ROCK QUEEN UNIT
Data on the Proposed Operation (VII), the Geologic Data (VIII), the Stimulation Program (IX), and the Fresh Water Wells (XI)

March, 2009

Lease Location: All or portions of Sec. 22 through 27, 34 through 36, T13S, R31E, Chaves County, NM, and all or portions of Sec. 19, 30, and 31, T13S, R32E, Lea County, NM.

Operator: Celero Energy II, LP

VII. Data on the Proposed Operation:

1. The proposed average water injection rate is 600 BWPD per well and the proposed maximum injection rate is 1500 BWPD per well. Assuming a total injection volume of 2.0 HCPV with 55% of that being the water injected, the total estimated volume of water injected is 34 MMB of water.

   The proposed average CO2 injection rate is 1250 MCFPD per well and the proposed maximum injection rate is 3000 MCFPD per well. Assuming a total injection volume of 2.0 HCPV with 45% of that being the CO2 injected, the total estimated volume of CO2 injected is 63 BCF of CO2.

   In this tertiary recovery project, Celero plans to flood the Queen reservoir using a "water alternating gas (CO2)" (WAG) method. We are planning to use a tapered WAG flooding schedule initially and adjust it as needed depending on how the Queen reservoir responds and performs. We will begin the tertiary flood with a wetter WAG schedule of 1.2 to allow for reservoir fillup and reservoir repressurization, taper the WAG schedule down to a 0.5 ratio during the primary flooding phase of the project, and then increase the WAG ratio as the project reaches maturity and nears the end of its life.

2. The system will be closed.

3. The proposed average water injection pressure is 800 psi and the proposed maximum water injection pressure is 1000 psi. This maximum pressure is significantly higher that the 610 psi that the NMOCD would allow using their traditional calculation (0.2*3050' to top of the Queen formation). Celero has performed step rate tests on twelve water injection wells scattered throughout the Rock Queen CO2 Pilot area and these tests show that Celero can safely inject up to 1000 psi without exceeding the parting pressure of the Queen formation. Attached are the results of these twelve step rate tests.

   Celero is seeking approval to increase the maximum injection pressure for all of the injection wells in the Rock Queen Unit including the CO2 pilot area injection wells, the surrounding water curtain injection wells, and any future injection wells in the Rock Queen Unit.

   The proposed average CO2 injection pressure is 900 psi. This is based on the CO2 being a lighter injected fluid and assuming the friction losses down the tubing are about the same for the water and the CO2. The proposed maximum CO2 injection pressure is 1100 psi.

4. The source water for the waterflood is recycled produced water and fresh water (Ogallala formation) from local wells. Water analyses and compatability tests are attached.

VIII. The Geologic Data:

- Geologic Age: Permian
- Geologic Name: Queen (a member of the Artesian Group)
- Average Thickness: 15 feet (calculated form available core data)
- Lithology: Shaly sandstone
- Measured Depth: 3000' to 3100'
- Sources of underground drinking water: Ogallala formation at depths from 100' to 200'.

IX. Data on the Proposed Stimulation Program:

- Celero will initially attempt to produce or inject into these wells as they are with no initial stimulation treatments.
- Should a stimulation treatment become needed due to skin damage, poor reservoir quality, reservoir heterogeneities, scale formation, etc., then a mild 7 ½% NEFE HCL treatment with the appropriate additives will be used at a volume of 50 to 100 gal/ft of perforated or open hole interval.
- Should a mild acid treatment not provide an adequate stimulation treatment, then a small 20,000# to 100,000# proppant gelled water frac will be considered and implemented as needed to provide the Queen formation with adequate stimulation.
- Also, depending on what type of scale or corrosion problems develop, appropriate chemical treatments will be designed and implemented to remediate the identified problem(s).

XI. Data on the Fresh Water Wells:

- There is one fresh water well within one mile of any injection well on the Rock Queen Unit. That well is located in Section 35 (F), T13S, R31E, Chaves County, NM. A recent chemical analysis of the well's water and a map showing the location of the water well are attached.

GRAY WIRELINE

STEP RATE TESTS

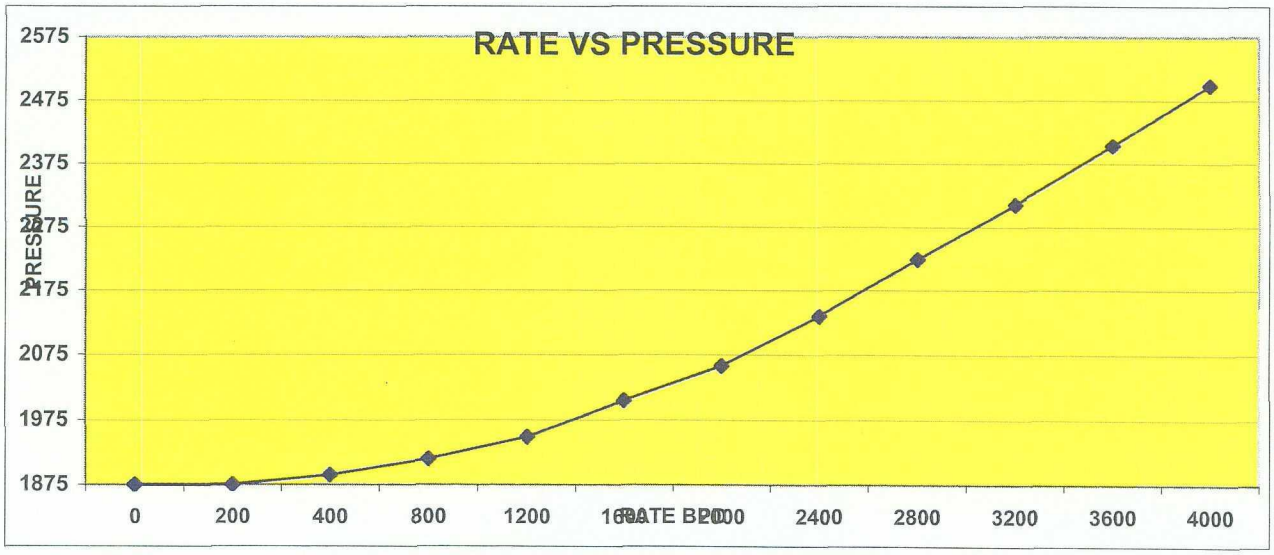
monty.holmes@graywireline.com

RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	3/31/2008	12:27 PM	1875	404	
200	3/31/2008	1:00 PM	1875	475	
400	3/31/2008	1:30 PM	1890	600	
800	3/31/2008	2:00 PM	1915	675	
1200	3/31/2008	2:30 PM	1949	725	
1600	3/31/2008	3:00 PM	2005	825	
2000	3/31/2008	4:25 PM	2058	925	
2400	3/31/2008	4:55 PM	2134	1025	
2800	3/31/2008	6:37 PM	2224	1215	NO FRACTURE
3200	3/31/2008	7:07 PM	2310	1400	POINT ACHIEVED
3600	3/31/2008	7:37 PM	2403	1525	
4000	3/31/2008	8:07 PM	2498	1700	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #42	Witnessed By:	DON HALE
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	3/29/2008		
Tool Depth	2900' IN TBG.		
Tubing Size:	2 3/8		
Tail Pipe Depth:	2967'		
Perfs:	3057-61, OH: 3067-88'		
Plug Back Depth	3088'		

NOTES:
SET DOWN
IN PACKER

GWSi



No Fracture Point Achieved

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STEP RATE TESTS

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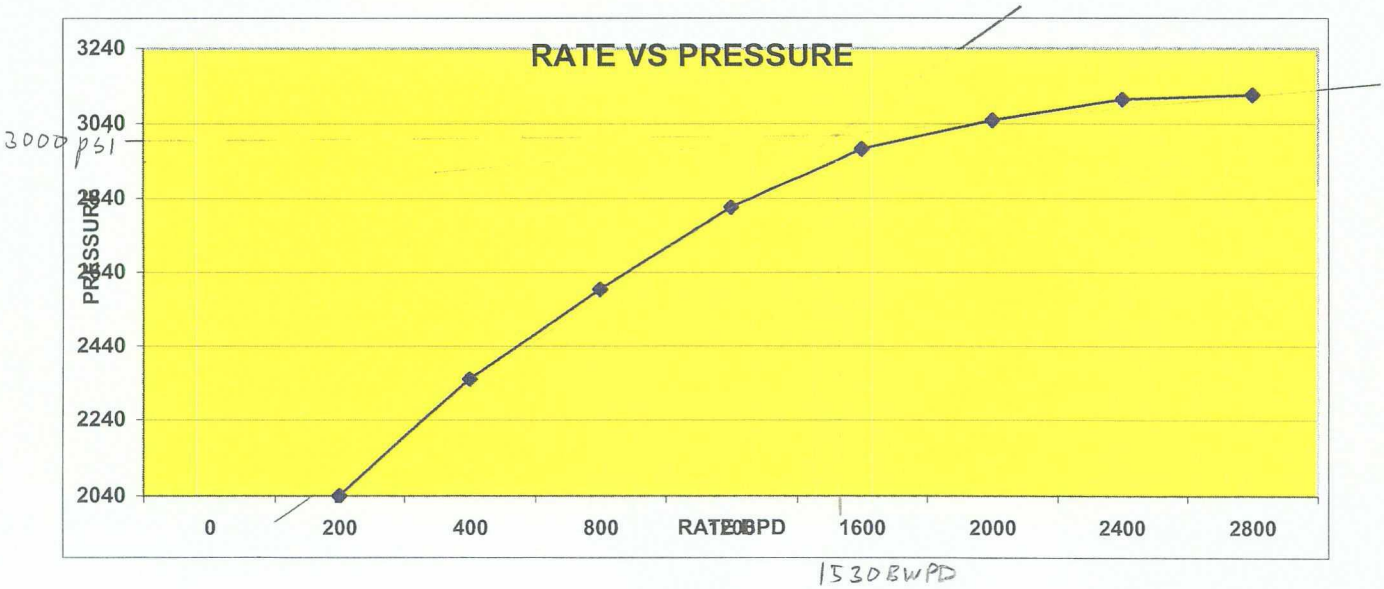
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	4/3/2008	7:29 AM	1337	0	
200	4/3/2008	8:00 AM	2040	600	START FRACTURE
400	4/3/2008	8:30 AM	2350	1025	APPROX 2400 PSI
800	4/3/2008	9:00 AM	2593	1275	
1200	4/3/2008	9:30 AM	2815	1500	
1600	4/3/2008	10:00 AM	2973	1675	SUSTAINED FRAC
2000	4/3/2008	10:30 AM	3048	1800	APPROX. 2950 PSI
2400	4/3/2008	11:00 AM	3103	1900	
2800	4/3/2008	11:30 AM	3115	2000	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #44	Witnessed By:	DON HALE
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	4/2/2008		
Tool Depth	3030'	NOTES:	
Tubing Size:	2 3/8		
Tail Pipe Depth:	2890'		
Perfs:	3032-50'		
Plug Back Depth	3065'		

GWSi



Fracture Point: 1530 BWPD, 3000 psi BH, 1720 psi Surface

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STEP RATE TESTS

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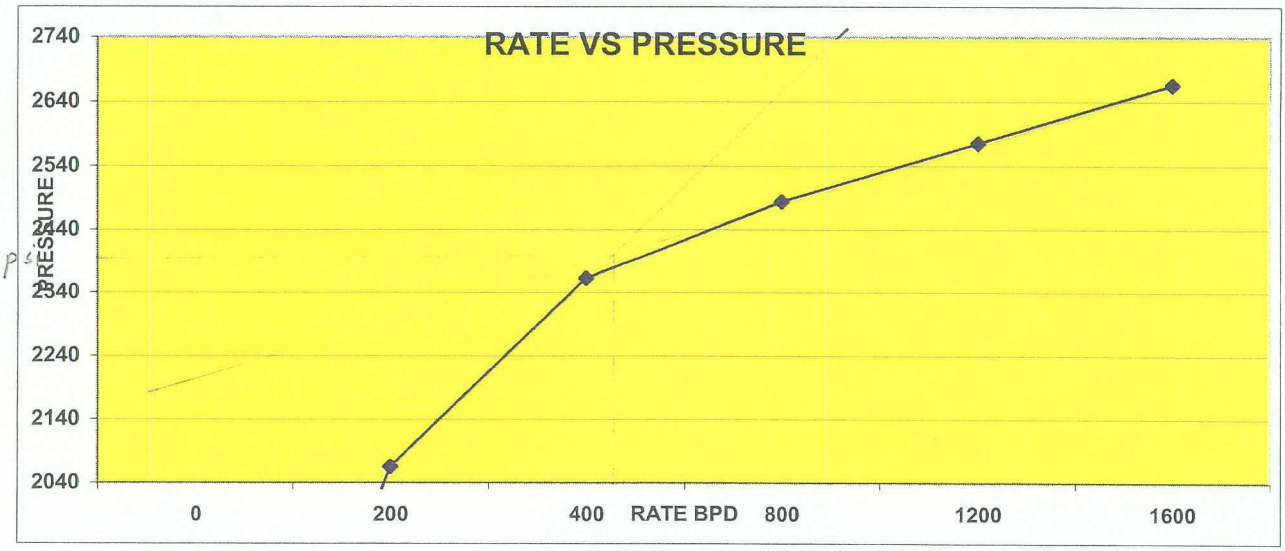
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	4/2/2008	2:44 AM	1251	0	
200	4/2/2008	3:15 PM	2065	625	
400	4/2/2008	3:45 PM	2362	1010	FRACTURE POINT
800	4/2/2008	4:15 PM	2484	1175	APPROX. 2400 PSI
1200	4/2/2008	4:45 PM	2575	1280	
1600	4/2/2008	5:15 PM	2665	1375	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #62	Witnessed By:	JOHN ANDERSON
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	4/1/2008		
Tool Depth	3040'	NOTES:	
Tubing Size:	2 3/8		
Tail Pipe Depth:	2975'		
Perfs:	3053-70', OH: 3072-3100'		
Plug Back Depth	3100'		

GWSi



2395 psi

440 BWPD

Fracture Point: 440 BWPD, 2395 BH psi, 1055 Surf. psi

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STEP RATE TESTS

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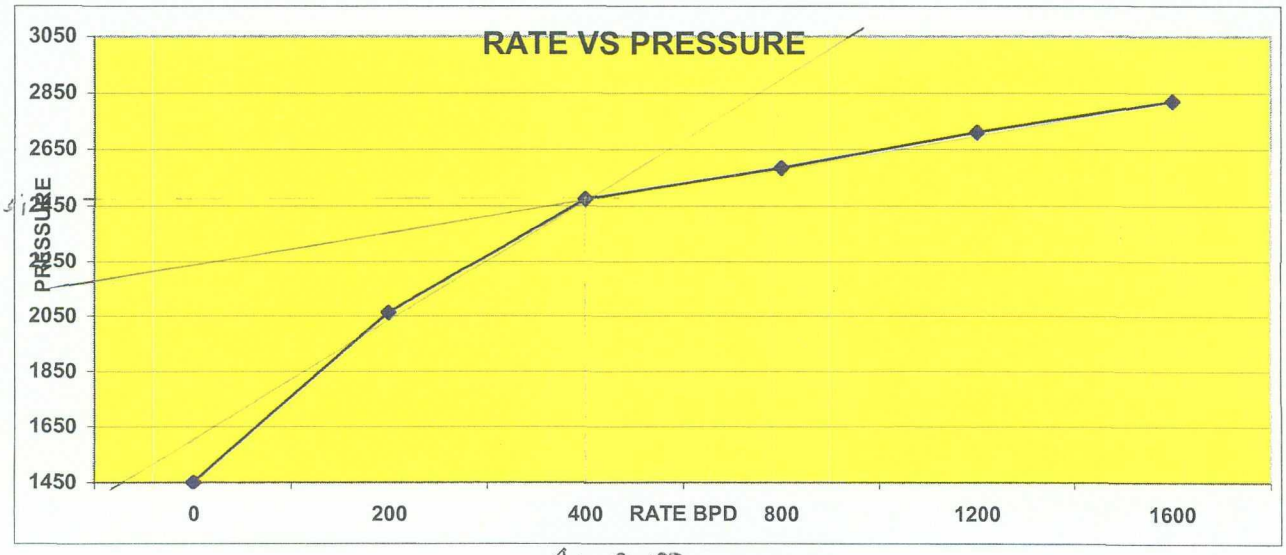
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	4/1/2008	8:35 AM	1450	0	
200	4/1/2008	9:10 AM	2063	570	
400	4/1/2008	9:40 AM	2474	1140	FRACTURE POINT
800	4/1/2008	10:10 AM	2584	1250	APPROX. 2474 PSI
1200	4/1/2008	10:40 AM	2710	1400	
1600	4/1/2008	3:00 PM	2819	1550	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #66	Witnessed By:	JOHN ANDERSON
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	3/29/2008		
Tool Depth	3050'	NOTES:	
Tubing Size:	2 3/8		
Tail Pipe Depth:	2988'		
Perfs:	3052-69'		
Plug Back Depth	3077'		

GWSi



Fracture Point: 400 BWPD, 2474 psi BH, 1140 psi Surf.

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STEP RATE TESTS

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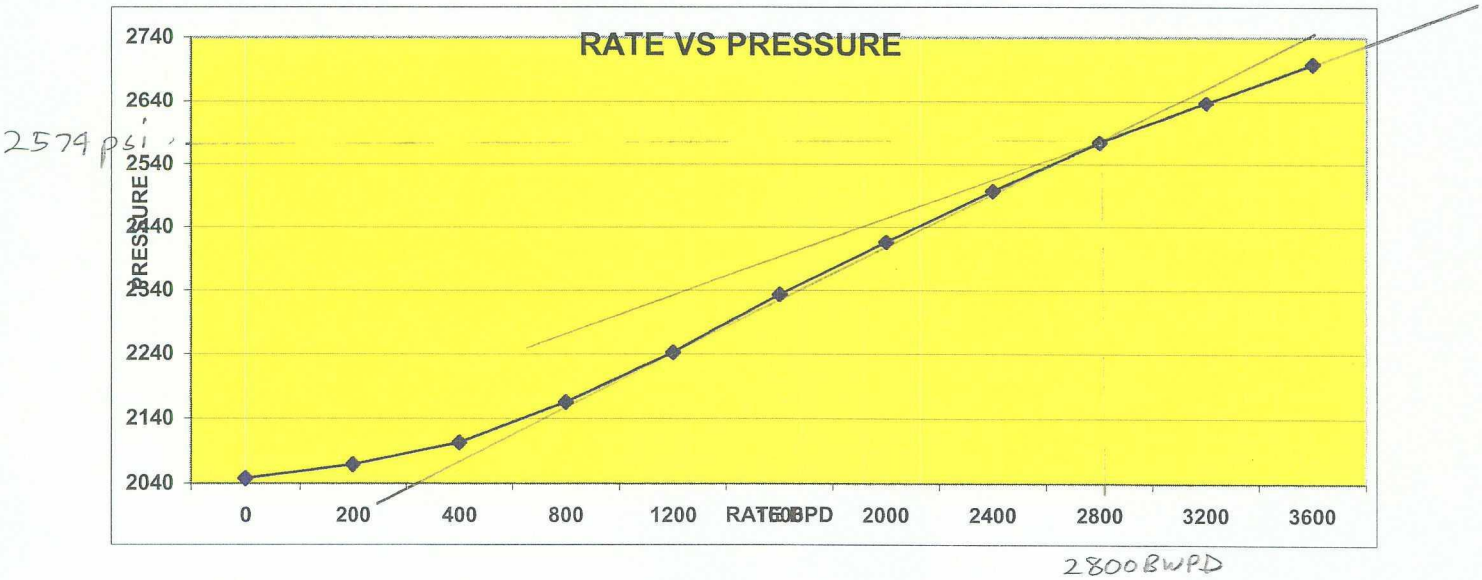
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	4/2/2008	7:40 AM	2048	524	
200	4/2/2008	8:15 AM	2069	625	
400	4/2/2008	8:45 AM	2103	675	
800	4/2/2008	9:15 AM	2165	850	
1200	4/2/2008	9:45 AM	2242	950	
1600	4/2/2008	10:15 AM	2333	1100	
2000	4/2/2008	10:45 AM	2416	1225	
2400	4/2/2008	11:15 AM	2497	1375	
2800	4/2/2008	11:45 AM	2574	1530	FRACTURE POINT
3200	4/2/2008	12:15 PM	2637	1630	APPROX. 2540 PSI
3600	4/2/2008	12:45 PM	2698	1730	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #70	Witnessed By:	JOHN ANDERSON
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	4/1/2008		
Tool Depth	3040'	NOTES:	
Tubing Size:	2 3/8		
Tail Pipe Depth:	2949'		
Perfs:	OH: 3047-90'		
Plug Back Depth	3090'		

GWSi



Fracture Point: 2800 BWPD, 2574 psi BH, 1530 psi Surf.

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STEP RATE TESTS

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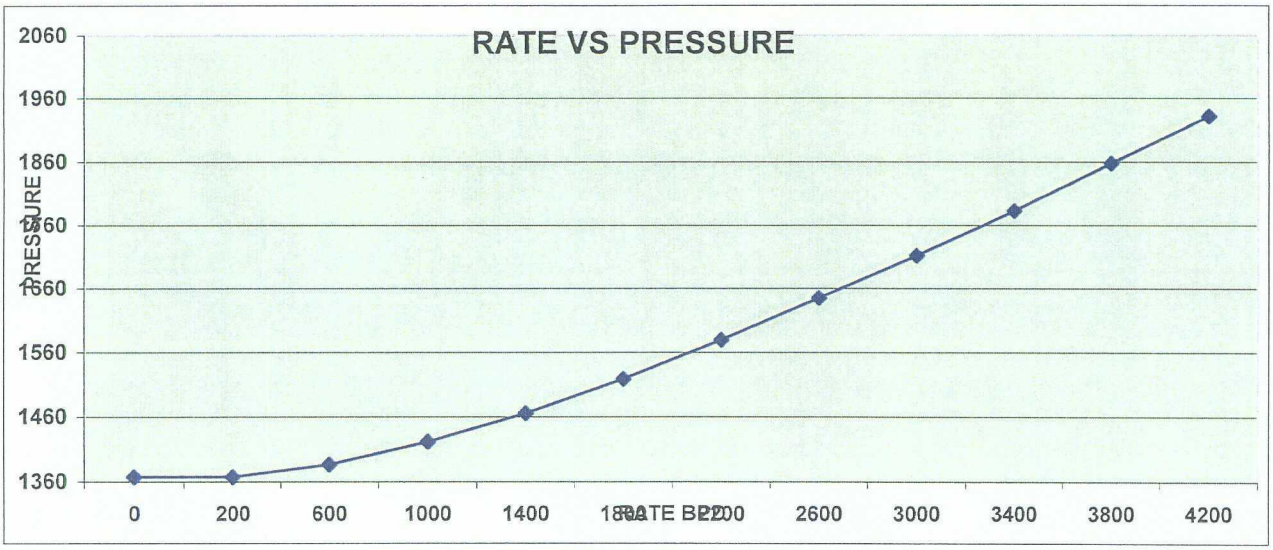
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/25/2008	10:23 AM	1368	VAC	
200	8/25/2008	11:00 AM	1368	0	
600	8/25/2008	11:30 AM	1387	100	
1000	8/25/2008	12:00 PM	1422	140	
1400	8/25/2008	12:30 PM	1466	200	
1800	8/25/2008	1:00 PM	1519	285	
2200	8/25/2008	1:30 PM	1580	395	
2600	8/25/2008	2:00 PM	1645	495	
3000	8/25/2008	2:30 PM	1712	610	
3400	8/25/2008	3:00 PM	1783	740	
3800	8/25/2008	3:30 PM	1858	890	
4200	8/25/2008	4:00 PM	1932	1020	OUT OF WATER

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #85	Witnessed By:	DAN PARKHURST
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/24/2008		
Tool Depth	3040'		
Tubing Size:	2 3/8"		
Tail Pipe Depth:	2976'		
Perfs:	OPEN HOLE: 3041-80'		
Plug Back Depth	3080		

NOTES:
NO FRACTURE ACHIEVED

GWSi



No fracture point achieved.

GRAY WIRELINE

STEP RATE TESTS

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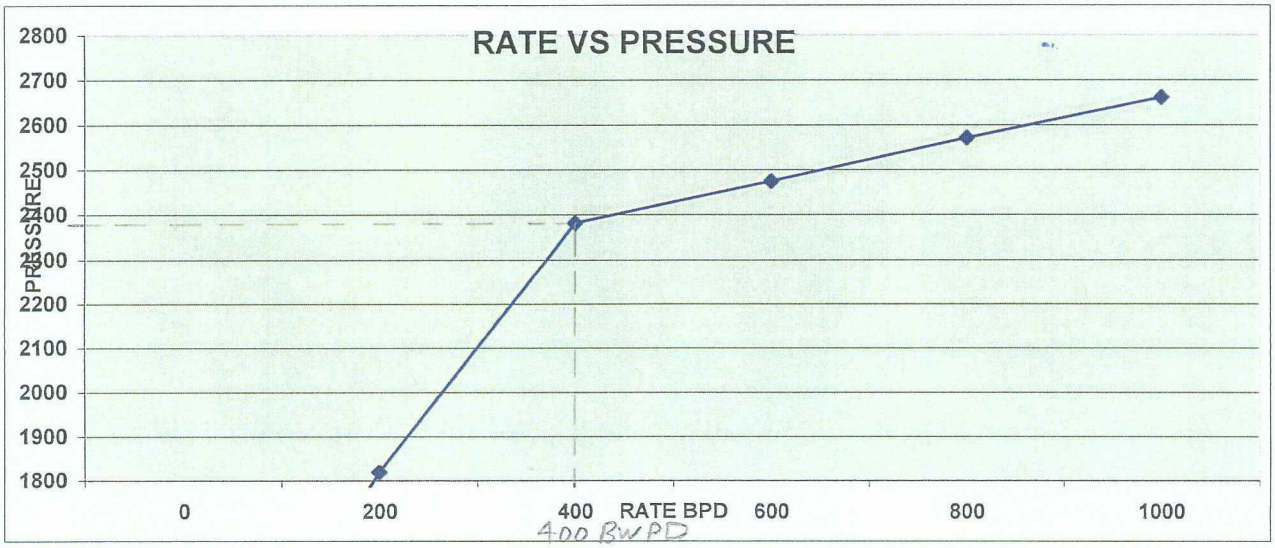
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/26/2008	9:07 AM	1091	VAC	
200	8/26/2008	9:45 AM	1820	500	
400	8/26/2008	10:15 AM	2382	1145	FRACTURE POINT ←
600	8/26/2008	10:45 AM	2475	1230	
800	8/26/2008	11:15 AM	2572	1340	
1000	8/26/2008	11:45 AM	2662	1440	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #87	Witnessed By:	DAN PARKHURST
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/25/2008		
Tool Depth	2900' IN TBG		
Tubing Size:	2 3/8"		
Tail Pipe Depth:	2968'		
Perfs:	3057-71', OPE HOLE: 3063-3100'		
Plug Back Depth	3100'		

NOTES:
UNABLE TO GET
THRU PACKER

GWSi



Fracture Point: 400 BWPD, 2382 psi BH, 1145 psi Surface

GRAY WIRELINE

STEP RATE TESTS

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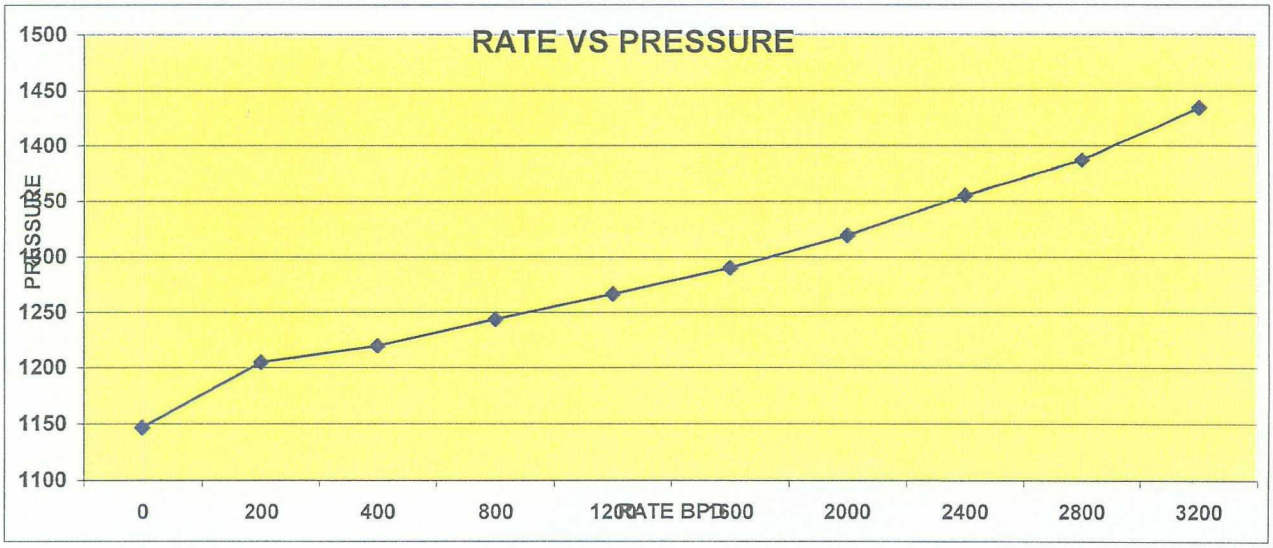
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/19/2008	10:40 AM	1147	VAC	
200	8/19/2008	11:15 AM	1205	VAC	
400	8/19/2008	11:45 AM	1220	VAC	
800	8/19/2008	12:15 PM	1244	VAC	
1200	8/19/2008	12:45 PM	1267	VAC	
1600	8/19/2008	1:15 PM	1290	VAC	
2000	8/19/2008	1:45 PM	1319	0	
2400	8/19/2008	2:15 PM	1355	200	
2800	8/19/2008	2:45 PM	1387	300	NO FRACTURE
3200	8/19/2008	3:15 PM	1435	450	POINT ACHIEVED

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #6	Witnessed By:	DAN PARKHURST
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/18/2008		
Tool Depth	3050'	NOTES:	
Tubing Size:	2 3/8		
Tail Pipe Depth:	2735'		
Perfs:	3052-67'		
Plug Back Depth	3094'		

GWSi



No Fracture Point Achieved

GRAY WIRELINE

STEP RATE TESTS

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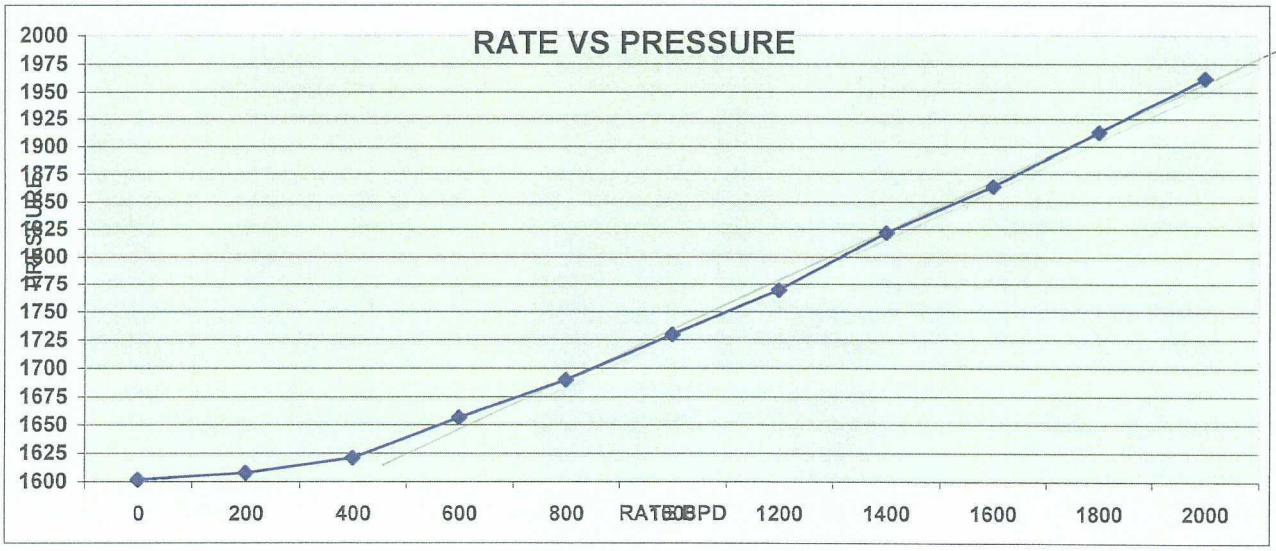
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/21/2008	8:43 AM	1602	118	
200	8/21/2008	9:15 AM	1608	200	
400	8/21/2008	9:45 AM	1621	375	
600	8/21/2008	10:15 AM	1657	425	
800	8/21/2008	10:45 AM	1690	465	
1000	8/21/2008	11:15 AM	1730	510	
1200	8/21/2008	11:45 AM	1770	570	
1400	8/21/2008	12:15 PM	1822	620	~~FRACTURE POINT~~
1600	8/21/2008	12:45 PM	1864	685	
1800	8/21/2008	1:15 PM	1913	745	
2000	8/21/2008	1:45 PM	1962	810	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #48	Witnessed By:	EDDIE TAYLOR
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/20/2008 PM		
Tool Depth	2900', IN TBG		
Tubing Size:	2 3/8", 1.25" ID SN ?		
Tail Pipe Depth:	2962'		
Perfs:	OPEN HOLE: 3028-74'		
Plug Back Depth	3074'		

NOTES:
UNABLE TO GET
THRU PACKER

GWSi



No Fracture Point Achieved.

GRAY WIRELINE

STEP RATE TESTS

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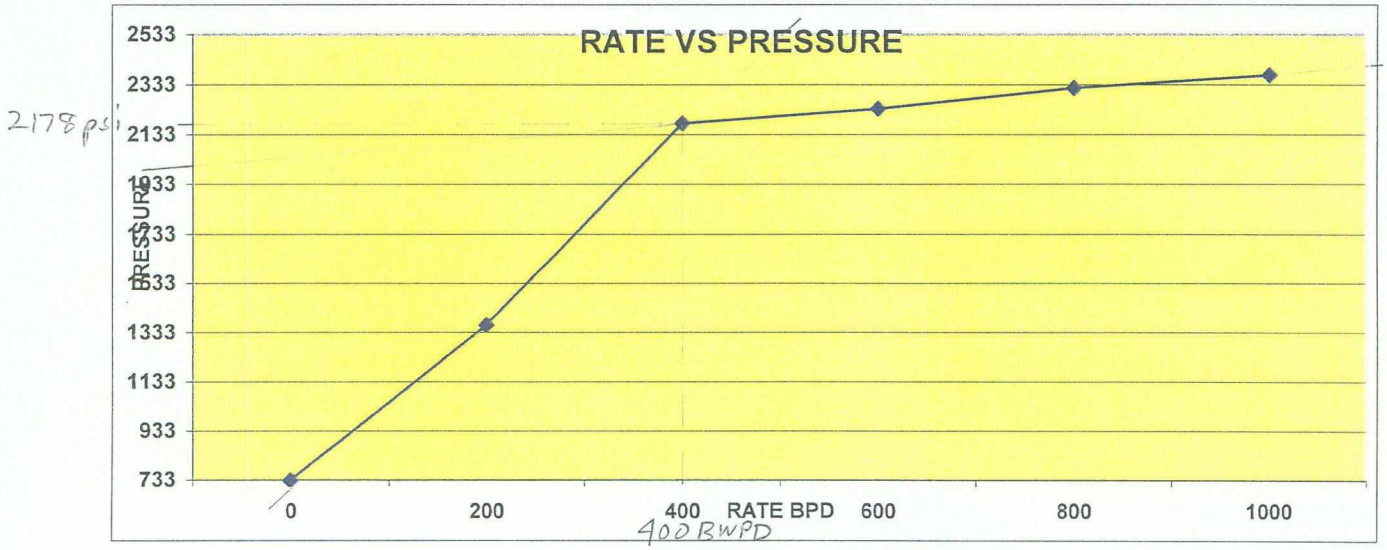
RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/20/2008	3:07 PM	733	0	
200	8/20/2008	3:45 PM	1364	0	
400	8/20/2008	4:15 PM	2178	875	FRACTURE POINT
600	8/20/2008	4:45 PM	2237	930	
800	8/20/2008	5:15 PM	2320	1030	
1000	8/20/2008	5:45 PM	2372	1100	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #50	Witnessed By:	EDDIE TAYLOR
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/19/2008		
Tool Depth	3030'	NOTES:	
Tubing Size:	2 3/8"		
Tail Pipe Depth:	2940'		
Perfs:	3032-46'		
Plug Back Depth	3067'		

GWSi



Fracture Point: 400 BWPD, 2178 psi BH, 875 psi Surface

GRAY WIRELINE

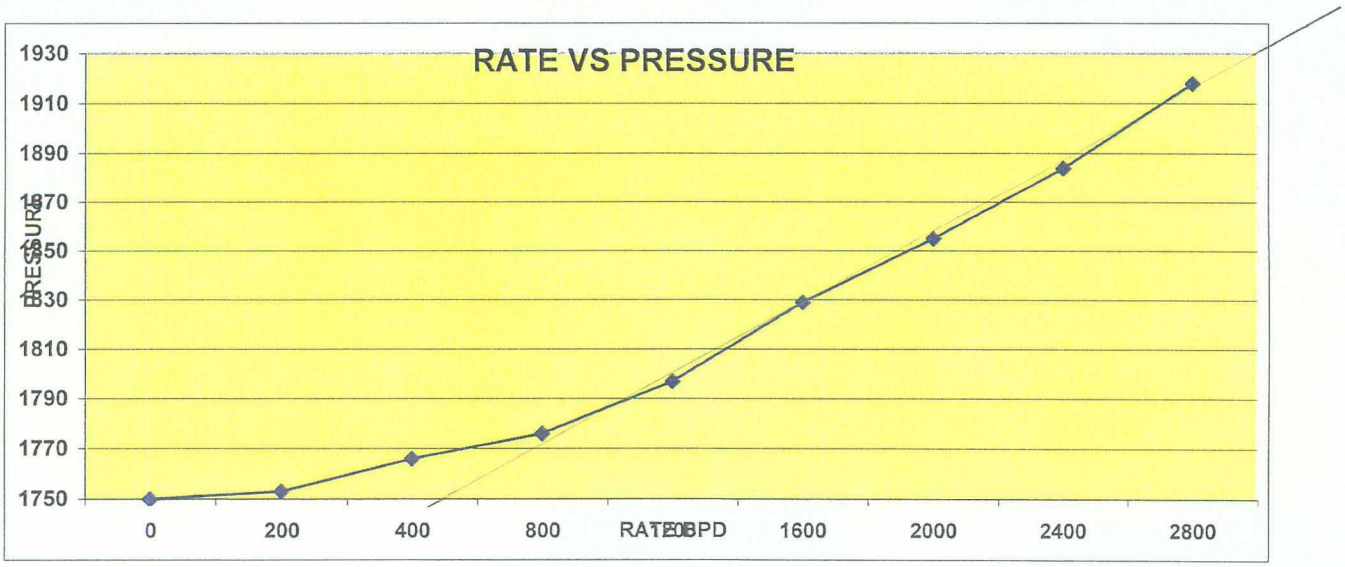
STEP RATE TESTS

monty.holmes@graywireline.com

RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/20/2008	9:26 AM	1750	275	
200	8/20/2008	10:00 AM	1753	300	
400	8/20/2008	10:30 AM	1766	520	
800	8/20/2008	11:00 AM	1776	550	
1200	8/20/2008	11:30 AM	1797	580	
1600	8/20/2008	12:00 PM	1829	640	~~FRACTURE POINT~~
2000	8/20/2008	12:30 PM	1855	720	
2400	8/20/2008	1:00 PM	1884	805	
2800	8/20/2008	1:30 PM	1918	900	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #64	Witnessed By:	EDDIE TAYLOR
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/19/2008		
Tool Depth	2900' in Tubing	NOTES:	
Tubing Size:	2 3/8", 1.25" ID SN		
Tail Pipe Depth:	2960'		
Perfs:	3041-65'		
Plug Back Depth	3097'		

GWSi



No Fracture Point Achieved.

GRAY WIRELINE

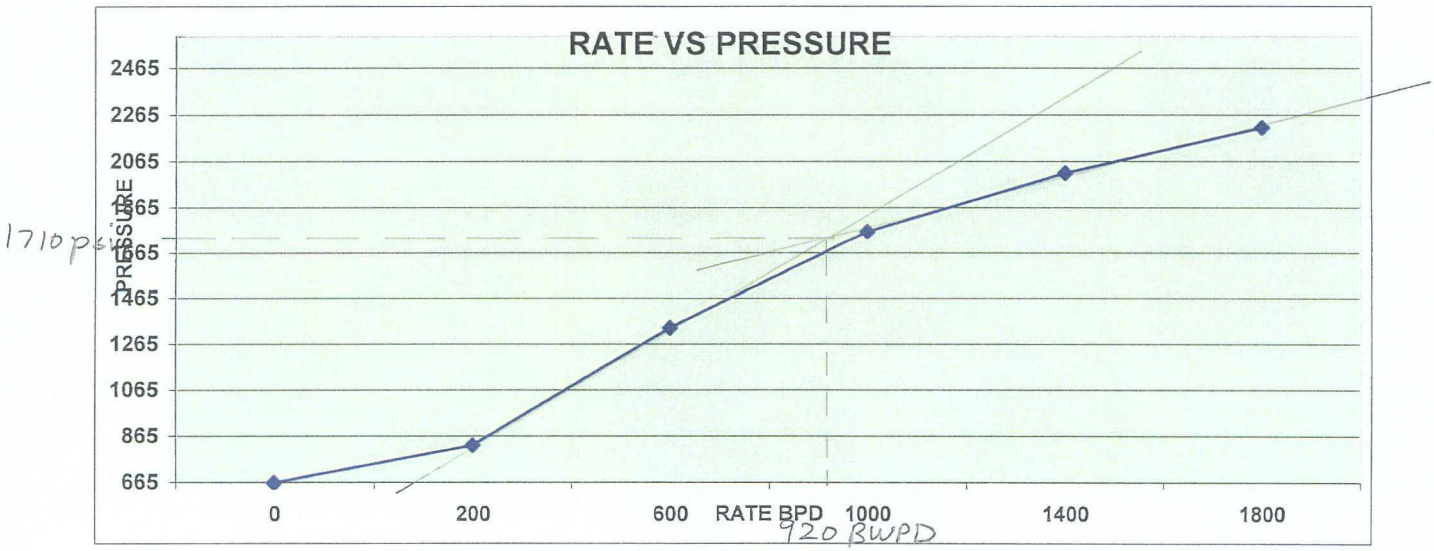
STEP RATE TESTS

monty.holmes@graywireline.com

RATE BPD	Date	Time	BH Press	Surf Press	Comments
0	8/22/2008	9:12 AM	665	VAC	
200	8/22/2008	9:45 AM	827	VAC	
600	8/22/2008	10:15 AM	1337	0	
1000	8/22/2008	10:45 AM	1760	490	FRACTURE POINT
1400	8/22/2008	11:15 AM	2015	760	1780 PSI
1800	8/22/2008	11:45 AM	2211	1000	
2200	8/22/2008	12:15 PM	2386	1200	

Company:	CELERO ENERGY	Recorded By:	M. HOLMES
Well:	ROCK QUEEN #68	Witnessed By:	EDDIE TAYLOR
Field:	CAPROCK	Truck Number:	42
County:	CHAVES	District:	ODESSA
State:	NEW MEXICO	Tool Number:	SPARTEK 1 3/8"
Injector	WATER	Test Type:	STEP RATE TEST
Shut In Time:	8/21/2008		
Tool Depth	3050'	NOTES:	
Tubing Size:	2 3/8"		
Tail Pipe Depth:	2974'		
Perfs:	OPEN HOLE: 3056-84'		
Plug Back Depth	3084'		

GWSi



Fracture Point: 920 BWPD, 1710 psi BH, 430 psi surface

John Anderson

From: DON HALE [dth-jr@msn.com]
Sent: Monday, February 18, 2008 4:50 PM
To: bwoodard@celeroenergy.com
Cc: janderson@celeroenergy.com
Subject: FW: [Fwd: Celero Compatibility.pdf attached]
Attachments: Celero Compatibility.pdf

> From: prokem@windstream.net
> To: dth-jr@msn.com
> Subject: [Fwd: Celero Compatibility.pdf attached]
> Date: Mon, 18 Feb 2008 15:10:31 -0600
>
>
> >
> > From: "Jose L. Enriquez" <jose@interchem.us>
> > Date: 2008/02/18 Mon PM 02:34:43 CST
> > To: <prokem@windstream.net>
> > Subject: Celero Compatibility.pdf attached
> >
> > Attached please find the computer printout of the predicted compatibility
> > between the Celero Energy Produced Water and the Recovery Water. Results
> > indicate that these waters are very compatible, reducing the Calcium
> > Carbonate scaling tendencies substantially, from about 10% by volume
> > Produced Water up to about 60% by volume Produced Water. The Calcium
> > Sulfate scaling potential remains negligible. No other potential problems
> > are identified.
> >
> > If we may be of further assistance in the interpretation of the above
> > observations, please call at your convenience.
> >
> > Jose L. Enriquez
> > Technical Services
> >
> >

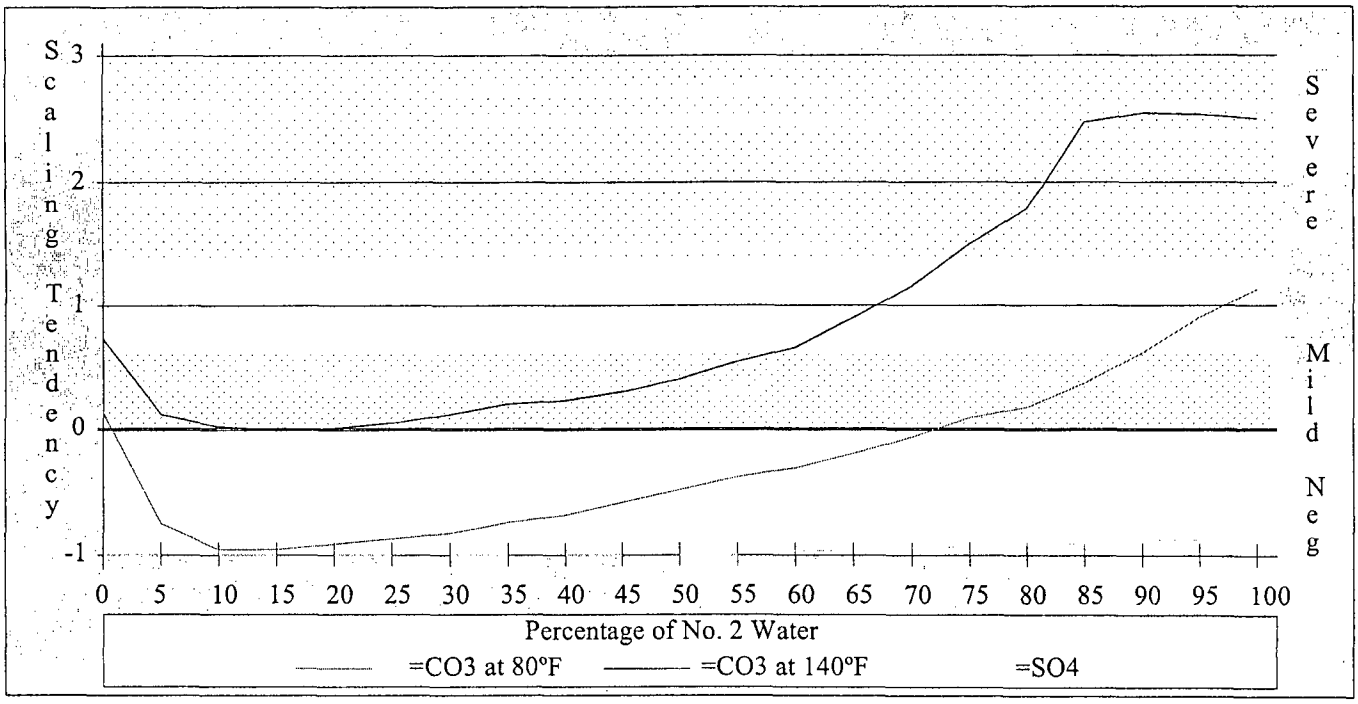
Comparison Between Two Waters

Requested by: Pro-Kem, Inc.

Sample No. 1
Celero Energy
Recovery Water

Sample No. 2
Celero Energy
Produced Water

Percent of #1 & #2	pH	TDS	SpGr	CaCO3 Saturation @80°F.	CaCO3 Saturation @140°F.	Calcium Sulfate Scaling Potential
100 - 00	7.100	468	1.009	0.133	0.733	Nil
95 - 05	7.070	15,378	1.019	-0.751	0.109	Nil
90 - 10	7.040	30,289	1.029	-0.960	0.010	Nil
85 - 15	7.010	45,199	1.038	-0.952	-0.012	Nil
80 - 20	6.980	60,109	1.048	-0.908	0.002	Nil
75 - 25	6.950	75,020	1.058	-0.873	0.047	Nil
70 - 30	6.920	89,930	1.068	-0.823	0.107	Nil
65 - 35	6.890	104,840	1.077	-0.742	0.193	Nil
60 - 40	6.860	119,751	1.087	-0.679	0.226	Nil
55 - 45	6.830	134,661	1.097	-0.592	0.298	Nil
50 - 50	6.800	149,572	1.107	-0.480	0.400	Nil
45 - 55	6.770	164,482	1.116	-0.382	0.538	Nil
40 - 60	6.740	179,392	1.126	-0.307	0.653	Nil
35 - 65	6.710	194,303	1.136	-0.196	0.904	Nil
30 - 70	6.680	209,213	1.146	-0.067	1.153	Nil
25 - 75	6.650	224,123	1.155	0.080	1.500	Nil
20 - 80	6.620	239,034	1.165	0.175	1.785	Nil
15 - 85	6.590	253,944	1.175	0.367	2.467	Nil
10 - 90	6.560	268,854	1.185	0.608	2.548	Nil
05 - 95	6.530	283,765	1.194	0.898	2.528	Nil
00 - 100	6.500	298,675	1.204	1.125	2.505	Nil



Pro-Kem, Inc.
WATER ANALYSIS REPORT

SAMPLE

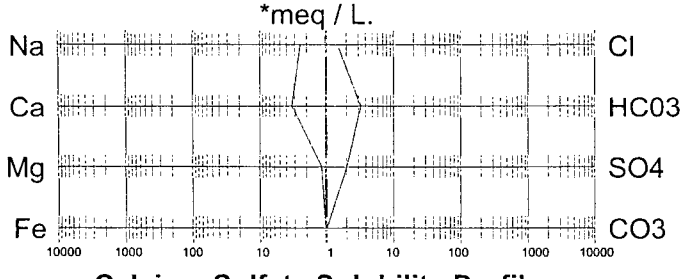
Oil Co. : **Celero Energy**
Lease :
Well No.: **Fresh Water**
Location:
Attention:

Date Sampled : **17-August-2007**
Date Analyzed: **23-August-2007**
Lab ID Number: **Aug2307.003- 2**
Salesperson :
File Name : **aug2307.003**

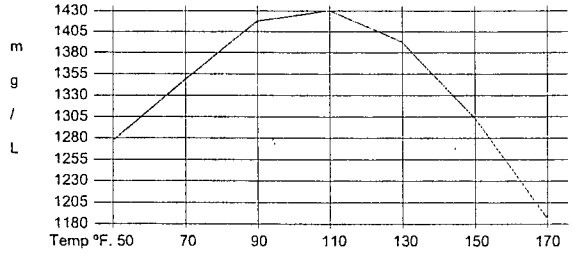
ANALYSIS

1.	Ph		**7.100**			
2.	Specific Gravity 60/60 F.		**1.009**			
3.	CACO3 Saturation Index	@ 80F	**0.133**	**Mild**		
		@140F	**0.733**	**Moderate**		
	Dissolved Gasses		**MG/L.**	**EQ. WT.**		***MEQ/L**
4.	Hydrogen Sulfide		**Not Present**			
5.	Carbon Dioxide		**Not Determined**			
6.	Dissolved Oxygen		**Not Determined**			
	Cations					
7.	Calcium	(Ca++)	**63**	/ 20.1 =		**3.13**
8.	Magnesium	(Mg++)	**13**	/ 12.2 =		**1.07**
9.	Sodium	(Na+) (Calculated)	**54**	/ 23.0 =		**2.35**
10.	Barium	(Ba++)	**Not Determined**			
	Anions					
11.	Hydroxyl	(OH-)	**0**	/ 17.0 =		**0.00**
12.	Carbonate	(CO3=)	**0**	/ 30.0 =		**0.00**
13.	Bicarbonate	(HCO3-)	**193**	/ 61.1 =		**3.16**
14.	Sulfate	(SO4=)	**95**	/ 48.8 =		**1.95**
15.	Chloride	(Cl-)	**50**	/ 35.5 =		**1.41**
16.	Total Dissolved Solids		**468**			
17.	Total Iron	(Fe)	**2.00**	/ 18.2 =		**0.11**
18.	Manganese	(Mn++)	**Not Determined**			
19.	Total Hardness as CaCO3		**208**			
20.	Resistivity @ 75 F. (Calculated)		**2.462** Ohm · meters			

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	**3.13**		81.04		**254**
CaSO4	**0.00**		68.07		**0**
CaCl2	**0.00**		55.50		**0**
Mg(HCO3)2	**0.02**		73.17		**2**
MgSO4	**1.04**		60.19		**63**
MgCl2	**0.00**		47.62		**0**
NaHCO3	**0.00**		84.00		**0**
NaSO4	**0.91**		71.03		**64**
NaCl	**1.41**		58.46		**82**

* milliequivalents per Liter

Kevin Byrne, Analyst

Pro-Kem, Inc.
WATER ANALYSIS REPORT

SAMPLE

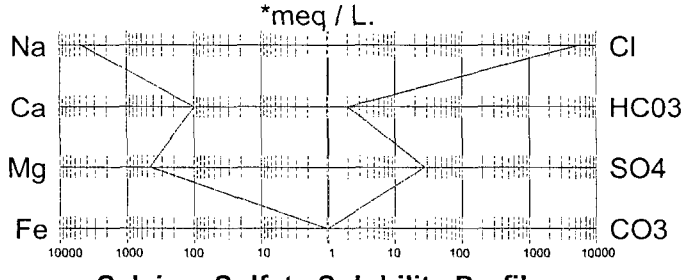
Oil Co. : **Celero**
Lease : **Rock Queen**
Well No.: **84**
Location:
Attention:

Date Sampled : **17-July-2007**
Date Analyzed: **20-July-2007**
Lab ID Number: **Jul2307.004- 1**
Salesperson :
File Name : **jul2307.004**

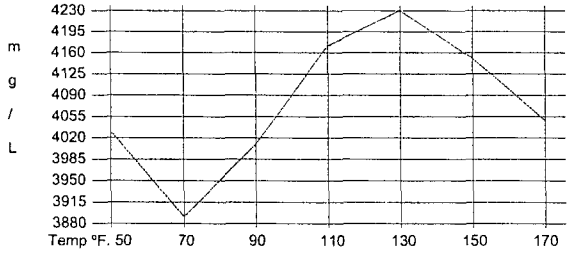
ANALYSIS

1.	Ph		**6.500**			
2.	Specific Gravity 60/60 F.		**1.204**			
3.	CACO3 Saturation Index	@ 80F	**1.125**	**Moderate**		
		@140F	**2.505**	**Severe**		
	Dissolved Gasses		**MG/L.**	**EQ. WT.**		***MEQ/L**
4.	Hydrogen Sulfide		**Not Present**			
5.	Carbon Dioxide		**300**			
6.	Dissolved Oxygen		**Not Determined**			
	Cations					
7.	Calcium	(Ca++)	**1,876**	/ 20.1	=	**93.33**
8.	Magnesium	(Mg++)	**5,310**	/ 12.2	=	**435.25**
9.	Sodium	(Na+) (Calculated)	**107,113**	/ 23.0	=	**4,657.09**
10.	Barium	(Ba++)	**Not Determined**			
	Anions					
11.	Hydroxyl	(OH-)	**0**	/ 17.0	=	**0.00**
12.	Carbonate	(CO3=)	**0**	/ 30.0	=	**0.00**
13.	Bicarbonate	(HCO3-)	**117**	/ 61.1	=	**1.91**
14.	Sulfate	(SO4=)	**1,300**	/ 48.8	=	**26.64**
15.	Chloride	(Cl-)	**182,959**	/ 35.5	=	**5,153.77**
16.	Total Dissolved Solids		**298,675**			
17.	Total Iron	(Fe)	**11.50**	/ 18.2	=	**0.63**
18.	Manganese	(Mn++)	**Not Determined**			
19.	Total Hardness as CaCO3		**26,544**			
20.	Resistivity @ 75 F. (Calculated)		**0.001** Ohm · meters			

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	**1.91**		81.04		**155**
CaSO4	**26.64**		68.07		**1,813**
CaCl2	**64.78**		55.50		**3,595**
Mg(HCO3)2	**0.00**		73.17		**0**
MgSO4	**0.00**		60.19		**0**
MgCl2	**435.25**		47.62		**20,726**
NaHCO3	**0.00**		84.00		**0**
NaSO4	**0.00**		71.03		**0**
NaCl	**4,653.75**		58.46		**272,058**

* milliequivalents per Liter

Kevin Byrne, Analyst

Summary Report

Ike Tavarez
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: June 14, 2007

Work Order: 7052432

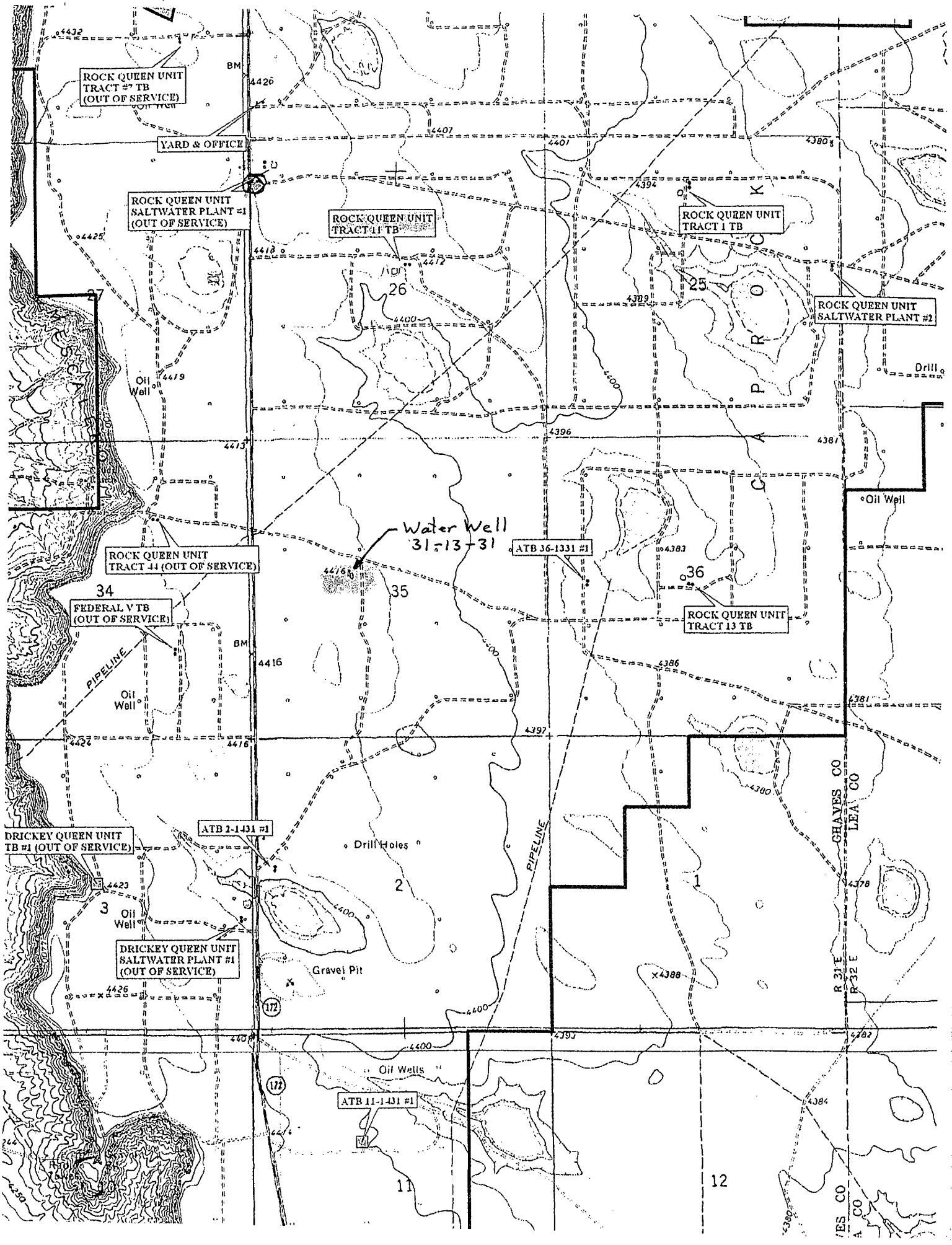
Project Location: Chaves Co. NM
Project Name: Celero Energy-Rock Queen ESA
Project Number: 2972

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
125351	Water Well 31-13-31	water	2007-05-22	00:00	2007-05-23

Location: Sec. 35(F), T13S, R31ECM

Sample: 125351 - Water Well 31-13-31

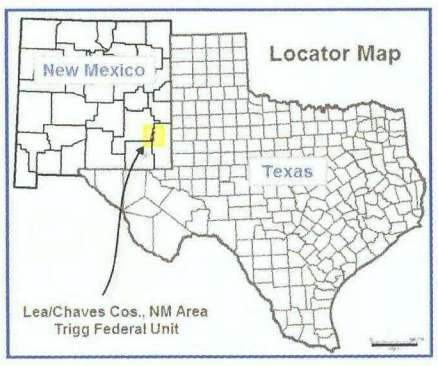
Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		152	mg/L as CaCo3	4.00
Total Alkalinity		152	mg/L as CaCo3	4.00
Dissolved Calcium		63.5	mg/L	0.500
Chloride		32.1	mg/L	0.500
Specific Conductance		546	uMHOS/cm	0.00
Fluoride		<1.00	mg/L	0.200
Dissolved Potassium		1.98	mg/L	0.500
Dissolved Magnesium		8.79	mg/L	0.500
Dissolved Sodium		28.5	mg/L	0.500
Nitrate-N		4.10	mg/L	0.200
pH		7.83	s.u.	0.00
Sulfate		43.6	mg/L	0.500
Total Dissolved Solids		327.0	mg/L	10.00


ROCK QUEEN UNIT TRACT #7 TB (OUT OF SERVICE)
YARD & OFFICE
ROCK QUEEN UNIT SALTWATER PLANT #1 (OUT OF SERVICE)
ROCK QUEEN UNIT TRACT 11 TB
ROCK QUEEN UNIT TRACT 1 TB
ROCK QUEEN UNIT SALTWATER PLANT #2
ROCK QUEEN UNIT TRACT 44 (OUT OF SERVICE)
Water Well 31-13-31
ATB 36-1331 #1
ROCK QUEEN UNIT TRACT 13 TB
FEDERAL V TB (OUT OF SERVICE)
PIPELINE
DRICKEY QUEEN UNIT TB #1 (OUT OF SERVICE)
ATB 2-1431 #1
Drill Holes
DRICKEY QUEEN UNIT SALTWATER PLANT #1 (OUT OF SERVICE)
Gravel Pit
Oil Wells
ATB 11-1431 #1
Oil Well
Drill
CHAVES CO
LEA CO
R 31 E
R 32 E
ROCK
BM

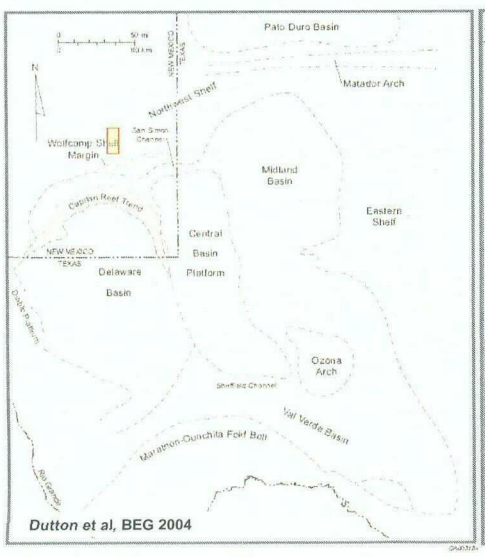
Queen Reservoir Type Section

Rock Queen Unit
Caprock Field

Chaves Co., NM



Major subdivisions and boundaries of the Permian Basin in west Texas and New Mexico



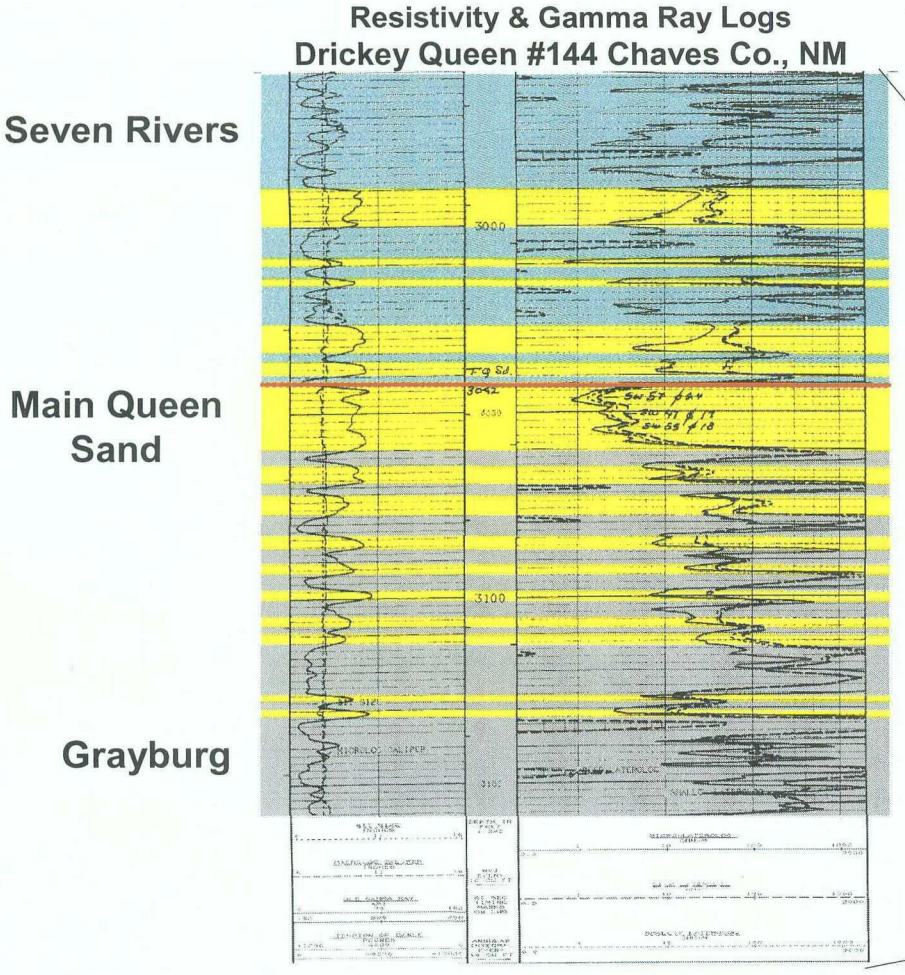
Stratigraphic nomenclature for the Permian section in the Permian Basin

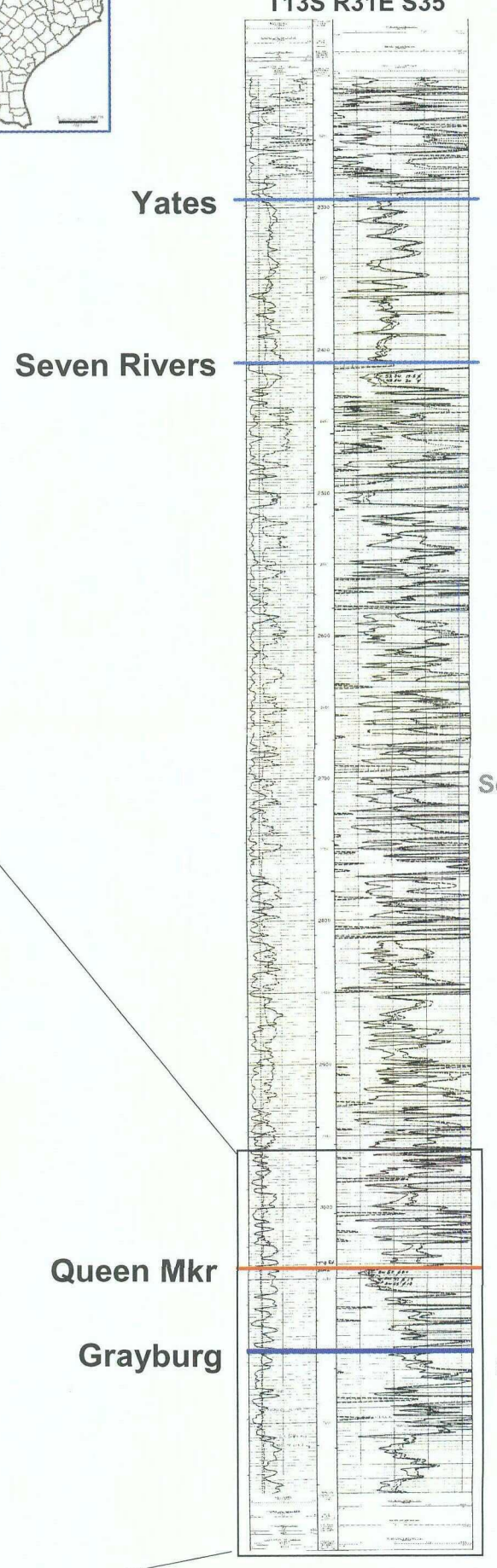
System	Epoch/ Series/ Stage	Time (m.y.)	Delaware Basin	NW Shelf New Mexico	NW Shelf Texas	Central Basin Platform
PERMIAN	Ochoan	251	Dewey Lake	Dewey Lake	Dewey Lake	Dewey Lake
			Rustler	Rustler	Rustler	Rustler
			Salado	Salado	Salado	Salado
			Castile	Castile	Castile	
	Guadalupian		Delaware Mountain Group: Bell Canyon	Tansill	Tansill	Tansill
				Yates	Yates	Yates
				Seven Rivers (Artesia Gp.)	Seven Rivers (Artesia Gp.)	Seven Rivers (Artesia Gp.)
			Cherry Canyon	Queen	Queen	Queen
				Grayburg	Grayburg	Grayburg
				Upper San Andres	Upper San Andres	Upper San Andres
			Brushy Canyon			
			Cutoff	Lower San Andres	Lower San Andres	Lower San Andres
	Leonardian					Holt
			Bone Spring	Glorieta	Glorieta	Glorieta
			1st carbonate / 1st sand / 2nd carbonate / 2nd sand / 3rd carbonate / 3rd sand	Paddock	Upper Clear Fork (Clear Fork Group)	Upper Clear Fork (Clear Fork Group)
				Blinebry	Middle Clear Fork	Middle Clear Fork
				Tubb (Yeso)	Tubb	Tubb
				Drinkard	Lower Clear Fork	Lower Clear Fork
			Lower carbonate	Abo	Abo	Abo/Wichita
	Wolfcampian		Wolfcamp	Wolfcamp	Wolfcamp	Wolfcamp

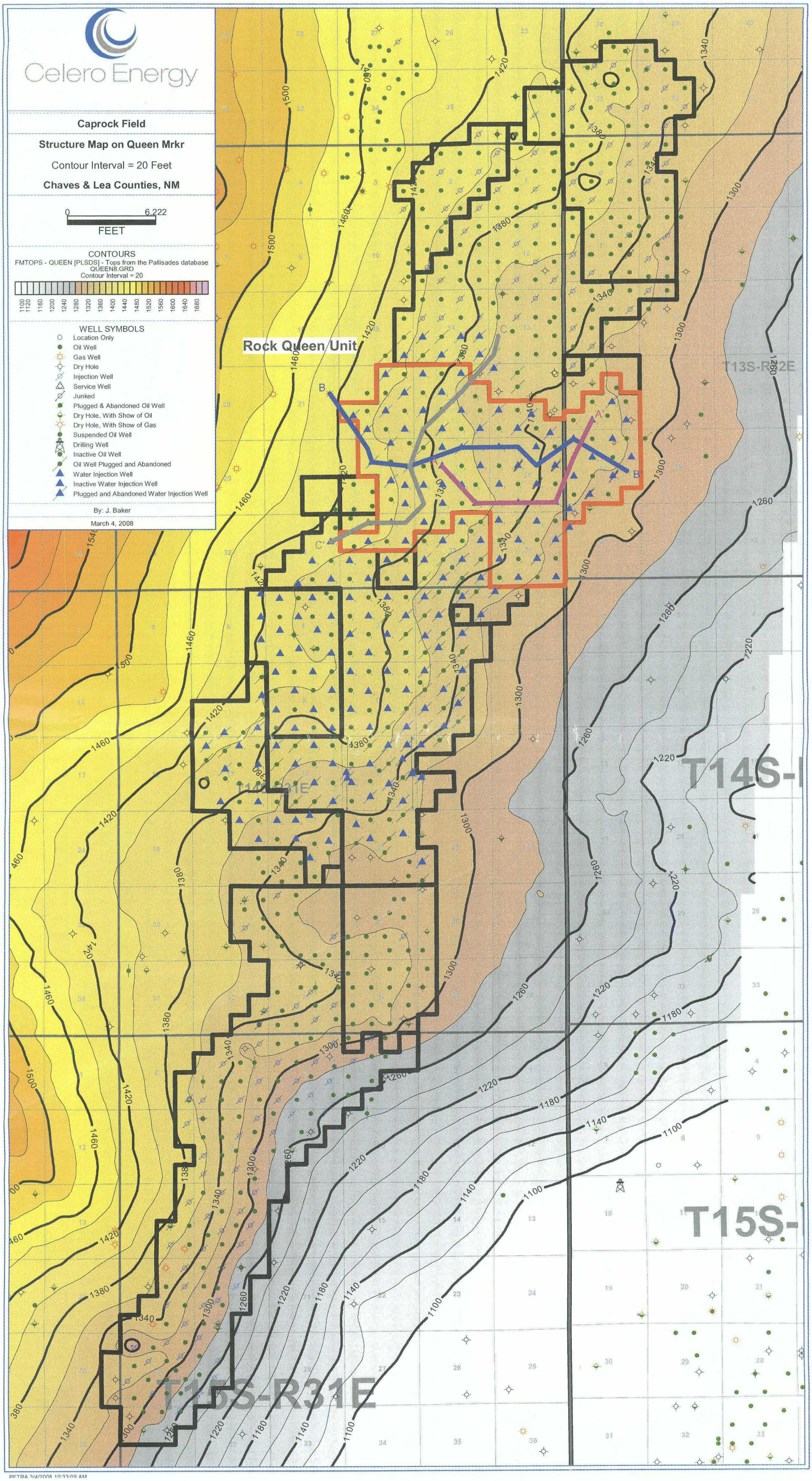
Dutton et al, BEG 2004

Queen Interval Log Detail

Resistivity & Gamma Ray Logs
Drickey Queen #144 Chaves Co., NM







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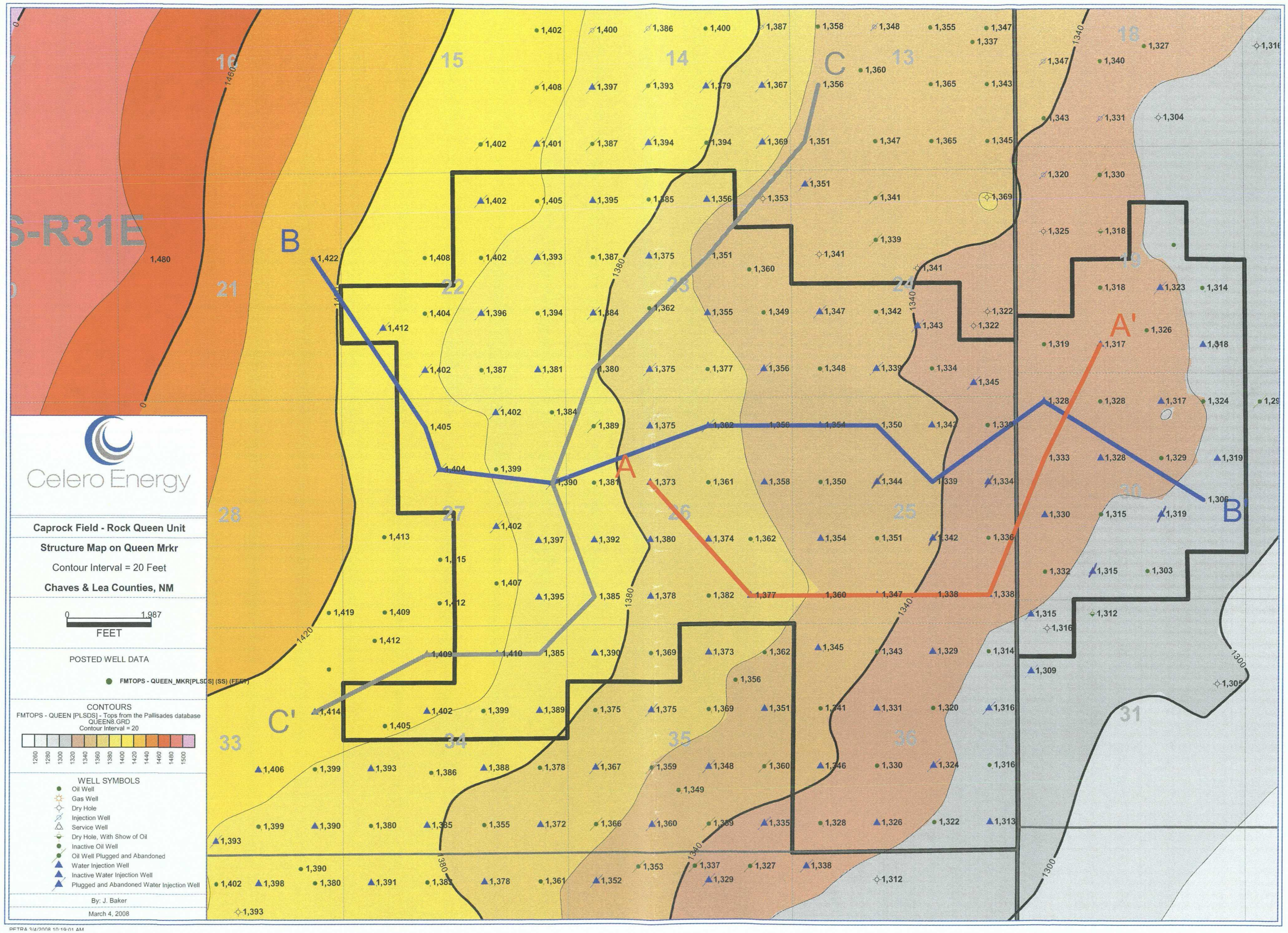

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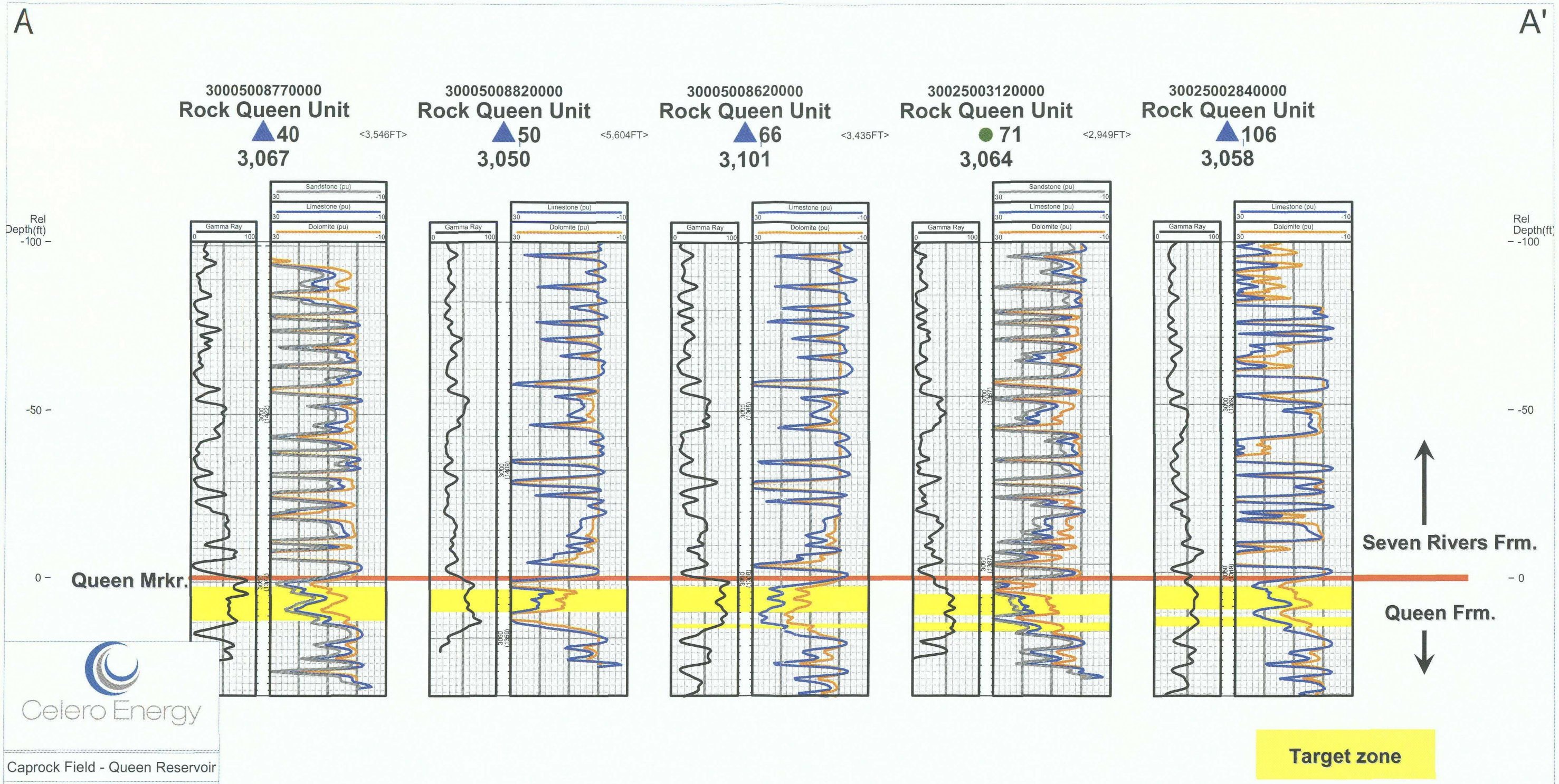


Celero Energy

Caprock Field - Queen Reservoir

Rock Queen Unit

Stratigraphic Cross Section

Datum = Queen

Horizontal Scale = 1072.7
Vertical Scale = 20.0
Vertical Exaggeration = 53.6x

UWI
Well Name
Well Label
WELL - TD

Chaves& Lea Counties., NM

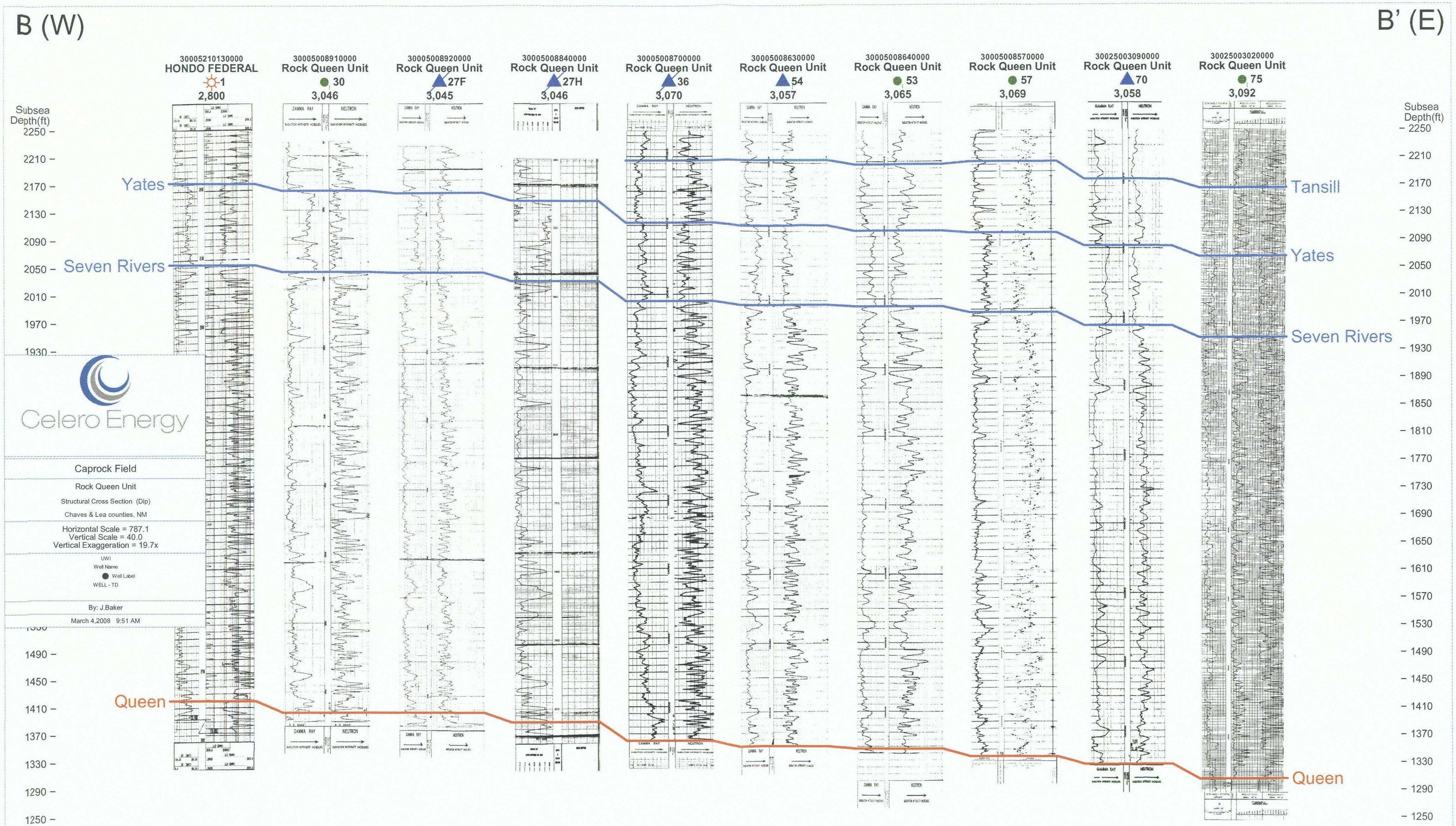
By: J.Baker

March 4,2008 10:06 AM

Rock Queen Unit – Queen Reservoir Cross Section

Chaves & Lea Cos., NM

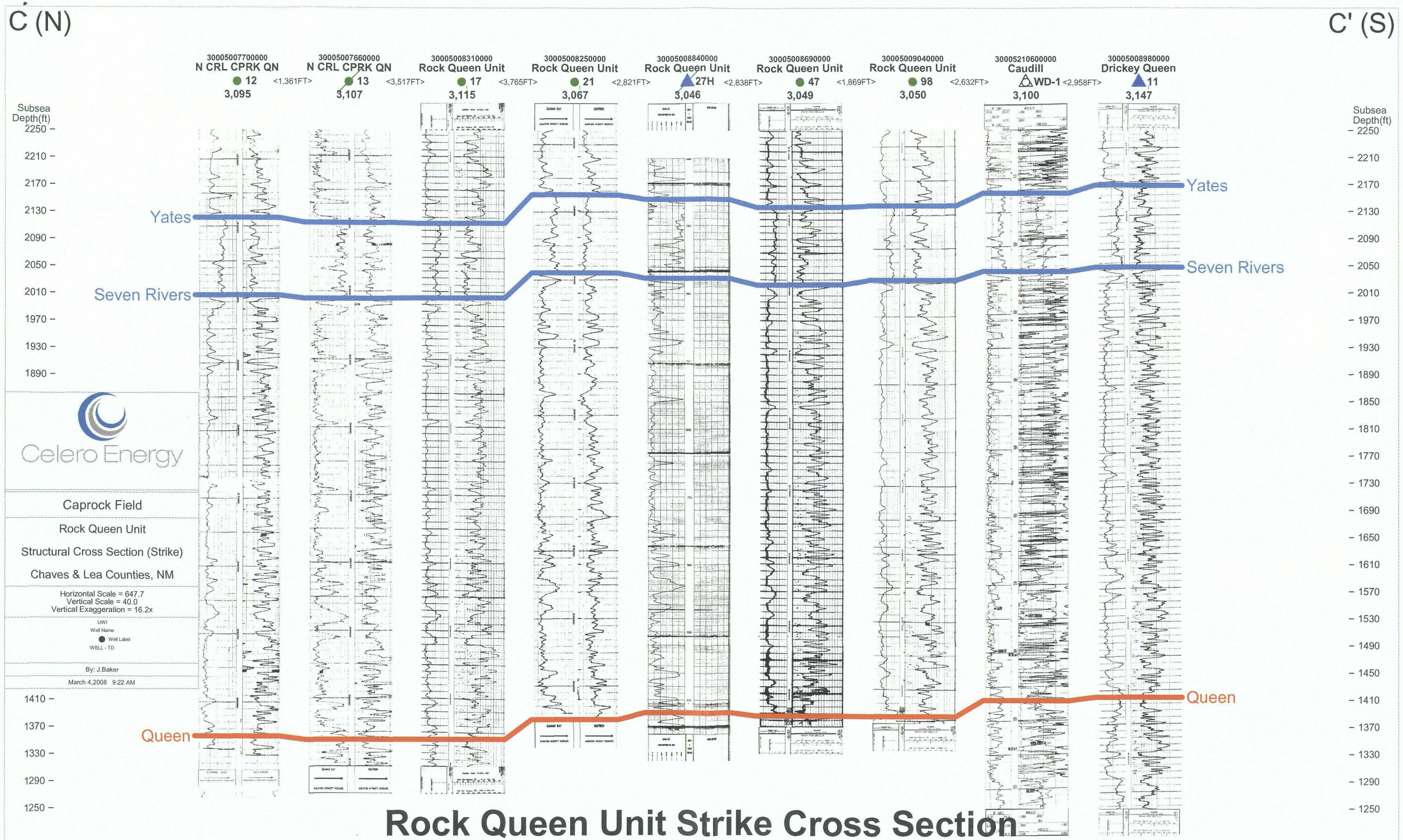
PETRA 3/4/2008 10:06:11 AM (RQU Hearing Reservior detail 5 wells only 0308.CSP)



Rock Queen Unit Dip Cross Section

Chaves & Lea Cos., NM

PETRA 3/4/2008 9:51:09 AM (RQU Hearing Dip CS 0308.CSP)


C (N)
C' (S)
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Rock Queen Unit
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Drickey Queen
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3,147
Subsea Depth(ft)
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2210
2170
2130
2090
2050
2010
1970
1930
1890
1850
1810
1770
1730
1690
1650
1610
1570
1530
1490
1450
1410
1370
1330
1290
1250
Yates
Seven Rivers
Queen
Celero Energy
Caprock Field
Rock Queen Unit
Structural Cross Section (Strike)
Chaves & Lea Counties, NM
Horizontal Scale = 647.7
Vertical Scale = 40.0
Vertical Exaggeration = 16.2x
UWI
Well Name
Well Label
WELL - TD
By: J.Baker
March 4,2008 9:22 AM
Rock Queen Unit Strike Cross Section
Chaves & Lea Cos., NM
PETRA 3/4/2008 9:22:08 AM

Rock Queen Unit

S-R31E

Celero Energy

Caprock Field

USGS Topographic Map

Rock Queen Unit Area

Chaves & Lea Counties, NM

0 1,980
FEET

POSTED WELL DATA

Well Label

WELL SYMBOLS

- Oil Well
- Gas Well
- Dry Hole
- Injection Well
- Service Well
- Dry Hole, With Show of Oil
- Inactive Oil Well
- Oil Well Plugged and Abandoned
- Water Injection Well
- Inactive Water Injection Well
- Plugged and Abandoned Water Injection Well

By: J. Baker

March 4, 2008

PETRA 3/4/2008 10:41:52 AM