80	Calcite PTB @ 200 F :	N/A
Gypsum (CaSO4) SI :	-3.65	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.93	Barite PTB :	33.5
Celestite (SrSO4) SI :	-1.24	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 14

Location : Well No. 34-224

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 242 mg/l
Magnesium : 2 mg/l
Barium : 200 mg/l
Strontium : 89 mg/l
Iron : 4.0 mg/l
Manganese : 0.0 mg/l
Sodium : 10101 mg/l

A N I O N S

Chloride : 15,580 mg/l
Carbonate : 0 mg/l
Bicarbonate : 976 mg/l
Sulfate : 51 mg/l

pH (field) :	6.16	Specific Gravity :	1.015 grams/ml
Temperature :	77 degrees F	Total Dissolved Solids :	27,245 ppm
Ionic Strength :	0.46	CO2 in Water :	93 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.48	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.25	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.03	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.18	Calcite PTB @ 140 F :	46.3
Calcite (CaCO3) SI @ 160 F :	0.41	Calcite PTB @ 160 F :	92.6
Calcite (CaCO3) SI @ 180 F :	0.64	Calcite PTB @ 180 F :	129.0
Calcite (CaCO3) SI @ 200 F :	0.88	Calcite PTB @ 200 F :	157.9
Gypsum (CaSO4) SI :	-2.60	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.12	Barite PTB :	40.8
Celestite (SrSO4) SI :	-1.07	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 14

Location : Well No. 34-311/34-314

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 663 mg/l
Magnesium : 8 mg/l
Barium : 447 mg/l
Strontium : 118 mg/l
Iron : 9.0 mg/l
Manganese : 0.4 mg/l
Sodium : 11728 mg/l

A N I O N S

Chloride : 19,260 mg/l
Carbonate : 0 mg/l
Bicarbonate : 522 mg/l
Sulfate : 59 mg/l

pH (field) :	6.37	Specific Gravity :	1.005 grams/ml
Temperature :	78 degrees F	Total Dissolved Solids :	32,814 ppm
Ionic Strength :	0.55	CO2 in Water :	104 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.72	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.49	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.28	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.06	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.16	Calcite PTB @ 160 F :	42.2
Calcite (CaCO3) SI @ 180 F :	0.39	Calcite PTB @ 180 F :	91.3
Calcite (CaCO3) SI @ 200 F :	0.63	Calcite PTB @ 200 F :	133.5
Gypsum (CaSO4) SI :	-2.17	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.41	Barite PTB :	45.2
Celestite (SrSO4) SI :	-0.97	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 14

Location : Well No. 34-421

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 326 mg/l
Magnesium : 24 mg/l
Barium : 272 mg/l
Strontium : 118 mg/l
Iron : 8.0 mg/l
Manganese : 0.2 mg/l
Sodium : 10815 mg/l

A N I O N S

Chloride : 17,160 mg/l
Carbonate : 0 mg/l
Bicarbonate : 639 mg/l
Sulfate : 38 mg/l

pH (field) :	6.36	Specific Gravity :	1.020 grams/ml
Temperature :	78 degrees F	Total Dissolved Solids :	29,400 ppm
Ionic Strength :	0.50	CO2 in Water :	156 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.98	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.75	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.54	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.32	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.10	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	0.13	Calcite PTB @ 180 F :	31.2
Calcite (CaCO3) SI @ 200 F :	0.37	Calcite PTB @ 200 F :	82.4
Gypsum (CaSO4) SI :	-2.63	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.07	Barite PTB :	29.9
Celestite (SrSO4) SI :	-1.11	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 2

Location : Well No. 34-14

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : test separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium :	139	mg/l
Magnesium :	6	mg/l
Barium :	27	mg/l
Strontium :	21	mg/l
Iron :	3.0	mg/l
Manganese :	0.0	mg/l
Sodium :	9566	mg/l

ANIONS

Chloride :	14,200	mg/l
Carbonate :	0	mg/l
Bicarbonate :	1,420	mg/l
Sulfate :	27	mg/l

pH (field) :	6.09		Specific Gravity :	1.010	grams/ml
Temperature :	84	degrees F	Total Dissolved Solids :	25,409	ppm
Ionic Strength :	0.42		CO2 in Water :	127	mg/l
			Mole % CO2 in Gas:		mole %
Conductivity:		micromho/centimeters	H2S in Water :	0.1	mg/l
Ammonia :		ppm	Dissolved Oxygen :		ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.41	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.25	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.04	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.18	Calcite PTB @ 140 F :	34.2
Calcite (CaCO3) SI @ 160 F :	0.41	Calcite PTB @ 160 F :	65.5
Calcite (CaCO3) SI @ 180 F :	0.64	Calcite PTB @ 180 F :	86.4
Calcite (CaCO3) SI @ 200 F :	0.88	Calcite PTB @ 200 F :	100.7
Gypsum (CaSO4) SI :	-3.08	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.00	Barite PTB :	12.4
Celestite (SrSO4) SI :	-1.91	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 13

Location : Well No. 33-42

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : bul separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 186 mg/l
Magnesium : 7 mg/l
Barium : 67 mg/l
Strontium : 47 mg/l
Iron : 11.0 mg/l
Manganese : 0.0 mg/l
Sodium : 9778 mg/l

A N I O N S

Chloride : 14,380 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,903 mg/l
Sulfate : 19 mg/l

pH (field) :	6.27	Specific Gravity :	1.015 grams/ml
Temperature :	81 degrees F	Total Dissolved Solids :	26,398 ppm
Ionic Strength :	0.44	CO2 in Water :	142 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.13	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	0.06	Calcite PTB @ 100 F :	17.8
Calcite (CaCO3) SI @ 120 F :	0.27	Calcite PTB @ 120 F :	63.5
Calcite (CaCO3) SI @ 140 F :	0.49	Calcite PTB @ 140 F :	99.1
Calcite (CaCO3) SI @ 160 F :	0.71	Calcite PTB @ 160 F :	122.6
Calcite (CaCO3) SI @ 180 F :	0.95	Calcite PTB @ 180 F :	138.5
Calcite (CaCO3) SI @ 200 F :	1.18	Calcite PTB @ 200 F :	148.3
Gypsum (CaSO4) SI :	-3.12	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.22	Barite PTB :	14.1
Celestite (SrSO4) SI :	-1.74	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 17

Location : Well No. 04-241

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 166 mg/l
Magnesium : 0 mg/l
Barium : 191 mg/l
Strontium : 64 mg/l
Iron : 67.0 mg/l
Manganese : 1.0 mg/l
Sodium : 8080 mg/l

ANIONS

Chloride : 12,260 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,064 mg/l
Sulfate : 33 mg/l

pH (field) :	6.12	Specific Gravity :	1.010 grams/ml
Temperature :	89 degrees F	Total Dissolved Solids :	21,925 ppm
Ionic Strength :	0.36	CO2 in Water :	251 mg/l
Conductivity:	micromho/centimeters	Mole % CO2 in Gas:	mole %
Ammonia :	ppm	H2S in Water :	0.1 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.75	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.63	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.42	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.21	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.02	Calcite PTB @ 160 F :	4.5
Calcite (CaCO3) SI @ 180 F :	0.25	Calcite PTB @ 180 F :	48.8
Calcite (CaCO3) SI @ 200 F :	0.49	Calcite PTB @ 200 F :	82.8
Gypsum (CaSO4) SI :	-2.88	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.98	Barite PTB :	26.2
Celestite (SrSO4) SI :	-1.29	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 17

Location : Well No. 04-234

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

CATIONS

Calcium : 513 mg/l
Magnesium : 18 mg/l
Barium : 196 mg/l
Strontium : 54 mg/l
Iron : 21.0 mg/l
Manganese : 0.1 mg/l
Sodium : 7057 mg/l

ANIONS

Chloride : 11,400 mg/l
Carbonate : 0 mg/l
Bicarbonate : 991 mg/l
Sulfate : 15 mg/l

pH (field) :	6.27	Specific Gravity :	1.010 grams/ml
Temperature :	87 degrees F	Total Dissolved Solids :	20,265 ppm
Ionic Strength :	0.34	CO2 in Water :	217 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.25	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.11	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.10	Calcite PTB @ 120 F :	38.5
Calcite (CaCO3) SI @ 140 F :	0.32	Calcite PTB @ 140 F :	112.1
Calcite (CaCO3) SI @ 160 F :	0.54	Calcite PTB @ 160 F :	177.0
Calcite (CaCO3) SI @ 180 F :	0.77	Calcite PTB @ 180 F :	231.3
Calcite (CaCO3) SI @ 200 F :	1.01	Calcite PTB @ 200 F :	278.6
Gypsum (CaSO4) SI :	-2.76	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.65	Barite PTB :	10.8
Celestite (SrSO4) SI :	-1.72	Celestite PTB :	N/A

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Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 17

Location : Well No. 04-331

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 224 mg/l
Magnesium : 3 mg/l
Barium : 197 mg/l
Strontium : 67 mg/l
Iron : 74.0 mg/l
Manganese : 0.7 mg/l
Sodium : 6108 mg/l

A N I O N S

Chloride : 9,220 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,259 mg/l
Sulfate : 38 mg/l

pH (field) :	6.36	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	17,190 ppm
Ionic Strength :	0.28	CO2 in Water :	322 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.49	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.33	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.12	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.10	Calcite PTB @ 140 F :	27.5
Calcite (CaCO3) SI @ 160 F :	0.32	Calcite PTB @ 160 F :	78.0
Calcite (CaCO3) SI @ 180 F :	0.55	Calcite PTB @ 180 F :	117.8
Calcite (CaCO3) SI @ 200 F :	0.79	Calcite PTB @ 200 F :	146.1
Gypsum (CaSO4) SI :	-2.65	Gypsum PTB :	N/A
Barite (BaSO4) SI :	2.18	Barite PTB :	29.2
Celestite (SrSO4) SI :	-1.14	Celestite PTB :	N/A

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Vernal District Technical Services



Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 11

Location : Well No. 10-131

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : bulk #1 separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 83 mg/l
Magnesium : 16 mg/l
Barium : 106 mg/l
Strontium : 42 mg/l
Iron : 7.0 mg/l
Manganese : 0.0 mg/l
Sodium : 6635 mg/l

A N I O N S

Chloride : 9,720 mg/l
Carbonate : 0 mg/l
Bicarbonate : 1,318 mg/l
Sulfate : 38 mg/l

pH (field) :	6.09	Specific Gravity :	1.005 grams/ml
Temperature :	86 degrees F	Total Dissolved Solids :	17,965 ppm
Ionic Strength :	0.30	CO2 in Water :	229 mg/l
		Mole % CO2 in Gas:	mole %
Conductivity:	micromho/centimeters	H2S in Water :	0.1 mg/l
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.76	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.61	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.40	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.18	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.04	Calcite PTB @ 160 F :	5.7
Calcite (CaCO3) SI @ 180 F :	0.27	Calcite PTB @ 180 F :	30.6
Calcite (CaCO3) SI @ 200 F :	0.51	Calcite PTB @ 200 F :	47.1
Gypsum (CaSO4) SI :	-3.07	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.90	Barite PTB :	30.2
Celestite (SrSO4) SI :	-1.34	Celestite PTB :	N/A

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Champion Technologies, Inc.
Vernal District Technical Services



Water Analysis Report

Date Sampled : 25-Aug-08
Date Received : 14-Aug-08
Date Reported : 18-Aug-08
Date Reported : 25-Aug-08

Delta Petroleum

Field : Vega
Lease : Pad 3

Location : Well No. 10-23

Attention :

cc1 :

cc2 :

cc3 :

Sample Point : bulk separator

Salesman : Matt Merkel

Analyst : Karen Hawkins Allen

Comments : Metals analyzed by AA.

C A T I O N S

Calcium : 188 mg/l
Magnesium : 9 mg/l
Barium : 206 mg/l
Strontium : 32 mg/l
Iron : 8.0 mg/l
Manganese : 0.0 mg/l
Sodium : 8437 mg/l

A N I O N S

Chloride : 12,920 mg/l
Carbonate : 0 mg/l
Bicarbonate : 976 mg/l
Sulfate : 18 mg/l

pH (field) :	6.05	Specific Gravity :	1.010 grams/ml
Temperature :	85 degrees F	Total Dissolved Solids :	22,794 ppm
Ionic Strength :	0.38	CO2 in Water :	32 mg/l
Conductivity :	micromho/centimeters	Mole % CO2 in Gas :	mole %
Ammonia :	ppm	H2S in Water :	0.4 mg/l
		Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	0.06	Calcite PTB :	12.8
Calcite (CaCO3) SI @ 100 F :	0.21	Calcite PTB @ 100 F :	45.0
Calcite (CaCO3) SI @ 120 F :	0.42	Calcite PTB @ 120 F :	79.6
Calcite (CaCO3) SI @ 140 F :	0.64	Calcite PTB @ 140 F :	106.6
Calcite (CaCO3) SI @ 160 F :	0.86	Calcite PTB @ 160 F :	126.5
Calcite (CaCO3) SI @ 180 F :	1.10	Calcite PTB @ 180 F :	141.3
Calcite (CaCO3) SI @ 200 F :	1.33	Calcite PTB @ 200 F :	149.9
Gypsum (CaSO4) SI :	-3.11	Gypsum PTB :	N/A
Barite (BaSO4) SI :	1.74	Barite PTB :	14.2
Celestite (SrSO4) SI :	-1.88	Celestite PTB :	N/A

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